SITE 739 HOLE A CORE 1H CORED INTERVAL 0.0-4.6 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
QUATERNARY	R/G *Neogloboquadrina pachyderma* interval	B	R/G *Antarctissa denticulata* interval	C/M *Thalassiaosira lentiginosa*		γ-2.18 ●V-2060 w:20.5% γ-2.20 ●V-1912 w:19.7% γ-2.17 ●V-1782 w:18.5%	● %$CaCO_3$+0.2 %TOC-0.20	1 2 3 CC	0.5 1.0	VOID VOID		◇ ◇ ◇	* *

LITHOLOGIC DESCRIPTION

DIAMICTON

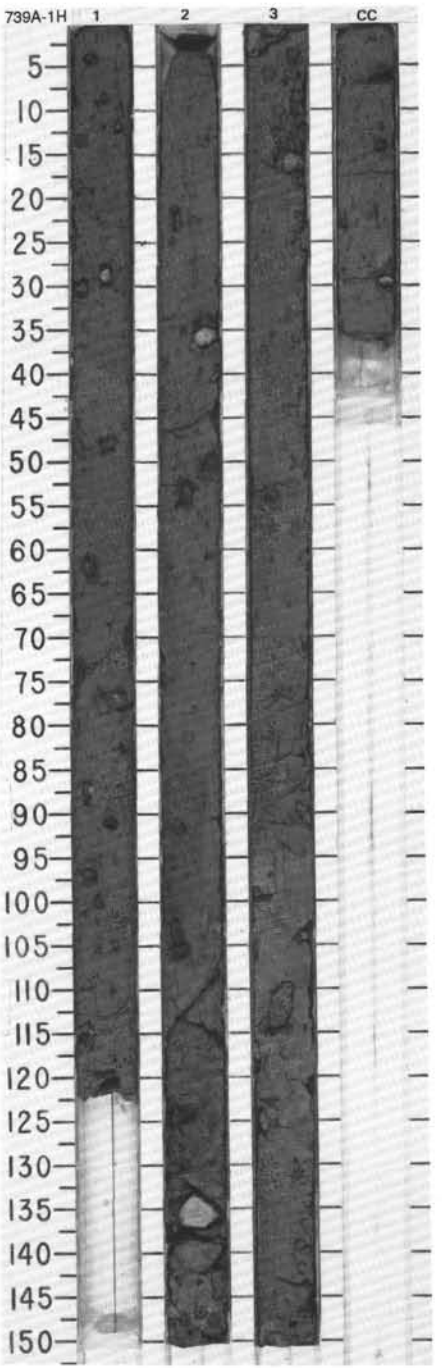
Major lithology:
Diamicton (sand-silt-clay with 1-10% gravel, and 5-10% diatoms), dark gray (5Y 3/1 and 5Y 4/1) with some deformed darker bands of black (5Y 2.5/1) material); homogeneous, unstratified. The sediment is soft and sticky. Clasts of gravel are subrounded 38%, subangular 38%, angular 24% (sample of 26). Many have facets, are unweathered. They include gneisses with amphibole and garnet. Section 1 has a few carbonate fragments (< 1 cm diameter echinoderms) disseminated through the core.

Average gravel content:
Section 1, 10%
Section 2, 10%

Drilling disturbance:
The sediment is strongly disturbed, especially in Section 2 as the core liner shattered and the sediment was person-handled excessively.

SMEAR SLIDE SUMMARY (%):

	1, 80 D	3, 80 D
TEXTURE:		
Sand	20	10
Silt	50	60
Clay	30	30
COMPOSITION:		
Access. Minerals	2	3
Clay	10	15
Diatoms	10	5
Feldspar	25	20
Garnet	—	Tr
Opaques	2	5
Palagonite	1	1
Quartz	50	50



SITE 739 HOLE A CORE 2H CORED INTERVAL 4.6-5.6 mbsf

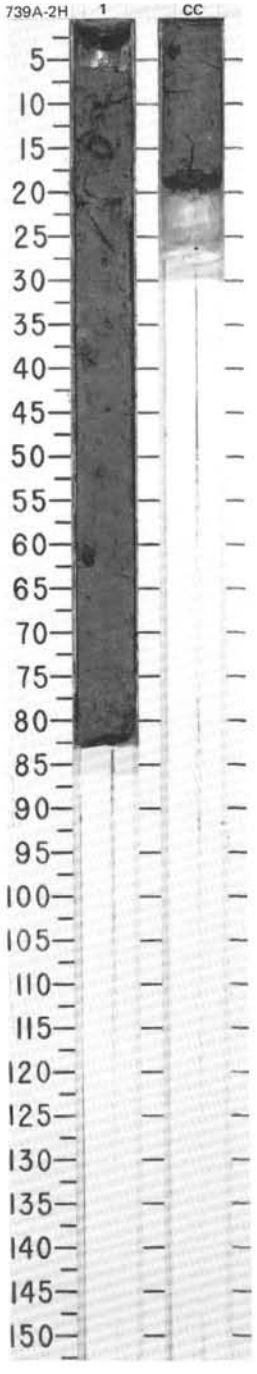
TIME-ROCK UNIT	BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
QUATERNARY	R/G		R/G	C/M		V=2263 w=19.7% ●/-2.24	%$CaCO_3$=0.3 %TOC=0.25 ●	1	0.5			◇	*	SAND-SILT-CLAY
			Antarctissa denticulata interval	*Thalassiosira lentiginosa*				CC		VOID				

Major lithology:
Sand-silt-clay with 30% diatoms, <1% gravel as evenly distributed ionestones, dark gray (5Y 4/1), poorly sorted, homogeneous, unstratified and soft. The gravel clasts include biotite gneiss and garnetiferous mica schist.

Drilling disturbance:
Moderate.

SMEAR SLIDE SUMMARY (%):

	1, 50 D
TEXTURE:	
Sand	40
Silt	30
Clay	30
COMPOSITION:	
Access. Minerals	5
Clay	15
Diatoms	30
Feldspar	27
Quartz	20
Radiolarians	3
Spicules	Tr

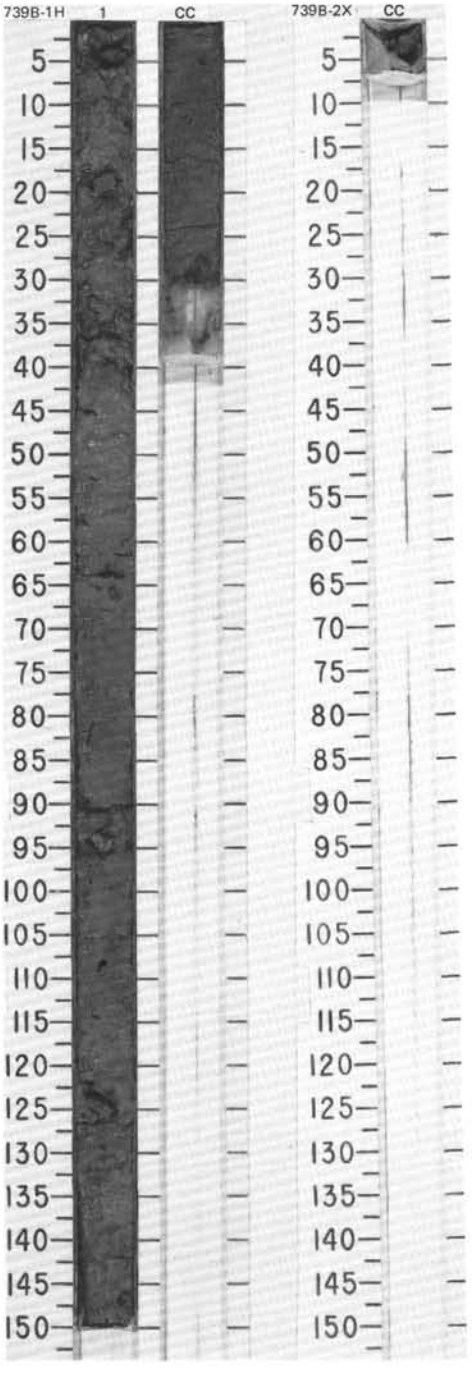


SITE 739 HOLE B CORE 1H CORED INTERVAL 0.0-1.9 mbsf

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/G	B	*Antarctissa denticulata* interval	R/G		γ=2.09 ●V=2490 w=21.8%	● %$CaCO_3$=0.1 %TOC=0.39	1	0.5 1.0				*	DIAMICTON Major lithology: Diamicton (sand-silt-clay with 2% gravel and around 5% diatoms), dark gray (5Y 4/1), poorly sorted, homogeneous, unstratified and rather plastic. Slight variations of clay and sand content occur. In the core catcher there are diffuse, irregular patches of gravelly sandy silty clay of visually estimated compositions: (1) granule 10%, sand 25-40%, silt and clay 50-65%, and (2) gravel 10%, sand 10%, silt and clay 80%. The irregular patches may be due to soft sediment deformation. Clasts are mainly metamorphic, the largest being 3 cm diameter in Section 1, 120 cm. Drilling disturbance: In Section 1 there is very deformed soft, sticky sediment. In core catcher soft sediment deformation may have been due to drilling. SMEAR SLIDE SUMMARY (%): 1, 70 D; CC, 10 D TEXTURE: Sand 10 25 Silt 50 45 Clay 40 30 COMPOSITION: Access. Minerals 1 2 Clay 15 20 Diatoms 5 5 Feldspar 25 15 Opaques 1 3 Palagonite Tr 2 Quartz 50 50 Radiolarians Tr Tr Silicoflagellates Tr —
				Thalassiosira lentiginosa				CC					*	

SITE 739 HOLE B CORE 2X CORED INTERVAL 1.9-3.1 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/G		C/G				CC	1				*	No recovery except for three small subangular pebbles of schist and gneiss, and relict clayey silt with minor carbonate in core-catcher. SMEAR SLIDE SUMMARY (%): CC, 1 D TEXTURE: Sand 15 Silt 60 Clay 25 COMPOSITION: Access. Minerals 1 Carbonate Tr Clay 15 Diatoms 5 Feldspar 15 Foraminifers 1 Opaques 3 Quartz 60 Radiolarians Tr Silicoflagellates Tr Spicules Tr



739 B 3X NO RECOVERY

SITE 739 HOLE C CORE 1R CORED INTERVAL 0.0-9.5

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					w=23% ● 9-44% ▽2.10	%TOC=0.35 ● %$CaCO_3$=0.1	1	0.5				*	DIATOMACEOUS SAND-SILT-CLAY AND SAND-SILT-CLAY WITH MINOR DIATOMS
	R/G	B	R/G	C/G				CC	1.0				*	

Antarctissa denticulata interval

Thalassiosira lentiginosa

Major lithology:
Diatomaceous sand-silt-clay and sand-silt-clay with minor diatoms; Section 1, 0-20 cm is olive (5Y 5/3) and 20-96 cm is dark gray (5Y 4/1). Angular to subangular grains, granules and small pebbles (< 0.75 cm long), composed predominantly of quartz, are scattered throughout the core.

Minor lithology:
Sand-silt-clay, very dark grayish brown (2.5Y 3/2) with 1% diatoms occurs in Section 1, 96-110 cm; this part of the core is more compact and consolidated.

Drilling disturbance:
Section 1, 0-20 cm is very soft and soupy, 20-96 cm is soft and soupy, and 96-110 cm is only moderately disturbed.

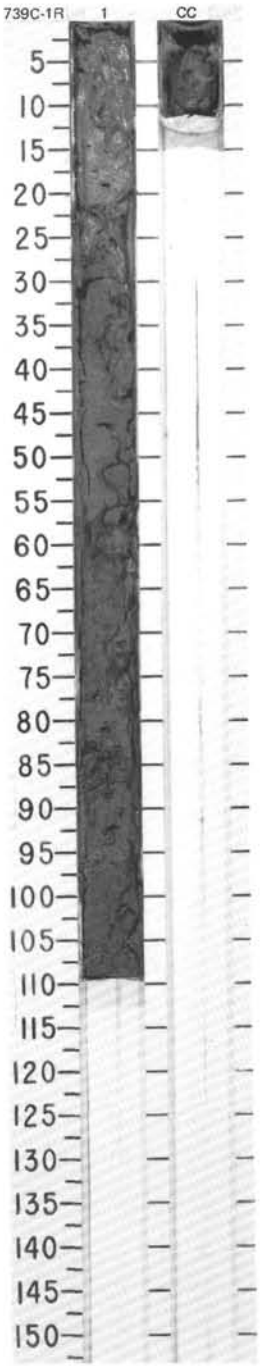
SMEAR SLIDE SUMMARY (%):

	1, 18 D	1, 46 D	1, 103 D
TEXTURE:			
Sand	30	30	40
Silt	50	50	40
Clay	20	20	20
COMPOSITION:			
Amphibole	—	2	—
Calcite	—	3	—
Clay	15	20	20
Diatoms	15	35	1
Feldspar	10	5	20
Opaques	—	Tr	—
Pyroxene	3	—	3
Quartz	50	30	55
Radiolarians	5	—	—
Spinel	—	Tr	Tr

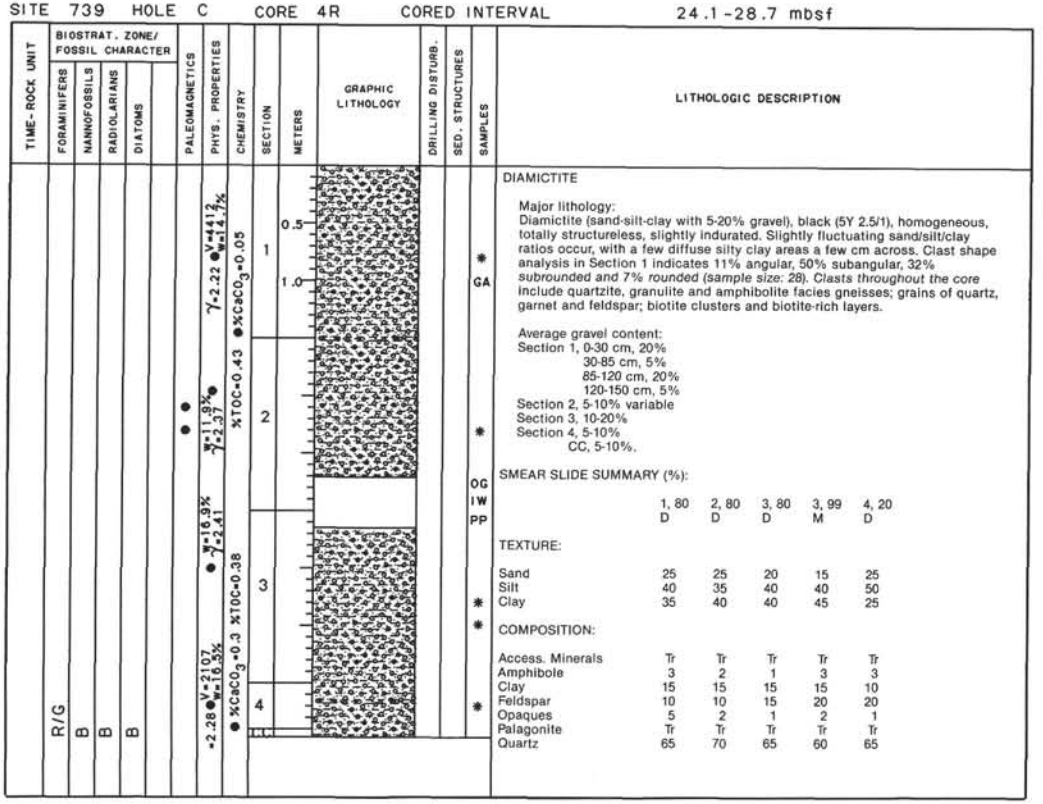
SITE 739 HOLE C CORE 2R CORED INTERVAL 9.50 mbsf

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
							● %$CaCO_3$=0.3 %TOC=0.45	1						

739 C 3R NO RECOVERY



SITE 739 HOLE C CORE 4R CORED INTERVAL 24.1-28.7 mbsf



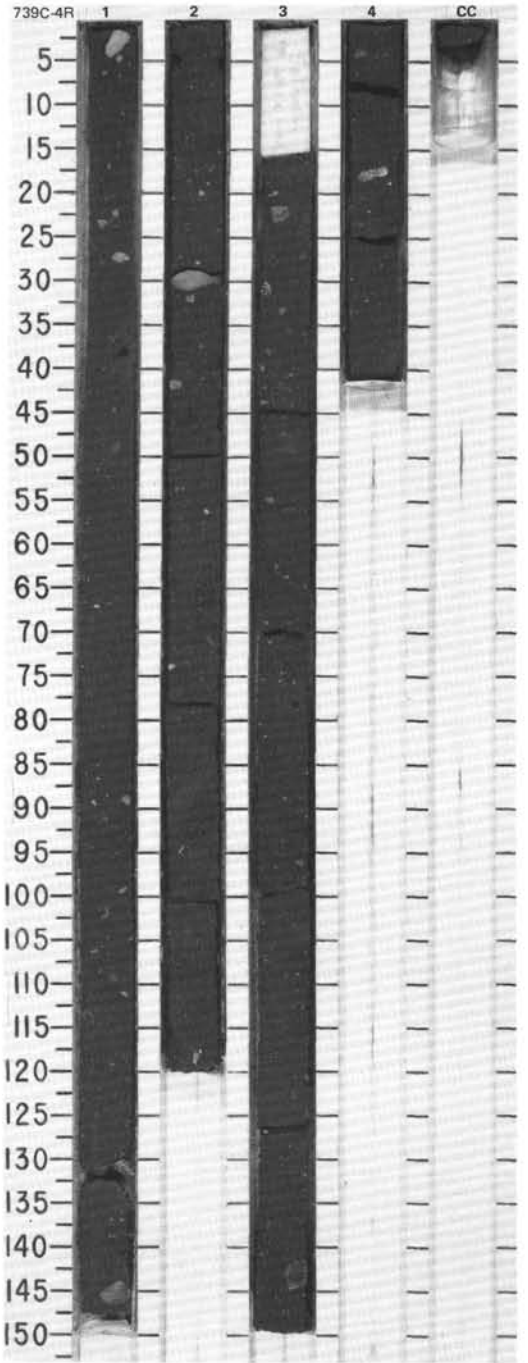
DIAMICTITE

Major lithology:
Diamictite (sand-silt-clay with 5-20% gravel), black (5Y 2.5/1), homogeneous, totally structureless, slightly indurated. Slightly fluctuating sand/silt/clay ratios occur, with a few diffuse silty clay areas a few cm across. Clast shape analysis in Section 1 indicates 11% angular, 50% subangular, 32% *subrounded and 7% rounded (sample size: 28). Clasts throughout the core* include quartzite, granulite and amphibolite facies gneisses; grains of quartz, garnet and feldspar; biotite clusters and biotite-rich layers.

Average gravel content:
Section 1, 0-30 cm, 20%
30-85 cm, 5%
85-120 cm, 20%
120-150 cm, 5%
Section 2, 5-10% variable
Section 3, 10-20%
Section 4, 5-10%
CC, 5-10%.

SMEAR SLIDE SUMMARY (%):

	1, 80 D	2, 80 D	3, 80 D	3, 99 M	4, 20 D
TEXTURE:					
Sand	25	25	20	15	25
Silt	40	35	40	40	50
Clay	35	40	40	45	25
COMPOSITION:					
Access. Minerals	Tr	Tr	Tr	Tr	Tr
Amphibole	3	2	1	3	3
Clay	15	15	15	15	10
Feldspar	10	10	15	20	20
Opaques	5	2	1	2	1
Palagonite	Tr	Tr	Tr	Tr	Tr
Quartz	65	70	65	60	65



SITE 739 HOLE C CORE 5R CORED INTERVAL 28.7-38.3 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
	R/G	B	B	B			● %CaCO$_3$ +0.5 %TOC=0.36	1 2 3 CC	0.5 1.0				PP	DIAMICTITE Major lithology: Diamictite (sand-silt-clay with 5-20% gravel), black (5Y 2.5/1), homogeneous, totally structureless, slightly indurated. Slightly fluctuating sand/silt/clay ratios occur, with a few diffuse clayey silt areas a few cm across, e.g., Section 1, 70 cm and 130 cm. Clast shape data indicate 14% angular, 41% subangular, 38% subrounded, 8% rounded (sample size 51). Clasts include vein quartz, biotite clusters, granite, microgranite, gneiss and feldspar grains. The largest clast is 4 cm in length. Most clasts are fresh with no weathering rinds; however some granite feldspar grains are weathered. Average gravel content: Section 1, 0-20 cm, 10% 20-50 cm, 20% 50-150 cm, 10%; Section 2, 0-50 cm, 15% 50-100 cm, 5% 100-150 cm, 20% Section 3, 5-15%

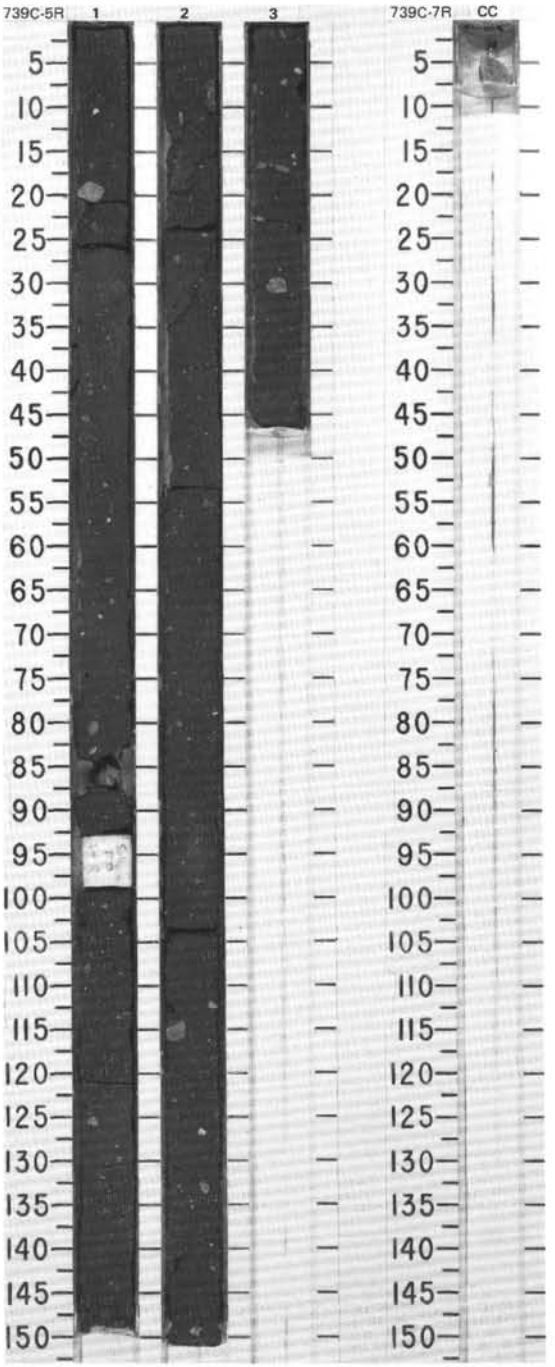
SMEAR SLIDE SUMMARY (%):

	1, 70 D	1, 130 D	2, 80 D	3, 20 D
TEXTURE:				
Sand	15	15	20	25
Silt	50	45	45	45
Clay	35	40	35	30
COMPOSITION:				
Access. Minerals	Tr	Tr	2	Tr
Amphibole	3	2	—	2
Clay	10	20	8	20
Feldspar	10	10	50	10
Opaques	5	3	5	7
Palagonite	Tr	Tr	5	Tr
Quartz	70	65	30	60

739 C 6R NO RECOVERY

SITE 739 HOLE C CORE 7R CORED INTERVAL 48.0-57.6 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
								CC						No recovery except for 2 cm recorded in core catcher. Single drill-abraded pebble of gneiss, 3 cm.



SITE 739 HOLE C CORE 8R CORED INTERVAL 57.6-67.3 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
	B	R/M		R/P		● ϕ=32% γ=2.14 w=14%	● $\%CaCO_3$=0.8 %TOC=0.46	CC						No recovery except for 4 cm in corecatcher comprising two rounded pebbles of garnet-bearing gneiss and overconsolidated sand-silt-clay, dark olive gray (5Y 3/1); sand fraction is mainly quartz grains up to 2 mm in diameter; this comprises up to 40% of the sediment. A pebble of garnet-bearing gneiss occurs in the sand-silt-clay.

SITE 739 HOLE C CORE 9R CORED INTERVAL 67.3-76.9 mbsf

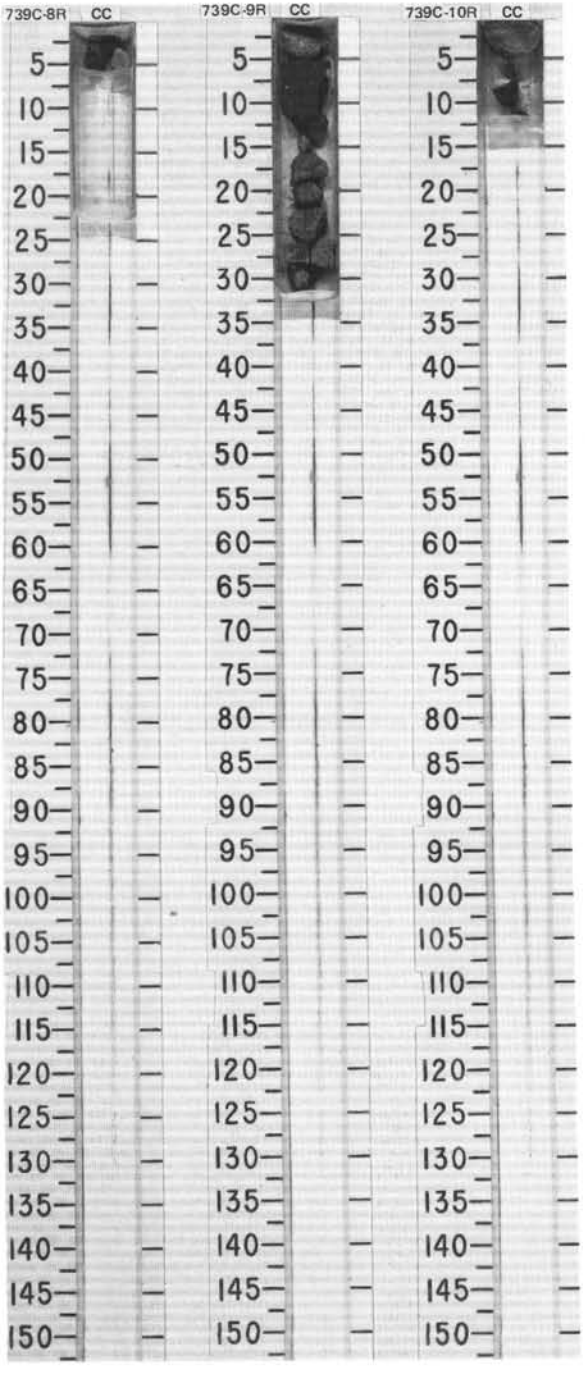
TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
	B	B	B	B		● ϕ=27% γ=2.29 w=12% V=2411	● $\%CaCO_3$=0.6 %TOC=0.58	CC			X		*	No recovery except for 30 cm in core catcher comprising angular clasts of grey granite, gneiss, granodiorite, foliated crystalline metamorphic rock, diamictite and an 8.5 cm long piece of compact diamictite (sand-silt-clay), very dark gray (5Y 3/1) with up to 15% fine quartz dominated gravel.

