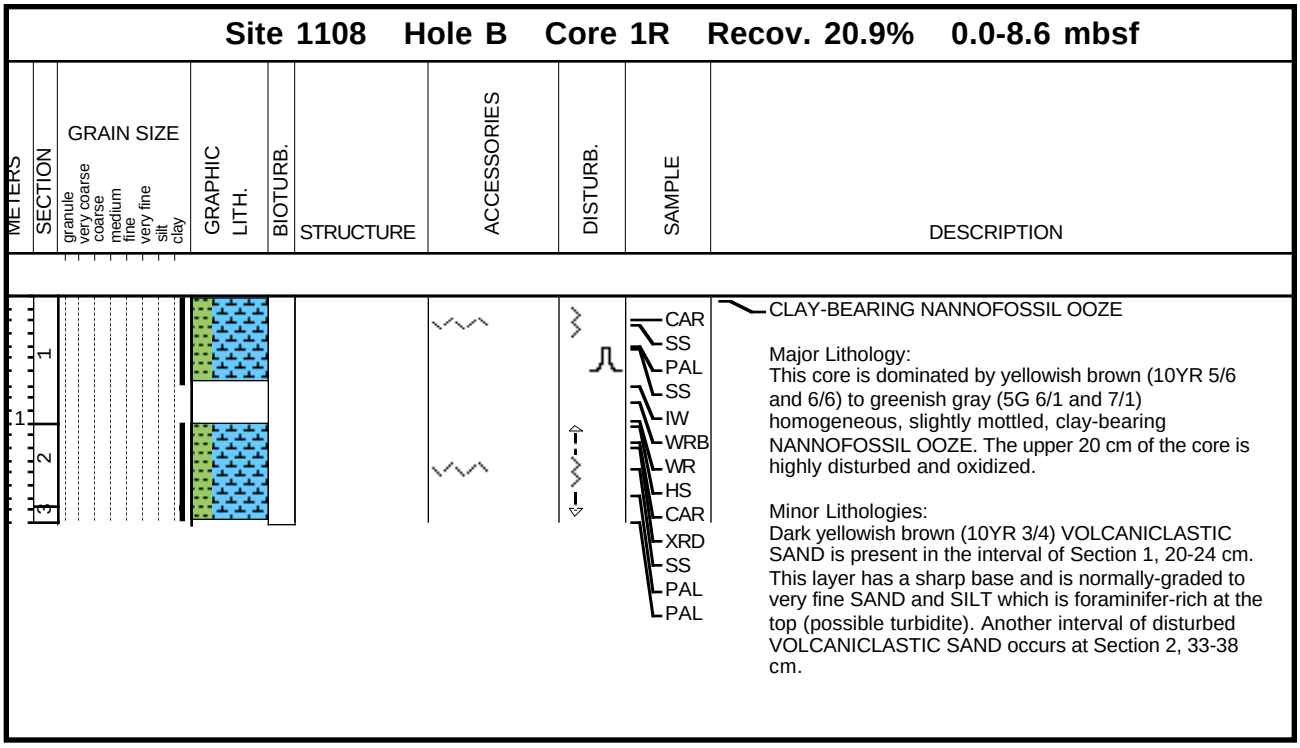
Core Photo



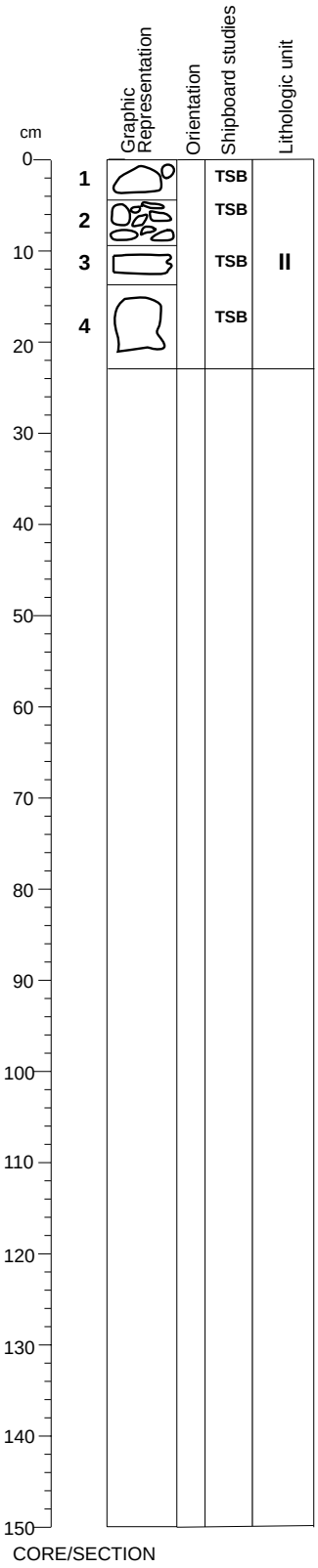
1108B-2R NO RECOVERY

Core Photo

Site 1108 Hole B Core 3R Recov. 1.5% 14.5-24.1 mbsf

METERS	SECTION	GRAIN SIZE (granule, very coarse, coarse, medium, fine, very fine, silt, clay)	GRAPHIC LITH.	BIOTURB.	STRUCTURE	ACCESSORIES	DISTURB.	SAMPLE	DESCRIPTION
	1							THS	SANDSTONE, SEDIMENTARY BRECCIA, BASALT, and GREENSCHIST FACIES MYLONITE Major Lithologies: Olive gray (5Y 5/2) foliated, banded, and gray (5Y 5/1) SANDSTONES with quartz, feldspar, ferromagnesian minerals, and lithics. Minor Lithologies: Black (N 2/2), vesicular BASALT, one piece of GREENSCHIST FACIES MYLONITE, and a SEDIMENTARY BRECCIA with angular potassium-feldspar and plagioclase in a dark gray siliceous matrix.

Core Photo



180-1108B-3R-CC

UNIT: Lithostratigraphic Unit II

Trays: 1- 4

Interval Location:	Core	Section	Tray	Depth (cm) in Piece	Depth (mbsf)
Top:	3R	CC	1	0	14.50
Bottom:	3R	CC	4	24	14.74

Thickness (m): 0.24

CONTACTS: Missing.

COMMENTS: The core catcher brought various rock pieces. The pieces were sorted by rock type and put into four trays.

Tray 1: Two pieces of sedimentary rocks.
A well lithified volcaniclastic sandstone (2 x 4.5 cm) containing sub-rounded fragments of basalt and minerals (including ferro-magnesian minerals and quartz).
Alteration: Fe-oxide weathering , pyritization.
A microgranite made of angular alkali feldspar (1-2 mm), hornblende, and mica in a fine-grained quartz matrix.

Tray 2: Ten rock pieces (0.5 x 4 cm) including greenschist facies mylonite, igneous rock retrograded under greenschist facies conditions.

Tray 3: One piece of igneous rock.
Dark vesicular olivine basalt.

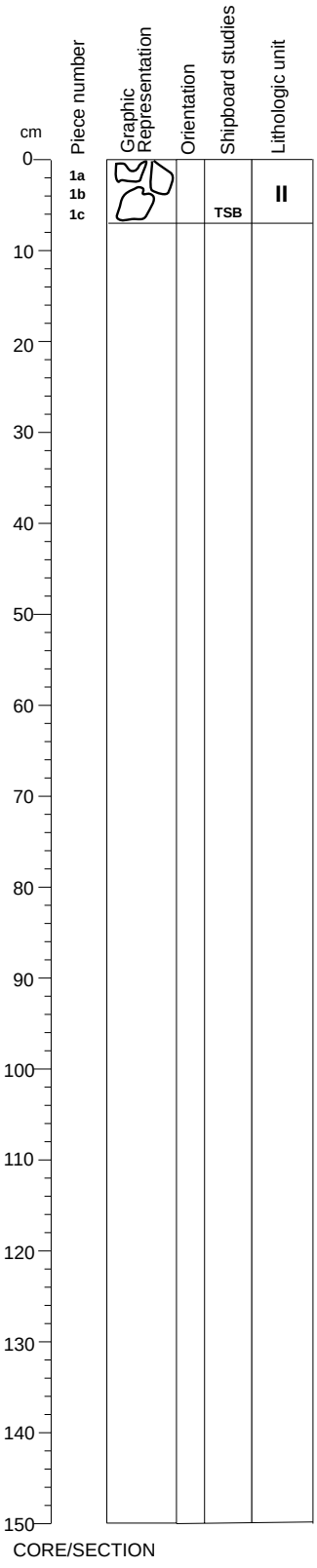
Tray 4: One piece of rock.
A fine-grained volcaniclastic sandstone containing silty clasts made by bioturbation.

Core Photo

Site 1108 Hole B Core 4R Recov. 0.3% 24.1-33.8 mbsf

METERS	SECTION	GRAIN SIZE (granule, very coarse, coarse, medium, fine, very fine, silt, clay)	GRAPHIC LITH.	BIOTURB.	STRUCTURE	ACCESSORIES	DISTURB.	SAMPLE	DESCRIPTION
	1							THS THS PAL	SANDSTONE, BASALT Major Lithologies: Core contains 2 pieces of black (7.5YR N2/0) vesicular BASALT with phenocrysts of pyroxene and plagioclase needles, possible glassy salvages in places, along with 1 piece of dark brown (7.5R 4/0), fine-grained quartz SANDSTONE with volcanic and feldspar lithics.

Core Photo



180-1108B-4R-CC

UNIT: Lithostratigraphic Unit II

Tray: 1

Interval Location:	Core	Section	Piece	Depth (cm) in Piece	Depth (mbsf)
Top:	**4R**	**CC**	**1a**	**0**	**24.10**
Bottom:	**4R**	**CC**	**1c**	**7**	**24.17**

Thickness (m): 0.07

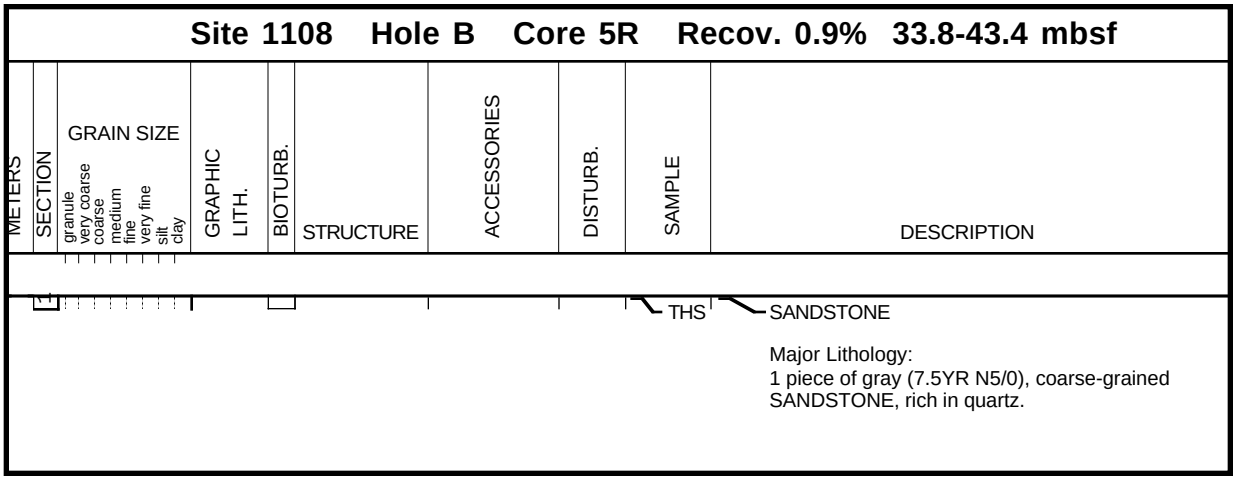
CONTACTS: Missing.

COMMENTS: The core catcher brought 3 rock pieces of various type. The rocks were put into 1 tray.

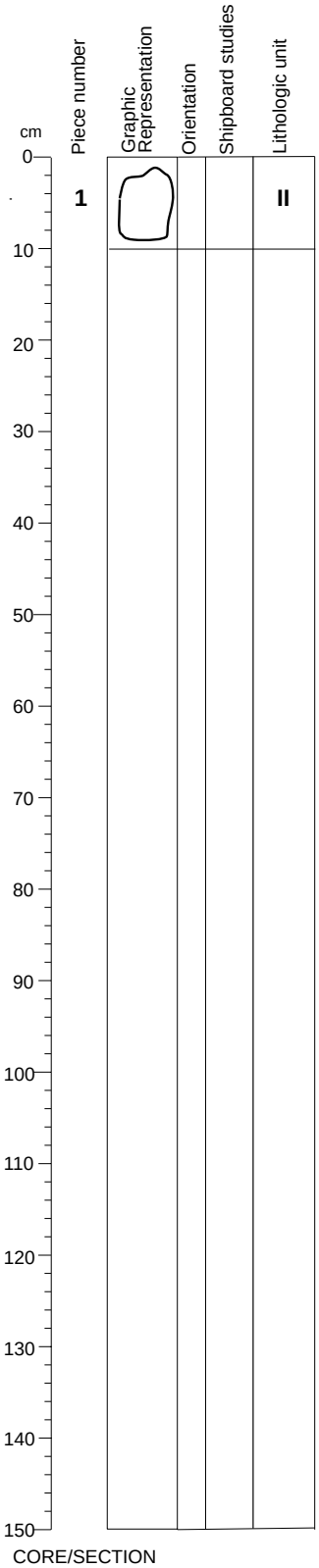
Tray 1:
Piece 1a: Sedimentary rock.
A fine-grained volcaniclastic sandstone (2 x 2 cm) containing subrounded fragments of basalt and minerals (including ferro-magnesian minerals and quartz).

