

**NGHP Expedition 1**


**Cored Interval Site 5 - Hole C**


Seafloor 957.2 (m)

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**Barrel Sheet Key**


**Cored & Recovered:**


 Core Recovery


 Cored Interval No Recovery

**Lithology:**


 Nannofossil Rich Clay


 Nannofossil Bearing Clay


 Foraminifera Bearing Clay


 Catwalk Sampled Core

**Bioturbation:**



 Rare


 Moderate


 Common

 Abundant


**Diagenesis:**


 FeS     Pyrite


 Authigenic Carbonate

 Carbonate Cement


**Structures:**


 Silt/Sand Beds


 Silt/Sand Laminiae


 Mottling


**Fossils:**

 Shell Fragments


 Foraminifera


 Mollusk


 Gastropod


 Woody Debris


**Disturbance:**


 Moussey

 Gas

 Expansion Cracks

 Moderately Disturbed

 Very Disturbed

 Soupy

**NGHP Expedition 1**


**Cored Interval Site 5 - Hole D**


Seafloor 955.2 (m)

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**Barrel Sheet Key**


**Cored & Recovered:**

 Core Recovery


 Cored Interval No Recovery


**Lithology:**


 Nannofossil Rich Clay


 Catwalk Sampled Core

**Bioturbation:**


 Rare


 Moderate


 Common

 Abundant


**Diagenesis:**


 FeS


 Authigenic Carbonate

 Carbonate Cement


**Structures:**

 Silt/Sand Beds


 Silt/Sand Laminiae


 Mottling


**Fossils:**


 Shell Fragments


**Disturbance:**

 Moussey

 Gas

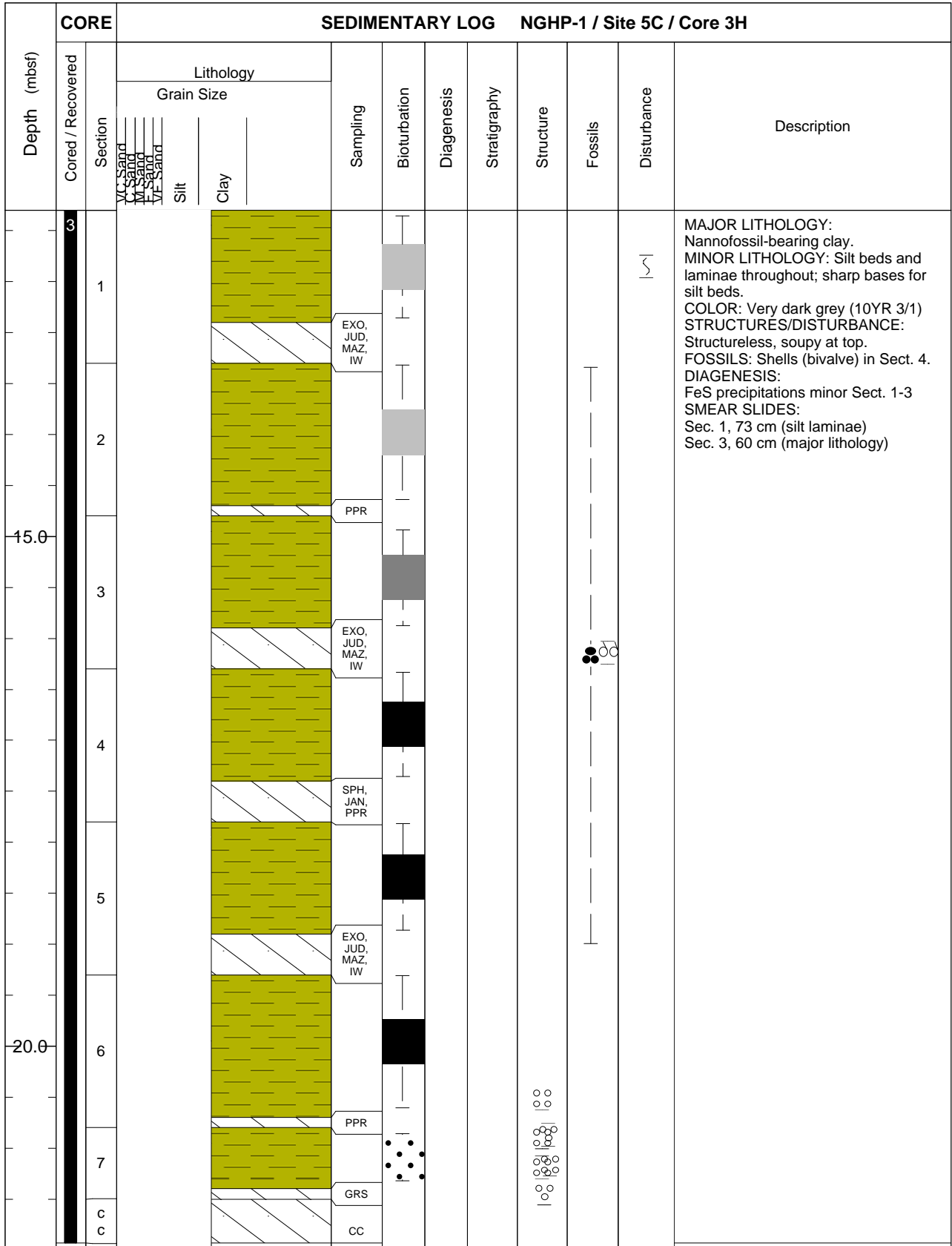
 Expansion Cracks

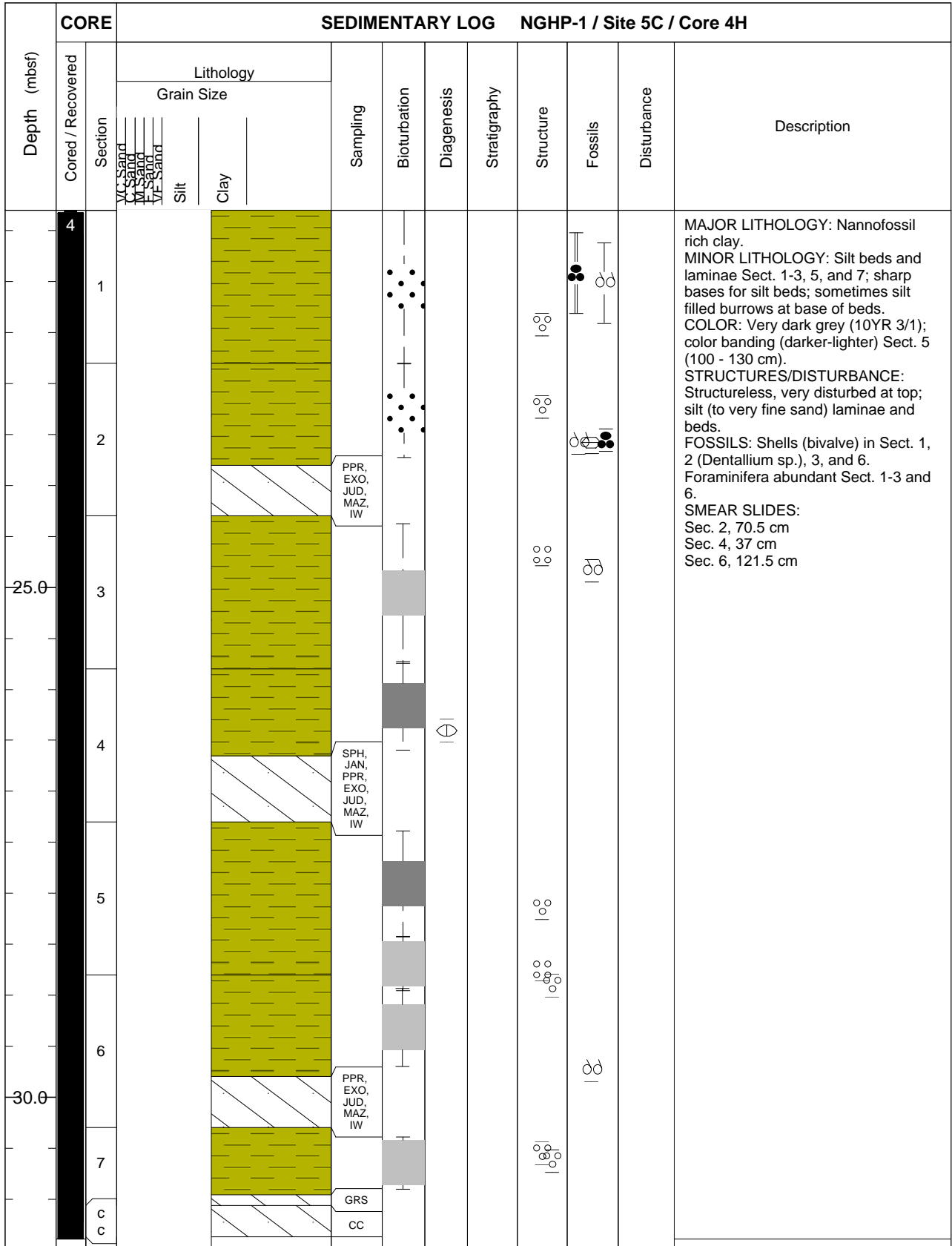
 Moderately Disturbed

 Very Disturbed

Depth (mbsf)	CORE		SEDIMENTARY LOG NGHP 1 / Site 5C / Core 1H							Description	
	Cored / Recovered	Section	Lithology Grain Size	Sampling	Biorturbation	Diagenesis	Stratigraphy	Structure	Fossils		Disturbance
1	1	VC-Sand V-Sand W-Sand VF-Sand	Silt Clay	EXO, JUD, MAZ, IW  PPR, PAL, CC		Fe Fe Fe Fe			∩ ∞		<b>MAJOR LITHOLOGY:</b> Nannofossil-rich clay, <b>COLOR:</b> Very dark greyish brown (10YR 3/2) Sec. 1, 0-150 cm; very dark grey (10YR 3/1) Sec. 2, 0-EOC. <b>STRUCTURES/DISTURBANCE:</b> Structureless, soupy at top, getting firmer from Sec. 1, 85 cm to EOC. <b>DIAGENESIS:</b> FeS precipitations minor throughout with some concentrated zones. <b>SMEAR SLIDES:</b> Sec. 1, 40 cm Sec. 2, 14 cm

Depth (mbsf)	CORE		SEDIMENTARY LOG NGHP-1 / Site 5C / Core 2H									
	Cored / Recovered	Section	Lithology		Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description
			Grain Size									
	2		VC-Sand V-Sand W-Sand VF-Sand	Silt Clay								
	1				EXO, JUD, MAZ, IW							<p><b>MAJOR LITHOLOGY:</b> Nannofossil-bearing clay. <b>MINOR LITHOLOGY:</b> Silt beds and laminae throughout; sharp bases for silt beds. <b>COLOR:</b> Very dark grey (10YR 3/1) <b>STRUCTURES/DISTURBANCE:</b> Structureless, soupy at top. <b>FOSSILS:</b> Shells (bivalve) in Sect. 4. <b>DIAGENESIS:</b> FeS precipitations minor Sect. 1-3 <b>SMEAR SLIDES:</b> Sec. 1, 73 cm (silt laminae) Sec. 3, 60 cm (major lithology)</p>
	2				PPR							
5.0	3				EXO, JUD, MAZ, IW							
	4				SPH, JAN, PPR							
	5				EXO, JUD, MAZ, IW							
10.0	6				PPR							
	7				EXO, JUD, MAZ, IW, GRS							
					CC							





Depth (mbsf)	CORE		SEDIMENTARY LOG NGHP-1 / Site 5C / Core 5H									
	Cored / Recovered	Section	Lithology		Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description
			Grain Size									
			VC-Sand C-Sand M-Sand VF-Sand	Silt Clay								
5												
