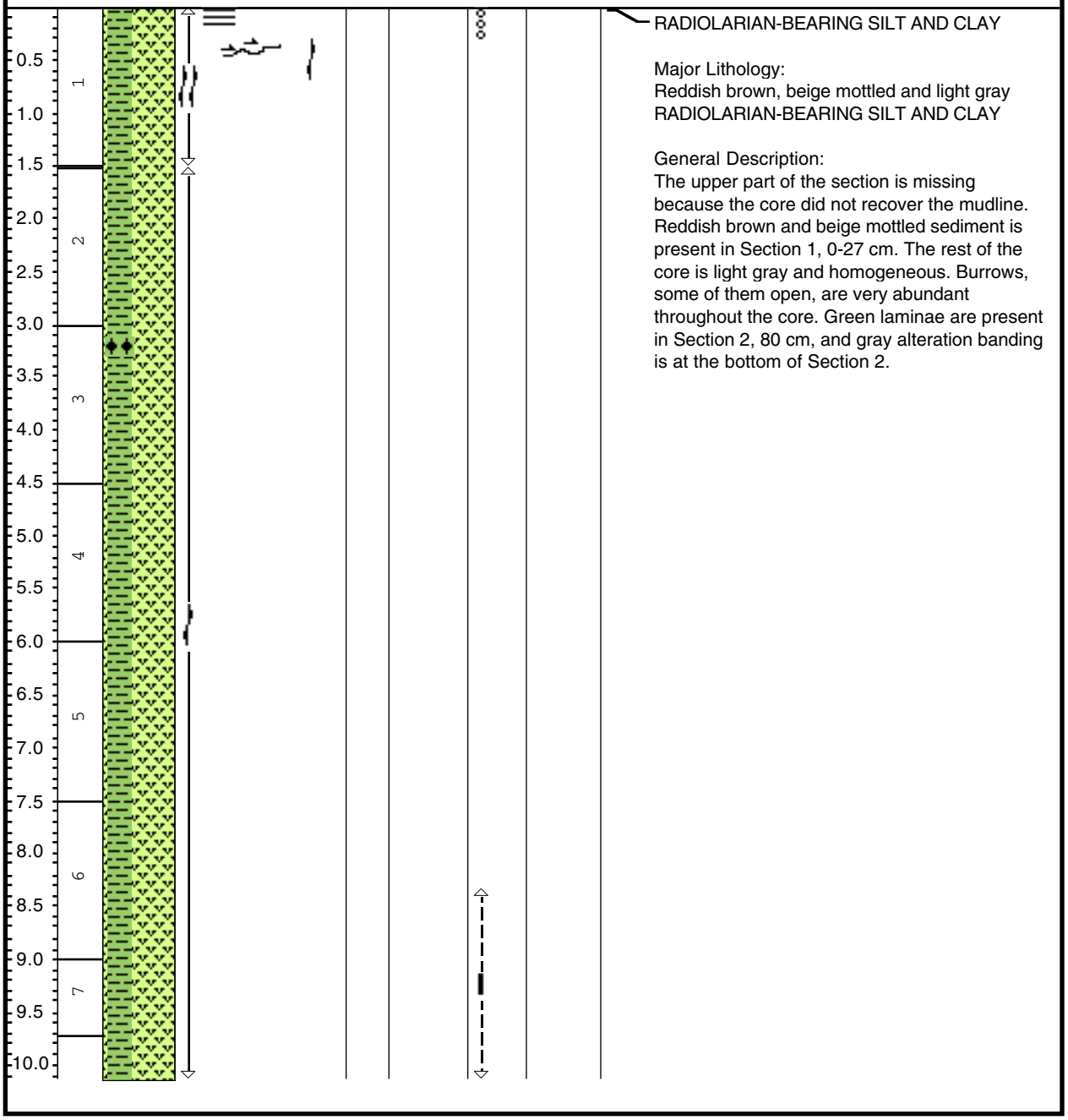
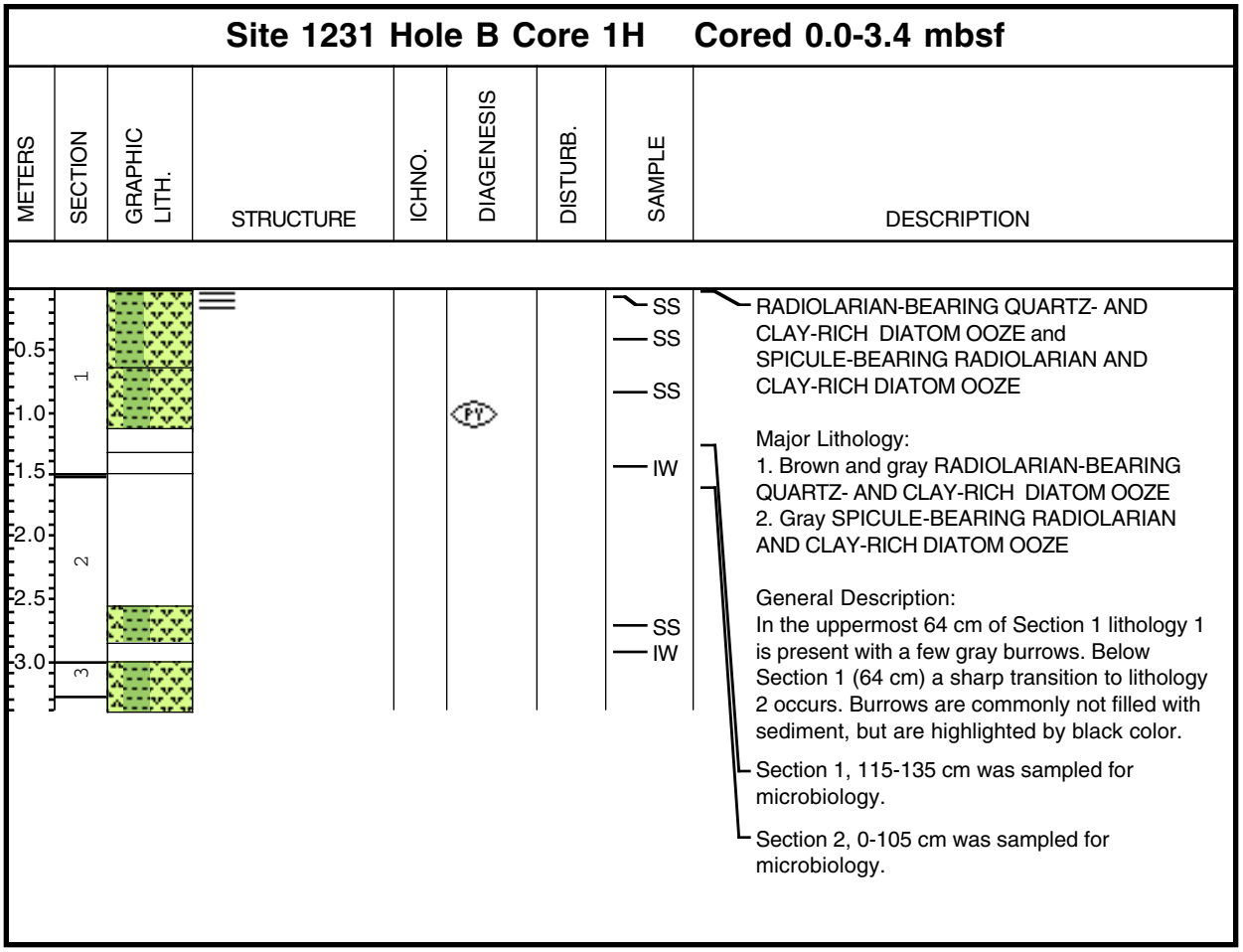
Core Photo

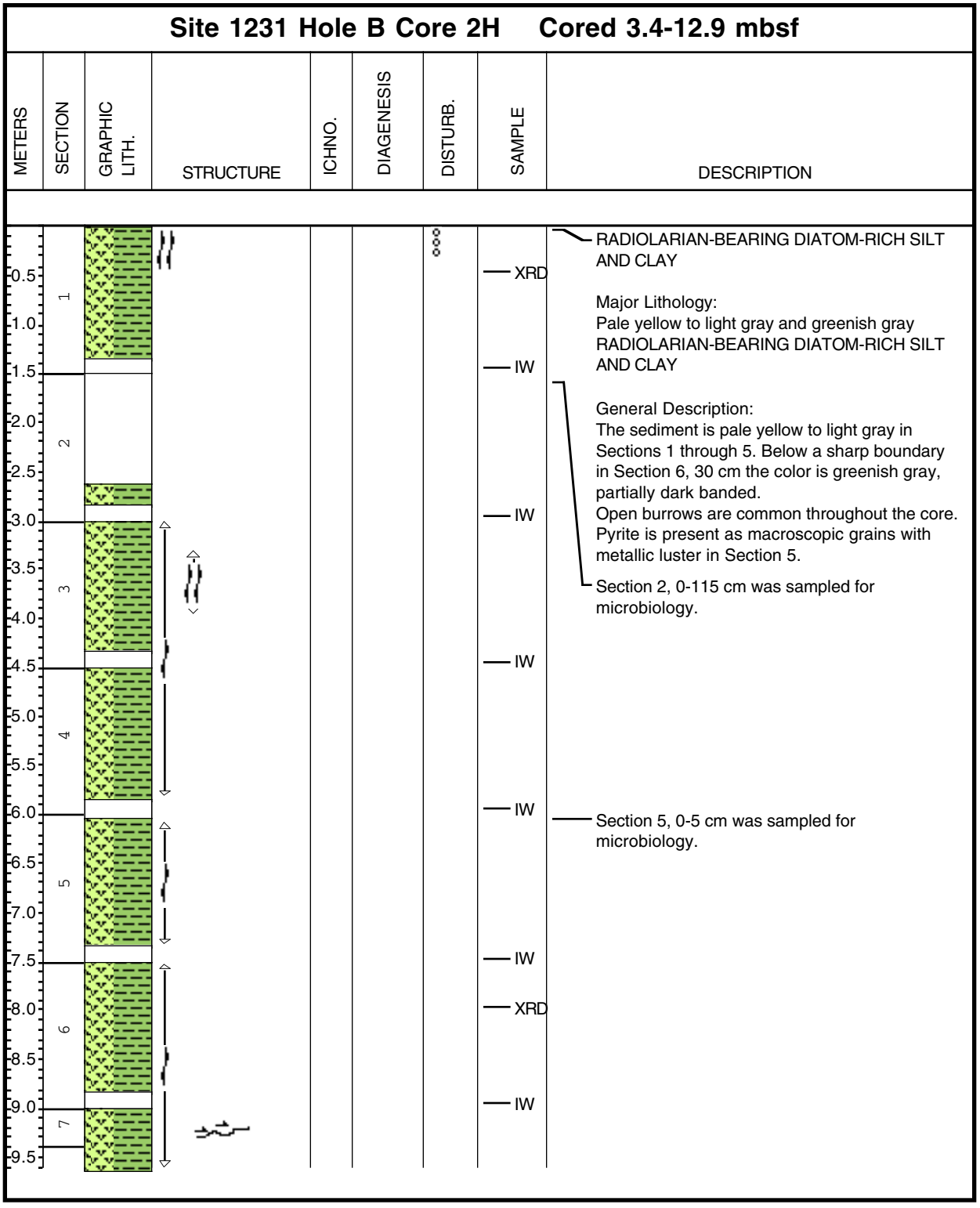
Site 1231 Hole A Core 1H Cored 0.0-9.5 mbsf



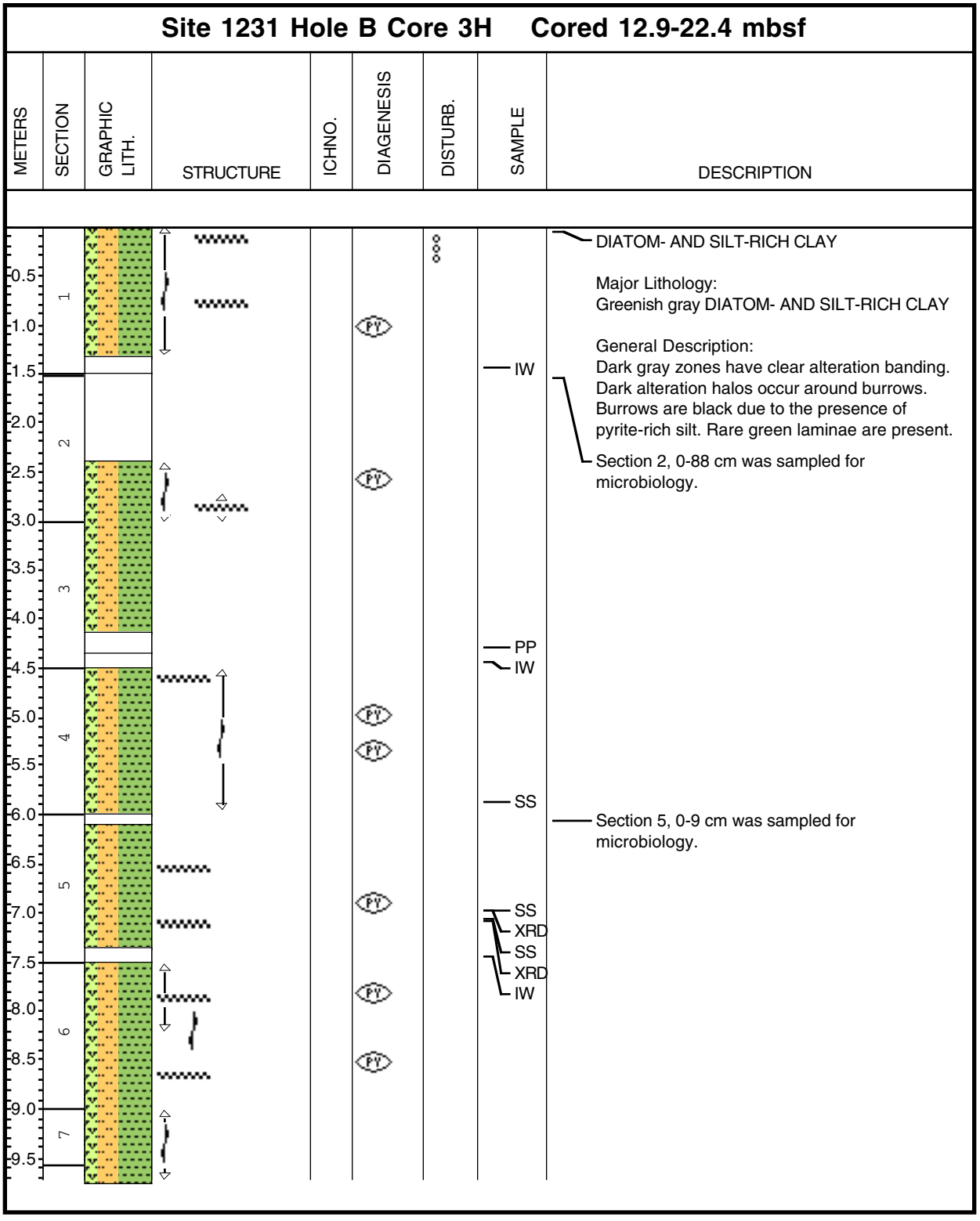
Core Photo


Site 1231 Hole B Core 1H Cored 0.0-3.4 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
3.0
1
2
3
PY
SS
SS
SS
IW
SS
IW
RADIOLARIAN-BEARING QUARTZ- AND CLAY-RICH DIATOM OOZE and SPICULE-BEARING RADIOLARIAN AND CLAY-RICH DIATOM OOZE
Major Lithology:
1. Brown and gray RADIOLARIAN-BEARING QUARTZ- AND CLAY-RICH DIATOM OOZE
2. Gray SPICULE-BEARING RADIOLARIAN AND CLAY-RICH DIATOM OOZE
General Description:
In the uppermost 64 cm of Section 1 lithology 1 is present with a few gray burrows. Below Section 1 (64 cm) a sharp transition to lithology 2 occurs. Burrows are commonly not filled with sediment, but are highlighted by black color.
Section 1, 115-135 cm was sampled for microbiology.
Section 2, 0-105 cm was sampled for microbiology.

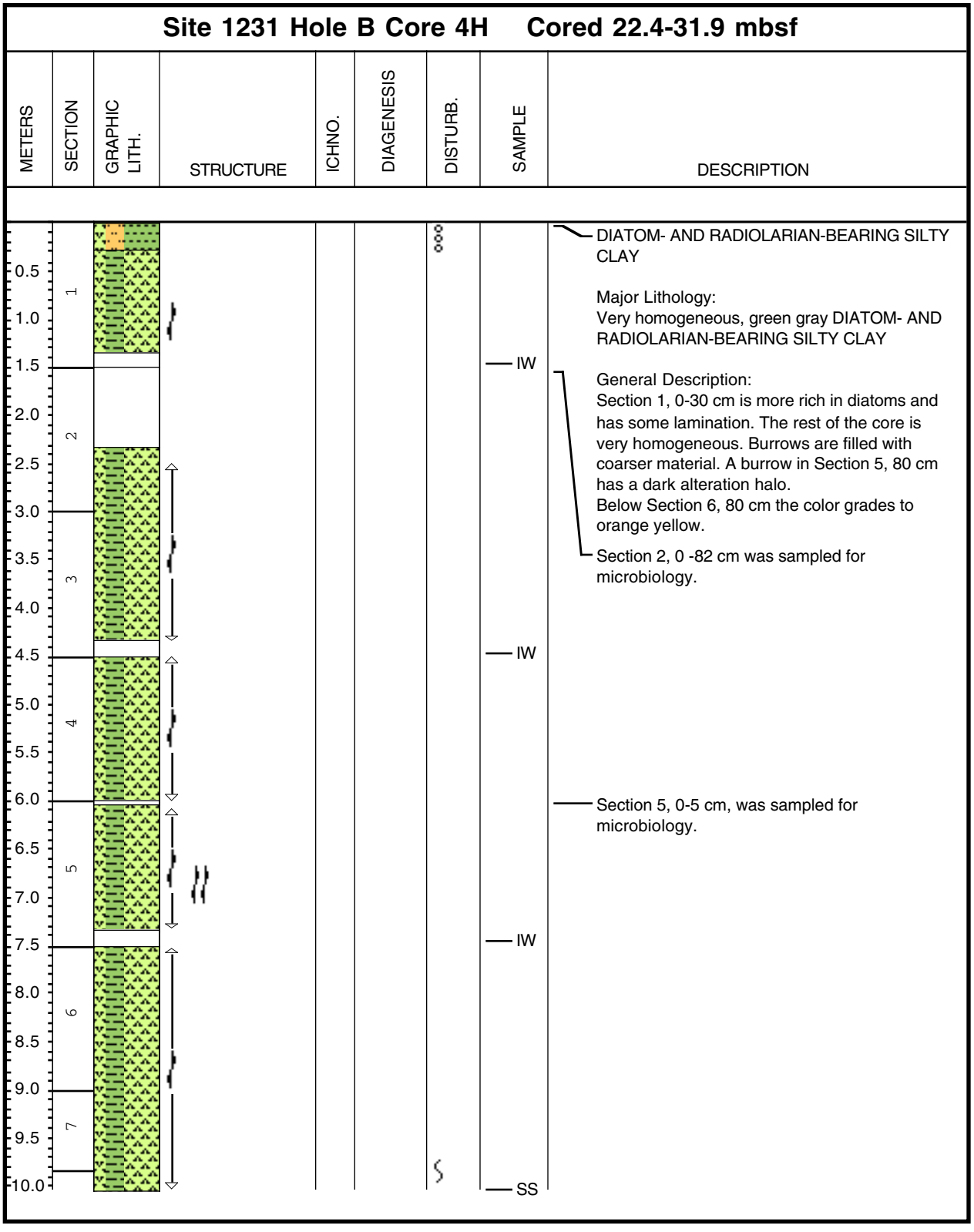
Core Photo


Site 1231 Hole B Core 2H Cored 3.4-12.9 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
9.5
1
2
3
4
5
6
7
XRD
IW
IW
IW
IW
IW
XRD
IW
RADIOLARIAN-BEARING DIATOM-RICH SILT AND CLAY
Major Lithology:
Pale yellow to light gray and greenish gray RADIOLARIAN-BEARING DIATOM-RICH SILT AND CLAY
General Description:
The sediment is pale yellow to light gray in Sections 1 through 5. Below a sharp boundary in Section 6, 30 cm the color is greenish gray, partially dark banded.
Open burrows are common throughout the core.
Pyrite is present as macroscopic grains with metallic luster in Section 5.
Section 2, 0-115 cm was sampled for microbiology.
Section 5, 0-5 cm was sampled for microbiology.

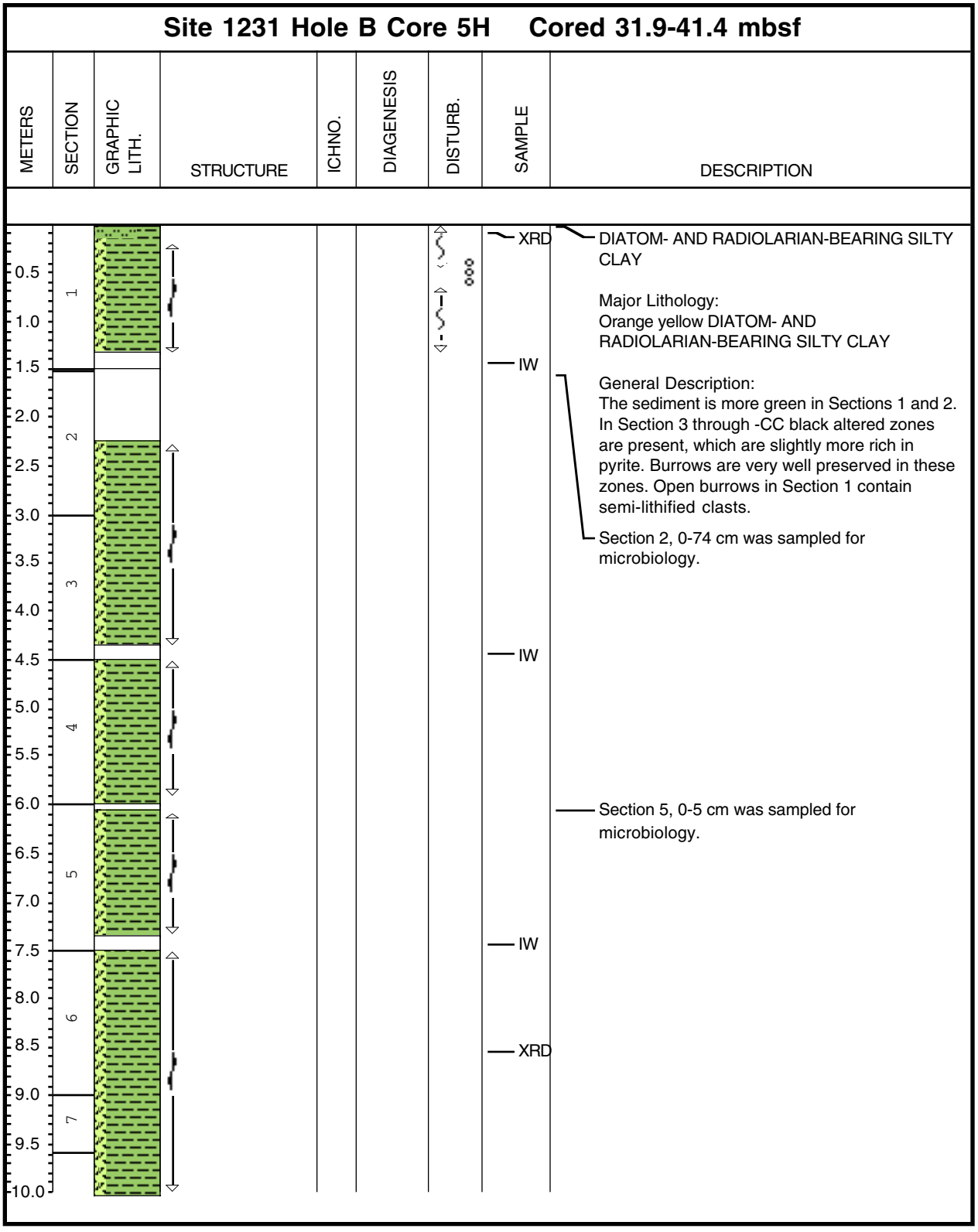
Core Photo


Site 1231 Hole B Core 3H Cored 12.9-22.4 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
9.5
1
2
3
4
5
6
7
PY
IW
PP
IW
SS
SS
XRD
SS
XRD
IW
DIATOM- AND SILT-RICH CLAY
Major Lithology:
Greenish gray DIATOM- AND SILT-RICH CLAY
General Description:
Dark gray zones have clear alteration banding. Dark alteration halos occur around burrows. Burrows are black due to the presence of pyrite-rich silt. Rare green laminae are present.
Section 2, 0-88 cm was sampled for microbiology.
Section 5, 0-9 cm was sampled for microbiology.

