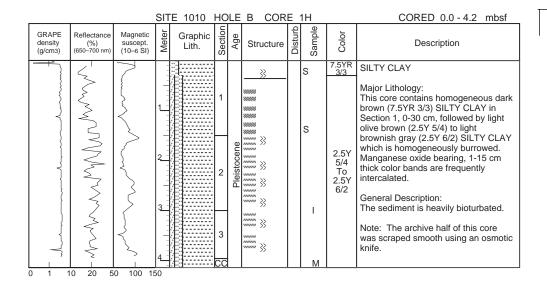


Previous Chapter

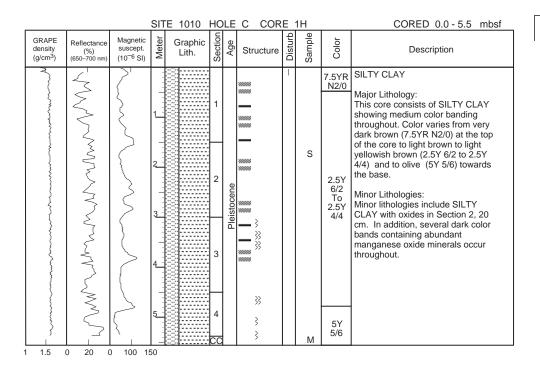
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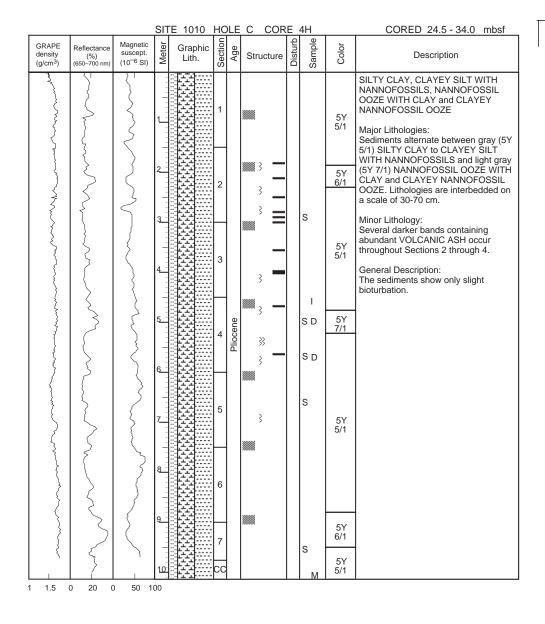
			SIT	E 1010	НО	LE	B COR	E :	2H		CORED 4.2 - 13.7 mbsf
GRAPE density (g/cm ³)	Reflectance (%) (650–700 nm)	Magnetic suscept. (10 ⁻⁶ SI)	Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
HANNAM MARA PULLANAMANANAMANAMANAMANAMANAMANAMANAMANAM		200 4	1 - 1 - 2 - 3 4		1 2 3 4 5 CC	Pleistocene		00000000	S S S S M	5Y 4/2 To 5Y 6/2	CLAY Major Lithology: This core contains a homogeneous light olive gray to gray (5Y 4/2 to 5Y 6/2) CLAY. Clay content varies between 70% and 80%, with 20-30% silt. Minor Lithologies: 1. VOLCANIC ASH layers at Section 4, 10-12 cm, and Section 5, 30-32 cm 2. NANNOFOSSIL CLAY at Section 6, 19 cm. General Description: Bioturbation is generally slight to moderate throughout this core, but increases near the base.

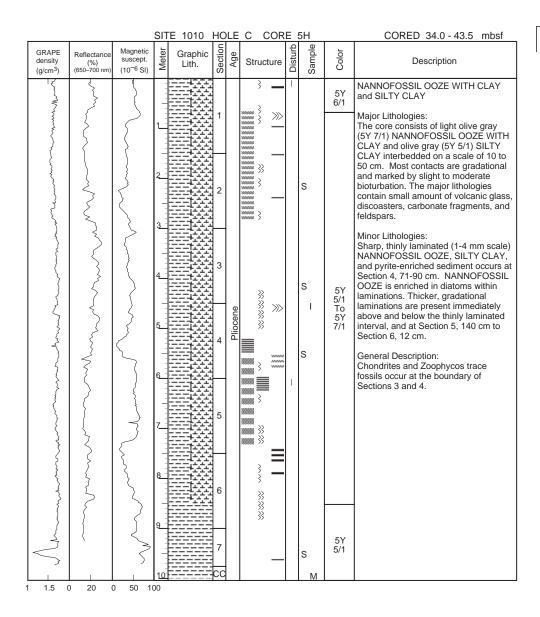
			SIT	E 1010	HC	LE	B COR	E :	3H		CORED 13.7 - 23.2 mbsf
GRAPE density (g/cm ³)	Reflectance (%) (650–700 nm)	Magnetic suscept. (10 ⁻⁶ SI)	Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
JAN WANTER CONTRACTION OF THE STATE OF THE S			2		2 3	Pliocene -Pleistocene	— -A 33 -A — 3 -A	00 W	S	5Y 5/2	CLAY Major Lithology: This core consists of a homogeneous olive gray (5Y 5/2 to 5Y 7/1) CLAY. This core is moderately bioturbated. Minor Lithologies: Minor lithologies include SILTY CLAY with volcanic glass (Section 2, 84 cm). General Deascription: Discrete VOLCANIC ASH layers occur at Section 2, 80 and 85 cm, Section 3, 15, and 55 cm, Section 4, 85 cm, and Section 6, 77 cm.
			5		4	late Pliocen				5Y 7/1 5Y 5/2	
}		}	7_		5		}}} }}} }}			5Y 5/1	
\ \{\}	}	}					33			5Y 3/1	
					6 7 CC		→ ³³ -A		M	5Y 5/2	



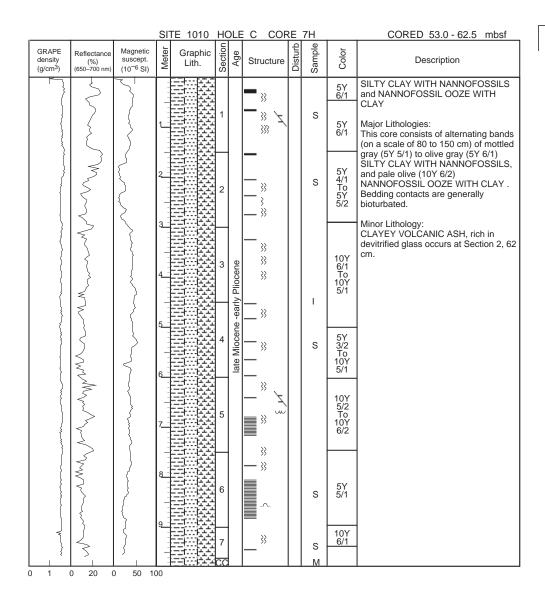
			SIT	E 1010	HO	LE	C COR				CORED 5.5 - 15.0 mbsf
GRAPE density (g/cm ³)	Reflectance (%) (650–700 nm)	Magnetic suscept. (10 ⁻⁶ SI)	Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
Aprille Company of many many many many many many many many		200 4	2 - 4 - 7 - 8 - 9 - 00		1 2 2 3 3 4 4 5 5 6 6 7 7 CCC	Pleistocene	<pre> 3</pre>	00	S S S S S S S S S S	5Y 5/2 To 5Y 6/2	SILTY CLAY Major Lithology: The entire cored interval consists of olive gray to light olive gray (5Y 5/2 to 5Y 6/2) SILTY CLAY. Minor Lithologies: Sand-size VOLANIC ASH occurs in discrete thin layers and disseminated over larger intervals, particularly in Section 2, 123-126 cm, Section 4, 139-143 cm, Section 6, 11-117 cm, and Section 6, 142-148 cm. General Description: Bioturbation is generally slight to moderate.

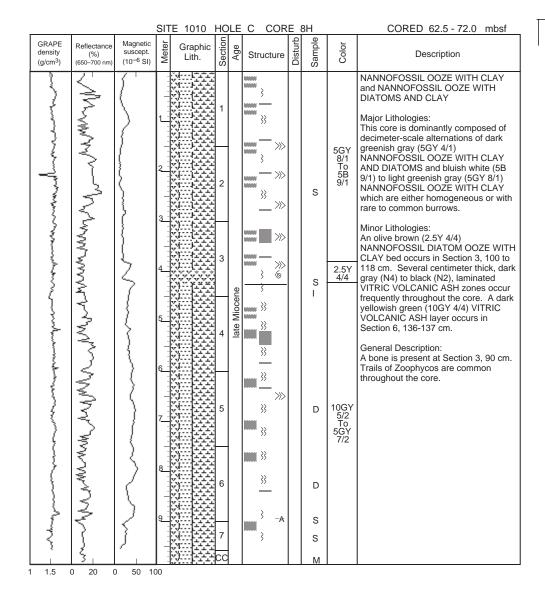
			SIT	ΓΕ 1010	НС	LE	C	COR	Ε			CORED 15.0 - 24.5 mbsf
GRAPE density (g/cm ³)	Reflectance (%) (650–700 nm)	Magnetic suscept. (10 ⁻⁶ SI)	Meter	Graphic Lith.	Section	Age	Struc	ture	Disturb	Sample	Color	Description
1.5		100 2	2		1 2 3 4 5 CC	late Pliocene -Pleistocene	**************************************	-A -A		S D S D S M	10Y 7/1 10Y 6/1	MANNOFOSSIL OOZE WITH CLAY Major Lithology: This core consists of pelagic NANNOFOSSIL OOZE WITH CLAY. The clay content is about 15%. Sediment color is light gray to pale greenish yellow (5Y 7/1 to 10Y 6/1). Minor Lithologies: This core contains three thin (1-2 cm) VOLCANIC ASH layers found in Section 1, 90-91 cm, Section 2, 67-68 cm, and Section 3, 112-113 cm and a SILTY CLAY layer in Section 6, 64-70 cm. Other minor lithologies are CLAYEY NANNOFOSSIL OOZE (Section 7, 37 cm), NANNOFOSSIL OOZE WITH GLASS (Section 3, 81 cm), and SILTY CLAY (Section 6, 68 cm). General Description: The sediment is slightly bioturbated.

