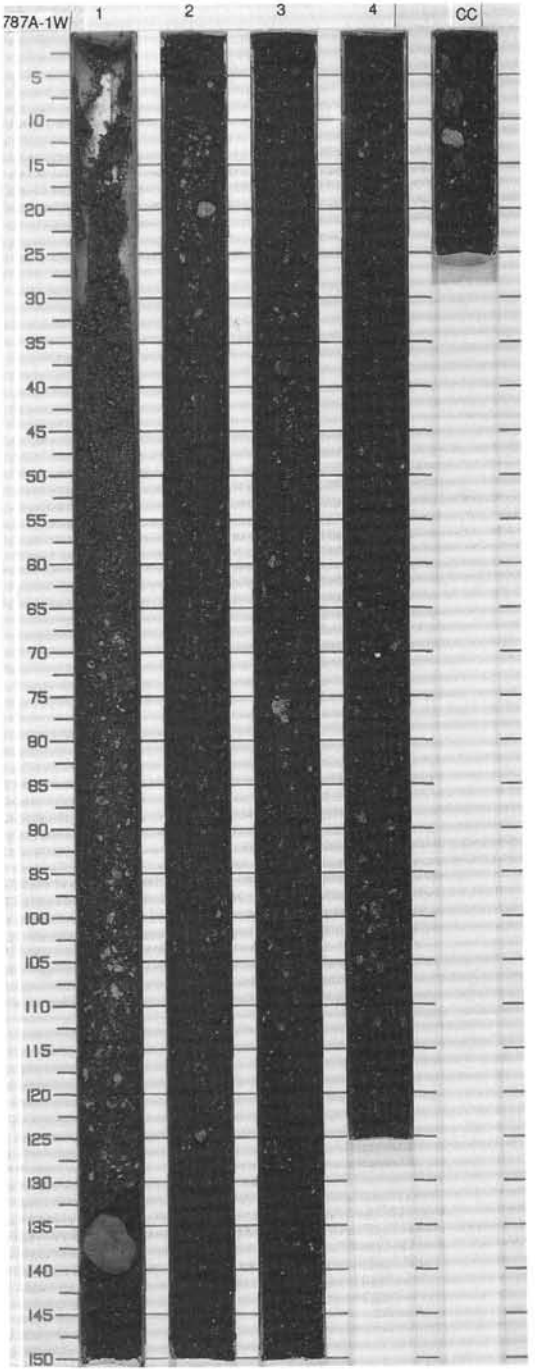
SITE 787 HOLE A CORE 1W CORED INTERVAL 0-34.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
UPPER MIOCENE		CN8-CN9a						1	0.5		○			PUMICEOUS AND SCORIACEOUS SANDY GRAVEL Major lithology: Poorly sorted, structureless, washed-in SANDY GRAVEL. Gravel consists of white to light gray (5Y 6/1) pumice and black scoria. Sand is black and mainly scoriaceous lithic grains plus some pumice and plagioclase crystals. Rare red pumice (10R 5/8) is present. Benthic foraminifers, as large as 2 mm diameter, are scattered throughout the core. Scoria is aphyric with rare plagioclase. Dacite pumice contains translucent glass, and crystals of plagioclase, quartz and pyroxene. The core has been reduced to soupy condition by drilling.
									1.0		○			
								2			○	◆		
								3			○			
								4			○			
	A/G		B					CC			○			

Information on Core Description Forms, for ALL sites, represents field notes taken aboard ship. Some of this information has been refined in accord with post-cruise findings, but production schedules prohibit definitive correlation of these forms with subsequent findings. Thus, the reader should be alerted to the occasional ambiguity or discrepancy.

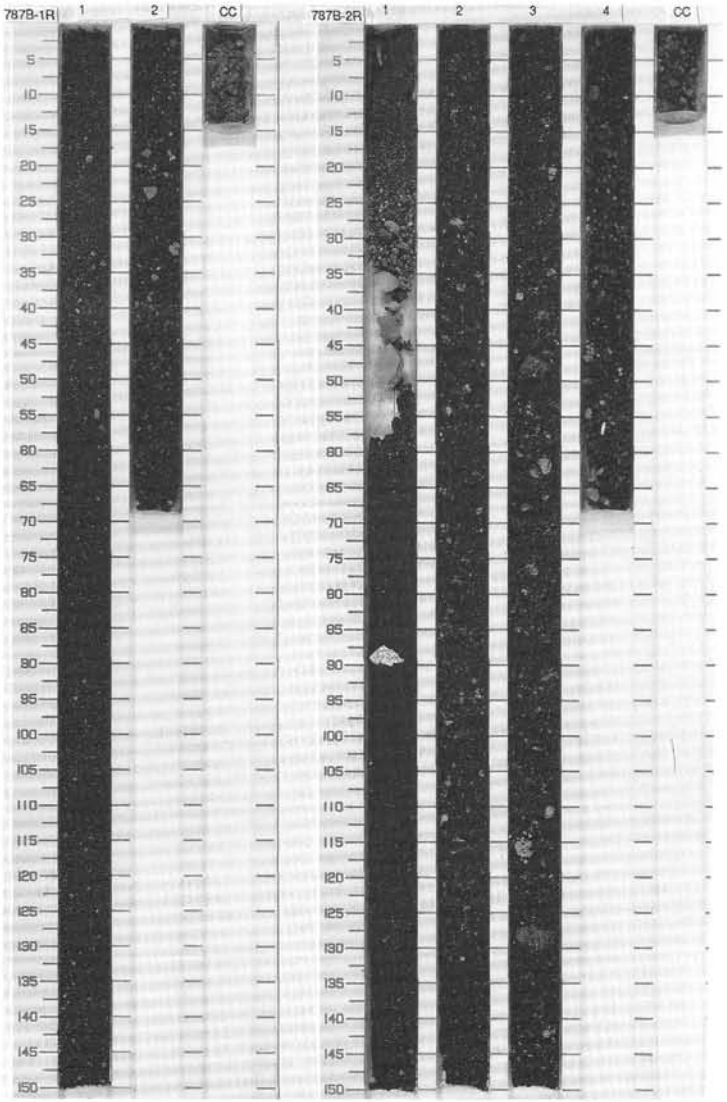


SITE 787 HOLE B CORE 1R CORED INTERVAL 0.0-2.3 mbsf

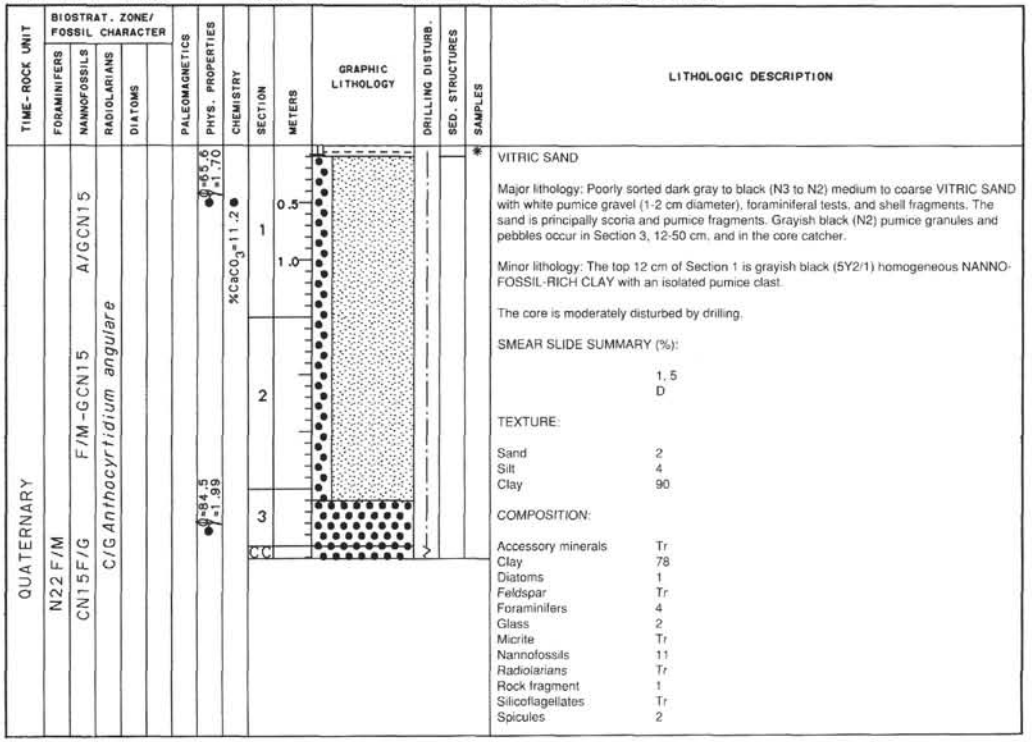
TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
QUATERNARY	C/M N22	F/M CN15	C/G *Anthocyrtidium angulare*			ϕ=37.8 ρ=2.11	%$CaCO_3$=1.1	1, 2, CC	0.5, 1.0					SCORIACEOUS AND PUMICEOUS SANDY GRAVEL Major lithology: Poorly-sorted, normal graded, matrix-free SANDY GRAVEL with very scarce fossil remains. Normal grading is probably due to drilling disturbance. Gravel consists of black scoria (N1) plus light gray olive (5Y 6/1) to grayish olive green (5GY 3/2) pumice. Pumice is fresh, translucent with microphenocrysts of quartz, plagioclase and pyroxene. Scoria is aphyric. Sand is dominantly black, and consists of scoria lithic grains, some pumice and isolated quartz grains. The core has been reduced to soupy condition by drilling.

SITE 787 HOLE B CORE 2R CORED INTERVAL 2.3-11.9 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
QUATERNARY	C/M N22	A/G CN15	C/G *Anthocyrtidium angulare*			ϕ=53.8 ρ=1.89 ϕ=44.5 ρ=1.79 ϕ=72.1 ρ=1.62	%$CaCO_3$=2.3 %$CaCO_3$=1.2 %$CaCO_3$=10.8	1, 2, 3, 4, CC	0.5, 1.0	VOID				SCORIACEOUS AND VITRIC SILTY SAND, VITRIC SANDY GRAVEL AND PUMICEOUS-SCORIACEOUS GRAVEL Major lithologies: Poorly sorted SCORIACEOUS and VITRIC SILTY SAND in Section 1, coarsening downward, first into VITRIC SANDY GRAVEL and then into matrix-free PUMICEOUS-SCORIACEOUS GRAVEL. Main components are scoria and pumice, with one crystalline dacite clast in Section 1, and scattered gastropods and bryozoans, best seen in Section 4. In Section 3 (45 and 125 cm), there are two soft clasts of nannofossil-rich clay. The overall upward fining in this core, and loss of gravel matrix downward, are believed to be the result of drilling disturbance, which has left the core highly disturbed. SMEAR SLIDE SUMMARY (%): 3, 128 M TEXTURE: Sand 5 Silt 30 Clay 65 COMPOSITION: Clay 77 Diatoms 10 Feldspar Tr Foraminifers 1 Glass 1 Nannofossils 8 Quartz 1 Spicules 2



SITE 787 HOLE B CORE 3R CORED INTERVAL 11.9-21.4 mbsf



LITHOLOGIC DESCRIPTION

VITRIC SAND

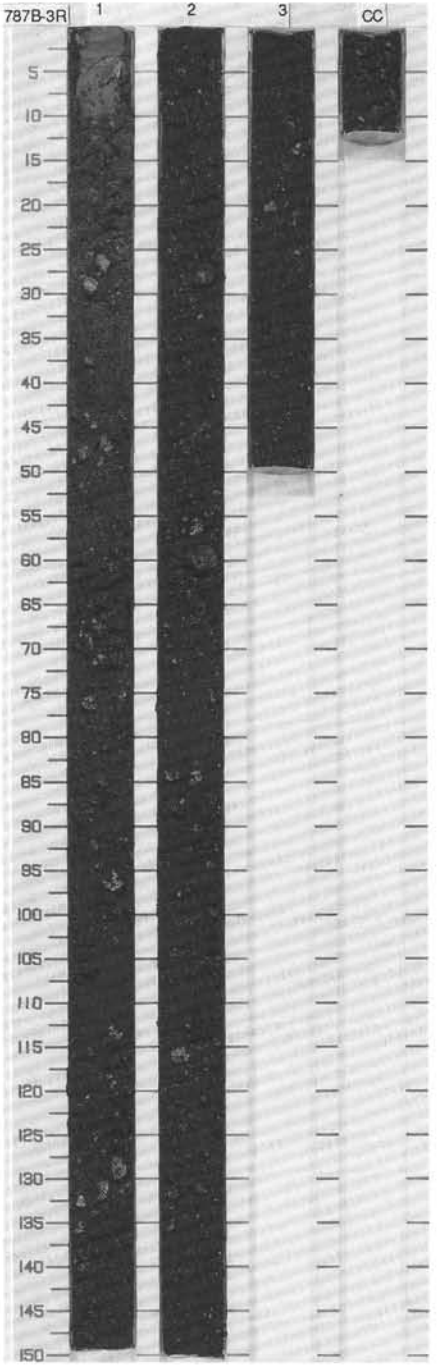
Major lithology: Poorly sorted dark gray to black (N3 to N2) medium to coarse VITRIC SAND with white pumice gravel (1-2 cm diameter), foraminiferal tests, and shell fragments. The sand is principally scoria and pumice fragments. Grayish black (N2) pumice granules and pebbles occur in Section 3, 12-50 cm, and in the core catcher.

Minor lithology: The top 12 cm of Section 1 is grayish black (5Y2/1) homogeneous NANNOFOSSIL-RICH CLAY with an isolated pumice clast.

The core is moderately disturbed by drilling.

SMEAR SLIDE SUMMARY (%):

	1, 5 D
TEXTURE:	
Sand	2
Silt	4
Clay	90
COMPOSITION:	
Accessory minerals	Tr
Clay	78
Diatoms	1
Feldspar	Tr
Foraminifers	4
Glass	2
Micrite	Tr
Nannofossils	11
Radiolarians	Tr
Rock fragment	1
Silicoflagellates	Tr
Spicules	2



SITE 787 HOLE B CORE 4R CORED INTERVAL 21.4-30.9 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
LOWER PLIOCENE	N19-N21 F/M	CN10c-CN11c/G	B		N			1, CC					* *

LITHOLOGIC DESCRIPTION

LITHIC-VITRIC RICH NANNOFOSSIL OOZE AND NANNOFOSSIL SILTY CLAY

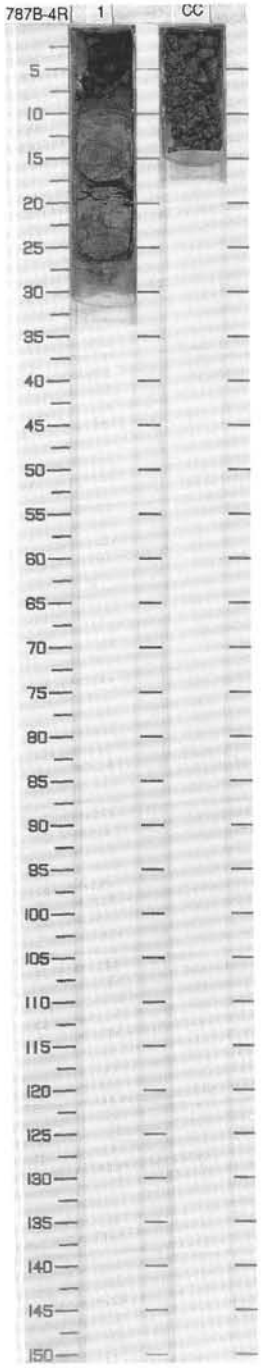
Major lithology: Homogeneous olive gray (5Y3/2) LITHIC-VITRIC RICH NANNOFOSSIL OOZE occurs in Section 1, 7-11, 13-18, and 22-26 cm and in the core catcher. Olive gray (5Y4/2) NANNOFOSSIL-RICH CLAY occurs in Section 1, 11-13 and 18-22 cm.

Minor lithology: Six clean black (5Y2/1) and dark olive gray (5Y3/2) pumice pebbles 0.8 to 2.5 cm in diameter occur in Section 1, 0-5 cm.

The core is moderately disturbed by drilling.

SMEAR SLIDE SUMMARY (%):

	1, 10 M	1, 12 D
TEXTURE:		
Sand	2	2
Silt	15	3
Clay	83	95
COMPOSITION:		
Accessory minerals	1	Tr
Bioclast	1	—
Clay	2	80
Diatoms	1	Tr
Feldspar	1	1
Foraminifers	1	Tr
Glass	8	Tr
Micrite	Tr	Tr
Nannofossils	75	15
Radiolarians	—	Tr
Rock fragment	10	1
Silicoflagellates	Tr	Tr
Spicules	Tr	1



SITE 787 HOLE B CORE 5R CORED INTERVAL 30.9-40.3 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER MIOCENE / LOWER PLIOCENE	N16-N18	A/G CN11b or older	*Didimocyrtis antepenultima*		N	ρ=60.4 ±1.91 ●	%$CaCO_3$=11.9 ●	1					***

LITHOLOGIC DESCRIPTION

NANNOFOSSIL-RICH VOLCANIC-LITHIC SILTY CLAY

Major lithology: Most of the core (7-22 cm) is very dark grayish brown (2.5Y3/2) NANNOFOSSIL-RICH VOLCANIC-LITHIC SILTY CLAY.

Minor lithology: The lowermost 7 cm of the core is dark olive (5Y4/3) CLAY.

The core is slightly disturbed by drilling.

SMEAR SLIDE SUMMARY (%):

	1, 7 M	1, 15 D	1, 25 D
TEXTURE:			
Sand	25	10	3
Silt	60	40	10
Clay	15	50	87
COMPOSITION:			
Accessory minerals	Tr	Tr	1
Clay	10	50	40
Diatoms	Tr	1	—
Feldspar	Tr	Tr	1
Foraminifers	Tr	—	Tr
Glass	80	1	2
Nannofossils	5	6	1
Pellets	—	—	50
Radiolarians	—	—	2
Rock fragment	—	40	2
Silicoflagellates	—	Tr	—
Spicules	—	—	1

SITE 787 HOLE B CORE 6R CORED INTERVAL 40.3-49.8 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER OLIGOCENE	F/B	C/G CP19b	C/MCP19b	B	N	ϕ=70.2 ρ=1.77 ϕ=70.4 ρ=1.72	%CaCO3 =20.0 %CaCO3=10.1	1 2	0.5 1.0				*

LITHOLOGIC DESCRIPTION

NANNOFOSSIL CLAYSTONE, NANNOFOSSIL-RICH CLAYSTONE AND CLAYSTONE

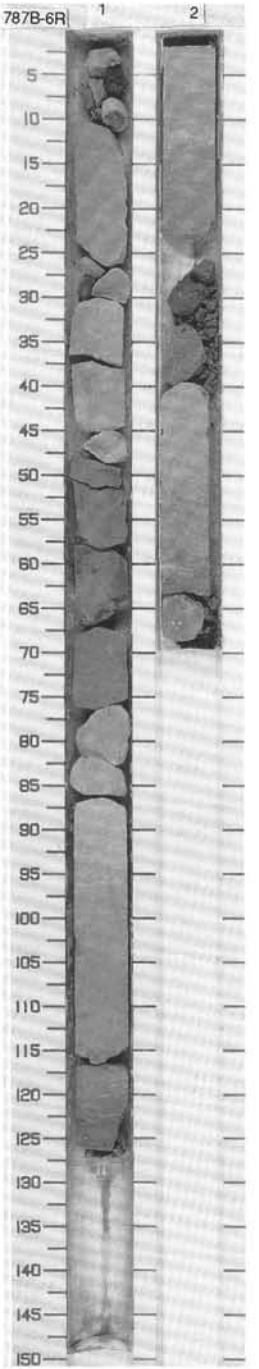
Major lithology: Variegated shades of greenish gray (5GY7/1, 6.5/1, -6/1, -4/1) NANNOFOSSIL CLAYSTONE and NANNOFOSSIL-RICH CLAYSTONE, in which much of the carbonate is pelletized micrite. The rock is locally bioturbated: lightly in Section 1, 30-35 cm, moderately to heavily from Section 1, 85 cm to Section 2, 68 cm.

