126 791A 1H NO RECOVERY

SITE 791 HOLE A CORE 2H CORED INTERVAL 4.5-14.0 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
QUATERNARY		CN15	UPPER PLIOCENE - RECENT			● Ø=67.8 ρ=1.63	● %$CaCO_3$=2.7	1	0.5 1.0				
						● Ø=65.1 ρ=1.59	● %$CaCO_3$=1.9	2					
								3					*
								4					
								5					
						● Ø=64.6 ρ=1.64	● %$CaCO_3$=1.7	6					IW
	F/G	R/M						7					

LITHOLOGIC DESCRIPTION

CLAY AND VITRIC SILT

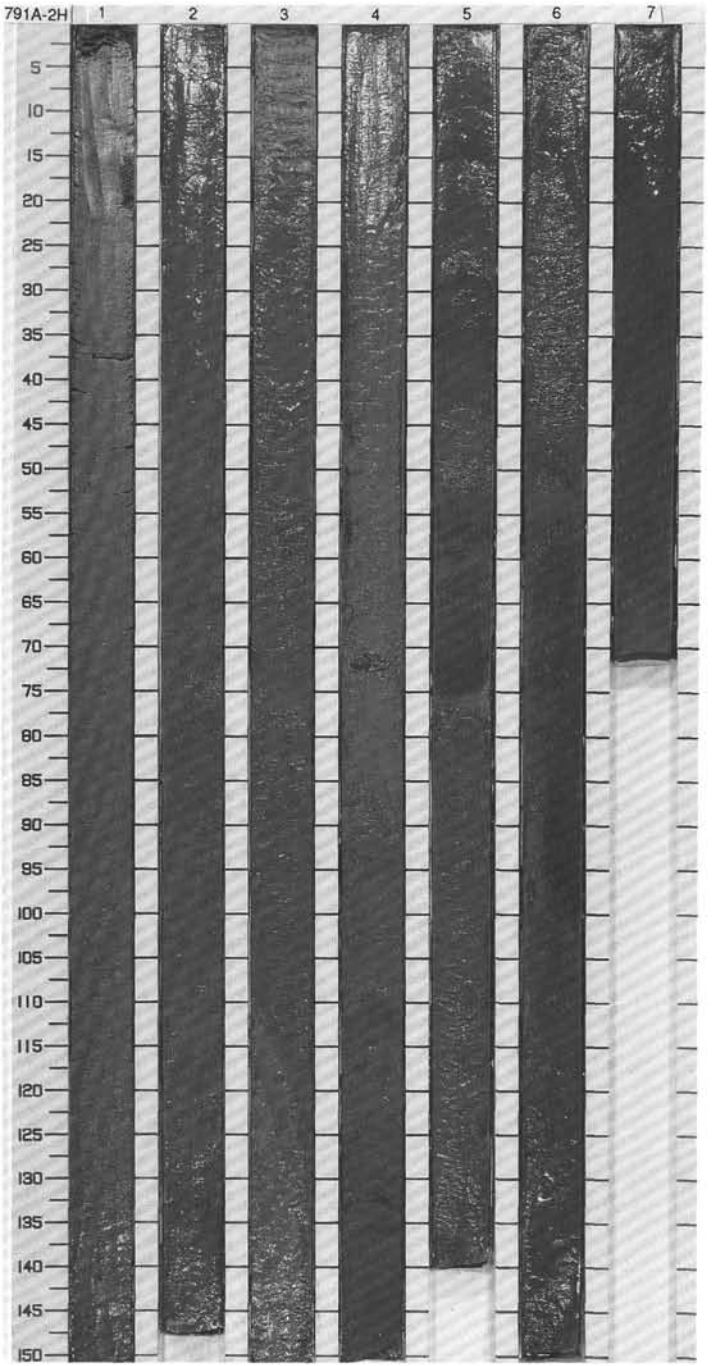
Major lithologies:
Light olive gray (5Y 5/2) CLAY and VITRIC SILT respectively comprise 30% and 69% of the core.

Minor lithology: A 2-cm thick FINE VITRIC SAND layer in Section 5 grades upward into silt.

The core is structureless for the most part, being moderately to very disturbed by drilling.

SMEAR SLIDE SUMMARY (%):

	3, 75 D
TEXTURE:	
Sand	15
Silt	75
Clay	10
COMPOSITION:	
Diatoms	Tr
Feldspar	1
Foraminifers	2
Glass	91
Nannofossils	3
Quartz	1



SITE 791 HOLE A CORE 3H CORED INTERVAL 14.0-23.5 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
QUATERNARY		CN15	UPPER PLIOCENE-RECENT			ϕ=71.0 ρ=1.47		1 2 3 CC	0.5 1.0				*	

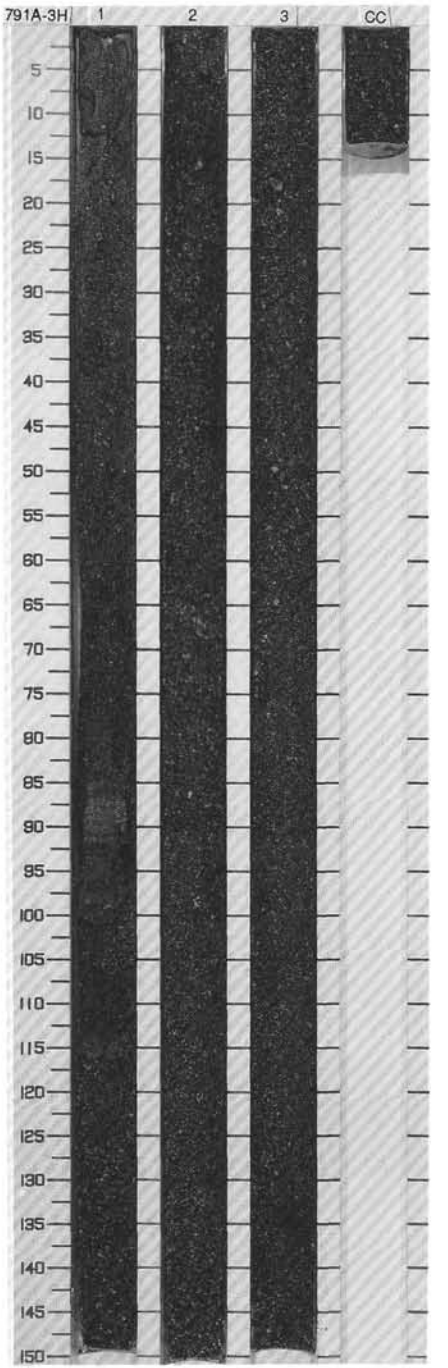
VITRIC SANDY PUMICEOUS GRAVEL

Major lithology: Dark gray (5Y 4/1) and olive gray (5Y 4/2) VITRIC SANDY PUMICEOUS GRAVEL constitutes 87% of the core. Maximum clast sizes range from 8 to 20 mm, and matrix grain size decreases irregularly downward from granules in the upper part to very coarse sand.

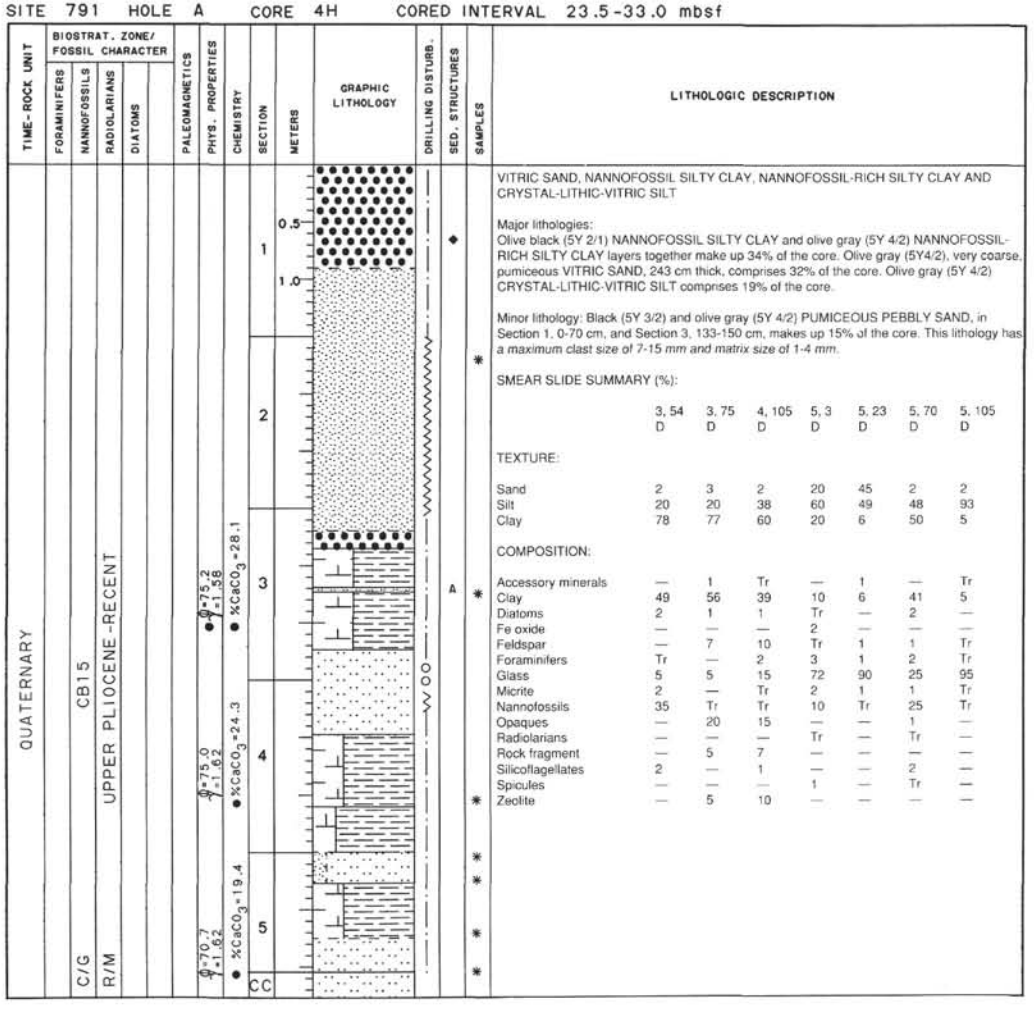
Minor lithologies:
Light olive gray (5Y 5/2), fine-grained VITRIC SAND occurs in Section 1, 0-17 cm. Also in Section 1, overlying another 17 cm layer of very coarse, brownish black (5YR 2/1) VITRIC SAND is a light olive gray (5Y 5/2) VITRIC SILT with a very dark gray (5Y 3/1) lamination. The sands and silts comprise 9% and 4% of the core, respectively.

SMEAR SLIDE SUMMARY (%):

	1, 92 D
TEXTURE:	
Sand	15
Silt	84
Clay	1
COMPOSITION:	
Feldspar	7
Foraminifers	Tr
Glass	86
Micrite	2
Rock fragment	2



SITE 791 HOLE A CORE 4H CORED INTERVAL 23.5-33.0 mbsf



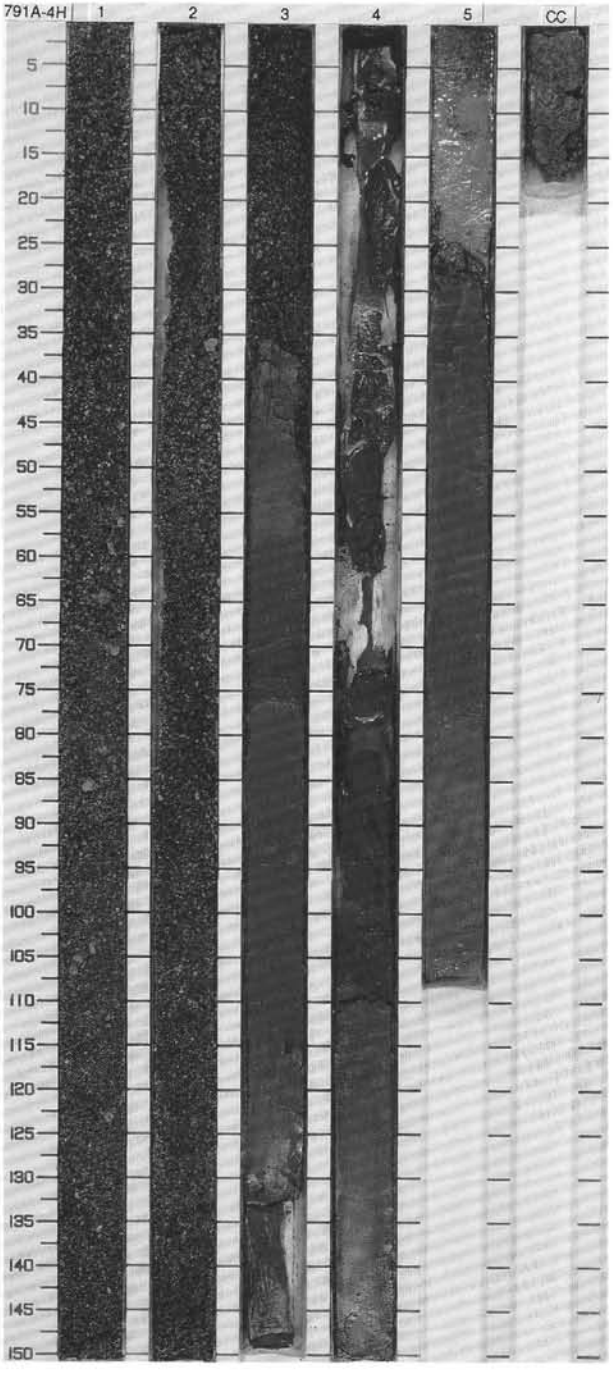
VITRIC SAND, NANNOFOSSIL SILTY CLAY, NANNOFOSSIL-RICH SILTY CLAY AND CRYSTAL-LITHIC-VITRIC SILT

Major lithologies:
Olive black (5Y 2/1) NANNOFOSSIL SILTY CLAY and olive gray (5Y 4/2) NANNOFOSSIL-RICH SILTY CLAY layers together make up 34% of the core. Olive gray (5Y4/2), very coarse, pumiceous VITRIC SAND, 243 cm thick, comprises 32% of the core. Olive gray (5Y 4/2) CRYSTAL-LITHIC-VITRIC SILT comprises 19% of the core.

Minor lithology: Black (5Y 3/2) and olive gray (5Y 4/2) PUMICEOUS PEBBLY SAND, in Section 1, 0-70 cm, and Section 3, 133-150 cm, makes up 15% of the core. This lithology has a maximum clast size of 7-15 mm and matrix size of 1-4 mm.

SMEAR SLIDE SUMMARY (%):

	3, 54 D	3, 75 D	4, 105 D	5, 3 D	5, 23 D	5, 70 D	5, 105 D
TEXTURE:							
Sand	2	3	2	20	45	2	2
Silt	20	20	38	60	49	48	93
Clay	78	77	60	20	6	50	5
COMPOSITION:							
Accessory minerals	—	1	Tr	—	1	—	Tr
Clay	49	56	39	10	6	41	5
Diatoms	2	1	1	Tr	—	2	—
Fe oxide	—	—	—	2	—	—	—
Feldspar	—	7	10	Tr	1	1	Tr
Foraminifers	Tr	—	2	3	1	2	Tr
Glass	5	5	15	72	90	25	95
Micrite	2	—	Tr	2	1	1	Tr
Nannofossils	35	Tr	Tr	10	Tr	25	Tr
Opaques	—	20	15	—	—	1	—
Radiolarians	—	—	—	Tr	—	Tr	—
Rock fragment	—	5	7	—	—	—	—
Silicoflagellates	2	—	1	—	—	2	—
Spicules	—	—	—	1	—	Tr	—
Zeolite	—	5	10	—	—	—	—



SITE 791 HOLE A CORE 5H CORED INTERVAL 33.0-42.5 mbsf

TIME-ROCK UNIT: QUATERNARY

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS F/G; NANNOFOSSILS CN15; RADIOLARIANS R/P; DIATOMS

PALEOMAGNETICS

PHYS. PROPERTIES: ρ=67.9, χ=1.69; ρ=52.8, χ=1.93; ρ=69.7, χ=1.65; ρ=71.1, χ=1.64

CHEMISTRY: %$CaCO_3$=17.1; %$CaCO_3$=0.9; %$CaCO_3$=15.0; %$CaCO_3$=15.9

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES: A, A, A

SAMPLES: *, *, *, *, OG, IW, *

LITHOLOGIC DESCRIPTION

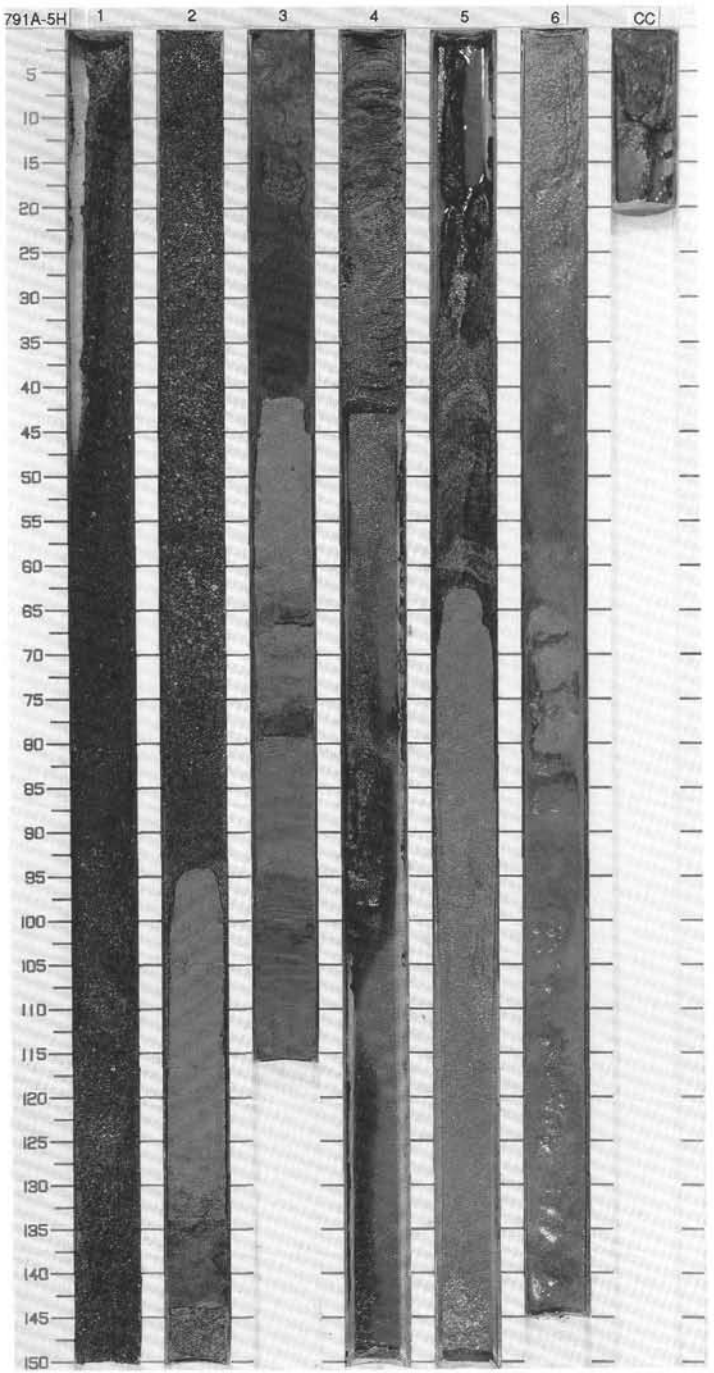
CRYSTAL-VITRIC SAND AND VITRIC-CRYSTAL SAND

Major lithologies:
Olive black (5Y 2/1) CRYSTAL-VITRIC SAND occurs in the uppermost 244 cm of the core. Grayish black (N2) VITRIC-CRYSTAL SAND forms a 171-cm thick layer in Sections 4 and 5, a 134 cm layer in Sections 5 and 6, and two thin 10 and 21 cm) layers in Sections 2 and 3. This unit comprises 74% of the core.

Minor lithologies:
Olive gray (5Y 4/2) CLAYEY VITRIC SILT, in Section 2, 94-134 cm. Olive gray (5Y 4/2) VITRIC SILT, in Section 2, 144 cm, to Section 3, 41 cm; Section 4, 0-42 cm, and Section 6, 86-145 cm. A 19-cm layer of black (N2) CLAY occurs in Section 3, 96-115 cm.

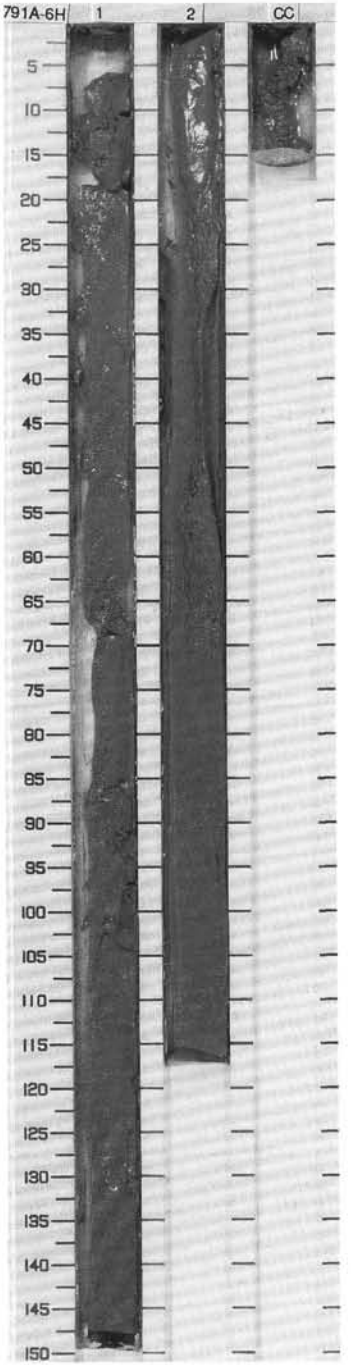
SMEAR SLIDE SUMMARY (%):

	1, 78 D	2, 117 D	3, 78 D	3, 109 D	5, 5 D	6, 71 D
TEXTURE:						
Sand	95	7	90	—	85	2
Silt	2	63	10	5	15	98
Clay	3	30	—	95	—	—
COMPOSITION:						
Accessory minerals	15	—	10	—	5	Tr
Clay	2	55	—	82	—	—
Diatoms	—	2	—	—	—	—
Epidote	—	—	Tr	—	—	—
Feldspar	15	—	10	Tr	5	Tr
Foraminifers	Tr	3	—	—	Tr	Tr
Glass	66	30	76	2	87	100
Micrite	—	2	—	—	—	—
Nannofossils	2	5	—	—	—	Tr
Opaques	—	1	2	5	3	—
Rock fragment	—	—	2	—	—	—
Silicoflagellates	—	2	—	—	—	—
Zeolite	—	—	—	10	—	—



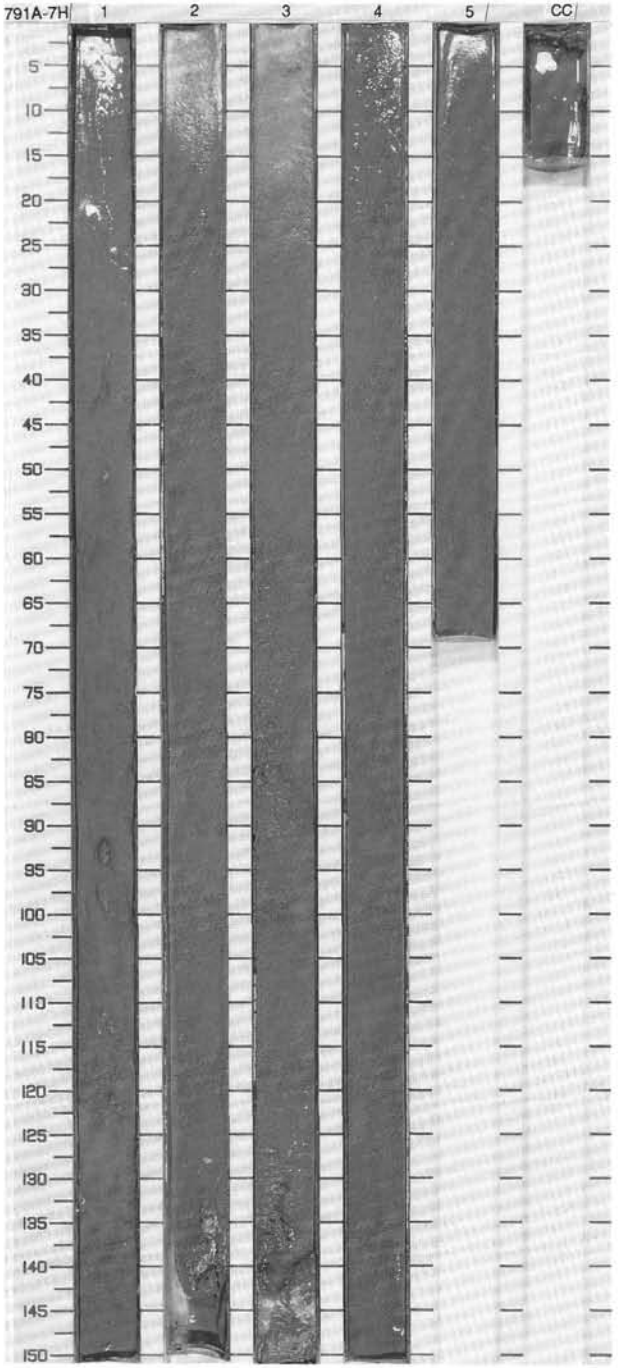
SITE 791 HOLE A CORE 6H CORED INTERVAL 42.5-52.0 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
QUATERNARY	C/G-F	CN15	R/P	UPPER PLIOCENE-RECENT		●=66.1 ●=1.85		1	0.5 1.0				*	VITRIC SILT Major lithology: The entire core is light olive gray (5Y 5/2) VITRIC SILT, homogenized by drilling and in very disturbed and soupy condition. SMEAR SLIDE SUMMARY (%): 1, 20 D TEXTURE: Silt 100 COMPOSITION: Feldspar 2 Glass 97 Micrite 1 Nannofossils Tr
								2						
								CC						



SITE 791 HOLE A CORE 7H CORED INTERVAL 52.0-61.6 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		CN15				● ρ=73.1 ● γ=1.59	● %$CaCO_3$=1.2	1	0.5		○			VITRIC SILT
						● ρ=66.6 ● γ=1.64			1.0		○			Major lithology: The entire core is light olive gray (5Y 5/2) VITRIC SILT, homogenized by drilling and in moderately disturbed to soupy condition.
	C/G	UPPER PLIOCENE-RECENT						2			○			SMEAR SLIDE SUMMARY (%):
	F/M										○			2, 50 D
											○			TEXTURE:
											○			Silt 100
											○			Clay Tr
											○		*	COMPOSITION:
								3			○			Accessory minerals Tr
											○			Feldspar 3
											○			Foraminifers Tr
											○			Glass 97
											○			Nannofossils Tr
								4			○			
											○			
											○			
											○			
								5			○			
								CC			○			



SITE 791 HOLE A CORE 8H CORED INTERVAL 61.6-71.3 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
QUATERNARY		CN15	C/G	B		ρ=75.7 γ=1.49	%$CaCO_3$=0.6	1 2 3 4 5 6 7 CC	0.5 1.0			◇	*

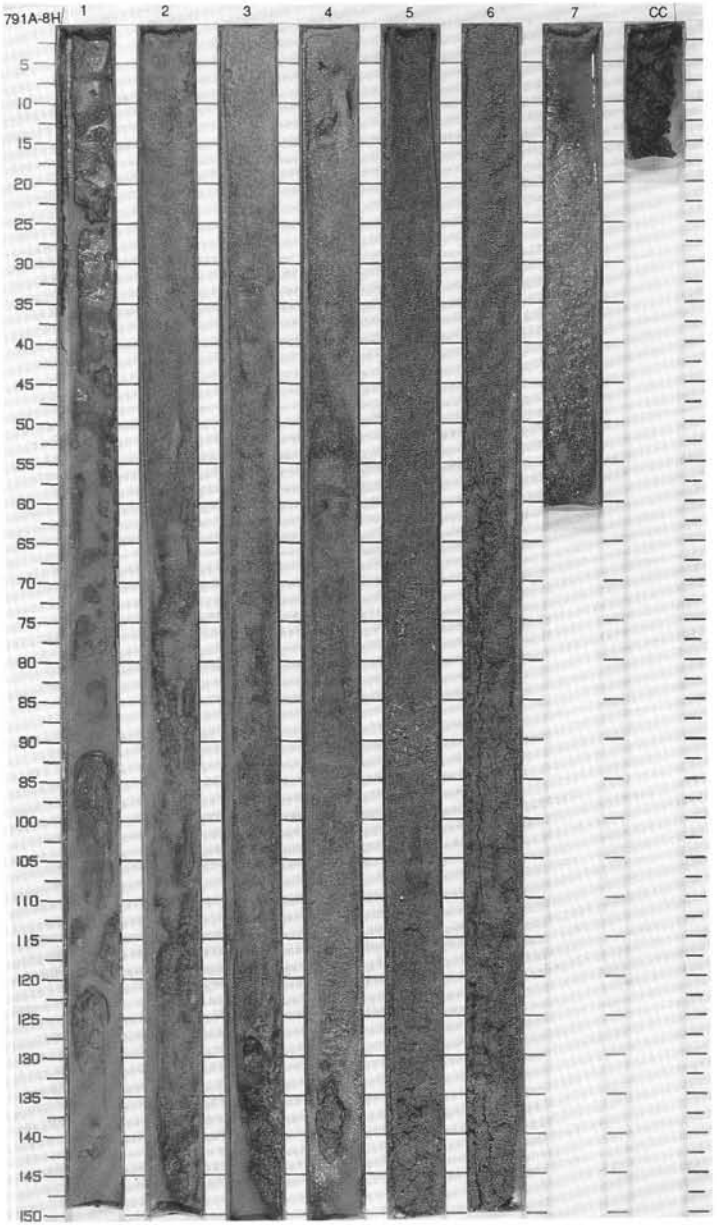
LITHOLOGIC DESCRIPTION

CRYSTAL-VITRIC SAND

Major lithology: The entire core consists of very disturbed to soupy, dark gray (5Y 4/1), fine to medium CRYSTAL-VITRIC SAND, somewhat coarser from Section 4, 130 cm downwards. An 8-mm pumice clast is located at the top of Section 3, and thin intervals containing concentrations of pumice pebbles granules occur in Section 5. Minor laminated zones of finer material occur in Sections 2 and 4.

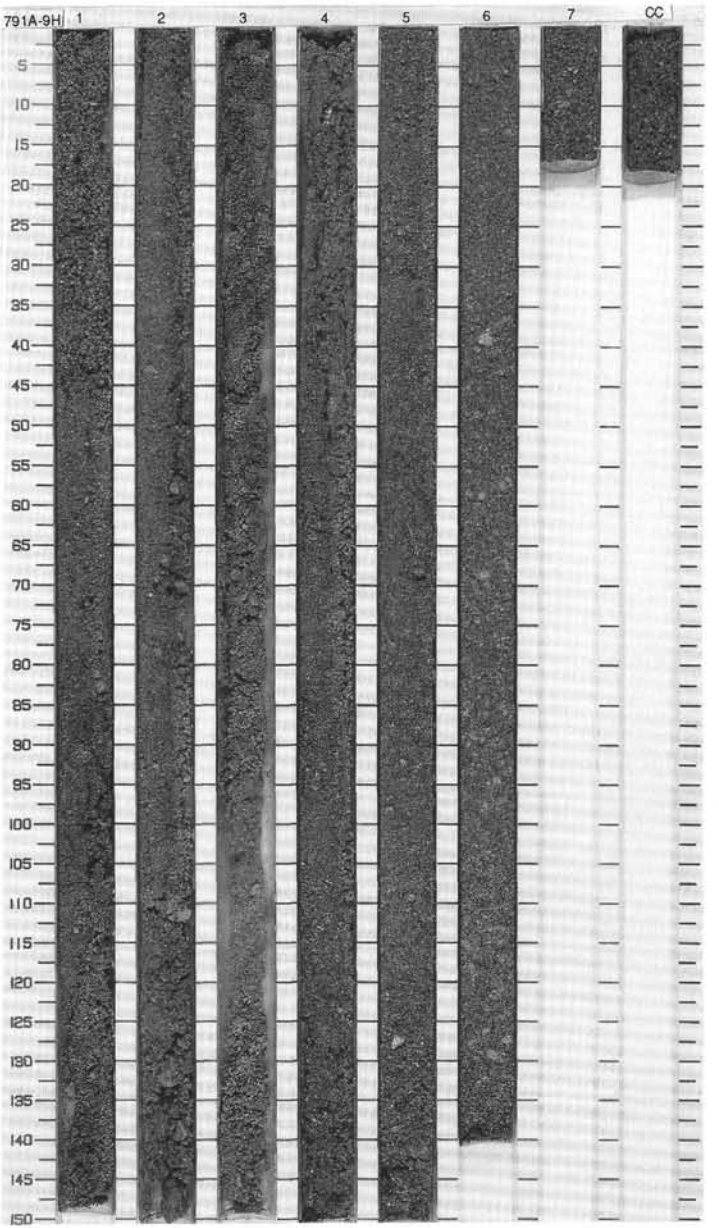
SMEAR SLIDE SUMMARY (%):

	3, 75 D
TEXTURE:	
Sand	95
Silt	5
COMPOSITION:	
Accessory minerals	15
Feldspar	15
Foraminifers	Tr
Glass	70
Nannofossils	Tr



SITE 791 HOLE A CORE 9H CORED INTERVAL 71.3-81.0 mbsf

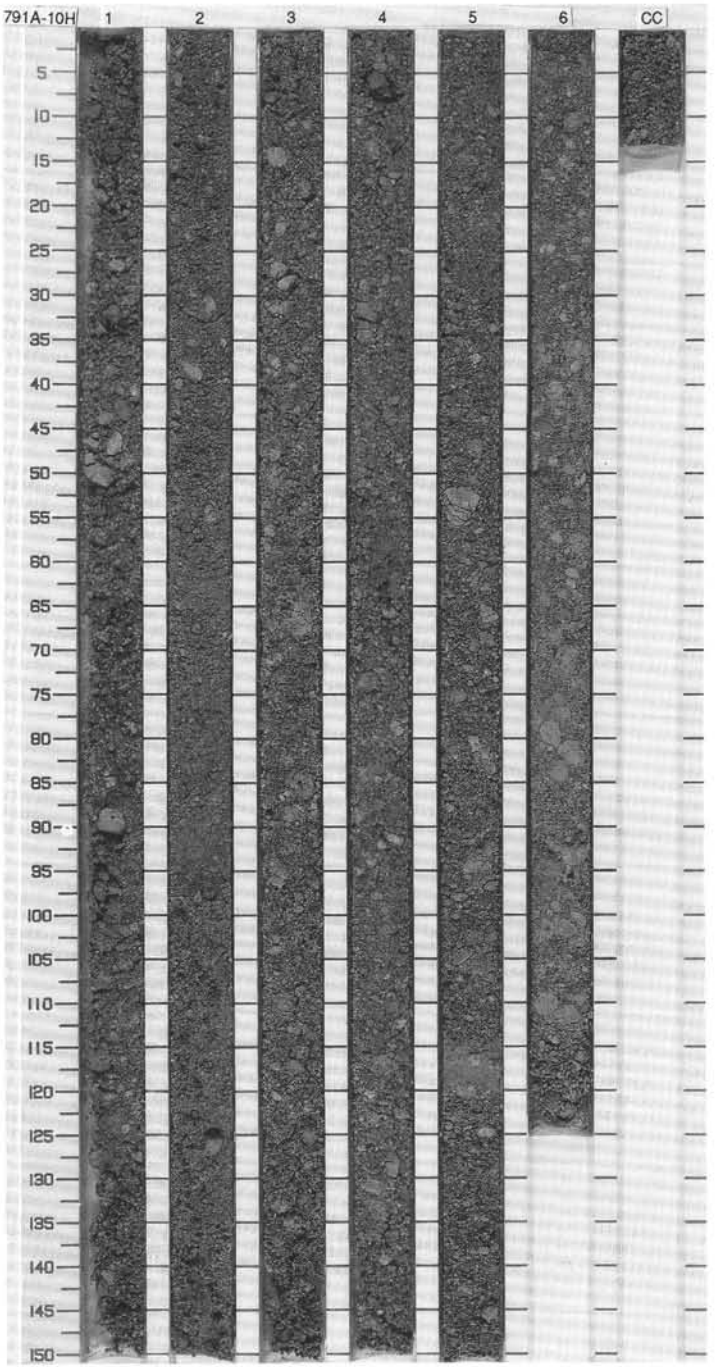
TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
QUATERNARY		CN15	C/G B					1 2 3 4 5 6 7 CC	0.5 1.0				IW	PUMICEOUS PEBBLE-BEARING GRANULE GRAVEL Major lithology: The entire core consists of PUMICEOUS PEBBLE-BEARING GRANULE GRAVEL, gray (5Y 5/1) for the most part, with minor light olive gray (5Y 5/2) intervals. The interval Section 2, 108-150 cm, has a concentration of pumice pebbles 28-51 mm in diameter.



SITE 791 HOLE A CORE 10H CORED INTERVAL 81.0-90.7 mbsf

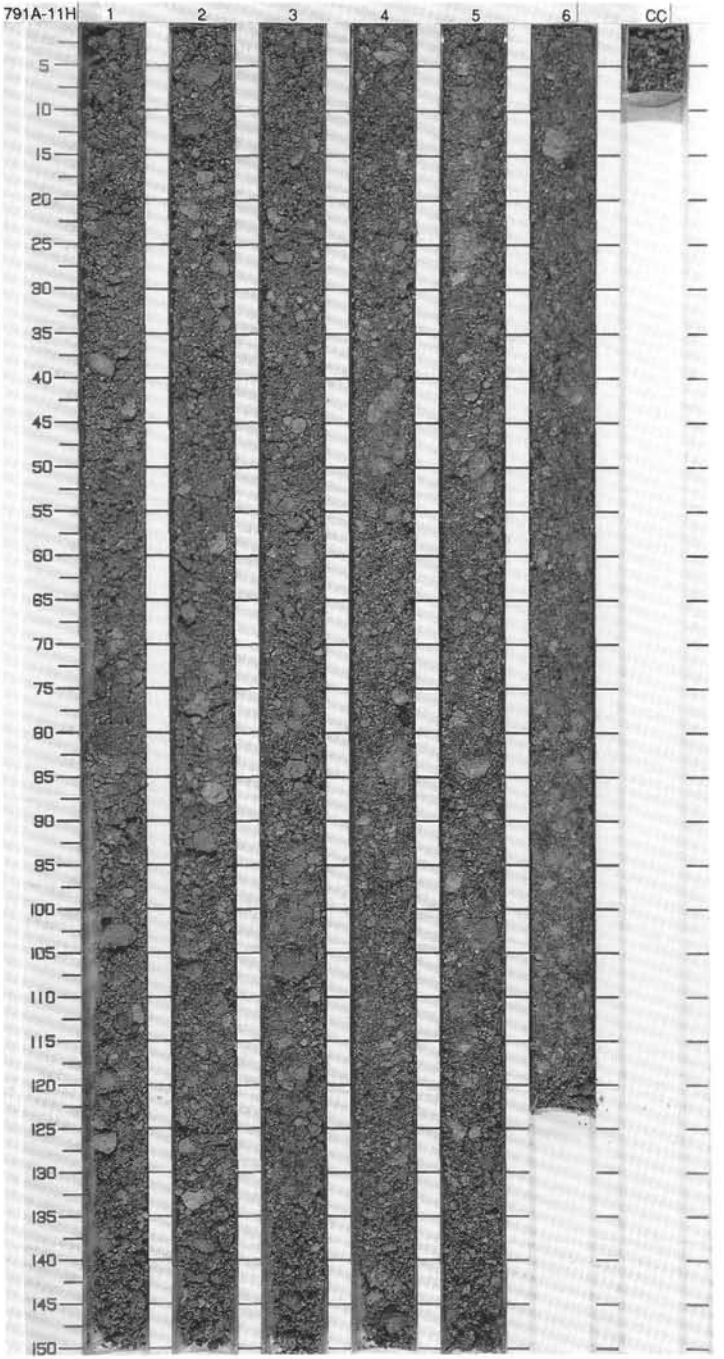
TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
QUATERNARY		CN15				ϕ=77.0 γ=1.41	•%$CaCO_3$=0.3	1 2 3 4 5 6 CC	0.5 1.0				*	PUMICEOUS PEBBLE-GRANULE GRAVEL Major lithology: The entire core is gray (5Y 5/1) PUMICEOUS PEBBLE-GRANULE GRAVEL, consisting of 40% pumice pebbles and 60% granular matrix. The mean maximum clast sizes (average of 10) are 47 mm, but 60-76 mm pebbles also occur in Sections 1, 4 and 5. The pebbles are sub-rounded to rounded. SMEAR SLIDE SUMMARY (%): 5, 117 D TEXTURE: Sand 35 Silt 64 Clay 1 COMPOSITION: Accessory minerals Tr Clay 1 Feldspar Tr Foraminifers Tr Glass 98 Micrite Tr Nannofossils 1

C/G
B



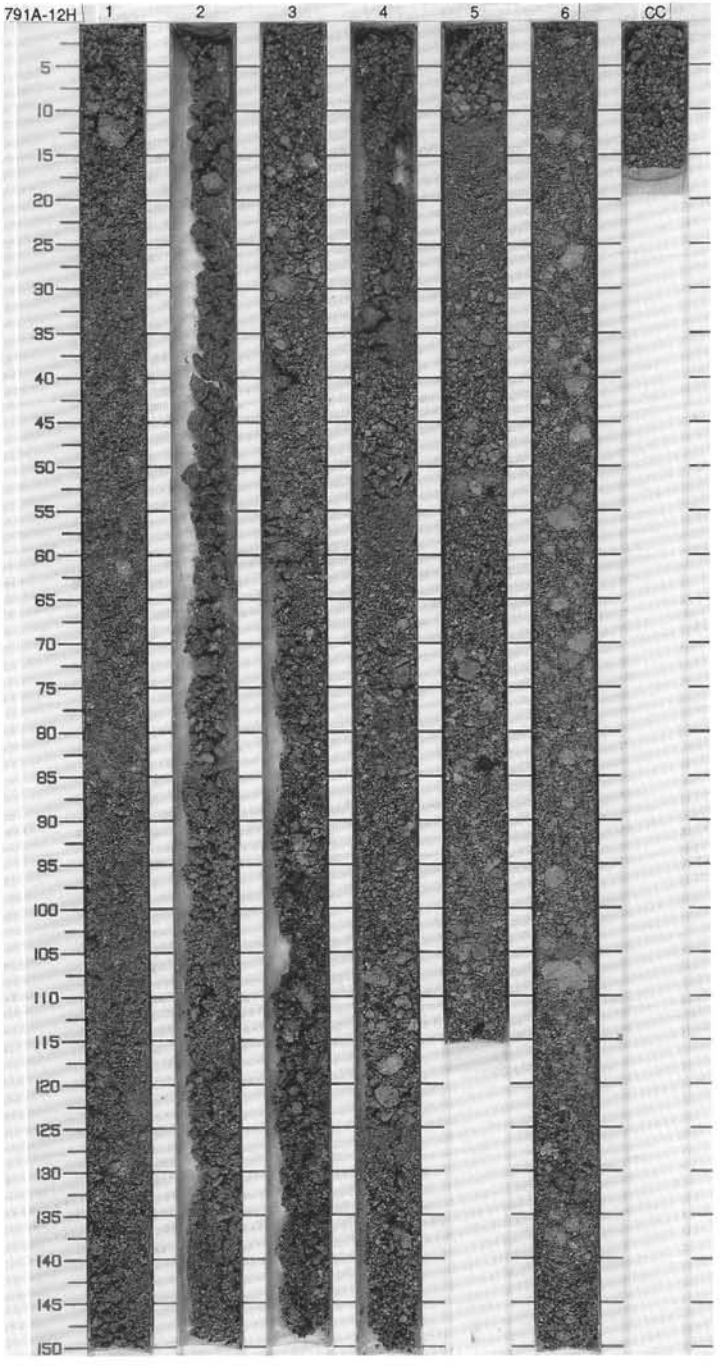
SITE 791 HOLE A CORE 11H CORED INTERVAL 90.7-100.4 mbsf

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
QUATERNARY		CN15	C/G	B				1 2 3 4 5 6	0.5 1.0					PUMICEOUS PEBBLE-GRANULE GRAVEL Major lithology: The entire core is gray (5Y 5/1) PUMICEOUS PEBBLE-GRANULE GRAVEL, consisting of about 40% pumice pebbles and 60% granular matrix. The mean maximum clast sizes (average of 10) are 41 mm, but 55 mm pebbles also occur. The pebbles are sub-rounded to rounded. Minor lithology: A pinkish gray (5YR 6/2) 3-cm diameter pumice pebble occurs in Section 1, 75 cm.



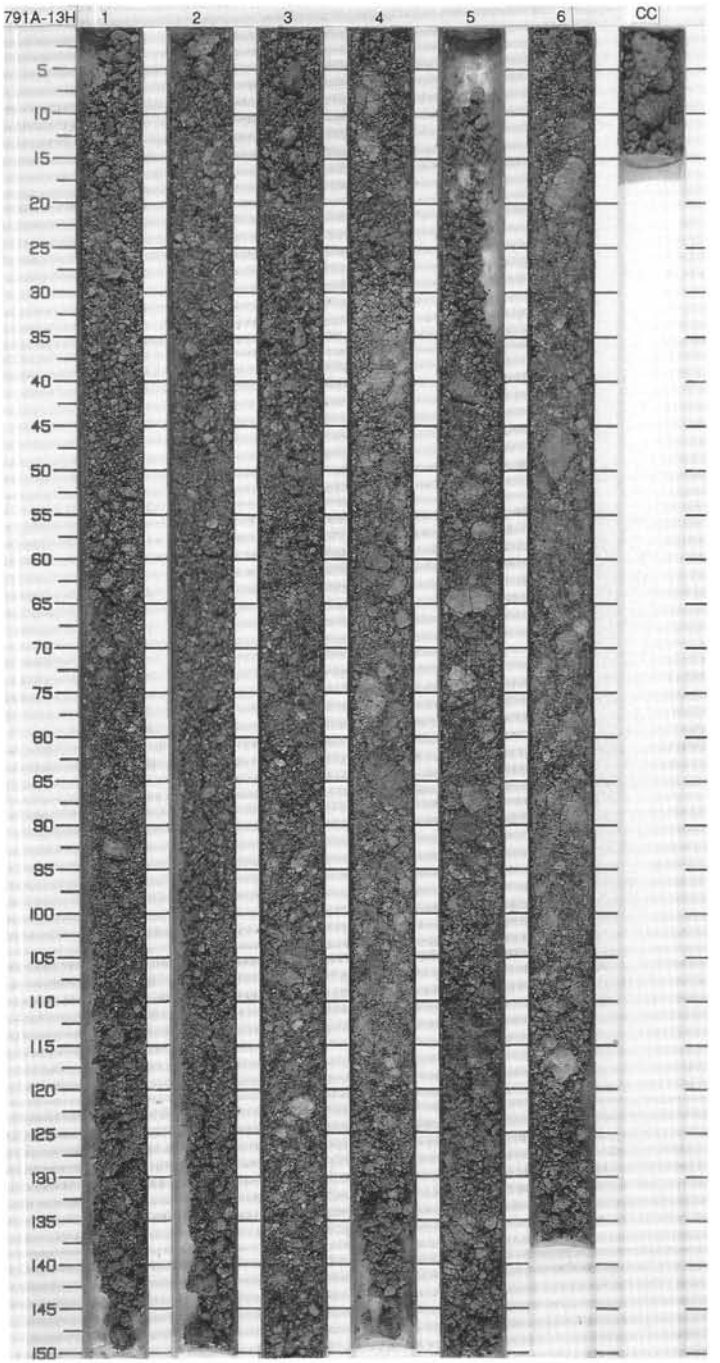
SITE 791 HOLE A CORE 12H CORED INTERVAL 100.4-110.1 mbsf

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
QUATERNARY			R/P					1	0.5					PUMICEOUS PEBBLE-GRANULE GRAVEL
UPPER PLIOCENE-RECENT									1.0					Major lithology: The entire core consists of dark gray (5Y 4/1) PUMICEOUS PEBBLE-GRANULE GRAVEL, consisting of about 40% pumice pebbles and 60% granular matrix. The somewhat darker color than in the overlying core (11H) is due to a slight increase in the amount of black sand grains. The mean maximum clast sizes (average of 10) is 38 mm, but 54 mm pebbles also occur. The pebbles are sub-rounded to rounded.
								2						
								3						
								4						
								5					OG	
													IW	
								6						
								CC						



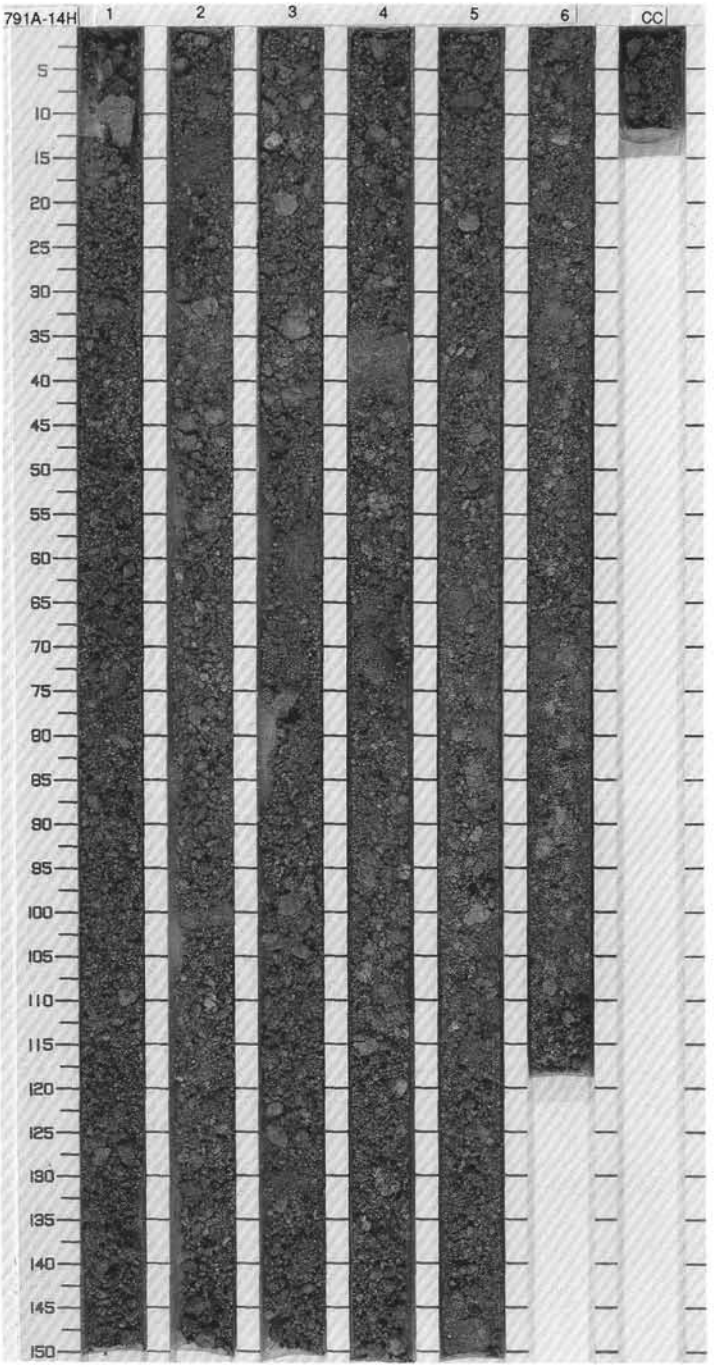
SITE 791 HOLE A CORE 13H CORED INTERVAL 110.1-119.8 mbsf

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
QUATERNARY		CN15	A/G B			ϕ=73.9 ρ=1.49	• $\%CaCO_3$=0.3	1 2 3 4 5 6 CC	0.5 1.0					PUMICEOUS GRANULE-PEBBLE GRAVEL Major lithology: The entire core consists of PUMICEOUS GRANULE-PEBBLE GRAVEL with an overall dark gray (5Y 4/1) color. Pumice-pebble colors vary from dark gray (5Y 4/1) to light gray (N7). The gravels consist of about 60% pumice pebbles and 40% granular matrix. The mean maximum clast sizes (average of 10) is 44 mm. Maximum clast diameter is 61 mm. The pebbles are sub-angular to sub-rounded.