SMEAR SLIDE SUMMARY (%):

	CC, 9 D
TEXTURE:	
Sand	25
Silt	50
Clay	25
COMPOSITION:	
Access. Minerals	2
Amphibole	5
Clay	15
Feldspar	10
Opaques	2
Palagonite	1
Quartz	65

SITE 739 HOLE C CORE 10R CORED INTERVAL 76.9-86.6 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
		B		R/P			● $\%CaCO_3$=0.6 %TOC=0.4	CC			X			No recovery except for 10 cm in core catcher comprising drill-abraded pebbles, one of granite and two of gneiss.

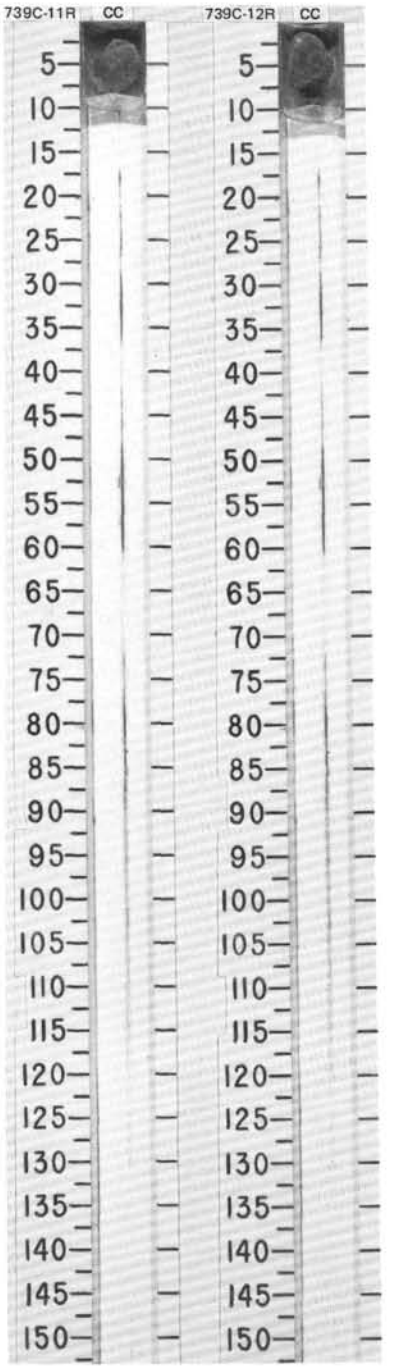


SITE 739 HOLE C CORE 11R CORED INTERVAL 86.6-96.3 mbsf

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
								CC						No recovery except for 7 cm in core catcher comprising a single drill-abraded gneiss pebble.

SITE 119 HOLE C CORE 12R CORED INTERVAL 96.3-105.9 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
		R/M		F/M				CC			X			No recovery except for 8 cm in core catcher comprising three angular pebbles of foliated hornblende-biotite gneiss.



SITE 739 HOLE C CORE 13R CORED INTERVAL 105.9-115.5 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 PLIOCENE	B	R/M		*Nitzschia angulata* to upper *Nitzschia reinholdii* R/P	•	0-24% ▼-11% ●-10% ◆-11% V=2234 /=2.39 /=2.3 /=2.38		1	0.5 1.0		X X X / /		* PP *
								2					

LITHOLOGIC DESCRIPTION

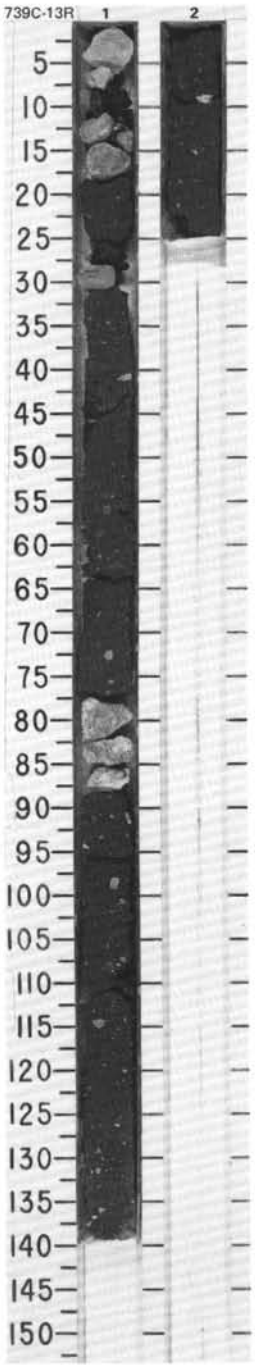
DIAMICTITE and DIAMICTITE with MINOR DIATOMS

Major lithology:
Diamictite and diamictite with minor diatoms (sand-silt-clay with minor gravel), very dark gray (5Y 3/1) with 5-10% diatoms; massive, non-stratified, poorly sorted. A paler more sandy layer 1 cm thick occurs in Section 1, 39-40 cm. Gravel content is 15-20%; most clasts are angular to subangular granules and small pebbles up to a maximum of 2 cm in diameter. Clasts are composed predominantly of quartz, feldspar, granite, gneiss and hard black coaly carbonaceous shale; all clasts are fresh and unaltered. One clast shows bullet-shaped terminations.

Drilling disturbance:
Section 1, 0-20 cm, coarse gravel, 30 cm, single clast, 80-87 cm, coarse gravel; all due to hole contamination.

SMEAR SLIDE SUMMARY (%):

	1, 70 D	2, 10 D
TEXTURE:		
Sand	15	10
Silt	60	60
Clay	25	30
COMPOSITION:		
Access. Minerals	2	1
Amphibole	3	3
Clay	15	20
Diatoms	10	5
Feldspar	2	3
Opaques	2	1
Palagonite	1	2
Quartz	60	60



SITE 739 HOLE C CORE 14R CORED INTERVAL 115.5-125.2 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
LOWER PLIOCENE		B	B	R/P				1, 2, 3, CC	0.5, 1.0				PP

└upper *Nitzschia reinholdii* to *Nitzschia angulata*

φ=15% ● V=2482 w=6% ρ=2.45 ● %CaCO3=0.1 %TOC=0.93 ● φ=7% ρ=2.49 ● φ=11% ρ=2.30 ● φ=7% ρ=2.29 ● φ=12% ρ=2.0 ● φ=25%

LITHOLOGIC DESCRIPTION

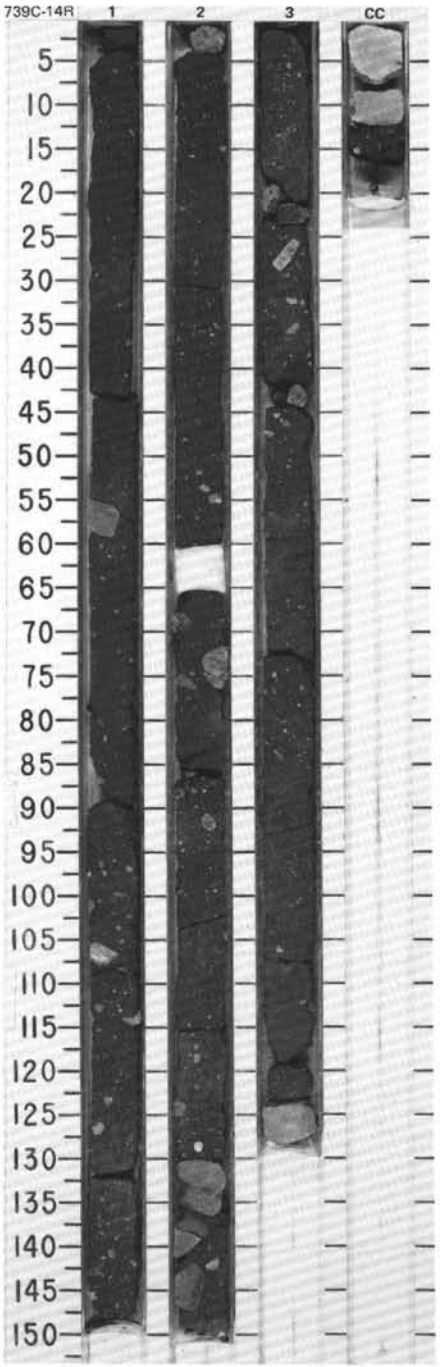
DIAMICTITE

Major lithology:
Diamictite (clayey silt to silty clay with minor sand and gravel), black (5Y 2.5/1) and very dark gray (5Y 3/1), massive, non-stratified, poorly sorted, compacted to slightly indurated. Slight variations in sand and gravel content are visible in the core. Clasts are mostly a few cm in diameter, the largest being 6 cm. Clast shape analysis in Sections 1-3 indicates 16% angular, 38% subangular, 42% subrounded, 4% rounded (sample size 50). Clasts include in decreased order of importance quartz-feldspar-biotite gneisses, biotite-feldspar-amphibole gneisses, gneisses of granulite facies or of anorthosite affinity (magnetite-bearing), biotite-rich gneisses and pyrite-rich mylonite. Most clasts are fresh.

Average gravel content:
Section 1, 0-50 cm, 10%
50-90 cm, 15%
90-150 cm, 30%
Section 2, 0-65 cm, 15%
65-95 cm, 25%
95-115 cm, 15%
115-150 cm, 40%
Section 3, 0-55 cm, 30%
55-75 cm, 15%
75-85 cm, 20%
85-95 cm, 5%
95-130 cm, 15%
CC, 0-15 cm, 60%

SMEAR SLIDE SUMMARY (%):

	1, 79 D	3, 57 D
TEXTURE:		
Sand	20	20
Silt	50	50
Clay	30	30
COMPOSITION:		
Access. Minerals	1	1
Amphibole	3	2
Clay	25	20
Diatoms	3	2
Feldspar	2	3
Opaques	2	1
Palagonite	2	1
Quartz	58	65



SITE 739 HOLE C CORE 15R CORED INTERVAL 125.2-130.3 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
		B		B		●	●		1	0.5 1.0				* * PP

V=2274 ϕ=21%
W=8% γ=2.22

W=11%
γ=2.48

DIAMICTITE

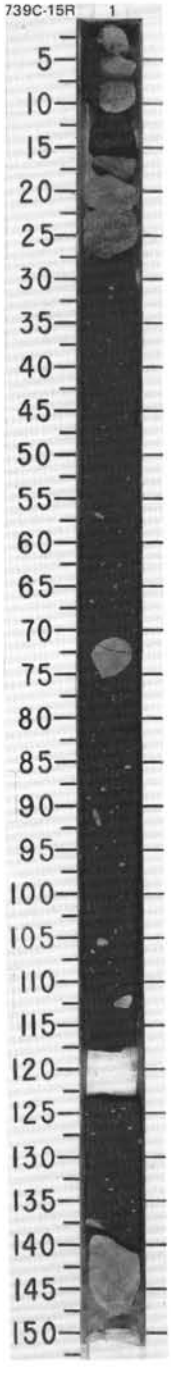
Major lithology:
Diamictite (sand-silt-clay with minor gravel), black (2.5G 2.5/0), massive, non-stratified, poorly sorted, compacted to slightly indurated. Slight variations in sand and gravel content are visible in the core, especially in Section 1, 11-16 cm, where a granule-coarse sand-silt-clay fines upwards to the main diamictite with a higher clay content (boundaries are diffuse). Clasts are mostly a few cm in diameter, the largest being 11 cm down core. Clast shape analysis in Section 1 indicates 4% angular, 60% subangular, 20% subrounded, 16% rounded (sample size 25). Larger clasts tend to be subrounded or rounded, smaller clasts angular to subangular. Clasts include gneisses (biotite +/− garnet and quartz-feldspar varieties), altered granite. Most clasts are fresh, but some granites are weathered.

Average gravel content:
Section 1, 0-30 cm, 70%
30-60 cm, 10%
60-150 cm, 15%

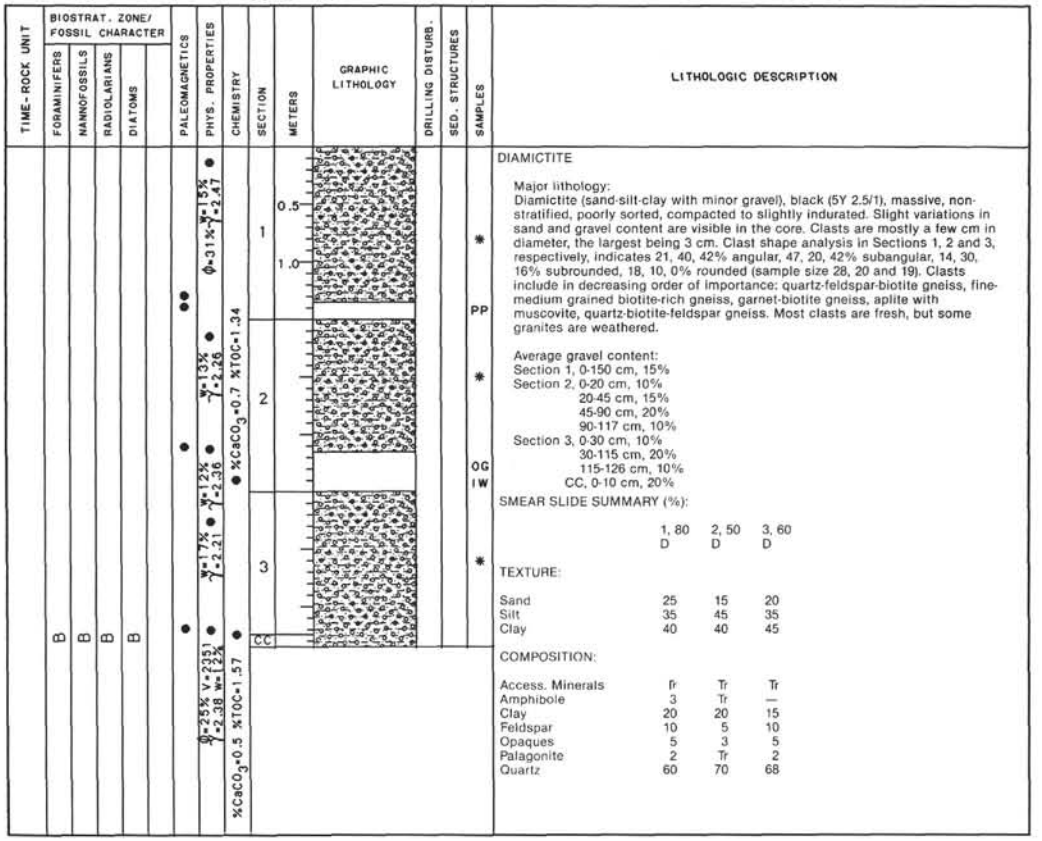
Drilling disturbance:
Broken core around clasts.

SMEAR SLIDE SUMMARY (%):

	1, 40 D	1, 100 D
TEXTURE:		
Sand	20	20
Silt	45	40
Clay	35	40
COMPOSITION:		
Access. Minerals	Tr	Tr
Amphibole	Tr	Tr
Clay	15	20
Feldspar	5	5
Nannofossils	Tr	Tr
Opaques	5	7
Palagonite	2	2
Quartz	70	65



SITE 739 HOLE C CORE 16R CORED INTERVAL 130.3-135.0 mbsf



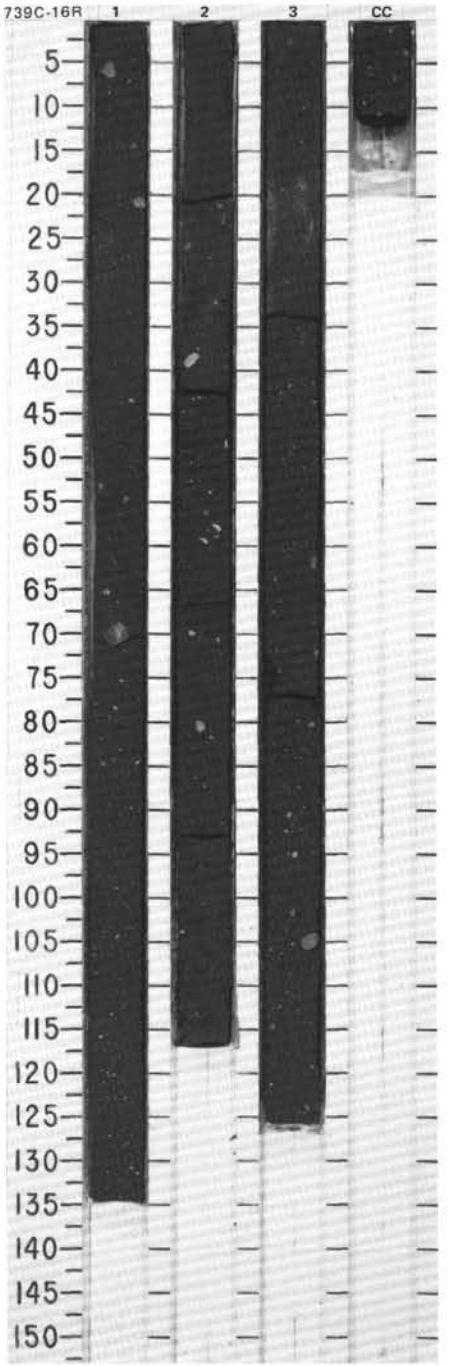
DIAMICTITE

Major lithology:
Diamictite (sand-silt-clay with minor gravel), black (5Y 2.5/1), massive, non-stratified, poorly sorted, compacted to slightly indurated. Slight variations in sand and gravel content are visible in the core. Clasts are mostly a few cm in diameter, the largest being 3 cm. Clast shape analysis in Sections 1, 2 and 3, respectively, indicates 21, 40, 42% angular, 47, 20, 42% subangular, 14, 30, 16% subrounded, 18, 10, 0% rounded (sample size 28, 20 and 19). Clasts include in decreasing order of importance: quartz-feldspar-biotite gneiss, fine-medium grained biotite-rich gneiss, garnet-biotite gneiss, aplite with muscovite, quartz-biotite-feldspar gneiss. Most clasts are fresh, but some granites are weathered.

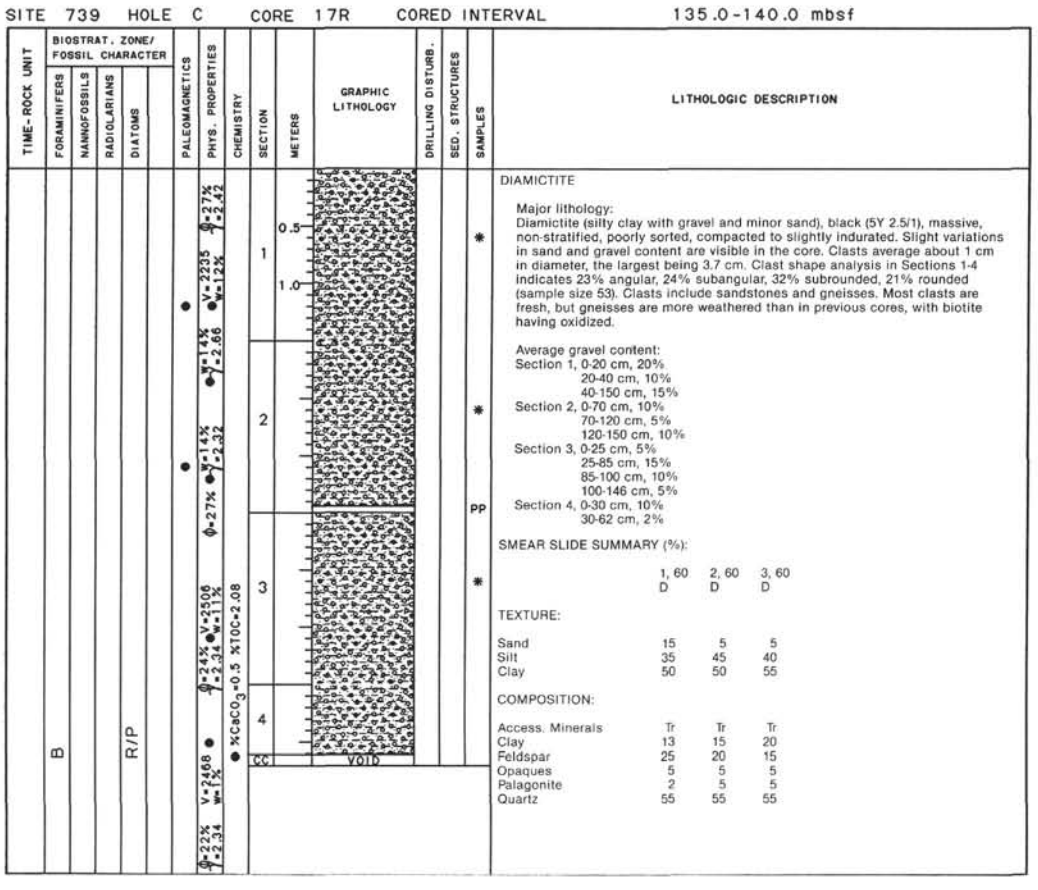
Average gravel content:
Section 1, 0-150 cm, 15%
Section 2, 0-20 cm, 10%
20-45 cm, 15%
45-90 cm, 20%
90-117 cm, 10%
Section 3, 0-30 cm, 10%
30-115 cm, 20%
115-126 cm, 10%
CC, 0-10 cm, 20%

SMEAR SLIDE SUMMARY (%):

	1, 80 D	2, 50 D	3, 60 D
TEXTURE:			
Sand	25	15	20
Silt	35	45	35
Clay	40	40	45
COMPOSITION:			
Access. Minerals	fr	Tr	Tr
Amphibole	3	Tr	—
Clay	20	20	15
Feldspar	10	5	10
Opaques	5	3	5
Palagonite	2	Tr	2
Quartz	60	70	68



SITE 739 HOLE C CORE 17R CORED INTERVAL 135.0-140.0 mbsf



LITHOLOGIC DESCRIPTION

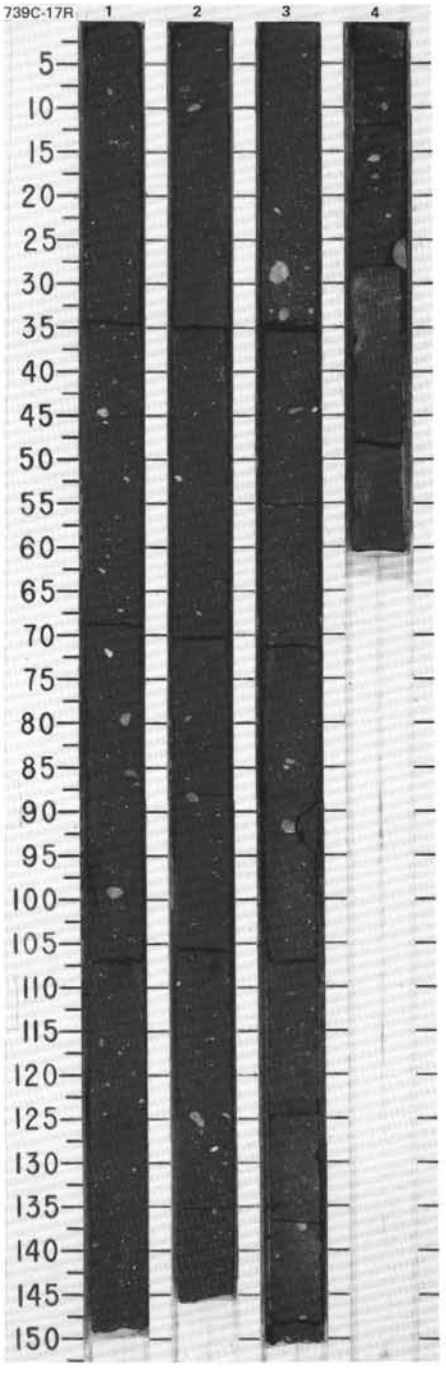
DIAMICTITE

Major lithology:
Diamictite (silty clay with gravel and minor sand), black (5Y 2.5/1), massive, non-stratified, poorly sorted, compacted to slightly indurated. Slight variations in sand and gravel content are visible in the core. Clasts average about 1 cm in diameter, the largest being 3.7 cm. Clast shape analysis in Sections 1-4 indicates 23% angular, 24% subangular, 32% subrounded, 21% rounded (sample size 53). Clasts include sandstones and gneisses. Most clasts are fresh, but gneisses are more weathered than in previous cores, with biotite having oxidized.

Average gravel content:
Section 1, 0-20 cm, 20%
20-40 cm, 10%
40-150 cm, 15%
Section 2, 0-70 cm, 10%
70-120 cm, 5%
120-150 cm, 10%
Section 3, 0-25 cm, 5%
25-85 cm, 15%
85-100 cm, 10%
100-146 cm, 5%
Section 4, 0-30 cm, 10%
30-62 cm, 2%

SMEAR SLIDE SUMMARY (%):

	1, 60 D	2, 60 D	3, 60 D
TEXTURE:			
Sand	15	5	5
Silt	35	45	40
Clay	50	50	55
COMPOSITION:			
Access. Minerals	Tr	Tr	Tr
Clay	13	15	20
Feldspar	25	20	15
Opaques	5	5	5
Palagonite	2	5	5
Quartz	55	55	55



SITE 739 HOLE C CORE 18R CORED INTERVAL 140.0-144.7 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER MIOCENE	B	R/M	B	C/M *Denticulopsis hustedtii*		ϕ=43% γ=2.22 V=2075 V_w=22% ϕ=16% γ=2.16 ϕ=18% γ=2.25 ϕ=24% γ=2.04	% $CaCO_3$=0.1 %TOC=1.36	1 2 3 CC	0.5 1.0				* *

LITHOLOGIC DESCRIPTION

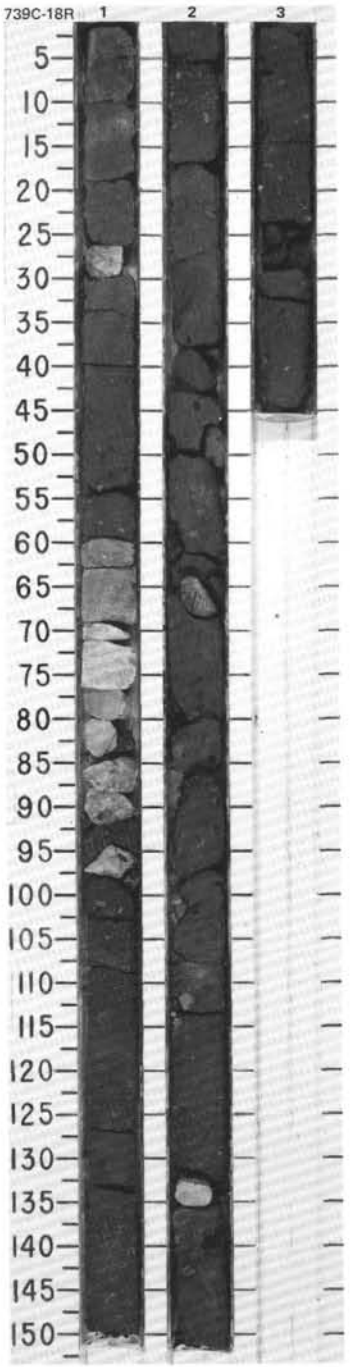
DIAMICTITE

Major lithology:
Diamictite (sand-silt-clay with gravel), black (5Y 2.5/1) and very dark gray (5Y 3/1), massive, non-stratified, poorly sorted, compacted to slightly indurated. Slight variations in sand and gravel content are visible in the core. Clasts are mostly a few cm in diameter, the largest being 20 cm downcore. Clast shape analysis in Sections 1-3 indicates 4% angular, 24% subangular, 54% subrounded, 18% rounded (sample size 50). Clasts include biotite granites (coarse-grained), pegmatites, arkosic gneisses with muscovite or aplite, garnet-biotite gneiss (coarse-grained) and iron oxide-rich pebbles. Most clasts are fresh, but some granites are weathered.