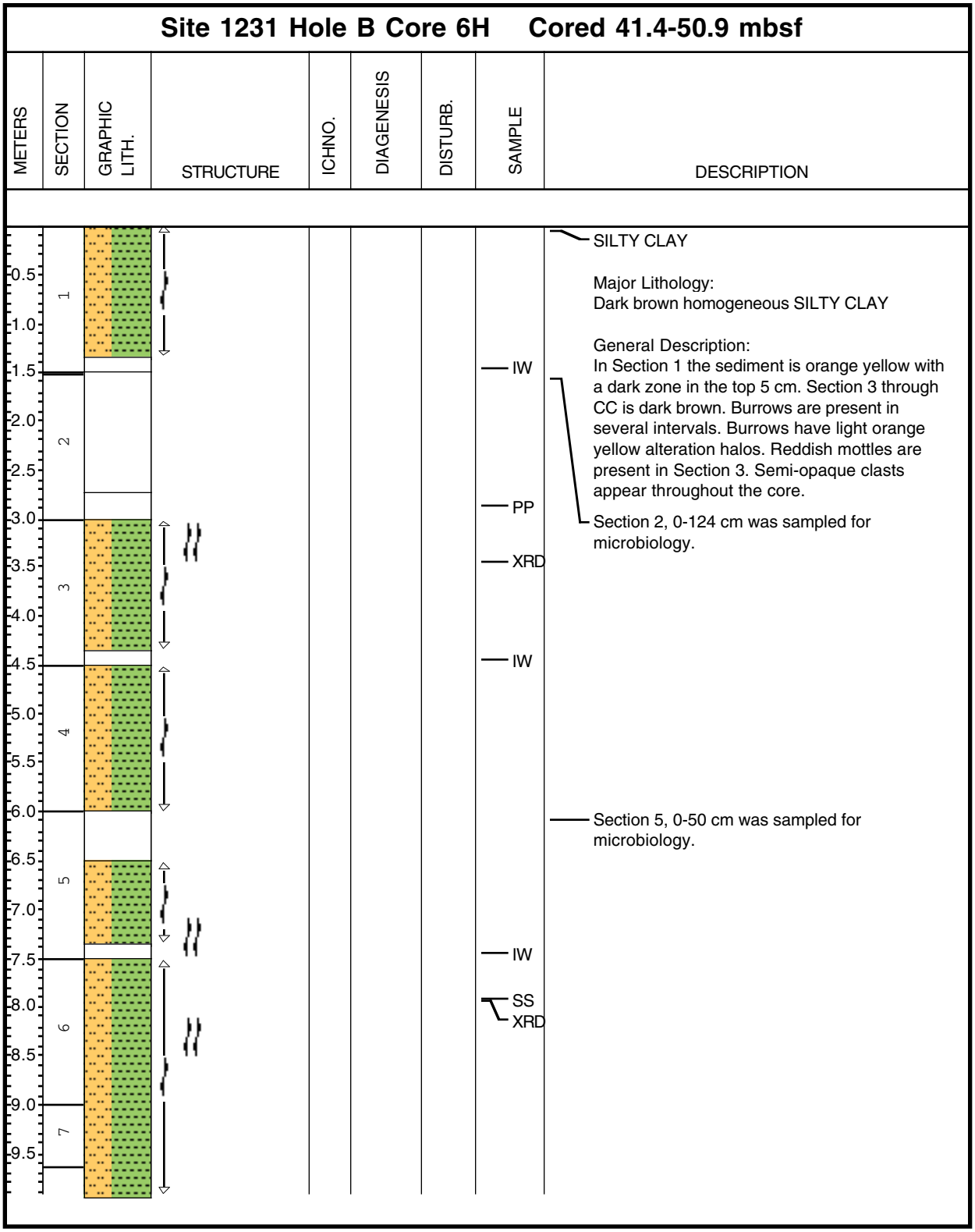
Core Photo


Site 1231 Hole B Core 4H Cored 22.4-31.9 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
9.5
10.0
1
2
3
4
5
6
7
IW
IW
IW
SS
DIATOM- AND RADIOLARIAN-BEARING SILTY CLAY
Major Lithology:
Very homogeneous, green gray DIATOM- AND RADIOLARIAN-BEARING SILTY CLAY
General Description:
Section 1, 0-30 cm is more rich in diatoms and has some lamination. The rest of the core is very homogeneous. Burrows are filled with coarser material. A burrow in Section 5, 80 cm has a dark alteration halo.
Below Section 6, 80 cm the color grades to orange yellow.
Section 2, 0 -82 cm was sampled for microbiology.
Section 5, 0-5 cm, was sampled for microbiology.

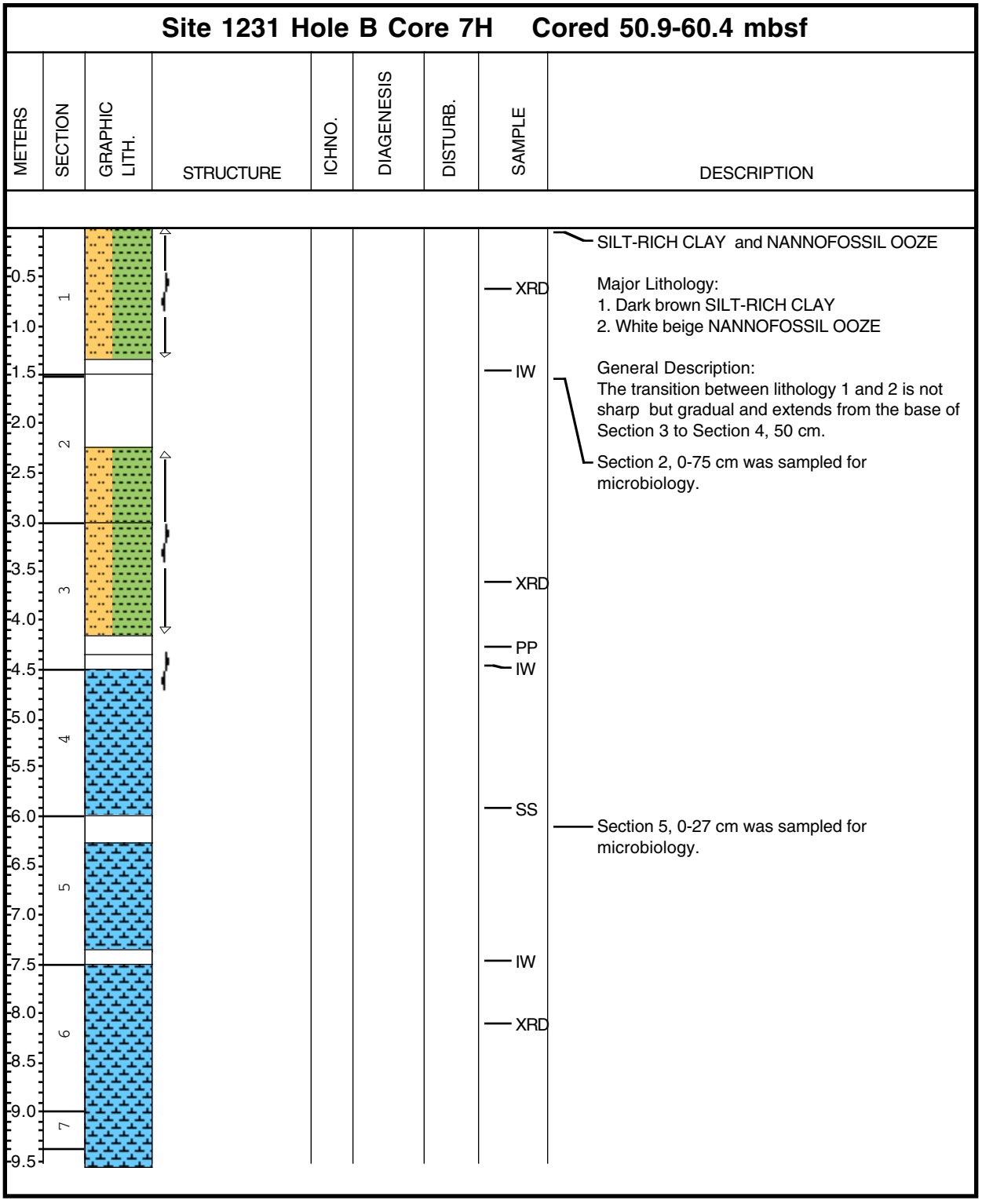
Core Photo


Site 1231 Hole B Core 5H Cored 31.9-41.4 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
9.5
10.0
1
2
3
4
5
6
7
XRD
IW
IW
IW
XRD
DIATOM- AND RADIOLARIAN-BEARING SILTY CLAY
Major Lithology:
Orange yellow DIATOM- AND RADIOLARIAN-BEARING SILTY CLAY
General Description:
The sediment is more green in Sections 1 and 2. In Section 3 through -CC black altered zones are present, which are slightly more rich in pyrite. Burrows are very well preserved in these zones. Open burrows in Section 1 contain semi-lithified clasts.
Section 2, 0-74 cm was sampled for microbiology.
Section 5, 0-5 cm was sampled for microbiology.

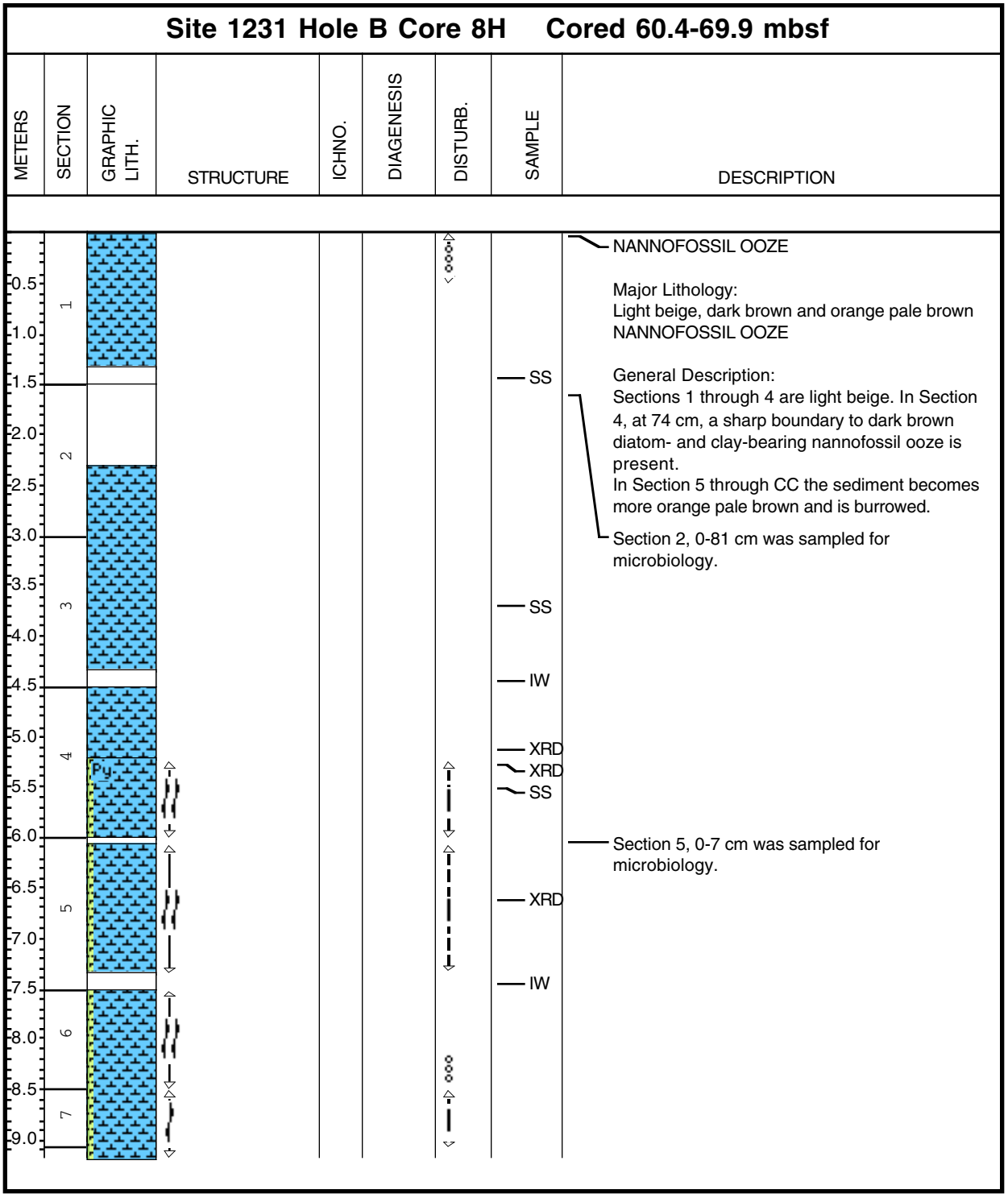
Core Photo


Site 1231 Hole B Core 6H Cored 41.4-50.9 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
9.5
1
2
3
4
5
6
7
IW
PP
XRD
IW
IW
SS
XRD
SILTY CLAY
Major Lithology:
Dark brown homogeneous SILTY CLAY
General Description:
In Section 1 the sediment is orange yellow with a dark zone in the top 5 cm. Section 3 through CC is dark brown. Burrows are present in several intervals. Burrows have light orange yellow alteration halos. Reddish mottles are present in Section 3. Semi-opaque clasts appear throughout the core.
Section 2, 0-124 cm was sampled for microbiology.
Section 5, 0-50 cm was sampled for microbiology.

Core Photo


Site 1231 Hole B Core 7H Cored 50.9-60.4 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
9.5
1
2
3
4
5
6
7
XRD
IW
XRD
PP
IW
SS
IW
XRD
SILT-RICH CLAY and NANNOFOSSIL OOZE
Major Lithology:
1. Dark brown SILT-RICH CLAY
2. White beige NANNOFOSSIL OOZE
General Description:
The transition between lithology 1 and 2 is not sharp but gradual and extends from the base of Section 3 to Section 4, 50 cm.
Section 2, 0-75 cm was sampled for microbiology.
Section 5, 0-27 cm was sampled for microbiology.

Core Photo


Site 1231 Hole B Core 8H Cored 60.4-69.9 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
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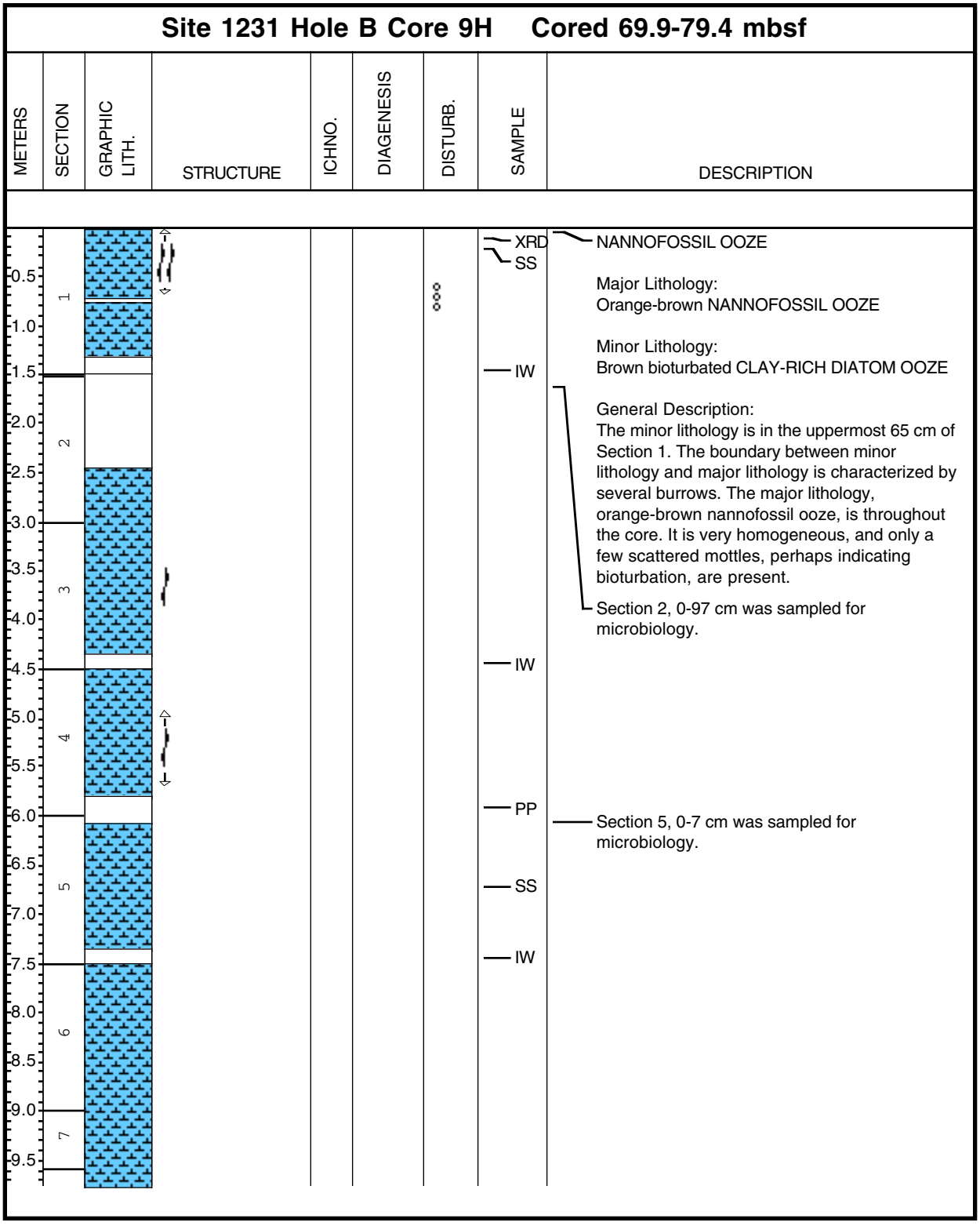
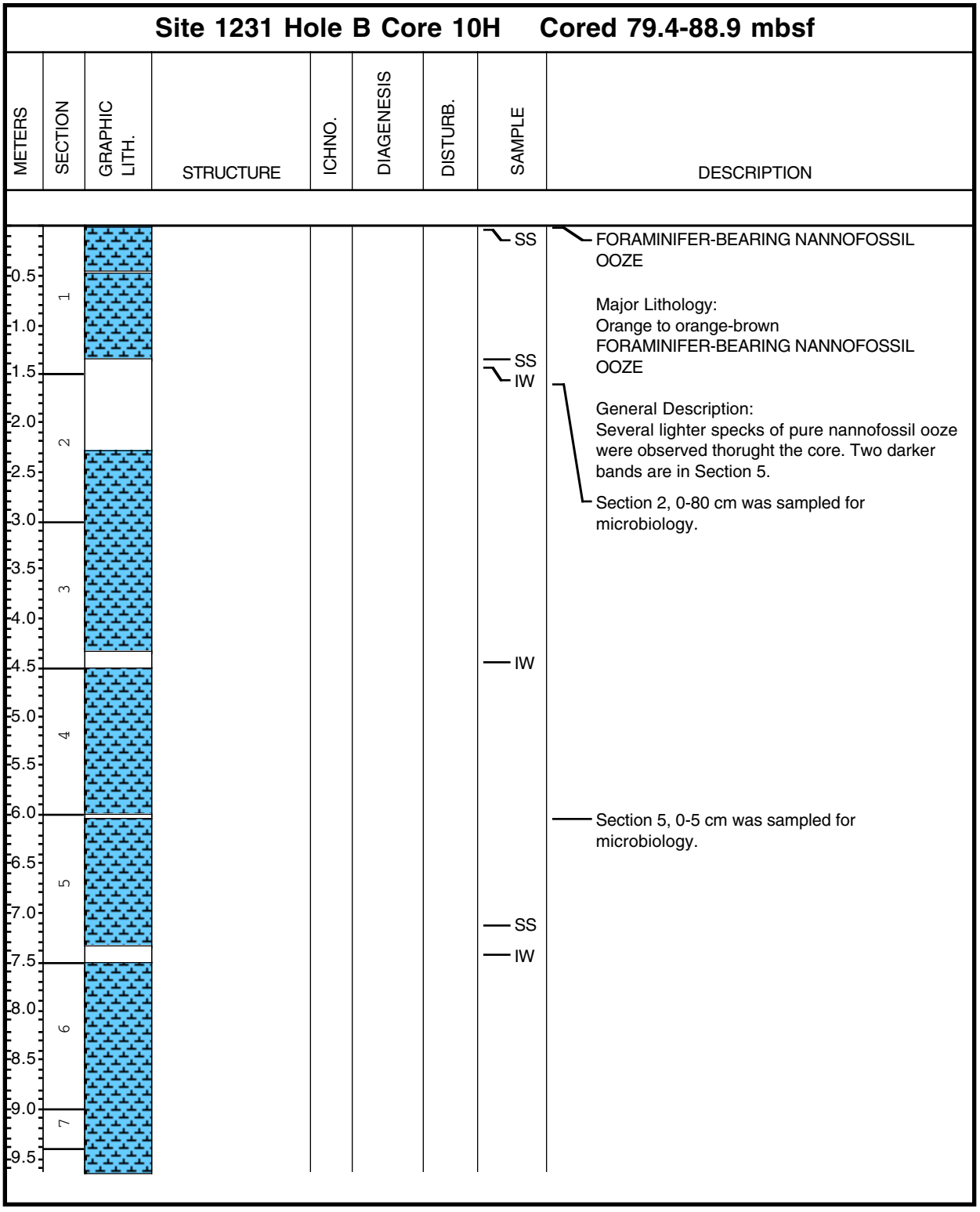
6.5
7.0
7.5
8.0
8.5
9.0
1
2
3
4
5
6
7
Py
SS
SS
IW
XRD
XRD
SS
XRD
IW
NANNOFOSSIL OOZE
Major Lithology:
Light beige, dark brown and orange pale brown NANNOFOSSIL OOZE
General Description:
Sections 1 through 4 are light beige. In Section 4, at 74 cm, a sharp boundary to dark brown diatom- and clay-bearing nannofossil ooze is present.
In Section 5 through CC the sediment becomes more orange pale brown and is burrowed.
Section 2, 0-81 cm was sampled for microbiology.
Section 5, 0-7 cm was sampled for microbiology.

