

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0-1				Mn							SILICEOUS CARBONATE OOZE WITH CLAY
1-2											97-101 cm: unknown void
2-3						D		middle Eocene	SS	pal YE	pieces of siliceous sponge up to 1 cm in length.
3-4				Mn							General Description: The core is mostly constituted of monotonous and structureless pale yellow (5Y 8/2) SILICEOUS CARBONATE OOZE WITH CLAY. Mn-oxide spots less than 1 cm across rarely occur throughout the core.
4-5									IW		
5-6									XRD SS SS SS PAL		dusky red (7.5R 3/4) ALTERED VOLCANIC GLASS occurs in Interval 11-12 cm as pieces with a nodular outline.
											yellow (5Y 7/6) VITRIC ASH WITH BIOTITE occurs in Interval 12-14cm. Sharp base towards underlying light gray ash layer. Top less sharp.
											light gray (5Y 7/1) VITRIC ASH WITH CARBONATE GRAINS AND SPONGE SPICULES occurs in Interval 14- 16 cm. Base is sharp with one burrow propagating 1 cm into the underlying ooze.

SITE 1050 HOLE A CORE 2H

CORED 10.10-19.60 mbsf

1050A-2H

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
1											<p>SILICEOUS NANNOFOSSIL OOZE WITH FORAMS</p> <p>pale yellow (5Y 8/2) Homogeneous lithology throughout core</p> <p>Black spots throughout core, in Section 2 limonitic speck (27-28 cm)</p>
2											
3											
4									SS		
5									IW		
6										pal YE	
7											
8											
9											
10											

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1										
1	2										
2	3										
3	4										
4	5										
5	6										
6	7										
7											
8											
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NANNOFOSSIL OOZE WITH CLAY
Section 1, 0-32 cm, moderate drilling disturbance
pale yellow (5Y 8/2)
Section 1, 129-130 cm, single Mn nodule
scattered black flecks throughout core

middle Eocene

SS

IW

pal YE

PAL

Py

SITE 1050 HOLE A CORE 4H

CORED 29.1-38.6 mbsf

1050A-4H

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0				Mh							<p>NANNOFOSSIL OOZE WITH CLAY several larger (0.5-1 cm) Mn-oxide blebs</p>
1								SS			
2											
3											
4											
5											
6											
7				Py					IW	pal YE	<p>undetermined mollusc fragment of 1 cm diameter</p>
8				Py							<p>General description: Entire core consists of monotonous and structureless pale yellow (6Y 8/2) NANNOFOSSIL OOZE WITH CLAY. A few pyrite blebs smaller than 1 mm are scattered throughout the core. Oblique and subhorizontal layering in Section 2, 110-120 cm and Section 3, 110-140 cm are artifacts introduced by the core splitting process.</p>
9											
10									PAL		

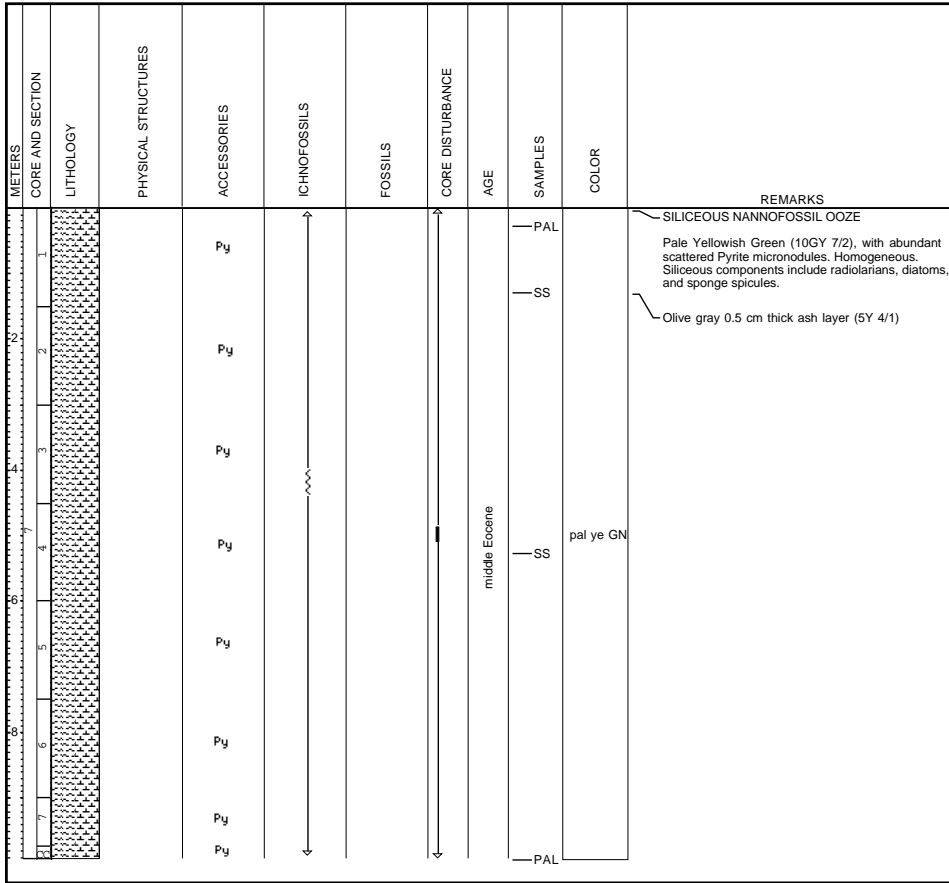
METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
								middle Eocene IW SS PAL		lt gy GN	<p>— NANNOFOSSIL OOZE WITH CLAY AND SPICULES</p> <p>Grayish green (10G 8/1) Pyrite scattered throughout core. Slightly bioturbated in Sections 5-7.</p> <p>Note: all of CC to Paleo lab</p>

SITE 1050 HOLE A CORE 6H

CORED 48.1-57.6 mbsf

1050A-6H

METERS CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0										
1			Py							NANNOFOSSIL OOZE WITH RADIOLARIANS AND SPICULES Light Greenish Gray (5GY 8/1) Minor components: sponge spicules, foraminifers and diatoms Pyrite micronodules scattered through core.
2			Py							
3			Py					SS		
4			Py					IW		
5			Py					SS	lt gn GY	
6			Py							
7			Py							
8			Py					PAL		



SITE 1050 HOLE A CORE 8H

CORED 67.1-76.6 mbsf

1050A-8H

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1			Py							SILICEOUS NANNOFOSSIL OOZE and NANNOFOSSIL OOZE WITH SILICEOUS MICROFOSSILS. Mn flecks (micronodules) throughout
2	2			Py							Pale yellowish green (10GY 7/2) SILICEOUS NANNOFOSSIL OOZE gradually becomes pale green NANNOFOSSIL OOZE WITH SILICEOUS MICROFOSSILS down core.
3	3			Py							
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99	99			Py							
100	100			Py							

middle Eocene

SS
SS
CO3

pal ye GN

Burrows, concentration of black flecks (ash?)

SM: Section 5, 16 cm SILICEOUS NANNOFOSSIL OOZE WITH SPICULES.

Pale Green (5G 7/2)

Note: all of CC went to Paleo Lab.