		1										<p><b>MAJOR LITHOLOGY:</b> Nannofossil rich clay.  <b>MINOR LITHOLOGY:</b> Silt beds and laminae Sect. 1-2.  <b>COLOR:</b> Alternating bands of the spectrum of very dark greenish grey colors (Gley 1: 3/10GY, 3/N, 3/5GY).  <b>STRUCTURES/DISTURBANCE:</b> Some high disturbance of silt (to very fine sand) laminae and beds(.5-2mm) Sec. 1 (13-129cm) and Sec. 2 (4-95cm). Mottling in Sec. 3 (60-85cm).  <b>DIAGENESIS:</b> Authigenic carbonate veins moderate throughout core.            Sec. 1: 85-95cm            Sec. 5: 45-55cm.            Sec. 6: 2-74cm            Sec. 7: 8-73.5cm.  <b>Authigenic carbonate nodules abundant in core.</b>            Sec. 3: 83, 117, 127, 140cm.            Sec. 4: 2cm.            Sec. 5: 78, 84, 130, 133, 135cm.            Sec. 6: 2, 4, 40, 42, 45, 48, 54, 57, 62, 65, 66, &amp; 74cm.            Sec. 7: 8, 17, 19, 21, 23-24, 30, 33, 35-36, 37, 43, 46, 60, 71, 73, 73.5cm.  <b>SMEAR SLIDES:</b>            Sec. 1, 54 cm            Sec. 1, 60 cm            Sec. 2, 85 cm            Sec. 3, 40 cm            Sec. 5, 95 cm</p>
		2			PPR, EXO, JUD, MAZ, IW							
		3										
35.0		4			SPH, JAN, PPR, EXO, JUD, MAZ, IW							
		5										
		6			PPR, EXO, JUD, MAZ, IW							
		7										
40.0		c			CC							
		c										


Depth (mbsf)	CORE		SEDIMENTARY LOG NGHP-1 / Site 5C / Core 6H									
	Cored / Recovered	Section	Lithology		Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description
			Grain Size									
			VC-Sand V-Sand IV-Sand VF-Sand	Silt Clay								
45.0	6	1										<p><b>MAJOR LITHOLOGY:</b> Nannofossil rich clay. <b>MINOR LITHOLOGY:</b> Silt beds, Silt Laminae</p> <p>Sect. 1: 29cm, 1cm thick silt bed. Sect. 2: From 5 to 64cm alternating bands of light &amp; dark clay; silt laminae throughout; 7-8cm silt bed. Sect. 3: 50, 51, &amp; 71cm silt laminae; 38 - 39 &amp; 41 - 42cm silt beds. Sect. 4: 22, 34,53, 66, 83, 108cm silt laminae; at 115 cm silt bed. Sect. 5: 20, 22 cm silt laminae; at 34-35 and 96-95cm silt beds. Sect. 6: 4-5cm silt bed. Sect. 7: 100cm silt laminae. Sect. 8: between 10-50cm silt laminae.</p> <p><b>COLOR:</b> Alternating bands of the light and dark, dark greenish grey colors (Gley 1). <b>DISTURBANCE:</b> Sect. 2: gas cracks at 30-34 cm Sect. 3: Oblique silt filled burrows 35-44 &amp; 62-44.32cm. Sect. 4: Vertical burrows 0-6 cm. Minor gas cracks throughout. Sect. 5: Minor gas cracks throughout with a void at 90cm. Sect. 6: Burrows visible throughout. Gas voids common 70-75, 100-105cm. Sect. 7: Inclined burrows 115-120 cm. Gas voids throughout, notable at 72-84cm. <b>DIAGENESIS:</b> Sect. 1: Small authigenic carb. nodules at 1, 13, 15.5, 20, 29.5, &amp; 31.5 cm Sect. 2: Authigenic carb. nodules at 2, 7.5, 12.5, 14-16, 21, 26-28, 37, 40.5, 66, &amp; 112.5 cm Sect. 3: Carb. bands 75, 85-86, &amp; 89-90 cm; carb. nodules 31, 39, 40, 42, &amp; 42cm Sect. 4: Light bands of carb. 24 &amp; 43 cm; carb. nodule layers 4, 13, 18, 48, 54, 110 cm; carbonate nodules 14, 88, &amp; 96cm; Sect. 5: Carb. bands 49, 51, 53, 56, 71 cm; carb. nodule layer 60cm; carb. nodule 54cm Sect. 7: Carbonate nodules 104 cm Sect. 8: Carb. bands 13, 15, 17, 32, 34, 45 &amp; 58 cm <b>SMEAR SLIDES:</b> Sec. 3: 55 cm Sec. 3: 85.5cm. Sec. 6: 60cm.</p>
		2										
		3										
		4					PPR, EXO, JUD, MAZ, IW					
		5					SPH, JAN, PPR					
		6					EXO, JUD, MAZ, IW					
		7					PPR					
		8										
50.0		c c			CC							