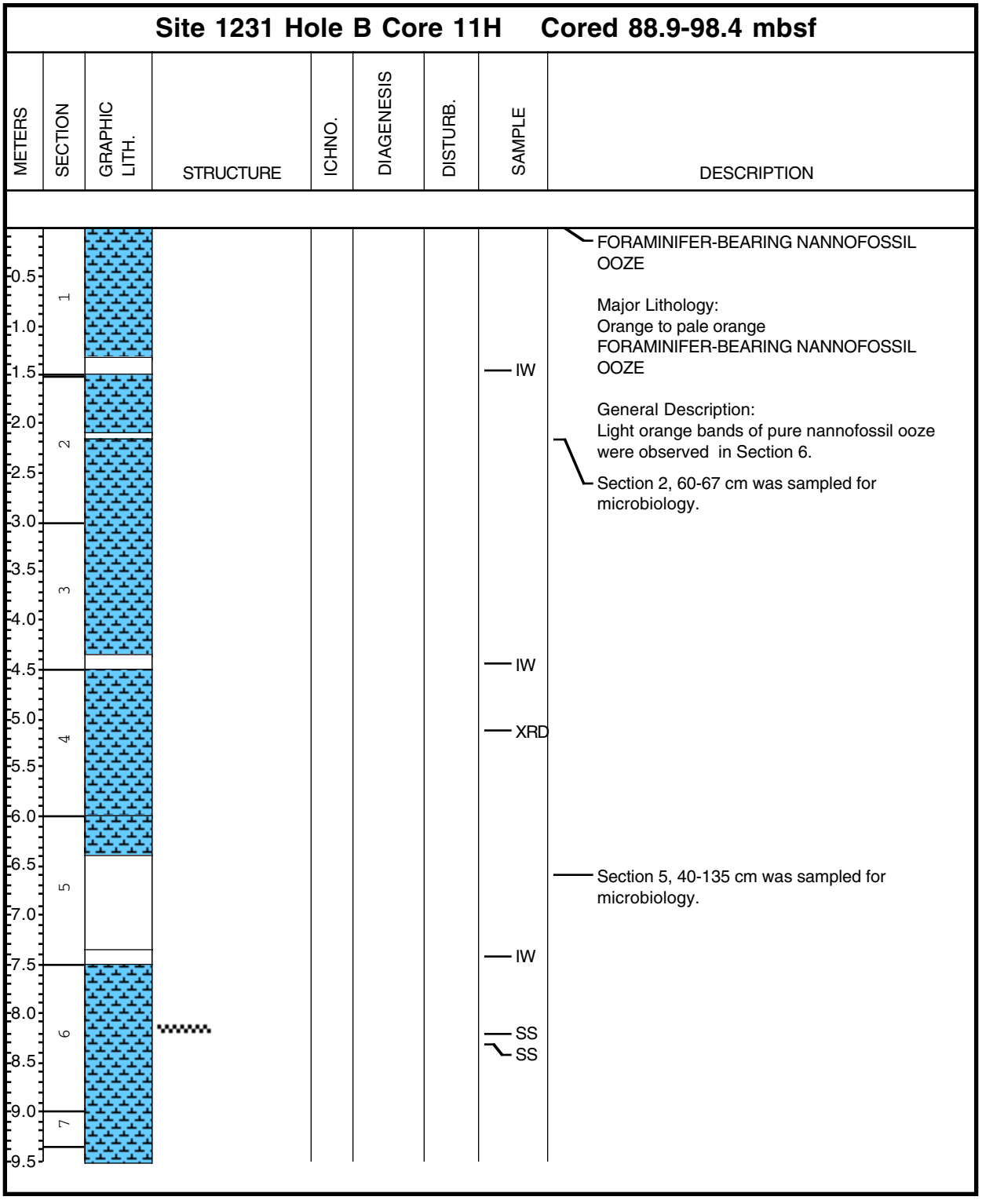
Core Photo


Site 1231 Hole B Core 9H Cored 69.9-79.4 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
9.5
1
2
3
4
5
6
7
XRD
SS
IW
IW
PP
SS
IW
NANNOFOSSIL OOZE
Major Lithology:
Orange-brown NANNOFOSSIL OOZE
Minor Lithology:
Brown bioturbated CLAY-RICH DIATOM OOZE
General Description:
The minor lithology is in the uppermost 65 cm of Section 1. The boundary between minor lithology and major lithology is characterized by several burrows. The major lithology, orange-brown nannofossil ooze, is throughout the core. It is very homogeneous, and only a few scattered mottles, perhaps indicating bioturbation, are present.
Section 2, 0-97 cm was sampled for microbiology.
Section 5, 0-7 cm was sampled for microbiology.

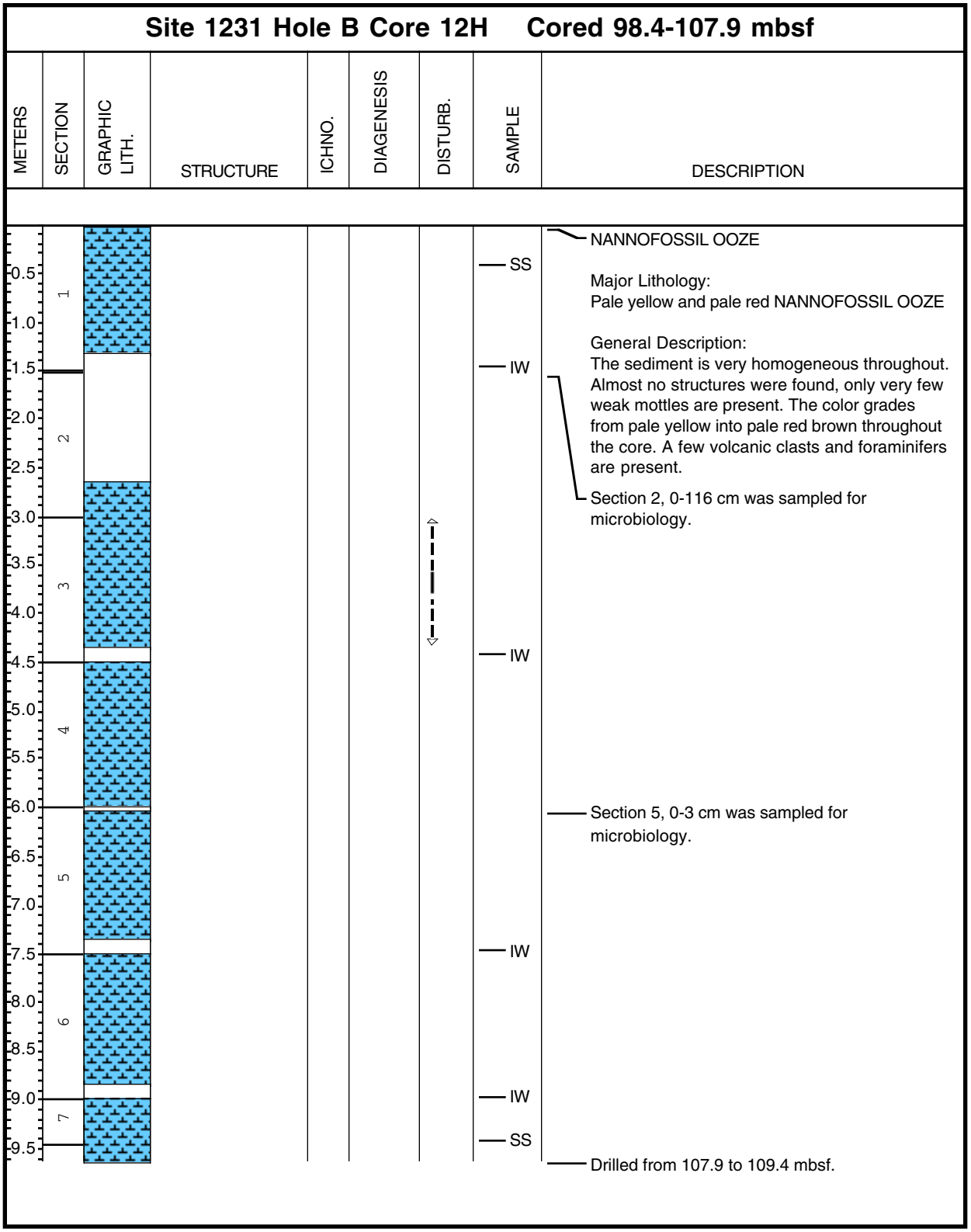
Core Photo


Site 1231 Hole B Core 10H Cored 79.4-88.9 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
9.5
1
2
3
4
5
6
7
SS
SS
IW
IW
SS
IW
FORAMINIFER-BEARING NANNOFOSSIL OOZE
Major Lithology:
Orange to orange-brown FORAMINIFER-BEARING NANNOFOSSIL OOZE
General Description:
Several lighter specks of pure nannofossil ooze were observed thorught the core. Two darker bands are in Section 5.
Section 2, 0-80 cm was sampled for microbiology.
Section 5, 0-5 cm was sampled for microbiology.

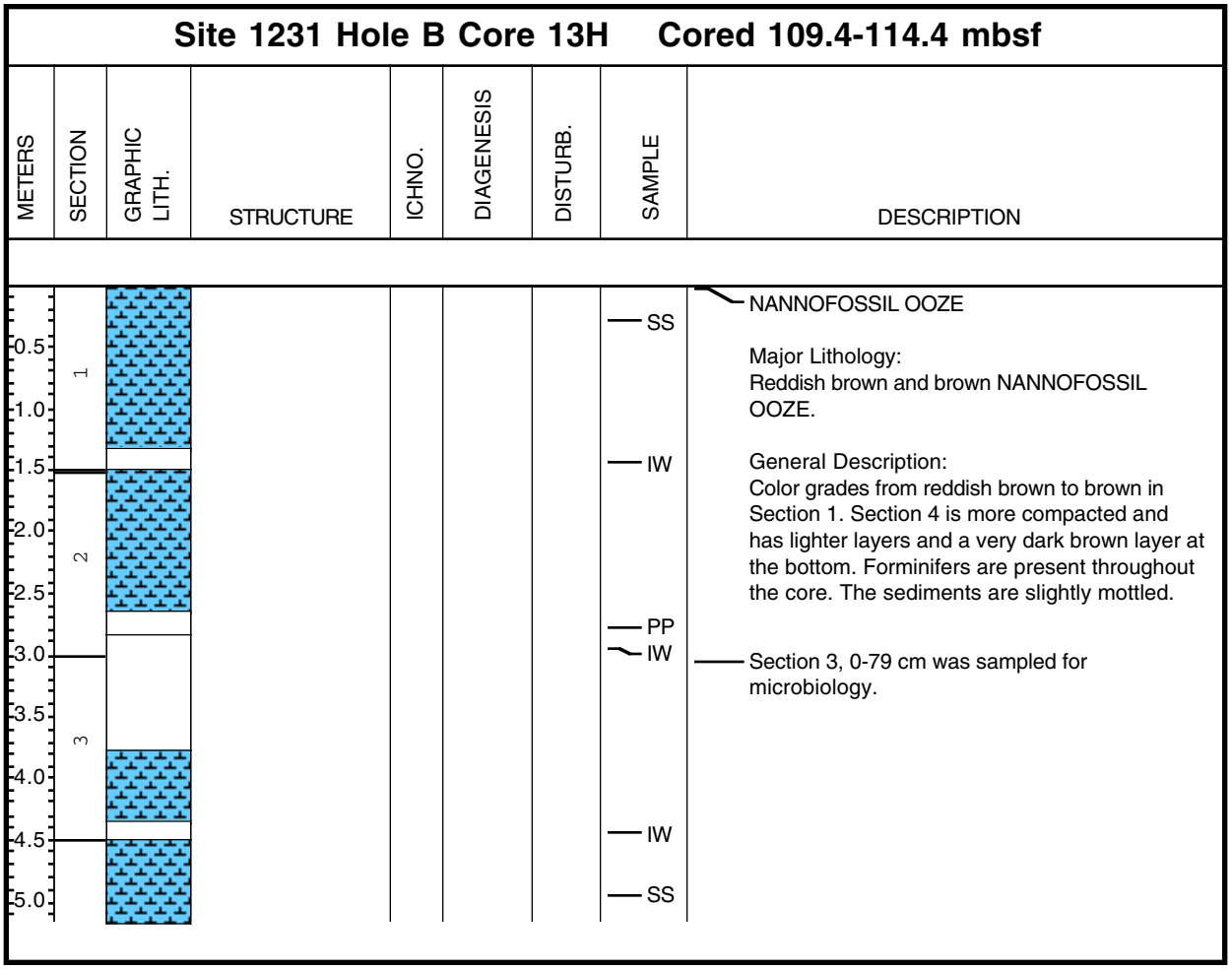
Core Photo


Site 1231 Hole B Core 11H Cored 88.9-98.4 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
9.5
1
2
3
4
5
6
7
IW
IW
XRD
IW
SS
SS
FORAMINIFER-BEARING NANNOFOSSIL OOZE
Major Lithology:
Orange to pale orange FORAMINIFER-BEARING NANNOFOSSIL OOZE
General Description:
Light orange bands of pure nannofossil ooze were observed in Section 6.
Section 2, 60-67 cm was sampled for microbiology.
Section 5, 40-135 cm was sampled for microbiology.

Core Photo


Site 1231 Hole B Core 12H Cored 98.4-107.9 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
9.5
1
2
3
4
5
6
7
SS
IW
IW
IW
IW
SS
NANNOFOSSIL OOZE
Major Lithology:
Pale yellow and pale red NANNOFOSSIL OOZE
General Description:
The sediment is very homogeneous throughout. Almost no structures were found, only very few weak mottles are present. The color grades from pale yellow into pale red brown throughout the core. A few volcanic clasts and foraminifers are present.
Section 2, 0-116 cm was sampled for microbiology.
Section 5, 0-3 cm was sampled for microbiology.
Drilled from 107.9 to 109.4 mbsf.

Core Photo

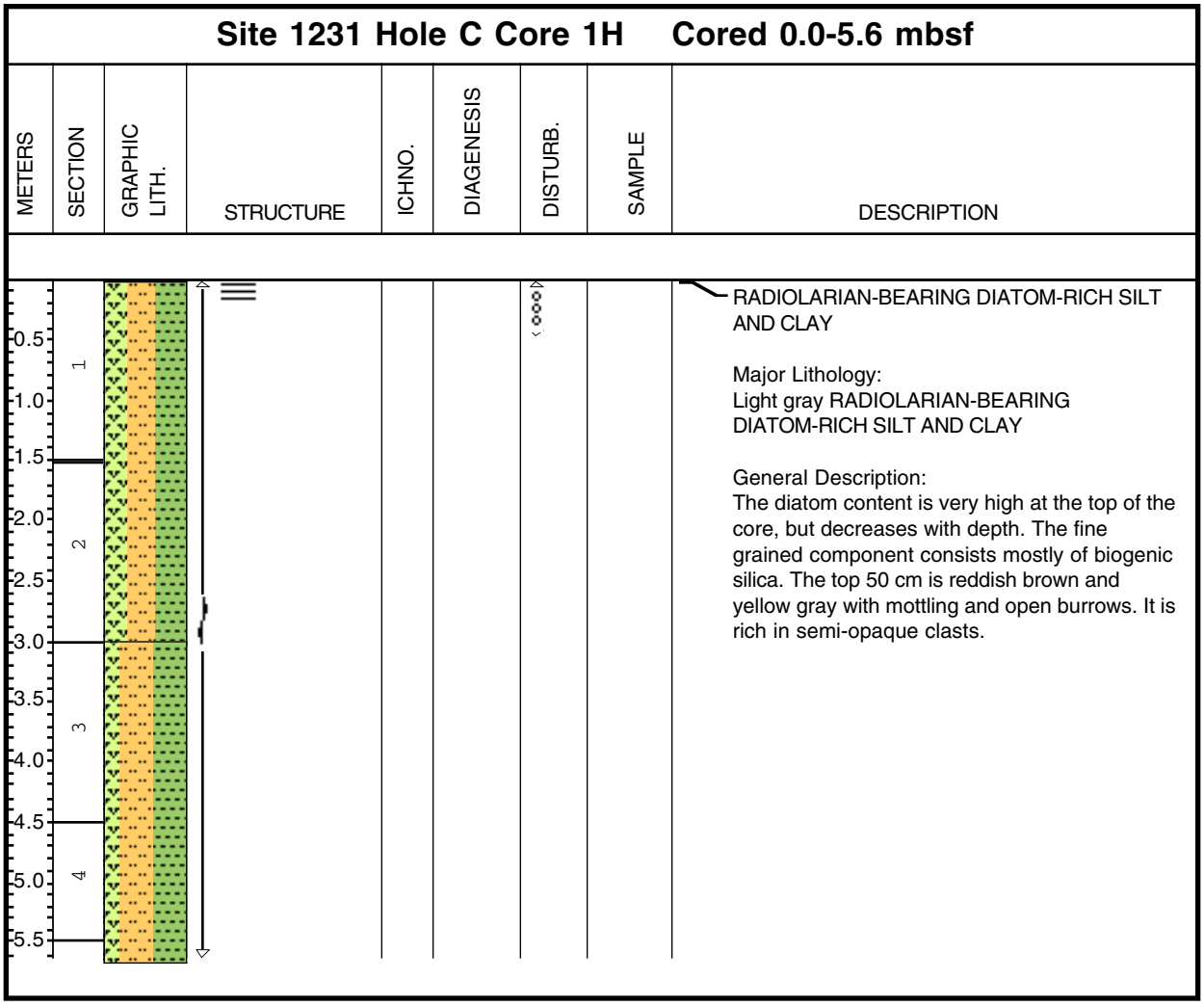

Site 1231 Hole B Core 13H Cored 109.4-114.4 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
1
2
3
SS
IW
PP
IW
IW
SS
NANNOFOSSIL OOZE
Major Lithology:
Reddish brown and brown NANNOFOSSIL OOZE.
General Description:
Color grades from reddish brown to brown in Section 1. Section 4 is more compacted and has lighter layers and a very dark brown layer at the bottom. Forminifers are present throughout the core. The sediments are slightly mottled.
Section 3, 0-79 cm was sampled for microbiology.

Core Photo

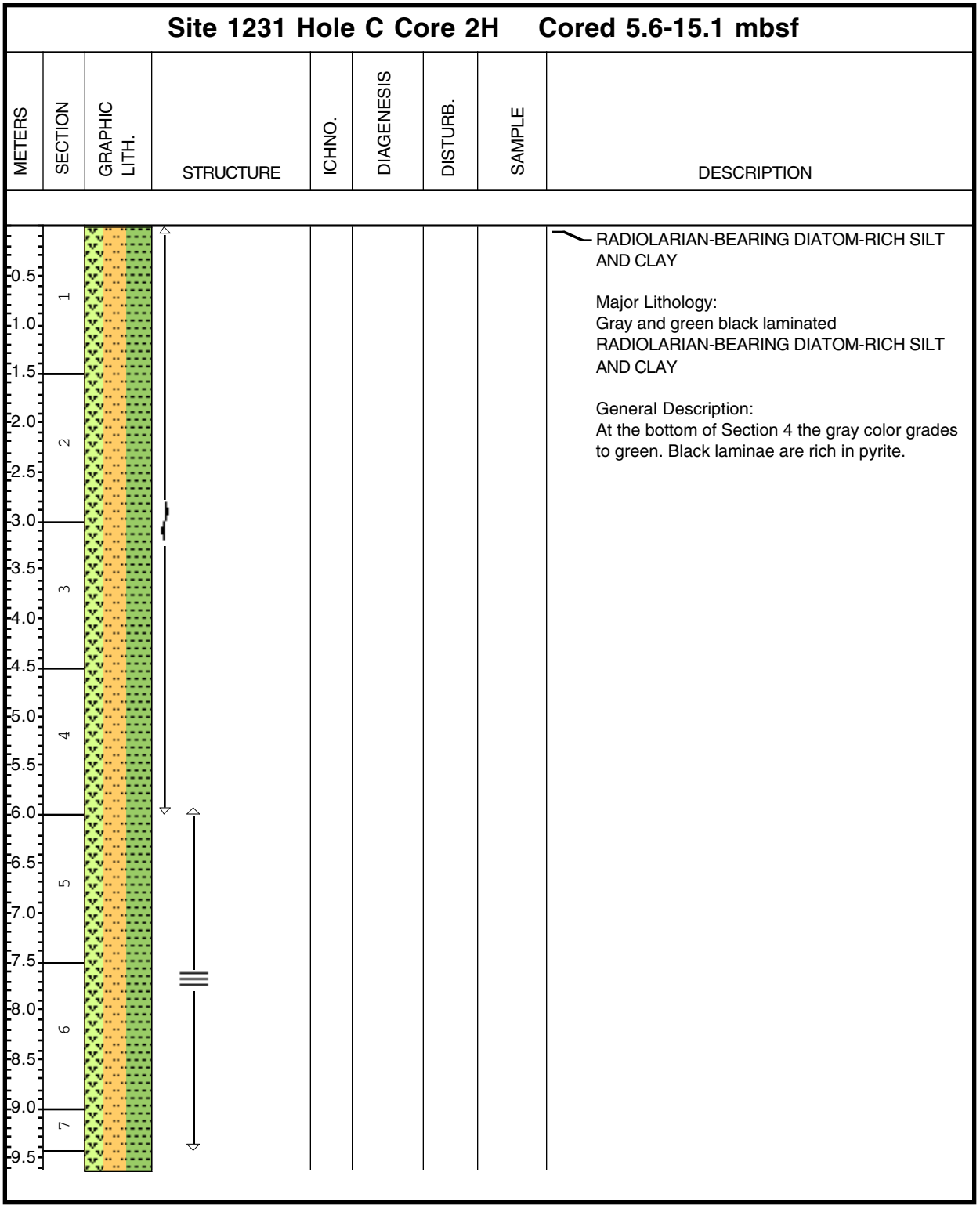
Site 1231 Hole B Core 14X Cored 114.4-117.3 mbsf

METERS	SECTION	GRAPHIC LITH.	STRUCTURE	ICHNO.	DIAGENESIS	DISTURB.	SAMPLE	DESCRIPTION
	1							The entire core was sampled for microbiology.

Core Photo


Site 1231 Hole C Core 1H Cored 0.0-5.6 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
1
2
3
4
RADIOLARIAN-BEARING DIATOM-RICH SILT AND CLAY
Major Lithology:
Light gray RADIOLARIAN-BEARING DIATOM-RICH SILT AND CLAY
General Description:
The diatom content is very high at the top of the core, but decreases with depth. The fine grained component consists mostly of biogenic silica. The top 50 cm is reddish brown and yellow gray with mottling and open burrows. It is rich in semi-opaque clasts.