SS
PAL

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHIHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											
1											
2											
3											
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8											
9											
10											

SILICEOUS NANNOFOSSIL OOZE
 (diatoms, radiolarians, sponge spicules)
 Light greenish gray (5G 8/1)
 burrow mottled with Zoophycos, Planolites and
 Chondrites
 Pyrite (micronodules) throughout

middle Eocene

IW

lt gn GY

PAL

METERS CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0			Mh							SILICEOUS NANNOFOSSIL CHALK WITH CARBONATE GRAINS burrow mottled throughout with Zoophycos, Planolites, and Chondrites Pyrite micronodules in upper part rare glauconite
1			Mh							
2			Mh							
3			Mh					SS		SM: Section 3, 18 cm QUARTZ NANNOFOSSIL CHALK with SILICEOUS MICROFOSSILS
4							middle Eocene			
5										
6								SS		SM: Section 6, 87 cm SPICULE NANNOFOSSIL CHALK
7								SS		SM: Section 7, 50 cm
8								PAL		

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHIKOFOSILLS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
								<p>middle Eocene</p>	<p>PAL</p>	<p>gy GN</p>	<p>SILICEOUS NANNOFOSSIL CHALK WITH CLAY grayish green (5G 8/1); biscuitied throughout. Biscuits are 5-10 cm long with drilling slurry between. — thin ash lamina</p>

SITE 1050 HOLE A CORE 12X

CORED 105.2-114.8 mbsf

1050A-12X

1050A-13X

	METERS	CORE AND SECTION	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
	0 1 2							middle Eocene	SS	lt gy GN	CARBONATE CHALK WITH NANNOFOSSILS AND SPONGE SPICULES light grayish green (10GY 8/1) biscuiting throughout core; biscuits 5-10 cm with drilling slurry between.

SITE 1050 HOLE A CORE 13X

CORED 114.80-124.40 mbsf

	METERS	CORE AND SECTION	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
	0 1 2 3 4 5 6							middle Eocene	SS IW	lt gy GN	CARBONATE NANNOFOSSIL CHALK WITH SPICULES AND FORAMINIFERS and CARBONATE NANNOFOSSIL CHALK WITH SPONGE SPICULES light grayish green (10GY 8/1) Biscuits throughout core, mostly 5-10 cm log; many biscuits fractured.

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0.0	1										<p>NANNOFOSSIL CHALK pale grayish green (10GY 8/1) bioturbation throughout core, biscuiting by drilling, 5-10 cm long; many biscuits are entirely fractured, with biscuitsAll reside in a drilling-induced glurry.</p> <p>NANNOFOSSIL CHALK WITH ASH, Section 4, 137-140 cm</p>
0.2	2							SS			
0.4	3								pal gy GN		
0.6	4										
0.8	5							SS			
1.0	6							PAL			

SITE 1050 HOLE A CORE 15X

CORED 134.0-143.6 mbsf

1050A-15X

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 gy GN</p> <p>PAL</p>		<p>CARBONATE NANNOFOSSIL CHALK WITH SPICULES Pale grayish green (10GY 8/1) Entire core is highly biscuited.</p> <p>127-150 cm: drilling disturbed CHERT layer</p> <p>thin layer of pinkish echinoderm fragments</p>

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHNOFOSSELS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1										<p>NANNOFOSSIL CHALK WITH SPICULES Light grayish green NANNOFOSSIL CHALK WITH SPICULES grades downcore into NANNOFOSSIL CHALK WITH CLAY and NANNOFOSSIL CHALK WITH CLAY AND CARBONATE GRAINS, becoming richer in clay and poorer in nannofossil preservation. Light grayish green (10GY 8/1) as dominant lithology Biscuits throughout core, bigger biscuits than in Core 15X (to 20 cm) Bioturbation throughout core, Section 1 highly bioturbated from 110 to 145 cm.</p>
2	2							SS			
3	3								lt gy GN		
4	4							IW			
5	5										
6	6							SS		At Section 5 (144 cm) and Section 4 (30 cm) very thin Mn oxide layer	
7	7									Section 4 highly bioturbated and Mn oxide enriched	
								early Eocene			LIMESTONE interval with CHERT on top (burrowing and chert infilling) (21-29 cm)
											42-43 cm interval: thin (< 0.3 cm) greenish layer (5G 5/3) with altered volcanic glass that grades into a brownish gray (5YR 7/2) layer (42-48 cm) with a hardground on top
											LIMESTONE interval with chert nodules (17-27 cm CC)

SITE 1050 HOLE A CORE 17X

CORED 153.2-162.8 mbsf

1050A-17X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
17.0	1			▲					SS	vpl BR lt ol GY	CLAYEY CALCARBONATE CHALK WITH FORAMINIFERS and SPONGE SPICULE CARBONATE CHALK WITH RADIOLARIANS
17.0	2			▲					SS		General Description: The upper part of the core (Section 1, 0-74 cm) consists of an alternation of differently silicified very pale brown (10YR 6/2) to light olive gray (10Y 6/2) CLAYEY CARBONATE CHALK WITH FORAMINIFERS. Strong silicification occurs in Section 1, 8-28 cm and a light olive gray (10Y 6/2) CHERT layer occurs in Section 1, 72-74 cm. Below Section 1, 74 cm, the core consists of monotonous, strongly bioturbated light greenish gray (10GY 8/1) SPONGE SPICULE CARBONATE CHALK WITH RADIOLARIANS. The entire core is moderately disturbed with drilling biscuits throughout.
17.0	3							early Eocene		lt gn GY	
17.0	4								PAL		

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
							early Eocene	PAL	lt gy GN	<p>Major Lithology: SILICEOUS NANNOFOSSIL CHALK entire core; light greenish gray (8GY 8/1 to 8G 8/1); burrow mottled throughout; scattered pyrite flecks throughout; drilling biscuits of ~5-10 cm in drilling slurry throughout core.</p> <p>slight color variation (greener) 13-16 cm</p>

SITE 1050 HOLE A CORE 21X

CORED 189.6-199.2 mbsf

1050A-21X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1								SS		Major lithology: SILICEOUS NANNOFOSSIL CHALK to NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS AND MICRITE throughout core except as noted; rhythmic alternation of lighter and darker shades of light greenish gray (5GY 8/1 to 5G 7/1) variably expressed; burrow mottled throughout.
2	2										Minor Lithology: SILICEOUS NANNOFOSSIL CHALK with vitric ash- Section 1, 59 cm; 0.5 cm thick, brown/black; bioturbated.
3	3										100 to 103 cm- laminae
4	4										103 to 138 cm- scattered black flecks, not concentrated in burrows
5	5							early Eocene	SS SS SS		discrete burrows more obvious in darker intervals but density of mottles approximately constant throughout
6	6										in Section 2, ~3.5 alternations of light/dark with boundaries at 10 cm (relatively sharp), 23 cm (gradational), 50 cm (gradational), 66 cm (relatively sharp, 90 cm (gradational), 125 cm (very gradational).
7	7										very subtle color variations in upper 2/3 of section, 3 vague darker intervals at 109-115 cm, 124-130cm, and 135-140cm in bottom 1/3 of section
8	8										color intermediate with very subtle variation through section, slightly darker in upper 15 cm
											Pyrite concentrated in 2 burrows
											color intermediate with very subtle variation through section
											75 to 100 cm- Pyrite concentrated in burrows
											Pyrite concentrated in two burrows
											Pyrite concentrated in burrow
											color variation subtle, slightly darker 0-18cm, 92-98cm, and 137-140cm
											scattered Pyrite rare (not concentrated in burrows) to base of core
									PAL		

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1										<p>Major lithologies: SILICEOUS CHALK WITH NANNOFOSSIL Section 1, 0 cm - Section 5, 30 cm; pale grayish green (10GY 6/2) to pale green (5G 7/2) rhythmic alternations (middle of darker intervals indicated below); burrow mottling most evident in darker intervals but burrowed throughout; identifiable traces are Chondrites and Planolites. NANNOFOSSIL RADIOLARITE/SPICULITE- Section 5, 30 cm to base of core; pale green (10G 6/2); common pyrite from Section 6 to base of core.</p> <p>drilling biscuits (3-10 cm thick) throughout entire core</p> <p>darker interval</p> <p>darker interval</p> <p>darker interval</p> <p>darker interval</p> <p>darker interval</p> <p>darker interval</p> <p>darker interval</p> <p>darker interval</p> <p>common pyrite to base of core</p>
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SITE 1050 HOLE A CORE 23X