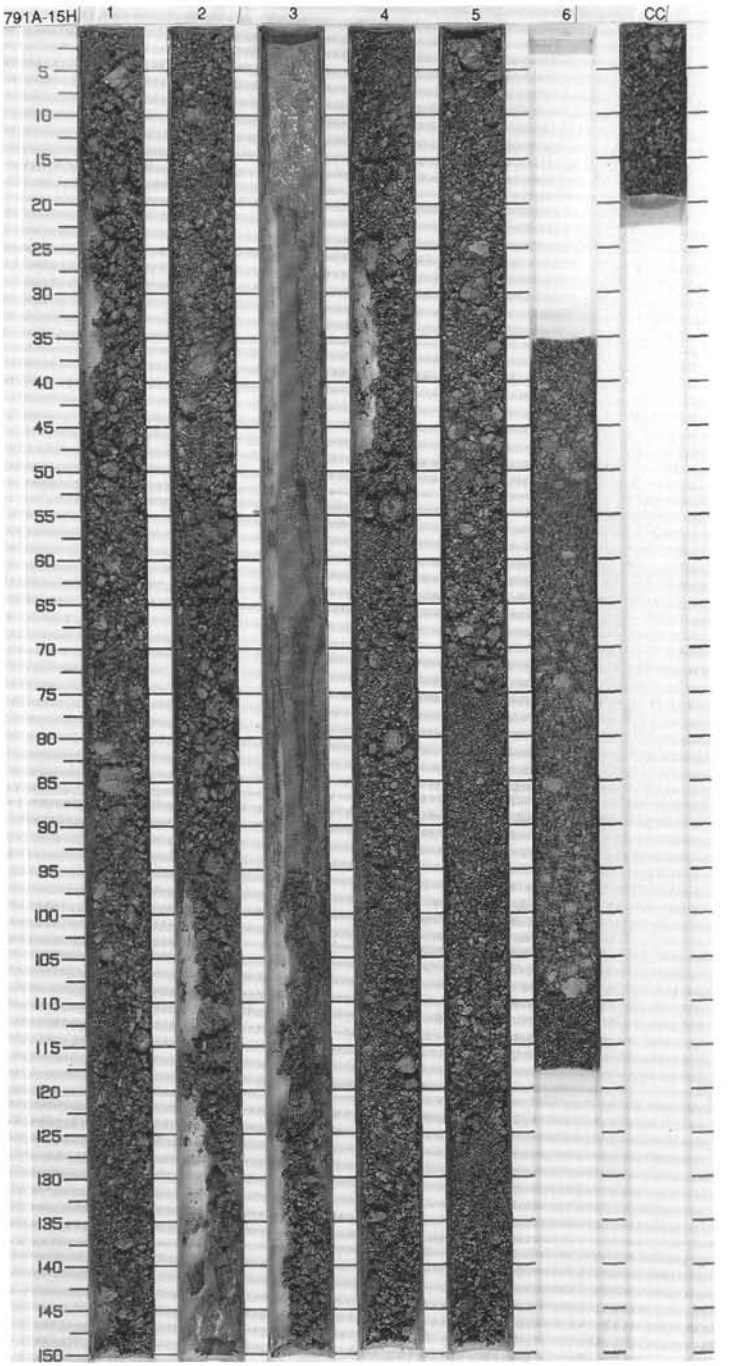
SITE 791 HOLE A CORE 14H CORED INTERVAL 119.8–129.5 mbsf

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
QUATERNARY		CN15	A/G	B				1	0.5					PUMICEOUS GRANULE-PEBBLE GRAVEL Major lithology: The entire core consists of PUMICEOUS GRANULE-PEBBLE GRAVEL with an overall dark gray (5Y 4/1) color. Pumice-pebble colors vary from dark gray (5Y 4/1) to light gray (N7). The gravels consist of about 70% pumice pebbles and 30% granular matrix. The mean maximum clast sizes (average of 10) are 39 mm. Maximum clast diameter is 60 mm. The pebbles are subangular to subrounded. Minor lithology: In Section 2, 100-103 cm, and Section 4, 33-41 cm, there are gray (5Y 6/1) beds of PUMICEOUS SILTY SAND (ash).
									1.0					
								2						
								3						
								4						
								5						
								6						
								CC						

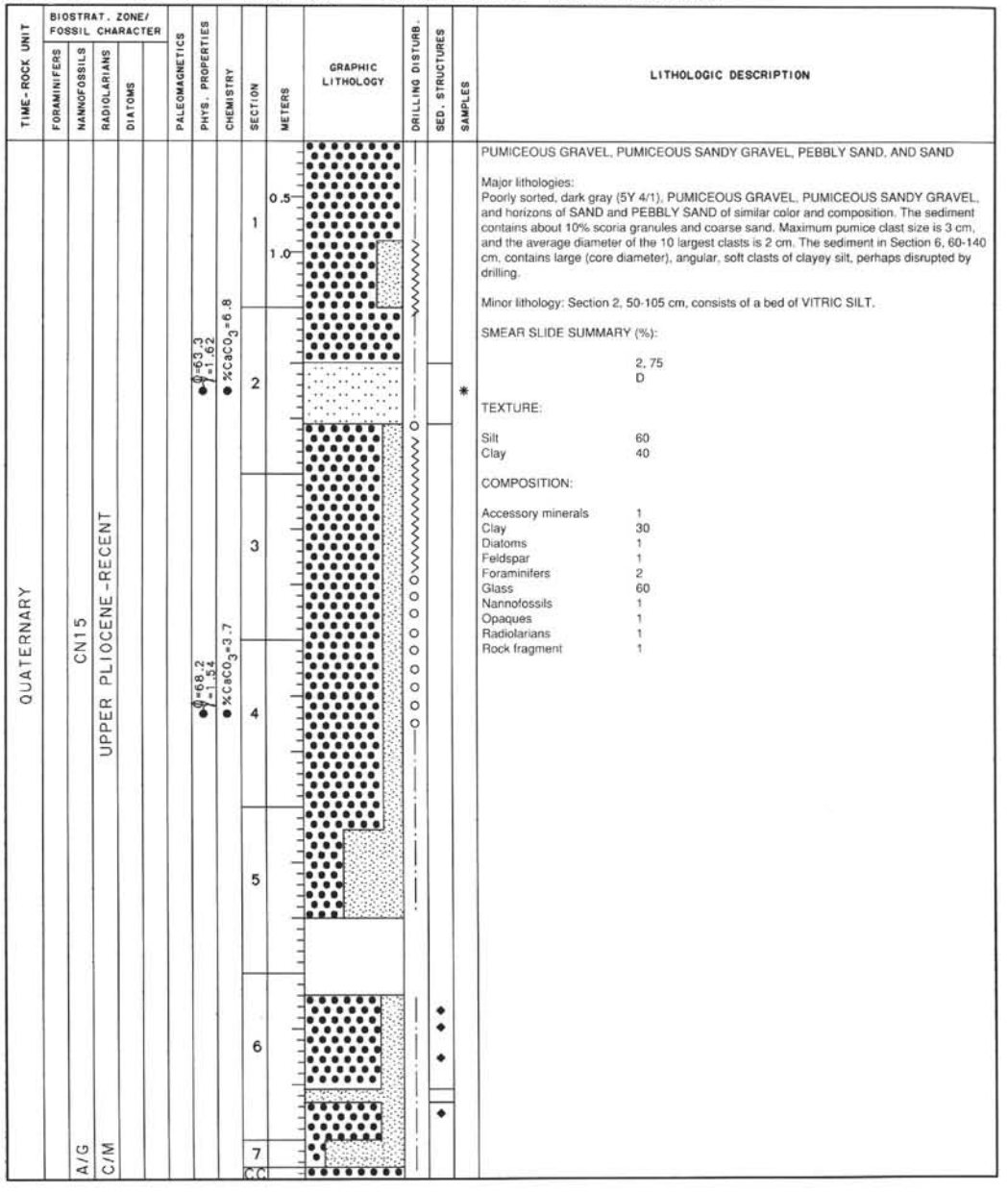


SITE 791 HOLE A CORE 15H CORED INTERVAL 129.5-139.2 mbsf

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
QUATERNARY		CN15	A/G R/P					1 2 3 4 5 6 CC	0.5 1.0				OG IW	126-791A-15H PUMICEOUS GRAVEL, SAND, AND PEBBLY SAND Major lithologies: The sediment consists of both poorly sorted, dark gray (5Y 4/1), PUMICEOUS GRAVEL, and horizons of SAND and PEBBLY SAND of similar color and composition. Pumice colors are very light gray (N8), light gray (N7), and gray (5Y 6/1). The sediment contains about 10% scoria granules and coarse sand. Maximum pumice clast size is 5 cm, and the average diameter of the 10 largest pebbles is 3 cm. The core may be severely mixed by drilling.



SITE 791 HOLE A CORE 16H CORED INTERVAL 139.2-148.8 mbsf



LITHOLOGIC DESCRIPTION

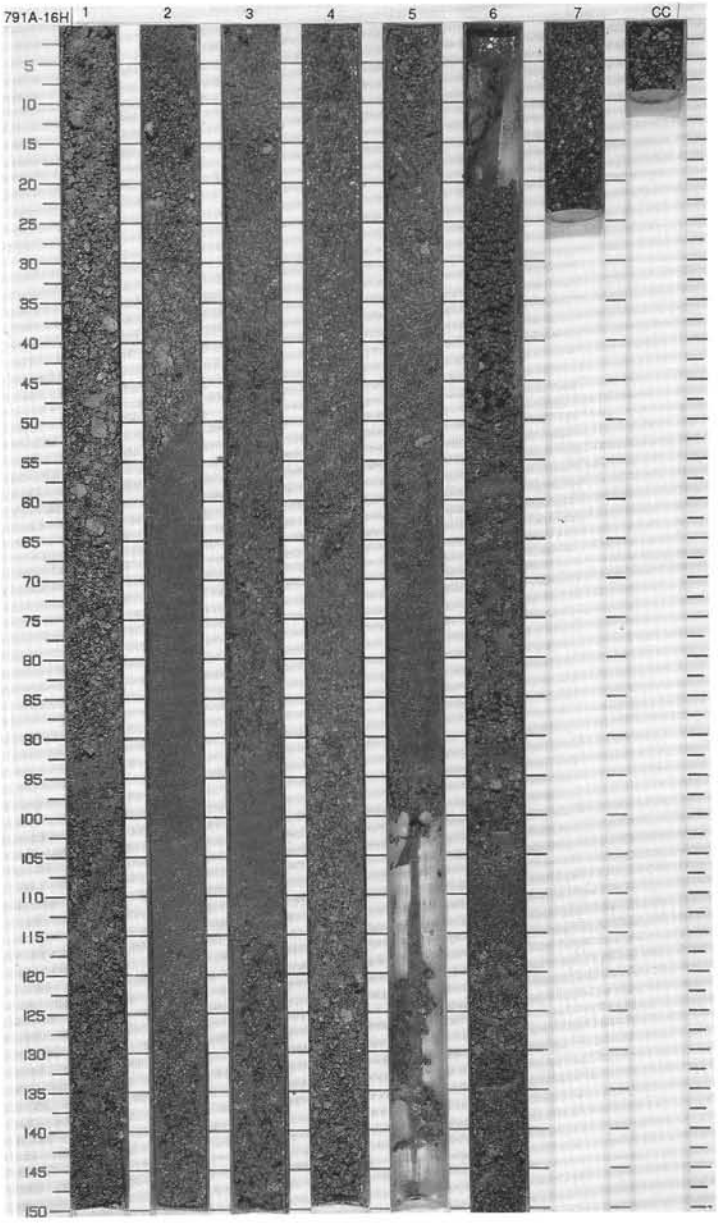
PUMICEOUS GRAVEL, PUMICEOUS SANDY GRAVEL, PEBBLY SAND, AND SAND

Major lithologies:
Poorly sorted, dark gray (5Y 4/1), PUMICEOUS GRAVEL, PUMICEOUS SANDY GRAVEL, and horizons of SAND and PEBBLY SAND of similar color and composition. The sediment contains about 10% scoria granules and coarse sand. Maximum pumice clast size is 3 cm, and the average diameter of the 10 largest clasts is 2 cm. The sediment in Section 6, 60-140 cm, contains large (core diameter), angular, soft clasts of clayey silt, perhaps disrupted by drilling.

Minor lithology: Section 2, 50-105 cm, consists of a bed of VITRIC SILT.

SMEAR SLIDE SUMMARY (%):

	2, 75 D
TEXTURE:	
Silt	60
Clay	40
COMPOSITION:	
Accessory minerals	1
Clay	30
Diatoms	1
Feldspar	1
Foraminifers	2
Glass	60
Nannofossils	1
Opaques	1
Radiolarians	1
Rock fragment	1



SITE 791 HOLE A CORE 17H CORED INTERVAL 148.8-158.5 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
QUATERNARY	A/G	CN15	R/P	UPPER PLIOCENE-RECENT		● ϕ=56.4 ● γ=1.77	● %$CaCO_3$=0.30	1 2 3 4 5 6	0.5 1.0					PUMICEOUS SANDY GRAVEL AND PEBBLY SAND Major lithologies: Poorly sorted, light gray (N7) PUMICEOUS SANDY GRAVEL in Sections 1 and 2, and PEBBLY SAND of similar color and composition in Sections 3-6. The core is moderately disturbed by drilling in Sections 1 and 2, soupy in Sections 3-5, and moderate to soupy in Section 6.

SITE 791 HOLE A CORE 18H CORED INTERVAL 158.5-168.1 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
QUATERNARY		CN15	C/G	B		●ϕ=64.3 ●γ=1.67	●%CaCO$_3$=22.9	1	0.5				
						●ϕ=66.2 ●γ=1.63	●%CaCO$_3$=3.4	1	1.0				
								2					
								3					
								4					
								5					
								6					OG IW
								7					
								CC					

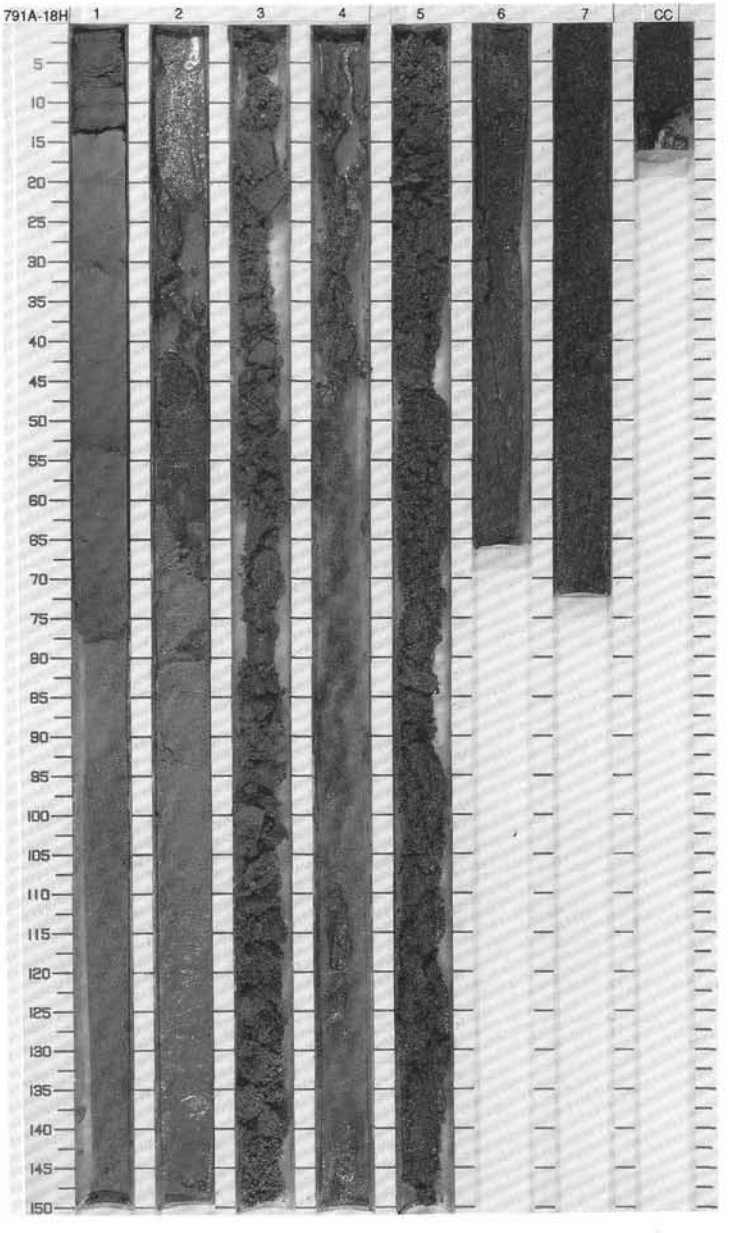
LITHOLOGIC DESCRIPTION

VITRIC SAND AND VITRIC SILTY CLAY

Major lithologies:
Olive gray (5Y 4/1) medium to granule-rich to pebbly SAND grading downward into dark gray (N3) coarse sand. Medium to thick graded beds of medium dark gray (N4) to olive gray (5Y 5/1) VITRIC SILTY CLAY are slightly mottled. Drilling has moderately disturbed the upper 75 cm of the core; the rest of it is very disturbed to soupy. The sand is structureless, and may be mainly flow-in material.

SMEAR SLIDE SUMMARY (%):

	1, 30 M	1, 43 D	1, 68 D
TEXTURE:			
Sand	75	—	—
Silt	25	40	30
Clay	—	60	70
COMPOSITION:			
Accessory minerals	1	—	—
Chlorite	—	1	1
Clay	19	60	42
Diatoms	2	2	1
Fe oxide	—	—	1
Feldspar	1	1	1
Foraminifers	1	1	1
Glass	70	30	30
Nannofossils	—	—	20
Opaques	1	1	—
Quartz	—	—	1
Spicules	—	—	1



SITE 791 HOLE A CORE 19H CORED INTERVAL 168.1-177.7 mbsf

TIME-ROCK UNIT: QUATERNARY; UPPER PLIOCENE-RECENT; R/P

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS; NANNOFOSSILS; RADIOLARIANS; DIATOMS

PALEOMAGNETICS

PHYS. PROPERTIES: ρ=67.3, ϕ=1.60; ρ=82.2, ϕ=1.57

CHEMISTRY: %CaCO3=3.0; %CaCO3=1.8

SECTION; METERS

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

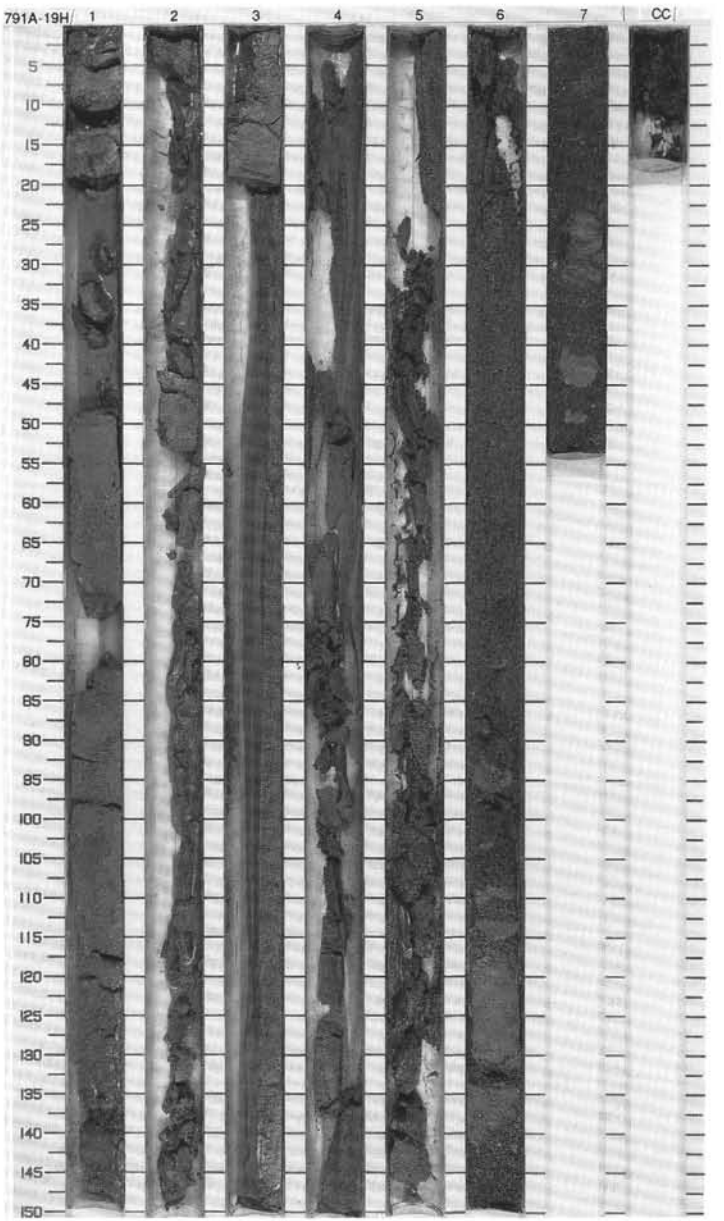
LITHOLOGIC DESCRIPTION

PUMICEOUS SAND, PUMICEOUS GRANULE-RICH SAND, VITRIC SILT AND VITRIC CLAYEY SILT

Major lithologies:
Medium dark gray (N4) to light olive gray (5Y 5/2) fine to very coarse PUMICEOUS SAND and PUMICEOUS GRANULE-RICH SAND with a minor percentage of scoria. In the upper part of the core sand grades into olive gray (5Y 5/2) VITRIC SILT and VITRIC CLAYEY SILT. The sediment is highly disturbed flow-in material.

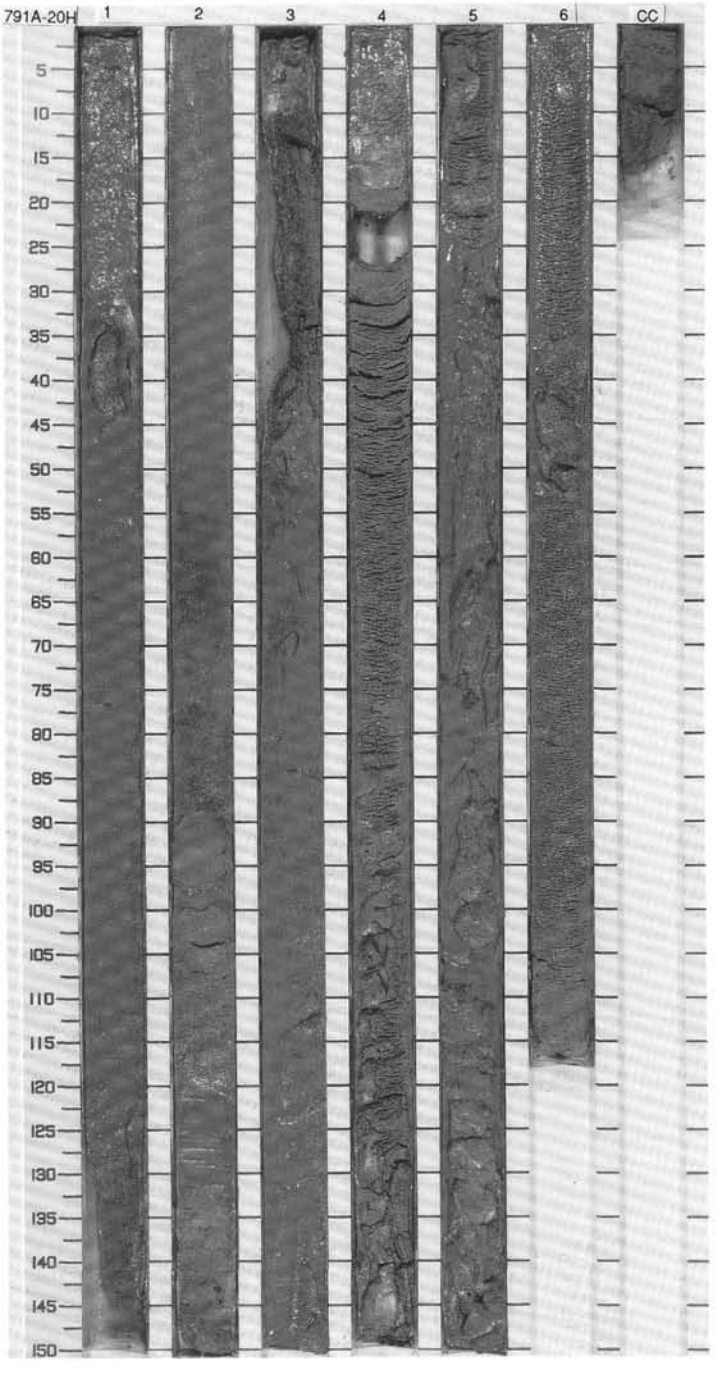
SMEAR SLIDE SUMMARY (%):

	1, 55 D
TEXTURE:	
Silt	70
Clay	30
COMPOSITION:	
Chlorite	1
Clay	20
Diatoms	1
Fe oxide	1
Feldspar	1
Foraminifers	1
Glass	70
Nannofossils	2
Opaques	1
Pyroxene	1
Quartz	1



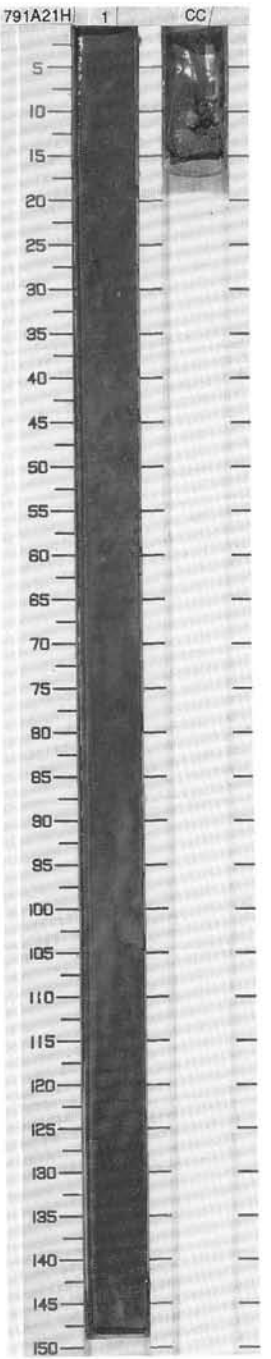
SITE 791 HOLE A CORE 20H CORED INTERVAL 177.7-187.4 mbsf

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
QUATERNARY	F/G	CN15	B			●ϕ=61.8 ●ρ=1.62 ●ϕ=63.9 ●ρ=1.61	●%$CaCO_3$=1.6 ●%$CaCO_3$=0.6	1 2 3 4 5 6 CC	0.5 1.0					VITRIC CLAYEY SILT AND PUMICEOUS SAND Major lithologies: Dark gray (5Y 4/1), structureless VITRIC CLAYEY SILT, interbedded with two thick beds of graded PUMICEOUS SAND. This core is strongly deformed by drilling.



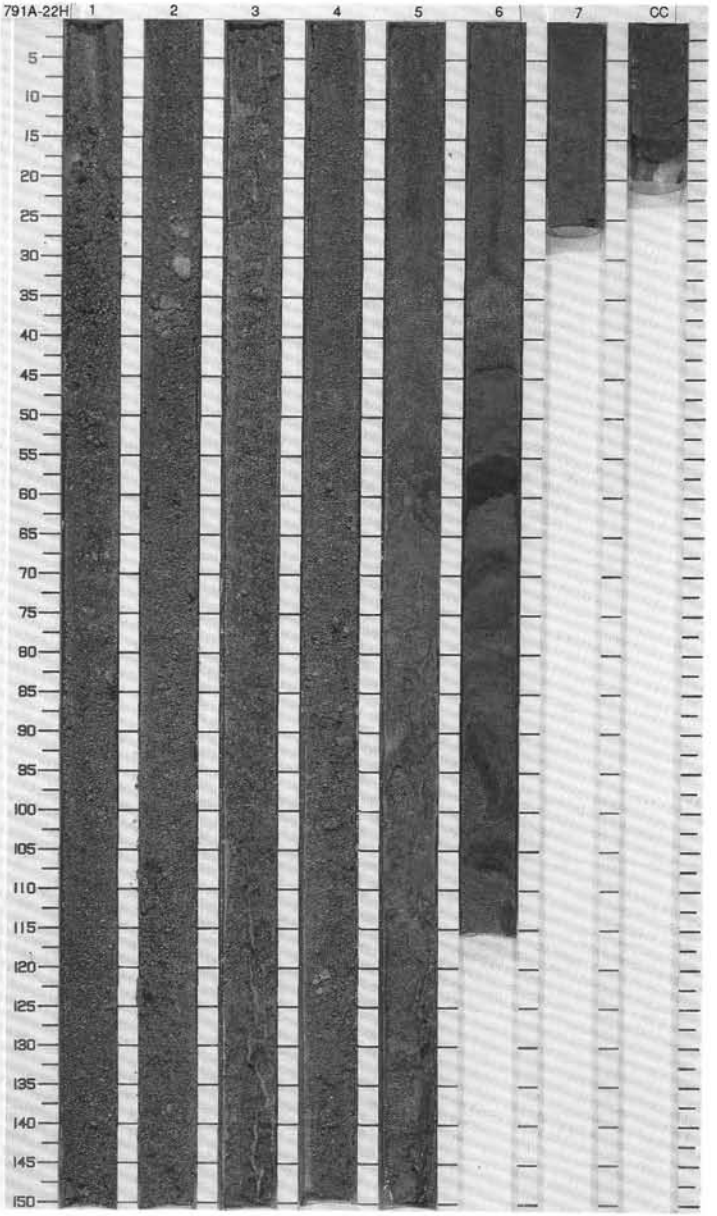
SITE 791 HOLE A CORE 21H CORED INTERVAL 187.4-196.9 mbsf

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		F/G	R/P					1	0.5 1.0					VITRIC SAND Major lithology: Dark gray (5Y 4/1), fine VITRIC SAND, strongly deformed by drilling. Minor lithology: Dark gray (5Y 4/1) VITRIC SILT, present only in the core catcher.
		CN15	UPPER PLIOCENE-RECENT					CC						



SITE 791 HOLE A CORE 22H CORED INTERVAL 196.9-206.4 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
QUATERNARY			F/M			◇ ϕ=57.3 γ=1.76 ● ϕ=61.1 γ=1.73 ● %$CaCO_3$=7.5 ● %$CaCO_3$=6.1		1 2 3 4 5 6 7 CC	0.5 1.0		OO		OG IW	PUMICEOUS PEBBLY SAND, PUMICEOUS SAND AND CLAYEY SILT Major lithologies: Dark gray (5Y 4/1) coarse PUMICEOUS SAND and PUMICEOUS PEBBLY SAND containing pumice clasts up to 3.5 cm diameter. From Section 6, 45 cm, to CC, the major lithology is grayish green (5GY 6/1), burrowed CLAYEY SILT with mottles and ash bands that are dark greenish gray (5G 4/1). Minor lithology: In Section 6, 55-60 cm, there is a dark gray (N3), sharp-based CLAYEY SILT, with fine-scale, basal, parallel laminae and apparent erosional base.



SITE 791 HOLE A CORE 23H CORED INTERVAL 206.4-207.9 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		CN15 C/G	B			ρ=74.1 γ=1.42	● %$CaCO_3$=0.3	1	0.5 1.0					PUMICEOUS SAND, PUMICEOUS GRANULE-RICH SAND AND VITRIC CLAYEY SILT Major lithologies: Olive gray (5Y 4/1) fine to medium PUMICEOUS SAND and light olive gray (5Y 5/2) PUMICEOUS GRANULE-RICH SAND deformed by drilling disturbance. Biscuits of light olive gray (5Y 5/2) VITRIC CLAYEY SILT occur in Section 2.
								2						
								CC						

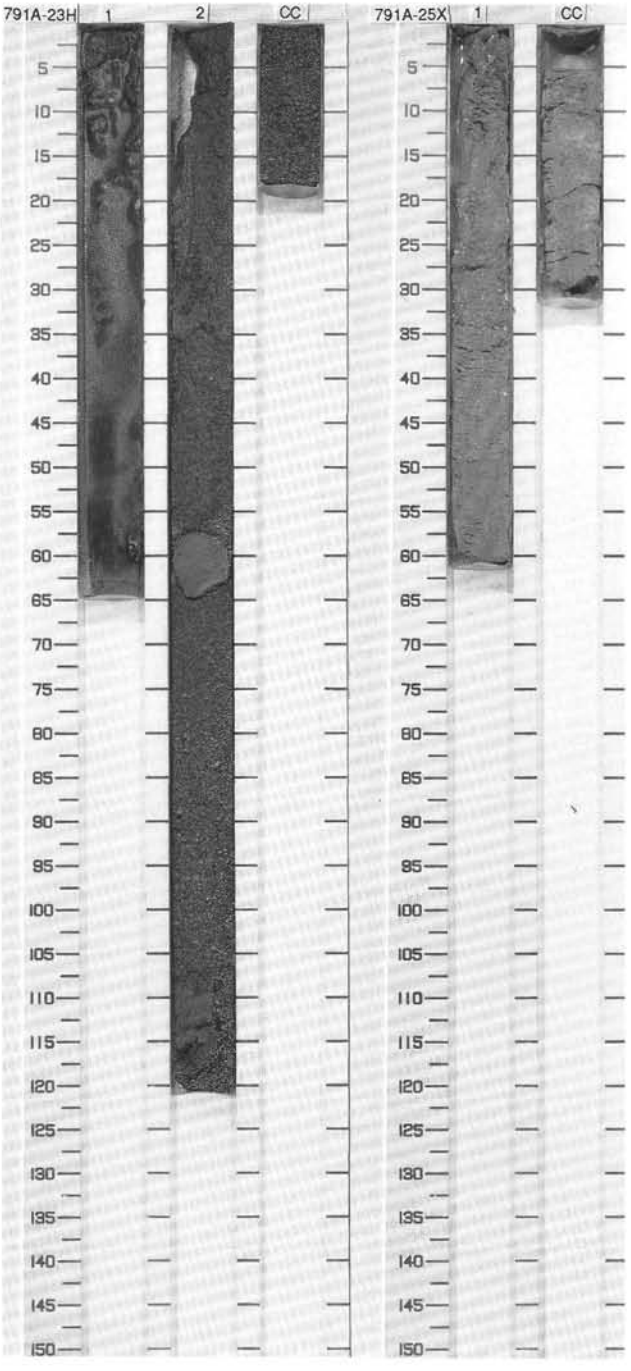
126 791A 24X NO RECOVERY

SITE 791 HOLE A CORE 25X CORED INTERVAL 217.1-226.7 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	LITHOLOGIC DESCRIPTION
QUATERNARY		CN15 F/M	B			ρ=56.3 γ=1.68	● %$CaCO_3$ =0.5	1	0.5					VITRIC SILT Major lithology: Gray (N6) structureless VITRIC SILT.
								CC						

126 791A 26X NO RECOVERY

126 791A 27X NO RECOVERY



SITE 791 HOLE A CORE 28X CORED INTERVAL 246.0-255.6 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		CN15	F/M	B		ϕ=47.6 γ=1.82	%$CaCO_3$=0.4	1 CC	0.5 1.0					PUMICEOUS SAND AND VITRIC SILT Major lithologies: Light gray (N7) to medium light gray (N6) PUMICEOUS SAND with scoria clasts, and mediu light gray (N6) VITRIC SILT. The sediment is structureless because of flow-in.

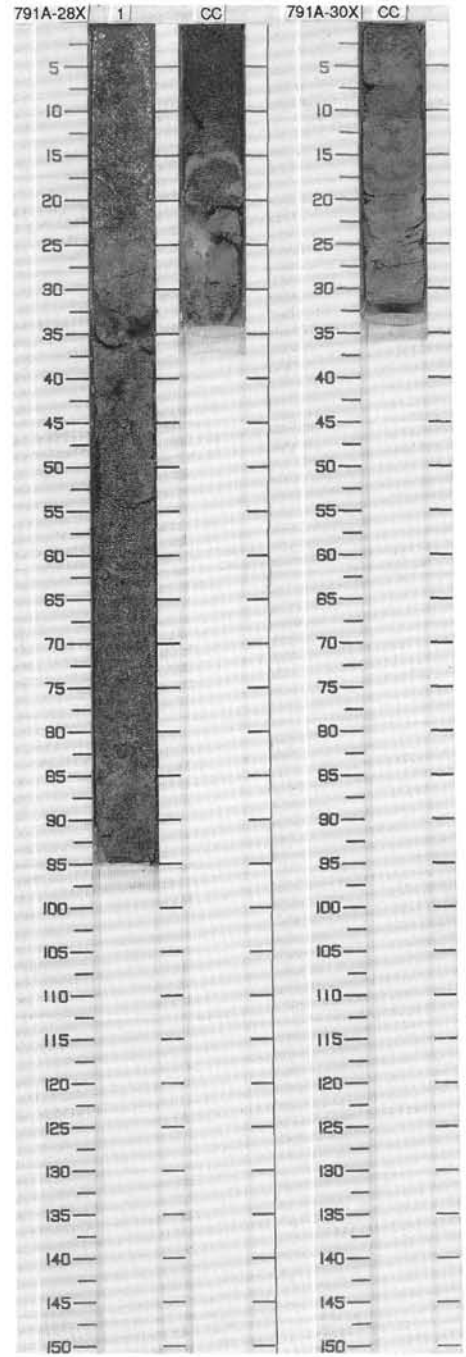
126 791A 29X NO RECOVERY

SITE 791 HOLE A CORE 30X CORED INTERVAL 265.3-274.9 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	CN15	R/M	B			ϕ=46.3 γ=1.88	%$CaCO_3$ =0.7	CC						VITRIC SAND AND VITRIC SILT Major lithology: Medium light gray (N6), crudely laminated, fine to coarse VITRIC SAND a VITRIC SILT.

126 791A 31X NO RECOVERY

126 791A 32X NO RECOVERY



SITE 791 HOLE A CORE 33X CORED INTERVAL 296.3-304.0 mbsf

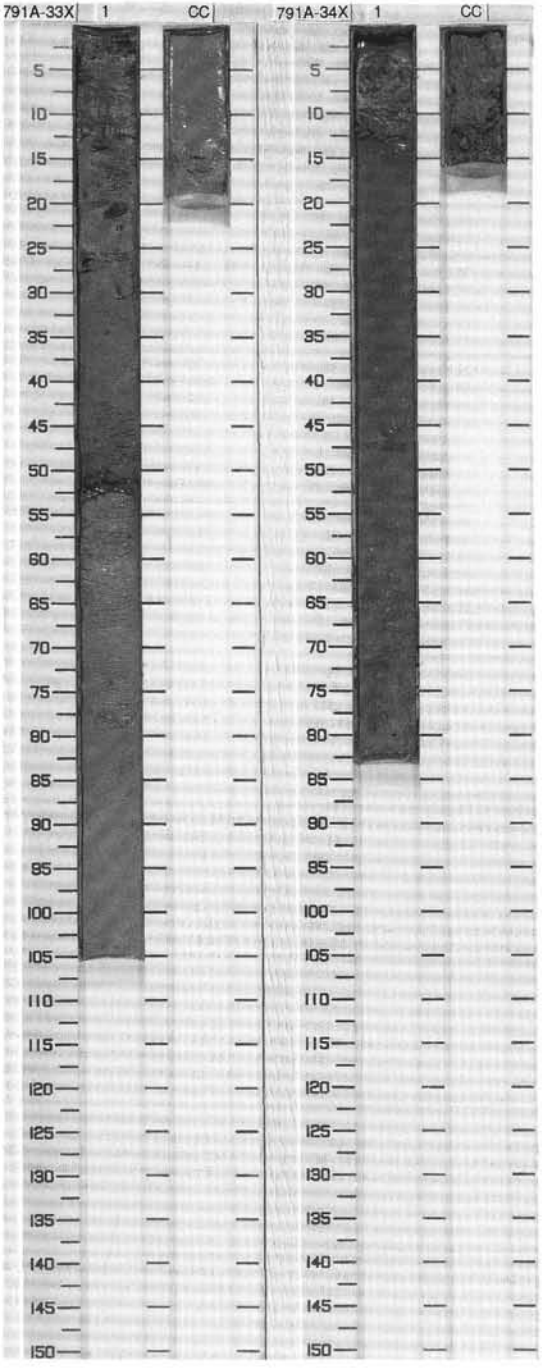
TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
QUATERNARY	A/G	CN15	B			ρ=1.62 ●	%CaCO3 =21.8 ●	1	0.5					SILT Major lithology: Generally structureless SILT, in various shades of gray (N2, N3, N5 and N7). Minor lithology: One dark gray ash bed in Section 1, 0-11 cm, has fine-scale parallel laminae at its base.
								CC						

SITE 791 HOLE A CORE 34X CORED INTERVAL 304.0-313.6 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	CN15	B			ρ=1.65 ●		1						SILTY SAND Major lithology: Medium light gray (N6) SILTY SAND with scattered pumice pebbles. The core is strongly disturbed by drilling. Minor lithology: A dark gray (N3) SILT bed occurs in Section 1, 0-11 cm.
								CC						

SITE 791 HOLE A CORE 35X CORED INTERVAL 313.6-323.3 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	A/G	CN15	F/M	UPPER PLIOCENE-RECENT				1	0.5 1.0					All of 0.03 cm recovery went to Paleontology Laboratory.
								2						



SITE 791 HOLE A CORE 36X CORED INTERVAL 323.3-332.9 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		R/M CN15						1	0.5 1.0					All of 0.01 cm recovery went to Paleontology Laboratory.
								2						

126 791A 37X NO RECOVERY

SITE 791 HOLE A CORE 38X CORED INTERVAL 342.6-352.3 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	A/G	CN15	C/M UPPER PLIOCENE-RECENT					1	0.5 1.0					All of 0.01 cm recovery went to Paleontology Laboratory.
								2						

SITE 791 HOLE A CORE 39X CORED INTERVAL 352.3-362.0 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
QUATERNARY		F/M CN15	B		%$CaCO_3$=15.7	Φ=67.5 ρ=1.64 Φ=58.6 ρ=1.76 Φ=62.4 ρ=1.7	%$CaCO_3$ =1.8	1 CC	0.5				* * *

LITHOLOGIC DESCRIPTION

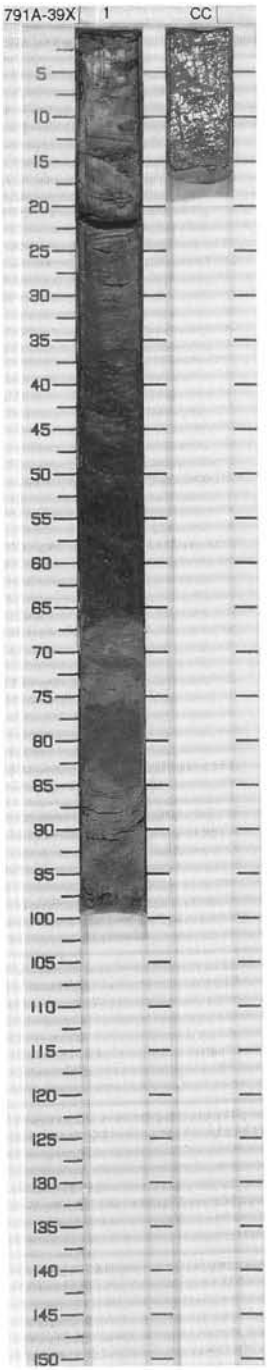
CLAYEY NANNOFOSSIL-DIATOM OOZE, CLAYEY VITRIC SILT, VITRIC SILT AND SANDY VITRIC SILT

Major lithologies:
An olive gray (5Y 4/2) CLAYEY NANNOFOSSIL-DIATOM OOZE layer 36 cm thick occurs in Section 1, 0-36 cm, and represents 30% of recovery. It is underlain by a 30 cm brownish black (5YR 2/1) CLAYEY VITRIC SILT layer (25% of core) and interbedded dark gray (5Y 4/1) VITRIC SILT and gray (5Y 5/1) SANDY VITRIC SILT, which constitute 32% and 13% of the core, respectively.

NOTE: This core was soupy at the top and was consolidated into a single section on the ship by standing it on end.

SMEAR SLIDE SUMMARY (%):

	1, 10 D	1, 60 D	1, 80 D	1, 89 D	CC, 10 D
TEXTURE:					
Sand	5	5	15	40	50
Silt	65	70	75	60	45
Clay	30	25	10	—	5
COMPOSITION:					
Clay	30	21	10	—	2
Diatoms	44	1	15	Tr	1
Feldspar	1	2	1	Tr	—
Foraminifers	1	1	1	Tr	—
Glass	2	70	64	100	88
Micrite	Tr	Tr	1	—	1
Nannofossils	20	2	7	Tr	7
Opaques	Tr	3	1	—	1
Radiolarians	1	—	—	—	—
Silicoflagellates	Tr	—	Tr	—	—
Spicules	1	Tr	Tr	—	—



SITE 791 HOLE A CORE 40X CORED INTERVAL 362.0-371.7 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
QUATERNARY / UPPER PLIOCENE-RECENT		F/G	R/P		●	● 9=55.2 7=1.66	● %$CaCO_3$ =1.1	1 CC	0.5				* ** **

LITHOLOGIC DESCRIPTION

VITRIC SILT, DIATOM NANNOFOSSIL-RICH VITRIC SILTY CLAY AND PUMICEOUS SANDY-SILTY GRAVEL

Major lithologies:
The sediment in this core consists of dark gray (5Y 4/1) VITRIC SILT (65% of the core), moderately burrowed olive gray (5Y 4/2) DIATOM-NANNOFOSSIL-RICH VITRIC SILTY CLAY (22%), and dark gray (5Y4/1) PUMICEOUS SANDY-SILTY GRAVEL (19%).

