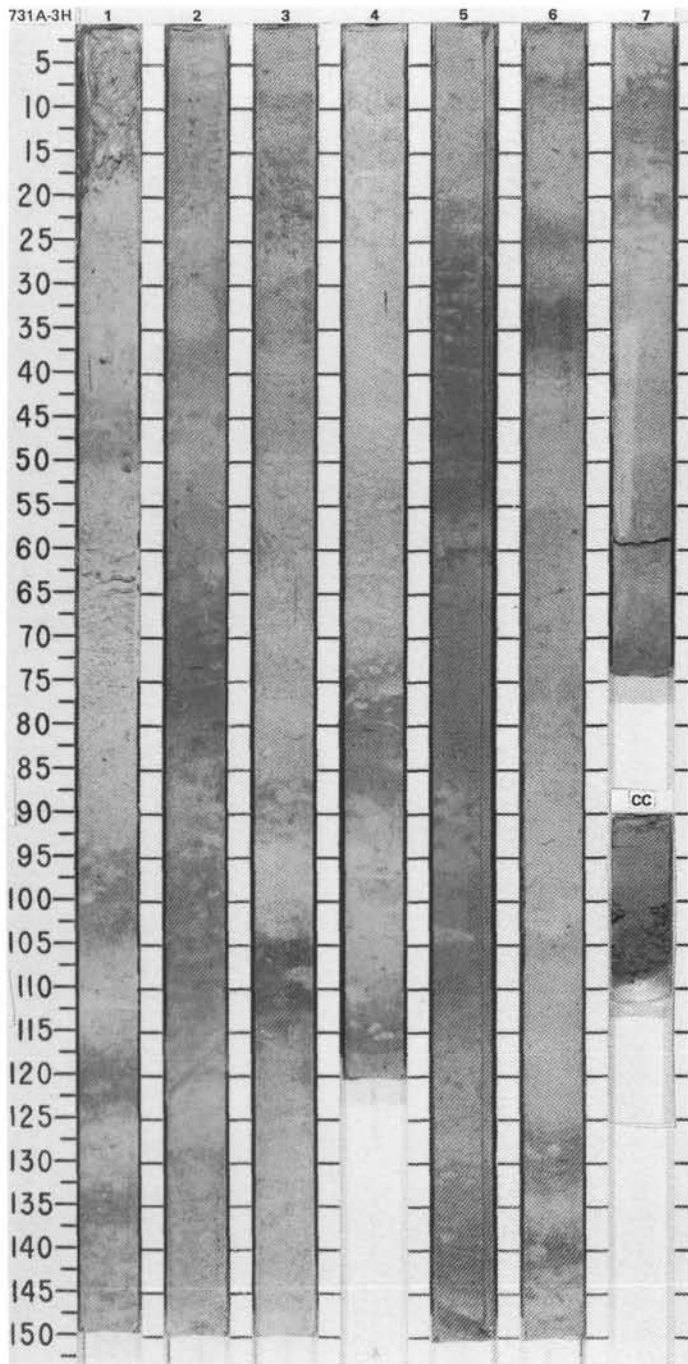
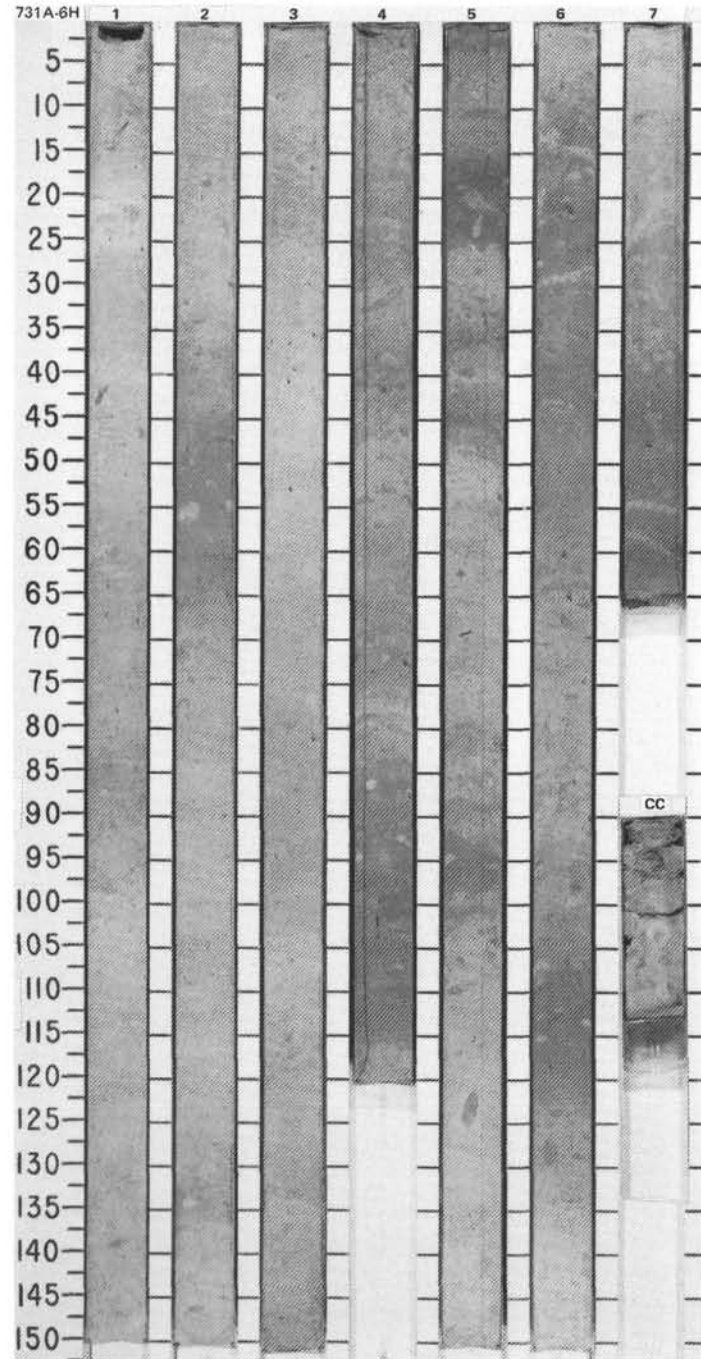


TIME-ROCK UNIT		BIOSTRAT. ZONE/ FOSSIL CHARACTER	PALEOMAGNETIC	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION																																										
FORAMINIFERS	NANNOFOSSILS																																																					
PLEISTOCENE																																																						
*C/M	N22			• $\phi=67.0$ $\gamma=1.84$	IC-7.77	1	0.5					<p>NANNOFOSSIL OOZE and FORAMINIFER-BEARING MARLY NANNOFOSSIL OOZE</p> <p>Section 1, 0-17 cm, is highly disturbed. Remainder is undisturbed.</p> <p>Major lithologies:</p> <p>a. NANNOFOSSIL OOZE, light gray (5Y 7/1, 7/2) and light greenish gray (5GY 7/1, 10Y 6/2). Slight to moderate bioturbation throughout.</p> <p>b. FORAMINIFER-BEARING MARLY NANNOFOSSIL OOZE, light olive gray (5Y 6/2), pale olive (5Y 6/3), and olive (5Y 5/3). Bioturbated.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <table border="1"> <tr> <td></td> <td>1, 83</td> <td>5, 47</td> </tr> <tr> <td></td> <td>D</td> <td>D</td> </tr> </table> <p>TEXTURE:</p> <table border="1"> <tr> <td>Sand</td> <td>5</td> <td>10</td> </tr> <tr> <td>Silt</td> <td>10</td> <td>20</td> </tr> <tr> <td>Clay</td> <td>85</td> <td>70</td> </tr> </table> <p>COMPOSITION:</p> <table border="1"> <tr> <td>Access. minerals</td> <td>1</td> <td>1</td> </tr> <tr> <td>Clay</td> <td>15</td> <td>20</td> </tr> <tr> <td>Dolomite</td> <td>Tr</td> <td>—</td> </tr> <tr> <td>Foraminers</td> <td>4</td> <td>6</td> </tr> <tr> <td>Volcanic glass</td> <td>Tr</td> <td>—</td> </tr> <tr> <td>Inorganic calcite</td> <td>9</td> <td>20</td> </tr> <tr> <td>Nannofossils</td> <td>70</td> <td>50</td> </tr> <tr> <td>Quartz</td> <td>1</td> <td>3</td> </tr> <tr> <td>Sponge spicules</td> <td>Tr</td> <td>Tr</td> </tr> </table>		1, 83	5, 47		D	D	Sand	5	10	Silt	10	20	Clay	85	70	Access. minerals	1	1	Clay	15	20	Dolomite	Tr	—	Foraminers	4	6	Volcanic glass	Tr	—	Inorganic calcite	9	20	Nannofossils	70	50	Quartz	1	3	Sponge spicules	Tr	Tr
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Sand	5	10																																																				
Silt	10	20																																																				
Clay	85	70																																																				
Access. minerals	1	1																																																				
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Dolomite	Tr	—																																																				
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Nannofossils	70	50																																																				
Quartz	1	3																																																				
Sponge spicules	Tr	Tr																																																				
*A/M -G	NN19 <i>Pseudoemiliania lacunosa</i>		• $\phi=69.2$ $\gamma=1.48$	IC-8.07	2	1.0																																																
*C/G	*C/G <i>Amphiropalum ypsilon</i>		• Brunhes																																																			
			• $\phi=63.7$ $\gamma=1.66$	IC-7.43	3																																																	
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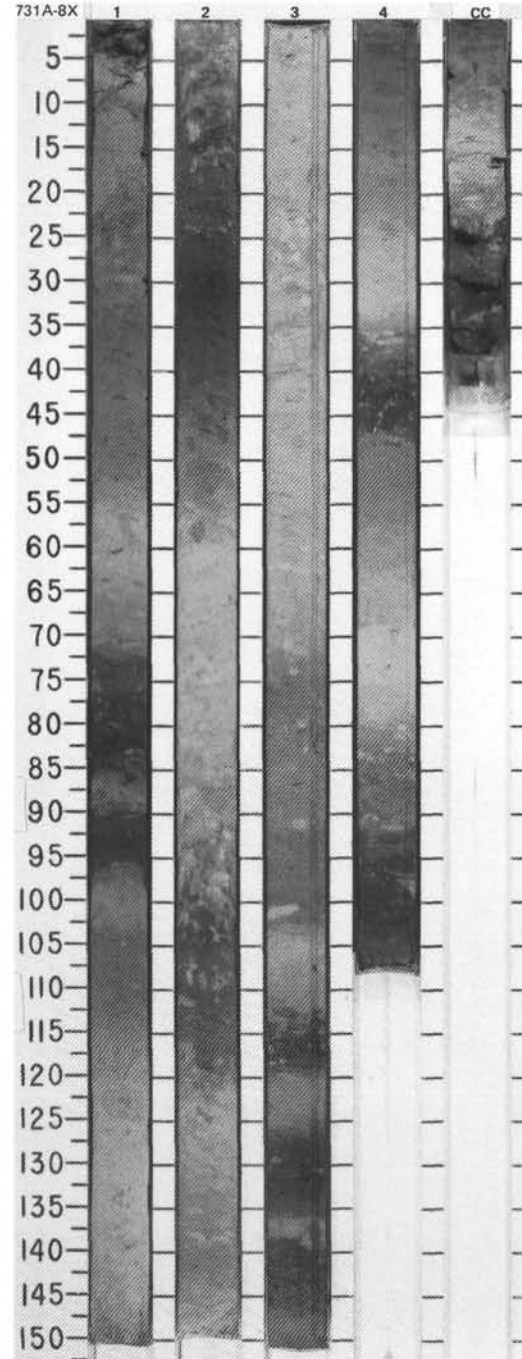
SITE 731 HOLE A CORE 6H CORED INTERVAL 2413.6-2423.1 mbsl; 47.8-57.3 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER			PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB. SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION																								
	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS DIATOMS																																
PLEISTOCENE ?											NANNOFOSSIL OOZE, MARLY NANNOFOSSIL OOZE, and SILICEOUS MARLY NANNOFOSSIL OOZE Entire core is undisturbed. Major lithologies: a. NANNOFOSSIL OOZE, light gray (5Y 7/1, 7/2) and light greenish gray (5GY 7/1, 10Y 7/2). Bioturbated throughout. Grading to minor occurrences of foraminifer-bearing nannofossil ooze. b. MARLY NANNOFOSSIL OOZE, pale olive (5Y 6/3), light olive gray (5Y 6/2), and light greenish gray (10Y 6/2), with minor gradations to siliceous-bearing marly nannofossil ooze. Bioturbated throughout. c. SILICEOUS MARLY NANNOFOSSIL OOZE, olive (5Y 5/3, 5/4). Bioturbated. SMEAR SLIDE SUMMARY (%): <table style="margin-left: 20px;"> <tr><td>3, 105</td></tr> <tr><td>D</td></tr> </table> TEXTURE: <table style="margin-left: 20px;"> <tr><td>Sand</td><td>5</td></tr> <tr><td>Silt</td><td>20</td></tr> <tr><td>Clay</td><td>75</td></tr> </table> COMPOSITION: <table style="margin-left: 20px;"> <tr><td>Access. minerals</td><td>1</td></tr> <tr><td>Clay</td><td>25</td></tr> <tr><td>Diatoms</td><td>8</td></tr> <tr><td>Dolomite</td><td>Tr</td></tr> <tr><td>Foraminifers</td><td>4</td></tr> <tr><td>Inorganic calcite</td><td>10</td></tr> <tr><td>Nannofossils</td><td>50</td></tr> <tr><td>Silicoflagellates</td><td>2</td></tr> </table>	3, 105	D	Sand	5	Silt	20	Clay	75	Access. minerals	1	Clay	25	Diatoms	8	Dolomite	Tr	Foraminifers	4	Inorganic calcite	10	Nannofossils	50	Silicoflagellates	2
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Nannofossils	50																																		
Silicoflagellates	2																																		
* R/P							0.5																												
* A/M	NN19	<i>Pseudomillanina lacunosa</i>			● $\phi=63.5$ $\gamma=1.66$ IC=8.29 ● OC=0.60		1.0																												
* C/M		*C/M <i>Anthocyrridium angulare</i>					2																												
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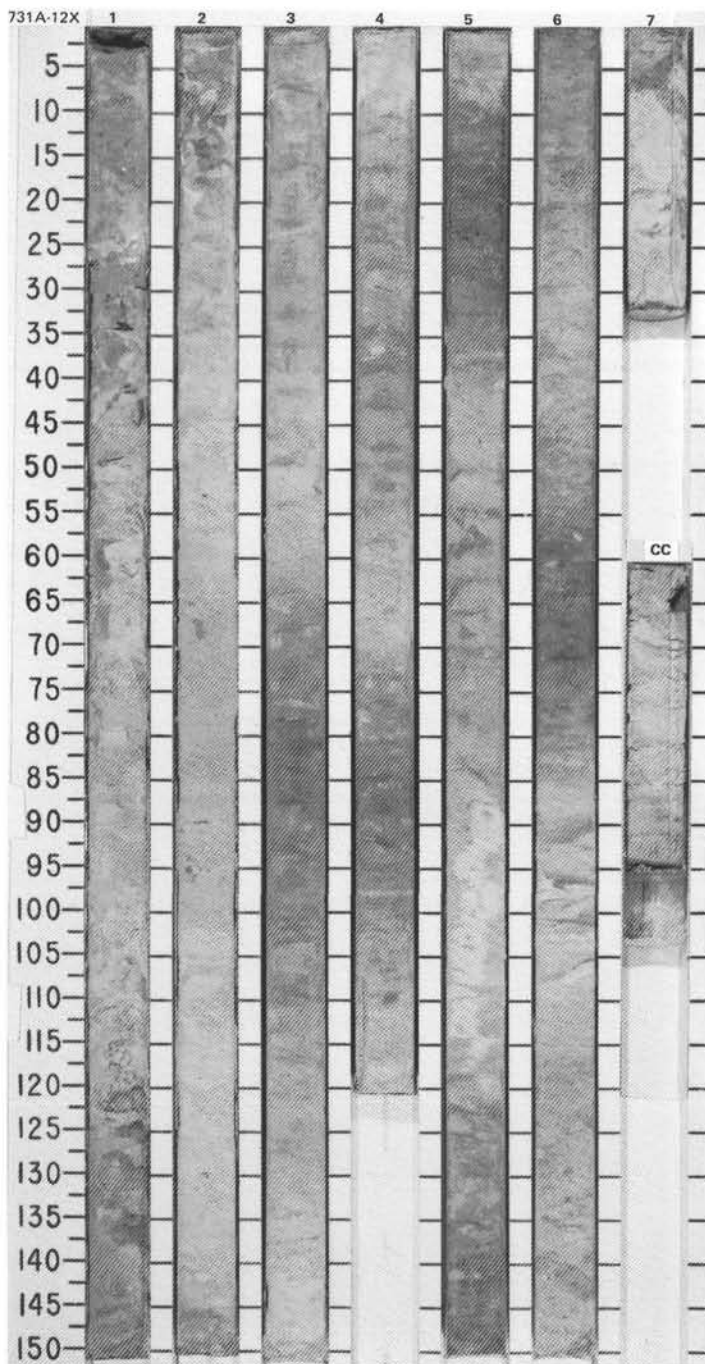
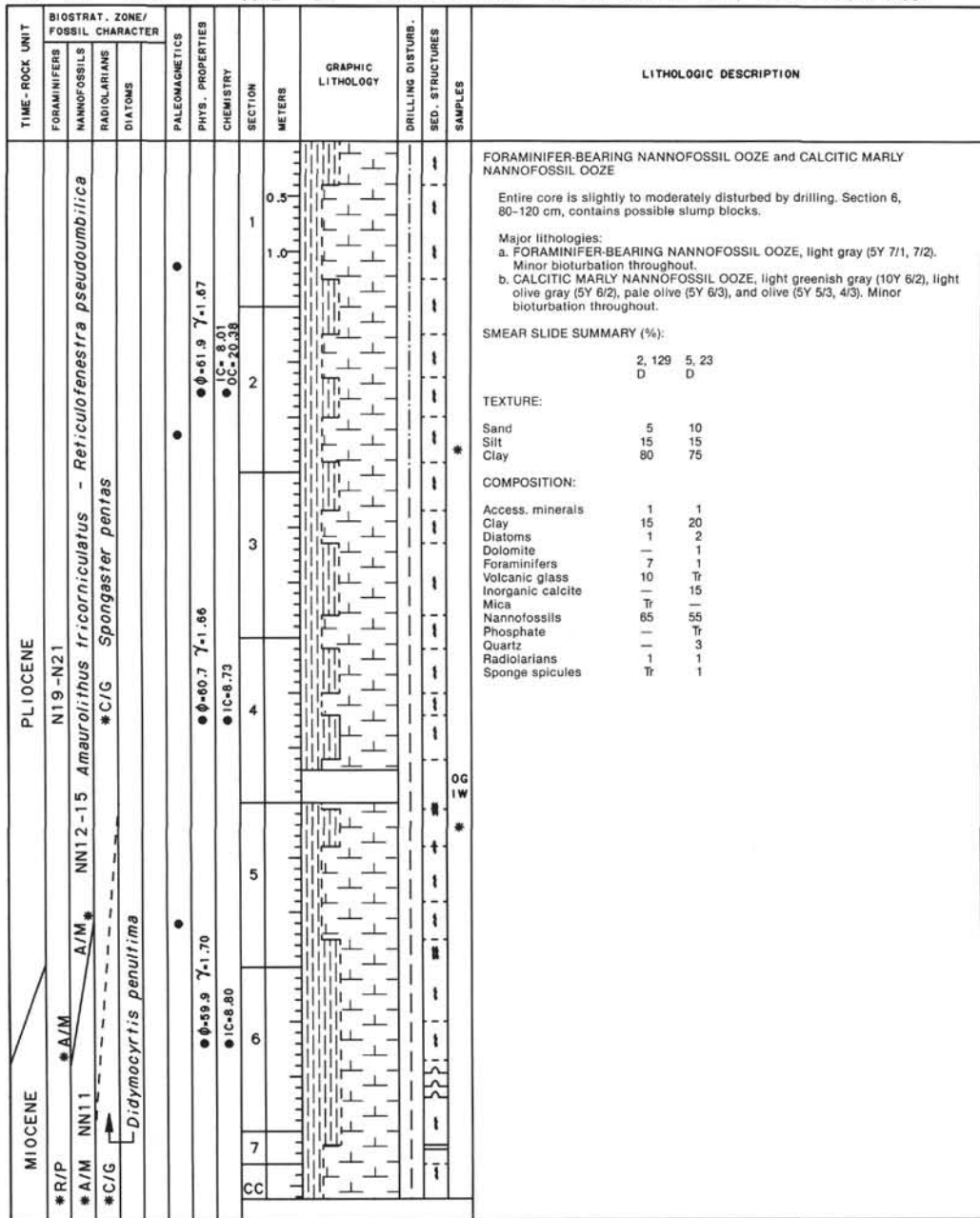


SITE 731 HOLE A CORE 8X CORED INTERVAL 2432.8-2442.5 mbsl; 67.0-76.7 mbsf

TIME-ROCK UNIT		BIOSTRAT. ZONE/ FOSSIL CHARACTER		PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION																																																			
FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS																																																												
PLIOCENE																																																															
#R/P	?						0.5					<p>FORAMINIFER-BEARING CALCITIC MARLY NANNOFOSSIL OOZE and NANNOFOSSIL-RICH CALCITIC SILTY CLAY</p> <p>Section 2 is slightly disturbed. Remainder is undisturbed.</p> <p>Major lithologies:</p> <p>a. FORAMINIFER-BEARING CALCITIC MARLY NANNOFOSSIL OOZE, light greenish gray (5GY 7/1; 10Y 6/2, 5/2), pale olive (5Y 6/3), and olive (5Y 5/3). Gradationally interbedded and bioturbated throughout.</p> <p>b. NANNOFOSSIL-RICH CALCITIC SILTY CLAY, olive (5Y 4/3) and dark olive gray (5Y 3/2). Bioturbated.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <table border="1"> <tr> <td></td> <td>2.29</td> <td>4.72</td> </tr> <tr> <td>D</td> <td>D</td> <td>D</td> </tr> </table> <p>TEXTURE:</p> <table border="1"> <tr> <td>Sand</td> <td>20</td> <td>—</td> </tr> <tr> <td>Silt</td> <td>35</td> <td>30</td> </tr> <tr> <td>Clay</td> <td>45</td> <td>70</td> </tr> </table> <p>COMPOSITION:</p> <table border="1"> <tr> <td>Access. minerals</td> <td>3</td> <td>1</td> </tr> <tr> <td>Clay</td> <td>30</td> <td>15</td> </tr> <tr> <td>Dolomite</td> <td>—</td> <td>Tr</td> </tr> <tr> <td>Foraminifers</td> <td>—</td> <td>6</td> </tr> <tr> <td>Volcanic glass</td> <td>1</td> <td>—</td> </tr> <tr> <td>Inorganic calcite</td> <td>30</td> <td>20</td> </tr> <tr> <td>Mica</td> <td>—</td> <td>Tr</td> </tr> <tr> <td>Nannofossils</td> <td>15</td> <td>55</td> </tr> <tr> <td>Organic debris</td> <td>5</td> <td>—</td> </tr> <tr> <td>Quartz</td> <td>15</td> <td>2</td> </tr> <tr> <td>Radiolarians</td> <td>1</td> <td>1</td> </tr> <tr> <td>Sponge spicules</td> <td>Tr</td> <td>—</td> </tr> </table>		2.29	4.72	D	D	D	Sand	20	—	Silt	35	30	Clay	45	70	Access. minerals	3	1	Clay	30	15	Dolomite	—	Tr	Foraminifers	—	6	Volcanic glass	1	—	Inorganic calcite	30	20	Mica	—	Tr	Nannofossils	15	55	Organic debris	5	—	Quartz	15	2	Radiolarians	1	1	Sponge spicules	Tr	—
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Sponge spicules	Tr	—																																																													
#A/P	NN19	<i>Pseudoemiliania lacunosa</i>	*A/M		$\phi = 62.1$	$\gamma = 1.69$	1.0																																																								
#C/G	*C/G	? <i>Anthocyrtidium angulare</i>			IC-0.30	OC-0.30	2																																																								
					$\phi = 64.8$	$\gamma = 1.62$	3																																																								
					IC-7.56		4																																																								
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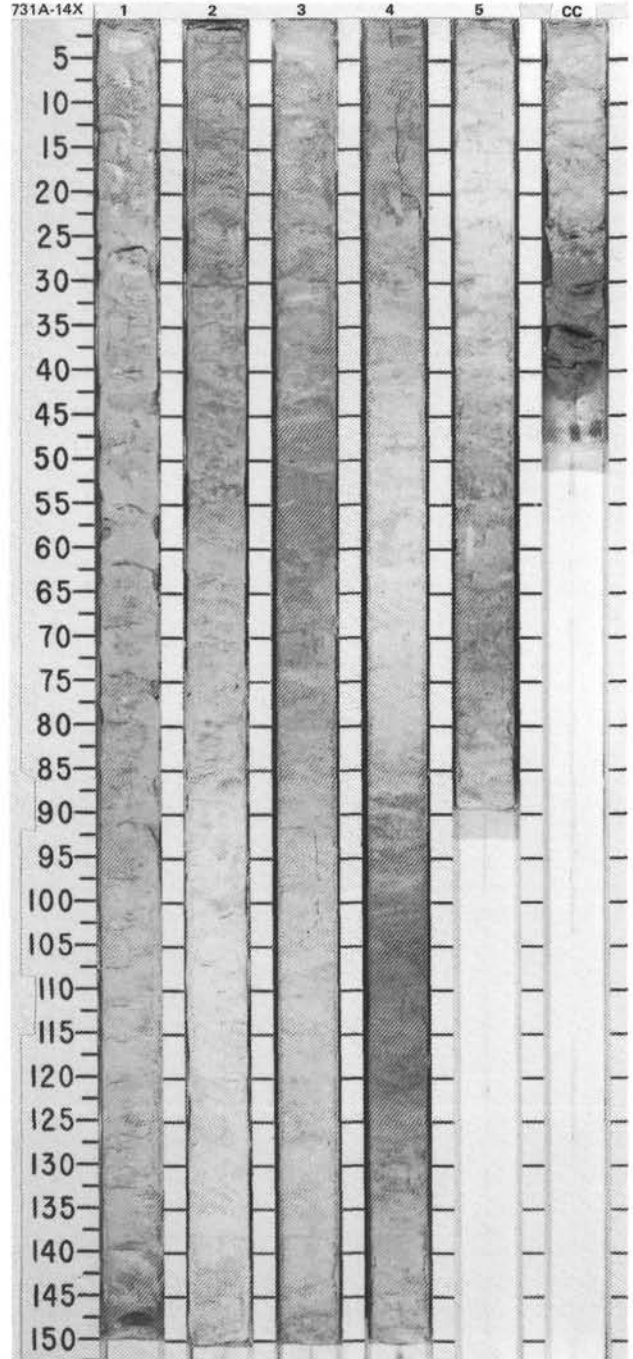