CORED 208.8-218.4 mbsf

1050A-23X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											
1											Major Lithology: SILICEOUS NANNOFOSSIL CHALK TO NANNOFOSSIL SILICEOUS CHALK
2											entire core, greenish gray (5GY 8/1 to 5G 6/1) with rhythmic alternations (middle of darker intervals indicated below); burrow mottled throughout.
3											horizon with pyrite concentration
4											darker interval
5											darker interval
6											darker interval
7											darker interval
8											darker interval
9											slightly laminated
10											darker interval
11											123cm- pyrite enriched horizon
12											darker interval
13											coring gap not plotted
14											darker interval
15											pyrite nodules
16											
17											
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METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1										Major Lithology: NANNOFOSSIL- SILICEOUS CHALK entire core: light greenish gray (10GY 7/2 to 10GY 8/2); burrow mottled throughout except as noted; identified traces: Zoophycus, Planolites, Chondrites; Planolites and Chondrites sometimes filled with finely disseminated pyrite; vague light/dark alternations.
2	2										drilling biscuits (~10 cm spacing) throughout core
3	3										pyrite
4	4										slightly darker
5	5										darker layer
6	6										pyrite scattered through sections 4 to 6
7	7										104 to 112 cm- laminated
8	8										55 to 57 cm- laminated
9	9										60 to 90 cm- pyrite declines in abundance
10	10										darker
11	11										90 to 95 cm- slump fold, deformed sediments and superjacent 5 cm laminated, darker
12	12										SM: 82 cm SILICEOUS MICRITE CHALK WITH FORAMINIFERS
13	13										pyrite absent to base of core
								early Eocene			
									SS		
									PAL		

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0.0											
1.0											
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CLAYEY NANNOFOSSIL
 CHALK WITH SPICULES and
 NANNOFOSSIL CHALK WITH
 CLAY AND SPICULES
 light grayish green (5G 8/1)
 Some Mn blebs on top
 (downhole contamination)
 Drilling biscuits through core
 High bioturbation throughout
 core

late Paleocene


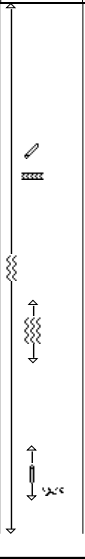
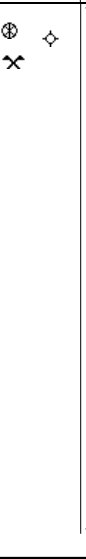

lt gn GY

PAL

SITE 1050 HOLE A CORE 28X

CORED 247.3-256.9 mbsf

1050A-28X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
1 2 3 4 5 6 7 8				Pu				late Paleocene	SS SS	PAL	CLAYEY CALCAREOUS CHALK alternating with NANNOFOSSIL CLAY WITH SILICEOUS FOSSILS AND CARBONATE GRAINS Alternation of moderately bioturbated light and darker layers; darker layers are richer in clay. (5GY 8/1 to 10GY 6/2) light greenish gray to greenish gray color changes are gradational

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1									pal gy GN	NANNOFOSSIL CHALK WITH CLAY AND SPICULES Alternating layers of pale grayish green (10GY 8/1) and grayish green (10GY 7/1) bioturbated NANNOFOSSIL CHALK WITH CLAY AND SPICULES Highly bisected from Section 1, 113 cm downcore
0	1							SS		pal gy GN	
0	2									gy GN	
0	2									pal gy GN	
0	2									..	
0	2									pal gy GN	
0	3									pal gy GN	
0	3									gy GN	
0	3									pal gy GN	
0	3									pal gy GN	
0	4									pal gy GN	
0	4									pal gy GN	
0	5									pal gy GN	
0	5									pal gy GN	
0	6									pal gy GN	
0	6									pal gy GN	
0	6									..	
0	7									pal gy GN	
0	7									gy GN	
										PAL	

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
1											CLAYEY NANNOFOSSIL CHALK WITH SPICULES and NANNOFOSSIL CLAY WITH SPICULES Grayish green (10GY 7/1) bioturbated CLAYEY NANNOFOSSIL CHALK W/SPICULES interbedded with medium green (10GY 6/1) bioturbated NANNOFOSSIL CLAY W/ SPICULES Biscuitied throughout Sections 4 through CC.
2								SS	gy GN		
3											
4									med gy GN		
5								SS	med gy GN		
6									gy GN		
7											
8											
9											
10											

SITE 1050 HOLE A CORE 32X

CORED 285.7-288.9 mbsf

1050A-32X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0.0											
0.5											
1.0											
1.5											
2.0											
2.5											
3.0											
3.5											
4.0											
4.5											
5.0											
5.5											
6.0											

CLAYEY NANNOFOSSIL CHALK WITH SPICULES
 light grayish green (10 GY 8/1)
 Highly biscuited throughout core
 Moderate bioturbation throughout core

late Paleocene

IW

lt gy GN

SS



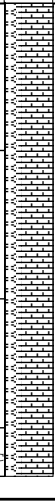
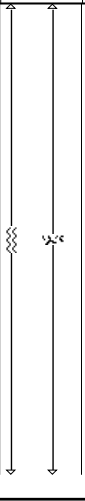

PAL

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											
1					↳				SS		SILICEOUS NANNOFOSSIL CHALK WITH CARBONATE GRAINS to SILICEOUS NANNOFOSSIL CARBONATE CHALK drilling biscuited (regular intervals, about 10-12 cm) slightly to moderately bioturbated (Chondrites and Planolites) alternating light and darker intervals (3GY 8/1 to 3GY 6/1)
2				∅							
3					∅						
4					↳				SS		
5					∅						
6					↳						
7					∅						
8					↳						
9					∅						
10					↳				PAL		

SITE 1050 HOLE A CORE 34X

CORED 295.3-304.9 mbsf

1050A-34X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHIKOFOSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
								late Paleocene		lt gn GY	<p>SILICEOUS NANNOFOSSIL CHALK</p> <p>drilling biscuted at regular intervals, about every 10-15 cm.</p> <p>alternating light dark intervals (1-2GY 6/1) light greenish gray</p> <p>scattered specks of pyrite, rare pyrite lined burrows</p>

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											
1											
2											
3			X	Py					SS		
4				Py							
5				Py							
6											
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SITE 1050 HOLE A CORE 36X

CORED 314.5-319.9 mbsf

1050A-36X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHIKOFOSILLS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0.00	1										NANNOFOSSIL DIATOM CHALK WITH SPICULES
0.25	2			Py							5GY 5/1 light Greenish Gray
0.50	3			Py				late Paleocene	SS	lt gn GY	common pyrite specks and pyrite filling of burrows
0.75	4			Py							
1.00											
1.25											
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40.75											
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METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
							<p>middle Eocene</p>	<p>SS PAL</p>	<p>pal YE</p>	<p>SILICEOUS NANNOFOSSIL OOZE (5Y 8/2) pale yellow, homogeneous in entire core</p> <p>hard olive colored flakes (unident.)</p> <p>VITRIC ASH layer</p>

SITE 1050 HOLE B CORE 2H

CORED 7.0-16.5 mbsf

1050B-2H

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
							<p>middle Eocene</p>		<p>pal YE</p>	<p>SILICEOUS NANNOFOSSIL OOZE</p> <p>5Y 8/2 pale yellow</p> <p>some Mn flecks (probably downhole contamination)</p>