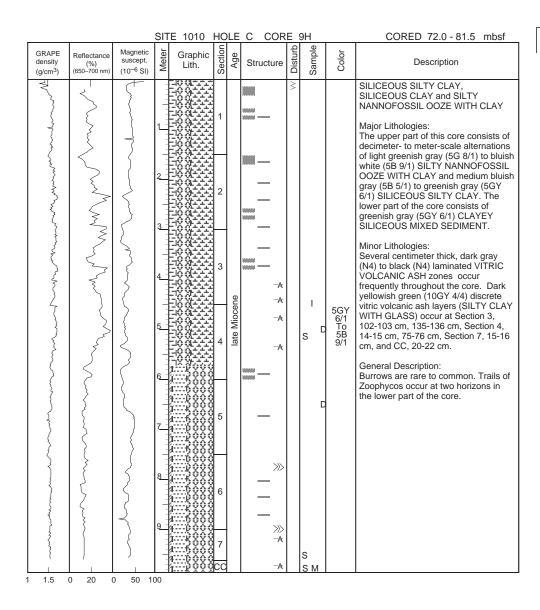




			SIT	E 1010		LE	C COR				CORED 43.5 - 53.0 mbsf
GRAPE density (g/cm ³)	Reflectance (%) (650–700 nm)	Magnetic suscept. (10 ⁻⁶ SI)	Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
			2 3 4 5 7 8 9		1 2 3 4 5 6 7 CC	early Pliocene	A* A* A* A* A* A* A*	1	s s s	5Y 5/1 5Y 5/1 10Y 5/1 10Y 5/1 5Y 6/1 5Y 6/1 5Y 6/1 5Y 5/1 5Y 6/1	CLAYEY SILT and NANNOFOSSIL OOZE WITH FORAMINIFERS Major Lithologies: This core consists of gray to light olive gray (5Y 5/1 to 10Y 5/1) CLAYEY SILT, and gray to white (5Y 5/1 to 5Y 8/1) NANNOFOSSIL OOZE WITH FORAMINIFERS. Minor Lithologies: Scattered individual thin black (N8) and green (10GY 4/4) laminations of pyrite or oxides and VOLCANIC ASH, partly altered to CLAY (Section 6, 9 cm) occur within the otherwise massive beds. Indistinct laminations with diffuse contacts occur in Section 4. General Description: The core is thickly bedded with bioturbated gradational contacts indicated by slight shifts in color.

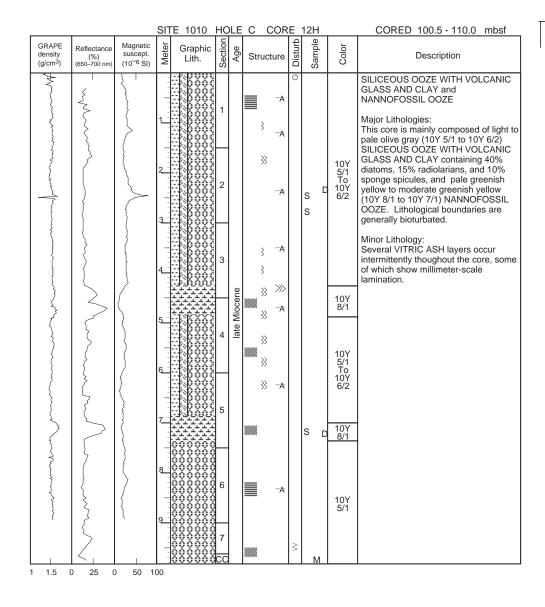


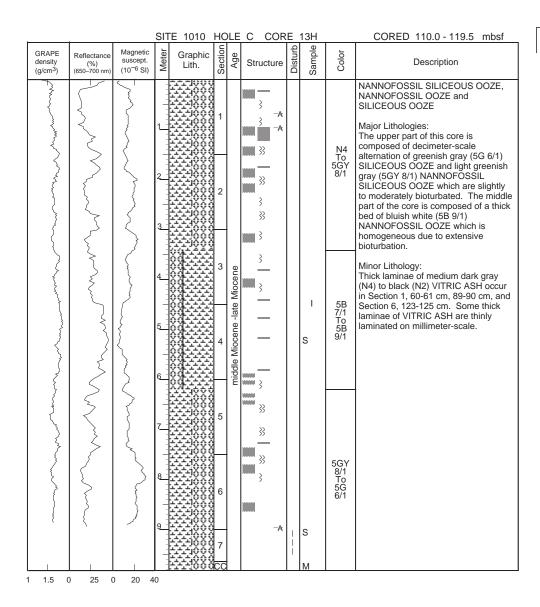


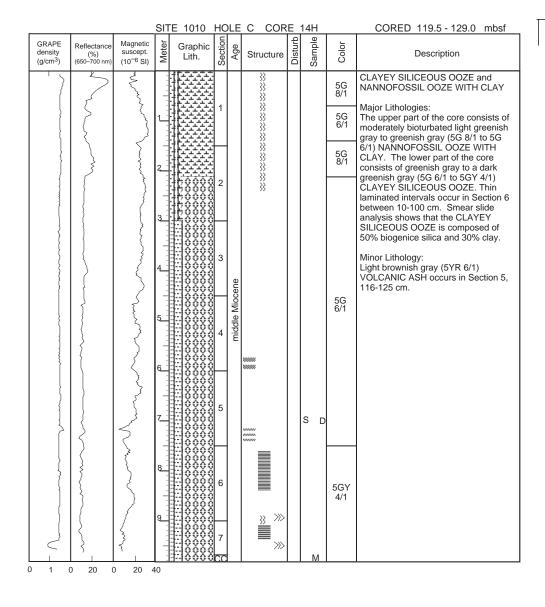


Reflectance (%) Magnetic succept. (%) Part of the succept. (%) Part of				SIT	E 1010	HO	LE	C COR	E	10H		CORED 81.5 - 91.0 mbsf
COZE WITH NANNOFOSSILS Solution Colored	density	Reflectance (%) (650–700 nm)	suscept.		Graphic	Section	Age		Disturb	Sample	Color	
Major Lithologies: This core is composed of meter scale interbedded olive gray (10' 6/2) to 6/1 light olive gray (5' 7'/1) DIATOMACEOUS RADIOLARIAN OOZE WITH CLAY and olive brown (5' 5'/3) SILICEOUS OOZE WITH ANNOPOSSILs which are slightly to moderately bioturbated or homogeneous. S S S S S S S S S S S S S S S S S S S	A	3	<u> </u>	-	100000 100000 100000			-			5Y 5/1	OOZE WITH CLAY and SILICEOUS
S SY 5/3 SILICEOUS OOZE WITH NANNOFOSSILS which are slightly to homogeneous. S S S S S S S S S S S S S S S S S S				1	1000000 1000000 10000000 10000000 1000000	1		*			5Y 7/1 To 5Y 6/1	Major Lithologies: This core is composed of meter scale interbedded olive gray (10Y 6/2) to light olive gray (5Y 7/1) DIATOMACEOUS RADIOLARIAN
Minor Lithology: Several centimeter to decimeter thick, dark gray (N4) to black (N2) laminated VITRIC ASH zones occur frequently throughout the core. S 107 6/2 107 6/2 107 6/2 107 6/1 107 6/1 107 6/2	N/		\	-		2		33		S	5Y 5/3	(5Y 5/3) SILICEOUS OOZE WITH NANNOFOSSILS which are slightly to
dark gray (N4) to black (N2) laminated VITRIC ASH zones occur frequently throughout the core.	}	}	}	3_	100000 100000 200000					S	5Y 4/1 To	homogeneous.
10Y	V	}	}	-	100000 100000 100000			55			5Y 7/1	Several centimeter to decimeter thick,
5 10				4_	%00000 100000 100000	3	e.	· ·		-	10Y 6/2	VITRIC ASH zones occur frequently
7/1 To 5Y 6/1 To 10Y 6/2 To 10Y 6	\.	}	}	5 -	100000 100000 100000		Miocer	}		'		
7		MM		6	160000 100000 100000 100000 100000	4	late				5Y 7/1 To 5Y 6/1	
7	}	W	}	-	100000 100000							
TOY 10Y 6/2 10	*		}	7		5		_				
6/2 16/2 00/00 16/2 00/00 1	7		}	8	10000000000000000000000000000000000000	_		***			10Y 5/1 To	
	}		}	9_	160000 160000 160000 160000	6		— — ■			6/2	
	\	}	>	-	100000 100000 100000	7					5Y	
1.5 0 20 0 25 50	1.5	0 20 () 25 5	<u>۔۔۔</u> 50	<u> </u>	UU		mm/h		IVI	5/1	<u> </u>