Pieces 1b and 1c: Igneous rocks.
Dark vesicular glassy olivine basalt containing plagioclase phenocrysts and plagioclase and olivine microphenocrysts and plagioclase needles in the glassy groundmass.

Core Photo


Site 1108 Hole B Core 5R Recov. 0.9% 33.8-43.4 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
THS
SANDSTONE
Major Lithology:
1 piece of gray (7.5YR N5/0), coarse-grained SANDSTONE, rich in quartz.

Core Photo



180-1108B-5R-CC

UNIT: Lithostratigraphic Unit II

Tray: 1

Interval Location:	Core	Section	Tray	Depth (cm) in Piece	Depth (mbsf)
Top:	5R	CC	1	0	33.80
Bottom:	5R	CC	1	9	33.89

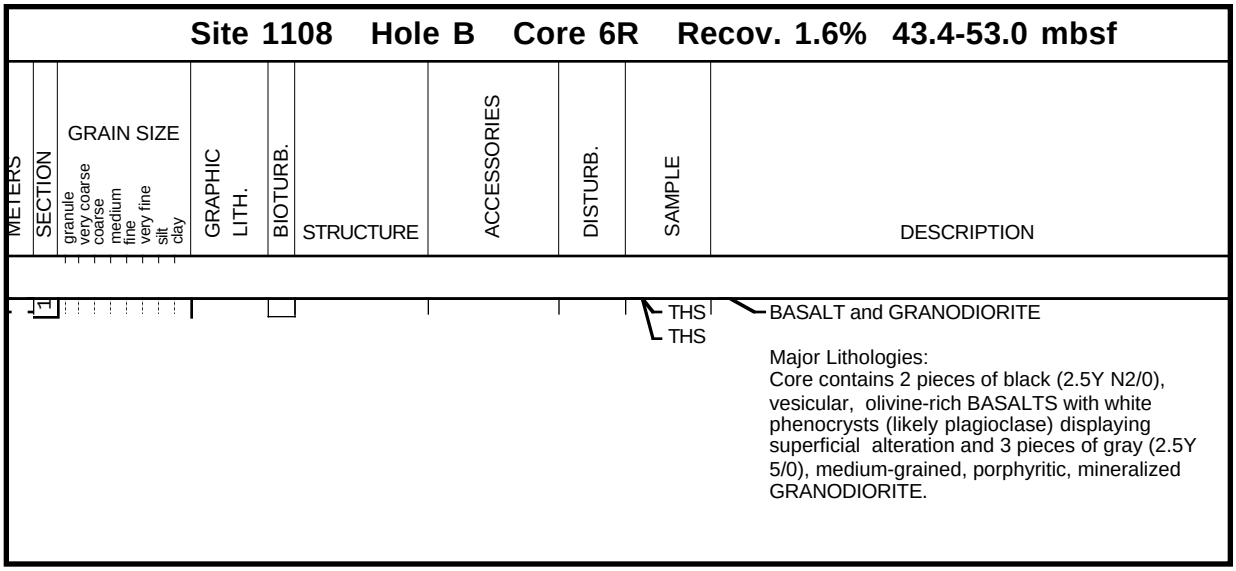
Thickness (m): 0.09

CONTACTS: Missing.

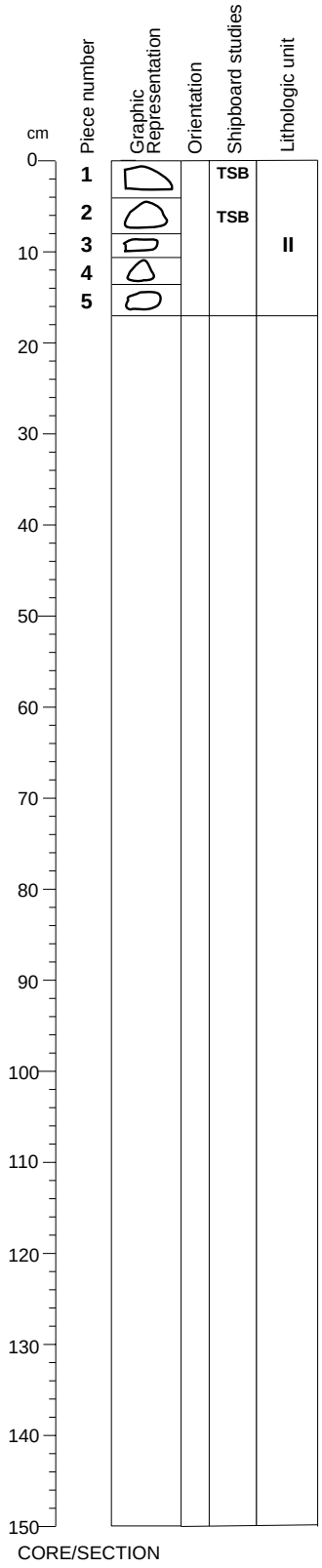
COMMENTS: The core catcher brought 1 piece of rock.

Tray 1: One piece of sedimentary rock.
A coarse-grained volcaniclastic sandstone (4 x 5 cm) containing lithic fragments and minerals (including ferro-magnesian minerals, feldspars, and quartz).

Core Photo


Site 1108 Hole B Core 6R Recov. 1.6% 43.4-53.0 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
1
THS
THS
BASALT and GRANODIORITE
Major Lithologies:
Core contains 2 pieces of black (2.5Y N2/0), vesicular, olivine-rich BASALTS with white phenocrysts (likely plagioclase) displaying superficial alteration and 3 pieces of gray (2.5Y 5/0), medium-grained, porphyritic, mineralized GRANODIORITE.

Core Photo



180-1108B-6R-CC

UNIT: Lithostratigraphic Unit II

Trays: 1- 5

Interval Location:	Core	Section	Tray	Depth (cm) in Piece	Depth (mbsf)
Top:	6R	CC	1	0	43.40
Bottom:	6R	CC	5	17	43.57

Thickness (m): 0.17

CONTACTS: Missing.

COMMENTS: The core catcher brought up 5 various pieces of rock. These rocks were sorted by types and put into 5 trays. All pebbles are well-rounded.

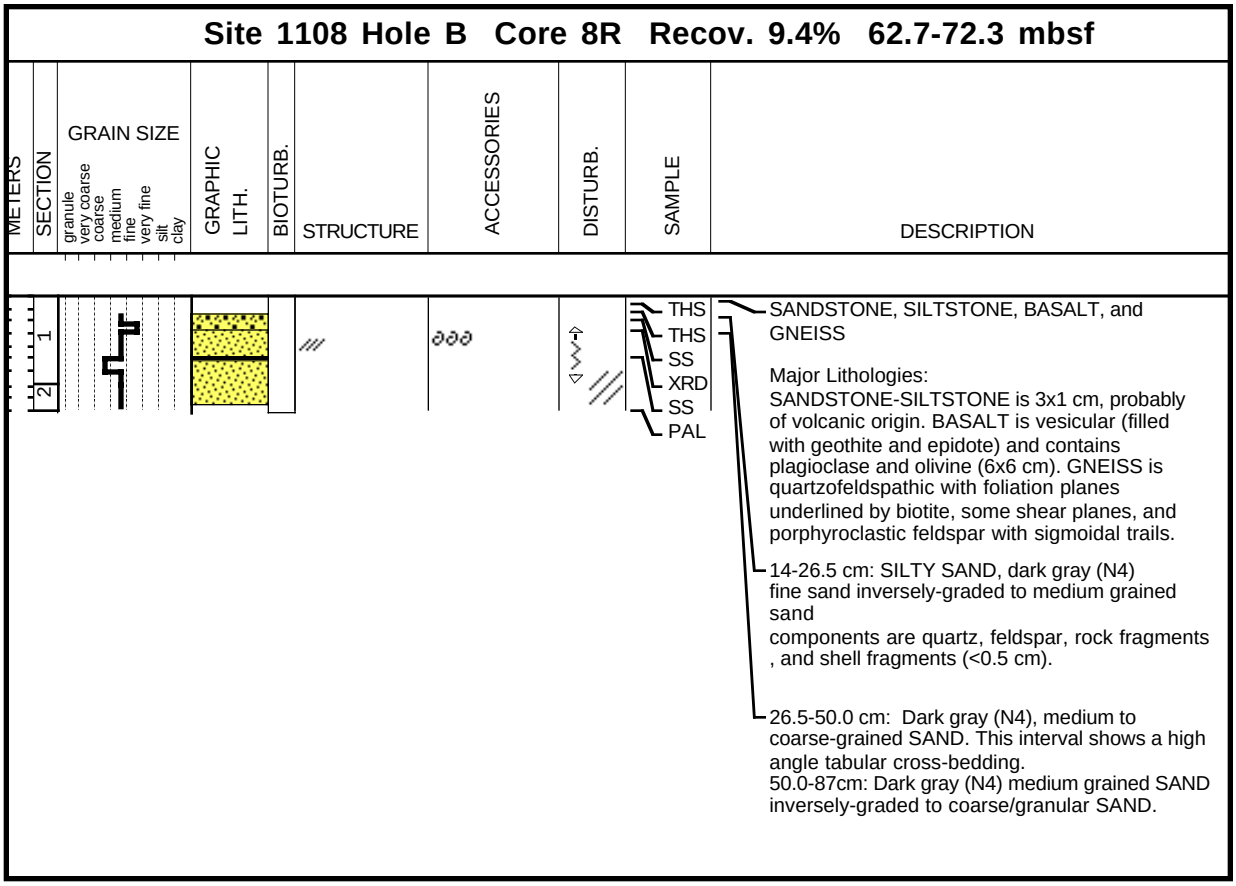
Tray 1: One piece of igneous rock.
A vesicular olivine basalt (2 x3 cm) containing plagioclase and olivine phenocrysts in a pilotaxitic (flow textured plagioclase laths in glass) groundmass.

Trays 2, 4, 5 : One piece of igneous rock.
Lepidoblastic medium-grained granodiorite or granite (4 x 3 cm) consisting of 80% plagioclase , 20% quartz, and 5% biotite, possibly replacing hornblende.

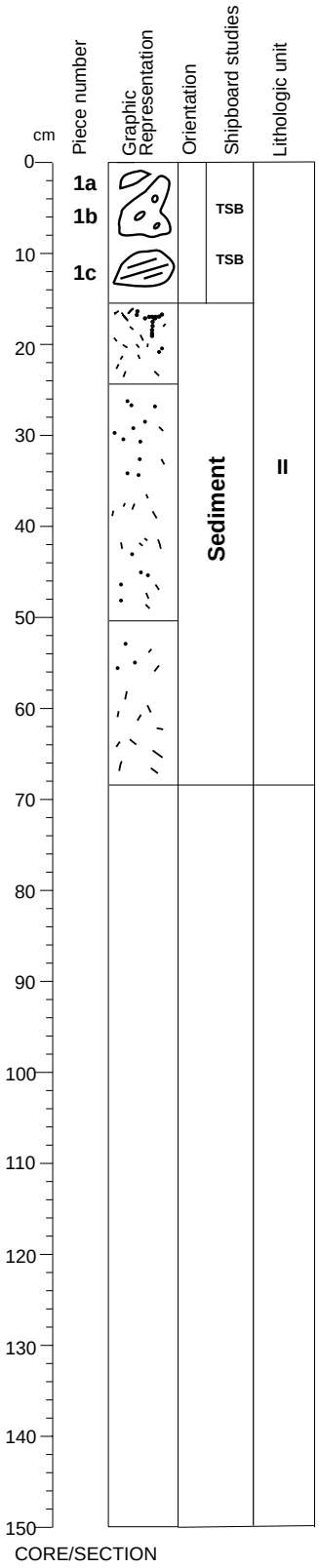
Tray 3: One piece of igneous rock.
A vesicular basalt (2 x 3 cm) containing hornblende or pyroxene phenocrysts and plagioclase needles.
Alteration: Peripheral weathering (0.5 cm outside to inside)

1108B-7R NO RECOVERY

Core Photo


Site 1108 Hole B Core 8R Recov. 9.4% 62.7-72.3 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
1
2
THS
THS
SS
XRD
SS
PAL
SANDSTONE, SILTSTONE, BASALT, and GNEISS
Major Lithologies:
SANDSTONE-SILTSTONE is 3x1 cm, probably of volcanic origin. BASALT is vesicular (filled with geothite and epidote) and contains plagioclase and olivine (6x6 cm). GNEISS is quartzofeldspathic with foliation planes underlined by biotite, some shear planes, and porphyroclastic feldspar with sigmoidal trails.
14-26.5 cm: SILTY SAND, dark gray (N4)
fine sand inversely-graded to medium grained sand
components are quartz, feldspar, rock fragments , and shell fragments (<0.5 cm).
26.5-50.0 cm: Dark gray (N4), medium to coarse-grained SAND. This interval shows a high angle tabular cross-bedding.
50.0-87cm: Dark gray (N4) medium grained SAND inversely-graded to coarse/granular SAND.