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
								<p>middle Eocene</p>	<p>pal YE</p>		<p>SILICEOUS NANNOFOSSIL OOZE (5Y 8/1 to 5Y2/3) pale yellow</p> <p>Mn specks scattered throughout</p> <p>when core is scraped, burrow structures and bioturbation visible, as are subtle light-dark alternations on 3-4 cm scale</p>

SITE 1050 HOLE B CORE 8H

CORED 64.0-73.5 mbsf

1050B-8H

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 gy GN</p>	<p>PAL</p>	<p>SILICEOUS NANNOFOSSIL OOZE grading downcore to SILICEOUS NANNOFOSSIL CHALK light grayish green (5G 8/1)</p> <p>Pyrite blebs throughout core</p> <p>Moderate bioturbation throughout core</p> <p>Section 5 downcore slightly fractured</p>

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>lt gy GN</p>	<p>NANNOFOSSIL CHALK WITH SPICULES AND CARBONATE GRAINS light grayish green (5G 8/1)</p> <p>0-10 cm: drilling disturbances and Mn nodule fragments</p> <p>Pyrite throughcore</p> <p>Moderate-high bioturbation throughout core (burrow mottled)</p>

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0-1				▲▲▲							NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS (9GY 7/1) light green Section 1, 0-18 cm: downhole caving of Mn nodules Drilling disturbance moderate to severe; drilling biscuits are fractuely 2-4 cm thick, between drilling slurry 2-5 cm thick
1-6						⊕ ✕ ◇		middle Eocene	SS	lt GN	
6-7									SS		SM: Section 6, 27 cm gray slurry between biscuits NANNOFOSSIL OOZE WITH SILICEOUS MICROFOSSILS AND ASH
7-8									PAL		

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											
1						◇					NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS
2						✕			SS		light greenish gray (10GY 8/1)
3						⊕					homogeneous, with rare black flecks
4											biscuitied throughout (3-4 cm biscuits, every 6-7 cm.)
5											
6										lt gn GY	
7											
8											
9											
10									SS		SM: Section 6, 147 cm
11											NANNOFOSSIL VITRIC ASH
12									PAL		



SITE 1050 HOLE B CORE 14X

CORED 119.4-129.0 mbsf

1050B-14X

MEETERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHNOFOSFILLS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											
1											
2											
3											
4											
5											
6											
7											
8											

NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS
 (5G 8/1 to 10GY 8/1)
 pale green to pale yellowish green
 homogeneous except for a few faint laminae
 drilling biscuits throughout

SM: Section 5, 46 and 48 cm VITRIC ASH

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
							<p>middle Eocene</p>	<p>SS pal gn GY</p>		<p>SILICEOUS NANNOFOSSIL CHALK</p> <p>pale greenish gray (5GY 8/1 to 10 GY 8/3)</p> <p>drilling biscuits throughout</p> <p>homogeneous, with faint burrow mottles</p> <p>rare dark flecks (MnO₂) throughout</p> <p>SM: Sec CC, 65 cm VITRIC ASH WITH SILICEOUS MICROFOSSILS AND NANNOFOSSILS</p>	

SITE 1050 HOLE B CORE 16X

CORED 138.6-148.2 mbsf

1050B-16X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0.5	1										<p>SILICEOUS NANNOFOSSIL CHALK grading downward into NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS</p> <p>pale greenish gray to light greenish gray (5GY 8/2 to 10GY 8/2)</p> <p>minor lithology: CHERT (5GY 7/1) Sec. 1</p> <p>CHERT, 80-100 cm (5GY 7/1)</p>
1	2										
2	3										
3	4										
4	5										
								middle Eocene		pal gn GY	
									SS		
									SS		
									SS		
									PAL		

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

NANNOFOSSIL CHALK WITH SILICEOUS MICROFOSSILS

white (N/8) to pale greenish gray (5GY 8/2 to 10GY 8/1)

Downhole of Section 4, 75 cm, the sediment becomes coarser and increasingly burrow-mottled until the chert layer in Section 6.

mit gn GY

Section 6, 23-32 cm. HARDGROUND grading from green to greenish brown; altered, bioturbated ASH.

middle Eocene

early Eocene
SS
PAL

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
				Mh					PAL	pal gy GN	<p>SILICEOUS NANNOFOSSIL CHALK</p> <p>pale grayish green (10GY 8/1) Entire core is homogenous, moderately bioturbated and highly biscuited.</p>

SITE 1050 HOLE B CORE 21X

CORED 177.0-186.6 mbsf

1050B-21X

METERS	CORE AND SECTION LITHOLOGY	PHYSICAL STRUCTURES ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
						<p>early Eocene</p>	<p>SS</p> <p>PAL</p>	<p>pal gy GN</p>	<p>SILICEOUS NANNOFOSSIL CHALK</p> <p>Core consists of homogeneous, pale grayish green (10GY 7/1), moderately bioturbated, SILICEOUS NANNOFOSSIL CHALK. Entire core is highly biscuitied.</p>

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1										<p>SILICEOUS CARBONATE CHALK WITH NANNOFOSSILS AND CLAY</p> <p>General description: The entire core consists of monotonous and largely structureless light greenish gray (5GY 7/1) to greenish gray (5GY 8/1) SILICEOUS CHALK WITH NANNOFOSSILS AND CLAY. Millimeter-sized dark spots (Mn-oxides?) occur throughout the core. Bedding is not visible which is presumably due to pervasive, strong bioturbation. The core is moderately disturbed with biscuit length in the range of 10 to 30 cm.</p> <p>faint dark layer bearing rare-common biotite; possible ash</p> <p>sharp color change</p> <p>mottled color transition</p> <p>faint dark layer (Mn oxide?)</p>
2	2								lt gn GY gn GY		
4	3							early Eocene	SS		
6	4								gn GY		
8	5								SS		
10	6									lt gn GY gn GY	
12	7										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	1 2 3 4 5 6 7						early Eocene	SS SS SS pal gy GN PAL	SILICEOUS CHALK WITH NANNOFOSSILS AND CLAY Pale grayish green (10GY 7/2) Moderate bioturbation and abundant pyrite throughout core Biscuiting throughout core At 24 and 63 cm thin pyrite-rich layers		

SITE 1050 HOLE B CORE 25X

CORED 215.5-225.1 mbsf

1050B-25X




METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
								<p>early Eocene</p>	<p>SS</p> <p>pal gy GN</p> <p>PAL</p>		<p>SILICEOUS NANNOFOSSIL CHALK WITH CLAY pale grayish green (10GY 7/1) with intervals of grayish green (10GY 6/1) moderate bioturbation throughout pyrite flecks & some pyrite-filled burrows biscuits throughout</p> <p>SD Section 1, 72 cm</p> <p>Zoophycos burrow, Section 5, 134-135 cm</p>

SITE 1050 HOLE B CORE 26X

CORED 225.1-230.4 mbsf




1050B-26X

1050B-27X

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
26 27								early Eocene	PAL SS SS	pal gn GY	<p>NANNOFOSSIL CHALK WITH CLAY and LIMESTONE</p> <p>Upper (0-14 cm) and lower (27-31 cm) part of core consist of fractured chunks of grayish green LIMESTONE. Remainder (17-25 cm) consists of pale grayish green, moderately bioturbated CLAYEY NANNOFOSSIL CHALK WITH CLAY.</p>

SITE 1050 HOLE B CORE 27X

CORED 230.4-240.0 mbsf

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
27 28								early Eocene	SS PAL	pal gy GN	<p>NANNOFOSSIL CHALK WITH CLAY</p> <p>Pale grayish green (10GY 7/1)</p> <p>0-15 cm: Black blebs</p> <p>Moderate bioturbation throughout core, burrows more abundant at 31 cm</p> <p>Biscuiting and highly fractured throughout core</p>