Minor lithology: Thin intervals of CLAYSTONE occur in Section 1, 26-30 and 46-48 cm, and in Section 2, 52-68 cm.

The core is moderately fractured by drilling.

SMEAR SLIDE SUMMARY (%):

	1, 20 D	1, 29 D	1, 46 D	1, 66 D	1, 88 D	2, 16 D	2, 61 D
TEXTURE:							
Sand	Tr	Tr	1	60	1	2	1
Silt	5	5	4	40	9	40	9
Clay	95	95	95	—	90	58	90
COMPOSITION:							
Accessory minerals	Tr	Tr	—	Tr	—	—	—
Clay	86	94	95	—	71	49	80
Feldspar	2	1	—	5	—	—	Tr
Foraminifers	—	—	—	—	Tr	—	—
Glass	1	2	Tr	65	2	10	3
Micrite	1	—	2	—	2	10	5
Nannofossils	10	2	2	—	25	30	10
Radiolarians	Tr	—	—	—	—	—	—
Rock fragment	—	—	—	30	—	—	—
Spicules	—	1	1	—	Tr	1	1



SITE 787 HOLE B CORE 7R CORED INTERVAL 49.8-59.3 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER OLIGOCENE	B	C/M CP19b	B		R? N	ϕ=58.4 ϕ=60.1 ●=1.78 ●=1.74 %CaCO3 %CaCO3 ●=9.7 ●=18.8		1 2 CC	0.5 1.0				

LITHOLOGIC DESCRIPTION

NANNOFOSSIL-RICH CLAYSTONE AND VITRIC SILTY CLAYSTONE

Major lithology: Lightly to moderately bioturbated, dark gray (5Y4/1) NANNOFOSSIL-RICH CLAYSTONE is the dominant lithology of the core from Section 1, 50 cm to CC. Brownish black (5YR2/1) VITRIC SILTY CLAYSTONE occurs in Section 1, 37-50 and 74-88 cm.

Minor lithology: Gray (5Y5/1) NANNOFOSSIL-RICH CLAYSTONE occurs in the core catcher.

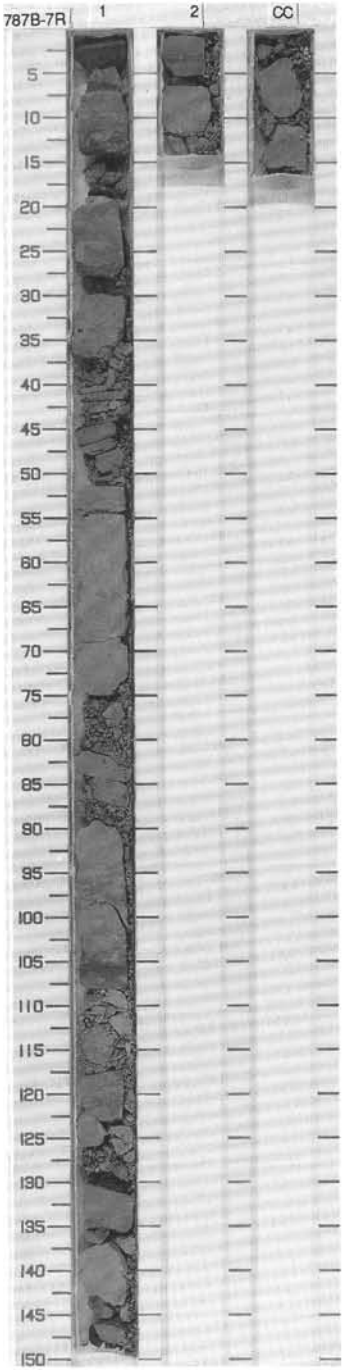
Drilling has highly fractured the core, and portions are drilling breccia.

SMEAR SLIDE SUMMARY (%):

	1, 2 D	1, 25 D	1, 42 D	1, 65 M	1, 130 D	1, 140 D	2, 1 D
TEXTURE:							
Sand	85	2	20	5	95	5	Tr
Silt	10	28	30	25	3	30	20
Clay	5	70	50	65	2	65	80
COMPOSITION:							
Accessory minerals	—	—	—	1	—	—	—
Amphibole	—	—	—	1	—	—	—
Clay	5	69	50	55	5	35	70
Feldspar	1	Tr	Tr	1	5	—	Tr
Glass	53	20	40	20	45	25	15
Mica	—	—	—	1	—	—	—
Micrite	1	3	—	—	—	—	—
Nannofossils	7	5	10	20	2	35	15
Pyroxene	—	—	—	—	3	—	—
Quartz	3	1	—	1	—	Tr	—
Rock fragment	30	2	—	—	40	—	—

SMEAR SLIDE SUMMARY (%):

	CC, 7 D
TEXTURE:	
Sand	1
Silt	9
Clay	90
COMPOSITION:	
Accessory minerals	1
Clay	82
Feldspar	Tr
Glass	5
Nannofossils	12
Rock fragment	Tr
Spicules	Tr



SITE 787 HOLE B CORE 8R CORED INTERVAL 59.3-69.0 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER OLIGOCENE	R/P	A/G	B		N?	ϕ=69.2 ● γ=1.97		1 CC	0.5				

LITHOLOGIC DESCRIPTION

NANNOFOSSIL-RICH CLAYSTONE

Major lithology: Burrowed, lithic-sand-bearing NANNOFOSSIL-RICH CLAYSTONE. The sediment is color-mottled in grayish olive gray (5Y 3/2), greenish gray (5GY 6/1), and pale olive (10Y 6/2). The sand is scoria and pumice particles, mixed into the surrounding sediments by burrowers. Sub-vertical veinlets are found in Section 1, 15-18 cm and 30-35 cm.

The core is highly fractured by drilling.

SITE 787 HOLE B CORE 9R CORED INTERVAL 69.0-78.7 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER OLIGOCENE	R/M	A/M-G	B		R	ϕ=68.2 ● γ=1.86 ϕ=63.6 ● γ=1.80 ϕ=67.3 ● γ=1.93	● %$CaCO_3$=32.3 ● %$CaCO_3$=7.7	1 2 3 CC	0.5 1.0				* * *

LITHOLOGIC DESCRIPTION

VITRIC NANNOFOSSIL SANDY CLAYSTONE AND NANNOFOSSIL-RICH CLAYSTONE

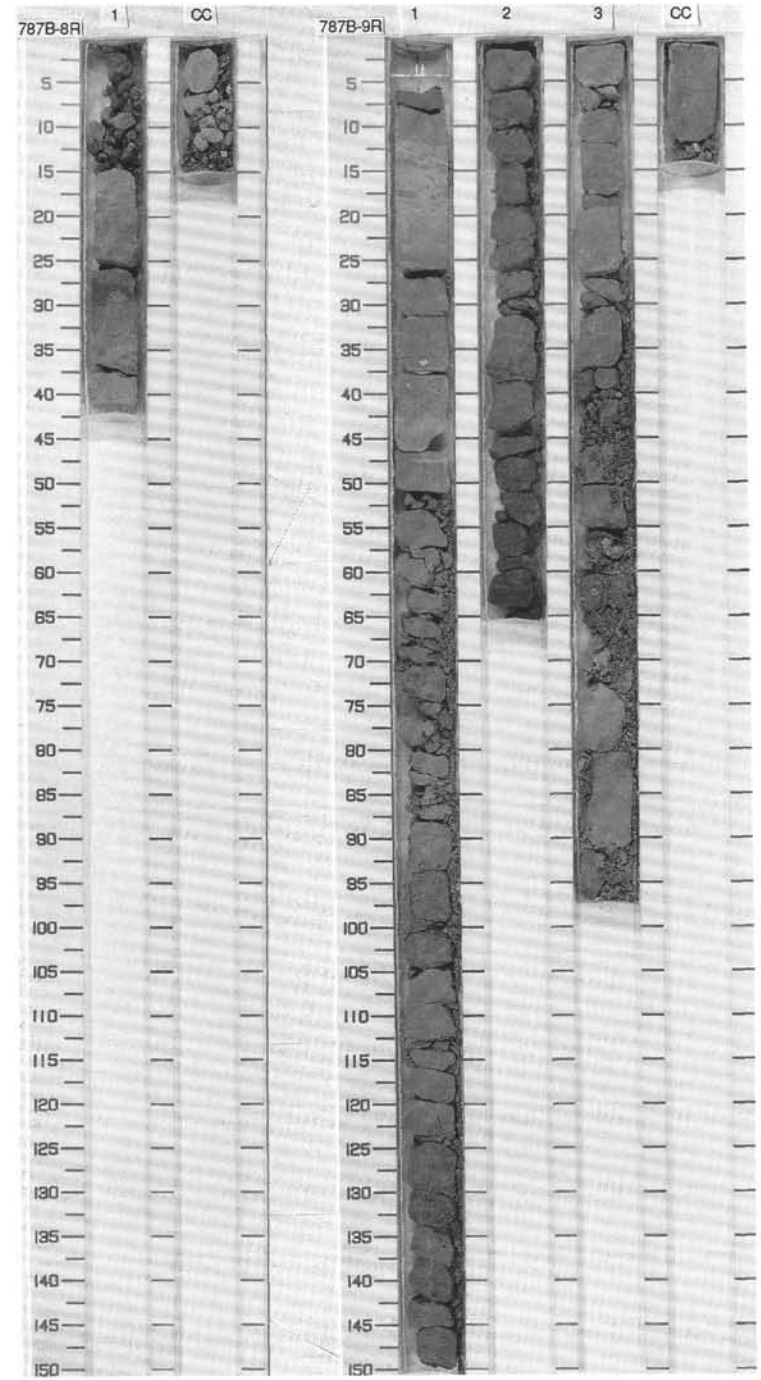
Major lithology: Olive (5Y 5/3) VITRIC NANNOFOSSIL SANDY CLAYSTONE and NANNOFOSSIL-RICH CLAYSTONE, with diatoms, iron oxides, quartz and feldspar. The core is strongly bioturbated throughout (Chondrites, spreiten structures) except for a claystone bed that shows plane-parallel laminae at the base and is structureless at the top. Sub-vertical dewatering veinlets are scattered throughout the core.

Minor lithology: Poorly-sorted olive gray (5Y 5/2) PUMICEOUS and SCORIACEOUS SANDY CLAYSTONE.

The core is highly disturbed by drilling.

SMEAR SLIDE SUMMARY (%):

	2, 64 D	3, 22 D	3, 70 D
TEXTURE:			
Sand	30	5	5
Silt	30	15	15
Clay	40	80	80
COMPOSITION:			
Accessory minerals	1	1	5
Clay	39	65	75
Diatoms	—	1	1
Feldspar	—	1	1
Glass	55	25	1
Mica	—	1	1
Nannofossils	5	5	15
Quartz	—	1	1



SITE 787 HOLE B CORE 10R CORED INTERVAL 78.7-88.4 mbsf

TIME-ROCK UNIT: UPPER OLIGOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS: B; NANNOFOSSILS: A/M-G CP19b C/M CP19b; RADIOLARIANS: B; DIATOMS:

PALEOMAGNETICS: N; R

PHYS. PROPERTIES: ρ=65.5, χ=1.68; ρ=56.3, χ=1.87

CHEMISTRY: %$CaCO_3$=3.3; %$CaCO_3$=60.0

SECTION: 1, 2, 3, CC

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: OG

LITHOLOGIC DESCRIPTION

CLAYSTONE AND NANNOFOSSIL CHALK

Major lithology: Generally strongly burrowed, pale olive (10Y 6/2) and greenish gray (5GY 6/1) CLAYSTONE, and yellowish gray (5Y 7/2) NANNOFOSSIL CHALK.

Minor lithologies: There are local <1 cm thick layers of SILTSTONE and SANDY SILTSTONE consisting of scoria and glass. Burrowing partly destroyed these layers. Section 1 contains common sub-vertical dewatering veinlets.

The upper half of the core is highly fractured by drilling, and the lower half is undisturbed.

SMEAR SLIDE SUMMARY (%):

	1, 65 D	2, 95 D
TEXTURE:		
Silt	20	10
Clay	80	90
COMPOSITION:		
Accessory minerals	1	—
Clay	50	62
Feldspar	4	1
Glass	40	1
Mica	1	—
Nannofossils	2	35
Quartz	2	1

SITE 787 HOLE B CORE 11R CORED INTERVAL 88.4-98.1 mbsf

TIME-ROCK UNIT: UPPER OLIGOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS: C/A P/M A/M CP19b; NANNOFOSSILS: A/M-G CP19b; RADIOLARIANS: B; DIATOMS:

PALEOMAGNETICS: N; R

PHYS. PROPERTIES: ρ=51.7, χ=1.92; ρ=64.8, χ=1.69

CHEMISTRY: %$CaCO_3$=64.4; %$CaCO_3$=8.7

SECTION: 1, 2, 3, CC

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

NANNOFOSSIL-RICH CLAYSTONE

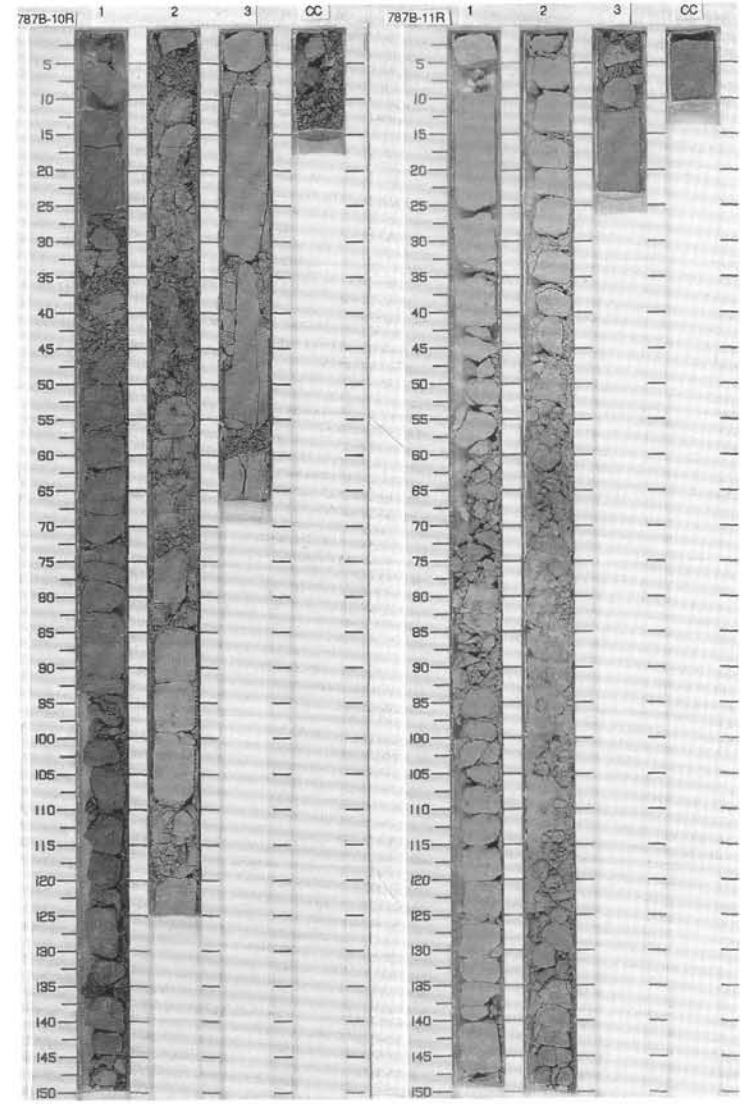
Major lithologies: Pale brown (10YR 6/3) to very pale brown (10YR 7/3) NANNOFOSSIL CHALK and NANNOFOSSIL-RICH CLAYSTONE. Bioturbation affects most of the core, producing mottling and/or burrowing (Chondrites, possibly Planolites, and spreiten features). Sub-vertical dewatering veinlets occur at the bottom of the core.

Minor lithology: Two laminae of VITRIC-RICH CLAYSTONE occur in Section 1, 12 cm.

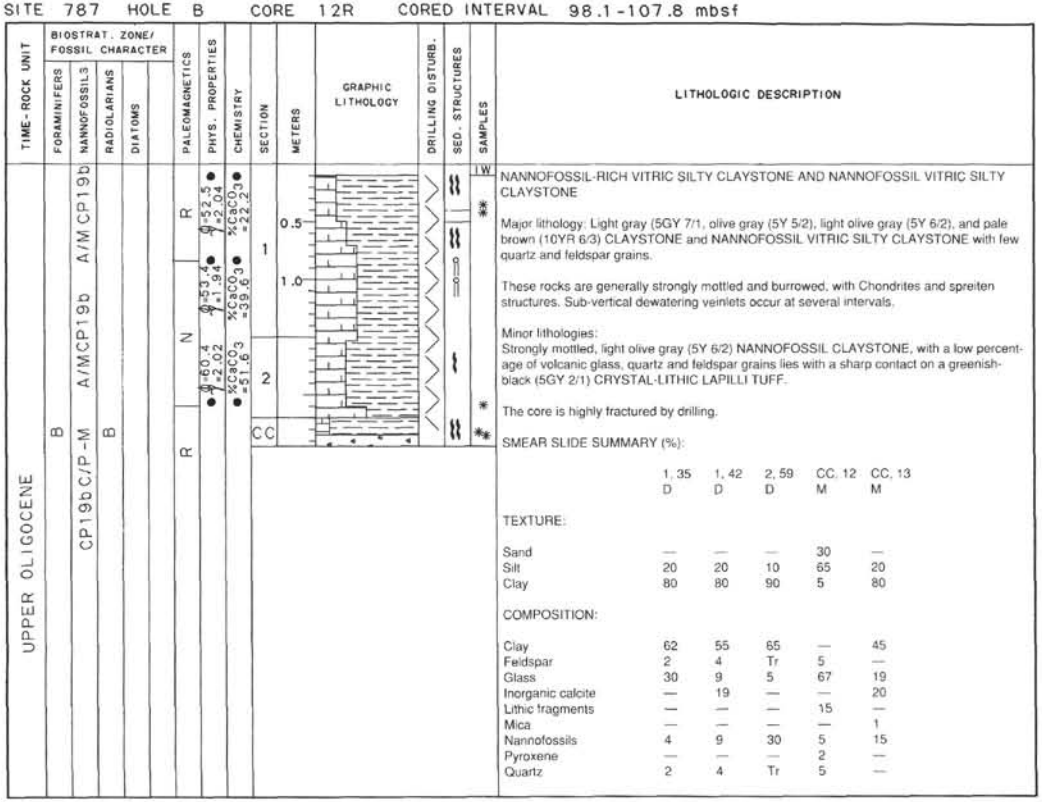
The core is highly to moderately fractured by drilling.

SMEAR SLIDE SUMMARY (%):

	1, 12 M	1, 29 D	2, 128 D
TEXTURE:			
Silt	20	10	10
Clay	80	90	90
COMPOSITION:			
Clay	60	52	85
Glass	20	3	10
Nannofossils	20	45	5



SITE 787 HOLE B CORE 12R CORED INTERVAL 98.1-107.8 mbsf



NANNOFOSSIL-RICH VITRIC SILTY CLAYSTONE AND NANNOFOSSIL VITRIC SILTY CLAYSTONE

Major lithology: Light gray (5GY 7/1, olive gray (5Y 5/2), light olive gray (5Y 6/2), and pale brown (10YR 6/3) CLAYSTONE and NANNOFOSSIL VITRIC SILTY CLAYSTONE with few quartz and feldspar grains.