SMEAR SLIDE SUMMARY (%):

	1, 9 D	CC, 7 D	CC, 20 D	CC, 29 D
TEXTURE:				
Sand	10	40	5	40
Silt	90	60	55	60
Clay	—	Tr	40	—
COMPOSITION:				
Accessory minerals	—	Tr	—	1
Clay	—	Tr	40	—
Diatoms	Tr	Tr	10	—
Feldspar	Tr	1	1	2
Foraminifers	Tr	Tr	2	Tr
Glass	99	98	30	96
Micrite	—	—	—	1
Nannofossils	1	—	15	—
Opaques	—	1	2	—
Rock fragment	—	Tr	Tr	—
Spicules	—	—	Tr	Tr

SITE 791 HOLE A CORE 41X CORED INTERVAL 371.7-381.4 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
QUATERNARY / UPPER PLIOCENE-RECENT		C/G	R/M					CC			○		*

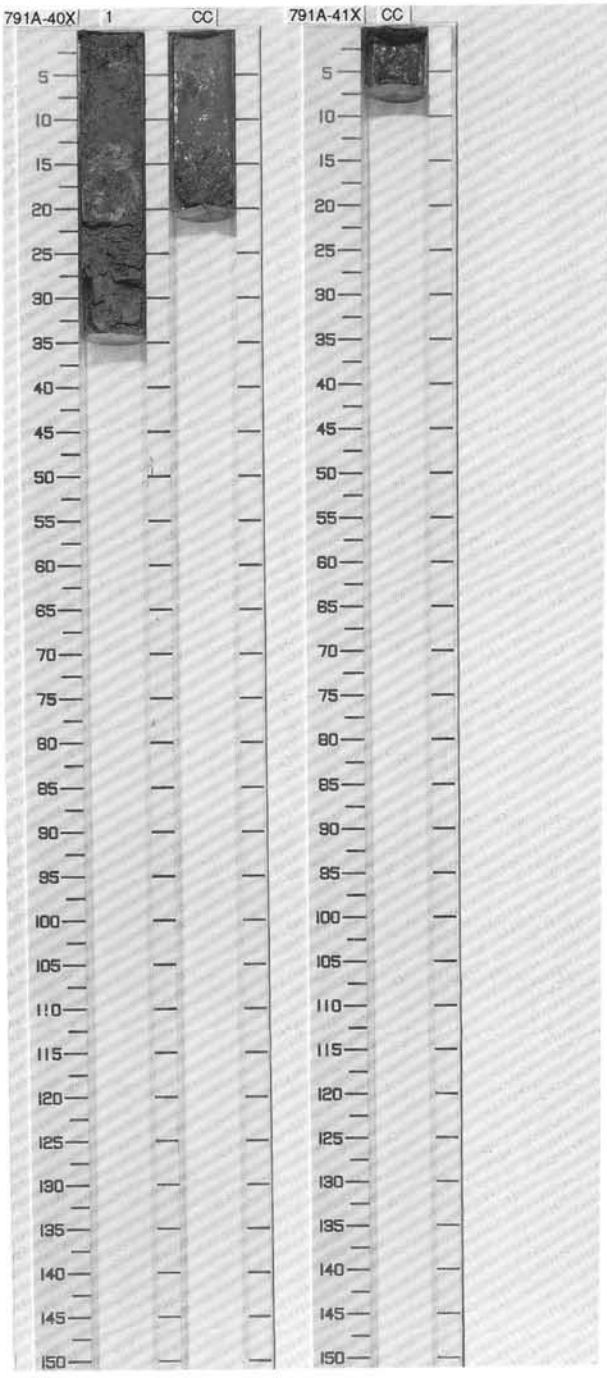
LITHOLOGIC DESCRIPTION

VITRIC SANDY SILT

Major lithology: Dark gray (5Y 4/1), structureless VITRIC SANDY SILT.

SMEAR SLIDE SUMMARY (%):

	CC, 4 D
TEXTURE:	
Sand	70
Silt	30
COMPOSITION:	
Accessory minerals	2
Feldspar	3
Glass	95
Micrite	Tr
Nannofossils	Tr
Spicules	Tr



SITE 791 HOLE A CORE 42X CORED INTERVAL 381.4-391.0 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	LITHOLOGIC DESCRIPTION
QUATERNARY		CN15 A/G	B			ρ=63.4 ● ϕ=1.77	%$CaCO_3$ ● =3.7	1					*	NANNOFOSSIL-RICH VITRIC SILT
								CC					*	

Major lithology: Gray (5Y 5/1), structureless NANNOFOSSIL-RICH VITRIC SILT.

Minor lithology: Section 1, 0-4 cm, consists of dark gray (5Y 4/1) NANNOFOSSIL-RICH CLAY.

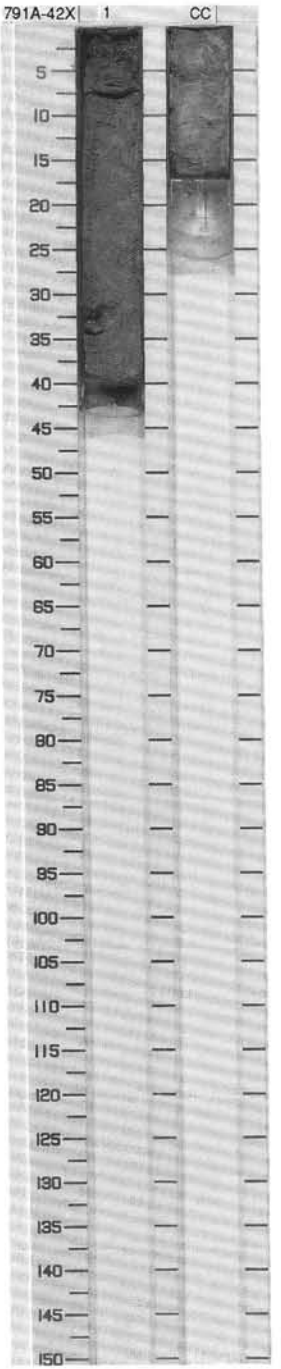
SMEAR SLIDE SUMMARY (%):

	1, 4 M	CC, 12 D
TEXTURE:		
Sand	—	3
Silt	15	97
Clay	85	Tr
COMPOSITION:		
Accessory minerals	—	Tr
Clay	65	Tr
Diatoms	3	Tr
Feldspar	—	Tr
Foraminifers	1	—
Glass	7	89
Micrite	1	Tr
Nannofossils	20	10
Opaques	3	Tr
Silicoflagellates	Tr	—
Spicules	Tr	—

126 791A 43X NO RECOVERY

126 791A 44X NO RECOVERY

126 791A 45X NO RECOVERY



SITE 791 HOLE A CORE 46X CORED INTERVAL 418.8-428.4 mbsf

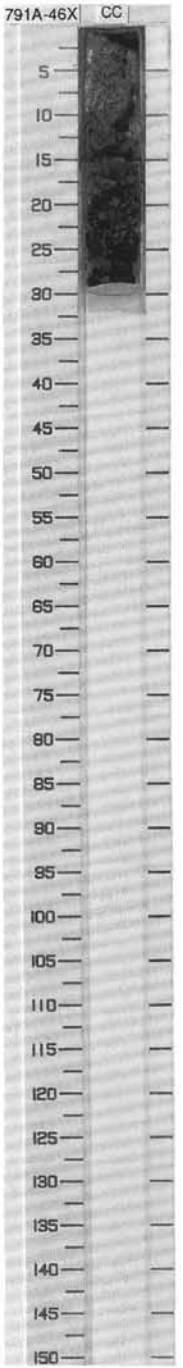
TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
QUATERNARY		C/G	R/P					CC					*	CRYSTAL-VITRIC SILTY SAND AND SANDY SILTSTONE

CN15 UPPER PLIOCENE-RECENT

Major lithologies:
Severe drilling disturbance has reduced CC, 0-15 cm, to a soupy mixture of dark gray (5Y 4/1) CRYSTAL-VITRIC SILTY SAND in which angular rock fragments are imbedded; identical fragments that are not imbedded in unconsolidated sediment constitute the bottom 13 cm of the core-catcher sample. These fragments are highly indurated, conchoidally fractured, grayish black (N2) and black (5Y3/2) SANDY SILTSTONES, some with fine laminations <1 mm in thickness.

SMEAR SLIDE SUMMARY (%):

	CC, 8 D
TEXTURE:	
Sand	80
Silt	20
COMPOSITION:	
Feldspar	15
Foraminifers	5
Glass	75
Nannofossils	Tr



126 791A 47X NO RECOVERY

126 791A 48X NO RECOVERY

126 791B 1R NO RECOVERY

126 791B 2W WASH CORE

126 791B 3W WASH CORE

126 791B 4R NO RECOVERY

126 791B 5R NO RECOVERY

126 791B 6R NO RECOVERY

126 791B 7R NO RECOVERY

126 791B 8R NO RECOVERY

SITE 791 HOLE B CORE 9R CORED INTERVAL 463.6-473.3 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	CN15	A/G	R/M	UPPER PLIOCENE-RECENT		● ϕ=61.0 ρ=1.72	● %$CaCO_3$ =10.3	CC					*	NANNOFOSSIL-RICH SILTY CLAYSTONE

Major lithology: Greenish black (5G 2/1) structureless NANNOFOSSIL-RICH SILTY CLAYSTONE.

SMEAR SLIDE SUMMARY (%):

	CC, 15 D
TEXTURE:	
Sand	3
Silt	27
Clay	70
COMPOSITION:	
Accessory minerals	1
Clay	67
Diatoms	3
Feldspar	1
Foraminifers	3
Glass	7
Nannofossils	15
Opaques	2
Radiolarians	Tr
Silicoflagellates	Tr
Spicules	1

SITE 791 HOLE B CORE 10R CORED INTERVAL 473.3-482.9 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
QUATERNARY		A/G	C/M		N	ρ=60.1 ● ϕ=1.87 %CaCO3 ● =16.53		1	0.5 1.0				* * * W

LITHOLOGIC DESCRIPTION

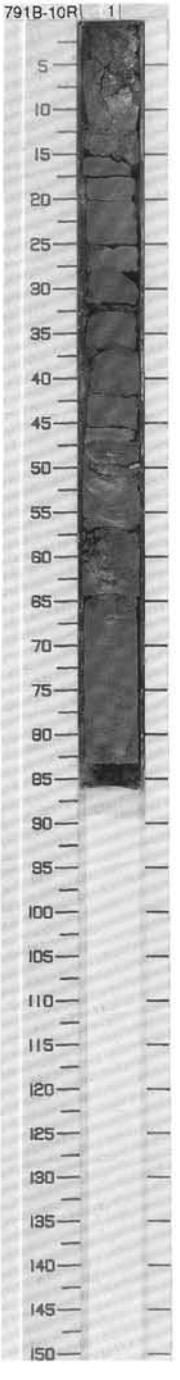
SILTY CLAYSTONE AND NANNOFOSSIL-RICH VITRIC SILTY CLAYSTONE

Major lithologies:
Olive gray (5Y 4/2) SILTY CLAYSTONE containing foraminifers, and NANNOFOSSIL-RICH VITRIC SILTY CLAYSTONE of the same color.

Minor lithology: A CRYSTAL-VITRIC CLAYEY SILTSTONE (ash bed) occurs in Section 1, 12-15 cm.

SMEAR SLIDE SUMMARY (%):

	1, 14 M	1, 30 D	1, 80 D
TEXTURE:			
Sand	Tr	—	—
Silt	50	25	40
Clay	50	75	60
COMPOSITION:			
Accessory minerals	Tr	—	1
Clay	50	72	58
Diatoms	Tr	Tr	Tr
Feldspar	10	2	2
Foraminifers	—	Tr	—
Glass	26	15	10
Lithic fragments	Tr	—	—
Micrite	1	4	2
Nannofossils	10	5	25
Opaques	2	2	1
Silicoflagellates	1	Tr	—
Spicules	Tr	—	1



SITE 791 HOLE B CORE 11R CORED INTERVAL 482.9-492.6 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		F/G CN15	B		N			CC					*	CRYSTAL VITRIC SAND

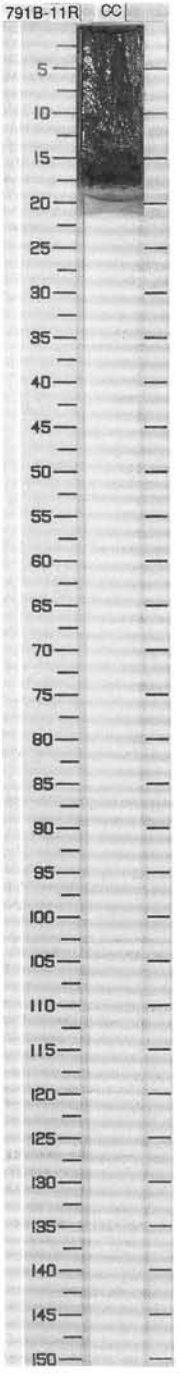
Major lithology: Dark gray (5Y 4/1), structureless fine CRYSTAL-VITRIC SAND (ash) consisting of transparent white pumice clasts, olive (5Y 5/4) glass, and dark rock fragments.

Minor lithology: A VITRIC SAND, identical in appearance to the above material, but lacking significant crystals, occurs in CC, 0-4 cm.

SMEAR SLIDE SUMMARY (%):

	CC, 10 D
TEXTURE:	
Sand	75
Silt	25
Clay	Tr
COMPOSITION:	
Accessory minerals	1
Bioclast	1
Clay	Tr
Feldspar	7
Foraminifers	1
Glass	87
Micrite	2
Nannofossils	1

126 791B 12R NO RECOVERY



SITE 791 HOLE B CORE 13R CORED INTERVAL 502.1-511.8 mbsf

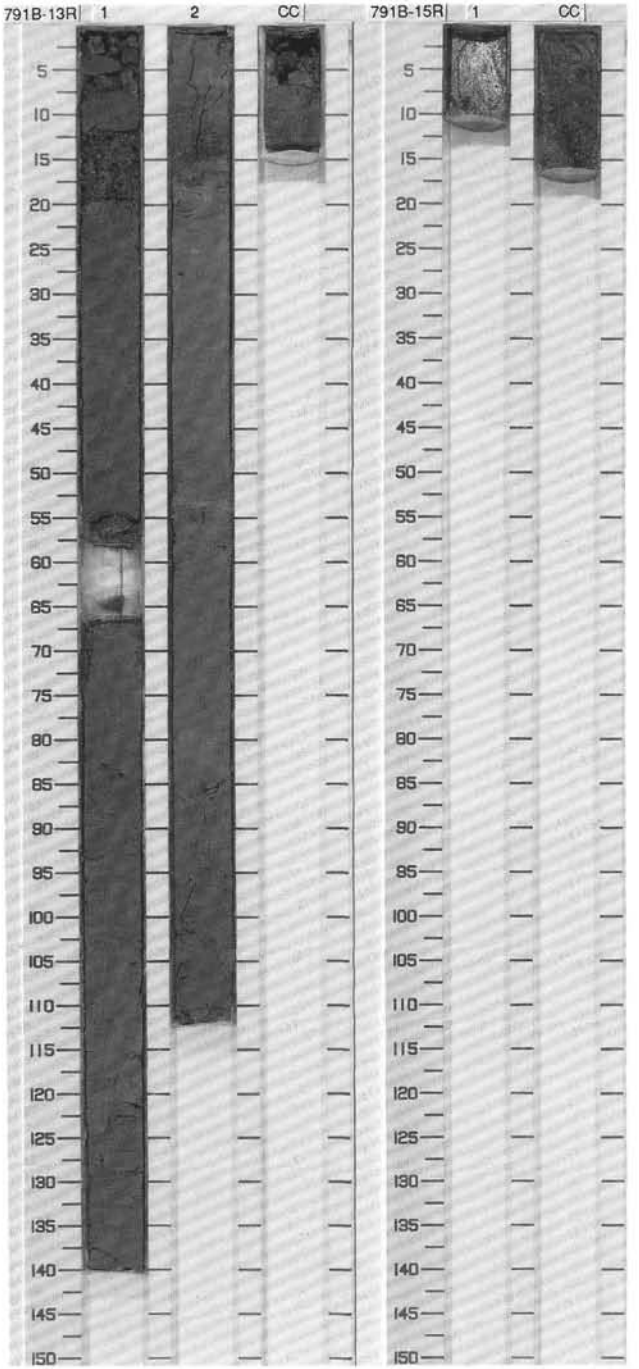
TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
QUATERNARY		A/G CN14b	C/M UPPER PLIOCENE-RECENT			ρ=61.0 ρ=1.75 ρ=63.0 ρ=1.77	%CaCO3 =19.1 %CaCO3 =24.2	1 2 CC	0.5 1.0				* TW * * *	NANNOFOSSIL-RICH CLAYSTONE AND NANNOFOSSIL-RICH SILTY CLAYSTONE Major lithologies: *Most of the core consists of olive gray (5Y 4/2), locally burrowed (Zoophycos, Chondrites)* NANNOFOSSIL-RICH CLAYSTONE and NANNOFOSSIL-RICH SILTY CLAYSTONE. Minor lithologies: In Section 1, 11-19 cm, there is a bed of GRANULE GRAVEL with silty claystone clasts and pumice clasts. In Section 2, 50-53 cm and 55-60 cm, there are two thin beds of VITRIC SILT (ash). From Section 2, 110 cm to CC, the sediment consists of parallel laminated DIATOM CLAYSTONE. SMEAR SLIDE SUMMARY (%):

	1, 46 D	1, 135 D	2, 13 D	2, 53 M	CC, 9 D
TEXTURE:					
Sand	3	—	2	Tr	—
Silt	37	45	38	100	58
Clay	60	55	60	Tr	42
COMPOSITION:					
Accessory minerals	—	Tr	1	Tr	—
Clay	58	55	57	—	—
Diatoms	Tr	—	—	Tr	55
Feldspar	2	1	1	Tr	—
Foraminifers	1	1	Tr	Tr	Tr
Glass	10	5	1	97	41
Lithic fragments	—	Tr	—	Tr	—
Micrite	3	3	3	Tr	—
Nannofossils	25	35	25	3	2
Opaques	—	—	10	Tr	2
Radiolarians	—	Tr	—	—	—
Silicoflagellates	Tr	—	2	—	—
Spicules	Tr	Tr	—	—	—

126 791B 14R NO RECOVERY

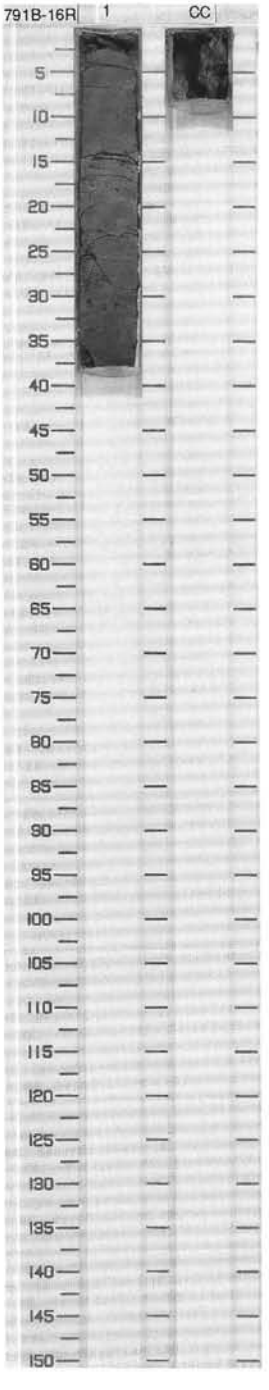
SITE 791 HOLE B CORE 15R CORED INTERVAL 521.5-531.2 mbsf

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
QUATERNARY		A/G CN14b	B		N			1 CC			O			SAND Major lithology: Dark gray (5Y 4/1) and black (5Y 3/2) medium to coarse SAND, consisting of pumice clasts and black rock fragments.



SITE 791 HOLE B CORE 16R CORED INTERVAL 531.2-540.9 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		CN14b C/M	UPPER PLIOCENE-RECENT R/M		N	ρ=65.0 ● ρ=1.74 %CaCO3 ● =21.53		1 CC				≋	*	NANNOFOSSIL-RICH CLAYSTONE AND NANNOFOSSIL-RICH VITRIC CLAYEY SILTSTONE Major lithologies: Locally burrowed (Zoophycos), olive gray (5Y 4/2) and brownish black (5YR 2/1) NANNOFOSSIL-RICH CLAYSTONE and NANNOFOSSIL-RICH VITRIC CLAYEY SILTSTONE. SMEAR SLIDE SUMMARY (%): 1, 10 D / CC, 4 D TEXTURE: Sand — 5 Silt 49 55 Clay 51 40 COMPOSITION: Accessory minerals — Tr Clay 50 40 Diatoms — 2 Feldspar Tr 1 Foraminifers 2 Tr Glass 5 30 Micrite — 2 Nannofossils 40 10 Opaques 1 — Oxide — 10 Silicoflagellates 2 — Zeolite — 5



SITE 791 HOLE B CORE 17R CORED INTERVAL 540.9-550.6 mbsf

TIME-ROCK UNIT	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
QUATERNARY		C/M	R/M					CC					**	VITRIC CLAYEY SILT AND VITRIC SILT

CN14b

UPPER PLIOCENE-Recent

Major lithologies:
This CC contains structureless dark gray (5Y 4/1) VITRIC CLAYEY SILT (0-9 cm) and gray (5Y 5/1) parallel laminated VITRIC SILT (9-12 cm).

SMEAR SLIDE SUMMARY (%):

	CC, 7 D	CC, 10 D
TEXTURE:		
Sand	Tr	2
Silt	70	88
Clay	30	10
COMPOSITION:		
Accessory minerals	Tr	—
Clay	30	10
Feldspar	2	8
Foraminifers	—	Tr
Glass	63	80
Lithic fragments	Tr	—
Micrite	—	Tr
Nannofossils	3	2
Opaques	1	Tr

SITE 791 HOLE B CORE 18R CORED INTERVAL 550.6-560.3 mbsf

TIME-ROCK UNIT	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
QUATERNARY		A/G	R/P		N	ρ 1.61.0 ρ 1.83	●	1					*	VITRIC CLAYEY SILT

CN14b

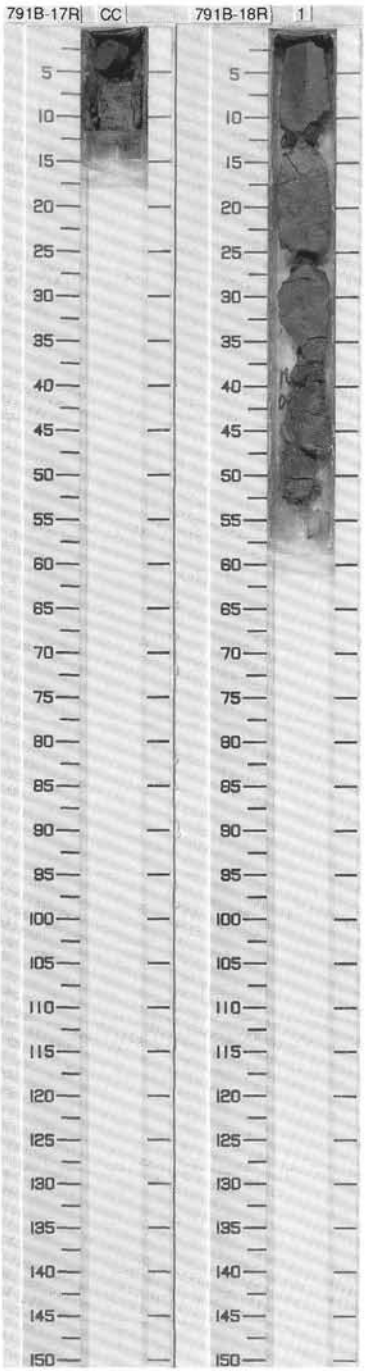
UPPER PLIOCENE-RECENT

Major lithology: Gray (5Y 5/1), structureless VITRIC CLAYEY SILT.

SMEAR SLIDE SUMMARY (%):

	1, 30 D
TEXTURE:	
Sand	5
Silt	75
Clay	20
COMPOSITION:	
Accessory minerals	Tr
Clay	20
Feldspar	3
Foraminifers	Tr
Glass	71
Glauconite	Tr
Nannofossils	5
Opaques	1

126 791B 19R NO RECOVERY



SITE 791 HOLE B CORE 20R CORED INTERVAL 569.7-579.3 mbsf

TIME-ROCK UNIT	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
QUATERNARY	CN14b	A/G	C/M		I			CC					* *	VITRIC SILT AND DIATOM-NANNOFOSSIL CLAYSTONE

UPPER PLIOCENE-RECENT

Major lithologies:
Structureless gray (5Y 5/1) VITRIC SILT and dark gray (5Y 4/1) DIATOM-NANNOFOSSIL CLAYSTONE

SMEAR SLIDE SUMMARY (%):

	1, 6 D	CC, 14 D
TEXTURE:		
Sand	Tr	1
Silt	90	39
Clay	10	60
COMPOSITION:		
Clay	10	58
Diatoms	—	15
Feldspar	5	Tr
Foraminifers	—	2
Glass	80	2
Micrite	—	1
Nannofossils	5	20
Opaques	Tr	2
Radiolarians	—	Tr
Silicoflagellates	—	Tr
Spicules	—	Tr

SITE 791 HOLE B CORE 21R CORED INTERVAL 579.3-589.0 mbsf

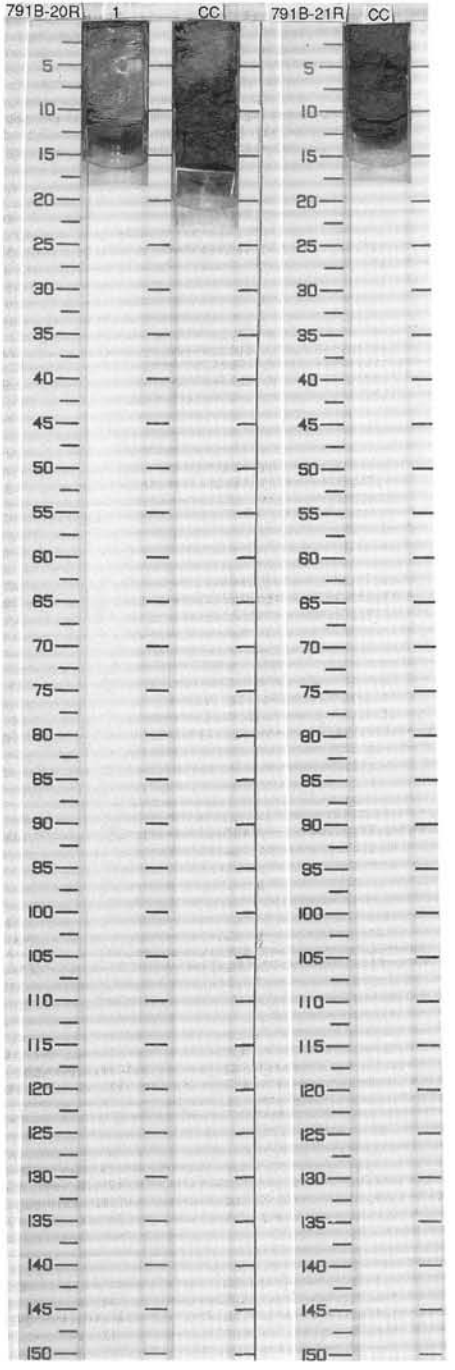
TIME-ROCK UNIT	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
QUATERNARY	CN14b	A/G	C/M		I			CC					*	NANNOFOSSIL-DIATOM-RICH CLAYSTONE

UPPER PLIOCENE-RECENT

Major lithology: Olive gray (5Y 4/2) NANNOFOSSIL-DIATOM-RICH CLAYSTONE.

SMEAR SLIDE SUMMARY (%):

	CC, 6 D
TEXTURE:	
Silt	25
Clay	75
COMPOSITION:	
Clay	72
Diatoms	10
Feldspar	1
Foraminifers	2
Glass	5
Nannofossils	7
Pyrite	1
Radiolarians	Tr
Spicules	1
Zeolite	1



SITE 791 HOLE B CORE 22R CORED INTERVAL 589.0-598.7 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
QUATERNARY		CN14b	A/G	UPPER PLIOCENE-RECENT C/M	N	ρ=30.0 γ=1.76	%CaCO3 =26.2	1	0.5				

LITHOLOGIC DESCRIPTION

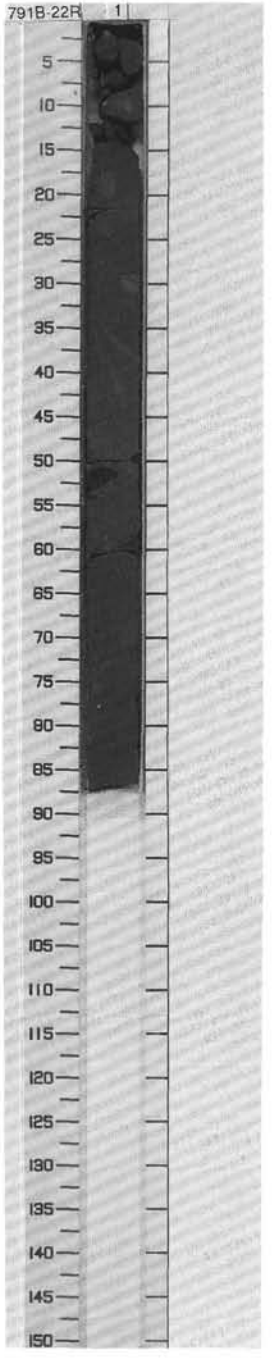
DIATOM-NANNOFOSSIL CLAYSTONE

Major lithology: Dark greenish gray (5G 4/1) structureless DIATOM-NANNOFOSSIL CLAYSTONE, with sponge spicules and diatoms.

Minor lithology: Two beds, Section 1, 50-52 cm and 58-60 cm, of greenish black (5G 2/1) NANNOFOSSIL-RICH VITRIC CLAYEY SILT.

SMEAR SLIDE SUMMARY (%):

	1, 30 D	1, 52 M
TEXTURE:		
Sand	—	5
Silt	10	25
Clay	90	70
COMPOSITION:		
Accessory minerals	2	1
Clay	30	10
Diatoms	15	2
Feldspar	5	2
Foraminifers	10	7
Glass	—	20
Lithic fragments	—	1
Nannofossils	30	41
Opaques	2	10
Quartz	3	5
Spicules	3	1



SITE 791 HOLE B CORE 23R CORED INTERVAL 598.7-608.4 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
QUATERNARY		CN14b	UPPER PLIOCENE-RECENT		N	ϕ=64.0 ρ=1.81 %$CaCO_3$=27.2	%$CaCO_3$=27.7 ϕ=67.0 ρ=1.64 %$CaCO_3$=26.5 ϕ=63.0 ρ=1.75 %$CaCO_3$=32.5	1 2 3 4 CC	0.5 1.0			A P	* *

LITHOLOGIC DESCRIPTION

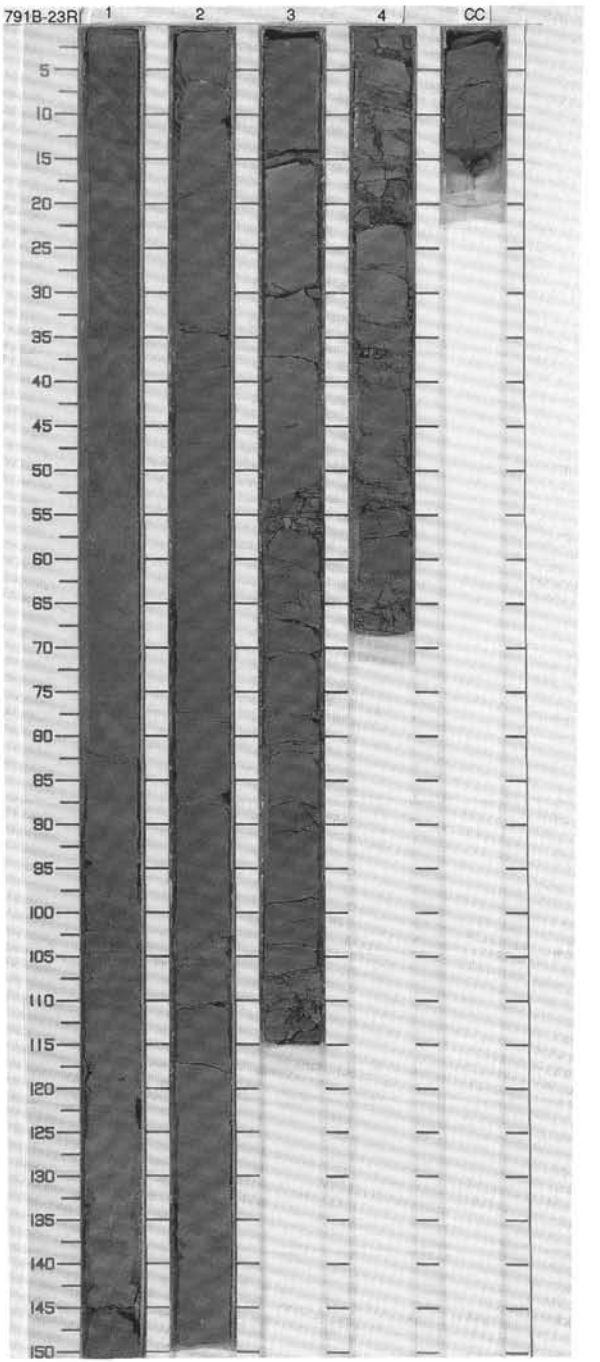
FORAMINIFER-NANNOFOSSIL SILTY CLAYSTONE AND FORAMINIFER-NANNOFOSSIL-RICH SILTY CLAYSTONE

Major lithology: Dark greenish gray (5GY 4/1) slightly burrowed, locally laminated FORAMINIFER-NANNOFOSSIL SILTY CLAYSTONE and FORAMINIFER-NANNOFOSSIL-RICH SILTY CLAYSTONE. Foraminifers are locally concentrated, making the sediment appear silt-rich. There are scattered, white clusters of sponge spicules and some burrows are filled by pyrite. Apparent dips in bedding are approximately 15°, although sharp dip changes in single pieces of core suggest slip along low-angle shear planes.

Minor lithology: Section 4, 0-20 cm and 35-40 cm, contains several, approximately 1 cm thick, finely laminated beds of grayish yellow (5GY 7/2) VITRIC-BEARING DIATOM-NANNOFOSSIL CHALK.

SMEAR SLIDE SUMMARY (%):

	1, 65 D	4, 17 M
TEXTURE:		
Silt	20	40
Clay	80	60
COMPOSITION:		
Clay	29	10
Diatoms	3	35
Foraminifers	10	4
Glass	—	5
Nannofossils	45	41
Opaques	2	3
Quartz	10	—
Radiolarians	—	1
Spicules	1	1



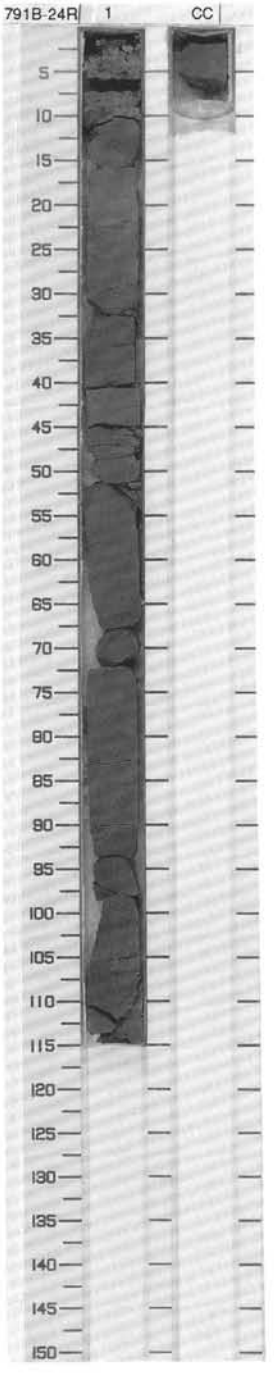
SITE 791 HOLE B CORE 24R CORED INTERVAL 608.4-618.1 mbsf

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
QUATERNARY / UPPER PLIOCENE - MIDDLE PLEISTOCENE >410K		C/G CN14b	F/M		N	ϕ=57.0 / I=1.91	%CaCO3 =23.4	1	0.5 / 1.0				* *	NANNOFOSSIL-RICH SILTY CLAYSTONE

Major lithologies:
Structureless, dark gray (5GY 4/1), dark gray (5Y 4/1) and dark gray (5YR 4/1) NANNOFOSSIL-RICH SILTY CLAYSTONE, with scattered crystals and burrow fillings of pyrite.

SMEAR SLIDE SUMMARY (%):

	1, 9 D	1, 80 D
TEXTURE:		
Sand	—	10
Silt	30	30
Clay	70	60
COMPOSITION:		
Accessory minerals	2	2
Clay	25	35
Diatoms	2	1
Feldspar	1	1
Foraminifers	1	1
Glass	30	30
Inorganic calcite	3	2
Nannofossils	30	20
Opaques	1	1
Quartz	1	2
Radiolarians	2	1
Spicules	2	2



SITE 791 HOLE B CORE 25R CORED INTERVAL 618.1-627.7 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
QUATERNARY		A/G CN14b	F/M UPPER PLIOCENE-RECENT			ϕ=60.1 ρ=1.88 %CaCO3=26.8 ϕ=55.0 ρ=1.87 %CaCO3=15.5		1 2 CC	0.5 1.0				P * **

LITHOLOGIC DESCRIPTION

NANNOFOSSIL-RICH SILTY CLAYSTONE AND NANNOFOSSIL-RICH SILTY CLAYSTONE

Major lithology: Olive gray (5Y 3/2) NANNOFOSSIL-RICH SILTY CLAYSTONE and NANNOFOSSIL-RICH CLAYSTONE, highly burrowed by Chondrites, and locally by Zoophycus. Pyrite is scattered throughout the core as disseminated crystals and burrow fillings, and scarce biogenic fragment are visible. Bedding planes show apparent dips of 20°.

Minor lithology: A dark gray (N3) CRYSTAL SILTY CLAYSTONE bed occurs in Section 1, 153-161 cm.

SMEAR SLIDE SUMMARY (%):

	1, 145 M	2, 7 M	2, 90 D
TEXTURE:			
Silt	30	50	25
Clay	70	50	75
COMPOSITION:			
Accessory minerals	—	3	—
Clay	13	45	16
Diatoms	2	—	3
Feldspar	5	25	4
Foraminifers	5	2	7
Glass	20	10	10
Lithic fragments	—	—	2
Nannofossils	50	5	50
Opaques	2	5	3
Quartz	3	5	4
Spicules	Tr	Tr	1

SITE 791 HOLE B CORE 26R CORED INTERVAL 627.7-637.0 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
QUATERNARY		CN14b A/G	UPPER PLIOCENE-RECENT F/M		N	ϕ=58.0 ρ=1.81	%CaCO3=27.2	1	0.5				*

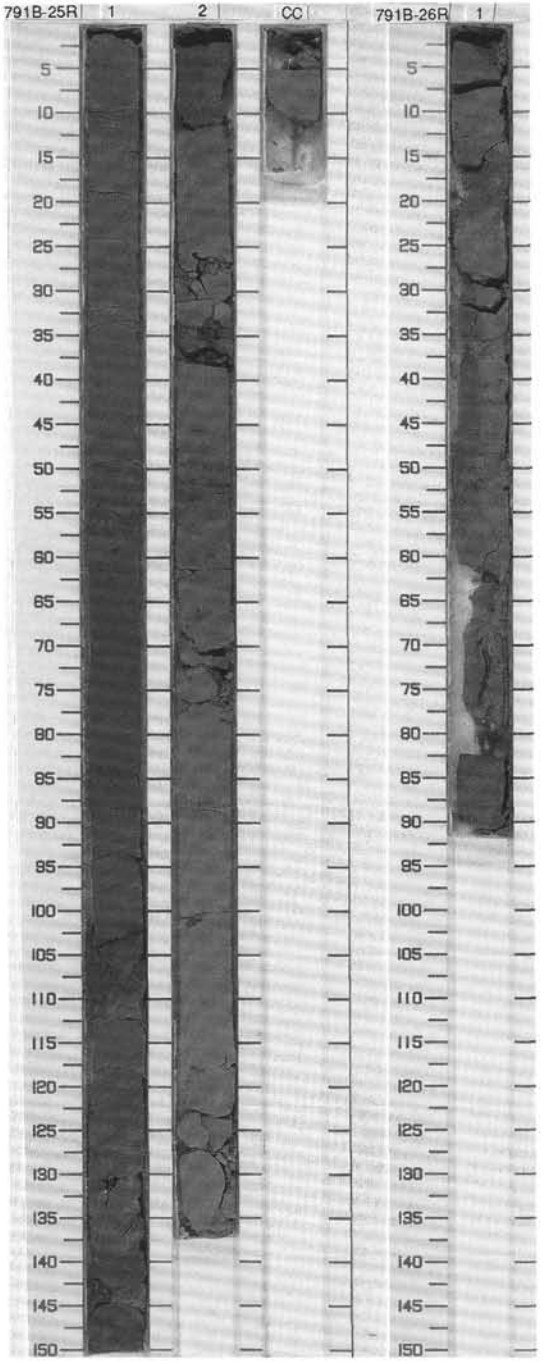
LITHOLOGIC DESCRIPTION

VITRIC-SILT-RICH NANNOFOSSIL-RICH CLAYSTONE

Major lithology: Structureless, dark gray (5GY 4/1), VITRIC-SILT-RICH NANNOFOSSIL-RICH CLAYSTONE. The glass is colorless.

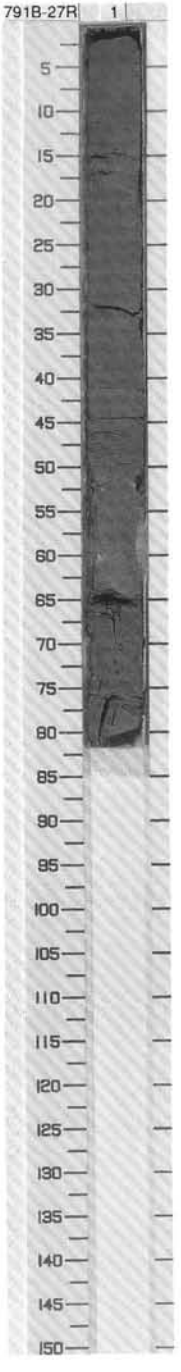
SMEAR SLIDE SUMMARY (%):

	1, 40 D
TEXTURE:	
Sand	5
Silt	30
Clay	65
COMPOSITION:	
Accessory minerals	2
Feldspar	3
Foraminifers	5
Glass	15
Lithic fragments	5
Nannofossils	70
Silicoflagellates	Tr

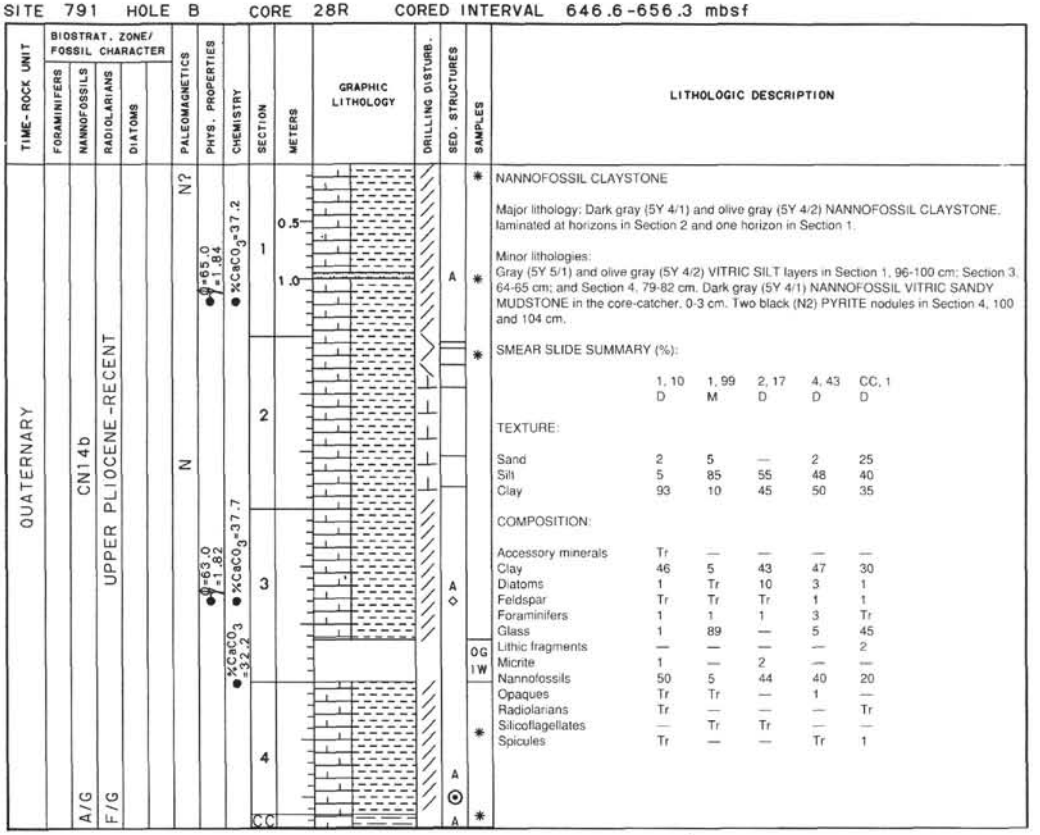


SITE 791 HOLE B CORE 27R CORED INTERVAL 637.0-646.6 mbsf

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		CN14b A/G	UPPER PLIOCENE-RECENT R/M		N	ϕ=58.0 ● ρ=1.81 %CaCO3 ● =28.8		1	0.5			P	*	NANNOFOSSIL-RICH CLAYSTONE Major lithologies: Olive gray (5Y 3/2) NANNOFOSSIL-RICH CLAYSTONE highly burrowed by Zoophycos, with scattered pyrite. Minor lithology: In Section 1, 50-65 cm, drilling disturbance has rendered a bed of NANNOFOSSIL VITRIC SILT soupy. SMEAR SLIDE SUMMARY (%): 1, 60 M TEXTURE: Sand 5 Silt 30 Clay 65 COMPOSITION: Feldspar 3 Foraminifers 2 Glass 35 Inorganic calcite 5 Nannofossils 47 Opaques 3 Quartz 5 Radiolarians Tr



SITE 791 HOLE B CORE 28R CORED INTERVAL 646.6-656.3 mbsf



LITHOLOGIC DESCRIPTION

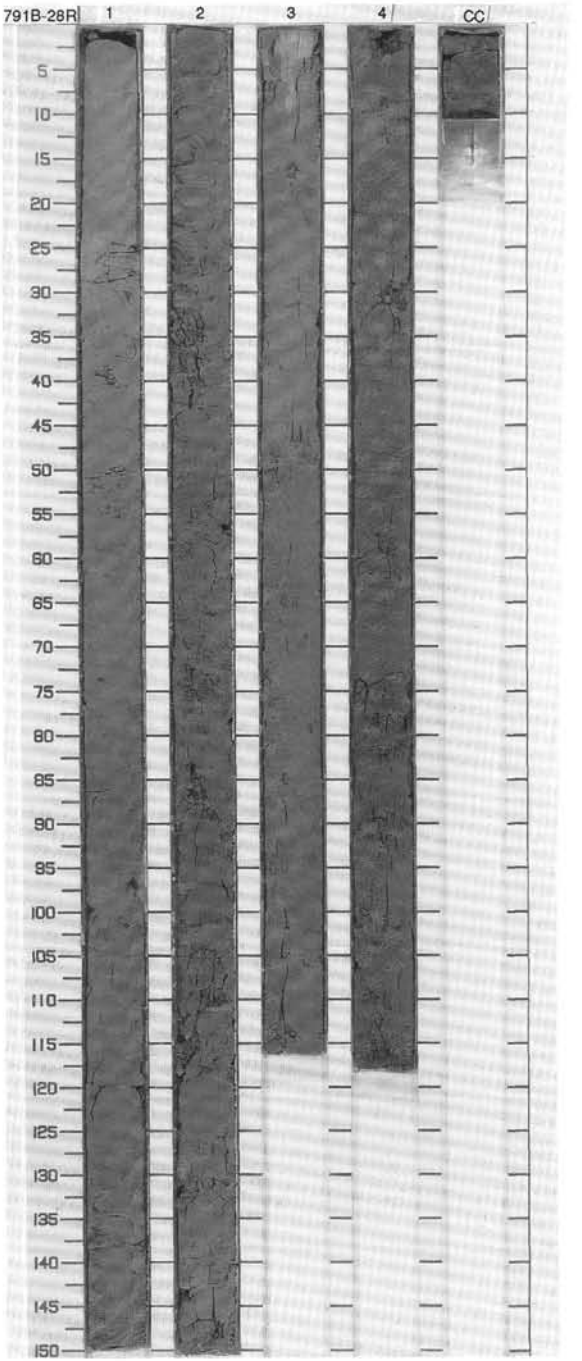
NANNOFOSSIL CLAYSTONE

Major lithology: Dark gray (5Y 4/1) and olive gray (5Y 4/2) NANNOFOSSIL CLAYSTONE, laminated at horizons in Section 2 and one horizon in Section 1.

Minor lithologies:
Gray (5Y 5/1) and olive gray (5Y 4/2) VITRIC SILT layers in Section 1, 96-100 cm; Section 3, 64-65 cm; and Section 4, 79-82 cm. Dark gray (5Y 4/1) NANNOFOSSIL VITRIC SANDY MUDSTONE in the core-catcher, 0-3 cm. Two black (N2) PYRITE nodules in Section 4, 100 and 104 cm.