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											
1											
2											
3											
4											
5											
6											
								early Paleocene		lt gn GY dk gn GY	<p>CLAYEY CARBONATE SILICEOUS CHALK WITH NANNOFOSSILS and CHERT</p> <p>Entire core is structureless light greenish gray (5GY 6/1) to greenish gray (2.5GY 5/1) CLAYEY CARBONATE SILICEOUS CHALK WITH NANNOFOSSILS with occasional, slightly more vivid green laminae. In Sections 1 and 2, these laminae appear to occur in a cyclic manner. The laminae consist of CARBONATE SILICEOUS CLAYSTONE WITH FORAMINIFERS AND NANNOFOSSILS. Composition is similar to dominant lithology, but the laminae have more carbonate and are coarser-grained. CHERT and silicified intervals of the dominant lithology occur in Sections 3 through 5. Drilling disturbance is restricted to these silicified/cherty intervals. Several mm-scale open voids occur throughout the core.</p>
											PAL CC entirely consumed for micropaleontology sample

SITE 1050 HOLE C CORE 4R

CORED 346.3-355.9 mbsf

1050C-4R

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1								SS		<p>CLAYSTONE WITH NANNOFOSSILS AND CARBONATE GRAINS and CLAYSTONE WITH NANNOFOSSILS</p> <p>7 cm: Entire echinoid, flattened, with spines.</p> <p>Greenish gray (5G 5/1), laminated CLAYSTONE WITH NANNOFOSSILS AND CARBONATE GRAINS grades downward to CLAYSTONE WITH NANNOFOSSILS, faintly burrow-mottled throughout. Green bands every 2-3 cm throughout core; a few dark gray bands are pyritic, apparent diagenetic fronts. Slightly bioturbated with Phycoides, Chondrites, and rare Zoophycos. Burrows outlined or completely filled with black, framboidal pyrite.</p>
2	2										
4	3							early Paleocene		gn GY lt GY	
6	4								SS		
8	5			Py							
8	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											
8											

CLAYSTONE WITH NANNOFOSSILS

Homogeneous, greenish gray CLAYSTONE WITH NANNOFOSSILS, faintly burrow-mottled. Chondrites burrows at regular (~50cm) intervals. faint light-dark alternations in Sections 5 and 6.

SS

early Paleocene

gn GY

IW

PAL

SITE 1050 HOLE C CORE 6R

CORED 365.5-375.2 mbsf

1050C-6R

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	COREDISTURBANCE	PORETYPE	AGE	SAMPLES	COLOR	REMARKS
0												
1												
2				GI						SS Pho SS SS		NANNOFOSSIL CARBONATE CHALK WITH CLAY Alternations of white light gray (10Y 7/1) and grayish green (10GY 6/1) NANNOFOSSIL CARBONATE CHALK WITH CLAY. Darker intervals have slightly more silt-sized terrigenous components and pyrite. Some green intervals appear with pinkish mottles. Pink color of Section 2 overprints (or is overprinted by) green splotches or uniformly over a measure interval (e.g. Sect. 5, 86-97 cm). Many burrows are not pink; in other areas, pink overprints burrows and matrix. Most contacts between shades of green and gray are gradual, few are sharp. Core is intensively burrow-mottled throughout.
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100												

SITE 1050 HOLE C CORE 8R

CORED 384.9-394.5 mbsf

1050C-8R

MEETERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1										<p>MICRITE NANNOFOSSIL CHALK WITH CLAY, CLAYEY NANNOFOSSIL CHALK</p> <p>Subtle gradations from very light greenish gray (5GY 8/1) to greenish gray (5GY 6/1) with the lighter intervals being more carbonate-rich and the darker intervals being more clay-rich.</p> <p>Burrow mottled throughout.</p> <p>Rare black specks throughout.</p> <p>11-35 cm-Broken pieces (3-5 cm), no slurry; drilling disturbance slight (long pieces, little to no slurry) in remainder of core.</p> <p>Relatively sharp color transition.</p>
1	2								lt gn GY		
2	3								lt gn GY		
3	4								vlt gn GY		
4	5								vlt gn GY		
5	6								lt gn GY		
6	7								gn GY		
7	8								lt gn GY		
8	9								lt gn GY		
9	10								vlt gn GY		
								early Paleocene			
									IW		
									SS		
									PAL		

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHO NO FOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											
1									SS	gy GN	<p>NANNOFOSSIL CLAYSTONE and CLAYSTONE WITH CARBONATE GRAINS AND NANNOFOSSILS</p> <p>Grayish green (10GY 5/1) NANNOFOSSIL CLAYSTONE that grades into light greenish gray (10Y 7/1) CLAYSTONE WITH CARBONATE GRAINS AND NANNOFOSSIL. Bioturbation is moderate to heavy and pyrite lines burrows throughout. Drilling disturbance is slight with some fragmented intervals.</p> <p>Section 2, 17-20 cm: Slightly darker (10GY 7/1) interval severely bioturbated with lighter burrow infillings.</p>
2						++			SS		
3										lt gn GY	
4								early Paleocene			
5											
6									SS		SM: Section 4, 105 cm: Green thin layer (0.2 cm) very rich in clay. CLAYSTONE

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0.0								early Paleocene			NANNOFOSSIL CLAYSTONE, CLAYSTONE, and CLAYSTONE WITH NANNOFOSSILS
0.1									SS	gn GY lt gn GY	Light greenish gray to greenish gray (10Y 8/1-6/1) burrow-mottled NANNOFOSSIL CLAYSTONE to CLAYSTONE WITH NANNOFOSSILS with pyrite flecks disseminated throughout the core. There are several thin intervals of very light colored sediment (Section 1, 95-96 cm, 98-99 cm, 124-125 cm; Section 2, 44 cm, 45 cm, 47 cm).
0.2									SS SS	gn GY lt gn GY	Close-up photograph : 120-135 cm Section 1, 125-132 cm: greenish gray (10Y 7/1-6/1) NANNOFOSSILS CLAYSTONE and CLAYSTONE WITH NANNOFOSSILS homogeneous sediment that lacks the bioturbation found in the surrounding core.
0.3								late Maastrichtian			
0.4									SS SS	lt gn GY	Section 2, 32-37 cm: slurry with a few small bits of greenish gray (10Y 6/1) NANNOFOSSIL CARBONATE CLAYSTONE and CLAYSTONE with very pale red (7.5R 6/1) slurry.
0.5									SS	gn GY	Section 2, 20-50, and 20-40 cm cm: close-up photographs
0.6									PAL		36 cm: K/T BOUNDARY: CLAYSTONE 60 cm: CLAYSTONE WITH NANNOFOSSILS



SITE 1050 HOLE C CORE 11R

CORED 408.7-413.7 mbsf

1050C-11R

1050C-12R

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHO FOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
1				GI							NANNOFOSSIL CLAYSTONE
2				Py				late Maastrichtian	SS SS SS	lt gn GY	Section 1, 95 cm: Thin sandy lamina of NANNOFOSSIL CLAYSTONE WITH FORAMINIFERS. Light greenish gray (5GY 6/1) NANNOFOSSIL CLAYSTONE. Slightly bioturbated, although subhorizontal laminae are visible.
3				GI					SS	mlt gn GY	Section 3, 10-20 cm: Subhorizontal laminae with light layers.
4				Py GI							
											PAL

SITE 1050 HOLE C CORE 12R

CORED 413.7-423.3 mbsf

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHO FOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
1								Maastrichtian		lt gn GY	NANNOFOSSIL CLAYSTONE Medium-light greenish gray (5GY 6/1) NANNOFOSSIL CLAYSTONE, highly drilling disturbed
											PAL