NANNOFOSSIL OOZE WITH DIATOMS AND RADIOLARIANS and DIATOM OOZE Major Lithologies: The entire interval consists of pale olive (10Y 6/1) NANOFOSSIL OOZE WITH DIATOMS AND RADIOLARIANS alternating with pale greenish yellow (10Y 7/1) DIATOM OOZE. Minor Lithologies: Several dark gray (N4) to black (N2) VOLCANIC ASH layers occur in the lower part of the core. A pale olive (10Y 6/1) DIATOM OOZE in Section 3, 78-92 cm, is almost exclusively composed of Thalassiothrix spp. pennate diatoms. S 10Y 6/1 General Description:				SIT	E 1010		LE	C COR		11H		CORED 91.0 - 100.5 mbsf
The entire interval consists of pale of the entire interval consists of the entire int	density	Reflectance (%) (650–700 nm)	suscept.	Meter		Section	Age	Structure	Disturb	Sample	Color	Description
The entire interval consists of pale of the entire interval consists of the entire int	MAMMAM		\	1		1		*** *** ***			10Y 6/1	DIATOMS AND RADIOLARIANS and DIATOM OOZE
Minor Lithologies: Several dark gray (N4) to black (N2) Vol.CANIC ASH layers occur in the lower part of the core. A pale olive (10Y 6/1) DIATOM OOZE in Section 3, 78-92 cm, is almost exclusively composed of Thalassiothrix spp. pennate diatoms. General Description: The bioturbation is generally common in the lower part of the core with Zoophycos at Section 2, 90-140 cm, Section 7, 0-40 cm, and 120-150 cm.	John Monday Market			2		2				S	10Y 7/1	The entire interval consists of pale olive (10Y 6/1) NANOFOSSIL OOZE WITH DIATOMS AND RADIOLARIANS alternating with pale greenish yellow (10Y 7/1) DIATOM
₹ } ₹	Marriage of Jan Marriage			4			late Miocene	>>> *******		S	10Y 6/1	Several dark gray (N4) to black (N2) VOLCANIC ASH layers occur in the lower part of the core. A pale olive (10Y 6/1) DIATOM OOZE in Section 3, 78-92 cm, is almost exclusively composed of Thalassiothrix spp. pennate diatoms. General Description: The bioturbation is generally common in the lower part of the core with Zoophycos at Section 2, 90-140 cm,
₹ { 	* T	1	}	6 -				>>> >>>				
₹ { 	M. Marana Ma			7		5		\$\$ \$\$ \$\$ \$\$ \$\$			10Y 7/1	
	5	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~						 				
	Ę	}	}	-		cc				М		

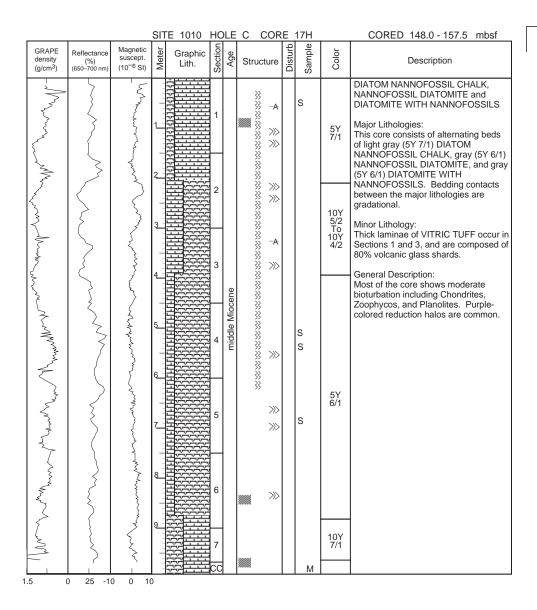






Magnetic suscept. (10-6 SI)	Graphic Lith.	Dection Section Age	Structure -A -3	Disturb	Sample	Color	Description SILICEOUS CLAYEY MIXED SEDIMENT and CLAYEY SILICEOUS OOZE Major Lithologies:
		1	33 >>>	S	6		SEDIMENT and CLAYEY SILICEOUS OOZE
7 3	XXXX					5G 7/2	This core consists of gradationally interbedded grayish green (5G 5/2) CLAYEY SILICEOUS MIXED SEDIMENT and (5Y 4/2 to 5Y 5/2) CLAYEY SILICEOUS OOZE. Minor Lithologies:
) 3	- X		- >			5Y 4/3	Thin beds of dusky yellowish green (5Y 4/2) DIATOM OOZE WITH CLAY occur
	000		} -A			5G 5/2	in Sections 2, 3, and 6. These have gradational boundaries. A single bed of light gray (5Y 7/1) NANNOFOSSIL OOZE WITH CLAY occurs in Section
_	0000	3	3			5Y 4/2	4. A 5 cm-thick black graded VITRIC ASH WITH PYRITE bed with an sharp
5.	0000	4 Aiocene	3			5Y 4/3 To 5G 6/2	lower contact is present at Section 6, 123-128 cm. This bed is characterized by volcanic glass shards coated in pyrite. Other VOLCANIC ASH beds occur in Sections 1, 2, and 6.
		4 ppiw	}} >>>			5Y 4/2 To 5Y 7/1	General Description: The core is mottled in appearence, often with reduction haloes surrounding burrows.
	0000				3	5Y 4/3	
	0000	6	3 _			5GY 4/2	
9	0000 0000 0000 0000	7	} »»		8	5G 5/2	
	7.	7	7	**************************************		**************************************	\$\\ \begin{array}{cccccccccccccccccccccccccccccccccccc

GRAPE density (g/cm³) Reflectance (%) (succept. (10 °6 St)) Reflectance (%) (succept. (10 °6 St)) Reflectance (succept	tions ayish olive IOZE and DFOSSIL
Major Lithologies: The core consists of alterna between olive (5Y 4/3) to gr green (5GY 3/2) DIATOM C	tions ayish olive IOZE and DFOSSIL
S S S S S S S S S S S S S S S S S S S	rayish olive DOZE and DFOSSIL bated,
The core consists of alternal between clive (5Y 4/3) to green (5GY 3/2) DIATOM C	rayish olive DOZE and DFOSSIL bated,
OOZE. Sy A/3 General Description: The core is generally bioturi however, thinly laminated ir common in the upper half or	bated,
General Description: The core is generally bioturi however, thinly laminated ir common in the upper half o	bated,
however, thinly laminated ir common in the upper half o	tanuala ana
	the core
The lithologies are increasir indurated.	ngly well
3 3 3 10Y 6/2	
\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
\$\left\{\begin{array}{c ccccccccccccccccccccccccccccccccccc	
10Y 6/2	
1 1.5 0 25 -20 0 20	



			SI	E 1010 F		E	C COR		18X		CORED 157.5 - 165.2 mbsf
GRAPE density (g/cm ³)	Reflectance (%) (650–700 nm)	Magnetic suscept. (10 ⁻⁶ SI)	Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
1.5	0 50	1 12.5 2	2 3 3 5 7 7		1 2 3 4 5 5 6 6 7 CCC	Middle Miocene	********		s s s	10Y 7/1 5GY 5/2 10Y 7/1 5Y 5/2 10Y 7/1 5Y 5/2 10Y 7/1 5Y 5/2	DIATOM NANNOFOSSIL OOZE and DIATOM OOZE WITH NANNOFOSSILS Major Lithologies: This core is composed of thickly interbedded pale olive gray (10Y 7/1) DIATOM NANNOFOSSIL OOZE and greenish gray (5GY 5/2) DIATOM OOZE WITH NANNOFOSSILS. Minor Lithologies: The minor lithologies consist of pale olive gray (10Y 7/1) NANNOFOSSIL OOZE WITH DIATOMS and light olive gray (5Y 6/2) NANNOFOSSIL DIATOM OOZE. These lithologies are gradationally interbedded between the DIATOM NANNOFOSSIL OOZE AND DIATOM OOZE WITH NANNOFOSSILS General Description: The sediments are generally moderately bioturbated. Note: The cores were split by sawing.

Jensity (%) (650-700 nm) (10 ⁻⁶ SI) Lith. (10 ⁻⁶ SI) Six Lith. (10 ⁻⁶ SI) Lith. (10 ⁻⁶ SI) Lith. (10 ⁻⁶ SI) Lith. (10 ⁻⁶ SI) Six Lith. (10 ⁻⁶ SI) Lit				SIT	ΓΕ 1010			C COR	Е	19X		CORED 165.2 - 174.9 mbsf
DIATOM NANNOFOSSIL OOZE Major Lithologies: This core is mottled throughout and consists of gradationally interbedded greenish gray (10GY 5/2) NANNOFOSSIL DIATOM OOZE and light greenish gray (5GY 8/1) DIATON NANNOFOSSIL OOZE. General Description: Burrowing is especially distinct at lithological contacts where burrows in the underlying lithology are filed it sediment from above.	GRAPE density (g/cm ³)	Reflectance (%) (650–700 nm)	suscept.	Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
\$ S S S S S S S S S	density	Reflectance (%) (650–700 nm)	SUSCEPT. (10 ° 6 SI)	3	Graphic Lith.	1 2 3 5	middle Miocene	**************************************		o – o o	10GY 5/2 5GY 8/1 5GY 8/1 10GY 5/2 5GY 8/1	NANNOFOSSIL DIATOM OOZE and DIATOM NANNOFOSSIL OOZE Major Lithologies: This core is mottled throughout and consists of gradationally interbedded greenish gray (10GY 5/2) NANNOFOSSIL DIATOM OOZE and light greenish gray (5GY 8/1) DIATOM NANNOFOSSIL OOZE. General Description: Burrowing is especially distinct at lithological contacts where burrows in the underlying lithology are filed it
1.5 0 20 -10 0 10	1.5	0 20 -1	0 0	10		UU		\$	Ш	M		

5Y DIATOM NANNOFOSSIL OOZE and NANNOFOSSIL DIATOM OOZE 5Y Major Lithologies: This core consists of gradationally interbedded yellowish gray (5Y 7/1 to 5Y 8/1) DIATOM NANNOFOSSIL DIATOM OOZE S S S S S S S S S S S S S S S S S S S		_SI	TE 1010			C COR	_	20X		CORED 174.9 - 184.6 mbsf
Major Lithologies: This core consists of gradationally interbedded yellowish gray (5Y 7/1 to 5Y 8/1) DIATOM NANNOFOSSIL DIATOM NANNOFOSSIL OOZE and greenish gray (5GY 5/2 to 10GY 7/2) NANNOFOSSIL DIATOM OOZE. S S S S S S S S S S S S S S S S S S	(%) suscept.	Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
thick lamina of greenish gray (10GY)	Manual Ma	2 3 4 5 6		2	middle Miocene	}	//	s s s	5Y 7/1 5Y 8/1 5Y 5/2 5Y 8/1 10GY 7/2 To 5GY 5/2	Major Lithologies: This core consists of gradationally interbedded yellowish gray (5Y 7/1 to 5Y 8/1) DIATOM NANNOFOSSIL OOZE and greenish gray (5GY 5/2 to 10GY 7/2) NANNOFOSSIL DIATOM OOZE. Minor Lithologies: Highly fractured thin beds of PORCELLANITE occur in Section 4 at 40 cm, 90 cm, 110 cm, and in the Core Catcher. A highly fractured chert occurs in the core catcher below a thick lamina of greenish gray (10GY 5/2) DOLOMITIC CLAY which is barren of diatoms and contains about 5% nannofossils. General Description:

SI	E 1010	НО	LE	C COR	CORED 184.6 - 194.2 mbsf				
Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description	
1		1 CC	middle Miocene	© 3 % © 33 © 33	> >	S S S M	10GY 5/2 To 5GY 8/1	DOLOMITIC NANNOFOSSIL OOZE and PORCELLANITE Major Lithologies: This core consists of bioturbated grayish green to greenish gray (10GY 5/2 to 5GY 8/1) DOLOMITIC NANNOFOSSIL OOZE with thin interbeds or concretions of PORCELLANITE. The DOLOMITIC NANNOFOSSIL OOZE is composed of up to 35% dolomite. The PORCELLANITE is highly fractured and disturbs the surrounding less consolidated sediments. Minor Lithology: Thin beds of greenish black (5GY 2/1) CHERT occur at top of Section 1. A dewatering structure occurs in Section 1 between 19-20 cm, which has been silicified in PORCELLANITE.	