SMEAR SLIDE SUMMARY (%):

	1, 10 D	1, 99 M	2, 17 D	4, 43 D	CC, 1 D
TEXTURE:					
Sand	2	5	—	2	25
Silt	5	85	55	48	40
Clay	93	10	45	50	35
COMPOSITION:					
Accessory minerals	Tr	—	—	—	—
Clay	46	5	43	47	30
Diatoms	1	Tr	10	3	1
Feldspar	Tr	Tr	Tr	1	1
Foraminifers	1	1	1	3	Tr
Glass	1	89	—	5	45
Lithic fragments	—	—	—	—	2
Micrite	1	—	2	—	—
Nannofossils	50	5	44	40	20
Opaques	Tr	Tr	—	1	—
Radiolarians	Tr	—	—	—	Tr
Silicoflagellates	—	Tr	Tr	—	—
Spicules	Tr	—	—	Tr	1



SITE 791 HOLE B CORE 29R CORED INTERVAL 656.3-666.6 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 / UPPER PLIOCENE-RECENT		A/G	R/M					CC			/		*	NANNOFOSSIL CLAYSTONE

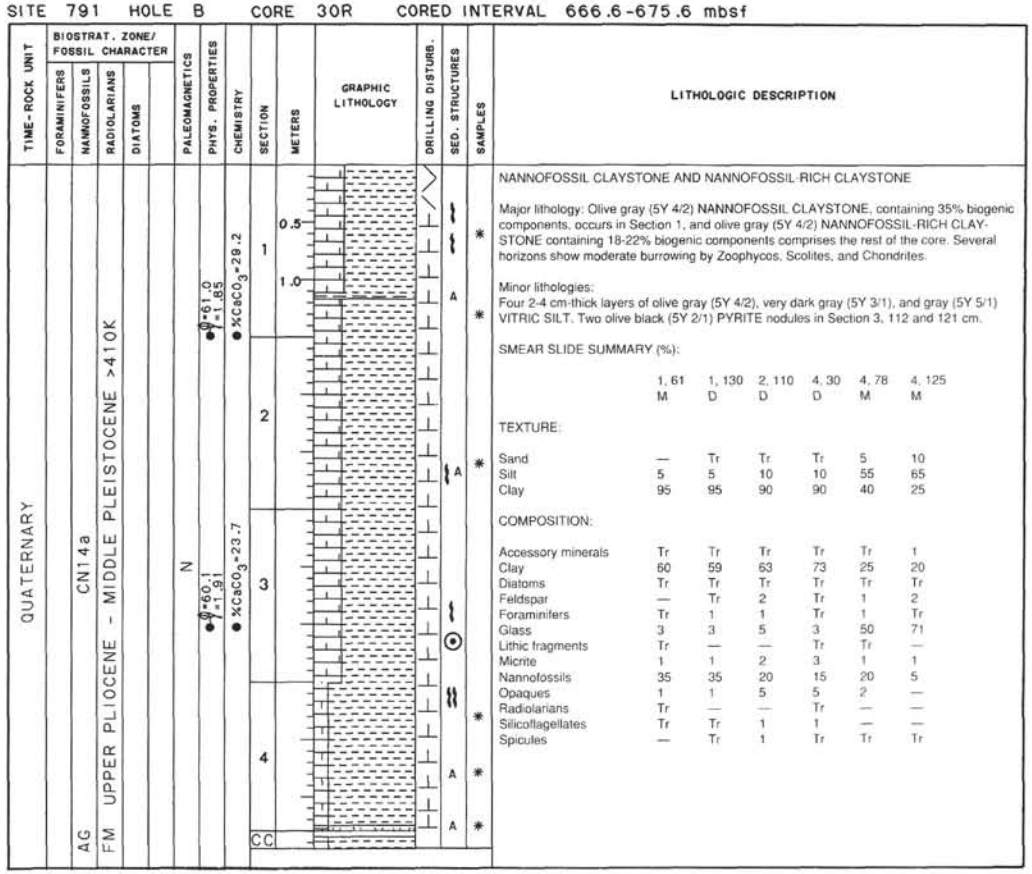
Major lithology: Olive gray (5Y 4/2) NANNOFOSSIL CLAYSTONE, the top 6 cm is drilling breccia, the remaining 11 cm slightly fractured.

Minor lithology: Black (N 2) PYRITE nodule at 16 cm.

SMEAR SLIDE SUMMARY (%):

	1, 10 D
TEXTURE:	
Sand	1
Silt	40
Clay	59
COMPOSITION:	
Clay	58
Diatoms	Tr
Foraminifers	3
Glass	3
Nannofossils	35
Opaques	1
Radiolarians	Tr

SITE 791 HOLE B CORE 30R CORED INTERVAL 666.6-675.6 mbsf



LITHOLOGIC DESCRIPTION

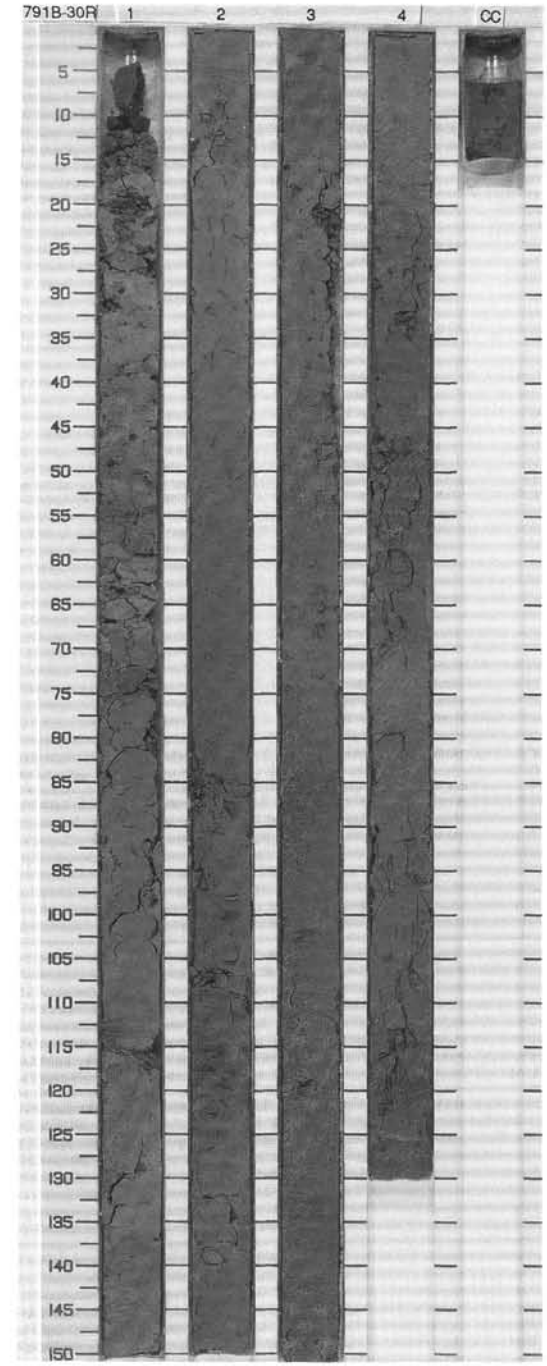
NANNOFOSSIL CLAYSTONE AND NANNOFOSSIL-RICH CLAYSTONE

Major lithology: Olive gray (5Y 4/2) NANNOFOSSIL CLAYSTONE, containing 35% biogenic components, occurs in Section 1, and olive gray (5Y 4/2) NANNOFOSSIL-RICH CLAYSTONE containing 18-22% biogenic components comprises the rest of the core. Several horizons show moderate burrowing by Zoophycos, Scolites, and Chondrites.

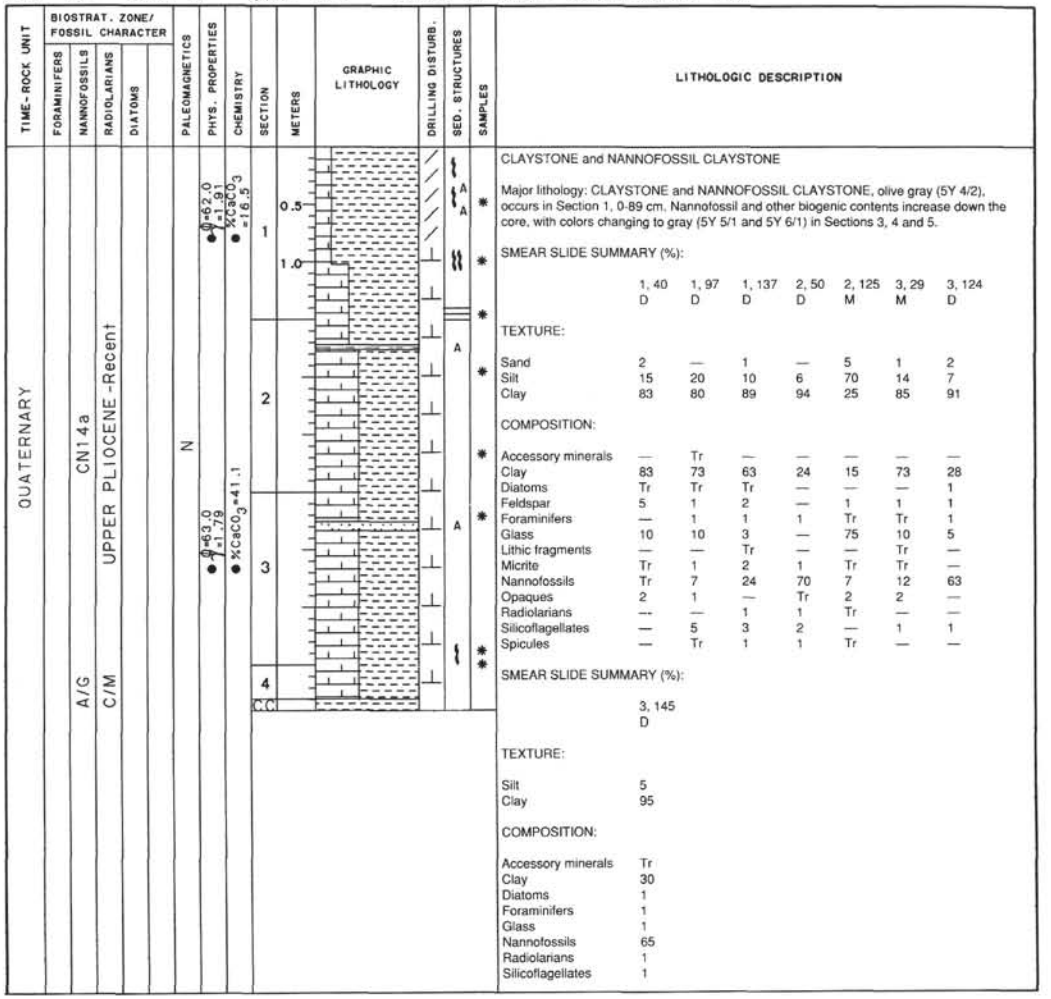
Minor lithologies:
Four 2-4 cm-thick layers of olive gray (5Y 4/2), very dark gray (5Y 3/1), and gray (5Y 5/1) VITRIC SILT. Two olive black (5Y 2/1) PYRITE nodules in Section 3, 112 and 121 cm.

SMEAR SLIDE SUMMARY (%):

	1, 61 M	1, 130 D	2, 110 D	4, 30 D	4, 78 M	4, 125 M
TEXTURE:						
Sand	—	Tr	Tr	Tr	5	10
Silt	5	5	10	10	55	65
Clay	95	95	90	90	40	25
COMPOSITION:						
Accessory minerals	Tr	Tr	Tr	Tr	Tr	1
Clay	60	59	63	73	25	20
Diatoms	Tr	Tr	Tr	Tr	Tr	Tr
Feldspar	—	Tr	2	Tr	1	2
Foraminifers	Tr	1	1	Tr	1	Tr
Glass	3	3	5	3	50	71
Lithic fragments	Tr	—	—	Tr	Tr	—
Micrite	1	1	2	3	1	1
Nannofossils	35	35	20	15	20	5
Opaques	1	1	5	5	2	—
Radiolarians	Tr	—	—	Tr	—	—
Silicoflagellates	Tr	Tr	1	1	—	—
Spicules	—	Tr	1	Tr	Tr	Tr



SITE 791 HOLE B CORE 31R CORED INTERVAL 675.6-685.3 mbsf



LITHOLOGIC DESCRIPTION

CLAYSTONE and NANNOFOSSIL CLAYSTONE

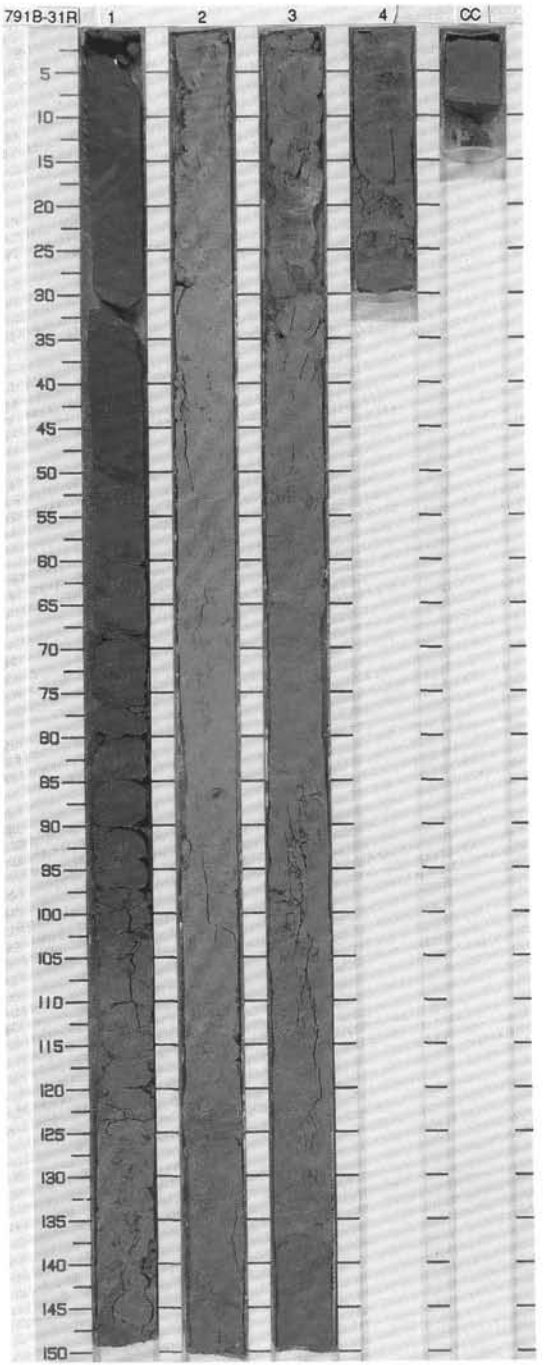
Major lithology: CLAYSTONE and NANNOFOSSIL CLAYSTONE, olive gray (5Y 4/2), occurs in Section 1, 0-89 cm. Nannofossil and other biogenic contents increase down the core, with colors changing to gray (5Y 5/1 and 5Y 6/1) in Sections 3, 4 and 5.

SMEAR SLIDE SUMMARY (%):

	1, 40 D	1, 97 D	1, 137 D	2, 50 D	2, 125 M	3, 29 M	3, 124 D
TEXTURE:							
Sand	2	—	1	—	5	1	2
Silt	15	20	10	6	70	14	7
Clay	83	80	89	94	25	85	91
COMPOSITION:							
Accessory minerals	—	Tr	—	—	—	—	—
Clay	83	73	63	24	15	73	28
Diatoms	Tr	Tr	Tr	—	—	—	1
Feldspar	5	1	2	—	1	1	1
Foraminifers	—	1	1	1	Tr	Tr	1
Glass	10	10	3	—	75	10	5
Lithic fragments	—	—	Tr	—	—	Tr	—
Micrite	Tr	1	2	1	Tr	Tr	—
Nannofossils	Tr	7	24	70	7	12	63
Opaques	2	1	—	Tr	2	2	—
Radiolarians	—	—	1	1	Tr	—	—
Silicoflagellates	—	5	3	2	—	1	1
Spicules	—	Tr	1	1	Tr	—	—

SMEAR SLIDE SUMMARY (%):

	3, 145 D
TEXTURE:	
Silt	5
Clay	95
COMPOSITION:	
Accessory minerals	Tr
Clay	30
Diatoms	1
Foraminifers	1
Glass	1
Nannofossils	65
Radiolarians	1
Silicoflagellates	1



SITE 791 HOLE B CORE 32R CORED INTERVAL 685.3-695.0 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	LITHOLOGIC DESCRIPTION
QUATERNARY		A/G	R/P		N	ρ=1.88 %CaCO3=26.4		1	0.5, 1.0				* ** *	NANNOFOSSIL-RICH VITRIC-SILTY CLAYSTONE, NANNOFOSSIL-RICH CLAYEY VITRIC SILTSTONE, AND VITRIC SILT

Major lithologies:
Olive gray (5Y 4/2) NANNOFOSSIL-RICH VITRIC-SILTY CLAYSTONE (23%), light olive gray (5Y 5/2) NANNOFOSSIL-RICH CLAYEY VITRIC SILTSTONE (44%), and VITRIC SILT (33%).

The interval from 42 to 74 cm is soupy; the rest of the core has been moderately fractured by drilling.

SMEAR SLIDE SUMMARY (%):

	1, 17 D	1, 70 D	1, 80 D	1, 110 D
TEXTURE:				
Sand	5	2	Tr	Tr
Silt	15	83	70	50
Clay	80	15	30	50
COMPOSITION:				
Accessory minerals	—	Tr	—	Tr
Clay	33	5	20	33
Diatoms	1	1	1	Tr
Feldspar	1	1	Tr	—
Foraminifers	1	—	Tr	Tr
Glass	15	82	63	45
Glauconite	Tr	—	—	—
Micrite	1	1	2	2
Nannofossils	45	10	10	20
Opaques	2	—	1	Tr
Silicoflagellates	1	—	1	—
Spicules	—	—	2	—

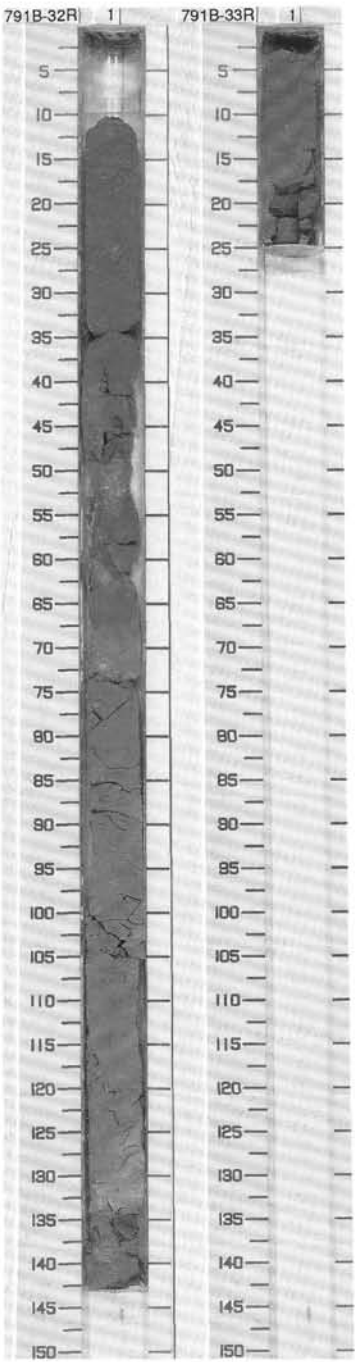
SITE 791 HOLE B CORE 33R CORED INTERVAL 695.0-704.6 mbsf

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		CN14a A/G	UPPER PLIOCENE-RECENT F/P		R			1					*	NANNOFOSSIL CLAY

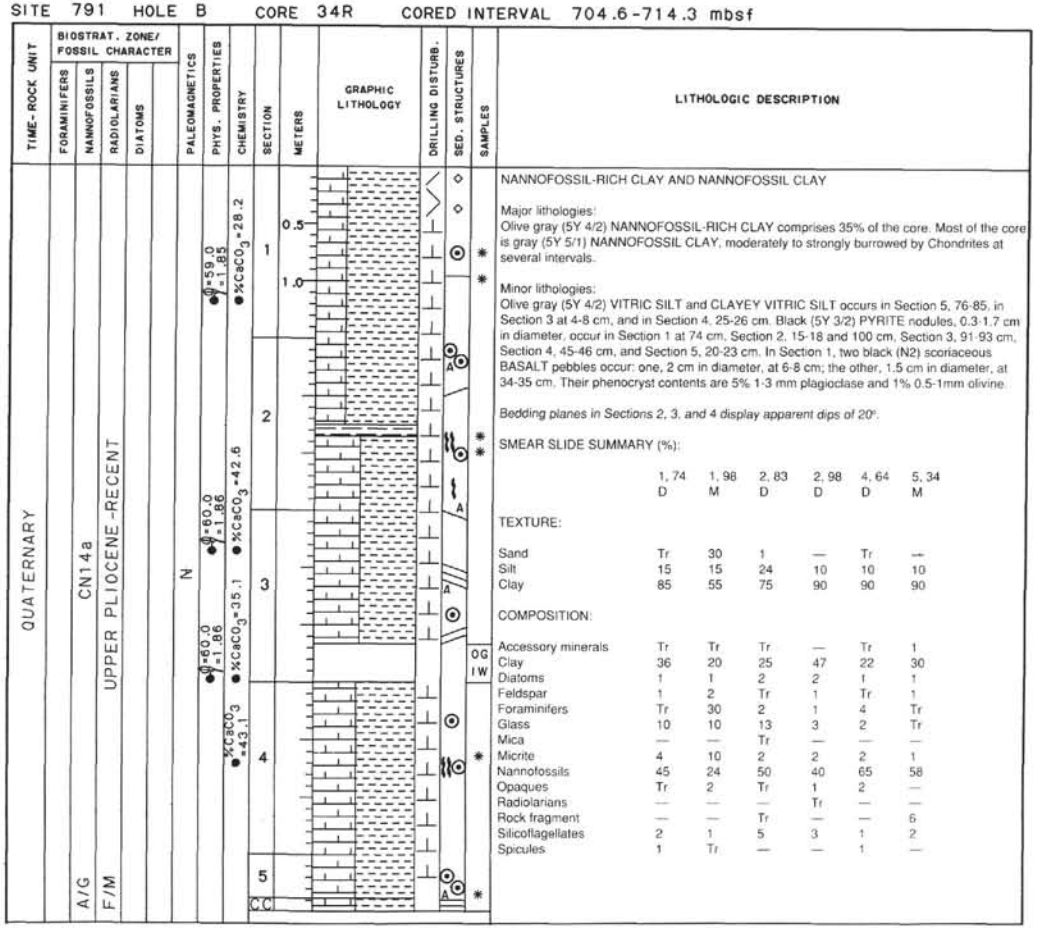
Major lithology: Olive gray (5Y4/2) NANNOFOSSIL CLAY. Chondrites burrows occur at 14-17 cm and single laminae of black and white medium-sand pumice grains are found at 3 and 13 cm.

SMEAR SLIDE SUMMARY (%):

	1, 10 D
TEXTURE:	
Silt	10
Clay	90
COMPOSITION:	
Accessory minerals	Tr
Clay	20
Feldspar	1
Foraminifers	2
Glass	5
Micrite	3
Nannofossils	69
Opaques	Tr
Rock fragment	Tr



SITE 791 HOLE B CORE 34R CORED INTERVAL 704.6-714.3 mbsf



NANNOFOSSIL-RICH CLAY AND NANNOFOSSIL CLAY

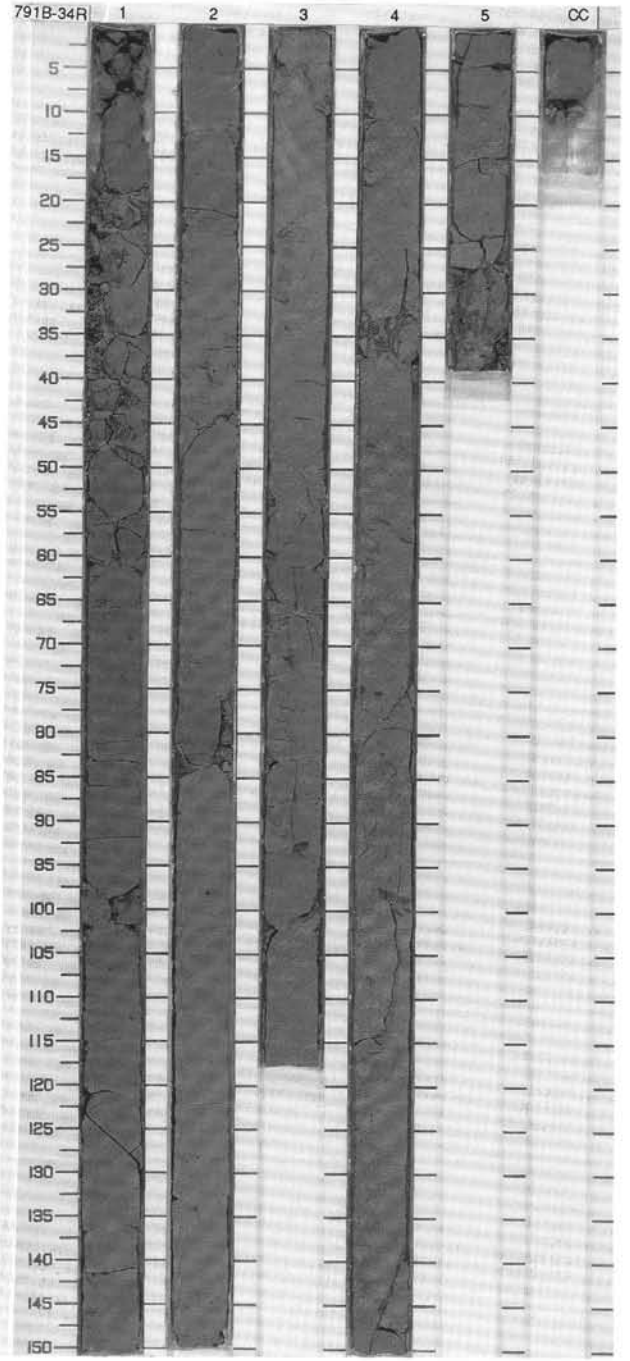
Major lithologies:
Olive gray (5Y 4/2) NANNOFOSSIL-RICH CLAY comprises 35% of the core. Most of the core is gray (5Y 5/1) NANNOFOSSIL CLAY, moderately to strongly burrowed by Chondrites at several intervals.

Minor lithologies:
Olive gray (5Y 4/2) VITRIC SILT and CLAYEY VITRIC SILT occurs in Section 5, 76-85, in Section 3 at 4-8 cm, and in Section 4, 25-26 cm. Black (5Y 3/2) PYRITE nodules, 0.3-1.7 cm in diameter, occur in Section 1 at 74 cm, Section 2, 15-18 and 100 cm, Section 3, 91-93 cm, Section 4, 45-46 cm, and Section 5, 20-23 cm. In Section 1, two black (N2) scoriaceous BASALT pebbles occur: one, 2 cm in diameter, at 6-8 cm; the other, 1.5 cm in diameter, at 34-35 cm. Their phenocryst contents are 5% 1-3 mm plagioclase and 1% 0.5-1mm olivine.

Bedding planes in Sections 2, 3, and 4 display apparent dips of 20°.

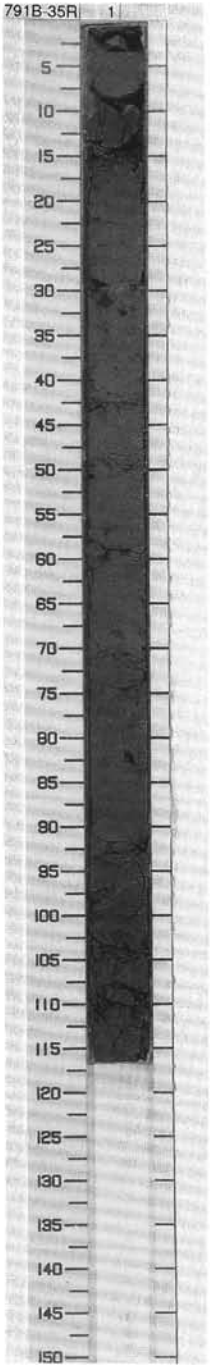
SMEAR SLIDE SUMMARY (%):

	1, 74 D	1, 98 M	2, 83 D	2, 98 D	4, 64 D	5, 34 M
TEXTURE:						
Sand	Tr	30	1	—	Tr	—
Silt	15	15	24	10	10	10
Clay	85	55	75	90	90	90
COMPOSITION:						
Accessory minerals	Tr	Tr	Tr	—	Tr	1
Clay	36	20	25	47	22	30
Diatoms	1	1	2	2	1	1
Feldspar	1	2	Tr	1	Tr	1
Foraminifers	Tr	30	2	1	4	Tr
Glass	10	10	13	3	2	Tr
Mica	—	—	Tr	—	—	—
Micrite	4	10	2	2	2	1
Nannofossils	45	24	50	40	65	58
Opaques	Tr	2	Tr	1	2	—
Radiolarians	—	—	—	Tr	—	—
Rock fragment	—	—	Tr	—	—	6
Silicoflagellates	2	1	5	3	1	2
Spicules	1	Tr	—	—	1	—



SITE 791 HOLE B CORE 35R CORED INTERVAL 714.3-723.6 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		CN 14a C/M-F	UPPER PLIOCENE-RECENT R/P		N			1	0.5 1.0			◇	*	NANNOFOSSIL CLAYSTONE Major lithology: Dark gray (5Y 4/1)NANNOFOSSIL CLAYSTONE, with moderate Zoophycos burrowing at 98-115 cm. Minor lithology: An isolated dark gray (5Y 4/1) PUMICE clast 1.3 cm in diameter occurs at 31 cm. The top 15 cm and bottom 15 cm of the core have been reduced to drilling breccia; the rest of the core is moderately to highly fractured. SMEAR SLIDE SUMMARY (%): 1, 72 D TEXTURE: Sand 2 Silt 18 Clay 80 COMPOSITION: Clay 50 Feldspar 2 Foraminifers 2 Glass 10 Micrite 2 Nannofossils 30 Opaques 1 Radiolarians Tr Silicoflagellates 2 Spicules 1



SITE 791 HOLE B CORE 36R CORED INTERVAL 723.6-733.6 mbsf

TIME-ROCK UNIT: QUATERNARY

BIOSTRAT. ZONE/FOSSIL CHARACTER
- FORAMINIFERS: A/G
- NANNOFOSSILS: CN14a
- RADIOLARIANS: F/M
- DIATOMS: UPPER PLIOCENE-RECENT

PALEOMAGNETICS: N

PHYS. PROPERTIES: ϕ=58.0 ρ=1.83; ϕ=63.0 ρ=1.95; ϕ=58.0 ρ=1.83; ϕ=57.0 ρ=1.95

CHEMISTRY: %$CaCO_3$=40.5; %$CaCO_3$=26.5

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES: A

SAMPLES: *

LITHOLOGIC DESCRIPTION

NANNOFOSSIL CLAY and NANNOFOSSIL-RICH CLAY

Major lithologies:
Gray (5Y 5/1) NANNOFOSSIL CLAY, except for Section 1, 0-118 cm, which is olive gray (5Y 4/2) NANNOFOSSIL RICH CLAY. Slight Chondrites and Scolites burrowing at several intervals.

Minor lithology: Isolated dark gray (5Y 4/1) PUMICE clasts, 0.2-0.5 cm in diameter, in Section 2, 135 cm, and Section 3, 20-30 cm.

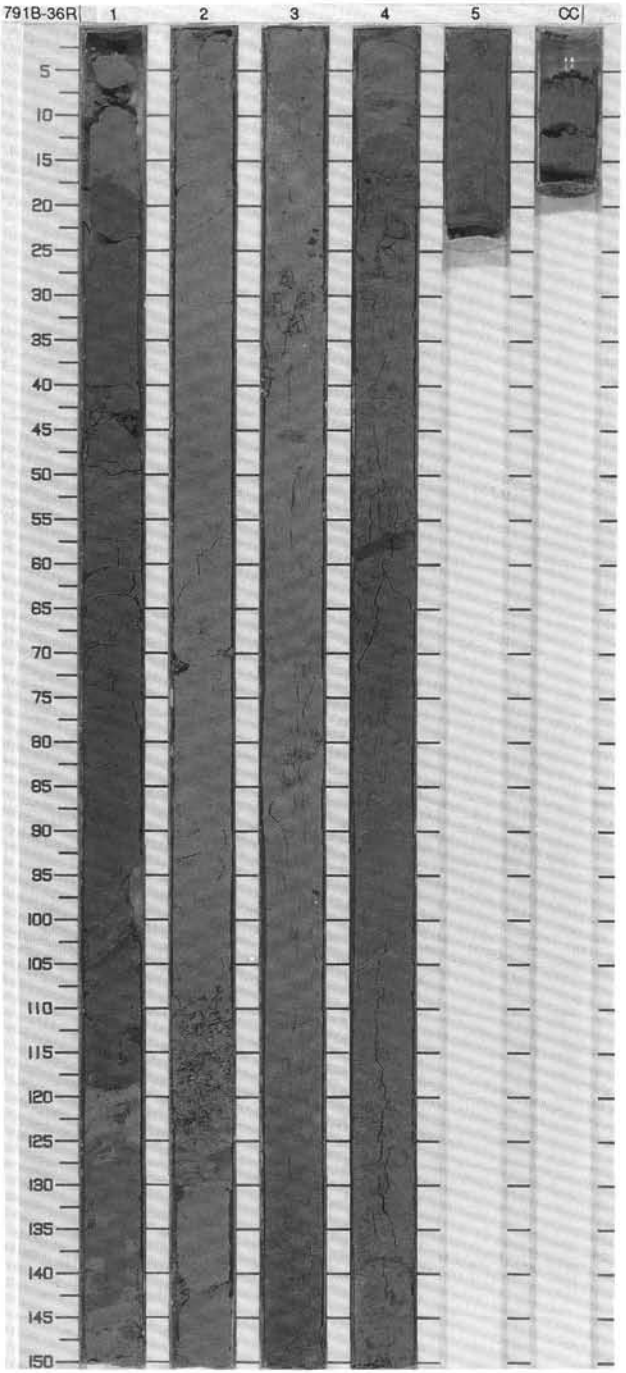
The interval in Section 2, 110-124 cm is probably drilling breccia, composed of NANNOFOSSIL CLAY and PUMICE fragments. The rest of the core has been moderately to highly fractured.

SMEAR SLIDE SUMMARY (%):

	1, 29 D	2, 30 D	2, 137 D	3, 140 D	4, 5 D	4, 16 M	4, 100 D
TEXTURE:							
Sand	—	1	—	5	3	3	5
Silt	25	15	15	50	52	77	10
Clay	75	84	85	45	45	20	85
COMPOSITION:							
Accessory minerals	—	—	—	—	—	Tr	Tr
Clay	70	26	25	39	30	20	52
Diatoms	—	—	Tr	—	1	—	1
Feldspar	1	Tr	—	2	1	2	—
Foraminifers	1	1	Tr	3	1	—	2
Glass	7	2	5	15	40	60	7
Micrite	—	—	—	—	—	1	5
Nannofossils	20	70	70	40	26	2	30
Opaques	1	—	—	—	1	15	—
Radiolarians	—	—	Tr	—	—	—	—
Rock fragment	—	—	—	—	—	Tr	—
Silicoflagellates	—	—	—	Tr	—	—	2
Spicules	Tr	1	Tr	1	—	—	1

SMEAR SLIDE SUMMARY (%):

	5, 10 D
TEXTURE:	
Sand	1
Silt	35
Clay	64
COMPOSITION:	
Clay	48
Feldspar	1
Foraminifers	3
Glass	2
Nannofossils	45
Opaques	1



SITE 791 HOLE B CORE 37R CORED INTERVAL 733.6-742.8 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
QUATERNARY		A/G CN14a C/G	UPPER PLIOCENE-RECENT		N	●φ=65.0 ●φ=62.0 ●ρ=1.91 ●ρ=1.92	●%CaCO3=13.5	1 2	0.5 1.0		/		* *

LITHOLOGIC DESCRIPTION

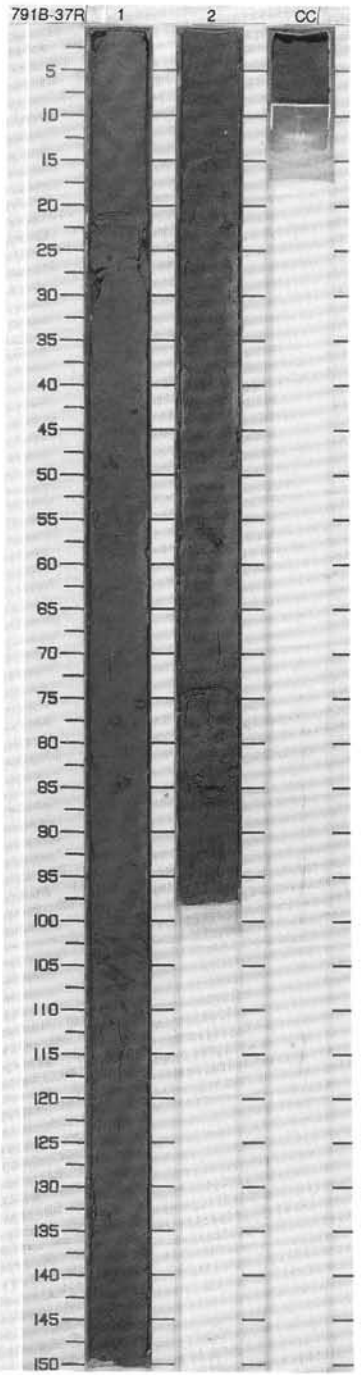
NANNOFOSSIL SILTY CLAYSTONE

Major lithology: Olive gray, (5Y 4/1) slightly burrowed NANNOFOSSIL SILTY CLAYSTONE, with scattered visible biogenic remains. Sand-sized clasts of devitrified basic brown glass and mafic crystal fragments occur both randomly distributed in the core and concentrated along certain horizons

Minor lithology: A 3 cm-long white (N9) PUMICE clast of pumice occurs in Section 1, 70 cm.

SMEAR SLIDE SUMMARY (%):

	1, 36 D	2, 60 D
TEXTURE:		
Silt	20	15
Clay	80	85
COMPOSITION:		
Accessory minerals	1	1
Clay	40	45
Diatoms	1	1
Feldspar	1	t
Foraminifers	1	—
Glass	20	15
Inorganic calcite	2	2
Nannofossils	30	30
Opaques	1	1
Oxide	—	1
Quartz	1	1
Radiolarians	1	—
Spicules	1	1



SITE 791 HOLE B CORE 38R CORED INTERVAL 762.8-752.4 mbsf

TIME-ROCK UNIT: QUATERNARY

BIOSTRAT. ZONE/ FOSSIL CHARACTER
- FORAMINIFERS: A/G
- NANNOFOSSILS: CN14a
- RADIOLARIANS: C/M
- DIATOMS: UPPER PLIOCENE - MIDDLE PLEISTOCENE >410K

PALEOMAGNETICS: R? | R | N

PHYS. PROPERTIES: ϕ=62.0, ϕ=1.92, ϕ=58.0, ϕ=1.88

CHEMISTRY: %$CaCO_3$=33.4, %$CaCO_3$=20.5

SECTION: 1, 2, 3, 4, CC

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

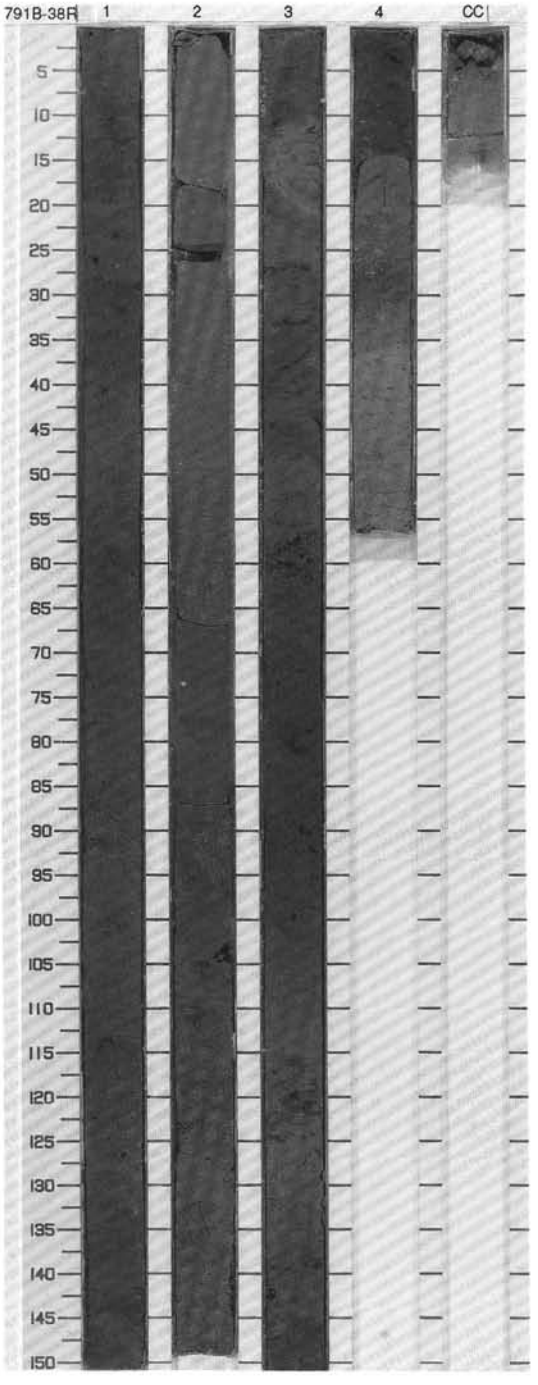
NANNOFOSSIL-RICH SILTY CLAYSTONE

Major lithologies:
Olive gray (5Y 4/1) to light olive gray (5Y 5/2), highly burrowed NANNOFOSSIL-RICH SILTY CLAYSTONE, with abundant scattered pyrite. Biogenic fragments are distributed randomly in the core, and some subangular pumice clasts up to 6 mm in diameter occur.

Minor lithology: A bed of medium gray (N5) VITRIC SILTY CLAY occurs in Section 3, 12-18 cm. Millimeter-sized beds of dusky green (5G 3/2) VITRIC SILT ash layers also occur in Section 3.

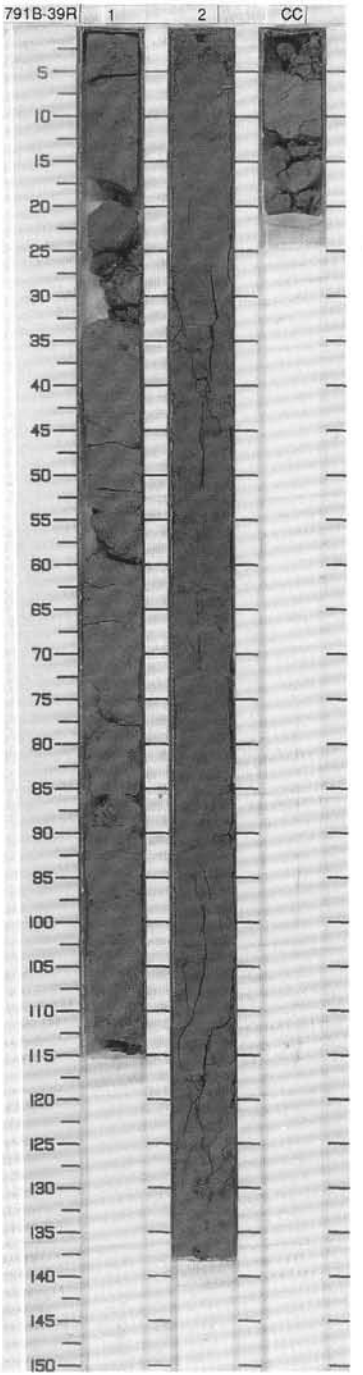
SMEAR SLIDE SUMMARY (%):

	2, 49 D	3, 16 D	4, 38 D
TEXTURE:			
Sand	—	20	—
Silt	30	80	20
Clay	70	—	80
COMPOSITION:			
Accessory minerals	1	1	2
Clay	34	60	38
Diatoms	2	1	2
Feldspar	1	1	1
Foraminifers	2	1	1
Glass	30	20	20
Inorganic calcite	—	—	1
Nannofossils	20	10	30
Opaques	—	2	2
Oxide	2	—	—
Quartz	3	2	1
Radiolarians	1	1	—
Spicules	1	1	2



SITE 791 HOLE B CORE 39R CORED INTERVAL 752.4-762.1 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
QUATERNARY		CN14a	UPPER PLIOCENE - MIDDLE PLEISTOCENE >410K		R	ϕ=57.0 ● ρ=1.84	%CaCO3 =33.6 ●	1	0.5			A		FORAMINIFER-NANNOFOSSIL-RICH VITRIC SILTY CLAYSTONE and FORAMINIFER-NANNOFOSSIL-RICH VITRIC SANDY MUDSTONE Major lithologies: Burrowed, dark gray (5Y 4/1), FORAMINIFER-NANNOFOSSIL-RICH VITRIC SILTY CLAYSTONE, with scattered black sand grains of basaltic glass and mafic crystals. With increasing sand content, the sediment becomes FORAMINIFER-NANNOFOSSIL-RICH VITRIC SANDY MUDSTONE. The black sand grains are locally concentrated in diffuse bands or in burrow fillings. Minor lithology: Section 1, 25-27 cm, is a grayish black (N2) VITRIC SILT bed (ash). Bedding in this core has apparent dips of 20° SMEAR SLIDE SUMMARY (%): 2, 75 D TEXTURE: Sand 5 Silt 30 Clay 65 COMPOSITION: Accessory minerals 5 Clay 20 Diatoms Tr Feldspar 5 Foraminifers 20 Glass 15 Lithic fragments 10 Nannofossils 20 Spicules Tr
						ϕ=56.0 ● ρ=1.88	%CaCO3 =28.5 ●		1.0				OG IW	
							%CaCO3 =14.3 ●	2					*	
								CC						



SITE 791 HOLE B CORE 40R CORED INTERVAL 762.1-771.7 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
QUATERNARY	A/G	CN14a	C/M	UPPER PLIOCENE - MIDDLE PLEISTOCENE	R	ρ=1.61.0 ρ=1.85 ρ=56.0 ρ=1.8 %CaCO3=37.7 %CaCO3=31.5		1 2 3 CC	0.5 1.0				*

LITHOLOGIC DESCRIPTION

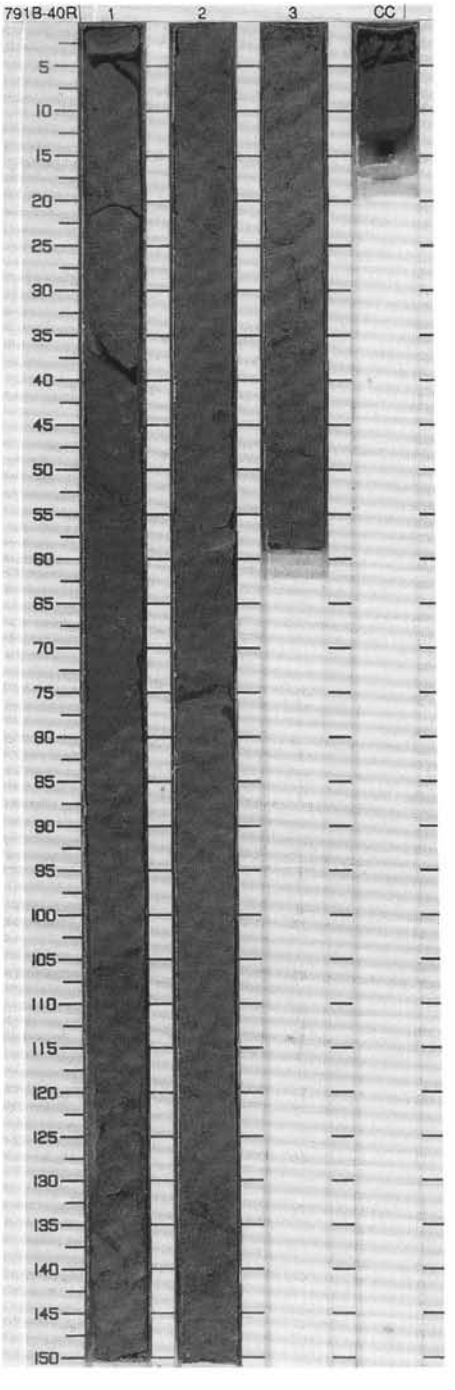
NANNOFOSSIL SILTY CLAYSTONE

Major lithology: Olive gray (5Y 4/1) highly burrowed NANNOFOSSIL SILTY CLAYSTONE. Silt- to sand-sized basalt rock fragments and some pumice clasts (up to 2 mm long) are scattered throughout all the core. Bedding is at 40°.