Depth (mbsf)	CORE		SEDIMENTARY LOG NGHP-1 / Site 5C / Core 7H									
	Cored / Recovered	Section	Lithology		Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description
			Grain Size									
			VC-Sand	VC-Silt								
50.0	7	1										<p><b>MAJOR LITHOLOGY:</b> Nannofossil rich clay.  <b>MINOR LITHOLOGY:</b> Silt beds, Silt Laminae            Sect. 1: 108-109cm silt bed.            Sect. 2: Silt laminae throughout; silt beds 15-16cm.            Sect. 3: Silt laminae throughout; silt beds 128-129, 136-138, 142-144cm.            Sect. 4: Silt laminae, none b/w 0-90cm, frequent 90-125cm; Silt beds 90, 102, 112cm.            Sect. 5: Silt laminae throughout.            Sect. 6: Silt laminae throughout. Silt beds 15, 19, 22, 31, 55, 104, 118cm.            Sect. 7: Silt laminae throughout. Silt beds 13, 40cm.  <b>COLOR:</b> Color banding b/w 0-10cm only; Very dark            Sect 1: 5.1Y 2.8/0.2; Sect 2: 4.9Y 3.1/0.1; Sect 3: 5.5Y 3.2/0.2; Sect. 4: 5.5Y 3.3/0.3; Sect 5: 1.2GY 3/0.1; Sect 6: 3.2Y 3.3/0.1; Sect 7: 6.5Y 2.8/02  <b>STRUCTURES/DISTURBANCE:</b>            Sect. 2, 6 &amp; 7: Gas voids - moderate.            Sect. 5: Bioturbation rare; Flow out disturbances from 55-98cm.  <b>DIAGENESIS:</b>            Sect. 1: Carb.-rich bands; alternating carb bands and silt laminae thru entire section.            Sect. 2: Isolated carb bands 41, 49, 54cm.            Sect. 3: Carb. bands 19, 45, 52, 54, 66, 109, 111, 121, 127, 129, 134, 142cm.            Sect. 5: Carb nodules 12 &amp; 97cm.            Sect. 6: Carb. bands throughout; carb. nodules 81, 108, 131cm.            Sect. 7: Carb. nodules 104 cm.  <b>SMEAR SLIDES:</b>            Sec. 3 at 68 cm            Sec. 6 at 50 cm</p>
		2			PPR, EXO, JUD, MAZ, IW							
		3										
		4			SPH, JAN, PPR							
55.0		5			EXO, JUD, MAZ, IW							
		6										
		7			PPR							
		c			CC							



Depth (mbsf)	CORE		SEDIMENTARY LOG NGHP-1 / Site 5C / Core 8H									
	Cored / Recovered	Section	Lithology		Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description
			Grain Size									
			VC Sand MS Sand MF Sand VF Sand	Silt Clay								
60.0	8	1										<p>MAJOR LITHOLOGY: Nannofossil rich clay. MINOR LITHOLOGY: Silt beds, Silt Laminae throughout core. Sec. 3: Silt beds 78, 86, 92-94cm. COLOR: Color banding throughout; Very dark grey 10yr 3/1. STRUCTURES/DISTURBANCE: Rare gas expansion voids throughout core. Sec. 1: 0-10cm slightly disturbed. Sec. 3: Flow out disturbance b/w 58-75cm. Sec. 4: Flow out disturbance b/w 50-70cm; In non-archival 1/2 of core, wood debris 25cm, DIAGENESIS: Sec. 1: Carb. nodules 50, 145cm. Carb. nodule layers 18, 24, 29, 38, 50, 52, 89, 123, 140, 142cm. Sec. 2: Carb nodules 19, 65cm. Sec. 3: Carb nodules 122cm. Sec. 4: Carb. nodule 44cm. Carb. nodule layers 42, 48, 96, 104-109, 117cm. Sec. 5: Carb nodule 0-33cm. Carb nodule layers 69, 75, 77, 78, 82, 91, 96, 100, 101, 104cm. Sec. 7: Carb. nodules 36 cm. SMEAR SLIDES: Sec. 5 130cm Sec. 7 13cm</p>
		2			PPR, EXO, JUD, MAZ, IW							
		3										
		4										
65.0		5			SPH, JAN, PPR							
		6			EXO, JUD, MAZ, IW							
		7			PPR							
		c			CC							

Depth (mbsf)	CORE		SEDIMENTARY LOG NGHP-1 / Site 5C / Core 9H									
	Cored / Recovered	Section	Lithology		Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description
			Grain Size									
			VC Sand VS Sand IV Sand VF Sand Silt Clay									
70.0	9	1										<p><b>MAJOR LITHOLOGY:</b> Nannofossil rich clay.  <b>MINOR LITHOLOGY:</b> Silt beds, Silt Laminae            Sec. 1: Silt bed ~28-29cm            Sec. 2: Shell fragment rich bed 7-10cm            Sec. 3: Silt laminae 23-25, 30-31, 108, 117 cm; Silt beds 13-16, 57-58 cm            Sec. 4: Silt laminae 3, 71, 73, 83cm; Thick silt bed fining upward, possible double event, 9-13cm; Shell fragments b/w 90-125cm            Sec. 5: 1 Shell bed (bivalves) 25cm            Sec. 6: Silt laminae 80cm;            Sec. 7: Silt bed 5-9cm; silt laminae 30-57cm            Sec. 8: Silt laminae 58-62cm  <b>COLOR:</b> Color banding throughout; Very dark grey            Sec. 1: 5.2Yr 3.2/0.2.            Sec. 2: 8.9Y 2.7/0.3.            Sec. 3: 6.6Y 2.9/0.3.            Sec. 4: 4.5Y 3.2/0.3.            Sec. 5: 5.8Y 3.5/0.3.            Sec. 6: 6.9Y 3.7/0.2            Sec. 7: 2.1Y 3.7/0.2            Sec. 8: 3.3Y 4.0/0.1  <b>STRUCTURES/DISTURBANCE:</b>            Sect. 1: Highly disturbed - out of order segments            Sect. 3: Gas expansion void at 44-56cm.            Sect. 4: Gas voids common from 0-60cm.            Sect. 6: Silt filled borrows. Moderate gas cracks.            Sect. 7: Silt filled burrow at 9-25cm;  <b>DIAGENESIS:</b>            Sect. 1: Carb. nodules 5, 55cm            Sect. 3: Carb nodules 122cm            Sect. 4: Carb. nodule 44cm; Carb. nodule layers 42, 48, 96, 104-109, 117cm;            Sect. 5: Pyrite concretions (small, mm) 72, 76, 105cm            Sect. 6: carb. nodules associated all along from 92 - 140cm            Sect. 7: Carb nodules 1-2, 40cm; silt filled burrow from 9-25cm            Sect. 8: Carb nodules 0-5, 10-25cm, 36-47cm; 70-88cm  <b>SMEAR SLIDES:</b>            Sec. 3 at 86cm            Sec. 4 at 12cm            Sec. 8 at 53cm</p>
		2		PPR, EXO, JUD, MAZ, IW								
		3										
		4		SPH, JAN, PPR								
		5		EXO, JUD, MAZ, IW								
75.0		6		PPR								
		7										
		8										
		c		CC								
		c		IW								

Depth (mbsf)	CORE		SEDIMENTARY LOG NGHP-1 / Site 5C / Core 10P									
	Cored / Recovered	Section	Lithology		Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description
			Grain Size									
	1	1	VC-Sand VC-Sand VC-Sand VC-Sand VC-Sand Silt Clay		IW							MAJOR LITHOLOGY: Nannofossil rich clay. COLOR: Greenish black; Sect 1: Gley 1 2.5/10Y STRUCTURES/DISTURBANCE: Sect. 1: 10-25cm fractures; Soupy 25-36cm