SITE 731 HOLE A CORE 12X CORED INTERVAL 2471.5-2481.2 mbsl: 105.7-115.4 mbsf



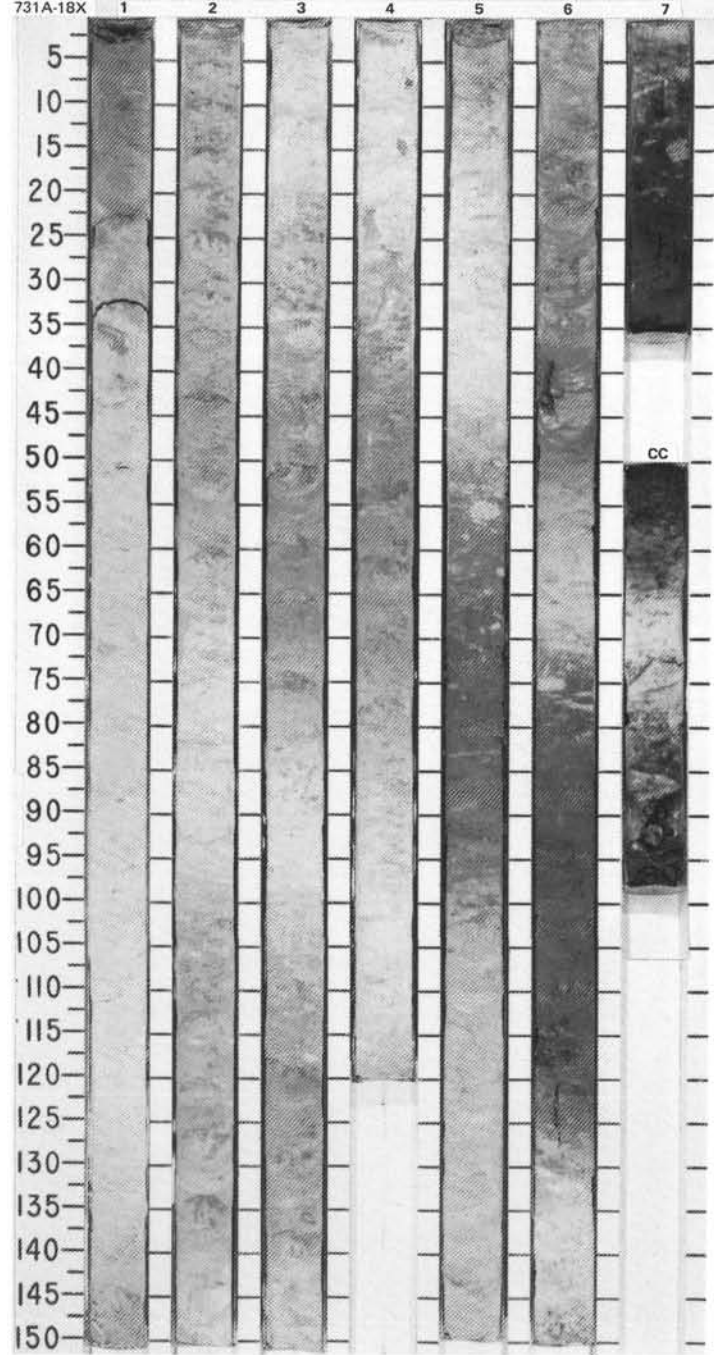
SITE 731 HOLE A CORE 14X CORED INTERVAL 2490.8-2500.5 mbsl; 125.0-134.7 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER		PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION																																										
MIOCENE	#R/P	N16-N17					0.5 1.0					<p>NANNOFOSSIL OOZE to MARLY NANNOFOSSIL OOZE</p> <p>Entire core is slightly disturbed.</p> <p>Major lithology: NANNOFOSSIL OOZE to MARLY NANNOFOSSIL OOZE, white (5Y 8/1), light gray (5Y 7/1, 7/2), and olive gray (5Y 6/2, 5/2). Darker intervals are occasionally siliceous bearing. Bioturbated throughout.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <table border="0"> <tr> <td></td> <td>2, 110</td> <td>4, 110</td> </tr> <tr> <td>D</td> <td>D</td> <td>D</td> </tr> </table> <p>TEXTURE:</p> <table border="0"> <tr> <td>Silt</td> <td>10</td> <td>20</td> </tr> <tr> <td>Clay</td> <td>90</td> <td>80</td> </tr> </table> <p>COMPOSITION:</p> <table border="0"> <tr> <td>Access. minerals</td> <td>—</td> <td>Tr</td> </tr> <tr> <td>Clay</td> <td>20</td> <td>15</td> </tr> <tr> <td>Diatoms</td> <td>—</td> <td>2</td> </tr> <tr> <td>Foraminifers</td> <td>Tr</td> <td>Tr</td> </tr> <tr> <td>Inorganic calcite</td> <td>10</td> <td>15</td> </tr> <tr> <td>Nannofossils</td> <td>70</td> <td>60</td> </tr> <tr> <td>Quartz</td> <td>—</td> <td>4</td> </tr> <tr> <td>Radiolarians</td> <td>Tr</td> <td>1</td> </tr> <tr> <td>Silicoflagellates</td> <td>Tr</td> <td>—</td> </tr> <tr> <td>Sponge spicules</td> <td>Tr</td> <td>3</td> </tr> </table>		2, 110	4, 110	D	D	D	Silt	10	20	Clay	90	80	Access. minerals	—	Tr	Clay	20	15	Diatoms	—	2	Foraminifers	Tr	Tr	Inorganic calcite	10	15	Nannofossils	70	60	Quartz	—	4	Radiolarians	Tr	1	Silicoflagellates	Tr	—	Sponge spicules	Tr	3
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D	D	D																																																				
Silt	10	20																																																				
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Radiolarians	Tr	1																																																				
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Sponge spicules	Tr	3																																																				
	#A/M	NN11 <i>Discoaster quinqueramus</i>				2																																																
	#C/G	*C/G <i>Didymocrysis penultima</i>				3																																																
						4																																																
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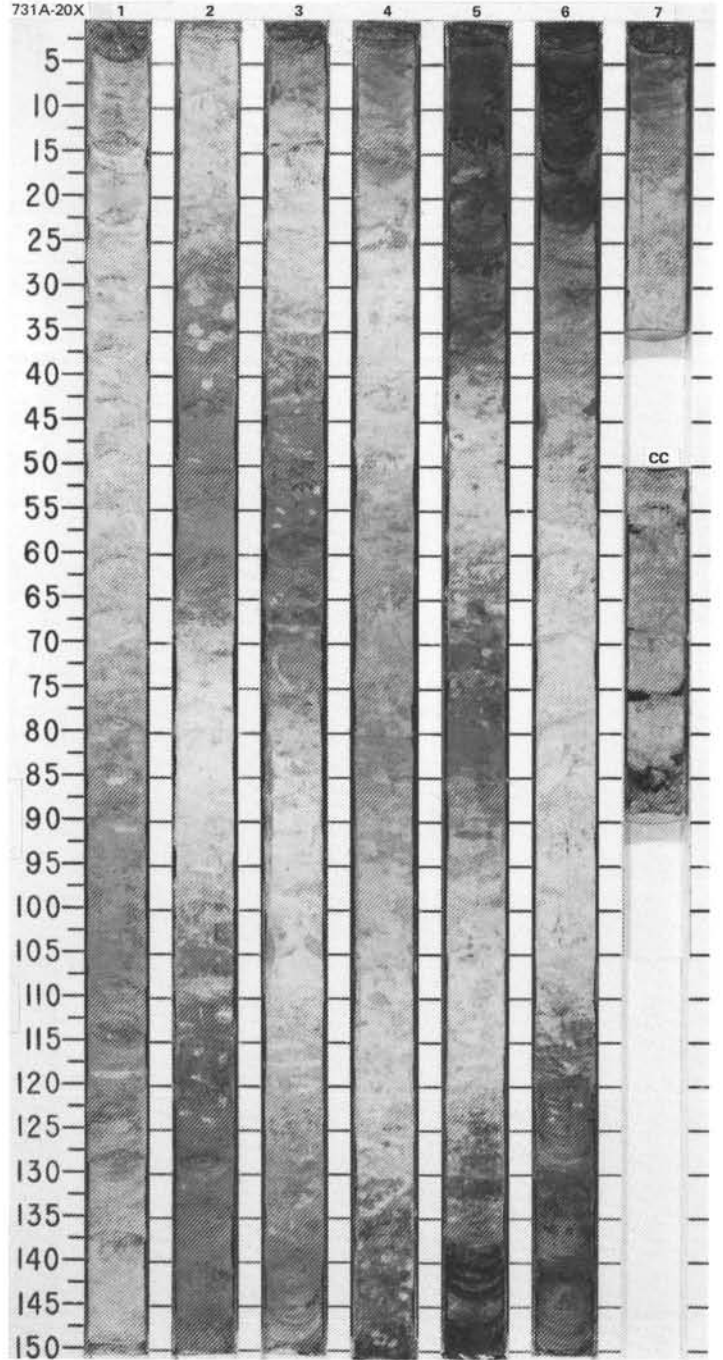
SITE 731 HOLE A CORE 18X CORED INTERVAL 2529.5-2539.2 mbsl; 163.7-173.4 mbsf

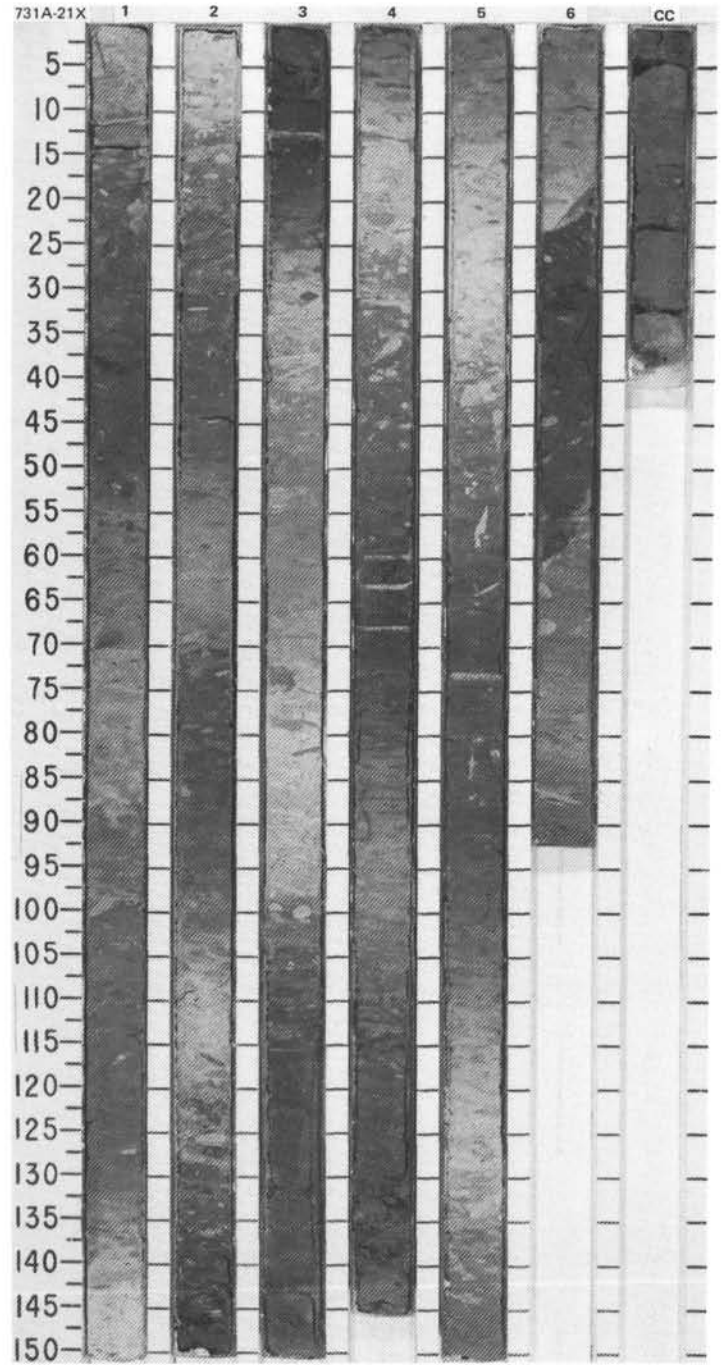
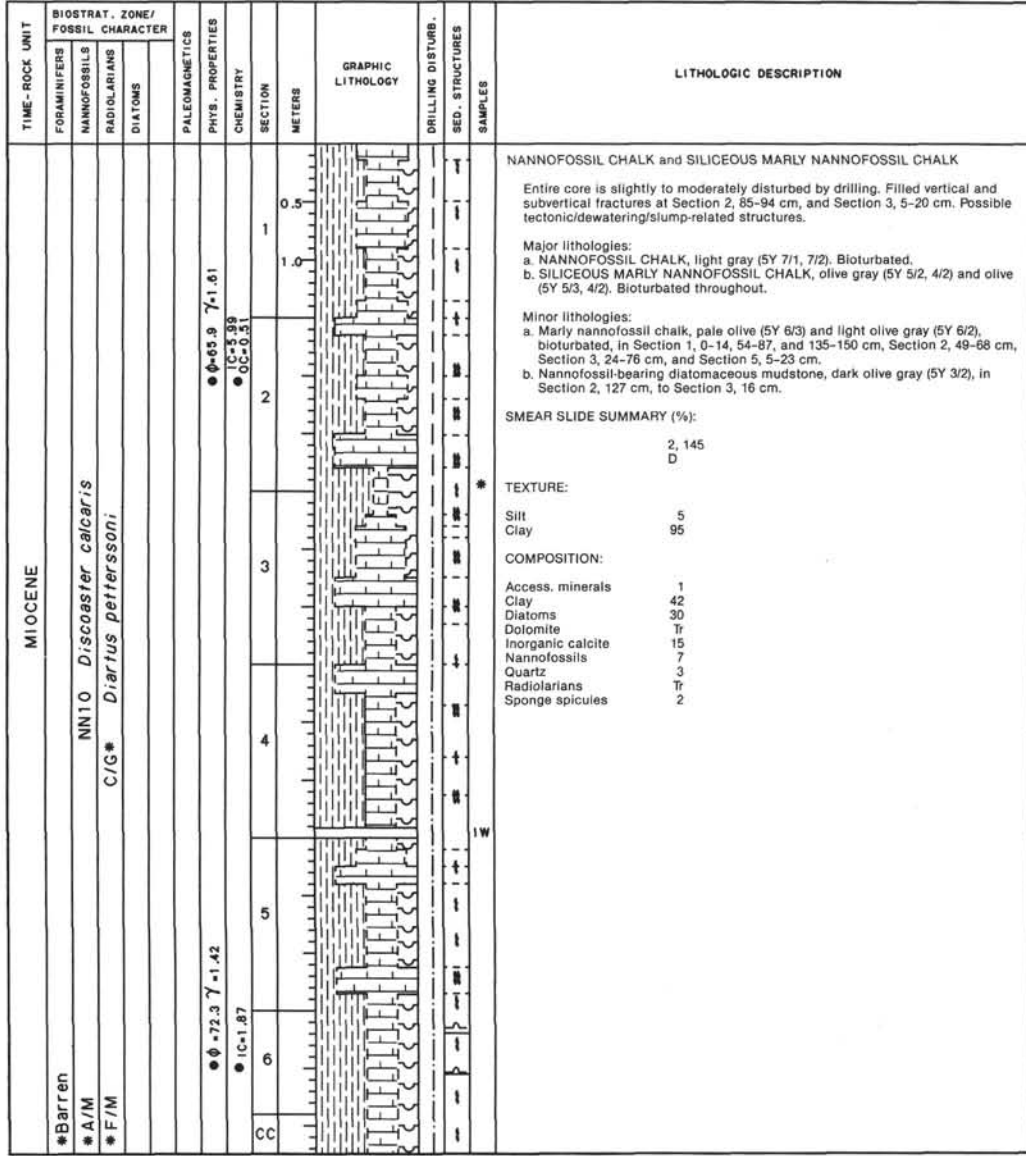
TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER				PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION																																																																
	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS																																																																										
MIOCENE	*Barren	NN11	A/M*						0.5					<p>NANNOFOSSIL OOZE, MARLY NANNOFOSSIL OOZE, and SILICEOUS MARLY NANNOFOSSIL OOZE</p> <p>Entire core is slightly disturbed.</p> <p>Major lithologies:</p> <p>a. NANNOFOSSIL OOZE, light gray (5Y 7/1, 7/2). Bioturbated.</p> <p>b. MARLY NANNOFOSSIL OOZE, olive gray (5Y 8/2, 5/2) and olive (5Y 5/3). Slight bioturbation throughout, with minor gradations to siliceous-bearing marly nannofossil ooze.</p> <p>c. SILICEOUS MARLY NANNOFOSSIL OOZE, olive (5Y 4/3). Bioturbated.</p> <p>Minor lithology: Siliceous clayey silt, olive (5Y 4/3), bioturbated, in Section 7, 5-35 cm.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <table border="1"> <tr> <td></td> <td>3, 90</td> <td>5, 77</td> <td>7, 28</td> </tr> <tr> <td></td> <td>D</td> <td>D</td> <td>M</td> </tr> </table> <p>TEXTURE:</p> <table border="1"> <tr> <td>Silt</td> <td>20</td> <td>35</td> <td>60</td> </tr> <tr> <td>Clay</td> <td>80</td> <td>65</td> <td>40</td> </tr> </table> <p>COMPOSITION:</p> <table border="1"> <tr> <td>Access. minerals</td> <td>Tr</td> <td>2</td> <td>5</td> </tr> <tr> <td>Clay</td> <td>20</td> <td>40</td> <td>30</td> </tr> <tr> <td>Diatoms</td> <td>2</td> <td>10</td> <td>15</td> </tr> <tr> <td>Dolomite</td> <td>Tr</td> <td>Tr</td> <td>Tr</td> </tr> <tr> <td>Foraminifers</td> <td>2</td> <td>2</td> <td>5</td> </tr> <tr> <td>Inorganic calcite</td> <td>2</td> <td>2</td> <td>15</td> </tr> <tr> <td>Nannofossils</td> <td>70</td> <td>30</td> <td>5</td> </tr> <tr> <td>Organic debris</td> <td>—</td> <td>—</td> <td>5</td> </tr> <tr> <td>Quartz</td> <td>1</td> <td>3</td> <td>15</td> </tr> <tr> <td>Radiolarians</td> <td>2</td> <td>2</td> <td>5</td> </tr> <tr> <td>Silicoflagellates</td> <td>—</td> <td>1</td> <td>—</td> </tr> <tr> <td>Sponge spicules</td> <td>Tr</td> <td>1</td> <td>—</td> </tr> </table>		3, 90	5, 77	7, 28		D	D	M	Silt	20	35	60	Clay	80	65	40	Access. minerals	Tr	2	5	Clay	20	40	30	Diatoms	2	10	15	Dolomite	Tr	Tr	Tr	Foraminifers	2	2	5	Inorganic calcite	2	2	15	Nannofossils	70	30	5	Organic debris	—	—	5	Quartz	1	3	15	Radiolarians	2	2	5	Silicoflagellates	—	1	—	Sponge spicules	Tr	1	—
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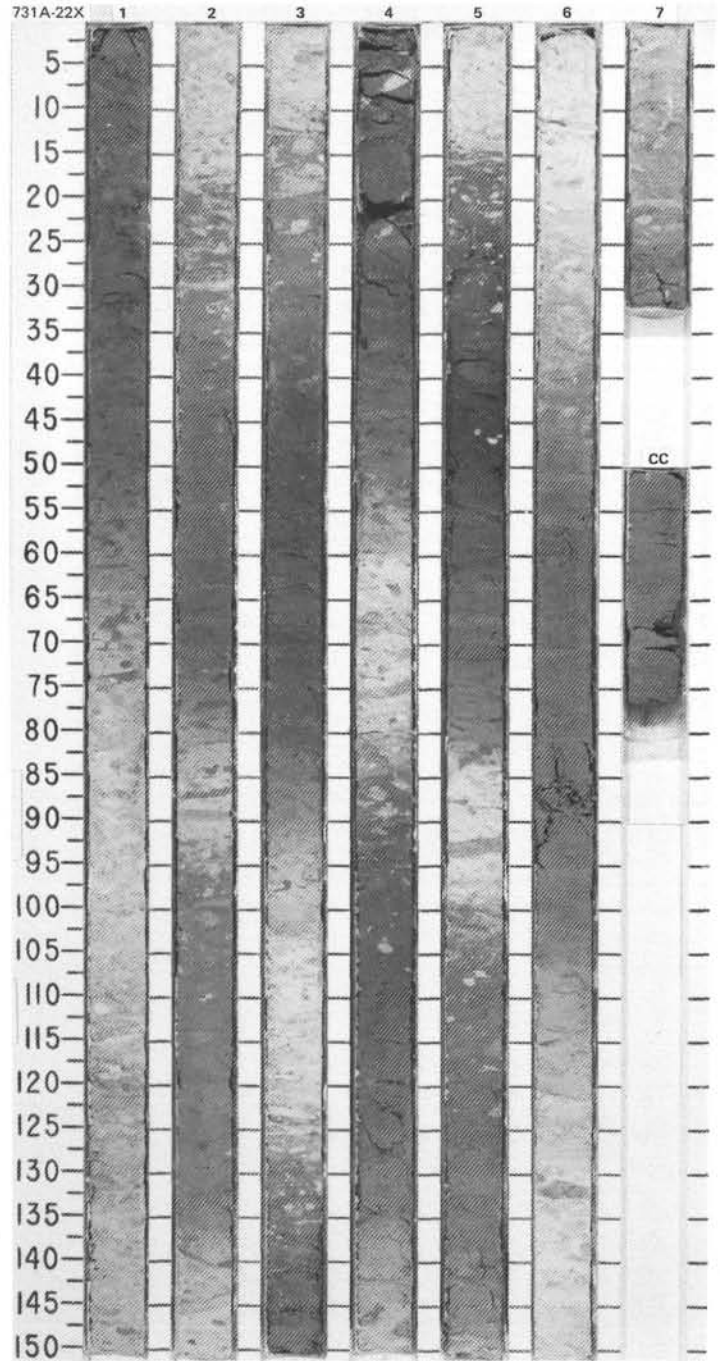
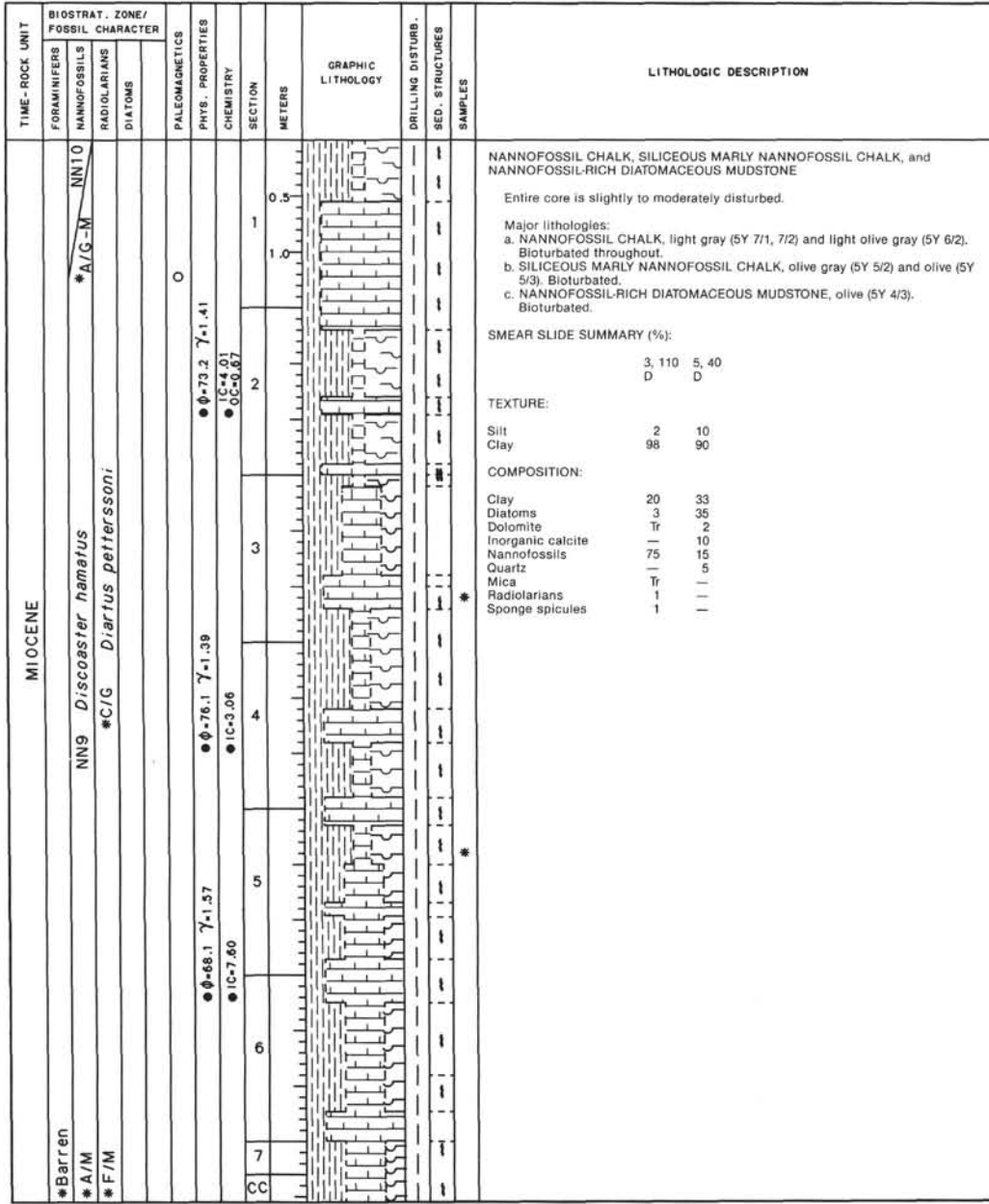
SITE 731 HOLE A CORE 20X CORED INTERVAL 2548.9-2558.6 mbsl; 183.1-192.8 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION																																							
MIOCENE	?				0.5 1.0					<p>NANNOFOSSIL OOZE and SILICEOUS MARLY NANNOFOSSIL OOZE</p> <p>Entire core is slightly disturbed.</p> <p>Major lithologies:</p> <p>a. NANNOFOSSIL OOZE, light gray (5Y 7/1). Bioturbated.</p> <p>b. SILICEOUS MARLY NANNOFOSSIL OOZE, olive gray (5Y 5/2, 4/2) and olive (5Y 5/3, 4/3). Bioturbated.</p> <p>Minor lithologies:</p> <p>a. Marly nannofossil ooze, light gray (5Y 6/1) and light olive gray (5Y 6/2), bioturbated, in Section 1, 7-76 and 131-150 cm, Section 7, 8-30 cm, and CC.</p> <p>b. Diatomaceous nannofossil-rich clay, dark olive gray (5Y 3/2) in Section 5, 122 cm, to Section 6, 22 cm.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <table border="1"> <tr> <td></td> <td>3, 54</td> <td>5, 144</td> </tr> <tr> <td>D</td> <td>D</td> <td>D</td> </tr> </table> <p>TEXTURE:</p> <table border="1"> <tr> <td>Silt</td> <td>25</td> <td>10</td> </tr> <tr> <td>Clay</td> <td>75</td> <td>90</td> </tr> </table> <p>COMPOSITION:</p> <table border="1"> <tr> <td>Clay</td> <td>20</td> <td>40</td> </tr> <tr> <td>Diatoms</td> <td>15</td> <td>20</td> </tr> <tr> <td>Dolomite</td> <td>2</td> <td>Tr</td> </tr> <tr> <td>Inorganic calcite</td> <td>8</td> <td>10</td> </tr> <tr> <td>Mica</td> <td>2</td> <td>—</td> </tr> <tr> <td>Nannofossils</td> <td>35</td> <td>20</td> </tr> <tr> <td>Quartz</td> <td>14</td> <td>10</td> </tr> <tr> <td>Radiolarians</td> <td>3</td> <td>—</td> </tr> <tr> <td>Sponge spicules</td> <td>1</td> <td>—</td> </tr> </table>		3, 54	5, 144	D	D	D	Silt	25	10	Clay	75	90	Clay	20	40	Diatoms	15	20	Dolomite	2	Tr	Inorganic calcite	8	10	Mica	2	—	Nannofossils	35	20	Quartz	14	10	Radiolarians	3	—	Sponge spicules	1	—
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Quartz	14	10																																															
Radiolarians	3	—																																															
Sponge spicules	1	—																																															
*R/P					1																																												
*A/P	NN10 <i>Discoaster calcaris</i>				2																																												
*C/G	*C/G <i>Diartus petterssoni</i>				3																																												
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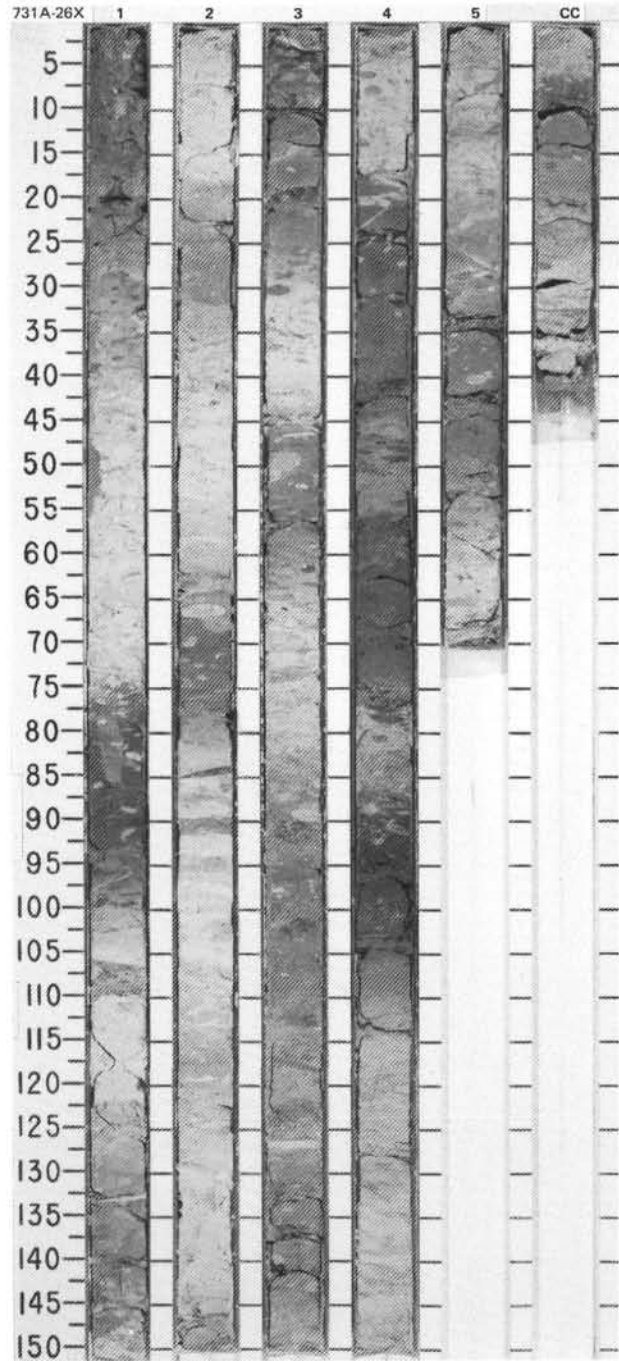