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHO FOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1	Light greenish gray (5GY 7/1) NANNOFOSIL CLAYSTONE moderately bioturbated with pyrite lining some burrows. Lithology is homogeneous throughout with some alternations of lighter-darker color in Section 3. The core is slightly drilling fractured. In Section 1, 96 and 110 cm, some pyrite nodules (0.2-0.3 cm) are observed. Microfaults in Section 3, 93 cm and Section 4, 30-35 cm.								lt gn GY	<p>NANNOFOSSIL CLAYSTONE</p> <p>Light greenish gray (5GY 7/1) NANNOFOSIL CLAYSTONE moderately bioturbated with pyrite lining some burrows. Lithology is homogeneous throughout with some alternations of lighter-darker color in Section 3. The core is slightly drilling fractured. In Section 1, 96 and 110 cm, some pyrite nodules (0.2-0.3 cm) are observed. Microfaults in Section 3, 93 cm and Section 4, 30-35 cm.</p>
1	2								SS		
2	3								mt gn GY		
3	4								lt gn GY		
4	5								mt gn GY		
5	6								mt gn GY		
6	7								mt gn GY		
7	8								mt gn GY		
8	9								mt gn GY		
9	10								mt gn GY		
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25	26								mt gn GY		
26	27								mt gn GY		
27	28								mt gn GY		
28	29								mt gn GY		
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157	158								mt gn GY		
158	159								mt gn GY		
159	160										

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE/DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											
1										lt gn GY	NANNOFOSSIL CHALK WITH CLAY and CLAYEY CARBONATE NANNOFOSSILS CHALK
2										lt gn GY lt br GY lt gn GY lt br GY lt gn GY lt br GY	Alternation of light gray (10Y 7/1) NANNOFOSSIL CHALK WITH CLAY and slightly darker, more brownish CLAYEY CARBONATE NANNOFOSSILS CHALK. 29-36 cm: Piece with irregular, deformed bedding/lamination due to soft-sediment deformation.
3									Pho	lt br GY lt gn GY lt br GY lt gn GY lt br GY lt gn GY lt br GY	68-106 cm: Perfect cross section of Zoophycos burrow penetrating almost 40 cm of sediment, but radiating no more than 4 cm. Smaller Zoophycos at 87-95 cm.
4									SS SS	lt br GY lt gn GY lt br GY lt gn GY	
5								late Maastrichtian		lt br GY lt gn GY lt br GY lt gn GY lt br GY lt gn GY lt br GY lt gn GY lt br GY lt gn GY lt br GY lt gn GY lt br GY lt gn GY lt br GY lt gn GY	
6										lt br GY lt gn GY lt br GY lt gn GY lt br GY lt gn GY lt br GY lt gn GY lt br GY lt gn GY	
7				Sm					Pho SS PAL	lt gn GY lt gn GY	Sect. 7, 51-56.5 cm (452.11-452.17 mbsf): Laminated brownish gray (7.5YR 6/1) CLAYSTONE WITH NANNOFOSSILS (Bentonite?). Contains rare pieces of altered volcanic glass. Layers offset by drilling-induced fault. CLAYSTONE slurry is squeezed downsection in liner.

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0.0	1									gn GY	NANNOFOSSIL CLAYSTONE
0.1											Section 1, 0-35 cm: severe biscuiting with biscuits that are light greenish gray (5GY 7/1) and reddish brown (10YR 5/3) with some voids around the biscuits and a minor amount of slurry.
0.2									SS		Section 1-Section 2, 42 cm: Alternating light greenish gray to greenish gray (5GY 8/1-7/1), heavily bioturbated NANNOFOSSIL CLAYSTONE.
0.3									IW		SM, Section 2, 41 cm: burrow fill composed of CALCAREOUS FORAMINIFER CHALK
0.4									SS		Section 2, 42 cm to the base of the core: Alternating light greenish gray to greenish gray (5GY 8/1-6/1) NANNOFOSSIL CLAYSTONE with chaotic bedding, soft sediment deformation, and microfaults.
0.5									SS	gn GY lt gn GY	
0.6									Pho		Photographic close-up, Section 6, 105-130 cm.
0.7									Pho		Photographic close-up, Section 7, 0-38 cm.
0.8									PAL		

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHO FOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1	[Lithology pattern]	X						vpl GN	..	NANNOFOSSIL CHALK and CLAYEY NANNOFOSSIL CHALK WITH CARBONATE GRAINS
1	2	[Lithology pattern]						early Maastriichtian	vpl GN	..	Alternating very pale green (3GY 7/1) to greenish gray (3GY 6/2) NANNOFOSSIL CHALK and CLAYEY NANNOFOSSIL CHALK WITH CARBONATE GRAINS. Moderately to heavily bioturbated. Microfaults and slumps throughout lower half of the core.
2	3	[Lithology pattern]							vpl GN	..	
3	4	[Lithology pattern]	X	P ₂	[Fossil symbols]	0			vpl GN	gn.GY	Section 4, 110 cm: Probable bentonite?
4	5	[Lithology pattern]	X					late Camp.	vpl GN	..	CC entirely to Paleo lab
5	6	[Lithology pattern]	X					PAL	vpl GN	..	

METERS	CORE AND SECTION	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
	LITHOLOGY									
1.0	gn WH					←←←←	late Campanian	gn WH		NANNOFOSSIL CHALK AND NANNOFOSSIL CHALK WITH FORAMINIFERS
1.1	lt ye GN							lt ye GN		
1.2	dsk gy YE							dsk gy YE		
1.3	lt ye GN							lt ye GN		
1.4	lt ye GN						Pho	lt ye GN		Strongly slumped varicolored (yellowish green to yellowish orange) NANNOFOSSIL CHALK WITH FORAMINIFERS. Burrow-mottled except where slumping obliterated the mottling.
1.5	mlt ye OR							mlt ye OR		
1.6	lt ye GN							lt ye GN		Horse-tail dissolution laminae, incipient stylolites. (108-127 cm)
1.9	lt ye GN						SS	lt ye GN		Multiple soft-sediment deformation fractures and up to 30 degrees inclined bedding.
2.0	lt ye GN							lt ye GN		
2.1	lt ye GN							lt ye GN		Slumpfold
2.2	lt ye GN							lt ye GN		0-20 cm: 45 degrees inclined bedding and semi-lithified sediment deformation fractures.
3.0	PAL					←←←←				