CORE		SEDIMENTARY LOG NGHP-1 / Site 5C / Core 11X										
Depth (mbsf)	Cored / Recovered	Section	Lithology		Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description
			Grain Size									
			VC-Sand V-Sand W-Sand VF-Sand	Silt Clay								
80.0	1	1			IW PVS, PIN, GRS		⊕					<p>MAJOR LITHOLOGY: Nannofossil rich clay.</p> <p>MINOR LITHOLOGY: Sec. 1: Silt bed at 29-32 cm. Sand at 30cm in silt.</p> <p>COLOR: Very dark gray; Sec 1: Gley 1 2.5Y 10Y</p> <p>STRUCTURES/DISTURBANCE: Sec. 1: Soupy 0-5, 60-75cm. Mousselike at 75-78cm. Highly disturbed 24-34cm.</p> <p>SMEAR SLIDES: Sec. 1 at 58cm</p>
85.0												

Depth (mbsf)	CORE		SEDIMENTARY LOG NGHP-1 / Site 5C / Core 12P										
	Cored / Recovered	Section	Lithology		Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description	
			Grain Size										
	1 2	1	VC-Sand V-Sand IV-Sand VF-Sand	Silt Clay									
													<p>MAJOR LITHOLOGY: Nannofossil rich clay.            COLOR: Greenish-black, Glyc 1 2.5 / 10Y            STRUCTURES/DISTURBANCE:            Sec. 1: Soupy at 1-2cm. Mousselike 2-24cm. Highly disturbed at 24-34cm.            DIAGENESIS:            Sec. 1: Carb. nodules at 71cm            SMEAR SLIDES:            Sec. 1 at 30cm</p>

Depth (mbsf)	CORE		SEDIMENTARY LOG NGHP-1 / Site 5C / Core 13X									
	Cored / Recovered	Section	Lithology		Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description
			Grain Size									
	1 3		VC-Sand V-Sand IV-Sand VF-Sand	Silt Clay								
	1				PPR, EXO, JUD, MAZ, IW (20cm)							
	2				IW							
	3				PPR, EXO, JUD, MAZ, IW (20cm)							
90.0	4											
	c				SPH (5cm) JAN, GRS							
	c				cc							
95.0												

MAJOR LITHOLOGY: Nannofossil rich clay.  
 MINOR LITHOLOGY: Sand  
 Sect. 1: Sand bed 43cm  
 Sect. 2: Silt 4-15cm; Silt layer w/ carb. cement 43-50 cm; Sand 47cm; Silt with organics  
 Sect. 3: Silt w/ carb. cement 8-17cm; Silt layers 34-37, 48-50, 58, 60, 68-69, 73-74, 79-80cm  
 Sect. 4: Silt w/ carb. cement 10-27 cm laminae, and beds 57-70, 80-82, 99-100cm  
 COLOR: Sect 1: 5.6Y 3.2/03 black; Sect. 3 & 4: 5.3Y 3.4/02 very dark grey;  
 STRUCTURES/DISTURBANCE:  
 Sect. 2: Mousselike 0-20cm  
 DIAGENESIS: Carbonate nodules moderate.  
 Sect. 1: at 11, 16, 18, 22, 30, 31, 58cm.  
 Sect. 2: at 2 cm.  
 Sect. 3: at 68-75cm.  
 SMEAR SLIDES:  
 Sec. 1 at 43cm.  
 Sec. 2 at 47cm.

CORE		SEDIMENTARY LOG NGHP-1 / Site 5C / Core 14X										
Depth (mbsf)	Cored / Recovered	Section	Lithology		Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description
			Grain Size									
			VC-Sand V-Sand IV-Sand VF-Sand	Silt Clay								
100.0	1 4	1			PPR, EXO, JUD, MAZ, IW (20 cm)		⊖		○ ● ○		┌ └	MAJOR LITHOLOGY: Nannofossil bearing clay MINOR LITHOLOGY: Silt & Sand Sect. 1: Sand bed 55cm; Silt laminae (inclined) 30-42cm Sect. 3: Silt w/ carb. cement 8-17cm; Silt layers 34-37, 48-50, 58, 60, 68-69, 73-74, 79-80cm Sect. 4: Silt w/ carb. cement 10-27 cm laminae, and beds 57-70, 80-82, 99-100cm COLOR: Sect 1: 5.1Y 3.2/2 dark olive grey; Sec. 3 Alternating dark and light color clay. STRUCTURES/DISTURBANCE: Sect. 1: Soupy 0-1cm; Mousselike 1-25cm. DIAGENESIS: Carbonate nodules common. Sect. 1: at 51.5, 52.5, 55, 67cm. Sect. 2: at 2 cm (1cm long), 3 cm, and 18cm (2 round concretions). Sect. 3: at 5.5, 9.5, 12cm. SMEAR SLIDES: Sect. 1 55cm:
		2			IW							
		3										
		c			cc							
		c										
105.0												

Depth (mbsf)	CORE		SEDIMENTARY LOG NGHP-1 / Site 5C / Core 15X									
	Cored / Recovered	Section	Lithology		Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description
			Grain Size									
			VC Sand									
			CS Sand									
			IV Sand									
			VF Sand									
			Silt									
			Clay									
110.0	1				PPR, EXO, JUD, MAZ, IW (20cm)							
	2				SPH (5cm), JAN, PPR							
	3				EXO, JUD, MAZ, IW (20cm)							
	4				CC (PUS, PIN, GRS)							
115.0	c											
	c											

MAJOR LITHOLOGY: Nannofossil rich clay  
 MINOR LITHOLOGY: Silt  
 Sec. 1: Silt laminae at 41-43, 46-47, 50-51, 54-56, 86-89cm (with carbonate cement).  
 Sec. 2: Alternating dark and light color clay. Silt laminae at 80-82, 34, 108cm. Silt bed at 95-100cm.  
 Sec. 3: Alternating bands of dark and light clay. Silt laminae at 8, 10, 24, 73-74cm.  
 Sec. 4: Silt laminae at 36-82cm.  
 COLOR: 6.5Y, 3.1/0.2  
 STRUCTURES/DISTURBANCE:  
 Sec. 1: Gas expansion crack at 14-20cm.  
 DIAGENESIS:  
 Sec. 1: Authogenic carbonate nodules at 71cm. Carbonate cemented zone from 86-89cm.  
 Sec. 2: Small authogenic carbonate nodules from 17-40cm and 63-71cm.  
 Sec. 3: Small authogenic carbonate nodules at 0-14, 30, 34, 52-53, 62cm. Larger carbonate nodules at 19-20, 40, 71-72cm.  
 Sec. 4: Small authogenic carbonate nodules at 5-20. Average size carbonate nodules at 33, 60, 63, 75cm.  
 SMEAR SLIDES:  
 Sec. 2 at 59cm  
 Sec. 4 at 43cm