Core Photo



180-1108B-8R-1

UNIT: Lithostratigraphic Unit II

Tray: 1

Interval Location:	Core	Section	Piece	Depth (cm) in Piece	Depth (mbsf)
Top:	8R	1	1a	0	62.70
Bottom:	8R	1	1c	17	63.38

Thickness (m): 0.17

CONTACTS: Missing.

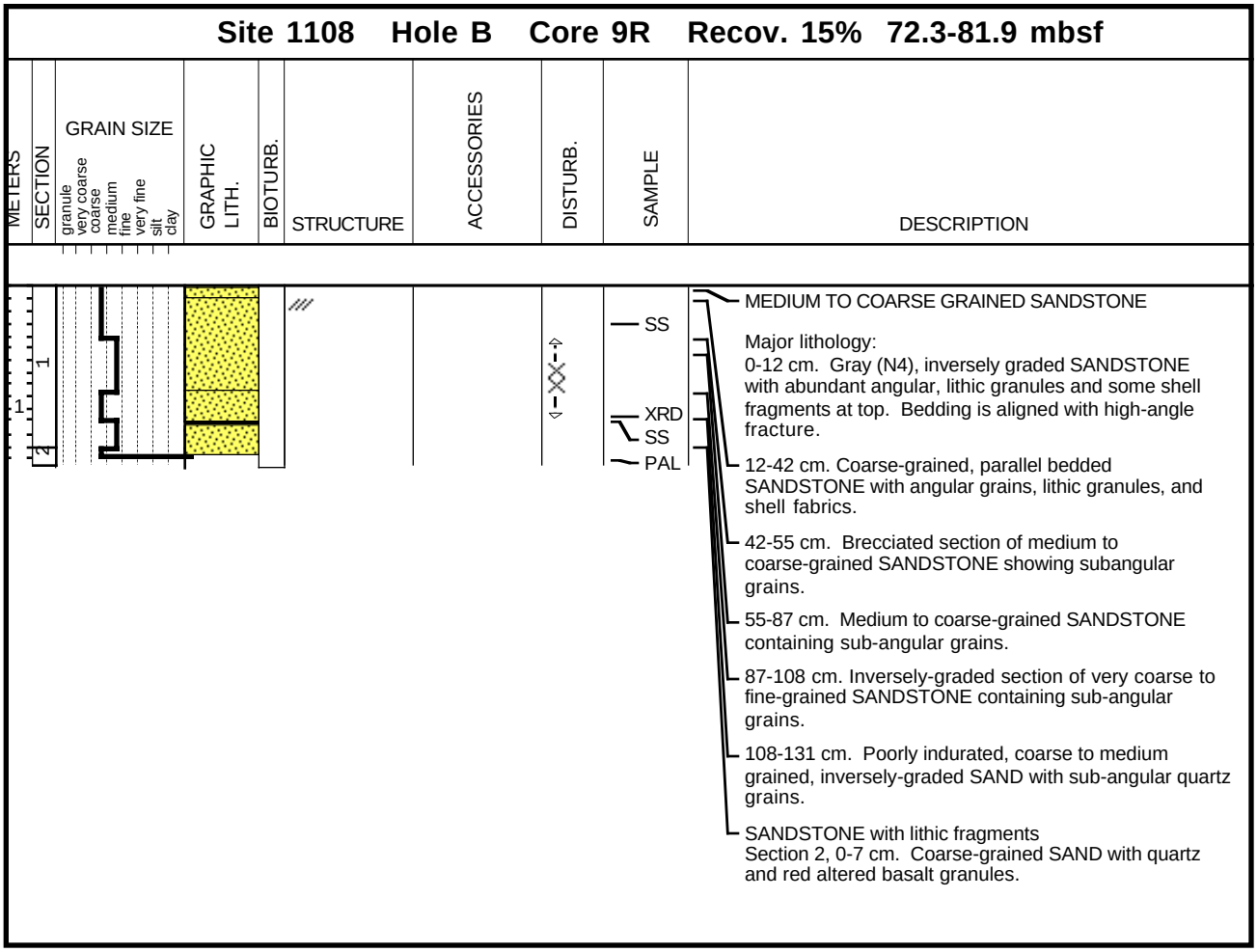
COMMENTS: The upper part of the core contains 3 pebbles of various type which were sorted and put into 3 trays.

Tray 1: One piece of sedimentary rock.
A sandy siltstone, volcaniclastic(?) rock (3 x 1 cm).

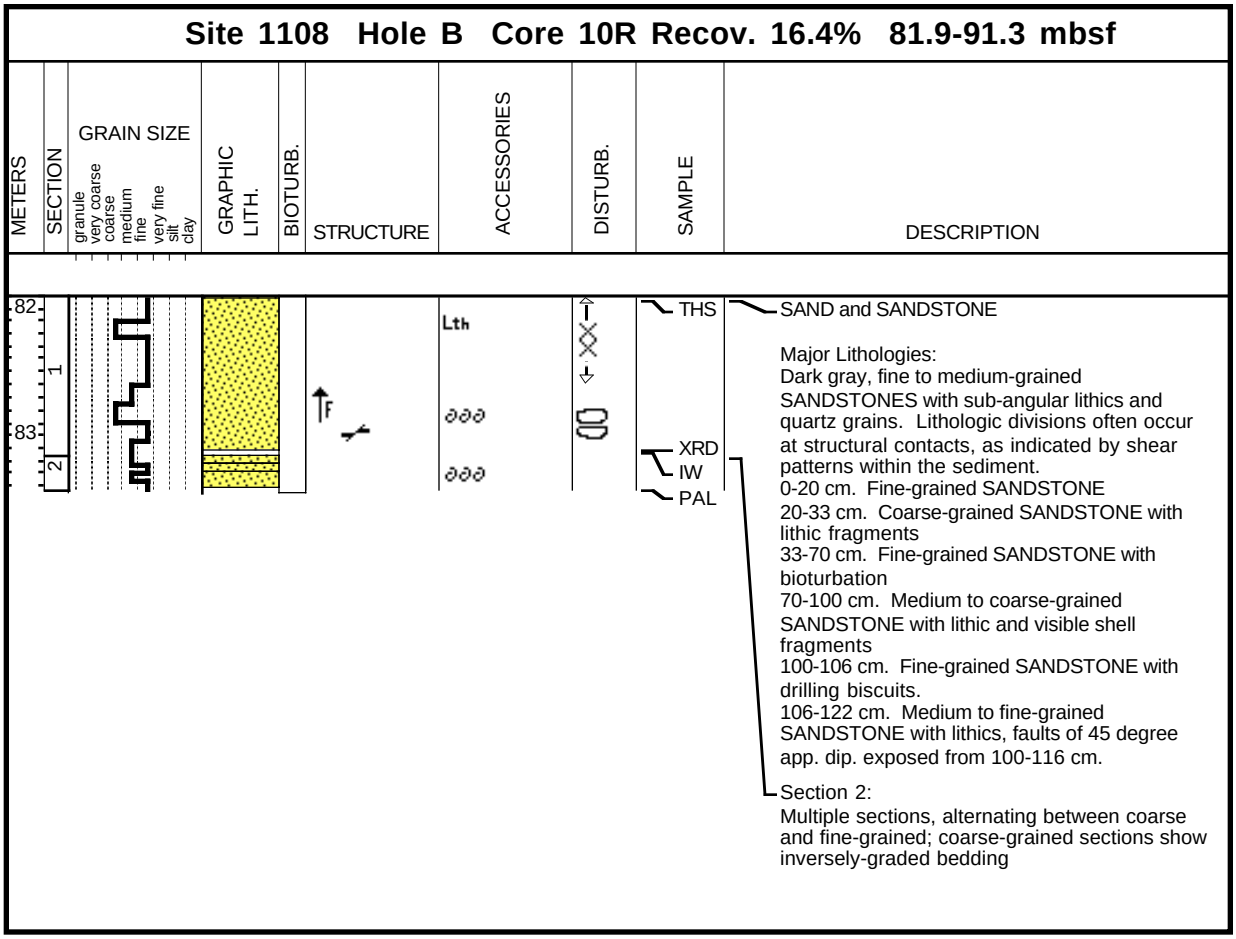
Tray 2 : One piece of igneous rock.
A vesicular basalt (6 x 6 cm) containing olivine phenocrysts and plagioclase needles. Some vesicles are filled with pale green minerals (zeolite and epidote).

Tray 3: One piece of metamorphic rock.
A leucocratic gneiss or foliated leucogabbro (6 x 5 cm) consisting of 70% plagioclase , 20% quartz, and 10% biotite partly replaced by chlorite. The biotite underlines the foliation plane. Some shear bands and sigmoidal trails are visible around feldspar grains.

Core Photo


Site 1108 Hole B Core 9R Recov. 15% 72.3-81.9 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
1
1
2
SS
XRD
SS
PAL
MEDIUM TO COARSE GRAINED SANDSTONE
Major lithology:
0-12 cm. Gray (N4), inversely graded SANDSTONE with abundant angular, lithic granules and some shell fragments at top. Bedding is aligned with high-angle fracture.
12-42 cm. Coarse-grained, parallel bedded SANDSTONE with angular grains, lithic granules, and shell fabrics.
42-55 cm. Brecciated section of medium to coarse-grained SANDSTONE showing subangular grains.
55-87 cm. Medium to coarse-grained SANDSTONE containing sub-angular grains.
87-108 cm. Inversely-graded section of very coarse to fine-grained SANDSTONE containing sub-angular grains.
108-131 cm. Poorly indurated, coarse to medium grained, inversely-graded SAND with sub-angular quartz grains.
SANDSTONE with lithic fragments
Section 2, 0-7 cm. Coarse-grained SAND with quartz and red altered basalt granules.

Core Photo



1108B-11R NO RECOVERY

1108B-12R NO RECOVERY

Core Photo

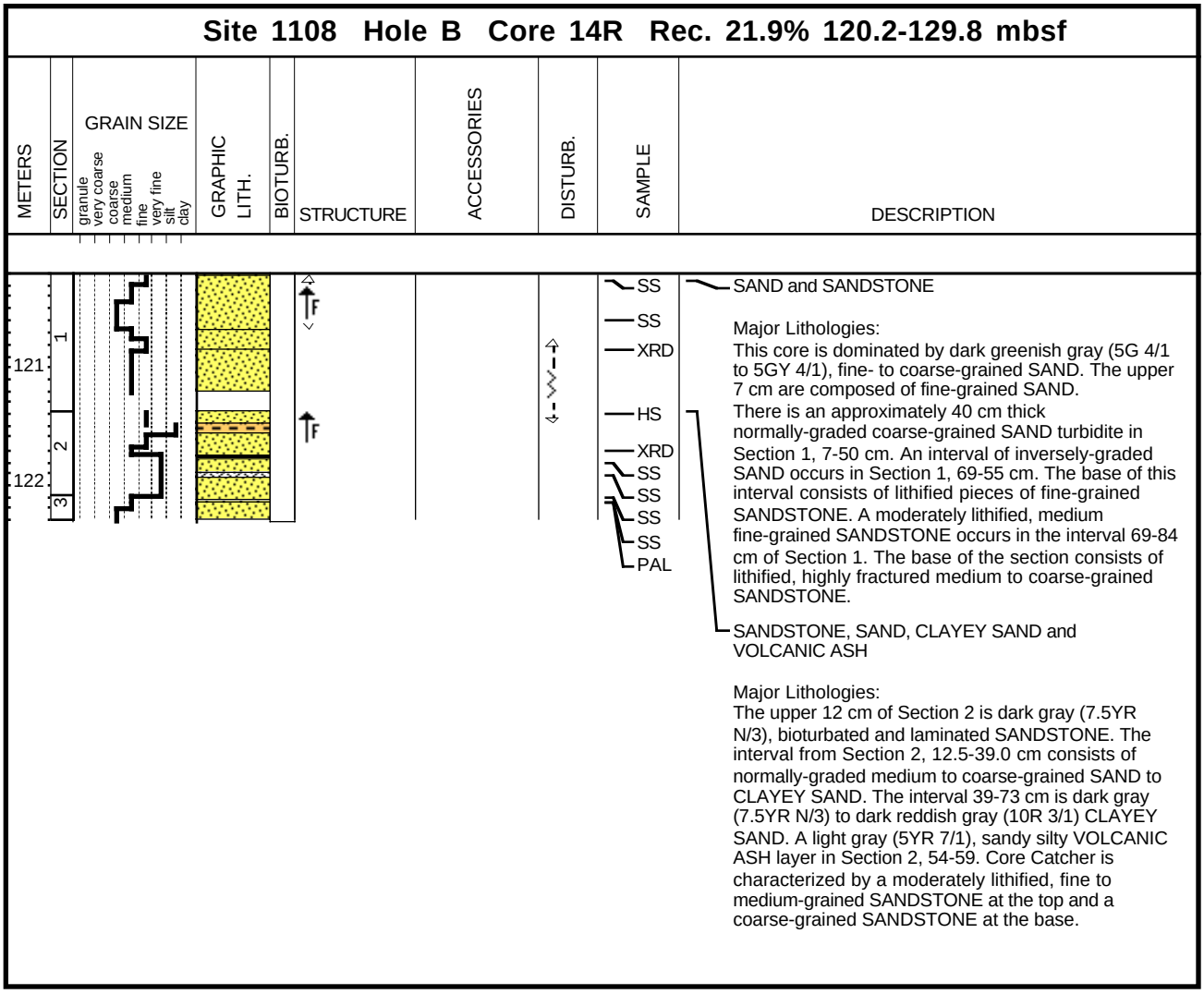
Site 1108 Hole B Core 13R Recov. 0.31% 110.6-120.2 mbsf

