SITE 749 HOLE A CORE 1H CORED INTERVAL 0.0-9.5 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
LOWER OLIGOCENE / MIDDLE PLIOCENE	G. *eugubina* (LOWER PLEISTOCENE)	NP23-NP25 correlative	OLIGOCENE / MIDDLE PLIOCENE	*Rocella vigilans* (*C. elliptopora* / *A. ingens*)	● ○ ● ○ ●			1 2 3 4 5 6 7 CC	0.5 1.0		○ ○		* * * * *

LITHOLOGIC DESCRIPTION

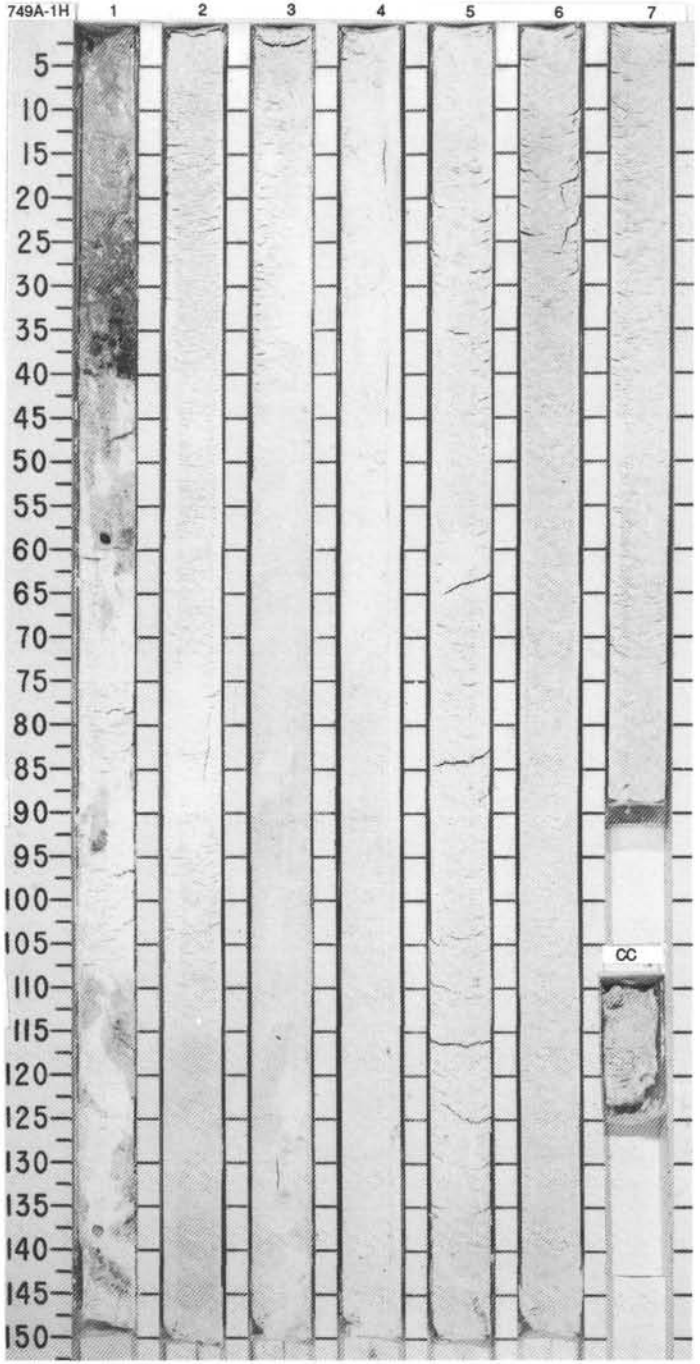
NANNOFOSSIL OOZE

Major lithology: NANNOFOSSIL OOZE, white (whiter than 10YR 8/1), with intervals of darker white and creamy white. Bioturbation is moderate; mottles occur in Section 2, 115-130 cm; Section 3, 50-150 cm; Section 4, and 0-30 cm. Zones of disseminated ice-rafted debris occur in Section 3.

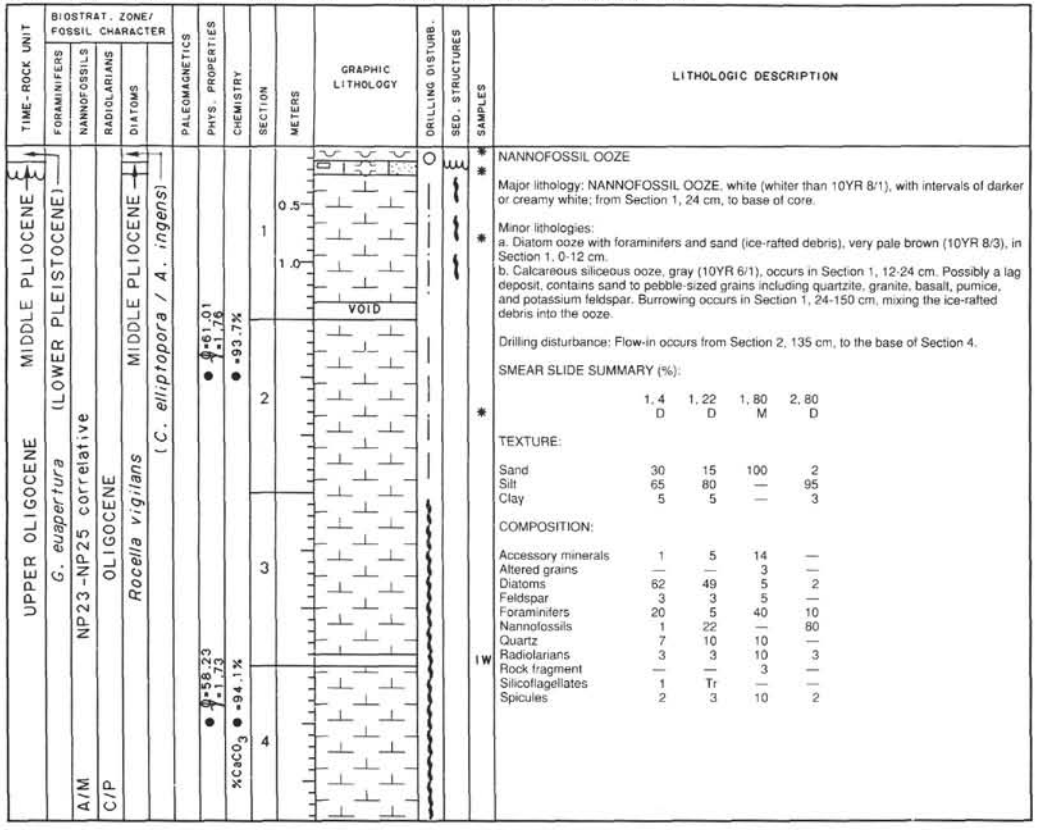
Minor lithologies:
a. Diatom ooze with foraminifers and sand (ice-rafted debris), very pale brown (10YR 6/1), in *Section 1, 0-18 cm.*
b. Calcareous siliceous ooze, gray (10YR 6/1), possibly a lag deposit, occurs in Section 1, 18-38 cm. Contains sand to pebble-sized grains; is mixed into underlying interval.

SMEAR SLIDE SUMMARY (%):

	1, 3 M	1, 29 M	1, 98 D	3, 86 D	6, 50 D
TEXTURE:					
Sand	20	20	2	10	10
Silt	75	75	95	90	80
Clay	5	5	—	—	10
COMPOSITION:					
Accessory minerals	—	5	—	—	—
Calcareous fragments	10	25	2	—	—
Diatoms	60	35	3	8	2
Feldspar	—	3	—	—	—
Foraminifers	10	1	5	10	10
Garnet	—	Tr	—	—	—
Hornblende	—	Tr	—	—	—
Nannofossils	—	—	82	75	81
Plagioclase	—	3	—	—	—
Quartz	—	13	—	—	—
Radiolarians	5	5	1	4	2
Rock fragment	10	—	1	—	—
Silicoflagellates	3	—	1	Tr	—
Spicules	2	10	2	2	5



SITE 749 HOLE B CORE 1H CORED INTERVAL 0.0-5.8 mbsf



NANNOFOSSIL OOZE

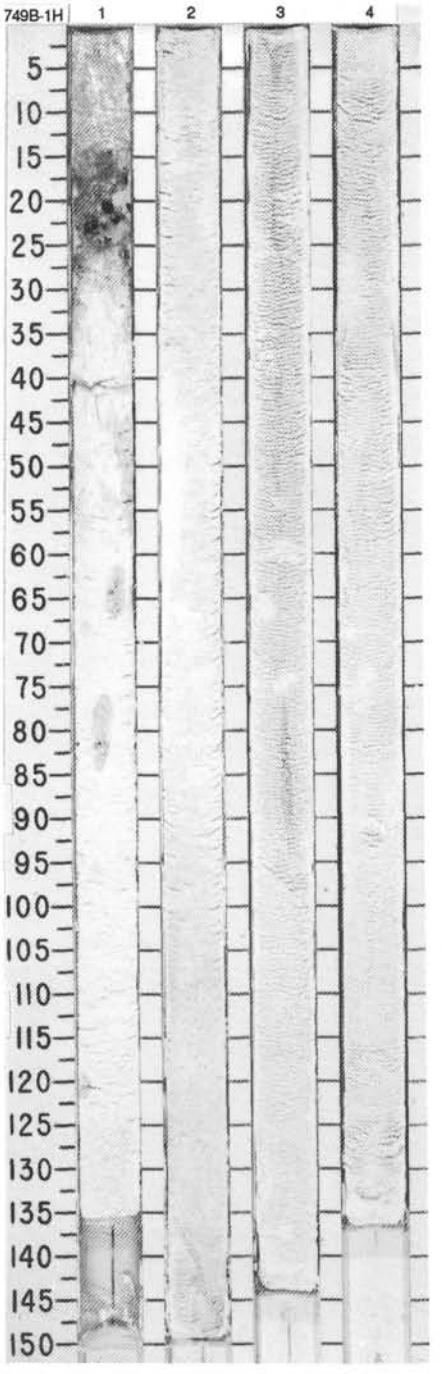
Major lithology: NANNOFOSSIL OOZE, white (whiter than 10YR 8/1), with intervals of darker or creamy white; from Section 1, 24 cm, to base of core.

Minor lithologies:
a. Diatom ooze with foraminifers and sand (ice-rafted debris), very pale brown (10YR 8/3), in Section 1, 0-12 cm.
b. Calcareous siliceous ooze, gray (10YR 6/1), occurs in Section 1, 12-24 cm. Possibly a lag deposit, contains sand to pebble-sized grains including quartzite, granite, basalt, pumice, and potassium feldspar. Burrowing occurs in Section 1, 24-150 cm, mixing the ice-rafted debris into the ooze.

Drilling disturbance: Flow-in occurs from Section 2, 135 cm, to the base of Section 4.

SMEAR SLIDE SUMMARY (%):

	1, 4 D	1, 22 D	1, 80 M	2, 80 D
TEXTURE:				
Sand	30	15	100	2
Silt	65	80	—	95
Clay	5	5	—	3
COMPOSITION:				
Accessory minerals	1	5	14	—
Altered grains	—	—	3	—
Diatoms	62	49	5	2
Feldspar	3	3	5	—
Foraminifers	20	5	40	10
Nannofossils	1	22	—	80
Quartz	7	10	10	—
Radiolarians	3	3	10	3
Rock fragment	—	—	3	—
Silicoflagellates	1	Tr	—	—
Spicules	2	3	10	2



SITE 749 HOLE B CORE 2H CORED INTERVAL 5.8-15.3 mbsf

TIME-ROCK UNIT: LOWER OLIGOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: *Subbotina angiporoides* (FORAMINIFERS); NP23-NP25 correlative (NANNOFOSSILS); OLIGOCENE (RADIOLARIANS); *Rocella vigilans* / *K. minor* / *Pyxilla reticulata* / *C. superbus* (DIATOMS)

PALEOMAGNETICS

PHYS. PROPERTIES: ρ=64.35, γ=1.61; ρ=60.92, γ=1.69; ρ=62.53, γ=1.69

CHEMISTRY: %$CaCO_3$ = 85.5%; 91.8%; 87.7%

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY: VOID

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

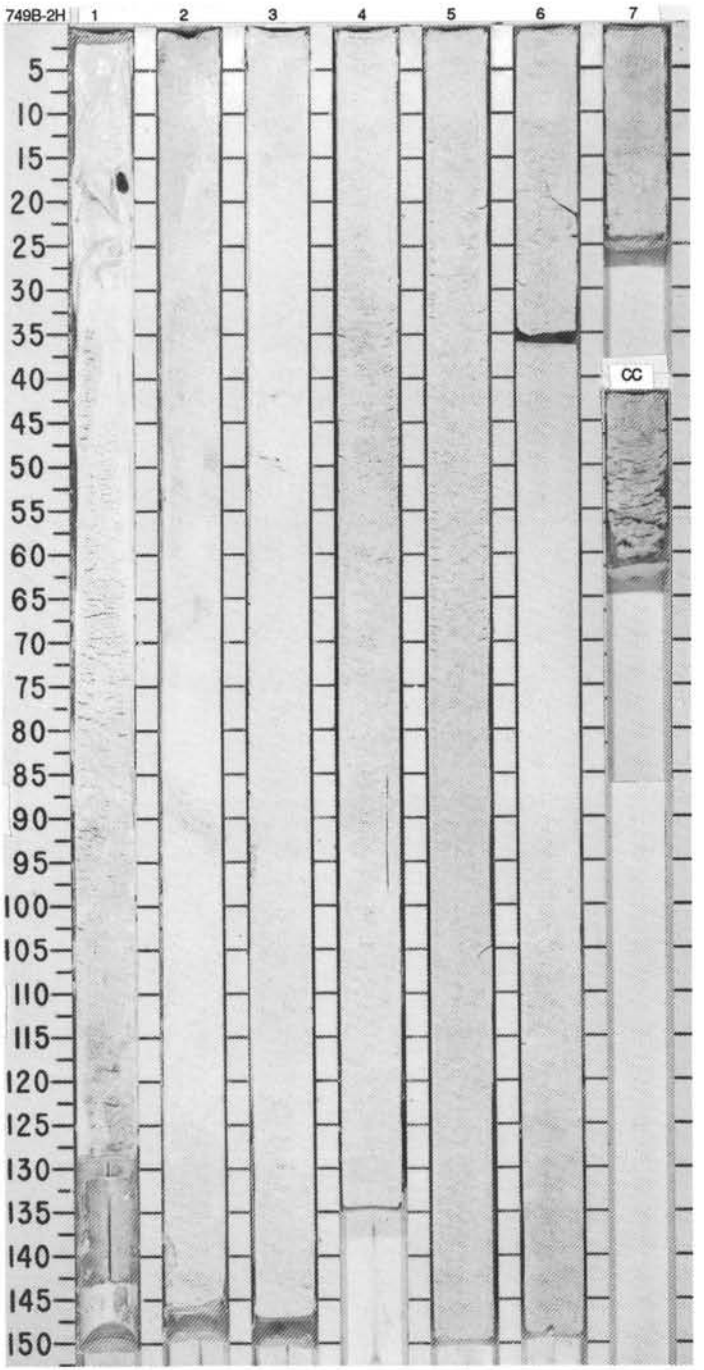
NANNOFOSSIL OOZE

Major lithology: NANNOFOSSIL OOZE, white (2.5Y 8/2 to 2.5Y N8); the whiter intervals are enriched in diatoms. An ash-enriched interval occurs at the base of the disturbed part of core (Section 1, 114-118). Rare black flecks of pyrite are scattered over the surface. Slightly bioturbated in Section 6 between 100-150 cm.