SITE 1050 HOLE C CORE 20R

CORED 490.6-500.2 mbsf

1050C-20R

METRES	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHTHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1								SS	pal BR ft br GY	NANNOFOSSIL CHALK WITH FORAMINIFERS, NANNOFOSSIL CHALK WITH FORAMINIFERS AND CLAY RIP-UP CLASTS, NANNOFOSSIL CHALK WITH CARBONATE, PHOSPHATE/IRON HARDGROUNDS
0.79									SS		Section 1, 0-79 cm: Light brownish gray (2Y 6/2) to pale brown (10YR 6/3) NANNOFOSSIL CHALK WITH FORAMINIFERS, with color changes gradual (due to heavy bioturbation) and occurring over 10-15 cm intervals. At 45-63 cm, burrow fill is reddish brown.
0.79									Pho	BK RD	Section 1, 79-80 cm: PHOSPHATE/IRON HARDGROUND, in situ.
0.87									SS	dk BR	Section 1, 80-87 cm: Red (10R 4/6) NANNOFOSSIL CHALK WITH FORAMINIFERS.
1.00									Pho	pal BR ft br GY	Section 1, 87-100 cm: 1x1 to 1x4 cm-size clasts of black PHOSPHATE/IRON HARDGROUND floating in red NANNOFOSSIL CHALK WITH FORAMINIFERS matrix, possibly transported, more likely bioturbated more or less in situ. Some pieces of hardground have 4 mm wide borings filled with matrix-type sediment.
1.10									Pho		Section 1, 100 cm: mineralized HARDGROUND, with sub-mm black coating.
1.38									Pho		Section 1, 104-150 cm to Section 2, 38 cm: NANNOFOSSIL CHALK WITH FORAMINIFERS AND CLAY RIP-UP CLASTS, similar to sediment from top of Section 1 (0-79 cm), but with common rip-up clasts that are black, green, and various shades of brown.
1.38									Pho		Section 2, 38-104 cm: NANNOFOSSIL CHALK WITH FORAMINIFERS AND CLAY RIP-UP CLASTS, with black, sand-to-granule size clasts apparently worked downward by bioturbation from surfaces near 38 cm, 82 cm, and 93 cm.
1.50									SS		Section 2, 137-150 cm: Laminated, salt-and-pepper, NANNOFOSSIL SILTSTONE WITH IRON OXIDE, with up to 10% altered volcanic glass and with black clay rip-ups clasts, sand size. Top 2 cm appears cross-laminated.
1.76									SS		Section 3, 0-76 cm: NANNOFOSSIL CHALK WITH FORAMINIFERS AND CLAY RIP-UP CLASTS, alternating among darker to lighter shades of brown, heavily bioturbated, with color alternations gradual.
1.76									Pho		Section 3, 88-76 and 99-122 cm: High concentration of clay clasts, up to 2 cm across, heavily bioturbated.
1.76									SS		Section 3, 119-122 cm: White NANNOFOSSIL CHALK, as thin bed and piped into underlying hardground.
1.76									SS		Section 3, 122 cm: HARDGROUND
1.76									Pho		Section 3, 122 cm to Section 4, 102 cm: Heavily bioturbated NANNOFOSSIL CHALK WITH CARBONATE, alternately reddish brown to faint green, mottled, with clay rip-up clasts.
1.76									SS		Section 4, 102 cm: hardground
1.76									SS		Section 4, 116 cm: 8 mm thick lamina of CLAYSTONE, slick feel, as if a bentonite.
1.76									SS		Section 4, 102-150 cm: Purplish red to yellowish green NANNOFOSSIL CHALK WITH CARBONATE. Beds from 106-115, 115-133, and 133-150 cm are massive and a dark purplish red, intensely bioturbated, which change upward to lighter purplish red, and culminate in yellowish green, sub-mm laminae.
1.76									SS		Section 5: Massive, heavily bioturbated, mottled, purplish red to pale green NANNOFOSSIL CHALK WITH CARBONATE.
1.76									PAL		Section 4, 37 cm: 3 mm thick black, clay-rich lamina, slick.

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1								Pho SS		<p>NANNOFOSSIL CHALK WITH FORAMINIFERS, a HARDGROUND, and NANNOFOSSIL CHALK</p> <p>Section 1, 0-65 cm: Mottled reddish brown and pale green NANNOFOSSIL CHALK, WITH FORAMINIFERS highly bioturbated, to pale green with a few red splotches. Clay rip-up clasts concentrated around 41 and 53-55 cm. Interval 58-61 cm is faintly laminated LIMONITIC CLAYSTONE.</p>
1	2								vpl OL SS		<p>Section 1, 65-73 cm: DEBRIS FLOW of clay and chalk rip-ups clasts, silly putty pink, green, brownish red, black and white. The clasts were soft before deposition and are now compressed around each other. Large (to 2.5 cm), angular black clasts have green rip-up clasts within them.</p>
2	3								IW vpl OL		<p>Section 1, 73-77 cm: White NANNOFOSSIL CHALK WITH FORAMINIFERS with faint green burrows.</p> <p>Section 1, 77-150 cm: Intensely bioturbated pinkish gray chalk that reddens upward to dusky rose with dark green subhorizontal streaks (burrows?).</p>
3	4								SS		<p>Section 2, 13-15 cm: Dipping, purplish red laminae, folded, microfaulted.</p>
4	5										<p>Section 2: NANNOFOSSIL CHALK WITH FORAMINIFERS in chaotic beds, obvious where formerly laminated, faint in massive, faintly bioturbated intervals. Burrows appear stretched, both vertically and horizontally.</p>
5	6										<p>Chaotic bedding persists to the base of the core.</p> <p>Section 3, 12-59 cm, and Section 4, 0-30 cm: Dusky yellow (6Y 6/2) limonite bands cut across NANNOFOSSIL CHALK; probably diagenetic features.</p>
6	7										<p>Section 3, 51-59 cm: Faint green laminae</p> <p>Section 3, 21-36 cm: Rare burrows outlined in dusky yellow, with green interiors.</p>
7	8										<p>Section 4, 130-137 cm: Fracture with slickensides</p>
8	9										<p>Section 5: Heavily bioturbated, burrows slightly stretched.</p>
9	10										<p>Section 6: 15-22 and 43-45 cm microlaminated, dusky yellow and green. The intervening intervals are massive, slightly to heavily bioturbated.</p>
10	11										<p>Section 7: Chaotically bedded to 30 cm. Sub-mm laminae at 30-34, 48-53, 64-68, 104-112 cm. The upper laminated intervals are green to dusky yellow; the lowest is very dark, almost black. Intervening sediment is massive, white, intensely bioturbated.</p>
11	12								SS PAL		<p>Core Catcher: 0-16 cm, white, massive chalk; 16-28 cm, black, laminated NANNOFOSSIL CARBONATE CHALK WITH FORAMINIFERS, IRON OXIDE, AND PYRITE.</p>

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
22.1 22.2	1 2							middle Cenomanian	SS SS PAL	lt gn GY	<p>NANNOFOSSIL CHALK WITH CLAY</p> <p>Greenish gray (10Y 6/1) to light greenish gray (10Y 8/1) with greenish gray burrows.</p> <p>35-50 cm- Abundant cross-cutting Zoophycos spreiten.</p> <p>Section 2: Eight 2-5 cm pieces; most match lithology in Section 1.</p> <p>Clast of greenish gray (5Y 4/1), laminated CLAYSTONE WITH NANNOFOSSIL AND MICRITE.</p> <p>Clast with yellowish (5Y 7/2) patches but otherwise as major lithology.</p>

METRES	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
1										lt gn GY	<p>CARBONATE CHALK WITH CLAY, LIMESTONE WITH CLAY and CLAYEY NANNOFOSSIL CHALK WITH MICRITE</p> <p>Core contains interbedded slump deposits and pelagic sediment.</p> <p>Slump deposits are composed of LIMESTONE with both clay-rich and clay-poor layers. More foraminifers were apparent on cut surface than suggested by smear slide. Within slump, layers range from < 1 mm to > 25 cm and from dark greenish gray (10Y 3/1) to very light greenish gray (10Y 9/1). Small faults (both normal and reverse sense of displacement) and folds are common throughout. White, oval, 1-5 mm burrows occur rarely throughout. At least 3 and perhaps 5 or more slumps are represented.</p> <p>Pelagic sediment (CARBONATE CHALK WITH CLAY to CLAYEY NANNOFOSSIL CHALK WITH MICRITE) is burrow mottled, light greenish gray (10Y8/1) to greenish gray (5GY 5/1) with gradual color variation. Darker intervals are relatively clay-rich, and lighter intervals are relatively carbonate-rich.</p> <p>15-20 cm: Matrix supported, white (0.5 cm max) and green (0.3 cm max) pebbles.</p> <p>72 cm: 1 cm clayey layer.</p> <p>72 cm: 1 cm clayey layer.</p> <p>Color changes are gradational.</p>
2									Pho	med gn GY	
3									Pho Pho		
4									SS	lt gn GY	
5									IW	mlt gn GY	
6									SS	med gn GY	
7									Pho		
8									SS		
9										lt gn GY	
10										mlt gn GY	
11										lt gn GY	
12										mlt gn GY	
13										mlt gn GY	
14										gn GY	
15									SS		
16									PAL		