SIT	E 1010	HC	LE	C COR	CORED 194.2 - 203.8 mbsf			
Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
1		1	middle Miocene	33 33	\wedge	S S M	5G 5/2 10Y 5/1 5G 5/2	NANNOFOSSIL DIATOMITE, SILTY CLAY WITH NANNOFOSSILS and PORCELLANITE Major Lithologies: This core consists of bioturbated grayish green (10Y 5/1) NANNOFOSSIL DIATOMITE and olive gray (5G 5/2) SILTY CLAY WITH NANNOFOSSILS with interbeds or nodules of grayish green (10Y 5/1) PORCELLANITE. The silicified lithologies are fractured and disturb the surrounding less-consolidated sediments. General Description: Burrows structures are preserved in CHERT and PORCELLANITE.

Graphic Lith. Major Lithologies: This core consists of fractured thin beds or nodules of green (10GY 5/2) DIATOMACEOUS CLAY. Some burrows can be seen on the fractured surfaces of the indurated fragments. Minor Lithology: Fractured thin beds or nodules of greenish black (5GY 2/1) CHERT. Some burrows can be seen in	SIT	E 1010	HOL	E.	C COR	CORED 203.8 - 209.4 mbsf					
PORCELLANITE Major Lithologies: This core consists of fractured thin beds or nodules of greenish black (5GY 2/1) PORCELLANITE in grayish green (10GY 5/2) DIATOMACEOUS CLAY. Some burrows can be seen on the fractured surfaces of the indurated fragments. Minor Lithology: Fractured thin beds or nodules of greenish black (5GY 2/1) CHERT.	Meter		Section	Age	Structure	Disturb	Description				
indurated fragments.		4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 CC	middle Miocene		^^^^	_	5GY 2/1	PORCELLANITE Major Lithologies: This core consists of fractured thin beds or nodules of greenish black (5GY 2/1) PORCELLANITE in grayish green (10GY 5/2) DIATOMACEOUS CLAY. Some burrows can be seen on the fractured surfaces of the indurated fragments. Minor Lithology: Fractured thin beds or nodules of greenish black (5GY 2/1) CHERT. Some burrows can be seen in		

SITE	1010	НΟ	LE	C COR	CORED 209.4 - 213.9 mbsf				
Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description	
		1						APHYRIC BASALT Major Lithology: This core consists of a fine grained APHYRIC BASALT which is vesciular from 20 cm to the base of the core. Piece 4 shows alteration products and pyrite infilling vesicles, and Piece 7 shows flow banding. Minor Lithology: Piece 2 consists of an APHYRIC PLAGIOCLASE BASALT which is non- vesicular.	

			SIT	E 1010		LE	D COR	E	1H		CORED 0.0 - 4.0 mbsf
	GRAPE density (g/cm ³)	Magnetic suscept. (10 ⁻⁶ SI)	Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
	1		-							10YR 3/4	SILTY CLAY
			1_		1	À	2000000 2000000 2000000 2000000 2000000 2000000		S	10YR 4/4	Major Lithology: This core is composed of dark yellowish brown (10YR 4/4) to yellowish orange (10YR 6/4) SILTY CLAY with decimeter scale dark gray
			3		2 3	Quaternary	Second		S M	10YR 6/4	(N3) color banding (Mn-oxide?). General Description: The SILTY CLAY is massive except for the dark bands, and displays few distinct burrows.
0	1 5	50 100 1	50								

		SI	TE 1010	HC	LE	D COR	E	2H		CORED 4.0 - 13.5 mbsf
GRAPE density (g/cm ³)	Magnetic suscept. (10 ⁻⁶ SI)	Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
1	}									CLAY and SILTY CLAY
		1_		1			≯		5GY 5/2	Major Lithologies: This core is composed of dusky yellowish green (5GY 5/2) to grayish olive green (5GY 4/2) CLAY and SILTY CLAY which show meter scale indistinct color alternation.
}	}	2_		0			>		5V	Minor Lithology: Grayish blue green (5GB 5/2) to black
\	[2			3		5Y 7/2	(N2) discrete VITRIC VOLCANIC ASH layers occur in Section 7, 10 cm, 30
}		3							5Y	cm, and 75-80 cm.
}		-							5Y 5/1 To 10GY 5/2	General Description: The core is slightly bioturbated to homogeneous throughout.
}		4_		3		}	≷			
{	}					} w				
}		5_		4	Quaternary				5Y 5/1 To 5Y 5/6	
	{	6		7	ğ				5Y 5/6	
}	{									
}	}	-		5		}			5)/	
}		7_				,			5Y 7/1 To 5Y 6/1	
}	}	-							6/1	
}	}	8_		6		}}				
\$	}	-						S D	5Y 6/1	
\ \rm \text{\rm \text{\rm \text{\rm \text{\rm \text{\rm \rm \text{\rm \text{\rm \text{\rm \text{\rm \text{\rm \text{\rm \rm \text{\rm \text{\rm \rm \text{\rm \rm \text{\rm \rm \rm \text{\rm \rm \rm \text{\rm \rm \rm \rm \rm \rm \rm \rm \rm \rm		9_		7		} -A			To 5GY 5/2	
		-		7		— -A		.,		
1 1.5	0 200 4	1 <u>10</u> -00	J	CC			_	M	l	

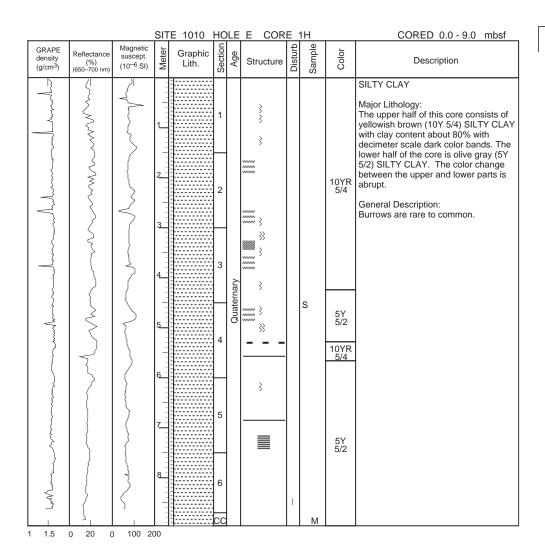
		E 1010		<u>LE, </u>	D COR		3H		CORED 13.5 - 23.0 mbsf
GRAPE Magnet density suscep (g/cm ³) (10 ⁻⁶ S	. 품	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
density suscep	. 품		1 2 3 4 5 6etion	Pliocene Age	Structure	OOO WWWWWWWWW Disturb	Sample	5Y 5/1 5Y 7/1 5Y 5/1 5Y 6/1 To 5Y 5/1 5Y 6/1 5Y 5/2	CALCAREOUS CLAY and SILTY CALCAREOUS CLAY Major Lithologies: This core is composed of meter scale alternation of gray (5Y 6/1) to light gray (5Y 7/1) SILTY CALCAREOUS CLAY and olive gray (5Y 5/2) to dark gray (5Y 4/1) CALCAREOUS CLAY. Minor Lithology: Several thin discrete VITRIC VOLCANIC ASH layers occur at Section 4, 29-30 cm, 44-45 cm, 110- 113 cm, 128 cm, Section 5, 82-83 cm, and Section 6, 145 cm. General Description: The core is moderately bioturbated to homogeneous throughout.
1.5 0 50	100		7 CC				М	5Y 4/1 5Y 7/1	

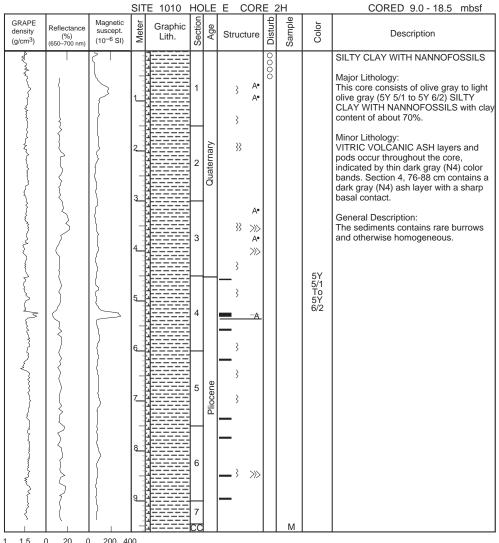
		SIT	ΓΕ 1010	HC	4H	H CORED 23.0 - 32.5 mbsf				
GRAPE density (g/cm ³)	Magnetic suscept. (10 ⁻⁶ SI)	Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
		3		2	Pliocene	- 3 - A - A - 3 - 3 - 3 - 3 - 3 - 3 - 3	W.W.	S	10Y 4/2 To 5GY 8/1	NANNOFOSSIL OOZE WITH CLAY and CLAY Major Lithologies: The upper part of this core is composed of meter scale alternation of grayish olive (10Y 4/2) CLAY and light greenish gray (5GY 8/1) NANNOFOSSIL OOZE WITH CLAY which are slightly to moderately bioturbated. The lower part of the core is composed of greenish gray (5G 6/1) to light greenish gray (5GY 8/1) NANNOFOSSIL OOZE WITH CLAY which shows faint, meter-scale color banding. Minor Lithology: A VITRIC VOLCANIC ASH layer occurs as medium dark gray (N4) to black (N2) diffuse zone of several centimeter thickness in the upper part of the core. It also occurs as greenish, thin layers in Section 3, 110-111 cm, and Section 4, 125-126 cm.
1 1.5	0 50 1	6		4 5 6 CC	Plioc	3 >>>		S	5G 6/1 To 5GY 8/1	and Section 4, 125-126 cm. General Description: Trails of Zoophycos occur approximately every 1 to 2 m.