Core Photo


Site 1231 Hole C Core 2H Cored 5.6-15.1 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
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8.0
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9.0
9.5
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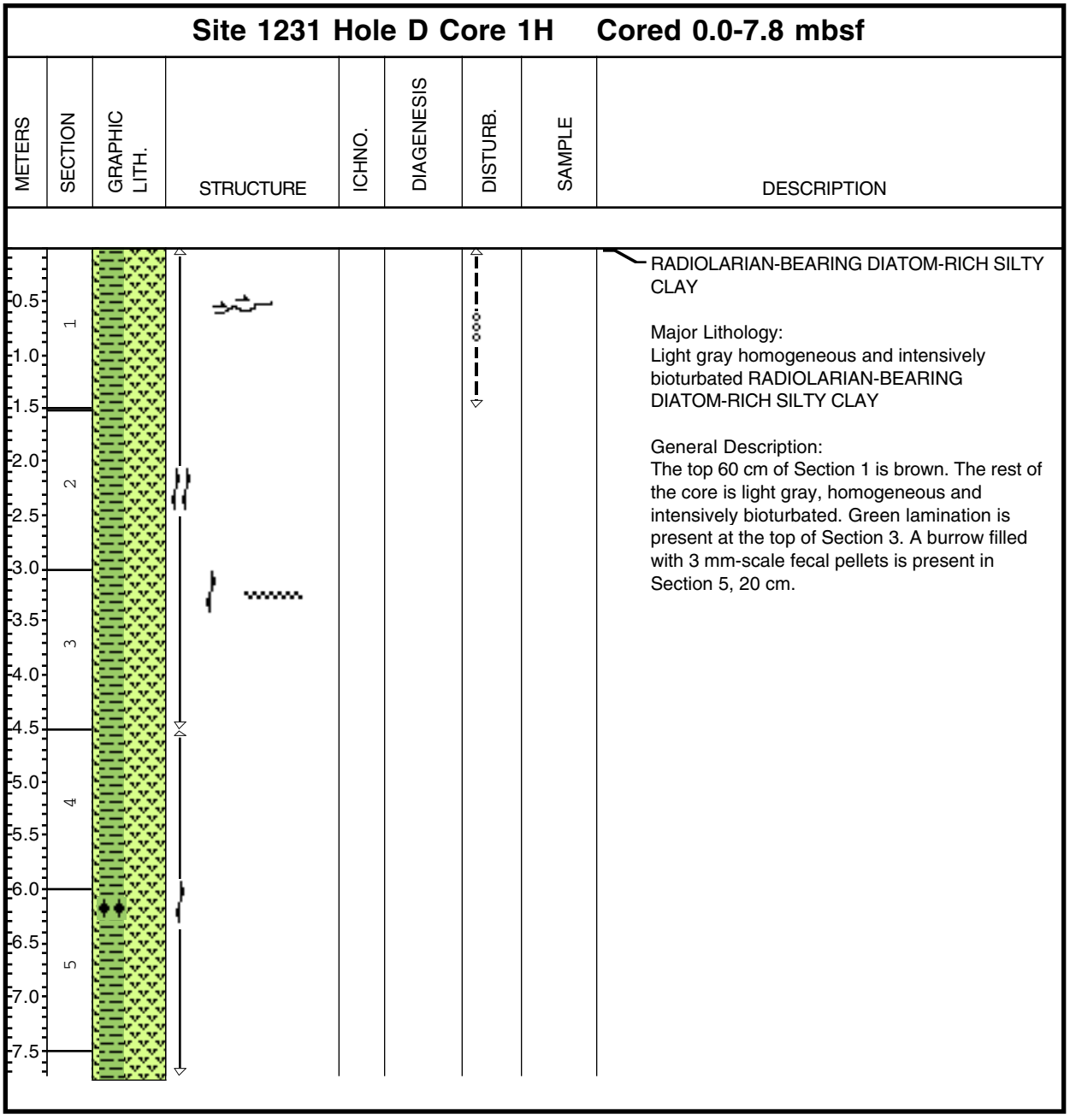
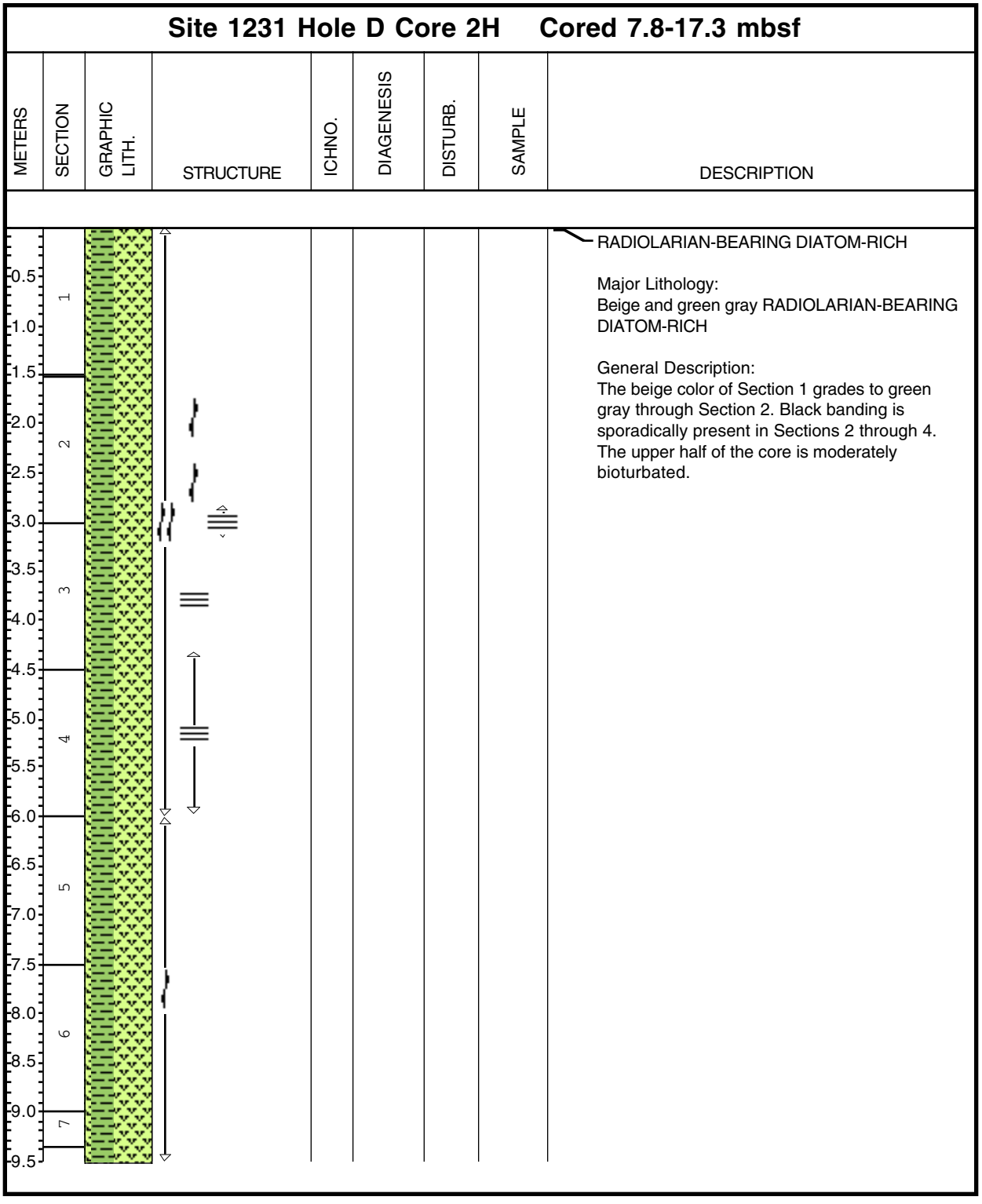
5
6
7
RADIOLARIAN-BEARING DIATOM-RICH SILT AND CLAY
Major Lithology:
Gray and green black laminated RADIOLARIAN-BEARING DIATOM-RICH SILT AND CLAY
General Description:
At the bottom of Section 4 the gray color grades to green. Black laminae are rich in pyrite.

Core Photo


Site 1231 Hole D Core 1H Cored 0.0-7.8 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
1
2
3
4
5
RADIOLARIAN-BEARING DIATOM-RICH SILTY CLAY
Major Lithology:
Light gray homogeneous and intensively bioturbated RADIOLARIAN-BEARING DIATOM-RICH SILTY CLAY
General Description:
The top 60 cm of Section 1 is brown. The rest of the core is light gray, homogeneous and intensively bioturbated. Green lamination is present at the top of Section 3. A burrow filled with 3 mm-scale fecal pellets is present in Section 5, 20 cm.

Core Photo


Site 1231 Hole D Core 2H Cored 7.8-17.3 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
RADIOLARIAN-BEARING DIATOM-RICH
Major Lithology:
Beige and green gray RADIOLARIAN-BEARING DIATOM-RICH
General Description:
The beige color of Section 1 grades to green gray through Section 2. Black banding is sporadically present in Sections 2 through 4. The upper half of the core is moderately bioturbated.
0.5
1.0
1.5
2.0
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3.0
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4.0
4.5
5.0
5.5
6.0
6.5
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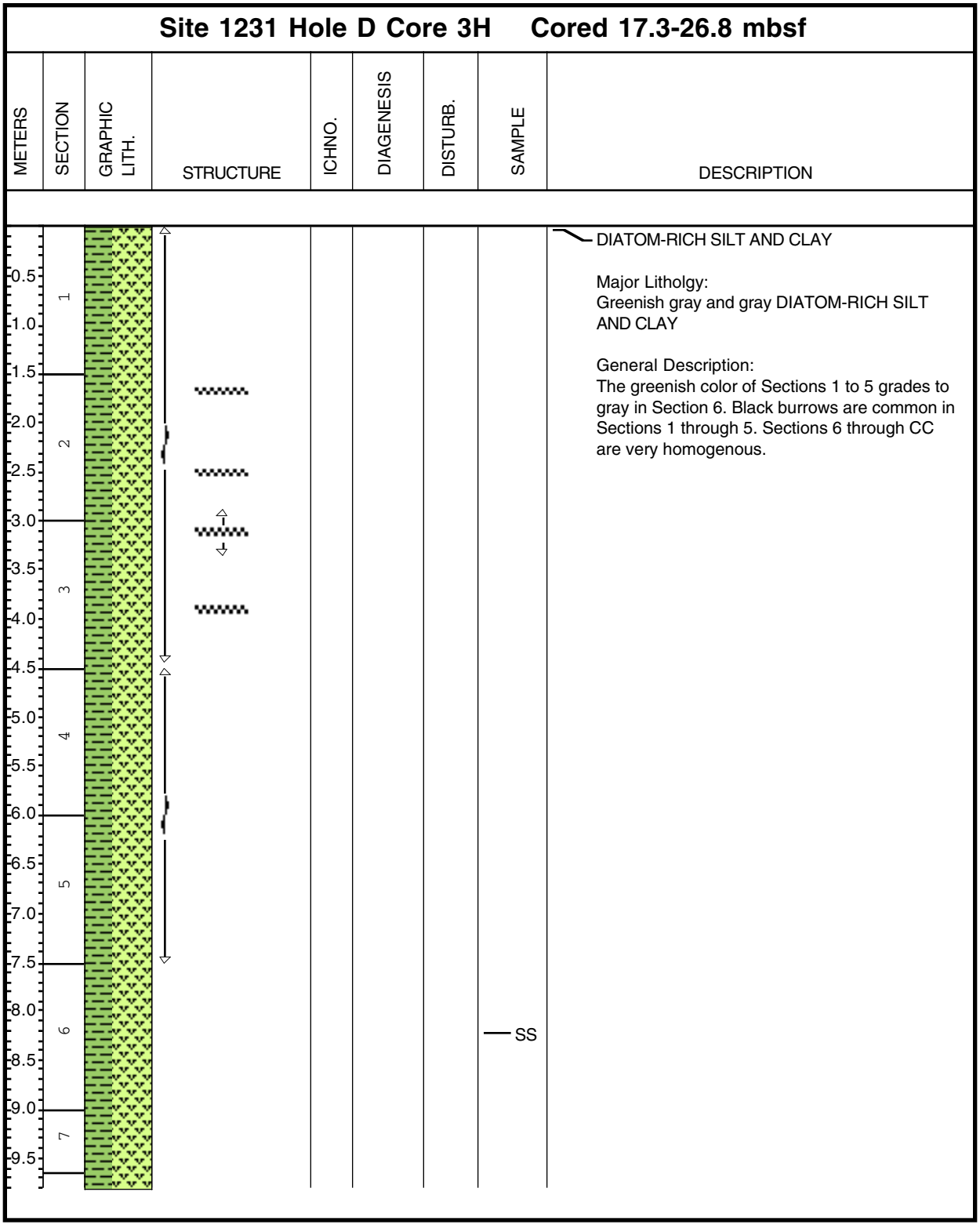
8.5
9.0
9.5
1
2
3
4
5
6
7

Core Photo


Site 1231 Hole D Core 3H Cored 17.3-26.8 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
9.5
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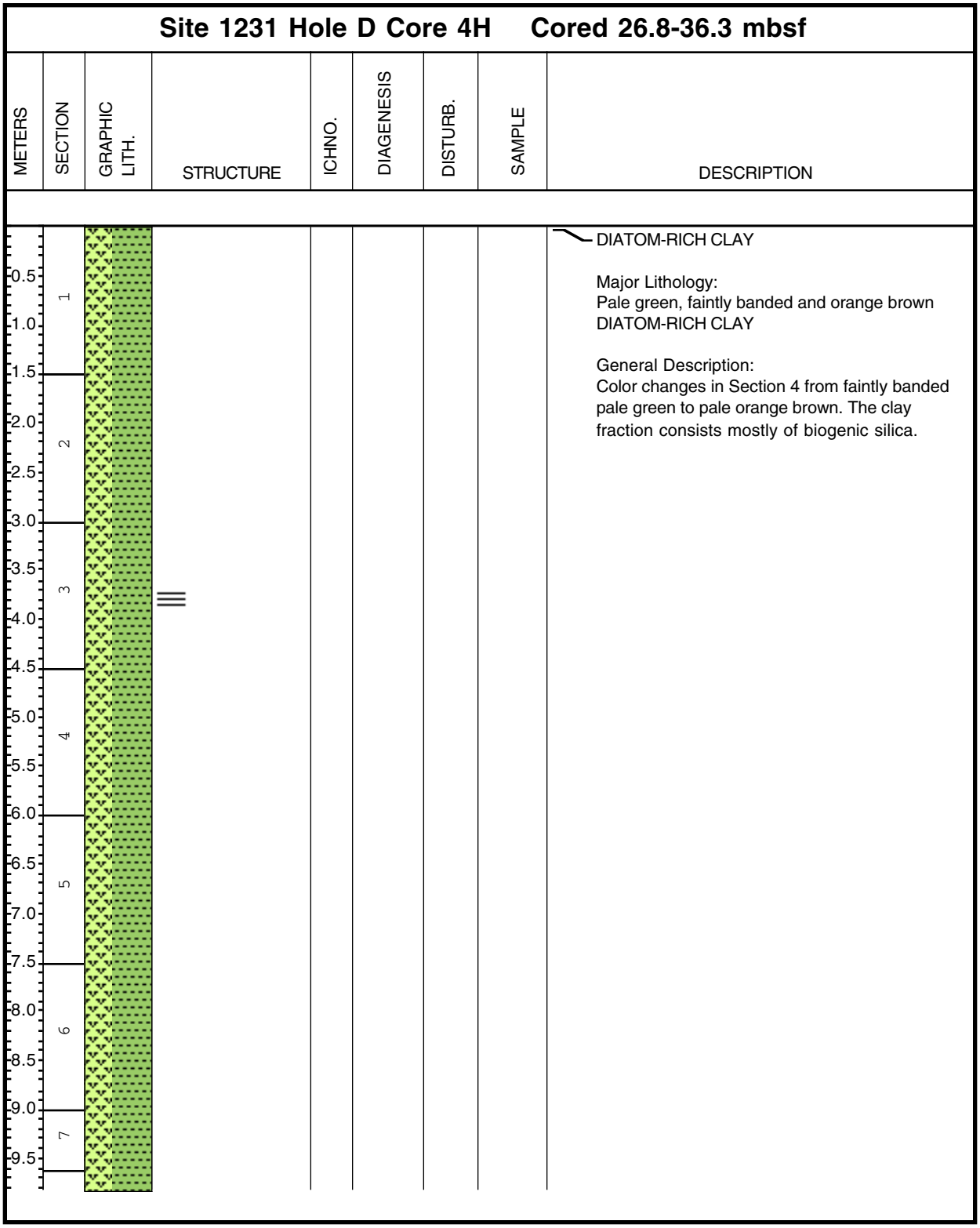
7
SS
DIATOM-RICH SILT AND CLAY
Major Litholgy:
Greenish gray and gray DIATOM-RICH SILT AND CLAY
General Description:
The greenish color of Sections 1 to 5 grades to gray in Section 6. Black burrows are common in Sections 1 through 5. Sections 6 through CC are very homogenous.

Core Photo


Site 1231 Hole D Core 4H Cored 26.8-36.3 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
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9.5
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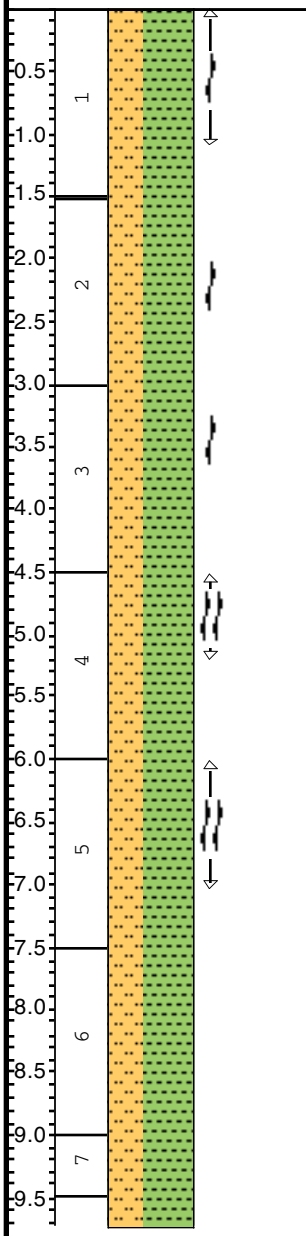
DIATOM-RICH CLAY
Major Lithology:
Pale green, faintly banded and orange brown DIATOM-RICH CLAY
General Description:
Color changes in Section 4 from faintly banded pale green to pale orange brown. The clay fraction consists mostly of biogenic silica.

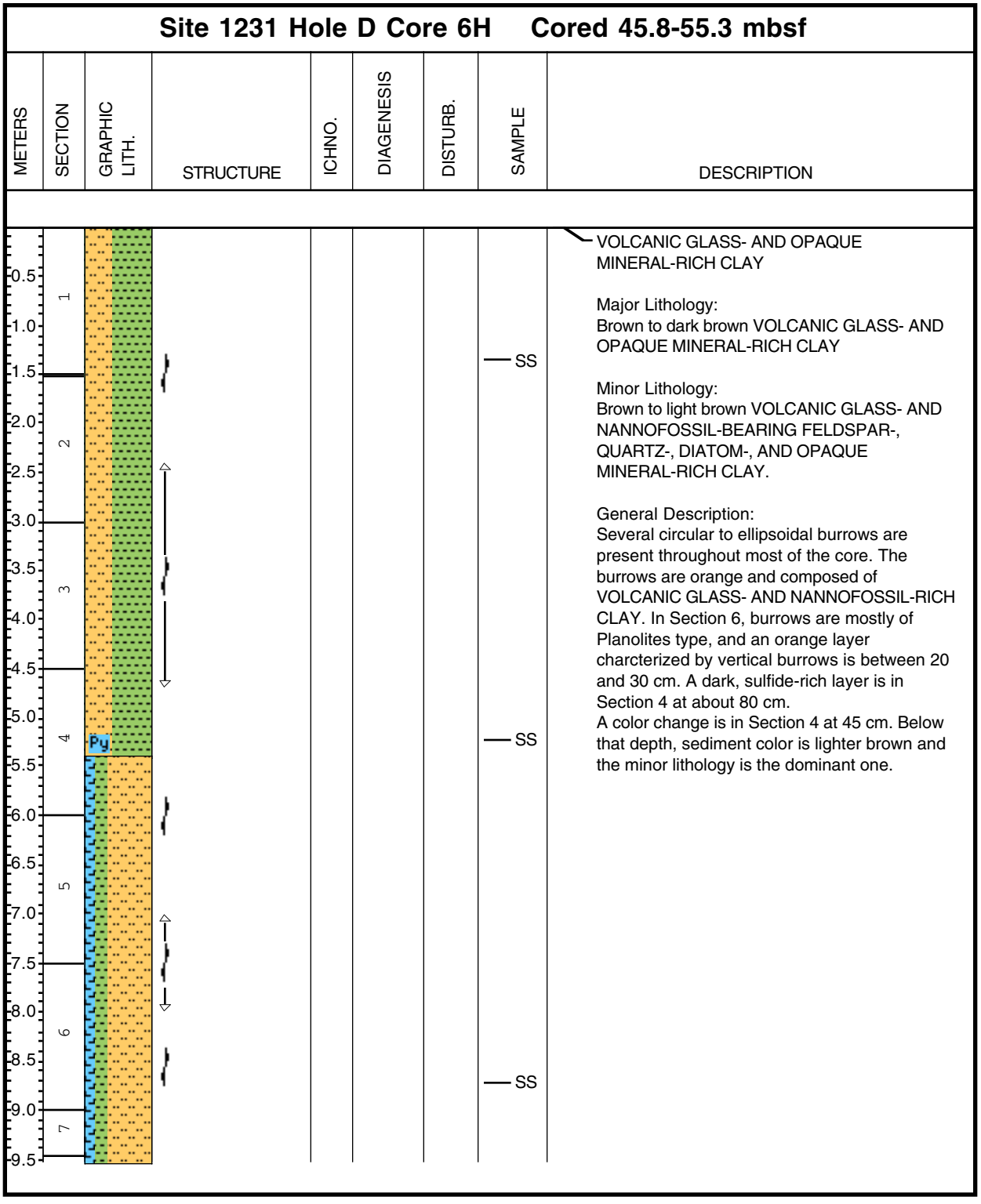
Core Photo

Site 1231 Hole D Core 5H Cored 36.3-45.8 mbsf



STRUCTURE	ICHNO.	DIAGENESIS	DISTURB.	SAMPLE	DESCRIPTION
				SS SS	QUARTZ-BEARING VOLCANIC GLASS-RICH CLAY Major Lithology: Pink to orange QUARTZ-BEARING VOLCANIC GLASS-RICH CLAY Minor Lithology: Dark brown QUARTZ- AND FELDSPAR-BEARING OPAQUE MINERAL AND VOLCANIC GLASS-RICH CLAY General Description: Section 1 through Section 6, 90 cm, are characterized by alternation between major and minor lithology. The darker bands composed of the minor lithology are about 20 to 40 cm thick and characterized by slightly to moderate bioturbation. Below Section 6, 90 cm, the color of the sediment is red to brown.