SITE 731 HOLE A CORE 22X CORED INTERVAL 2568.3-2578.0 mbsf; 202.5-212.2 mbsf

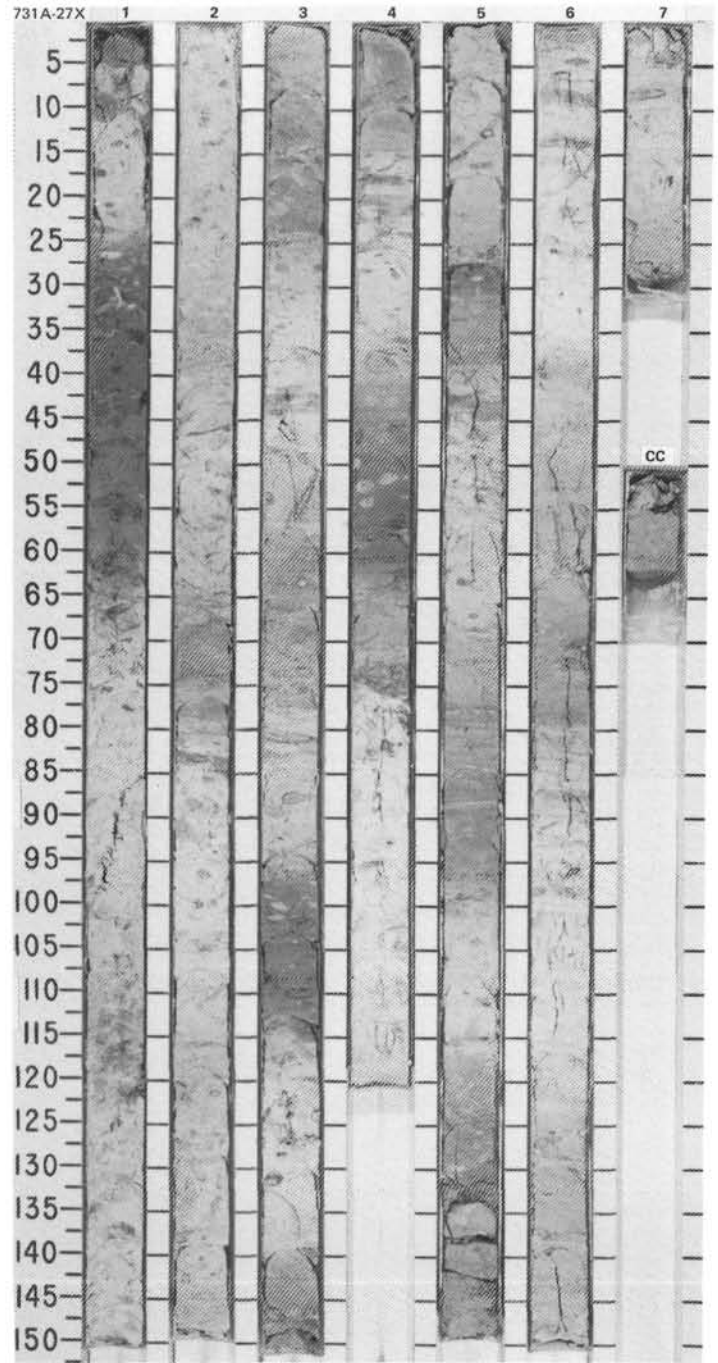


SITE 731 HOLE A CORE 26X CORED INTERVAL 2607.1-2616.7 mbsl; 241.3-250.9 mbsf

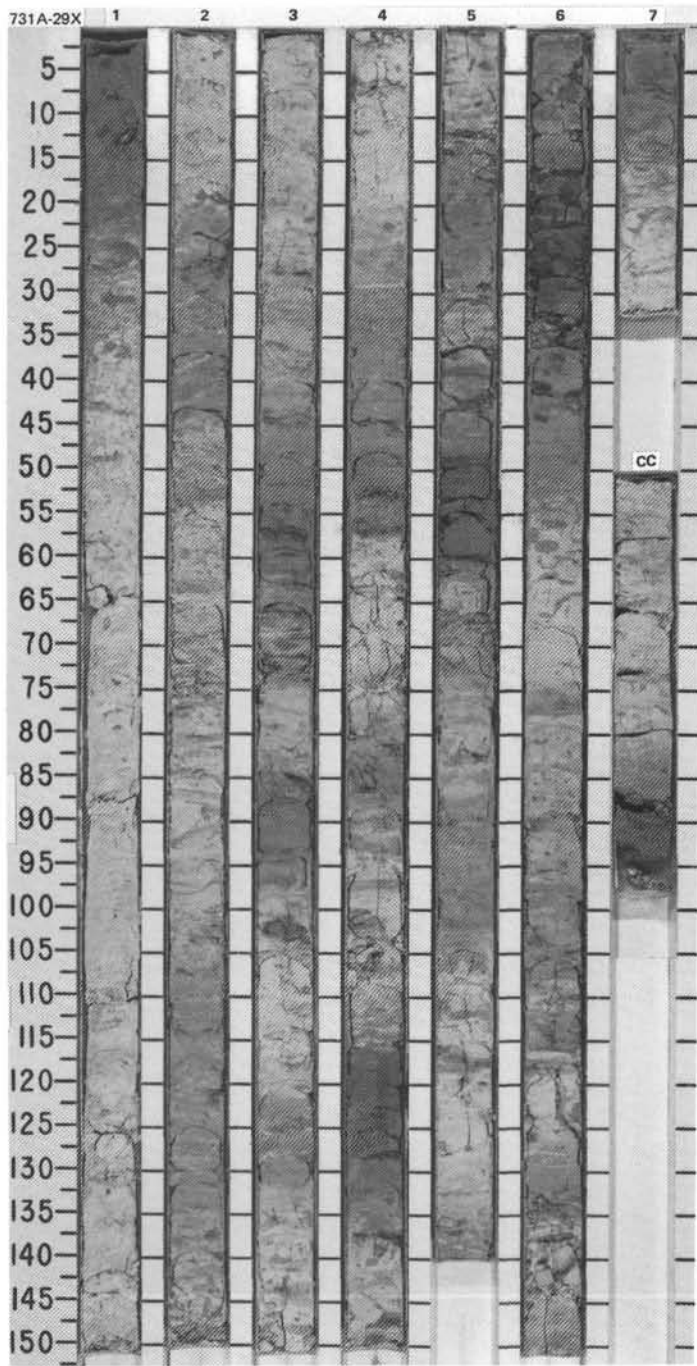
TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER				PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION																																																																												
	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS																																																																																					
MIOCENE	* R/P	N13-N14						0.5					<p>NANNOFOSSIL CHALK, CALCITIC MARLY NANNOFOSSIL CHALK, and NANNOFOSSIL-RICH CALCITIC SILTY CLAYSTONE</p> <p>Entire core is slightly to moderately disturbed and fractured by drilling. Vertical and subvertical sets of healed, mm-scale fractures at Section 1, 93-100 cm; Section 3, 15-20 and 89-93 cm; and Section 4, 50-55 and 95-105 cm. Possible tectonic/dewatering/slump-related structures.</p> <p>Major lithologies: a. NANNOFOSSIL CHALK, light gray (5Y 7/1) and light greenish gray (5GY 7/1, 10Y 7/1). Bioturbated. Purple oxidation haloes and laminations are common. b. CALCITIC MARLY NANNOFOSSIL CHALK, greenish gray (10Y 6/2, 5/2; 5G 6/1), and olive (5Y 5/3, 5/4). Bioturbated throughout. c. NANNOFOSSIL-RICH CALCITIC SILTY CLAYSTONE, olive (5Y 4/3) and dark greenish gray (10Y 4/2).</p> <p>SMEAR SLIDE SUMMARY (%):</p> <table border="1"> <tr> <td></td> <td>1, 115</td> <td>4, 100</td> <td>5, 44</td> </tr> <tr> <td></td> <td>D</td> <td>D</td> <td>D</td> </tr> </table> <p>TEXTURE:</p> <table border="1"> <tr> <td>Sand</td> <td>—</td> <td>20</td> <td>15</td> </tr> <tr> <td>Silt</td> <td>10</td> <td>35</td> <td>25</td> </tr> <tr> <td>Clay</td> <td>90</td> <td>45</td> <td>60</td> </tr> </table> <p>COMPOSITION:</p> <table border="1"> <tr> <td>Access. minerals</td> <td>1</td> <td>2</td> <td>2</td> </tr> <tr> <td>Clay</td> <td>10</td> <td>30</td> <td>25</td> </tr> <tr> <td>Diatoms</td> <td>Tr</td> <td>Tr</td> <td>1</td> </tr> <tr> <td>Dolomite</td> <td>1</td> <td>—</td> <td>1</td> </tr> <tr> <td>Feldspar</td> <td>—</td> <td>2</td> <td>2</td> </tr> <tr> <td>Fish remains</td> <td>—</td> <td>Tr</td> <td>—</td> </tr> <tr> <td>Foraminifers</td> <td>2</td> <td>—</td> <td>—</td> </tr> <tr> <td>Inorganic calcite</td> <td>2</td> <td>25</td> <td>20</td> </tr> <tr> <td>Mica</td> <td>Tr</td> <td>Tr</td> <td>1</td> </tr> <tr> <td>Nannofossils</td> <td>80</td> <td>15</td> <td>35</td> </tr> <tr> <td>Organic debris</td> <td>—</td> <td>5</td> <td>5</td> </tr> <tr> <td>Quartz</td> <td>2</td> <td>20</td> <td>8</td> </tr> <tr> <td>Radiolarians</td> <td>1</td> <td>1</td> <td>—</td> </tr> <tr> <td>Sponge spicules</td> <td>1</td> <td>—</td> <td>—</td> </tr> </table>		1, 115	4, 100	5, 44		D	D	D	Sand	—	20	15	Silt	10	35	25	Clay	90	45	60	Access. minerals	1	2	2	Clay	10	30	25	Diatoms	Tr	Tr	1	Dolomite	1	—	1	Feldspar	—	2	2	Fish remains	—	Tr	—	Foraminifers	2	—	—	Inorganic calcite	2	25	20	Mica	Tr	Tr	1	Nannofossils	80	15	35	Organic debris	—	5	5	Quartz	2	20	8	Radiolarians	1	1	—	Sponge spicules	1	—	—
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	* A/M	NN7 <i>Discoaster kujleri</i>	* L/A/M				1.0																																																																																		
	* C/M		* F/M	<i>Diartus petterssoni</i>			2																																																																																		
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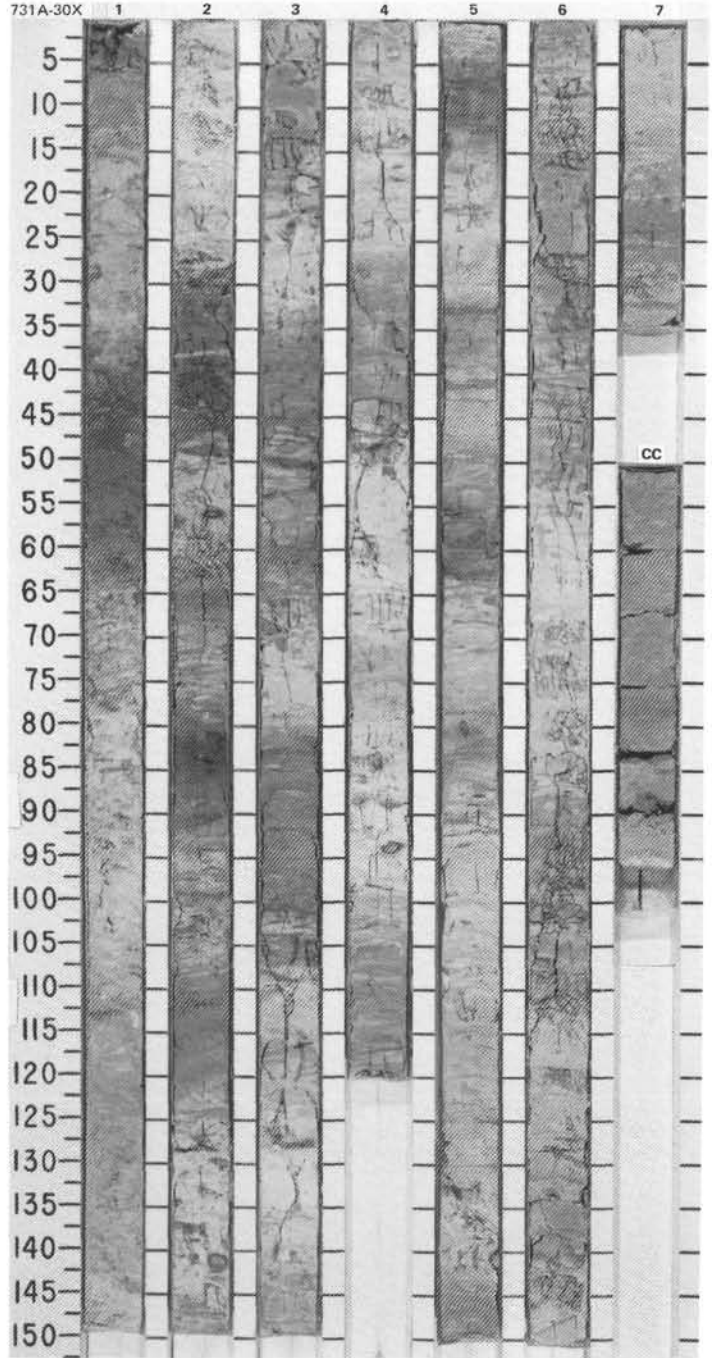
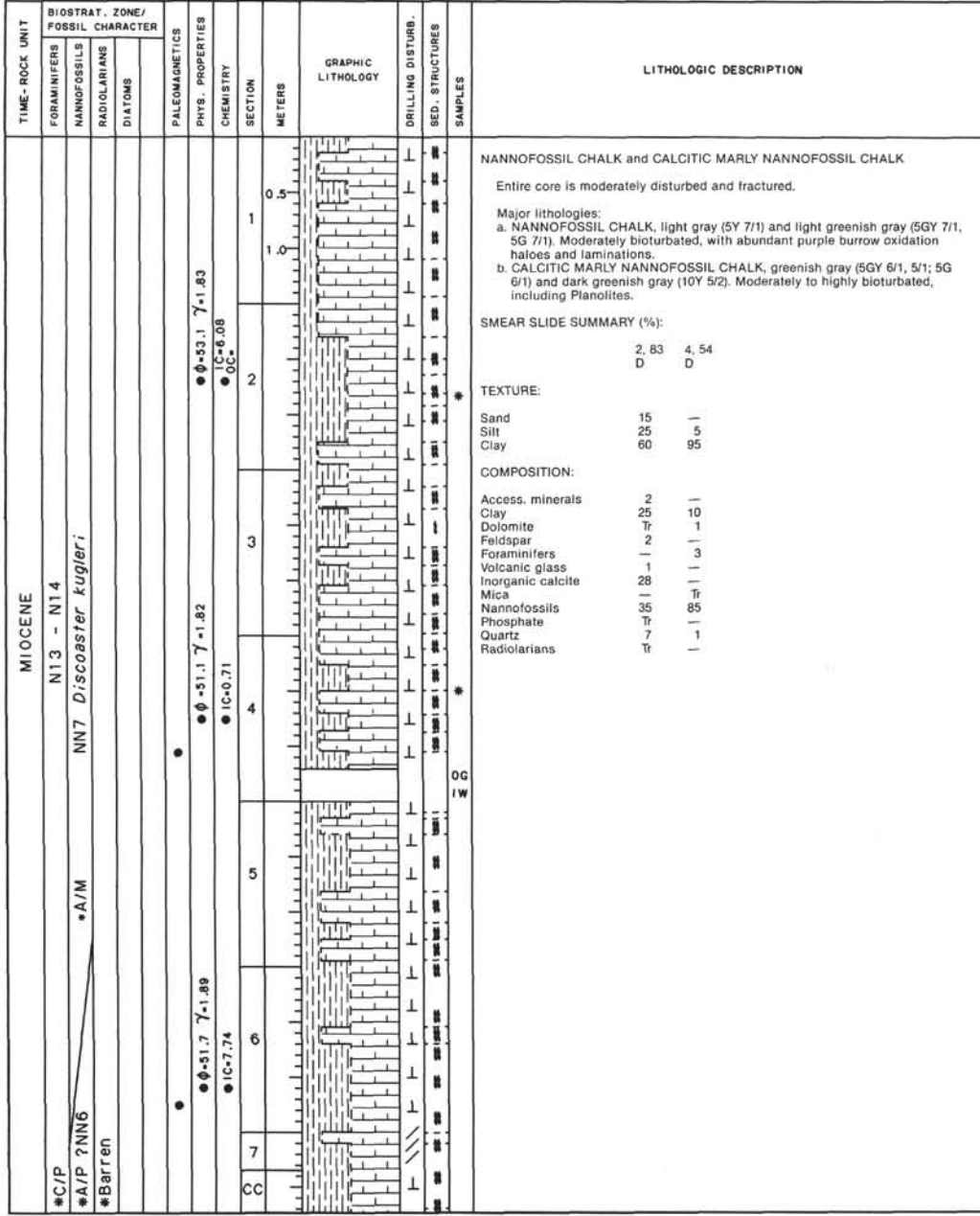
TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER				PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB. SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION																																																																				
	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS																																																																													
MIOCENE	N13-N14				● $\phi=40.6$ $\gamma=1.86$ ● IC-9.91 ● OC-8.80				0.5 1.0		↑	*	<p>NANNOFOSSIL CHALK</p> <p>Entire core is slightly to moderately disturbed and fractured.</p> <p>Major lithology: NANNOFOSSIL CHALK, white (5Y 8/1), light gray (5Y 7/1, 7/2), and light greenish gray (5GY 7/1, 10Y 7/2) to pale olive (5Y 6/3). Gradationally interbedded and bioturbated throughout.</p> <p>Minor lithology: Marly calcitic nannofossil chalk, dark greenish gray (10Y 4/2), bioturbated. Vertical and subvertical sets of parallel, mm-scale filled fractures at Section 3, 95-113 cm, and Section 5, 25-30 cm. Possible tectonic/dewatering/slump-related structures.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <table border="1"> <tr> <td></td> <td>1, 41</td> <td>5, 80</td> <td>6, 51</td> </tr> <tr> <td></td> <td>D</td> <td>D</td> <td>D</td> </tr> </table> <p>TEXTURE:</p> <table border="1"> <tr> <td>Sand</td> <td>10</td> <td>—</td> <td>—</td> </tr> <tr> <td>Silt</td> <td>30</td> <td>20</td> <td>10</td> </tr> <tr> <td>Clay</td> <td>60</td> <td>80</td> <td>90</td> </tr> </table> <p>COMPOSITION:</p> <table border="1"> <tr> <td>Access. minerals</td> <td>2</td> <td>Tr</td> <td>Tr</td> </tr> <tr> <td>Clay</td> <td>25</td> <td>10</td> <td>10</td> </tr> <tr> <td>Diatoms</td> <td>Tr</td> <td>—</td> <td>—</td> </tr> <tr> <td>Dolomite</td> <td>1</td> <td>1</td> <td>—</td> </tr> <tr> <td>Foraminifers</td> <td>1</td> <td>—</td> <td>—</td> </tr> <tr> <td>Volcanic glass</td> <td>—</td> <td>Tr</td> <td>—</td> </tr> <tr> <td>Inorganic calcite</td> <td>20</td> <td>15</td> <td>20</td> </tr> <tr> <td>Nannofossils</td> <td>35</td> <td>70</td> <td>70</td> </tr> <tr> <td>Phosphate</td> <td>Tr</td> <td>—</td> <td>—</td> </tr> <tr> <td>Quartz</td> <td>15</td> <td>2</td> <td>—</td> </tr> <tr> <td>Radiolarians</td> <td>1</td> <td>1</td> <td>—</td> </tr> <tr> <td>Sponge spicules</td> <td>Tr</td> <td>1</td> <td>Tr</td> </tr> </table>		1, 41	5, 80	6, 51		D	D	D	Sand	10	—	—	Silt	30	20	10	Clay	60	80	90	Access. minerals	2	Tr	Tr	Clay	25	10	10	Diatoms	Tr	—	—	Dolomite	1	1	—	Foraminifers	1	—	—	Volcanic glass	—	Tr	—	Inorganic calcite	20	15	20	Nannofossils	35	70	70	Phosphate	Tr	—	—	Quartz	15	2	—	Radiolarians	1	1	—	Sponge spicules	Tr	1	Tr
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Radiolarians	1	1	—																																																																														
Sponge spicules	Tr	1	Tr																																																																														
* R/P					● $\phi=62.3$ $\gamma=1.88$ ● IC-6.46			2		↑	*																																																																						
* A/M	NN7 <i>Discosaster kugleri</i>																																																																																
* C/G	* C/G <i>Diartius petterssoni</i>																																																																																
					● $\phi=59.3$ $\gamma=1.69$ ● IC-9.14			3		↑	*																																																																						
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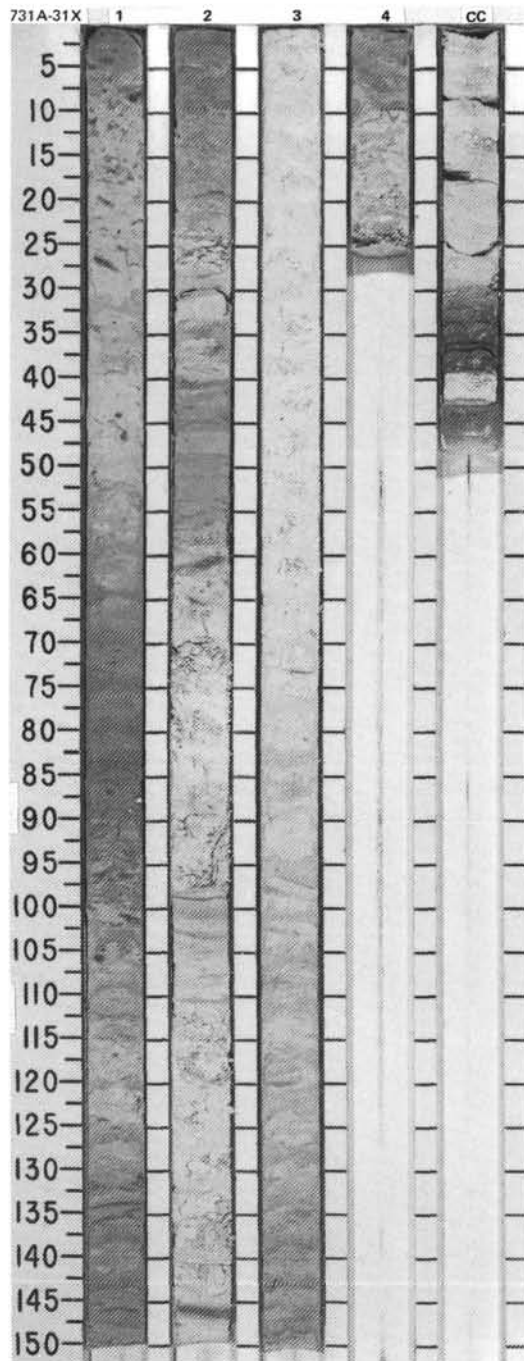
TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER				PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION																																																			
	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS																																																													
MIOCENE														<p>NANNOFOSSIL CHALK and CALCITIC MARLY NANNOFOSSIL CHALK</p> <p>Entire core is moderately disturbed and fractured.</p> <p>Major lithologies:</p> <p>a. NANNOFOSSIL CHALK, light gray (5Y 7/1, 7/2) and light greenish gray (5GY 7/1). Moderately bioturbated throughout, with Zoophycos and purple burrow oxidation haloes and laminations.</p> <p>b. CALCITIC MARLY NANNOFOSSIL CHALK, light greenish gray (10Y 6/3) and greenish gray (5GY 6/1, 5/1). Moderate bioturbation throughout. Vertical/subvertical sets of filled, mm-scale parallel fractures at Section 3, 48-51 and 83-88 cm; Section 4, 87-94 cm (show 0.5-1.0 mm vertical offset); and Section 5, 32-40 and 70-75 cm.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <table border="1"> <tr> <td></td> <td>1, 119</td> <td>4, 123</td> </tr> <tr> <td>D</td> <td></td> <td>D</td> </tr> </table> <p>TEXTURE:</p> <table border="1"> <tr> <td>Sand</td> <td></td> <td>10</td> </tr> <tr> <td>Silt</td> <td>10</td> <td>25</td> </tr> <tr> <td>Clay</td> <td>90</td> <td>65</td> </tr> </table> <p>COMPOSITION:</p> <table border="1"> <tr> <td>Access. minerals</td> <td>Tr</td> <td>2</td> </tr> <tr> <td>Clay</td> <td>15</td> <td>25</td> </tr> <tr> <td>Dolomite</td> <td>-</td> <td>1</td> </tr> <tr> <td>Foraminifers</td> <td>2</td> <td>Tr</td> </tr> <tr> <td>Volcanic glass</td> <td>-</td> <td>Tr</td> </tr> <tr> <td>Inorganic calcite</td> <td>3</td> <td>30</td> </tr> <tr> <td>Mica</td> <td>Tr</td> <td>-</td> </tr> <tr> <td>Nannofossils</td> <td>80</td> <td>40</td> </tr> <tr> <td>Organic debris</td> <td>-</td> <td>2</td> </tr> <tr> <td>Quartz</td> <td>Tr</td> <td>Tr</td> </tr> <tr> <td>Radiolarians</td> <td>Tr</td> <td>Tr</td> </tr> <tr> <td>Sponge spicules</td> <td>Tr</td> <td>-</td> </tr> </table>		1, 119	4, 123	D		D	Sand		10	Silt	10	25	Clay	90	65	Access. minerals	Tr	2	Clay	15	25	Dolomite	-	1	Foraminifers	2	Tr	Volcanic glass	-	Tr	Inorganic calcite	3	30	Mica	Tr	-	Nannofossils	80	40	Organic debris	-	2	Quartz	Tr	Tr	Radiolarians	Tr	Tr	Sponge spicules	Tr	-
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Radiolarians	Tr	Tr																																																															
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* R/P	N13-N14				● ϕ -88.0 γ -1.75	IC-70 05-021	2																																																										
* A/M	NN7 <i>Discoaster kugleri</i>				● ϕ -87.8 γ -1.76																																																												
* R/P	F/P* ? <i>Diartus petterssoni</i>				● ϕ -85.4	IC-8.54	3																																																										
					● ϕ -54.2 γ -1.81	IC-8.54	6																																																										
							7																																																										
							CC																																																										