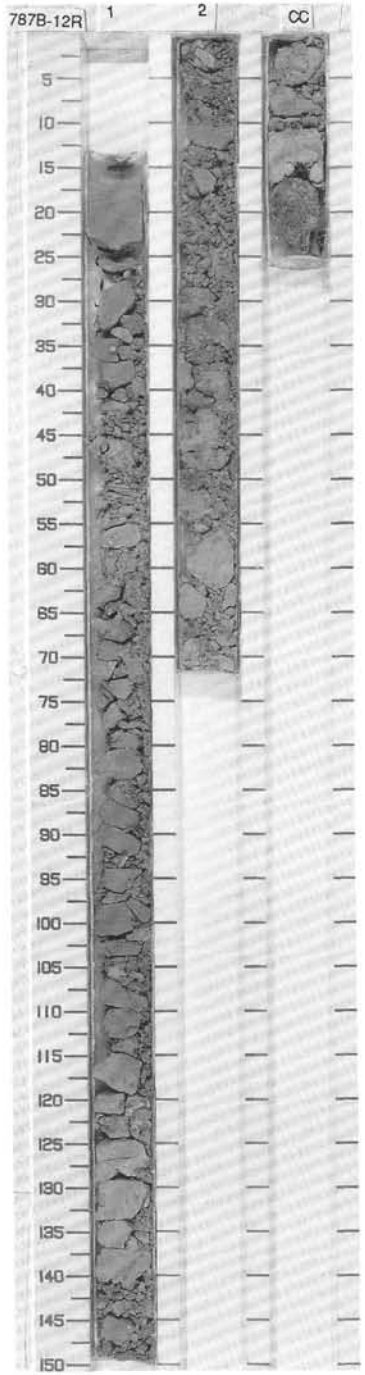
These rocks are generally strongly mottled and burrowed, with Chondrites and spreiten structures. Sub-vertical dewatering veinlets occur at several intervals.

Minor lithologies:
Strongly mottled, light olive gray (5Y 6/2) NANNOFOSSIL CLAYSTONE, with a low percentage of volcanic glass, quartz and feldspar grains lies with a sharp contact on a greenish-black (5GY 2/1) CRYSTAL-LITHIC LAPILLI TUFF.

The core is highly fractured by drilling.

SMEAR SLIDE SUMMARY (%):

	1, 35 D	1, 42 D	2, 59 D	CC, 12 M	CC, 13 M
TEXTURE:					
Sand	—	—	—	30	—
Silt	20	20	10	65	20
Clay	80	80	90	5	80
COMPOSITION:					
Clay	62	55	65	—	45
Feldspar	2	4	Tr	5	—
Glass	30	9	5	67	19
Inorganic calcite	—	19	—	—	20
Lithic fragments	—	—	—	15	—
Mica	—	—	—	—	1
Nannofossils	4	9	30	5	15
Pyroxene	—	—	—	2	—
Quartz	2	4	Tr	5	—



SITE 787 HOLE B CORE 13R CORED INTERVAL 107.8-117.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
UPPER OLIGOCENE	B	B R/G	C/P	? *Dorcadospyris ateuchus* Zone	R R? R	ρ=44.5 ρ=66.7 ρ=46.9 ρ=43.6 ρ=41.2 ρ=2.21 ρ=2.0 ρ=2.20 ρ=2.23 ρ=2.14	%$CaCO_3$=10.1	1 2 3 CC	0.5 1.0		o	≈	# *	CRYSTAL-LITHIC LAPILLI TUFF AND NANNOFOSSIL-RICH CLAYSTONE

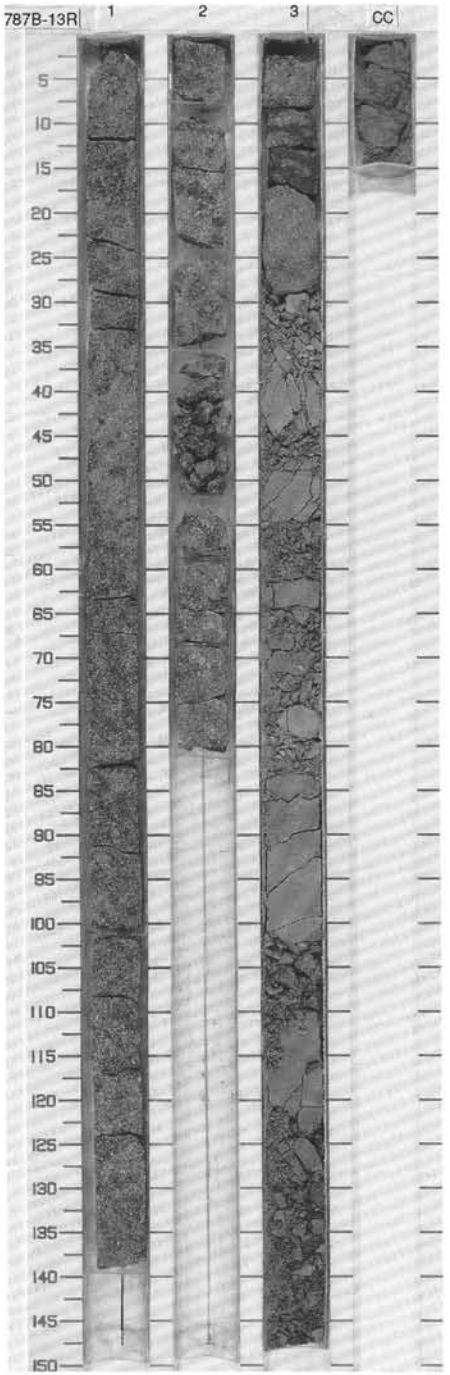
Major lithologies: Section 1, 0-135 cm, is a greenish black (5GY 2/1) CRYSTAL-LITHIC LAPILLI TUFF (pyroclastic flow) with a vesicular base due to hot emplacement over wet muds. Clasts are mainly gray andesite, black aphyric basalt and minor red scoria. Crystals are mainly plagioclase.

Minor lithology: Section 3, 30 cm, to CC is a highly bioturbated grayish yellow green (5GY 7/2) to grayish green (10GY 5/2) NANNOFOSSIL-RICH CLAYSTONE.

The core has been reduced to breccia by drilling.

SMEAR SLIDE SUMMARY (%):

	3, 100 D
TEXTURE:	
Silt	10
Clay	90
COMPOSITION:	
Accessory minerals	2
Clay	77
Feldspar	1
Glass	4
Nannofossils	15
Quartz	1



SITE 787 HOLE B CORE 14R CORED INTERVAL 117.5-127.2 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER OLIGOCENE	B R/G B	CP19b	A/P-M	CP19b	R I	ρ=44.2 ±2.05; ρ=46.5 ±1.96; ρ=61.4 ±1.68	%$CaCO_3$=1.5; %$CaCO_3$=2.8; %$CaCO_3$=1.3	1 2 3	0.5 1.0		0		# #

LITHOLOGIC DESCRIPTION

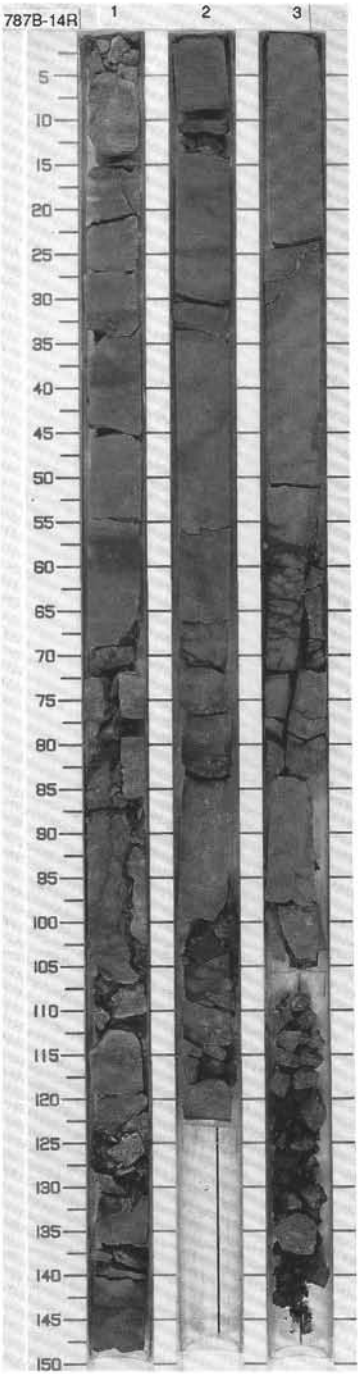
VITRIC SILTY CLAYSTONE AND VITRIC FINE SANDSTONE.

Major lithologies:
Section 1, 0-135 cm, is very dark greenish black (5G 3/2) VITRIC SILTY CLAYSTONE, bioturbated in places, and very dark greenish black (5G 3/2) VITRIC FINE SANDSTONE with normal grading and planar- and cross-laminations. There is a prominent sub-vertical fractured and brecciated zone in Section 1, 74-98 cm.

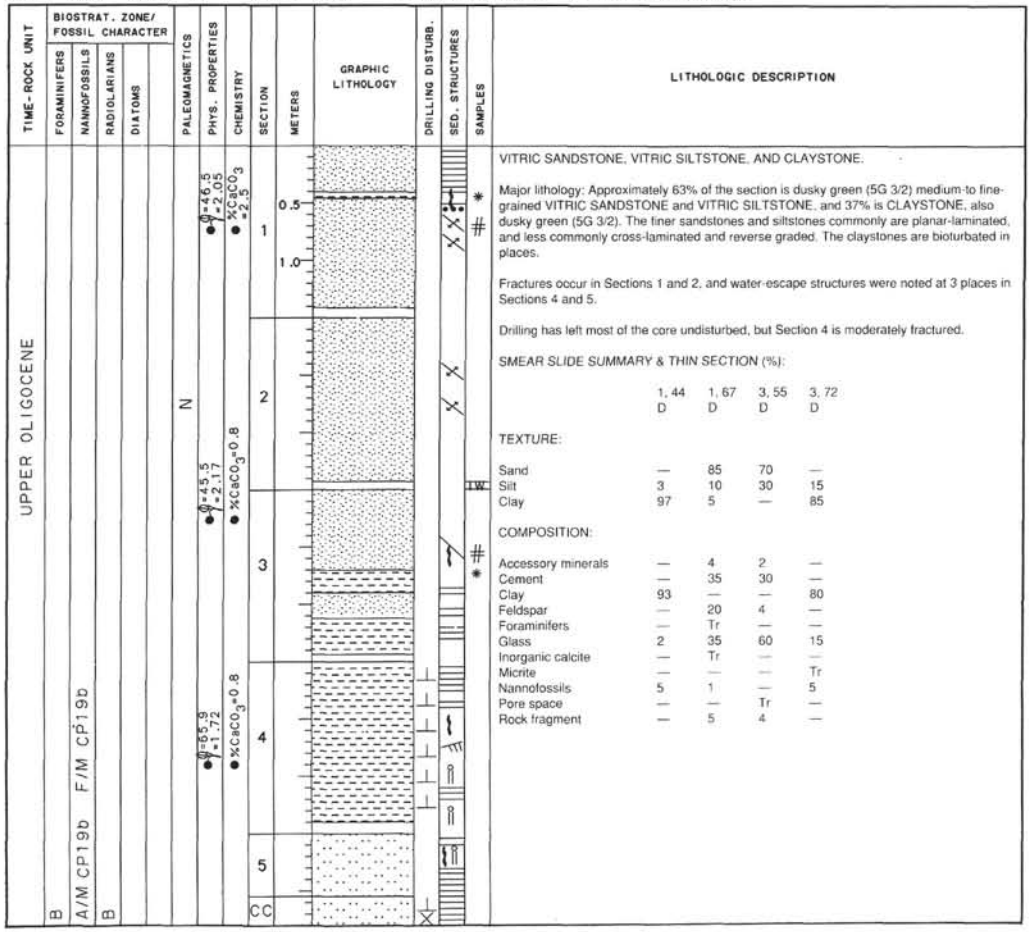
Parts of the core are moderately to highly fractured by drilling, but some intervals are undisturbed.

THIN SECTION SUMMARY (%):

	2, 118 D	3, 101 D
TEXTURE:		
Sand	100	90
Silt	—	10
COMPOSITION:		
Accessory minerals	Tr	1
Bioclast	1	2
Cement	30	30
Feldspar	7	15
Glass	60	50
Inorganic calcite	1	Tr
Rock fragment	1	2



SITE 787 HOLE B CORE 15R CORED INTERVAL 127.2-136.8 mbsf



LITHOLOGIC DESCRIPTION

VITRIC SANDSTONE, VITRIC SILTSTONE, AND CLAYSTONE.

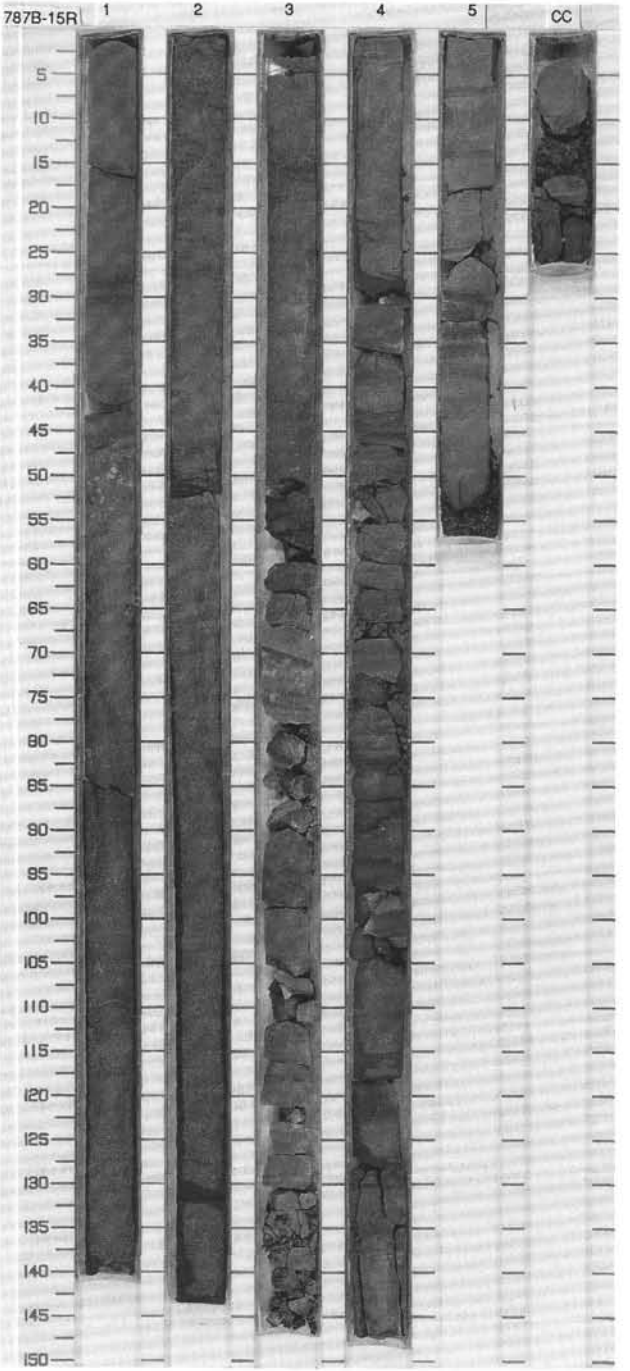
Major lithology: Approximately 63% of the section is dusky green (5G 3/2) medium-to fine-grained VITRIC SANDSTONE and VITRIC SILTSTONE, and 37% is CLAYSTONE, also dusky green (5G 3/2). The finer sandstones and siltstones commonly are planar-laminated, and less commonly cross-laminated and reverse graded. The claystones are bioturbated in places.

Fractures occur in Sections 1 and 2, and water-escape structures were noted at 3 places in Sections 4 and 5.

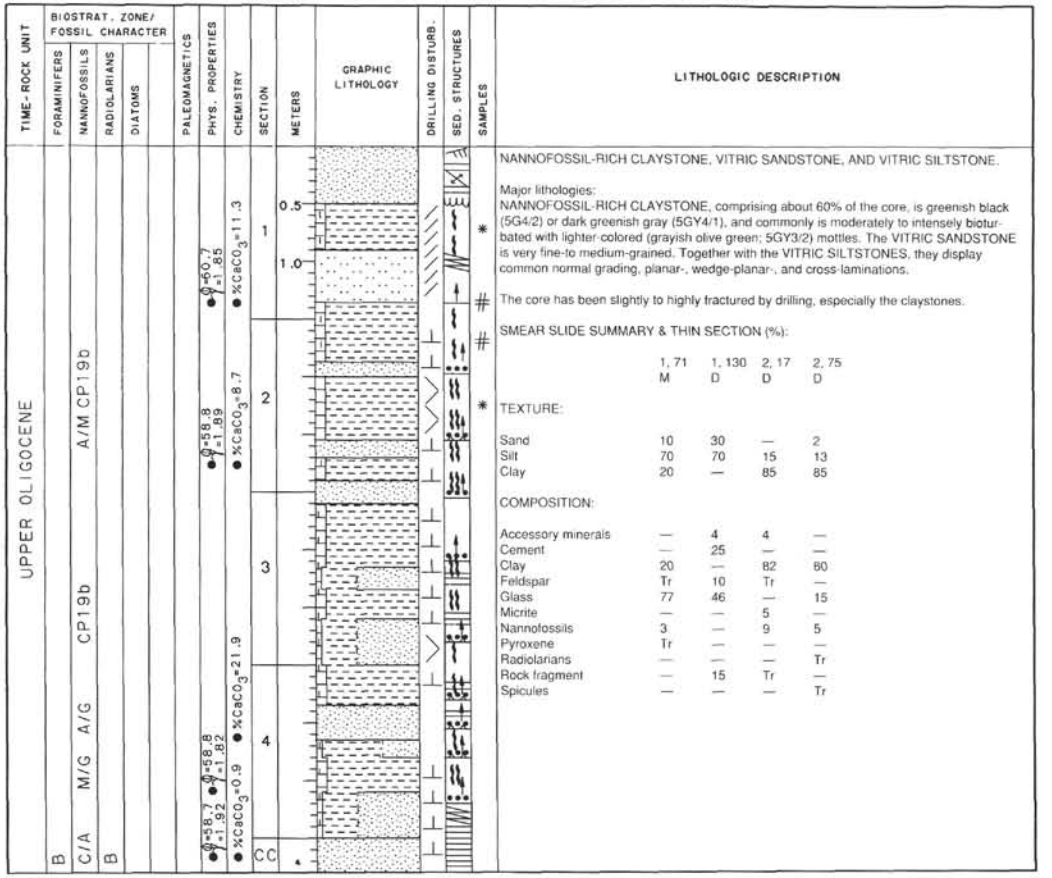
Drilling has left most of the core undisturbed, but Section 4 is moderately fractured.