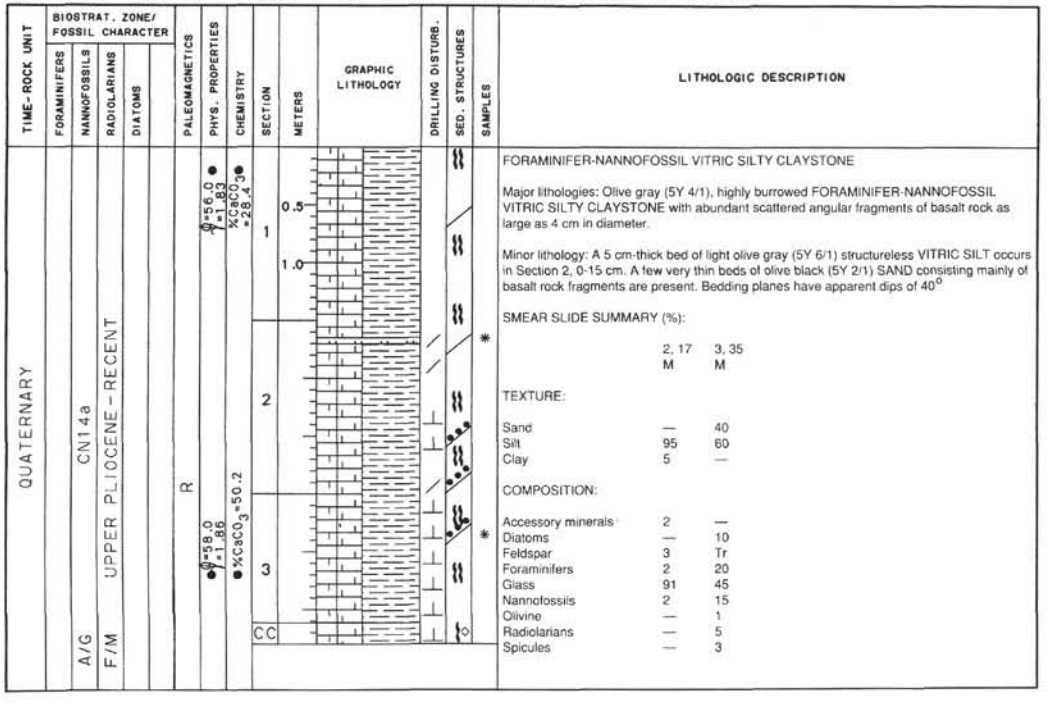
Minor lithology: Olive black (5Y 2/1) VITRIC SILT and VITRIC SAND ash layers, up to 1 cm thick are present mainly in Section 1.

SMEAR SLIDE SUMMARY (%):

	2, 77 D
TEXTURE:	
Silt	40
Clay	60
COMPOSITION:	
Accessory minerals	1
Clay	45
Diatoms	2
Feldspar	5
Foraminifers	5
Glass	10
Nannofossils	30
Opaques	2
Spicules	Tr



SITE 791 HOLE B CORE 41R CORED INTERVAL 771.7-781.3 mbsf



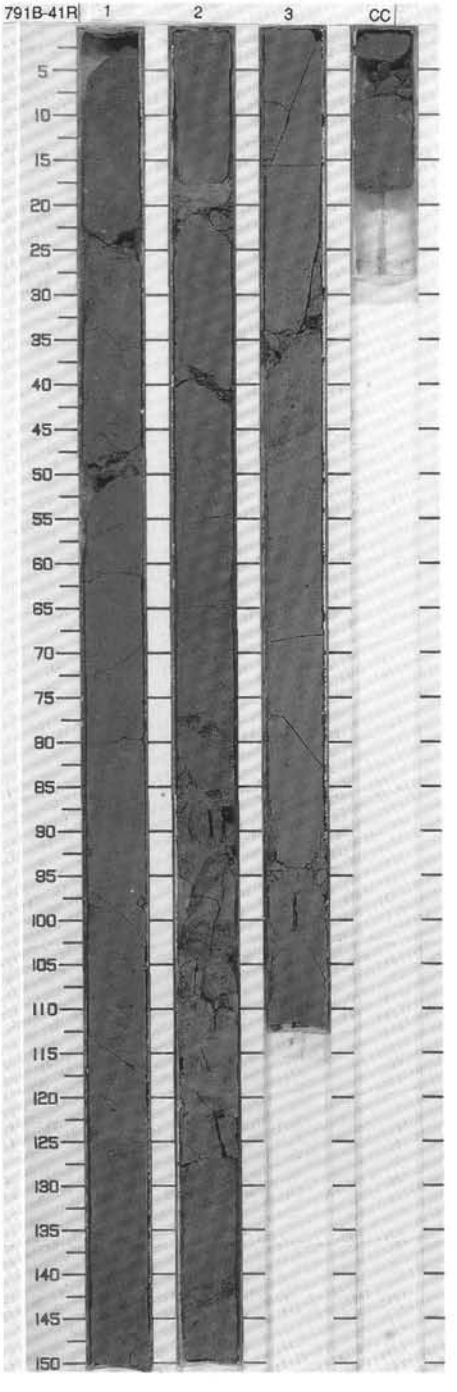
FORAMINIFER-NANNOFOSSIL VITRIC SILTY CLAYSTONE

Major lithologies: Olive gray (5Y 4/1), highly burrowed FORAMINIFER-NANNOFOSSIL VITRIC SILTY CLAYSTONE with abundant scattered angular fragments of basalt rock as large as 4 cm in diameter.

Minor lithology: A 5 cm-thick bed of light olive gray (5Y 6/1) structureless VITRIC SILT occurs in Section 2, 0-15 cm. A few very thin beds of olive black (5Y 2/1) SAND consisting mainly of basalt rock fragments are present. Bedding planes have apparent dips of 40°

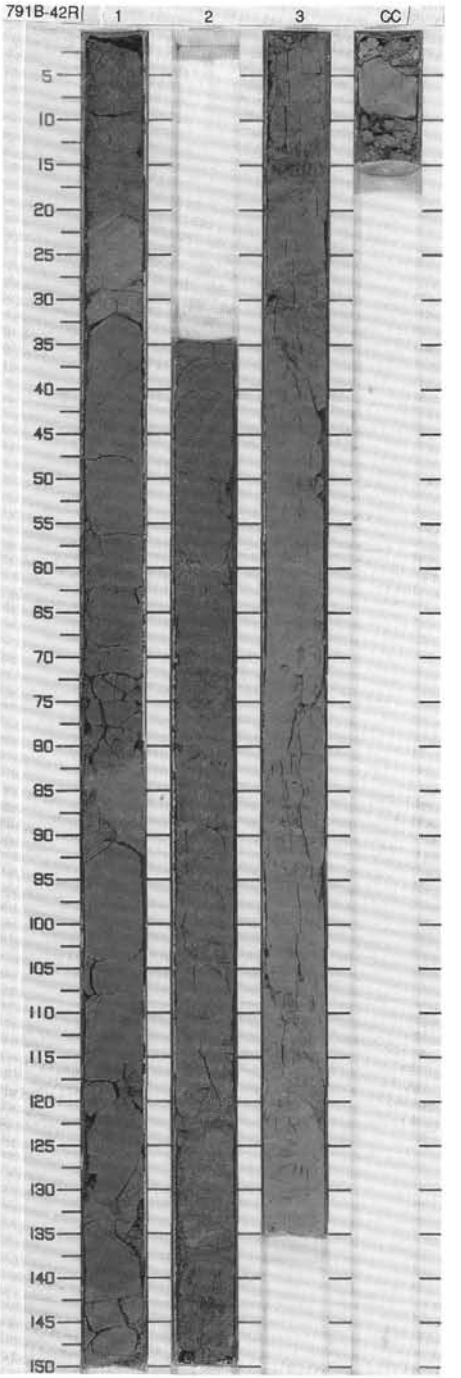
SMEAR SLIDE SUMMARY (%):

	2, 17 M	3, 35 M
TEXTURE:		
Sand	—	40
Silt	95	60
Clay	5	—
COMPOSITION:		
Accessory minerals	2	—
Diatoms	—	10
Feldspar	3	Tr
Foraminifers	2	20
Glass	91	45
Nannofossils	2	15
Olivine	—	1
Radiolarians	—	5
Spicules	—	3



SITE 791 HOLE B CORE 42R CORED INTERVAL 781.3-791.0 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	LITHOLOGIC DESCRIPTION
QUATERNARY	A/G	CN14a	C/M	UPPER PLIOCENE - MIDDLE PLEISTOCENE>410K	R	ϕ=58.0 ρ=1.85	%CaCO3 =38.2 %CaCO3 =35.3	1 2 3 CC	0.5 1.0				OG IW	NANNOFOSSIL SILTY CLAYSTONE AND NANNOFOSSIL CHALK Major lithologies: Most of this core consists of dark gray (5Y 4/1) NANNOFOSSIL SILTY CLAYSTONE, passing gradationally downward in Section 3 into gray (5Y 6/1) NANNOFOSSIL CHALK. These sediments are burrowed, and contain scattered grains and local concentrations of black, basaltic sand (dark glass and mafic minerals). Highest concentrations are in Section, 71-75 cm, and Section 3, 17-19 cm and 31-34 cm. Some burrows are filled with pyrite. Minor lithologies: Thin beds of light gray (N7) and medium gray (N5), soft, VITRIC SILT and NANNOFOSSIL-RICH VITRIC SILT occur in Section 1, 20-32 cm, 82-90 cm, Section 2, 135-137 cm, and Section 3, 120-122 cm. The bed in Section 1, 20-32 cm, is parallel laminated. Bedding dips at 42°. Much of the core consists of drilling biscuits.



SITE 791 HOLE B CORE 43R CORED INTERVAL 791.0-800.7 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
QUATERNARY		A/G CN14a R/M	UPPER PLIOCENE-RECENT		R	0-56.0 ρ=1.87	%CaCO3 =30.3	1 CC	0.5 1.0				* **

LITHOLOGIC DESCRIPTION

NANNOFOSSIL-RICH CLAYSTONE

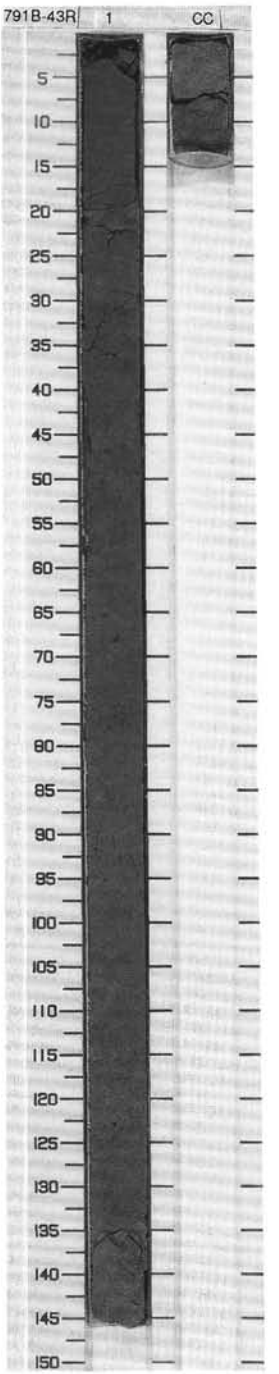
Major lithology: From 0-134 cm, the core consists of light olive gray (5Y 5/2) NANNOFOSSIL-RICH CLAYSTONE.

Minor lithology: From 134-145 cm, the core is gray (5Y 5/1) NANNOFOSSIL-RICH CLAYEY VITRIC SILT. Black (5Y 3/2) PYRITE nodules 0.22-0.3 cm in diameter occur in Section 1, 70 and 122 cm. Two dark gray (5GY 4/1) laminae, 3 mm thick, show apparent dips of 45°.

The core has been moderately fractured by drilling.

SMEAR SLIDE SUMMARY (%):

	1, 50 M	1, 140 D	CC, 5 D
TEXTURE:			
Sand	Tr	1	7
Silt	5	30	28
Clay	95	69	65
COMPOSITION:			
Clay	75	49	58
Feldspar	1	1	—
Foraminifers	—	2	1
Glass	2	25	10
Micrite	1	1	—
Nannofossils	20	20	30
Opaques	1	1	1
Silicoflagellates	Tr	—	—
Spicules	Tr	1	Tr



SITE 791 HOLE B CORE 44R CORED INTERVAL 800.7-810.3 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
QUATERNARY		A/G	R/M		(Jaramillo) N	ϕ=56.0 ● ρ=2.04 ● %CaCO3=35.2 ● ϕ=55.0 ● ρ=1.9 ● %CaCO3=38.8 ● ϕ=56.0 ●● ρ=1.96 ●● %CaCO3=39.5 ●● ϕ=57.0 ●● ρ=1.89 ●● %CaCO3=27.1		1	0.5				
		CN14a	UPPER PLIOCENE-RECENT						1.0				
								2					
								CC					

LITHOLOGIC DESCRIPTION

NANNOFOSSIL CLAYSTONE AND NANNOFOSSIL SILTY CLAYSTONE

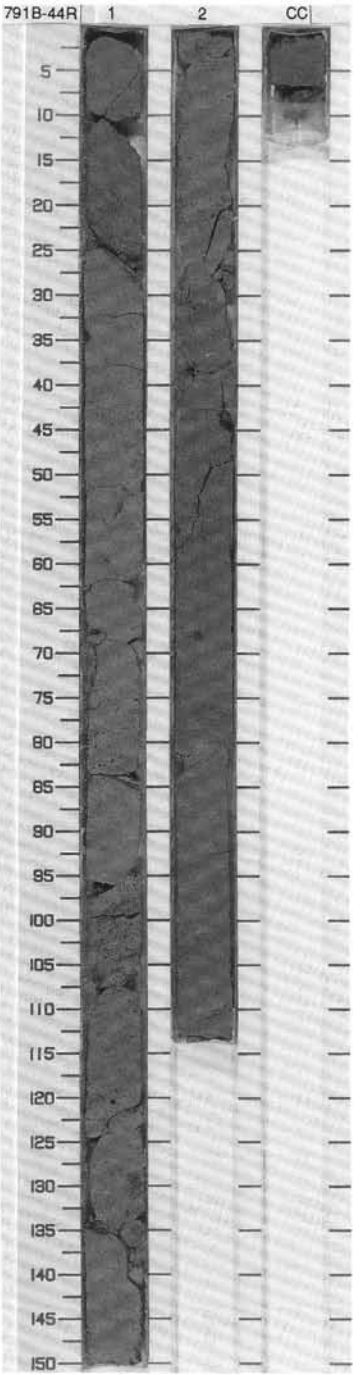
Major lithologies:
Section 1 is gray (5Y 5/1) NANNOFOSSIL CLAYSTONE. Black granules and fine-to medium-grained sand grains of brown glass and much rarer lithic fragments are scattered throughout this section, with greater concentrations at 10-26, 41-55, 74-78, 83-92, 95-107, 129-131, and 134-135 cm. The interval from Section 2, 29-114 cm to the bottom of the core-catcher is dark gray (5Y 4/1) NANNOFOSSIL SILTY CLAYSTONE. It has some Scolithus burrowing and contains disseminated black sand grains with greater concentrations in Section 2, 31, 35, 38, and 78 cm.

Minor lithologies:
Section 2, 0-29 cm is gray (5Y 5/1) NANNOFOSSIL-RICH VITRIC SILTY CLAYSTONE with a 0.3 cm-diameter black (5Y 3/2) PYRITE nodule at 22 cm. Gray (5Y 6/1, -5/1) VITRIC SILT (ash) beds occur in Section 1, 95-96 cm, and Section 2, 8-39 and 82-83 cm.

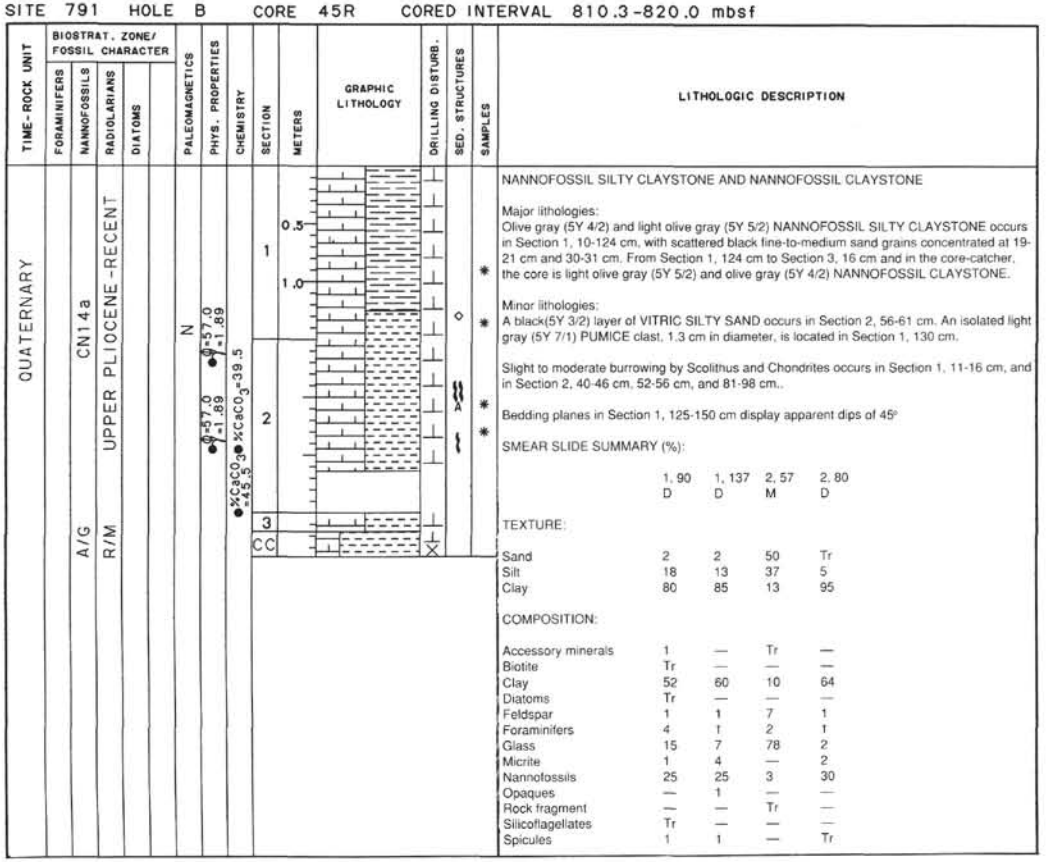
Bedding planes in Section 1 show apparent dips of 40° at 25-30 cm, 20° at 83-90 cm, 35° at 95-105 cm, and 20° at 110-120 cm. In Section 2, 80-87 cm, the apparent dip is 35°.

SMEAR SLIDE SUMMARY (%):

	1, 30 D	2, 11 D	2, 38 M	2, 82 M	2, 99 D
TEXTURE:					
Sand	1	5	15	25	5
Silt	9	30	35	65	15
Clay	90	65	50	10	80
COMPOSITION:					
Accessory minerals	Tr	Tr	1	—	Tr
Clay	60	46	40	10	47
Diatoms	—	Tr	—	Tr	—
Feldspar	1	Tr	1	2	1
Foraminifers	2	2	2	Tr	1
Glass	5	30	45	83	20
Micrite	1	1	Tr	—	1
Nannofossils	30	20	10	2	30
Opaques	—	—	1	2	Tr
Radiolarians	—	—	—	1	—
Rock fragment	—	—	Tr	—	—
Silicoflagellates	—	1	—	—	—
Spicules	1	—	—	—	—



SITE 791 HOLE B CORE 45R CORED INTERVAL 810.3-820.0 mbsf



LITHOLOGIC DESCRIPTION

NANNOFOSSIL SILTY CLAYSTONE AND NANNOFOSSIL CLAYSTONE

Major lithologies:
Olive gray (5Y 4/2) and light olive gray (5Y 5/2) NANNOFOSSIL SILTY CLAYSTONE occurs in Section 1, 10-124 cm, with scattered black fine-to-medium sand grains concentrated at 19-21 cm and 30-31 cm. From Section 1, 124 cm to Section 3, 16 cm and in the core-catcher, the core is light olive gray (5Y 5/2) and olive gray (5Y 4/2) NANNOFOSSIL CLAYSTONE.

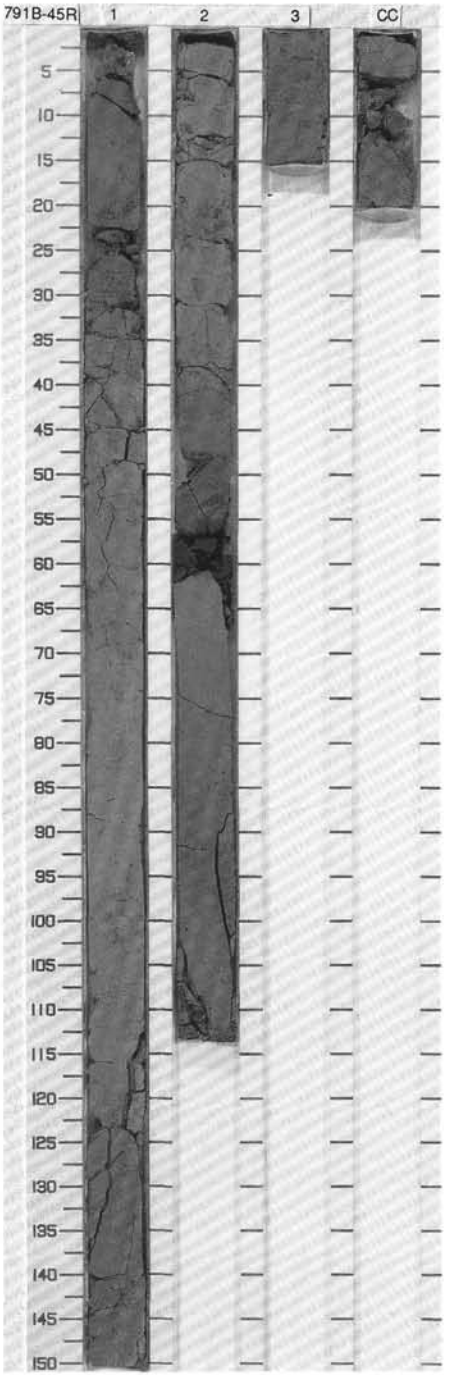
Minor lithologies:
A black(5Y 3/2) layer of VITRIC SILTY SAND occurs in Section 2, 56-61 cm. An isolated light gray (5Y 7/1) PUMICE clast, 1.3 cm in diameter, is located in Section 1, 130 cm.

Slight to moderate burrowing by Scolithus and Chondrites occurs in Section 1, 11-16 cm, and in Section 2, 40-46 cm, 52-56 cm, and 81-98 cm..

Bedding planes in Section 1, 125-150 cm display apparent dips of 45°

SMEAR SLIDE SUMMARY (%):

	1, 90 D	1, 137 D	2, 57 M	2, 80 D
TEXTURE:				
Sand	2	2	50	Tr
Silt	18	13	37	5
Clay	80	85	13	95
COMPOSITION:				
Accessory minerals	1	—	Tr	—
Biotite	Tr	—	—	—
Clay	52	60	10	64
Diatoms	Tr	—	—	—
Feldspar	1	1	7	1
Foraminifers	4	1	2	1
Glass	15	7	78	2
Micrite	1	4	—	2
Nannofossils	25	25	3	30
Opaques	—	1	—	—
Rock fragment	—	—	Tr	—
Silicoflagellates	Tr	—	—	—
Spicules	1	1	—	Tr



SITE 791 HOLE B CORE 46R CORED INTERVAL 820.0-829.6 mbsf

TIME-ROCK UNIT: QUATERNARY

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS A/G; NANNOFOSSILS CN14a; RADIOLARIANS R/P; DIATOMS

PALEOMAGNETICS: R; N (Jaramillo)

PHYS. PROPERTIES: ϕ=58.0, ρ=1.92; ϕ=57.0, ρ=1.89

CHEMISTRY: %$CaCO_3$ =22.5

SECTION: 1, 2, CC

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

NANNOFOSSIL-RICH CLAYSTONE AND NANNOFOSSIL-RICH VITRIC SILTY CLAYSTONE

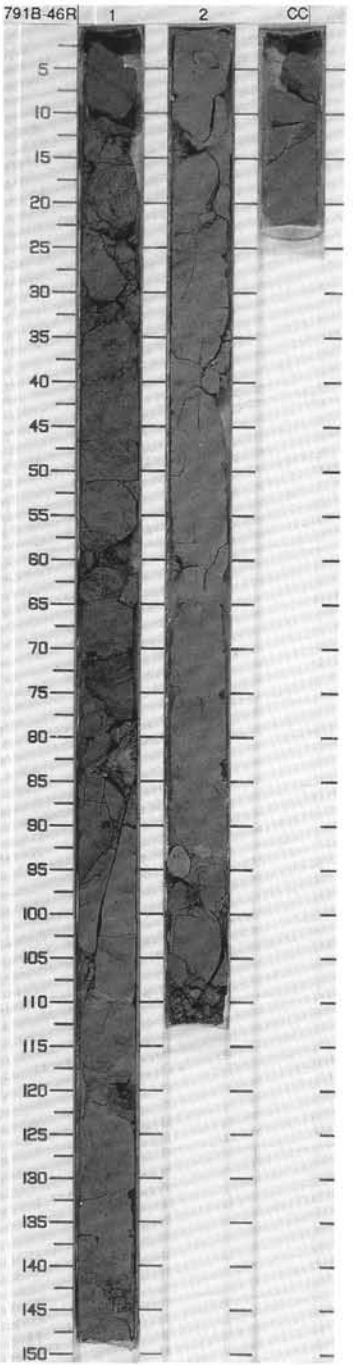
Major lithologies:
Section 1, 4-143 cm and the interval from Section 2, 94 cm to the base of the core-catcher is olive gray (5Y 4/2) NANNOFOSSIL-RICH CLAYSTONE. The interval from Section 1, 143 cm to Section 2, 94 cm is light olive gray (5Y 5/2) NANNOFOSSIL-RICH VITRIC SILTY CLAYSTONE, with slight burrowing by Chondrites in Section 2, 78-82 cm.

Minor lithologies:
An olive gray (5Y 4/2) layer of VITRIC SILT occurs in Section 1, 0-4 cm. Thin layers of gray (5Y 5/1) CLAYEY VITRIC SILT occur in Section 1, 13-17 cm and 109-110 cm, and in Section 2, 14-15 and 94-95 cm. An isolated black (5Y 3/2) SCORIA clast 1.1 cm in diameter is in Section 1, 90 cm. Two isolated light gray (5Y 7/1) PUMICE clasts 2.2 and 3.7 cm in diameter are found in Section 2, 90-95 cm.

Two microfaults, dipping 45° are situated in Section 1, 72-81 cm and 99-100 cm, the upper one cutting bedding planes with an apparent dip of 10°. Apparent dips below the lower microfault (Section 1, 105-150 cm) are 20°.

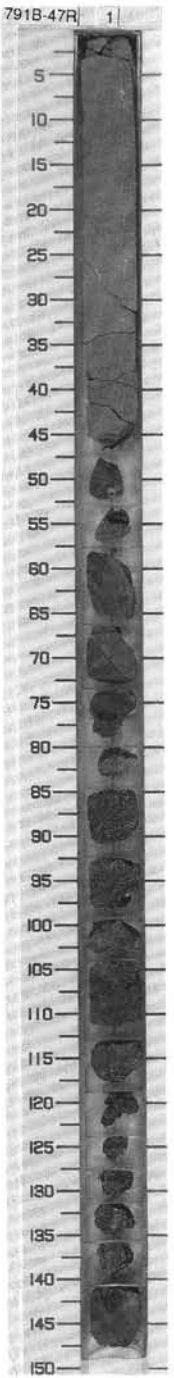
SMEAR SLIDE SUMMARY (%):

	1, 14 M	1, 49 D	2, 13 M	2, 50 D	CC, 16 D
TEXTURE:					
Sand	3	3	2	15	5
Silt	75	12	83	15	15
Clay	22	85	15	70	80
COMPOSITION:					
Accessory minerals	2	Tr	1	Tr	1
Clay	20	70	15	59	59
Diatoms	—	Tr	—	—	—
Feldspar	1	1	2	2	1
Foraminifers	1	2	1	5	8
Glass	72	10	80	20	10
Micrite	1	1	Tr	2	—
Nannofossils	2	15	Tr	12	20
Opaques	1	—	1	—	—
Rock fragment	Tr	—	Tr	—	—
Silicoflagellates	—	Tr	—	—	—
Spicules	—	1	—	Tr	1



SITE 791 HOLE B CORE 47R CORED INTERVAL 829.6-839.2 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
QUATERNARY		A/G			I	ϕ=57.0 ● ρ=1.89	%CaCO3 =37.99 ●	1	0.5 1.0				*	NANNOFOSSIL-FORAMINIFER CLAYSTONE Major lithology: Grayish green (5GY 6/1) NANNOFOSSIL-FORAMINIFER CLAYSTONE, with local intervals of intense burrowing, isolated pumice granules at 2-4 cm and 37-38 cm, and sand-sized basalt fragments. A shear surface with an apparent dip of about 40° is at 20-25 cm. Igneous rocks occupy the rest of the core. SMEAR SLIDE SUMMARY (%): 1, 43 D TEXTURE: Sand 25 Silt 35 Clay 40 COMPOSITION: Accessory minerals 1 Clay 37 Feldspar 2 Foraminifers 40 Glass 5 Nannofossils 15
		CN14a												



SITE 791 HOLE B CORE 62R CORED INTERVAL 974.1-983.7 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
QUATERNARY		F/M CN14a			R	ρ=49.0 Ø=2.13	%CaCO3 =0.71	1					* *

LITHOLOGIC DESCRIPTION

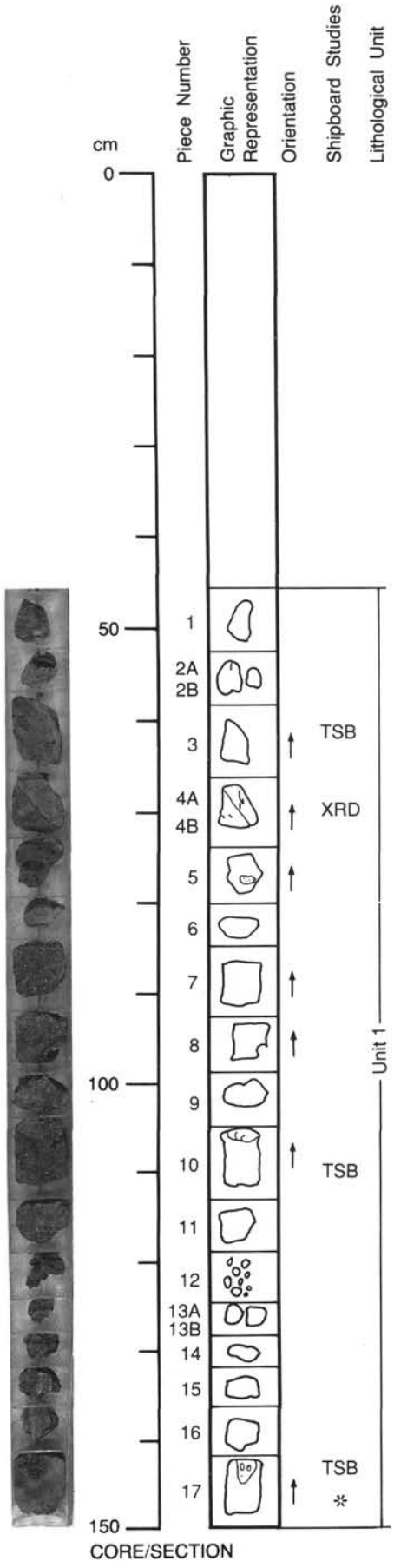
CRYSTAL-VITRIC SILT AND SANDY MUD

Major lithologies:
The top 10 cm of the core is brownish black (5YR 2/1) CRYSTAL-VITRIC SILT. In a smear slide the material consists principally of opaque glass, feldspar, pyroxene, and olivine grains. From 10-22 cm the material is dark gray (5Y 4/1) SANDY MUD, consisting of opaque glass, clay-sized zeolites (?), and accessory minerals.

These sediments are homogeneous and firm but unconsolidated, and rest on basalt, which constitutes the remainder of the core.

SMEAR SLIDE SUMMARY (%):

	1, 1 D	1, 21 D
TEXTURE:		
Sand	10	40
Silt	85	30
Clay	5	30
COMPOSITION:		
Accessory minerals	10	15
Clay	—	30
Feldspar	25	15
Glass	65	40
Spar cement	Tr	—

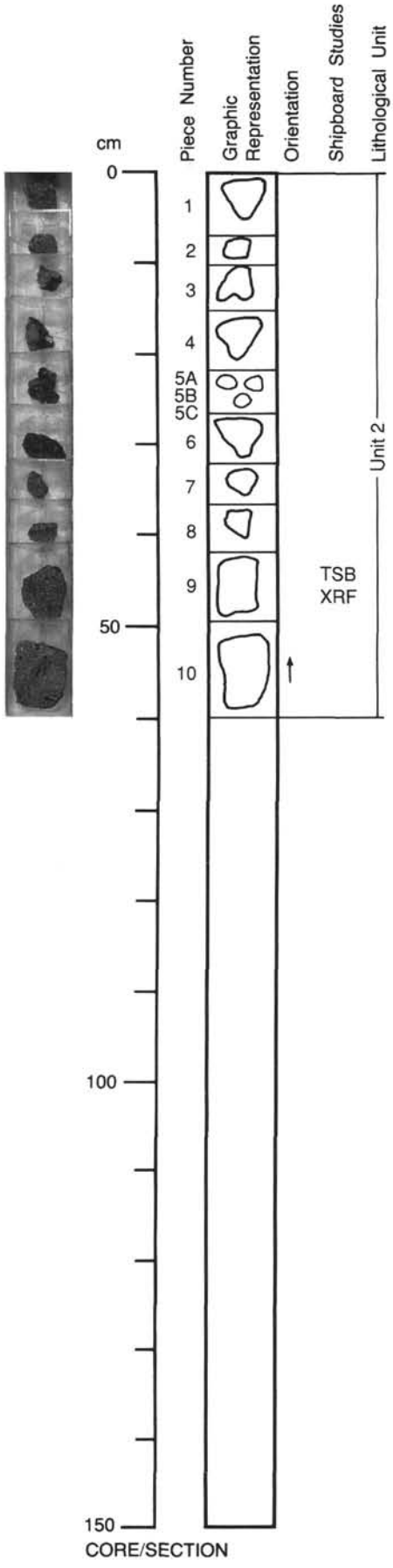


126-791B-47R-1

UNIT 1: BASALT BRECCIA

Pieces 1-17

CONTACTS: None.
PHENOCRYSTS:
Olivine - 1-2%; 0.2-0.5 mm; fresh, euhedral.
Plagioclase - 3%; 0.5-2.0 mm; fresh, euhedral.
GROUNDMASS: Intersertal.
VESICLES: 30%; 0.3-2.0; round; random; some smectite linings.
COLOR: Dark gray, N4.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: The clasts (0.5-2.0 cm) described above occur in a crystal-lithic nonvesicular glass matrix of the same mineralogy.

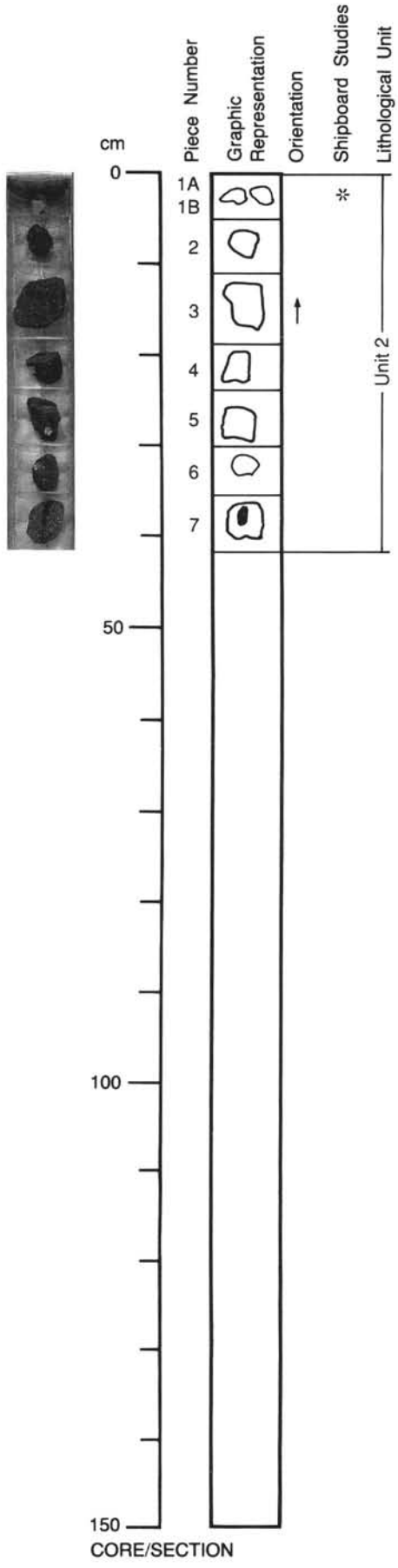


126-791B-48R-1

UNIT 2: GLOMEROPORPHYRITIC BASALT

Pieces 1-10

CONTACTS: None.
PHENOCRYSTS: Often in glomeroporphyritic clots.
Plagioclase - 3-4%; 1-3 mm; fresh, euhedral.
Olivine - 1-2%; 0.1-0.5 mm; fresh, euhedral.
Clinopyroxene - 1-3%; 1.5-3.0 mm; fresh, euhedral.
GROUNDMASS: Intersertal.
VESICLES: 20%; 0.5 mm; round; random; smectite linings.
COLOR: Dark gray, N4.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: None.

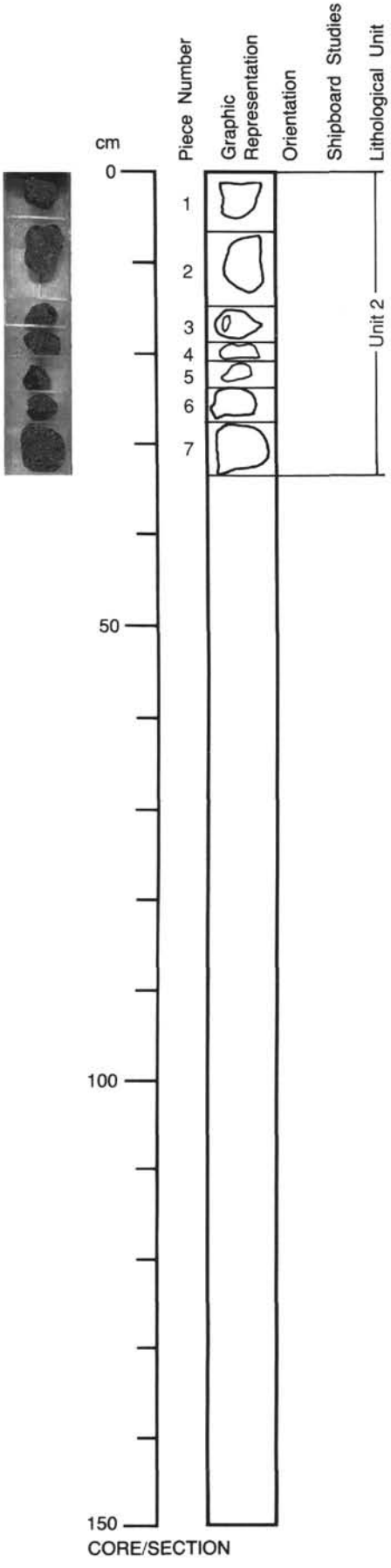


126-791B-49R-1

UNIT 2: GLOMEROPORPHYRITIC BASALT

Pieces 1-7

CONTACTS: None.
PHENOCRYSTS: Often in glomeroporphyritic clots.
Plagioclase - 3-4%; 1-3 mm; fresh, euhedral.
Olivine - 1-2%; 0.1-0.5 mm; fresh, euhedral.
Clinopyroxene - 1-3%; 1.5-3.0 mm; fresh, euhedral.
GROUNDMASS: Intersertal.
VESICLES: 20%; 0.5 mm; round; random; smectite linings.
COLOR: Dark gray, N4.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: None.

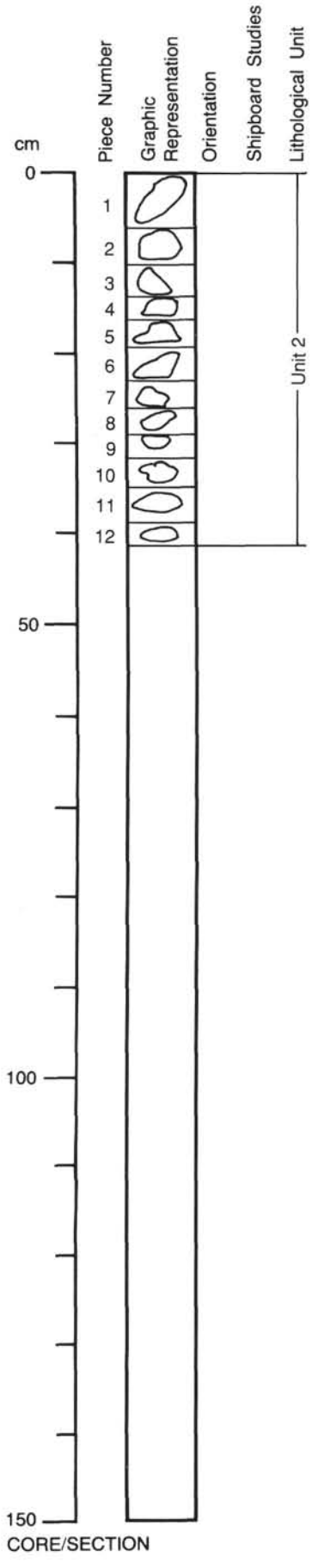


126-791B-50R-1

UNIT 2: GLOMEROPORPHYRITIC BASALT

Pieces 1-7

CONTACTS: None.
PHENOCRYSTS: Often in glomeroporphyritic clots.
Plagioclase - 3-4%; 1-3 mm; fresh, euhedral.
Olivine - 1-2%; 0.1-0.5 mm; fresh, euhedral.
Clinopyroxene - 1-3%; 1.5-3.0 mm; fresh, euhedral.
GROUNDMASS: Intersertal.
VESICLES: 20%; 0.5 mm; round; random; smectite linings.
COLOR: Dark gray, N4.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: None.

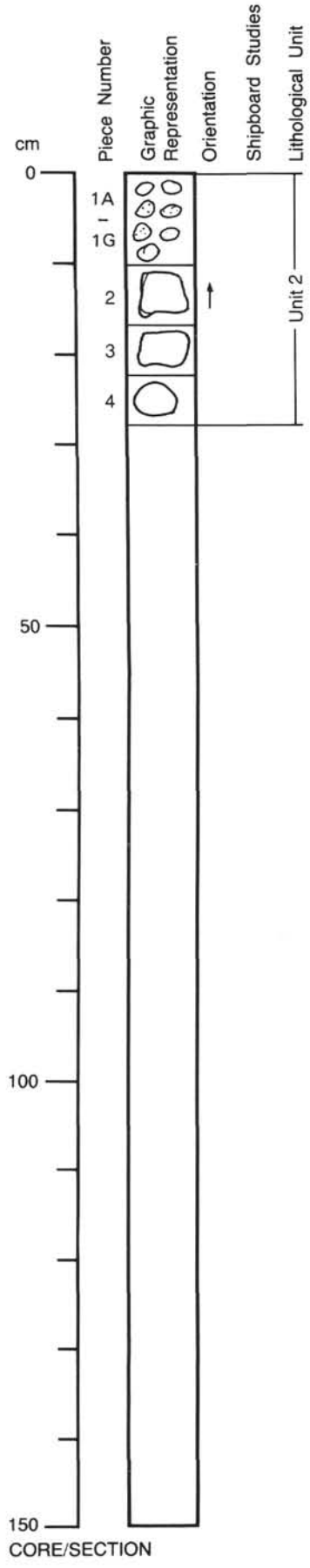


126-791B-51R-1

UNIT 2: GLOMEROPORPHYRITIC BASALT

Pieces 1-12

CONTACTS: None.
PHENOCRYSTS: Often in glomeroporphyritic clots.
Plagioclase - 3-4%; 1-3 mm; fresh, euhedral.
Olivine - 1-2%; 0.1-0.5 mm; fresh, euhedral.
Clinopyroxene - 1-3%; 1.5-3.0 mm; fresh, euhedral.
GROUNDMASS: Intersertal.
VESICLES: 20%; 0.5 mm; round; random; smectite linings.
COLOR: Dark gray, N4.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: None.

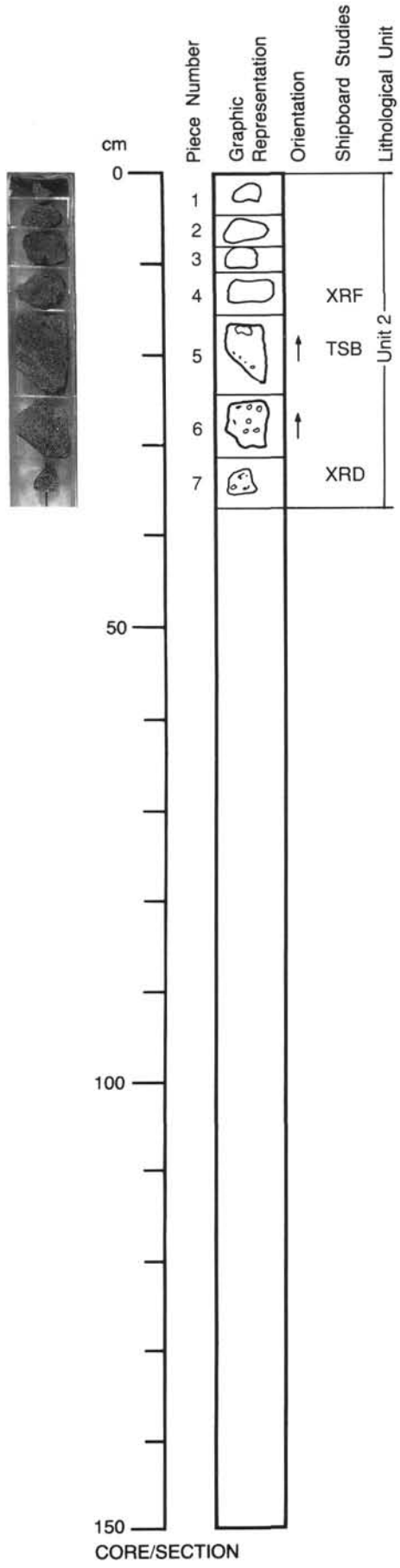


126-791B-52R-CC

UNIT 2: GLOMEROPORPHYRITIC BASALT

Pieces 1-4

CONTACTS: None.
PHENOCRYSTS: Often in glomeroporphyritic clots.
Plagioclase - 3-4%; 1-3 mm; fresh, euhedral.
Olivine - 1-2%; 0.1-0.5 mm; fresh, euhedral.
Clinopyroxene - 1-3%; 1.5-3.0 mm; fresh, euhedral.
GROUNDMASS: Intersertal.
VESICLES: 20%; 0.5 mm; round; random; smectite linings.
COLOR: Dark gray/N4.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: None.

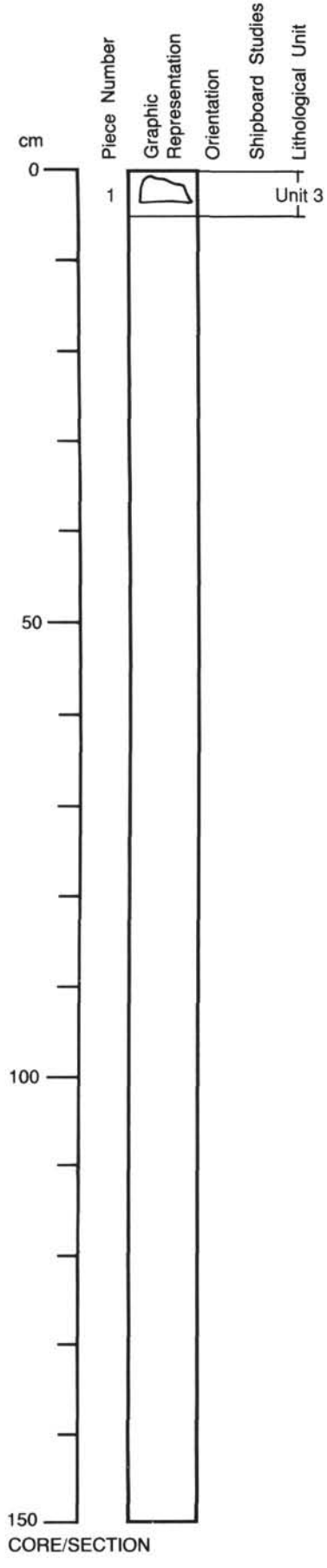


126-791B-53R-1

UNIT 2: GLOMEROPORPHYRITIC BASALT

Pieces 1-7

CONTACTS: None.
PHENOCRYSTS: Often in glomeroporphyritic clots.
Plagioclase - 3-4%; 1-3 mm; fresh, euhedral.
Olivine - 1-2%; 0.1-0.5 mm; fresh, euhedral.
Clinopyroxene - 1-3%; 1.5-3.0 mm; fresh, euhedral.
GROUNDMASS: Intersertal.
VESICLES: 20%; 0.5 mm; round; random; smectite linings.
COLOR: Dark gray, N4.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: None.