1 1.5 0 50 100

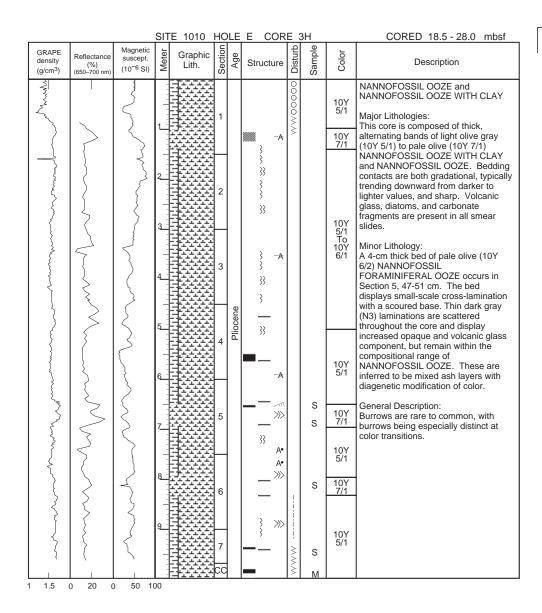
		SI	ΓΕ 1010		LE	D COR	E	5H		CORED 32.5 - 42.0 mbsf
GRAPE density (g/cm ³)	Magnetic suscept. (10 ⁻⁶ SI)	Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
Am ~~~	-	1		1		·······	1	s	5Y 6/1	NANNOFOSSIL CLAY and CLAYEY NANNOFOSSIL OOZE Major Lithologies: This core is composed of meter scale
Mary many many		2		2						alternation of light gray (5Y 6/1) CLAYEY NANNOFOSSIL OOZE and pale olive (5Y 6/3) NANNOFOSSIL CLAY. The transitions are generally gradational. Minor Lithology: The minor lithology is composed of thin laminated, dark gray (5Y 4/1) to pale
Town of the state		4		3		-A -A		S	5Y 5/1 To 10Y 6/1	olive (5Y 6/3) intervals with abundant VITRIC VOLCANIC ASH layers. General Description: The core is homogeneous to moderately bioturbated with Chondrites in Section 4, 110-150 cm, Section 5, 40-60 cm, and Section 6, 120-140 cm.
M. M. M.		5_		4	Pliocene	» » » 6		s	5Y 6/1	
	}	6_				,,, «				
\$)	-	 			<u>}}}</u> 6			10Y 3/1	
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	1	7_		5					5Y 6/3	
Y MAY - MANANAMANA MANANA MANANA YA MANANA YA MANANA YA MANANA MANANA MANANA MANANA MANANA MANANA MANANA MANANA		8		6		}} }		s s	5Y 5/1 To 10Y 5/1	
1.5	0 50 10	9		7 CC		}}		M	5Y 4/1	

	S	ITE 1010		CORED 42.0 - 51.5 mbsf					
density sus	gnetic cept.	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
	1 2 3 4 4 5 6 7 7 8 8 9 1 1 5 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 2 2 3 3 4 4 5 5 6 6 7 7 CCC	Pliocene	■ -A 3 >>> -A ■ -A -A -A -A -A -A -A -A	0	s o M	5Y 5/1 To 10Y 5/1	SILTY CLAY Major Lithology: This core consists of homogenous gray to pale olive (5Y 5/1 to 10Y 5/1) SILTY CLAY. Minor Lithology: Several VITIRC VOLCANIC ASH layers showing mm-scale laminations occur throughout the core. General Description: The sediment shows rare burrows and is otherwise homogeneous.



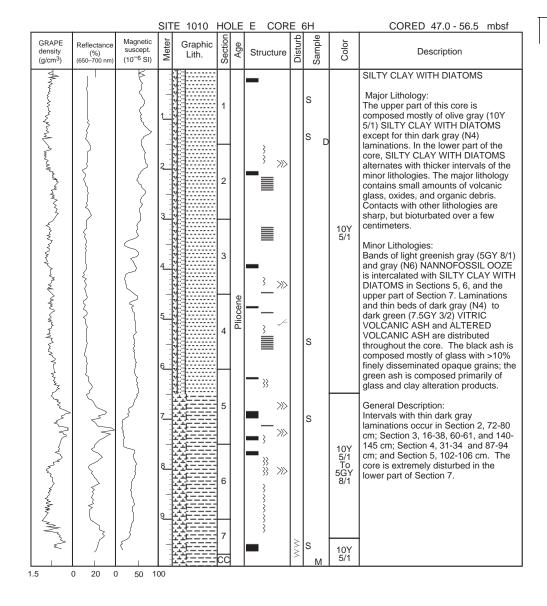


1 1.5 0 20 0 200 400



			SIT	E 1010	HO	LE	E COR				CORED 28.0 - 37.5 mbsf
GRAPE density (g/cm ³)	Reflectance (%) (650–700 nm)	Magnetic suscept. (10 ⁻⁶ SI)	Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
	}	}	111111					0000000		5Y 6/1	NANNOFOSSIL OOZE, SILTY CLAY and SILTY NANNOFOSSIL CLAY
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	3	{	_		1			00			Major Lithologies: This core is composed of alternating olive gray (10Y 6/1) SILTY CLAY, very
The second of th			2		2		>> >> >> >> >> >> >> >> >> >> >> >> >>			5Y 5/1	light gray (5Y 7/1 to 5Y 8/1) NANNOFOSSIL OOZE, and gray (5Y 5/1) SILTY NANNOFOSSIL CLAY, interbedded on a scale of decimeters to meters. Contacts are gradational over several centimeters.
Jan			3_				3			10Y 7/1	Minor Lithology: Black (N2) or grayish green (5G 5/2) VITRIC VOLCANIC ASH laminations are distributed in the lower half of the
WANT OF THE STATE	\{ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	}	4_		3		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		S	10Y 6/1	core and occur in all lithologies; most have sharp upper contacts and gradational lower contacts. Light brown SILTY CLAY with VITRIC VOLCANIC ASH is interlaminated with gray green
}	>	}				Pliocene	3		0	5Y	CLAY near the base of Section 6. General Description:
- Company of the control of the cont			9		4	PI	>		S	5Y 7/1 To 5Y 8/1	Drilling disturbance is severe at the top of the core. Burrows are rare to common in Sections 1 through 5. Glassy lapilli and trace fossils are disseminated sporadically throughout
\$	{	}					>			5Y 6/1	this core.
3	}	5	7		5					5Y 7/1	
MV			8_		6		-A -A		S	10Y 6/1	
Monday	}	}					=		S	7.5YR 6/2	
Soul Mark			9		7		— -A		М	5Y 7/1	
1.5	20 (50 1	00								

			SIT	E 1010		LE	E COR		БН		CORED 37.5 - 47.0 mbsf
GRAPE density (g/cm ³)	Reflectance (%) (650–700 nm)	Magnetic suscept. (10 ⁻⁶ SI)	Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
J. J. Swy		*					3	-		10Y 5/1 To	CLAYEY NANNOFOSSIL OOZE and NANNOFOSSIL SILTY CLAY
3	<	}	1_		1		33			10Y 6/1	Major Lithologies: This core is composed of light olive
A March			2_				<u>}}</u>		S	5G 6/1	gray (5G 6/1 to 10Y 6/1) CLAYEY NANNOFOSSIL OOZE and greenish gray (10Y 5/1) NANNOFOSSIL SILTY CLAY. Contacts are either gradational over a few centimeters or burrowed.
MMM MANA			3		2		**			10Y 5/1 To 10Y 6/1	General Description: The core is slightly disturbed in the top few centimeters and is moderately bioturbated and mottled throughout. Section 3 has black (N2) color bands each, a few centimeters thick, at 24, 34, 58, 110, 131, and 94 cm.
MMMMM		5	4_		3		<u>}}</u>			10Y	
		}				Pliocene	** ** **			6/1 To 5G 6/1	
X 2		}	5		4	Plio	} }}		S		
Mary Mary Mary Mary Mary Mary Mary Mary			6 6 1		5		- A }}		S	5G 6/1	
5 1	10 20	0 50 10	9 -		7 CC				М		