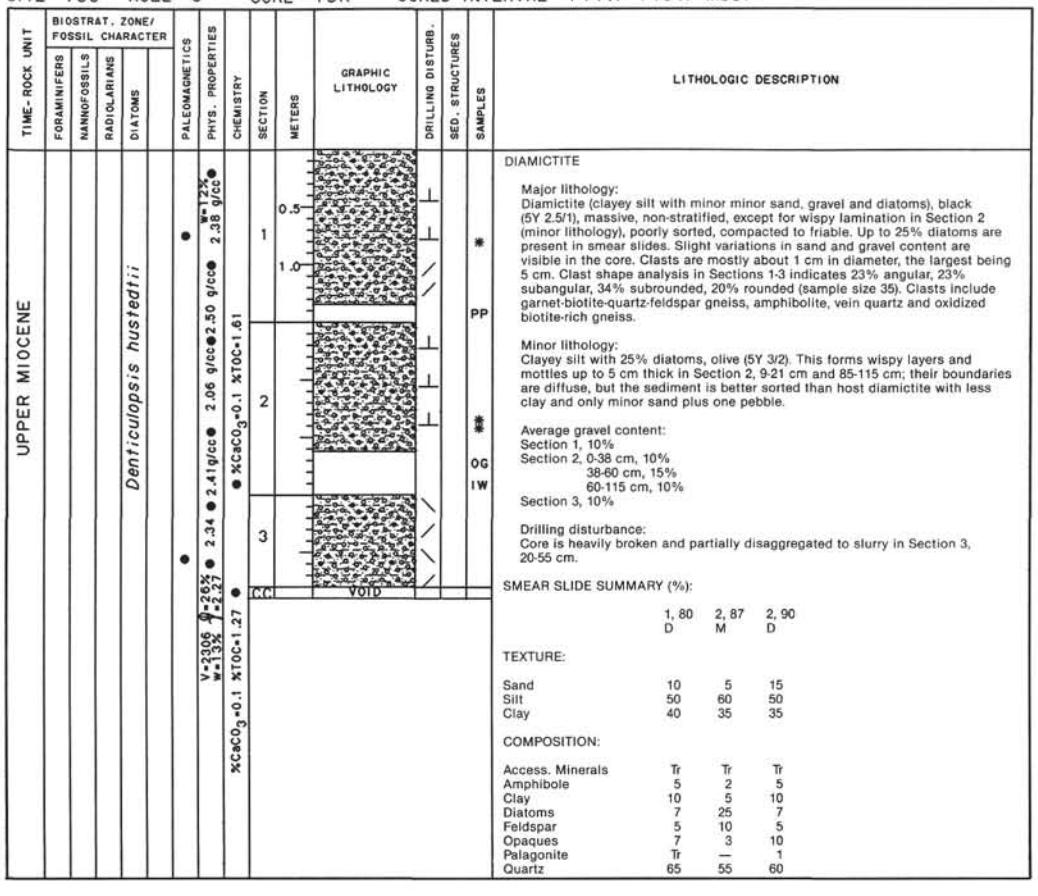
Average gravel content:
Section 1, 0-60 cm, 10-15%
60-100 cm, 80%
100-150 cm, 10-20%
Section 2, 0-20 cm, 20%
20-150 cm, 10-15%
Section 3, 10-15%

SMEAR SLIDE SUMMARY (%):

	1, 5 D	2, 75 D
TEXTURE:		
Sand	25	20
Silt	35	40
Clay	40	40
COMPOSITION:		
Access. Minerals	Tr	Tr
Amphibole	1	1
Clay	25	25
Diatoms	5	15
Feldspar	5	5
Opaques	5	3
Palagonite	1	1
Quartz	55	50



SITE 739 HOLE C CORE 19R CORED INTERVAL 144.7-149.7 mbsf



DIAMICTITE

Major lithology:
Diamictite (clayey silt with minor minor sand, gravel and diatoms), black (5Y 2.5/1), massive, non-stratified, except for wispy lamination in Section 2 (minor lithology), poorly sorted, compacted to friable. Up to 25% diatoms are present in smear slides. Slight variations in sand and gravel content are visible in the core. Clasts are mostly about 1 cm in diameter, the largest being 5 cm. Clast shape analysis in Sections 1-3 indicates 23% angular, 23% subangular, 34% subrounded, 20% rounded (sample size 35). Clasts include garnet-biotite-quartz-feldspar gneiss, amphibolite, vein quartz and oxidized biotite-rich gneiss.

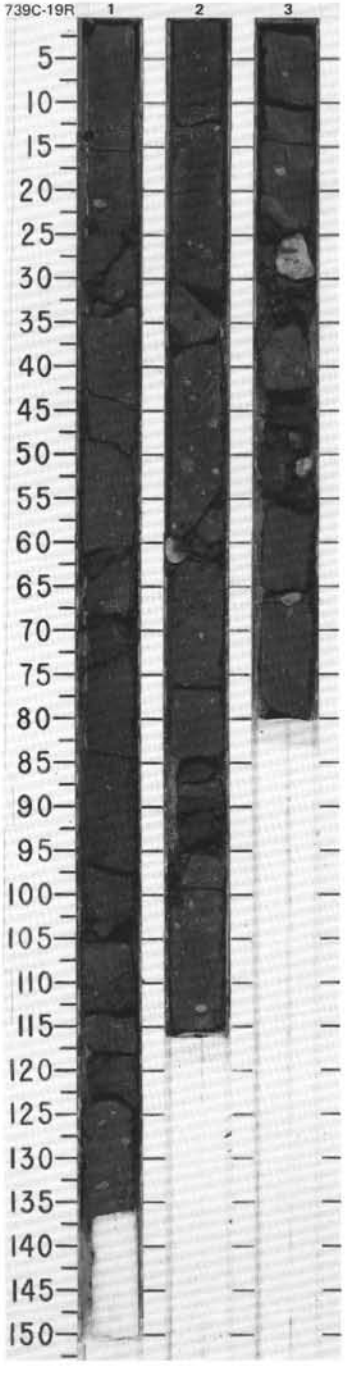
Minor lithology:
Clayey silt with 25% diatoms, olive (5Y 3/2). This forms wispy layers and mottles up to 5 cm thick in Section 2, 9-21 cm and 85-115 cm; their boundaries are diffuse, but the sediment is better sorted than host diamictite with less clay and only minor sand plus one pebble.

Average gravel content:
Section 1, 10%
Section 2, 0-38 cm, 10%
38-60 cm, 15%
60-115 cm, 10%
Section 3, 10%

Drilling disturbance:
Core is heavily broken and partially disaggregated to slurry in Section 3, 20-55 cm.

SMEAR SLIDE SUMMARY (%):

	1, 80 D	2, 87 M	2, 90 D
TEXTURE:			
Sand	10	5	15
Silt	50	60	50
Clay	40	35	35
COMPOSITION:			
Access. Minerals	Tr	Tr	Tr
Amphibole	5	2	5
Clay	10	5	10
Diatoms	7	25	7
Feldspar	5	10	5
Opaques	7	3	10
Palagonite	Tr	—	1
Quartz	65	55	60



SITE 739 HOLE C CORE 20R CORED INTERVAL 149.7-154.3 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER MIOCENE	B	B		R/P *Denticulopsis hustedtii*	γ=2.48 g/cc	γ=2.33 ●γ=2.33 ●γ=2.39 V=238% ●28% w=13% γ=2.41	● %$CaCO_3$ ●0.2 %TOC=1.84	1 2 3 CC	0.5 1.0	VOID			*

LITHOLOGIC DESCRIPTION

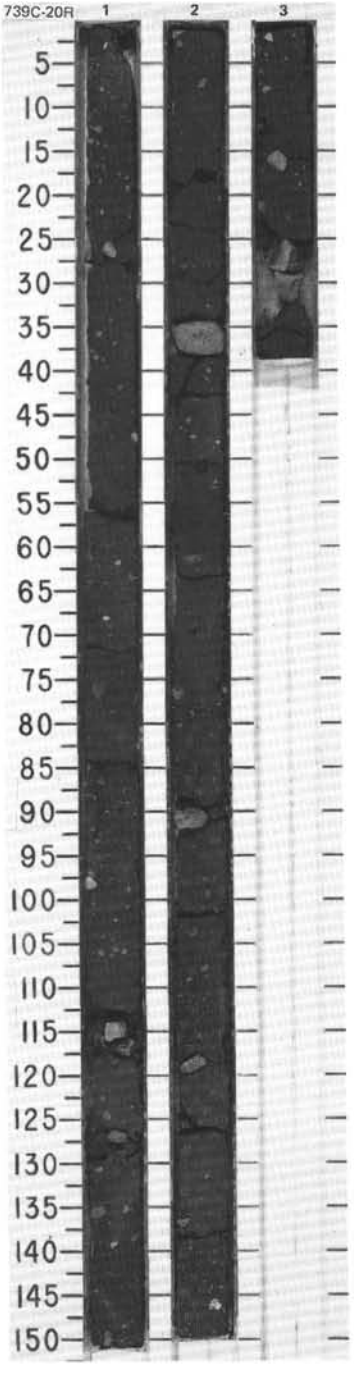
DIAMICTITE

Major lithology:
Diamictite (sand-silt-clay with minor gravel), black (5Y 2.5/1), massive, non-stratified, poorly sorted, compacted to friable. Slight variations in sand and gravel content are visible in the core. Clasts are mostly about 1 cm in diameter, the largest being 5.5 cm. Clast shape analysis in Sections 1-3 indicates 3% angular, 34% subangular, 50% subrounded, 13% rounded (sample size 32). Clasts include gneisses of the following types: quartz-feldspar-biotite-pyrite-magnetite, quartz-feldspar-biotite (coarse to fine grained varieties), biotite-ironoxide-quartz-feldspar (very fine grained, black). Most clasts are slightly altered but some are highly altered.

Average gravel content:
Section 1, 15%
Section 2, 0-30 cm, 10%
30-65 cm, 15%
65-100 cm, 10%
100-120 cm, 15%
120-150 cm, 10%
Section 3, 15%

SMEAR SLIDE SUMMARY (%):

	2, 70 D
TEXTURE:	
Sand	20
Silt	55
Clay	25
COMPOSITION:	
Access. Minerals	Tr
Amphibole	2
Clay	10
Diatoms	20
Feldspar	12
Opaques	5
Palagonite	Tr
Quartz	50



SITE 739 HOLE C CORE 21R CORED INTERVAL 154.3-159.3 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
				B	O	γ=2.33 g/cc γ=2.58 w=13% Φ=32% Φ=28% γ=2.25 Φ=25% γ=2.36 w=12% γ=2.45 Φ=29% γ=3.17 γ=2336 w=13%		1 2 3	0.5 1.0				PP

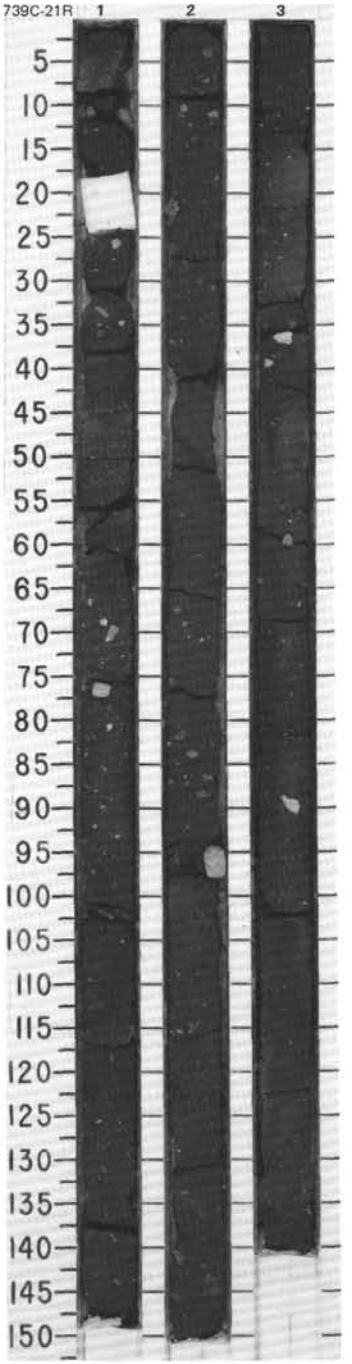
LITHOLOGIC DESCRIPTION

DIAMICTITE

Major lithology:
Diamictite (silty clay with sand and gravel), black (5Y 2.5/2), massive, non-stratified, poorly sorted, compacted to friable. Slight variations in sand and gravel content are visible in the core. Clasts are mostly about 1 cm in diameter. Clast shape analysis in Sections 1-3 indicates 3% angular, 37% subangular, 44% subrounded, 16% rounded (sample size 32). Clasts include gneiss with garnet, biotite, quartz and feldspar, fine grained biotite-amphibole gneiss, fine grained quartz-feldspar gneiss.

SMEAR SLIDE SUMMARY (%):

	3, 30 D	3, 30 D
TEXTURE:		
Sand	15	10
Silt	60	40
Clay	20	50
COMPOSITION:		
Amphibole	1	Tr
Clay	20	25
Feldspar	2	20
Opaques	1	10
Palagonite	1	5
Quartz	75	40



SITE 739 HOLE C CORE 22R CORED INTERVAL 159.3-164.0 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER MIOCENE	B	B		C/M *Denticulopsis hustedtii*	O	V=2429 w=9% ϕ=2% ρ=2.4 W=9% ϕ=21% ρ=2.42 ρ=2.33 W=11% ρ=2.43 W=12% ρ=2.33	● %$CaCO_3$=0.1 %TOC=0.85 ● %$CaCO_3$=0.6 %TOC=1.86	1 2 3 4 CC	0.5 1.0	VOID			* * OG IW

LITHOLOGIC DESCRIPTION

DIAMICTITE

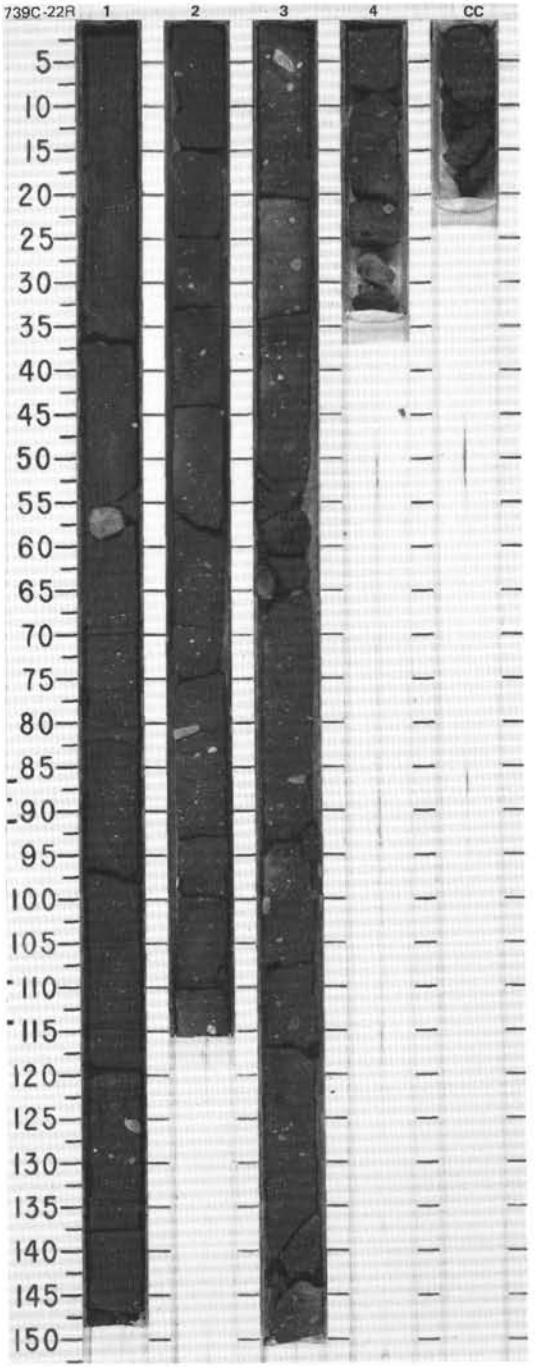
Major lithology:
Diamictite (sand-silt-clay with minor gravel), very dark gray (5Y 3/1), massive, non-stratified, poorly sorted. Core-catcher, 10-20 cm, contains olive gray (10Y 3/1) better sorted sand relatively free of clay and silt. Clasts are mostly < 1 cm in diameter with the largest clast 2.2 cm in diameter; clast shapes are angular to subangular but in Section 1, 104-148 cm and Section 2, 2-3% of clasts are subrounded. Clast lithologies include quartz, granite, mica schist, feldspar, grayish green (10Y 4/1) sandstone, black anthracitized coaly shale and pyroxenite; all clasts are fresh and unaltered. Gravel content is 2-10% throughout the core but variable.

Average gravel content:
Section 1, 31-38 cm, 5%
95-98 cm, 5%
Section 2, 0-10 cm, 2-3%
10-22 cm, 1%
22-56 cm, 5%
56-72 cm, 2%
72-98 cm, 5%
98-116 cm, 10%

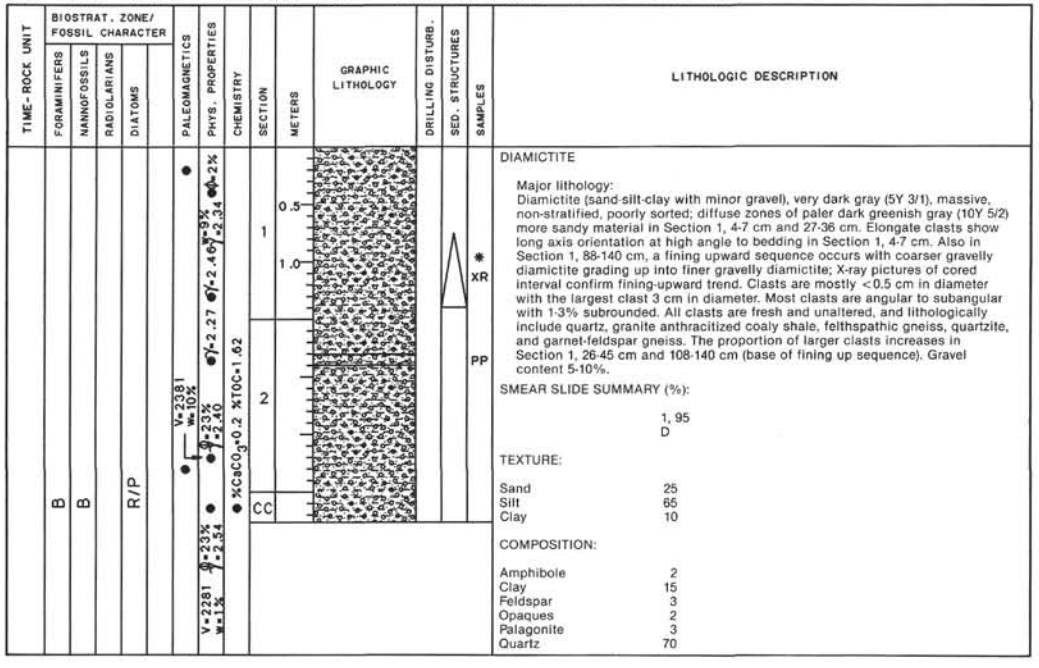
Drilling disturbance:
Drill breccia in core-catcher, 10-20 cm.

SMEAR SLIDE SUMMARY (%):

	1, 35 M	2, 67 D
TEXTURE:		
Sand	20	20
Silt	35	65
Clay	45	15
COMPOSITION:		
Access Minerals	1	1
Amphibole	1	1
Clay	40	17
Feldspar	3	3
Opaques	1	1
Palagonite	2	2
Quartz	50	70



SITE 739 HOLE C CORE 23R CORED INTERVAL 164.0-169.0 mbsf

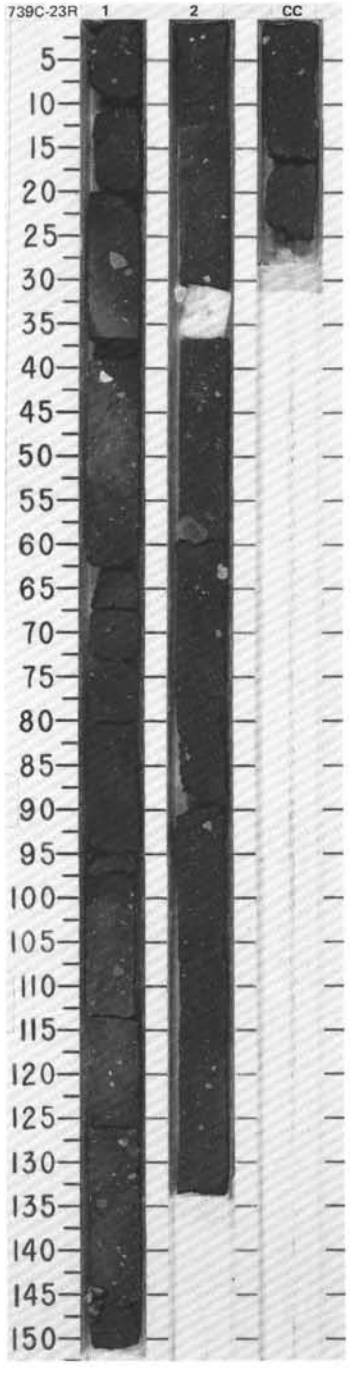


DIAMICTITE

Major lithology:
Diamictite (sand-silt-clay with minor gravel), very dark gray (5Y 3/1), massive, non-stratified, poorly sorted; diffuse zones of paler dark greenish gray (10Y 5/2) more sandy material in Section 1, 4-7 cm and 27-36 cm. Elongate clasts show long axis orientation at high angle to bedding in Section 1, 4-7 cm. Also in Section 1, 88-140 cm, a fining upward sequence occurs with coarser gravelly diamictite grading up into finer gravelly diamictite; X-ray pictures of cored interval confirm fining-upward trend. Clasts are mostly <0.5 cm in diameter with the largest clast 3 cm in diameter. Most clasts are angular to subangular with 1-3% subrounded. All clasts are fresh and unaltered, and lithologically include quartz, granite anthracitized coaly shale, felthspathic gneiss, quartzite, and garnet-feldspar gneiss. The proportion of larger clasts increases in Section 1, 26-45 cm and 108-140 cm (base of fining up sequence). Gravel content 5-10%.

SMEAR SLIDE SUMMARY (%):

	1, 95 D
TEXTURE:	
Sand	25
Silt	65
Clay	10
COMPOSITION:	
Amphibole	2
Clay	15
Feldspar	3
Opaques	2
Palagonite	3
Quartz	70



SITE 739 HOLE C CORE 24R CORED INTERVAL 169.0-173.6 mbsf

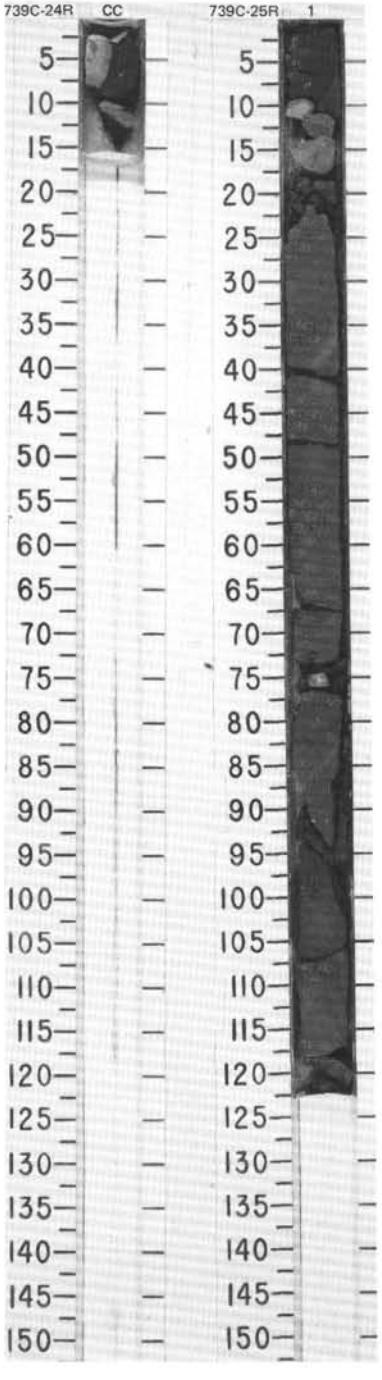
TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
	B	B		B			● %$CaCO_3$=0.5 %TOC=1.37 ●	CC			X			DIAMICTITE Major lithology: Diamictite (sand-silt-clay with minor gravel), very dark gray (5Y 3/1), massive, non-stratified, poorly sorted; contains one large quartzite clast, 7 cm in diameter. Drilling disturbance: Drilling breccia in core-catcher.

SITE 739 HOLE C CORE 25R CORED INTERVAL 173.6-183.2 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
LOWER OLIGOCENE	B	B		F/P		V=2422 Φ=32% V=2537 Φ=31% W=13% 2.24 W=14% 2.35 ●	%$CaCO_3$=0.6 %TOC=1.05 ● %$CaCO_3$=2.2 %TOC=0.69 ●	1 CC	0.5 1.0 VOID				OG 1W *	DIAMICTITE Major lithology: Diamictite (sand-silt-clay with minor gravel), very dark gray (5Y 3/1), massive, non-stratified, poorly sorted with 5% diatoms, 1% silicoflagellates and traces of sponge spicules. Clasts mostly <1 cm and mostly angular to subangular; clast lithologies include quartz, granite, gneiss and diamictite.