METERS	SECTION	GRAIN SIZE (granule, very coarse, coarse, medium, fine, very fine, silt, clay)	GRAPHIC LITH.	BIOTURB.	STRUCTURE	ACCESSORIES	DISTURB.	SAMPLE	DESCRIPTION
								THS	SANDSTONE

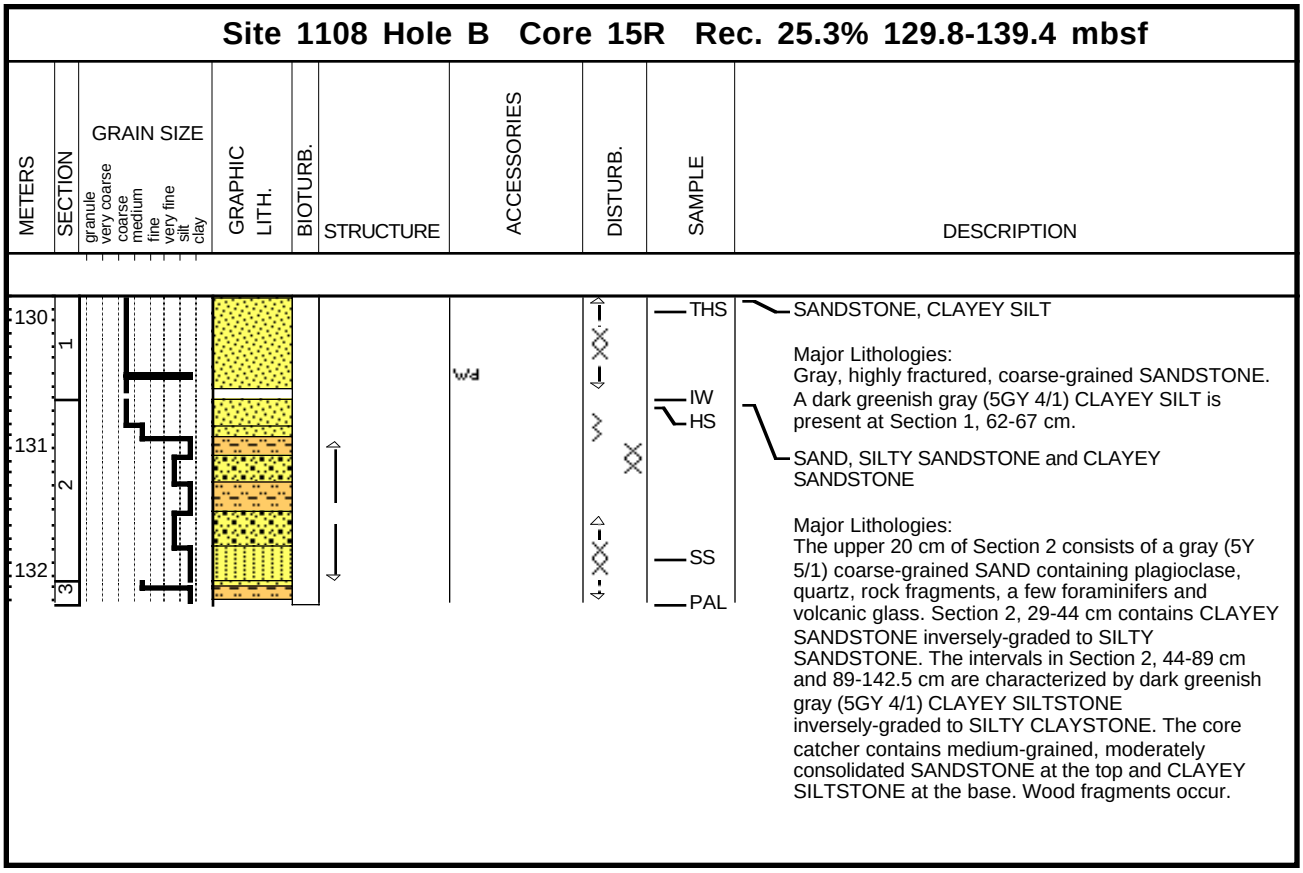
Major Lithologies:
Piece 1: subrounded pebble (1.5 cm) composed of sub-rounded to sub-angular, poorly-sorted, medium-coarse grains; Pebble is hard; grains are quartz and lithics.

Piece 2: rounded pebble (2X3.5 cm) composed of angular to sub-angular coarse-very coarse-grained SANDSTONE; grains are quartz and rock fragments. Pebble is very well cemented; a silica matrix of very fine sand-silt and mud is present.

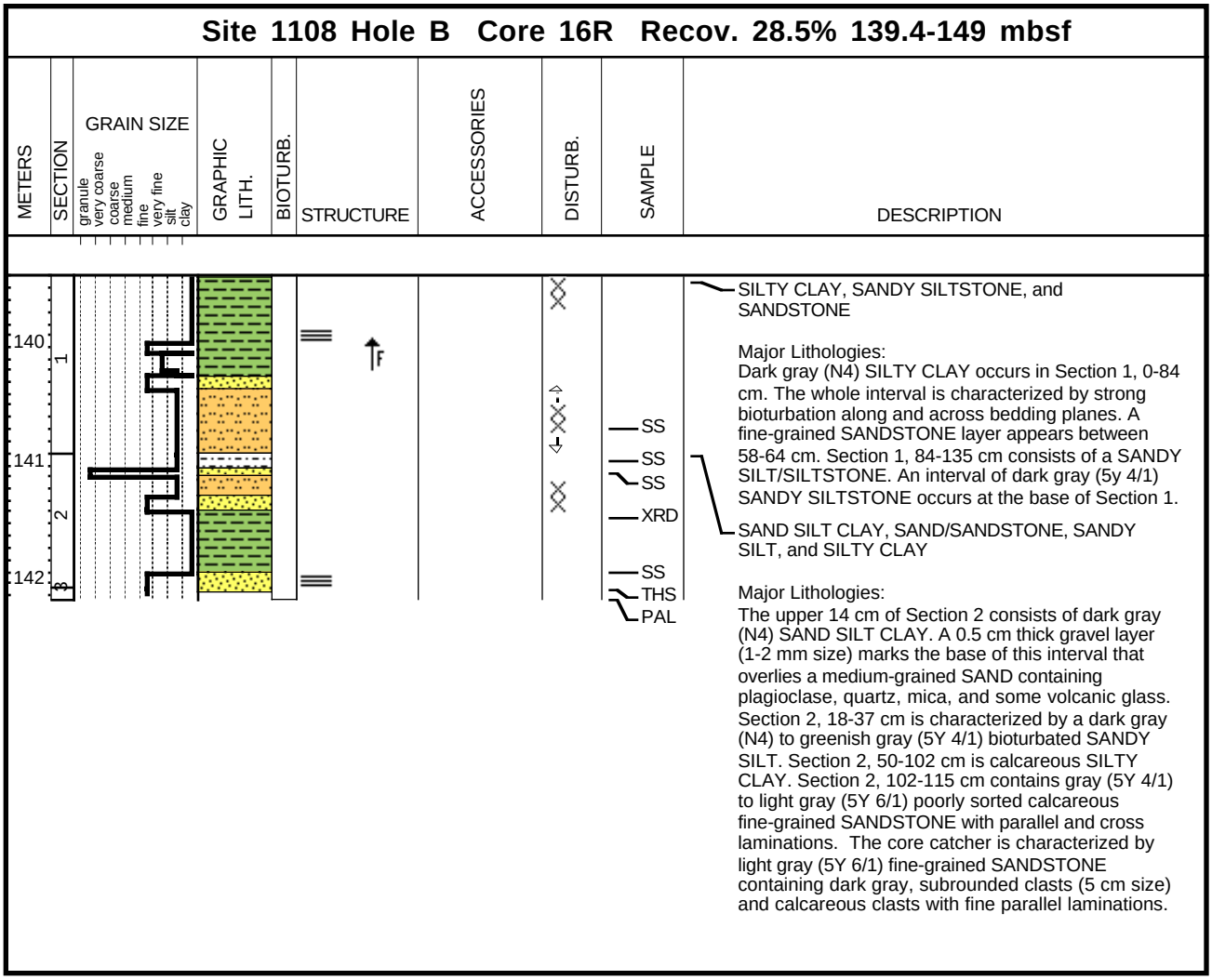
Core Photo


Site 1108 Hole B Core 14R Rec. 21.9% 120.2-129.8 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
121
122
1
2
3
F
F
SS
SS
XRD
HS
XRD
SS
SS
SS
SS
PAL
SAND and SANDSTONE
Major Lithologies:
This core is dominated by dark greenish gray (5G 4/1 to 5GY 4/1), fine- to coarse-grained SAND. The upper 7 cm are composed of fine-grained SAND.
There is an approximately 40 cm thick normally-graded coarse-grained SAND turbidite in Section 1, 7-50 cm. An interval of inversely-graded SAND occurs in Section 1, 69-55 cm. The base of this interval consists of lithified pieces of fine-grained SANDSTONE. A moderately lithified, medium fine-grained SANDSTONE occurs in the interval 69-84 cm of Section 1. The base of the section consists of lithified, highly fractured medium to coarse-grained SANDSTONE.
SANDSTONE, SAND, CLAYEY SAND and VOLCANIC ASH
Major Lithologies:
The upper 12 cm of Section 2 is dark gray (7.5YR N/3), bioturbated and laminated SANDSTONE. The interval from Section 2, 12.5-39.0 cm consists of normally-graded medium to coarse-grained SAND to CLAYEY SAND. The interval 39-73 cm is dark gray (7.5YR N/3) to dark reddish gray (10R 3/1) CLAYEY SAND. A light gray (5YR 7/1), sandy silty VOLCANIC ASH layer in Section 2, 54-59. Core Catcher is characterized by a moderately lithified, fine to medium-grained SANDSTONE at the top and a coarse-grained SANDSTONE at the base.