SITE 1050 HOLE C CORE 24R

CORED 529.1-538.7 mbsf

1050C-24R

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0.0											
1										gn GY	NANNOFOSSIL CHALK WITH CLAY AND FORAMINIFERS
2								early Cenomanian		lt gn GY	Laminated, burrow-mottled light greenish gray to greenish gray NANNOFOSSIL CHALK WITH CLAY AND FORAMINIFERS. Homogeneous with a few darker intervals. All sediments are wackestone.
3									SS	gn GY	
									PAL	lt gn GY	

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1						HH				<p>NANNOFOSSIL CARBONATE CHALK and CARBONATE CHALK WITH NANNOFOSSILS AND CLAY</p> <p>Irregular, faulted and slump-deformed alternation of light greenish gray (10GY 7/1) NANNOFOSSIL CARBONATE CHALK and dark greenish gray 10GY 5/1 CARBONATE CHALK WITH NANNOFOSSILS AND CLAY. Microfaults, many of which are subhorizontal or subparallel to bedding, are common throughout. They have mm-thick clay veneers on their planes. Larger, slickensided fault planes occur in the intervals where drilling disturbance is higher, but they are less abundant than the clay-sealed microfaults.</p>
1	2					HH	early Cenomanian	Ss			
2	3					HH		Ss			
3	4					HH					
4						HH		PAL			

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHNOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0	1								SS	lt gn GY gn GY	NANNOFOSSIL CLAYSTONE TO CLAYEY NANNOFOSSIL CHALK faults with slickensides: Section 1, 26-30 cm, 93-100 cm, 142-147 cm; Section 2, 0-14 cm, 98-100 cm.
1	2								SS	lt gn GY gn GY	SD: Section 1, 55 cm: CLAYEY NANNOFOSSIL CARBONATE CHALK WITH FORAMINIFERS Section 1, 51-150 cm: minor soft sediment deformation.
2	3							early Cenomanian	SS SS IW	pal BR gn GY rd BR lt gn GY	Sediments from Section 1, 0 cm through Section 2, ~88 cm are varying shades of light greenish gray to dark greenish gray (10GY 8/1-5/1). CARBONATE CLAYSTONE WITH NANNOFOSSILS Pale brown (10YR 6/3) CLAYEY NANNOFOSSIL CHALK with whitish sediments in chaotic bedding with microfaults. Section 2, 110-114 cm: homogeneous light gray (10YR 7/1) CARBONATE CHALK WITH FORAMINIFERS NANNOFOSSILS AND CLAY containing several small, lighter clasts with dissolved foraminifers.
3	4								Pho SS	rd BR lt gn GY	Section 2, 114-base: light greenish gray to greenish gray (10GY 8/1-6/1) with light gray (10YR 7/1) sediments with chaotic bedding.
4	5								SS	gn GY gn GY	Section 3, 0-33 cm: light greenish gray to greenish gray (10GY 8/1-6/1) sediments with rare reddish brown (5YR 5/4) sediments.
5	6								Pho SS	BK GY	Section 3, 33-53 cm: Reddish brown (5YR 5/4) sediments dominate, with rare light greenish gray to greenish gray (10GY 8/1-6/1) sediments, mostly as burrow infillings. Zoophycos burrows are scattered through Section 3.
6	7								PAL		Section 3, 53-86 cm: light greenish gray to greenish gray (10GY 8/1-6/1) sediment dominates. Section 3, 86-150 cm: reddish brown (5YR 5/4) CLAYEY NANNOFOSSIL CHALK WITH FORAMINIFERS AND FE-OXIDE with small color alternations with light greenish gray to greenish gray (10GY 8/1-6/1) sediment. In Section 4, 0-62 cm, the greenish grays become more dominant in these color alternations.
7	8										Section 4, 56 cm: dark brown (5YR 3/4) cherty infilled burrow. Section 4, 61-62 cm: reddish brown (5YR 5/4) patch; reddish brown Chondrites 57-67 cm. There are pinkish Chondrites and undifferentiated burrows 67-74 cm.
8	9										Section 4, 62-93 cm: light greenish gray to greenish gray (10GY 8/1-6/1) NANNOFOSSIL CLAYSTONE. There is a layer of light olive brown (2.5Y 5/6) sediment at 81-82 cm, with several streaks of the same color through this interval.
9	10										Section 4, 91-92 cm and 97-99 cm: mudclasts. Section 4, 104-108 cm: Black (5Y 2.5/1-2.5/2) homogeneous sediment. Soft sediment deformation is frequent throughout the entire core.
10	11										Section 4, 108 cm - Core Catcher: laminated gray to black (5Y 6/1-2.5/2) NANNOFOSSIL CLAYSTONE to CARBONATE CLAYSTONE WITH FORAMINIFERS AND NANNOFOSSILS with microfaults, soft sediment deformation, and occasional burrowing. Foraminifer molds are visible on the surface throughout the entire core. CC, 8-12 cm: homogeneous, with 2 burrows.

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
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METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0											
1									SS	mdk GY	CLAYSTONE WITH NANNOFOSSILS, FELDSPAR AND PYRITE and NANNOFOSSIL CLAYSTONE WITH SHELL DEBRIS AND CARBONATE GRAINS
2				P _u						dk GY	Laminated, medium to dark gray, faintly burrowed to non-burrowed CLAYSTONE WITH NANNOFOSSILS FELDSPAR AND PYRITE alternating with NANNOFOSSIL CLAYSTONE WITH SHELL DEBRIS AND CARBONATE GRAINS. Entire core is slumped and displays syn-sedimentary fractures. Bedding dips 30 degrees to vertical in Sections 4 to 6. Aragonite shell fragments scattered throughout the core and a few entire ammonite shells preserved.
3				P					mdk GY		
4									mdk ye GY		
5									dk GY		
6									dk GY		
7									dk GY		
8									mdk GY		
9									dk GY		
10									mdk GY		
11									dk GY		
12									SS	dk GY	
13										dk GY	
14										dk GY	
15										mdk GY	
16									PAL	dk GY	Aragonite shell of entire ammonite, obliquely compressed. Bedding dips 50 degrees

METERS	CORE AND SECTION	LITHOLOGY	PHYSICAL STRUCTURES	ACCESSORIES	ICHOFOSSILS	FOSSILS	CORE DISTURBANCE	AGE	SAMPLES	COLOR	REMARKS
0.0											<p>NANNOFOSSIL CLAYSTONE WITH ORGANIC DEBRIS AND FELDSPAR and CLAYEY NANNOFOSSIL CHALK</p> <p>Alternation of dark greenish gray (5GY 4/1) to greenish black (5GY 2/1) NANNOFOSSIL CLAYSTONE WITH ORGANIC DEBRIS AND FELDSPAR and greenish gray (5GY 6/1) CLAYEY NANNOFOSSIL CHALK. Small offset faults and angular slumping throughout.</p>
0.1										dk gn GY	
0.2										dk gn GY	
0.3				Py						dk gn GY	
0.4										gn GY	
0.5										dk gn GY	
0.6										gn GY	
0.7				Py						dk gn GY	
0.8										gn BK	
0.9										gn GY	
1.0										dk gn GY	
1.1										dk gn GY	
										PAL	