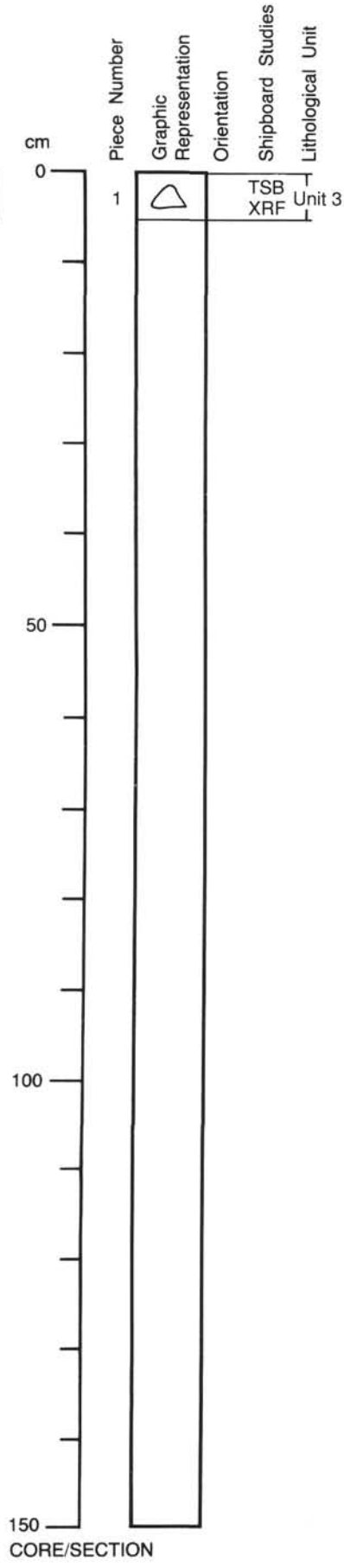


126-791B-54R-1

UNIT 3: BASALT

Piece 1

CONTACTS: None.
PHENOCRYSTS: Some glomeroporphyritic clots.
Plagioclase - 5%; 0.2-0.5 mm; fresh, euhedral.
Olivine - 1-3%; 0.2-1.5 mm; euhedral.
GROUNDMASS: Intersertal, microvesicular, devitrified glass.
VESICLES: 20%; 1-2 mm; round; random; smectite, calcite fillings.
COLOR: Dark gray, N4.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: None.

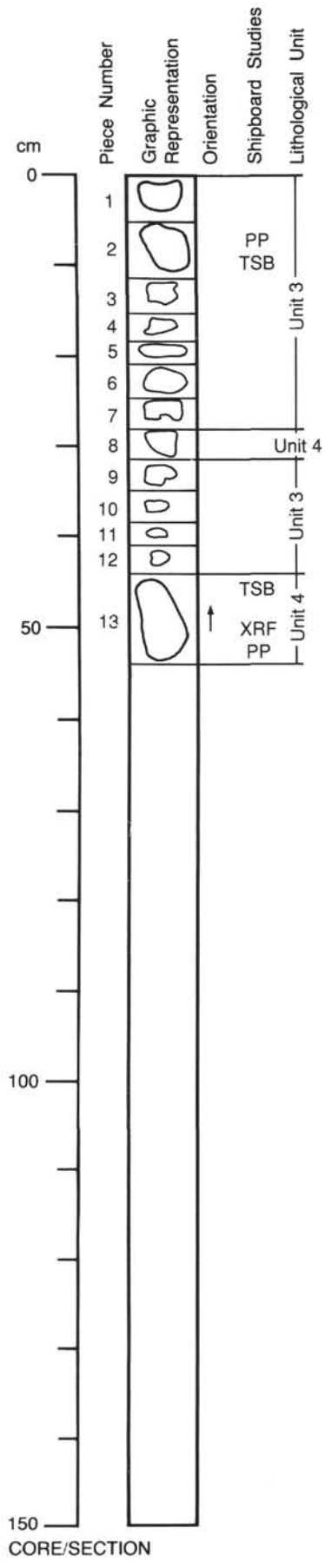


126-791B-55R-1

UNIT 3: BASALT

Piece 1

CONTACTS: None.
PHENOCRYSTS: Some glomeroporphyritic clots.
Plagioclase - 5%; 0.2-0.5 mm; fresh, euhedral.
Olivine - 1-3%; 0.2-1.5 mm; euhedral.
GROUNDMASS: Intersertal, microvesicular, devitrified glass.
VESICLES: 20%; 1-2 mm; round; random; smectite, calcite fillings.
COLOR: *Dark gray, N4.*
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: None.



126-791B-56R-1

UNIT 3: BASALT

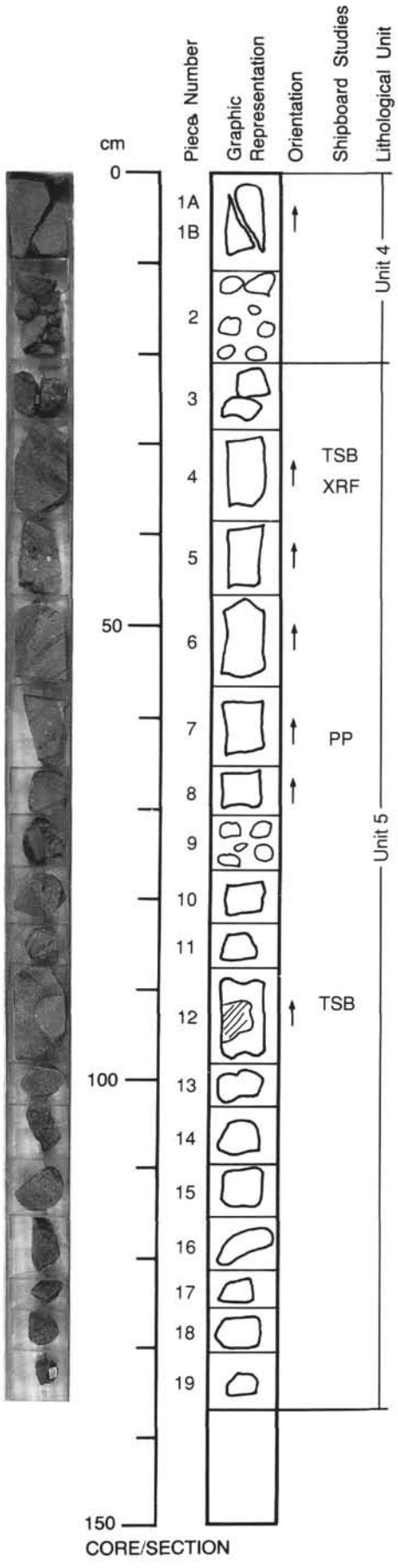
Pieces 1-7 and 9-12

CONTACTS: None.
PHENOCRYSTS: Some glomeroporphyritic clots.
Plagioclase - 5%; 0.2-0.5 mm; fresh, euhedral.
Olivine - 1-3%; 0.2-1.5 mm; euhedral.
GROUNDMASS: Intersertal, microvesicular, devitrified glass.
VESICLES: 20%; 1-2 mm; round; random; smectite, calcite fillings.
COLOR: Dark gray, N4.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: None.

UNIT 4: DIABASE

Pieces 8 and 13

CONTACTS: None.
PHENOCRYSTS:
Plagioclase - 60%; 0.2 mm; fresh.
Clinopyroxene - 15%; 0.05 mm.
Olivine - 2-3%; 0.05 mm.
Magnetite - 3%; 0.05 mm.
GROUNDMASS: Devitrified glass.
VESICLES: 5%; 0.2 mm; circular; random; smectite linings.
COLOR: Gray.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: None.



126-791B-57R-1

UNIT 4: DIABASE

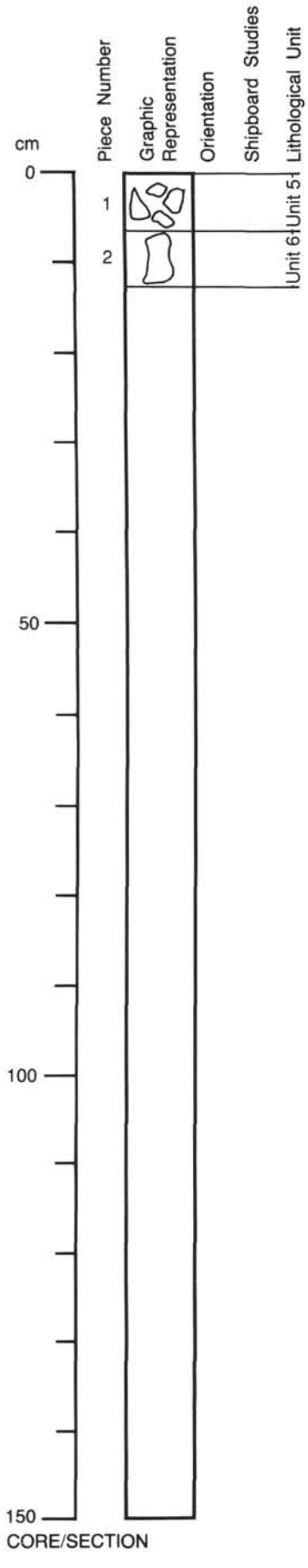
Pieces 1-2

CONTACTS: None.
PHENOCRYSTS:
Plagioclase - 60%; 0.2 mm; fresh.
Clinopyroxene - 15%; 0.05 mm.
Olivine - 2-3%; 0.05 mm.
Magnetite - 3%; 0.05 mm.
GROUNDMASS: Devitrified glass.
VESICLES: 5%; 0.2 mm; circular; random; smectite linings.
COLOR: Gray.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: None.

UNIT 5: BASALT

Pieces 3-19

CONTACTS: None.
PHENOCRYSTS:
Plagioclase - 5-10%; 0.2-0.5 mm; fresh, euhedral.
Olivine - 2-5%; 1-2 mm; euhedral, partly altered.
GROUNDMASS: Intergranular, microvesicular.
VESICLES: 25%; 0.2-1.5 mm; circular; random; ranges from open with blue smectite linings, to filled with calcite or zeolite.
COLOR: Dark gray, N4.
STRUCTURE: None.
ALTERATION: Alteration halos surround fresher cores.
VEINS/FRACTURES: None.



126-791B-58R-1

UNIT 5: BASALT

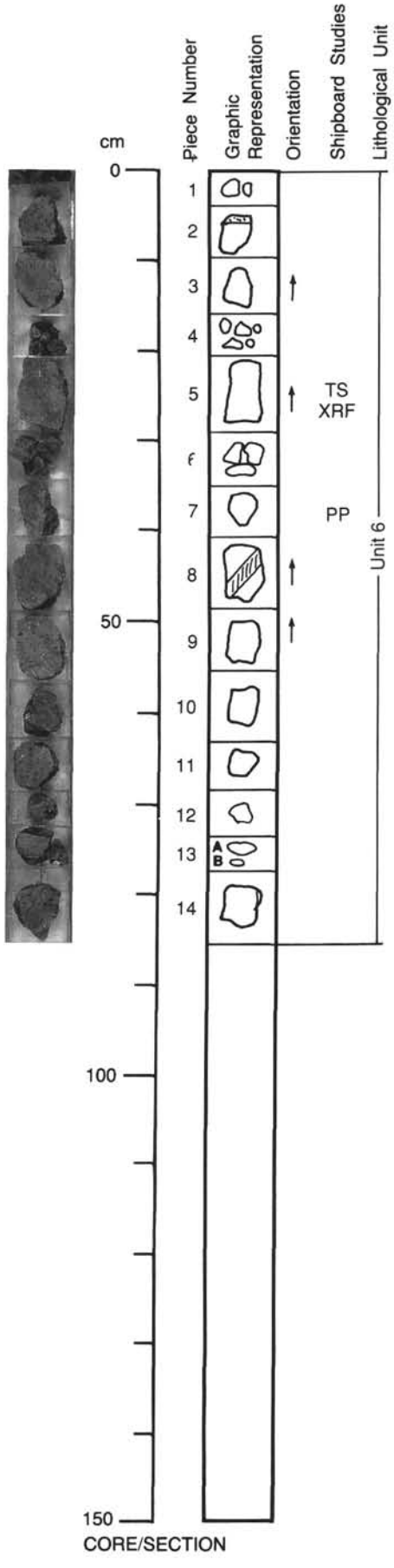
Piece 1

CONTACTS: None.
PHENOCRYSTS:
Plagioclase - 5-10%; 0.2-0.5 mm; fresh, euhedral.
Olivine - 2-5%; 1-2 mm; euhedral, partly altered.
GROUNDMASS: Intergranular, microvesicular.
VESICLES: 25%; 0.2-1.5 mm; circular; random; ranges from open with blue smectite linings, to filled with calcite or zeolite.
COLOR: Dark gray, N4.
STRUCTURE: None.
ALTERATION: Alteration halos surround fresher cores.
VEINS/FRACTURES: None.

UNIT 6: BASALT

Piece 2

CONTACTS: Glass at top.
PHENOCRYSTS:
Olivine - 1-2%; 0.3-1.0 mm; partly altered, euhedral.
Plagioclase - 1-3%; 0.3-1.0 mm; fresh, euhedral.
GROUNDMASS: Intersertal, microvesicular.
VESICLES: 10%; 0.2-1.0 mm; circular; random; smectite linings.
COLOR: Dark gray, N4.
STRUCTURE: None.
ALTERATION: None.
VEINS/FRACTURES: None.

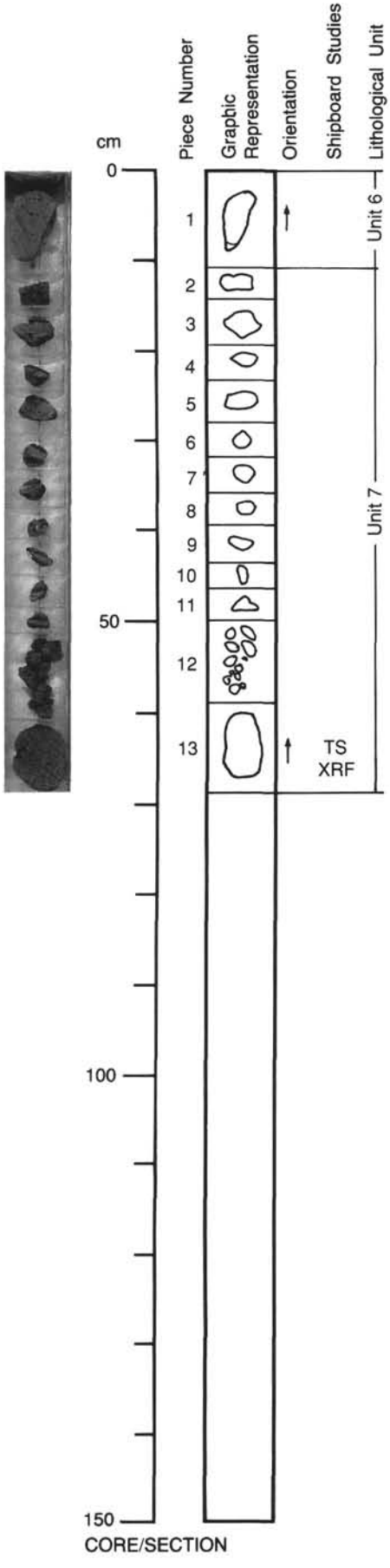


126-791B-59R-1

UNIT 6: BASALT

Pieces 1-14

CONTACTS: Glass at top.
PHENOCRYSTS:
Olivine - 1-2%; 0.3-1.0 mm; partly altered, euhedral.
Plagioclase - 1-3%; 0.3-1.0 mm; fresh, euhedral.
GROUNDMASS: Intersertal, microvesicular.
VESICLES: 10%; 0.2-1.0 mm; circular; random; smectite linings.
COLOR: Dark gray, N4.
STRUCTURE: None.
ALTERATION: None.
VEINS/FRACTURES: None.



126-791B-60R-1

UNIT 6: BASALT

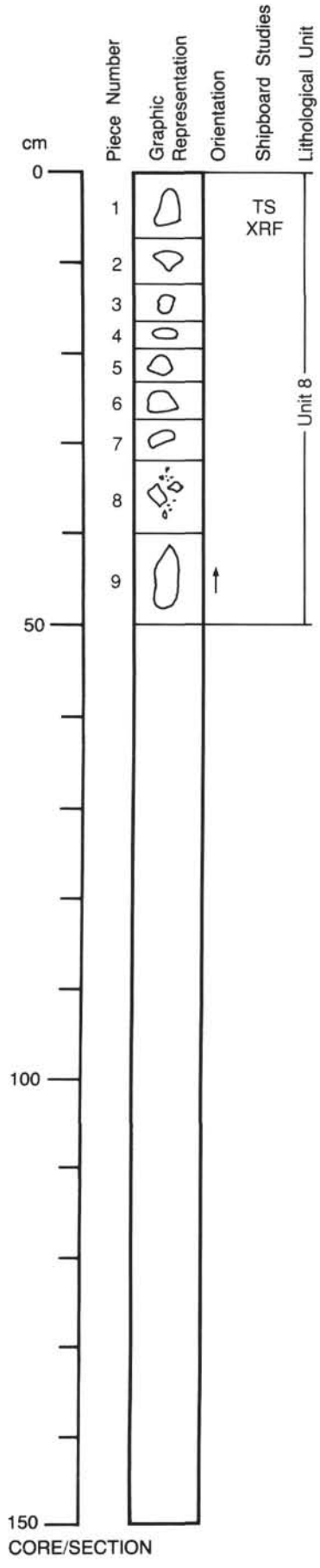
Piece 1

CONTACTS: Glass at top.
PHENOCRYSTS:
Olivine - 1-2%; 0.3-1.0 mm; partly altered, euhedral.
Plagioclase - 1-3%; 0.3-1.0 mm; fresh, euhedral.
GROUNDMASS: Intersertal, microvesicular.
VESICLES: 10%; 0.2-1.0 mm; circular; random; smectite linings.
COLOR: Dark gray, N4.
STRUCTURE: None.
ALTERATION: None.
VEINS/FRACTURES: None.

UNIT 7: BASALT

Pieces 2-13

CONTACTS: None.
PHENOCRYSTS:
Olivine - 1-3%; 0.5-2.0 mm; fresh, euhedral.
Plagioclase - 1-2%; 0.5-2.0 mm; fresh, euhedral.
GROUNDMASS: Intersertal, devitrified glass.
VESICLES: 20%; 1-3 mm; circular; random; smectite linings.
COLOR: Medium gray, N5.
STRUCTURE: None.
ALTERATION: None.
VEINS/FRACTURES: None.

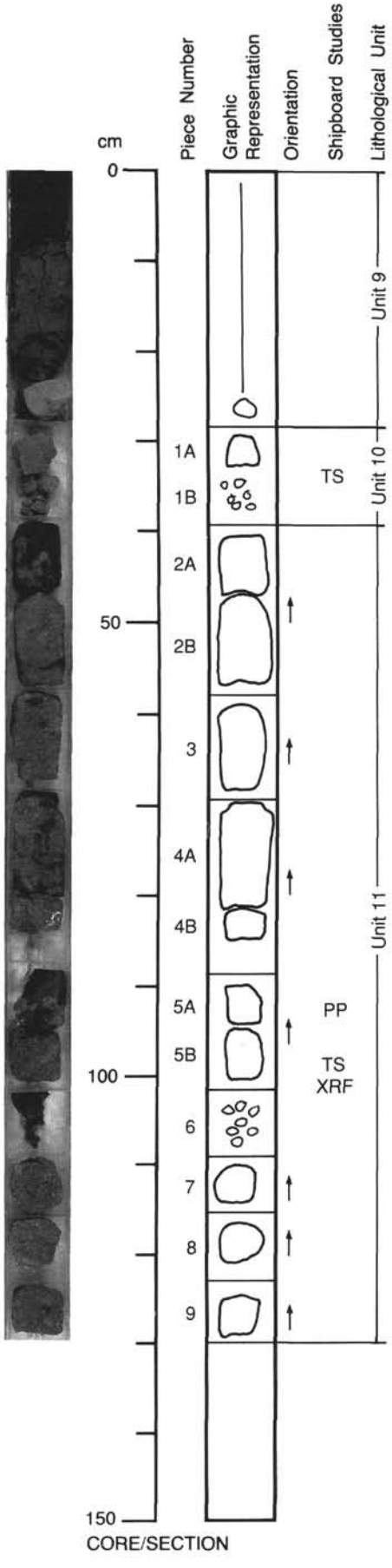


126-791B-61R-1

UNIT 8: DIABASE

Pieces 1-9

CONTACTS: None.
PHENOCRYSTS:
Plagioclase - 2%; 1-2 mm; fresh.
GROUNDMASS: Flow-aligned plagioclase, clinopyroxene, microvesicular glass.
VESICLES: <1 mm.
COLOR: Medium gray, N5.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: Chlorite vein in one piece.



126-791B-62R-1

UNIT 9: SEDIMENT: CRYSTAL VITRIC SILT (0-10 CM); CRYSTAL VITRIC SANDY CLAY (10-22 CM)

See sedimentary visual core description.

UNIT 10: BASALT

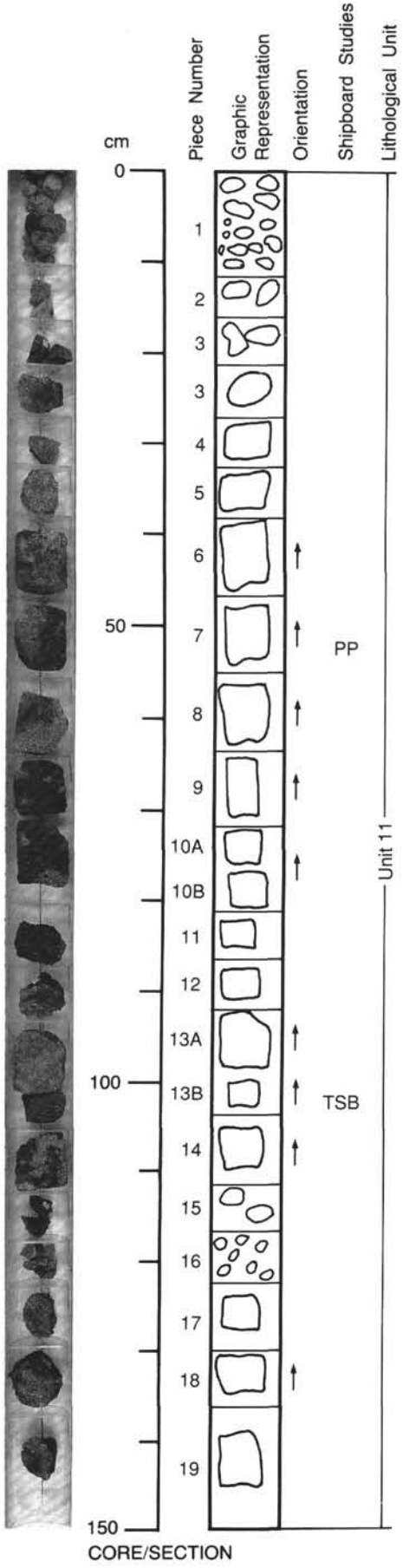
Piece 1

CONTACTS: None.
PHENOCRYSTS: Often in clots.
Plagioclase - 2-5%; 0.2-1.0 mm; euhedral, fresh.
GROUNDMASS: Intersertal, microvesicular with quench pyroxenes.
VESICLES: 10-30%; 0.2-1.0 mm; circular; random; smectite linings.
COLOR: Dark gray, N4.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: None.

UNIT 11: BASALT MOUSSE

Pieces 1-9

CONTACTS: None.
PHENOCRYSTS:
Olivine - 2%; <1 mm; euhedral, equant, fresh.
Plagioclase - <=5%; <1 mm; euhedral, elongate, fresh.
GROUNDMASS: Microvesicular, devitrified glass.
VESICLES: 50%; <0.2 mm; round; random; smectite lining plus occasional zeolite.
COLOR: Gray, N5.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Above description applies to the most common type of "clast" in a matrix which is very similar in composition. The matrix also has <1 mm olivine and plagioclase crystals, often in clots, within a vesicular glass (30%, 0.1-0.5 mm) which is less devitried than the clasts, and less vesicular around crystal clots.

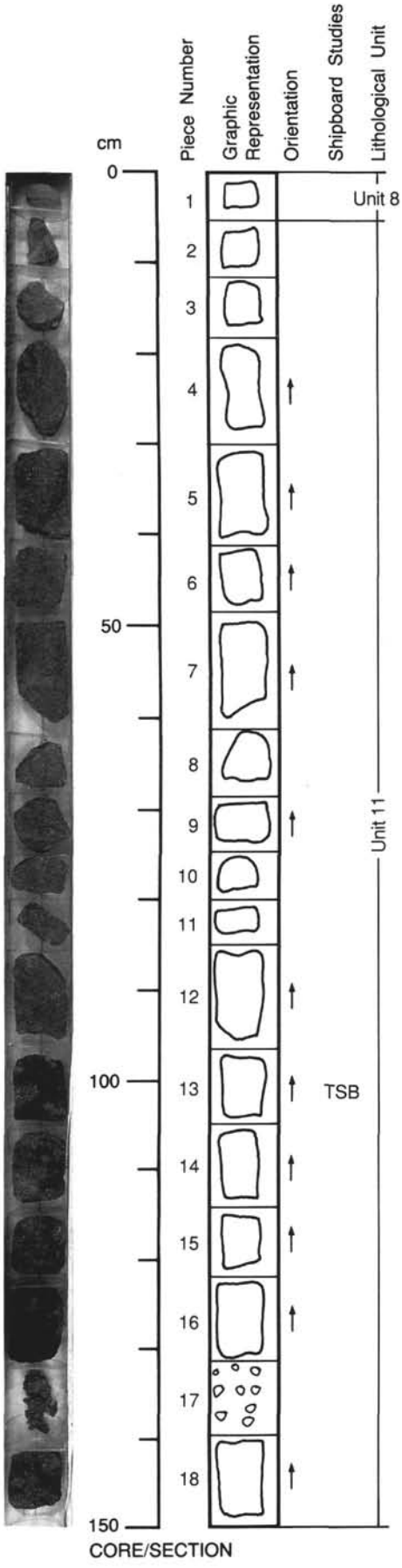


126-791B-63R-1

UNIT 11: BASALT MOUSSE

Pieces 1-19

CONTACTS: None.
PHENOCRYSTS:
Olivine - 2%; <1 mm; euhedral, equant, fresh.
Plagioclase - <=5%; <1 mm; euhedral, elongate, fresh.
GROUNDMASS: Microvesicular, devitrified glass.
VESICLES: 50%; <0.2 mm; round; random; smectite lining plus occasional zeolite.
COLOR: Gray, N5.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Above description applies to the most common type of "clast" in a matrix which is very similar in composition. The matrix also has <1 mm olivine and plagioclase crystals, often in clots, within a vesicular glass (30%, 0.1-0.5 mm) which is less devitried than the clasts, and less vesicular around crystal clots.



126-791B-64R-1

UNIT 8: DIABASE

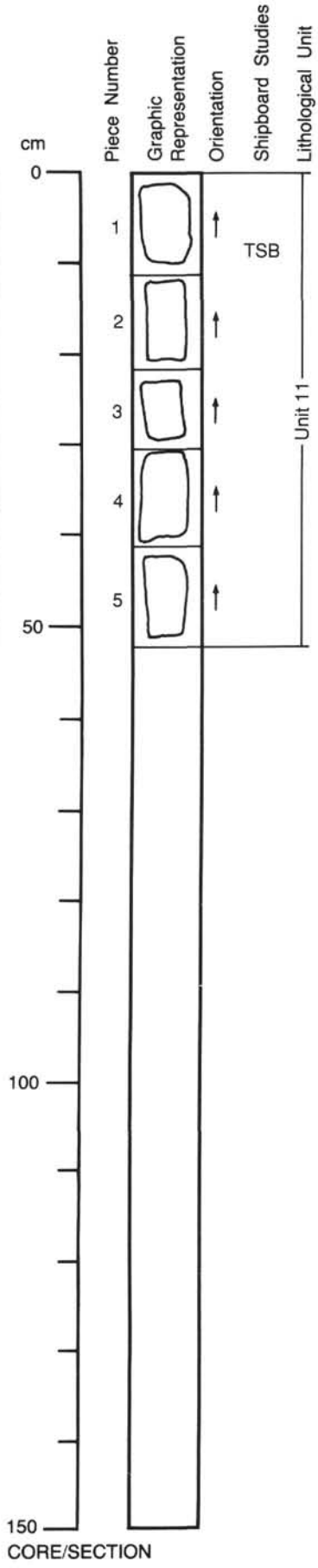
Piece 1

CONTACTS: None.
PHENOCRYSTS:
Plagioclase - 2%; 1-2 mm; fresh.
GROUNDMASS: Flow-aligned plagioclase, clinopyroxene, microvesicular glass.
VESICLES: <1 mm.
COLOR: Medium gray, N5.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: Chlorite vein in one piece.

UNIT 11: BASALT MOUSSE

Pieces 2-18

CONTACTS: None.
PHENOCRYSTS:
Olivine - 2%; <1 mm; euhedral, equant, fresh.
Plagioclase - <=5%; <1 mm; euhedral, elongate, fresh.
GROUNDMASS: Microvesicular, devitrified glass.
VESICLES: 50%; <0.2 mm; round; random; smectite lining plus occasional zeolite.
COLOR: Gray, N5.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Above description applies to the most common type of "clast" in a matrix which is very similar in composition. The matrix also has <1 mm olivine and plagioclase crystals, often in clots,within a vesicular glass (30%, 0.1-0.5 mm) which is less devitried than the clasts, and less vesicular around crystal clots.

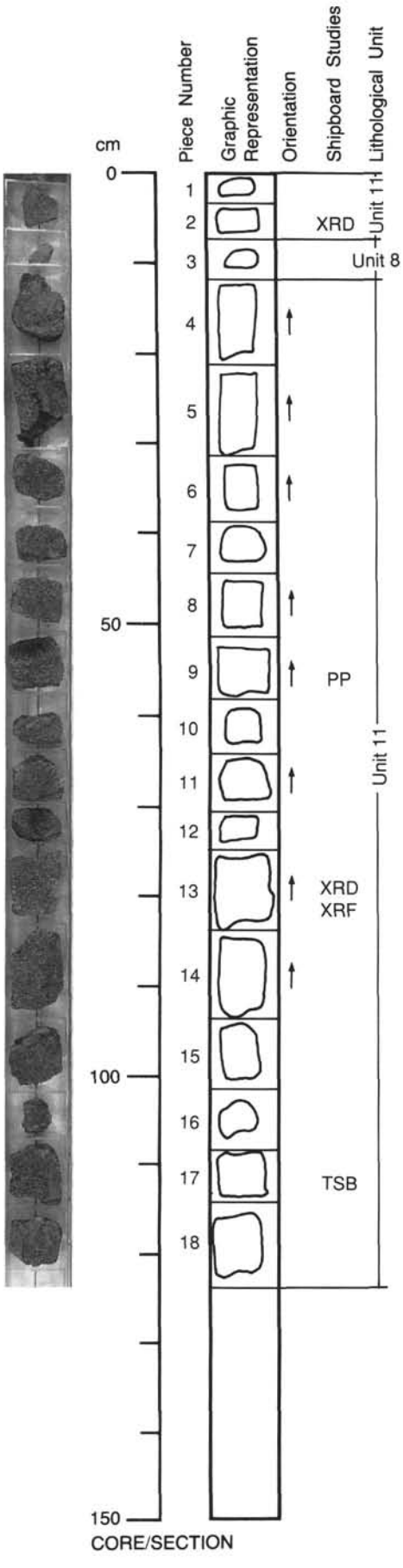


126-791B-64R-2

UNIT 11: BASALT MOUSSE

Pieces 1-5

CONTACTS: None.
PHENOCRYSTS:
Olivine - 2%; <1 mm; euhedral, equant, fresh.
Plagioclase - <=5%; <1 mm; euhedral, elongate, fresh.
GROUNDMASS: Microvesicular, devitrified glass.
VESICLES: 50%; <0.2 mm; round; random; smectite lining plus occasional zeolite.
COLOR: Gray, N5.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Above description applies to the most common type of "clast" in a matrix which is very similar in composition. The matrix also has <1 mm olivine and plagioclase crystals, often in clots, within a vesicular glass (30%, 0.1-0.5 mm) which is less devitried than the clasts, and less vesicular around crystal clots.



126-791B-65R-1

UNIT 11: BASALT MOUSSE

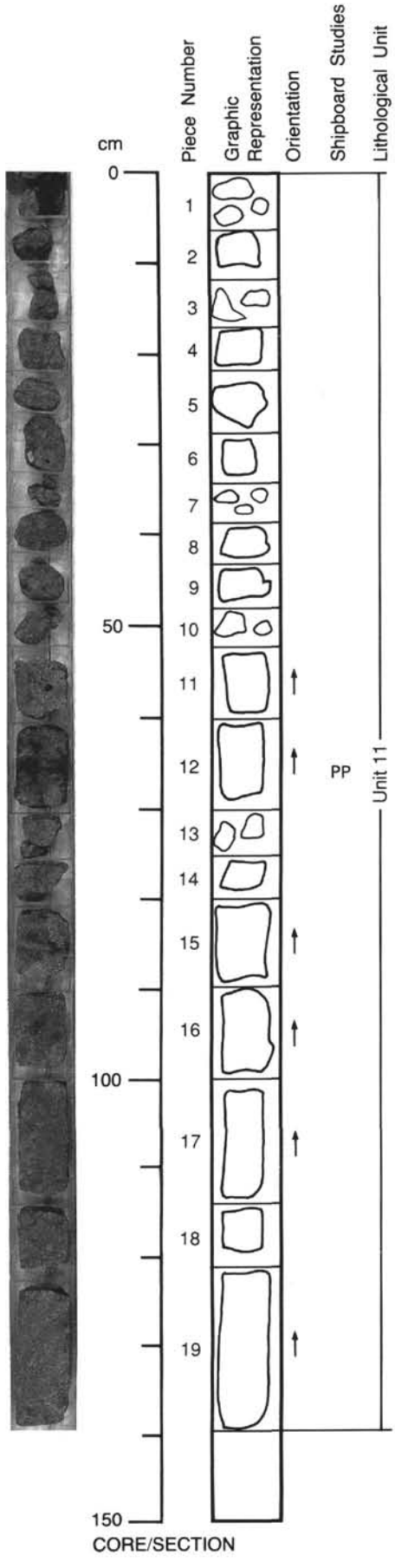
Pieces 1-2 and 4-18

CONTACTS: None.
PHENOCRYSTS:
Olivine - 2%; <1 mm; euhedral, equant, fresh.
Plagioclase - <=5%; <1 mm; euhedral, elongate, fresh.
GROUNDMASS: Microvesicular, devitrified glass.
VESICLES: 50%; <0.2 mm; round; random; smectite lining plus occasional zeolite.
COLOR: Gray, N5.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Above description applies to the most common type of "clast" in a matrix which is very similar in composition. The matrix also has <1 mm olivine and plagioclase crystals, often in clots, within a vesicular glass (30%, 0.1-0.5 mm) which is less devitried than the clasts, and less vesicular around crystal clots.

UNIT 8: DIABASE

Piece 3

CONTACTS: None.
PHENOCRYSTS:
Plagioclase - 2%; 1-2 mm; fresh.
GROUNDMASS: Flow-aligned plagioclase, clinopyroxene, microvesicular glass.
VESICLES: <1 mm.
COLOR: Medium gray, N5.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: Chlorite vein in one piece.

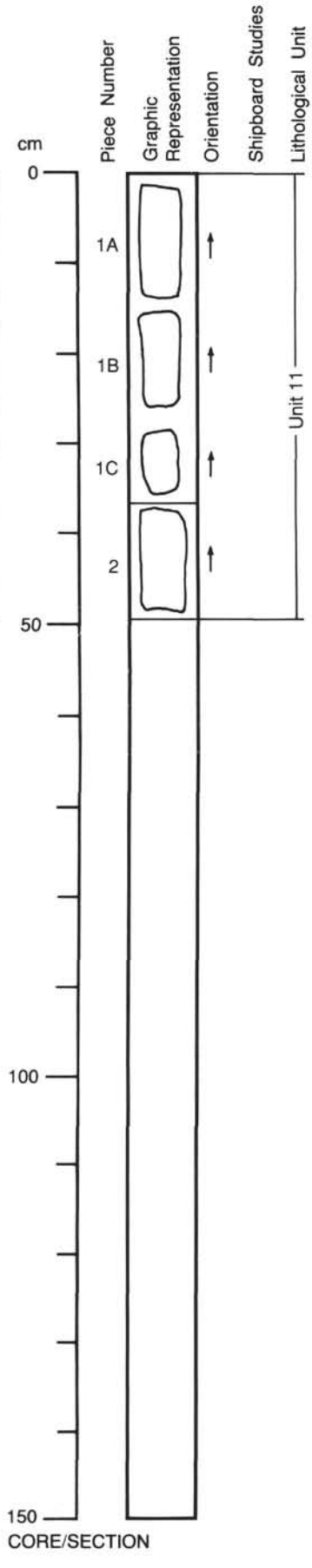


126-791B-66R-1

UNIT 11: BASALT MOUSSE

Pieces 1-19

CONTACTS: None.
PHENOCRYSTS:
Olivine - 2%; <1 mm; euhedral, equant, fresh.
Plagioclase - <=5%; <1 mm; euhedral, elongate, fresh.
GROUNDMASS: Microvesicular, devitrified glass.
VESICLES: 50%; <0.2 mm; round; random; smectite lining plus occasional zeolite.
COLOR: Gray, N5.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Above description applies to the most common type of "clast" in a matrix which is very similar in composition. The matrix also has <1 mm olivine and plagioclase crystals, often in clots, within a vesicular glass (30%, 0.1-0.5 mm) which is less devitried than the clasts, and less vesicular around crystal clots.

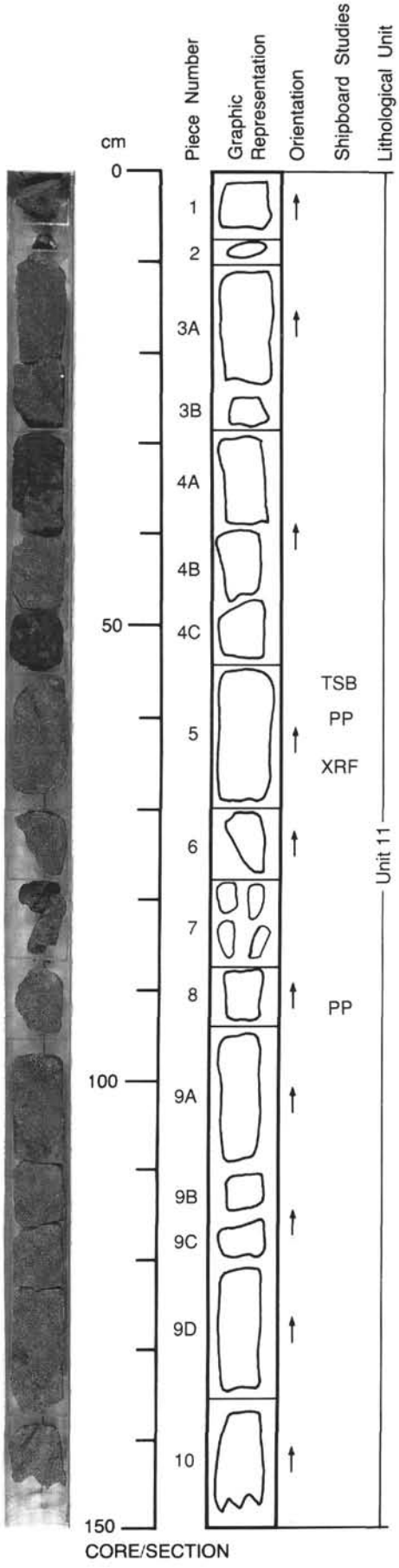


126-791B-66R-2

UNIT 11: BASALT MOUSSE

Pieces 1-2

CONTACTS: None.
PHENOCRYSTS:
Olivine - 2%; <1 mm; euhedral, equant, fresh.
Plagioclase - <=5%; <1 mm; euhedral, elongate, fresh.
GROUNDMASS: Microvesicular, devitrified glass.
VESICLES: 50%; <0.2 mm; round; random; smectite lining plus occasional zeolite.
COLOR: Gray, N5.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Above description applies to the most common type of "clast" in a matrix which is very similar in composition. The matrix also has <1 mm olivine and plagioclase crystals, often in clots, within a vesicular glass (30%, 0.1-0.5 mm) which is less devitried than the clasts, and less vesicular around crystal clots.

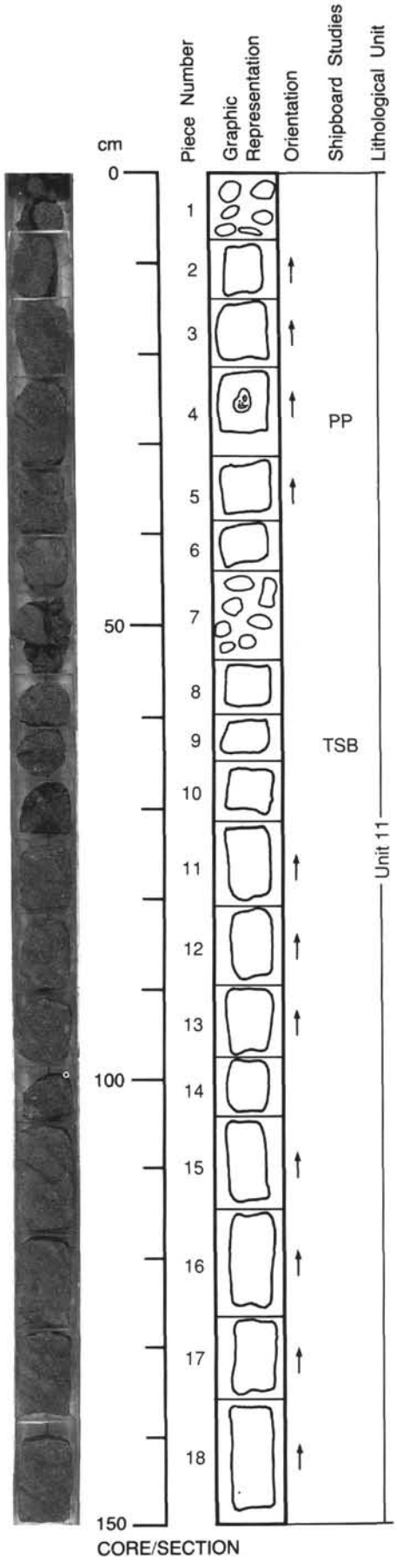


126-791B-67R-1

UNIT 11: BASALT MOUSSE

Pieces 1-10

CONTACTS: None.
PHENOCRYSTS:
Olivine - 2%; <1 mm; euhedral, equant, fresh.
Plagioclase - <=5%; <1 mm; euhedral, elongate, fresh.
GROUNDMASS: Microvesicular, devitrified glass.
VESICLES: 50%; <0.2 mm; round; random; smectite lining plus occasional zeolite.
COLOR: Gray, N5.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Above description applies to the most common type of "clast" in a matrix which is very similar in composition. The matrix also has <1 mm olivine and plagioclase crystals, often in clots, within a vesicular glass (30%, 0.1-0.5 mm) which is less devitried than the clasts, and less vesicular around crystal clots.

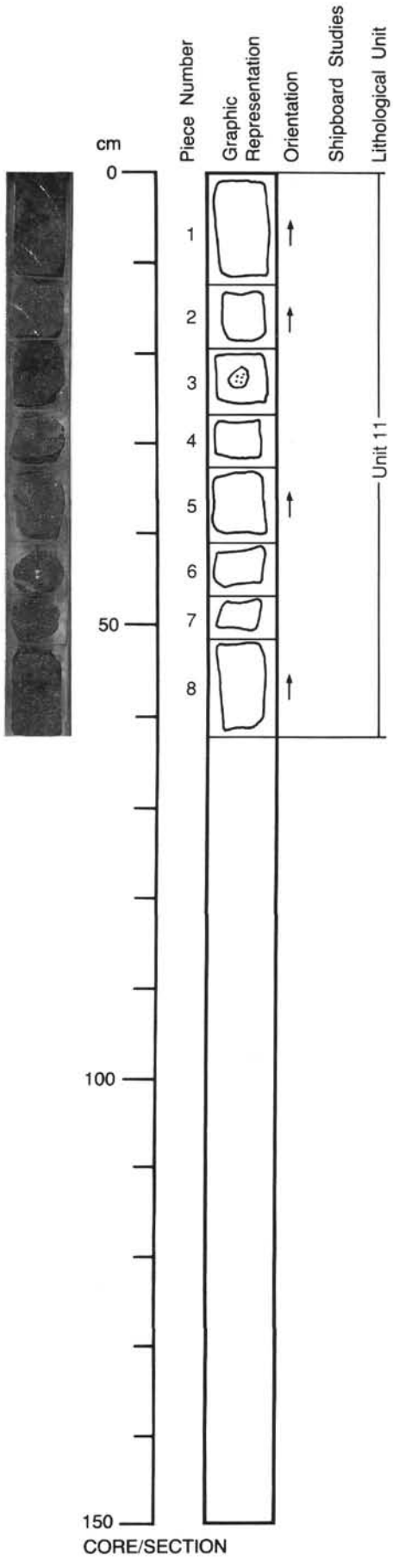


126-791B-67R-2

UNIT 11: BASALT MOUSSE

Pieces 1-18

CONTACTS: None.
PHENOCRYSTS:
Olivine - 2%; <1 mm; euhedral, equant, fresh.
Plagioclase - <=5%; <1 mm; euhedral, elongate, fresh.
GROUNDMASS: Microvesicular, devitrified glass.
VESICLES: 50%; <0.2 mm; round; random; smectite lining plus occasional zeolite.
COLOR: Gray, N5.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Above description applies to the most common type of "clast" in a matrix which is very similar in composition. The matrix also has <1 mm olivine and plagioclase crystals, often in clots, within a vesicular glass (30%, 0.1-0.5 mm) which is less devitried than the clasts, and less vesicular around crystal clots.

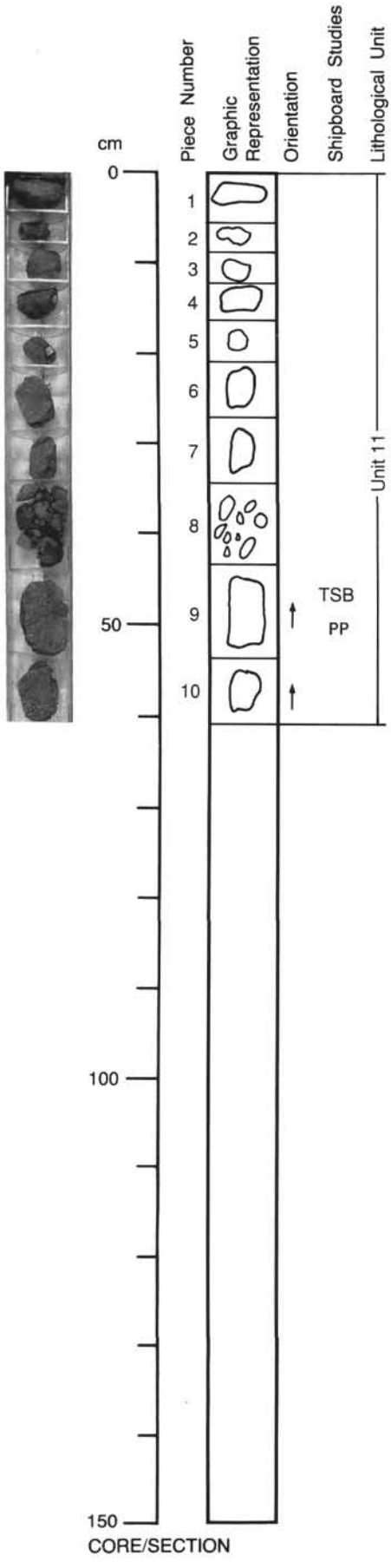


126-791B-67R-3

UNIT 11: BASALT MOUSSE

Pieces 1-8

CONTACTS: None.
PHENOCRYSTS:
Olivine - 2%; <1 mm; euhedral, equant, fresh.
Plagioclase - <=5%; <1 mm; euhedral, elongate, fresh.
GROUNDMASS: Microvesicular, devitrified glass.
VESICLES: 50%; <0.2 mm; round; random; smectite lining plus occasional zeolite.
COLOR: Gray, N5.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Above description applies to the most common type of "clast" in a matrix which is very similar in composition. The matrix also has <1 mm olivine and plagioclase crystals, often in clots, within a vesicular glass (30%, 0.1-0.5 mm) which is less devitried than the clasts, and less vesicular around crystal clots.

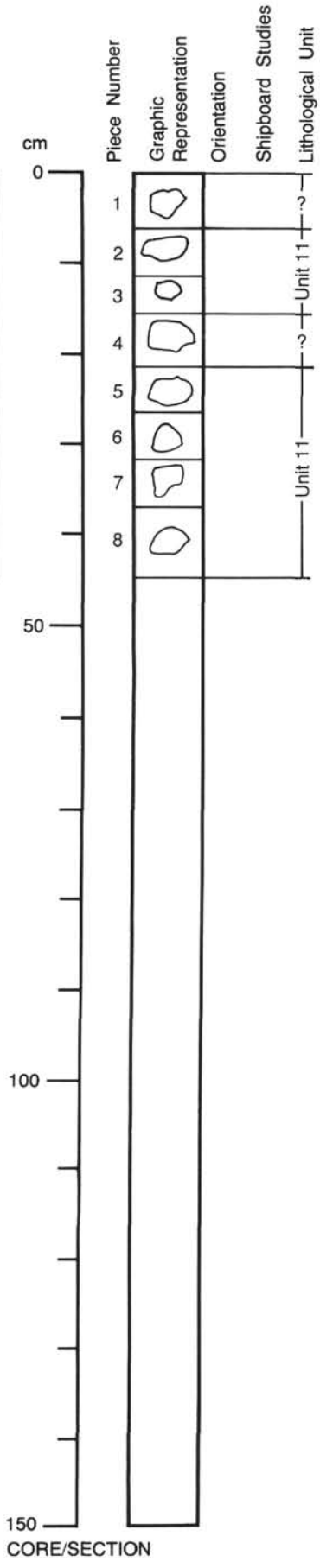


126-791B-68R-1

UNIT 11: BASALT MOUSSE

Pieces 1-10

CONTACTS: None.
PHENOCRYSTS:
Olivine - 2%; <1 mm; euhedral, equant, fresh.
Plagioclase - <=5%; <1 mm; euhedral, elongate, fresh.
GROUNDMASS: Microvesicular, devitrified glass.
VESICLES: 50%; <0.2 mm; round; random; smectite lining plus occasional zeolite.
COLOR: Gray, N5.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Above description applies to the most common type of "clast" in a matrix which is very similar in composition. The matrix also has <1 mm olivine and plagioclase crystals, often in clots, within a vesicular glass (30%, 0.1-0.5 mm) which is less devitried than the clasts, and less vesicular around crystal clots.