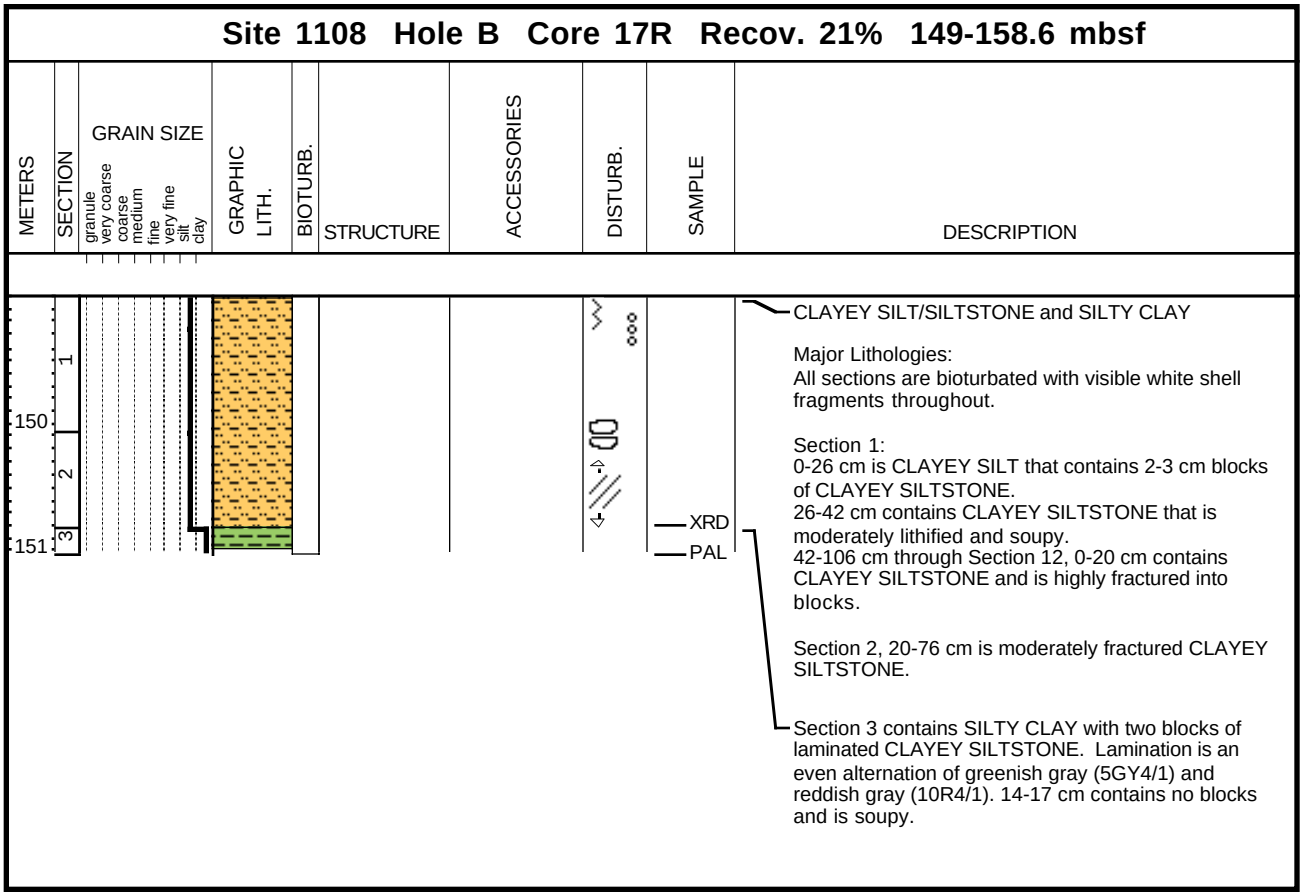
Core Photo


Site 1108 Hole B Core 15R Rec. 25.3% 129.8-139.4 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
130
131
132
1
2
3
THS
IW
HS
SS
PAL
SANDSTONE, CLAYEY SILT
Major Lithologies:
Gray, highly fractured, coarse-grained SANDSTONE. A dark greenish gray (5GY 4/1) CLAYEY SILT is present at Section 1, 62-67 cm.
SAND, SILTY SANDSTONE and CLAYEY SANDSTONE
Major Lithologies:
The upper 20 cm of Section 2 consists of a gray (5Y 5/1) coarse-grained SAND containing plagioclase, quartz, rock fragments, a few foraminifers and volcanic glass. Section 2, 29-44 cm contains CLAYEY SANDSTONE inversely-graded to SILTY SANDSTONE. The intervals in Section 2, 44-89 cm and 89-142.5 cm are characterized by dark greenish gray (5GY 4/1) CLAYEY SILTSTONE inversely-graded to SILTY CLAYSTONE. The core catcher contains medium-grained, moderately consolidated SANDSTONE at the top and CLAYEY SILTSTONE at the base. Wood fragments occur.

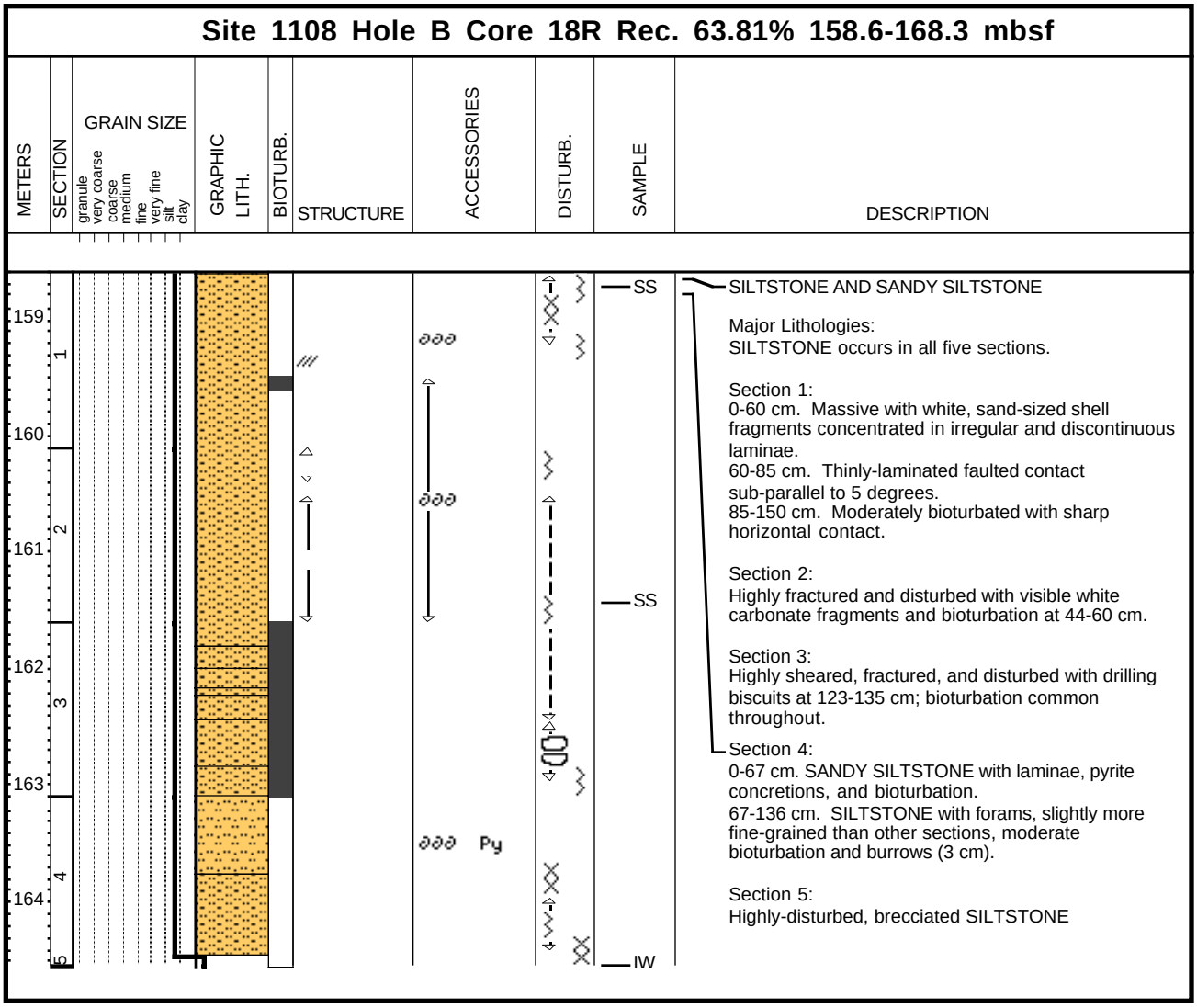
Core Photo


Site 1108 Hole B Core 16R Recov. 28.5% 139.4-149 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
140
141
142
1
2
3
F
SS
SS
SS
XRD
SS
THS
PAL
SILTY CLAY, SANDY SILTSTONE, and SANDSTONE
Major Lithologies:
Dark gray (N4) SILTY CLAY occurs in Section 1, 0-84 cm. The whole interval is characterized by strong bioturbation along and across bedding planes. A fine-grained SANDSTONE layer appears between 58-64 cm. Section 1, 84-135 cm consists of a SANDY SILT/SILTSTONE. An interval of dark gray (5y 4/1) SANDY SILTSTONE occurs at the base of Section 1.
SAND SILT CLAY, SAND/SANDSTONE, SANDY SILT, and SILTY CLAY
Major Lithologies:
The upper 14 cm of Section 2 consists of dark gray (N4) SAND SILT CLAY. A 0.5 cm thick gravel layer (1-2 mm size) marks the base of this interval that overlies a medium-grained SAND containing plagioclase, quartz, mica, and some volcanic glass. Section 2, 18-37 cm is characterized by a dark gray (N4) to greenish gray (5Y 4/1) bioturbated SANDY SILT. Section 2, 50-102 cm is calcareous SILTY CLAY. Section 2, 102-115 cm contains gray (5Y 4/1) to light gray (5Y 6/1) poorly sorted calcareous fine-grained SANDSTONE with parallel and cross laminations. The core catcher is characterized by light gray (5Y 6/1) fine-grained SANDSTONE containing dark gray, subrounded clasts (5 cm size) and calcareous clasts with fine parallel laminations.

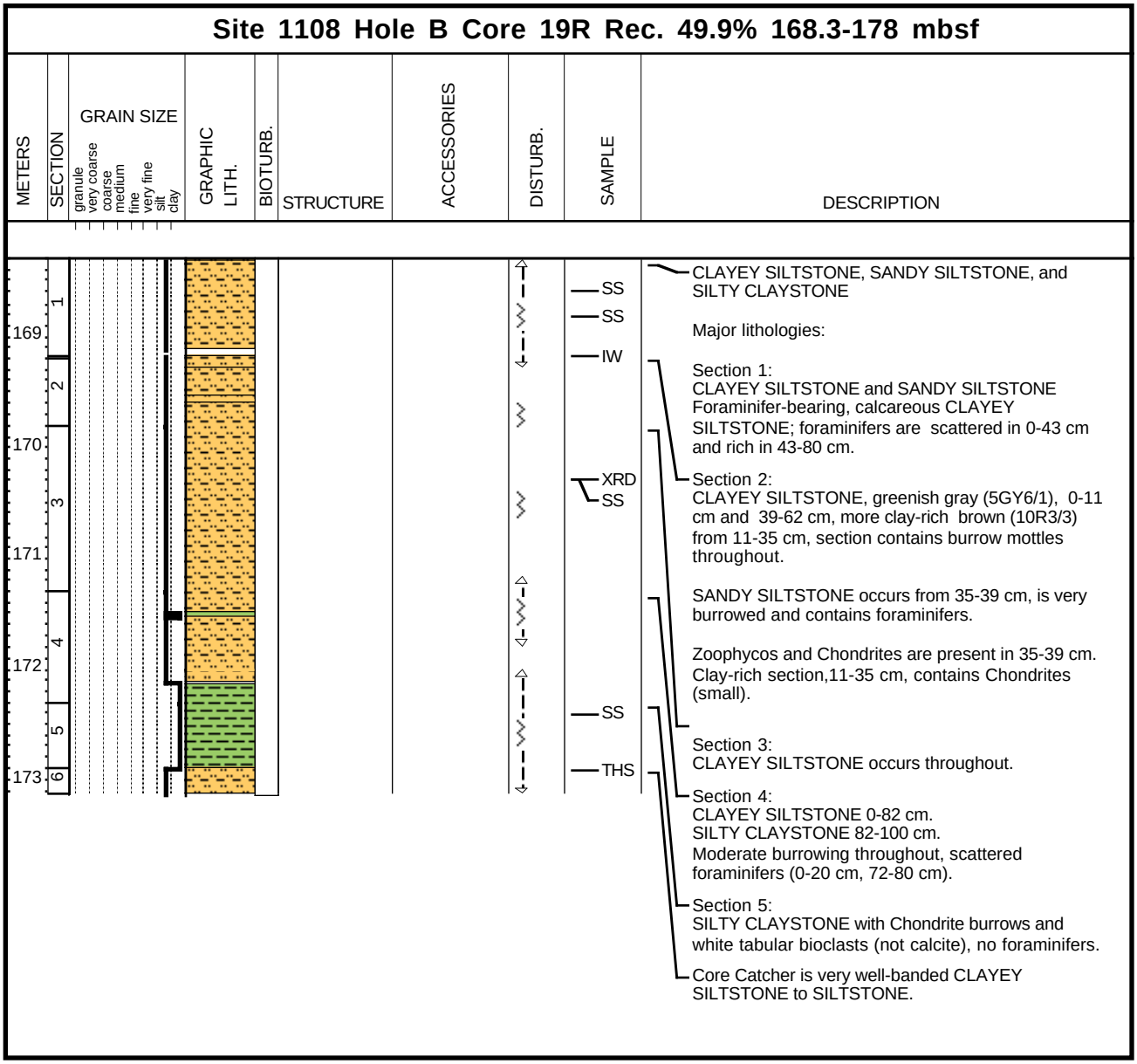
Core Photo


Site 1108 Hole B Core 17R Recov. 21% 149-158.6 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
150
151
1
2
3
XRD
PAL
CLAYEY SILT/SILTSTONE and SILTY CLAY
Major Lithologies:
All sections are bioturbated with visible white shell fragments throughout.
Section 1:
0-26 cm is CLAYEY SILT that contains 2-3 cm blocks of CLAYEY SILTSTONE.
26-42 cm contains CLAYEY SILTSTONE that is moderately lithified and soupy.
42-106 cm through Section 12, 0-20 cm contains CLAYEY SILTSTONE and is highly fractured into blocks.
Section 2, 20-76 cm is moderately fractured CLAYEY SILTSTONE.
Section 3 contains SILTY CLAY with two blocks of laminated CLAYEY SILTSTONE. Lamination is an even alternation of greenish gray (5GY4/1) and reddish gray (10R4/1). 14-17 cm contains no blocks and is soupy.