SMEAR SLIDE SUMMARY & THIN SECTION (%):

	1, 44 D	1, 67 D	3, 55 D	3, 72 D
TEXTURE:				
Sand	—	85	70	—
Silt	3	10	30	15
Clay	97	5	—	85
COMPOSITION:				
Accessory minerals	—	4	2	—
Cement	—	35	30	—
Clay	93	—	—	80
Feldspar	—	20	4	—
Foraminifers	—	Tr	—	—
Glass	2	35	60	15
Inorganic calcite	—	Tr	—	—
Micrite	—	—	—	Tr
Nannofossils	5	1	—	5
Pore space	—	—	Tr	—
Rock fragment	—	5	4	—



SITE 787 HOLE B CORE 16R CORED INTERVAL 136.8-146.5 mbsf



LITHOLOGIC DESCRIPTION

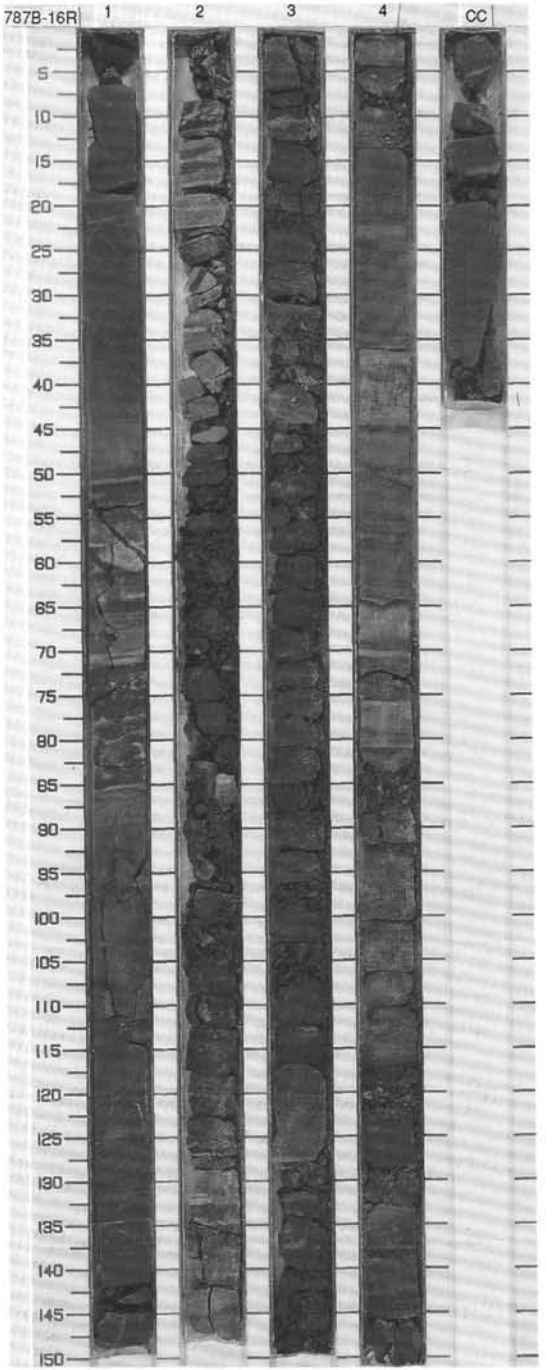
NANNOFOSSIL-RICH CLAYSTONE, VITRIC SANDSTONE, AND VITRIC SILTSTONE.

Major lithologies:
NANNOFOSSIL-RICH CLAYSTONE, comprising about 60% of the core, is greenish black (5G4/2) or dark greenish gray (5GY4/1), and commonly is moderately to intensely bioturbated with lighter-colored (grayish olive green; 5GY3/2) mottles. The VITRIC SANDSTONE is very fine-to medium-grained. Together with the VITRIC SILTSTONES, they display common normal grading, planar-, wedge-planar-, and cross-laminations.

The core has been slightly to highly fractured by drilling, especially the claystones.

SMEAR SLIDE SUMMARY & THIN SECTION (%):

	1, 71 M	1, 130 D	2, 17 D	2, 75 D
TEXTURE:				
Sand	10	30	—	2
Silt	70	70	15	13
Clay	20	—	85	85
COMPOSITION:				
Accessory minerals	—	4	4	—
Cement	—	25	—	—
Clay	20	—	82	80
Feldspar	Tr	10	Tr	—
Glass	77	46	—	15
Micrite	—	—	5	—
Nannofossils	3	—	9	5
Pyroxene	Tr	—	—	—
Radiolarians	—	—	—	Tr
Rock fragment	—	15	Tr	—
Spicules	—	—	—	Tr



SITE 787 HOLE B CORE 17R CORED INTERVAL 146.5-156.2 mbsf

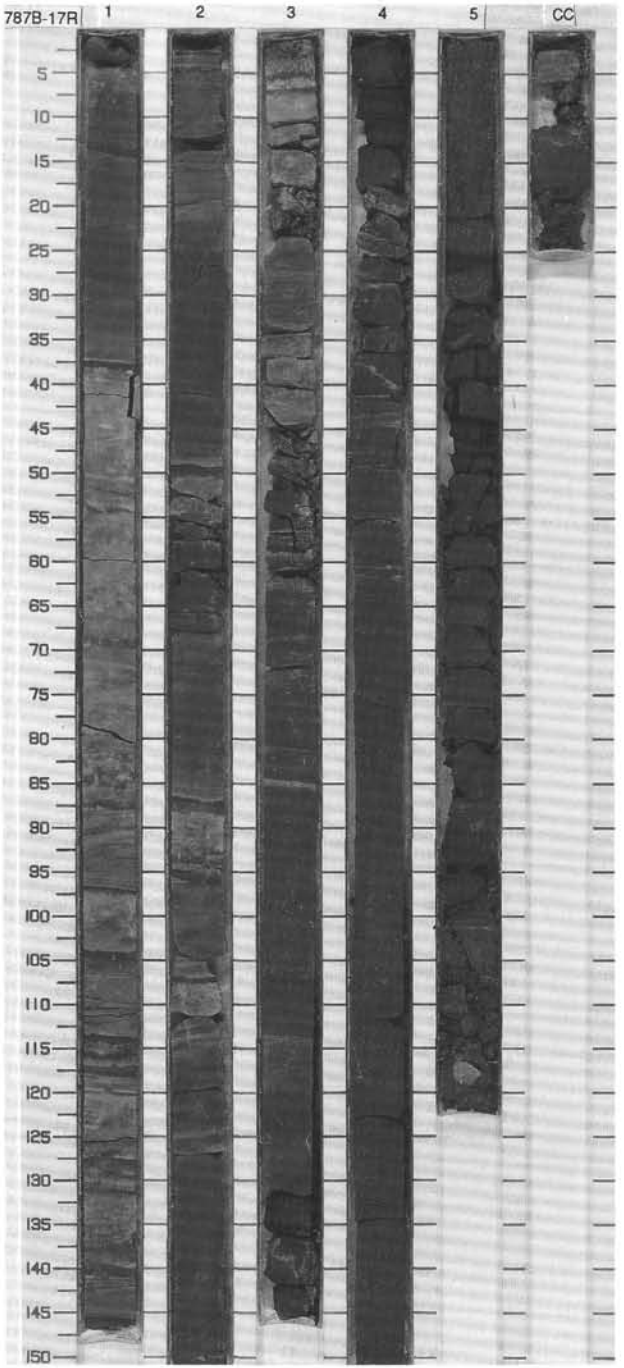
TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
UPPER OLIGOCENE	B	C/M CP19b	A/G CP19b	C/P	N	ϕ=53.5 ρ=1.85	%$CaCO_3$=6.1	5						
	F/M CP19b					ϕ=61.7 ρ=2.08	%$CaCO_3$ =0.7	3						
						ϕ=60.8 ρ=1.98	%$CaCO_3$=1.0	2						
						ϕ=36.0 ρ=1.92	%$CaCO_3$ =8.6	1	0.5					
									1.0					
								CC						

VITRIC SANDSTONE, CLAYSTONE, AND VITRIC SILTSTONE

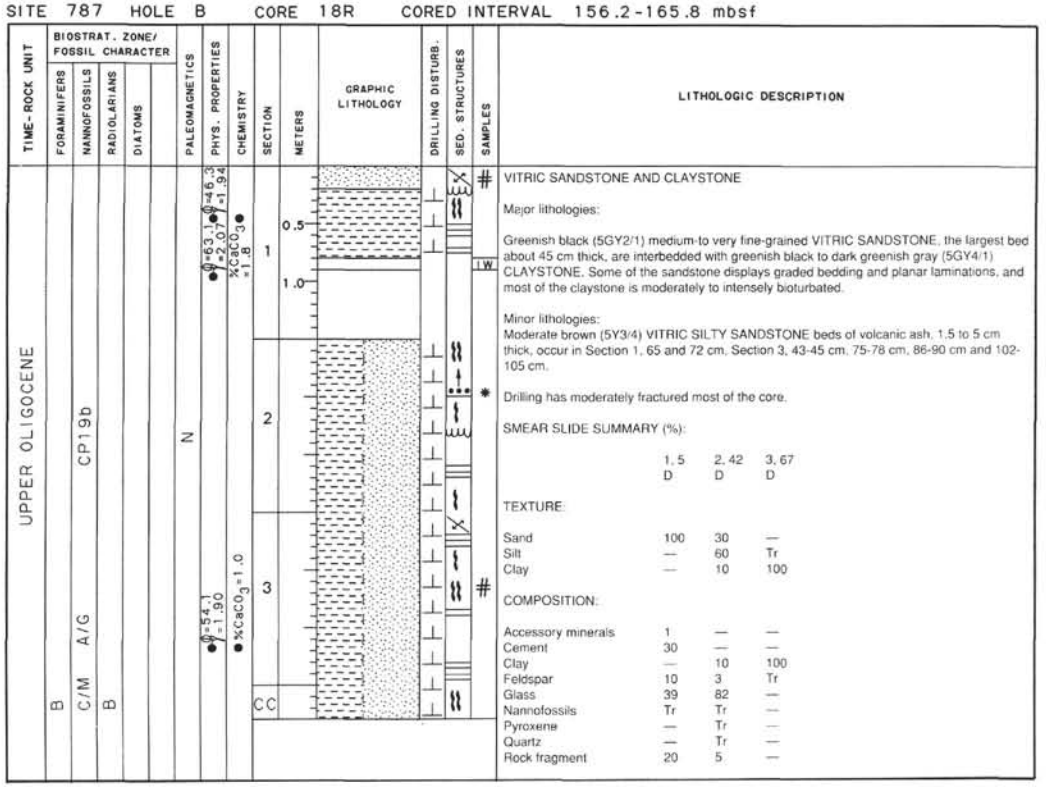
Major lithologies:
Greenish black (5GY2/1), fine- to medium-grained VITRIC SANDSTONE and less abundant VITRIC SILTSTONE, in individual beds as thick as 160 cm, but more commonly 10 to 35 cm thick, most showing parallel laminations. Ripple laminations are less common. Inverse grading was noted at two places in Section 3. The normally graded sandstones generally are capped with dark grayish green to greenish gray (5GY4/1, -5/1) CLAYSTONES, many of which are moderately to intensely laminated.

Minor lithology: A single variegated bed of greenish gray (5GY6/1) and greenish black (5GY2/1) CONGLOMERATE with pumice clasts occurs in Section 3, 0-7 cm.

Drilling has left much of the core undisturbed, but some intervals are moderately fractured.



SITE 787 HOLE B CORE 18R CORED INTERVAL 156.2-165.8 mbsf



LITHOLOGIC DESCRIPTION

VITRIC SANDSTONE AND CLAYSTONE

Major lithologies:

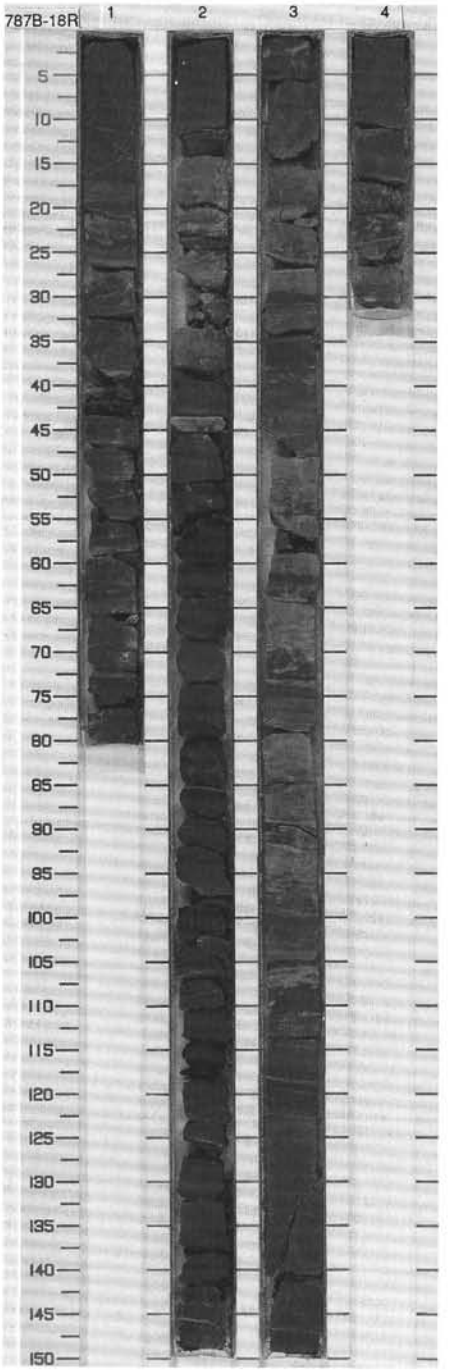
Greenish black (5GY2/1) medium-to very fine-grained VITRIC SANDSTONE, the largest bed about 45 cm thick, are interbedded with greenish black to dark greenish gray (5GY4/1) CLAYSTONE. Some of the sandstone displays graded bedding and planar laminations, and most of the claystone is moderately to intensely bioturbated.

Minor lithologies:
Moderate brown (5Y3/4) VITRIC SILTY SANDSTONE beds of volcanic ash, 1.5 to 5 cm thick, occur in Section 1, 65 and 72 cm; Section 3, 43-45 cm, 75-78 cm, 86-90 cm and 102-105 cm.

Drilling has moderately fractured most of the core.

SMEAR SLIDE SUMMARY (%):

	1, 5 D	2, 42 D	3, 67 D
TEXTURE:			
Sand	100	30	—
Silt	—	60	Tr
Clay	—	10	100
COMPOSITION:			
Accessory minerals	1	—	—
Cement	30	—	—
Clay	—	10	100
Feldspar	10	3	Tr
Glass	39	82	—
Nannofossils	Tr	Tr	—
Pyroxene	—	Tr	—
Quartz	—	Tr	—
Rock fragment	20	5	—



SITE 787 HOLE B CORE 19R CORED INTERVAL 165.8-175.5 mbsf

TIME-ROCK UNIT: UPPER OLIGOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: UPPER OLIGOCENE ?
- NANNOFOSSILS: CP19b
- RADIOLARIANS: F/P-M
- DIATOMS: C/P

PALEOMAGNETICS: R / I / R / N / R

PHYS. PROPERTIES: ϕ=54.6, ρ=2.11; ϕ=55.8, ρ=2.06; ϕ=61.7, ρ=1.99

CHEMISTRY: %CaCO3=0.7; %CaCO3=10.5; %CaCO3=1.8

SECTION: 1, 2, 3, 4, 5, 6, 7

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

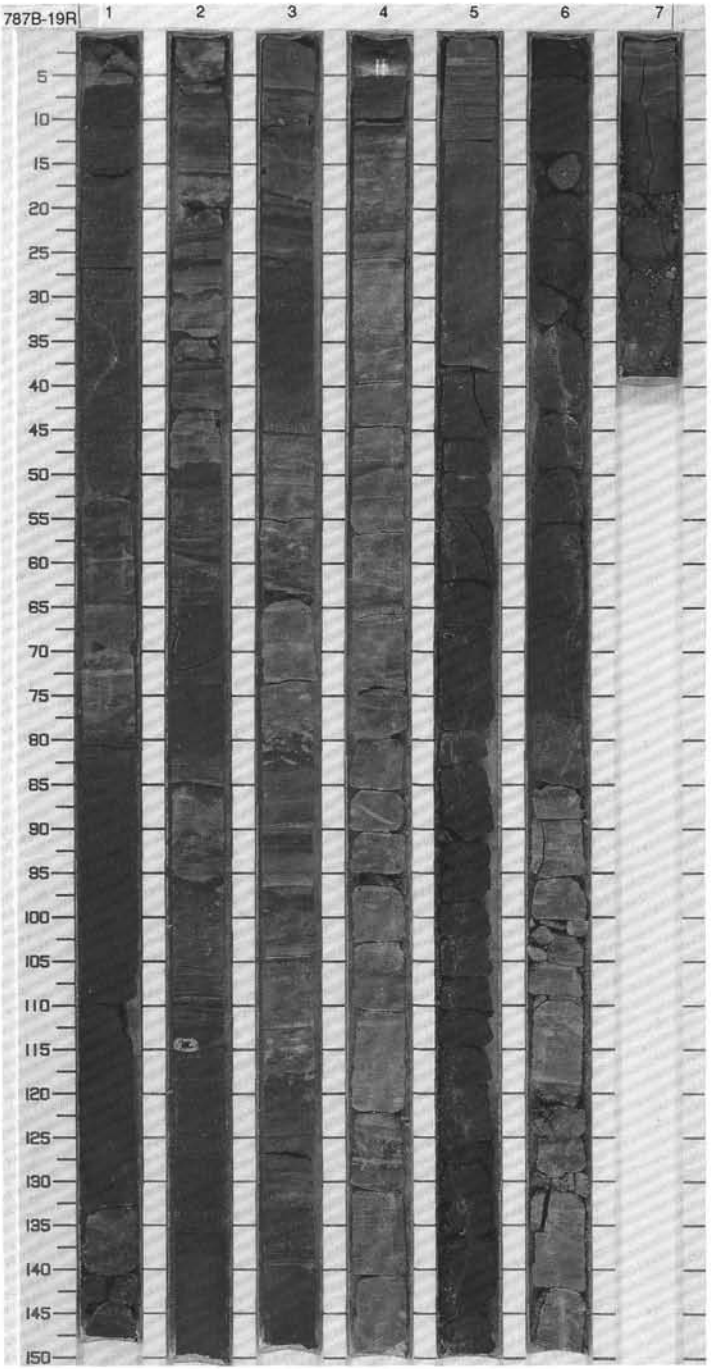
NANNOFOSSIL-RICH VITRIC SILTY CLAYSTONE, VITRIC SILTY SANDSTONE, AND VITRIC SANDSTONE

Major lithologies:
Dark greenish gray (5G4/1), and greenish gray (5GY4/1) moderately to intensely bioturbated VITRIC SILTY CLAYSTONE comprises slightly over half of the core. Dark gray (5Y4/1, N3) VITRIC SANDSTONE and VITRIC SILTY SANDSTONE display common scoured bases, graded bedding, planar-lamination, and less common wedge-planar laminae.

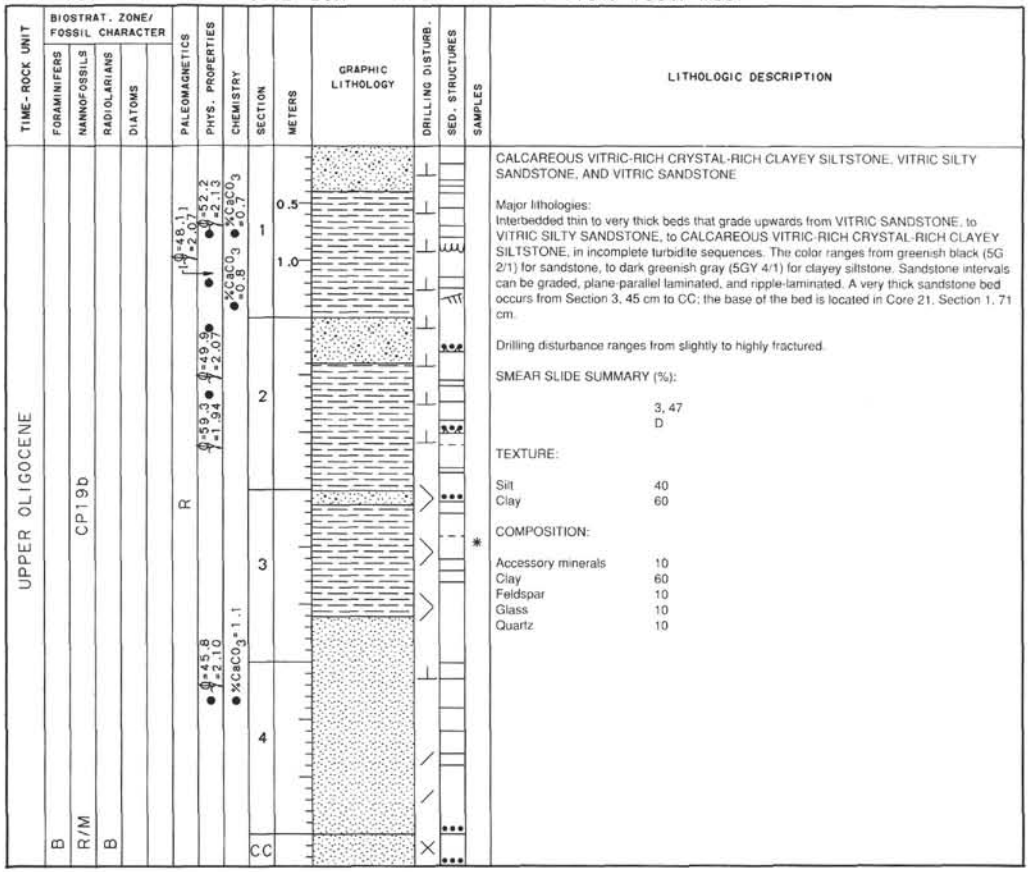
Only portions of Sections 1, 2 and 4 are moderately fractured by drilling; the rest of the core is undisturbed.