SMEAR SLIDE SUMMARY (%):

	1, 53 D	CC, 2 D
TEXTURE:		
Sand	15	15
Silt	60	65
Clay	25	20
COMPOSITION:		
Amphibole	3	2
Clay	15	20
Diatoms	5	—
Feldspar	4	3
Opaques	—	2
Palagonite	—	1
Quartz	70	70
Silicoflagellates	1	—
Spicules	Tr	—



SITE 739 HOLE C CORE 26R CORED INTERVAL 183.2-192.9 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
LOWER OLIGOCENE	B	R/M		C/M	O●	●v=2128 ● γ=2.23 ●	● %CaCO3=1.2 %TOC=0.62	1 2 3 CC	0.5 1.0			P	

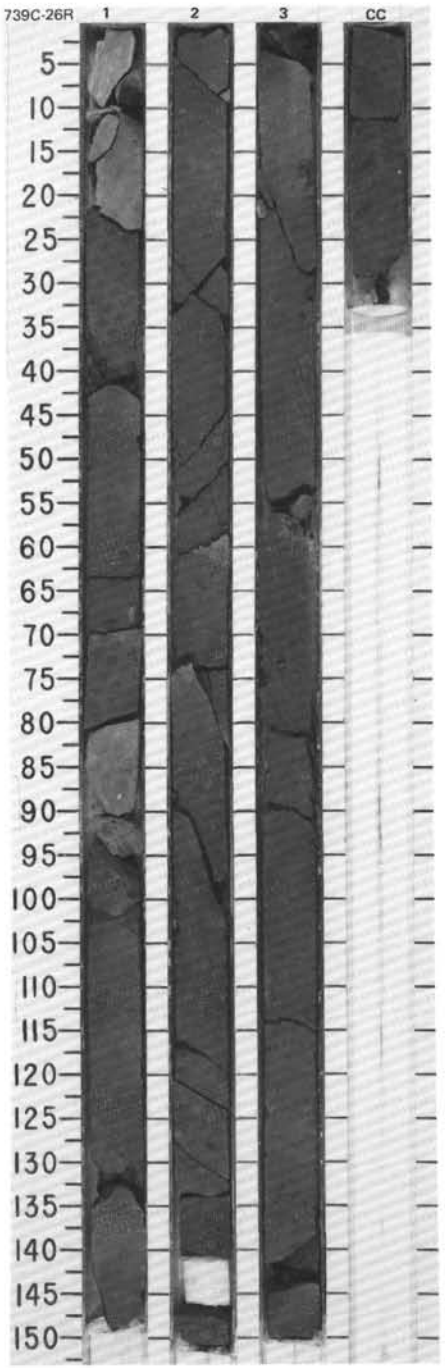
LITHOLOGIC DESCRIPTION

DIAMICTITE with MINOR DIATOMS

Major lithology:
Diamictite with minor diatoms (sand-silt-clay with minor gravel), very dark gray (5Y 3/1), massive, non-stratified, poorly sorted, except in core catcher, 10-20 cm which is sharply-based and graded with coarser clay-silt-sand in lower part; the upper part may be burrowed. A darker layer a few millimeters in thickness occurs in Section 1, 72 cm; Section 2, 0-22 cm contains several millimeter thick layers, 54-55 cm, pyrite; Section 3, 133-136 cm, pyrite concretion. A shell fragment occurs in Section 2, at 102 cm; the core catcher shows long axis imbrication of small clasts at 22 cm. Fractures with slickensided surfaces occur throughout the core which contains 15% diatoms. Clasts are mostly about 4 mm in diameter; they are angular to subangular and composed mainly of quartz, schist, mafic lithics and sediment. In the core catcher, 15-25 cm, clasts of darker (5Y 5/2, 5Y 4/1) and lighter (5Y 5/1) diamictite occur. Gravel content averages 5-10% uniformly throughout the core.

SMEAR SLIDE SUMMARY (%):

	1, 70 D	1, 72 D	2, 7 M
TEXTURE:			
Sand	10	15	10
Silt	75	65	75
Clay	15	20	15
COMPOSITION:			
Amphibole	3	2	1
Clay	15	20	20
Diatoms	15	20	20
Feldspar	3	3	2
Glass	1	—	1
Glauconite	Tr	—	—
Opaques	1	—	—
Quartz	55	55	50
Silicoflagellates	2	—	1
Spicules	Tr	Tr	Tr



SITE 739 HOLE C CORE 27R CORED INTERVAL 192.9-202.5 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	B	R/M	B	R/P	•	w=21% ϕ=42% ρ=2.15 w=22% ϕ=42% ρ=2.09	%$CaCO_3$=1.2 %TOC=0.45	1 CC	0.5		O		*

LITHOLOGIC DESCRIPTION

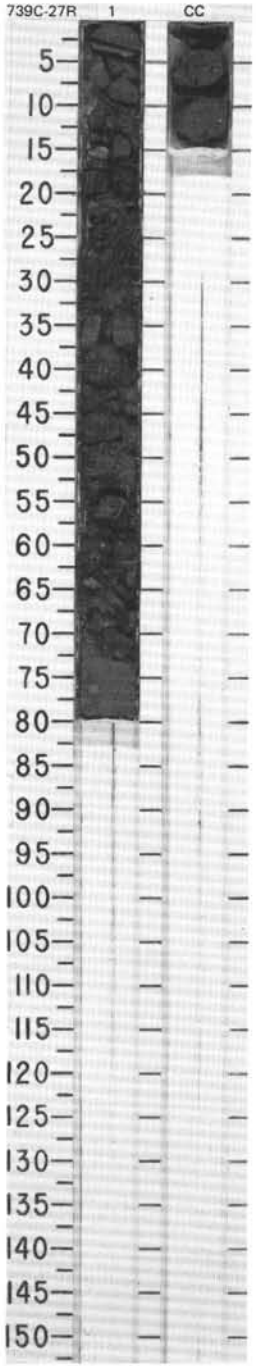
DIATOMACEOUS SANDY-SILTY CLAYSTONE

Major lithology:
Diatomaceous sandy-silty claystone, very dark gray (5Y 3/1) to dark olive gray (5Y 4/1) with up to 30% diatoms; massive, non-stratified, poorly sorted; Section 1, 70-80 cm contains irregular diffuse lighter (sand-rich) and darker (clay-rich) streaks. Small pieces of mollusc shell occur in Section 1, 40 cm. Gravel content is 1% or less and confined to the top 16 cm of Section 1 and the core catcher. Clasts are mostly <4 mm in diameter with the largest clast 1.2 cm in diameter. Clasts are mainly angular to subangular and composed of quartz, quartzite and reworked diamictite with >1% gravel.

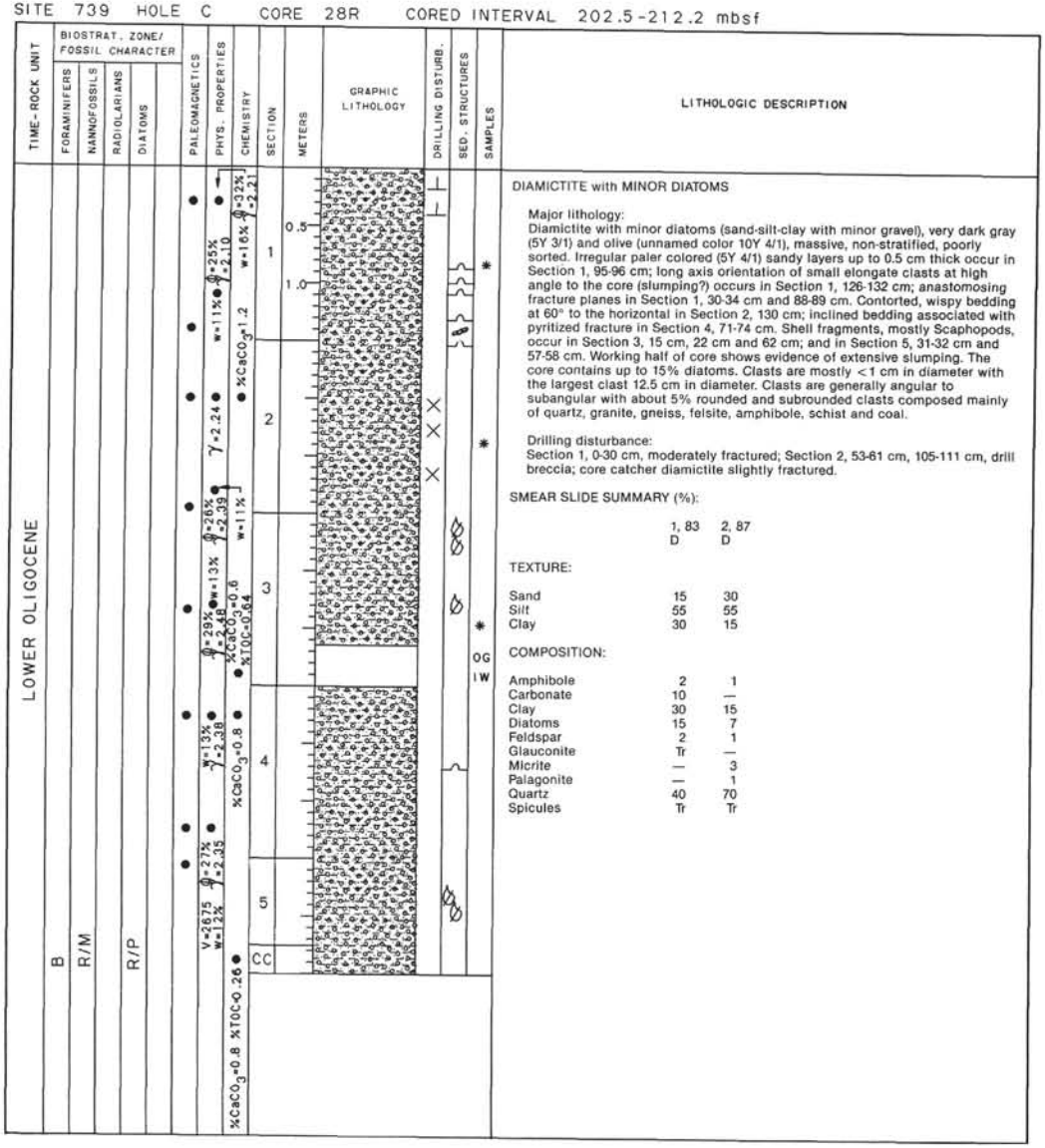
Drilling disturbance:
The core is broken and fragmented throughout.

SMEAR SLIDE SUMMARY (%):

	1, 42 D
TEXTURE:	
Sand	—
Silt	—
Clay	—
COMPOSITION:	
Amphibole	1
Clay	25
Diatoms	30
Feldspar	2
Quartz	35
Silicoflagellates	1
Spicules	2



SITE 739 HOLE C CORE 28R CORED INTERVAL 202.5-212.2 mbsf



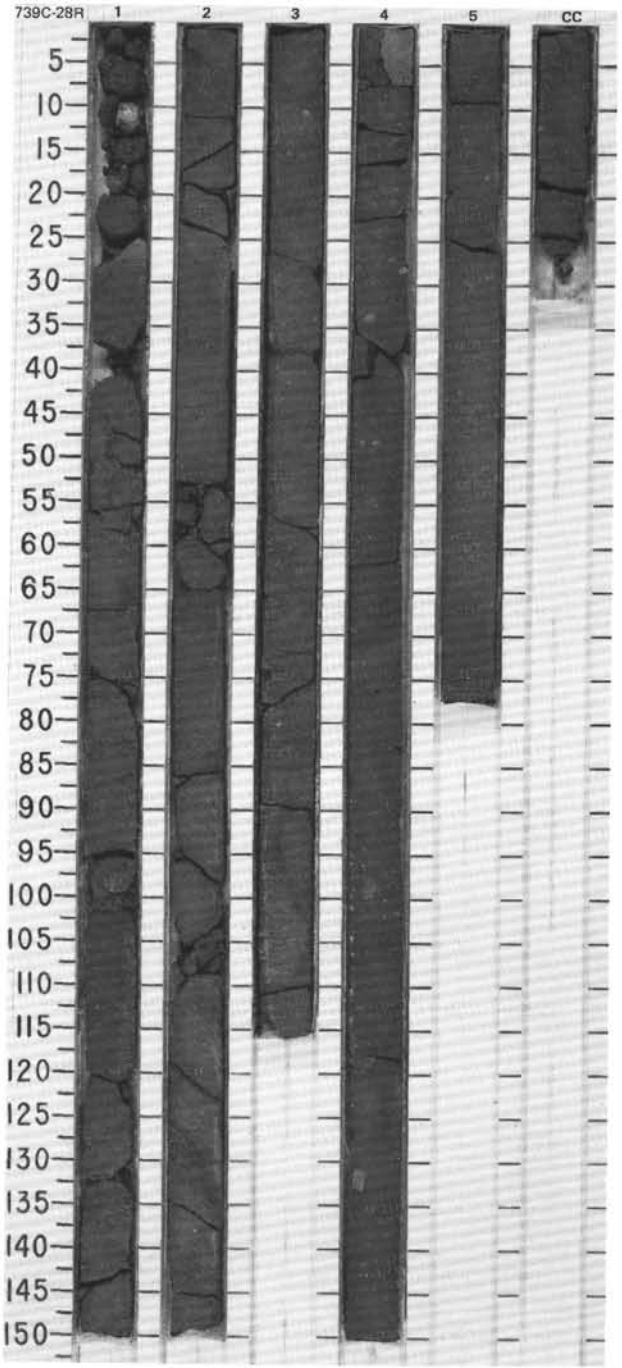
DIAMICTITE with MINOR DIATOMS

Major lithology:
Diamictite with minor diatoms (sand-silt-clay with minor gravel), very dark gray (5Y 3/1) and olive (unnamed color 10Y 4/1), massive, non-stratified, poorly sorted. Irregular paler colored (5Y 4/1) sandy layers up to 0.5 cm thick occur in Section 1, 95-96 cm; long axis orientation of small elongate clasts at high angle to the core (slumping?) occurs in Section 1, 126-132 cm; anastomosing fracture planes in Section 1, 30-34 cm and 88-89 cm. Contorted, wispy bedding at 60° to the horizontal in Section 2, 130 cm; inclined bedding associated with pyritized fracture in Section 4, 71-74 cm. Shell fragments, mostly Scaphopods, occur in Section 3, 15 cm, 22 cm and 62 cm; and in Section 5, 31-32 cm and 57-58 cm. Working half of core shows evidence of extensive slumping. The core contains up to 15% diatoms. Clasts are mostly <1 cm in diameter with the largest clast 12.5 cm in diameter. Clasts are generally angular to subangular with about 5% rounded and subrounded clasts composed mainly of quartz, granite, gneiss, felsite, amphibole, schist and coal.

Drilling disturbance:
Section 1, 0-30 cm, moderately fractured; Section 2, 53-61 cm, 105-111 cm, drill breccia; core catcher diamictite slightly fractured.

SMEAR SLIDE SUMMARY (%):

	1, 83 D	2, 87 D
TEXTURE:		
Sand	15	30
Silt	55	55
Clay	30	15
COMPOSITION:		
Amphibole	2	1
Carbonate	10	—
Clay	30	15
Diatoms	15	7
Feldspar	2	1
Glauconite	Tr	—
Micrite	—	3
Palagonite	—	1
Quartz	40	70
Spicules	Tr	Tr



SITE 739 HOLE C CORE 29R CORED INTERVAL 212.2-221.8 mbsf

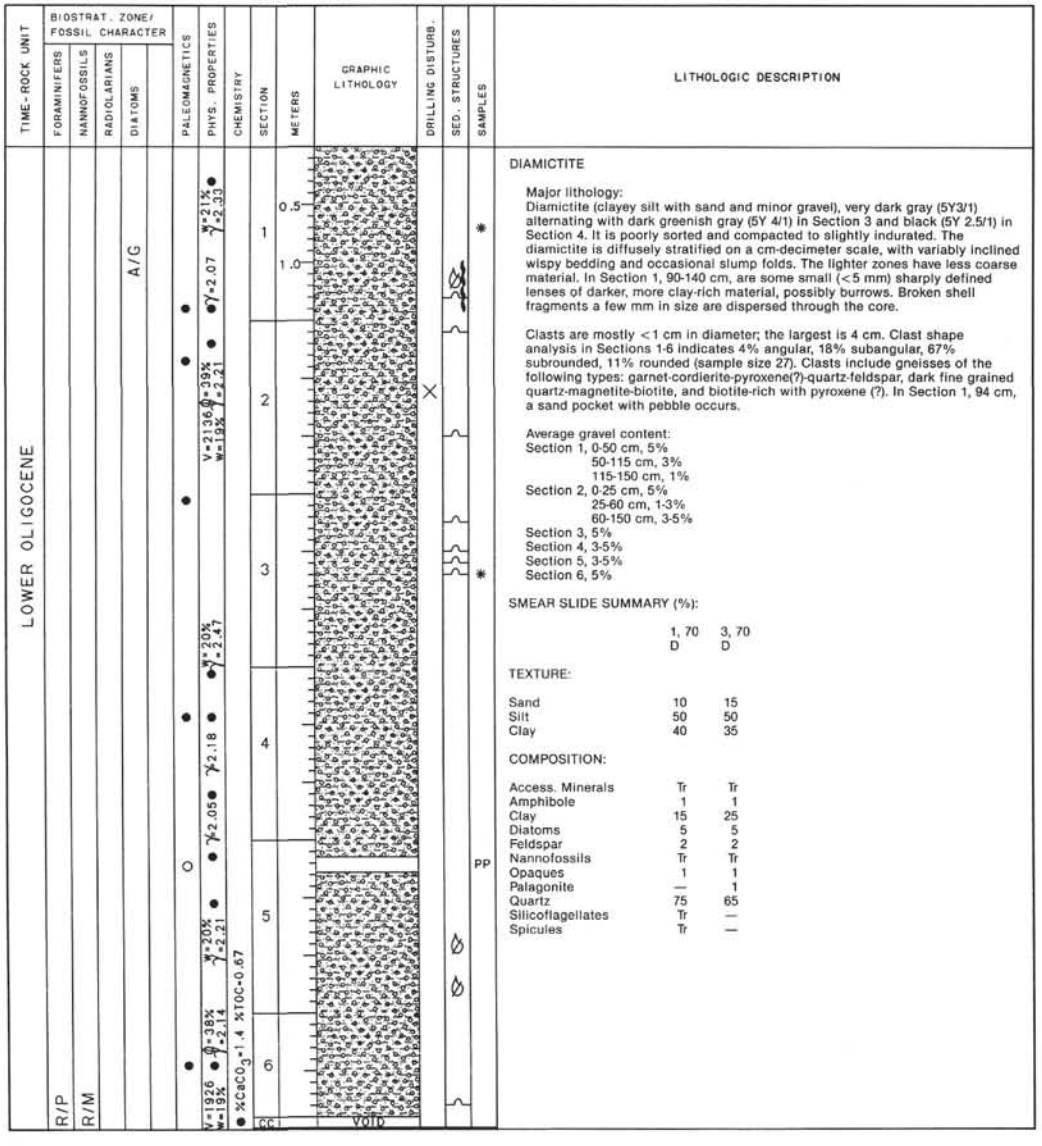
DIAMICTITE

Major lithology:
Diamictite (clay-silt-sand with minor gravel), very dark gray (5Y 3/1); massive, non-stratified, poorly sorted. Shell fragments occur in Section 1, 18 cm, 53 cm, 59 cm, 95 cm and 143 cm; Section 2, 68 cm; Section 3, 4 cm, 149 cm; black burrow-like structure in Section 4, 0-15 cm, 120-150 cm. More sand-rich zone in Section 4, 128-130 cm; Section 5, 85-114 cm and in core catcher, 15-20 cm; slickensided surface in Section 2, 100-110 cm.

Minor lithology:
Diamictite as above, lighter greenish gray (10Y 4/1) and very dark gray (5Y 3/1), but with mm-cm scale diffuse, wispy layers at variable angles to bedding associated with slumping in Section 1, 8-18 cm, 35-40 cm, 50-65 cm; Section 2, 58-103 cm; Section 3, throughout but with slumped layers arouind base of pebble; Section 5, 45-50 cm, 60-65 cm, 70-83 cm. Clasts mostly 2-4 mm in diameter with largest clast 2 cm in diameter. Clast shapes are mainly angular to subangular but with 1-5% rounded to subrounded clasts composed of quartz, quartzite, granite and various metamorphic lithologies, including garnetiferous gneiss. Gravel content is 1-5% throughout core.

Drilling disturbance:
Dark mm-scale, convex-up (bowed) layers spaced 2-10 cm apart, occur in Section 2, 20-31 cm and Section 4; these are caused by core barrel rotation during drilling. Section 5, 50-75 cm is highly fractured; core catcher, 0-8 cm, contains drilling breccia and moderately fractured diamictite, 8-24 cm.

SITE 739 HOLE C CORE 30R CORED INTERVAL 221.8-231.4 mbsf



DIAMICTITE

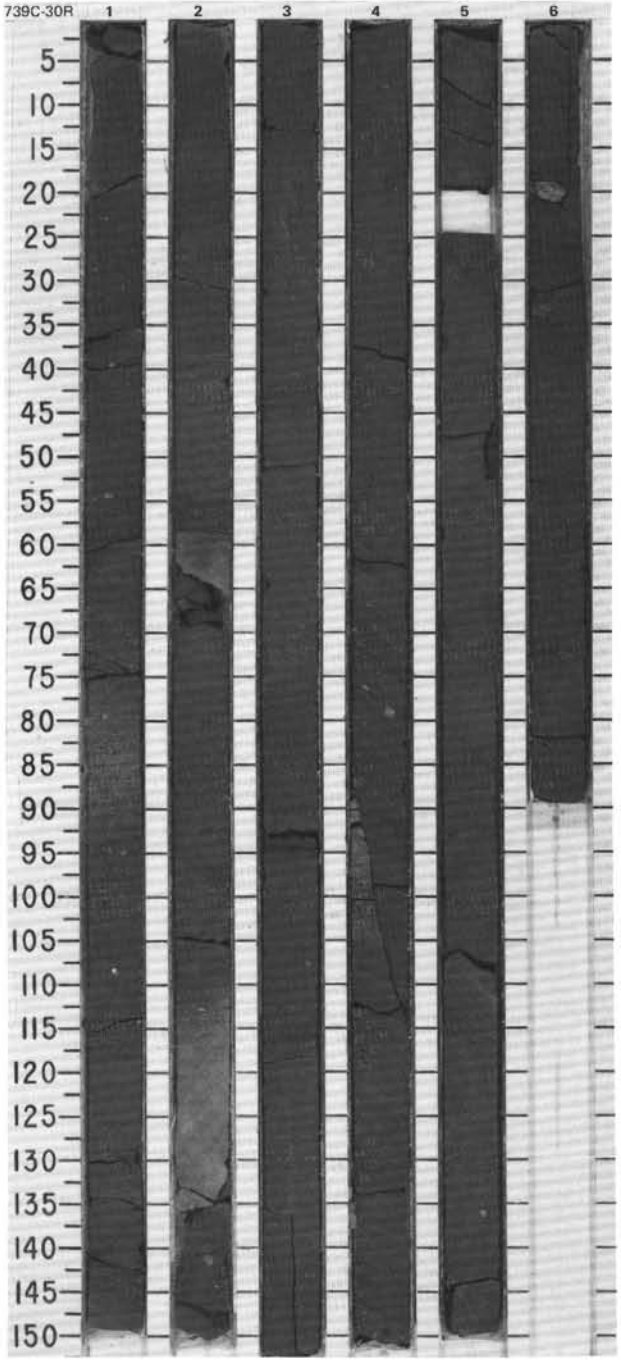
Major lithology:
Diamictite (clayey silt with sand and minor gravel), very dark gray (5Y3/1) alternating with dark greenish gray (5Y 4/1) in Section 3 and black (5Y 2.5/1) in Section 4. It is poorly sorted and compacted to slightly indurated. The diamictite is diffusely stratified on a cm-decimeter scale, with variably inclined wispy bedding and occasional slump folds. The lighter zones have less coarse material. In Section 1, 90-140 cm, are some small (<5 mm) sharply defined lenses of darker, more clay-rich material, possibly burrows. Broken shell fragments a few mm in size are dispersed through the core.

Clasts are mostly <1 cm in diameter; the largest is 4 cm. Clast shape analysis in Sections 1-6 indicates 4% angular, 18% subangular, 67% subrounded, 11% rounded (sample size 27). Clasts include gneisses of the following types: garnet-cordierite-pyroxene(?)-quartz-feldspar, dark fine grained quartz-magnetite-biotite, and biotite-rich with pyroxene (?). In Section 1, 94 cm, a sand pocket with pebble occurs.

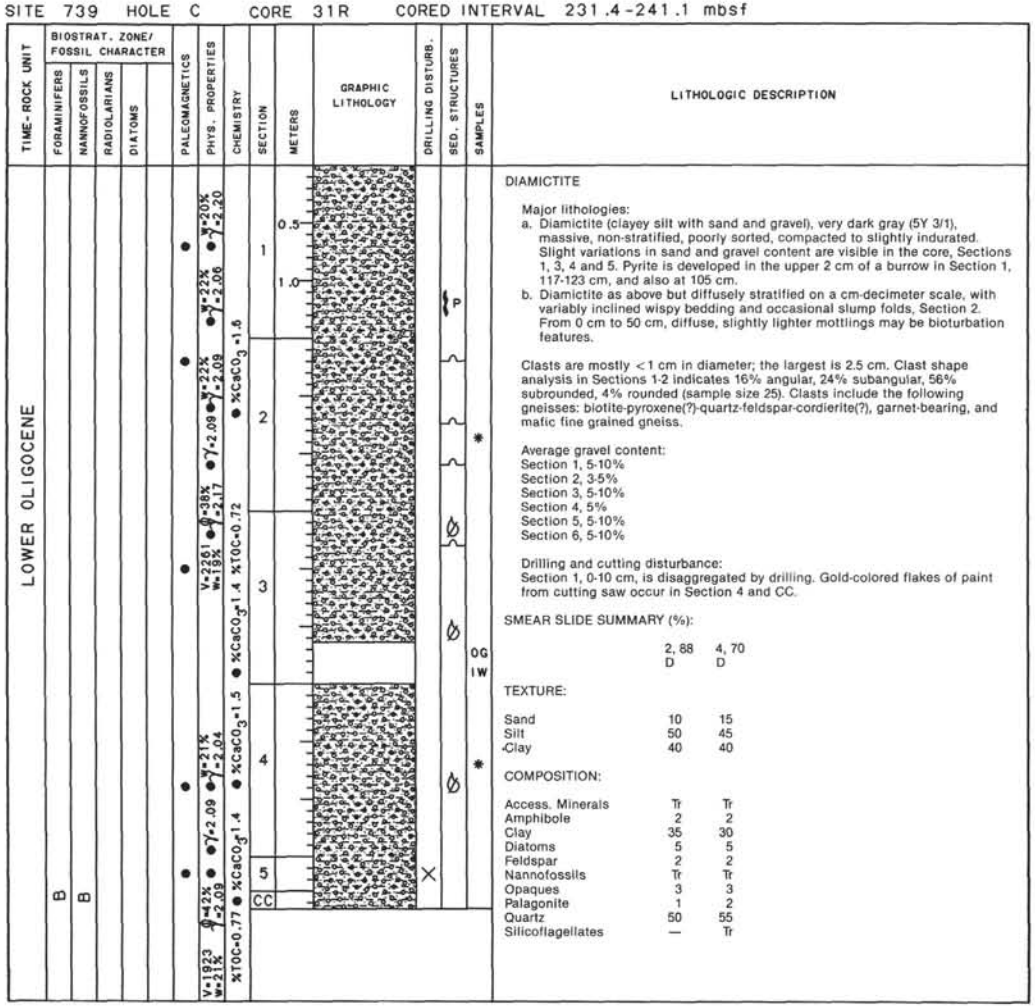
Average gravel content:
Section 1, 0-50 cm, 5%
50-115 cm, 3%
115-150 cm, 1%
Section 2, 0-25 cm, 5%
25-60 cm, 1-3%
60-150 cm, 3-5%
Section 3, 5%
Section 4, 3-5%
Section 5, 3-5%
Section 6, 5%

SMEAR SLIDE SUMMARY (%):

	1, 70 D	3, 70 D
TEXTURE:		
Sand	10	15
Silt	50	50
Clay	40	35
COMPOSITION:		
Access. Minerals	Tr	Tr
Amphibole	1	1
Clay	15	25
Diatoms	5	5
Feldspar	2	2
Nannofossils	Tr	Tr
Opaques	1	1
Palagonite	—	1
Quartz	75	65
Silicoflagellates	Tr	—
Spicules	Tr	—



SITE 739 HOLE C CORE 31R CORED INTERVAL 231.4-241.1 mbsf



LITHOLOGIC DESCRIPTION

DIAMICTITE

Major lithologies:

a. Diamictite (clayey silt with sand and gravel), very dark gray (5Y 3/1), massive, non-stratified, poorly sorted, compacted to slightly indurated. Slight variations in sand and gravel content are visible in the core, Sections 1, 3, 4 and 5. Pyrite is developed in the upper 2 cm of a burrow in Section 1, 117-123 cm, and also at 105 cm.

b. Diamictite as above but diffusely stratified on a cm-decimeter scale, with variably inclined wispy bedding and occasional slump folds, Section 2. From 0 cm to 50 cm, diffuse, slightly lighter mottlings may be bioturbation features.