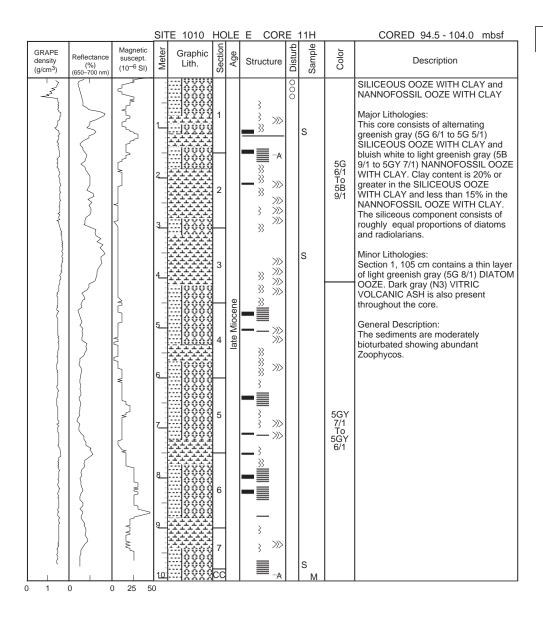


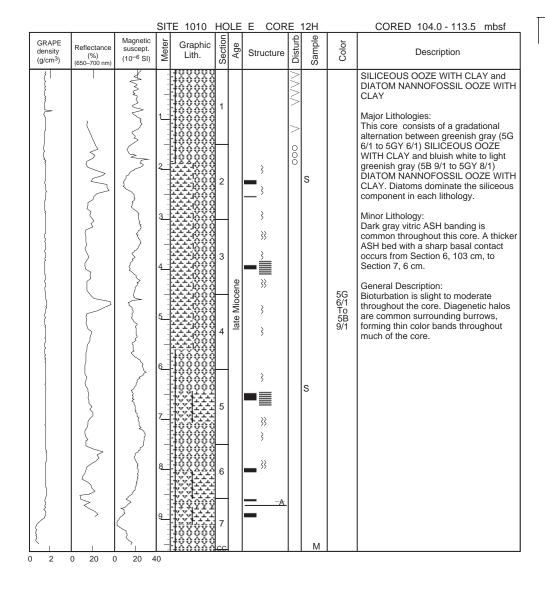
			SIT	E 1010		LE	E COR	E 7			CORED 56.5 - 66.0 mbsf
GRAPE density (g/cm ³)	Reflectance (%) (650–700 nm)	Magnetic suscept. (10 ⁻⁶ SI)	Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
<u> </u>	}		-		1		***			10Y 5/1 To 10Y 6/1	NANNOFOSSIL OOZE WITH DIATOMS and VITRIC ASH WITH DIATOMS Major Lithologies: This core comprises interbedded olive
		{					′		0	5G 2/1	gray (5Y 4/1) NANNOFOSSIL OOZE WITH DIATOMS and pale olive (10Y
}	}	}	2_		0				S S	5Y 4/1	5/1 to 10Y 6/1) VITRIC ASH WITH DIATOMS. VITRIC ASH WITH DIATOMS dominates the upper part of
	1, Mm	}	3		3	ene	-A ::::::::::::::::::::::::::::::::::::			10Y 6/1	the core, and NANNOFOSSIL OOZE WITH DIATOMS dominates the lower half. Bedding contacts are generally gradational or burrowed. Smear slide analysis shows that the VITRIC ASH WITH DIATOMS comprises up to 50% volcanic glass shards and 20% diatomaceous material. The NANNOFOSSIL OOZE WITH DIATOMS in the lower part of the core contains laminated intervals with up to
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		5		4	late Miocene	= = = **				20% diatoms and 65% nannofossils. Color banding reflects either increase or decrease in the ratio of diatoms to nannofossils. Nannofossil-rich beds are more light greenish gray (5GY 8/1) in color. Minor Lithologies:
			7		5				S	5Y 4/1 To 5Y 6/1	Olive gray (5¥ 4/1) mottled with light olive brown (5Y 5/6) SILICEOUS OOZE WITH NANNOFOSSILS is found in Section 2, 52-65 cm.
	M		9		6		**************************************		S		
	>	<u> </u>	_								
1 1.5	0 20 0	50 1	00								

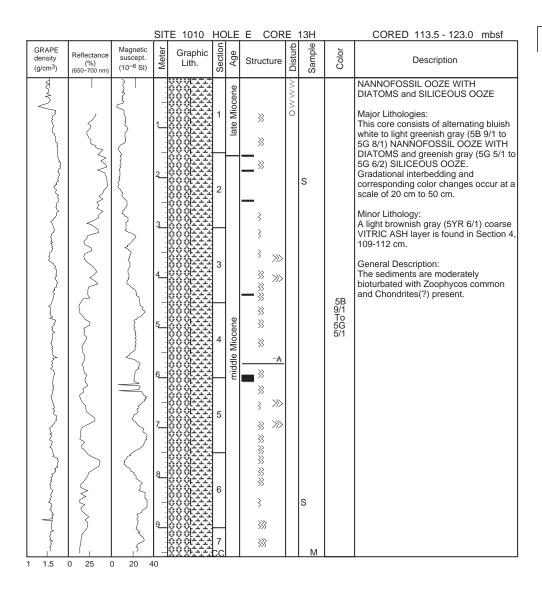
			SIT	E 1010	HC	LE	E COR				CORED 66.0 - 75.5 mbsf
GRAPE density (g/cm ³)	Reflectance (%) (650–700 nm)	Magnetic suscept. (10 ⁻⁶ SI)	Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
Morrow Maryon			1		1		_			10Y 5/2 To 10Y 6/2	SILTY CLAY and SILTY NANNOFOSSIL OOZE Major Lithologies: This core consists of gradationally interbedded olive gray (10Y 6/2) SILTY CLAY and light gray to white (10Y 7/1 to 10Y 8/1) SILTY NANNOFOSSIL OOZE. The silt-sized fraction is composed mainly of quartz, feldspar,
Marrow John John	*		3		2					10Y 7/1	and volcanic glass. Minor Lithology: Several thin bands of dark gray (N3) ash layers and many dark green (5G 5/2) bentonite(?) ash layers are scattered throughout the core.
J. J	\	{	4		3		}} }}		S	10Y 6/2 10Y 7/1	General Description: Burrows are rare to common throughout the core.
\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ 			-			ene				10Y 6/2	amoughout the core.
3	}	}	5			ate Miocene	}} _A			10Y 7/1	
months and market and francourse	M		6 - - - - - - - - - - - - - - - - - -		5	late	- 33 - A - A - 3 - A - 3 - 4 - 3 - 4 - 3 - 4 - 3 - 4 - 5 - 4 - 5 - 5 - 5 - 5 - 5 - 5 - 5		S	10Y 6/2	
}	}	}	8				33		S	10Y 7/1	
James James		}	9	Table 1	7		** **			10Y 6/1	
1.5	0 20 0	50 1	00		CC			}	М	10Y 8/1	

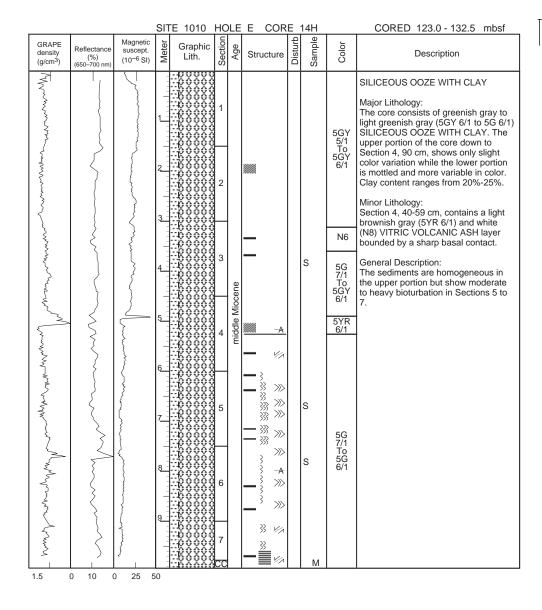
			SIT	E 1010	HC	<u>L</u> E	E COR	E 9			CORED 75.5 - 85.0 mbsf
GRAPE density (g/cm ³)	Reflectance (%) (650-700 nm)	Magnetic suscept. (10 ⁻⁶ SI)	Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
MMV More	~~~~~				1			0000000000		5Y 6/1	NANNOFOSSIL OOZE, DIATOM CLAY and DIATOM OOZE Major Lithologies: This core consists of alternating olive gray (5Y 6/1) DIATOM CLAY, very light gray (5Y 8/1) NANNOFOSSIL
W.W.			2		2		- } -A		S	5Y 8/1	OOZE, and light gray (5Y 7/1) DIATOM OOZE interbedded on a scale of decimeters to meters. Contacts are gradational over several centimeters.
			3_				—			5Y 7/1	Minor Lithology: Grayish green (5G 5/2) or black (N2) VITRIC VOLCANIC ASH laminations are distributed in the lower half of the
SMY SMAN SMAN		}	4		3	ene	-				core and they occur in all lithologies; they usually are in sharp contact with overlying lithologies, and are transitional into underlying lithologies.
John John John John John John John John			5	**************************************	4	late Miocene	—			5Y 6/1 To 5Y 7/1	General Description: Drilling disturbance is severe at the top of the core. Burrows are generally rare in Sections 1 through 5. Glassy lapilli are sporadically disseminated throughout the core.
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		{	6	**************************************	5		A 		S		
- Andrew - N		}	7	#******* #****** #******	5		-A		S	5Y 7/1	
\ \frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\fir}}}}}}}{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\fir}}}}}}}{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac}\frac{\frac{\frac{\frac{\frac}}}}}}}{\firan{\frac{\frac{\frac{\frac{\frac{\frac}}}}}}}{\	$ $	>	<u>8</u> _	**************************************			<b>-</b> 33			5Y 5/1	
W W W W		}	9	***** ***** *****	6		} <b>=</b>			5Y 7/1	
	0 20 0	50 10	00	v;v;t ;;v;v;	7				S M	5Y 6/4	