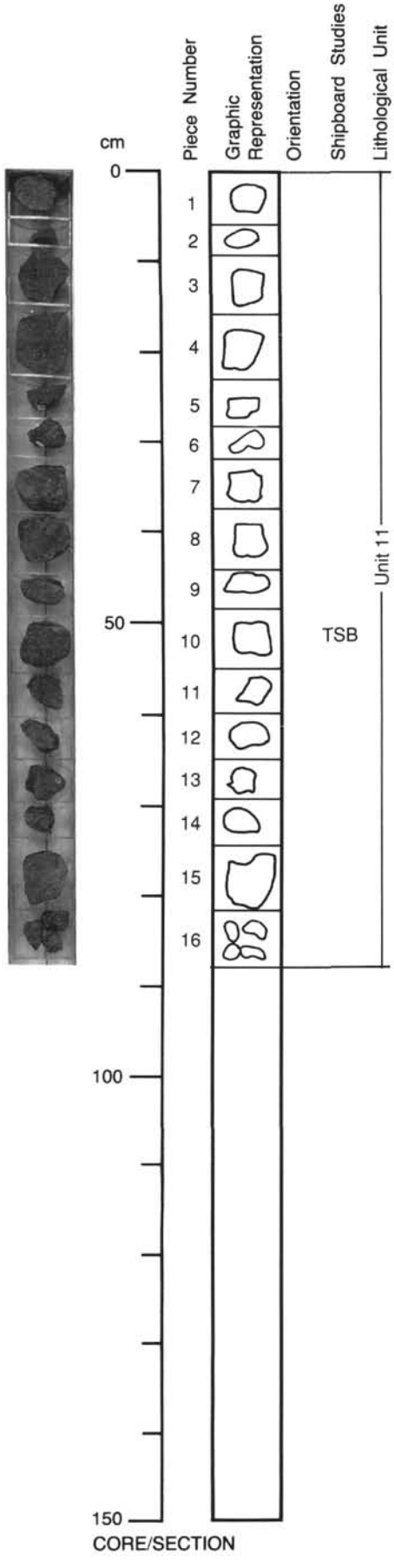


126-791B-69R-1

UNIT 11: BASALT MOUSSE

Pieces 1-8

CONTACTS: None.
PHENOCRYSTS:
Olivine - 2%; <1 mm; euhedral, equant, fresh.
Plagioclase - <=5%; <1 mm; euhedral, elongate, fresh.
GROUNDMASS: Microvesicular, devitrified glass.
VESICLES: 50%; <0.2 mm; round; random; smectite lining plus occasional zeolite.
COLOR: Gray, N5.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Above description applies to the most common type of "clast" in a matrix which is very similar in composition. The matrix also has <1 mm olivine and plagioclase crystals, often in clots, within a vesicular glass (30%, 0.1-0.5 mm) which is less devitried than the clasts, and less vesicular around crystal clots.

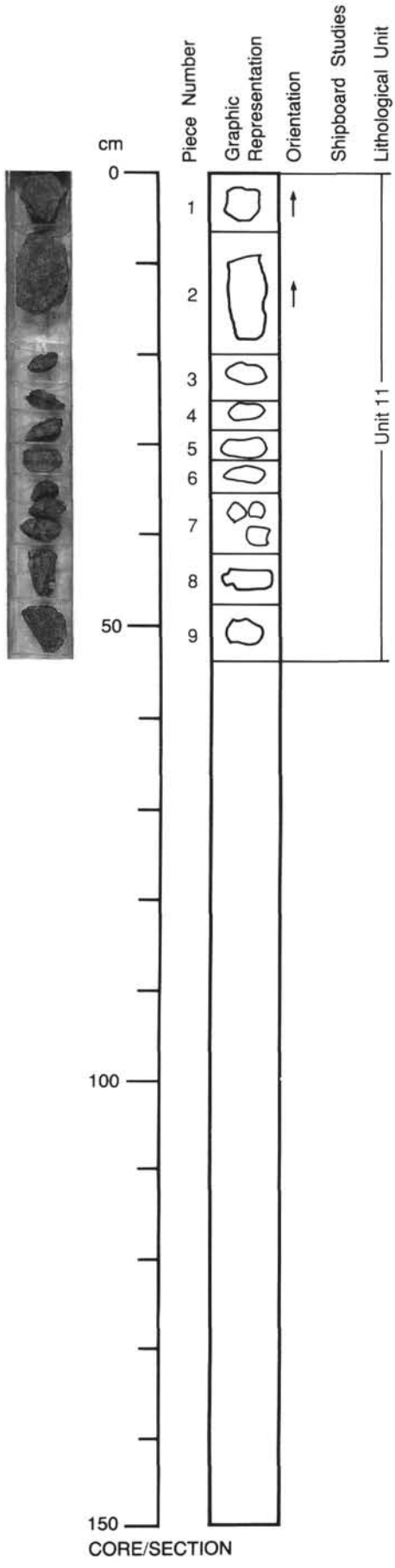


126-791B-70R-1

UNIT 11: BASALT MOUSSE

Pieces 1-16

CONTACTS: None.
PHENOCRYSTS:
Olivine - 2%; <1 mm; euhedral, equant, fresh.
Plagioclase - <=5%; <1 mm; euhedral, elongate, fresh.
GROUNDMASS: Microvesicular, devitrified glass.
VESICLES: 50%; <0.2 mm; round; random; smectite lining plus occasional zeolite.
COLOR: Gray, N5.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Above description applies to the most common type of "clast" in a matrix which is very similar in composition. The matrix also has <1 mm olivine and plagioclase crystals, often in clots, within a vesicular glass (30%, 0.1-0.5 mm) which is less devitried than the clasts, and less vesicular around crystal clots.

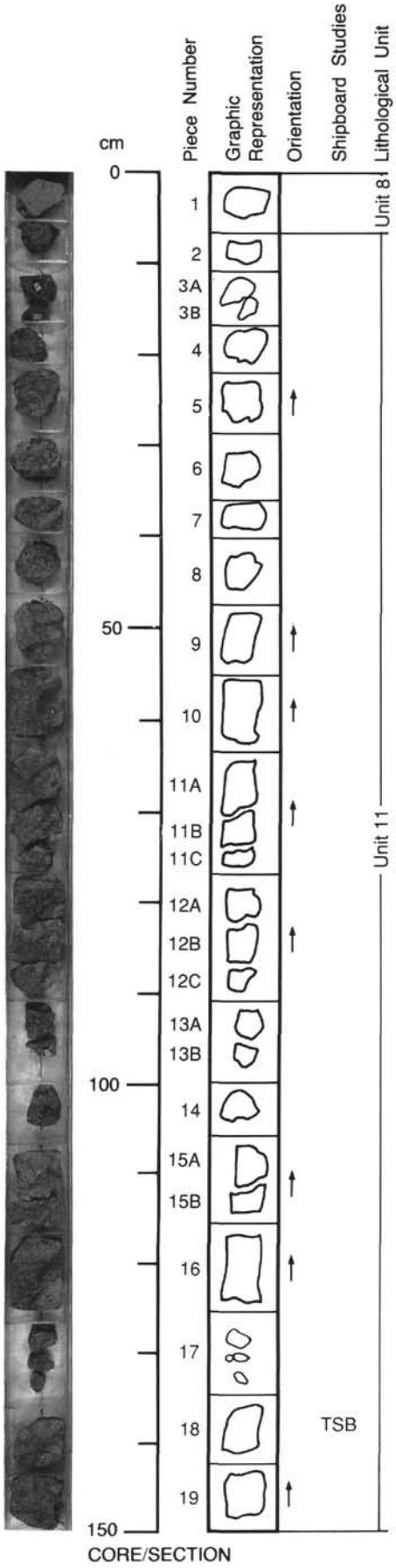


126-791B-71R-1

UNIT 11: BASALT MOUSSE

Pieces 1-9

CONTACTS: None.
PHENOCRYSTS:
Olivine - 2%; <1 mm; euhedral, equant, fresh.
Plagioclase - <=5%; <1 mm; euhedral, elongate, fresh.
GROUNDMASS: Microvesicular, devitrified glass.
VESICLES: 50%; <0.2 mm; round; random; smectite lining plus occasional zeolite.
COLOR: Gray, N5.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Above description applies to the most common type of "clast" in a matrix which is very similar in composition. The matrix also has <1 mm olivine and plagioclase crystals, often in clots, within a vesicular glass (30%, 0.1-0.5 mm) which is less devitried than the clasts, and less vesicular around crystal clots.



126-791B-72R-1

UNIT 8: DIABASE

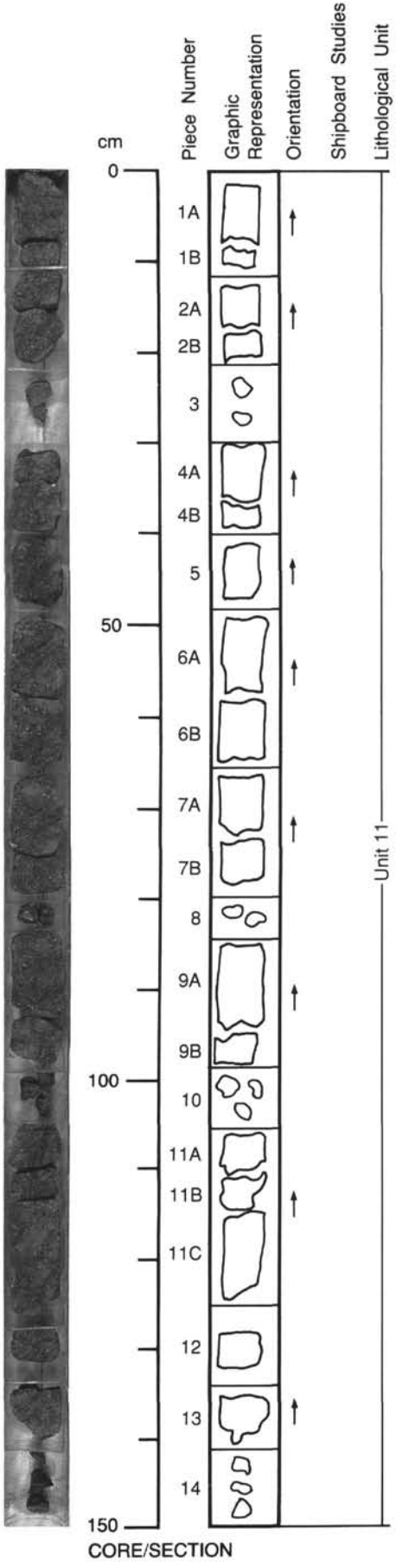
Piece 1

CONTACTS: None.
PHENOCRYSTS:
Plagioclase - 2%; 1-2 mm; fresh.
GROUNDMASS: Flow-aligned plagioclase, clinopyroxene, microvesicular glass.
VESICLES: <1 mm.
COLOR: Medium gray, N5.
STRUCTURE: None.
ALTERATION: Slight.
VEINS/FRACTURES: Chlorite vein in one piece.

UNIT 11: BASALT

Pieces 2-19

CONTACTS: None.
PHENOCRYSTS: Olivine altering to smectite in cracks.
Olivine - 2%; <1 mm; euhedral, equant.
Plagioclase - <5%; <1 mm; euhedral, elongate, fresh.
GROUNDMASS: Microvesicular, more devitrified than higher in Unit 11.
VESICLES: 50%; <0.2 mm; round; random; increasing smectite and zeolite.
COLOR: Gray, N5.
STRUCTURE: None.
ALTERATION: As noted above.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Above description applies to the most common type of "clast" in a matrix which is very similar in composition. The matrix also has <1 mm olivine and plagioclase crystals, often in clots, within vesicular (30%, 0.1-0.5 mm) glass which is less devitrified than the clasts, and less vesicular around crystal clots.

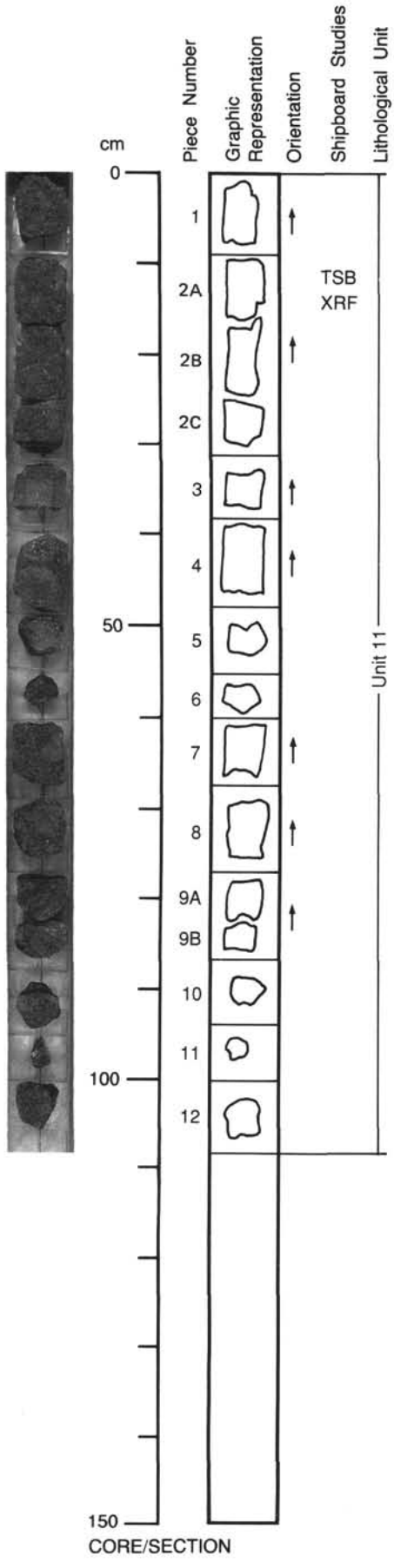


126-791B-72R-2

UNIT 11: BASALT MOUSSE

Pieces 1-14

CONTACTS: None.
PHENOCRYSTS: Olivine altering to smectite in cracks.
Olivine - 2%; <1 mm; euhedral, equant.
Plagioclase - <5%; <1 mm; euhedral, elongate, fresh.
GROUNDMASS: Microvesicular, more devitrified than higher in Unit 11.
VESICLES: 50%; <0.2 mm; round; random; increasing smectite and zeolite.
COLOR: Gray, N5.
STRUCTURE: None.
ALTERATION: As noted above.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Above description applies to the most common type of "clast" in a matrix which is very similar in composition. The matrix also has <1 mm olivine and plagioclase crystals, often in clots, within vesicular (30%, 0.1-0.5 mm) glass which is less devitrified than the clasts, and less vesicular around crystal clots.

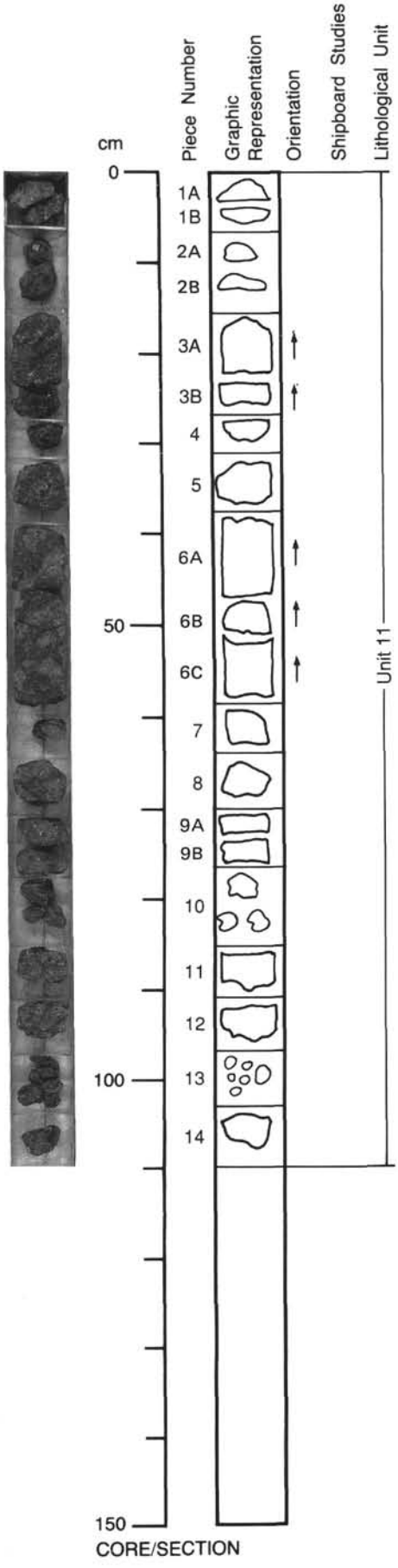


126-791B-72R-3

UNIT 11: BASALT MOUSSE

Pieces 1-12

CONTACTS: None.
PHENOCRYSTS: Olivine altering to smectite in cracks.
Olivine - 2%; <1 mm; euhedral, equant.
Plagioclase - <5%; <1 mm; euhedral, elongate, fresh.
GROUNDMASS: Microvesicular, more devitrified than higher in Unit 11.
VESICLES: 50%; <0.2 mm; round; random; increasing smectite and zeolite.
COLOR: Gray, N5.
STRUCTURE: None.
ALTERATION: As noted above.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Above description applies to the most common type of "clast" in a matrix which is very similar in composition. The matrix also has <1 mm olivine and plagioclase crystals, often in clots, within vesicular (30%, 0.1-0.5 mm) glass which is less devitrified than the clasts, and less vesicular around crystal clots.

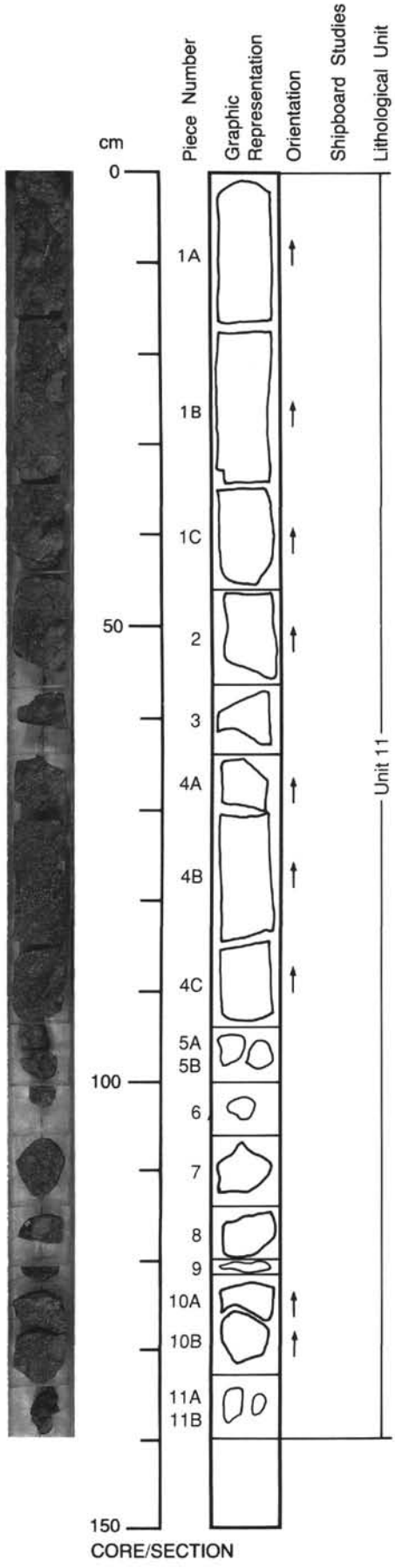


126-791B-73R-1

UNIT 11: BASALT MOUSSE

Pieces 1-14

CONTACTS: None.
PHENOCRYSTS: Olivine altering to smectite in cracks.
Olivine - 2%; <1 mm; euhedral, equant.
Plagioclase - <5%; <1 mm; euhedral, elongate, fresh.
GROUNDMASS: Microvesicular, more devitrified than higher in Unit 11.
VESICLES: 50%; <0.2 mm; round; random; increasing smectite and zeolite.
COLOR: Gray, N5.
STRUCTURE: None.
ALTERATION: As noted above.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Above description applies to the most common type of "clast" in a matrix which is very similar in composition. The matrix also has <1 mm olivine and plagioclase crystals, often in clots, within vesicular (30%, 0.1-0.5 mm) glass which is less devitrified than the clasts, and less vesicular around crystal clots.

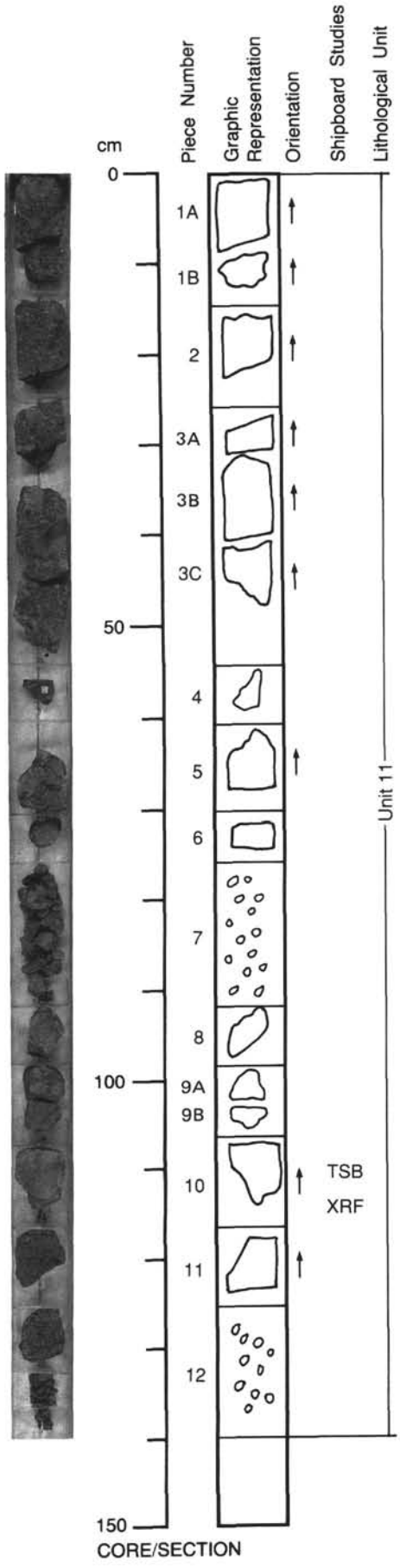


126-791B-73R-2

UNIT 11: BASALT MOUSSE

Pieces 1-11

CONTACTS: None.
PHENOCRYSTS: Olivine altering to smectite in cracks.
Olivine - 2%; <1 mm; euhedral, equant.
Plagioclase - <5%; <1 mm; euhedral, elongate, fresh.
GROUNDMASS: Microvesicular, more devitrified than higher in Unit 11.
VESICLES: 50%; <0.2 mm; round; random; increasing smectite and zeolite.
COLOR: Gray, N5.
STRUCTURE: None.
ALTERATION: As noted above.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Above description applies to the most common type of "clast" in a matrix which is very similar in composition. The matrix also has <1 mm olivine and plagioclase crystals, often in clots, within vesicular (30%, 0.1-0.5 mm) glass which is less devitrified than the clasts, and less vesicular around crystal clots.

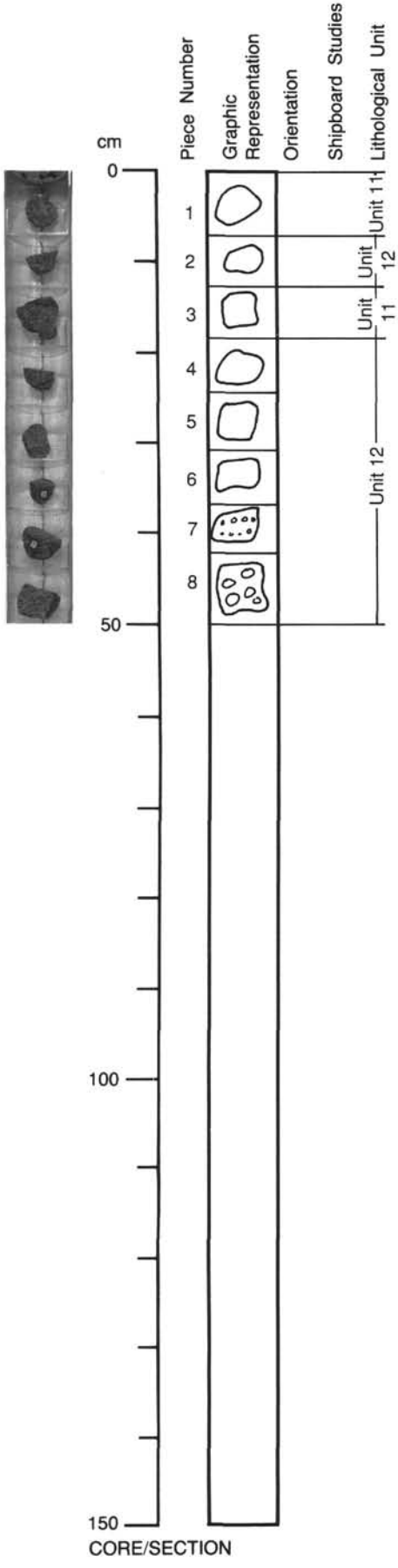


126-791B-73R-3

UNIT 11: BASALT MOUSSE

Pieces 1-12

CONTACTS: None.
PHENOCRYSTS: Olivine altering to smectite in cracks.
Olivine - 2%; <1 mm; euhedral, equant.
Plagioclase - <5%; <1 mm; euhedral, elongate, fresh.
GROUNDMASS: Microvesicular, more devitrified than higher in Unit 11.
VESICLES: 50%; <0.2 mm; round; random; increasing smectite and zeolite.
COLOR: Gray, N5.
STRUCTURE: None.
ALTERATION: As noted above.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Above description applies to the most common type of "clast" in a matrix which is very similar in composition. The matrix also has <1 mm olivine and plagioclase crystals, often in clots, within vesicular (30%, 0.1-0.5 mm) glass which is less devitrified than the clasts, and less vesicular around crystal clots.



126-791B-74R-1

UNIT 11: BASALT MOUSSE

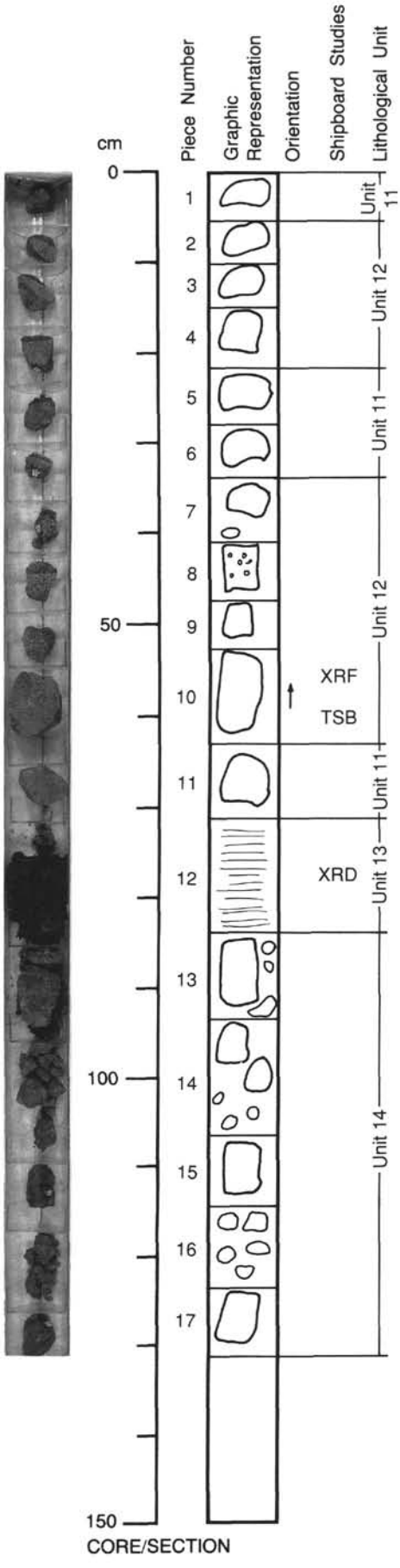
Pieces 1, 3

CONTACTS: None.
PHENOCRYSTS: Olivine altering to smectite in cracks.
Olivine - 2%; <1 mm; euhedral, equant.
Plagioclase - <5%; <1 mm; euhedral, elongate, fresh.
GROUNDMASS: Microvesicular, more devitrified than higher in Unit 11.
VESICLES: 50%; <0.2 mm; round; random; increasing smectite and zeolite.
COLOR: Gray, N5.
STRUCTURE: None.
ALTERATION: As noted above.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Above description applies to the most common type of "clast" in a matrix which is very similar in composition. The matrix also has <1 mm olivine and plagioclase crystals, often in clots, within vesicular (30%, 0.1-0.5 mm) glass which is less devitrified than the clasts, and less vesicular around crystal clots.

UNIT 12: BASALT CLASTS

Pieces 2 and 4-8

CONTACTS: None.
PHENOCRYSTS:
Plagioclase - 10%; <1.5 mm; euhedral, elongate, fresh.
GROUNDMASS: Intersertal, clinopyroxene + plagioclase + devitrified glass, microvesicular.
VESICLES: 10%; <1 mm; round; random; smectite, zeolite fillings.
COLOR: Gray, N5.
STRUCTURE: None.
ALTERATION: As above.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Mostly clasts with thin, partial coatings of greenish matrix such as the Unit 11 mousse.



126-791B-75R-1

UNIT 11: BASALT MOUSSE

Pieces 1, 5, 6, 11

CONTACTS: None.
PHENOCRYSTS: Olivine altering to smectite in cracks.
Olivine - 2%; <1 mm; euhedral, equant.
Plagioclase - <5%; <1 mm; euhedral, elongate, fresh.
GROUNDMASS: Microvesicular, more devitrified than higher in Unit 11.
VESICLES: 50%; <0.2 mm; round; random; increasing smectite and zeolite.
COLOR: Gray, N5.
STRUCTURE: None.
ALTERATION: As noted above.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Above description applies to the most common type of "clast" in a matrix which is very similar in composition. The matrix also has <1 mm olivine and plagioclase crystals, often in clots, within vesicular (30%, 0.1-0.5 mm) glass which is less devitrified than the clasts, and less vesicular around crystal clots.

UNIT 12: BASALT CLASTS

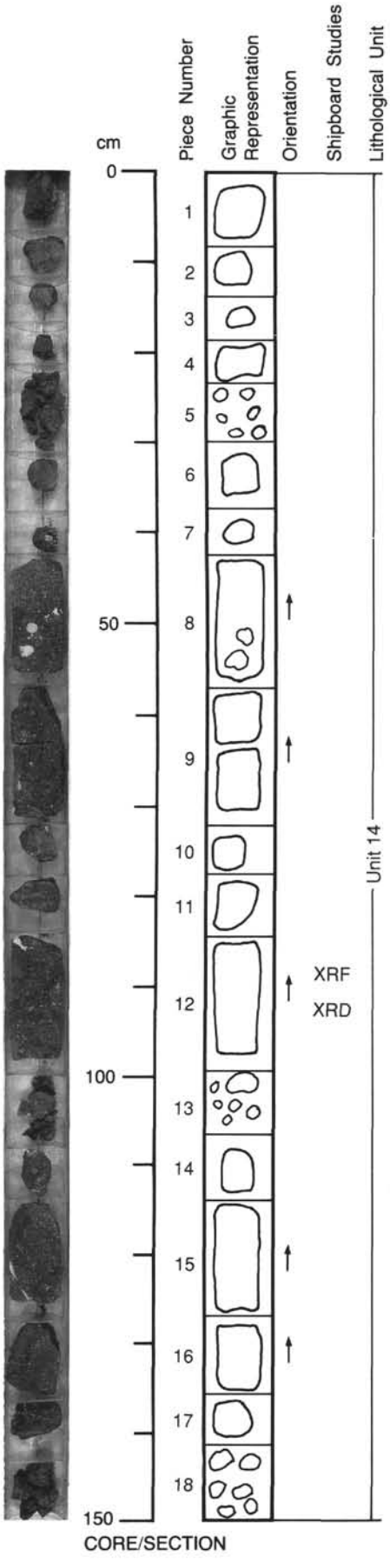
Pieces 2-4 and 7-10

CONTACTS: None.
PHENOCRYSTS:
GROUNDMASS: Intersertal, clinopyroxene + plagioclase + devitrified glass, microvesicular.
VESICLES: 10%; <1 mm; round; random; smectite, zeolite fillings.
COLOR: Gray, N5.
STRUCTURE: None.
ALTERATION: As above.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Mostly clasts with thin, partial coatings of greenish matrix such as the Unit 11 mousse.

UNIT 14: BASALT MOUSSE

Pieces 13-17

CONTACTS: None.
PHENOCRYSTS:
Olivine - 1-5%; <5 mm; pseudomorphed by smectite and iron-oxide.
Plagioclase - 1-5%; <5 mm; fresh.
GROUNDMASS: Microvesicular, devitrified iron-stained glass (60%).
VESICLES: 10%; <0.2 mm; round; random; smectite, zeolite fillings.
COLOR: Green-gray.
STRUCTURE: None.
ALTERATION: More than in Unit 11.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Above description applies to "clasts" in a matrix which is very similar in composition. The matrix also has <5 mm altered olivine and fresh plagioclase crystals, often in clots, within vesicular (30%, <0.1 mm, slightly flattened) glass.

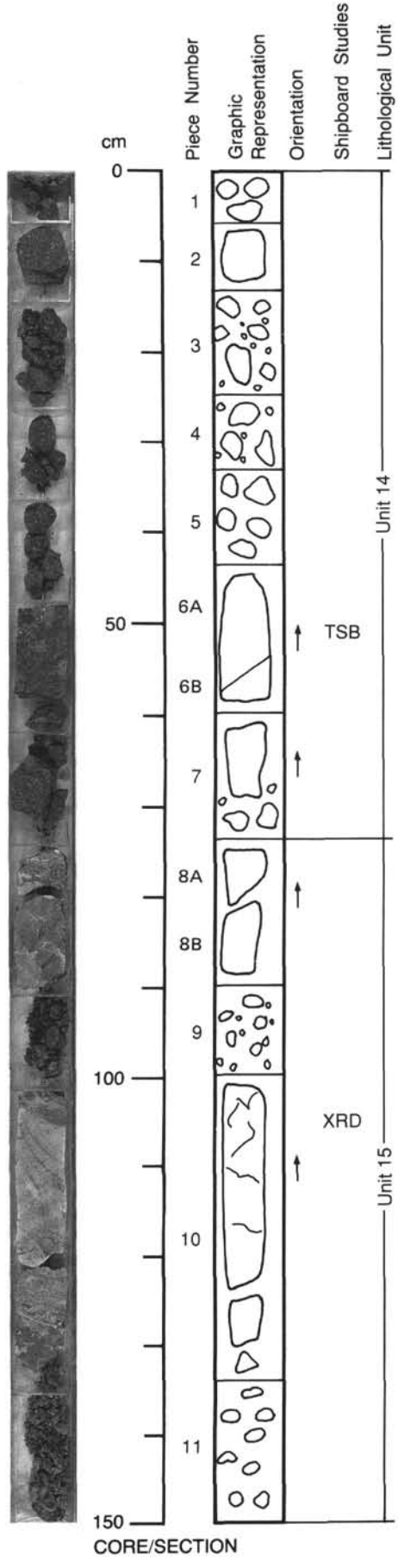


126-791B-76R-1

UNIT 14: BASALT MOUSSE

Pieces 1-18

CONTACTS: None.
PHENOCRYSTS:
Olivine - 1-5%; <5 mm; pseudomorphed by smectite and iron-oxide.
Plagioclase - 1-5%; <5 mm; fresh.
GROUNDMASS: Microvesicular, devitrified iron-stained glass (60%).
VESICLES: 10%; <0.2 mm; round; random; smectite, zeolite fillings.
COLOR: Green-gray.
STRUCTURE: None.
ALTERATION: More than in Unit 11.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Above description applies to "clasts" in a matrix which is very similar in composition. The matrix also has <5 mm altered olivine and fresh plagioclase crystals, often in clots, within vesicular (30%, <0.1 mm, slightly flattened) glass.



126-791B-76R-2

UNIT 14: BASALT MOUSSE

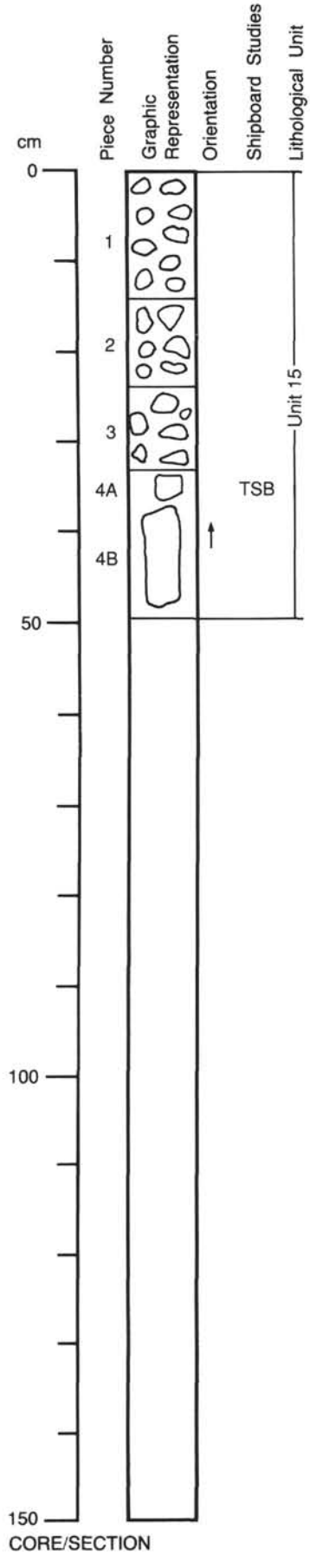
Pieces 1-7

CONTACTS: None.
PHENOCRYSTS:
Olivine - 1-5%; <5 mm; pseudomorphed by smectite and iron-oxide.
Plagioclase - 1-5%; <5 mm; fresh.
GROUNDMASS: Microvesicular, devitrified iron-stained glass (60%).
VESICLES: 10%; <0.2 mm; round; random; smectite, zeolite fillings.
COLOR: Green-gray.
STRUCTURE: None.
ALTERATION: More than in Unit 11.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Above description applies to "clasts" in a matrix which is very similar in composition. The matrix also has <5 mm altered olivine and fresh plagioclase crystals, often in clots, within vesicular (30%, <0.1 mm, slightly flattened) glass.

UNIT 15: DIABASE

Pieces 8-11

PHENOCRYSTS:
Plagioclase - 40%; <0.5 mm.
Olivine - 2%; 0.5 mm; altered to smectite, oxide.
Clinopyroxene - 30%; <0.1 mm.
FeTi oxide - 30%; 0.1 mm.
GROUNDMASS: Devitrified glass.
VESICLES: None.
COLOR: Gray.
ALTERATION: As above.
VEINS/FRACTURES: 0-25%; 0.5 - 2 cm; subvertical; gypsum veins in Pieces 8 and 10.

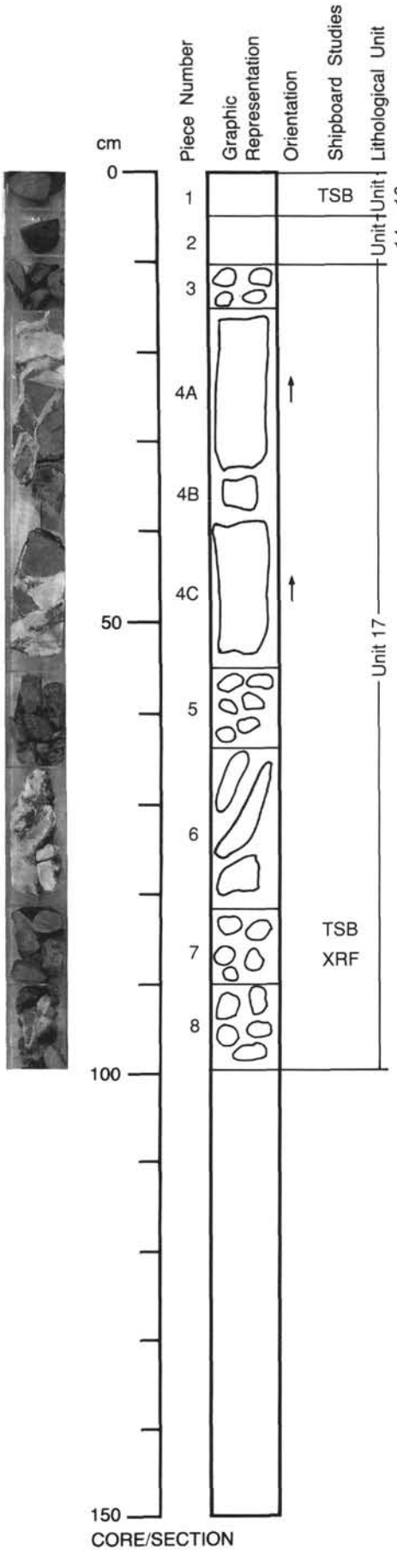


126-791B-76R-3

UNIT 15: DIABASE

Pieces 1-4

CONTACTS: None.
PHENOCRYSTS:
Plagioclase - 40%; <0.5 mm.
Clinopyroxene - 30%; <1.0 mm.
FeTi oxide - 30%; 0.1 mm.
Olivine - 2%; 0.5 mm; altered to smectite, oxide.
GROUNDMASS: Devitrified glass.
VESICLES: None.
COLOR: Gray.
STRUCTURE: None.



126-791B-77R-1

UNIT 16: CRYSTAL-LITHIC ASH TUFF

Piece 1

CONTACTS: None.
PHENOCRYSTS:
Plagioclase - 5%; 0.1-0.2 mm; some sericitization.
GROUNDMASS: Fine-grained.
VESICLES: None.
COLOR: Overall mottled dark greenish gray.
STRUCTURE: None.
ALTERATION: Chlorite, hematite, calcite.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Unwelded, undeformed pumice and lithic (10%, 0.2-0.5 mm) fragments.

UNIT 14: BASALT MOUSSE

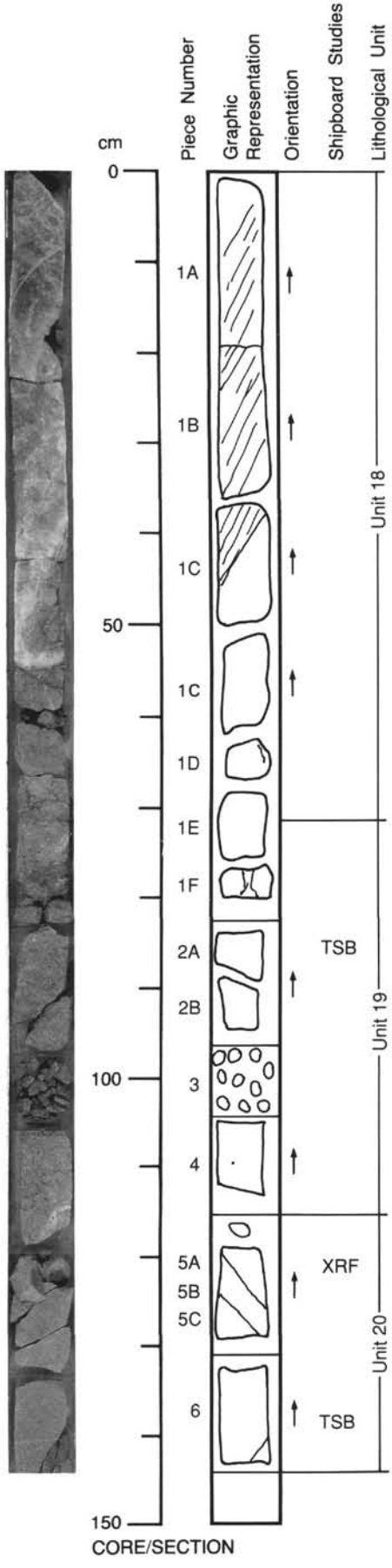
Piece 2

CONTACTS: None.
PHENOCRYSTS:
Olivine - 1-5%; <5 mm; pseudomorphed by smectite and iron-oxide.
Plagioclase - 1-5%; <5 mm; fresh.
GROUNDMASS: Microvesicular, devitrified iron-stained glass (60%).
VESICLES: 10%; <0.2 mm; round; random; smectite, zeolite fillings.
COLOR: Green-gray.
STRUCTURE: None.
ALTERATION: More than in Unit 11.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Above description applies to "clasts" in a matrix which is very similar in composition. The matrix also has <5 mm altered olivine and fresh plagioclase crystals, often in clots, within vesicular (30%, <0.1 mm, slightly flattened) glass.

UNIT 17: DIABASE

Pieces 3-8

CONTACTS: None.
PHENOCRYSTS:
Plagioclase - 60%; 0.2-1.0 mm; subhedral.
Clinopyroxene - 10%; 0.5-1.0 mm; anhedral.
Olivine - 2%; <0.5 mm; altered to smectite, chlorite.
GROUNDMASS: None.
VESICLES: None.
COLOR: Olive black.
STRUCTURE: Slickensides in Piece 5.
ALTERATION: Glass altered to chlorite and smectite.
VEINS/FRACTURES: None.



126-791B-77R-2

UNIT 18: GYPSUM-MINERALIZED FRACTURE BRECCIA IN LAPILLI TUFF

Pieces 1A-1E

CONTACTS: Sharp, depositional with Unit 19.
PHENOCRYSTS: None.
GROUNDMASS: Fine-grained.
VESICLES: None.
COLOR: Purple, gray, green clasts.
STRUCTURE: Complex.
ALTERATION: Extensive.
VEINS/FRACTURES: 3 sets of fracture-filling events, at about 45 degrees to core axis; gypsum in veins.
ADDITIONAL COMMENTS: Breccia clasts (1-4 cm) are crystal-lithic and welded lithic-vitric lapilli tuffs.

UNIT 19: CRYSTAL-LITHIC LAPILLI TUFF

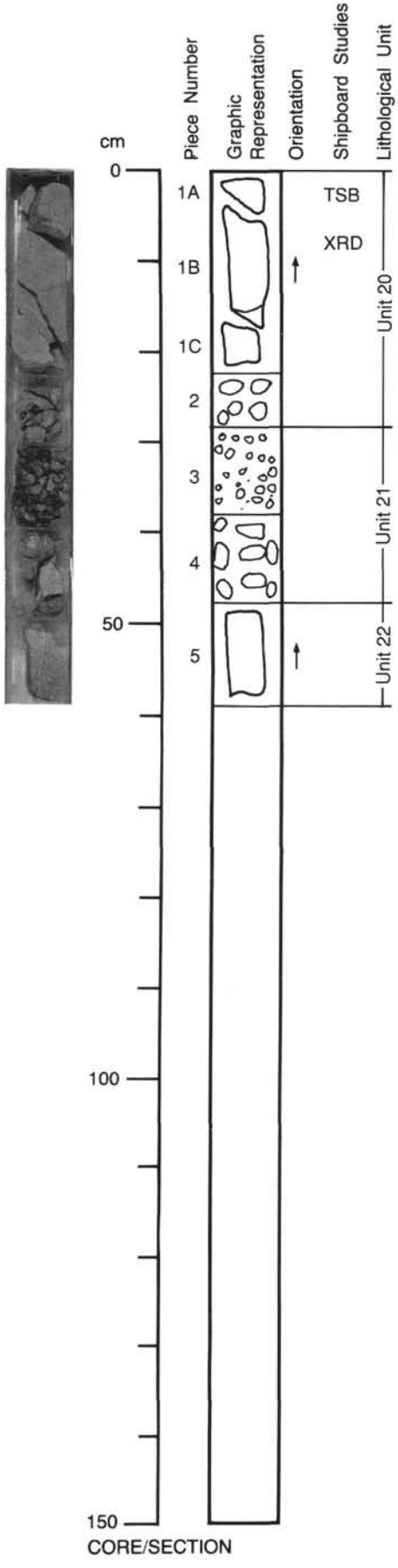
Pieces 1E-4

CONTACTS: Separated from Unit 18 by pale fine ash, 3 mm thick.
PHENOCRYSTS: None.
GROUNDMASS: Fine-grained.
VESICLES: None.
COLOR: Green and gray.
STRUCTURE: Crudely layered, fining upward.
ALTERATION: 50%: chlorite, smectite, calcite.
VEINS/FRACTURES: Possible cleavage fabric at high angle to bedding.
ADDITIONAL COMMENTS: Welded tuff with eutaxitic textures. Clasts: 50% vitric fragments of flattened pumice; 40% equant lithic (andesite-dacite?) clasts; 5% Fe-Ti oxides; 3% calcite after mafic minerals(?); 2% recrystallized quartz. Clasts are 2-10 mm and well-sorted.