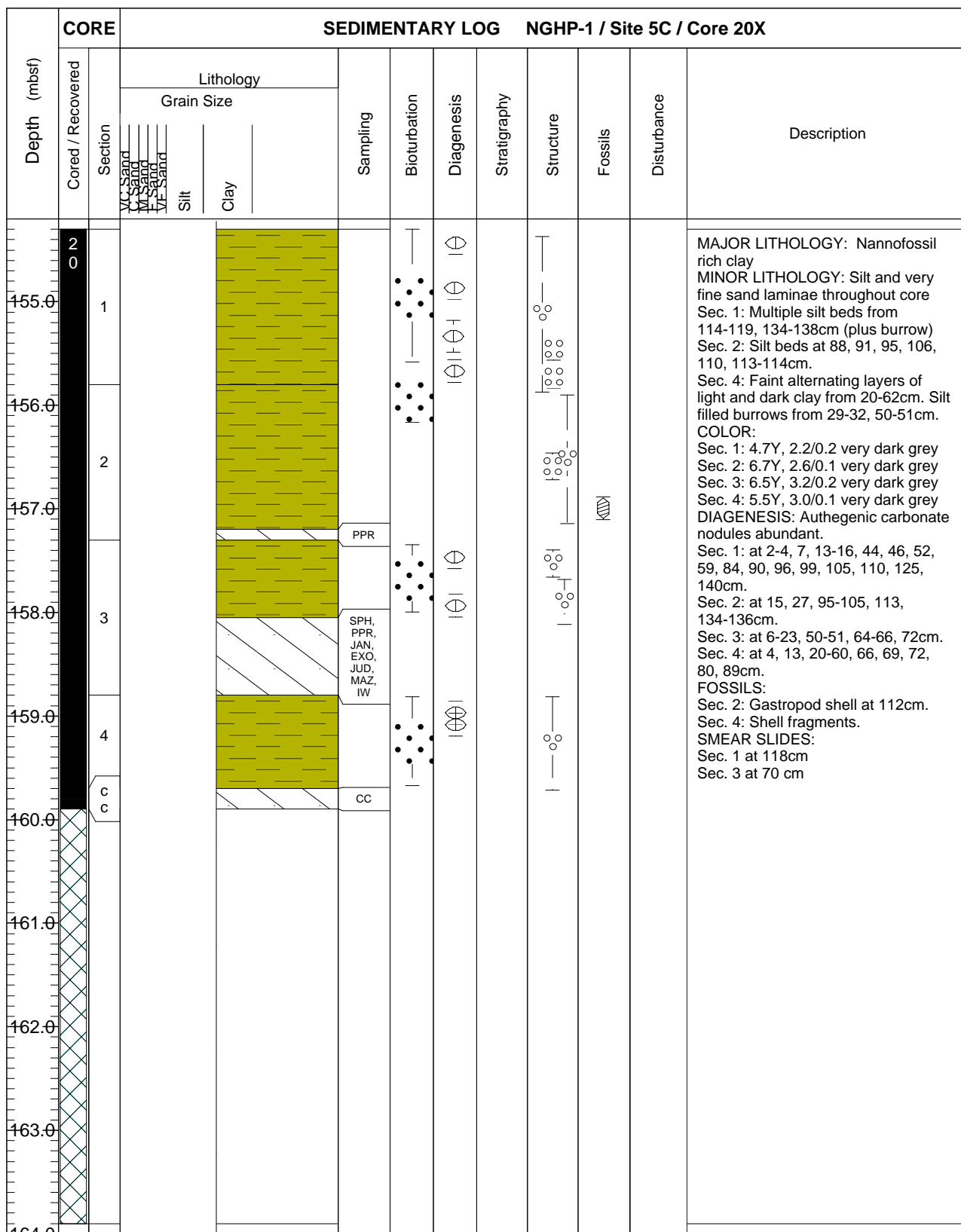
Depth (mbsf)	CORE SEDIMENTARY LOG NGHP-1 / Site 5C / Core 16X											
	Cored / Recovered	Section	Lithology		Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description
			Grain Size									
			VC-Sand V-Sand IV-Sand VF-Sand	Silt Clay								
120.0	1 6	1										<p>MAJOR LITHOLOGY: Nannofossil bearing clay MINOR LITHOLOGY: Silt Sect. 1: Alternating dark and light color clay from .5-68cm. COLOR: 1.7Y, 3.8/0.7 very dark greyish brown. STRUCTURES/DISTURBANCE: Sect. 1: Mousselike at 0-5cm. Cracks in clay at both edges throughout. DIAGENESIS: Sect. 1: Authegenic carbonate nodules at 29-30cm. Carbonate cemented zone from 86-89cm. SMEAR SLIDES: Sect. 1 at 18cm</p>
125.0		c c			PPR, EXO, JUD, MAZ, IW, CC							

Depth (mbsf)	CORE		SEDIMENTARY LOG NGHP-1 / Site 5C / Core 17X									
	Cored / Recovered	Section	Lithology		Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description
			Grain Size									
	1 7		VC Sand VCS Sand VMS Sand VFS Sand	Silt Clay								
		1										<p><b>MAJOR LITHOLOGY:</b> Nannofossil rich clay until Sect. 3 at 108cm changing to nannofossil bearing clay.  <b>MINOR LITHOLOGY:</b> Silt            Sect. 1: Mottled, alternating dark and light color clay from 0-56cm.            Sect. 2: Mottled, alternating dark and light color clay, with the lighter clay now dominating from 0-90cm.            Sect. 3: Carbonate rich discontinuous silt laminae at 114, 122, 123, 127, 129.  <b>COLOR:</b>            Sect. 1: 1.6Y, 3.2/0.4 very dark grey until 56cm. 7.5Y, 2.8/0.4 black to end of section.            Sect. 2, 3, 4 &amp; 5 : 1.6Y, 3.2/0.4 very dark grey.  <b>STRUCTURES/DISTURBANCE:</b>            Sect. 1: Mousselfike at 0-6, 127-129cm.  <b>DIAGENESIS:</b>            Sect. 1: 45 degree inclined arbonate vein 2mm thick at 105 cm.            Authegenic carbonate nodules at 119, 122, 124cm.            Sect. 2: Authegenic carbonate nodule at 75cm.            Sect. 3: Carbonate cement at 22cm.            Authegenic carbonate nodules at 37, 136, 137, 142, 145, 148cm.            Sect. 4: Authegenic carbonate nodules at 10, 21, 24-29, 60-61, 117cm.            Sect. 5: Authegenic carbonate nodules at 8, 28, 51cm.  <b>SMEAR SLIDES:</b>            Sect. 1 at 50cm            Sect. 3 at 70cm</p>
		2			PPR, EXO, JUD, MAZ, IW							
		3										
130.0		4										
		5			SPH, JAN, PPR							
					EXO, JUD, MAZ, IW, CC							
		c c										
135.0												

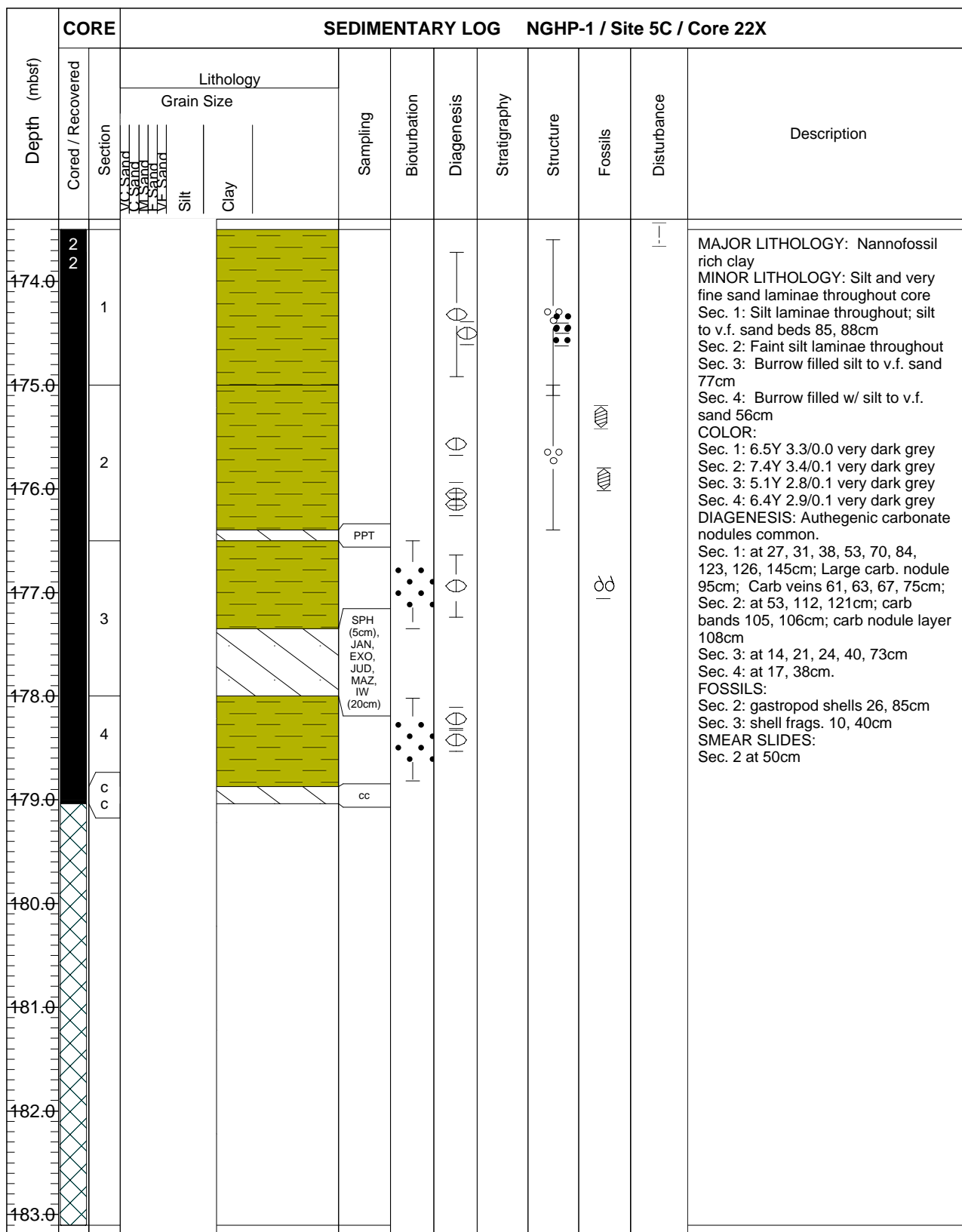
Depth (mbsf)	CORE		SEDIMENTARY LOG NGHP-1 / Site 5C / Core 18X									
	Cored / Recovered	Section	Lithology		Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description
			Grain Size									
	1 8		VC-Sand V-Sand IV-Sand VF-Sand	Silt Clay								
	1				PPR, EXO, JUD, MAZ, IW							<p>MAJOR LITHOLOGY: Nannofossil rich clay            COLOR: 4.7Y, 3.1/0.3 very dark grey            STRUCTURES/DISTURBANCE:            Sec. 1: Gas expansion cracks at 19, 38, 55, 80, 100, 110, 132cm. Mousseliike at 0-17cm.            Sec. 2: Gas expansion cracks at 26, 44, 60, 73-80cm.            DIAGENESIS: Authogenic carbonate nodules common.            Sec. 1: at 40-60, 67-70cm.            Sec. 2: at 80, 96, 100, 107, 118, 132, 135cm. Carbonate layers at 55, 62-67, 72, 101, 106, 108, 117, 131-140cm.            Sec. 3: at 8-9, 32-68, 62-63, cm.            SMEAR SLIDES:            Sec. 1 at 61cm</p>
	2											
	3				SPH, JAN, IW, CC							
140.0		c c										