SITE 731 HOLE A CORE 30X CORED INTERVAL 2645.7 -2655.4 mbsl; 279.9 -289.6 mbsf

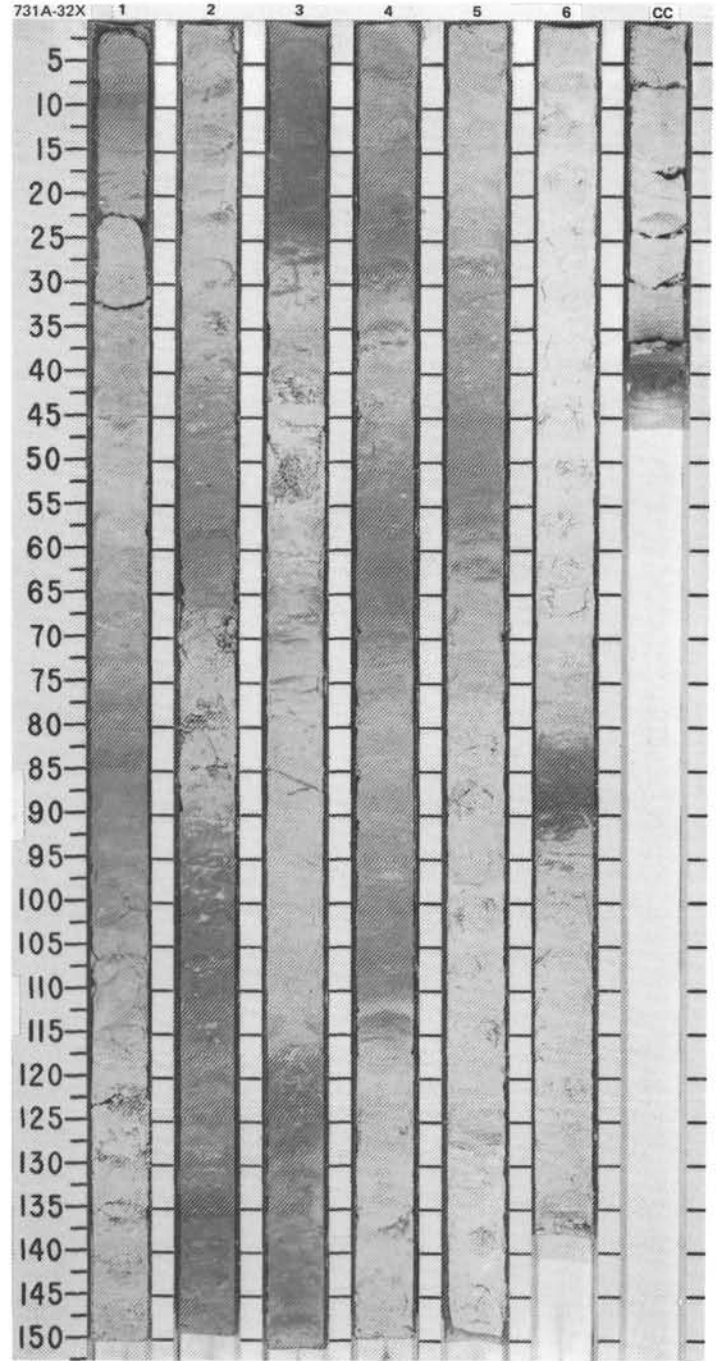


TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER				PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION																																	
	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS																																											
MIOCENE	*Barren	NN16 <i>Discosiderites</i>												<p>NANNOFOSSIL CHALK and CALCITIC MARLY NANNOFOSSIL CHALK</p> <p>Entire core is moderately disturbed and fractured.</p> <p>Major lithologies: a. NANNOFOSSIL CHALK, white (5Y 8/1) and light greenish gray (5GY 7/1). Moderate bioturbation throughout. b. CALCITIC MARLY NANNOFOSSIL CHALK, greenish gray (5GY 6/1, 5G 5/1). Bioturbated.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <table border="1"> <tr> <td></td> <td>1, 85</td> <td>2, 84</td> </tr> <tr> <td></td> <td>0</td> <td>0</td> </tr> </table> <p>TEXTURE:</p> <table border="1"> <tr> <td>Silt</td> <td>5</td> <td>5</td> </tr> <tr> <td>Clay</td> <td>95</td> <td>95</td> </tr> </table> <p>COMPOSITION:</p> <table border="1"> <tr> <td>Access. minerals</td> <td>1</td> <td>—</td> </tr> <tr> <td>Clay</td> <td>20</td> <td>10</td> </tr> <tr> <td>Dolomite</td> <td>1</td> <td>—</td> </tr> <tr> <td>Foraminifers</td> <td>Tr</td> <td>4</td> </tr> <tr> <td>Inorganic calcite</td> <td>2</td> <td>1</td> </tr> <tr> <td>Nannofossils</td> <td>75</td> <td>85</td> </tr> <tr> <td>Quartz</td> <td>1</td> <td>—</td> </tr> </table>		1, 85	2, 84		0	0	Silt	5	5	Clay	95	95	Access. minerals	1	—	Clay	20	10	Dolomite	1	—	Foraminifers	Tr	4	Inorganic calcite	2	1	Nannofossils	75	85	Quartz	1	—
	1, 85	2, 84																																													
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Silt	5	5																																													
Clay	95	95																																													
Access. minerals	1	—																																													
Clay	20	10																																													
Dolomite	1	—																																													
Foraminifers	Tr	4																																													
Inorganic calcite	2	1																																													
Nannofossils	75	85																																													
Quartz	1	—																																													
					● $\phi=48.5$ $\gamma=1.88$	● IC-6.95																																									
					● $\phi=42.8$ $\gamma=2.01$	● IC-6.74																																									
						CC																																									



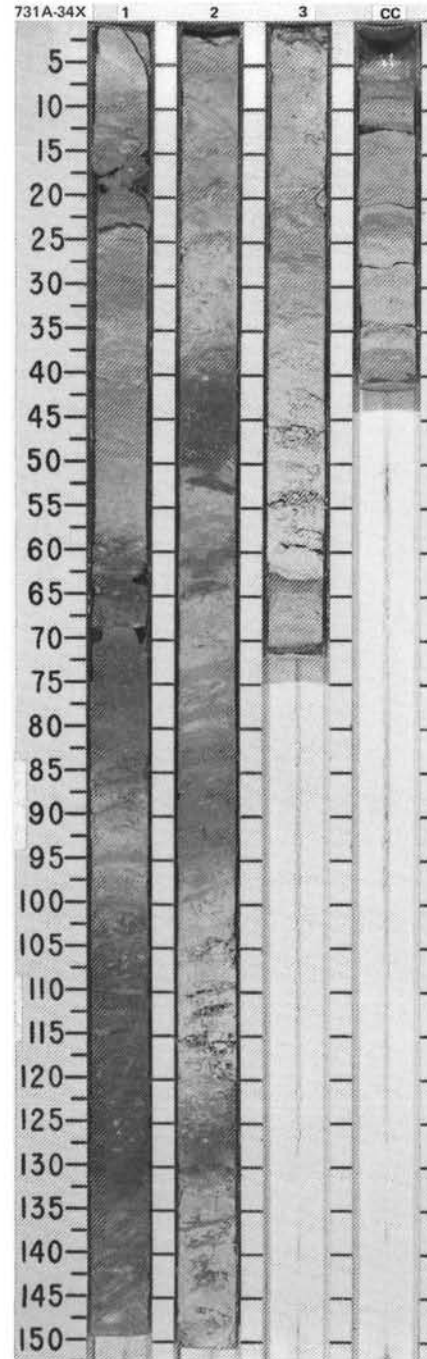
SITE 731 HOLE A CORE 32X CORED INTERVAL 2665.0-2674.7 mbsf; 299.2-308.9 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER				PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION																																																				
	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS																																																														
MIOCENE																																																																		
*Barren		NN6				$\phi=42.5$ $\gamma=2.02$	IC=9.78 OC=0.05		0.5					<p>NANNOFOSSIL CHALK</p> <p>Entire core is moderately disturbed and fractured.</p> <p>Major lithology: NANNOFOSSIL CHALK, white (5Y 8/1), light gray (5Y 7/1, N7), and light greenish gray (5G 7/1), to gray (5Y 6/1) and greenish gray (5GY 6/1). Moderate bioturbation, and minor development of stylolitic bedding.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <table border="1"> <tr> <td></td> <td>1, 8</td> <td>1, 57</td> <td>3, 20</td> </tr> <tr> <td></td> <td>M</td> <td>D</td> <td>D</td> </tr> </table> <p>TEXTURE:</p> <table border="1"> <tr> <td>Silt</td> <td>5</td> <td>—</td> <td>5</td> </tr> <tr> <td>Clay</td> <td>95</td> <td>100</td> <td>95</td> </tr> </table> <p>COMPOSITION:</p> <table border="1"> <tr> <td>Access. minerals</td> <td>—</td> <td>Tr</td> <td>1</td> </tr> <tr> <td>Clay</td> <td>10</td> <td>10</td> <td>10</td> </tr> <tr> <td>Dolomite</td> <td>1</td> <td>Tr</td> <td>2</td> </tr> <tr> <td>Foraminifers</td> <td>1</td> <td>—</td> <td>—</td> </tr> <tr> <td>Volcanic glass</td> <td>—</td> <td>Tr</td> <td>Tr</td> </tr> <tr> <td>Inorganic calcite</td> <td>3</td> <td>Tr</td> <td>1</td> </tr> <tr> <td>Mica</td> <td>—</td> <td>—</td> <td>Tr</td> </tr> <tr> <td>Nannofossils</td> <td>85</td> <td>90</td> <td>85</td> </tr> <tr> <td>Quartz</td> <td>—</td> <td>—</td> <td>1</td> </tr> </table>		1, 8	1, 57	3, 20		M	D	D	Silt	5	—	5	Clay	95	100	95	Access. minerals	—	Tr	1	Clay	10	10	10	Dolomite	1	Tr	2	Foraminifers	1	—	—	Volcanic glass	—	Tr	Tr	Inorganic calcite	3	Tr	1	Mica	—	—	Tr	Nannofossils	85	90	85	Quartz	—	—	1
	1, 8	1, 57	3, 20																																																															
	M	D	D																																																															
Silt	5	—	5																																																															
Clay	95	100	95																																																															
Access. minerals	—	Tr	1																																																															
Clay	10	10	10																																																															
Dolomite	1	Tr	2																																																															
Foraminifers	1	—	—																																																															
Volcanic glass	—	Tr	Tr																																																															
Inorganic calcite	3	Tr	1																																																															
Mica	—	—	Tr																																																															
Nannofossils	85	90	85																																																															
Quartz	—	—	1																																																															
*A/P	NN4	<i>Helicosphaera ampliaperfa</i>	NN5	<i>Sphenolithus heteromorphus</i>		$\phi=49.0$ $\gamma=1.81$	IC=6.77		1.0																																																									
*Barren									2																																																									
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									5																																																									
									6																																																									
									CC																																																									



SITE 731 HOLE A CORE 34X CORED INTERVAL 2681.3-2687.9 mbsf; 315.5-322.1 mbsf

TIME - ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER				PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION								
	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS																		
MIOCENE	NN4 <i>Helicosphaera ampliapertura</i> - NN5 <i>Sphenolithus heteromorphus</i>				$\phi=52.8$ $\gamma=1.85$ ● IC-4.22 ● OC-0.04 ●	$\phi=45.6$ $\gamma=1.97$ ● IC-8.62 ●	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION	NANNOFOSSIL CHALK								
	*Barren	*A/P	*Barren																			Entire core is moderately disturbed and fractured.
																						Major lithology: NANNOFOSSIL CHALK, light gray (5Y 7/1, 10YR 7/1), gray (10YR 6/1, 5Y 6/1), and light brownish gray (10YR 6/2). Slight to moderate bioturbation.
																						Minor lithology: Calcitic marly nannofossil chalk, olive gray (5Y 5/2) and brown (10YR 5/3). Bioturbated in Section 1, 123-150 cm, and Section 2, 30-53 and 120-129 cm. Not bioturbated in the thin basal zones of upward-lightening sequences in CC.
													SMEAR SLIDE SUMMARY (%):									
													1, 138	2, 138								
													D	D								
													TEXTURE:									
													Silt	30	10							
													Clay	70	90							
													COMPOSITION:									
													Access. minerals	Tr	Tr							
													Clay	20	15							
													Dolomite	Tr	Tr							
													Foraminifers	Tr	—							
													Volcanic glass	Tr	—							
													Inorganic calcite	10	5							
													Nannofossils	65	80							
													Quartz	5	Tr							

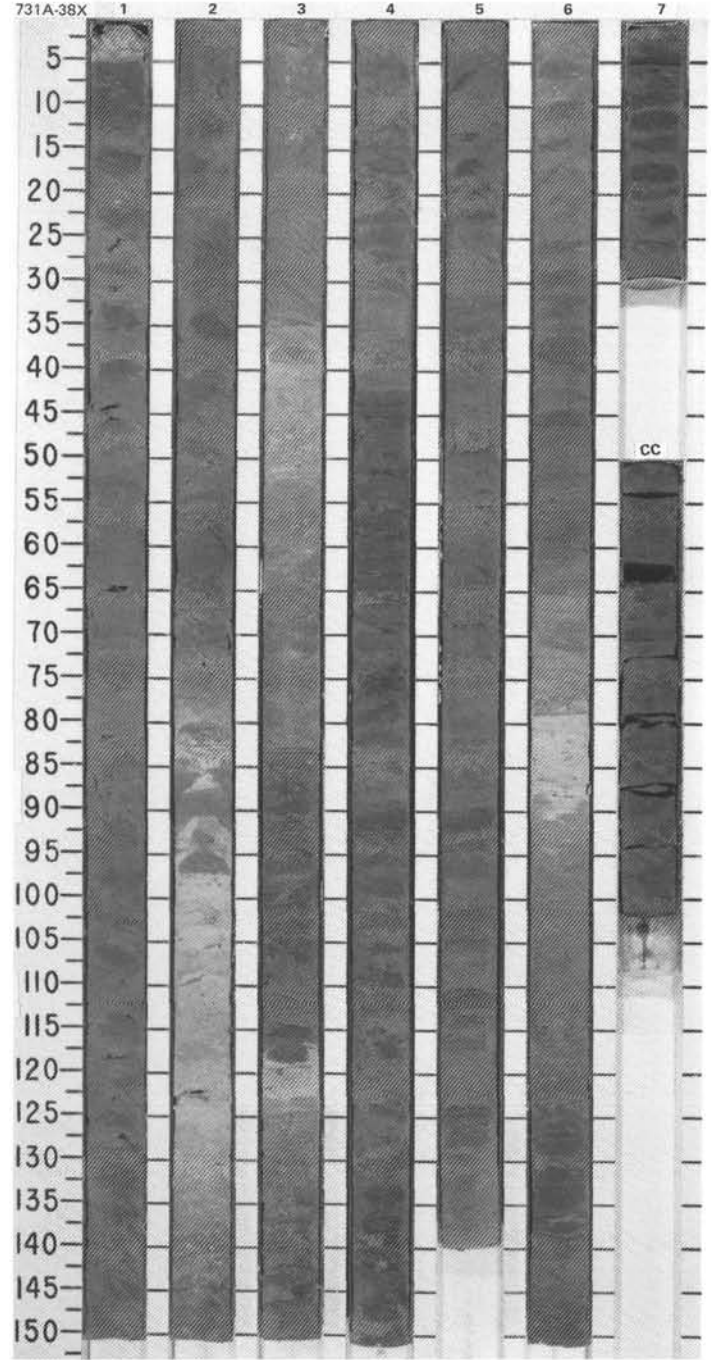
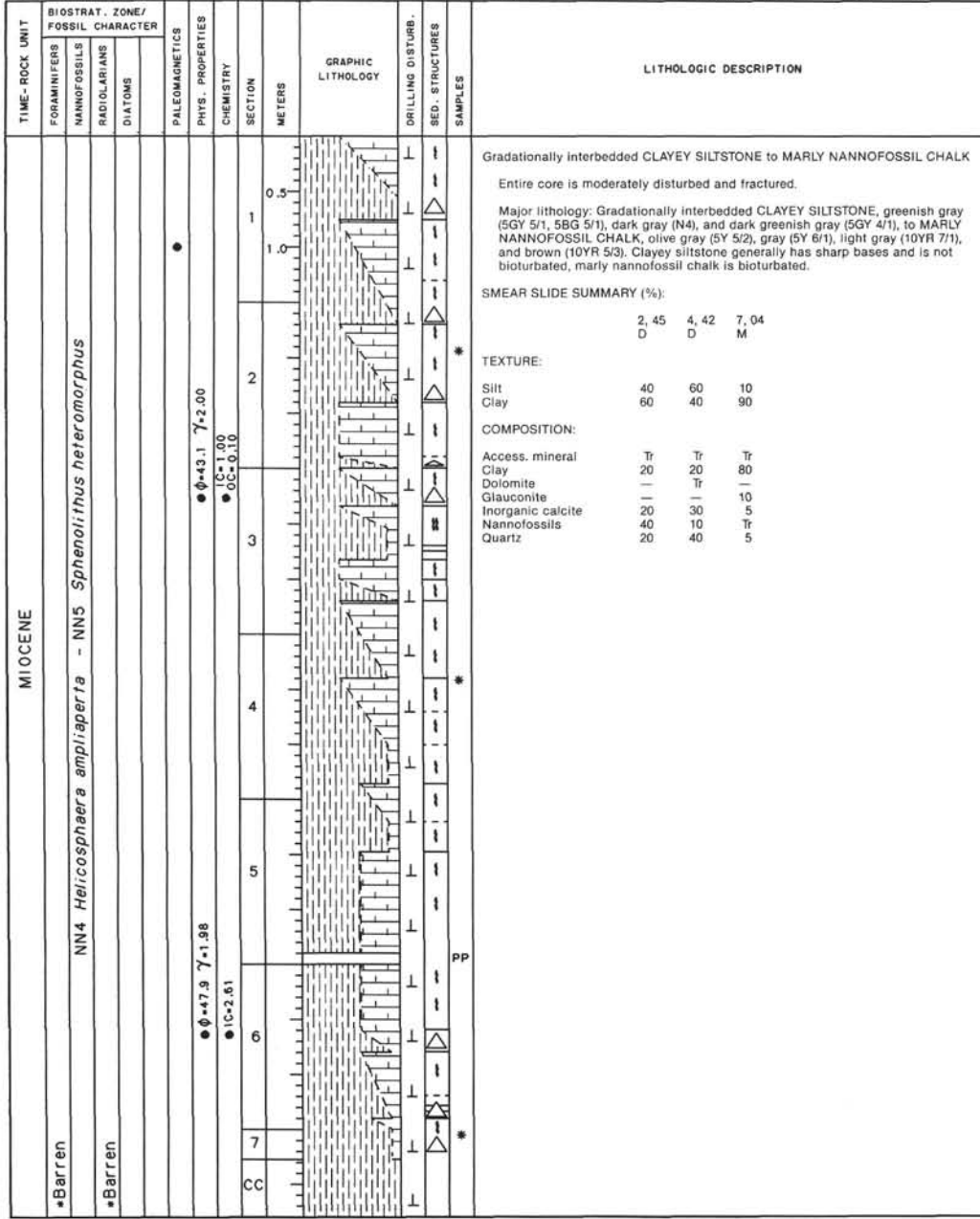


SITE 731 HOLE A CORE 36X CORED INTERVAL 2697.5-2707.2 mbsl; 331.7-341.3 mbsf

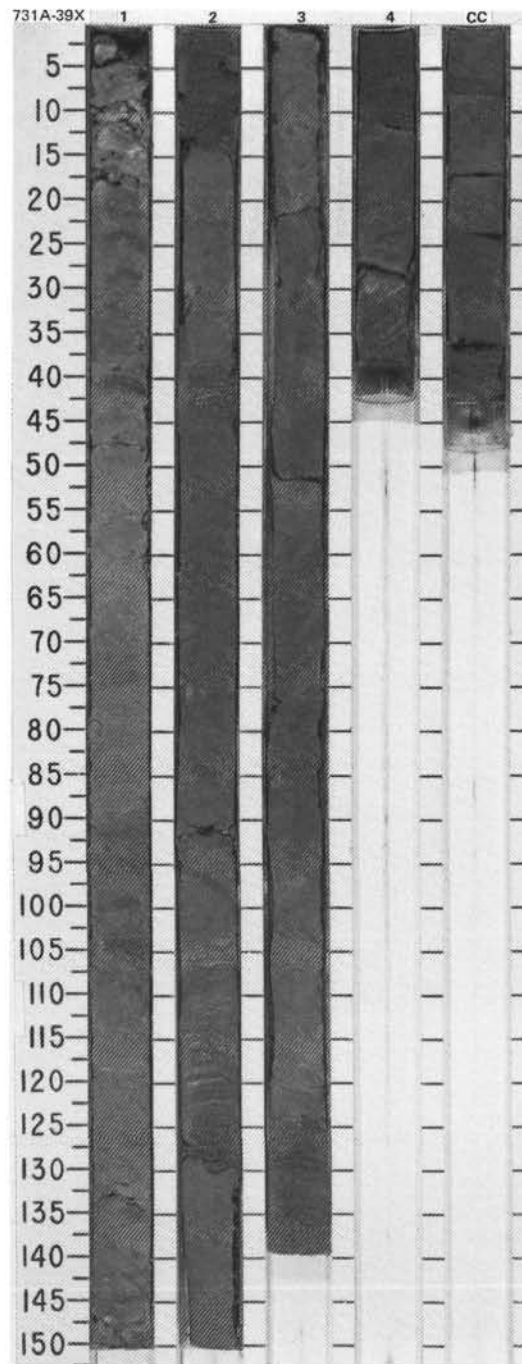
TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER				PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB. SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS									
MIOCENE	Barten *												<p>SILTY CLAYSTONE</p> <p>Entire core is moderately disturbed and fractured.</p> <p>Major lithology: SILTY CLAYSTONE, olive gray (5Y 4/2), with a 1-cm-thick interval of greenish gray (5BG 5/1) silty claystone.</p>
	NN4 <i>Helicosphaera ampliaperta</i> - NN5 <i>Sphenolithus heteromorphus</i>	R/M *	Barten *										



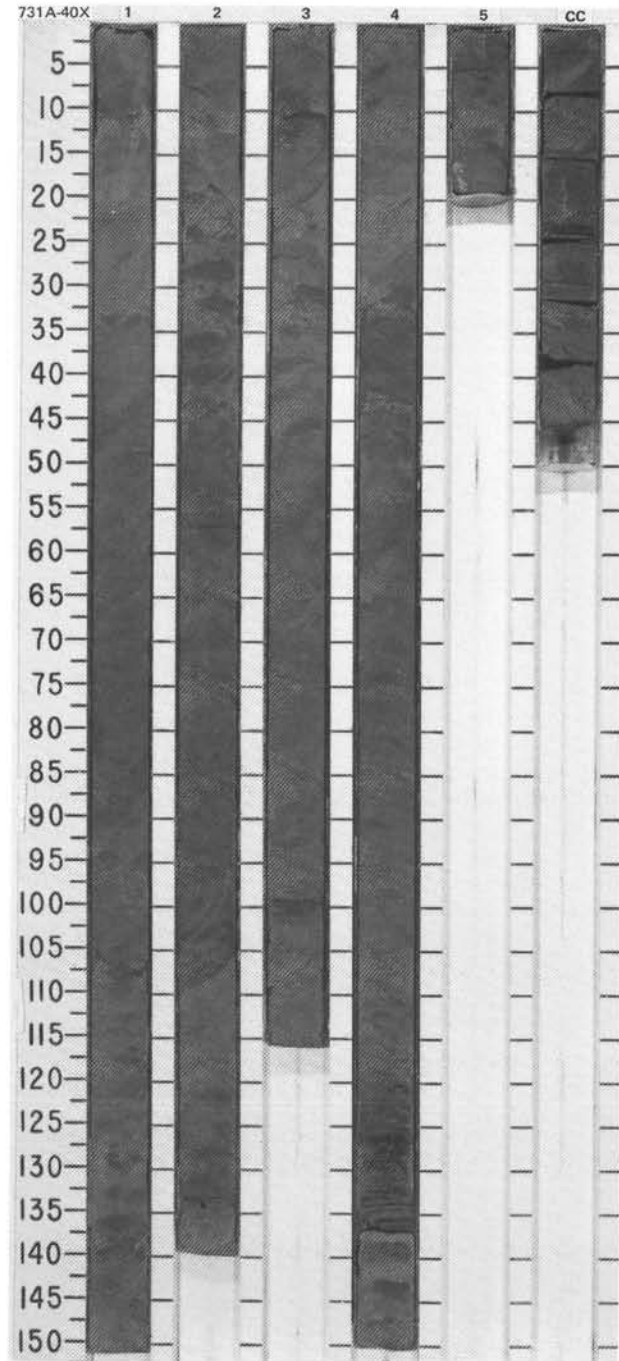
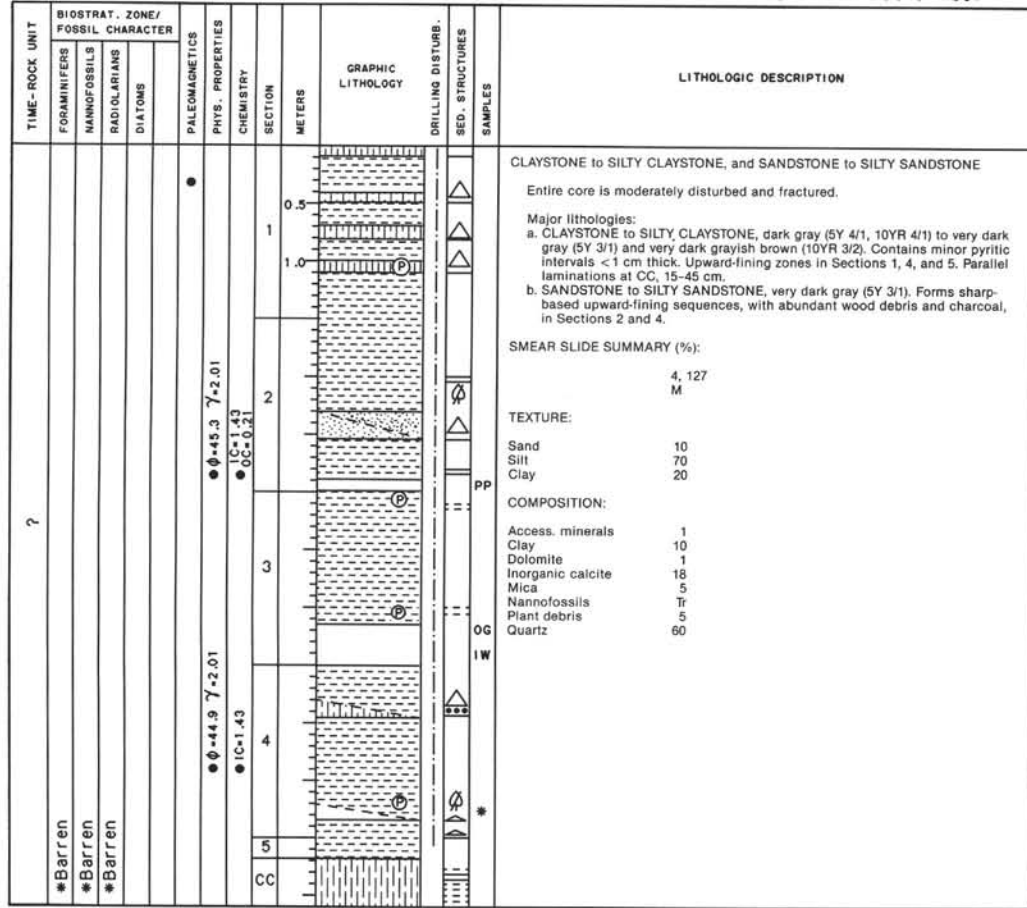
SITE 731 HOLE A CORE 38X CORED INTERVAL 2716.8-2726.5 mbsl; 351.0-360.7 mbsf



TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER				PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION																											
	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS																																					
MIOCENE	•Barren NN4 <i>Helicosphaera ampliapertura</i> - NN5 <i>Sphenolithus heteromorphus</i> •Barren								0.5 1 1.0 2 3 4 CC				<p>Gradationally interbedded SILTSTONE and SILTY CLAYSTONE, and SILTY CLAYSTONE</p> <p>Entire core is moderately disturbed and fractured.</p> <p>Major lithologies:</p> <p>a. SILTSTONE, very dark gray (5Y 3/1), grading to overlying silty claystone, dark gray (5Y 4/1). Basal siltstone layers have sharp bases, and are commonly graded and micaceous.</p> <p>b. SILTY CLAYSTONE, dark gray (5Y 4/1). Bioturbated at Section 1, 40-90 cm, and uniform from Section 2, 130 cm, to Section 3, 125 cm.</p> <p>Minor lithology: Silty sand to sandy silt, very dark gray (5Y 3/1), with parallel laminations and minor grading, and Section 3, 125 cm, to Section 4, 10 cm, and CC, 35-42 cm.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <table border="0"> <tr><td>2, 128</td></tr> <tr><td>M</td></tr> </table> <p>TEXTURE:</p> <table border="0"> <tr><td>Sand</td><td>5</td></tr> <tr><td>Silt</td><td>75</td></tr> <tr><td>Clay</td><td>20</td></tr> </table> <p>COMPOSITION:</p> <table border="0"> <tr><td>Access. minerals</td><td>2</td></tr> <tr><td>Clay</td><td>23</td></tr> <tr><td>Feldspar</td><td>2</td></tr> <tr><td>Glaucinite</td><td>1</td></tr> <tr><td>Hornblende</td><td>1</td></tr> <tr><td>Inorganic calcite</td><td>25</td></tr> <tr><td>Mica</td><td>7</td></tr> <tr><td>Opakes</td><td>3</td></tr> <tr><td>Quartz</td><td>35</td></tr> <tr><td>Rock fragment</td><td>1</td></tr> </table>	2, 128	M	Sand	5	Silt	75	Clay	20	Access. minerals	2	Clay	23	Feldspar	2	Glaucinite	1	Hornblende	1	Inorganic calcite	25	Mica	7	Opakes	3	Quartz	35	Rock fragment	1
2, 128																																									
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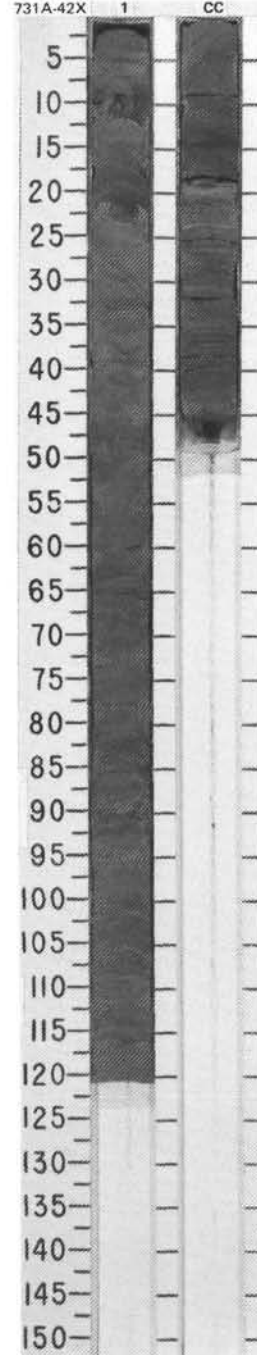


SITE 731 HOLE A CORE 40X CORED INTERVAL 2736.2-2745.8 mbsf; 370.4-380.0 mbsf



SITE 731 HOLE A CORE 42X CORED INTERVAL 2755.5-2765.2 mbsi; 389.7-399.4 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER				PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
	FORAMINIFERS	NAKKOFOSSILS	RADIOLARIANS	DIAZONES									
?	barren*	barren*	barren*	barren*					0.5 1.0 CC				<p>SILTY CLAYSTONE, interbedded SANDY SILTSTONE and SILTY CLAYSTONE, and gradationally interbedded SANDY SILTSTONE and SILTY CLAYSTONE</p> <p>Entire core is moderately to highly disturbed and fractured.</p> <p>Major lithologies:</p> <p>a. SILTY CLAYSTONE, very dark grayish brown (10YR 3/2), in Section 1, 22-82 and 116-121 cm.</p> <p>b. SANDY SILTSTONE, very dark gray (10YR 3/1), and SILTY CLAYSTONE, dark gray (10YR 4/1), interbedded on scale of 0.5-2.0 cm, forming an upward-fining sequence, in CC.</p> <p>c. SANDY SILTSTONE and SILTY CLAYSTONE, very dark grayish brown (10YR 3/2), gradationally interbedded to form sharp-based upward-fining sequences, Section 1, 0-22, 92-106, and 106-116 cm.</p>

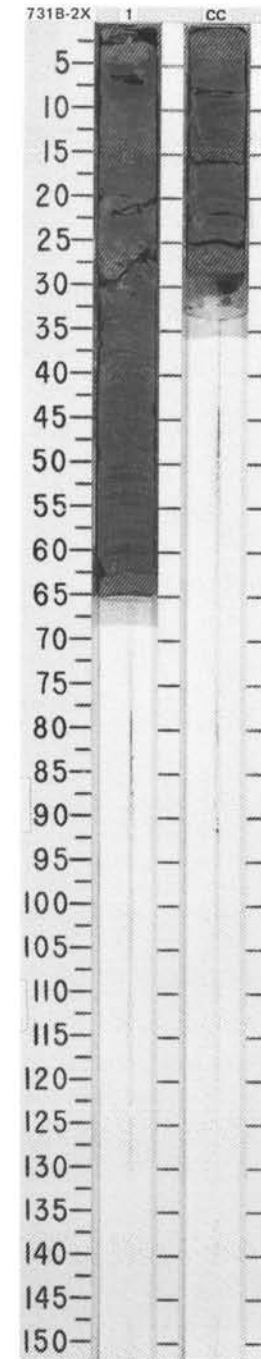
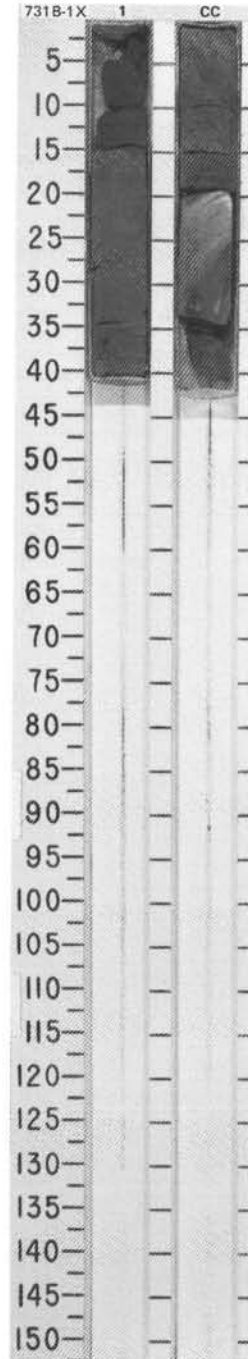


SITE 731 HOLE B CORE 1X CORED INTERVAL 2774.5-2784.2 mbsl; 408.7-418.4 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER				PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS										
?	#Barren					$\phi = 44.0$ $\gamma = 2.03$		1					*	<p>CLAYEY SILTSTONE and SANDSTONE</p> <p>Entire core is moderately disturbed and fractured.</p> <p>Major lithologies:</p> <p>a. CLAYEY SILTSTONE, very dark grayish brown (10YR 3/2) to very dark gray (5Y 3/1). Authigenic pyrite lenses at Section 1, 25 and 28 cm. Charcoal at Section 1, 37 cm. Parallel laminated in CC, 0-20 cm.</p> <p>b. SANDSTONE, very dark gray (5Y 3/1), structureless.</p> <p>SMEAR SLIDE SUMMARY</p> <p>1, 25 D</p> <p>TEXTURE:</p> <p>Sand 10 Silt 50 Clay 40</p> <p>COMPOSITION:</p> <p>Access. minerals 10 Clay 30 Inorganic calcite 30 Quartz 30</p>

SITE 731 HOLE B CORE 2X CORED INTERVAL 2784.2-2793.9 mbsl; 418.4-428.1 mbsf

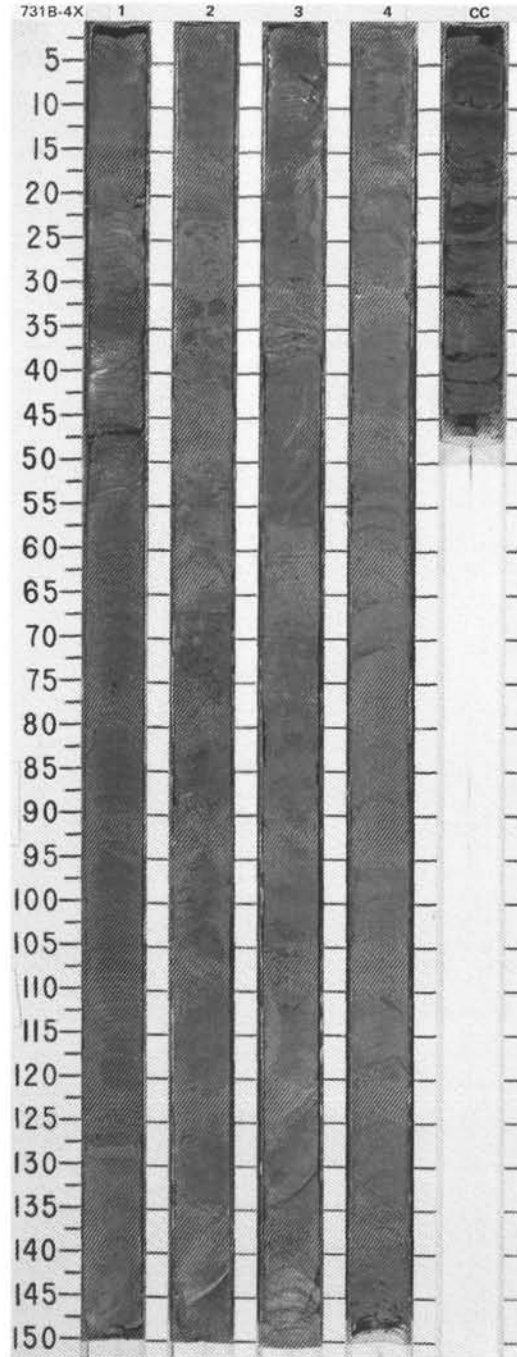
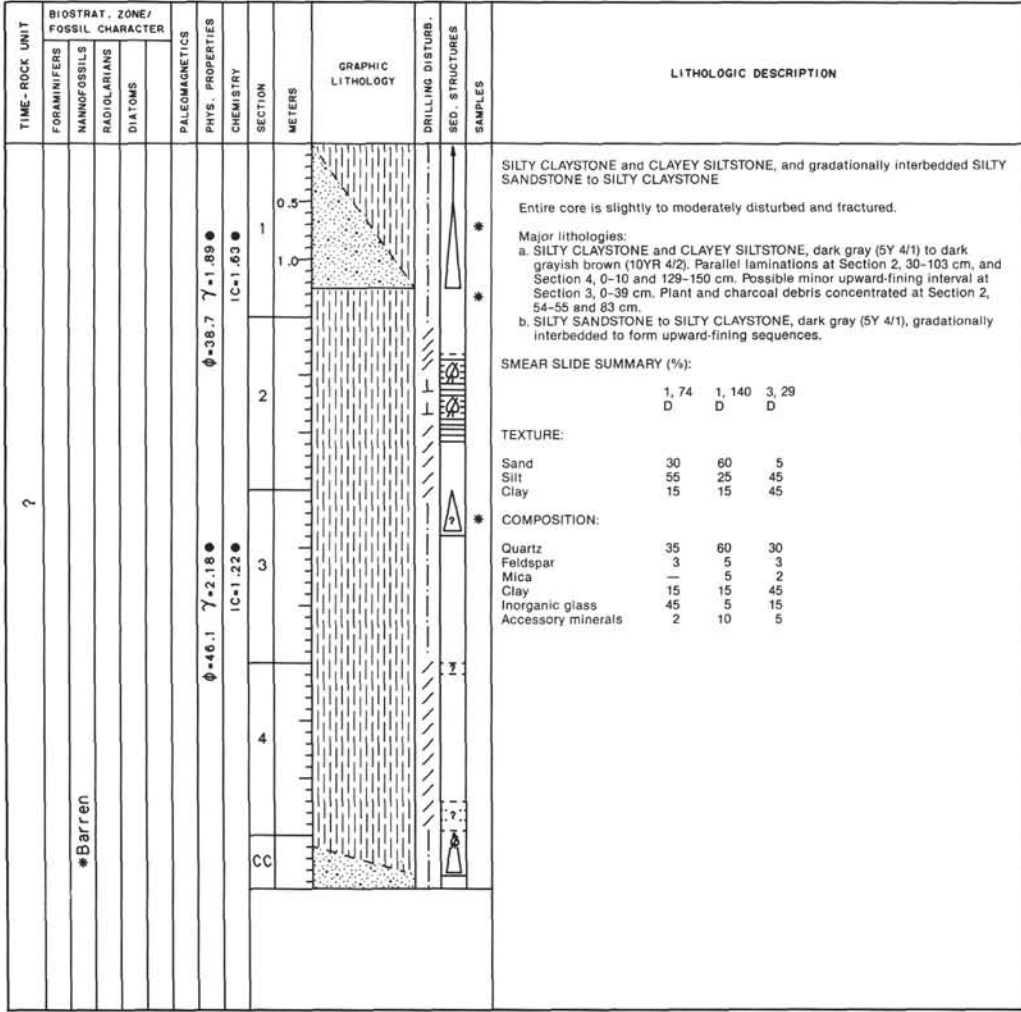
TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER				PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS										
?	#Barren					$\gamma = 2.12$ $\phi = 33.3$		1					*	<p>CLAYEY SILTSTONE and CLAYEY SANDSTONE</p> <p>Entire core is moderately disturbed and fractured.</p> <p>Major lithologies:</p> <p>a. CLAYEY SILTSTONE, dark gray (5Y 4/1). Parallel laminations at Section 1, 20-27 cm, and ripple cross-laminations at CC, 5-8 cm. Section 1, 0-27 and 62-64 cm, and CC, 0-8 cm.</p> <p>b. CLAYEY SANDSTONE, dark gray (5Y 4/1). Parallel laminations at Section 1, 27-30 cm.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <p>1, 30 D</p> <p>TEXTURE:</p> <p>Sand 60 Silt 20 Clay 20</p> <p>COMPOSITION:</p> <p>Clay 20 Inorganic glass 15 Quartz 50 Feldspar 5 Accessory minerals 10</p>



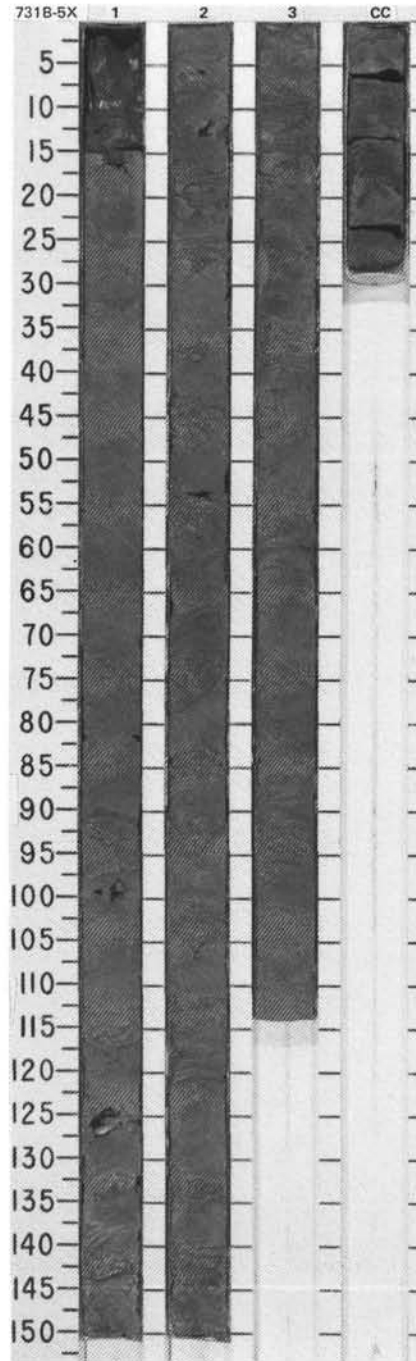
TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER				PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION																																												
	FORAMINIFERS	NANNOFOSILS	RADIOLARIANS	DIATOMS																																																						
?	#Bart					$\phi = 41.30$ $\gamma = 2.02$ $\gamma' = 2.71$ $IC = 1.60$		1	0.5 1.0					<p>SANDSTONE, SILTY CLAYSTONE, and CLAYEY SANDSTONE</p> <p>Entire core is moderately to highly disturbed and fractured.</p> <p>Major lithologies:</p> <p>a. SANDSTONE, dark gray (5Y 4/1). Medium-grained and ungraded. Cemented at Section 1, 0-15 cm.</p> <p>b. SILTY CLAYSTONE, dark gray (5Y 4/1), ungraded.</p> <p>c. CLAYEY SANDSTONE, dark gray (5Y 4/1), micaceous. Forms an upward-fining sequence, in CC.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <table border="1"> <thead> <tr> <th></th> <th>1, 29 D</th> <th>1, 60 D</th> <th>CC, 10 D</th> </tr> </thead> <tbody> <tr> <td>Sand</td> <td>70</td> <td>—</td> <td>70</td> </tr> <tr> <td>Silt</td> <td>20</td> <td>40</td> <td>10</td> </tr> <tr> <td>Clay</td> <td>10</td> <td>60</td> <td>20</td> </tr> </tbody> </table> <p>TEXTURE:</p> <p>COMPOSITION:</p> <table border="1"> <thead> <tr> <th></th> <th>1, 29</th> <th>1, 60</th> <th>CC, 10</th> </tr> </thead> <tbody> <tr> <td>Accessory minerals</td> <td>10</td> <td>—</td> <td>10</td> </tr> <tr> <td>Quartz</td> <td>60</td> <td>25</td> <td>60</td> </tr> <tr> <td>Feldspar</td> <td>5</td> <td>—</td> <td>5</td> </tr> <tr> <td>Mica</td> <td>5</td> <td>—</td> <td>20</td> </tr> <tr> <td>Clay</td> <td>10</td> <td>60</td> <td>20</td> </tr> <tr> <td>Inorganic minerals</td> <td>10</td> <td>—</td> <td>10</td> </tr> </tbody> </table>		1, 29 D	1, 60 D	CC, 10 D	Sand	70	—	70	Silt	20	40	10	Clay	10	60	20		1, 29	1, 60	CC, 10	Accessory minerals	10	—	10	Quartz	60	25	60	Feldspar	5	—	5	Mica	5	—	20	Clay	10	60	20	Inorganic minerals	10	—	10
	1, 29 D	1, 60 D	CC, 10 D																																																							
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Clay	10	60	20																																																							
	1, 29	1, 60	CC, 10																																																							
Accessory minerals	10	—	10																																																							
Quartz	60	25	60																																																							
Feldspar	5	—	5																																																							
Mica	5	—	20																																																							
Clay	10	60	20																																																							
Inorganic minerals	10	—	10																																																							



SITE 731 HOLE B CORE 4X CORED INTERVAL 2803.5-2813.2 mbsl; 427.7-447.4 mbsf

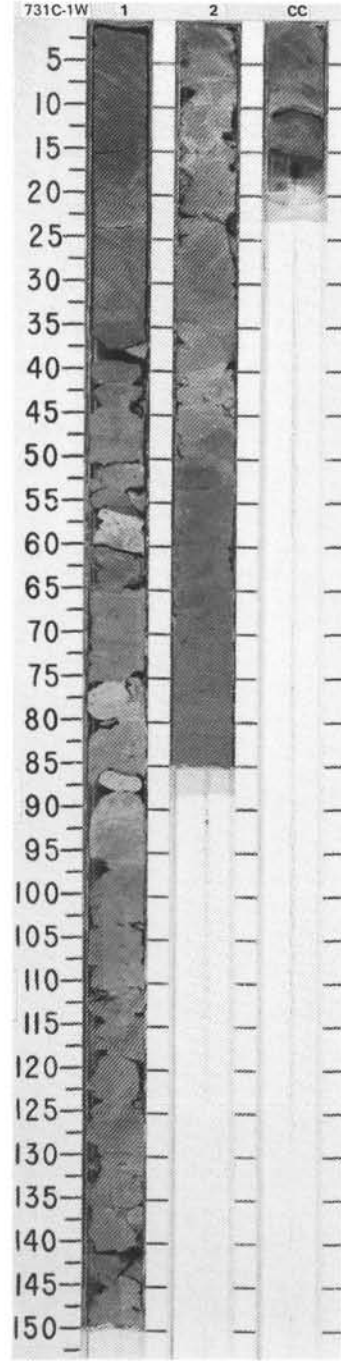


TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER				PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
	FORAMINIFERS	NAKNOFOSSILS	RADIOLARIANS	DIAATOMS										
?						$\phi = 51.0$	$\gamma = 1.92$	1	0.5					<p>SILTY CLAYSTONE and SILTSTONE</p> <p>Entire core is moderately disturbed and fractured.</p> <p>Major lithologies:</p> <p>a. SILTY CLAYSTONE, dark gray (10YR 4/1) to very dark grayish brown (10YR 3/2), and homogenous.</p> <p>b. SILTSTONE, dark gray (10YR 4/1) to very dark grayish brown (10YR 3/2), generally forming beds < 10 cm thick, with mm-scale parallel lamination.</p> <p>Minor lithology: Sandstone, dark gray (10YR 4/1), with sharp base and gradational upper contact, in Section 1, 10-18 cm.</p>
								1	1.0					
								2						
								3						
								CC						

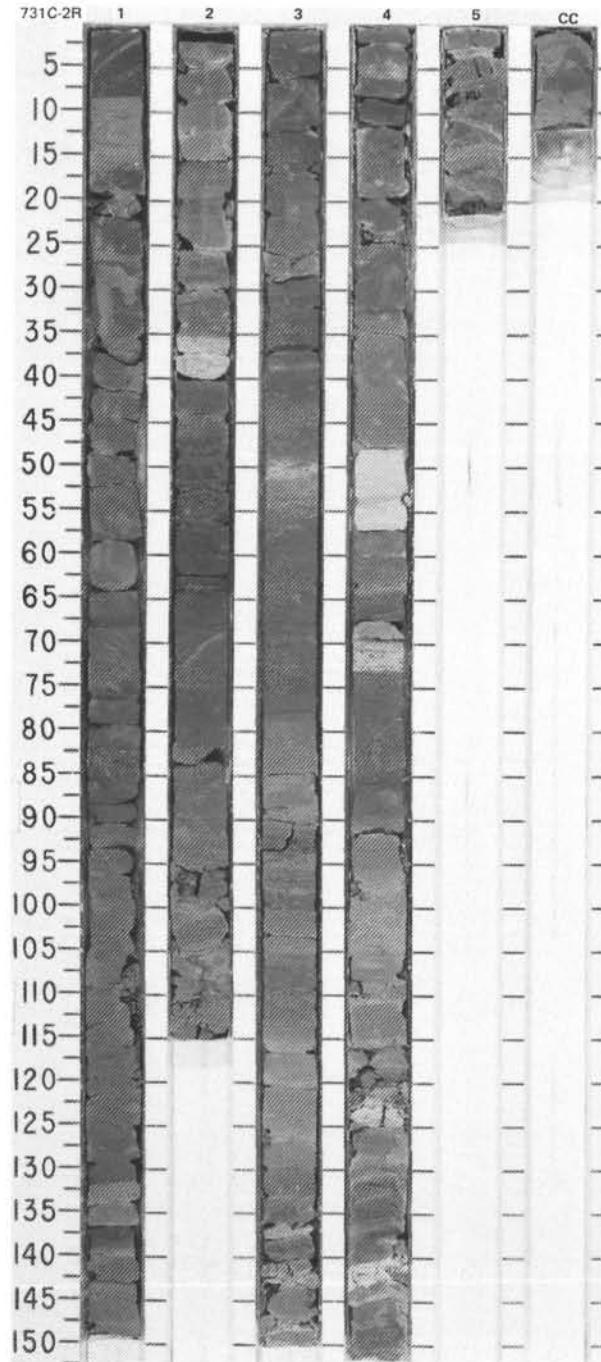


SITE 731 HOLE C CORE 1W CORED INTERVAL 2717.5-2868.2 mbsl; 351.7-502.4 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER				PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB. SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIAZONS									
MIOCENE	NN3 <i>Sphenolithus belemnos</i> * A/M							1	0.5	[Lithology symbols: horizontal dashes, vertical dashes, etc.]		*	<p>CLAYSTONE to NANNOFOSSIL-BEARING CALCITIC SILTY CLAYSTONE</p> <p>Entire core is moderately fractured and highly disturbed (wash core).</p> <p>Major lithology: CLAYSTONE to NANNOFOSSIL-BEARING CALCITIC SILTY CLAYSTONE, olive (5Y 4/3, 5/3), olive gray (5Y 5/2), gray (5Y 5/1), greenish gray (5GY 5/1), dark brown (10YR 3/3), and very dark grayish brown (10YR 3/2). Uniform.</p> <p>Minor lithology: Marly nannofossil chalk, gray (5Y 6/1), bioturbated. Section 1, 54-64 cm, and Section 2, 6-22 and 36-47 cm.</p>
							2	1.0	[Lithology symbols]			*	
							CC						



TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER				PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION																																																							
	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS																																																																	
MIOCENE														<p>CALCITIC SILTY CLAYSTONE and CLAYEY SILTSTONE to NANNOFOSSIL-BEARING SILTY CLAYSTONE</p> <p>Entire core is moderately to highly disturbed and fractured.</p> <p>Major lithology: CALCITIC SILTY CLAYSTONE and CLAYEY SILTSTONE to NANNOFOSSIL-BEARING SILTY CLAYSTONE, gray (5YR 5/1), olive gray (5Y 4/2), and reddish gray (5YR 5/2), to dark gray (5Y 4/1), dark greenish gray (10Y 5/1, 5GY 4/1), and dark grayish brown. Clayey siltstone contains diffuse parallel laminations; silty claystone is homogenous or bioturbated.</p> <p>Minor lithologies: a. SILTY SANDSTONE to SANDY SILTSTONE, very dark gray (5Y 4/1), in Section 1, 0-16 and 65-90 cm. Forms sharp-based upward-fining sequences, with lenticular bedding at Section 1, 83-87 cm. b. MARLY NANNOFOSSIL CHALK to NANNOFOSSIL CHALK, light gray (5Y 7/1, 6/1), light greenish gray (5G 7/1, 10Y 6/1), and greenish gray (5G 6/1). Forms two non-bioturbated, sharp-based upward-fining sequences at Section 4, 48-57 cm; other occurrences are moderately bioturbated. Section 2, 34-40 cm; and Section 4, 48-57, 68-74, 122-125, and 141-143 cm.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <table border="1"> <tr> <td></td> <td>1, 16</td> <td>1, 57</td> <td>1, 68</td> <td>2, 76</td> </tr> <tr> <td></td> <td>D</td> <td>D</td> <td>D</td> <td>D</td> </tr> </table> <p>TEXTURE:</p> <table border="1"> <tr> <td>Silt</td> <td>5</td> <td>—</td> <td>20</td> <td>45</td> </tr> <tr> <td>Clay</td> <td>95</td> <td>100</td> <td>80</td> <td>55</td> </tr> </table> <p>COMPOSITION:</p> <table border="1"> <tr> <td>Access. minerals</td> <td>Tr</td> <td>—</td> <td>1</td> <td>2</td> </tr> <tr> <td>Clay</td> <td>90</td> <td>60</td> <td>74</td> <td>50</td> </tr> <tr> <td>Fish remains</td> <td>Tr</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>Inorganic calcite</td> <td>3</td> <td>Tr</td> <td>7</td> <td>15</td> </tr> <tr> <td>Nannofossils</td> <td>3</td> <td>—</td> <td>40</td> <td>6</td> </tr> <tr> <td>Quartz</td> <td>3</td> <td>—</td> <td>12</td> <td>30</td> </tr> <tr> <td>Zeolites</td> <td>1</td> <td>Tr</td> <td>—</td> <td>—</td> </tr> </table>		1, 16	1, 57	1, 68	2, 76		D	D	D	D	Silt	5	—	20	45	Clay	95	100	80	55	Access. minerals	Tr	—	1	2	Clay	90	60	74	50	Fish remains	Tr	—	—	—	Inorganic calcite	3	Tr	7	15	Nannofossils	3	—	40	6	Quartz	3	—	12	30	Zeolites	1	Tr	—	—
	1, 16	1, 57	1, 68	2, 76																																																																	
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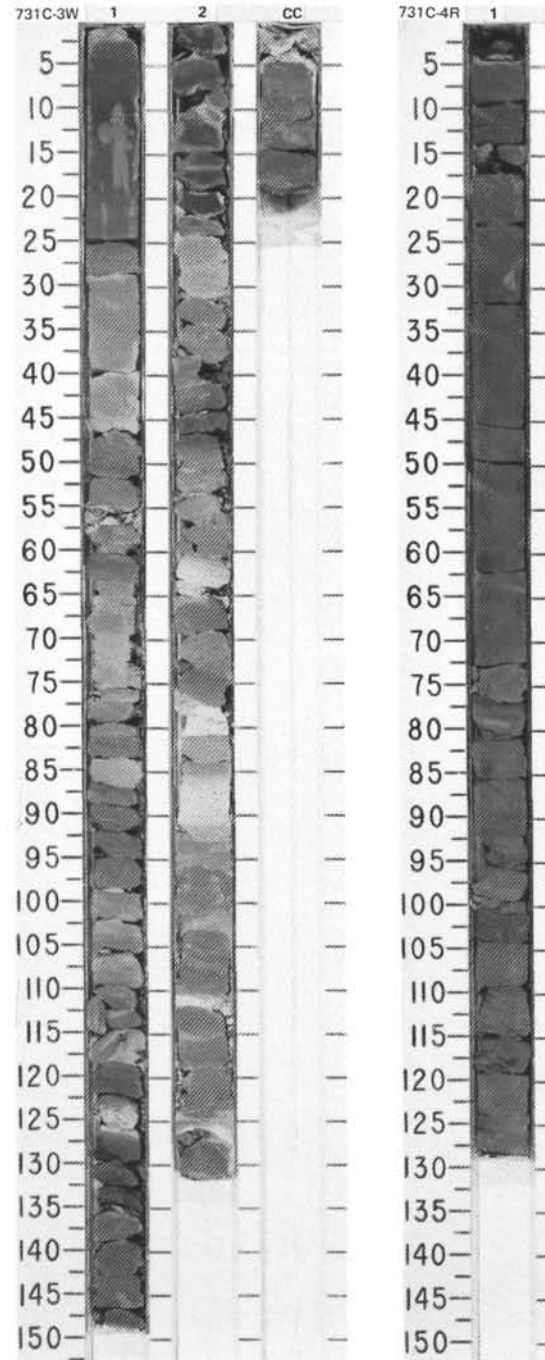


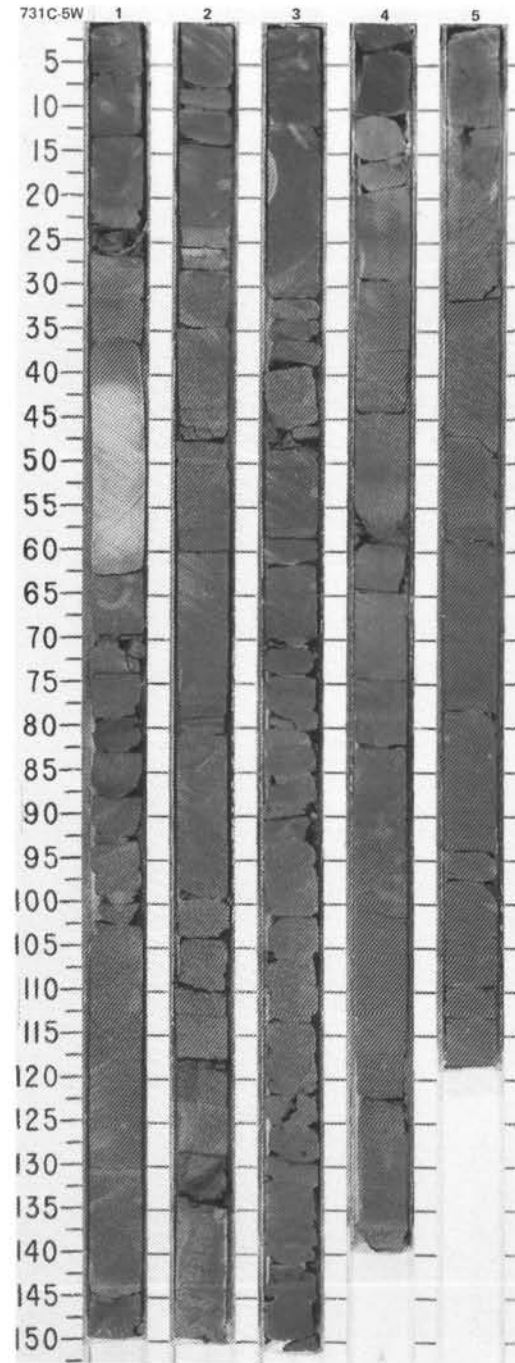
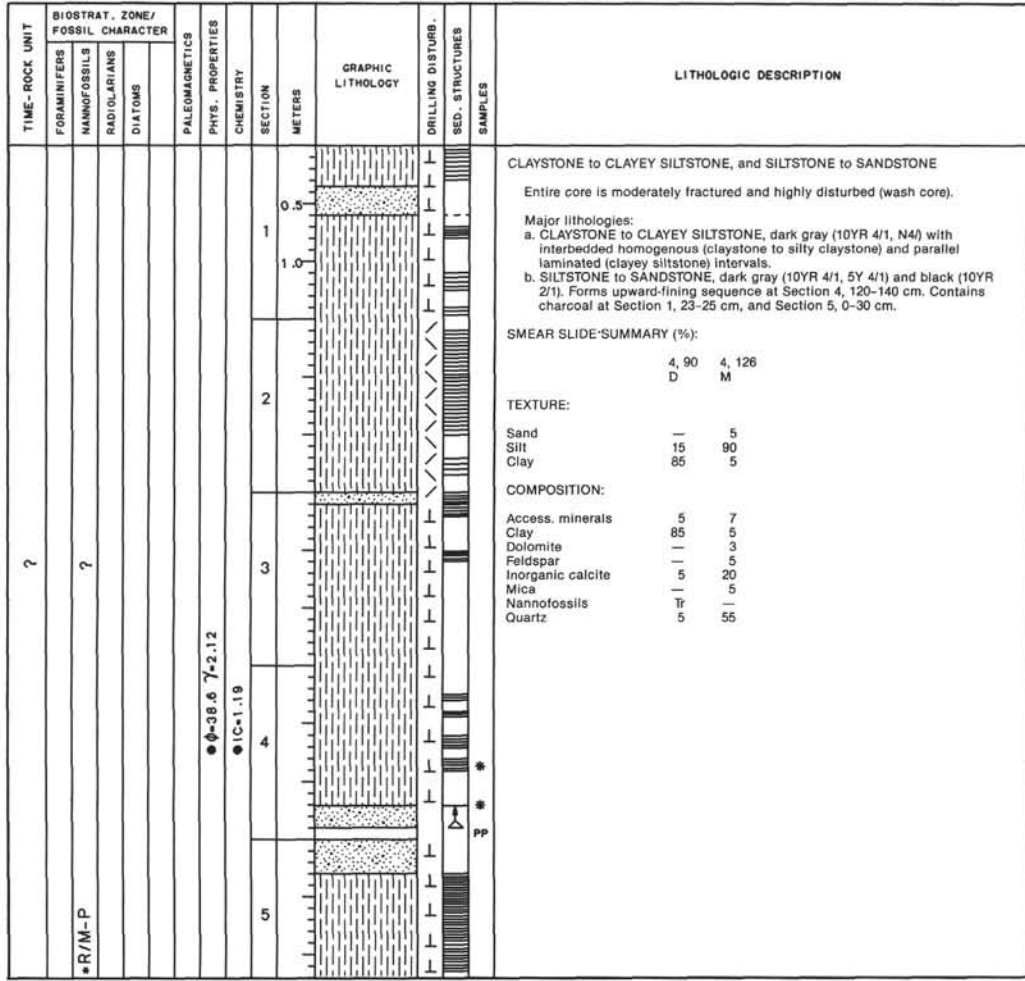
SITE 731 HOLE C CORE 3W CORED INTERVAL 2877.9-2926.0 mbsf: 512.1-560.2 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER			PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS									
MIOCENE							1 2 CC					<p>CALCITIC SILTY CLAYSTONE and CLAYEY SILTSTONE to NANNOFOSSIL-RICH CALCITIC SILTY CLAYSTONE</p> <p>Entire core is highly fractured and highly disturbed (wash core).</p> <p>Major lithology: CALCITIC SILTY CLAYSTONE and CLAYEY SILTSTONE to NANNOFOSSIL-RICH CALCITIC SILTY CLAYSTONE, olive (5Y 4/3), olive gray (5Y 5/2, 4/2), greenish gray (5G 5/1, 5BG 5/1, 5B 5/1), and reddish brown (5YR 4/3), to dark gray (5YR 4/1, 5Y 4/1), dark greenish gray (5BG 4/1), dark brown (10YR 4/3), dark grayish brown (10YR 4/2), and dark reddish brown (5YR 3/2). Predominantly homogenous, but locally bioturbated or parallel laminated.</p> <p>Minor lithology: Nannofossil chalk to foraminifer- nannofossil chalk, light greenish gray (5BG 7/1), greenish gray (5BG 6/1), and light olive gray (5Y 6/2). Generally forms sharp-based upward-fining sequences, in Section 1, 100 and 126 cm, Section 2, 60-64, 77-81, and 85-91 cm, and CC, 0-5 cm.</p>

SITE 731 HOLE C CORE 4R CORED INTERVAL 2926.0-2935.7 mbsf: 560.2-569.9 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER			PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION																																										
	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS																																																			
?							1					<p>CALCITIC SILTY CLAYSTONE and CALCITIC CLAYEY SILTSTONE</p> <p>Core is moderately disturbed and fractured.</p> <p>Major lithology: CALCITIC SILTY CLAYSTONE and CALCITIC CLAYEY SILTSTONE, dark gray (N4, 5Y 4/1), with parallel laminations in clayey siltstone at Section 1, 15-16, 60-63, 78-82, and 127-129 cm. Homogenous elsewhere.</p> <p>Minor lithology: Clayey sandstone, dark gray (5Y 4/1), with charcoal.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <table border="1"> <tr> <td></td> <td>1, 40</td> <td>1, 116</td> </tr> <tr> <td></td> <td>D</td> <td>M</td> </tr> </table> <p>TEXTURE:</p> <table border="1"> <tr> <td>Sand</td> <td>—</td> <td>50</td> </tr> <tr> <td>Silt</td> <td>20</td> <td>20</td> </tr> <tr> <td>Clay</td> <td>80</td> <td>30</td> </tr> </table> <p>COMPOSITION:</p> <table border="1"> <tr> <td>Access. minerals</td> <td>—</td> <td>2</td> </tr> <tr> <td>Clay</td> <td>49</td> <td>21</td> </tr> <tr> <td>Feldspar</td> <td>Tr</td> <td>5</td> </tr> <tr> <td>Inorganic calcite</td> <td>30</td> <td>10</td> </tr> <tr> <td>Mica</td> <td>—</td> <td>2</td> </tr> <tr> <td>Nannofossils</td> <td>1</td> <td>—</td> </tr> <tr> <td>Quartz</td> <td>20</td> <td>50</td> </tr> <tr> <td>Quartz</td> <td>50</td> <td>—</td> </tr> <tr> <td>Rock fragments</td> <td>—</td> <td>10</td> </tr> </table>		1, 40	1, 116		D	M	Sand	—	50	Silt	20	20	Clay	80	30	Access. minerals	—	2	Clay	49	21	Feldspar	Tr	5	Inorganic calcite	30	10	Mica	—	2	Nannofossils	1	—	Quartz	20	50	Quartz	50	—	Rock fragments	—	10
	1, 40	1, 116																																																				
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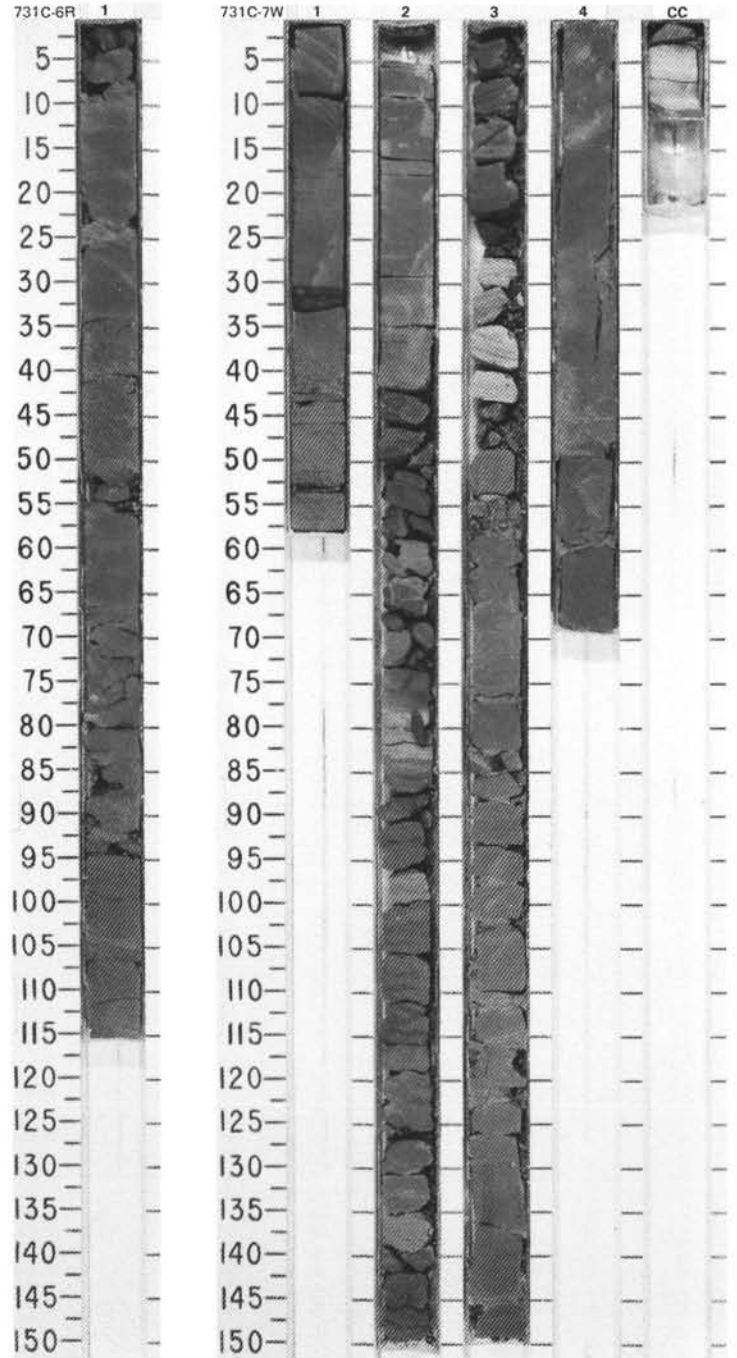


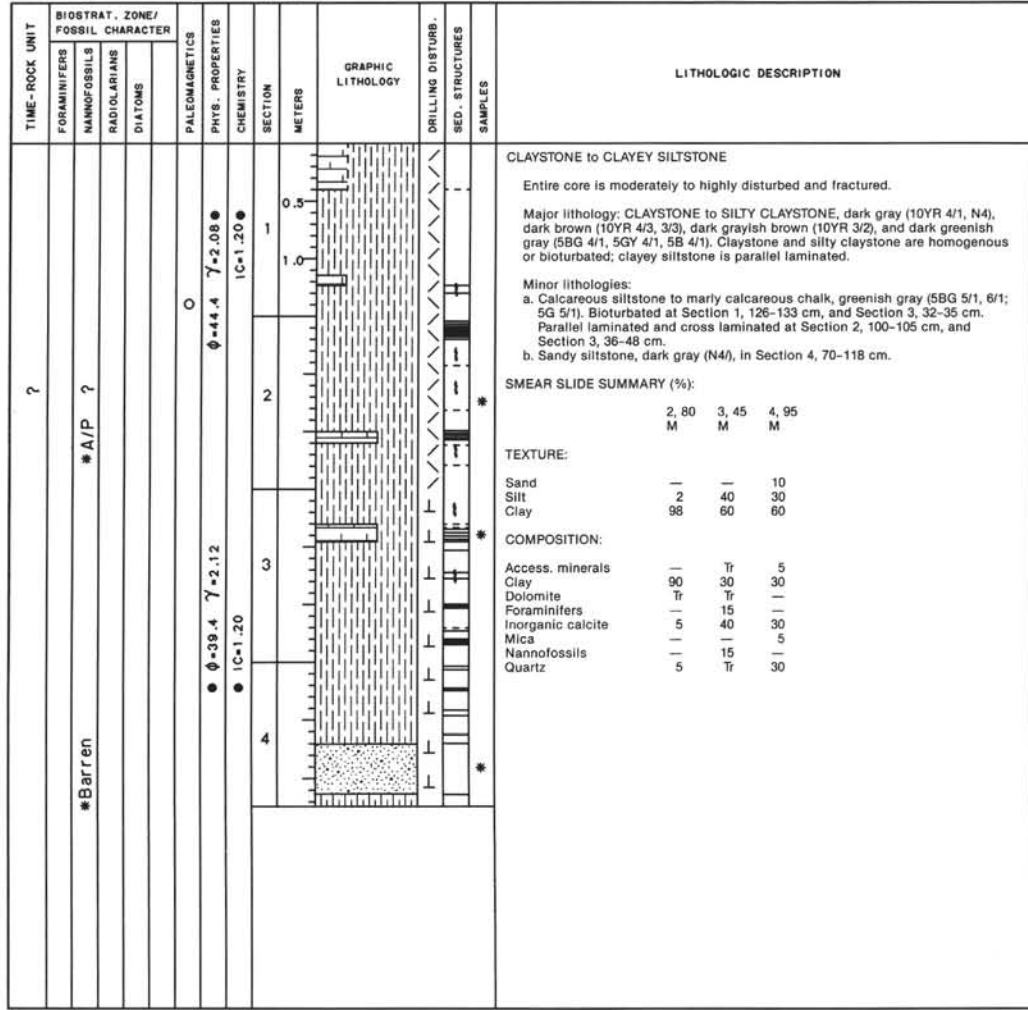
SITE 731 HOLE C CORE 6R CORED INTERVAL 2983.9-2993.6 mbsl; 618.1-627.8 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/FOSSIL CHARACTER				PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB. SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIAZONES								
?	*R/P	?			•	$\phi = -39.7$ $\gamma = 2.08$	IC-1.05	1.0 0.5 1.0				CLAYSTONE TO CLAYEY SILTSTONE Entire core is moderately disturbed and fractured. Major lithology: CLAYSTONE TO CLAYEY SILTSTONE, dark gray (10YR 4/1). Faint parallel laminations common.

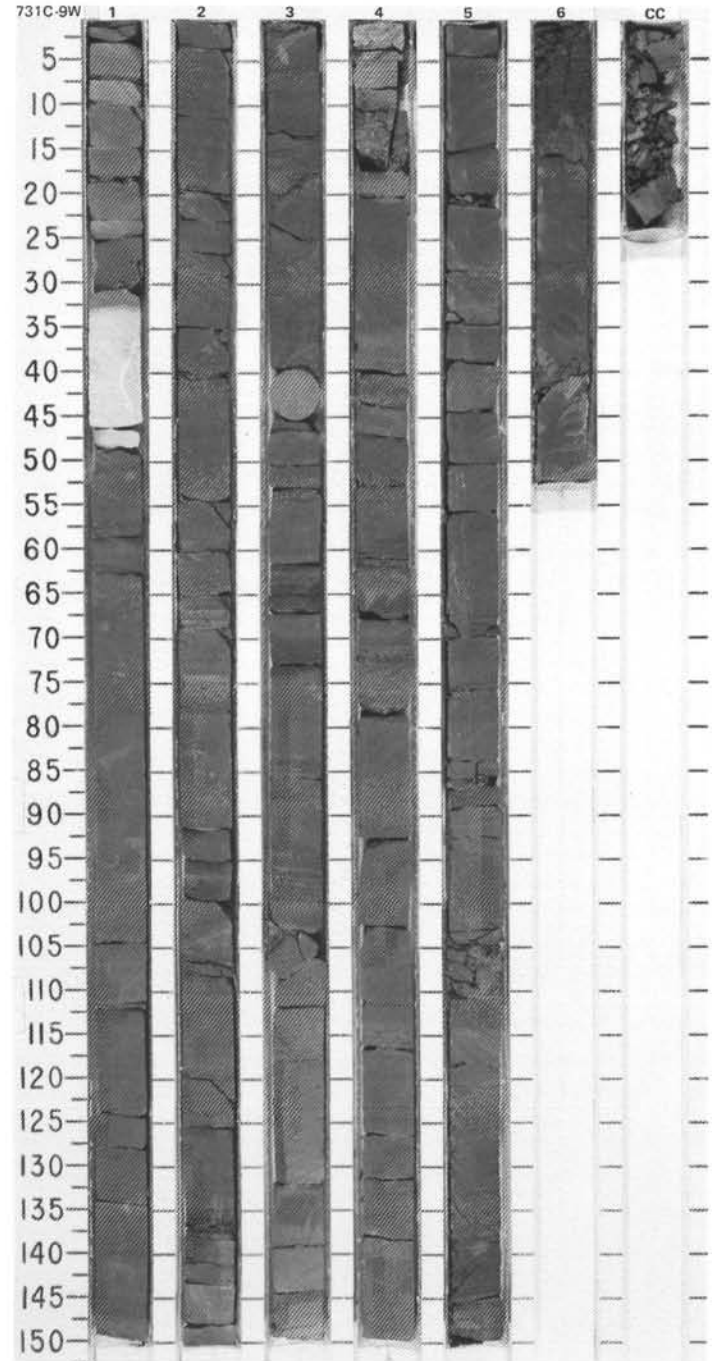
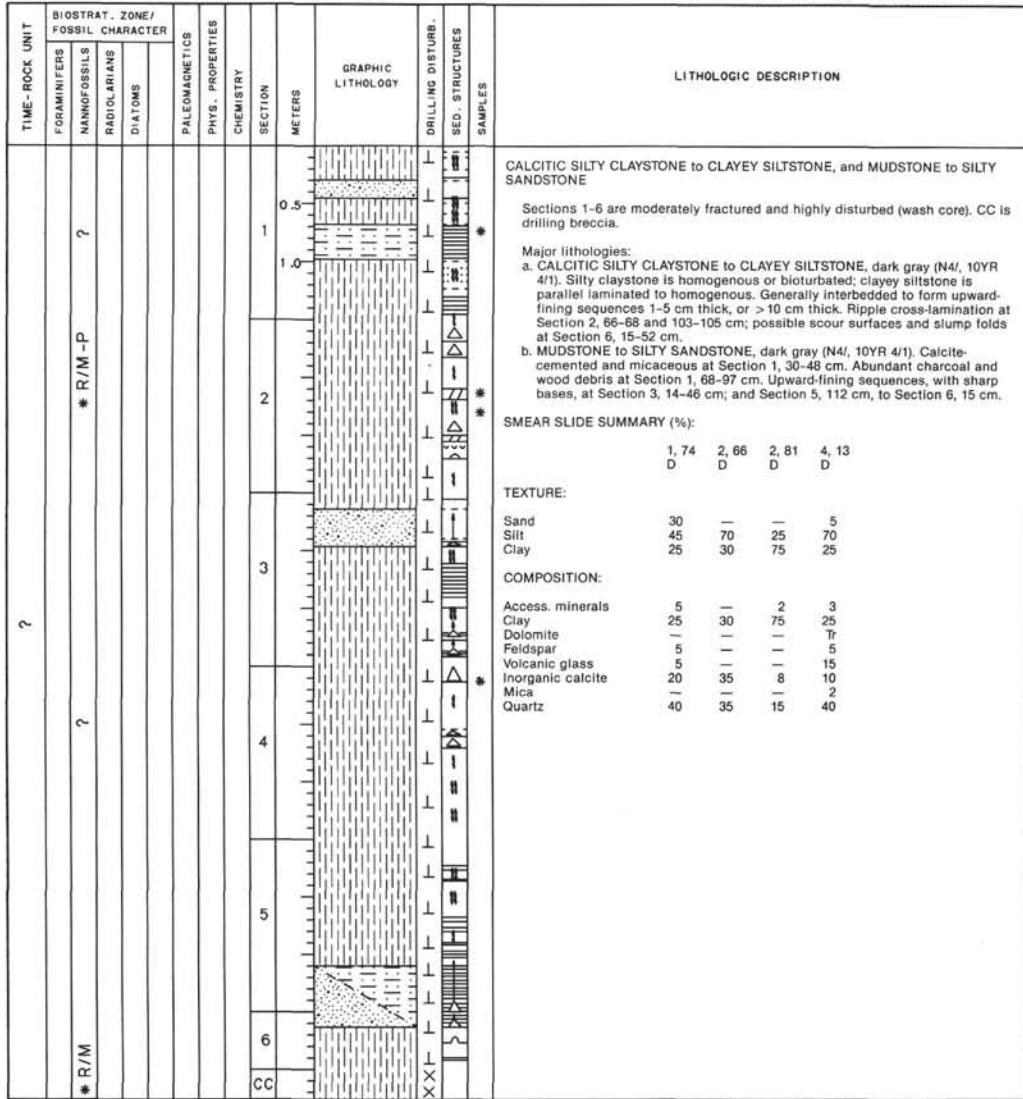
SITE 731 HOLE C CORE 7W CORED INTERVAL 2993.6-3041.7 mbsl; 627.8-675.9 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/FOSSIL CHARACTER				PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB. SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIAZONES								
?	*V/P	?			•	$\phi = -39.4$ $\gamma = 2.09$	IC-1.20	1.0 0.5 1.0 2.0 3.0 4.0 CC				CLAYSTONE TO CLAYEY SILTSTONE Entire core is moderately to highly fractured and highly disturbed (wash core). Major lithology: CLAYSTONE TO CLAYEY SILTSTONE, dark gray (10YR 4/1) to dark greenish gray (5G 4/1). Claystone intervals are homogenous to bioturbated; clayey siltstone intervals contain parallel laminations. Folded 1-cm-thick sandstone laminae at Section 3, 40-75 cm, is possible slump deposit. Minor lithology: Clayey siltstone to marly calcareous chalk, greenish gray (5G 6/1). Parallel laminations present to common, bioturbated with Zoophycos. Section 3, 25-40 cm. SMEAR SLIDE SUMMARY (%): 1, 30 M TEXTURE: Sand 30 Silt 50 Clay 20 COMPOSITION: Access. minerals 10 Clay 15 Feldspar 1 Inorganic calcite 15 Mica 1 Quartz 48