Minor lithologies:
a. Nannofossil ooze with diatoms, white (2.5Y 8/2), occurs in Section 2, 88-95 cm; Section 4, 0-30 cm and 95-135 cm; and Section 6, 45-95 cm.
b. Foraminifer nannofossil ooze, pale yellow (2.5Y 7/4), occurs in Section 2, 88-95 cm; contains a trace of ash.

SMEAR SLIDE SUMMARY (%):

	2, 76 M	2, 89 M	3, 50 D	4, 50 D	CC, 10 D
TEXTURE:					
Sand	4	20	8	2	1
Silt	94	77	89	96	97
Clay	2	3	3	2	2
COMPOSITION:					
Diatoms	4	4	15	Tr	—
Foraminifers	5	25	7	3	2
Glass	—	Tr	Tr	—	—
Nannofossils	88	65	74	96	95
Radiolarians	Tr	2	1	Tr	1
Silicoflagellates	Tr	1	Tr	—	—
Spicules	3	3	3	1	1



SITE 749 HOLE B CORE 3H CORED INTERVAL 15.3-24.8 mbsf

TIME-ROCK UNIT: UPPER EOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: *Globigeropsis index*
- NANNOFOSSILS: NP19-NP22 ?; NP18; A/G
- RADIOLARIANS: C/P
- DIATOMS: *C. superbus*; Not zoned

PALEOMAGNETICS | PHYS. PROPERTIES | CHEMISTRY | SECTION | METERS | GRAPHIC LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES

PHYS. PROPERTIES: ϕ=62.20, γ=1.69; ϕ=59.52, γ=1.75; ϕ=57.69, γ=1.76

CHEMISTRY: 87.1%; 95.0%; 93.7% %$CaCO_3$

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY: VOID

SAMPLES: OG IW

LITHOLOGIC DESCRIPTION

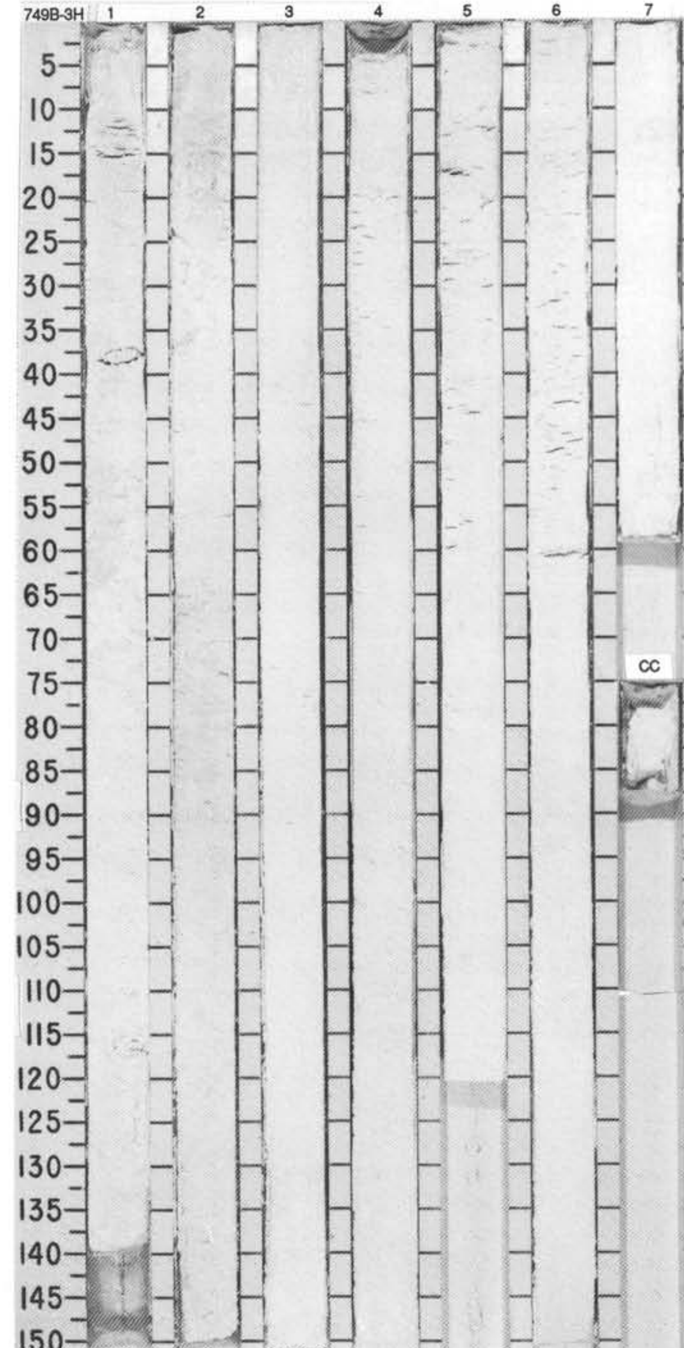
NANNOFOSSIL OOZE

Major lithology: NANNOFOSSIL OOZE, white (2.5Y N8), firm, slightly bioturbated in some intervals. An ash-enriched interval wherein the core is sprinkled with black specks occurs in Section 2, 50-70 cm. Thin mollusc fragments occur in Section 1, 112 cm. A pyrite-enriched interval occurs in Section 2, 0-27 cm, and is mottled with light gray (2.5Y N7).

Minor lithology: Nannofossil ooze with foraminifers, white (2.5Y 8/2), slightly darker than nannofossil ooze; occurs in Section 1, 0-64 cm, and in Section 2, 0-27 cm and 60-100 cm.

SMEAR SLIDE SUMMARY (%):

	2, 89 D	6, 18 M	6, 50 D
TEXTURE:			
Sand	8	5	7
Silt	88	92	91
Clay	4	3	2
COMPOSITION:			
Diatoms	—	—	Tr
Foraminifers	10	10	7
Glass	Tr	—	—
Nannofossils	90	84	92
Pyrite	—	3	—
Radiolarians	—	—	Tr
Spicules	Tr	3	1



SITE 749 HOLE B CORE 4H CORED INTERVAL 24.8-34.3 mbsf

TIME-ROCK UNIT: UPPER EOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS: *Globigeropsis index*; NANNOFOSSILS: NP18; RADIOLARIANS: A/G; DIATOMS: R/P; PALEOMAGNETICS: *Melosira architecturalis*

PHYS. PROPERTIES: Barren

CHEMISTRY: ● 57.72 / 1.74 ● 95.0%; ● 57.80 / 1.78 %$CaCO_3$ ● 94.5%; ● 60.59 / 1.75 ● 95.7%

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: PP

LITHOLOGIC DESCRIPTION

NANNOFOSSIL OOZE WITH FORAMINIFERS

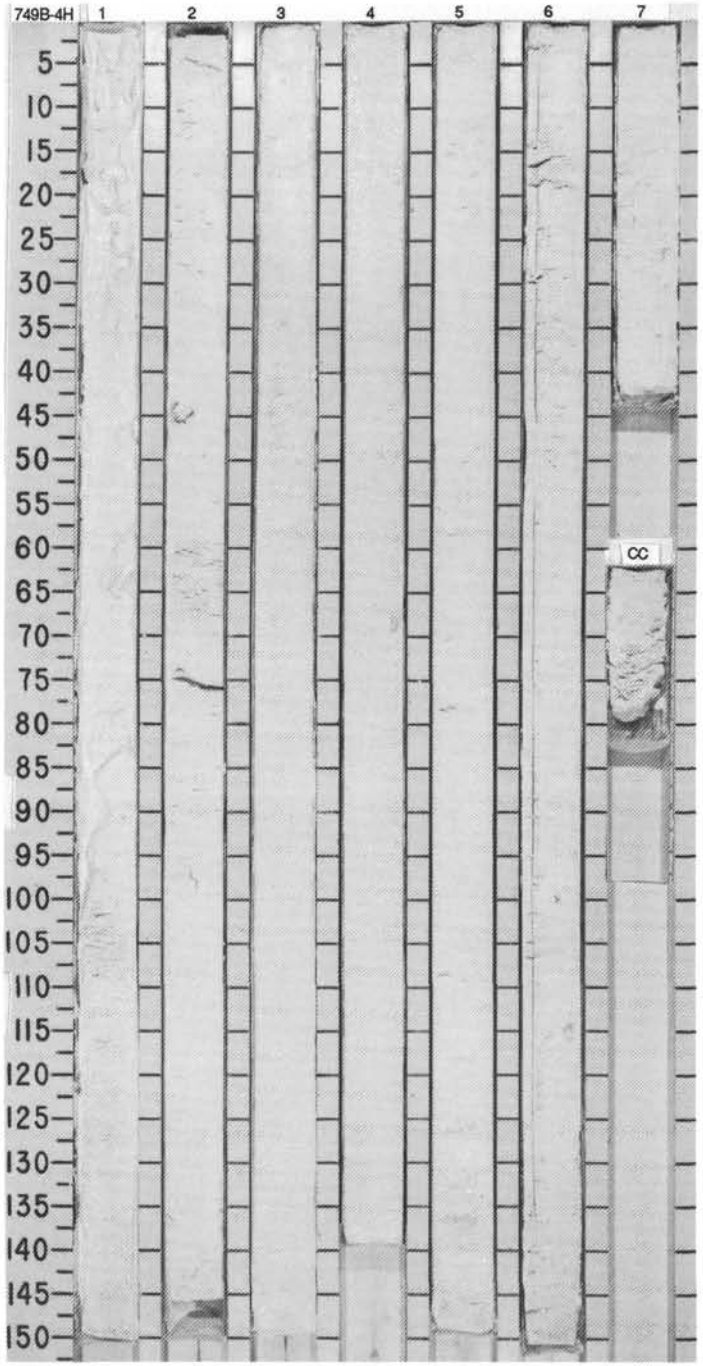
Major lithology: NANNOFOSSIL OOZE with FORAMINIFERS, white (2.5Y 8/2), occurs in Sections 1 through 5; foraminifer content decreases in Section 5. A mollusc fragment occurs in Section 2, 43 cm.

Minor lithology: Nannofossil ooze, white (2.5Y N8), occurs in Section 6 through the base of the core. Ooze is slightly bioturbated in some intervals or faintly mottled with pale yellow (2.5Y 8/4) noncalcareous grains throughout; a burrow filled with this material occurs in Section 6, 99 cm.

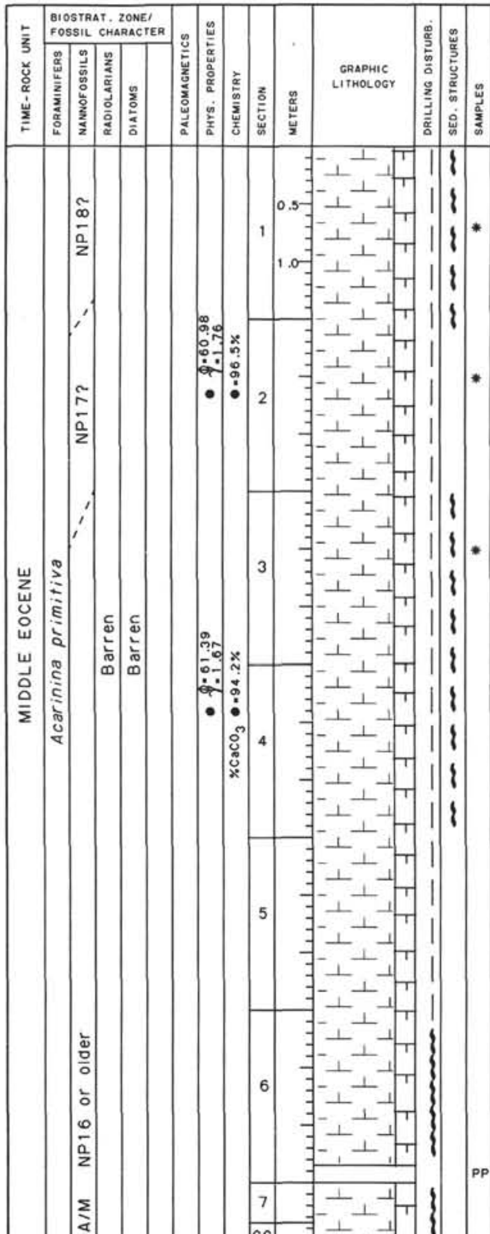
Drilling disturbance: Section 1, 0-103 cm, is highly disturbed by drilling; Section 3, 0-70 cm, is disturbed along the sides of the core.