Depth (mbsf)	CORE SEDIMENTARY LOG NGHP-1 / Site 5C / Core 19X											
	Cored / Recovered	Section	Lithology		Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description
			Grain Size									
1445.0	19											
		1										
		2			PPR							
		3										
1450.0		4			SPH, PPR, JAN, EXO, JUD, MAZ, IW							
		5										
		6			PPR, GRS, CC							
		c										
		c										

**MAJOR LITHOLOGY:** Nannofossil rich clay  
**MINOR LITHOLOGY:** Silt and very fine sand.  
 Sec. 1: Faint silt laminae throughout. Silt/very fine sand beds at 102-103, 114-115, 117-119cm.  
 Sec. 2: Faint silt laminae throughout.  
 Sec. 3: Faint silt laminae throughout. Silt/very fine sand beds at 112-118, 123, 135-136, 144cm.  
 Sec. 4: Faint silt laminae throughout. Silt/very fine sand beds at 3, 6, 31, 32-34, 37cm.  
 Sec. 5: Faint alternating layers of light and dark clay throughout. Faint silt laminae throughout.  
 Sec. 6: Faint alternating layers of light and dark clay throughout. Faint silt laminae throughout.  
**COLOR:**  
 Sec. 1: 1.6Y, 3.2/.01 very dark grey  
 Sec. 2: 1.6Y, 3.3/.01 very dark grey  
 Sec. 3: 3.3YR, 3.8/0 very dark grey  
 Sec. 4: 4.6Y, 2.8/0.2 very dark grey  
 Sec. 5: 5.8Y, 2.5/0.1 very dark grey  
 Sec. 6: 6.3Y, 2.8/0.1 very dark grey  
**STRUCTURES/DISTURBANCE:**  
 Sec. 1: Moderate gas expansion cracks.  
**DIAGENESIS:** Authogenic carbonate nodules abundant.  
 Sec. 1: at 44, 57, 65, 72, 95, 114, 126, 145cm. Carbonate layer at 99cm.  
 Sec. 2: at 2, 5, 10, 14, 21, 25, 33, 60, 82, 89, 96, 106, 109, 122, 124cm. Carbonate layer at 26cm.  
 Sec. 3: at 3, 8, 38, 41, 53, 61, 63, 82, 88, 97, 112cm.  
 Sec. 4: at 12, 20, 21, 29, 47, 68, 72, 76, 80cm. Carbonate layers at 44, 56 cm.  
 Sec. 5: at 18-20, 34, 40, 56-64, 72, 79, 88-96, 101, 106, 107, 108, 111-112, 116, 127, 132, 136, 138cm.  
 Sec. 6: at 5, 17, 24-26, 28cm.  
**SMEAR SLIDES:**  
 Sec. 1 at 118cm  
 Sec. 3 at 70 cm



Depth (mbsf)	CORE		SEDIMENTARY LOG NGHP-1 / Site 5C / Core 21X									
	Cored / Recovered	Section	Lithology		Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description
			Grain Size									
			VC Sand C Sand M Sand VF Sand	Silt Clay								
164.0	2	1										<p><b>MAJOR LITHOLOGY:</b> Nannofossil bearing clay  <b>MINOR LITHOLOGY:</b> Silt laminae and very fine sand filled burrows throughout core            Sec. 1: Sand filled burrows 17-24, 46-51cm            Sec. 2: Silt laminae throughout            Sec. 3: Sandy carb veins 12, 28cm; silt laminae 0-90cm  <b>COLOR:</b>            Sec. 1: 3.4Y 3.3/0.1 very dark grey            Sec. 2: 6.0Y 2.8/0.2 very dark grey            Sec. 3: 5.9Y 2.5/0.2 very dark grey  <b>DIAGENESIS:</b> Authogenic carbonate nodules abundant.            Sec. 1: at 14, 41, 45, 50, 57, 65, 83-84, 116, 136, 142cm.            Sec. 2: at 5, 6, 9, 23-26, 30, 35, 36, 40, 43, 45, 49, 50, 54, 58, 59, 60, 69cm; carb. vein 16cm.            Sec. 3: at 8, 10, 13, 39, 44, 54, 80, 88, 100, 108, 118cm  <b>FOSSILS:</b>            Sec. 1: Shell frags. 123cm            Sec. 3: Shell fragments. 110cm  <b>SMEAR SLIDES:</b>            Sec. 2 40cm</p>
165.0												
166.0		2										
167.0		3			SPH (5cm), PPR, JAN, EXO, JUD, MAZ, IW (20cm)							
168.0		c			cc							
169.0												
170.0												
171.0												
172.0												
173.0												