UNIT 20: CRYSTAL-LITHIC ASH TUFF

Pieces 5-6

CONTACTS: None.
PHENOCRYSTS: None.
GROUNDMASS: Fine
VESICLES: None.
COLOR: Pale green, 10G 8/2.
STRUCTURE: Bedded.
ALTERATION: Chlorite, calcite, quartz.
VEINS/FRACTURES: Incipient cleavage in chlorite at 45 degrees to bedding.
ADDITIONAL COMMENTS: Fining-upward bedding. Welded eutaxitic textures. 70-80%. pumice/glass shards altered to 6:1 chlorite:calcite assemblage. Lithics and crystals, 10-20% each.



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UNIT 20: CRYSTAL-LITHIC ASH TUFF

Pieces 1-2

CONTACTS: None.
PHENOCRYSTS: None.
GROUNDMASS: Fine.
VESICLES: None.
COLOR: Pale green, 10G 8/2.
STRUCTURE: Bedded.
ALTERATION: Chlorite, calcite, quartz.
VEINS/FRACTURES: Incipient cleavage in chlorite at 45 degrees to bedding.
ADDITIONAL COMMENTS: Fining-upward bedding. Welded eutaxitic textures. 70-80%. pumice/glass shards altered to 6:1 chlorite: calcite assemblage. Lithics and crystals, 10-20% each.

UNIT 21: CRYSTAL-LITHIC ASH TUFF

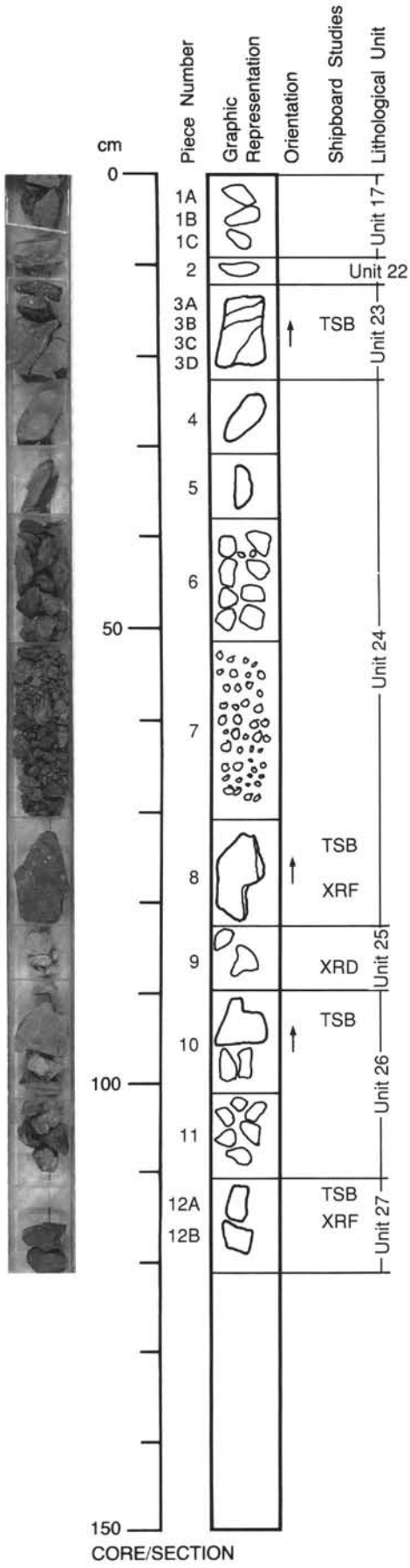
Pieces 3-4

CONTACTS: Gradational.
PHENOCRYSTS: None.
GROUNDMASS: Fine.
VESICLES: None.
COLOR: Mottled greenish grey; darker green than Unit 20.
STRUCTURE: Bedded.
ALTERATION: Chlorite, epidote.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Pumice not as flattened as in Unit 20.

UNIT 22: LITHIC LAPILLI TUFF

Piece 5

CONTACTS: None.
PHENOCRYSTS: Plagioclase and clinopyroxene microphenocrysts in lithics.
GROUNDMASS: Fine.
VESICLES: None.
COLOR: Pale green.
STRUCTURE: None.
ALTERATION: Chlorite after glass; epidote after clinopyroxene.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Unwelded, poorly sorted. Lithic lava fragments (50%). Fine chlorite after glass (50%).



126-791B-78R-1

UNIT 17: DIABASE

Piece 1

CONTACTS: None.
PHENOCRYSTS:
Plagioclase - 60%; 0.2-1.0 mm; subhedral.
Clinopyroxene - 10%; 0.5-1.0 mm; anhedral.
Olivine - 2%; <0.5 mm; altered to smectite, chlorite.
GROUNDMASS: None
VESICLES: None.
COLOR: Olive black.
STRUCTURE: Slickensides in Piece 5.
ALTERATION: Glass altered to chlorite and smectite.
VEINS/FRACTURES: None.

UNIT 22: LITHIC LAPILLI TUFF

Piece 2

CONTACTS: None.
PHENOCRYSTS: Plagioclase and clinopyroxene microphenocrysts in lithics.
GROUNDMASS: Fine.
VESICLES: None.
COLOR: Pale green.
STRUCTURE: None.
ALTERATION: Chlorite after glass; epidote after clinopyroxene.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Unwelded, poorly sorted. Lithic lava fragments (50%) Fine chlorite after glass (50%).

UNIT 23: DIABASE

Piece 3

CONTACTS: None.
PHENOCRYSTS:
Plagioclase - 60%; <0.1-0.3 mm; sericitized.
Clinopyroxene - 5%; <0.3-1.0 mm; subhedral, partly chlorite.
Olivine - 5%; <0.5 mm; chlorite.
GROUNDMASS: Intersertal, fine-grained.
VESICLES: None.
COLOR: Dark greenish grey, 5G 4/1.
STRUCTURE: None.
ALTERATION: Chlorite.
VEINS/FRACTURES: 5%; random; gypsum-filled.

UNIT 24: BASALT

Pieces 4-8

CONTACTS: None.
PHENOCRYSTS:
Olivine - 2-3%; <0.5 mm; altered to chlorite.
Plagioclase - 2%; 0.3-0.7 mm; euhedral.
GROUNDMASS: 50% plagioclase + 50% chlorite after glass; intersertal,microvesicular.
VESICLES: Radial chlorite fillings.
COLOR: Dark greenish gray, 5G 4/1.
STRUCTURE: None.
ALTERATION: As above.
VEINS/FRACTURES: Gypsum veins in Pieces 4 and 8.
ADDITIONAL COMMENTS: Rounded microvesicular glassy clasts with plagioclase laths are present, perhaps as xenoliths.

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UNIT 25: FELSIC CLAST + FAULT GOUGE

Piece 9

CONTACTS: None.
PHENOCRYSTS:
Plagioclase - 5-10%; <0.5 mm.
Chlorite - 2%; <0.5 mm.
GROUNDMASS: Fine-grained.
VESICLES: None.
COLOR: Medium gray, N5.
STRUCTURE: None.
ALTERATION: Chlorite, epidote.
VEINS/FRACTURES: Disseminated pyrite in mm veins.
ADDITIONAL COMMENTS: Above applies to 3 cm clast present with fault gouge in interval 9. Gouge contains chlorite and quartz.

UNIT 26: DIABASE

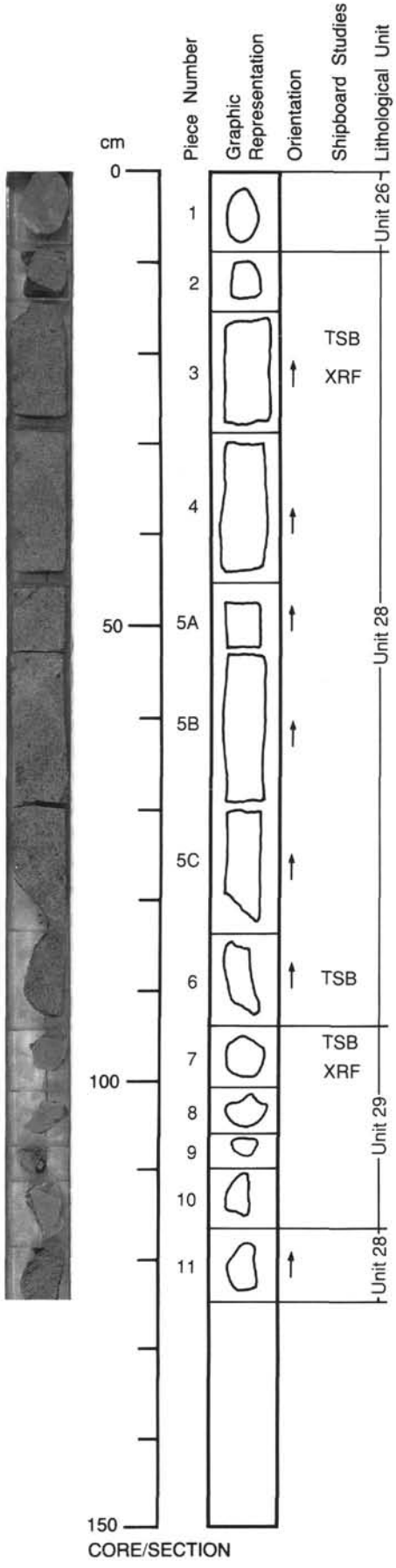
Pieces 10 and 11

CONTACTS: None.
PHENOCRYSTS:
Plagioclase - 60%; 0.2-1.0 mm.
Clinopyroxene - 10%; 0.5 mm.
Olivine - 5%; 0.5 mm; altered to chlorite.
GROUNDMASS: Intersertal glass altered to chlorite (30%.
VESICLES: None.
COLOR: Dark greenish gray, 5GY 4/1.
STRUCTURE: None.
ALTERATION: Disseminated pyrite and gypsum.
VEINS/FRACTURES: Weak alignment of plagioclase may be due to shearing.

UNIT 27: BASALT

Piece 12

CONTACTS: None.
PHENOCRYSTS:
Plagioclase - 65%; <5 mm; altered to clay, chlorite.
Clinopyroxene - 1%; <5 mm; altered to epidote.
GROUNDMASS: Microcrystalline; altered to chlorite, clay, quartz.
VESICLES: 20%; 1-2 mm; round; random; zeolite fillings.
COLOR: Medium blue gray, 5B 5/1.
STRUCTURE: None.
ALTERATION: As above.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Too altered to identify.



126-791B-79R-1

UNIT 26: DIABASE

Piece 1

CONTACTS: None.
PHENOCRYSTS:
Plagioclase - 60%; 0.2-1.0 mm.
Clinopyroxene - 10%; 0.5 mm.
Olivine - 5%; 0.5 mm; altered to chlorite.
GROUNDMASS: Intersertal glass altered to chlorite (30%).
VESICLES: None.
COLOR: Dark greenish gray, 5GY 4/1.
STRUCTURE: None.
ALTERATION: Disseminated pyrite and gypsum.
VEINS/FRACTURES: Weak alignment of plagioclase may be due to shearing.

UNIT 28: CRYSTAL-LITHIC TUFF

Pieces 2-6, and 11

CONTACTS: None.
PHENOCRYSTS: Plagioclase in clasts.
GROUNDMASS: Fine grained in clasts.
VESICLES: Elongate vesicles in clasts.
COLOR: Medium bluish gray, 5B 5/1.
STRUCTURE: Overall fining upwards.
ALTERATION: Shards altered to smectite, chlorite.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: *Eutaxitic, well sorted tuff consisting up 1-2 mm plagioclase.* (partly altered to chlorite) 40%, 1-4 mm heterolithologic lithic fragments (basalt-rhyolite? indeterminate) 20%, crushed pumice (altered to smectite,chlorite) 40%.

UNIT 29: DIABASE

Pieces 7-10

CONTACTS: None.
PHENOCRYSTS:
Plagioclase - 10%; 0.2-0.5 mm; euhedral-subhedral, altered to sericite.
Clinopyroxene - 3%; 0.2-0.3 mm; euhedral, altered to chlorite.
Olivine - 3%; 0.2-0.5 mm; euhedral, altered to chlorite.
GROUNDMASS: Plagioclase laths in fine-grained altered glass.
VESICLES: None.
COLOR: Medium blue gray, 5B 5/1.
STRUCTURE: None.
ALTERATION: Highly altered as above.
VEINS/FRACTURES: *Gypsum, pyrite, calcite in veins.*

126-791B-47R-01 (Piece 3,57-61 cm) OBSERVER: LTP WHERE SAMPLED: Unit 1

ROCK NAME: Basaltic breccia/olivine basalt

GRAIN SIZE: Fine

TEXTURE: Medium porphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	<1	1	0.2		Euhedral	Partly altered to smectites.
Plagioclase	3	3	</=0.5		Euhedral	
GROUNDMASS						
Feldspars	3	3	</=0.1		Euhedral	Abundant glassy groundmass.
Olivine	Tr	N/A	N/A		N/A	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE
Vesicles	73			Smectites	

COMMENTS: The matrix of the breccia is partly transferred glass. It contains centimetric clasts of olivine in little phyric basalts, sometimes the groundmass is unclear fresh glass. Not vesicular mousse. Unit 1.

126-791B-47R-01 (Piece 10,110-111 cm) OBSERVER: REX WHERE SAMPLED: Unit 1

ROCK NAME: Basalt breccia

GRAIN SIZE: ~0.5-5 mm + in thin section

TEXTURE: Fragmented glass + basalt clasts

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	2	2	0.5		Subhedral	Chromium-spinel inclusions.
Plagioclase	5	2	N/A		Euhedral	Large 0.1 mm fluid inclusions and strong zoning.
Clinopyroxene	5	5	N/A		Euhedral	
GROUNDMASS						
Plagioclase	25	25	0.1		Euhedral	
Glass	63	63	N/A		N/A	

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

COMMENTS: Clastic glass breccia. Two main clast types: dark, altered?, vitrophyric basalt, and a pale green vitrophyric basalt which forms most of the matrix of the slide.

126-791B-47R-01 (Piece 17,141-145 cm) OBSERVER: LTP WHERE SAMPLED: Unit 7

ROCK NAME: Basaltic breccia/olivine basalt

GRAIN SIZE: Fine

TEXTURE: Pyroclastic/porphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	2	N/A	</=0.5		Euhedral	Basaltic clasts.
Plagioclase	3	N/A	</=2		Euhedral	
GROUNDMASS						
Olivine	1	N/A	</=0.1		Euhedral	Basaltic clast.
Plagioclase	3	N/A	</=0.5		Euhedral	Flow altered basaltic clast. Glassy groundmass partly altered.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE
Vesicles	>25		0.3-3	Smectite + glass	Circular

COMMENTS: This basaltic breccia is mainly free of olivine phyric basalt clasts. The matrix of breccia includes olivine and plagioclase fragments as well as basaltic fragments with very fresh glass and not vesicular. Unit 1.

126-791B-48R-01 (Piece 9,43-46 cm) OBSERVER: LTP WHERE SAMPLED: Unit 2

ROCK NAME: Olivine-clinopyroxene-plagioclase phyric basalt

GRAIN SIZE: Fine

TEXTURE: Porphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	2	2	0.1-0.5		Euhedral	Fresh.
Plagioclase	4	4	>/=1		Subeuhedral	Often clustered sometimes with clinopyroxene.
Clinopyroxene	3	2	>/=1		Euhedral	
GROUNDMASS						
Plagioclase	3	?	>/=0.5		N/A	Flow aligned.
Olivine	<1	N/A	>/=0.1		N/A	
Clinopyroxene	2	N/A	>/=0.2		N/A	
Altered glass	N/A	N/A	N/A		N/A	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE
Vesicles	20		0.5-15	Smectites, zeolites	

COMMENTS: Glomeroporphyritic clots abundant.

126-791B-53R-01 (Piece 5,19-23 cm) OBSERVER: LTP WHERE SAMPLED:

ROCK NAME: Olivine-clinopyroxene-plagioclase phyric basalt

GRAIN SIZE: Fine

TEXTURE: Intersertal and porphyric

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	<1	1	0.5		Euhedral	Partly altered in smectites + calcite.
Plagioclase	3	3	1-1.5		Euhedral	Crystals often cluster.
Clinopyroxene	1.5	1.5	>/=3		Euhedral	Plagioclase inclusions.
GROUNDMASS						
Feldspar	10	N/A	>/=1		N/A	Flow aligned.
Clinopyroxene	5-6	N/A	0.1-0.5		N/A	Partly devitrified glass.

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Clays			Filling up vesicles.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE
Vesicles	N/A		<0.5-1.3	Smectites + glass	

COMMENTS: Glomeroporphyritic clots common.

126-791B-55R-01 (Piece 1,2-5 cm) OBSERVER: TOR WHERE SAMPLED:

ROCK NAME: Moderately plagioclase-olivine-phyric basalt

GRAIN SIZE: Fine

TEXTURE: Vesicular-intersertal

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	3	3	0.2-1.5		Euhedral	Fresh, partly embayed. Includes spinel.
Plagioclase	5	5	0.2-0.3		Euhedral	Fresh.
GROUNDMASS						
Olivine	N/A	N/A	<0.1		N/A	
Plagioclase	N/A	N/A	<0.1		N/A	
Glass	N/A	N/A	N/A		Devitrifying.	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE
Vesicles	20	Even	0.2-1.5		Round

COMMENTS: Unit 3.

126-791B-56R-01 (Piece 2,7-10 cm) OBSERVER: REX WHERE SAMPLED:

ROCK NAME: Moderately plagioclase olivine phyric basalt

GRAIN SIZE: Fine

TEXTURE: Porphyritic, intersertal

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	1-2	2	0.5-1		Euhedral	Altered along fractures (smectite occasionally glomeroporphyritic clusters).
Spinel	N/A	N/A	<0.05		N/A	Included in olivine.
GROUNDMASS						
Plagioclase	60	60	0.1		Laths	
Glass	27	N/A	N/A		N/A	Altered.

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Clays	<1	Olivine	Smectite replacing olivine.
Carbonate	5	Vesicles	Calcite replacing olivine along small veins and vesicles.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE
Vesicles	20	Ubiquitous	1-2	Calcite	Elongate-spherical

COMMENTS: Unit 3.

126-791B-56R-01 (Piece 13,45-48 cm) OBSERVER: TOR WHERE SAMPLED:

ROCK NAME: Highly plagioclase-clinopyroxene-olivine diabase

GRAIN SIZE: Fine

TEXTURE: Intersertal

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	2-3	2-3	0.05		Euhedral	Fresh.
Plagioclase	60	60	0.2		Euhedral	Laths fresh.
Clinopyroxene	15	15	0.05		Euhedral	Fresh.
Magnetite	3	3	0.05		Euhedral	
GROUNDMASS						
Glass	N/A	20	N/A		N/A	Altered to clay; smectite.

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Clays	20	Glass	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE	COMMENTS
Vesicles	5	Even	0.2		Round	Vesicles partly filled with smectite.

COMMENTS: Unit 4

126-791B-57R-01 (Piece 4,) OBSERVER: LTP WHERE SAMPLED:

ROCK NAME: Intersertal olivine plagioclase basalt

GRAIN SIZE: Fine

TEXTURE: Intersertal-fluidal highly porphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	5	5	1-1.5		Euhedral	Fresh, beginning to be altered along fractures. Includes spinel.
Plagioclase	10	10	0.2-0.5		Euhedral	
GROUNDMASS						
Plagioclase	N/A	N/A	</=0.2		N/A	Partly devitrifying.
Clinopyroxene	N/A	N/A	</=0.2		N/A	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE
Vesicles	25	Even	0.2-1.5	Calcite, smectite, zeolite	Round

COMMENTS: No top or bottom interval given. Unit 5.

126-791B-57R-01 (Piece 12,) OBSERVER: LTP WHERE SAMPLED:

ROCK NAME: Olivine-clinopyroxene-intersertal basalt

GRAIN SIZE: Fine

TEXTURE: Intersertal-medium porphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	1-2	3	1-2		Euhedral	Clustered and partly altered to calcite, smectite and celadonite.
Spinel	N/A	N/A	N/A		N/A	In inclusions in olivine.
GROUNDMASS						
Clinopyroxene	1-2	N/A	</=0.5		Sub-euhedral	
Plagioclase	10	N/A	~0.5		N/A	Very little glass and completely transformed.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE	COMMENTS
Vesicles	30		1-2?			Calcite, smectite.

COMMENTS: Different from the previous one-more coarse grained, tending to a dolomitic texture: Unit 5. Altered area surrounds fresher core in hand specimen but no difference apparent in thin section. No top or bottom interval given.

126-791B-59R-01 (Piece 5,46-47 cm) OBSERVER: TOR WHERE SAMPLED: Unit 6

ROCK NAME: Moderately plagioclase-olivine-phyric basalt

GRAIN SIZE: Fine

TEXTURE: Vesicular, intersertal

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	1	3	0.3-1		Euhedral	Embayed, replaced by calcite. Includes spinel.
Plagioclase	3	3	0.3-0.7		Euhedral	
GROUNDMASS						
Plagioclase	N/A	N/A	N/A		Laths	
Glass	N/A	N/A	N/A		N/A	Devitrified.

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Clays	3	Glass	
Carbonate	3	Olivine, vein	Fills vein throughout.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE	COMMENTS
Vesicles	10	Scattered	0.2-1		Irregular	Smectite on the vesicle walls.

COMMENTS: Unit 6.

126-791B-60R-01 (Piece 13,) OBSERVER: LTP WHERE SAMPLED:

ROCK NAME: Olivine-plagioclase phyric basalt

GRAIN SIZE: Fine grained

TEXTURE: Porphyritic, intersertal

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	1	1	N/A		Euhedral	Corroded olivine, sometimes clustered.
Plagioclase	2	0.5-1	N/A		Euhedral	
Spinel-Chromium	N/A	N/A	N/A		N/A	Inclusion in olivine.
GROUNDMASS						
Olivine	N/A	<0.5	N/A		N/A	Altered brown glass.
Plagioclase	N/A	.1-.5	N/A		N/A	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE	COMMENTS
Vesicles	20		1-3			Smectites.

COMMENTS: No top or bottom interval given. Unit 7.

126-791B-60R-01 (Piece 13,60-68 cm) OBSERVER: TOR WHERE SAMPLED:

ROCK NAME: Moderately plagioclase-olivine-phyric basalt

GRAIN SIZE: Fine

TEXTURE: Vesicular, intersertal

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	1	N/A	0.1-1		Euhedral	Embayed, some scattered.
Plagioclase	3	N/A	0.3		Euhedral	
GROUNDMASS						
Olivine	N/A	N/A	<0.1		N/A	
Plagioclase	N/A	N/A	N/A		N/A	Needles.
Glass	N/A	N/A	N/A		N/A	Devitrified.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE
Vesicles	20	Scattered	0.5-2		Irregular

126-791B-62R-01 (Piece 1B) OBSERVER: LTP WHERE SAMPLED:

ROCK NAME: Plagioclase phyric basalt

GRAIN SIZE: Fine

TEXTURE: Porphyritic, intersertal

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Plagioclase	5	N/A	</=0.5		Euhedral	Clustered in glomeroporphyritic clots.
GROUNDMASS						
Plagioclase	2	N/A	</=0.1		N/A	
Clinopyroxene	N/A	N/A	</=0.1		N/A	Quenched crystals are plumerose.
Glass	N/A	N/A	N/A		N/A	Highly vesicular.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE	COMMENTS
Vesicles	30		0.1-2	Smectites, chlorite	Rounded	Sometimes jointing.

COMMENTS: Quenched clinopyroxene crystals. Unit 10. No top or bottom interval given.

126-791B-62R-01 (Piece 5B,95-100 cm) OBSERVER: TOR WHERE SAMPLED:

ROCK NAME: Breccia unit 11 / matrix

GRAIN SIZE: Fine

TEXTURE: Vesicular, intersertal, porphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	N/A	N/A	N/A		Euhedral	Perfectly fresh as clots. Includes spinel.
Plagioclase	N/A	N/A	N/A		Euhedral	Perfectly fresh as clots.
GROUNDMASS						
Glass	N/A	N/A	N/A		N/A	Devitrified. Glass held together by clots.
Plagioclase	N/A	N/A	N/A		N/A	Needles.

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Clays	1	Vesicles	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE	COMMENTS
Vesicles	30	Random	0.1-0.5			Vesicles w/ smectite lining, vesicle walls.

COMMENTS: Phenocrysts are light beige and isotrophic. The glass looks "bubbly" and fresh: Contact: embayed but sharp edges of clasts poke into matrix, even vesicle walls of clasts can be edges (i.e., vesicle chilled before inclusion in matrix).

126-791B-62R-01 (Piece 5B,95-100 cm) OBSERVER: TOR WHERE SAMPLED:

ROCK NAME: Breccia unit 11/ clasts

GRAIN SIZE: Fine

TEXTURE: Vesicular, intersertal, porphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	2	2	0.5-1		Euhedral	Partly altered to smectite; clasts. Includes spinel.
Plagioclase	5	5	0.5-1		Euhedral	Fresh clasts.
GROUNDMASS						
Plagioclase	N/A	N/A	N/A		N/A	Needles.
Glass	N/A	N/A	N/A		N/A	Devitrified.

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Clays	3	Vesicles and olivine	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE	COMMENTS
Vesicles	25	Even	0.1-0.2			Rimmed with smectite and yellow minerals.

COMMENTS: Unit 11 mousse.

126-791B-63R-01 (Piece 13B,102-104 cm) OBSERVER: LTP WHERE SAMPLED: Unit 11

ROCK NAME: Basaltic breccia

GRAIN SIZE:

TEXTURE: Porphyritic, intersertal

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0	2	0.5		Euhedral	Pseudomorphs of olivine and smectites.
Plagioclase	4	4	0.5		Euhedral	Clustered in glomeroporphyritic aggregates.
GROUNDMASS						
Feldspar	N/A	N/A	0.01		N/A	Some are microphenocrysts, others are devitrifying microlites.
Groundmass	65	N/A	N/A		N/A	Highly vesicular glass now replaced by brown opaque material.

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Clays		Smectites	Filling vesicles.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE	COMMENTS
Vesicles	30		0.01; 2-3		Elongated	Filled with smectite and hematite.

COMMENTS: Clasts: smaller clasts identical to the big one. Matrix: contains clots of fresh/perfectly fresh olivine and plagioclase. Some of these clots are in a very fresh glass or were very small fragments of both minerals. Highly vesicular glass, very fresh.

126-791B-64R-01 (1-2 cm) OBSERVER: LTP WHERE SAMPLED:

ROCK NAME: Plagioclase phyric basalt

GRAIN SIZE: Fine

TEXTURE: Porphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Plagioclase	2	N/A	0.3-1		Euhedral	Clustered with clinopyroxene.
Clinopyroxene	0.5	N/A	0.5		Subhedral	
GROUNDMASS						
Plagioclase	2	N/A	0.1		N/A	Devitrified brown glass.
Clinopyroxene	0.5	N/A	N/A		N/A	Vesicles filled with smectites.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE	COMMENTS
Vesicles	N/A		0.3-10			Smectites.

COMMENTS: No piece # given. Unit 11.

126-791B-64R-02 (Piece 1,8-9 cm) OBSERVER: TOR WHERE SAMPLED: Unit 11

ROCK NAME: Basalt mousse-only clasts

GRAIN SIZE: Fine

TEXTURE: Vesicular, intersertal, porphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0	</=1	0.2-1		Euhedral	Altered to smectite.
Plagioclase	5	5	0.2-1		Euhedral	Clots are glomeroporphyritic.
GROUNDMASS						
Glass	N/A	N/A	N/A		N/A	Devitrified, completely altered.
Plagioclase	N/A	N/A	N/A		Laths	
Clinopyroxene	N/A	N/A	N/A		Subeuhedral	Microphenocryst composition unknown.

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Clays	1	Olivine	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE	COMMENTS
Vesicles	40	Random	0.3-1		Round	Clasts.

COMMENTS: Matrix: small piece on thin section with one 0.3 mm euhedral olivine. Olivine and and glass are fresh. Vesicles </=0.01 mm are filled with smectites (not completely). Clasts: small fragments of basalt (as altered as the clasts). One clast contains clinopyroxene in the groundmass (intergranular).

126-791B-65R-01 (Piece 17,109-111 cm) OBSERVER: TOR WHERE SAMPLED: Unit 11

ROCK NAME: Basalt mousse

GRAIN SIZE: Fine

TEXTURE: Porphyritic/flow aligned

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0	3	0.2-1		Euhedral	Altered to smectite, chlorite clasts.
Plagioclase	5	5	0.2-1		Euhedral	Glomeroporphyritic.
Clinopyroxene	N/A	N/A	0.5		Euhedral	Intergranular texture with plagioclase. Plagioclase olivine or clinopyroxene form glomeroporphyritic aggregates.
GROUNDMASS						
Glass, plagioclase, clinopyroxene	N/A	N/A	N/A		Laths	Clasts 1,~2 no clinopyroxene.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE	COMMENTS
Vesicles	40	Random	0.1-0.2		Round	Matrix

COMMENTS: 2 types of clasts. Clast 1 vesicular (very different from the previous ones). Clast 2: 50% vesicles. Contains altered olivine and fresh plagioclase. Matrix: glassy "bubbly", with ~1% euhedral fresh olivine (0.5 mm) and 5% glomeroporphyritic plagioclase (fragments of plagioclase and olivine).

126-791B-67R-01 (Piece 5,61-63 cm) OBSERVER: LTP WHERE SAMPLED: Unit 11

ROCK NAME: Basaltic breccia

GRAIN SIZE: Fine

TEXTURE: Porphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	2	N/A	</=0.5		Euhedral	
Plagioclase	4	N/A	</=1		Euhedral	Clustered (glomeroporphyritic).
Spinel + Chromium	N/A	N/A	N/A		Euhedral	Inclusion in olivine (few).
GROUNDMASS						
Few feldspar	1	N/A	</=0.01		N/A	Highly vesicular glass.
Few olivine	N/A	N/A	</=0.03		N/A	

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Clays		Smectites	Filling up the vesicles/replacing altered glass.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE
Vesicles	50		<=1		

COMMENTS: Unit 11 "basaltic mousse". Clasts: olivine basalt with altered glass (non stained) and vesicles filled with smectites. Very fresh, medium porphyritic basalt with very fresh glass. Crystal fragments: olivine and plagioclase. Matrix: highly vesicular glass.

126-791B-67R-02 (Piece 9,62-65 cm) OBSERVER: LTP WHERE SAMPLED: Unit 11

ROCK NAME: Basaltic breccia mousse

GRAIN SIZE: Fine

TEXTURE: Porphyritic, vesicular

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0	2	</=0.5		Euhedral	Pseudomorphs in calcite and smectites.
Plagioclase	4	N/A	0.5		Subeuhedral	Clustered in glomeroporphyritic aggregates (smectites with olivine).
GROUNDMASS						
Plagioclase + clinopyroxene	N/A	3	0.02		N/A	Intergranular texture.
Plagioclase	N/A	3	N/A		N/A	Microlites and microphenocrysts.
Devitrified glass	N/A	3	N/A		N/A	Brown opaque material.

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Clays		Vesicles and olivine	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE	COMMENTS
Vesicles	40		0.02-1	Smectites	Rounded	Smectites jointed.

COMMENTS: Clast: olivine-plagioclase phyric basalt. Matrix: glass highly vesicular including fresh olivine and plagioclase clots, glass is fresh. Vesicles are fresh and lined by smectites.

126-791B-68R-01 (Piece 9,1-2 cm) OBSERVER: LTP WHERE SAMPLED: Unit 11

ROCK NAME: Olivine (only clast)-plagioclase (phyric) basalt

GRAIN SIZE: Fine

TEXTURE: Porphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0.5	N/A	0.5		Euhedral	Altered sometimes.
Plagioclase	2	N/A	0.1-0.5		Subeuhedral	Clustered in + glomerophyritic aggregares.
GROUNDMASS						
Feldspar	N/A	N/A	N/A		N/A	Few microlites. Abundant vesicular glassy groundmass. Glass partly transformed in brown secondary products.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE
Vesicles	30		1-3		Round, elongated

COMMENTS: No top or bottom intervals given.

126-791B-70R-01 (Piece 10,52-54 cm) OBSERVER: LTP WHERE SAMPLED: Unit 11

ROCK NAME: Basaltic breccia "mousse"

GRAIN SIZE: Fine

TEXTURE: Highly vesicular-porphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Plagioclase	2	2	0.5		Euhedral	Clustered in glomeroporphyritic aggregates.
GROUNDMASS						
Plagioclase	N/A	N/A	N/A		N/A	Microlites (devitrification).
Groundmass	48	48	N/A		N/A	Now completely altered.

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Clays			Filling up vesicles.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE
Vesicles	50		0.01-0.5		Circular, sometimes jointed.

COMMENTS: Few clasts: Highly vesicular basalt. Abundant matrix: fresh olivine (one or two crystals) fresh plagioclase-abundant, fresh glass. Flattened, elongated vesicles filled with smectites. Feldspars are broken crystals.

126-791B-72R-01 (Piece 18,137-138 cm) OBSERVER: LTP WHERE SAMPLED:

ROCK NAME: Basaltic breccia, unit 11

GRAIN SIZE:

TEXTURE: Highly vesicular/porphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0	2	Up to 1		Euhedral	Pseudomorph smectite.
Plagioclase	~4	4	0.5		N/A	Fractures are filled with zeolites.
GROUNDMASS						
Plagioclase	N/A	N/A	N/A		N/A	In microlites, devitrification.
Glass	N/A	50	N/A		N/A	Altered, highly vesicular.

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Clays			Vesicles are lined by smectites and filled with zeolites.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE	COMMENTS
Vesicles	46		Up to mm	Smectites + zeolites		??

COMMENTS: Clasts: Olivine presents bigger crystals. Plagioclase partly replaced by zeolite. Matrix: glass, altered olivine, fresh plagioclase clots, highly vesicular glass. Small flattened vesicles filled with smectites.

126-791B-72R-03 (Piece 2A,13-14 cm) OBSERVER: LTP WHERE SAMPLED:

ROCK NAME: Basaltic breccia

GRAIN SIZE: Fine

TEXTURE: Porphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0	2?	</=1		N/A	Altered.
Plagioclase	4	N/A	</=1.5		Euhedral	
GROUNDMASS						
Plagioclase	N/A	N/A	N/A		N/A	Only microlites/abundant groundmass; devitrified glass (brown).

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Zeolites			Filling up the vesicles.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE
Vesicles	N/A		</=5	Zeolites?, smectites	Round

COMMENTS: Unit 11. Clasts: a big clast of olivine (altered) and plagioclase medium phyric basalt. Clots or isolated plagioclase phenocrysts (entire and broken). Matrix: little matrix: glass with vesicles and zeolites (glass partly devitrified, yellow color).

126-791B-73R-03 (Piece 10,111-112 cm) OBSERVER: LTP WHERE SAMPLED:

ROCK NAME: Olivine-plagioclase basalt

GRAIN SIZE:

TEXTURE: Porphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0	1	</=1		Euhedral	Altered.
Plagioclase	6	6	</=1.5		Subeuhedral	
GROUNDMASS						
Feldspars	N/A	10	</=0.7		N/A	Glass, partly devitrified, 50%.

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Clays		Filling vesicles/replacing olivine	
Zeolites		Filling	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE
Vesicles	30		up to 10		Rounded and jointed.

COMMENTS: Unit 11. Clast only.

126-791B-75R-01 (Piece 10,57-58 cm) OBSERVER: LTP WHERE SAMPLED: Unit 12

ROCK NAME: Intersertal basalt

GRAIN SIZE: Fine

TEXTURE: Intersertal porphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0	1	1		Euhedral	Altered to calcite.
Plagioclase	10	10	</=1.5		Euhedral	Clustered.
GROUNDMASS						
Plagioclase	30	30	0.5		Euhedral	
Clinopyroxene	9	9	0.3		Subeuhedral	
Devitrified glass	40	40	N/A		N/A	

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Clays			
Carbonate	1		Olivine replaced by calcite.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE
Vesicles	10		</=15	Zeolites, smectites	

126-791B-76R-01 (Piece 12,93-94 cm) OBSERVER: LTP WHERE SAMPLED: Unit 14

ROCK NAME: Basaltic breccia

GRAIN SIZE:

TEXTURE: Porphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0	~3-5	</=1-0.5		Euhedral	Pseudomorphs of iddingsite, smectites, chlorite and iron.
Plagioclase	~4	~4	0.5		Euhedral	Beginning to alter.
GROUNDMASS						
Feldspars	N/A	0.01	N/A		N/A	
Groundmass	60	N/A	N/A		N/A	Glass completely transformed into smectites + iron stained (hematite?).

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Clays		Smectites	
Zeolites		filling vesicles	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE	COMMENTS
Vesicles	30		</=3		Rounded	Jointed vesicles forming a sort of net.

COMMENTS: Clast and matrix: very similar to core 126-76R-02, piece 6b. Altered olivine clast is plagioclase phyric basalt. Olivine clusters showing "cumulate" process. Matrix: highly vesicular matrix with olivine and plagioclase clots. The vesicles are a little flattened and filled with smectites. Glass is completely devitrified. Vesicle size-0.1 and 0.5 mm.

126-791B-76R-02 (Piece 6B,54-55 cm) OBSERVER: LTP WHERE SAMPLED: Unit 14

ROCK NAME: Olivine basalt breccia

GRAIN SIZE: Fine to medium

TEXTURE: Porphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0	4	</=2		Euhedral	Altered (iron and smectites/clustered glomeroporphyritic).
Plagioclase	10	10	</=1		Subeuhedral	
Clinopyroxene	1	1	N/A		N/A	Sometimes with olivine.
GROUNDMASS						
Feldspars	2	2	0.01		N/A	Devitrified glass (40%).
Glass	10	83	N/A		N/A	

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Clays	12	Filling vesicles	
Carbonate		Filling vesicles	
Chlorite	60	Replacing olivine and glass	
Hematite	5	Replacing olivine	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE
Vesicles	10	In glass	</=0.1	Chlorite	Rounded

COMMENTS: Unit 14. Clasts: (centimeter size) olivine, plagioclase, highly porphyritic basalt. Olivine and plagioclase clots. Crystals: olivine and plagioclase. Matrix: highly vesicular glass (this glass is now beginning to devitrify).

126-791B-76R-03 (Piece 4A,36-37 cm) OBSERVER: LTP WHERE SAMPLED:

ROCK NAME: Diabase

GRAIN SIZE:

TEXTURE:

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0	~2	0.5		Euhedral	Altered to smectites.
Plagioclase	40	40	</=0.5		Euhedral	
Clinopyroxene	30	30	</=1		Subeuhedral	
GROUNDMASS						
Oxides	N/A	30	N/A		N/A	
Altered glass	N/A	30	N/A		N/A	

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

COMMENTS: Rather altered in spite of the preserved clinopyroxene. Unit 15.

126-791B-77R-01 (Piece 1,7-9 cm) OBSERVER: REX WHERE SAMPLED: (drop-in) unit 16

ROCK NAME: Crystal-lithic ash tuff

GRAIN SIZE: Ash (<2 mm)

TEXTURE: Unwelded, vitroclastic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Plagioclase	4.5	5	0.1-0.2		Euhedral	Some sericitization.
Lithic lava-fragment	10	10	0.5-2		N/A	Various alteration to hematite, calcite and chlorite.
GROUNDMASS						
Vitric shards	0	85	N/A		N/A	Complete alteration to chlorite.

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Chlorite	85	Replacing	Replacing shards of pumice/volcanic glass.
Sericite	0.5	Replacing	Replacing plagioclase.

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

COMMENTS: Unwelded pyroclastic rock. Could be fall-deposit. No evidence for crushing of pumice shards. Lithic fragments replaced by various assemblages, including hematite-calcite.

126-791B-77R-01 (Piece 7,88-92 cm) OBSERVER: REX WHERE SAMPLED: Unit 17

ROCK NAME: Diabase

GRAIN SIZE: 0.5-1 mm

TEXTURE: Subophitic and intersertal

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0	2	0.2		Subhedral	Chlorite and smectite.
Plagioclase	60	60	0.2-1		Subhedral	Some sericite?
Clinopyroxene	10	10	0.5-1		Anhedral	Some smectite?
GROUNDMASS						
Glass/ microcrystalline	0	28	N/A		N/A	Replaced by chlorite smectite.

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Clays	2	Replacing	Smectite in olivine and some matrix.
Chlorite	28	Replacing	Mostly replaces groundmass, also olivine.

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

COMMENTS: Mixture of original subophitic and intersertal domains.

126-791B-77R-02 (Piece 2A,87-90 cm) OBSERVER: REX WHERE SAMPLED: Unit 19

ROCK NAME: Crystal-lithic lapilli tuff

GRAIN SIZE: >2 mm

TEXTURE: Eutaxitic welded tuff

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Lithic (lava) clasts	40	40	1-7		N/A	
Plagioclase	1	3	0.3		N/A	
Clinopyroxene	0	1	0.1		N/A	Calcite + sericite.
Quartz	2	2	0.01		N/A	Recrystallized granular clusters.
Magnetite / ilmenite	5	5	0.5		Euhedral	
GROUNDMASS						
Vitric shards-pumice	0	50	N/A		N/A	Difficult to judge proportion.

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Clays	5		Smectite.
Carbonate	20		
Chlorite	27		Replacing vitric clasts.

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

COMMENTS: May have a minor meta-fabric as well as the eutaxitic development.

126-791B-77R-02 (Piece 6A,138-141 cm) OBSERVER: REX WHERE SAMPLED: Unit 20

ROCK NAME: Coarse crystal-lithic ash tuff

GRAIN SIZE: 0.2-2 mm

TEXTURE: Eutaxitic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Ilmenite	1	1	0.3		N/A	
Plagioclase	8	N/A	0.5		N/A	
Quartz	1	1	0.2		N/A	Granular clumps.
Lithic-(lava) clasts	20	20	0.2-2		N/A	
GROUNDMASS						
Pumice-glass shards	0	70	0.1-2		Elongate	

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Clays	10	Replacing	Smectite replaces glass and minerals.
Carbonate	10	Replacing	Calcite replaces plagioclase.
Chlorite	50	Replacing	Replaces shards.

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

126-791B-77R-03 (Piece 1A,3-5 cm) OBSERVER: REX WHERE SAMPLED: Unit 20

ROCK NAME: Welded, graded ash tuff

GRAIN SIZE:

TEXTURE: Welded, eutaxitic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Plagioclase	5	5	0.2-0.5		Euhedral	
Clinopyroxene	1	1	0.2		Subhedral	
Lithic (lava) fragments	8	8	0.5		Irregular	Internally altered to hematite, chlorite calcite.
GROUNDMASS						
Shard matrix	0	86	0.5		Irregular	Glassy

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Carbonate			Some calcite as veins and maybe some plagioclase.
Chlorite	86	Replacing	Glassy pumice shards.

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

COMMENTS: This ash has two fabrics: (1) a relict igneous eutaxitic texture, flattened pumice fragments easily picked-out in PPL. (2) a metamorphic fabric-shown in XPL by chlorite lineation at ~45 degrees to eutaxitic development, much fainter than fabric 1.

126-791B-78R-01 (Piece 2,9-12 cm) OBSERVER: REX WHERE SAMPLED: Unit 22

ROCK NAME: Lithic lapilli tuff

GRAIN SIZE: 0.5-1.5 mm

TEXTURE: Unwelded pyroclastic?

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Plagioclase	15	15	0.2		Subhedral	
Ilmenite	1	1	0.1		Euhedral	
Lithic (lava clast)	50	50	15-5		N/A	Altered andesitic lava with epidote replacing clinopyroxene.
GROUNDMASS						
Ash matrix	0	36	N/A		N/A	Very fine glassy ash matrix.

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Clays	1		Smectite after plagioclase or clinopyroxene?
Carbonate	3	Filling	Veins cutting matrix.
Chlorite	30		

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

COMMENTS: Unwelded, poorly sorted deposit. Could be base-surge layer? Lava clasts have plagioclase phenocrysts. Also clinopyroxene-plagioclase phyric variety.

126-791B-78R-01 (Piece 3,16-19 cm) OBSERVER: TOR WHERE SAMPLED: Unit 23

ROCK NAME: Olivine-plagioclase-clinopyroxene phyric diabase

GRAIN SIZE: Fine

TEXTURE: Intersertal, subophitic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0	5	<0.5		Euhedral	Altered to chlorite, smectite.
Plagioclase	60	60	0.1-0.3		Euhedral	
Clinopyroxene	4	5	0.3-1		Subhedral	Altered to chlorite, sericite.
GROUNDMASS						
Glass	0	30	N/A		N/A	Altered to chlorite, smectite.

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Chlorite	36	Glass, olivine	Together with smectite replacing glass and olivine.
Sericite			Fractures filled with sericite?

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

126-791B-78R-01 (Piece 8,79-82 cm) OBSERVER: TOR WHERE SAMPLED: Unit 24

ROCK NAME: Moderately plagioclase phyric basalt

GRAIN SIZE: Fine

TEXTURE: Intersertal-vesicular

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0	2-3	0.3-0.7		Euhedral	Altered to chlorite.
Plagioclase	2	2	0.3-0.7		Euhedral	
GROUNDMASS						
Plagioclase	48	N/A	<0.2		Laths	
Glass	0	48	N/A		N/A	Altered to chlorite.

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Chlorite	50	Glass and olivine	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE	COMMENTS
Vesicles	N/A	Clasts	0.1-0.5	Chlorite	Round	Clasts nearly completely altered to chlorite. The vesicles are interconnected to each other with radially grown chlorite.

COMMENTS: The tiny plagioclase laths in the clasts could indicate a clast origin as xenolithic in the basalt magma. PHENOCRYSTS: rounded clasts with vesicles filled with chlorite. GROUNDMASS: clasts - glassy matrix with tiny plagioclase laths.

126-791B-78R-01 (Piece 10A,94-96 cm) OBSERVER: TOR WHERE SAMPLED: Unit 26

ROCK NAME: Plagioclase-olivine-clinopyroxene phyric diabase

GRAIN SIZE: Fine

TEXTURE: Subotitic-intersertal

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0	5	N/A		Euhedral	Altered to chlorite, smectite.
Plagioclase	60	60	N/A		Euhedral	
Clinopyroxene	10	10	N/A		Euhedral	
GROUNDMASS						
Glass	0	25	N/A		N/A	Altered to chlorite, smectite.

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Carbonate			Vein fracture in thin section.
Chlorite	30	Olivine and glass	Together with smectite.

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

COMMENTS: Weak alignment of plagioclase laths due to shearing.

126-791B-78R-01 (Piece 12A,112-114 cm) OBSERVER: REX WHERE SAMPLED: Unit 27

ROCK NAME: Basalt-andesite

GRAIN SIZE: One phenocryst of 2 mm

TEXTURE: Microcrystalline-porphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Plagioclase	65	75	N/A		N/A	
Clinopyroxene	0	1	N/A		N/A	
GROUNDMASS						
Altered glass?	0	24	N/A		N/A	

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Clays	5	Replacing	Matrix.
Chlorite	24	Replacing	Matrix.
Epidote	1	Replacing	Clinopyroxene.
Quartz	5		

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE	COMMENTS
Vesicles	20	Here and there!	1-2	Zeolite?	Round	Thin section too thin.

COMMENTS: Section at 20 microns.

126-791B-79R-01 (Piece 3,17-20 cm) OBSERVER: REX WHERE SAMPLED: Unit 28

ROCK NAME: Lithic-crystal tuff

GRAIN SIZE: 1-4 mm

TEXTURE: Eutaxitic, well sorted

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Plagioclase	30	40	1-2		N/A	
Lithic(lava) clasts	5	5	1-4		N/A	Variable range in composition and competence (scoria-pumice).
GROUNDMASS						
Crushed pumice shard	0	40	N/A		N/A	

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Clays	15	Replacing	Smectite replacing feldspar and matrix.
Carbonate	5	Filling	Filling fractures.
Chlorite	45	Replacing	Replacing glass/pumice shards.

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

COMMENTS: Variation in the vesicularity of the pumice-scoria fragments, hence difference in the degree of competence and variable amount of crushing/welding.

126-791B-79R-01 (Piece 6,85-87 cm) OBSERVER: TOR WHERE SAMPLED: Unit 28 bottom

ROCK NAME: Welded lithic crystal tuff

GRAIN SIZE: 1-2 mm

TEXTURE: Eutaxitic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Plagioclase	30	40	~1		N/A	
Lithics	10	10	1-2		N/A	
GROUNDMASS						
Crushed pumice shard	0	50	N/A		N/A	

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Clays	30		Smectite replacing glass and pumice shards.
Carbonate			Calcite filling fracture.
Chlorite	30		Replacing glass and pumice shards.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE	COMMENTS
Vesicles	N/A	in glass	N/A	Chlorite	Flat	Small compacted vesicles in crushed glass shards.

126-791B-79R-01 (Piece 7,94-97 cm) OBSERVER: TOR WHERE SAMPLED: Unit 29

ROCK NAME: Altered olivine-plagioclase-clinopyroxene phyric diabase

GRAIN SIZE: Fine

TEXTURE: Intersertal

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0	N/A	0.3-0.5		Euhedral	Altered to chlorite, smectite, calcite.
Plagioclase	5	5	0.3-0.5		Euhedral	
Clinopyroxene	5	5	0.3-0.5		Euhedral	
Magnetite	3	3	N/A		N/A	
GROUNDMASS						
Glass	0	N/A	N/A		N/A	Altered to chlorite, smectite.
Plagioclase	60	60	N/A		Laths	

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Clays			Replacing olivine and glass (together with chlorite).
Carbonate	Trace		
Zeolite	Trace		
Chlorite	27		Replacing glass and olivine.
Gypsum		Vein	

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