			SIT	E 1010	НС	LE	E COR	Ε´	10H		CORED 85.0 - 94.5 mbsf
GRAPE density (g/cm ³ )	Reflectance (%) (650–700 nm)	Magnetic suscept. (10 ⁻⁶ SI)	Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
Ab		*	1		1		}	≫	S	5GY 6/1 To 5GY 7/1	SILTY DIATOM OOZE WITH CLAY and NANNOFOSSIL OOZE WITH CLAY  Major Lithologies: This core consists of sediments with gradational alternations between
			2_							5GY 8/1	greenish gray (5GY 5/1 to 5GY 6/1) SILTY DIATOM OOZE WITH CLAY and bluish white to light greenish gray (5B 9/1 to 5GY 8/1) NANNOFOSSIL
-A		4	- Trial		2		<b>-</b> -≫			5GY 7/1 5GY 8/1	OOZE WITH CLAY. Clay content varies from 15%-20% in each lithology.
			3				3			5GY 6/1	Minor Lithology: Several darker bands of VOLCANIC ASH occur throughout the core.
}		}	4 -		3		<b>—</b>				General Description: The sediments are slightly bioturbated. Planolites and Chondrites are
}		{	1			ocene	<b>=</b> **			5B 9/1	common.
			5		5	late Miocene	— → → → → → → → → → → → → → → → → → → →			5GY 5/1 To 5GY 6/1	
}	$  \geq  $	}	- - 8				<b>_</b> ; ***			5GY 8/1	
}			] [		6		= ° >>>			5GY 7/1	
		}	9		7 CC		<b>-</b> ≫		S M	5B 9/1	
1 1.5	0 0	25 5	0								









			SIT	TE 1010		LE	E COR	E ·			CORED 132.5 - 142.0 mbsf
GRAPE density (g/cm ³ )	Reflectance (%) (650-700 nm)	Magnetic suscept. (10 ⁻⁶ SI)	Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
7			1	00000000000000000000000000000000000000	1		→ A → → → → → → → → → → → → → → → → → → →	WW		5GY 5/1 To 5GY 6/1	SILICEOUS OOZE WITH CLAY and NANNOFOSSIL OOZE WITH DIATOMS  Major Lithologies: This core consists of alternating greenish gray (5GY 5/1 to 5GY 6/1) SILICEOUS OOZE WITH CLAY and light greenish gray (5GY 8/1 to 5GY 7/1) NANNOFOSSIL OOZE WITH
~~~~			3		2		<b>-</b> * * * * * * * * * * * * * * * * * * *		S	5GY 8/1	DIÁTOMS. Colors are variable and mottled.  Minor Lithologies: Two thinner beds of DIATOM OOZE occur in Section 4, 50-100 cm, and
		M	4_		3	ene	» » » »			5GY 5/1 To 5GY	Section 6, 110-140 cm. Dark gray (N3) pyritic(?) VOLCANIC ASH layers are found in Section 1, 52-56 cm, and Section 5, 7-10 cm. General Description:
			5	1000000 1000000 1000000 1000000	4	middle Miocene	33		S	5GY 6/1 5Y 5/6	The sediments are slightly to moderately bioturbated.
			6	1000000 1000000 1000000 1000000	5		—				
~~~~			8	1000000 1000000 1000000 1000000						5G 6/1 To 5GY 6/1	
			9	100000	6		- \$ - \$ - \$ - \$ - \$			5Y 4/4	
1 1.5	0 20 -1	0 0 1		-100000 -100000 -100000 -100000	7 CC		}		М	5G 6/1	

		SI	ΓΕ 1010	_	DLE	E COR		16H		CORED 142.0 - 151.5 mbsf
GRAPE density (g/cm ³ )	Magnetic suscept. (10 ⁻⁶ SI)	Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
The man have been been to the second	Myrry	1		1		3	00000000 W		10Y 5/1 To 5Y 6/1	DIATOM OOZE WITH NANNOFOSSILS and DIATOM NANNOFOSSIL OOZE  Major Lithologies: This core consists of light greenish gray (5GY 8/1) DIATOM NANNOFOSSIL OOZE and light olive gray (5Y 6/1) to greenish gray (5GY 6/1) DIATOM OOZE WITH
		3		3		****		S	5GY 8/1 To 5GY 6/1	NANNOFOSSILS, interbedded at scales ranging from 30 to 300 cm. Overlying sediment infills burrows up to 10 cm below bedding surfaces. Radiolarians, sponge spicules, and silicoflagellates are present in small amounts in all smear slide samples.  General Description: The core is slightly to moderately bioturbated. Sub-mm-scale Chondrites
J. A.		5			middle Miocene	}			5GY 8/1	trace fossils cut across earlier cm- diameter burrows at Section 2, 107- 122 cm, Section 4, 36-50 cm, Section 6, 123-135 cm, and Section 7, 39-49
hormooper and a	}			4	middle	>>> 			5GY 6/1	cm.
		6		5		3		S	5GY 8/1	
		9		7					5GY 8/1 To 5Y 6/1	
1 1.5 -2	20 0 2	20		CC		\$\$ }}		S _M		