SMEAR SLIDE SUMMARY (%):

	2, 50 D	4, 60 D	6, 50 D
TEXTURE:			
Sand	7	9	3
Silt	90	89	93
Clay	3	2	4
COMPOSITION:			
Foraminifers	10	11	7
Nannofossils	90	89	93
Spicules	—	—	Tr



SITE 749 HOLE B CORE 5H CORED INTERVAL 34.3-43.8 mbsf



LITHOLOGIC DESCRIPTION

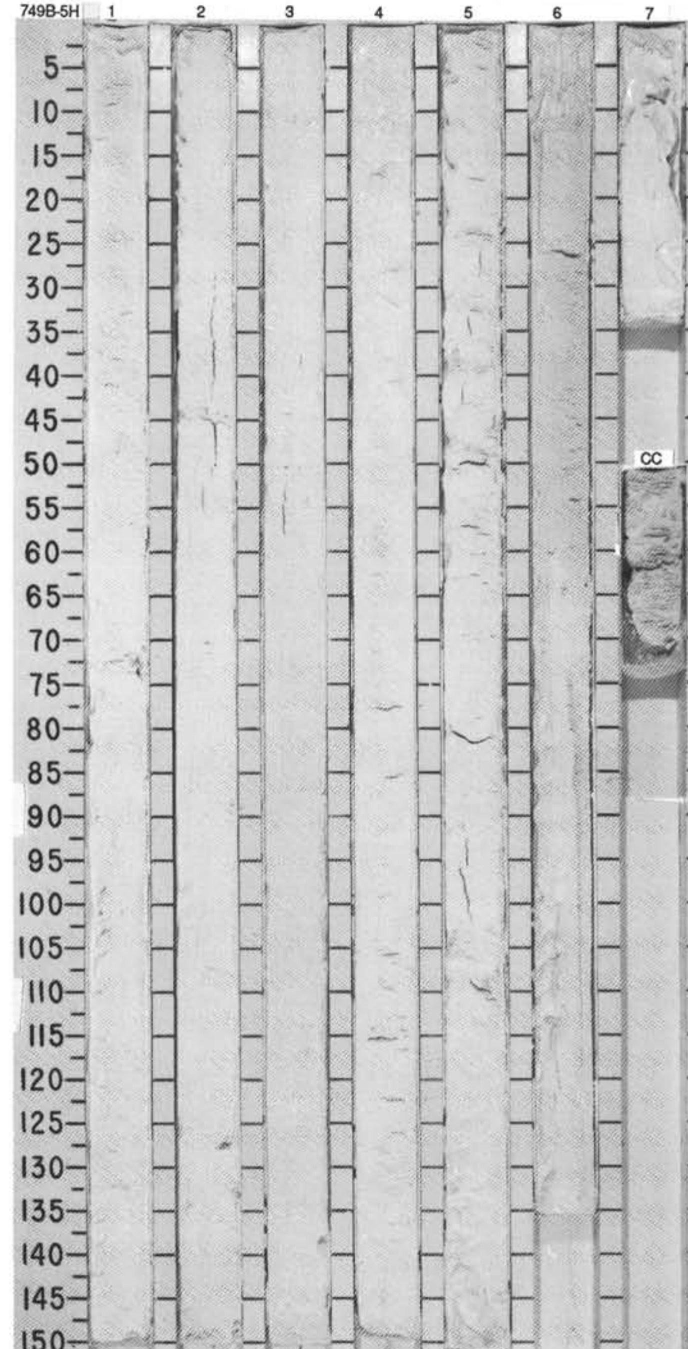
NANNOFOSSIL OOZE WITH FORAMINIFERS

Major lithology: NANNOFOSSIL OOZE with FORAMINIFERS, white (2.5Y N8 to 2.5Y 8/2); darker intervals contain more foraminifers, especially in Section 3. Slightly bioturbated, burrows appear as faint tan mottles. Purple pyritic burrows occur in Section 4, 102-104 cm, in Section 7, and in CC. Noncalcareous opaque minerals occur as rare yellow specks in scattered in Sections 1 and 2. In Section 2, 128 cm, an oval, horizontal burrow (3 mm by 4 mm) has been replaced by this material.

Drilling disturbance: Flow-in occurs in Sections 6, 7, and CC.

SMEAR SLIDE SUMMARY (%):

	1, 71 D	2, 51 D	3, 51 D
TEXTURE:			
Sand	8	7	9
Silt	88	89	86
Clay	4	4	5
COMPOSITION:			
Foraminifers	9	12	12
Nannofossils	91	88	88



SITE 749 HOLE B CORE 6X CORED INTERVAL 43.8-53.3 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
MIDDLE EOCENE	*Acarinina primitiva*	A/M	Barren	Barren				1 CC					*	NANNOFOSSIL OOZE WITH FORAMINIFERS

NP16? (not older than NP15)

Major lithology: NANNOFOSSIL OOZE with FORAMINIFERS, white (5Y 8/2), firm and homogeneous throughout, with no recognizable bedding features.

Minor lithology: Chert, very dark grayish brown (2.5Y 3/2), occurs as fragments in Section 1, 0-3 cm, containing ghost figures of foraminifers. Chert fragments in CC have chalk and porcellanite crusts.

Drilling disturbance: Core is soupy throughout; CC is highly disturbed.

SMEAR SLIDE SUMMARY (%):

	CC, 9 D
TEXTURE:	
Sand	15
Silt	81
Clay	4
COMPOSITION:	
Foraminifers	20
Nannofossils	80

SITE 749 HOLE B CORE 7X CORED INTERVAL 53.3-62.8 mbsf

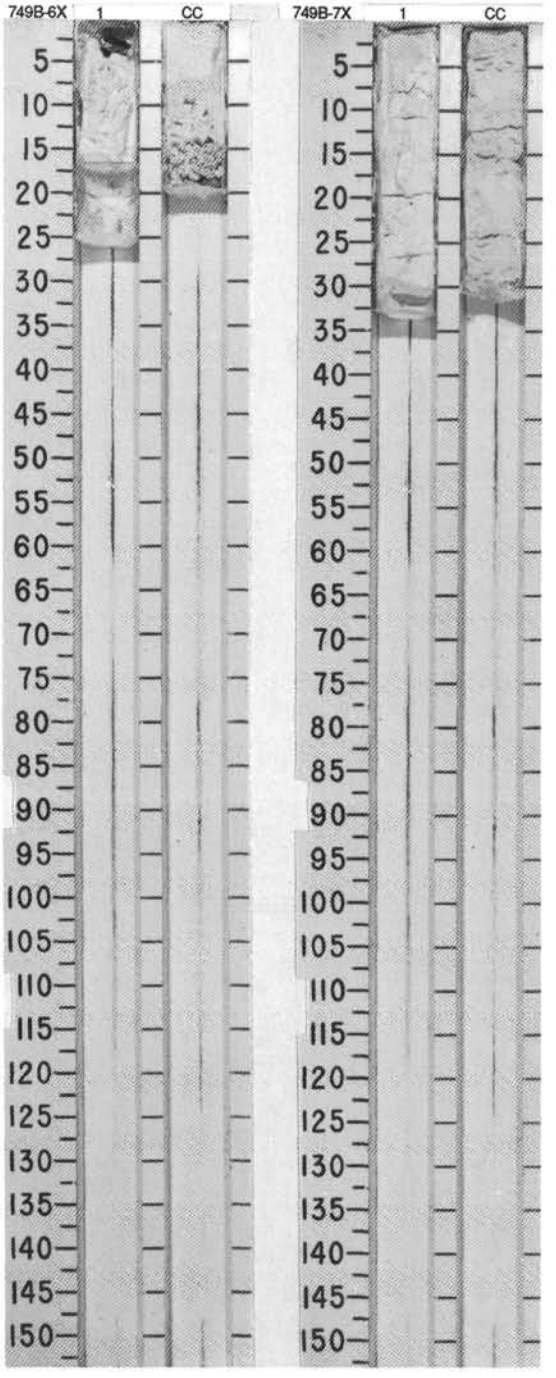
TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
MIDDLE EOCENE	*Acarinina primitiva*	A/G	C/P-M	MIDDLE EOCENE				1 CC	0.5				* *	FORAMINIFER NANNOFOSSIL OOZE

NP16? (not older than NP15) EOCENE

Major lithology: FORAMINIFER NANNOFOSSIL OOZE, white (2.5Y N8) to light gray (2.5Y 7/2), with purple pyritic splotches may represent that bioturbation; core is too highly disturbed to determine their true nature. Darker gray intervals, especially in CC, are much richer *in foraminifers*.

SMEAR SLIDE SUMMARY (%):

	1, 19 D	1, 25 D	CC, 10 D
TEXTURE:			
Sand	10	7	20
Silt	86	90	76
Clay	4	3	4
COMPOSITION:			
Calcite	—	Tr	Tr
Foraminifers	10	7	25
Nannofossils	87	89	72
Radiolarians	1	1	Tr
Spicules	2	3	3

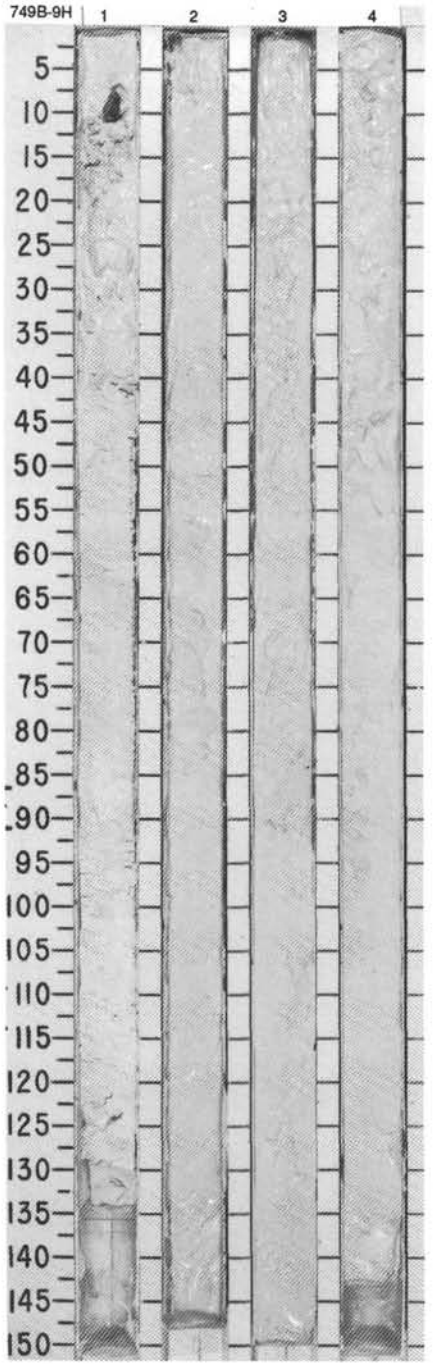


SITE 749 HOLE B CORE 9H CORED INTERVAL 72.3-81.8 mbsf

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
MIDDLE EOCENE	*Acarinina pentacamerata* - *Acarinina dense*	A/M NP16? (not older than NP15)	EOCENE	F/M MIDDLE EOCENE				1	0.5, 1.0	VOID			* * *	NANNOFOSSIL OOZE Major lithology: NANNOFOSSIL OOZE, white (whiter than 2.5Y N8), bioturbated throughout Section 1, 40-129 cm. This interval is the only undisturbed part of the core. Ooze is mottled with light gray (5Y 7/2) and purple splotches. Minor lithologies: a. Nannofossil ooze with foraminifers, white (5Y 8/2), occurs in the disturbed interval below Section 1. b. Chert, pale olive (5Y 6/3), occurs as fragments in Section 1, 0-35 cm. Drilling disturbance: below Section 1 the core is soupy and completely disturbed as a result of a shattered core liner. SMEAR SLIDE SUMMARY (%):
								2						
								3					*	
								4						

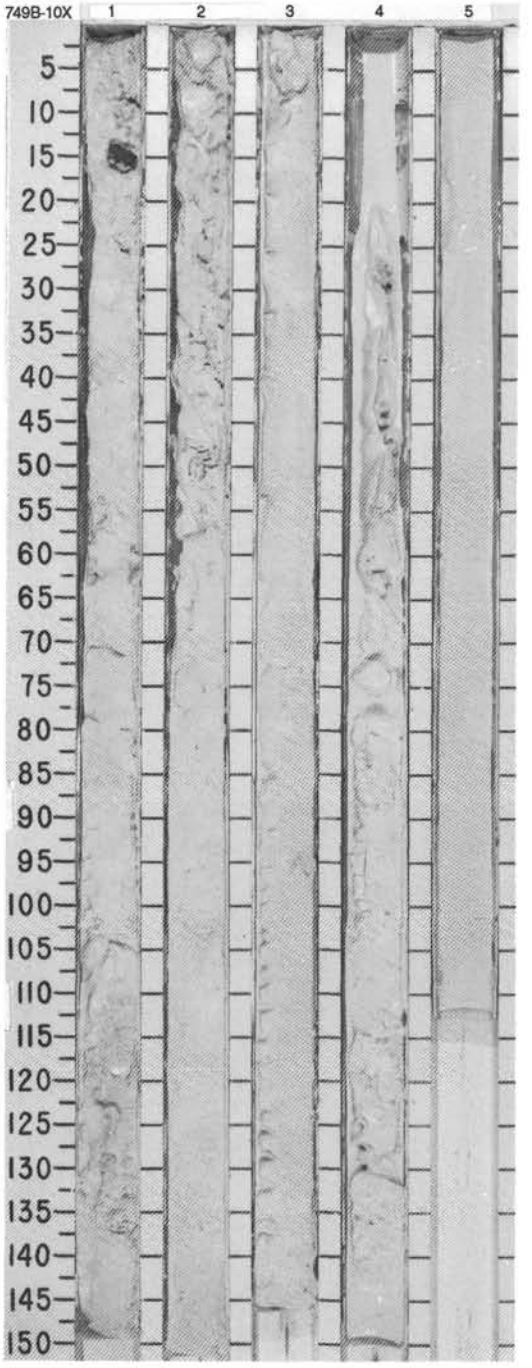
	1, 50 D	1, 63 M	1, 112 M	3, 50 D
TEXTURE:				
Sand	4	2	4	6
Silt	94	94	92	91
Clay	2	4	4	3
COMPOSITION:				
Calcite	Tr	—	—	—
Foraminifers	8	5	4	10
Glass	—	Tr	—	—
Nannofossils	89	91	92	90
Radiolarians	1	1	1	—
Silicoflagellates	Tr	Tr	—	—
Spicules	2	3	3	—

CORE 120-749B-8X NO RECOVERY



SITE 749 HOLE B CORE 10X CORED INTERVAL 81.8-91.3 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
MIDDLE EOCENE	*Acarinina pentacamerata - Acarinina densa*	A/M probably NP15	Barren	Barren		● ϕ=57.27 ρ=1.96	%$CaCO_3$ ● =95.1%	1 2 3 4 5	0.5 1.0				* *	NANNOFOSSIL OOZE Major lithology: NANNOFOSSIL OOZE, white (10YR 8/1), faintly mottled in Sections 2 and 3. Most burrows are obscured by severe drilling disturbance. Section 1 is faintly speckled with detrital grains (quartz, calcite). Minor lithology: Chert breccia occurs in Section 1, 0-15 cm; olive black, pebble-sized fragments. SMEAR SLIDE SUMMARY (%): 1, 119 D — 3, 120 D *TEXTURE:* Sand 3 2 Silt 92 95 Clay 3 2 COMPOSITION: Accessory minerals 1 — Altered grains Tr — Calcite 2 3 Foraminifers 7 7 Nannofossils 88 89



SITE 749 HOLE B CORE 11X CORED INTERVAL 91.3-100.8 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
MIDDLE EOCENE	*Acarinina pentacamerata* - *Acarinina densa*	A/G	NP15	Barren	Barren			1	0.5				*	NANNOFOSSIL OOZE WITH FORAMINIFERS
									1.0					Major lithology: NANNOFOSSIL OOZE with FORAMINIFERS, white (whiter than 10YR 8/1) to creamy white.
								2						Minor lithology: Chert, olive black, occurs in Section 1, 120 cm, as a single chip, and as sand-sized fragments in CC.
								CC						Drilling disturbance: Severely disturbed by drilling.