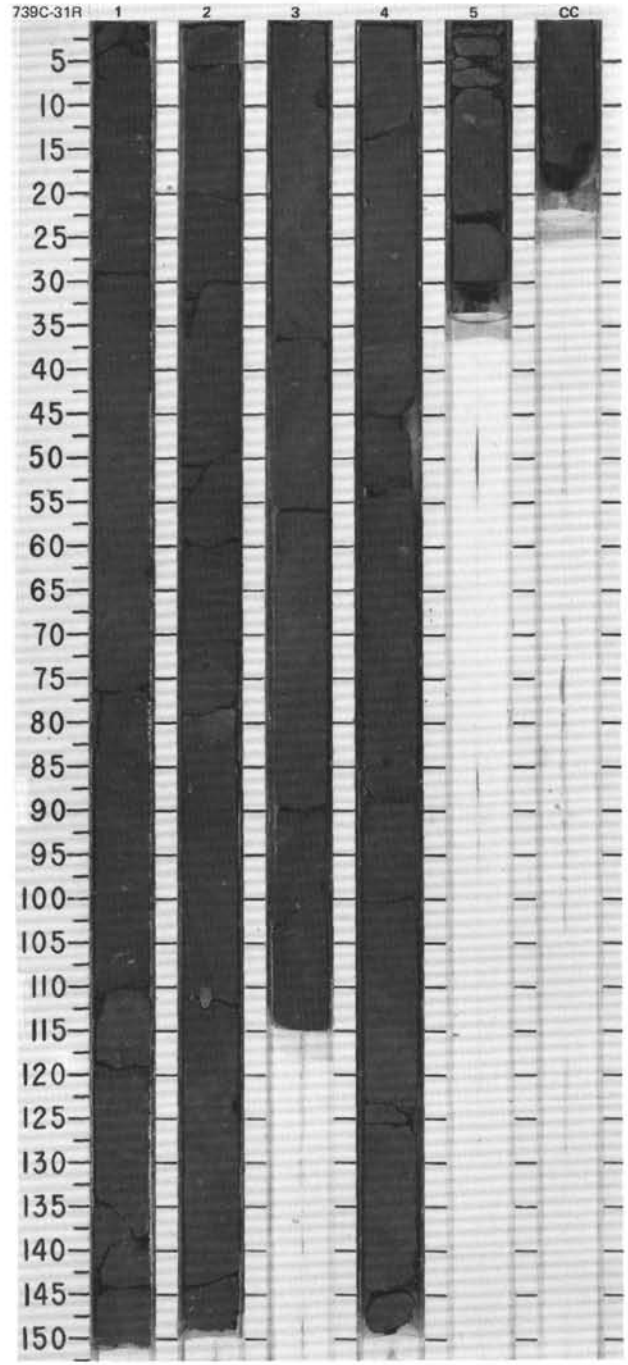
Clasts are mostly < 1 cm in diameter; the largest is 2.5 cm. Clast shape analysis in Sections 1-2 indicates 16% angular, 24% subangular, 56% subrounded, 4% rounded (sample size 25). Clasts include the following gneisses: biotite-pyroxene(?)-quartz-feldspar-cordierite(?), garnet-bearing, and mafic fine grained gneiss.

Average gravel content:
Section 1, 5-10%
Section 2, 3-5%
Section 3, 5-10%
Section 4, 5%
Section 5, 5-10%
Section 6, 5-10%

Drilling and cutting disturbance:
Section 1, 0-10 cm, is disaggregated by drilling. Gold-colored flakes of paint from cutting saw occur in Section 4 and CC.

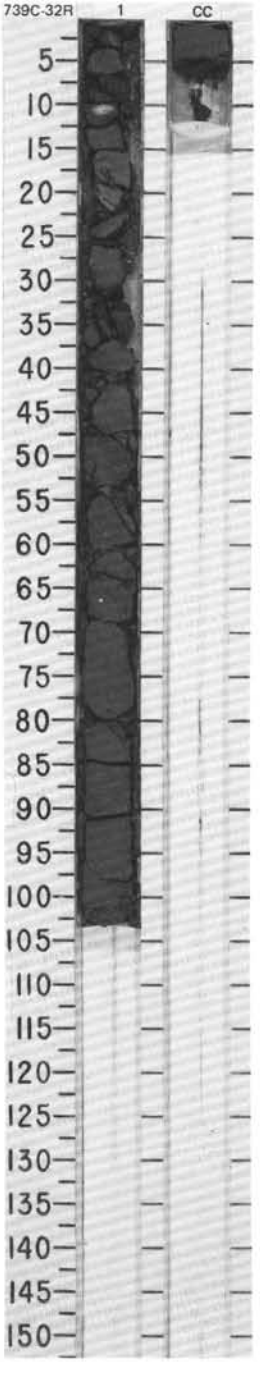
SMEAR SLIDE SUMMARY (%):

	2, 88 D	4, 70 D
TEXTURE:		
Sand	10	15
Silt	50	45
Clay	40	40
COMPOSITION:		
Access. Minerals	Tr	Tr
Amphibole	2	2
Clay	35	30
Diatoms	5	5
Feldspar	2	2
Nannofossils	Tr	Tr
Opaques	3	3
Palagonite	1	2
Quartz	50	55
Silicoflagellates	—	Tr



SITE 739 HOLE C CORE 32R CORED INTERVAL 241.1-250.7 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
LOWER OLIGOCENE	B	B	B	*C/M	●	V=2000 ● 44% w=23% 2.09 ρ=2.17 ●	%$CaCO_3$=1.9 %TOC=0.66 ● %$CaCO_3$=1.5 ●	1 CC	0.5 1.0		X X X X		*	DIAMICTITE Major lithology: Diamictite (sand-silt-clay with minor gravel), very dark gray (5Y 3/1), poorly sorted, totally disturbed, well-preserved shallow marine shell at Section 1, 10 cm, 2.5 cm across. Largest clast is 3 cm in diameter but could have derived from cave-in. The average gravel content in the core catcher is 3-5%. Drilling and cutting disturbance: Core is totally broken up into friable biscuits. SMEAR SLIDE SUMMARY (%): 1, 50 D TEXTURE: Sand 20 Silt 40 Clay 40 COMPOSITION: Access. Minerals Tr Amphibole 2 Clay 30 Diatoms 3 Feldspar 1 Nannofossils Tr Opaques 1 Palagonite 1 Quartz 60 Silicoflagellates Tr



SITE 739 HOLE C CORE 33R CORED INTERVAL 250.7-260.4 mbsf

TIME-ROCK UNIT: LOWER OLIGOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS: B; NANNOFOSSILS: R/M; RADIOLARIANS: C/M; DIATOMS: C/M

PALEOMAGNETICS

PHYS. PROPERTIES: V=2166 Φ=40% ρ=2.18 W=20%; V=2124 Φ=46% ρ=2.02 W=25%; V=1887 Φ=52% ρ=2.14 W=29%; V=1982 Φ=50% ρ=2.20 W=29%

CHEMISTRY: %$CaCO_3$=1.7 %TOC=0.58; %$CaCO_3$=1.3; %$CaCO_3$=1.8

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.: X

SED. STRUCTURES: P

SAMPLES: *

LITHOLOGIC DESCRIPTION

DIAMICTITE

Major lithologies:

a. Diamictite (sand-silt-clay with minor gravel), very dark gray (5Y 3/1), massive, non-stratified, poorly sorted, compacted to slightly indurated; Section 4, 30-150 cm; Section 5, 0-60 cm; Section 6. Slight variations in sand and gravel content are visible in the core.
A pyrite nodule or burrow fill occurs in Section 5, 100 cm; also pyrite occurs on a fracture within a more clay-rich band in Section 5, 100 cm.

b. Diamictite as above but diffusely to well stratified on a cm-decimeter scale, with variably inclined wispy bedding and occasional slump folds; Sections 1-3; Section 4, 1-30 cm; Section 5, 60-150 cm. Contacts with massive diamictite may have been sharp prior to slumping. Fragmented and entire shells are common. In Section 3, 50-110 cm, is a greenish (10Y 4/1) silty clay, rich in diatoms (40%), interfolded with more clast-rich sediment.

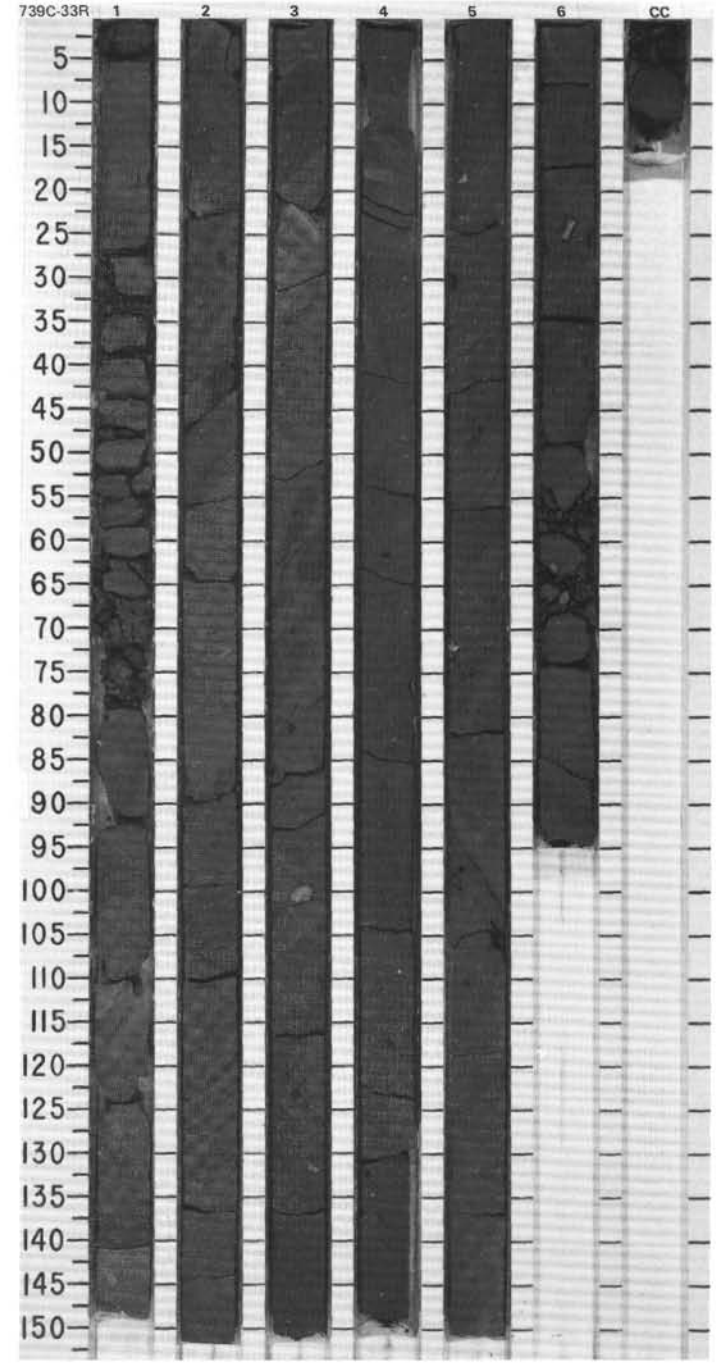
Clasts are mostly < 1 cm in diameter; the largest is 3.5 cm. Clast shape analysis in Sections 1-4 indicates 12% angular, 15% subangular, 58% subrounded, 15% rounded (sample size 41). Clasts include quartz-feldspar gneisses, black quartz-biotite gneiss, garnet-bearing gneiss, vein quartz, and light brown limestone in Section 1, 143 cm. Mafic gneisses are weathered.

Average gravel content:
Section 1, 3-5%
Section 2, 5-10%
Section 3, 1-15 cm, 5%
15-50 cm, 1%
50-110 cm, 5%
110-150 cm, 10%
Section 4, 5-10%
Section 5, 5%
Section 6, 5%

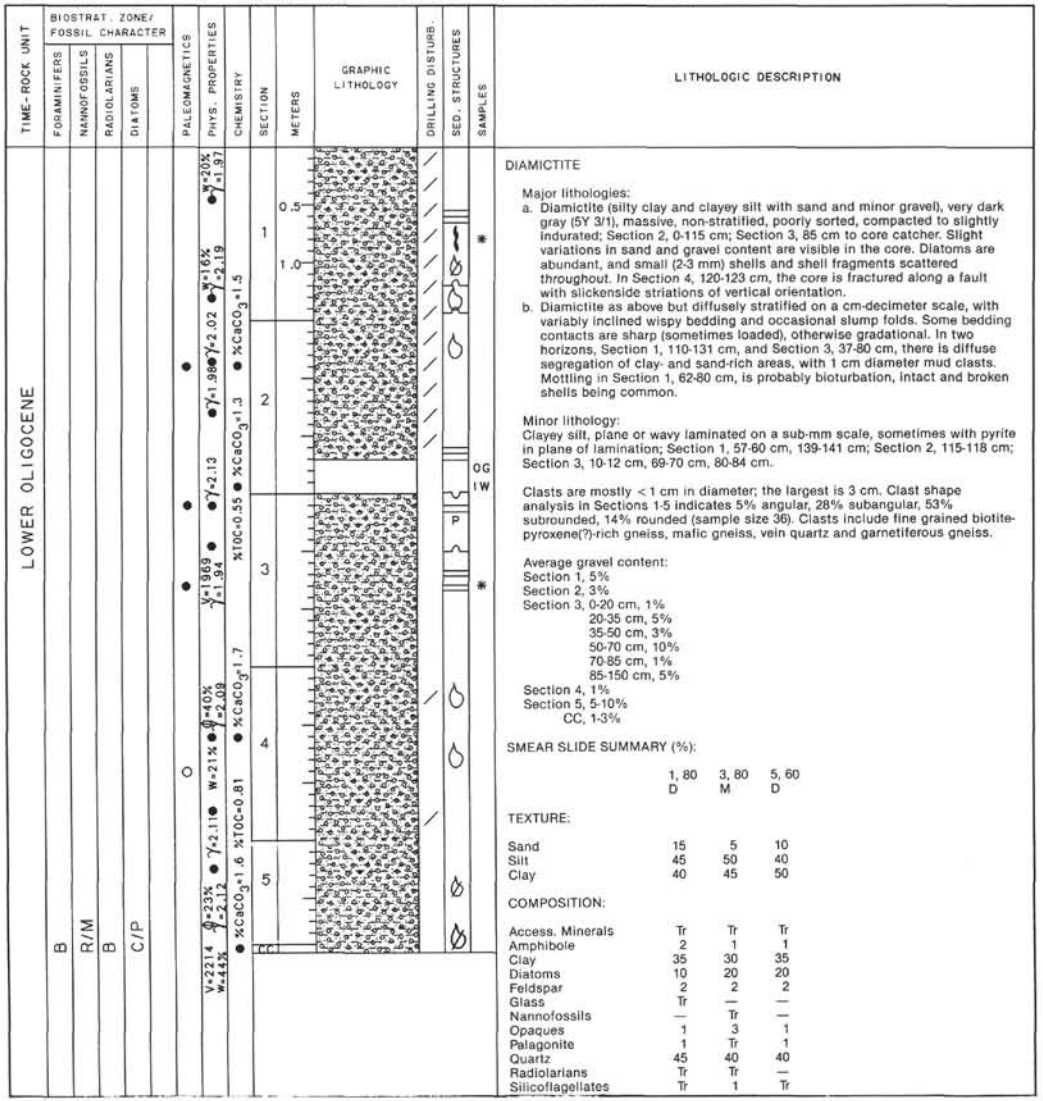
Drilling disturbance:
In Section 1, 30-60 cm, core has been broken into biscuits where fine layers (< 1 cm) occur.

SMEAR SLIDE SUMMARY (%):

	2, 69 D	4, 84 D
TEXTURE:		
Sand	5	40
Silt	40	30
Clay	55	30
COMPOSITION:		
Access. Minerals	Tr	2
Amphibole	—	1
Clay	45	30
Diatoms	40	15
Feldspar	2	8
Opaques	2	3
Palagonite	1	1
Quartz	10	40



SITE 739 HOLE C CORE 34R CORED INTERVAL 260.4-270.0 mbsf



DIAMICTITE

Major lithologies:

a. Diamictite (silty clay and clayey silt with sand and minor gravel), very dark gray (5Y 3/1), massive, non-stratified, poorly sorted, compacted to slightly indurated; Section 2, 0-115 cm; Section 3, 85 cm to core catcher. Slight variations in sand and gravel content are visible in the core. Diatoms are abundant, and small (2-3 mm) shells and shell fragments scattered throughout. In Section 4, 120-123 cm, the core is fractured along a fault with slickenside striations of vertical orientation.

b. Diamictite as above but diffusely stratified on a cm-decimeter scale, with variably inclined wispy bedding and occasional slump folds. Some bedding contacts are sharp (sometimes loaded), otherwise gradational. In two horizons, Section 1, 110-131 cm, and Section 3, 37-80 cm, there is diffuse segregation of clay- and sand-rich areas, with 1 cm diameter mud clasts. Mottling in Section 1, 62-80 cm, is probably bioturbation, intact and broken shells being common.

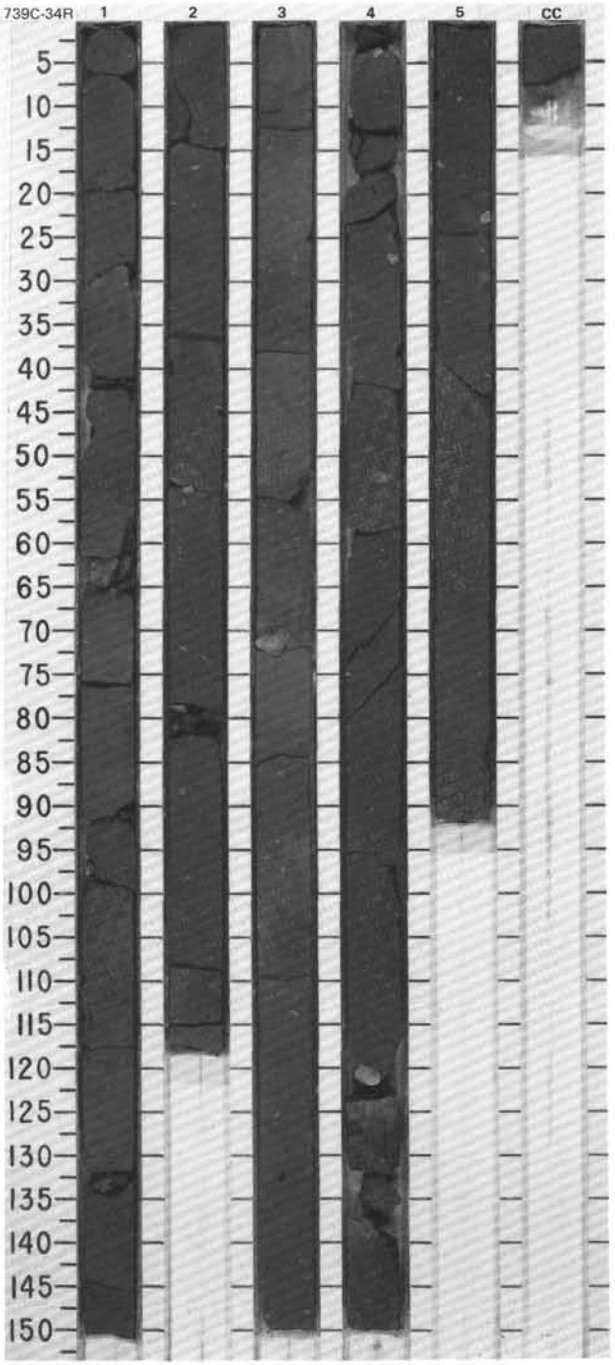
Minor lithology:
Clayey silt, plane or wavy laminated on a sub-mm scale, sometimes with pyrite in plane of lamination; Section 1, 57-60 cm, 139-141 cm; Section 2, 115-118 cm; Section 3, 10-12 cm, 69-70 cm, 80-84 cm.

Clasts are mostly < 1 cm in diameter; the largest is 3 cm. Clast shape analysis in Sections 1-5 indicates 5% angular, 28% subangular, 53% subrounded, 14% rounded (sample size 36). Clasts include fine grained biotite-pyroxene(?)-rich gneiss, mafic gneiss, vein quartz and garnetiferous gneiss.

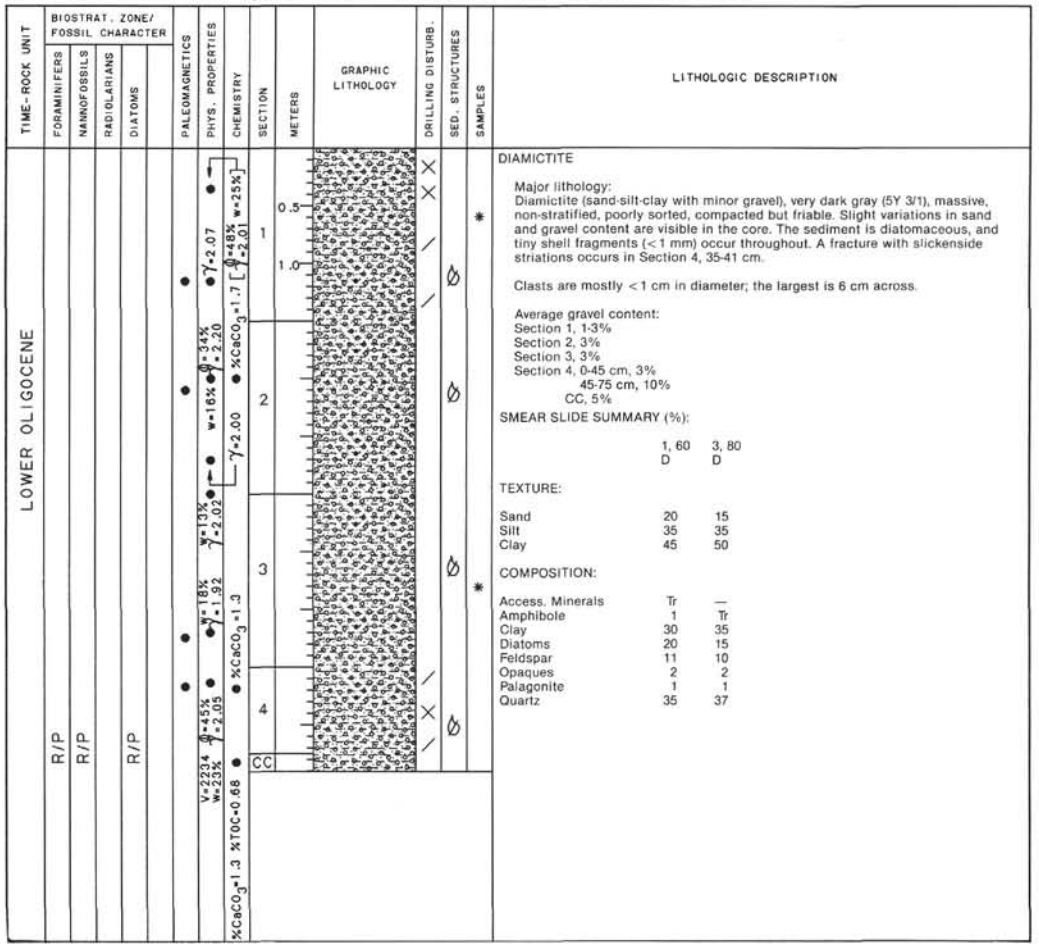
Average gravel content:
Section 1, 5%
Section 2, 3%
Section 3, 0-20 cm, 1%
20-35 cm, 5%
35-50 cm, 3%
50-70 cm, 10%
70-85 cm, 1%
85-150 cm, 5%
Section 4, 1%
Section 5, 5-10%
CC, 1-3%

SMEAR SLIDE SUMMARY (%):

	1, 80 D	3, 80 M	5, 60 D
TEXTURE:			
Sand	15	5	10
Silt	45	50	40
Clay	40	45	50
COMPOSITION:			
Access. Minerals	Tr	Tr	Tr
Amphibole	2	1	1
Clay	35	30	35
Diatoms	10	20	20
Feldspar	2	2	2
Glass	Tr	—	—
Nannofossils	—	Tr	—
Opaques	1	3	1
Palagonite	1	Tr	1
Quartz	45	40	40
Radiolarians	Tr	Tr	—
Silicoflagellates	Tr	1	Tr



SITE 739 HOLE C CORE 35R CORED INTERVAL 270.0-279.7 mbsf



DIAMICTITE

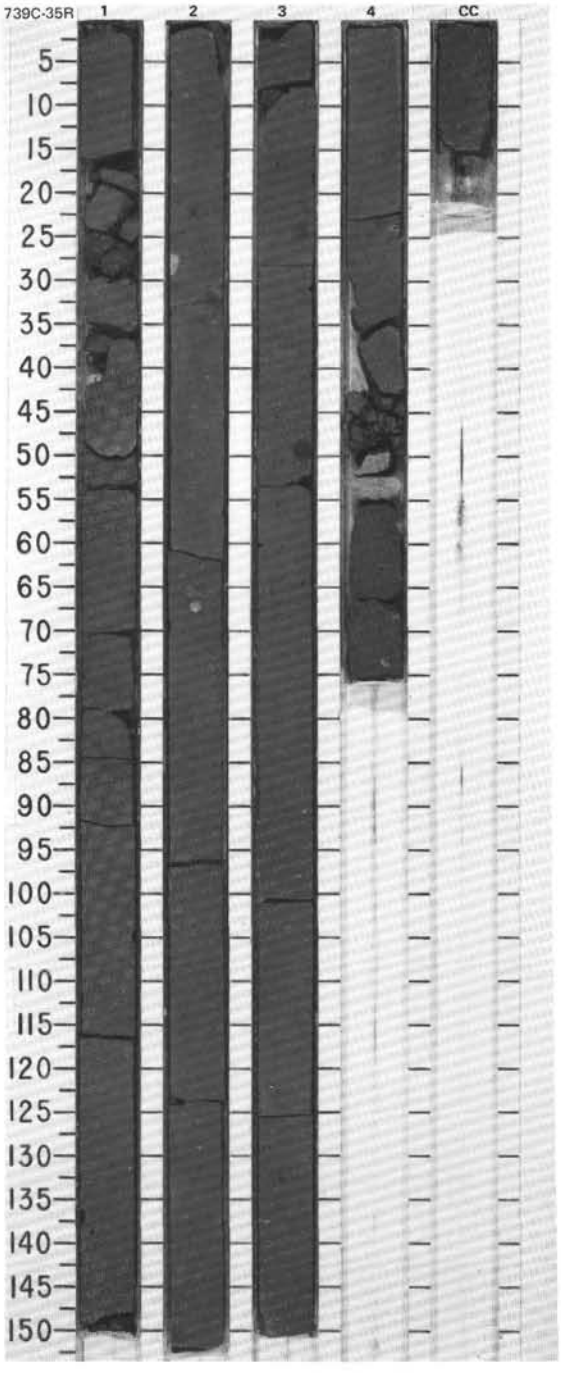
Major lithology:
Diamictite (sand-silt-clay with minor gravel), very dark gray (5Y 3/1), massive, non-stratified, poorly sorted, compacted but friable. Slight variations in sand and gravel content are visible in the core. The sediment is diatomaceous, and tiny shell fragments (< 1 mm) occur throughout. A fracture with slickenside striations occurs in Section 4, 35-41 cm.

Clasts are mostly < 1 cm in diameter; the largest is 6 cm across.