		SI	TE 1010	_	LE	E COR	_	17X		CORED 151.5 - 161.0 mbsf
GRAPE density (g/cm ³ )	Magnetic suscept. (10 ⁻⁶ SI)	Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
**************************************	<b>\</b> \{ \}	1_		1		} —	WWW	s	5Y 5/1	NANNOFOSSIL OOZE WITH DIATOMS AND RADIOLARIANS and DIATOM OOZE WITH NANNOFOSSILS
	<b>**</b>	2_				* * * *			5Y 5/2	Major Lithologies: This core is composed of gradational interbeds of yellowish gray (5Y 8/1) to pale greenish yellow (10Y 8/1) NANNOFOSSIL OOZE WITH
<b>**</b>	\$ (	-		2		<b>-</b>			5Y 7/1	DIATOMS AND RADIOLARIANS and olive gray (5Y 5/1) DIATOM OOZE WITH NANNOFOSSILS.
- Joseff And Mary Mary - Transford	7	3_ - 4_ - 5_		3	niddle Miocene	· · · · · · · · · · · · · · · · · · ·		S		Minor Lithology: A 2-cm-thick, graded bed of grayish black (N2) VITRIC ASH WITH PYRITE occurs in Section 7, 28-30 cm. The pyrite occurs as overgrowth coatings of otherwise unaltered glass shards.  General Description: This core is slightly bioturbated and displays many reduction halos around larger (>1 cm) burrows. The core is
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~ \	6_		4	midc	*****		S	5Y 8/1	pervasively sheared by XCB coring that has disrupted most fine sedimentary structures.
	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	7_		5						
~~~~	\ \ \	8_		6					5Y 7/2	
- www.		9_		7		•••		S	5Y 8/1	
1 1.5 -2	25 0 2	5	]\^_\	يار.		· ·		M		

		SIT	E 1010	HC	LE	E COR		18X		CORED 161.0 - 170.6 mbsf
GRAPE density (g/cm ³ )	Magnetic suscept. (10 ⁻⁶ SI)	Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
12	}					} }}			5Y 8/1	DIATOM NANNOFOSSIL OOZE and RADIOLARIAN DIATOM OOZE WITH NANNOFOSSILS
\ \{\}	\ \{\ \{\ \}	1_		1					5Y 7/1	Major Lithologies:
}	Mary Mary and Mr	2_		_		***************************************		S	5GY 6/1	This core consists of thick and gradationally interbedded light gray (5Y 7/1) to light olive gray (5Y 6/2) DIATOM NANNOFOSSIL OOZE and greenish gray (5GY 6/1)
, , , , , , , , , , , , , , , , , , ,	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	3		2		<b>-</b>			5Y 7/1	RADIOLARIAN DIATOM OOZE WITH NANNOFOSSILS. Most contacts are indistinct. Very small amounts of silicoflagellates, sponge spicules, and volcanic glass are present in smear
{	}					}			5Y 6/2	slides.
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	4_		3	middle Miocene	•			5Y 7/1	General Description: The sediments are slightly bioturbated with cm-thick burrows. The core is pervasively sheared by the XCB coring process.
	A Service Association of the service	5 6 7		5	middle	· · · · · · · · · · · · · · · · · · ·			5GY 6/1	
1 1.5 -1	- My Mary mand My -	8 -		6 7 CC		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		S M	5Y 6/2	

		SIT	TE 1010	HC	LE	E COR		19X		CORED 170.6 - 180.2 mbsf
GRAPE density (g/cm ³)	Magnetic suscept. (10 ⁻⁶ SI)	Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
-	American Junear	1_		1		}			5GY 6/1	DIATOM NANNOFOSSIL OOZE and DIATOM OOZE WITH RADIOLARIANS AND NANNOFOSSILS
}	}					}	!		5Y 8/1	Major Lithologies: This core consists of gradationally
\	}	-	為主義	\vdash		} } >>>			10Y 6/2	interbedded light greenish gray (5Y 8/1) to pale olive (10Y 6/2) DIATOM
		3		2		\gg			5Y 8/1	NANNOFOSSIL OOZE, greenish gray (5GY 5/1 to 5GY 6/1) to grayish olive (10Y 4/2) DIATOM OOZE WITH RADIOLARIANS AND NANNOFOSSILS. Most contacts are indistinct. Very small amounts of
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	*			3		3		S	10Y 4/2	sponge spicules or silicoflagellates are present in smear slides.  General Description:
3		4_			iocene	} }				This core is pervasively sheared by XCB coring, rendering the sedimentary structures disrupted and homogenized.
\		5		4	middle Miocene	\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\		S	5Y 8/1	
		6				3				
<b> </b>	}	7		5		3			5GY 6/1	
	}					3			5Y 8/1	
}		8_		6		}			5GY 6/1	
}		-		0		3			5Y 8/1	
}	}	9		7 CC		<b>-</b>		S M	5GY 5/1	
1 1.5 -	20 0 2	20	The last at a second	<u> </u>	_		_			1

SI	ΓΕ 1010		LE	F COR			_	CORED 0.0 - 8.2 mbsf
Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
3		1 2 3	Quaternary		0	ı	5YR 3/4 10YR 5/4 To 5Y 5/3	SILTY CLAY  Major Lithology: The entire cored interval consists of yellowish brown to olive SILTY CLAY.  General Description: The sediment is homogeneous. Several dark color bands containing abundant manganese occur throughout. There are thin ash layers in Section 4.
5		4						
7		5		−A		I	5Y 7/1 To 5Y 6/2	
L		CC			<u></u>			

SIT	TE 1010	HC	LE	F COR	E			CORED 8.2 - 17.7 mbsf
Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
1		1		\$\\ \\$\\ \\$\\ \\$\\ \\$\\ \\$\\ \\$\\ \\$\\	<b>*****</b>	1		SILTY CLAY WITH NANNOFOSSILS  Major Lithology: The entire cored interval consists of gray to light olive gray homogeneous SILTY CLAY WITH NANNOFOSSILS.
2		2		33	0	1	5Y 5/1 To 5Y 6/2	General Description: There is a rounded clast of coarse grained sandstone (breccia?) in Section 1, 63-70 cm. There is a thin ash layer in Section 3, 10 cm. Mn spots occur in Section 3, 45 cm, and Section 4, 65 cm. The liner was crushed in Section 7.
4		3		- <b>A</b> }}				
5		4	Quaternary	**		1		
7		5		33 -A -A		1	N4	
8		6		^{}}} <del>^</del> A		I I		
9		7		}}	<b></b>			

Sľ	TE 1010	HC	)LE	F COR				CORED 17.7 - 27.2 mbsf
Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
1_		1		» » »		I		NANNOFOSSIL OOZE, SILTY CLAY, and NANNOFOSSIL OOZE WITH CLAY  Major Lithology: The cored interval consists of light gray (5Y 7/1) to gray (5Y 5/1) NANNOFOSSIL OOZE, SILTY CLAY,
2_		2		33			5Y 7/1	and NANNOFOSSIL OOZE WITH CLAY, interbedded on a decimeter scale.
3_				<b>=</b> 33 -A		ı	To 5Y 5/1	General Description: Bioturbation is common throughout the core. There are thin dark olive gray (5Y 3/2) ASH layers in Section 5. Dark color banding on a 1-2 cm scale
4_		3		33 33 33				occurs in Sections 2 and 6. Mn spots occur in Sections 3, 4, 5, and 6.
5_		4	Quaternary	}}		I		
6_				}} -A		ı		
7_		5		33			5Y 7/1	
				}} <b>-A</b>		I	5Y	
8		6		<b>=</b>		ı	4/1 To 5Y 7/1	
9		7 CC		_				

SI	TE 1010		)LE	F CC	OR		4H		CORED 27.2 - 36.7 mbsf
Meter	Graphic Lith.	Section	Age	Structu	ure	Disturb	Sample	Color	Description
_		1		33		WWW		5Y 6/1 5Y 5/1	CLAY, SILTY CLAY, and NANNOFOSSIL OOZE Major Lithology: The cored interval consists of interbedded light gray (5Y 7/1) to gray (5Y 5/1) CLAY, SILTY CLAY, and NANNOFOSSIL OOZE.
2		2		- 33 33 A	A•			5Y 6/1	NANNOFOSSIL OOZE.  General Description: There are glassy lapilli in Section 2 and flow-in occurs from Section 3, 130 cm, to Section 5, 135 cm. The liner was crushed in Section 7.
3		3		33		^^^^^	I	6/1	was crushed in Section 7.
			Quaternary	}}		WWW.	1	5Y 7/1 To	
5		4	Quat			\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			
7		5						5Y 8/1	
8		6		<b>-</b> 3 <b>-</b> 3		S	_	5Y 6/1	
9		7				<b>////</b>			

SIT	TE 1010	HC	LE	F COR		5H		CORED 36.7 - 46.2 mbsf
Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
1		1		≡			5Y 6/1	CLAYEY NANNOFOSSIL OOZE and NANNOFOSSIL SILTY CLAY Major Lithology: The cored interval consists of
					\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	I	5Y	interbedded light olive gray (5Y 6/2) CLAYEY NANNOFOSSIL OOZE and very homogeneous gray (5Y 5/1) NANNOFOSSIL SILTY CLAY.
2		2			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		7/1	General Description: Color bands (5Y 3/1 to 2.5Y 6/3) occur on a cm scale in Section 4, 10-60 cm. Sediment was sucked in from Section
3		3			>			1, 100 cm, to Section 2, 138 cm.
4			Quaternary	- <b>A</b>		I .	5Y 7/1 To 2.5Y 6/3	
5		4		***				
6				}} -A				
7		5		-A				
8 - -		6					5Y 5/1	
9		7		-A		I		
	:: :::	CC						

SI	ΓΕ 1010	HC	LE	F	COR	E (	6H		CORED 46.2 - 55.7 mbsf
Meter		Section	Age		ucture	Disturb	Sample	Color	Description
2 3 4 5		1 2 3	Quaternary		} -A -A -A 3	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	1	5Y 5/2 To 5Y 6/1	SILTY CLAY and NANNOFOSSIL OOZE  Major Lithology: The cored interval consists of olive gray (5Y 5/2) to gray (5Y 6/1) SILTY CLAY and light gray (5Y 7/1) to white (5Y 8/1) NANNOFOSSIL OOZE.  General Description: Dark gray color bands occur throughout the core. There are green ASH layers in Section 2. The core liner was crushed in Section 7, 40-60 cm.
7		5		=	}		ı		
9		6			3		l	5Y 7/1 To 5Y 8/1	

#### 167-1010C-24N-1

# Shipboard studies Graphic representation Piece number Lithologic unit Orientation cm 2 3 4 50 5 6 100 8 150 CORE/SECTION

#### **UNIT 1: RUBBLE**

#### Piece 1

Weathered basalt gravel/clay mixture.

#### Piece 3

Rubble with clay binder

#### Piece 7

Aphyric basalt with flow-banding.

#### Piece 8

Aphyric fine-grained basalt rubble.

### **UNIT 2: APHYRIC PLAGIOCLASE BASALT.**

### Pieces 2, 4-6

CONTACTS: None.

GROUNDMASS : Subophitic.

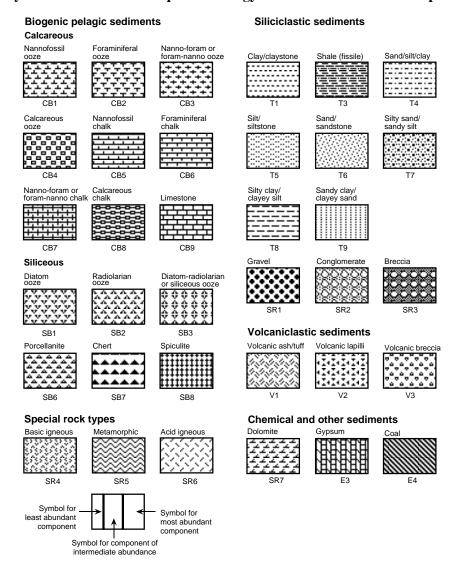
VESICLES: <2%; 1-2 mm; rounded; random.

COLOR: Gray. STRUCTURE: None.

**ALTERATION:** Fresh to light alteration--clay in vesicles; some pyrite in vesicles and fractures.

VEINS/FRACTURES: <<1%; <1 mm; random.

### Key to symbols used in the "Graphic Lithology" column on the core description sheets.



## Key to symbols used in the "Structures" column on the core description sheets.

		rilling disturbance rmbols	Sedimentary structures cont.								
	_	Soft sediments									
	1	Slightly disturbed	↑F	Fining-upward sequence	<b>♦</b>	Isolated pebbles/cobbles					
	1	Moderately disturbed	<b>↑</b>	Interval over which primary sedimentary structure occur	•	Isolated mud clasts					
	į	Moderately disturbed	_	Planar laminae	_^_	Slump blocks or slump folds					
	$\frac{2}{5}$	Highly disturbed	$\geq$	Wedge-planar laminae/beds	2	Contorted slump					
	0		•••	Graded bedding (normal)	X	Probable compaction fracture					
	0	Soupy	•••	Graded bedding (reversed)	<b> </b>						
		Hard sediments		Sharp contact		Microfault (normal)					
	$\leq$	Slightly fractured		Gradational contact	7/	Microfault (thrust)					
			w	Scoured, sharp contact	_	Managerile					
	王	Moderately fractured	•••	Scoured contact with graded bed	<del>/</del>	Macrofault					
	$\geq$	Highly fragmented		Thick color bands (sharp contact)	>>	Fracture					
	$\stackrel{\sim}{\sim}$	Drilling breccia	****	Thick color bands (gradational contact)	×	Totally fractured					
	$\widehat{\times}$	Drilling breccia		Medium color bands (sharp contact)	X	Vein structures					
ı	Sec	Sedimentary structures		Medium color bands (gradational contact)	₹3	Color mottles					
	}	Burrows, rare (<30% surface area)	=	Thin color bands (sharp contact)	<u>-</u>	Dolomite nodule/concretion					
	33	Burrows, common (30%–60% surface area)	******	Thin color bands (gradational contact)	D	Disseminated dolomite					
	333	Burrows, abundant (>60% surface area)		Laminations (mm scale)	P	Pyrite nodule/concretion					
	>>>	Discrete Zoophycos trace fossil		Individual thick color band	Р	Disseminated pyrite					
	6	Discrete Chondrites trace fossil		Individual medium color band Individual thin color band	G	Glauconite					
	9	Sagarites sponge	_	Individual lamination	$  oldsymbol{ } oldsymbol{ }  $	Concretions/nodules					
	3	Gastropods	<b>***</b>	Wavy lamination	(00)	Barite nodule/concretion					
	Ī	Other bivalves		Cross laminae	(Ba)	Bante nodule/concletion					
		Chall fromments	<u>7</u> Z	Cross stratification	Ва	Disseminated barite					
	8	Shell fragments	108U 77	Cross bedding	(Ca)	Calcite nodule/concretion					
	#	Wood framents		Convoluted/contorted bedding Flaser bedding	(c)	Carbonate nodule/concretion					
	$\alpha$	⇒ Fish debris		Graded interval, normal		2 2 2 (3.1.)					
				Veins	(Ch)	Chert nodule/concretion					
			8	Water escape structure	A●	Ash/pumice pods					
				Scour	-A	Ashlayer					
				ı		ı					