SMEAR SLIDE SUMMARY (%):

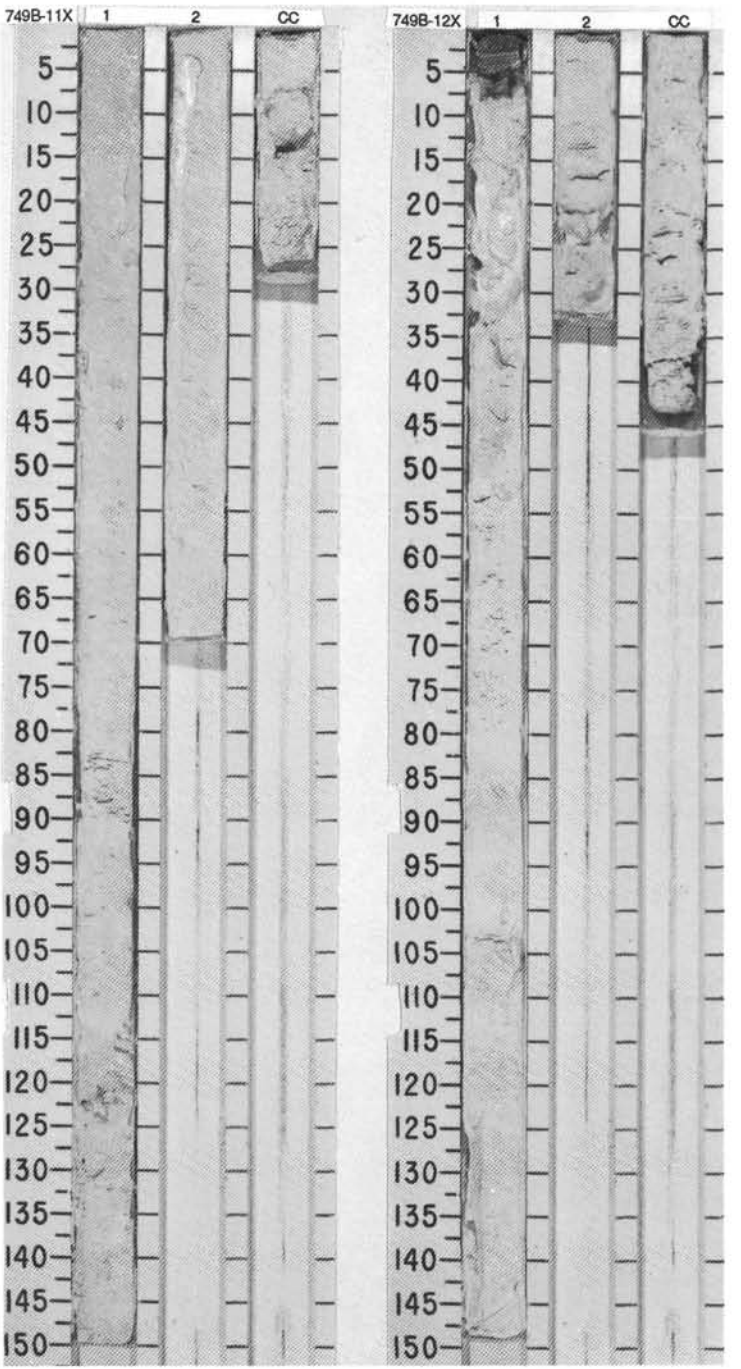
	1, 60 D
TEXTURE:	
Sand	10
Silt	90
Clay	—
COMPOSITION:	
Calcareous fragments	1
Foraminifers	15
Nannofossils	80

SITE 749 HOLE B CORE 12X CORED INTERVAL 100.8-110.3 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
MIDDLE EOCENE	*Acarinina pentacamerata* - *Acarinina densa*	A/G	NP14 (upper part) or lowermost NP15	Barren	Barren			1	0.5				*	NANNOFOSSIL OOZE
									1.0					Major lithology: NANNOFOSSIL OOZE, white (whiter than 10YR 8/1); faintly mottled in Section 1.
								2						Minor lithology: Chert, occurs as a large fragment in the top of Section 1; shows light, parallel layering in an olive matrix.
								CC						Drilling disturbance: Severely disturbed.

SMEAR SLIDE SUMMARY (%):

	1, 70 D
TEXTURE:	
Sand	1
Silt	95
Clay	2
COMPOSITION:	
Calcareous fragments	1
Foraminifers	5
Nannofossils	93

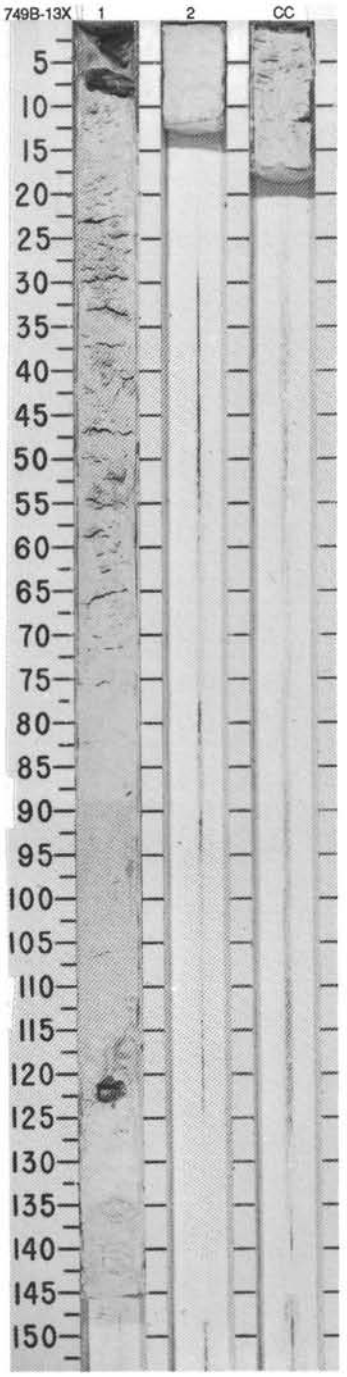


SITE 749 HOLE B CORE 13X CORED INTERVAL 110.3-119.8 mbsf

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
LOWER MIDDLE EOCENE	*Acarinina pentacamerata - Acarinina densa*	A/G NP14 (lower part)	Barren	Barren				1	0.5 1.0				*	NANNOFOSSIL OOZE Major lithology: NANNOFOSSIL OOZE, uniformly white (10Y 8/1), darker in Section 1, 10-110 cm; structureless; moderately disturbed. Smear slides show evidence of 40% micarb from dissolution and overgrowth effects. Minor lithology: Chert, occurs as fragments in Section 1, 0 cm (olive brown with pale, parallel layering and chalk patina) and 120 cm (olive). SMEAR SLIDE SUMMARY (%): 1, 70 D TEXTURE: Sand — Silt 95 Clay 2 COMPOSITION: Calcareous fragments 3 Foraminifers 7 Micrite 30 Nannofossils 60
								2						
								CC						

SITE 749 HOLE B CORE 14X CORED INTERVAL 119.8-123.8 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
								CC						No recovery (apart from nannofossil sample).

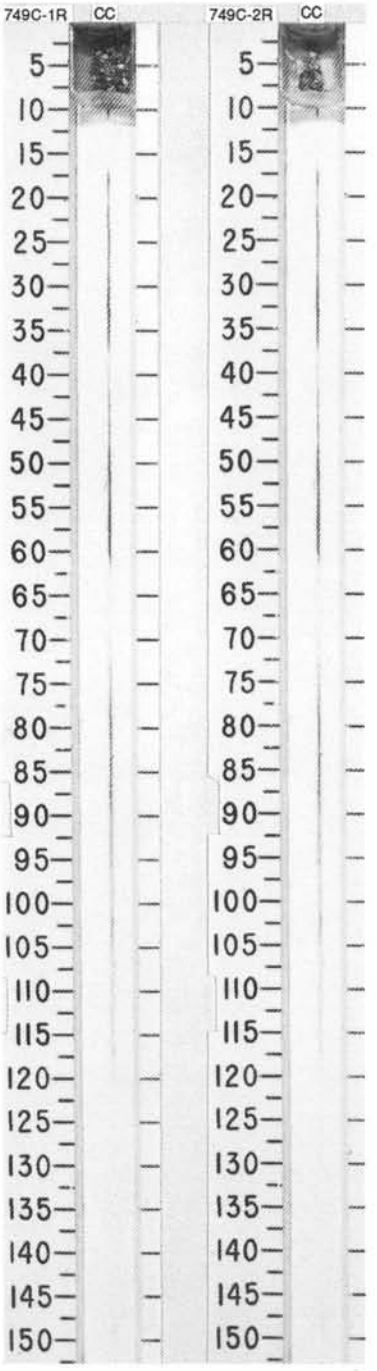


SITE 749 HOLE C CORE 1R CORED INTERVAL 102.0-111.5 mbsf

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
undetermined	no sample			no sample				CC		▲▲▲▲▲▲▲	X			CHERT AND PORCELLANITE Major lithology: CHERT and PORCELLANITE, gray, occurs as a drilling breccia in CC.

SITE 749 HOLE C CORE 2R CORED INTERVAL 111.5-121.0 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
undetermined	no sample	no sample		no sample				CC		▲▲▲▲▲▲▲	X			CHERT Major lithology: CHERT, occurs as sand-sized fragments in CC.



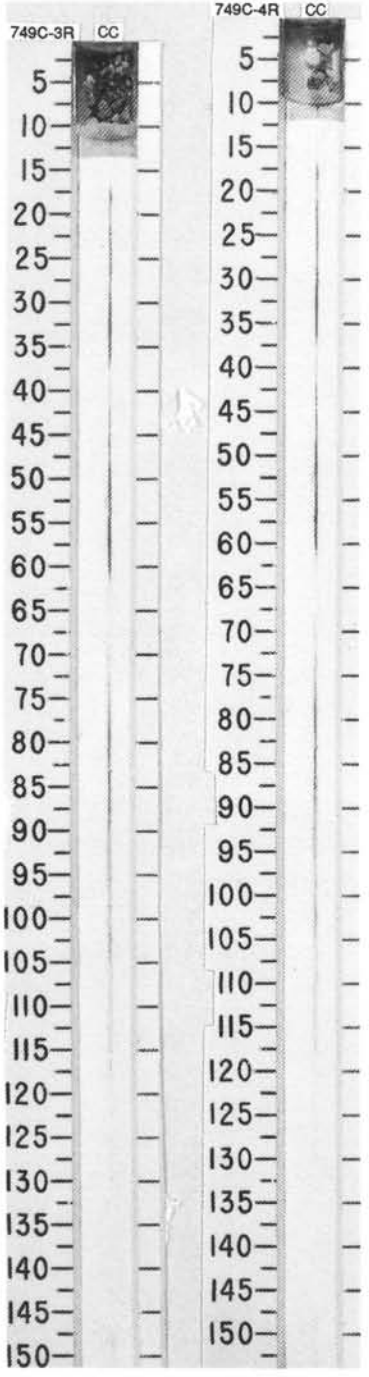
SITE 749 HOLE C CORE 3R CORED INTERVAL 121.0-130.5 mbsf

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
undetermined	no sample			no sample				CC		▲▲▲▲▲▲▲	X			CHERT AND PORCELLANITIC CHERT *Major lithology: CHERT and PORCELLANITIC CHERT, brown, occurs as fragments in CC.*

SITE 749 HOLE C CORE 4R CORED INTERVAL 130.5-140.0 mbsf

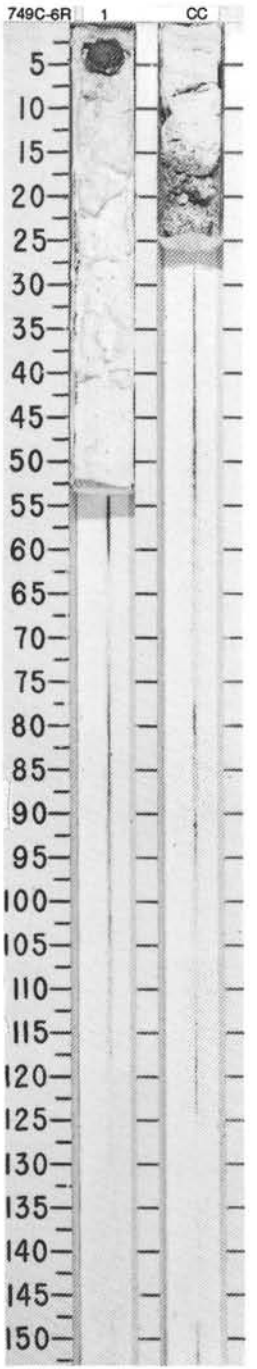
TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
undetermined	no sample			no sample				CC		▲▲▲▲▲▲▲	X			CHERT and PORCELLANITE *Major lithology: CHERT and PORCELLANITE, occurs as pebble-sized fragments in CC.*

CORE 120-749C-5R NO RECOVERY



SITE 749 HOLE C CORE 6R CORED INTERVAL 149.5-159.0 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	BIOSTRAT. ZONE/ FOSSIL CHARACTER: NANNOFOSSILS	BIOSTRAT. ZONE/ FOSSIL CHARACTER: RADIOLARIANS	BIOSTRAT. ZONE/ FOSSIL CHARACTER: DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
UPPER LOWER EOCENE	*Acarinina wilcoxensis* (≈ P8)	NP13 A/M		Barren				1 0 CC						NANNOFOSSIL OOZE Major lithology: NANNOFOSSIL OOZE, white (whiter than 10Y 8/1), uniform, occurs in Section 1, 5-53 cm. Minor lithology: Chert, olive brown, occurs as fragments in Section 1, the 0-5 cm, and in CC. Drilling disturbance: Core is highly disturbed.