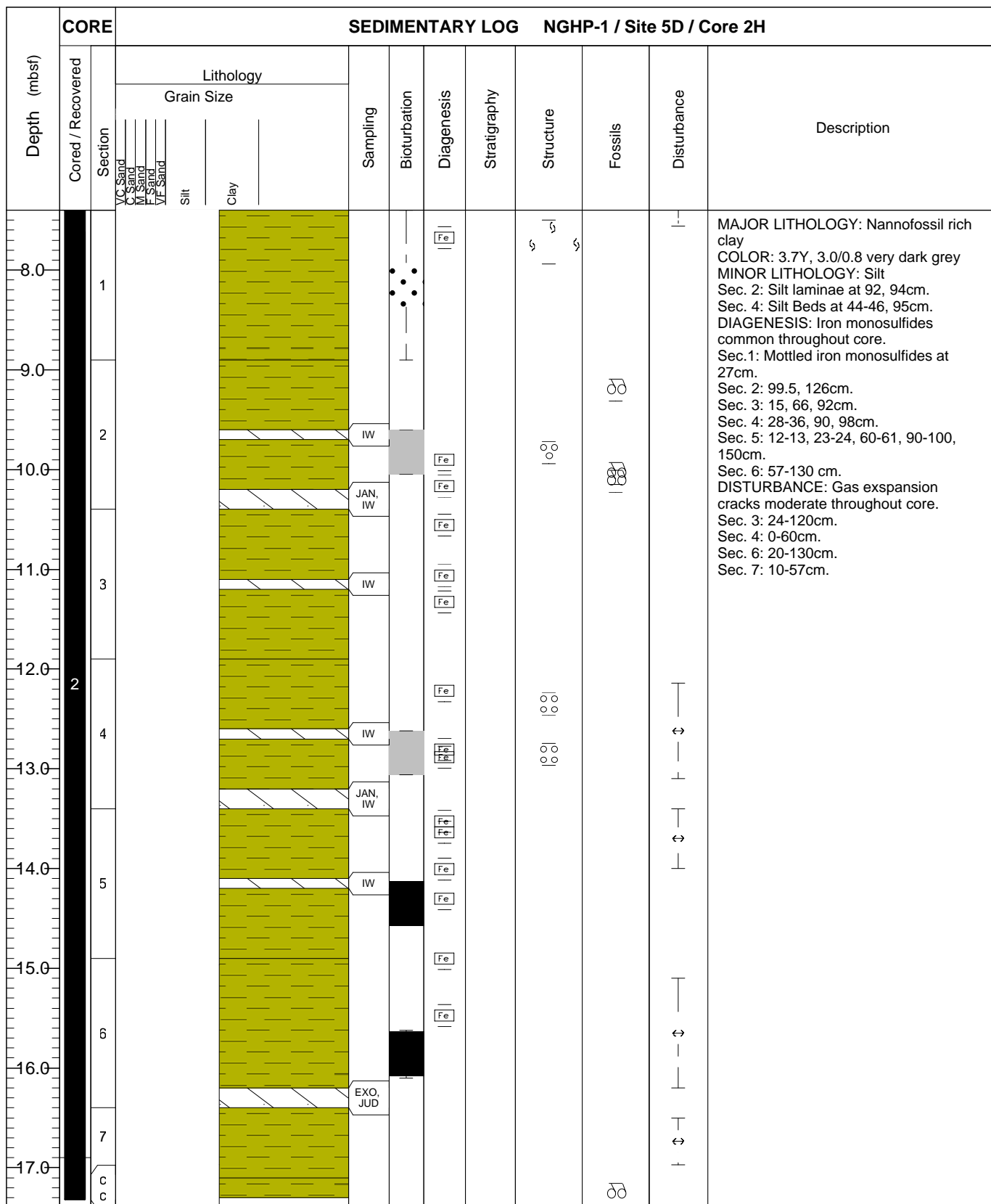


Depth (mbsf)	CORE SEDIMENTARY LOG NGHP-1 / Site 5C / Core 23X											
	Cored / Recovered	Section	Lithology		Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description
			Grain Size									
184.0	2	1	VC Sand V Sand IV Sand VF Sand	Silt Clay	SPH (5cm), PPR, JAN, EXO, JUD, MAZ, IW (20cm)							<p>MAJOR LITHOLOGY: Nannofossil rich clay MINOR LITHOLOGY: Rare silt laminae throughout core Sec. 2: Silt laminae 5cm; Faint alteration of fine to coarse grained silt COLOR: Sec. 1: 8.3Y 3.2/0.1 dark grey Sec. 2: 6.9Y 6.2/0.1 very dark grey Sec. 3: 5.0Y 2.8/0.1 dark grey DISTURBANCE: Sec. 1: Very disturbed bed 65-75cm; disturbed 40-63cm Sec. 3: Slightly disturbed 5-10cm DIAGENESIS: Authigenic carbonate nodules common. Sec. 1: at 40cm. Sec. 2: at 28, 60, 80, 112, 132, 147cm Sec. 3: at 5-10, 21, 37cm FOSSILS: Sec. 2: Shell frags. 108, 132cm SMEAR SLIDES: Sec. 2 at 90cm</p>
185.0		2										
186.0		3										
187.0		c			cc							
188.0		c										
189.0												
190.0												
191.0												
192.0												



CORE		SEDIMENTARY LOG NGHP-1 / Site 5C / Core 24X									
Depth (mbsf)	Cored / Recovered	Lithology		Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description
		Grain Size									
		VC Sand	Clay								
193.0	2 4										<p><b>MAJOR LITHOLOGY:</b> Nannofossil rich clay  <b>MINOR LITHOLOGY:</b> Rare silt laminae throughout core            Sec. 1: alternating light and dark clay/silt bands; mica flakes throughout the section            Sec. 2: faint laminations dark/light            Sec. 3: silt laminae 117-119, 121-125cm            Sec. 4: silt laminae 47-48, 51-53, 62cm            Sec. 5: silt laminae 0-3cm  <b>COLOR:</b>            Sec. 1: 3.6Y 3.2/0.2 dark grey            Sec. 2: 4.0Y 2.8/0.1 dark grey            Sec. 3: 4.0Y 3.8/0.2 dark grey            Sec. 4: 3.7Y 3.5/0.2 dark grey            Sec. 5: 4.7Y 3.0/0.3 dark grey  <b>DISTURBANCE:</b>            Sec. 1: Moussey/Very disturbed bed 0-4cm; Slightly disturbed 4-10cm  <b>DIAGENESIS:</b> Authogenic carbonate nodules abundant.            Sec. 1: at 13, 28, 31, 44, 48, 61, 76, 85, 99, 101, 105, 127, 130, 133, 142cm            Sec. 2: at 4, 5, 24, 29, 32, 42, 65, 70cm            Sec. 3: at 5-6, 9, 15-16, 20, 30, 45-47, 53, 66, 72, 77, 103, 110, 112, 116, 130, 135, 139, 142, 148cm            Sec. 4: at 12, 18, 27, 28, 29, 41, 75, 77cm            Sec. 5: at 13, 42, 46, 52cm  <b>FOSSILS:</b>            Sec. 1: carbonaceous material 70, 27cm            Sec. 2: shell frags 12cm  <b>SMEAR SLIDES:</b>            Sec. 3 at 70cm            Sec. 3 at 119cm</p>
194.0	1										
195.0	2			SPH (5cm), PPR, JAN, EXO, JUD, MAZ, IW (20cm)							
196.0	3										
197.0	4										
198.0	5										
199.0	c c			cc							
200.0											
201.0											
202.0											

Depth (mbsf)	CORE		SEDIMENTARY LOG NGHP 1 / Site 5D / Core 1H									
	Cored / Recovered	Section	Lithology		.Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description
			Grain Size									
			Silt	Clay								
1	1	1		JAN, IW								<p>MAJOR LITHOLOGY: Nannofossil rich clay COLOR: Sec. 1 &amp; 2: 2.2Y, 3.7-1.3 dark greyish brown. Sec. 3, 4 &amp; 5: 5Y, 3/1 very dark grey MINOR LITHOLOGY: Silt Sec. 1: Silty burrow 80-84cm. Sec. 3: Silt laminae at 38-40, 90-91cm. Silt Beds at 104-110cm (with clay filled burrows or rip-up clasts) Sec. 5: Faint silt laminae at 57cm. DIAGENESIS: Sec.1: Iron monosulfides at 21-23, 60-94(patchy), 94-150cm(abundant). Sec. 2: Mottled iron monosulfides throughout section. Sec. 3: Iron monosulfides at 4-6, 60, 110, 130cm. Sec. 4: Mottled iron monosulfides at 13-16cm (patchy). SMEAR SLIDES: Sec. 3: 53cm</p>
2	2		JAN, IW									
3	3		JAN, IW									
4	4		JAN, IW									
5	5		JAN, IW									
5.0	c	c		JAN, IW								