THIN SECTION SUMMARY (%):

	1, 34	3, 44
	D	D
TEXTURE:		
Sand	90	100
Silt	10	—
COMPOSITION:		
Accessory minerals	2	—
Cement	28	22
Feldspar	20	10
Glass	15	5
Inorganic calcite	—	Tr
Pore space	—	3
Rock fragment	35	60



SITE 787 HOLE B CORE 20R CORED INTERVAL 175.5-185.1 mbsf



LITHOLOGIC DESCRIPTION

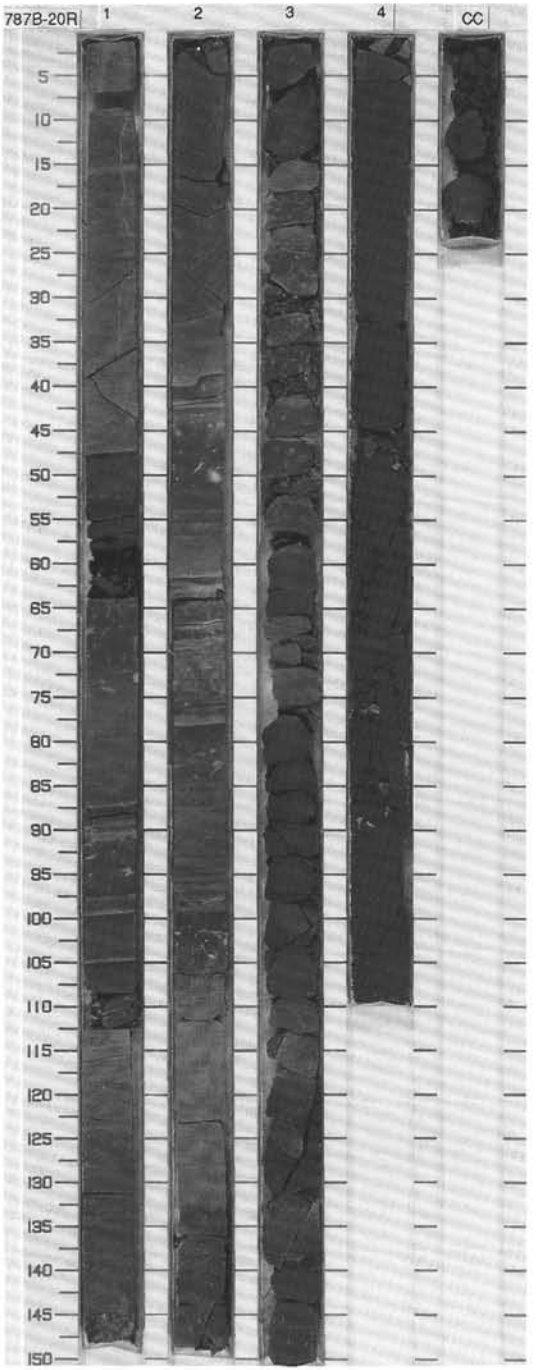
CALCAREOUS VITRIC-RICH CRYSTAL-RICH CLAYEY SILTSTONE, VITRIC SILTY SANDSTONE, AND VITRIC SANDSTONE

Major lithologies:
Interbedded thin to very thick beds that grade upwards from VITRIC SANDSTONE, to VITRIC SILTY SANDSTONE, to CALCAREOUS VITRIC-RICH CRYSTAL-RICH CLAYEY SILTSTONE, in incomplete turbidite sequences. The color ranges from greenish black (5G 2/1) for sandstone, to dark greenish gray (5GY 4/1) for clayey siltstone. Sandstone intervals can be graded, plane-parallel laminated, and ripple-laminated. A very thick sandstone bed occurs from Section 3, 45 cm to CC; the base of the bed is located in Core 21, Section 1, 71 cm.

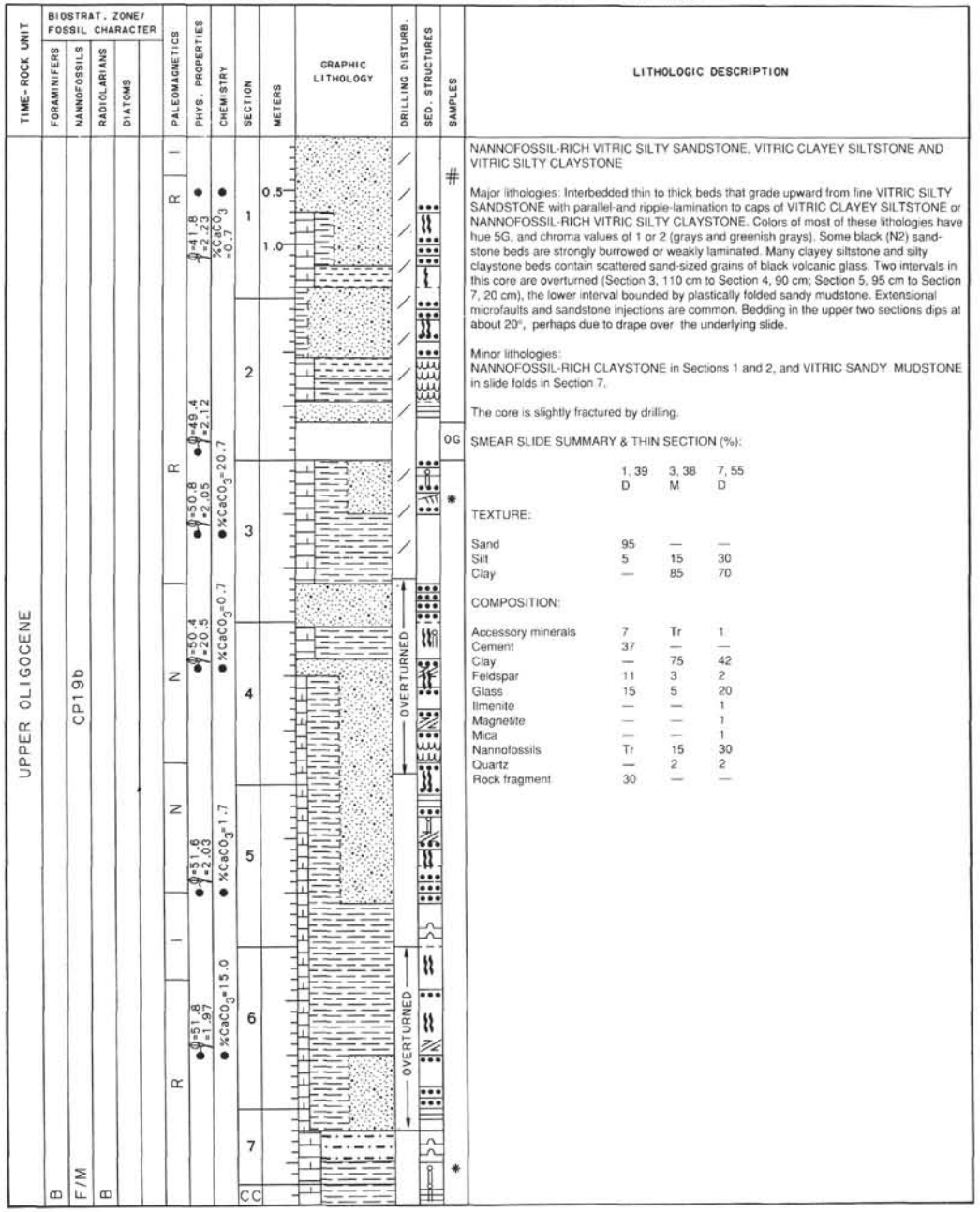
Drilling disturbance ranges from slightly to highly fractured.

SMEAR SLIDE SUMMARY (%):

	3, 47 D
TEXTURE:	
Silt	40
Clay	60
COMPOSITION:	
Accessory minerals	10
Clay	60
Feldspar	10
Glass	10
Quartz	10



SITE 787 HOLE B CORE 21R CORED INTERVAL 185.1-194.8 mbsf



LITHOLOGIC DESCRIPTION

NANNOFOSSIL-RICH VITRIC SILTY SANDSTONE, VITRIC CLAYEY SILTSTONE AND VITRIC SILTY CLAYSTONE

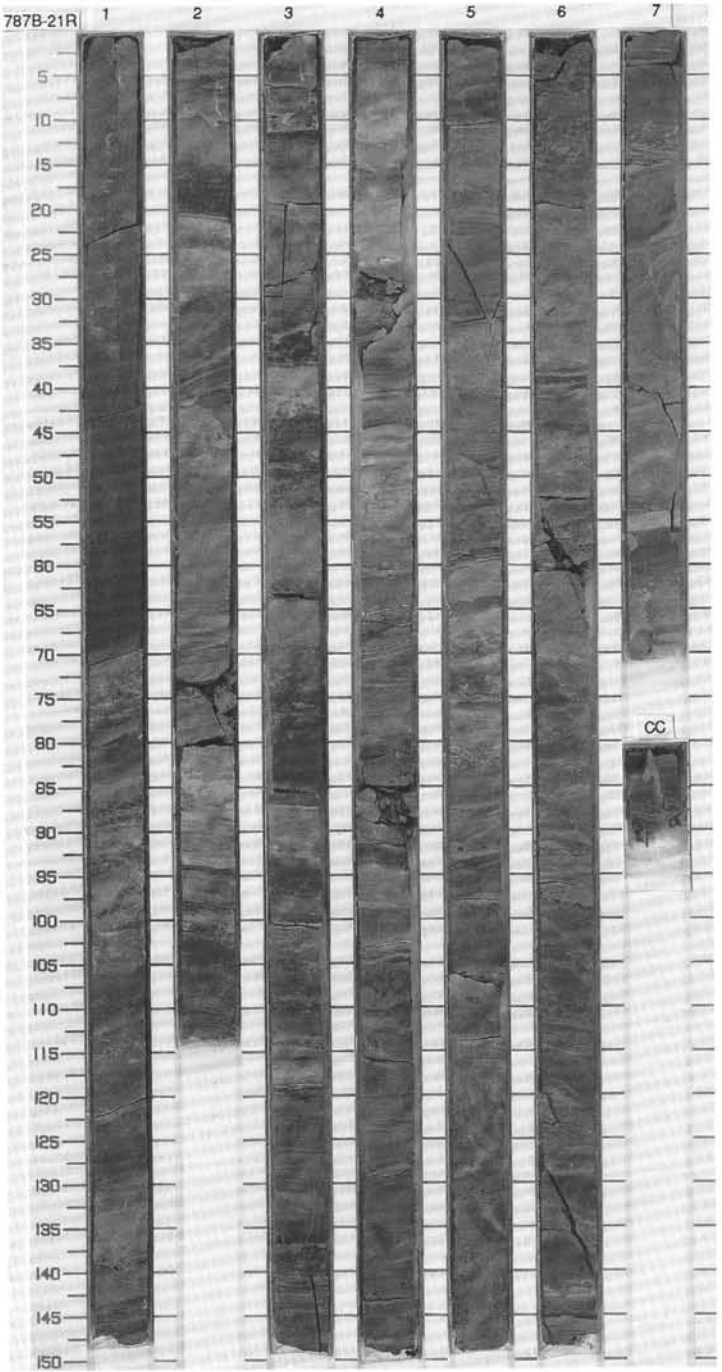
Major lithologies: Interbedded thin to thick beds that grade upward from fine VITRIC SILTY SANDSTONE with parallel-and ripple-lamination to caps of VITRIC CLAYEY SILTSTONE or NANNOFOSSIL-RICH VITRIC SILTY CLAYSTONE. Colors of most of these lithologies have hue 5G, and chroma values of 1 or 2 (grays and greenish grays). Some black (N2) sandstone beds are strongly burrowed or weakly laminated. Many clayey siltstone and silty claystone beds contain scattered sand-sized grains of black volcanic glass. Two intervals in this core are overturned (Section 3, 110 cm to Section 4, 90 cm; Section 5, 95 cm to Section 7, 20 cm), the lower interval bounded by plastically folded sandy mudstone. Extensional microfaults and sandstone injections are common. Bedding in the upper two sections dips at about 20°, perhaps due to drape over the underlying slide.

Minor lithologies:
NANNOFOSSIL-RICH CLAYSTONE in Sections 1 and 2, and VITRIC SANDY MUDSTONE in slide folds in Section 7.

The core is slightly fractured by drilling.

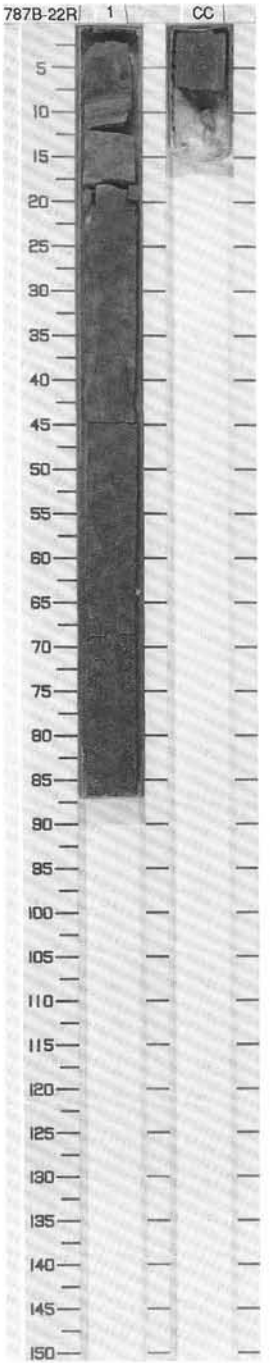
SMEAR SLIDE SUMMARY & THIN SECTION (%):

	1, 39 D	3, 38 M	7, 55 D
TEXTURE:			
Sand	95	—	—
Silt	5	15	30
Clay	—	85	70
COMPOSITION:			
Accessory minerals	7	Tr	1
Cement	37	—	—
Clay	—	75	42
Feldspar	11	3	2
Glass	15	5	20
Ilmenite	—	—	1
Magnetite	—	—	1
Mica	—	—	1
Nannofossils	Tr	15	30
Quartz	—	2	2
Rock fragment	30	—	—



SITE 787 HOLE B CORE 22R CORED INTERVAL 194.8-204.4 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
UPPER OLIGOCENE	F/M	CP19b	B			ρ 1.39-2.21		1 CC	0.5 1.0					GRANULE-RICH VITRIC SANDSTONE AND VITRIC SILTY CLAYSTONE Major lithologies: The core consists of two beds of grayish black (N2) to medium dark gray (N4) GRANULE-RICH VITRIC SANDSTONE grading upward into medium gray (N5) VITRIC SILTY CLAYSTONE. The sandstone interval of the graded beds is reverse to normal graded. Two subvertical dewatering veinlets occur in the upper part of the lower graded sequence. The core is slightly fractured by drilling.



SITE 787 HOLE B CORE 23R CORED INTERVAL 204.4-214.1 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
UPPER OLIGOCENE	F/M	CP19b	C/P		R	● ϕ=51.0 ρ=1.96 ● ϕ=36.7 ρ=2.31 ● %CaCO3=8.9 ● %CaCO3=0.7 ● ϕ=37.2 ρ=2.40 ● %CaCO3=1.7		1 2 3 4 5 CC	0.5 1.0			* *	

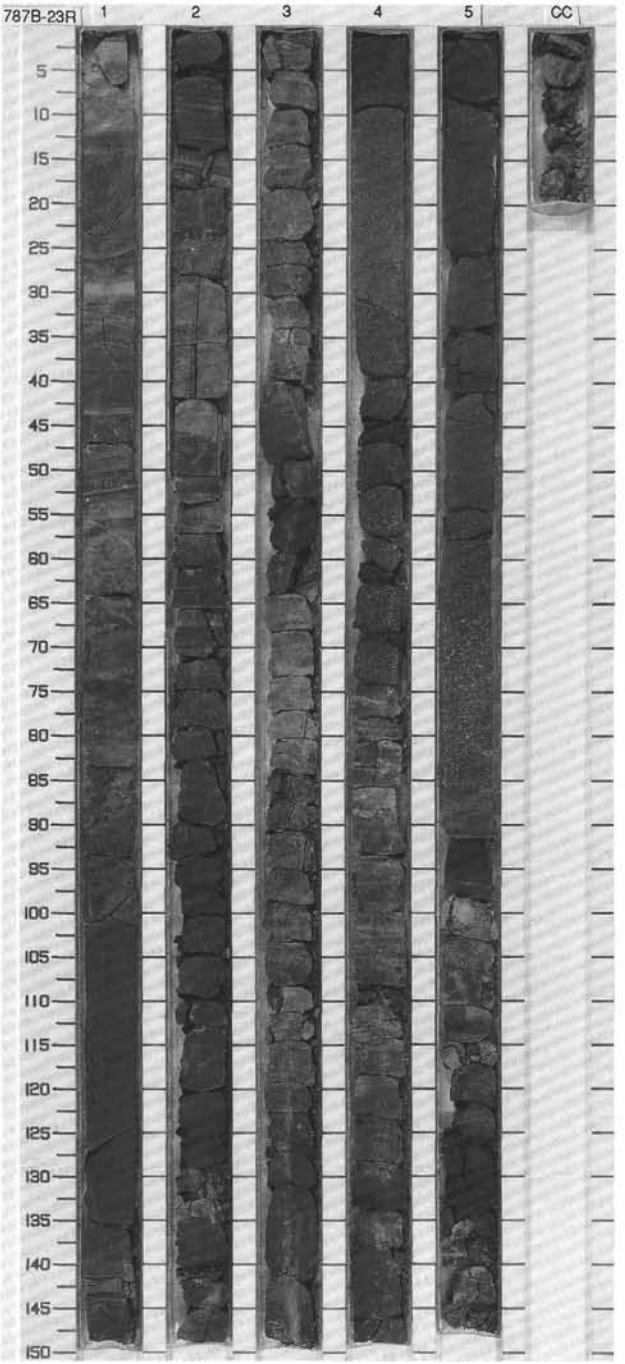
VITRIC SILTY CLAYSTONE, VITRIC SANDSTONE, VITRIC SILTY SANDSTONE, AND NANNOFOSSIL-RICH VITRIC SILTY CLAYSTONE

Major lithologies:
Thick to very thick beds of granule-rich to very fine, grayish black (N2) VITRIC SILTY SANDSTONE, that grade upwards into greenish black (5GY 2/1) VITRIC-RICH SILTY CLAYSTONE and greenish gray (5G 6/1), highly burrowed, thin to medium beds of NANNOFOSSIL-RICH VITRIC SILTY CLAYSTONE. Two very thick sandstone beds occur from Section 3, 110 cm to Section 4, 74 cm, and from Section 4, 116 cm to Section 5, 86 cm. The claystone caps of the graded sequences are weakly burrowed with spreiten structures. Subvertical dikes, common in Section 1 and in the upper part of Section 2, are filled with silty claystone as thick as 1 cm.

Only Section 1 is slightly fractured by drilling; the rest of the core is undisturbed.