SITE 749 HOLE C CORE 7R CORED INTERVAL 159.0-168.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER LOWER EOCENE	*Acarinina wilcoxensis*	NP13	Barren	Barren		● 59.66 ● 1.76 ● 54.76 ● 1.81	%$CaCO_3$ ● 95.3% ● 96.0%	1 2 3	0.5 1.0				OG IW

LITHOLOGIC DESCRIPTION

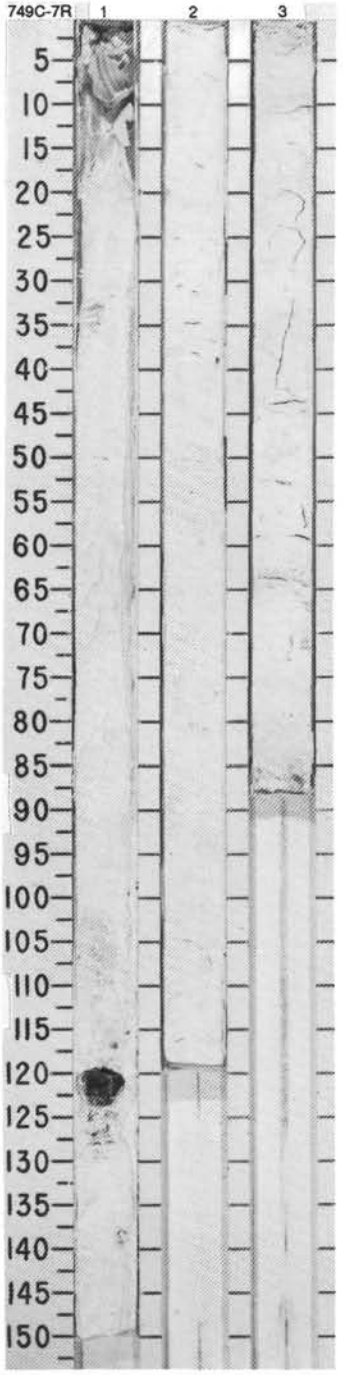
NANNOFOSSIL OOZE

Major lithology: NANNOFOSSIL OOZE, cream white (10YR 8/2), firm and homogeneous throughout; moderately bioturbated (mottled). Bluish gray blotches are scattered throughout, containing a trace of authigenic pyrite. Laminae occur on a cm-scale in Section 2, 18-19 cm; *lenticular laminae on a mm-scale occur in Section 2, 34-35 cm, 51-52 cm, and 74-75 cm.*

Minor lithology: Chert, gray (10YR 6/1) to light gray (10YR 7/1), occurs as fragments in Section 1, 5-8 cm and 120-123 cm; fragments have porcellanite zones and ghost figures of foraminifers. Drilling disturbance: highly disturbed in Section 1, 15-40 cm; moderately disturbed in Section 1, 40-150 cm.

SMEAR SLIDE SUMMARY (%):

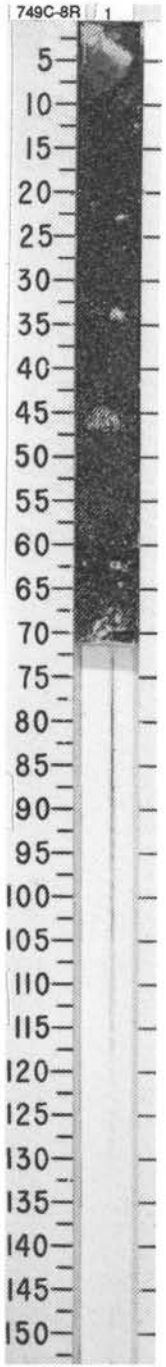
	1, 50 D	3, 52 M	3, 79 D
TEXTURE:			
Sand	4	6	4
Silt	92	90	92
Clay	4	4	4
COMPOSITION:			
Foraminifers	5	7	8
Nannofossils	95	93	91
Pyrite	—	Tr	—
Spicules	—	—	1



SITE 749 HOLE C CORE 8R CORED INTERVAL 168.5-178.0 mbsf

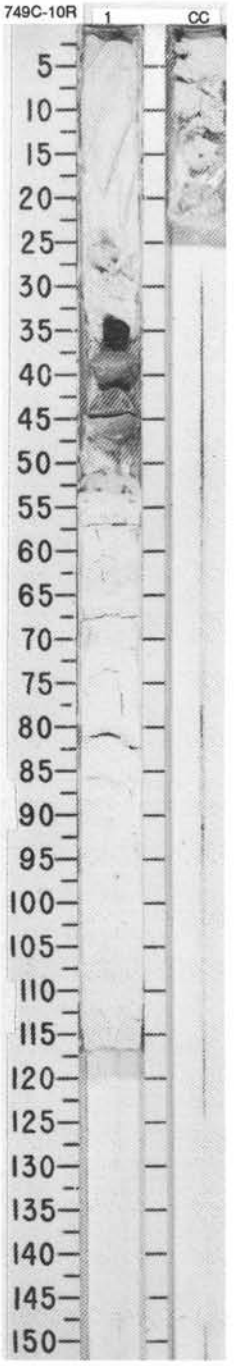
TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
UPPER LOWER EOCENE	*Acarinina wilcoxensis*	NP13	Barren	Barren				1	0.5	▲▲▲▲▲▲	X X X			CHERT Major lithology: CHERT, various shades of gray, occurs as drilling breccia. N.B.: No CC.

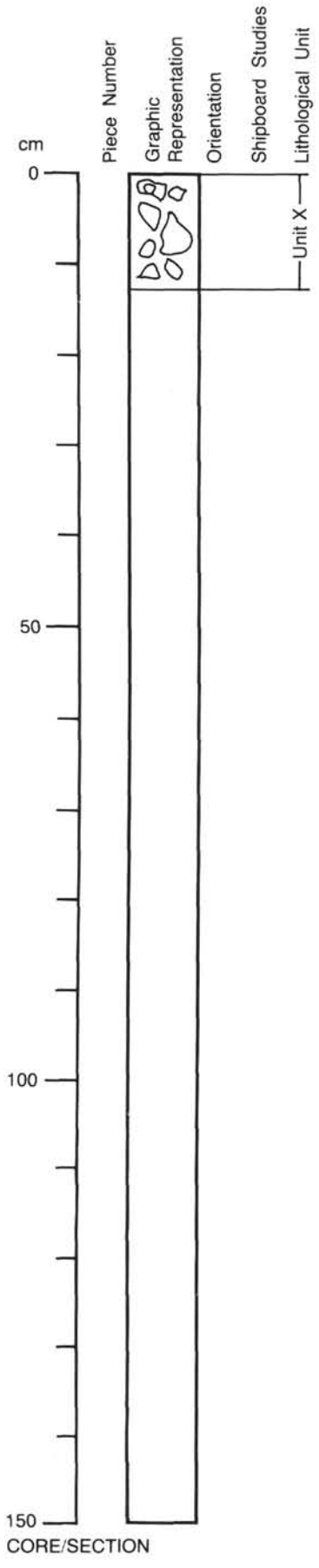
CORE 120-749C-9R NO RECOVERY



SITE 749 HOLE C CORE 10R CORED INTERVAL 187.5-197.0 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
MIDDLE LOWER EOCENE	*Acarinina wilcoxensis*	NP12	Barren	Barren				1	0.5				*	NANNOFOSSIL CHALK WITH FORAMINIFERS
									1.0					Major lithology: NANNOFOSSIL CHALK with FORAMINIFERS, white (10YR 8/1), homogeneous throughout; moderately bioturbated (mottled). Bluish gray blotches that contain a trace of authigenic pyrite are scattered throughout.
								CC						Minor lithology: chert, gray (10YR 5/1), occurs as fragments in Section 1, contains ghost figures of foraminifers.
														Drilling disturbance: soupy in Section 1, 0-52 cm; moderately fractured in Section 1, 52-116 cm; highly fractured in CC. A quartzite pebble (2 cm) occurs in Section 1, 33-34 cm, but probably is downhole contamination.
														SMEAR SLIDE SUMMARY (%):
														1, 82 D
														TEXTURE:
														Sand 7 Silt 90 Clay 3
														COMPOSITION:
														Foraminifers 2 Nannofossils 87 Spicules 1

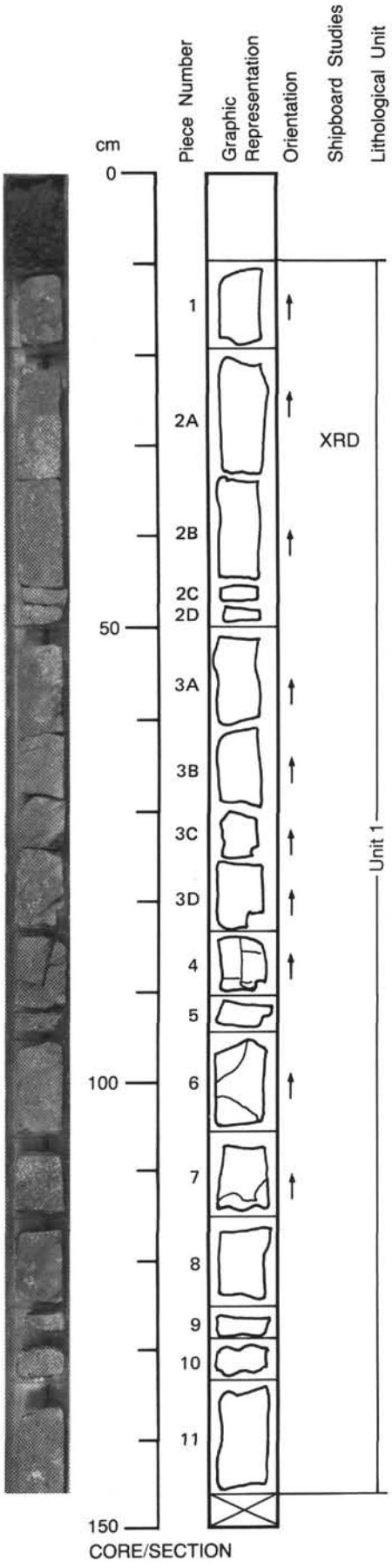




120-749C-11R-CC

UNIT 1: APHYRIC, APHANITIC, ALTERED, VESICULAR BASALTS

CONTACTS: See comments.
PHENOCRYSTS: See comments.
GROUNDMASS: See comments.
VESICLES: See comments.
COLOR: See comments.
STRUCTURE: See comments.
ALTERATION: See comments.
VEINS/FRACTURES: See comments.
ADDITIONAL COMMENTS: Green and red core, amygdules filled with zeolites and lined with green clay, calcite and zeolites.



120-749C-12R-1

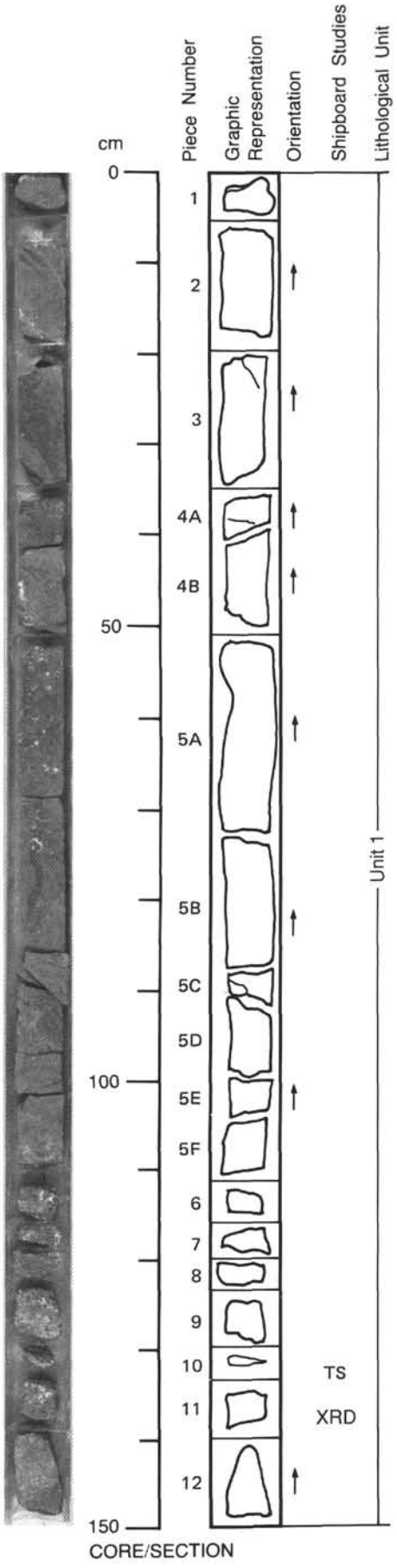
UNIT 1: DRILL CUTTINGS

CONTACTS: Not determined.
PHENOCRYSTS: Not determined.
GROUNDMASS: Not determined.
VESICLES: Not determined.
COLOR: Gray-olive green.
STRUCTURE: Not determined.
ALTERATION: Not determined.

UNIT 1: MODERATELY CLINOPYROXENE-PLAGIOCLASE PHYRIC AUTOBRECCIATED BASALT

Pieces 1-11

CONTACTS: Not determined.
PHENOCRYSTS:
Plagioclase - 1%, 1 mm.
Clinopyroxene - 3%, 1-2 mm.
GROUNDMASS: Microcrystalline.
VESICLES: Pieces 2A, 7, 9, and 10: up to 3%, 0.5-5 mm, highly vesicular with an irregular shape to rounded, infilled with some calcite and zeolites.
COLOR: Pieces 1 and 2: gray. Piece 3A: gradual change from gray to yellowish brown. Pieces 3B-3D, 4, and 5: mainly light yellowish brown. Piece 6: top - yellowish brown, bottom - gray. In both top and bottom parts different colored portion has a sharp contact. Pieces 7 to 9: gray.
STRUCTURE: Not determined.
ALTERATION: Gray colored part moderately altered, yellowish brown part highly altered.
VEINS/FRACTURES: Not determined.