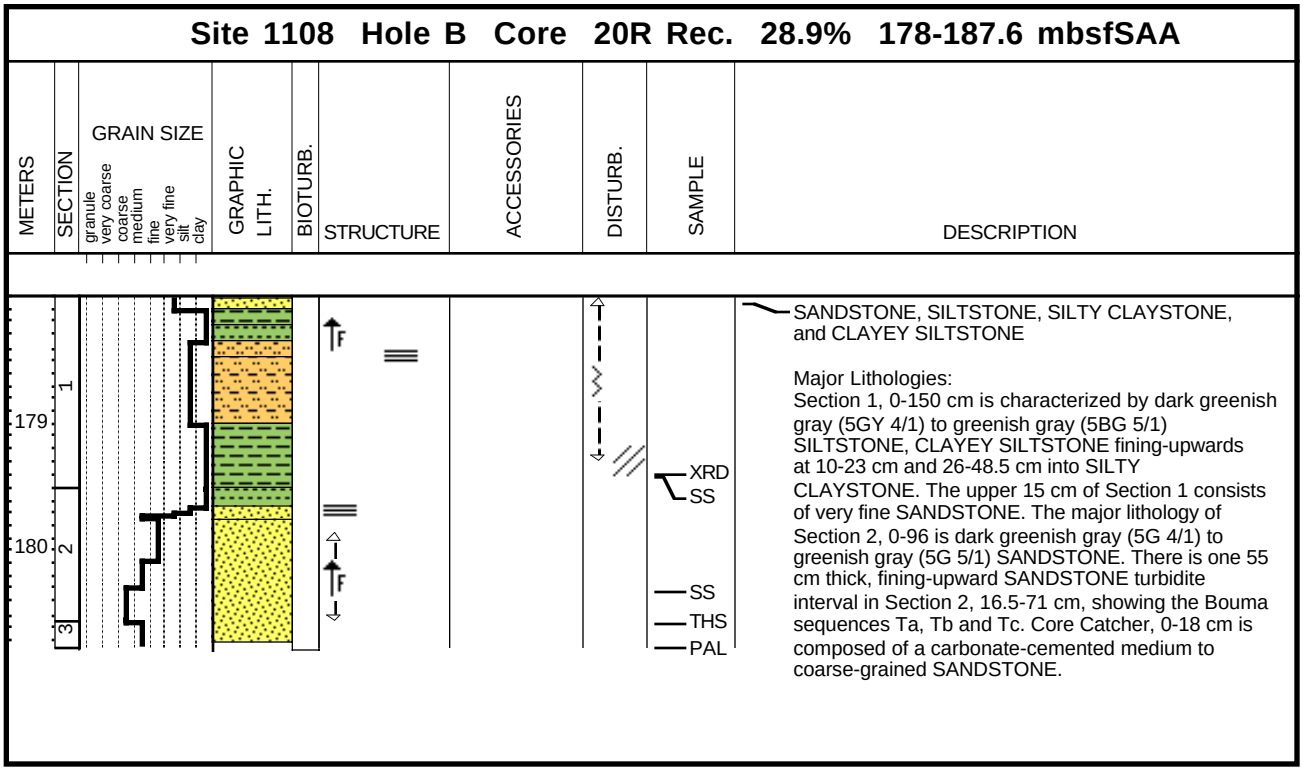
Core Photo


Site 1108 Hole B Core 18R Rec. 63.81% 158.6-168.3 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
159
160
161
162
163
164
1
2
3
4
5
Py
SS
SS
IW
SILTSTONE AND SANDY SILTSTONE
Major Lithologies:
SILTSTONE occurs in all five sections.
Section 1:
0-60 cm. Massive with white, sand-sized shell fragments concentrated in irregular and discontinuous laminae.
60-85 cm. Thinly-laminated faulted contact sub-parallel to 5 degrees.
85-150 cm. Moderately bioturbated with sharp horizontal contact.
Section 2:
Highly fractured and disturbed with visible white carbonate fragments and bioturbation at 44-60 cm.
Section 3:
Highly sheared, fractured, and disturbed with drilling biscuits at 123-135 cm; bioturbation common throughout.
Section 4:
0-67 cm. SANDY SILTSTONE with laminae, pyrite concretions, and bioturbation.
67-136 cm. SILTSTONE with forams, slightly more fine-grained than other sections, moderate bioturbation and burrows (3 cm).
Section 5:
Highly-disturbed, brecciated SILTSTONE

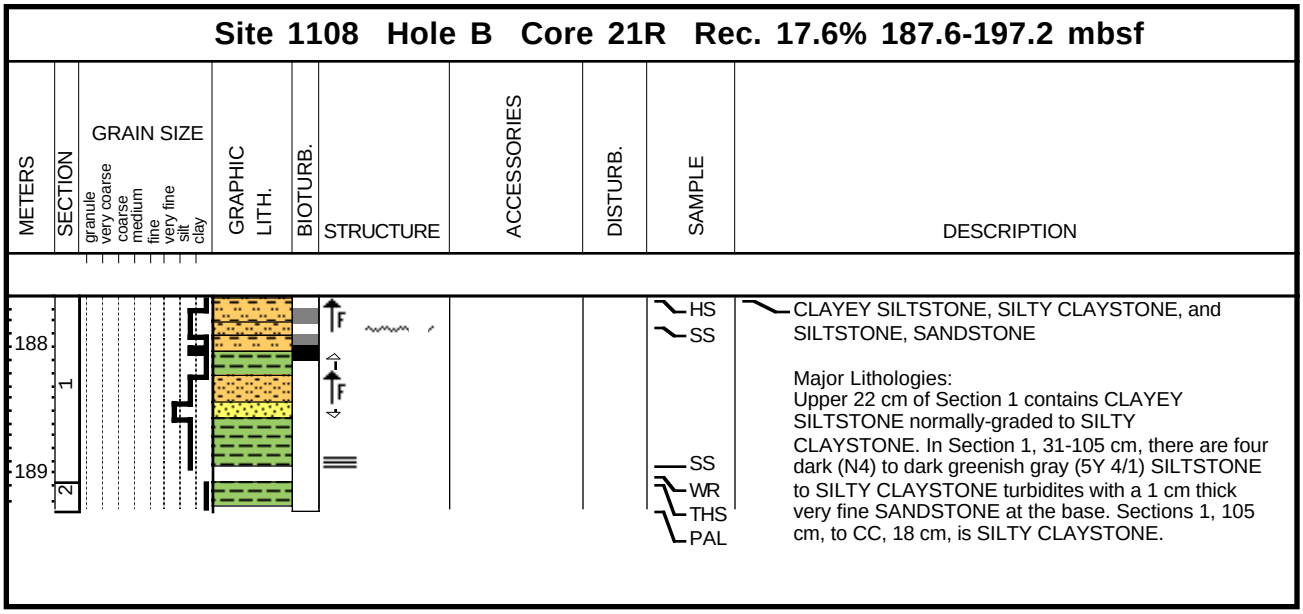
Core Photo


Site 1108 Hole B Core 19R Rec. 49.9% 168.3-178 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
169
170
171
172
173
1
2
3
4
5
6
SS
SS
IW
XRD
SS
SS
THS
CLAYEY SILTSTONE, SANDY SILTSTONE, and SILTY CLAYSTONE
Major lithologies:
Section 1:
CLAYEY SILTSTONE and SANDY SILTSTONE
Foraminifer-bearing, calcareous CLAYEY SILTSTONE; foraminifers are scattered in 0-43 cm and rich in 43-80 cm.
Section 2:
CLAYEY SILTSTONE, greenish gray (5GY6/1), 0-11 cm and 39-62 cm, more clay-rich brown (10R3/3) from 11-35 cm, section contains burrow mottles throughout.
SANDY SILTSTONE occurs from 35-39 cm, is very burrowed and contains foraminifers.
Zoophycos and Chondrites are present in 35-39 cm.
Clay-rich section,11-35 cm, contains Chondrites (small).
Section 3:
CLAYEY SILTSTONE occurs throughout.
Section 4:
CLAYEY SILTSTONE 0-82 cm.
SILTY CLAYSTONE 82-100 cm.
Moderate burrowing throughout, scattered foraminifers (0-20 cm, 72-80 cm).
Section 5:
SILTY CLAYSTONE with Chondrite burrows and white tabular bioclasts (not calcite), no foraminifers.
Core Catcher is very well-banded CLAYEY SILTSTONE to SILTSTONE.

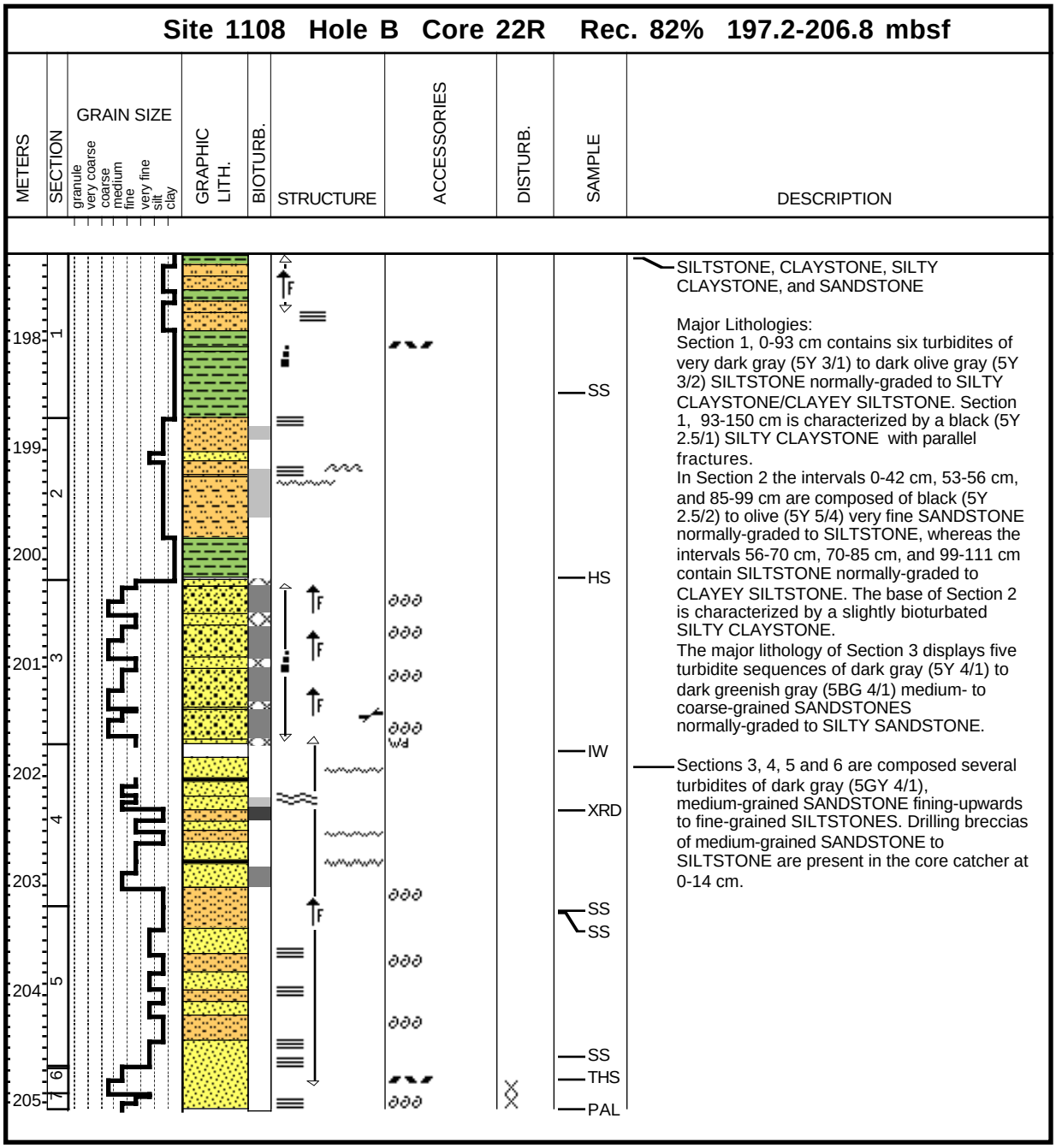
Core Photo


Site 1108 Hole B Core 20R Rec. 28.9% 178-187.6 mbsfSAA
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
179
180
1
2
3
F
F
XRD
SS
SS
THS
PAL
SANDSTONE, SILTSTONE, SILTY CLAYSTONE, and CLAYEY SILTSTONE
Major Lithologies:
Section 1, 0-150 cm is characterized by dark greenish gray (5GY 4/1) to greenish gray (5BG 5/1) SILTSTONE, CLAYEY SILTSTONE fining-upwards at 10-23 cm and 26-48.5 cm into SILTY CLAYSTONE. The upper 15 cm of Section 1 consists of very fine SANDSTONE. The major lithology of Section 2, 0-96 is dark greenish gray (5G 4/1) to greenish gray (5G 5/1) SANDSTONE. There is one 55 cm thick, fining-upward SANDSTONE turbidite interval in Section 2, 16.5-71 cm, showing the Bouma sequences Ta, Tb and Tc. Core Catcher, 0-18 cm is composed of a carbonate-cemented medium to coarse-grained SANDSTONE.