Core Photo


Site 1231 Hole D Core 6H Cored 45.8-55.3 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
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6.5
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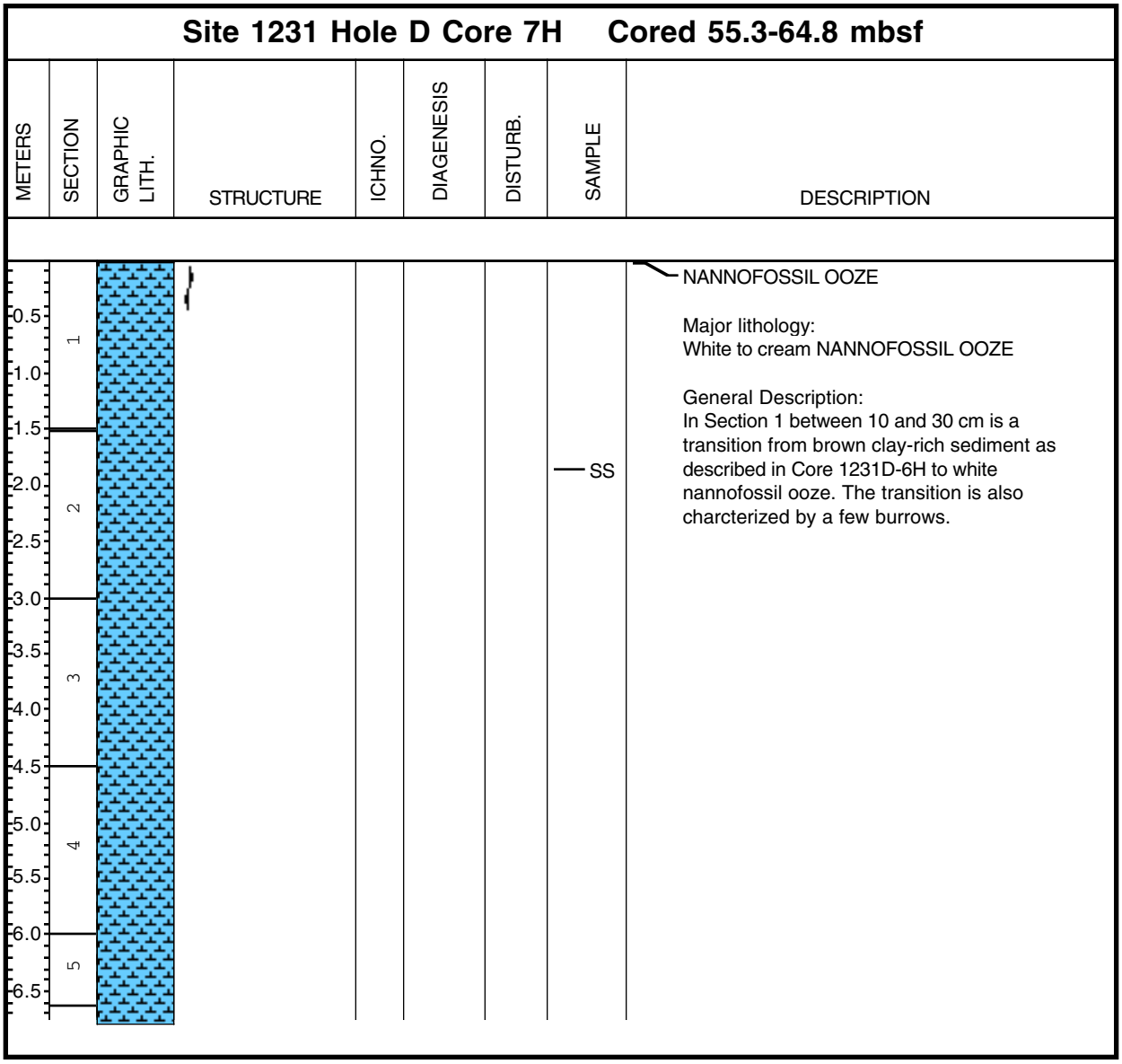
Py
SS
SS
SS
VOLCANIC GLASS- AND OPAQUE MINERAL-RICH CLAY
Major Lithology:
Brown to dark brown VOLCANIC GLASS- AND OPAQUE MINERAL-RICH CLAY
Minor Lithology:
Brown to light brown VOLCANIC GLASS- AND NANNOFOSSIL-BEARING FELDSPAR-, QUARTZ-, DIATOM-, AND OPAQUE MINERAL-RICH CLAY.
General Description:
Several circular to ellipsoidal burrows are present throughout most of the core. The burrows are orange and composed of VOLCANIC GLASS- AND NANNOFOSSIL-RICH CLAY. In Section 6, burrows are mostly of Planolites type, and an orange layer charcterized by vertical burrows is between 20 and 30 cm. A dark, sulfide-rich layer is in Section 4 at about 80 cm.
A color change is in Section 4 at 45 cm. Below that depth, sediment color is lighter brown and the minor lithology is the dominant one.

Core Photo


Site 1231 Hole D Core 7H Cored 55.3-64.8 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
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5.5
6.0
6.5
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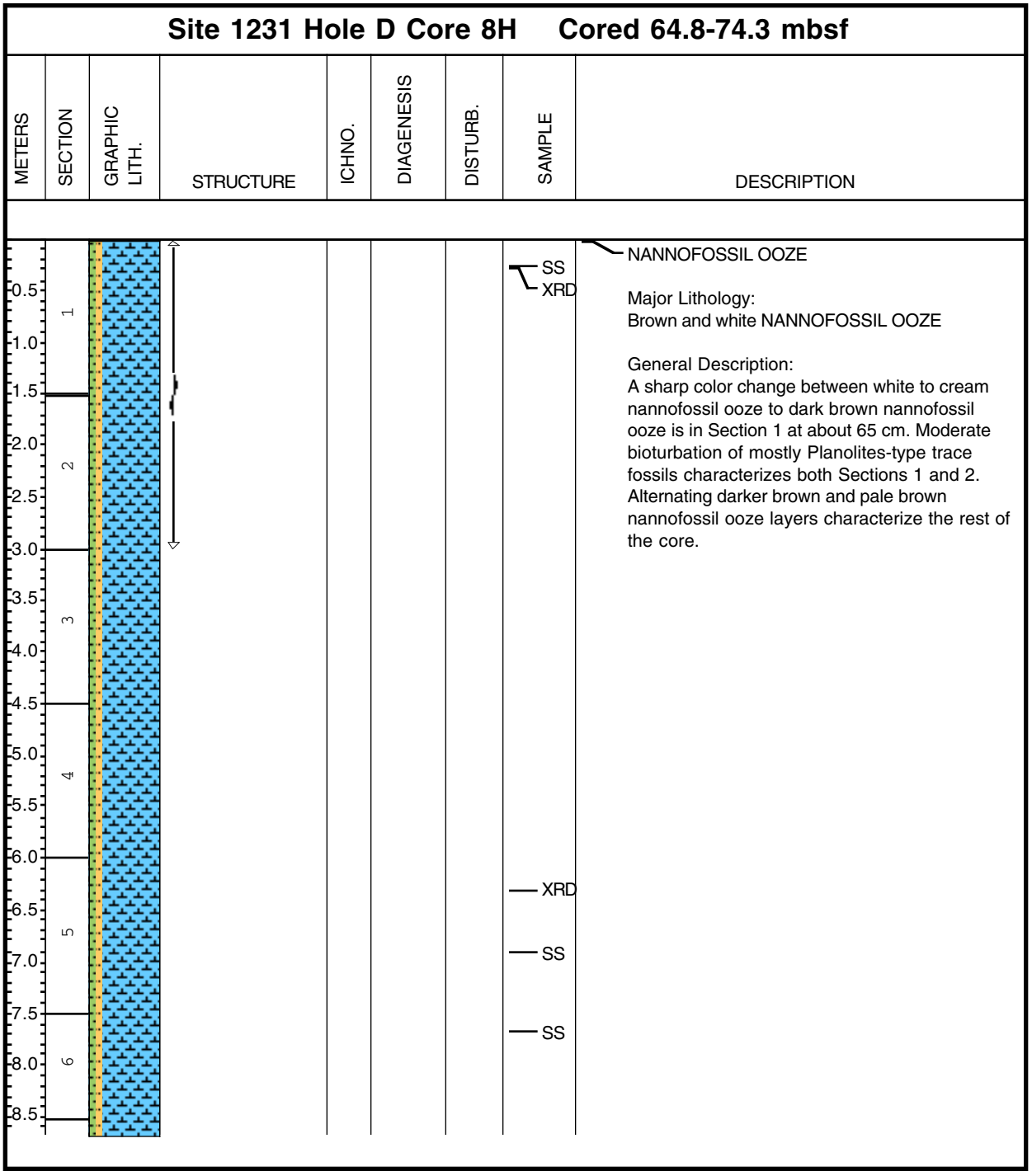
SS
NANNOFOSSIL OOZE
Major lithology:
White to cream NANNOFOSSIL OOZE
General Description:
In Section 1 between 10 and 30 cm is a transition from brown clay-rich sediment as described in Core 1231D-6H to white nannofossil ooze. The transition is also charcterized by a few burrows.

Core Photo


Site 1231 Hole D Core 8H Cored 64.8-74.3 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
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8.5
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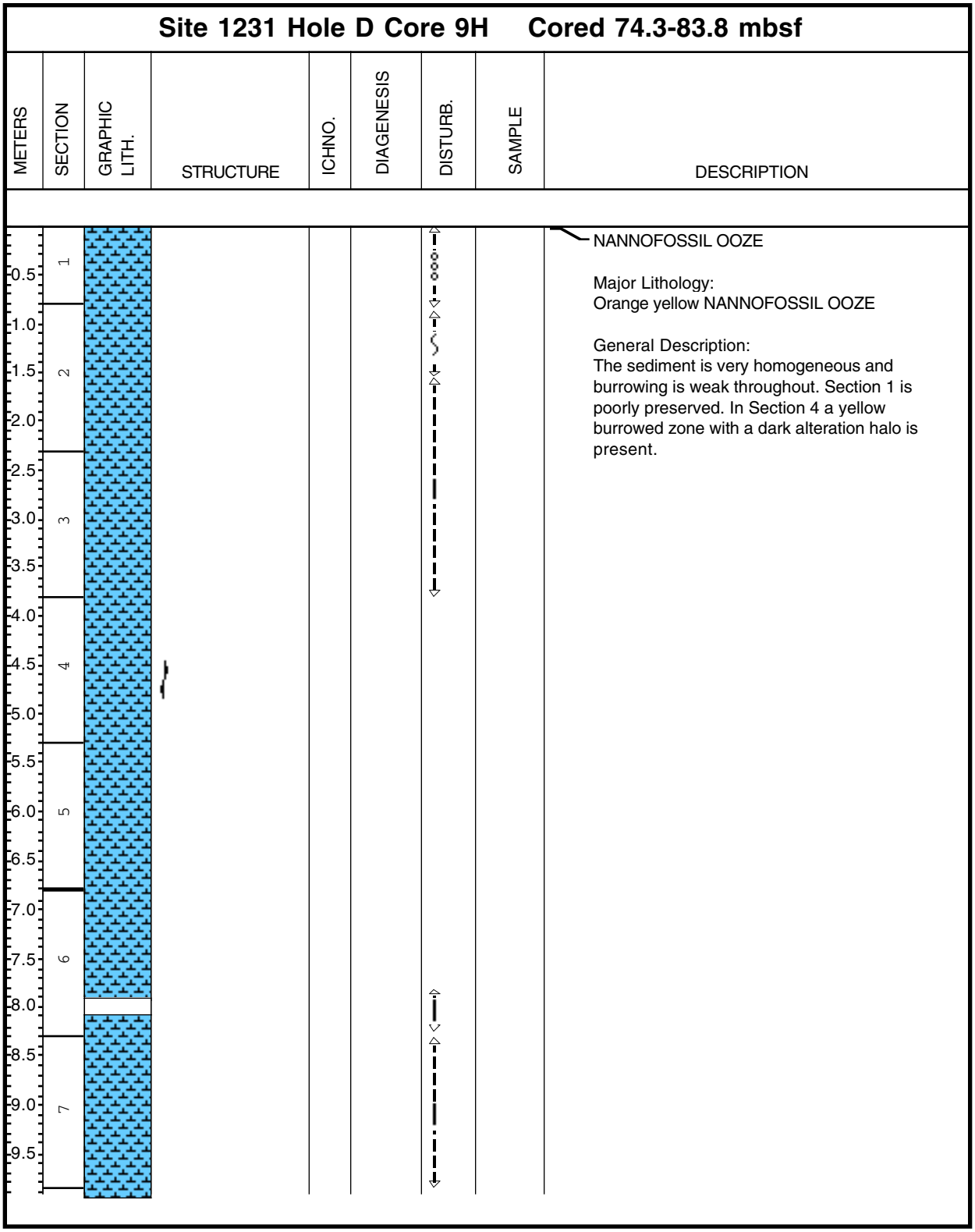
SS
XRD
XRD
SS
SS
NANNOFOSSIL OOZE
Major Lithology:
Brown and white NANNOFOSSIL OOZE
General Description:
A sharp color change between white to cream nannofossil ooze to dark brown nannofossil ooze is in Section 1 at about 65 cm. Moderate bioturbation of mostly Planolites-type trace fossils characterizes both Sections 1 and 2. Alternating darker brown and pale brown nannofossil ooze layers characterize the rest of the core.

Core Photo


Site 1231 Hole D Core 9H Cored 74.3-83.8 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
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9.5
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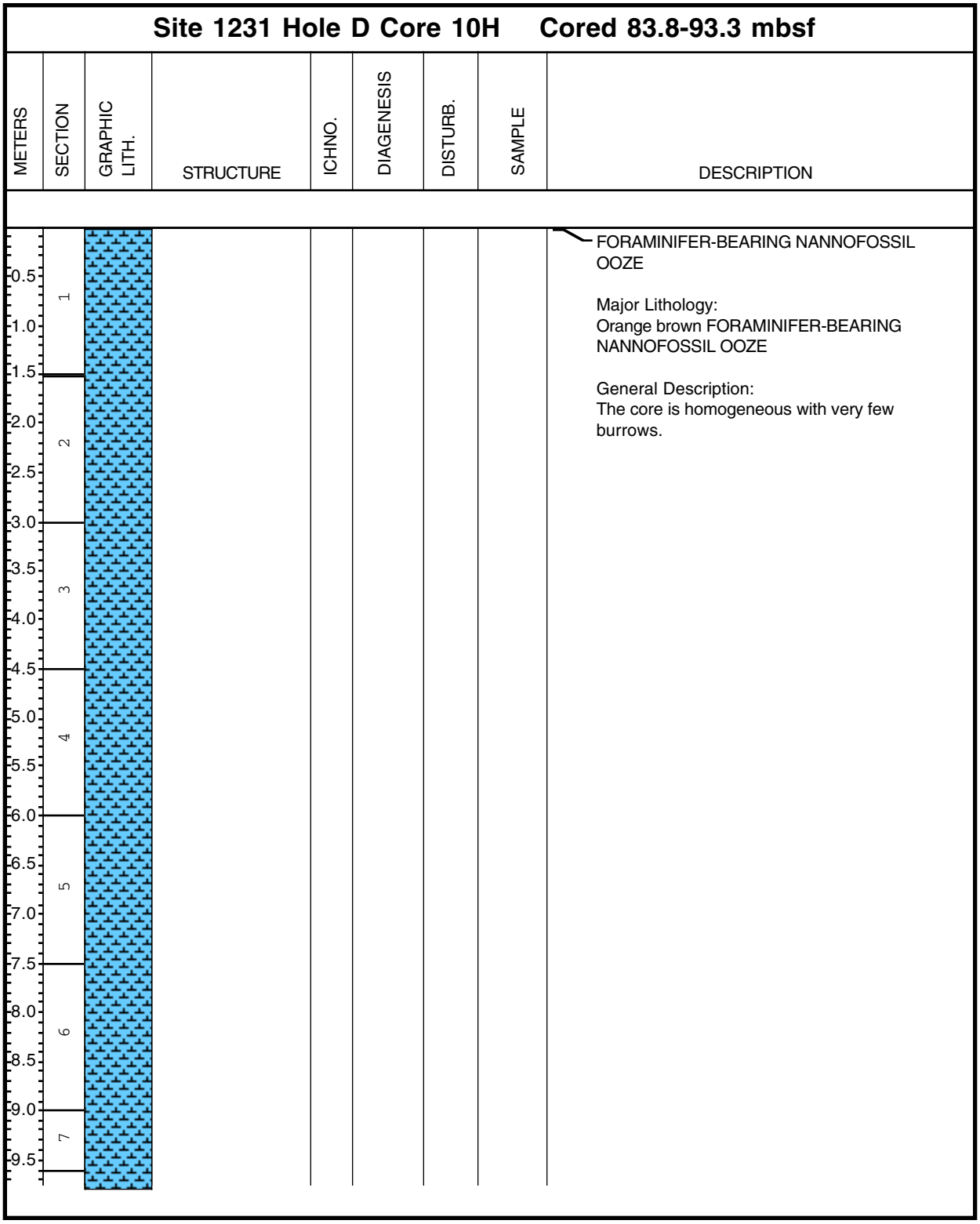
NANNOFOSSIL OOZE
Major Lithology:
Orange yellow NANNOFOSSIL OOZE
General Description:
The sediment is very homogeneous and burrowing is weak throughout. Section 1 is poorly preserved. In Section 4 a yellow burrowed zone with a dark alteration halo is present.

Core Photo


Site 1231 Hole D Core 10H Cored 83.8-93.3 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
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1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
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6.5
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8.5
9.0
9.5
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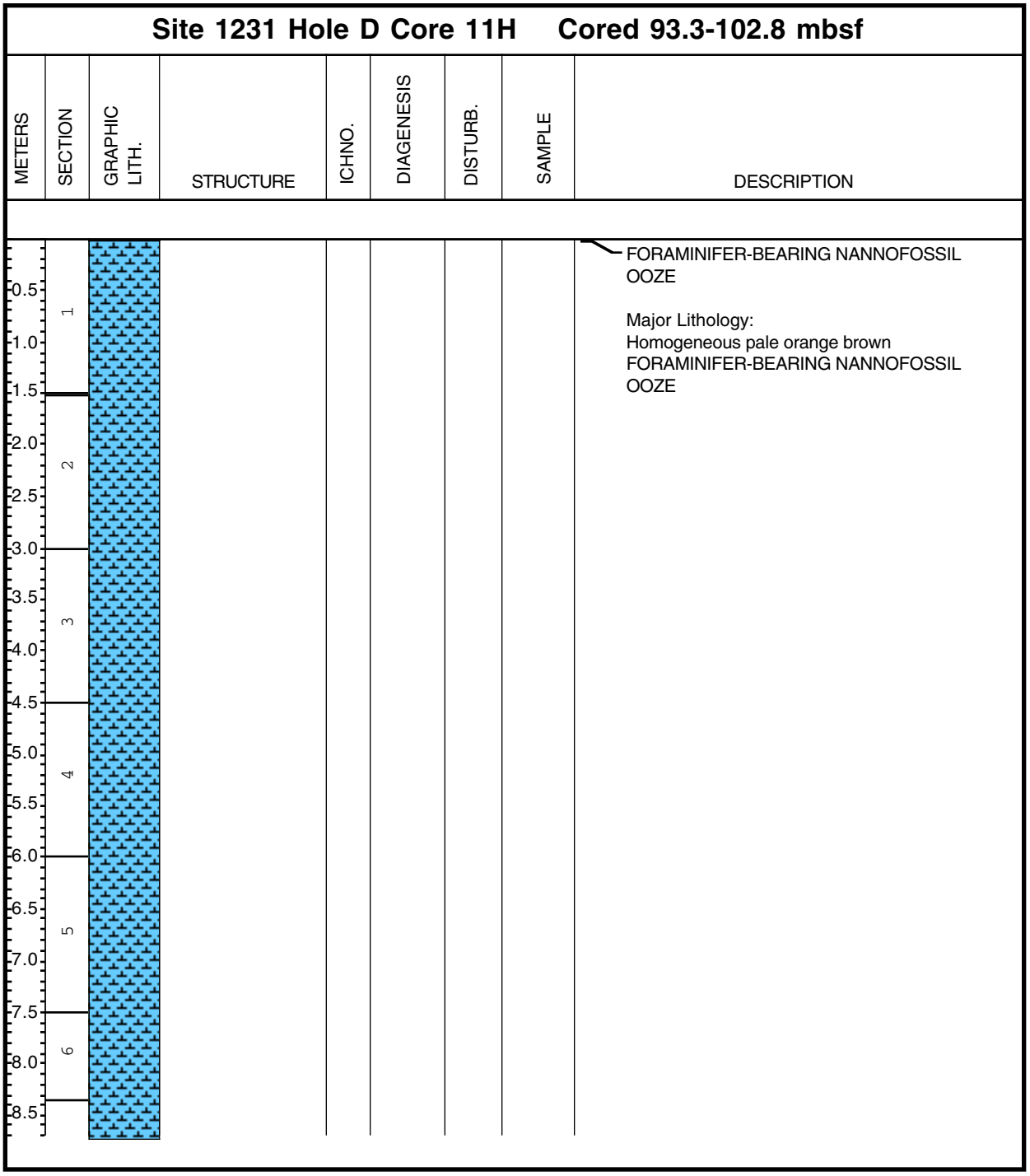
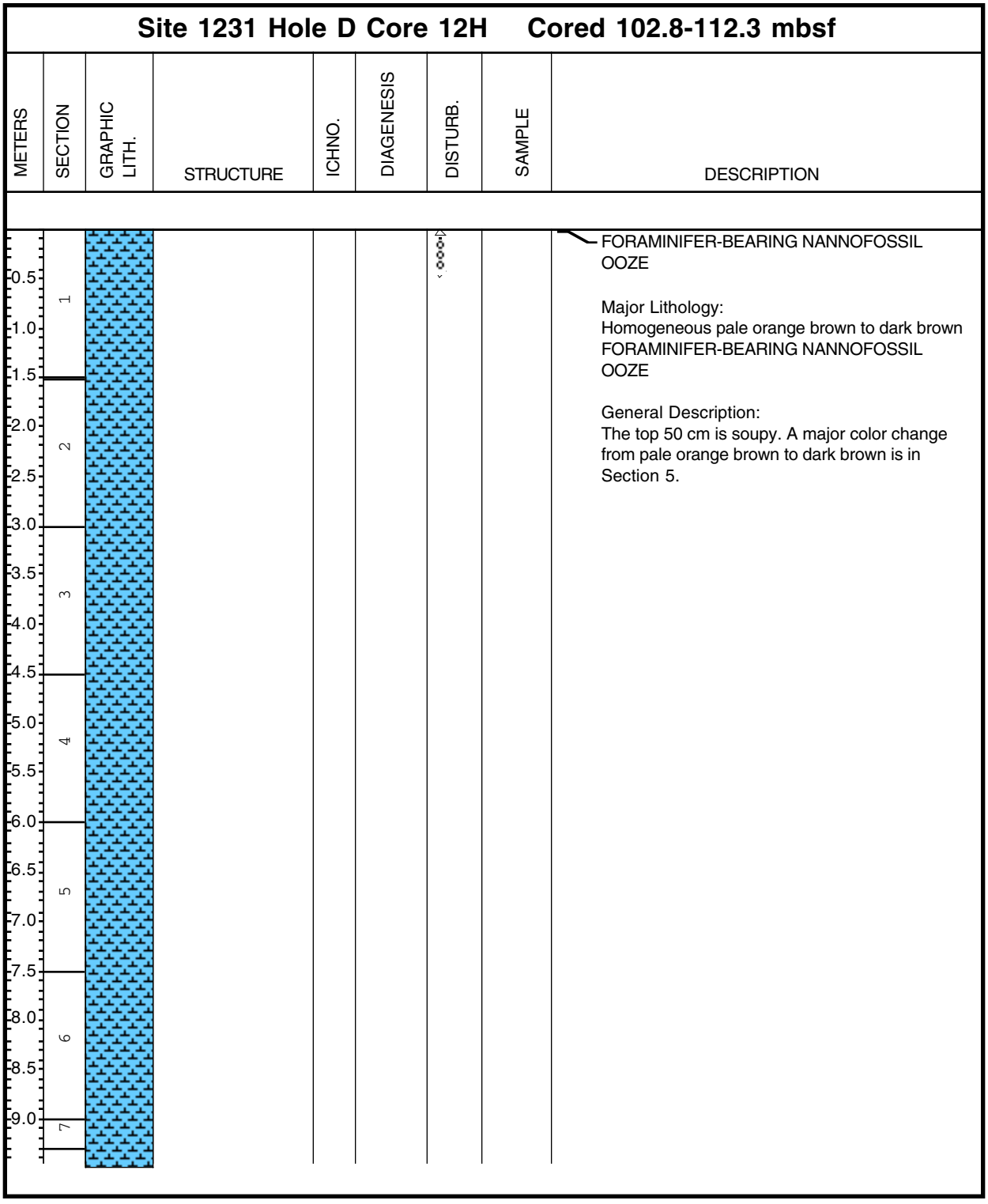
6
7
FORAMINIFER-BEARING NANNOFOSSIL OOZE
Major Lithology:
Orange brown FORAMINIFER-BEARING NANNOFOSSIL OOZE
General Description:
The core is homogeneous with very few burrows.