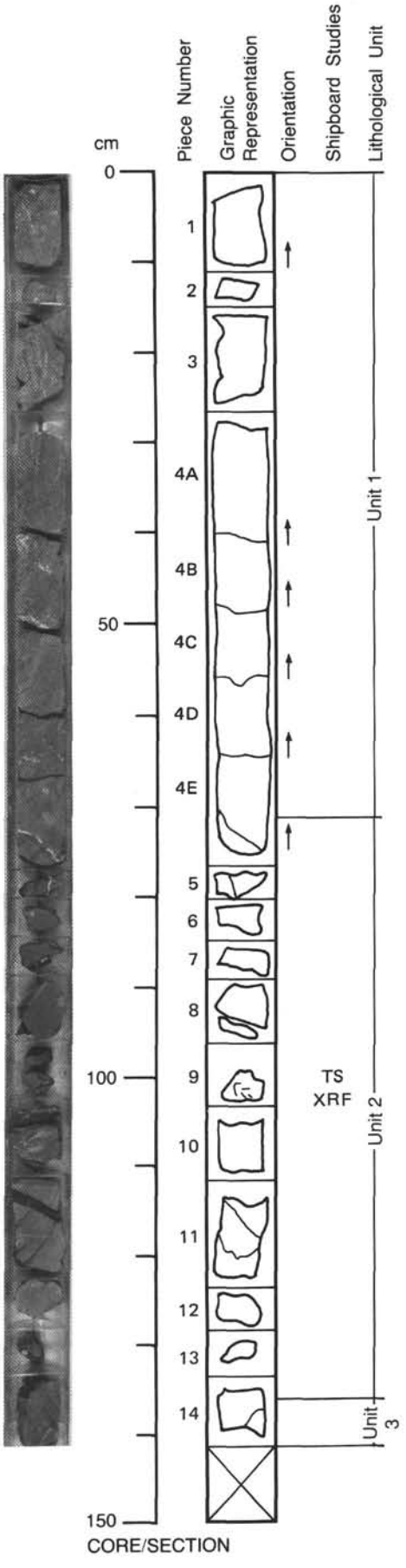


120-749C-12R-2

UNIT 1: CONTINUED

Pieces 1-12

CONTACTS: Not determined.
PHENOCRYSTS:
Plagioclase - 1%, 1 mm.
Clinopyroxene - 3%, 1-2 mm.
GROUNDMASS: Microcrystalline.
VESICLES: Pieces 6-12: up to 30%, 0.5-5 mm, highly vesicular with a irregular shape to rounded, infilled with some calcite and zeolites. Pieces 2-5: 0.5-1 mm wide, very elongated, filled with black minerals and zeolites.
COLOR: Gray.
STRUCTURE: Not determined.
ALTERATION: Gray colored part moderately altered, yellowish brown part highly altered.
VEINS/FRACTURES: (?)%, 0.5-3 mm, low angle dip filled with calcite or high angle dip infilled with zeolites.



120-749C-12R-3

UNIT 1: CONTINUED

Pieces 1-4E (Top)

CONTACTS: Not determined.
PHENOCRYSTS:
Plagioclase - 1%, 1 mm.
Clinopyroxene - 3%, 1-2 mm.
GROUNDMASS: Microcrystalline.
VESICLES: (?)%, 0.5-1 mm wide, very elongated, vesicles found in Pieces 1-4. Vesicles are filled with black minerals and zeolites.
COLOR: Pieces 1-4: gray.
STRUCTURE: Not determined.
ALTERATION: Gray-colored part moderately altered, yellowish brown part highly altered.
VEINS/FRACTURES: Not determined.
ADDITIONAL COMMENTS: This unit is autobrecciated. The fragments are angular with varied sizes (few mm up to few cm). The matrix is the same volcanic rock as the fragments but with a darker color.

UNIT 2: MODERATELY CLINOPYROXENE-PLAGIOCLASE PHYRIC BASALT DIKE

Pieces 4E (Bottom)-14 (Top)

CONTACTS: Dike has a 2-cm thick chilled margin with Unit 3.
PHENOCRYSTS:
Clinopyroxene - 3%, 0.3-1 mm, subhedral to euhedral.
Plagioclase - 3%, 0.2-0.7 mm, subhedral to euhedral laths.
GROUNDMASS: Microcrystalline.
VESICLES: None.
COLOR: Dark gray.
STRUCTURE: Not determined.
ALTERATION: Fresh to slightly altered.
VEINS/FRACTURES: 0.5-2 mm infilled with calcite. Pieces 4E and 14: discordant contact between the dike and volcanic rocks of Units 1 and 3, respectively.

UNIT 3: MODERATELY CLINOPYROXENE PHYRIC BASALT

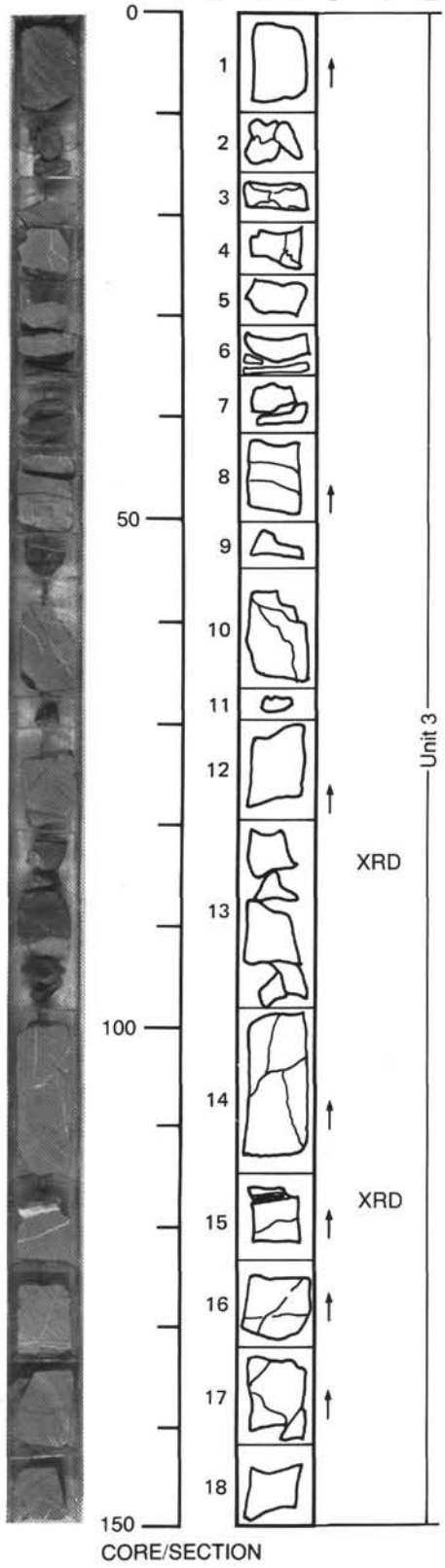
12R-3, Pieces 11-14, and 12R-4, Pieces 1-18

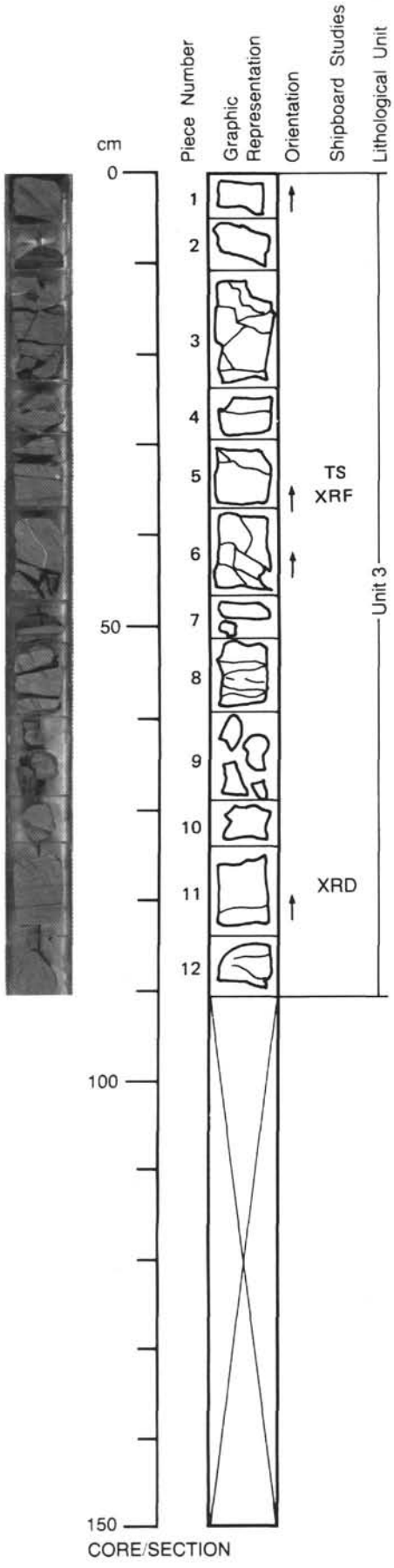
CONTACTS: Not determined.
PHENOCRYSTS: Clinopyroxene - 3%, 0.5 mm, subhedral
GROUNDMASS: Fine-grained.
VESICLES: > 1%, 0.5-2 mm, rounded, infilled with calcite.
COLOR: Pieces 12R-4, 1, 17, and 18: gray. Pieces 12R-4, 2-16: yellowish brown.
STRUCTURE: Not determined.
ALTERATION: Slight to moderate in gray basalts, highly altered in the yellowish brown basalts.
VEINS/FRACTURES: 0.5-1 cm thick, horizontal, steeply dipping conjugated veins. Piece 12R-4, 10: en echelon, infilled mainly with calcite. Pieces 12R-4, 13 and 15: horizontal veins, zoned (well visible on Piece 12R-4, 15), light green smectite, dark green clay mineral, and calcite.

120-749C-12R-4

12R-4, Pieces 1-18

See Section 120-749C-12R-3



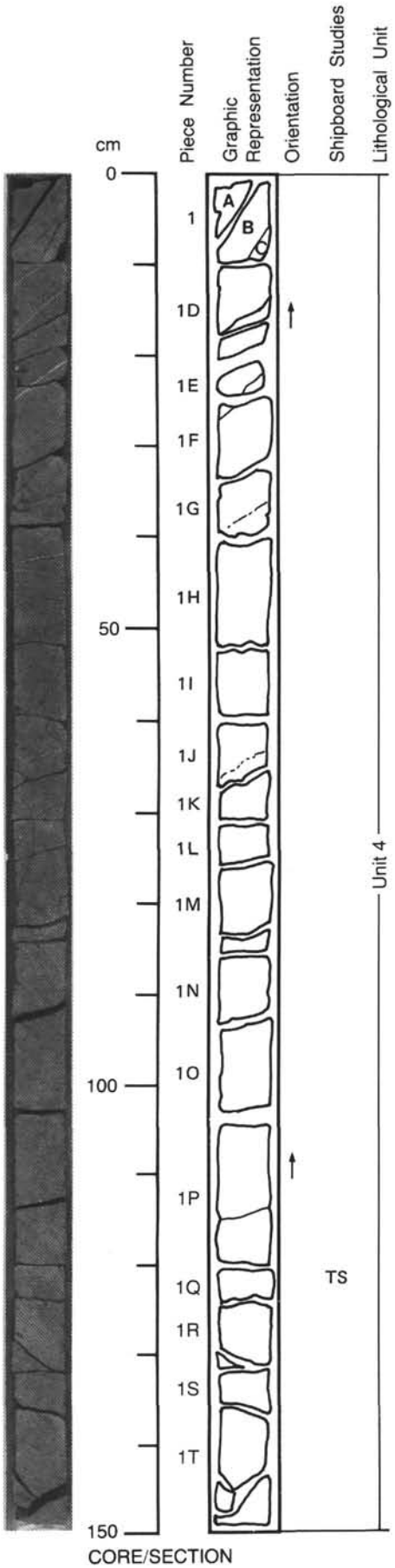


120-749C-12R-5

UNIT 3: CONTINUED

Pieces 1-12

CONTACTS: Not determined.
PHENOCRYSTS: Clinopyroxene - 3%, 0.5 mm, subhedral.
GROUNDMASS: Fine-grained.
VESICLES: > 1%, 0.5-2 mm, rounded, infilled with calcite.
COLOR: Gray.
STRUCTURE: Not determined.
ALTERATION: Slight to moderate in gray basalts, highly altered in the yellowish brown basalts.
VEINS/FRACTURES: Piece 11: horizontal veins filled with a dark green smectite and brown goethite and hematite.

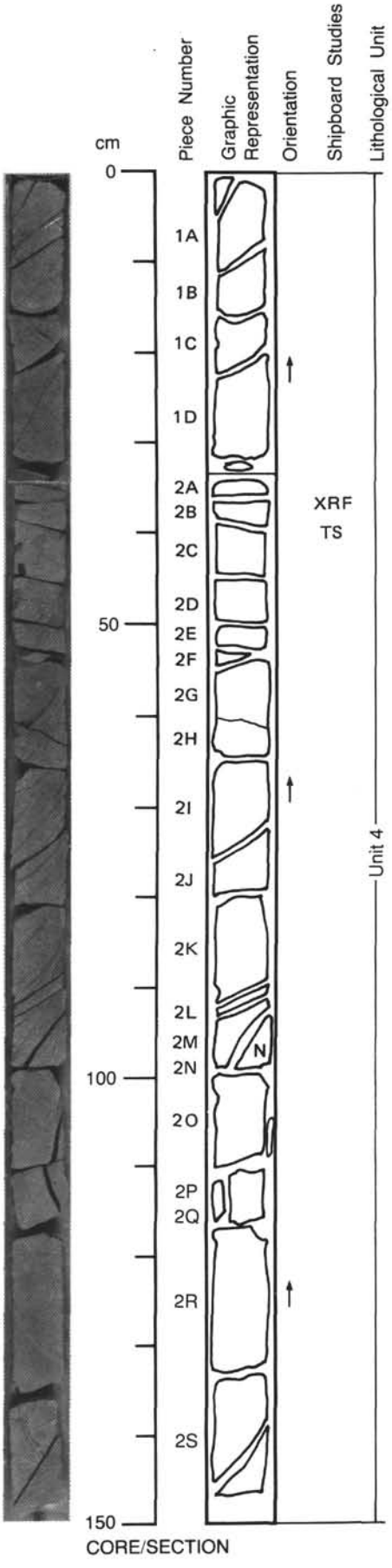


120-749C-15R-1

UNIT 4: MODERATELY CLINOPYROXENE-PLAGIOCLASE PHYRIC BASALT

Pieces 1A-1T

CONTACTS: Not determined.
PHENOCRYSTS:
Plagioclase - 1%, 1-2 mm, euhedral laths.
Clinopyroxene - 5%, 0.5-3 mm, subhedral.
GROUNDMASS: Fine-grained.
VESICLES: 1%, 1-2 mm, Infilled with calcite.
COLOR: Gray.
STRUCTURE: Not determined.
ALTERATION: Slight, some pyrite in fractures.
VEINS/FRACTURES: 0.5-3 mm, gently dipping, common in Pieces 1A to 1G, infilled with calcite. Some veins have brown-colored halo, up to 1 cm wide.