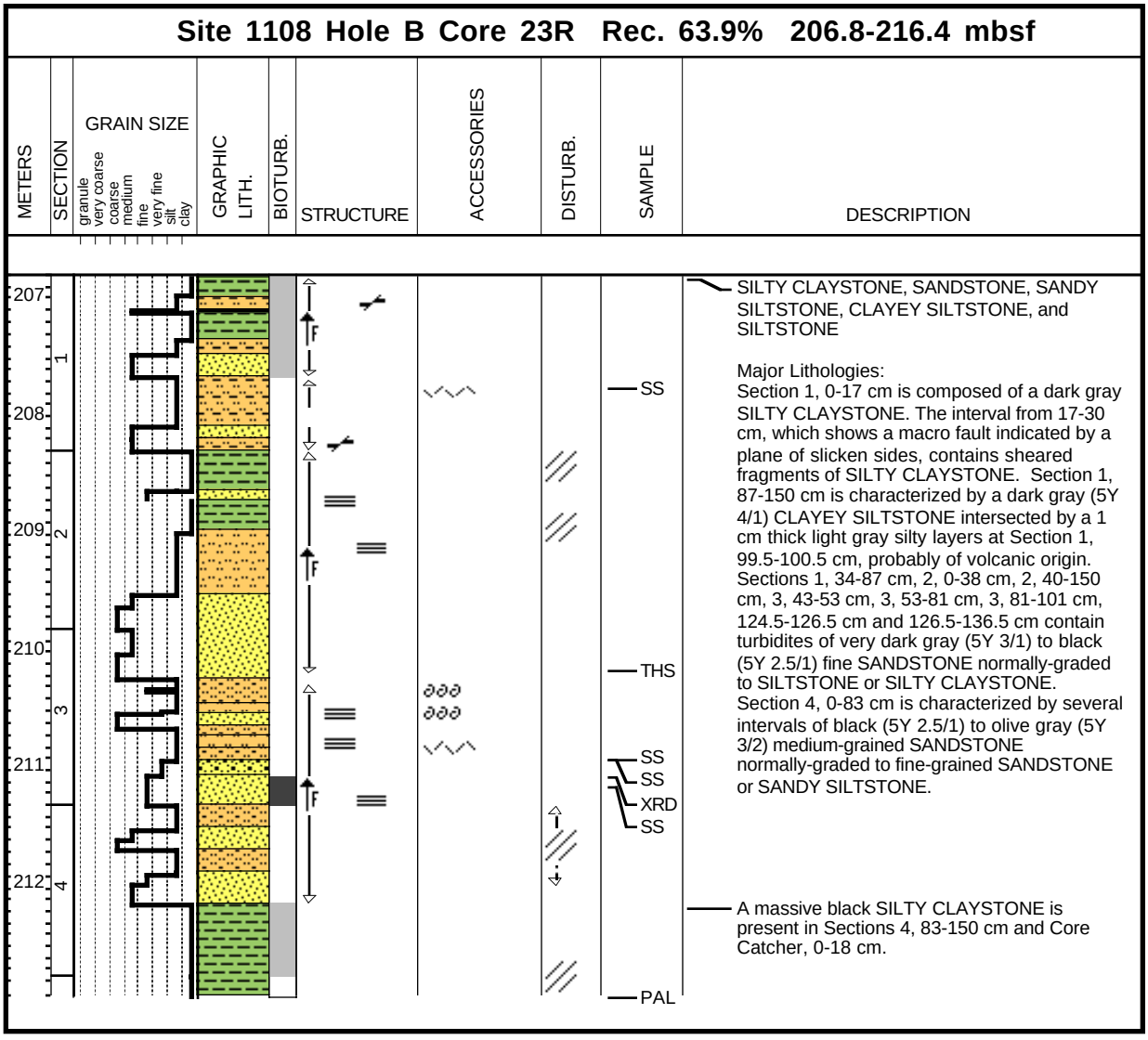
Core Photo


Site 1108 Hole B Core 21R Rec. 17.6% 187.6-197.2 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
188
189
1
2
F
F
HS
SS
SS
WR
THS
PAL
CLAYEY SILTSTONE, SILTY CLAYSTONE, and SILTSTONE, SANDSTONE
Major Lithologies:
Upper 22 cm of Section 1 contains CLAYEY SILTSTONE normally-graded to SILTY CLAYSTONE. In Section 1, 31-105 cm, there are four dark (N4) to dark greenish gray (5Y 4/1) SILTSTONE to SILTY CLAYSTONE turbidites with a 1 cm thick very fine SANDSTONE at the base. Sections 1, 105 cm, to CC, 18 cm, is SILTY CLAYSTONE.

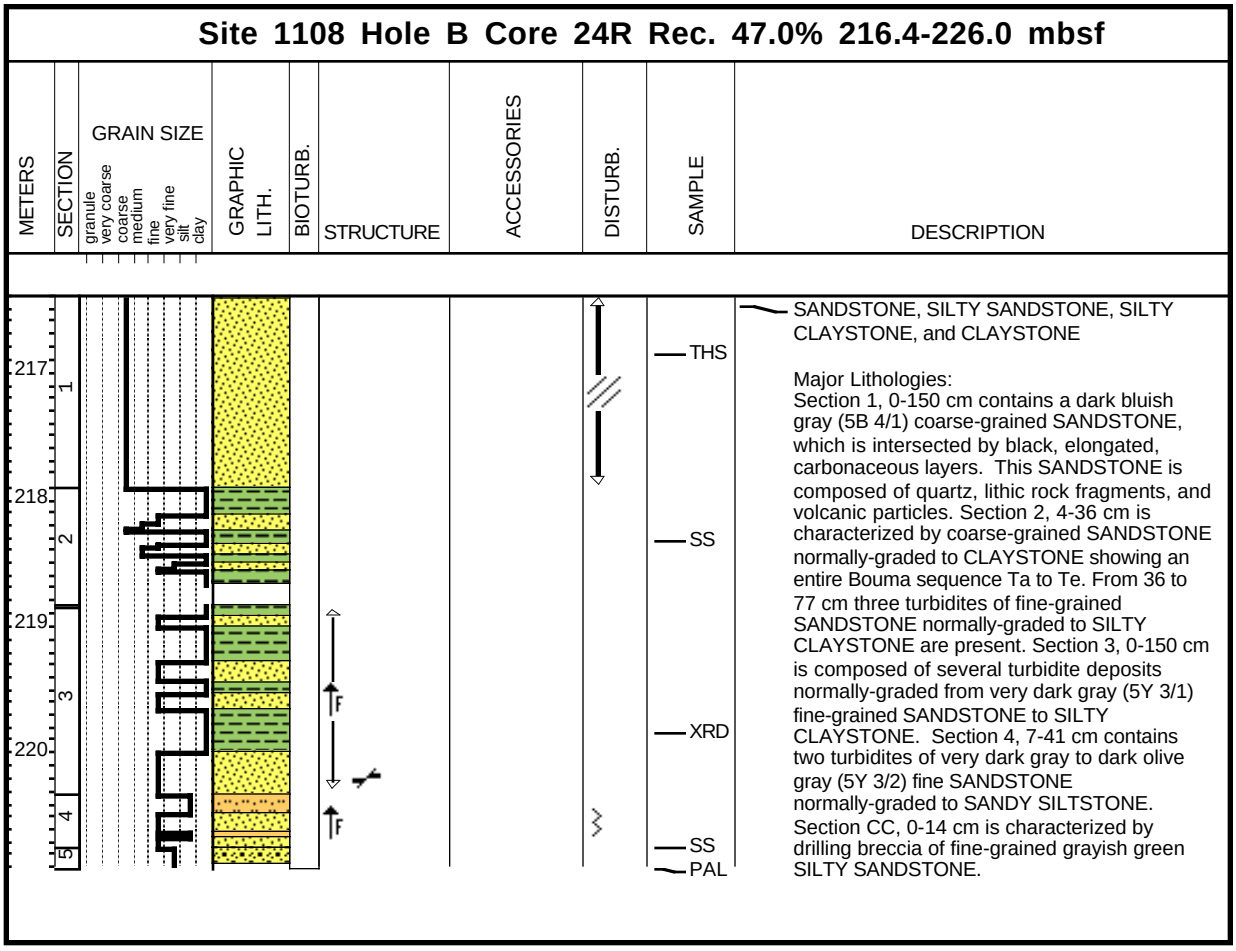
Core Photo


Site 1108 Hole B Core 22R Rec. 82% 197.2-206.8 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
198
199
200
201
202
203
204
205
1
2
3
4
5
6
7
SS
HS
IW
XRD
SS
SS
SS
THS
PAL
SILTSTONE, CLAYSTONE, SILTY CLAYSTONE, and SANDSTONE
Major Lithologies:
Section 1, 0-93 cm contains six turbidites of very dark gray (5Y 3/1) to dark olive gray (5Y 3/2) SILTSTONE normally-graded to SILTY CLAYSTONE/CLAYEY SILTSTONE. Section 1, 93-150 cm is characterized by a black (5Y 2.5/1) SILTY CLAYSTONE with parallel fractures.
In Section 2 the intervals 0-42 cm, 53-56 cm, and 85-99 cm are composed of black (5Y 2.5/2) to olive (5Y 5/4) very fine SANDSTONE normally-graded to SILTSTONE, whereas the intervals 56-70 cm, 70-85 cm, and 99-111 cm contain SILTSTONE normally-graded to CLAYEY SILTSTONE. The base of Section 2 is characterized by a slightly bioturbated SILTY CLAYSTONE.
The major lithology of Section 3 displays five turbidite sequences of dark gray (5Y 4/1) to dark greenish gray (5BG 4/1) medium- to coarse-grained SANDSTONES normally-graded to SILTY SANDSTONE.
Sections 3, 4, 5 and 6 are composed several turbidites of dark gray (5GY 4/1), medium-grained SANDSTONE fining-upwards to fine-grained SILTSTONES. Drilling breccias of medium-grained SANDSTONE to SILTSTONE are present in the core catcher at 0-14 cm.