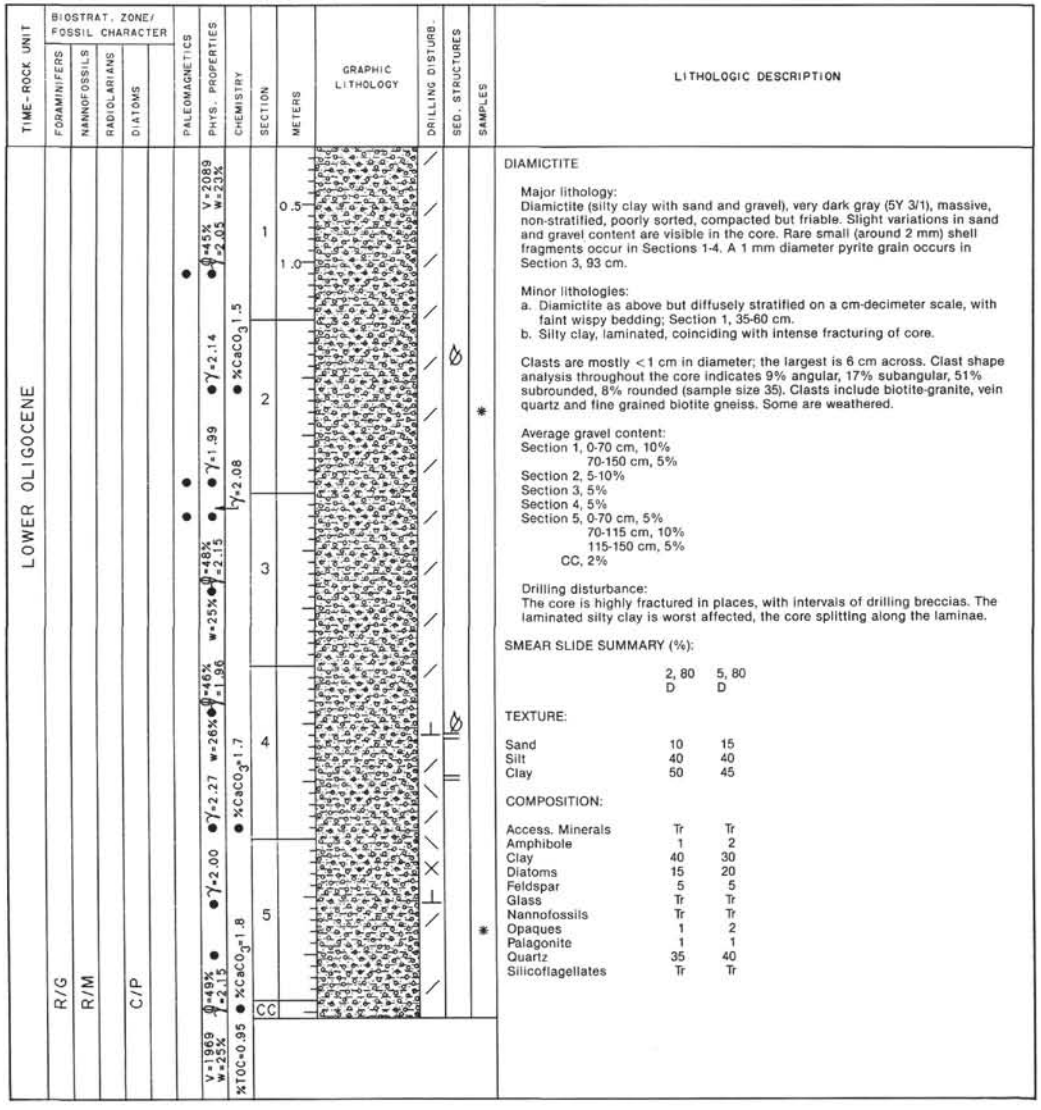
Average gravel content:
Section 1, 1-3%
Section 2, 3%
Section 3, 3%
Section 4, 0-45 cm, 3%
45-75 cm, 10%
CC, 5%

SMEAR SLIDE SUMMARY (%):

	1, 60 D	3, 80 D
TEXTURE:		
Sand	20	15
Silt	35	35
Clay	45	50
COMPOSITION:		
Access. Minerals	Tr	—
Amphibole	1	Tr
Clay	30	35
Diatoms	20	15
Feldspar	11	10
Opaques	2	2
Palagonite	1	1
Quartz	35	37



SITE 739 HOLE C CORE 36R CORED INTERVAL 279.7-289.3 mbsf



DIAMICTITE

Major lithology:
Diamictite (silty clay with sand and gravel), very dark gray (5Y 3/1), massive, non-stratified, poorly sorted, compacted but friable. Slight variations in sand and gravel content are visible in the core. Rare small (around 2 mm) shell fragments occur in Sections 1-4. A 1 mm diameter pyrite grain occurs in Section 3, 93 cm.

Minor lithologies:
a. Diamictite as above but diffusely stratified on a cm-decimeter scale, with faint wispy bedding; Section 1, 35-60 cm.
b. Silty clay, laminated, coinciding with intense fracturing of core.

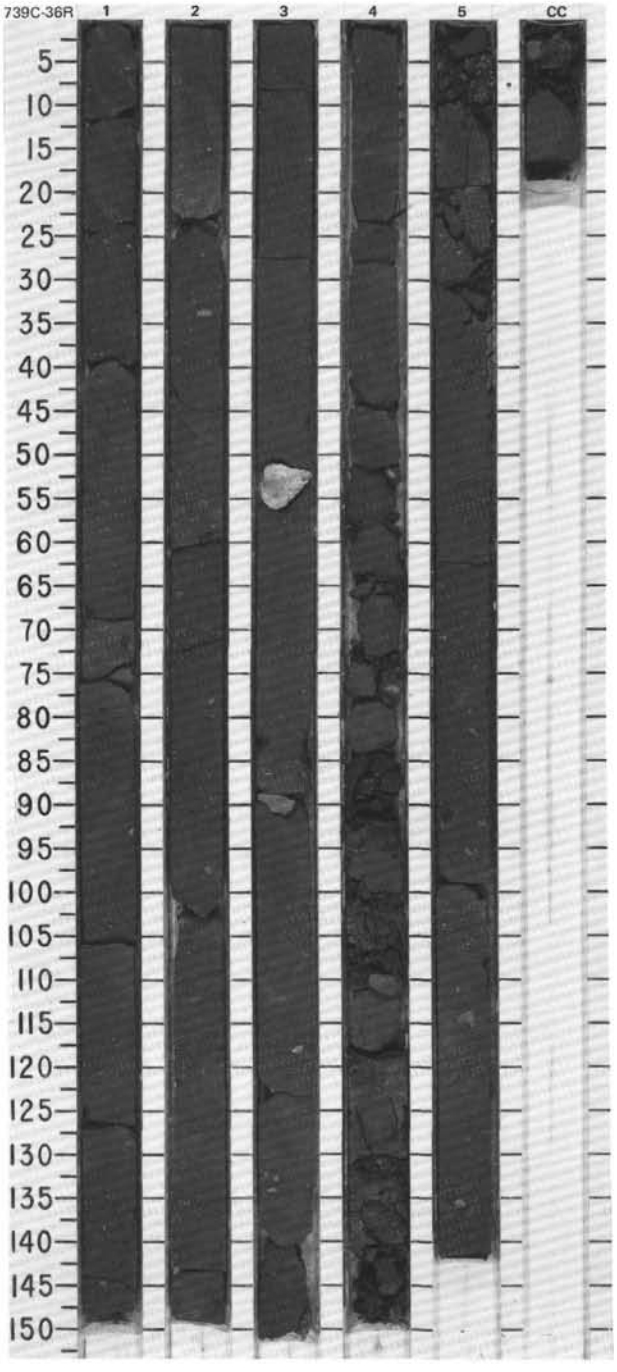
Clasts are mostly < 1 cm in diameter; the largest is 6 cm across. Clast shape analysis throughout the core indicates 9% angular, 17% subangular, 51% subrounded, 8% rounded (sample size 35). Clasts include biotite-granite, vein quartz and fine grained biotite gneiss. Some are weathered.

Average gravel content:
Section 1, 0-70 cm, 10%
70-150 cm, 5%
Section 2, 5-10%
Section 3, 5%
Section 4, 5%
Section 5, 0-70 cm, 5%
70-115 cm, 10%
115-150 cm, 5%
CC, 2%

Drilling disturbance:
The core is highly fractured in places, with intervals of drilling breccias. The laminated silty clay is worst affected, the core splitting along the laminae.

SMEAR SLIDE SUMMARY (%):

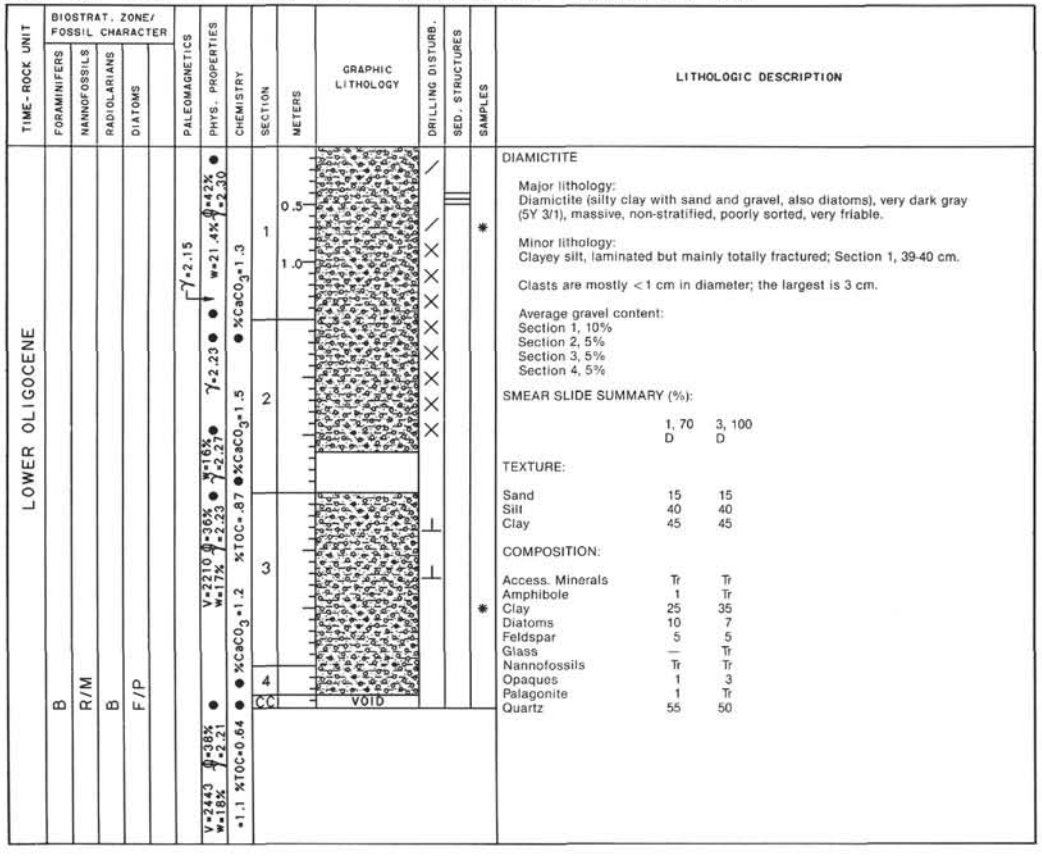
	2, 80 D	5, 80 D
TEXTURE:		
Sand	10	15
Silt	40	40
Clay	50	45
COMPOSITION:		
Access. Minerals	Tr	Tr
Amphibole	1	2
Clay	40	30
Diatoms	15	20
Feldspar	5	5
Glass	Tr	Tr
Nannofossils	Tr	Tr
Opaques	1	2
Palagonite	1	1
Quartz	35	40
Silicoflagellates	Tr	Tr



SITE 739 HOLE C CORE 37R CORED INTERVAL 289.3-298.9 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
LOWER OLIGOCENE	B	R/G		F/P	O	V=2309 ● w=20% ρ=2.31	%$CaCO_3$ ● =1.3 %$CaCO_3$=1.5 %TOC=0.72 ●	1 CC	0.5 1	VOID			*	DIAMICTITE Major lithology: Diamictite (silty clay with sand and gravel, also diatoms), very dark gray (5Y 3/1), massive, non-stratified, poorly sorted, compacted but friable. Slight variations in sand and gravel content are visible in the core. Clasts are mostly <2 cm in diameter; the largest is 4.5 cm across. Average gravel content: Section 1, 0-10 cm, 5% 10-25 cm, 10% 25-100 cm, 5% SMEAR SLIDE SUMMARY (%): 1, 70 D TEXTURE: Sand 15 Silt 35 Clay 50 COMPOSITION: Access. Minerals Tr Amphibole Tr Clay 35 Diatoms 15 Feldspar 2 Glass Tr Nannofossils Tr Opaques 2 Palagonite Tr Quartz 45 Silicoflagellates Tr

SITE 739 HOLE C CORE 38R CORED INTERVAL 298.9-308.6 mbsf



DIAMICTITE

Major lithology:
Diamictite (silty clay with sand and gravel, also diatoms), very dark gray (5Y 3/1), massive, non-stratified, poorly sorted, very friable.

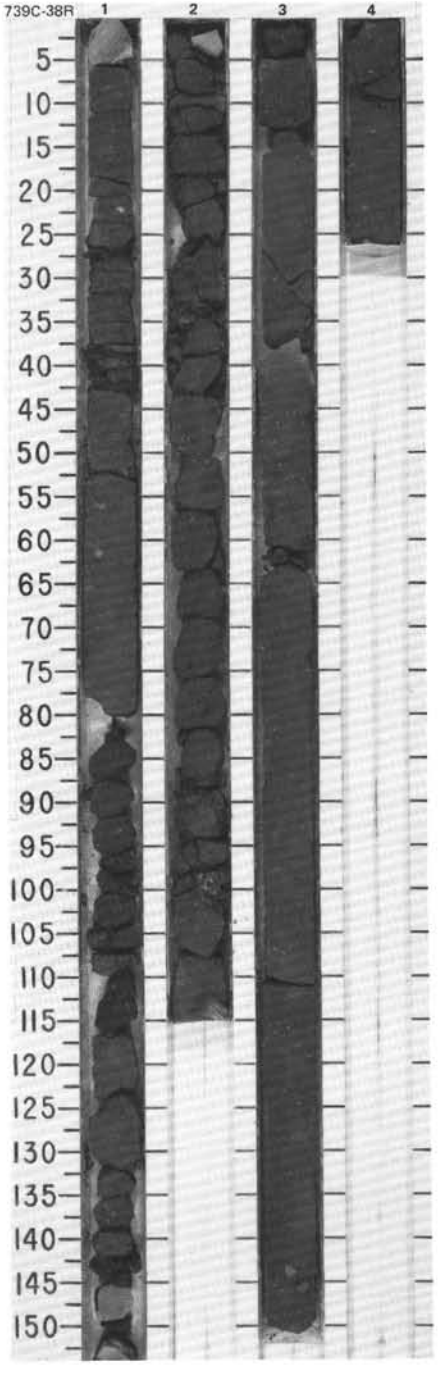
Minor lithology:
Clayey silt, laminated but mainly totally fractured; Section 1, 39-40 cm.

Clasts are mostly < 1 cm in diameter; the largest is 3 cm.

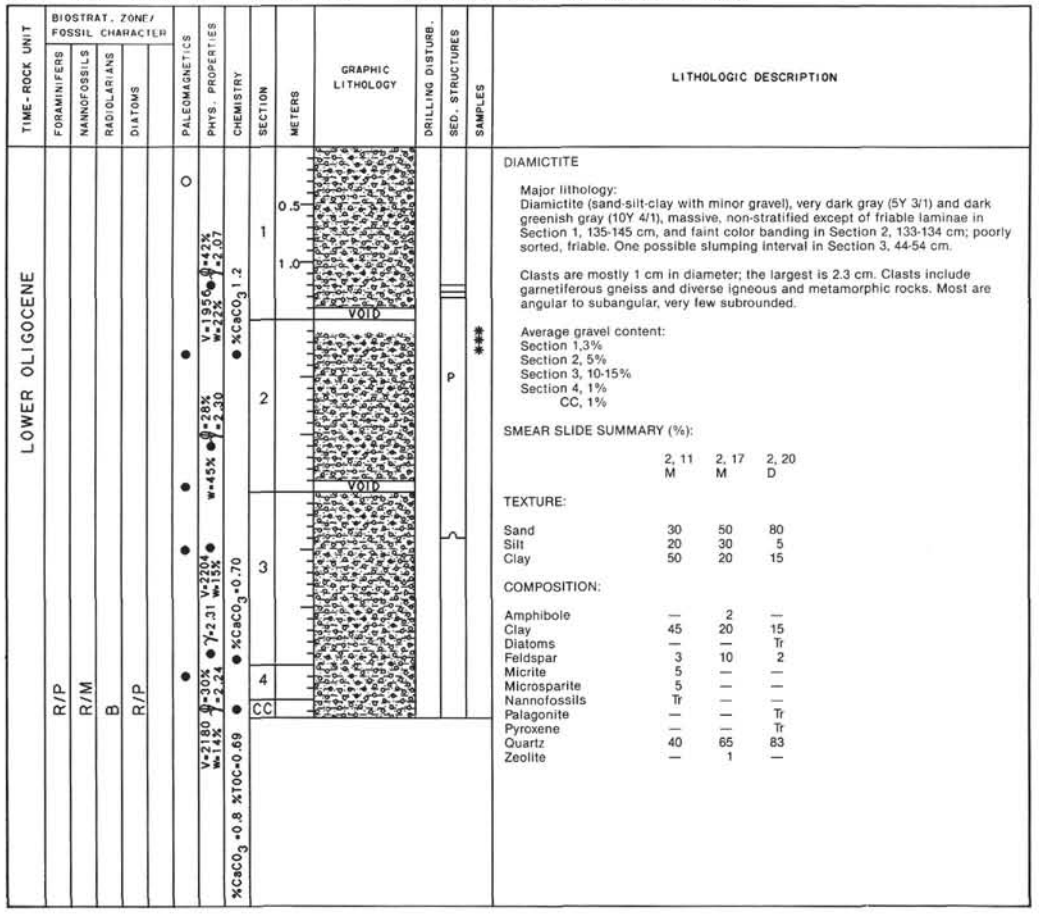
Average gravel content:
Section 1, 10%
Section 2, 5%
Section 3, 5%
Section 4, 5%

SMEAR SLIDE SUMMARY (%):

	1, 70 D	3, 100 D
TEXTURE:		
Sand	15	15
Silt	40	40
Clay	45	45
COMPOSITION:		
Access. Minerals	Tr	Tr
Amphibole	1	Tr
Clay	25	35
Diatoms	10	7
Feldspar	5	5
Glass	—	Tr
Nannofossils	Tr	Tr
Opaques	1	3
Palagonite	1	Tr
Quartz	55	50



SITE 739 HOLE C CORE 39R CORED INTERVAL 308.6-318.2 mbsf



DIAMICTITE

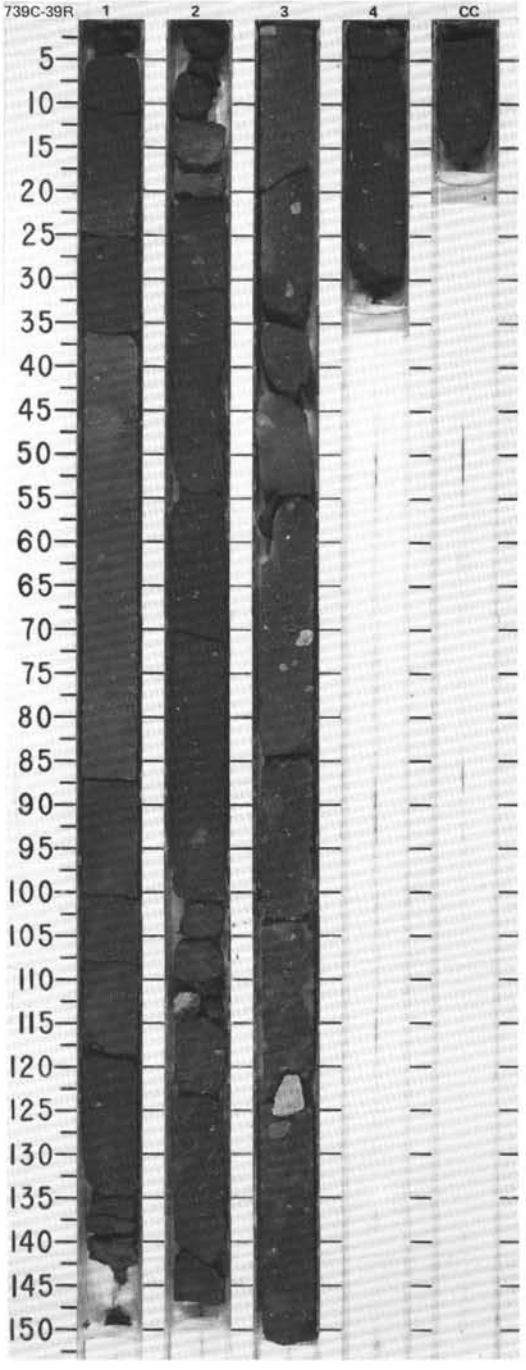
Major lithology:
Diamictite (sand-silt-clay with minor gravel), very dark gray (5Y 3/1) and dark greenish gray (10Y 4/1), massive, non-stratified except of friable laminae in Section 1, 135-145 cm, and faint color banding in Section 2, 133-134 cm; poorly sorted, friable. One possible slumping interval in Section 3, 44-54 cm.

Clasts are mostly 1 cm in diameter; the largest is 2.3 cm. Clasts include garnetiferous gneiss and diverse igneous and metamorphic rocks. Most are angular to subangular, very few subrounded.

Average gravel content:
Section 1, 3%
Section 2, 5%
Section 3, 10-15%
Section 4, 1%
CC, 1%

SMEAR SLIDE SUMMARY (%):

	2, 11 M	2, 17 M	2, 20 D
TEXTURE:			
Sand	30	50	80
Silt	20	30	5
Clay	50	20	15
COMPOSITION:			
Amphibole	—	2	—
Clay	45	20	15
Diatoms	—	—	Tr
Feldspar	3	10	2
Micrite	5	—	—
Microsparite	5	—	—
Nannofossils	Tr	—	—
Palagonite	—	—	Tr
Pyroxene	—	—	Tr
Quartz	40	65	83
Zeolite	—	1	—



SITE 739 HOLE C CORE 40R CORED INTERVAL 318.2-327.8 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
	B	R/M	B	B	•	V=2126 w=13% 0-28% 7-25	%CaCO3=1.2 %TOC=0.73	1 CC	0.5 1.0		X		* *

PHYS. PROPERTIES: V=2189 w=12% 2-23; %CaCO3 0.8-1.0

CHEMISTRY: %CaCO3

LITHOLOGIC DESCRIPTION

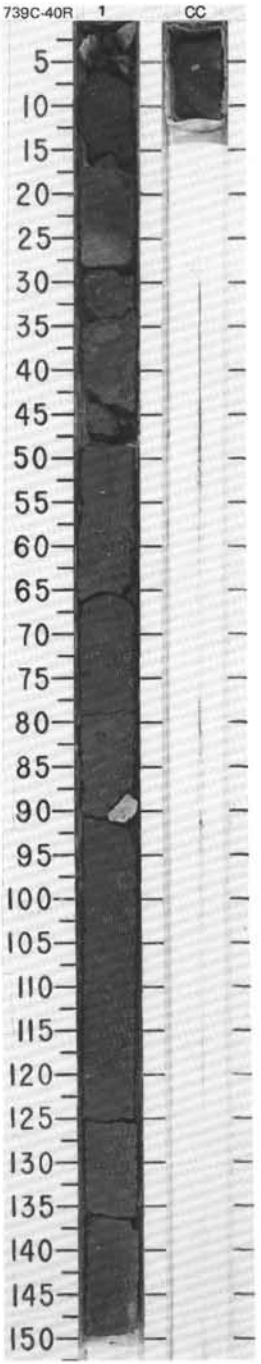
DIAMICTITE WITH MINOR CALCITE

Major lithology: Diamictite with minor calcite, and locally calcareous diamictite (sand-silt-clay with minor gravel), very dark gray (5Y 3/1) and dark olive gray (5Y 3/2), massive, non-stratified, poorly sorted. Section 1, 26-29 cm contains a lighter dark greenish gray (10Y 5/1) layer with gradational upper and lower boundaries.

Clasts are mostly <1 cm in diameter; angular to subangular with <3% rounded to subrounded. The clasts are composed of quartz and various metamorphic lithologies. Gravel content 2-5% but with the lowest gravel content of about 2% in Section 1, 41-99 cm.

SMEAR SLIDE SUMMARY (%):

	1, 26 M	1, 73 D
TEXTURE:		
Sand	20	50
Silt	20	30
Clay	60	20
COMPOSTION:		
Clay	3	10
Feldspar	3	5
Micrite	65	—
Opaques	—	10
Quartz	25	70



SITE 739 HOLE C CORE 41R CORED INTERVAL 327.8-337.5 mbsf

TIME-ROCK UNIT: R/M; R/M; B

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

PALEOMAGNETICS

PHYS. PROPERTIES: V=2123 w=14% γ=2.30 ϕ=31%; V=2102 w=13% γ=2.32 ϕ=29%; γ=2.26 w=12% ϕ=26% γ=2.34

CHEMISTRY: %$CaCO_3$=1.6 %TOC=0.70; %$CaCO_3$=0.9; %$CaCO_3$=0.9 %TOC=0.71; %$CaCO_3$=1.3; γ=2.30

SECTION: 1, 2, 3, CC

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: IW

LITHOLOGIC DESCRIPTION

DIAMICTITE with MINOR CALCITE

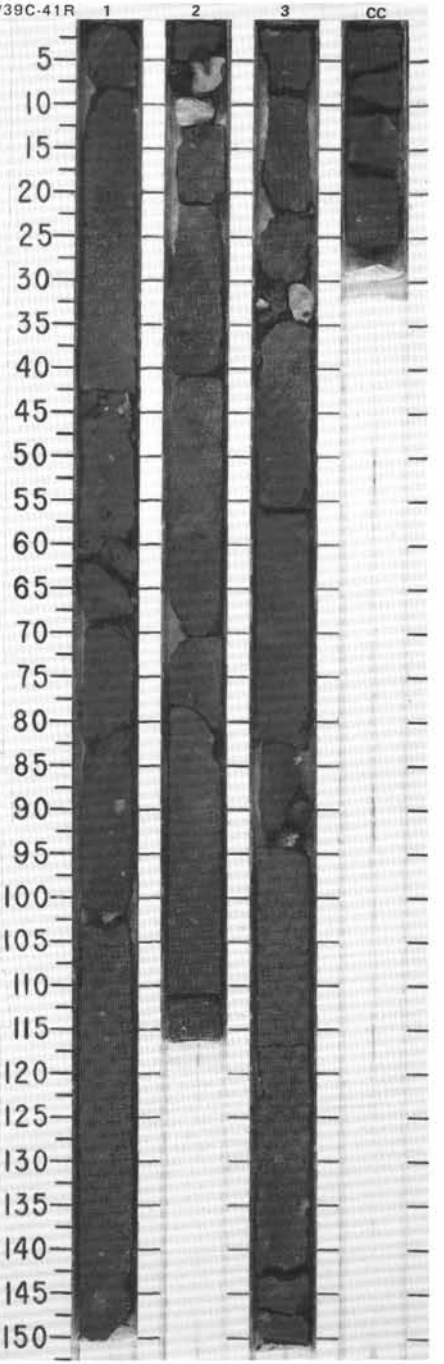
Major lithology:
Diamictite with minor calcite (clay-silt-sand with minor gravel), dark greenish gray (10Y 4/1), dark gray (unnamed color 7.5GY 3/1) and very dark gray (5Y 3/1), massive, non-stratified, poorly sorted.