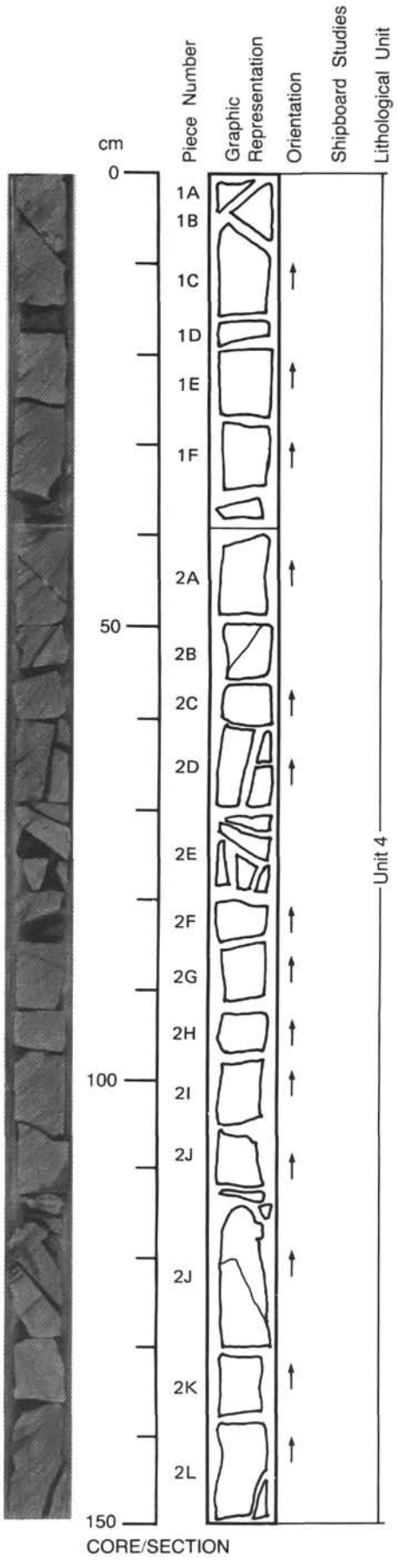


120-749C-15R-2

UNIT 4: CONTINUED

15R-2, Pieces 1-2, 15R-3, Pieces 1-2, and 15R-4, Pieces 1-3

CONTACTS: Not determined.
PHENOCRYSTS:
Plagioclase - 1%, 1-2 mm, euhedral laths.
Clinopyroxene - 5%, 0.5-3, subhedral.
GROUNDMASS: Fine-grained.
VESICLES: < 1%, 0.5 mm, filled with calcite.
COLOR: Gray.
STRUCTURE: Not determined.
ALTERATION: Slight, some pyrite in fractures.
VEINS/FRACTURES: (?)%, 0.5-2 mm, infilled with gray smectite, less common.

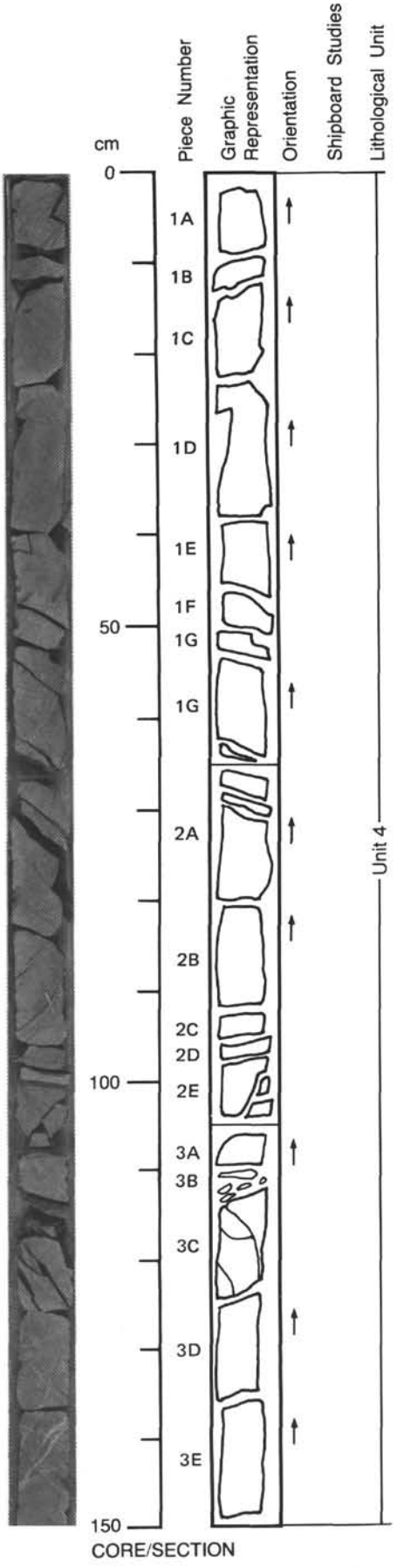


120-749C-15R-3

UNIT 4: CONTINUED

Pieces 1-2

See Section 120-749C-15R-2

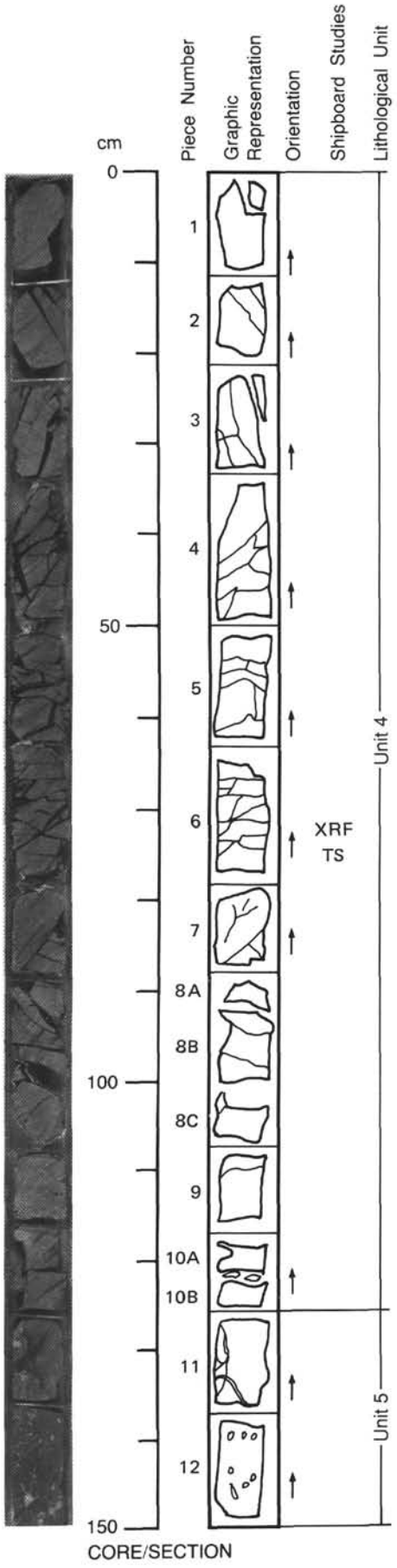


120-749C-15R-4

UNIT 4: CONTINUED

Pieces 1-3

See Section 120-749C-15R-2



120-749C-15R-5

UNIT 4: CONTINUED

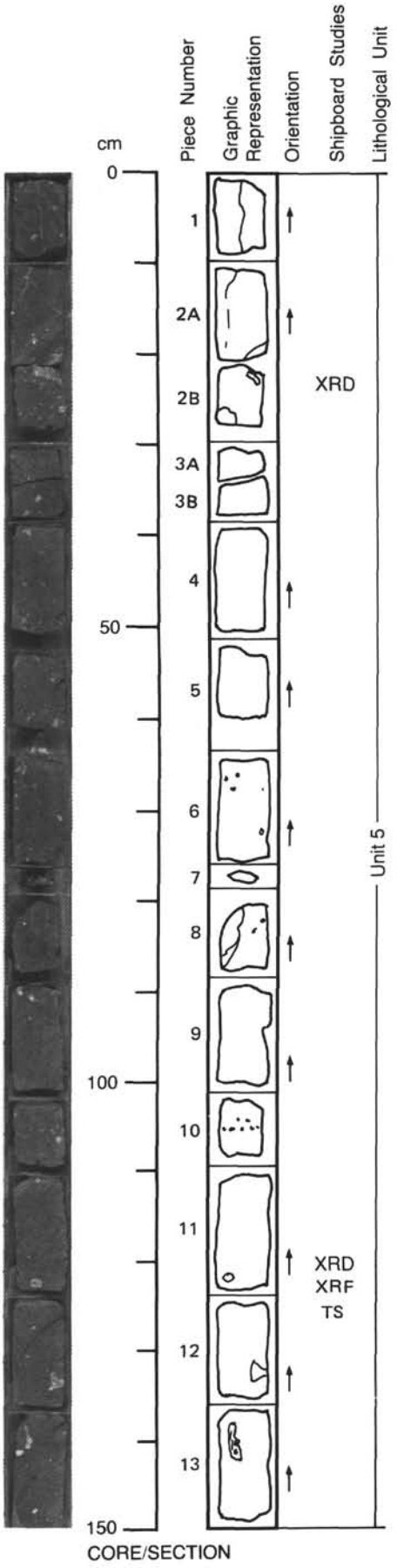
Pieces 1-10

CONTACTS: Not determined.
PHENOCRYSTS:
Plagioclase - 1%, 1-2 mm, euhedral laths.
Clinopyroxene - 5%, 0.5-3 mm, subhedral.
GROUNDMASS: Fine-grained.
VESICLES: < 1%, 0.5 mm, filled with calcite.
COLOR: Gray.
STRUCTURE: Not determined.
ALTERATION: Slight, some pyrite in fractures.
VEINS/FRACTURES: (?)%, 0.5-2 mm, infilled with gray smectite.
ADDITIONAL COMMENTS: Becoming finer grained towards contact with Unit 5. Near contact boundary (Piece 10 and part of Piece 11), fine-grained and aphyric.

UNIT 5: APHYRIC BASALT

Pieces 11 and 12

CONTACTS: Not determined.
PHENOCRYSTS: Rare plagioclase.
GROUNDMASS: Very fine-grained.
VESICLES: 1%, 1-10 mm, round to subround, irregularly distributed, green clay, zeolites, and calcite filled.
COLOR: Gray to gray-green.
STRUCTURE: Not determined.
ALTERATION: Slight.
VEINS/FRACTURES: Uncommon, thin (< 0.05 mm), filled with zeolites and quartz.

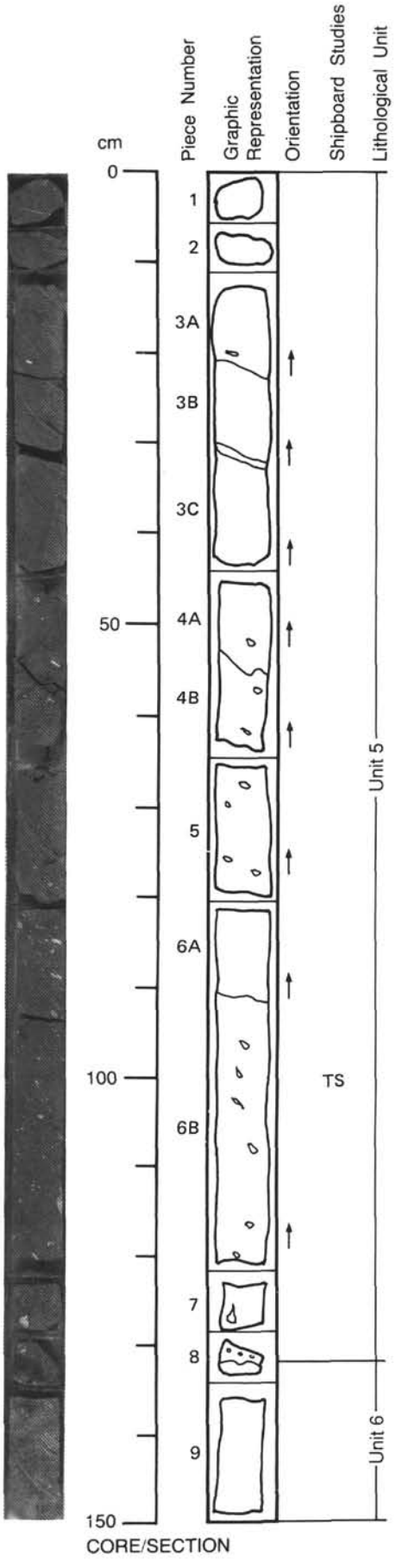


120-749C-15R-6

UNIT 5: CONTINUED

Pieces 1-13

CONTACTS: Not determined.
PHENOCRYSTS: Rare plagioclase.
GROUNDMASS: Very fine-grained.
VESICLES: 1%, 1-10 mm, round to subround, irregularly distributed, green clay, zeolites, and calcite filled. Piece 10: 2 cm horizon of round clay and zeolite-filled vesicles.
COLOR: Gray to gray-green.
STRUCTURE: Not determined.
ALTERATION: Slight.
VEINS/FRACTURES: Uncommon, thin (< 0.05 mm), filled with zeolites and quartz. Piece 2B has green smectite vein. Piece 11 has cavity filled with green smectite and laumontite.