SMEAR SLIDE SUMMARY (%):

	2, 44 D	2, 49 D
TEXTURE:		
Sand	5	—
Silt	45	40
Clay	50	60
COMPOSITION:		
Accessory minerals	1	1
Clay	40	58
Feldspar	1	1
Glass	30	29
Ilmenite	1	1
Magnetite	1	4
Nannofossils	25	2
Quartz	1	4



SITE 787 HOLE B CORE 24R CORED INTERVAL 214.1-223.7 mbsf

TIME-ROCK UNIT: UPPER OLIGOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS; NANNOFOSSILS: A/M, CP19b; RADIOLARIANS: B; DIATOMS

PALEOMAGNETICS: R

PHYS. PROPERTIES: ϕ=50.5, ρ=2.14; ϕ=58.5, ρ=1.84; ϕ=48.2, ρ=1.95; ϕ=53.9, ρ=2.07; ϕ=57.0, ρ=1.84; ϕ=46.8, ρ=2.11; ϕ=55.9, ρ=1.76

CHEMISTRY: %CaCO3=60.0; %CaCO3=10.43; %CaCO3=0.2; %CaCO3=14.0; %CaCO3=11.0; %CaCO3=0.8

SECTION: 1, 2, 3, 4, 5, 6, 7

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: OG, W

LITHOLOGIC DESCRIPTION

VITRIC SILTY SANDSTONE, NANNOFOSSIL-RICH VITRIC SILTY CLAYSTONE, NANNOFOSSIL-RICH VITRIC CLAYEY SILTSTONE, AND VITRIC SILTY CLAYSTONE

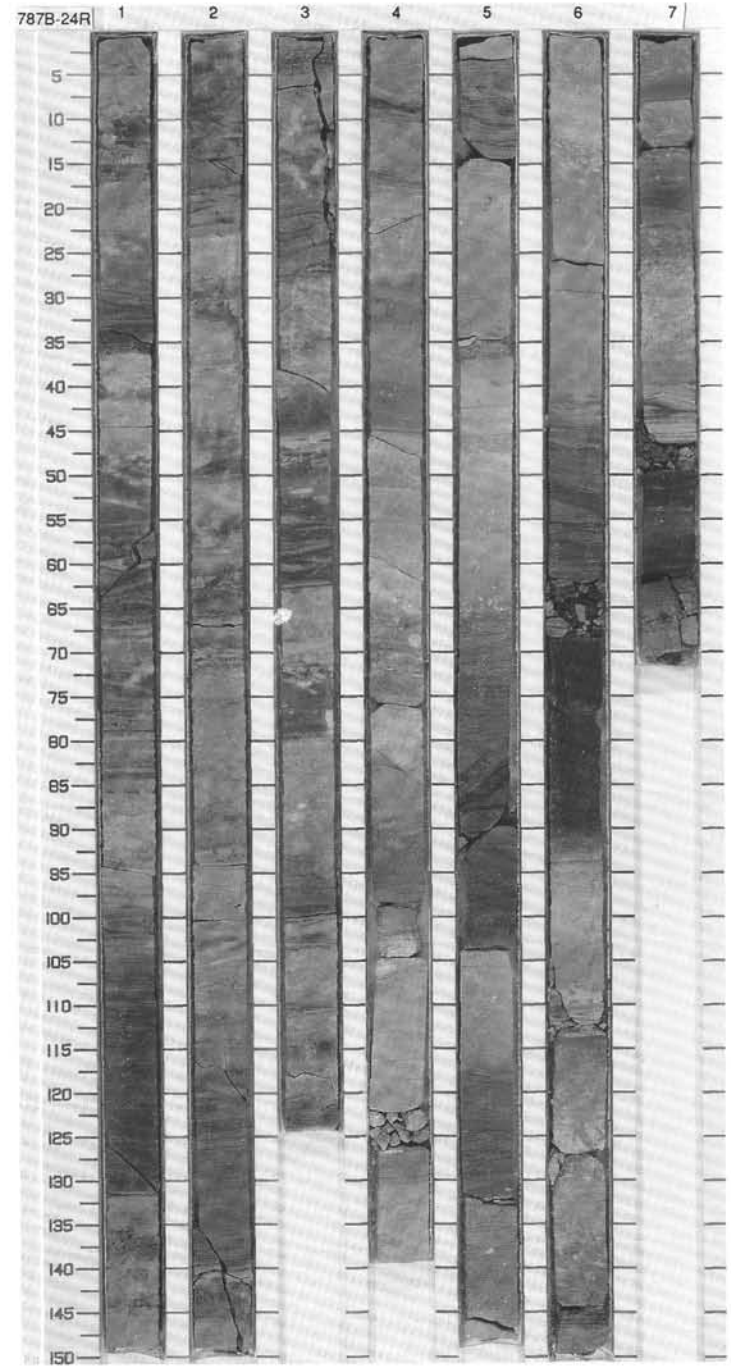
Major lithologies:
Thin to thick sequences that grade upward from fine VITRIC SILTY SANDSTONE with parallel-or ripple-lamination, to caps of NANNOFOSSIL-RICH VITRIC SILTY CLAYSTONE, NANNOFOSSIL-RICH CLAYEY SILTSTONE, and VITRIC SILTY CLAYSTONE. Colors vary from dark greenish gray (5GY 4/1) to light greenish gray (5GY 8/1), with the lighter colors indicating higher carbonate contents. Some black (N2) sandstone beds are strongly burrowed or weakly laminated. Many clayey siltstone and silty claystone beds contain scattered sand-sized grains of black volcanic glass.

Minor lithologies:
Brownish gray (5YR 4/1) VITRIC SILTY CLAYSTONE with 70% glass and the rest fresh mineral crystals (Section 5, 143-145 cm); black (N1), structureless CLAYSTONE layers less than 1 cm thick immediately below two graded sequences (Section 1, 14 cm; Section 7, 7 cm); two 10 cm-thick beds of NANNOFOSSIL-RICH CLAYSTONE in Section 4.

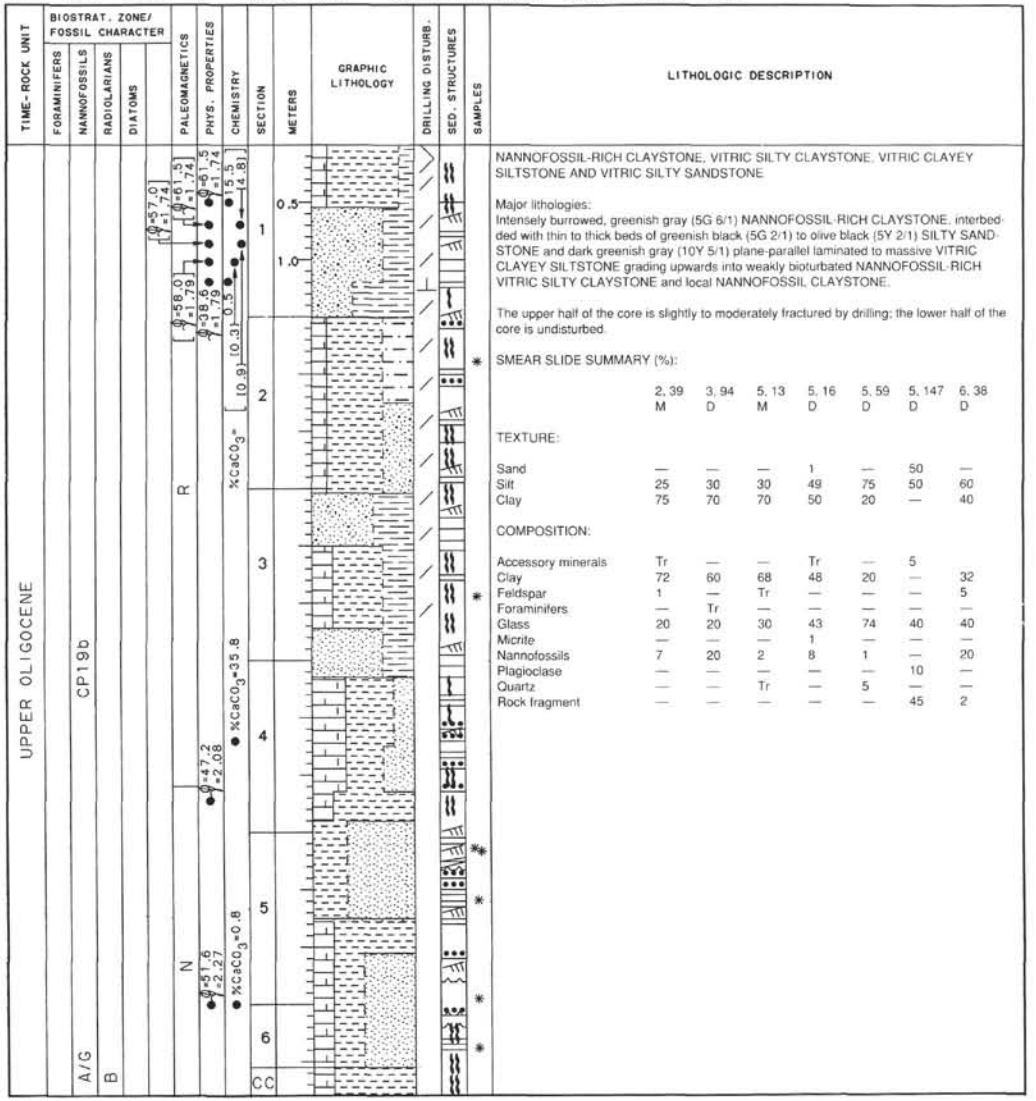
Only small intervals in Sections 4, 5 and 6 are slightly to highly fractured by drilling.

SMEAR SLIDE SUMMARY (%):

	4, 72 M	4, 78 M	5, 145 M
TEXTURE:			
Silt	80	20	50
Clay	20	80	50
COMPOSITION:			
Accessory minerals	1	—	10
Celadonite	45	—	—
Clay	10	20	—
Feldspar	1	Tr	—
Foraminifers	—	18	—
Glass	40	9	70
Ilmenite	1	—	—
Magnetite	1	—	—
Micrite	—	35	—
Nannofossils	—	18	—
Quartz	1	Tr	20



SITE 787 HOLE B CORE 25R CORED INTERVAL 223.7-233.4 mbsf



LITHOLOGIC DESCRIPTION

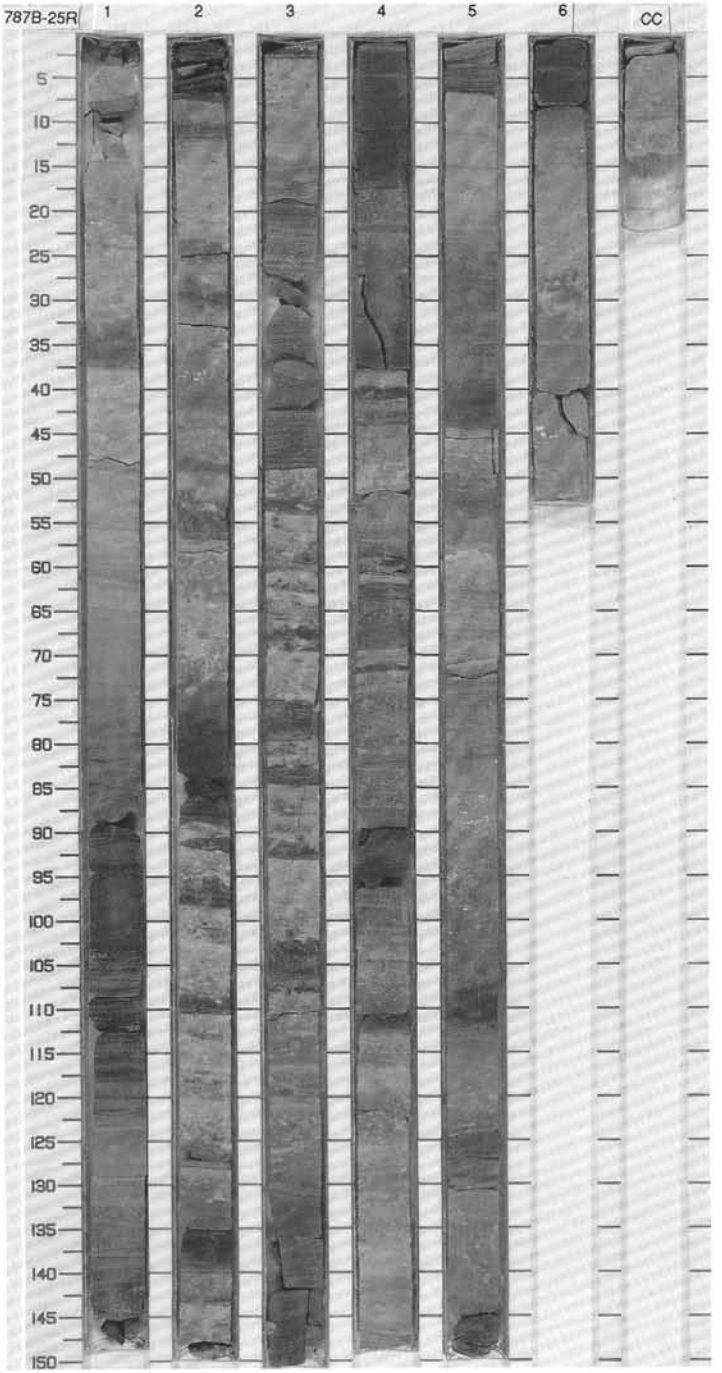
NANNOFOSSIL-RICH CLAYSTONE, VITRIC SILTY CLAYSTONE, VITRIC CLAYEY SILTSTONE AND VITRIC SILTY SANDSTONE

Major lithologies:
Intensely burrowed, greenish gray (5G 6/1) NANNOFOSSIL-RICH CLAYSTONE, interbedded with thin to thick beds of greenish black (5G 2/1) to olive black (5Y 2/1) SILTY SANDSTONE and dark greenish gray (10Y 5/1) plane-parallel laminated to massive VITRIC CLAYEY SILTSTONE grading upwards into weakly bioturbated NANNOFOSSIL-RICH VITRIC SILTY CLAYSTONE and local NANNOFOSSIL CLAYSTONE.

The upper half of the core is slightly to moderately fractured by drilling; the lower half of the core is undisturbed.

SMEAR SLIDE SUMMARY (%):

	2, 39 M	3, 94 D	5, 13 M	5, 16 D	5, 59 D	5, 147 D	6, 38 D
TEXTURE:							
Sand	—	—	—	1	—	50	—
Silt	25	30	30	49	75	50	60
Clay	75	70	70	50	20	—	40
COMPOSITION:							
Accessory minerals	Tr	—	—	Tr	—	5	
Clay	72	60	68	48	20	—	32
Feldspar	1	—	Tr	—	—	—	5
Foraminifers	—	Tr	—	—	—	—	—
Glass	20	20	30	43	74	40	40
Micrite	—	—	—	1	—	—	—
Nannofossils	7	20	2	8	1	—	20
Plagioclase	—	—	—	—	—	10	—
Quartz	—	—	Tr	—	5	—	—
Rock fragment	—	—	—	—	—	45	2



SITE 787 HOLE B CORE 26R CORED INTERVAL 233.4-243.0 mbsf

TIME-ROCK UNIT: UPPER OLIGOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS: F/P-M; NANNOFOSSILS: CP19b; RADIOLARIANS: B; DIATOMS: —

PALEOMAGNETICS: N / R / N

PHYS. PROPERTIES: ϕ=46.1, ρ=2.06; ϕ=66.8, ρ=1.74; ϕ=63.2, ρ=1.75

CHEMISTRY: %CaCO3=18.7; %CaCO3=1.4; %CaCO3=6.2

SECTION: 1, 2, 3, 4, 5, CC

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

NANNOFOSSIL-RICH CLAYSTONE, VITRIC-LITHIC SANDSTONE, VITRIC SILTSTONE

Major lithologies:
57% of the core is composed of greenish-, olive-, and dark gray (5G6/1, 5Y4/2 and 4/1) to olive black (5Y2/1) NANNOFOSSIL-RICH CLAYSTONE. Moderate to intense bioturbation has dispersed several percent each of glass shards and lithic sand grains into this material. Olive black (5Y2/1) medium-to very fine-grained VITRIC-LITHIC SANDSTONE and VITRIC-LITHIC-CRYSTAL SANDSTONE comprise 29% of the core, in beds ranging in thickness from a few millimeters to 54 cm. Planar- and cross-laminations typify the thicker units. The top of the core is a 30 cm thick greenish gray (5GY6/1) NANNOFOSSIL-RICH VITRIC SILTSTONE; other layers of this lithology ranging in thickness from 1 cm up to 14 cm and varying in color from olive- and greenish gray and black (5Y4/1, -2/1; 5GY6/1, -2/1) occur throughout the core.

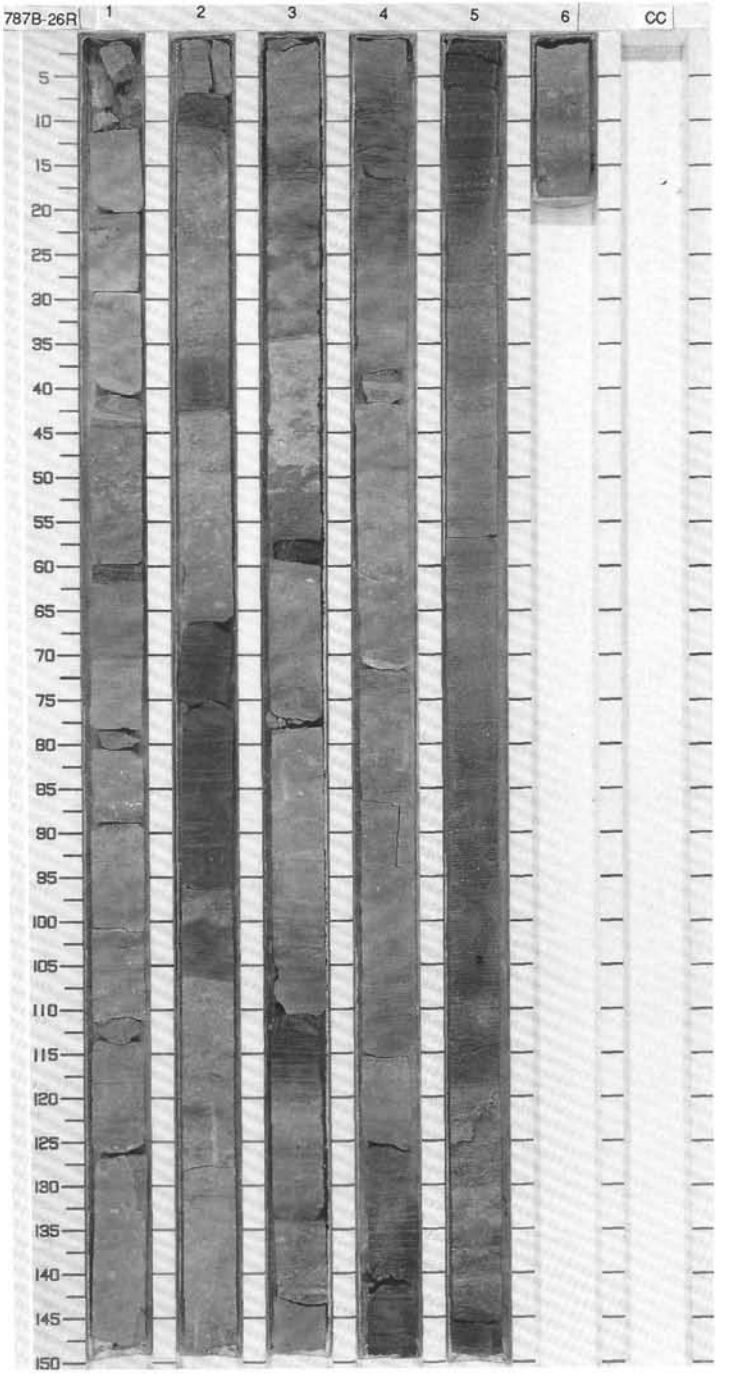
Section 1 is moderately fractured by drilling, and the rest of the core is slightly fractured.