Depth (mbsf)	CORE		SEDIMENTARY LOG NGHP-1 / Site 5D / Core 3H										
	Cored / Recovered	Section	Lithology		Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description	
			Grain Size										
			U-Sand M-Sand F-Sand V-F-Sand	Silt Clay									
0	3	1										<p>MAJOR LITHOLOGY: Nannofossil rich clay COLOR: Sec. 1: Gley 1, 3/10Y very dark greenish grey until 10cm. Changes to 3.8Y, 3.8/0.6 dark grey. Sec. 2: 4.9Y, 3.9/0.6 dark grey until 40cm. Changes to 2.7Y, 3.4/1.1 very dark grey. Sec. 3: 3.1Y, 2.9/0.8 very dark grey until 50cm. Changes to 4.6Y, 3.1/0.6 black. Sec. 4: 2.7Y, 3.9/0.4 black. Sec. 5: 2.5Y 3.0/0.4 black. Sec. 6 &amp; 7: 5.9Y, 2.5/0.7 black. MINOR LITHOLOGY: Silt Sec. 1: Silty throughout section. Sec. 2: Slightly coarser silt throughout. Sec. 4: Silt laminae at 19, 59, 67cm. Silt beds at 46-47, 68-71, 87-90cm. Sec. 5: Dispersed silt from 34-48cm. DIAGENESIS: Sec. 1: Iron monosulfides at 188cm. Sec. 2: Iron monosulfides at 74, 79cm. DISTURBANCE: Gas expansion cracks common throughout core. Sec. 2.: Large burrow at 53-67cm. Sec. 3: at 10-19, 62-78cm. Sec. 4: Burrow at 39-40cm. FOSSILS: Carbonate shell fragments moderate. Sec. 2: Throughout section. Sec. 3: at 43-50, 86cm. Sec. 4: at 34-48cm. SMEAR SLIDES: Sec. 2 at 79.5cm. Sec. 4 at 71cm.</p>	
10		2			IW		Fe						
20		3	3			JAN, IW							
30		4	4										
40		5	5			JAN, IW							
50		6	6			IW							
60		7	7			IW							
70		c											
80		c											
25.0													

Depth (mbsf)	CORE		SEDIMENTARY LOG NGHP-1 / Site 5D / Core 4H										
	Cored / Recovered	Section	Lithology		Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description	
			Grain Size										
			VC Sand	VS Sand	WS Sand	WF Sand	Silt	Clay					
		1											<p>MAJOR LITHOLOGY: Nannofossil rich clay            COLOR:            Sec. 1: 3.2Y 3.5/05 very dark grey            Sec. 2: 3.3Y 3.9/0.3 to 10cm;            Changes to 5.6Y 3.3/0.4 very dark grey.            Sec. 3: 2.9Y 2.7/0.2 very dark grey to 15cm; Changes to 5.9Y 3.1/0.4            Sec. 4: 1.8Y 3.6/0.2 dark grey to 112cm; Changes to 3.5Y 3.8/0.2            Sec. 5: 2.9Y 3.3Y 3.4/0.2 dark grey            Sec. 6: 4.2Y 3.1/0.3 dark grey            Sec. 7: 1.0Y 4.0/0.1            MINOR LITHOLOGY: Silt            Sec. 1: Laminated silt throughout            Sec. 2: Silt rich interval at 10-25, 100-150cm; Silt bed at 124cm            Sec. 4: Faint color banding 127-150cm; Silt laminae from 127-150cm            Sec. 5: Faint color banding throughout; Silt laminae 20-33, 90-101cm; Silt beds at 130-133cm            Sec. 6: Silt laminae throughout            Sec. 7: Silt laminae throughout; Silt bed at 6cm            DIAGENESIS:            Sec. 1: Iron mottling at 105-126cm            Sec. 2: Iron monosulfides at 4cm.            Sec. 3: Iron monosulfides at 10-13cm; Iron nodules at 21, 27, 34, 36cm            DISTURBANCE: Gas expansion cracks common throughout.            Sec. 1: at 0-50 cm; Burrow at 30-31cm.            Burrow at 61-67cm .            FOSSILS: Carbonate shell fragments moderate.            Sec. 1: at 74cm.            Sec. 2: at 108, 124cm.            Sec. 7: at 23, 32cm.            SMEAR SLIDES:            Sec. 4 at 91.5cm.</p>
		2											
		3											
30.0		4											
		4											
		5											
		6											
		7											
35.0													
		c											
		c											

Depth (mbsf)	CORE		SEDIMENTARY LOG NGHP-1 / Site 5D / Core 5P										
	Cored / Recovered	Section	Lithology			Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description
			VC Sand	LS Sand	WL Sand								
45.0	☒												No core was recovered.
45.2	☒												
45.4	☒												
45.6	☒												
45.8	☒												
46.0													
46.2													
46.4													
46.6													
46.8													
47.0													

Depth (mbsf)	CORE		SEDIMENTARY LOG NGHP-1 / Site 5D / Core 6P										
	Cored / Recovered	Section	Lithology			Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description
			Grain Size	Silt	Clay								
77.0	6P	1										<p>MAJOR LITHOLOGY: Nannofossil rich clay.            COLOR: Very dark grey.            Dispersed shell fragments and mica throughout.            SMEAR SLIDE: at 50cm</p>	
77.2													
77.4													
77.6													
77.8													
78.0													
78.2													
78.4													
78.6													
78.8													
79.0													

Depth (mbsf)	CORE		SEDIMENTARY LOG NGHP-1 / Site 5D / Core 7Y									
	Cored / Recovered	Section	Lithology		Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description
			Grain Size									
			VC: Sand	VC: Silt								
84.4												
84.6												
84.8												
85.0	7	1										
85.2	Y											
85.4												
85.6												
85.8												
86.0												
86.2												
86.4												
86.6												
86.8												
87.0												



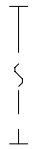
Depth (mbsf)	CORE		SEDIMENTARY LOG NGHP-1 / Site 5D / Core 8E									
	Cored / Recovered	Section	Lithology		Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description
			Grain Size									
			VC Sand	WC Sand								
88.7												
88.9												
89.1	⊗	1										
89.3	⊗											
89.5	⊗											
89.7	⊗											
89.9	⊗											
90.1												
90.3												
90.5												
90.7												
90.9												
91.1												
91.3												
91.5												
91.7												
91.9												

MAJOR LITHOLOGY: Nannofossil rich clay  
COLOR: Dark grey  
Void from 18-24cm.

Depth (mbsf)	CORE		SEDIMENTARY LOG NGHP-1 / Site 5D / Core 9P										
	Cored / Recovered	Section	Lithology			Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description
			Grain Size										
			VC: Sand	VC: Silt	VC: Clay								
2.7													
2.9													
3.1	X												No core was recovered.
3.3	X												
3.5	X												
3.7	X												
3.9	X												
4.1													
4.3													
4.5													
4.7													
4.9													

Depth (mbsf)	CORE		SEDIMENTARY LOG NGHP-1 / Site 5D / Core 10E									
	Cored / Recovered	Section	Lithology		Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description
			Grain Size									
			VC Sand	WC Sand								
14.7												
14.9												
15.1	1											
15.3	1											
15.5	1											
15.7	1											
15.9	1											
16.1												
16.3												
16.5												
16.7												
16.9												

Depth (mbsf)	CORE SEDIMENTARY LOG NGHP-1 / Site 5D / Core 11Y											
	Cored / Recovered	Section	Lithology		Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description
			Grain Size									
125.0	1 1 Y	1	VC-Sand V-Sand W-Sand VF-Sand	Silt Clay	JAN 20-23cm MAZ 23-28 cm IW				○●○●○●○●○●○●○●○●○			MAJOR LITHOLOGY: Nannofossil rich clay. COLOR: 5Y 2.5/1 Black 00 - 15 cm Mottled dark and light (slightly lighter) clay at 0-15, 36-65, 78-88cm. 20 - 23cm Working half only, sampled for JAN at 22cm Silt bed 23 - 28cm Working half only, sampled for MAZ at 44cm Sand at 52cm Discontinuous silt bed 70 - 80cm Working half only, sampled for IW SMEAR SLIDE: Sec. 1 at 44cm.
120.0												

Depth (mbsf)	CORE		SEDIMENTARY LOG NGHP-1 / Site 5D / Core 12P									
	Cored / Recovered	Section	Lithology		Sampling	Bioturbation	Diagenesis	Stratigraphy	Structure	Fossils	Disturbance	Description
			Grain Size									
			VC Sand VLS Sand VMS Sand VFS Sand	Silt Clay								
199.0												
199.2												
199.4												
199.6												
199.8												
200.0												
200.2	1	1			AAZ IW					 <p>MAJOR LITHOLOGY: Nannofossil rich clay. COLOR: Very dark grey. Disseminated shell fragments and mica throughout. SMEAR SLIDE: at 50cm .</p>		
200.4	2				AAZ IW							
200.6												
200.8												
201.0												
201.2												
201.4												
201.6												
201.8												
202.0												
202.2												
202.4												
202.6												
202.8												
203.0												