Core Photo


Site 1231 Hole D Core 11H Cored 93.3-102.8 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
FORAMINIFER-BEARING NANNOFOSSIL OOZE
Major Lithology:
Homogeneous pale orange brown FORAMINIFER-BEARING NANNOFOSSIL OOZE
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
1
2
3
4
5
6

Core Photo


Site 1231 Hole D Core 12H Cored 102.8-112.3 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
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9.0
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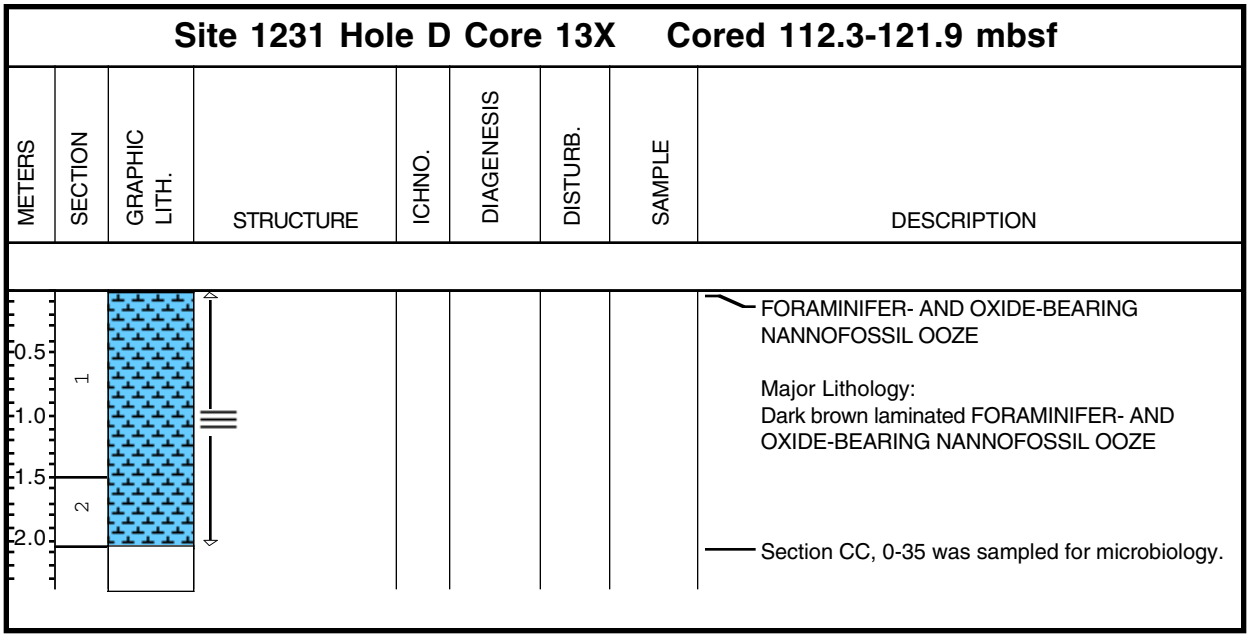
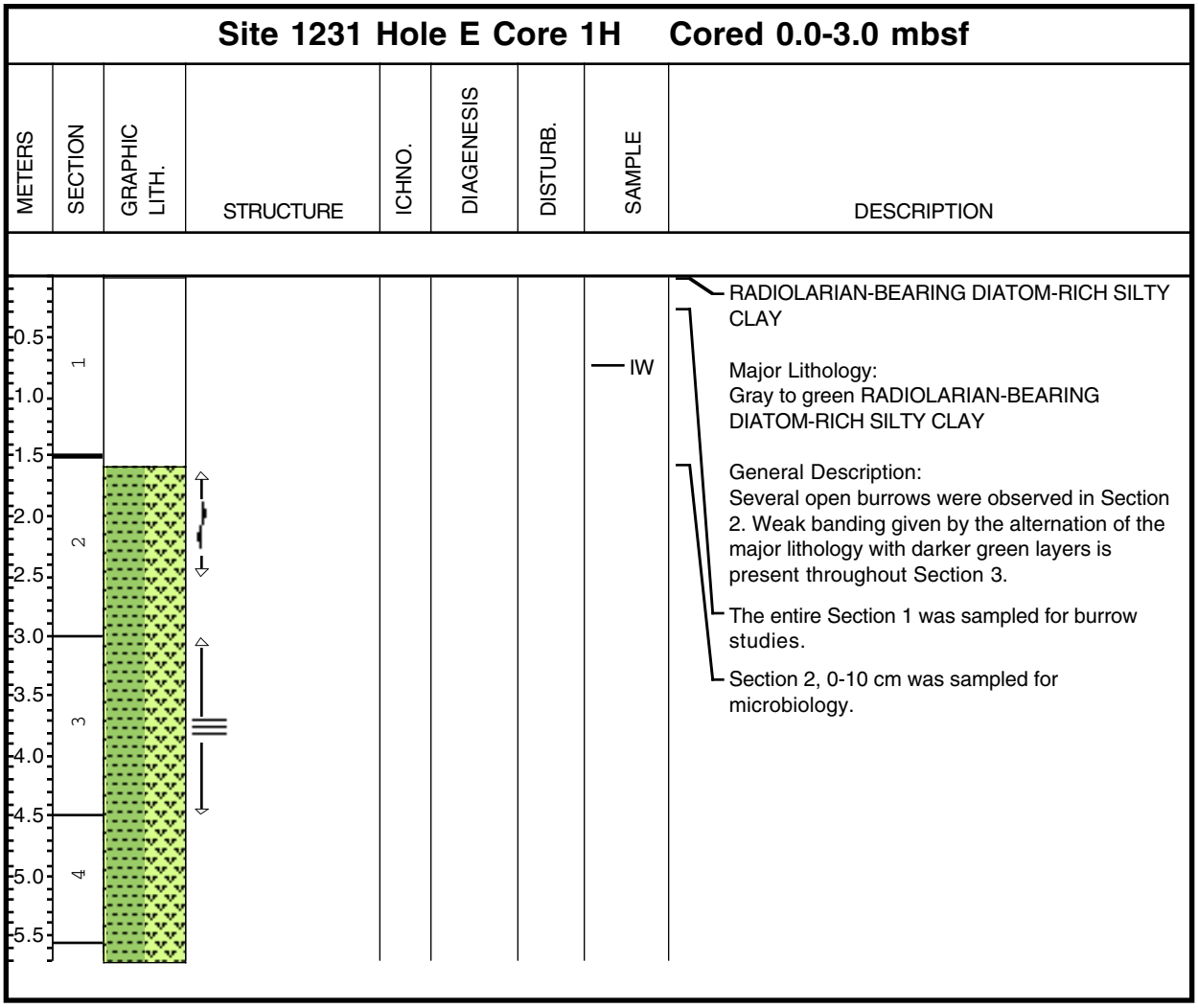
7
FORAMINIFER-BEARING NANNOFOSSIL OOZE
Major Lithology:
Homogeneous pale orange brown to dark brown FORAMINIFER-BEARING NANNOFOSSIL OOZE
General Description:
The top 50 cm is soupy. A major color change from pale orange brown to dark brown is in Section 5.

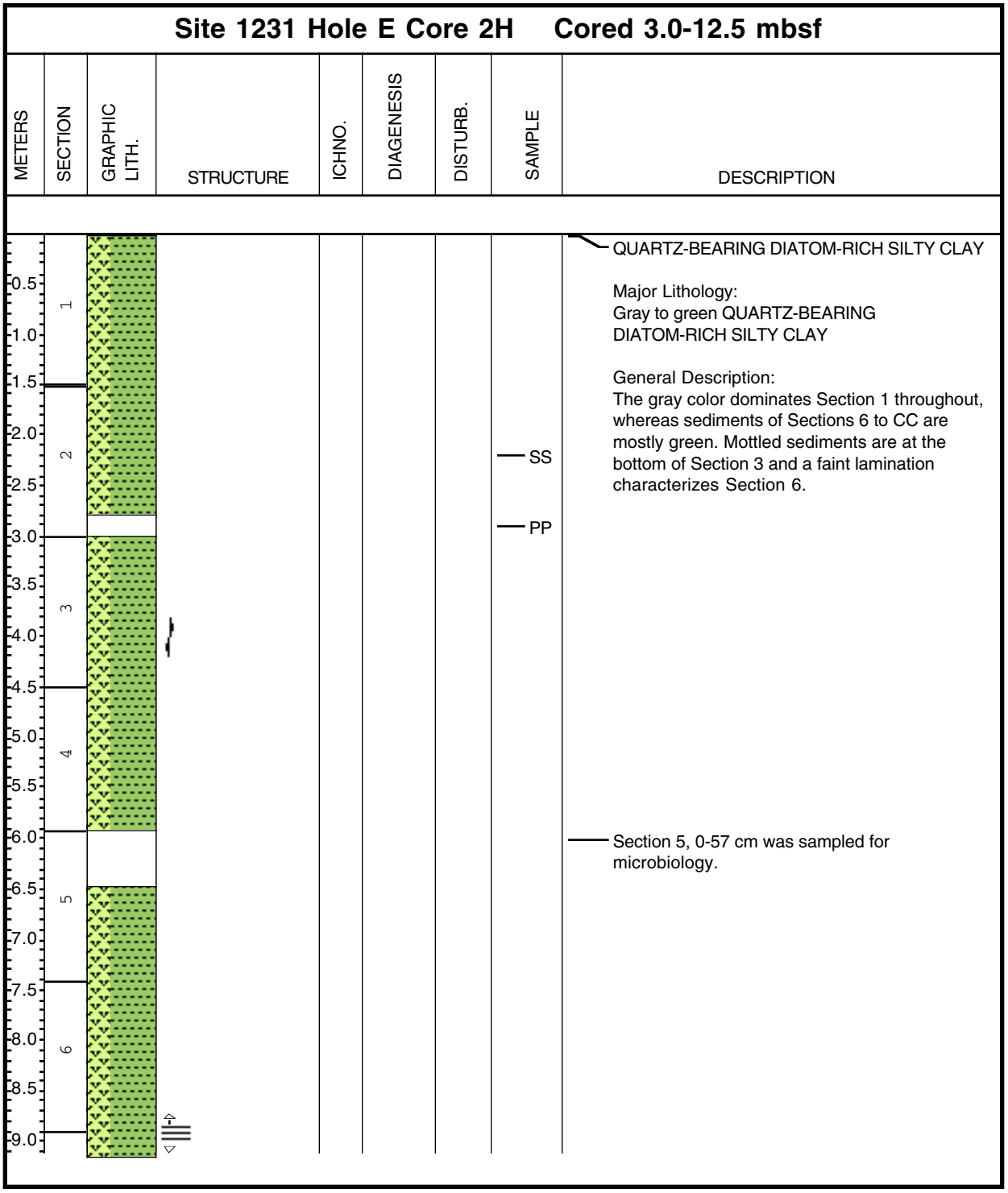
Core Photo


Site 1231 Hole D Core 13X Cored 112.3-121.9 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
1
2
FORAMINIFER- AND OXIDE-BEARING NANNOFOSSIL OOZE
Major Lithology:
Dark brown laminated FORAMINIFER- AND OXIDE-BEARING NANNOFOSSIL OOZE
Section CC, 0-35 was sampled for microbiology.

Core Photo


Site 1231 Hole E Core 1H Cored 0.0-3.0 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
1
2
3
4
IW
RADIOLARIAN-BEARING DIATOM-RICH SILTY CLAY
Major Lithology:
Gray to green RADIOLARIAN-BEARING DIATOM-RICH SILTY CLAY
General Description:
Several open burrows were observed in Section 2. Weak banding given by the alternation of the major lithology with darker green layers is present throughout Section 3.
The entire Section 1 was sampled for burrow studies.
Section 2, 0-10 cm was sampled for microbiology.

Core Photo


Site 1231 Hole E Core 2H Cored 3.0-12.5 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
1
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3
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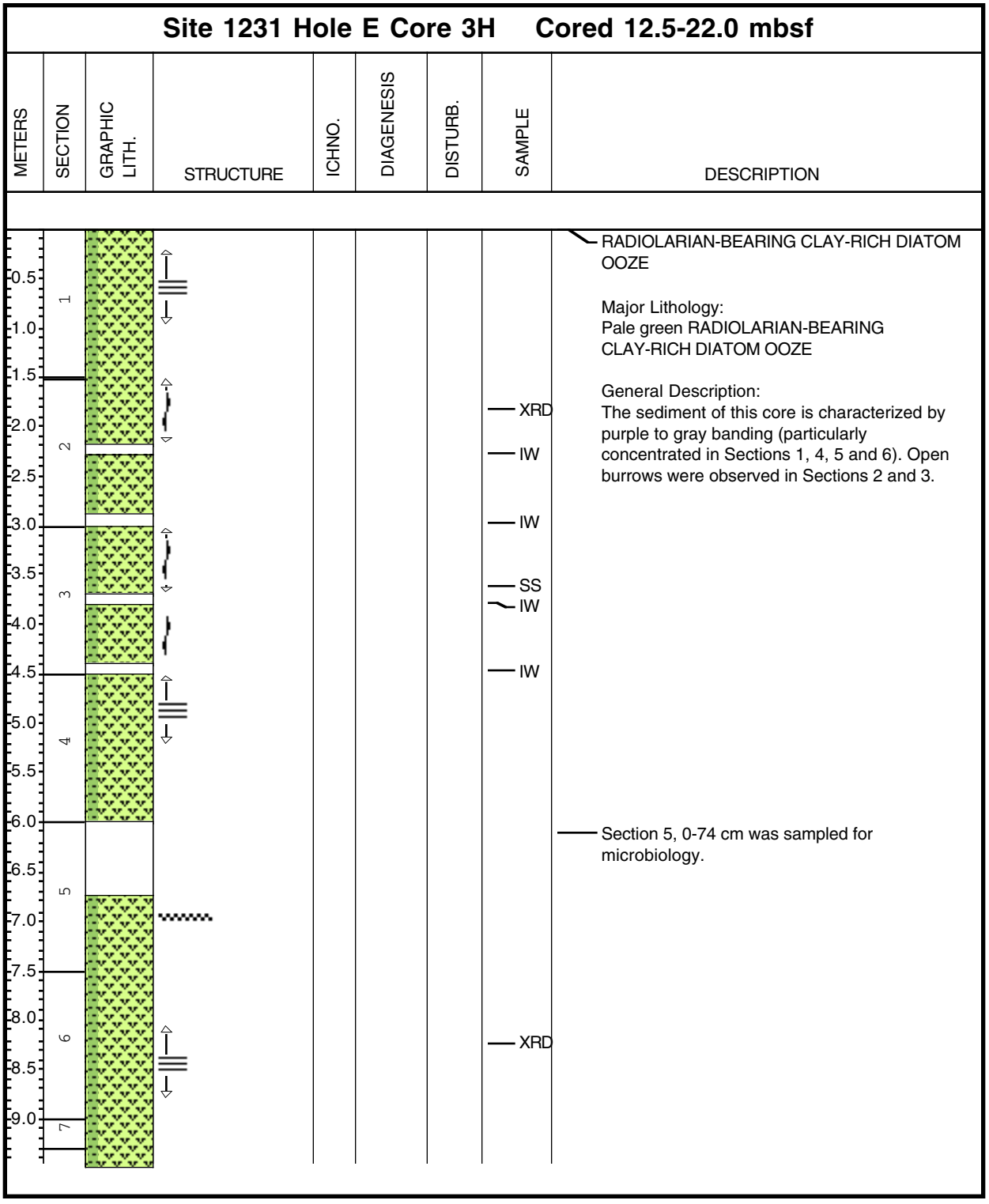
5
6
SS
PP
QUARTZ-BEARING DIATOM-RICH SILTY CLAY
Major Lithology:
Gray to green QUARTZ-BEARING DIATOM-RICH SILTY CLAY
General Description:
The gray color dominates Section 1 throughout, whereas sediments of Sections 6 to CC are mostly green. Mottled sediments are at the bottom of Section 3 and a faint lamination characterizes Section 6.
Section 5, 0-57 cm was sampled for microbiology.

Core Photo


Site 1231 Hole E Core 3H Cored 12.5-22.0 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
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1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
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8.5
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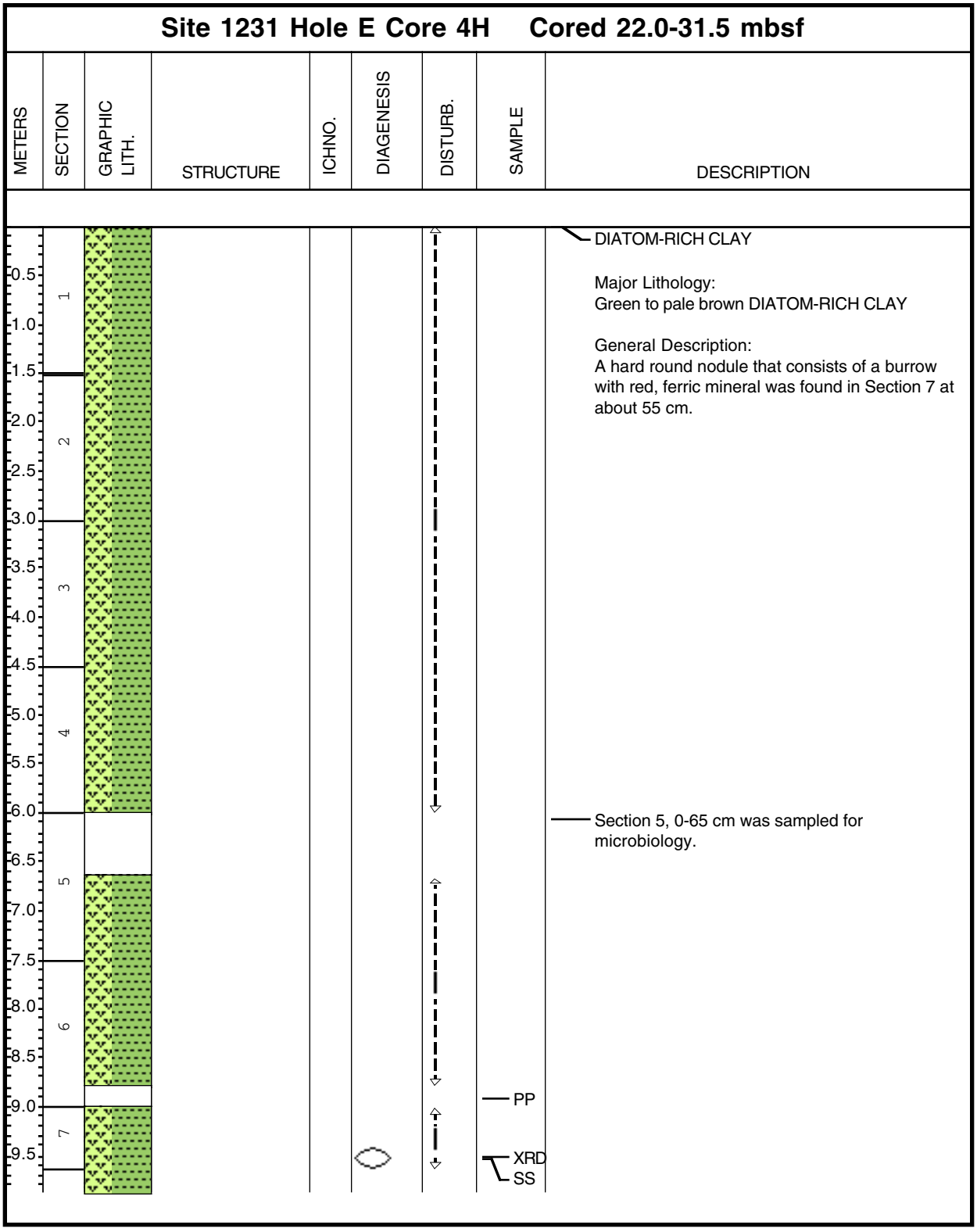
6
7
XRD
IW
IW
SS
IW
IW
XRD
RADIOLARIAN-BEARING CLAY-RICH DIATOM OOZE
Major Lithology:
Pale green RADIOLARIAN-BEARING CLAY-RICH DIATOM OOZE
General Description:
The sediment of this core is characterized by purple to gray banding (particularly concentrated in Sections 1, 4, 5 and 6). Open burrows were observed in Sections 2 and 3.
Section 5, 0-74 cm was sampled for microbiology.