Clasts are mostly <0.5 cm in diameter with the largest unbroken clast 7 cm in diameter; most are subangular to subrounded and composed of quartz, zeolites (fibrous), red sandstone, black carbonaceous shale, granite and metamorphic lithologies. Gravel content 2-7%.

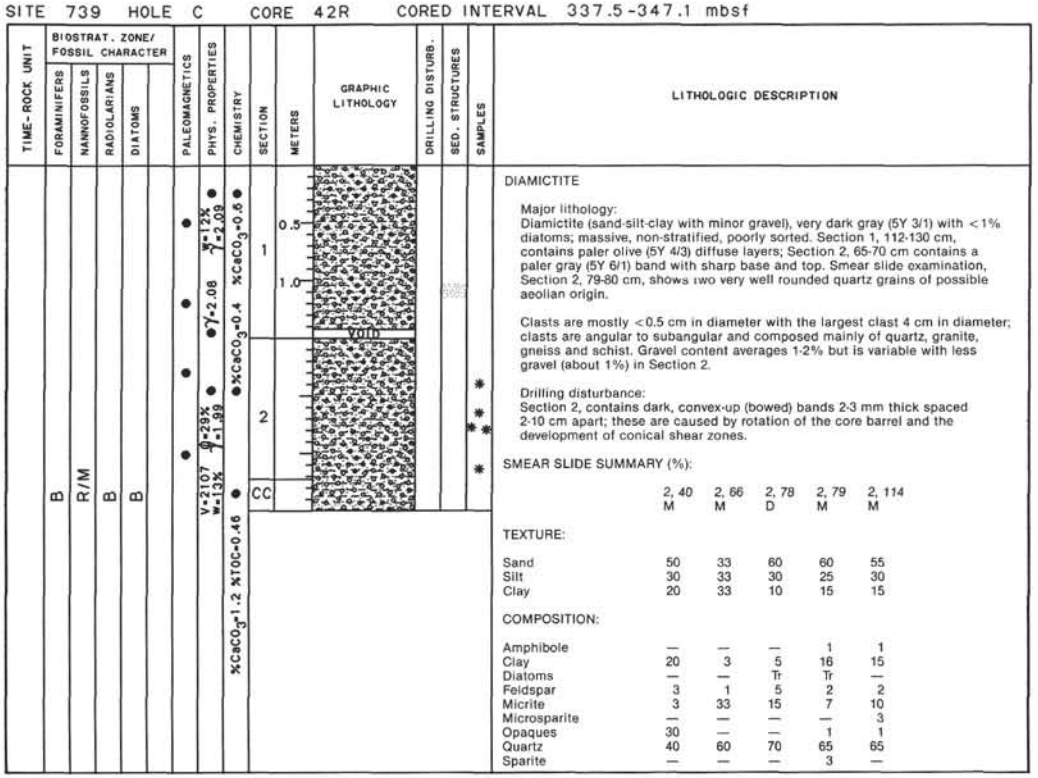
Average gravel content;
Section 1, 2%
Section 2, 5-7%
Section 3, 1-3%
CC, 2%

SMEAR SLIDE SUMMARY (%):

	1, 75 D	3, 52 D
TEXTURE:		
Sand	20	60
Silt	20	25
Clay	60	15
COMPOSITION:		
Amphibole	—	3
Clay	50	15
Feldspar	3	1
Micrite	10	15
Microsparite	3	—
Opaques	—	2
Palogonite	—	1
Quartz	30	60



SITE 739 HOLE C CORE 42R CORED INTERVAL 337.5-347.1 mbsf



LITHOLOGIC DESCRIPTION

DIAMICTITE

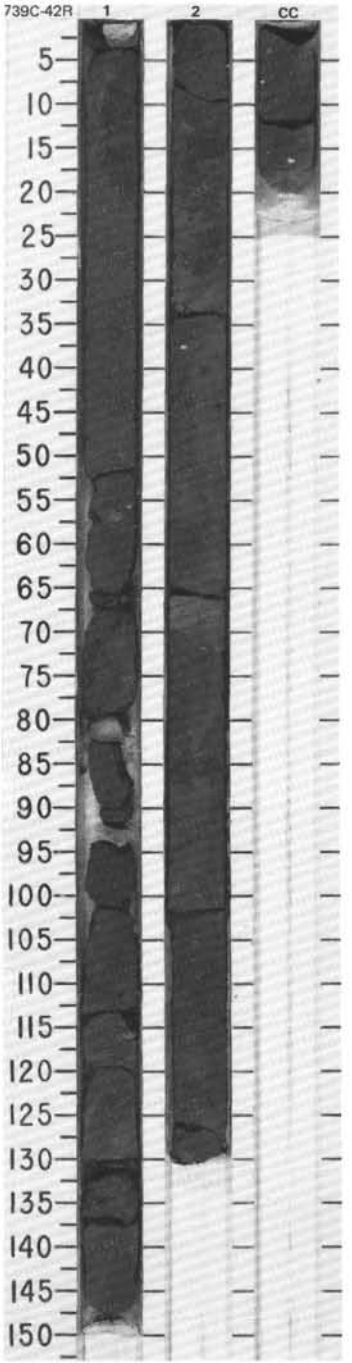
Major lithology:
Diamictite (sand-silt-clay with minor gravel), very dark gray (5Y 3/1) with <1% diatoms; massive, non-stratified, poorly sorted. Section 1, 112-130 cm, contains paler olive (5Y 4/3) diffuse layers; Section 2, 65-70 cm contains a paler gray (5Y 6/1) band with sharp base and top. Smear slide examination, Section 2, 79-80 cm, shows two very well rounded quartz grains of possible aeolian origin.

Clasts are mostly <0.5 cm in diameter with the largest clast 4 cm in diameter; clasts are angular to subangular and composed mainly of quartz, granite, gneiss and schist. Gravel content averages 1-2% but is variable with less gravel (about 1%) in Section 2.

Drilling disturbance:
Section 2, contains dark, convex-up (bowed) bands 2-3 mm thick spaced 2-10 cm apart; these are caused by rotation of the core barrel and the development of conical shear zones.

SMEAR SLIDE SUMMARY (%):

	2, 40 M	2, 66 M	2, 78 D	2, 79 M	2, 114 M
TEXTURE:					
Sand	50	33	60	60	55
Silt	30	33	30	25	30
Clay	20	33	10	15	15
COMPOSITION:					
Amphibole	—	—	—	1	1
Clay	20	3	5	16	15
Diatoms	—	—	Tr	Tr	—
Feldspar	3	1	5	2	2
Micrite	3	33	15	7	10
Microsparite	—	—	—	—	3
Opaques	30	—	—	1	1
Quartz	40	60	70	65	65
Sparite	—	—	—	3	—



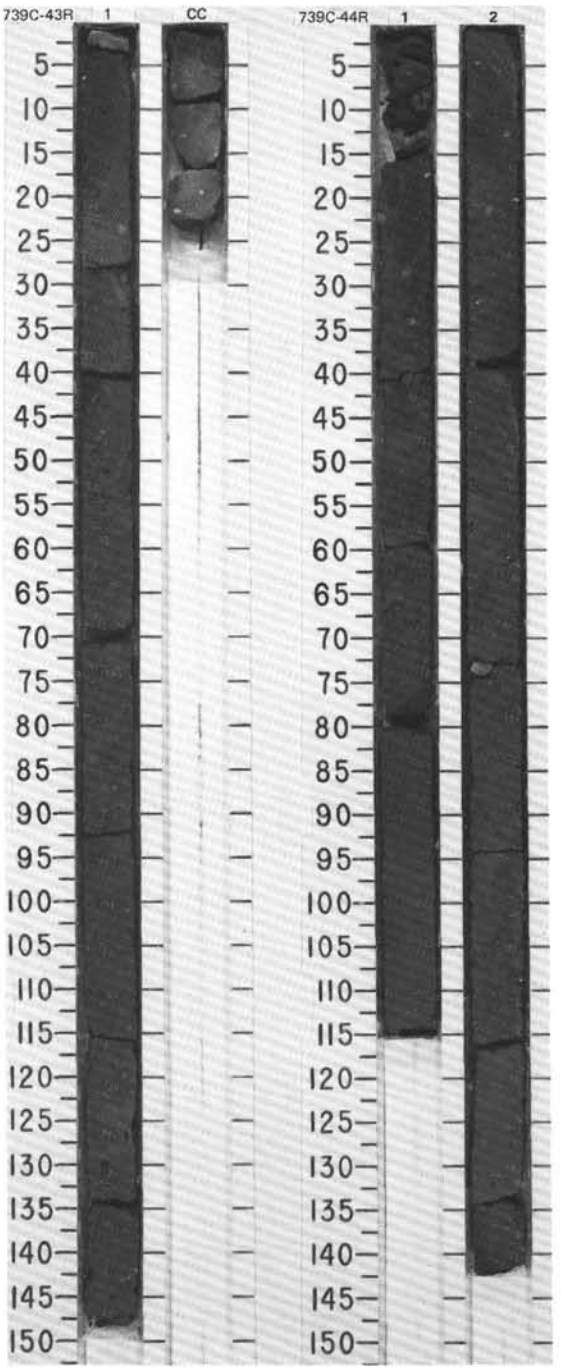
SITE 739 HOLE C CORE 43R CORED INTERVAL 347.1-356.8 mbsf

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
	B	B	B	B	•	•	•	1	0.5					DIAMICTITE
						V=2213 Ø=27% w=12% ρ=2.03	%CaCO3=17.9		1.0					Major lithology: Diamictite (sand-silt-clay and clay-silt-sand with minor gravel) very dark gray (5Y 3/1), massive, non-stratified, poorly sorted.
							%CaCO3=0.8 %TOC=0.81	CC						Clasts are mostly 2-4 mm in diameter with the largest unbroken clast 7 cm in diameter; clasts are angular, subangular and subrounded, and composed of quartz, granite, shale and metamorphic rocks. Gravel content is not more than 2-3%; long axes of elongate clasts aligned at high angle to horizontal in Section 1, 61 cm, possibly indicating a slump.

SITE 739 HOLE C CORE 44R CORED INTERVAL 356.8-366.5 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
	R/M	R/M	B	B	O	•	•	1	0.5				OG IW	DIAMICTITE with MINOR CALCITE
						V=2220 Ø=27% w=12% ρ=2.03	%CaCO3=0.8 %TOC=0.70		1.0					Major lithology: Diamictite (clay-silt-sand with minor gravel) with minor calcite, very dark gray (5Y 3/1) to dark gray (2.5Y 4/1), massive, non-stratified, poorly sorted. Shell fragment in Section 2, 63 cm.
							%CaCO3 =0.6	2				Ø	**	Clasts are mostly <1 cm in diameter with the largest clast 2 cm in diameter; clasts are angular, subangular and subrounded, and composed of quartz, gneiss, granite, felsite, light olive brown (2.5Y 5/3) sandstone and volcanic material. Gravel content very low, only 1-2%, but variable with parts of Section 2, <1%.
								CC		VOID				Drilling disturbance: Section 1, 0-15 cm, downhole contamination.
							%CaCO3=1.7 %TOC=0.45							SMEAR SLIDE SUMMARY (%):

	2, 61 D	2, 70 D
TEXTURE:		
Sand	50	55
Silt	35	30
Clay	15	15
COMPOSITION:		
Amphibole	1	Tr
Clay	15	20
Feldspar	2	1
Micrite	7	10
Microsparite	5	5
Nannofossils	Tr	—
Opaques	—	1
Palagonite	—	Tr
Quartz	65	60



SITE 739 HOLE C CORE 45R CORED INTERVAL 366.5-376.2 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
	B	B		B			%$CaCO_3$=1.3 %TOC=0.70 ●	CC					*	

DIAMICTITE

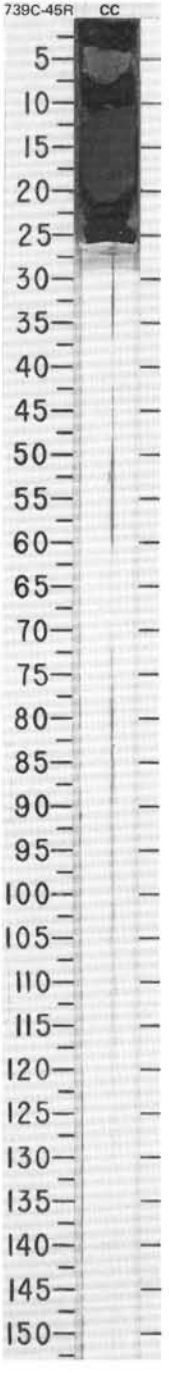
Major lithology:
Diamictite (clay-silt-sand with minor gravel), very dark gray (5Y 3/1), massive, non-stratified, poorly sorted.

Clasts are mostly 2-4 mm in diameter, angular to subangular and rounded, and composed of quartz with large (3-4 cm in diameter) clasts of gray (5Y 4/1) carbonaceous, burrowed sandstone. Gravel content is only about 1%.

Drilling disturbance:
Only core catcher recovered; 5-9 cm clast in core-catcher probably from hole contamination; lower 3-4 cm is soft, sticky diamictite.

SMEAR SLIDE SUMMARY (%):

	CC, 10 D
TEXTURE:	
Sand	50
Silt	15
Clay	35
COMPOSITION:	
Clay	35
Feldspar	2
Micrite	3
Microsparite	2
Nannofossils	1
Opaques	5
Quartz	50



SITE 739 HOLE C CORE 46R CORED INTERVAL 376.2-385.9 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
	B	B	B	B	•	γ=2.04 ● γ=2.31 ●	%CaCO3=0.6 ● %CaCO3=0.7	1	0.5 1.0	VOID			*
						Φ=29% ● W=14% ● I=2.22	%CaCO3=3.2 %TOC=1.57 ●	2 CC					

LITHOLOGIC DESCRIPTION

DIAMICTITE

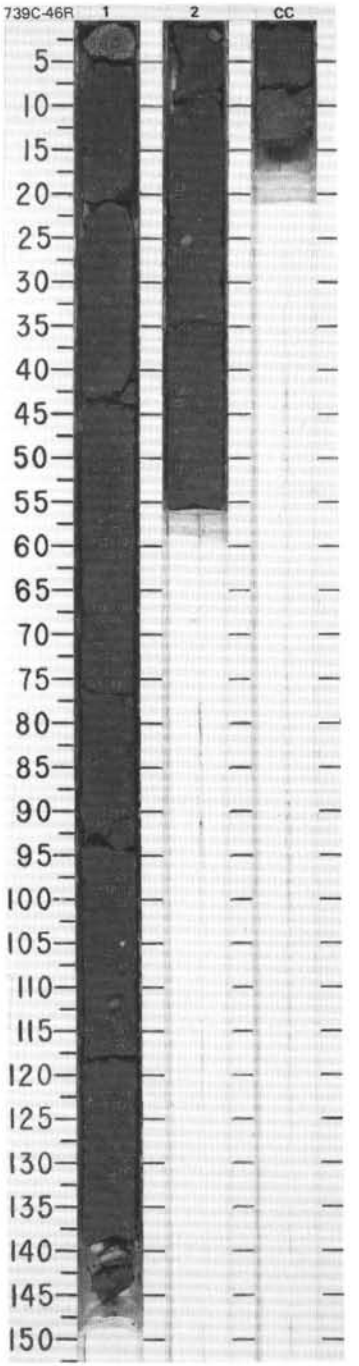
Major lithology:
Diamictite (silt-sand-clay with minor gravel), very dark gray (5Y 3/1) with a trace of nannofossils; massive, non-stratified, poorly sorted. Fine stringer, 1-1.5 cm long of granule conglomerate in section 1, 74 cm; a pale olive gray (5Y 4/2) finer textured, diffuse zone occurs in Section 1, 85-91 cm.

Clasts are mostly < 1cm in diameter with the largest clast 3 cm in diameter; clasts are angular, subangular and subrounded, and composed mainly of quartz, pyrite and sandstone. Gravel content is about 1-3% throughout the core.

Drilling disturbance:
Black, convex-up (bowed), fine mm-scale bands some 2-10 cm apart occur in Section 2, and in the core catcher; these are caused by core barrel rotation during drilling.

SMEAR SLIDE SUMMARY (%):

	1, 35 D
TEXTURE:	
Sand	30
Silt	25
Clay	45
COMPOSITION:	
Clay	40
Feldspar	5
Micrite	5
Nannofossils	Tr
Opaques	10
Quartz	35



SITE 739 HOLE C CORE 47R CORED INTERVAL 385.9-395.6 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

R/M | B | B | B

PHYS. PROPERTIES: V=2125 Φ=28% ρ=2.31 w=13%

CHEMISTRY: %$CaCO_3$=1.3 %$CaCO_3$=0.4 %TOC=1.37

SECTION 1, CC

METERS 0.5

GRAPHIC LITHOLOGY: VOID

SAMPLES: *

LITHOLOGIC DESCRIPTION

DIAMICTITE with MINOR CALCITE

Major lithology:
Diamictite (clay-silt-sand with minor gravel) with minor calcite (locally calcerous diamictite), dark olive gray (5Y 3/2), massive, non-stratified, poorly sorted; a paler gray (5Y 5/1) band occurs in Section 1, 86-87 cm.

Clasts are up to 1 cm in diameter, mostly angular to subangular and subrounded, and composed of quartz, some with pyritic rims, and gneiss. Gravel content varies from < 1-3% in Section 1, 0-30 cm and 50-93 cm; otherwise < 1%.

Drilling disturbance:
Black mm-scale convex up (bowed) bands, 7-10 cm apart, caused by drilling.

SMEAR SLIDE SUMMARY (%):

	1, 85 D
TEXTURE:	
Sand	50
Silt	30
Clay	20
COMPOSITION:	
Amphibole	1
Clay	20
Feldspar	2
Micrite	30
Quartz	40
Sparite	2

SITE 739 HOLE C CORE 48R CORED INTERVAL 395.6-405.2 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

B | B | B | B

%$CaCO_3$=.06

PHYS. PROPERTIES: V=2110 Φ=27% ρ=2.28 w=12% ρ=2.32 w=13% ρ=2.26

CHEMISTRY: %$CaCO_3$=0.8 %$CaCO_3$=0.9 %TOC=0.64 %$CaCO_3$=1.3 %TOC=0.54

SECTION 1, 2, CC

METERS 0.5, 1.0

GRAPHIC LITHOLOGY: VOID

SAMPLES: *, IW

LITHOLOGIC DESCRIPTION

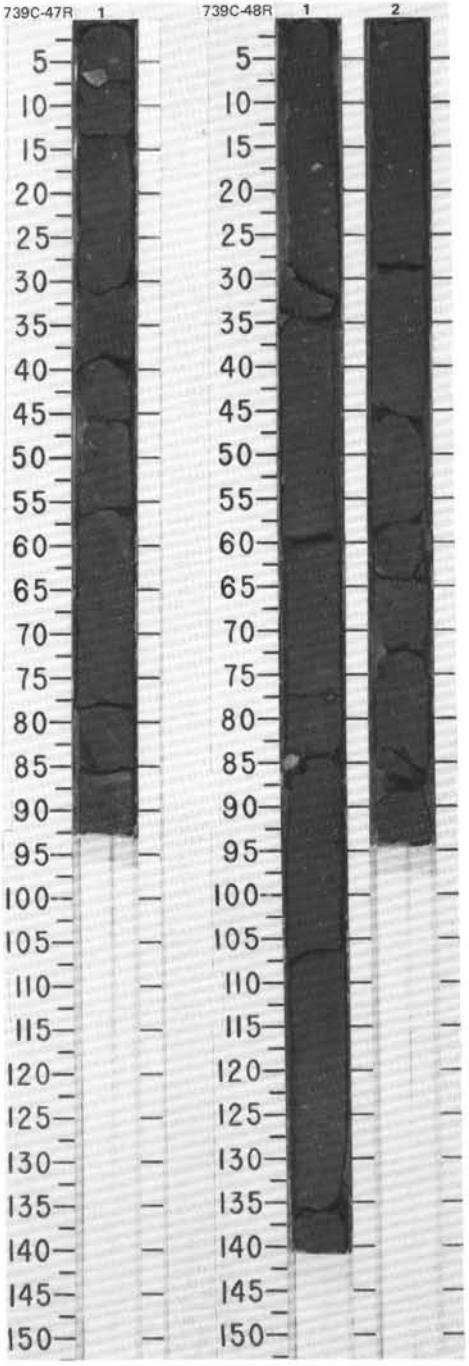
DIAMICTITE

Major lithology:
Diamictite (clay-silt-sand with minor gravel), very dark gray (5Y 3/1), massive, non-stratified, poorly sorted; Section 1, 58-65 cm, shows long axes orientation of elongate clasts dipping at high angle to bedding.

Clasts are up to 1.5 cm in diameter with the largest clasts concentrated in Section 1, 121-136 cm; clasts are angular, subangular and subrounded, and composed of quartz, pyritic quartz, igneous and metamorphic lithologies, and black coaly shale. Gravel content is 5% in Section 1, and 2% in Section 2.

SMEAR SLIDE SUMMARY (%):

	1, 49 D
TEXTURE:	
Sand	50
Silt	30
Clay	20
COMPOSITION:	
Clay	15
Diatoms	Tr
Feldspar	5
Micrite	7
Quartz	70

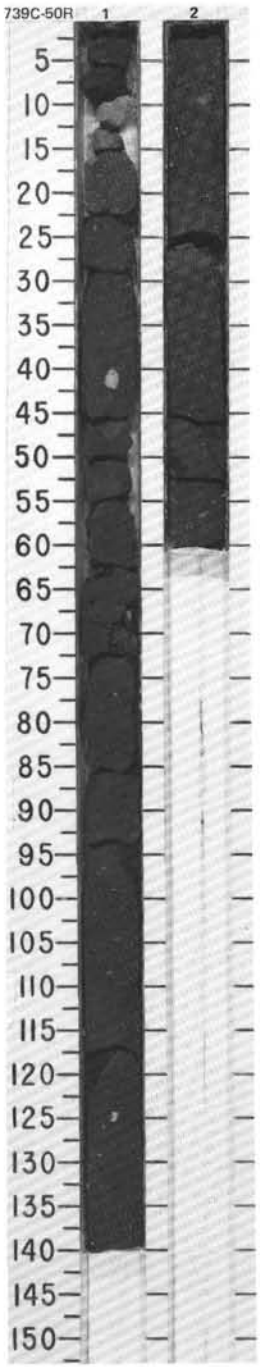


SITE 739 HOLE A CORE 49R CORED INTERVAL 405.2-414.9 mbsf

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
	B	B		B			$\%CaCO_3$=0.7 $\%TOC$=0.84	CC		VOID				

SITE 739 HOLE C CORE 50R CORED INTERVAL 414.9-424.5 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
	B	B	B	B	O	V=2020 W=132% D=27% γ=2.25 γ=2.34 W=13% γ=2.36	$\%CaCO_3$=1.1 $\%TOC$=0.73 $\%CaCO_3$=1.3 $\%CaCO_3$=0.8	1	0.5 1.0				* IW *	DIAMICTITE Major lithology: Diamictite (sand-silt-clay with minor gravel), very dark gray (5Y 3/1), massive, non-stratified, poorly sorted; more sandy in character in Section 2. Clasts are mostly <1 cm in diameter; clasts are angular, subangular and subrounded, and composed mainly of quartz, altered pyrite-bearing micaceous quartzite and yellow micaceous sandstone. Gravel content is 1-5% but variable. Average gravel content: Section 1, 15-40 cm, 2-3% 46-95 cm, 1% 95-140 cm, 5% Section 2, 2% gravel throughout SMEAR SLIDE SUMMARY (%): 1, 62 M — 2, 53 D TEXTURE: Sand 75 40 Silt 15 30 Clay 10 30 COMPOSITION: Clay 12 25 Feldspar — 5 Micrite — 5 Opaques 5 7 Quartz 80 55
								2						
								CC		VOID				



SITE 739 HOLE C CORE 51R CORED INTERVAL 424.5-434.2 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
					●	V=2009 w=13% γ=2.35 Ø=29% γ=2.24 V=2092 w=14%	%$CaCO_3$=0.6 %$CaCO_3$=1.2 %TOC=0.46	1 2 CC	0.5 1.0	VOID			*	

CALCAREOUS DIAMICTITE and DIAMICTITE

Major lithology:
Calcareous diamictite and diamictite (sand-silt-clay with minor gravel), very dark gray (5Y 3/1), massive, non-stratified, poorly sorted; small specks of pyrite disseminated throughout core.

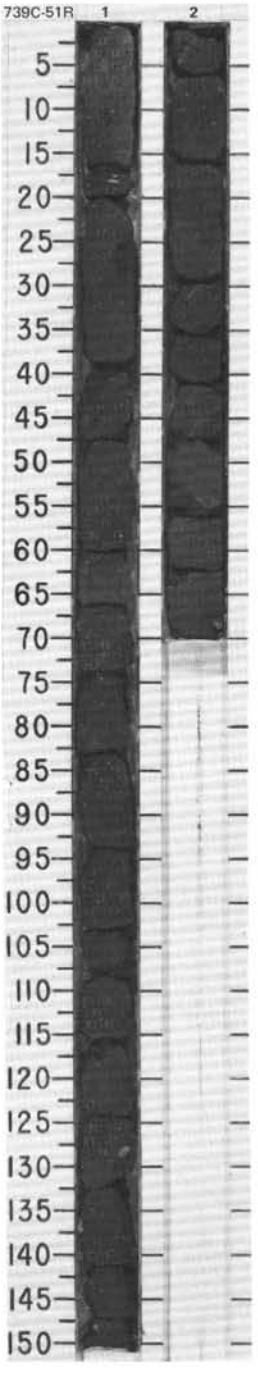
Clasts are mostly 2-4 mm in diameter, angular to subangular and subrounded; they are composed mainly of quartz, pyritic quartz and igneous and metamorphic rock types. Gravel content is 1-3%.

Average gravel content:
Section 1, 0-15 cm, 2-3%
15-150 cm, 1%
Section 2, 1% throughout.

Drilling disturbance:
Section 2, moderately fractured.