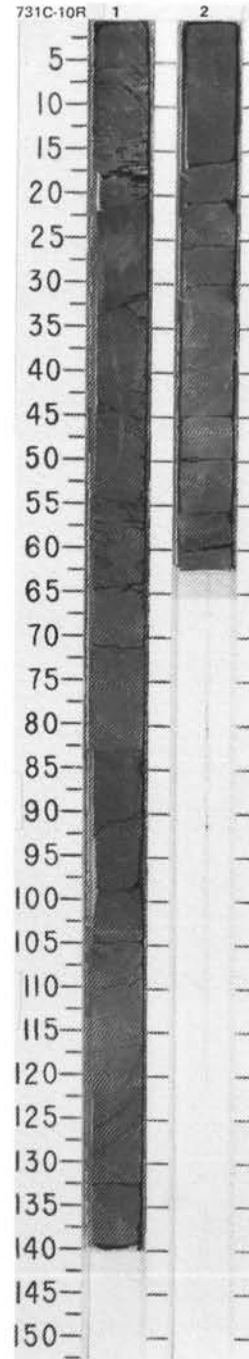




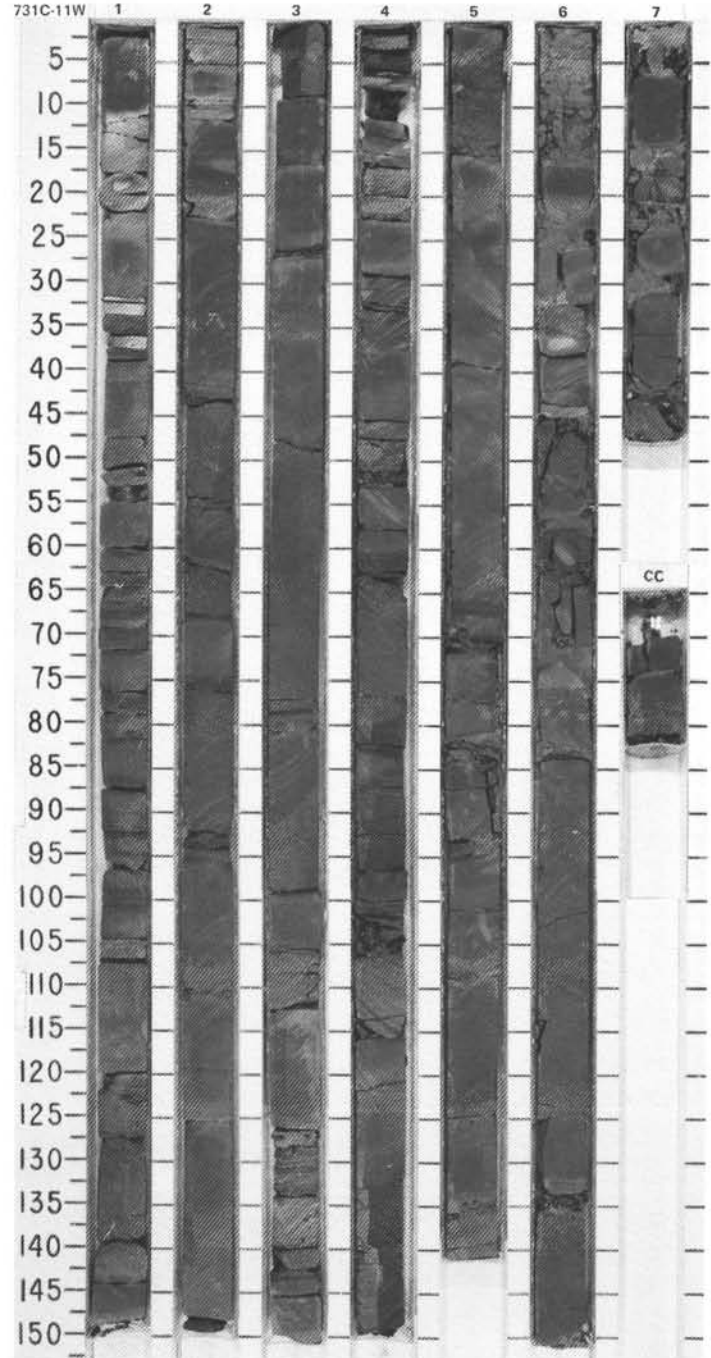
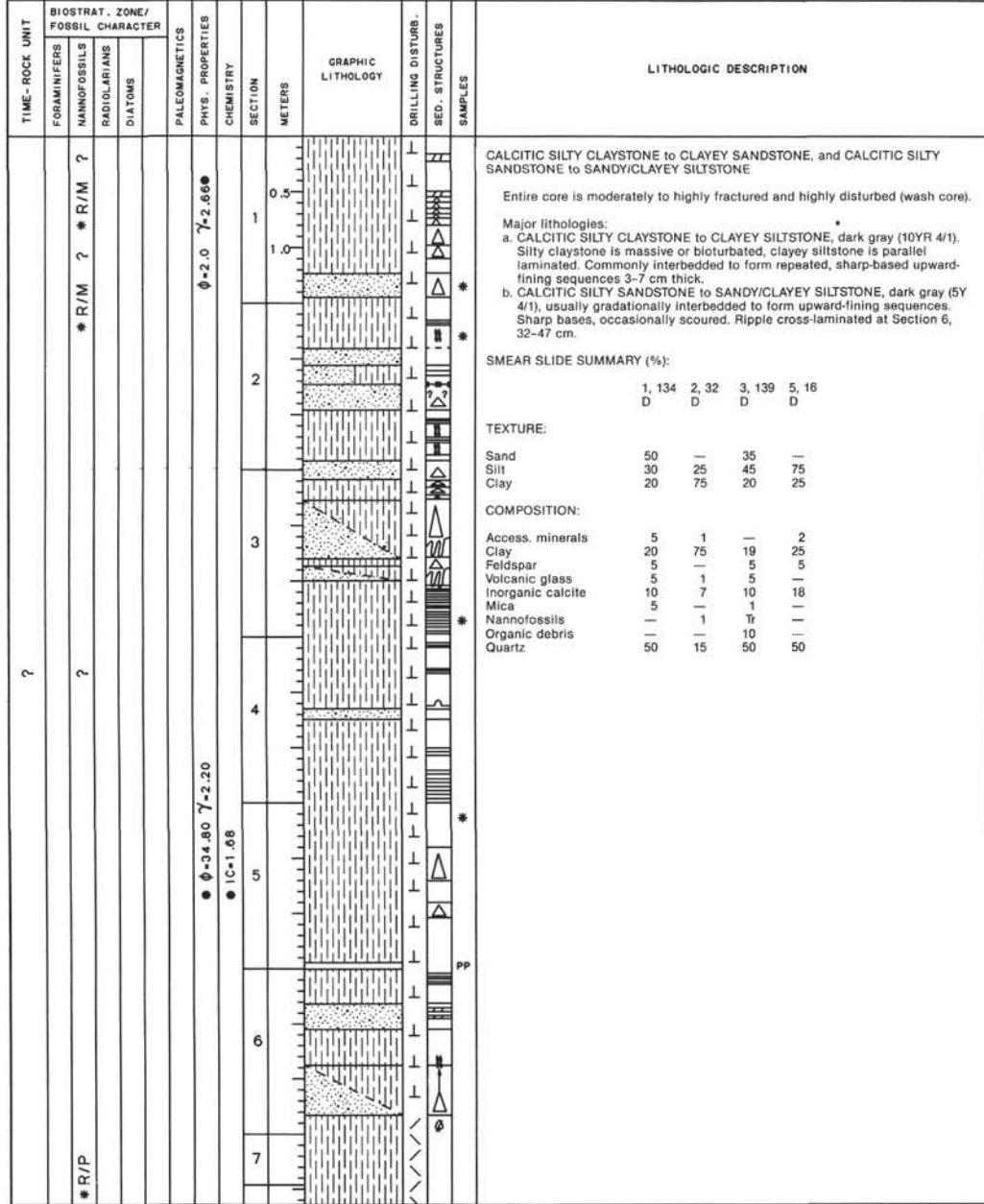
SITE 731 HOLE C CORE 9W CORED INTERVAL 3051.4-3099.4 mbsl; 685.6-733.6 mbsf



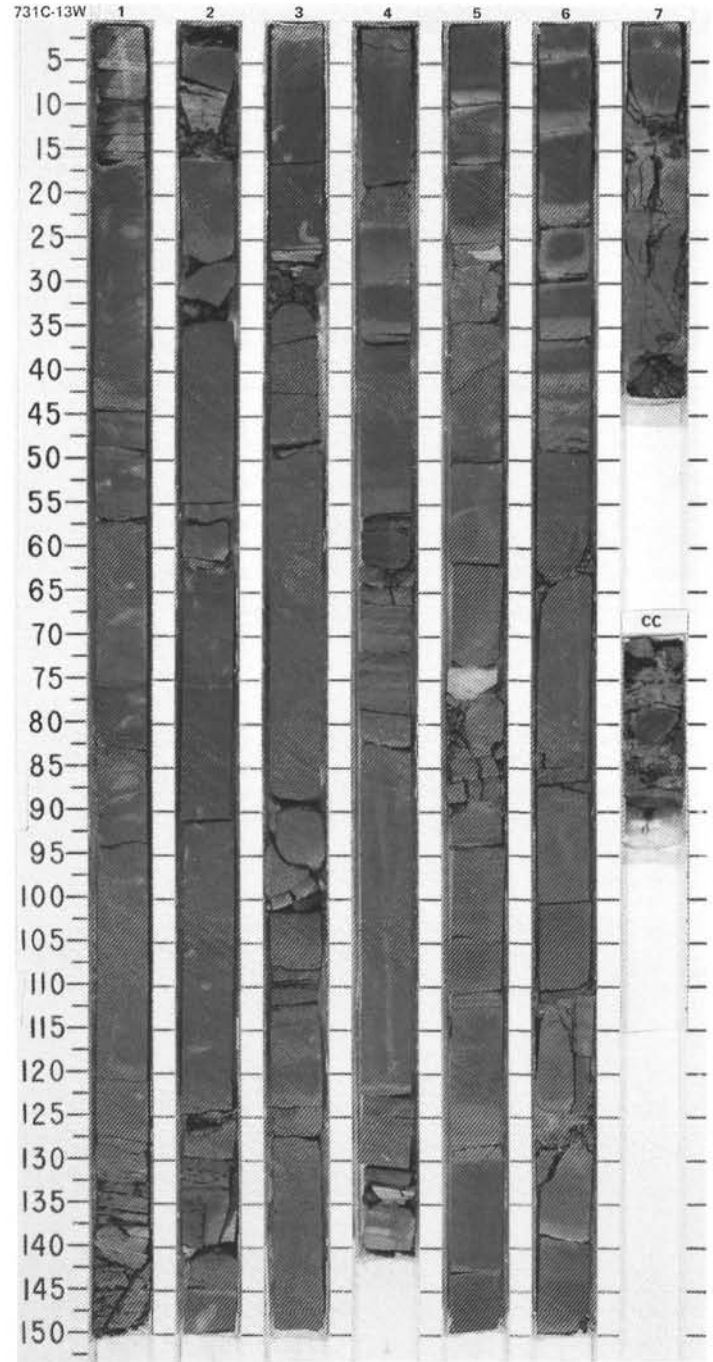
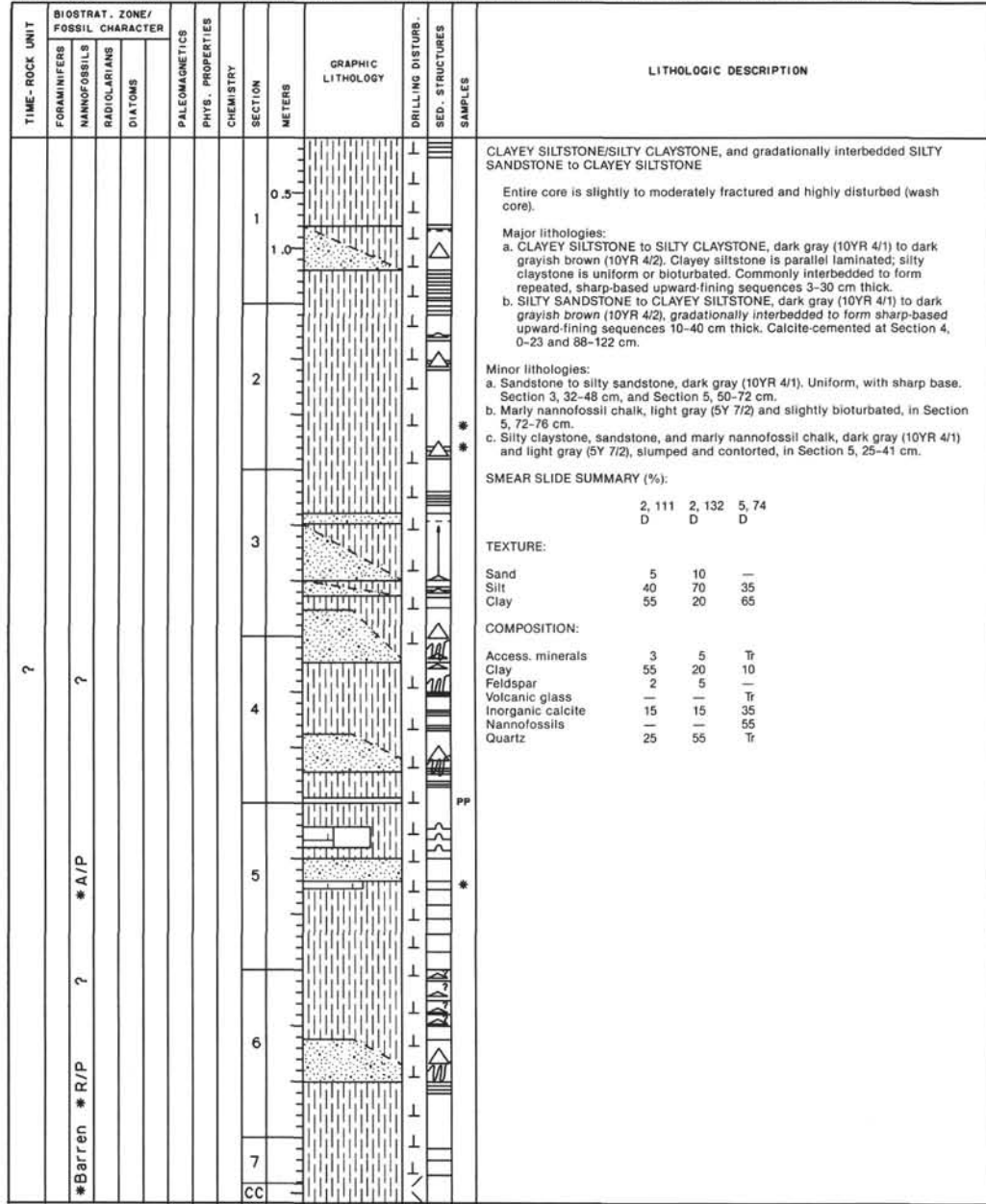
TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER			PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION																																																			
	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS											DIATOMS																																																		
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	*R/M				0-31.3 0-26.7 1-2.27 1-2.21 0-34.3 0-2.12 IC=1.33 IC=0.02 IC=1.79							Gradationally interbedded SILTY SANDSTONE to SILTY CLAYSTONE Entire core is moderately disturbed and fractured. Major lithology: SILTY SANDSTONE to CALCITIC SILTY CLAYSTONE, dark gray (10YR 4/1), and gradationally interbedded to form upward-fining sequences 3-85 cm thick. Sharp bases, with minor parallel laminations. Minor lithology: Silty claystone, dark gray (10YR 4/1), homogenous, in Section 2, 16-20, 23-25, and 31-62 cm. SMEAR SLIDE SUMMARY (%): <table style="margin-left: 20px;"> <tr> <td></td> <td>1, 15</td> <td>1, 26</td> <td>1, 100</td> </tr> <tr> <td></td> <td>D</td> <td>D</td> <td>D</td> </tr> </table> TEXTURE: <table style="margin-left: 20px;"> <tr> <td>Sand</td> <td>—</td> <td>—</td> <td>60</td> </tr> <tr> <td>Silt</td> <td>75</td> <td>45</td> <td>30</td> </tr> <tr> <td>Clay</td> <td>25</td> <td>55</td> <td>10</td> </tr> </table> COMPOSITION: <table style="margin-left: 20px;"> <tr> <td>Access. minerals</td> <td>5</td> <td>5</td> <td>5</td> </tr> <tr> <td>Clay</td> <td>25</td> <td>55</td> <td>10</td> </tr> <tr> <td>Dolomite</td> <td>2</td> <td>—</td> <td>2</td> </tr> <tr> <td>Feldspar</td> <td>—</td> <td>—</td> <td>5</td> </tr> <tr> <td>Volcanic glass</td> <td>3</td> <td>—</td> <td>8</td> </tr> <tr> <td>Inorganic calcite</td> <td>25</td> <td>10</td> <td>5</td> </tr> <tr> <td>Mica</td> <td>—</td> <td>—</td> <td>5</td> </tr> <tr> <td>Quartz</td> <td>40</td> <td>30</td> <td>60</td> </tr> </table>		1, 15	1, 26	1, 100		D	D	D	Sand	—	—	60	Silt	75	45	30	Clay	25	55	10	Access. minerals	5	5	5	Clay	25	55	10	Dolomite	2	—	2	Feldspar	—	—	5	Volcanic glass	3	—	8	Inorganic calcite	25	10	5	Mica	—	—	5	Quartz	40	30	60
	1, 15	1, 26	1, 100																																																													
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Mica	—	—	5																																																													
Quartz	40	30	60																																																													



SITE 731 HOLE C CORE 11W CORED INTERVAL 3109.1-3157.3 mbsl; 743.3-791.5 mbsf

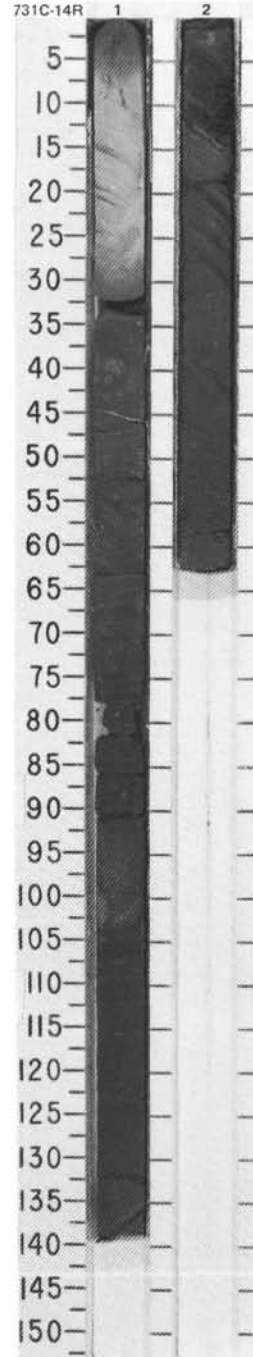


SITE 731 HOLE C CORE 13W CORED INTERVAL 3166.9-3215.2 mbsl; 801.1-849.4 mbsf



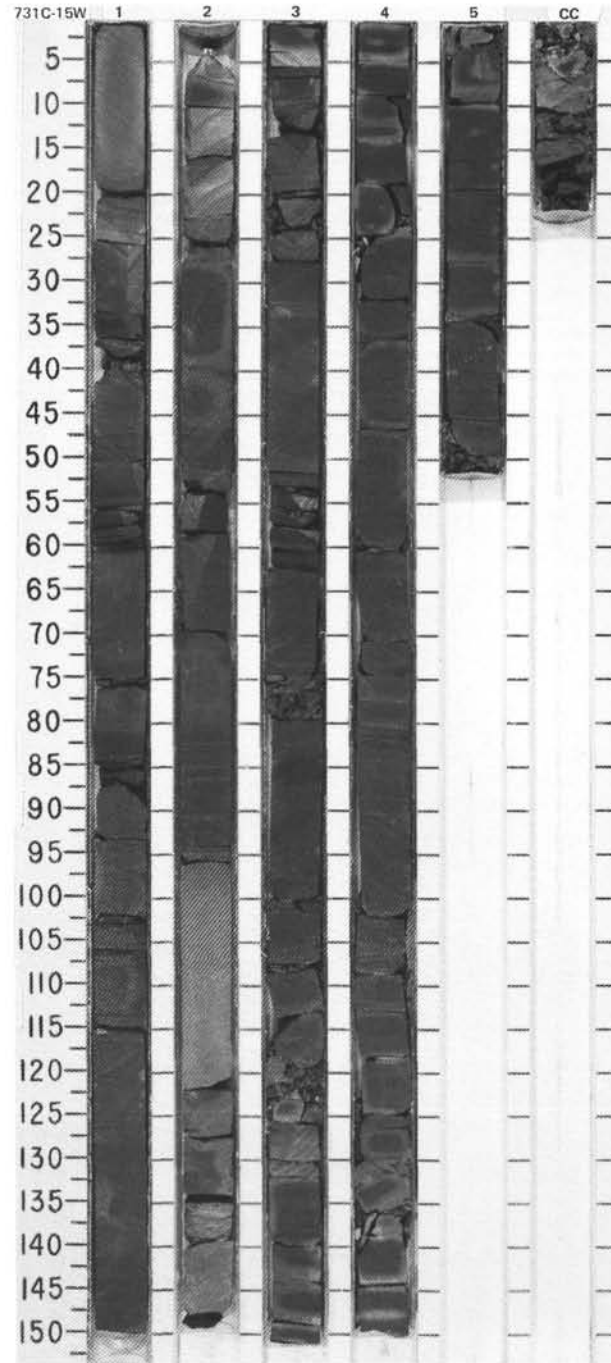
SITE 731 HOLE C CORE 14R CORED INTERVAL 3215.2-3224.9 mbsl; 849.4-859.1 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER			PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	BED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION																																				
	FORAMINIFERS	NAUFOSSILS	RADIOLARIANS																																														
?													<p>SILTY SANDSTONE</p> <p>Entire core is moderately disturbed and fractured.</p> <p>Major lithology: SILTY SANDSTONE, dark gray (10YR 4/1), with minor parallel lamination. Calcite-cemented at Section 1, 0-33 cm.</p> <p>Minor lithology: Calcitic clayey siltstone, dark gray (10YR 4/1) and homogenous, in Section 1, 33-48 cm.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <table border="1"> <tr> <td></td> <td>1, 40</td> <td>1, 116</td> </tr> <tr> <td>D</td> <td>D</td> <td>D</td> </tr> </table> <p>TEXTURE:</p> <table border="1"> <tr> <td>Sand</td> <td>5</td> <td>45</td> </tr> <tr> <td>Silt</td> <td>60</td> <td>35</td> </tr> <tr> <td>Clay</td> <td>35</td> <td>20</td> </tr> </table> <p>COMPOSITION:</p> <table border="1"> <tr> <td>Access. minerals</td> <td>5</td> <td>5</td> </tr> <tr> <td>Clay</td> <td>30</td> <td>20</td> </tr> <tr> <td>Feldspar</td> <td>—</td> <td>5</td> </tr> <tr> <td>Volcanic glass</td> <td>3</td> <td>5</td> </tr> <tr> <td>Inorganic calcite</td> <td>25</td> <td>10</td> </tr> <tr> <td>Mica</td> <td>2</td> <td>2</td> </tr> <tr> <td>Quartz</td> <td>35</td> <td>50</td> </tr> </table>		1, 40	1, 116	D	D	D	Sand	5	45	Silt	60	35	Clay	35	20	Access. minerals	5	5	Clay	30	20	Feldspar	—	5	Volcanic glass	3	5	Inorganic calcite	25	10	Mica	2	2	Quartz	35	50
	1, 40	1, 116																																															
D	D	D																																															
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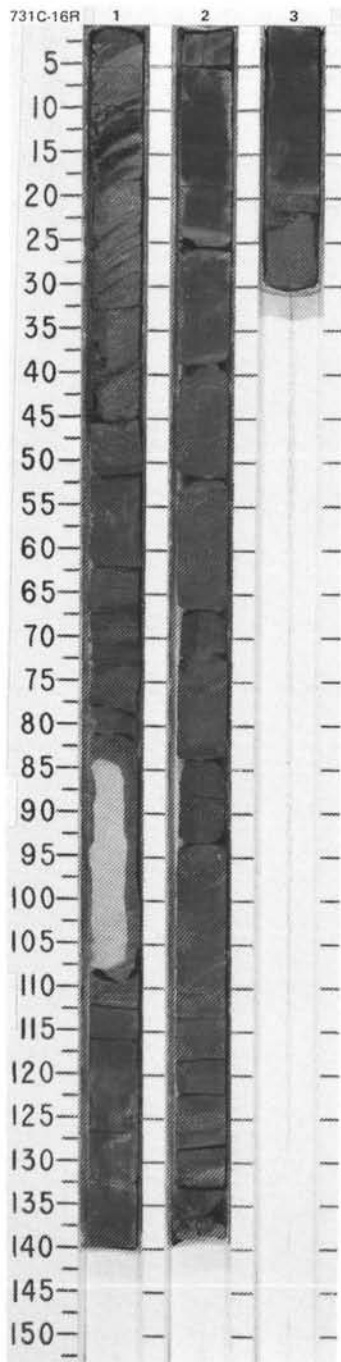


SITE 731 HOLE C CORE 15W CORED INTERVAL 3224.9-3273.1 mbsl; 859.1-907.3 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER				PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS										
?								1	0.5					<p>SILTY CLAYSTONE to CLAYEY SILTSTONE</p> <p>Entire core is moderately to highly fractured and highly disturbed (wash core).</p> <p>Major lithology: SILTY CLAYSTONE to CLAYEY SILTSTONE, very dark gray (5Y 3/1) to very dark grayish brown (10YR 3/2). Clayey siltstone is parallel laminated, silty claystone is uniform or bioturbated. Sharp-based upward-fining sequences 5-20 cm thick are common. Small slump folds and dewatering structures common in Sections 1 and 2.</p> <p>Minor lithology: Sandstone, gray (5Y 5/1) to dark gray (5Y 4/1). Inversely graded at Section 1, 0-24 cm, bioturbated or with convolute bedding at Section 1, 86-100 cm, and uniform at Section 2, 93-120 cm.</p>
							2	1.0						
							3							
							4							
							5							
							CC							



TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER				PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION																																	
	FORAMINIFERS	NAUPOSSIBLS	RADIOLARIANS	DIATOMS																																											
?									0.5 1.0					<p>SILTY CLAYSTONE to CLAYEY SILTSTONE</p> <p>Entire core is moderately disturbed and fractured.</p> <p>Major lithology: SILTY CLAYSTONE to CLAYEY SILTSTONE, dark gray (5Y 4/1, 5YR 4/1) to very dark gray (10YR 3/2), with abundant parallel lamination.</p> <p>Minor lithology: Sandy siltstone to silty sandstone, gray (N5), homogenous, calcite-cemented, Section 1, 0-2 and 80-108 cm.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <table border="0"> <tr> <td></td> <td>1, 120</td> <td>2, 90</td> </tr> <tr> <td></td> <td>D</td> <td>M</td> </tr> </table> <p>TEXTURE:</p> <table border="0"> <tr> <td>Sand</td> <td>—</td> <td>90</td> </tr> <tr> <td>Silt</td> <td>30</td> <td>6</td> </tr> <tr> <td>Clay</td> <td>70</td> <td>4</td> </tr> </table> <p>COMPOSITION:</p> <table border="0"> <tr> <td>Access. minerals</td> <td>—</td> <td>15</td> </tr> <tr> <td>Clay</td> <td>60</td> <td>—</td> </tr> <tr> <td>Feldspar</td> <td>—</td> <td>10</td> </tr> <tr> <td>Inorganic calcite</td> <td>10</td> <td>—</td> </tr> <tr> <td>Mica</td> <td>—</td> <td>Tr</td> </tr> <tr> <td>Quartz</td> <td>30</td> <td>75</td> </tr> </table>		1, 120	2, 90		D	M	Sand	—	90	Silt	30	6	Clay	70	4	Access. minerals	—	15	Clay	60	—	Feldspar	—	10	Inorganic calcite	10	—	Mica	—	Tr	Quartz	30	75
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Mica	—	Tr																																													
Quartz	30	75																																													
	#R/P				● 30.3 ● 29.4 ● 28.25 ● 27.23 ● 1C=1.45 ● 1C=1.32 ● 1C=1.18			1 2 CC																																							

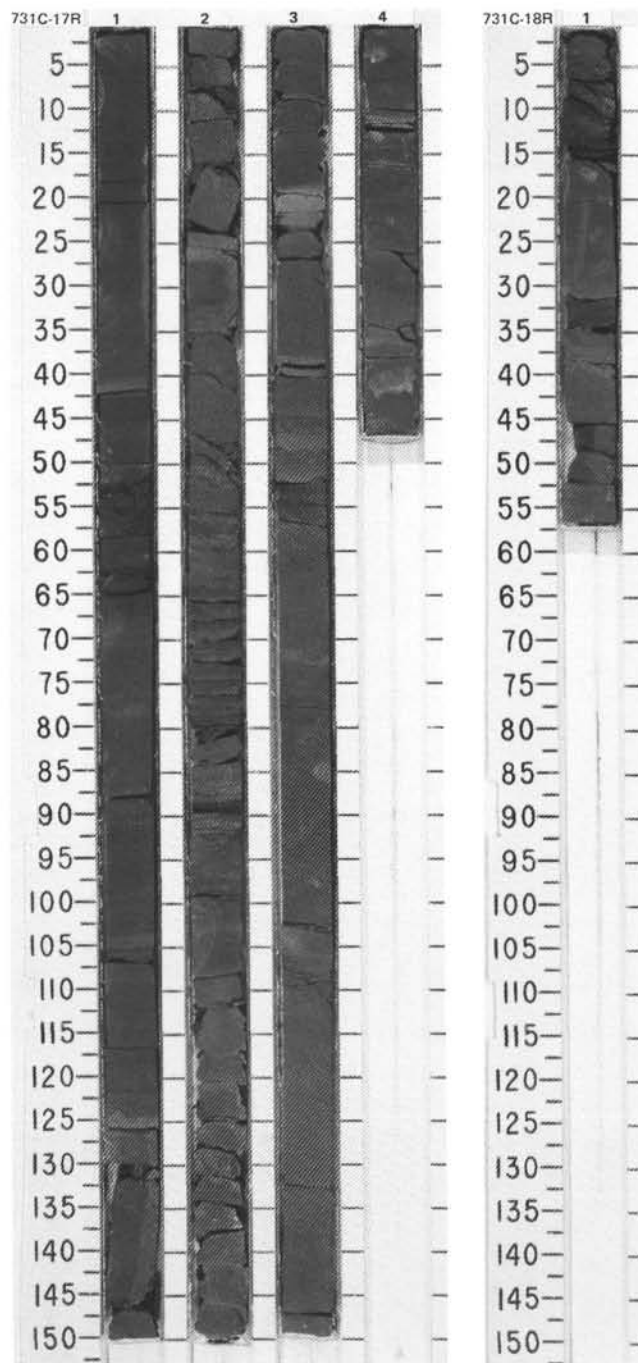


SITE 731 HOLE C CORE 17R CORED INTERVAL 3282.5-3292.2 mbsf; 916.7-926.4 mbsf

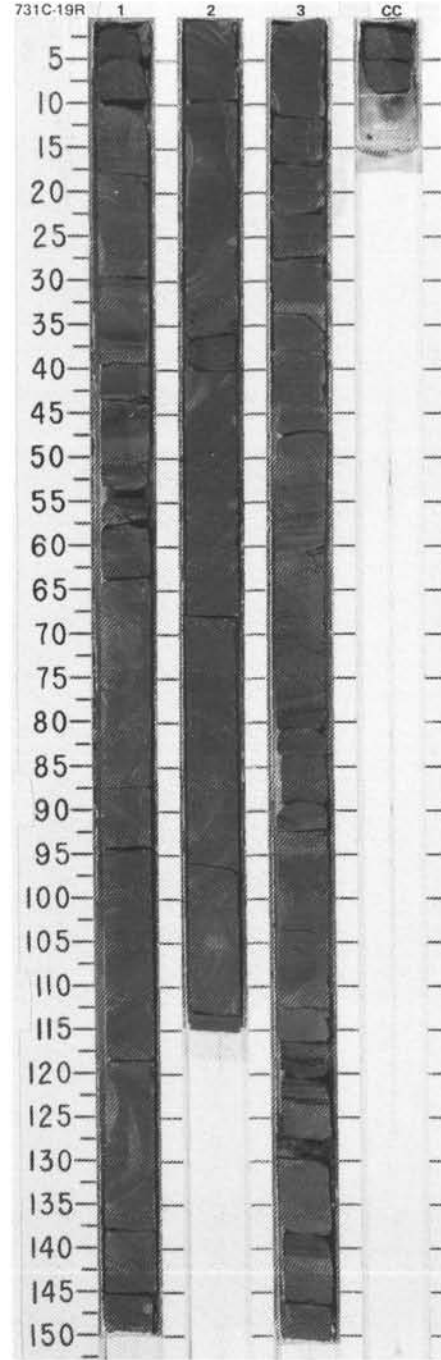
TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER				PALEOMAGNETICS	PHYS. PROPERTIES CHEMISTRY	SECTION METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES SAMPLES	LITHOLOGIC DESCRIPTION																																			
	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS																																										
?	#Brrgn				• $\phi=24.5$ $\gamma=2.30$ • IC=1.21	0.5 1.0 2 3 4				<p>SILTY CLAYSTONE to CLAYEY SILTSTONE, SANDSTONE, and gradationally interbedded SANDSTONE to SILTY CLAYSTONE</p> <p>Entire core is slightly to moderately disturbed and fractured.</p> <p>Major lithologies:</p> <p>a. SILTY CLAYSTONE to CLAYEY SILTSTONE, dark gray (N4) to very dark grayish brown (10YR 3/2) and very dark gray (5Y 3/1). Silty claystone is massive or bioturbated, and clayey siltstone is parallel laminated. Commonly interbedded to form sequences of repeated, sharp-based upward-fining intervals 3-10 cm thick.</p> <p>b. SANDSTONE, dark gray (5Y 4/1) to very dark grayish brown (10YR 3/2) and very dark gray (5Y 3/1). Massive.</p> <p>c. SANDSTONE to SILTY CLAYSTONE, dark gray (5Y 4/1) to very dark grayish brown (10YR 3/2) and very dark gray (5Y 3/1). Gradationally interbedded to form upward-fining sequences.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <table border="1"> <tr> <td></td> <td>3, 30</td> <td>3, 82</td> </tr> <tr> <td>D</td> <td></td> <td>D</td> </tr> </table> <p>TEXTURE:</p> <table border="1"> <tr> <td>Sand</td> <td>70</td> <td>—</td> </tr> <tr> <td>Silt</td> <td>10</td> <td>5</td> </tr> <tr> <td>Clay</td> <td>20</td> <td>95</td> </tr> </table> <p>COMPOSITION:</p> <table border="1"> <tr> <td>Access. minerals</td> <td>5</td> <td>Tr</td> </tr> <tr> <td>Clay</td> <td>20</td> <td>90</td> </tr> <tr> <td>Feldspar</td> <td>5</td> <td>—</td> </tr> <tr> <td>Inorganic calcite</td> <td>10</td> <td>5</td> </tr> <tr> <td>Mica</td> <td>5</td> <td>—</td> </tr> <tr> <td>Nannofossils</td> <td>Tr</td> <td>3</td> </tr> <tr> <td>Quartz</td> <td>55</td> <td>2</td> </tr> </table>		3, 30	3, 82	D		D	Sand	70	—	Silt	10	5	Clay	20	95	Access. minerals	5	Tr	Clay	20	90	Feldspar	5	—	Inorganic calcite	10	5	Mica	5	—	Nannofossils	Tr	3	Quartz	55	2
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Nannofossils	Tr	3																																												
Quartz	55	2																																												

SITE 731 HOLE C CORE 18R CORED INTERVAL 3292.2-3301.9 mbsf; 926.4-936.1 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER				PALEOMAGNETICS	PHYS. PROPERTIES CHEMISTRY	SECTION METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES SAMPLES	LITHOLOGIC DESCRIPTION
	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS							
?	#R/P ?					1				<p>CLAYEY SILTSTONE to SANDY SILTSTONE</p> <p>Entire core is moderately disturbed and fractured.</p> <p>Major lithology: CLAYEY SILTSTONE to SANDY SILTSTONE, very dark grayish brown (10YR 3/2). Clayey siltstone is parallel laminated, sandy siltstone is micaceous and contains charcoal.</p>	

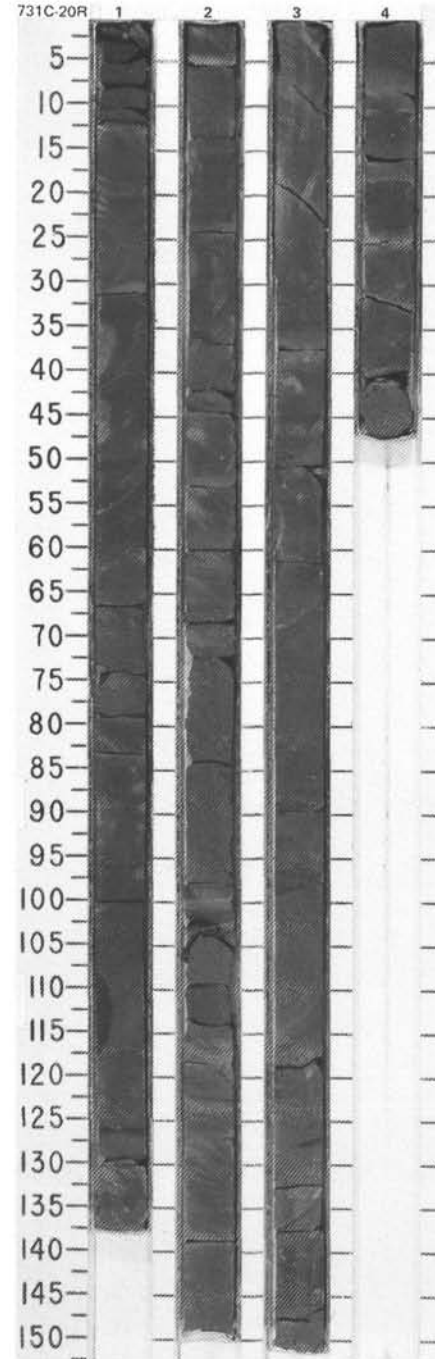


TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER			PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB. SEP. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
	FORAMINIFERS N/ NOFOSSILS	RADIOLARIANS	DIATOMS									
?				O	● 0-29.1 γ +2.33	● IC-1.05	1	0.5 1.0				<p>SILTY CLAYSTONE to CLAYEY SILTSTONE</p> <p>Entire core is moderately disturbed and fractured.</p> <p>Major lithology: SILTY CLAYSTONE to CLAYEY SILTSTONE, dark gray (5YR 4/1, 5Y 4/1) to very dark gray (5Y 3/1). Silty claystone is massive or bioturbated, and clayey siltstone is parallel laminated. Commonly interbedded to form sequences of repeated, sharp-based upward-fining intervals 3-20 cm thick.</p> <p>Minor lithology: Sandstone to silty sandstone, dark gray (5YR 4/1, 5Y 4/1) to very dark gray (5Y 3/1), massive, in Section 1, 0-10 cm, Section 3, 85-95 cm, and CC.</p>
	*R/P				● 0-29.1 γ +2.33	● IC-1.05	2					
					● 0-29.1 γ +2.33	● IC-1.05	3					
					● 0-29.1 γ +2.33	● IC-1.05	CC					



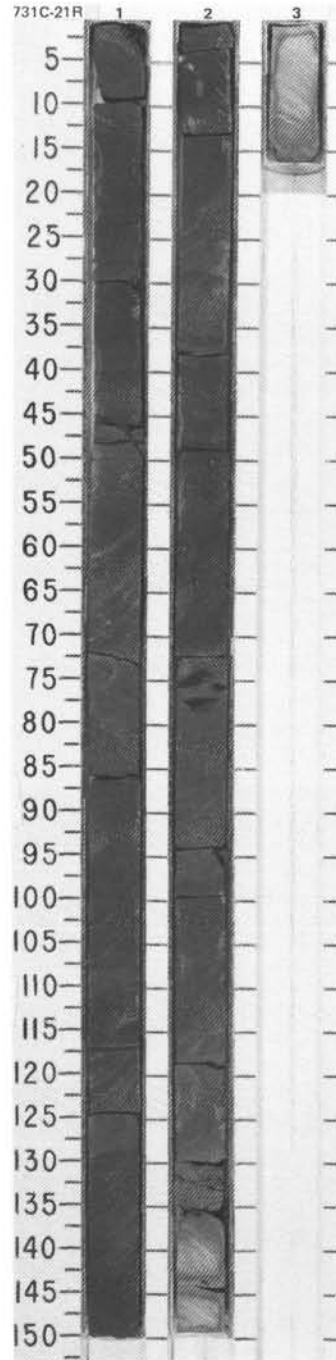
SITE 731 HOLE C CORE 20R CORED INTERVAL 3311.5-3321.2 mbsf; 945.7-955.4 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER				PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIAZONIS										
					●	γ = 32.0 δ = 2.25	1C-1.29	1	0.5	[Lithology symbols]				<p>SILTY CLAYSTONE to CLAYEY SILTSTONE and SANDSTONE to SILTSTONE</p> <p>Entire core is moderately disturbed and fractured.</p> <p>Major lithologies:</p> <p>a. SILTY CLAYSTONE to CLAYEY SILTSTONE, dark gray (N4) to very dark gray (5Y 3/1) and very dark grayish brown (10YR 3/2). Silty claystone is massive or bioturbated, and clayey siltstone is parallel laminated. Commonly interbedded to form sequences of repeated, sharp-based upward-fining intervals 3-10 cm thick.</p> <p>b. SANDSTONE to SILTSTONE, dark gray (N4) to very dark gray (5Y 3/1) and very dark grayish brown (10YR 3/2). Generally massive, with charcoal common and claystone lithoclasts rare. Minor upward-fining sequences in Section 4.</p>
								1	1.0	[Lithology symbols]				
								2		[Lithology symbols]				
								2		[Lithology symbols]				
								3		[Lithology symbols]				
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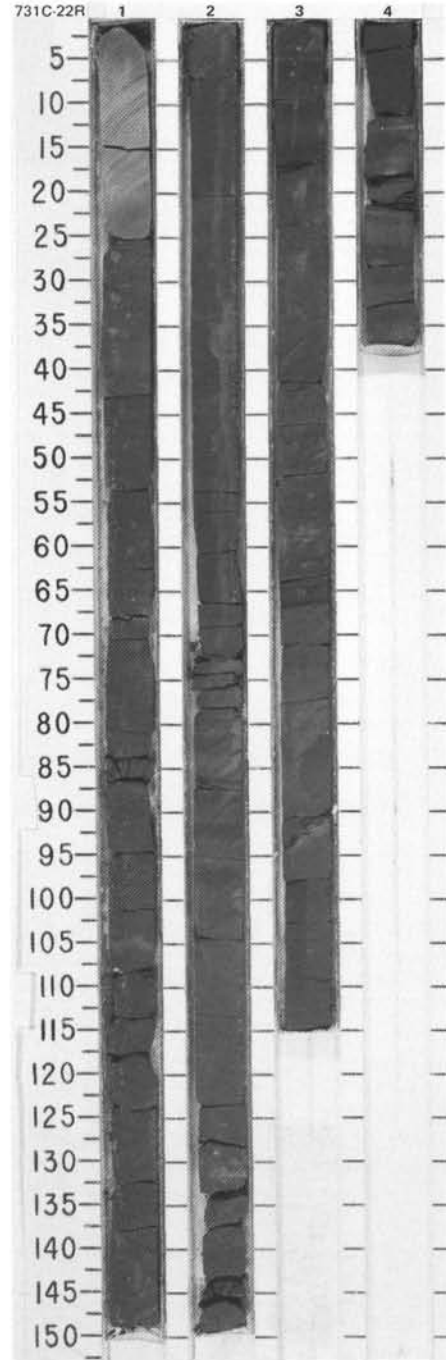
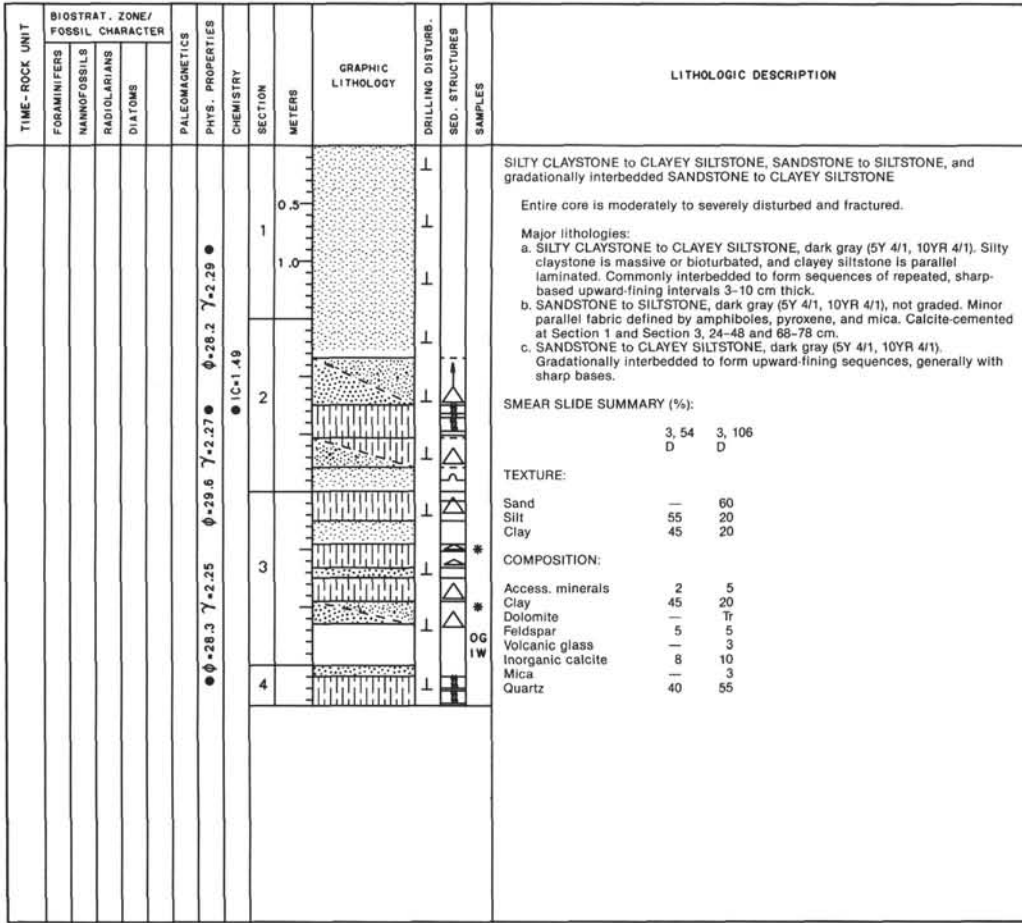


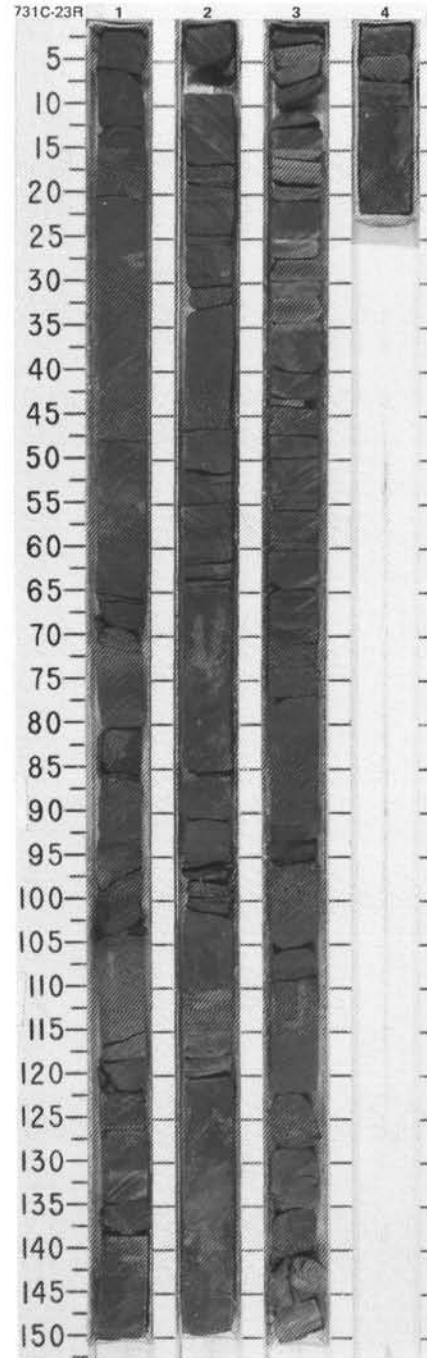
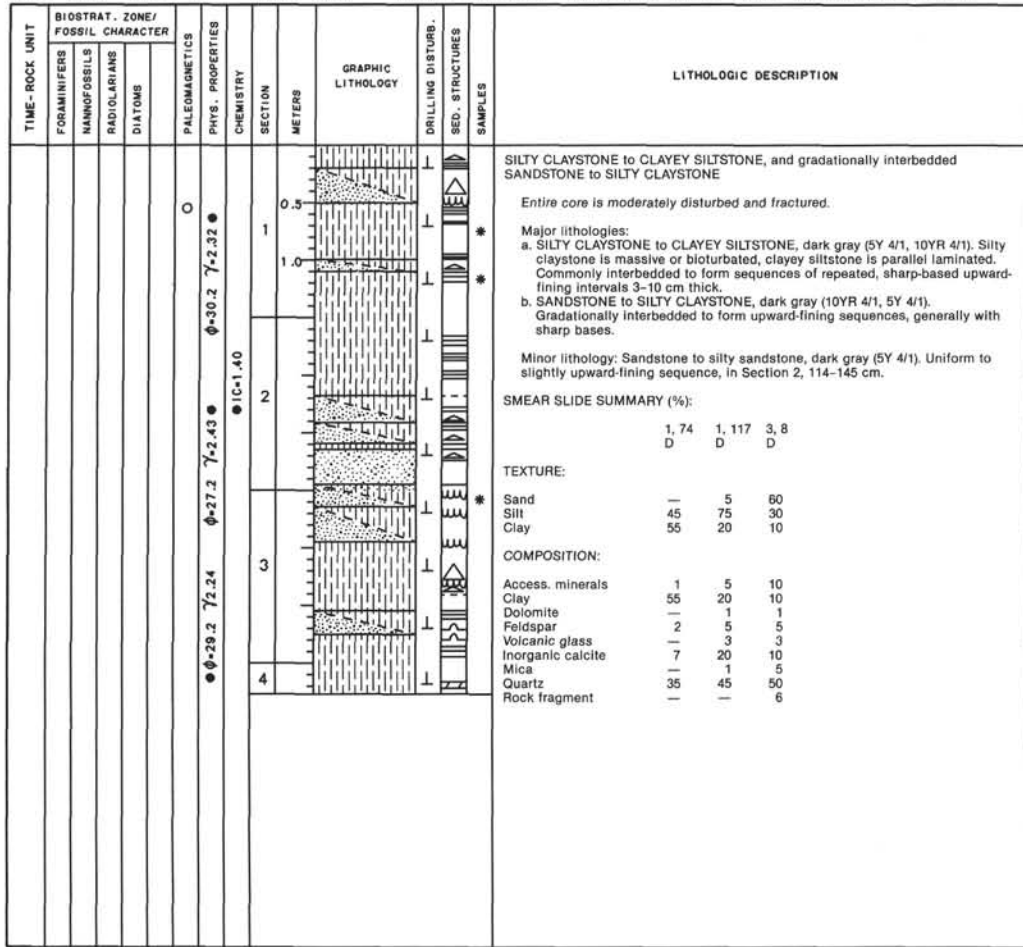
SITE 731 HOLE C CORE 21R CORED INTERVAL 3321.2-3330.9 mbsl; 955.4-965.1 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER			PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS										
													<p>SILTY CLAYSTONE to CLAYEY SILTSTONE and SANDSTONE to SILTSTONE</p> <p>Entire core is moderately disturbed and fractured.</p> <p>Major lithologies:</p> <p>a. SILTY CLAYSTONE to CLAYEY SILTSTONE, very dark grayish brown (10YR 3/2) and very dark gray (5Y 3/1). Silty claystone is massive or bioturbated, and clayey siltstone is parallel laminated. Commonly interbedded to form sequences of repeated, sharp-based upward-fining intervals 3-10 cm thick.</p> <p>b. SANDSTONE to SILTSTONE, very dark gray (5Y 3/1) to very dark grayish brown (10YR 3/2). Generally massive, with charcoal common, and rare claystone lithoclasts. Slumped zones at Section 1, 70-80 cm, and Section 2, 15-35 cm. Calcite-cemented at Section 2, 136 cm, to Section 3.</p>
					<p>0</p> <p>$\phi = 33.7$ $\gamma = 2.27$ ●</p> <p>$\phi = 31.0$ $\gamma = 2.25$ ●</p> <p>$\phi = 3.7$ $\gamma = 2.63$ ●</p>	<p>IC-1.43 ●</p> <p>IC-1.54 ●</p>	<p>1</p> <p>2</p> <p>3</p>	<p>0.5</p> <p>1.0</p>					



SITE 731 HOLE C CORE 22R CORED INTERVAL 3330.9-3340.6 mbsf; 965.1-974.8 mbsf





SITE 731 HOLE C CORE 24R CORED INTERVAL 3350.3-3360.0 mbsf; 984.5-994.2 mbsf