Core Photo


Site 1231 Hole E Core 4H Cored 22.0-31.5 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
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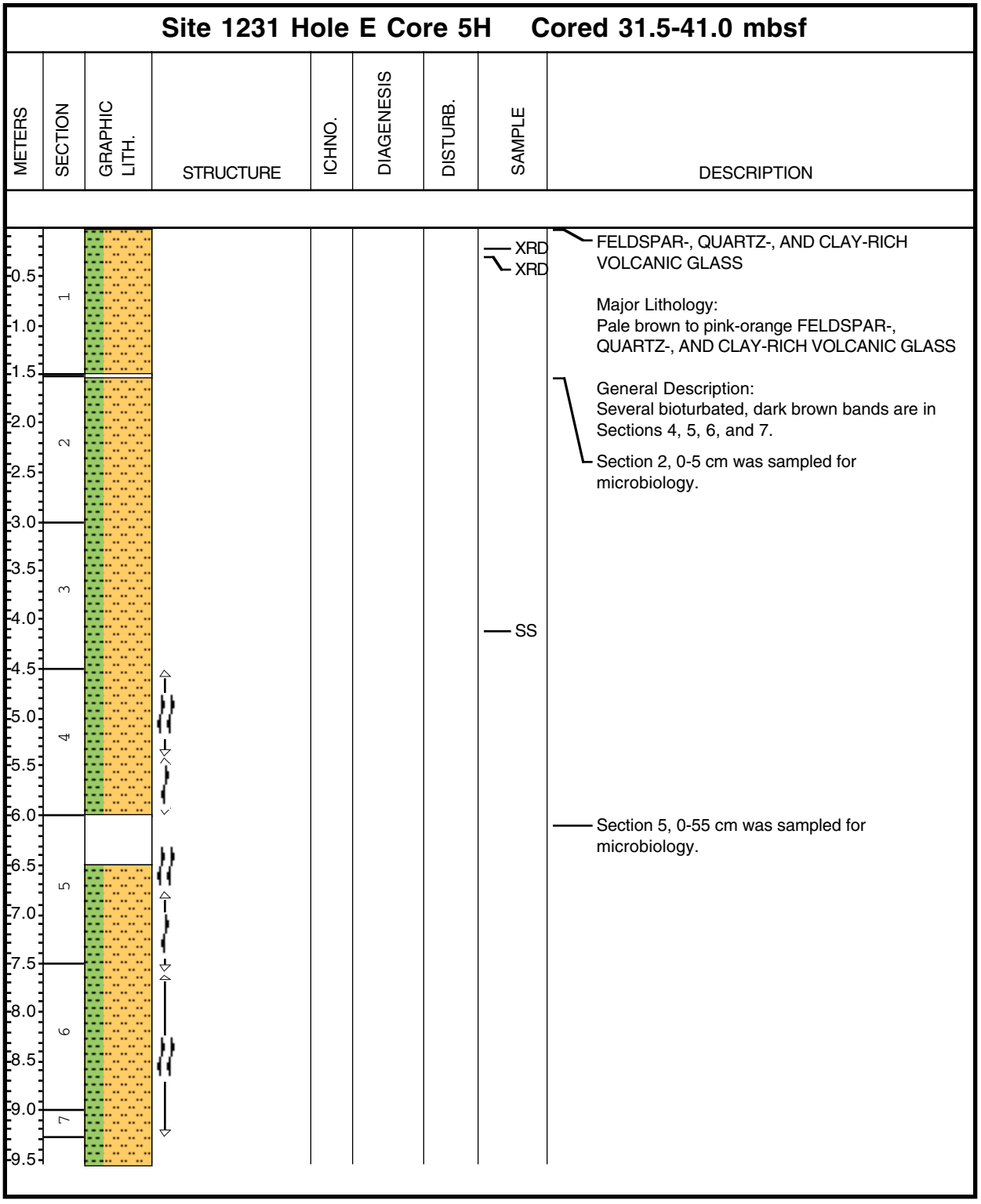
DIATOM-RICH CLAY
Major Lithology:
Green to pale brown DIATOM-RICH CLAY
General Description:
A hard round nodule that consists of a burrow with red, ferric mineral was found in Section 7 at about 55 cm.
Section 5, 0-65 cm was sampled for microbiology.
PP
XRD
SS

Core Photo


Site 1231 Hole E Core 5H Cored 31.5-41.0 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
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3.5
4.0
4.5
5.0
5.5
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6.5
7.0
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9.0
9.5
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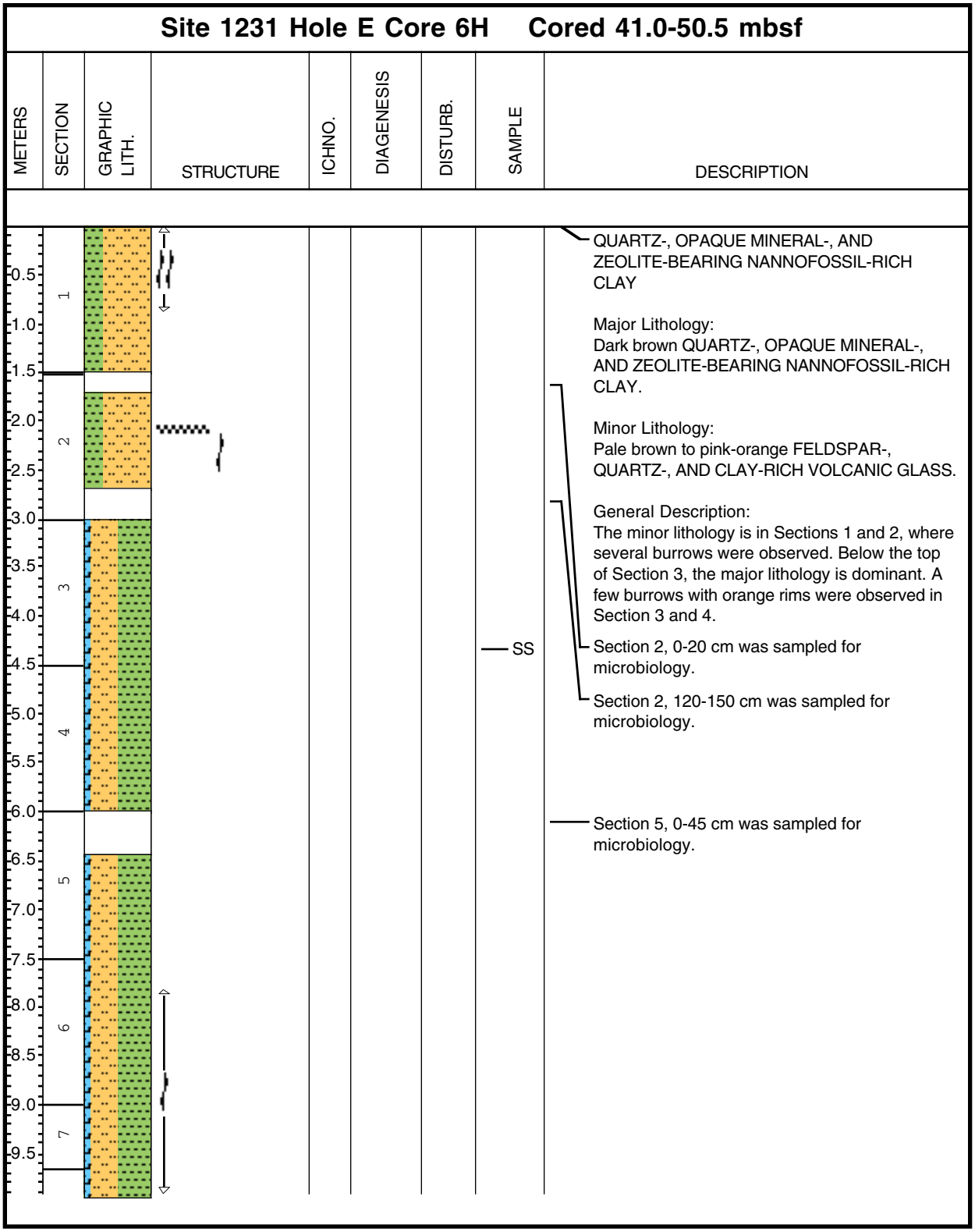
6
7
XRD
XRD
SS
FELDSPAR-, QUARTZ-, AND CLAY-RICH VOLCANIC GLASS
Major Lithology:
Pale brown to pink-orange FELDSPAR-, QUARTZ-, AND CLAY-RICH VOLCANIC GLASS
General Description:
Several bioturbated, dark brown bands are in Sections 4, 5, 6, and 7.
Section 2, 0-5 cm was sampled for microbiology.
Section 5, 0-55 cm was sampled for microbiology.

Core Photo


Site 1231 Hole E Core 6H Cored 41.0-50.5 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
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6
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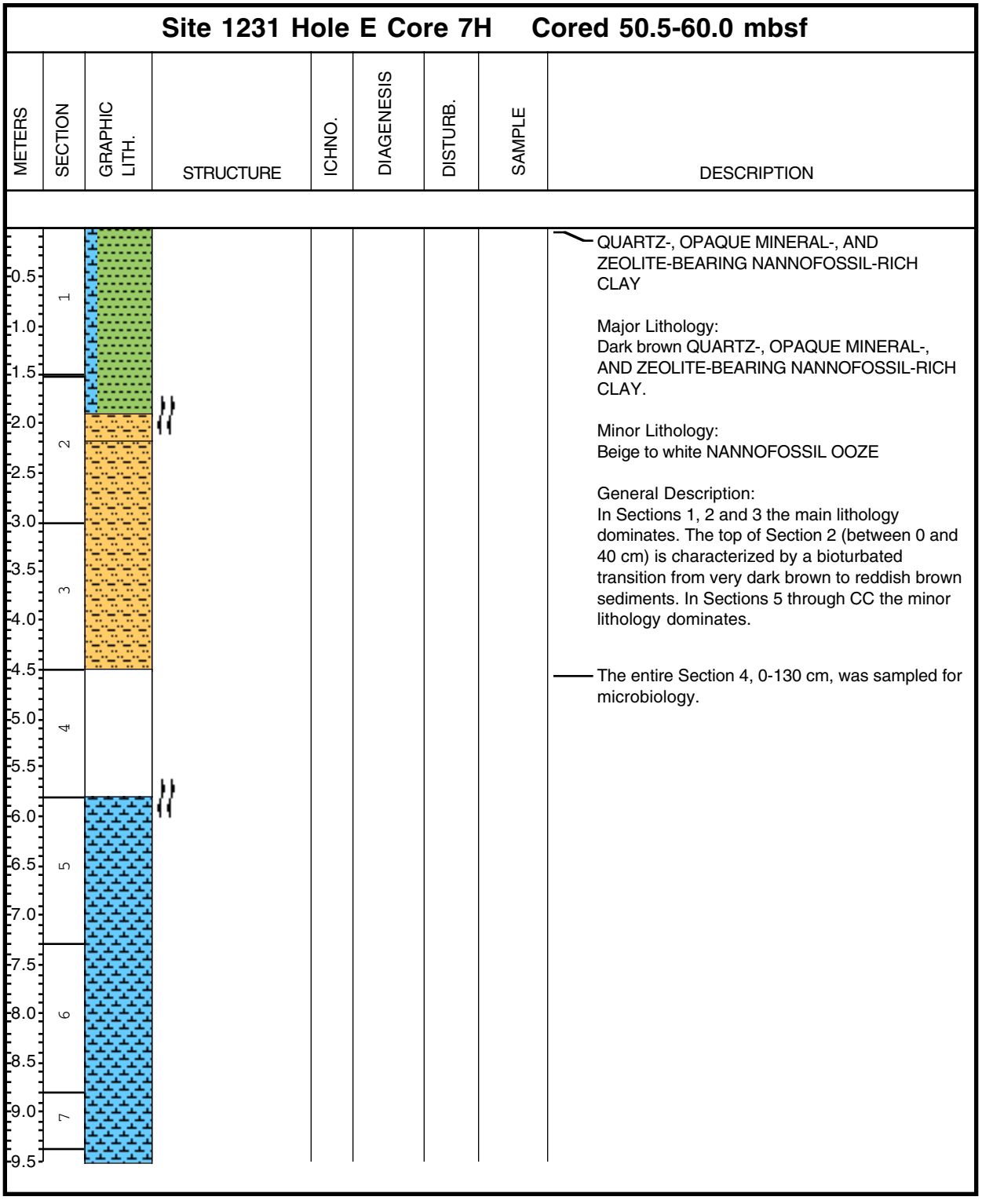
SS
QUARTZ-, OPAQUE MINERAL-, AND ZEOLITE-BEARING NANNOFOSSIL-RICH CLAY
Major Lithology:
Dark brown QUARTZ-, OPAQUE MINERAL-, AND ZEOLITE-BEARING NANNOFOSSIL-RICH CLAY.
Minor Lithology:
Pale brown to pink-orange FELDSPAR-, QUARTZ-, AND CLAY-RICH VOLCANIC GLASS.
General Description:
The minor lithology is in Sections 1 and 2, where several burrows were observed. Below the top of Section 3, the major lithology is dominant. A few burrows with orange rims were observed in Section 3 and 4.
Section 2, 0-20 cm was sampled for microbiology.
Section 2, 120-150 cm was sampled for microbiology.
Section 5, 0-45 cm was sampled for microbiology.

Core Photo


Site 1231 Hole E Core 7H Cored 50.5-60.0 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
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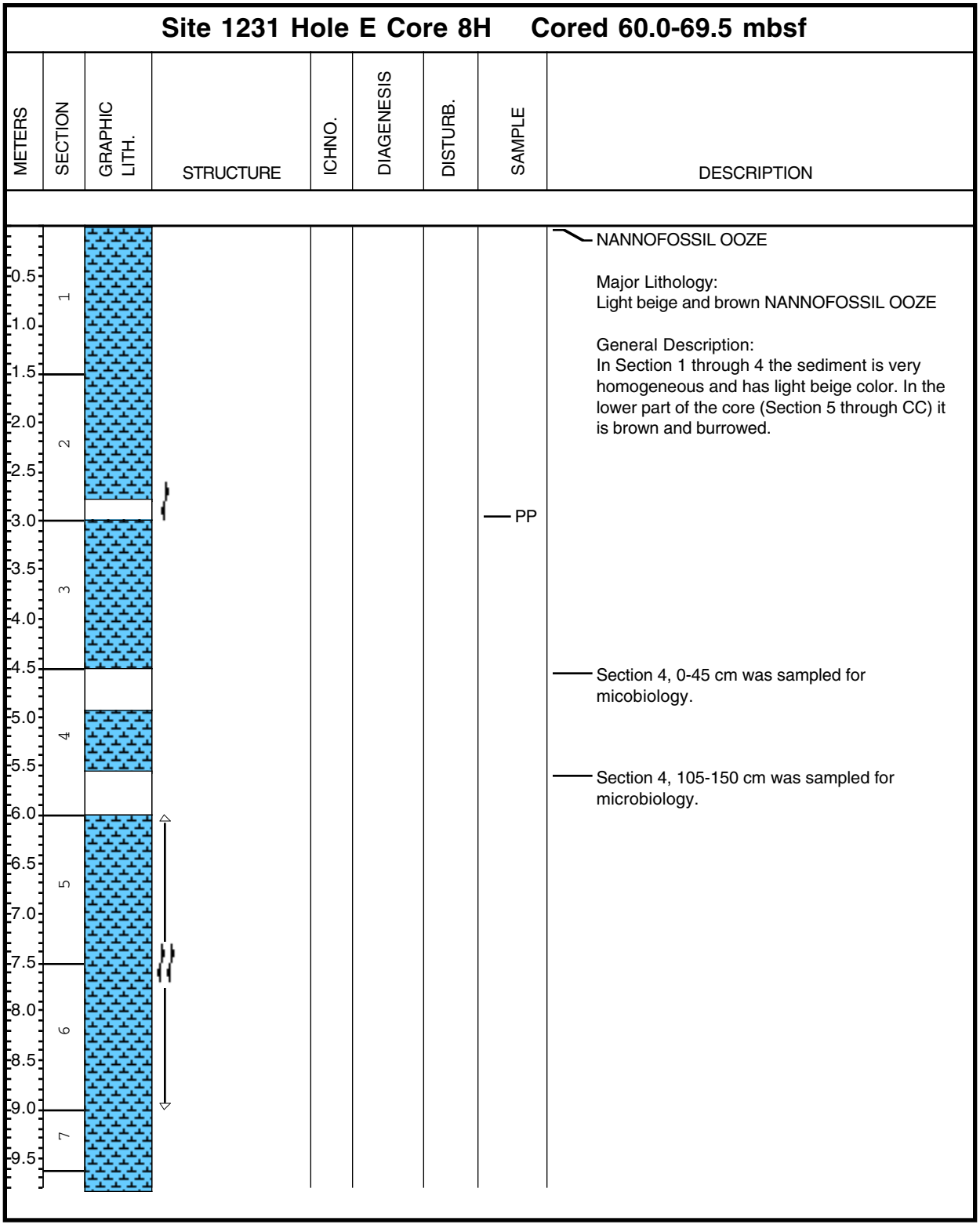
QUARTZ-, OPAQUE MINERAL-, AND ZEOLITE-BEARING NANNOFOSSIL-RICH CLAY
Major Lithology:
Dark brown QUARTZ-, OPAQUE MINERAL-, AND ZEOLITE-BEARING NANNOFOSSIL-RICH CLAY.
Minor Lithology:
Beige to white NANNOFOSSIL OOZE
General Description:
In Sections 1, 2 and 3 the main lithology dominates. The top of Section 2 (between 0 and 40 cm) is characterized by a bioturbated transition from very dark brown to reddish brown sediments. In Sections 5 through CC the minor lithology dominates.
The entire Section 4, 0-130 cm, was sampled for microbiology.

Core Photo


Site 1231 Hole E Core 8H Cored 60.0-69.5 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
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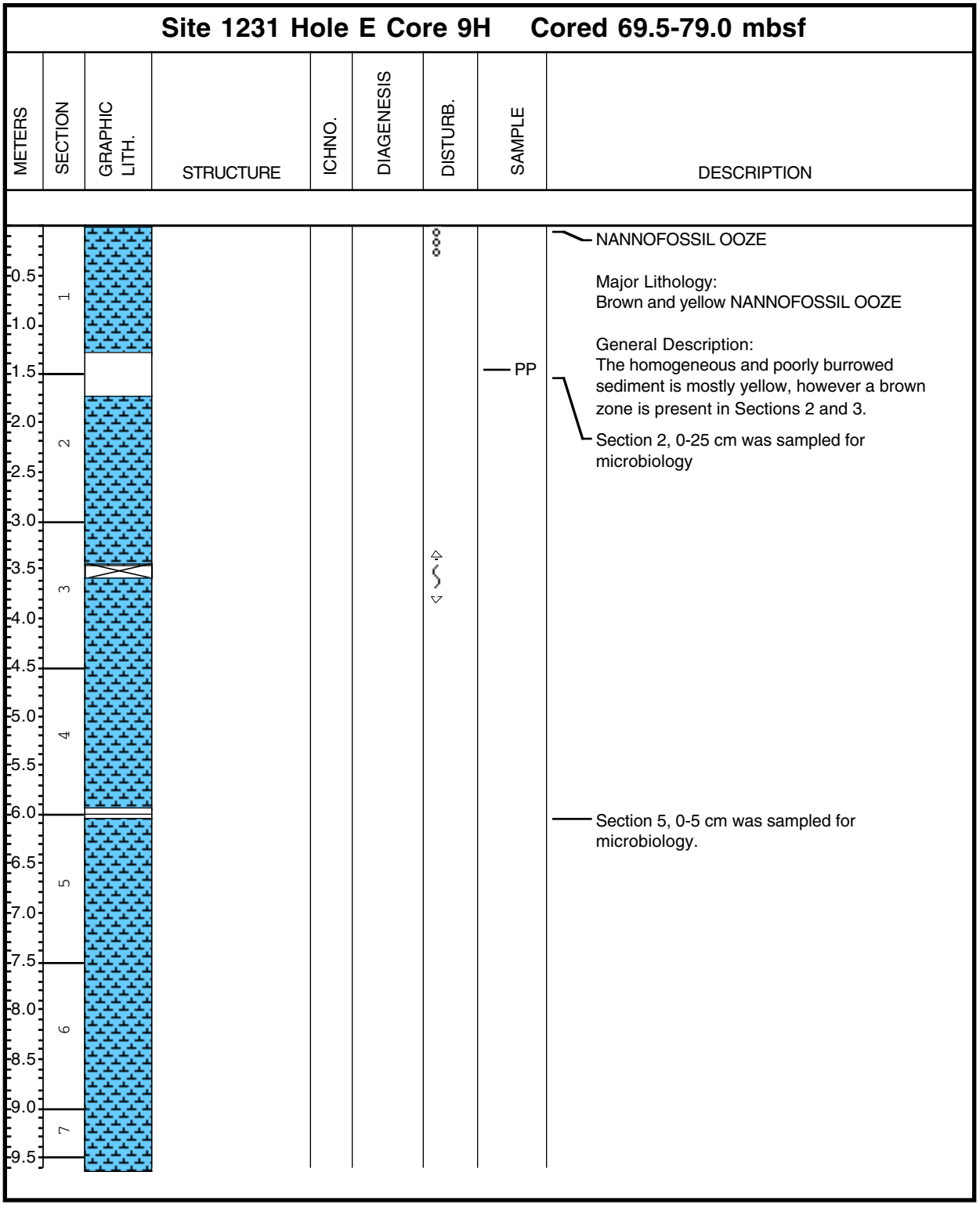
PP
NANNOFOSSIL OOZE
Major Lithology:
Light beige and brown NANNOFOSSIL OOZE
General Description:
In Section 1 through 4 the sediment is very homogeneous and has light beige color. In the lower part of the core (Section 5 through CC) it is brown and burrowed.
Section 4, 0-45 cm was sampled for micobiology.
Section 4, 105-150 cm was sampled for microbiology.

Core Photo


Site 1231 Hole E Core 9H Cored 69.5-79.0 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
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6.5
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9.5
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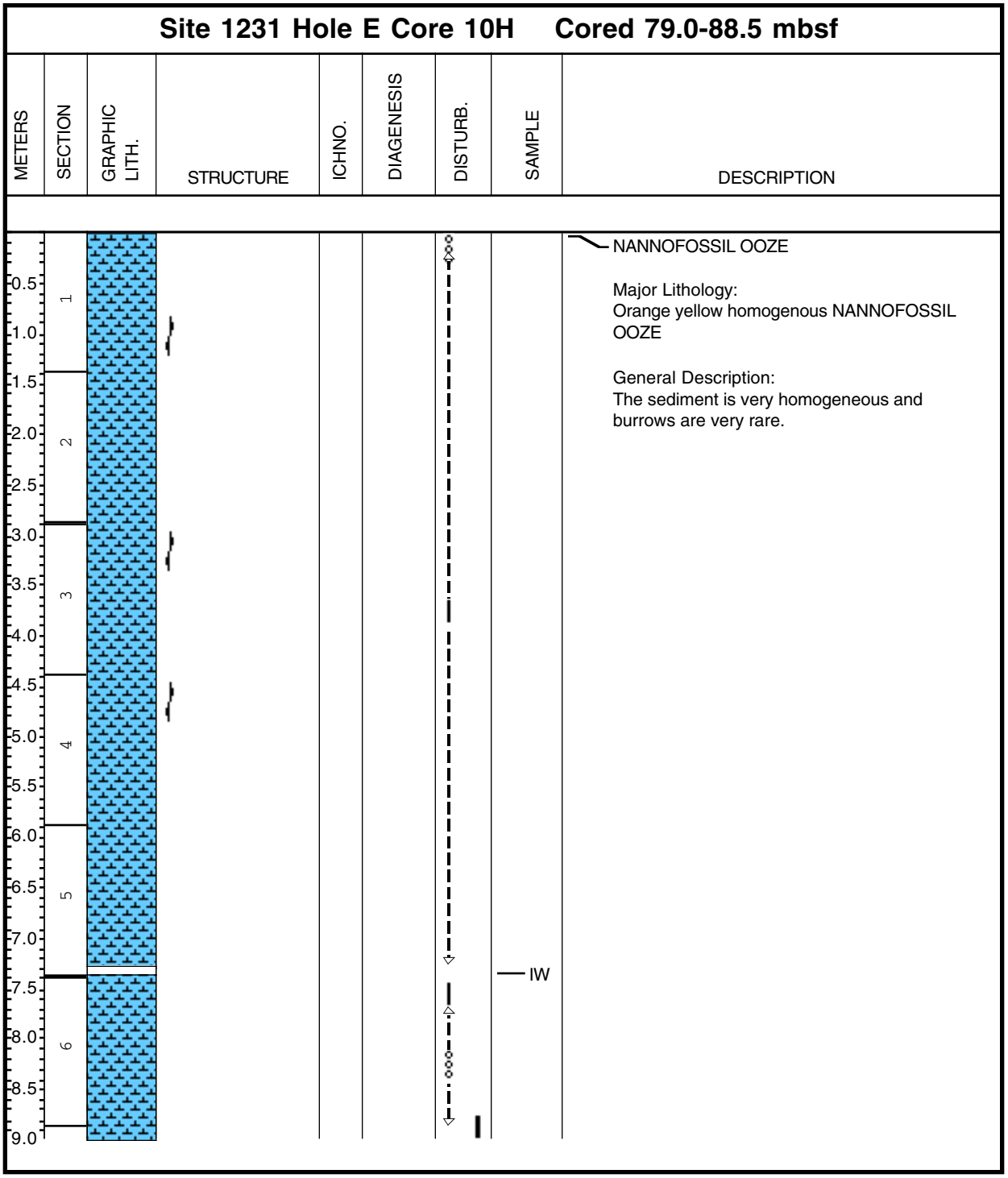
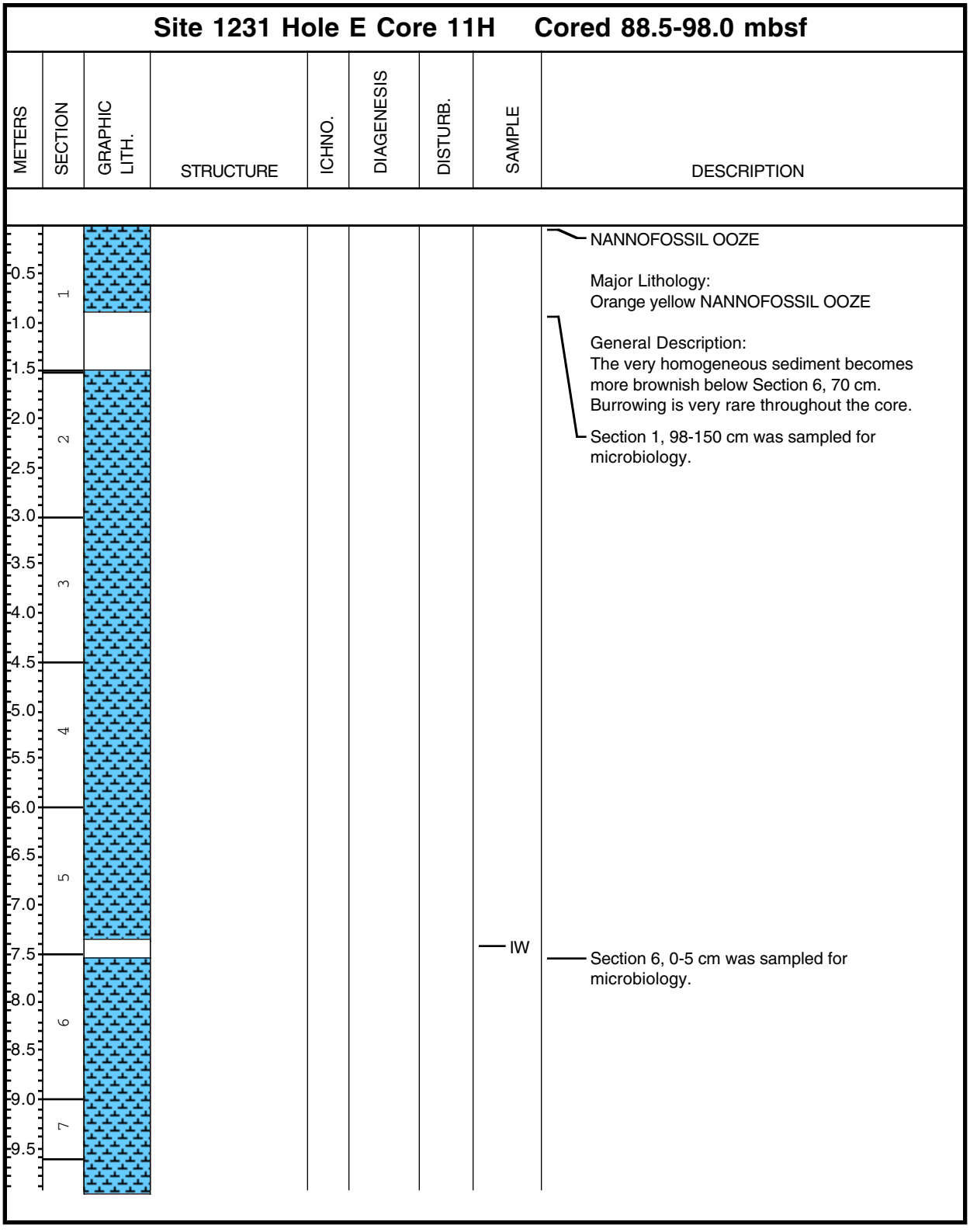
PP
NANNOFOSSIL OOZE
Major Lithology:
Brown and yellow NANNOFOSSIL OOZE
General Description:
The homogeneous and poorly burrowed sediment is mostly yellow, however a brown zone is present in Sections 2 and 3.
Section 2, 0-25 cm was sampled for microbiology
Section 5, 0-5 cm was sampled for microbiology.