SMEAR SLIDE SUMMARY (%):

	1, 60 D
TEXTURE:	
Sand	10
Silt	60
Clay	30
COMPOSITION:	
Amphibole	1
Clay	30
Feldspar	1
Micrite	7
Microsparite	40
Opaques	1
Quartz	15



SITE 739 HOLE C CORE 52R CORED INTERVAL 434.2-439.2 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
	B	B			O O	γ=2.22 ● γ=2.41 ●	%$CaCO_3$ =0.4 ●	1 2 CC	0.5 1.0	VOID			*

LITHOLOGIC DESCRIPTION

DIAMICTITE

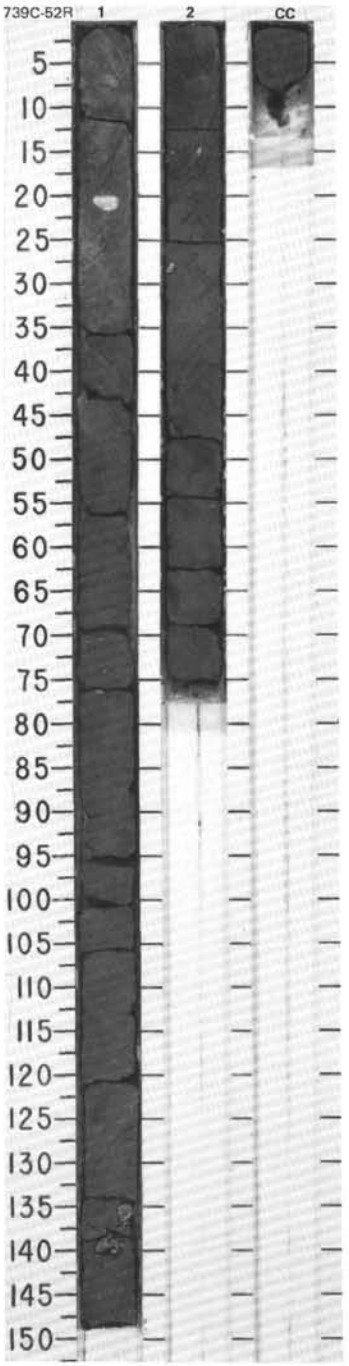
Major lithology:
Diamictite (sandy siltstone with minor clay and gravel), dark gray (5Y 4/1), massive, non-stratified, poorly sorted; Section 1, coarsens upwards, becoming more sandy in the upper 40 cm; pyrite specks are disseminated throughout the core.

Clasts are mostly <4 mm in diameter with the largest clast 1.2 cm in diameter. Clasts are angular to subrounded and rounded, and composed of quartz, quartzite and various igneous and metamorphic rock types. Gravel content low at about 1% throughout the core.

Drilling disturbance:
Section 1, black mm-scale convex-up (bowed) bands due to drilling.

SMEAR SLIDE SUMMARY (%):

	CC, 3 M
TEXTURE:	
Sand	20
Silt	70
Clay	10
COMPOSITION:	
Clay	20
Feldspar	7
Glauconite	Tr
Micrite	2
Opaques	10
Pyroxene	2
Quartz	55



SITE 739 HOLE C CORE 53R CORED INTERVAL 439.2-443.9 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
	B	B			O	V=2080 w=10% ϕ=30% ρ=2.37	%$CaCO_3$=1.0 %TOC=0.33	1 CC	0.5 1.0				*
						V=2076 w=14% ϕ=29% ρ=2.33	%$CaCO_3$=0.8						

LITHOLOGIC DESCRIPTION

DIAMICTITE

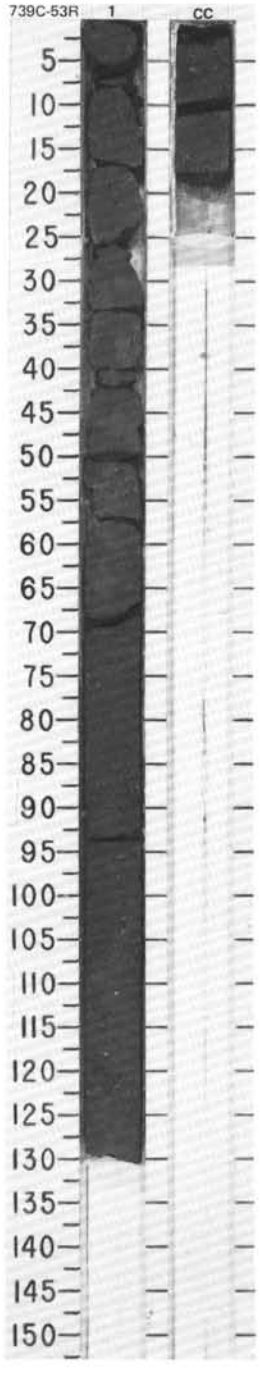
Major lithology:
Diamictite (sand-silt-clay with minor gravel), very dark gray (5Y 3/1), massive, non-stratified, poorly sorted, compacted but friable. Slight variations in sand and gravel content are visible in the core.

Clasts are less than 0.5 cm in diameter. Clasts include in decreased order of importance quartzite, sulfide-bearing quartz clasts, biotite, fine grained gneiss, biotite-garnet-cordierite medium grained gneiss, augen-gneiss. Most of them are subrounded. Average gravel content in Section 1 and in the core catcher is 1%.

Drilling disturbance:
Numerous darker, black (5Y 2.5/1) convex-up bands occur in Section 1, 66 to 130 cm, and convex-down ones in the core catcher. The bands have a thickness of about 1 mm and occur every 1 to 3 cm. They are thought to be due to drilling. The core catcher is probably upside down, because the darker bands are opposite to Section 1.

SMEAR SLIDE SUMMARY (%):

	1, 80 D
TEXTURE:	
Sand	20
Silt	60
Clay	20
COMPOSITION:	
Access. Minerals	Tr
Amphibole	Tr
Clay	15
Feldspar	2
Opaques	7
Palagonite	1
Quartz	75



SITE 739 HOLE C CORE 54R CORED INTERVAL 443.9-448.9 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
	B	B			•	V=2133 ρ=2.29	%$CaCO_3$ =0.4	1	0.5				*
						V=1903 Φ=35% w=17% ρ=2.19			1.0	VOID			IW
					•		%$CaCO_3$=0.2 %TOC=0.37 %$CaCO_3$=0.4 %TOC=0.39	CC					

LITHOLOGIC DESCRIPTION

DIAMICTITE

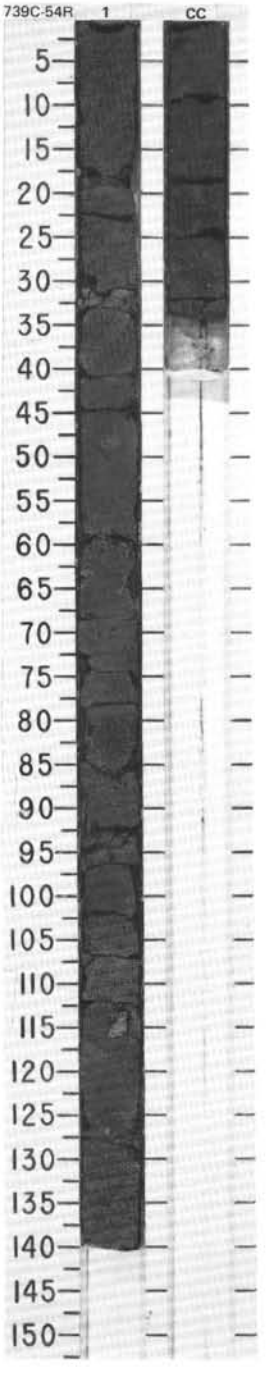
Major lithology:
Diamictite (sand-silt-clay with minor gravel), very dark gray (5Y 3/1), massive, non-stratified, poorly sorted, compacted but friable. Slight variations in sand and gravel content are visible in the core.

The largest clast is 3 cm in diameter. Clasts include one piece of sulfide-bearing, deformed pegmatite. Average gravel content in Section 1 and in the core catcher is about 1%.

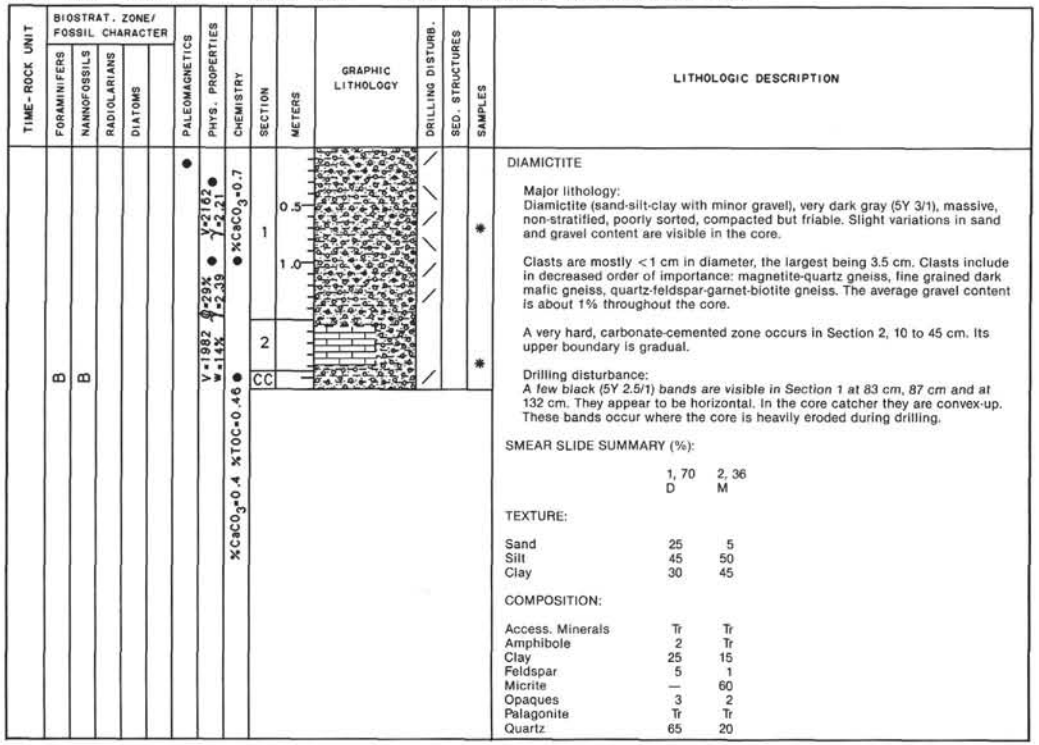
Drilling disturbance:
Numerous darker bands, which are convex-up, occur in Section 1, 105 to 140 cm and in the core catcher. They have thicknesses of around 1 mm and are due to drilling.

SMEAR SLIDE SUMMARY (%):

	1, 80 D
TEXTURE:	
Sand	20
Silt	45
Clay	35
COMPOSITION:	
Access. Minerals	Tr
Amphibole	2
Clay	25
Feldspar	5
Opaques	3
Palagonite	Tr
Quartz	65



SITE 739 HOLE C CORE 55R CORED INTERVAL 448.9-453.5 mbsf



LITHOLOGIC DESCRIPTION

DIAMICTITE

Major lithology:
Diamictite (sand-silt-clay with minor gravel), very dark gray (5Y 3/1), massive, non-stratified, poorly sorted, compacted but friable. Slight variations in sand and gravel content are visible in the core.

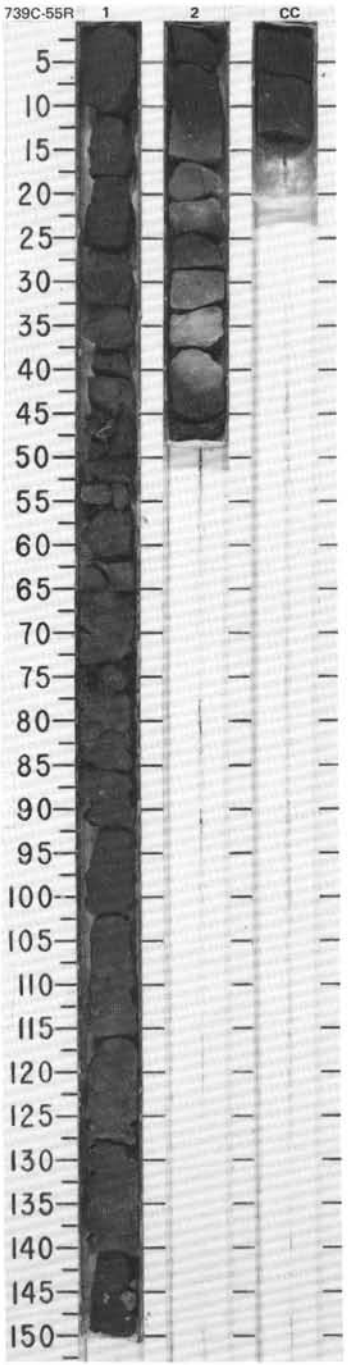
Clasts are mostly <1 cm in diameter, the largest being 3.5 cm. Clasts include in decreased order of importance: magnetite-quartz gneiss, fine grained dark mafic gneiss, quartz-feldspar-garnet-biotite gneiss. The average gravel content is about 1% throughout the core.

A very hard, carbonate-cemented zone occurs in Section 2, 10 to 45 cm. Its upper boundary is gradual.

Drilling disturbance:
A few black (5Y 2.5/1) bands are visible in Section 1 at 83 cm, 87 cm and at 132 cm. They appear to be horizontal. In the core catcher they are convex-up. These bands occur where the core is heavily eroded during drilling.

SMEAR SLIDE SUMMARY (%):

	1, 70 D	2, 36 M
TEXTURE:		
Sand	25	5
Silt	45	50
Clay	30	45
COMPOSITION:		
Access. Minerals	Tr	Tr
Amphibole	2	Tr
Clay	25	15
Feldspar	5	1
Micrite	—	60
Opaques	3	2
Palagonite	Tr	Tr
Quartz	65	20

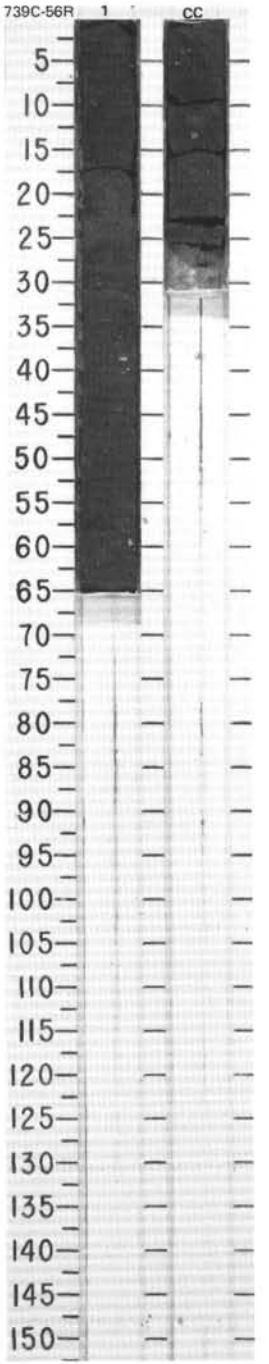


SITE 739 HOLE C CORE 56R CORED INTERVAL 453.5-458.5 mbsf

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
	B	B			•	V=2036 w=13% ϕ=33% ρ=2.22	%CaCO3 =0.4 %CaCO3 =0.4 %TOC=0.50	1	0.5				*	DIAMICTITE Major lithology: Diamictite (sand-silt-clay with minor gravel), very dark gray (5Y 3/1), massive, non-stratified, poorly sorted, compacted but friable. Slight variations in sand and gravel content are visible in the core. One slump features is visible in Section 1, 10 cm. Clasts are rarely a few cm in diameter, the largest being 7 cm. Average gravel content is 1-3% in Section 1, and 1% in the core catcher. Drilling disturbance: Some convex-up, black (5Y 2.5/1) bands occur in Section 1, 25 to 60 cm, and in the core catcher. They seem to be slightly enriched in sand and are believed to be produced during drilling.
								CC						

SMEAR SLIDE SUMMARY (%):

	1, 40 D
TEXTURE:	
Sand	20
Silt	40
Clay	40
COMPOSITION:	
Access. Minerals	Tr
Clay	20
Feldspar	5
Opaques	1
Palagonite	3
Quartz	70



SITE 739 HOLE C CORE 57R CORED INTERVAL 458.5-463.2 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
	B	B				V=2204 Φ=31% ● W=16% Φ=2.25	%$CaCO_3$=0.5 %TOC=0.57 ●	1	0.5				* *
								CC					

LITHOLOGIC DESCRIPTION

DIAMICTITE

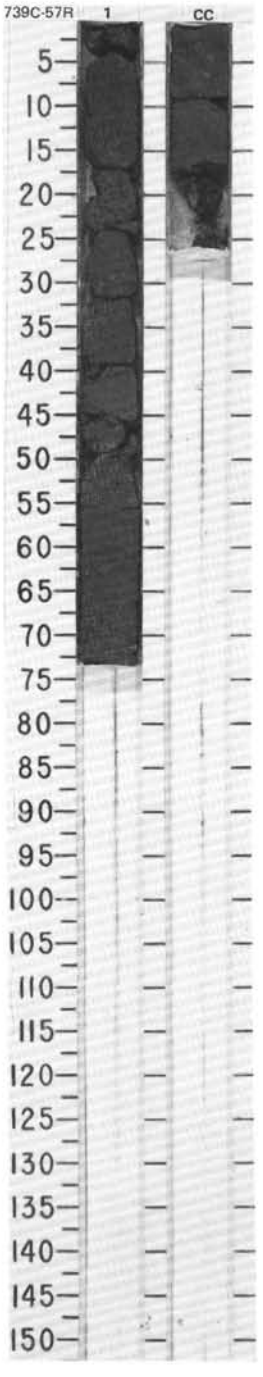
Major lithology:
Diamictite (sand-silt-clay with minor gravel), very dark gray (5Y 3/1), massive, non-stratified, poorly sorted, compacted but friable. Slight variations in sand and gravel content are visible in the core.

Clasts are mostly < 1 cm in diameter, the largest being 3 cm. Clasts include one carbonate pebble. The average gravel content is < 1% in Section 1, and 1% in the core catcher.

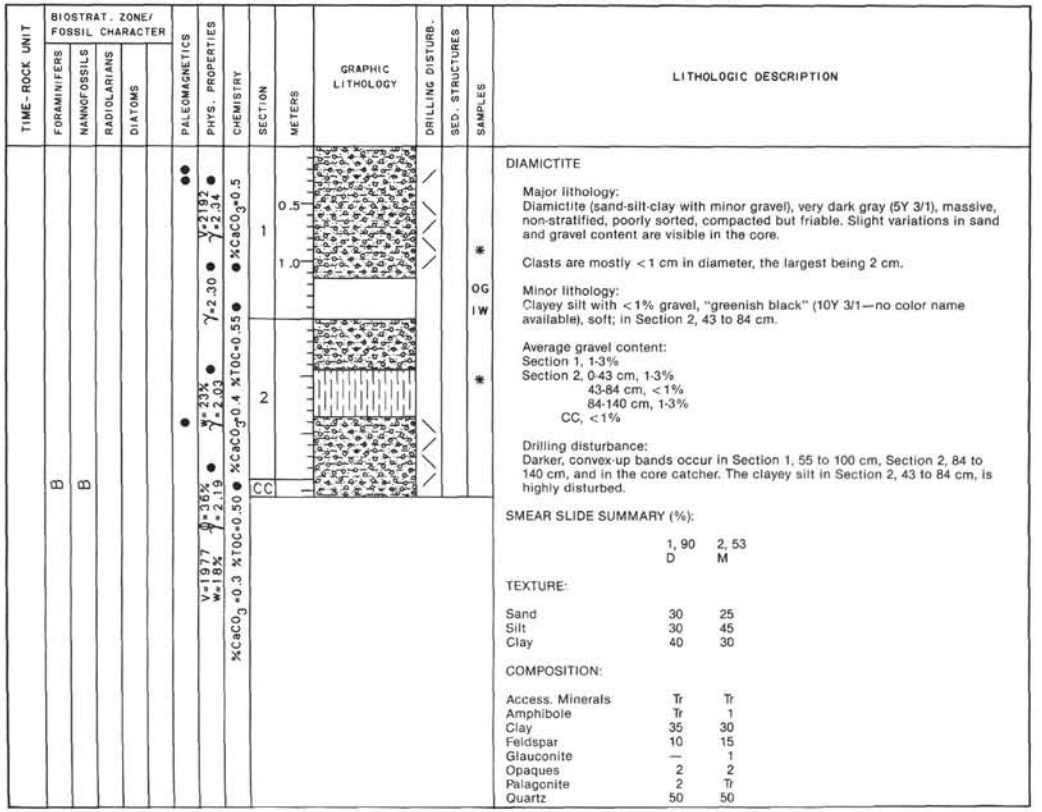
Drilling disturbance:
Some drilling derived convex-up bands, 2 to 3 mm thick, are present in Section 1, 44 to 72 cm, and in the core catcher.

SMEAR SLIDE SUMMARY (%):

	1, 47 M	1, 60 D
TEXTURE:		
Sand	—	20
Silt	—	40
Clay	—	40
COMPOSITION:		
Access. Minerals	Tr	Tr
Amphibole	Tr	5
Clay	10	35
Feldspar	Tr	2
Micrite	60	—
Opaques	Tr	3
Palagonite	—	Tr
Quartz	30	55



SITE 739 HOLE C CORE 58R CORED INTERVAL 463.2-468.2 mbsf



DIAMICTITE

Major lithology:
Diamictite (sand-silt-clay with minor gravel), very dark gray (5Y 3/1), massive, non-stratified, poorly sorted, compacted but friable. Slight variations in sand and gravel content are visible in the core.

Clasts are mostly <1 cm in diameter, the largest being 2 cm.

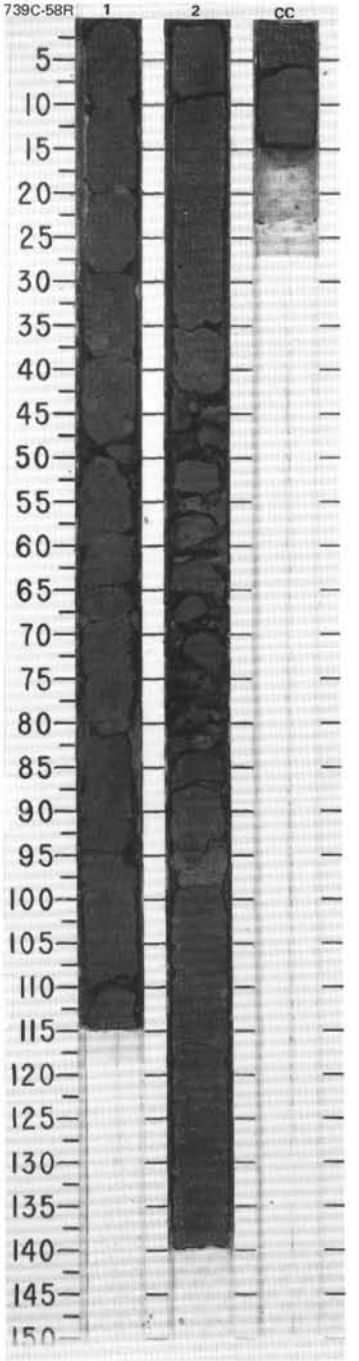
Minor lithology:
Clayey silt with <1% gravel, "greenish black" (10Y 3/1—no color name available), soft; in Section 2, 43 to 84 cm.

Average gravel content:
Section 1, 1-3%
Section 2, 0-43 cm, 1-3%
43-84 cm, <1%
84-140 cm, 1-3%
CC, <1%

Drilling disturbance:
Darker, convex-up bands occur in Section 1, 55 to 100 cm, Section 2, 84 to 140 cm, and in the core catcher. The clayey silt in Section 2, 43 to 84 cm, is highly disturbed.

SMEAR SLIDE SUMMARY (%):

	1, 90 D	2, 53 M
TEXTURE:		
Sand	30	25
Silt	30	45
Clay	40	30
COMPOSITION:		
Access. Minerals	Tr	Tr
Amphibole	Tr	1
Clay	35	30
Feldspar	10	15
Glauconite	—	1
Opaques	2	2
Palagonite	2	Tr
Quartz	50	50



SITE 739 HOLE C CORE 59R CORED INTERVAL 468.2-472.9 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
		B			●	V-2054 0-34% w-17% 2.21 ●	%CaCO3 =0.5	1	0.5			P	*	DIAMICTITE
								CC		VOID				

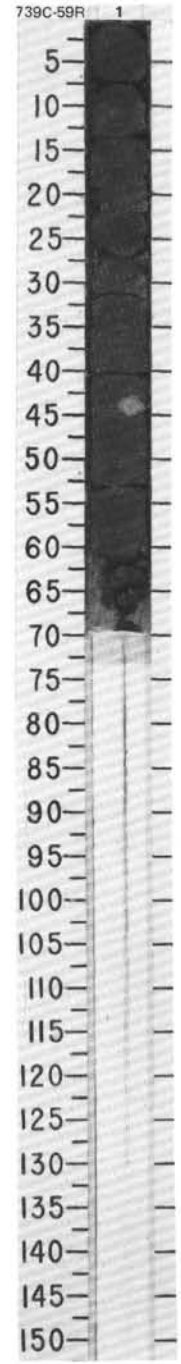
Major lithology:
Diamictite (clayey silt with minor sand and gravel), very dark gray (5Y 3/1), *massive, non-stratified, poorly sorted, compacted but friable.* Slight variations in sand and gravel content are visible in the core. Fine pyrite grains are present in Section 1, 52 cm and 56 cm.

The largest clast is 3 cm in diameter. The average gravel content is about 1% throughout the core.

Drilling disturbance:
Some darker bands generated during drilling occur in Section 1, 20 to 60 cm. The degree of curvature varies. The largest distortion appears just above a larger clast in Section 1, 44 cm.

SMEAR SLIDE SUMMARY (%):

	1, 40 D
TEXTURE:	
Sand	10
Silt	55
Clay	35
COMPOSITION:	
Access. Minerals	Tr
Amphibole	Tr
Clay	20
Feldspar	5
Opaques	7
Palagonite	2
Quartz	65



SITE 739 HOLE C CORE 60R CORED INTERVAL 472.9-477.9 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
		B				●	V=2004 w=9% ρ=1.9% ρ=2.46 ρ=2.23	$CaCO_3$ =1.8 %TOC=2.97 $CaCO_3$ =0.4	1	0.5 1.0				*	

DIAMICTITE

Major lithology:
Diamictite (clayey silt with minor sand and gravel), very dark gray (5Y 3/1), massive, non-stratified, poorly sorted, compacted but friable. Slight variations in sand and gravel content are visible in the core.

The largest clast is 3 cm in diameter. The average gravel content is 1% throughout the core.

Two carbonate-cemented, hard zones occur in Section 1, 0 to 5 cm, and Section 1, 130 to 140 cm.

Drilling disturbance:
Black (5Y 2.5/1) convex-up bands are present in Section 1, 85 to 95 cm. They are due to drilling.

SMEAR SLIDE SUMMARY (%):

	1, 40 D
TEXTURE:	
Sand	10
Silt	55
Clay	35
COMPOSITION:	
Access. Minerals	Tr
Clay	25
Feldspar	2
Opaques	10
Palagonite	3
Quartz	60

SITE 739 HOLE C CORE 61R CORED INTERVAL 477.9-482.6 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
		B						●	CC		VOID				
								$CaCO_3$=0.5 %TOC=0.72							

NO RECOVERY

Except of 2 cm in the core catcher. Which was not described.

SITE 739 HOLE C CORE 62R CORED INTERVAL 482.6-486.8 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
					●	● V=2164 @=15% w=7% ρ=2.55	● %C8CO3=23.10 %CaCO3=0.4 %TOC=0.3	CC					*	DIAMICTITE

Major lithology:
Diamictite (sand-silt-clay with minor gravel), very dark gray (5Y 3/1), massive, non-stratified, poorly sorted, compacted but friable. Slight variations in sand and gravel content are visible.

Clasts are <0.5 cm in diameter, the average gravel content is about 1%. At the top of CC, at 0 to 5 cm, the diamictite is carbonate-cemented and very hard.

Drilling disturbance:
The sediment in the core catcher is probably upside down, as the black band at CC, 8 cm, is convex-down.

SMEAR SLIDE SUMMARY (%):

	CC, 10 D
TEXTURE:	
Sand	20
Silt	40
Clay	40
COMPOSITION:	
Access. Minerals	Tr
Amphibole	1
Clay	30
Feldspar	5
Opaques	7
Palagonite	Tr
Quartz	55