SMEAR SLIDE SUMMARY (%):

	1, 27 D	2, 18 D	2, 61 D	3, 73 D	3, 114 D	3, 119 D	5, 13 D
TEXTURE:							
Sand	5	2	—	—	65	70	88
Silt	80	13	5	90	35	10	10
Clay	15	85	95	10	—	20	2
COMPOSITION:							
Accessory minerals	—	—	Tr	2	10	10	1
Clay	10	60	75	10	—	20	—
Feldspar	Tr	2	Tr	—	25	20	25
Glass	80	2	5	88	40	40	40
Micrite	—	—	10	—	—	—	—
Nannofossils	10	35	10	Tr	—	—	10
Rock fragment	—	1	—	Tr	25	10	15

SMEAR SLIDE SUMMARY (%):

	5, 53 D	5, 142 D
TEXTURE:		
Sand	Tr	25
Silt	25	10
Clay	75	65
COMPOSITION:		
Accessory minerals	3	5
Clay	80	67
Diatoms	—	Tr
Feldspar	1	10
Glass	10	5
Nannofossils	5	—
Rock fragment	1	10



SITE 787 HOLE B CORE 27R CORED INTERVAL 243.0-252.7 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER OLIGOCENE		A/G CP19a C/P			N	●ϕ=59.0 ρ=1.97 ●ϕ=59.7 ρ=1.87 ●ϕ=45.1 ρ=2.22 ●%CaCO3=1.8 ●%CaCO3=5.1	●%CaCO3=11.9 ●%CaCO3=10.7	1 2 3 4 CC	0.5 1.0				* * * *

LITHOLOGIC DESCRIPTION

NANNOFOSSIL-RICH VITRIC CRYSTAL-VITRIC SILTSTONE AND VITRIC SANDSTONE

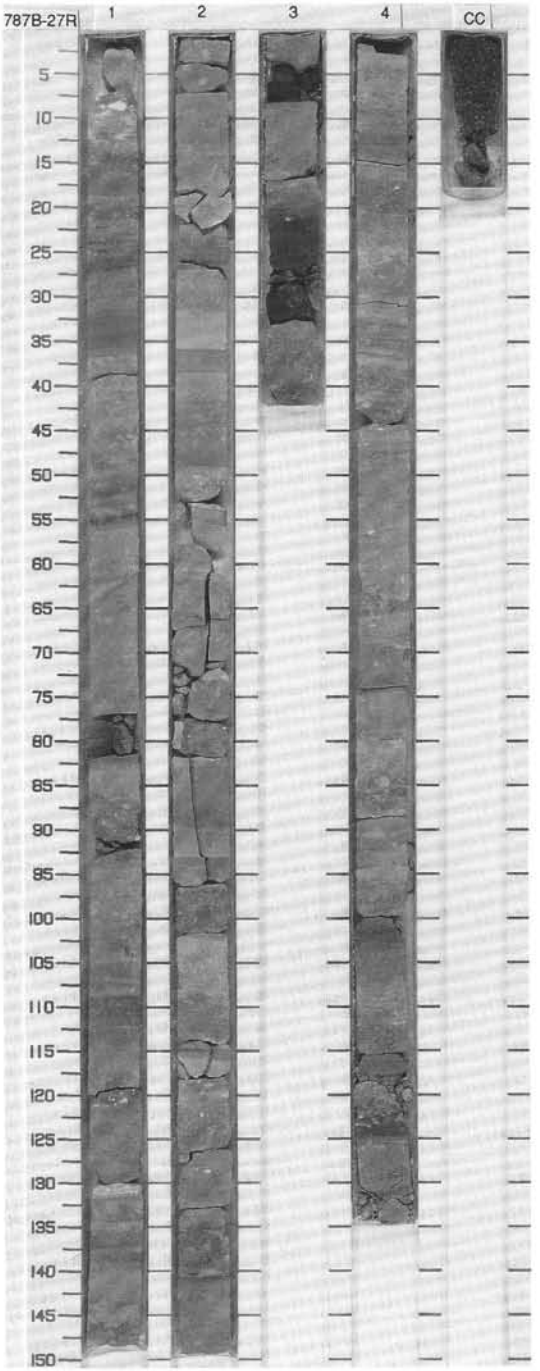
Major lithology: 77% of the core is dark greenish gray (5GY4/1, 5G4/1) and greenish gray (5GY6/1) NANNOFOSSIL-RICH CRYSTAL-VITRIC SILTSTONE, in beds as thick as 73 cm. Olive black (5Y2/1) VITRIC SANDSTONE beds are no thicker than 5 cm, except for one, 13 cm thick, in Section 3. Many of the thinner ones contain pumice grains and are partially dispersed into overlying and underlying units by burrowing. In both the sandstone and siltstones, planar laminations are common, cross-laminations less so.

Minor lithology: A 12-cm thick olive black (5Y2/1) VITRIC SILTY CLAYSTONE occurs in Section 2.

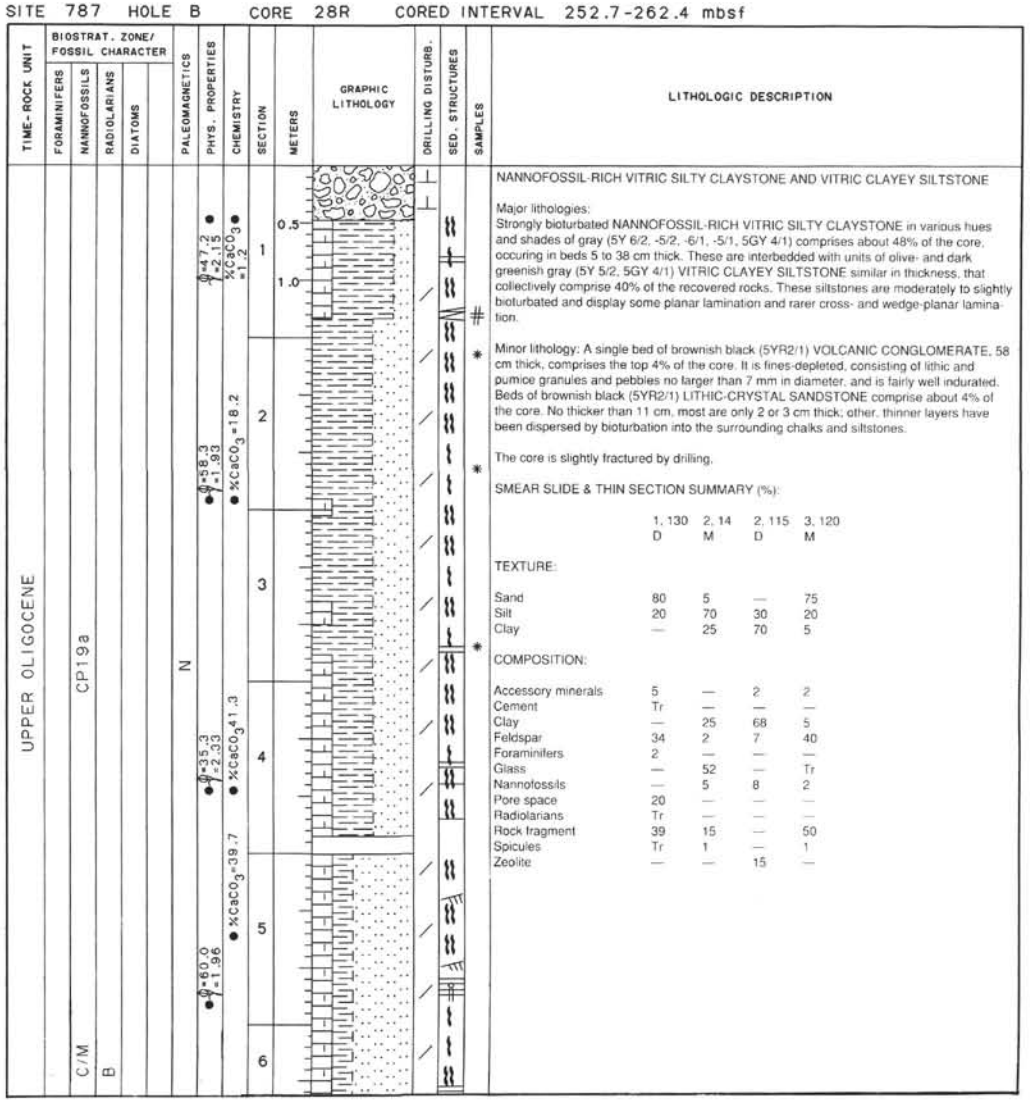
The core is moderately to highly fractured by drilling.

SMEAR SLIDE SUMMARY (%):

	1, 36 D	1, 60 D	2, 57 D	2, 92 D	4, 41 D
TEXTURE:					
Sand	30	Tr	3	3	3
Silt	50	80	45	52	57
Clay	20	20	52	45	40
COMPOSITION:					
Accessory minerals	10	5	5	5	—
Clay	20	20	52	45	37
Feldspar	10	25	10	10	5
Glass	5	15	—	—	5
Nannofossils	2	5	3	10	3
Rock fragment	40	15	10	10	5
Zeolite	10	15	20	20	45



SITE 787 HOLE B CORE 28R CORED INTERVAL 252.7-262.4 mbsf



LITHOLOGIC DESCRIPTION

NANNOFOSSIL-RICH VITRIC SILTY CLAYSTONE AND VITRIC CLAYEY SILTSTONE

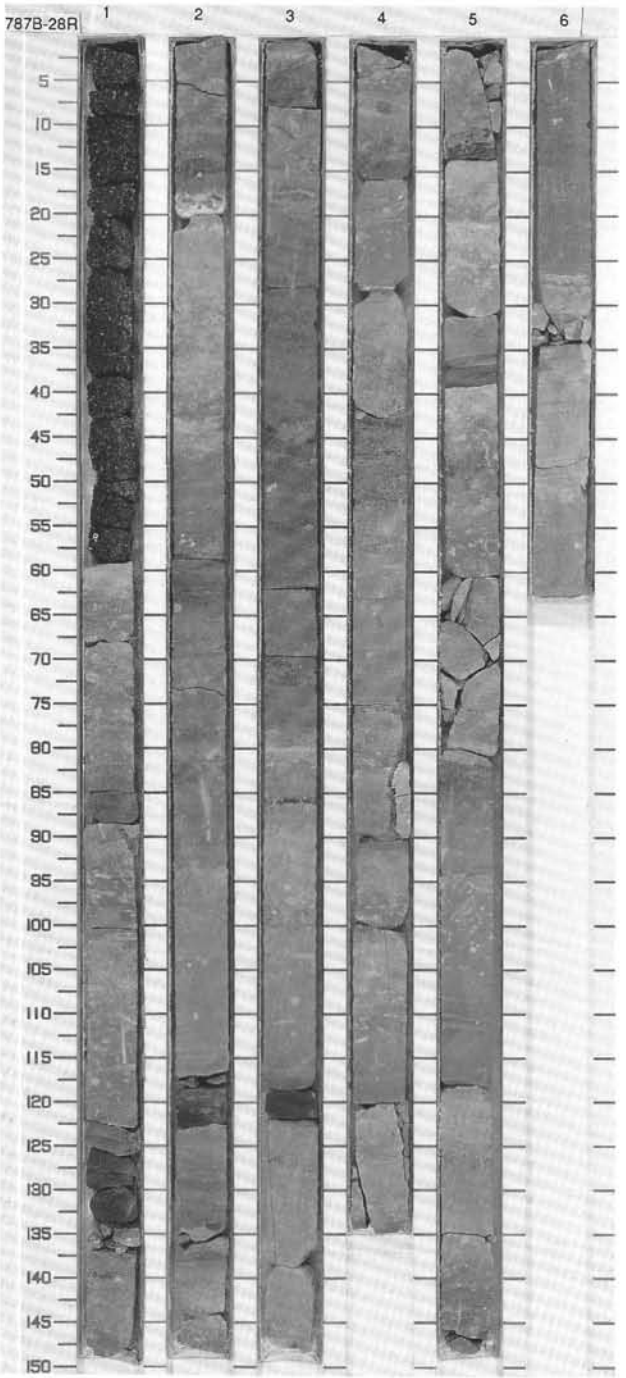
Major lithologies:
Strongly bioturbated NANNOFOSSIL-RICH VITRIC SILTY CLAYSTONE in various hues and shades of gray (5Y 6/2, -5/2, -6/1, -5/1, 5GY 4/1) comprises about 48% of the core, occuring in beds 5 to 38 cm thick. These are interbedded with units of olive- and dark greenish gray (5Y 5/2, 5GY 4/1) VITRIC CLAYEY SILTSTONE similar in thickness, that collectively comprise 40% of the recovered rocks. These siltstones are moderately to slightly bioturbated and display some planar lamination and rarer cross- and wedge-planar lamination.

Minor lithology: A single bed of brownish black (5YR2/1) VOLCANIC CONGLOMERATE, 58 cm thick, comprises the top 4% of the core. It is fines-depleted, consisting of lithic and pumice granules and pebbles no larger than 7 mm in diameter, and is fairly well indurated. Beds of brownish black (5YR2/1) LITHIC-CRYSTAL SANDSTONE comprise about 4% of the core. No thicker than 11 cm, most are only 2 or 3 cm thick; other, thinner layers have been dispersed by bioturbation into the surrounding chalks and siltstones.

The core is slightly fractured by drilling.

SMEAR SLIDE & THIN SECTION SUMMARY (%):

	1, 130 D	2, 14 M	2, 115 D	3, 120 M
TEXTURE:				
Sand	80	5	—	75
Silt	20	70	30	20
Clay	—	25	70	5
COMPOSITION:				
Accessory minerals	5	—	2	2
Cement	Tr	—	—	—
Clay	—	25	68	5
Feldspar	34	2	7	40
Foraminifers	2	—	—	—
Glass	—	52	—	Tr
Nannofossils	—	5	8	2
Pore space	20	—	—	—
Radiolarians	Tr	—	—	—
Rock fragment	39	15	—	50
Spicules	Tr	1	—	1
Zeolite	—	—	15	—



SITE 787 HOLE B CORE 29R CORED INTERVAL 262.4-272.0 mbsf

TIME-ROCK UNIT: UPPER OLIGOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS: A/M-G; NANNOFOSSILS: CP19a; RADIOLARIANS: B; DIATOMS:

PALEOMAGNETICS: N

PHYS. PROPERTIES: ϕ=61.0, ρ=1.86; ϕ=62.3, ρ=1.73; ϕ=60.9, ρ=1.89; ϕ=59.1, ρ=1.82; ϕ=35.4, ρ=2.78

CHEMISTRY: %$CaCO_3$=17.2; %$CaCO_3$=16.4; %$CaCO_3$=1.7; %$CaCO_3$=43.3

SECTION: 1, 2, 3, 4, 5, CC

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

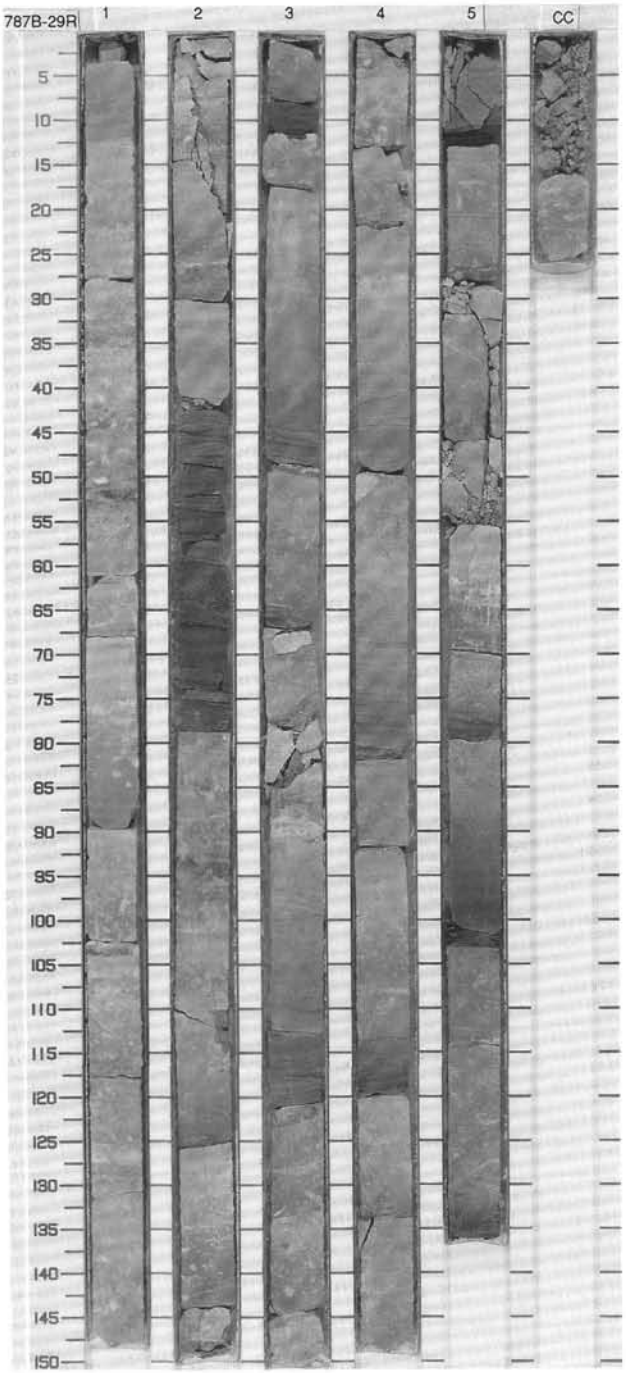
VITRIC-LITHIC SILTY SANDSTONE, NANNOFOSSIL VITRIC SILTY CLAYSTONE, AND NANNOFOSSIL-RICH VITRIC SILTY CLAYSTONE

Major lithologies:
Interbedded graded, laminated and cross-laminated greenish black (5GY 2/1) VITRIC-LITHIC SILTY SANDSTONES and burrowed intervals of light greenish gray (5GY 8/1) NANNOFOSSIL CHALK, and greenish gray (5GY 6/1, 7/1) NANNOFOSSIL VITRIC SILTY CLAYSTONE and NANNOFOSSIL-RICH VITRIC SILTY CLAYSTONE that commonly contain disperses sand-sized volcanic ash. There are healed fractures in the lower part of Section 3 and the upper part of Section 4.