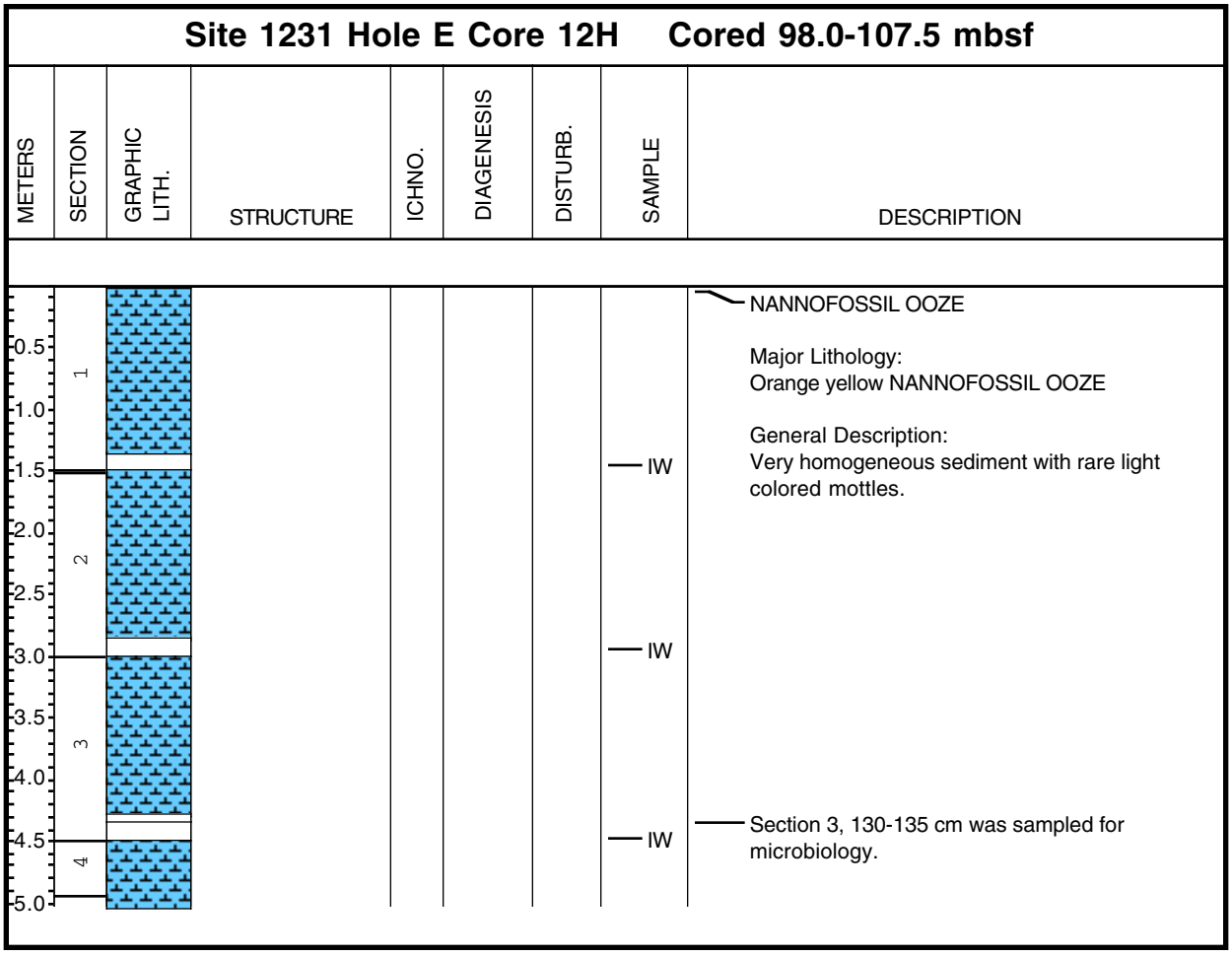
Core Photo


Site 1231 Hole E Core 10H Cored 79.0-88.5 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
1
2
3
4
5
6
NANNOFOSSIL OOZE
Major Lithology:
Orange yellow homogenous NANNOFOSSIL OOZE
General Description:
The sediment is very homogeneous and burrows are very rare.
IW

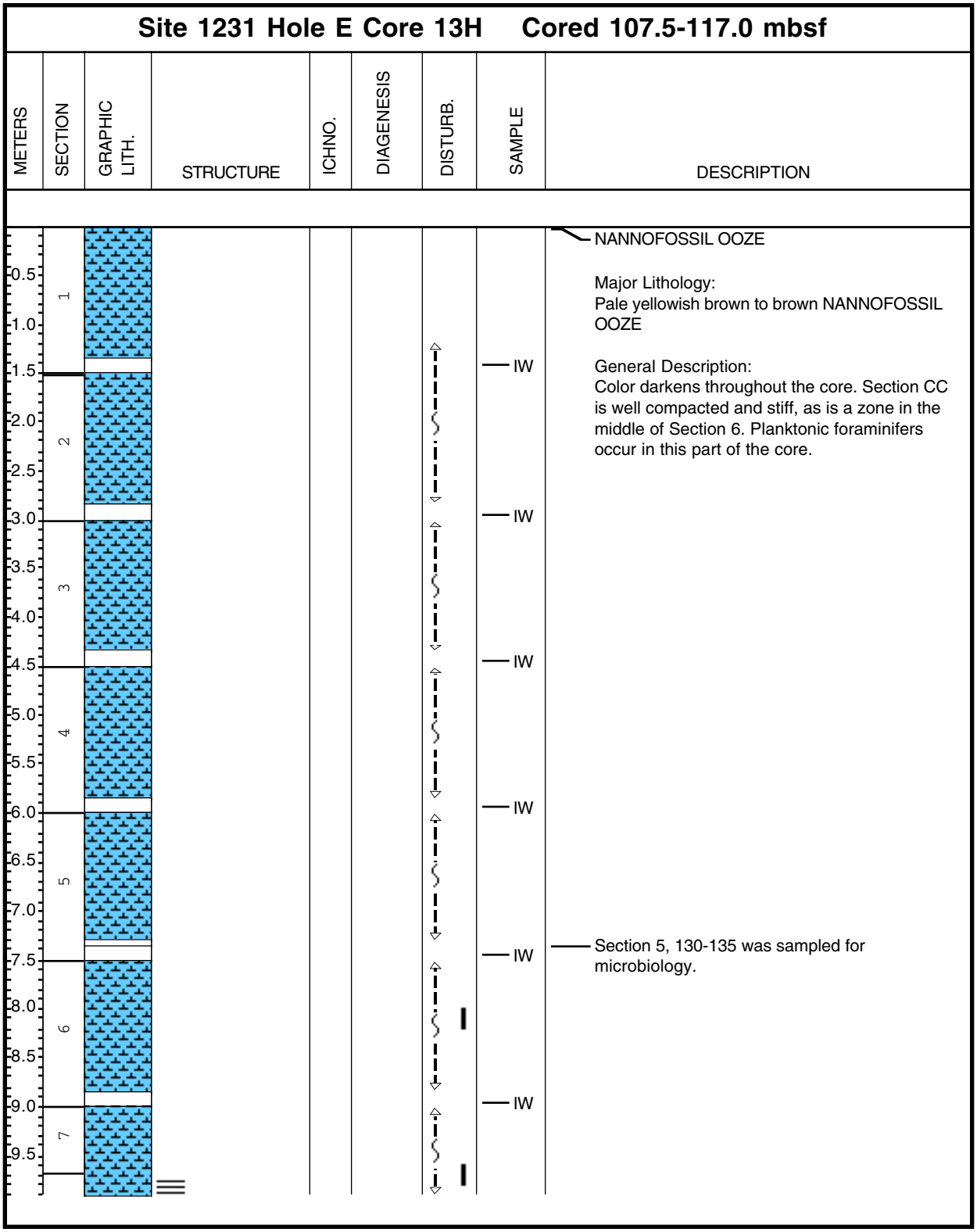
Core Photo


Site 1231 Hole E Core 11H Cored 88.5-98.0 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
9.5
1
2
3
4
5
6
7
NANNOFOSSIL OOZE
Major Lithology:
Orange yellow NANNOFOSSIL OOZE
General Description:
The very homogeneous sediment becomes more brownish below Section 6, 70 cm. Burrowing is very rare throughout the core.
Section 1, 98-150 cm was sampled for microbiology.
IW
Section 6, 0-5 cm was sampled for microbiology.

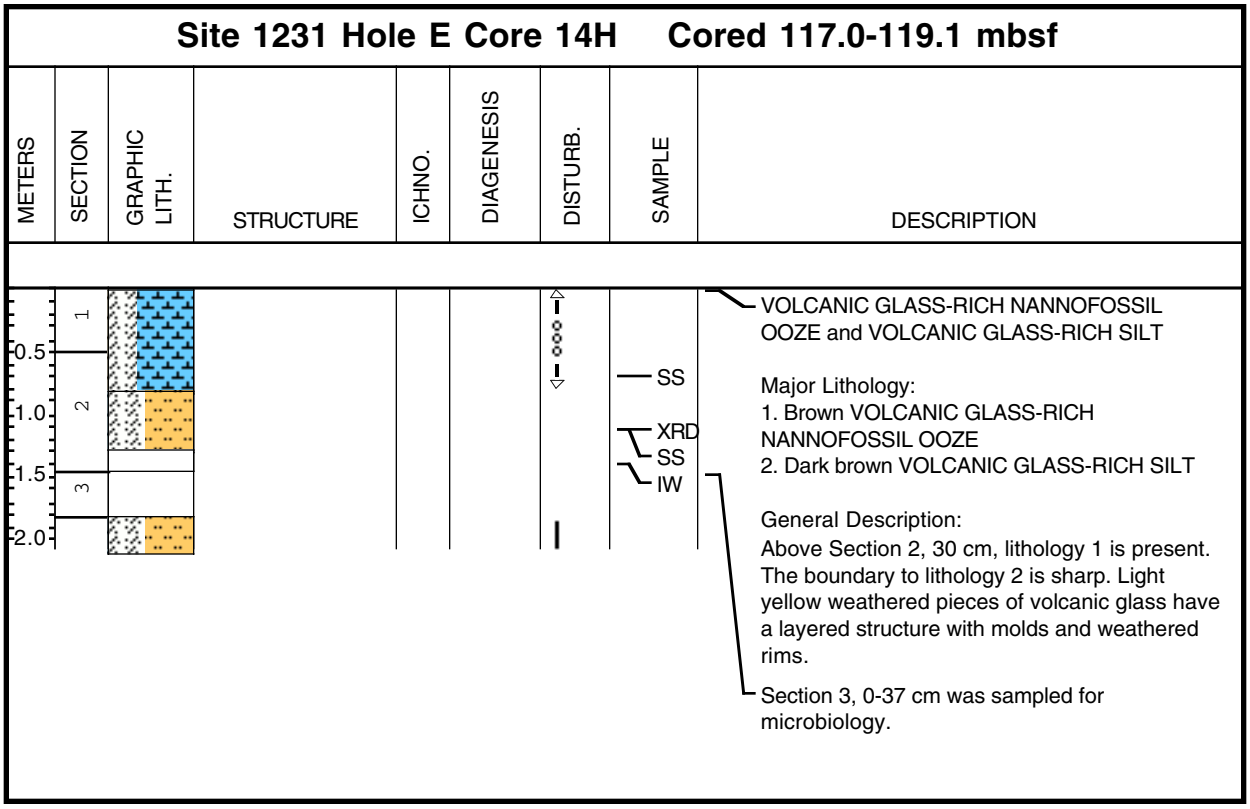
Core Photo


Site 1231 Hole E Core 12H Cored 98.0-107.5 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
1
2
3
4
IW
IW
IW
NANNOFOSSIL OOZE
Major Lithology:
Orange yellow NANNOFOSSIL OOZE
General Description:
Very homogeneous sediment with rare light colored mottles.
Section 3, 130-135 cm was sampled for microbiology.

Core Photo


Site 1231 Hole E Core 13H Cored 107.5-117.0 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
9.5
1
2
3
4
5
6
7
IW
IW
IW
IW
IW
IW
NANNOFOSSIL OOZE
Major Lithology:
Pale yellowish brown to brown NANNOFOSSIL OOZE
General Description:
Color darkens throughout the core. Section CC is well compacted and stiff, as is a zone in the middle of Section 6. Planktonic foraminifers occur in this part of the core.
Section 5, 130-135 was sampled for microbiology.

Core Photo


Site 1231 Hole E Core 14H Cored 117.0-119.1 mbsf
METERS
SECTION
GRAPHIC LITH.
STRUCTURE
ICHNO.
DIAGENESIS
DISTURB.
SAMPLE
DESCRIPTION
0.5
1.0
1.5
2.0
1
2
3
SS
XRD
SS
IW
VOLCANIC GLASS-RICH NANNOFOSSIL OOZE and VOLCANIC GLASS-RICH SILT
Major Lithology:
1. Brown VOLCANIC GLASS-RICH NANNOFOSSIL OOZE
2. Dark brown VOLCANIC GLASS-RICH SILT
General Description:
Above Section 2, 30 cm, lithology 1 is present. The boundary to lithology 2 is sharp. Light yellow weathered pieces of volcanic glass have a layered structure with molds and weathered rims.
Section 3, 0-37 cm was sampled for microbiology.

Sample						Mineral										Biogenic							Rock		
Core	CT	Sct	Top (cm)	Depth (mbsf)	Lithology	Carbonate (35)	Clay Mineral (47)	Dolomite (62)	Feldspar (71)	Glauconite (82)	Opaques (140)	Pyrite (169)	Quartz (172)	Volcanic Glass (81)	Zeolite (222)	Diatoms (58)	Foraminifers (78)	Nannofossils (132)	Radiolarians (173)	Silicoflagellates (189)	Sponge Spicules (199)	Organic Debris (161)	Clay Size Particles (255)	Silt (191)	Comments
Hole B																									
1	H	1	5	0.05	M		5					5	15			40	*	2	8	*		*	25		Radiolarian-bearing Quartz- and Clay-rich Diatom Ooze
1	H	1	40	0.40	D	*	10				4		4			50		*	6	1			25		Radiolarian-bearing Clay-rich Diatom Ooze
1	H	1	82	0.82	D				*		*		*			70			10	*			20		Radiolarian- and Clay-rich Diatom Ooze
1	H	2	121	2.71	D				*	*	*		2			65			10	1	5		17		Radiolarian-bearing Clay-rich Diatom Ooze
2	H	3	70	7.10	D	*		*	*		*		4			74			5	*			17		Radiolarian-bearing Clay-rich Diatom Ooze
2	H	6	20	11.10	D	*		3					4			38			5				50		Radiolarian- and Diatom-bearing Clay
2	H	7	4	12.44	M		10	*			4					40			5	1			40		Radiolarian-bearing Diatom-rich Clay
2	H	7	24	12.64	D				*				*			30			3				67		Diatom-rich Clay
3	H	4	133	18.73	D											15							65	20	Diatom-rich Silty Clay
3	H	5	94	19.84	M						99													1	Fine-grained pyrite
3	H	5	105	19.95	D											3			5	4	1		77	10	Radiolarian-bearing Silt-rich Clay
4	H	CC	18	32.41	D									*		3			3				50	44	Clay and Silt
6	H	6	40	49.30	D				*				*	5		2							53	40	Volcanic glass-bearing Silty Clay
7	H	1	60	51.50	D		79					1		5	15			*							Zeolite-rich Clay
7	H	4	140	56.80	D		*				*						*	100							Nannofossil Ooze
8	H	3	70	64.10	D												*	100							Nannofossil Ooze
8	H	4	100	65.90	D		5		*		*		*		*	5		90							Diatom-bearing Nannofossil Ooze
9	H	1	20	70.10	M		20				20							60							Clay- and Opaque-rich Nannofossil Ooze
9	H	5	70	76.60	D						8							92							Opaque-bearing Nannofossil Ooze
10	H	1	2	79.42	M					*						80		15	5	*					Radiolarian-bearing Nannofossil-rich Diatom Ooze
10	H	1	133	80.73	M						3						*	97							Nannofossil Ooze
10	H	5	110	86.50	D						8						5	87							Foram- and Opaque-bearing Nannofossil Ooze
11	H	6	69	97.09	D						3						2	95							Nannofossil Ooze
11	H	6	80	97.20	M						*						2	98							Nannofossil Ooze
12	H	1	40	98.80	D											*	*	100							Nannofossil Ooze
12	H	7	39	107.79	D									*				100							Nannofossil Ooze
13	H	1	27	109.67	D												*	100							Nannofossil Ooze
13	H	4	42	114.32	D												*	100							Nannofossil Ooze
Hole D																									
5	H	1	32	36.62	D		45		5		10		5	35		*				*					Opaque- and Volcanic glass-rich Clay
5	H	2	60	38.40	D		51		4				5	40		*			*						Quartz-bearing Volcanic glass-rich Clay
6	H	1	135	47.15	M		25	*			*			10				15					50		Volcanic glass- and Nannofossil-rich Clay
6	H	4	70	51.00	D		20		3		20		4	10				*					43		Volcanic glass- and Opaque-rich Clay
6	H	6	120	54.50	D		10	*	10		25		15	5	15		*	5					15		Volcanic glass-bearing Zeolite-rich Clay
7	H	2	35	57.15	D						1						4	95							Nannofossil Ooze
8	H	1	26	65.06	D						20				7	3		70							Zeolite-bearing Opaque-rich Nannofossil Ooze
8	H	5	90	71.70	D		3				35					1		61							Opaque-rich Nannofossil Ooze
8	H	6	16	72.46	D						4						*	96							Nannofossil Ooze
Hole E																									
2	H	2	70	5.20	D		8		4				5			30		*	4	3			46		Quartz-bearing Diatom-rich Clay
3	H	3	60	16.10	D		10							3		82			5	*					Radiolarian-bearing Clay-rich Diatom Ooze
4	H	7	52	31.52	M	94		3										2	1						Carbonate nodule
5	H	3	110	35.60	D		15		10				15	50		4		*					6		Feldspar- and Quartz- and Clay-rich Volcanic glass
6	H	3	130	45.30	D		20		4		5		5		8			10					48		Quartz- and Opaque- and Zeolite-bearing Nannofossil-rich Clay
7	H	3	10	53.60	D		10		5		35		25		10			15							Zeolite- and Nannofossil- and Quartz- and Opaque-rich Clayey Silt
8	H	5	80	66.80	D						10				5			85							Zeolite-bearing Opaque-rich Nannofossil Ooze
14	H	2	17	117.68	D						30						1	69							Volcanic glass-rich Nannofossil Ooze

Sample						Mineral										Biogenic							Rock		
Core	CT	Sct	Top (cm)	Depth (mbsf)	Lithology	Carbonate (35)	Clay Mineral (47)	Dolomite (62)	Feldspar (71)	Glauconite (82)	Opaques (140)	Pyrite (169)	Quartz (172)	Volcanic Glass (81)	Zeolite (222)	Diatoms (58)	Foraminifers (78)	Nannofossils (132)	Radiolarians (173)	Silicoflagellates (189)	Sponge Spicules (199)	Organic Debris (161)	Clay Size Particles (255)	Silt (191)	Comments
Hole E (continued)																									
14	H	2	60	118.11	D						45													55	Volcanic glass Silt

THIN SECTION: **201-1231B-14X-1, 0-2 cm** **OBSERVERS:**
ROCK NAME: **Sparsely plagioclase phyric basalt**
TEXTURE:

PRIMARY MINERALOGY	PERCENT	SIZE (mm) min.	max.	av.	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Plagioclase	1		1.5	<0.1	Euhedral laths	Fresh, sharp crystal faces, no evidence of embayment. Twinned and concentrically zoned (minor)
Clinopyroxene				0.01	Rare subhedra	Rare individual crystals and a few glomerocrysts with plagioclase
GROUNDMASS						
Altered volcanic glass and palagontite						
Fe-Ti oxides				0.005	Irregular but predominantly elongated	Abundant in groundmass (1-2%)

COMMENTS: Olivine-free, with rare euhedral plagioclase laths. Some smectite patches may have formed as a result of alteration of olivine, but morphologically appear to be for the most part filling vesicles. Abundant (relatively) irregularlly-shaped, reddish-hued Fe-Ti oxide crystals in mesostasis. Many have the morphology of rice grains. Calcite, palagonite, and smectite fill vesicles and replace groundmass in variable proportions. Fresh rock was a glassy, intergranular to intersertal textured basalt.