120-749C-16R-1

UNIT 5: CONTINUED

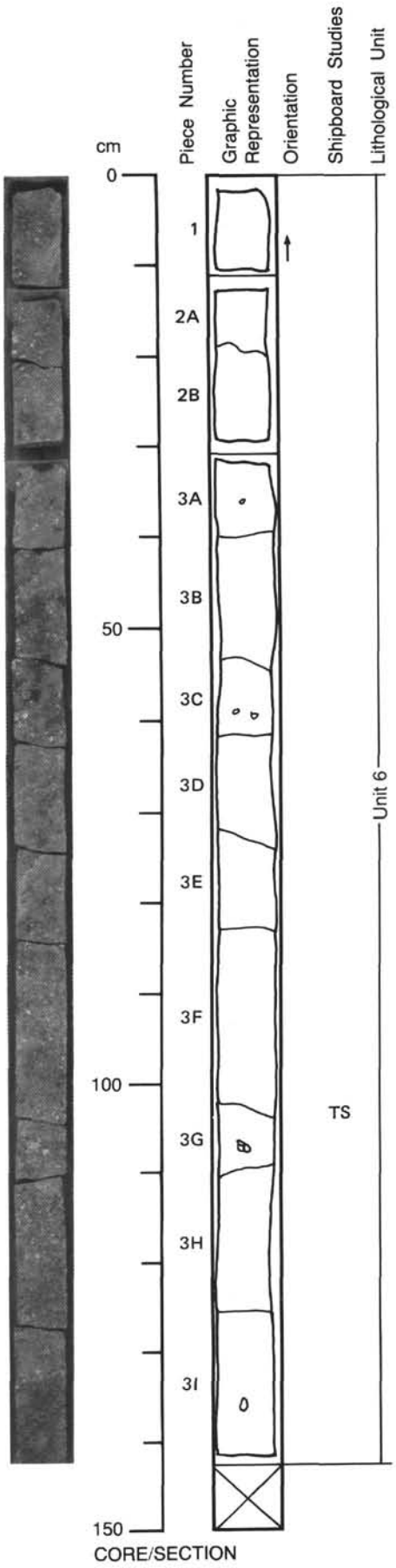
Pieces 1-8 (Top)

CONTACTS: Piece 8, top 4 cm: very fine-grained aphyric basalt. No vesicles, chilled margin. Contact with Unit 6.
PHENOCRYSTS: Rare plagioclase.
GROUNDMASS: Very fine-grained.
VESICLES: (?)%, 1-10 mm, round to subround, irregularly distributed, green clay, zeolites, and calcite filled. Amygdules increase in abundance toward base of Unit 5.
COLOR: Gray to gray-green.
STRUCTURE: Not determined.
ALTERATION: Slight.
VEINS/FRACTURES: Uncommon, thin (< 0.05 mm), filled with zeolites and quartz.

UNIT 6: PLAGIOCLASE GLOMEROCRYSTS BASALT

Pieces 8 (Bottom)-9

CONTACTS: Not determined.
PHENOCRYSTS: Unrecognizable.
GROUNDMASS: Very fine-grained and amygdaloidal with some angular fragments.
VESICLES: (?)%, 1 mm-2 cm, quartz and green clay filled.
COLOR: Green to light-gray green.
STRUCTURE: Not determined.
ALTERATION: Moderate.
VEINS/FRACTURES: None to very rare.

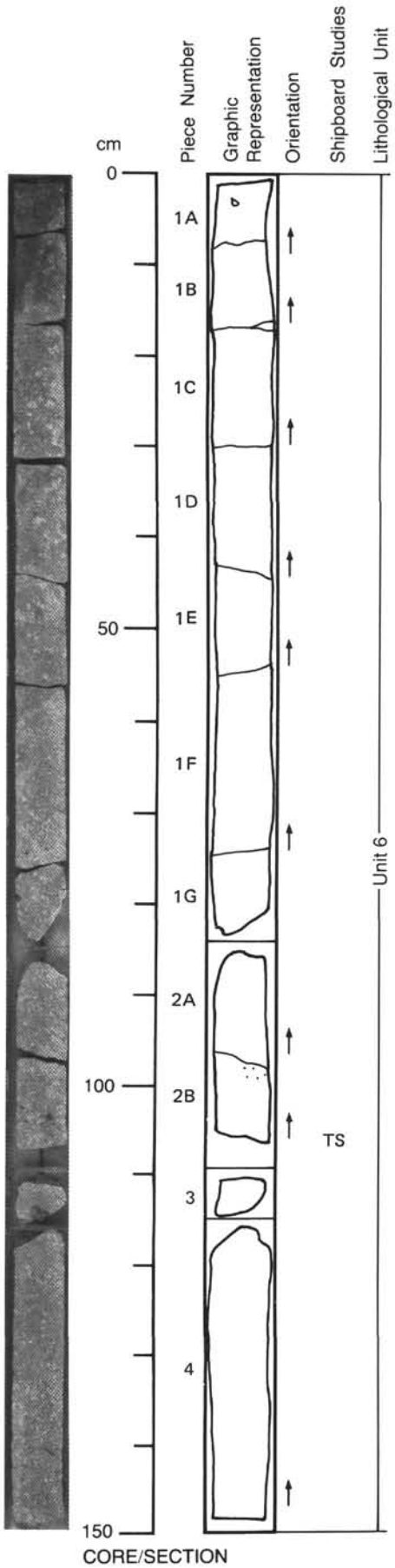


120-749C-16R-2

UNIT 6: CONTINUED

Pieces 1-3

CONTACTS: Not determined.
PHENOCRYSTS: Plagioclase - 20%, 1.5-2 mm, glomerocrysts.
GROUNDMASS: Very fine-grained and amygdaloidal with some angular fragments.
VESICLES: (?)%, 1 mm-2 cm, quartz and green smectite filled. No calcite.
COLOR: Green to light-gray green.
STRUCTURE: Not determined.
ALTERATION: Fresh to slight.
VEINS/FRACTURES: None.

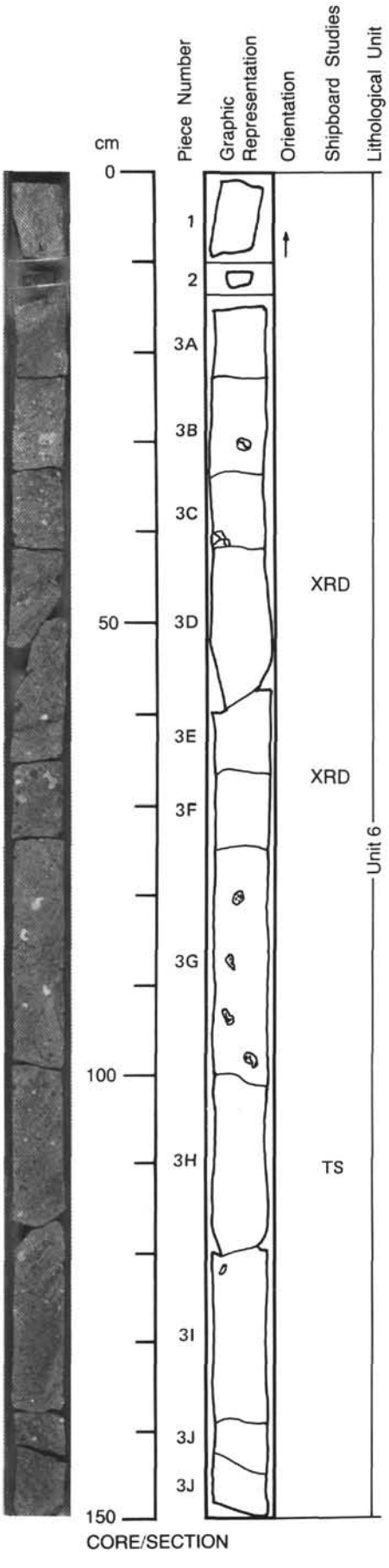


120-749C-16R-3

UNIT 6: CONTINUED

Pieces 1-4

CONTACTS: Not determined.
PHENOCRYSTS: Plagioclase - 20%, 1.5-2 mm, glomerocrysts.
GROUNDMASS: Very fine-grained and amygdaloidal with some angular fragments.
VESICLES: (?)%, 1 mm-2 cm, quartz and green clay-filled vesicles. No calcite. Pieces 1F to 4: vesicles become more open and are lined with dark green to blue green clay, continuing to Section 4, Piece 2.
COLOR: Green to light-gray green.
STRUCTURE: Not determined.
ALTERATION: Fresh.
VEINS/FRACTURES: None.

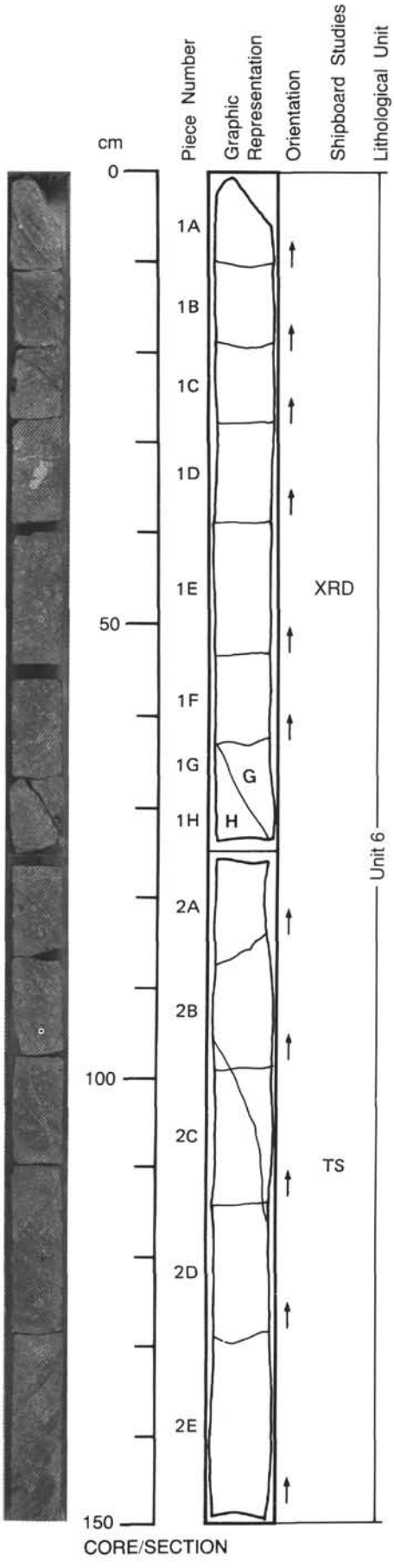


120-749C-16R-4

UNIT 6: CONTINUED

Pieces 1-3

CONTACTS: Not determined.
PHENOCRYSTS: Plagioclase - 20%, 1.5-2 mm, glomerocrysts.
GROUNDMASS: Very fine-grained and amygdaloidal.
VESICLES: Small (1-2 mm) vesicles are filled with green clay. Piece 3G: large (> 2 cm) vesicles filled with (a) 2 mm - 1cm clay/zeolites lining, (b) lined with green clay and filled with zeolite and 2-3 cm prismatic zeolite crystals.
COLOR: Green to light-gray green.
STRUCTURE: Not determined.
ALTERATION: Becoming less altered downward (i.e., Pieces 3G-3J).
VEINS/FRACTURES: None.



120-749C-16R-5

UNIT 6: PLAGIOCLASE GLOMEROCRYSTS BASALT

16R-5, Pieces 1-2, 16R-6, Pieces 1-2, and 16R-7, Pieces 1-6

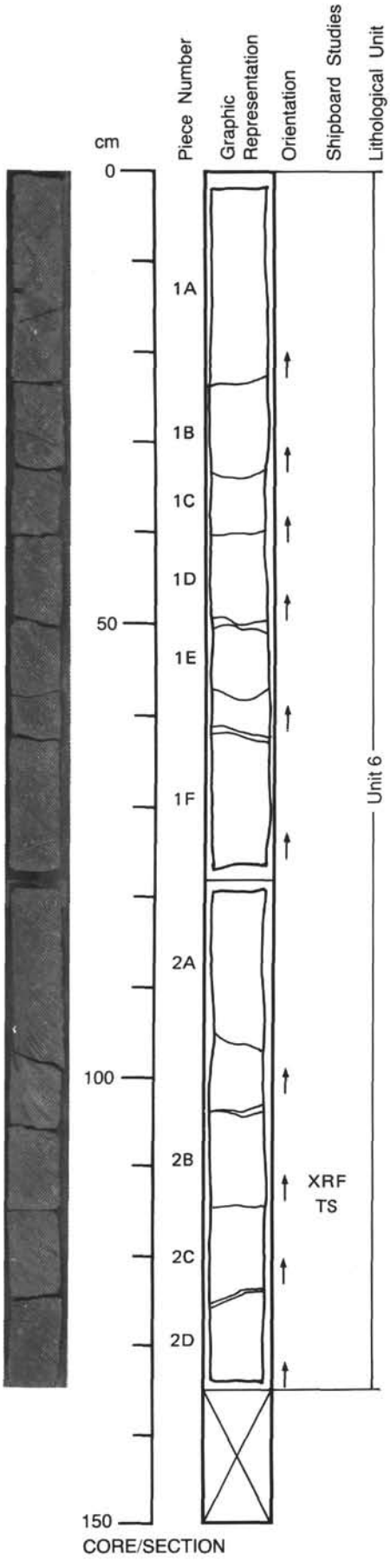
CONTACTS: Not determined.
PHENOCRYSTS:
Plagioclase - 30%, 3-10 mm.
Clinopyroxene - 2%, 1-3 mm.
GROUNDMASS: Fine-grained, microcrystalline.
VESICLES: (?)%, 1-5 mm, filled with green clay.
COLOR: Gray.
STRUCTURE: Not determined.
ALTERATION: Fresh to slightly altered.
VEINS/FRACTURES: (?)%, 1.5-5 mm, zoned, lined with green clays and prismatic zeolite.
ADDITIONAL COMMENTS: Unit 6 continues from 16R-1, Pieces 8 through 16R-7, Piece 6, but at Piece16R-4, 3H, Unit 6 becomes relatively fresh.

120-749C-16R-6

UNIT 6: CONTINUED

Pieces 1-2

See Section 749C-15R-5



120-749C-16R-7

UNIT 6: CONTINUED

Pieces 1-6

See Section 749C-15R-5