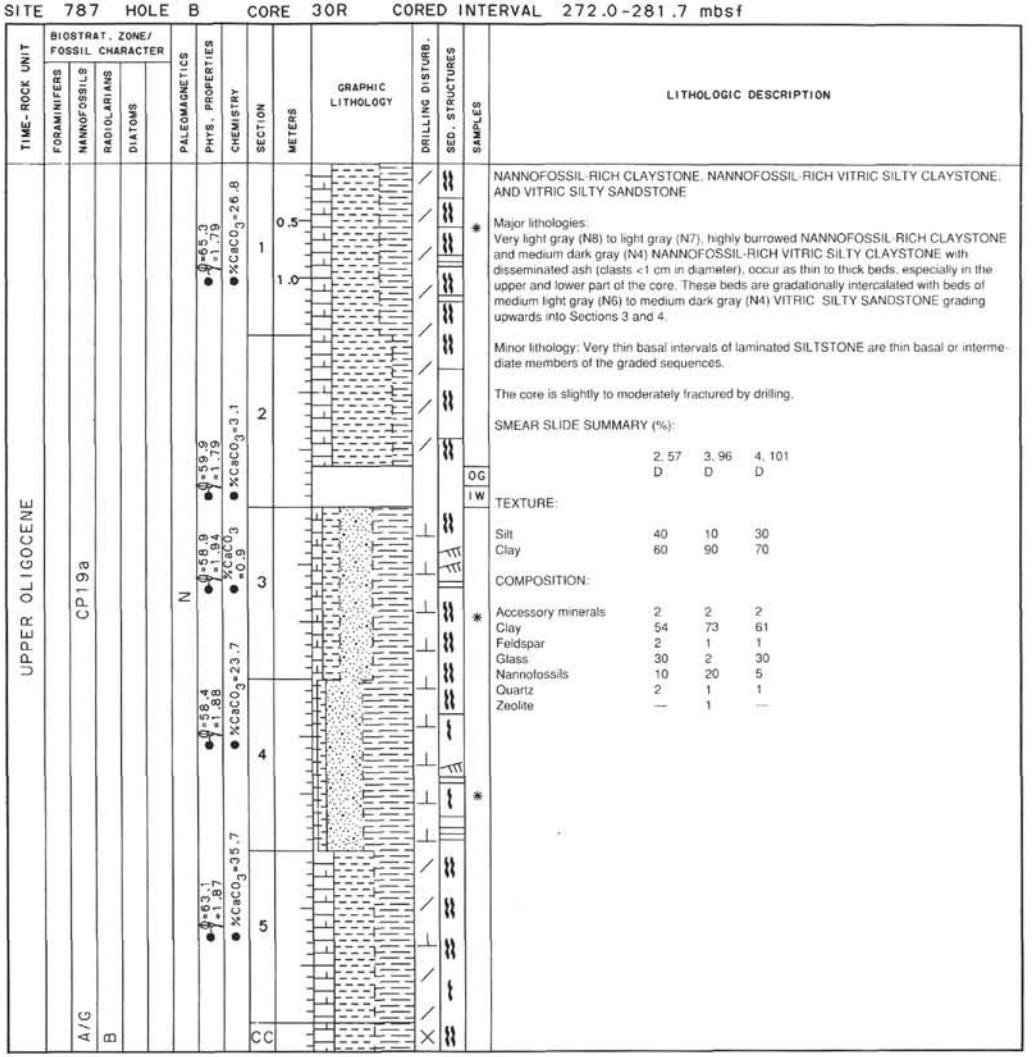
The core is undisturbed by drilling except for Section 2, which is slightly to highly fractured by drilling.

SMEAR SLIDE & THIN SECTION SUMMARY (%):

	2, 64 D	2, 140 D	3, 40 M	4, 95 D	5, 10 M
TEXTURE:					
Sand	80	1	20	2	58
Silt	20	24	45	38	40
Clay	—	75	35	60	2
COMPOSITION:					
Accessory minerals	1	—	—	—	Tr
Clay	5	73	30	48	2
Feldspar	5	15	5	5	35
Foraminifers	2	—	—	—	—
Glass	61	—	60	—	—
Nannofossils	2	2	5	30	1
Pore space	14	—	—	—	—
Radiolarians	—	—	Tr	—	—
Rock fragment	10	—	—	2	57
Zeolite	—	10	—	15	—



SITE 787 HOLE B CORE 30R CORED INTERVAL 272.0-281.7 mbsf



NANNOFOSSIL-RICH CLAYSTONE, NANNOFOSSIL-RICH VITRIC SILTY CLAYSTONE, AND VITRIC SILTY SANDSTONE

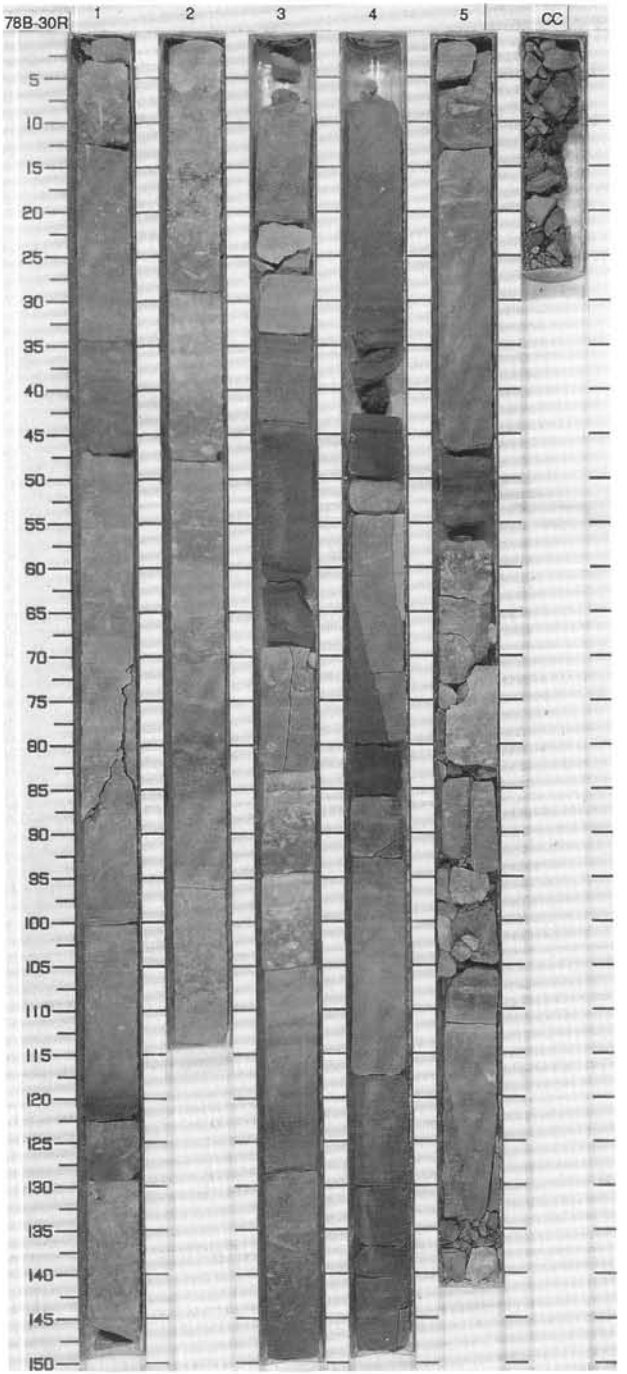
Major lithologies:
Very light gray (N8) to light gray (N7), highly burrowed NANNOFOSSIL-RICH CLAYSTONE and medium dark gray (N4) NANNOFOSSIL-RICH VITRIC SILTY CLAYSTONE with disseminated ash (clasts <1 cm in diameter), occur as thin to thick beds, especially in the upper and lower part of the core. These beds are gradationally intercalated with beds of medium light gray (N6) to medium dark gray (N4) VITRIC SILTY SANDSTONE grading upwards into Sections 3 and 4.

Minor lithology: Very thin basal intervals of laminated SILTSTONE are thin basal or intermediate members of the graded sequences.

The core is slightly to moderately fractured by drilling.

SMEAR SLIDE SUMMARY (%):

	2, 57 D	3, 96 D	4, 101 D
TEXTURE:			
Silt	40	10	30
Clay	60	90	70
COMPOSITION:			
Accessory minerals	2	2	2
Clay	54	73	61
Feldspar	2	1	1
Glass	30	2	30
Nannofossils	10	20	5
Quartz	2	1	1
Zeolite	—	1	—



SITE 787 HOLE B CORE 31R CORED INTERVAL 281.7-291.3 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS		PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER OLIGOCENE		R/F P/M CP19a	B			N	●φ=41.8 ●ρ=2.28	●%$CaCO_3$=26.8	1	0.5 1.0		X X X X X	◆	#
									2					

LITHOLOGIC DESCRIPTION

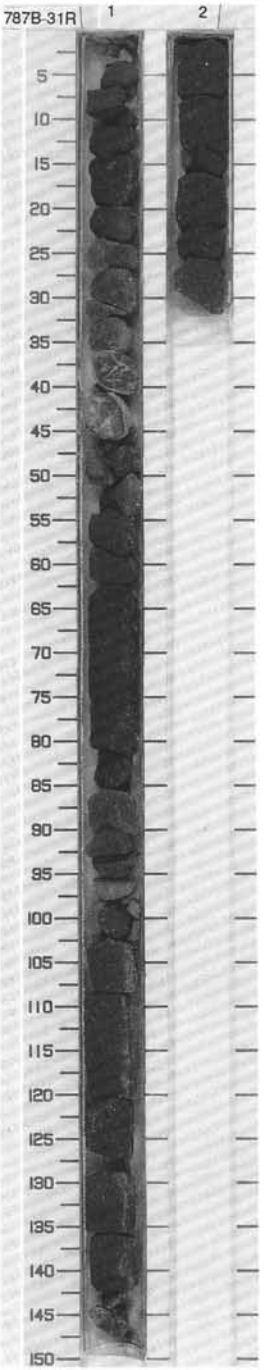
CRYSTAL-LITHIC GRANULE-RICH COARSE SANDSTONE

Major lithology: Dark gray (N3) CRYSTAL-LITHIC GRANULE-RICH COARSE SANDSTONE, with heterolithic assemblage of mafic and felsic lithic grains, pumice, red (5R 4/6) pumice, quartz, feldspar. The sandstone beds are structureless; three isolated clasts of medium gray (N4) clayey siltstone occur in Section 1, 40 cm.

The entire core has been brecciated by drilling.

THIN SECTION SUMMARY (%):

	1, 70 D
TEXTURE:	
Sand	95
Silt	5
COMPOSITION:	
Accessory minerals	10
Bioclast	Tr
Cement	3
Feldspar	10
Glass	15
Pore space	30
Rock fragment	32



SITE 787 HOLE B CORE 32R CORED INTERVAL 291.3-300.8 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
UPPER OLIGOCENE	B	C/P-M	CP19a	B	R	ϕ=51.9 ρ=2.07 ϕ=44.4 ρ=2.31	%$CaCO_3$=8.2 %$CaCO_3$=0.9	1 2	0.5 1.0				#	

CRYSTAL-LITHIC GRANULE-RICH COARSE SANDSTONE AND SILTY CLAYSTONE

Major lithologies:

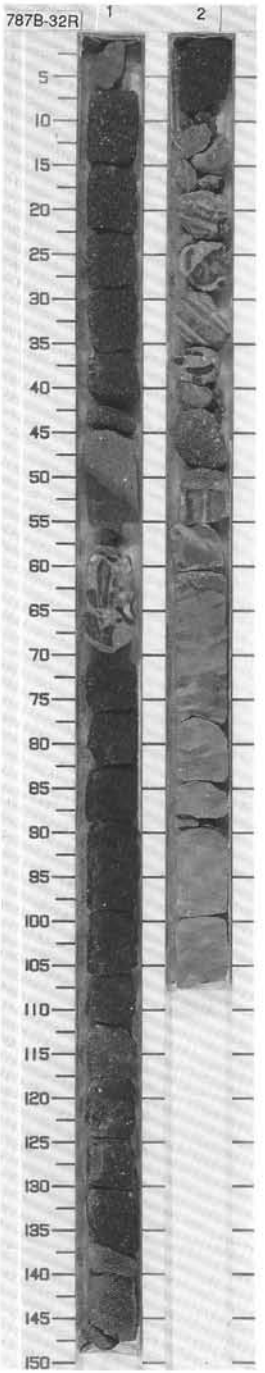
Most of this core is poorly sorted, dark gray (N3) CRYSTAL-LITHIC GRANULE-RICH COARSE SANDSTONE, locally pebble rich or with large pebbles and cobbles of greenish-black (5G 2/1) claystone. Grains in the sandstone include: mafic and felsic volcanic lithics, pumice, quartz, feldspar and red pumice. The lower part of Section 2 consists of SILTY CLAYSTONE.

Minor lithology: SANDY SILTSTONE in Section 2, 62-78 cm. Microfaults occur in the lower part of Section 2.

The entire core is highly fractured by drilling.

THIN SECTION SUMMARY (%):

	1, 81 D
TEXTURE:	
Sand	95
Silt	5
COMPOSITION:	
Accessory minerals	10
Bioclast	2
Cement	2
Feldspar	15
Mica	Tr
Pore space	20
Rock fragment	51



SITE 787 HOLE B CORE 33R CORED INTERVAL 300.8-310.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER OLIGOCENE	B	CP19a	B		R	ρ=38.2 ρ=47.3 ρ=2.29 ρ=2.43	%CaCO3 =0.6 XCaCO3=0.6	1 2 3 CC	0.5 1.0		X	◆ # #	OC IW

LITHOLOGIC DESCRIPTION

CRYSTAL-LITHIC PEBBLY SANDSTONE, VITRIC SANDSTONE AND NANNOFOSSIL VITRIC SILTY CLAYSTONE

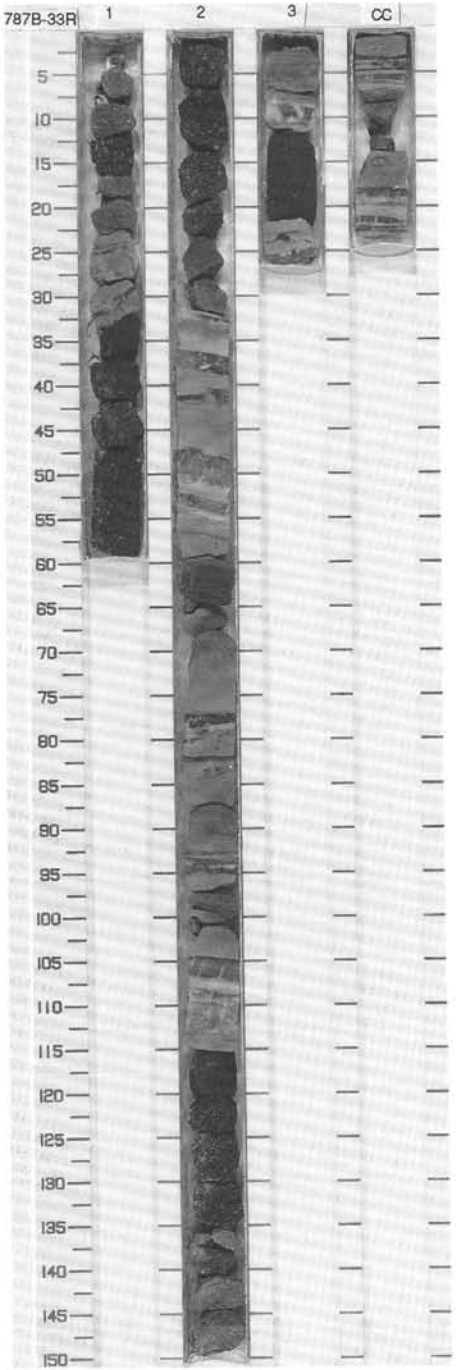
Major lithologies:

Dark gray (N3) CRYSTAL-LITHIC PEBBLY SANDSTONE with heterolithic assemblage of mafic and felsic lithic grains, pumice, red (5R 4/6) pumice, quartz, feldspar. The pebbly sandstone, which occurs in thick structureless beds, is interbedded with thin to medium thickness, dark (N3) to medium gray (N4) beds of fine VITRIC SANDSTONE grading upwards into a medium dark gray (N4) weakly burrowed NANNOFOSSIL VITRIC SILTY CLAYSTONE.

As a result of drilling, the condition of the core ranges from undisturbed to drilling breccia.

THIN SECTION SUMMARY (%):

	2, 52 D	3, 12 D
TEXTURE:		
Sand	—	95
Silt	40	5
Clay	60	—
COMPOSITION:		
Accessory minerals	5	4
Cement	—	30
Clay	50	—
Feldspar	20	5
Foraminifers	Tr	—
Glass	10	40
Micrite	10	—
Nannofossils	5	1
Rock fragment	—	20
Spar cement	Tr	—



SITE 787 HOLE B CORE 34R CORED INTERVAL 310.5-320.1 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER OLIGOCENE	B	C/G CP19a	B		R	ϕ=55.1 7.2.0 ●		1	0.5 1.0				#
								CC			X X		

LITHOLOGIC DESCRIPTION

NANNOFOSSIL-RICH VITRIC SILTY CLAYSTONE

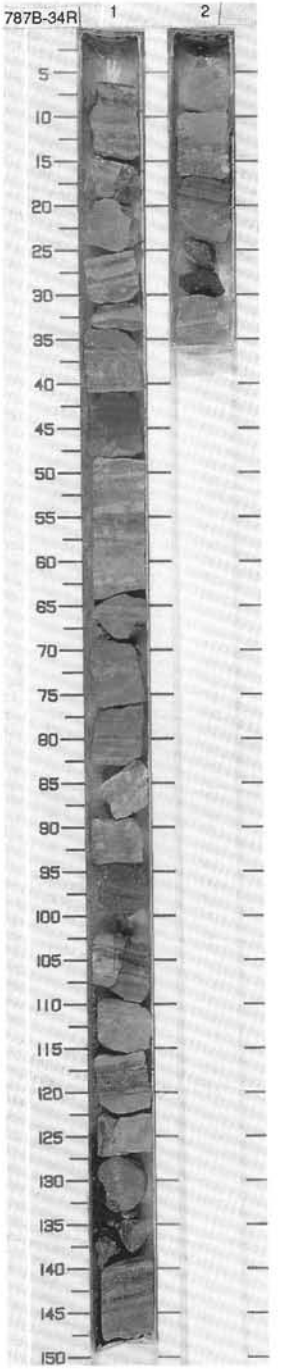
Major lithologies:
Drilling fragments of burrowed greenish gray (5GY 6/1) NANNOFOSSIL-RICH VITRIC SILTY CLAYSTONE and NANNOFOSSIL CLAYSTONE containing disseminated ash grains.

Minor lithologies: Basal parts of rippled VITRIC SANDY SILTSTONE beds; two thin coarse dark gray (N3) VITRIC SANDSTONE beds (Section 1, 94-101 cm, 119-121 cm).

Drilling has highly fractured most of the core, and the lower part is drilling breccia.

THIN SECTION SUMMARY (%):

	1, 94 D
TEXTURE:	
Sand	75
Silt	10
Clay	15
COMPOSITION:	
Accessory minerals	2
Bioclast	1
Clay	15
Feldspar	7
Foraminifers	1
Glass	15
Mica	1
Nannofossils	1
Pore space	15
Rock fragment	42



126-787B-2R-01 (44-45 cm) OBSERVER: GIL WHERE SAMPLED: Top of core (Pliocene-Pleistocene)

ROCK NAME: Andesite

GRAIN SIZE: Fine

TEXTURE: Intersertal

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Plagioclase	10	10	0.5		Euhedral	
Clinopyroxene	3	3	0.5		Euhedral	
Orthopyroxene	1	1	0.5		Euhedral	
Magnetite	<1	N/A	0.1		Anhedral	
GROUNDMASS						
N/A	N/A	N/A	N/A		N/A	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE
Vesicles	15		0.1	Zeolite	Circular

COMMENTS: Vesicular 2 pyroxene andesite with glomeroporphyritic clots. Contains an inclusion of less phyric non-vesicular plagioclase and augite and magnetite andesite; sample is 2 cm clast. No piece # given.

126-787B-5R-01 (31-40 cm) OBSERVER: GIL WHERE SAMPLED: Base gravel section

ROCK NAME: Dacite

GRAIN SIZE: Fine

TEXTURE: Vitric

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Plagioclase	20	20	2-3	Anorthite 30-40	Anhedral	Zoned and corroded.
Clinopyroxene	2	2	1		Euhedral	In clots with plagioclase.
Hornblende	Tr	N/A	0.5		Anhedral	Fresh.
GROUNDMASS						
N/A	N/A	N/A	N/A		N/A	Seems to be devitrified glass but peculiar.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE
Vesicles	0				

COMMENTS: No piece # given.

126-787B-13R-02 (27-28 cm) OBSERVER: LTP WHERE SAMPLED: Tuff

ROCK NAME: Welded andesitic lapille

GRAIN SIZE:

TEXTURE: Pyroclastic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Plagioclase	7	N/A	0.1-1		Subhedral to euhedral	Rocks predominately formed of andesitic vitric clasts and plagioclase-pyroxene crystals.
Clinopyroxene	2	N/A	0.3-1.5		Subhedral to euhedral	
GROUNDMASS						
Glass	N/A	N/A	N/A		N/A	Partly devitrified.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE
Vesicles	0				

COMMENTS: No piece # given.