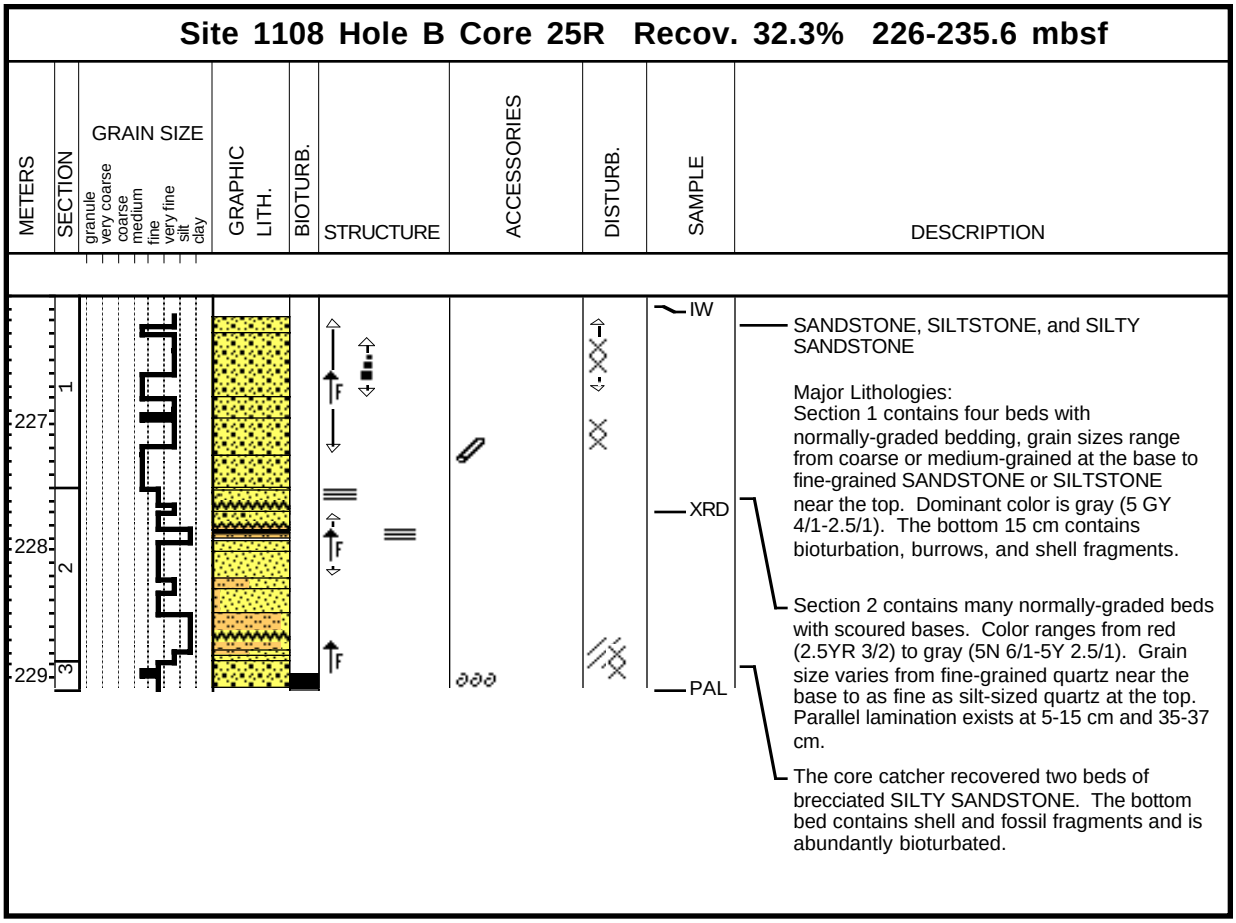
Core Photo


Site 1108 Hole B Core 23R Rec. 63.9% 206.8-216.4 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
207
208
209
210
211
212
1
2
3
4
F
SS
THS
SS
SS
XRD
SS
PAL
SILTY CLAYSTONE, SANDSTONE, SANDY SILTSTONE, CLAYEY SILTSTONE, and SILTSTONE
Major Lithologies:
Section 1, 0-17 cm is composed of a dark gray SILTY CLAYSTONE. The interval from 17-30 cm, which shows a macro fault indicated by a plane of slicken sides, contains sheared fragments of SILTY CLAYSTONE. Section 1, 87-150 cm is characterized by a dark gray (5Y 4/1) CLAYEY SILTSTONE intersected by a 1 cm thick light gray silty layers at Section 1, 99.5-100.5 cm, probably of volcanic origin. Sections 1, 34-87 cm, 2, 0-38 cm, 2, 40-150 cm, 3, 43-53 cm, 3, 53-81 cm, 3, 81-101 cm, 124.5-126.5 cm and 126.5-136.5 cm contain turbidites of very dark gray (5Y 3/1) to black (5Y 2.5/1) fine SANDSTONE normally-graded to SILTSTONE or SILTY CLAYSTONE. Section 4, 0-83 cm is characterized by several intervals of black (5Y 2.5/1) to olive gray (5Y 3/2) medium-grained SANDSTONE normally-graded to fine-grained SANDSTONE or SANDY SILTSTONE.
A massive black SILTY CLAYSTONE is present in Sections 4, 83-150 cm and Core Catcher, 0-18 cm.

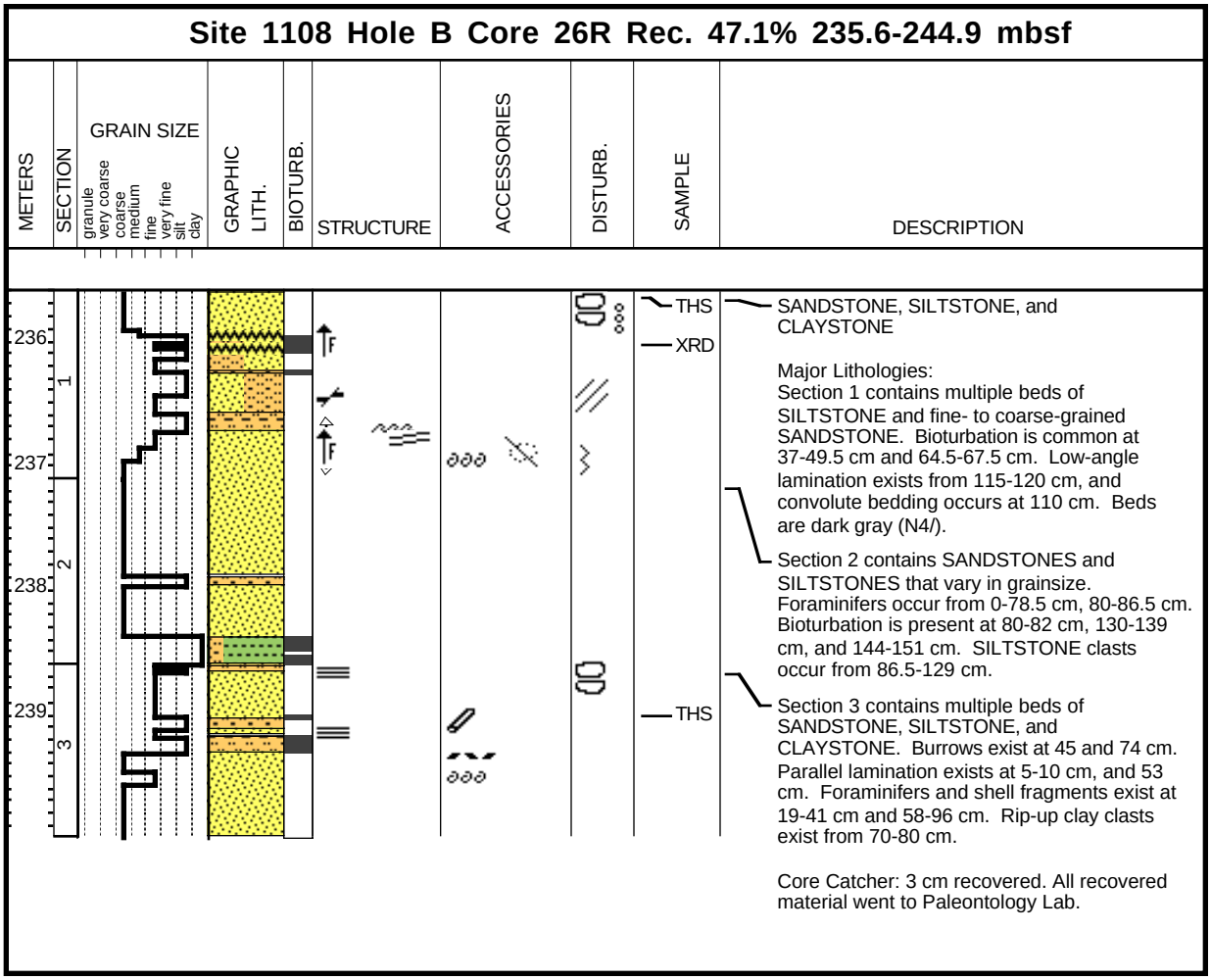
Core Photo


Site 1108 Hole B Core 24R Rec. 47.0% 216.4-226.0 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
217
218
219
220
1
2
3
4
5
F
F
THS
SS
XRD
SS
PAL
SANDSTONE, SILTY SANDSTONE, SILTY CLAYSTONE, and CLAYSTONE
Major Lithologies:
Section 1, 0-150 cm contains a dark bluish gray (5B 4/1) coarse-grained SANDSTONE, which is intersected by black, elongated, carbonaceous layers. This SANDSTONE is composed of quartz, lithic rock fragments, and volcanic particles. Section 2, 4-36 cm is characterized by coarse-grained SANDSTONE normally-graded to CLAYSTONE showing an entire Bouma sequence Ta to Te. From 36 to 77 cm three turbidites of fine-grained SANDSTONE normally-graded to SILTY CLAYSTONE are present. Section 3, 0-150 cm is composed of several turbidite deposits normally-graded from very dark gray (5Y 3/1) fine-grained SANDSTONE to SILTY CLAYSTONE. Section 4, 7-41 cm contains two turbidites of very dark gray to dark olive gray (5Y 3/2) fine SANDSTONE normally-graded to SANDY SILTSTONE. Section CC, 0-14 cm is characterized by drilling breccia of fine-grained grayish green SILTY SANDSTONE.

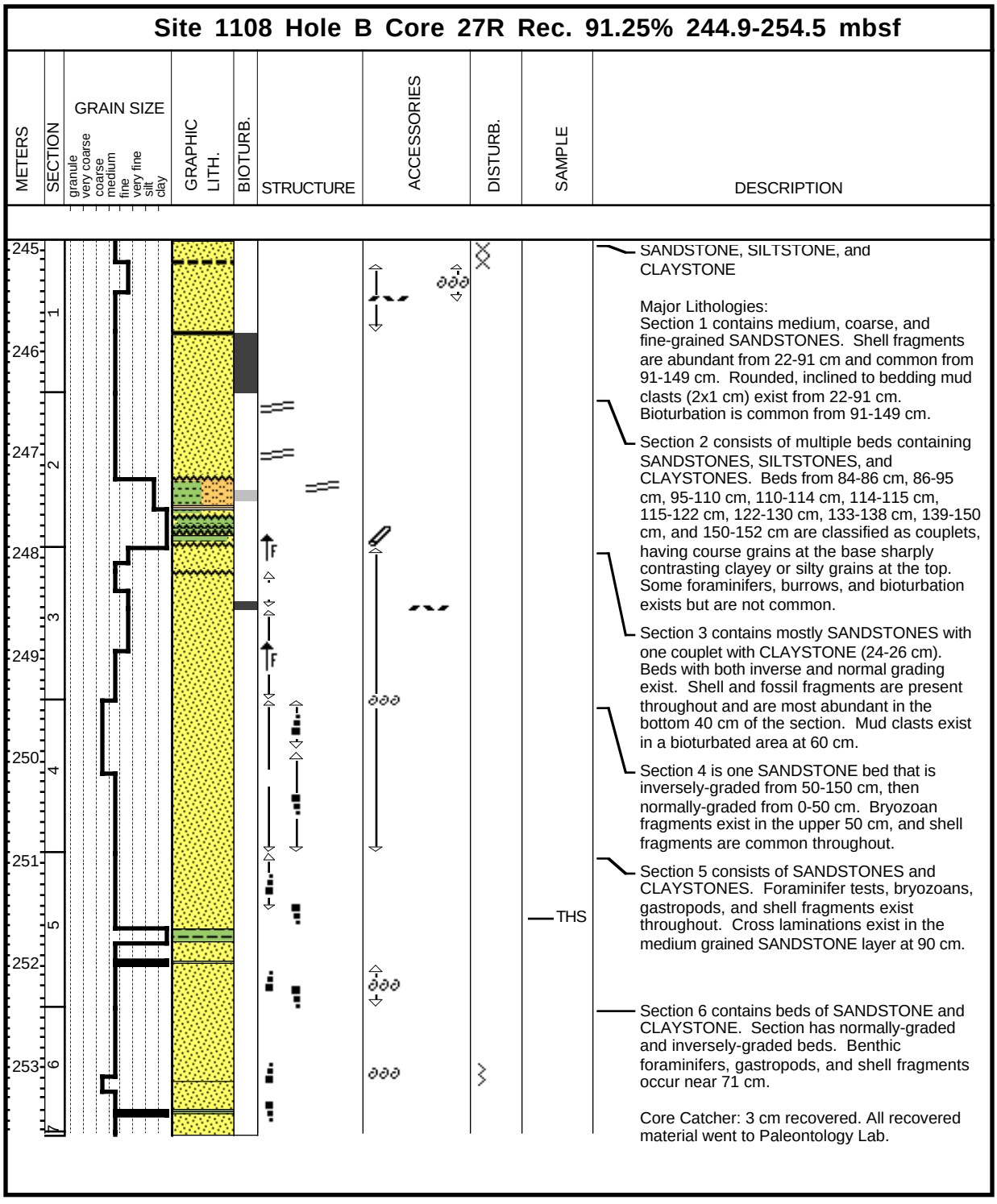
Core Photo


Site 1108 Hole B Core 25R Recov. 32.3% 226-235.6 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
227
228
229
1
2
3
F
IW
XRD
PAL
SANDSTONE, SILTSTONE, and SILTY SANDSTONE
Major Lithologies:
Section 1 contains four beds with normally-graded bedding, grain sizes range from coarse or medium-grained at the base to fine-grained SANDSTONE or SILTSTONE near the top. Dominant color is gray (5 GY 4/1-2.5/1). The bottom 15 cm contains bioturbation, burrows, and shell fragments.
Section 2 contains many normally-graded beds with scoured bases. Color ranges from red (2.5YR 3/2) to gray (5N 6/1-5Y 2.5/1). Grain size varies from fine-grained quartz near the base to as fine as silt-sized quartz at the top. Parallel lamination exists at 5-15 cm and 35-37 cm.
The core catcher recovered two beds of brecciated SILTY SANDSTONE. The bottom bed contains shell and fossil fragments and is abundantly bioturbated.

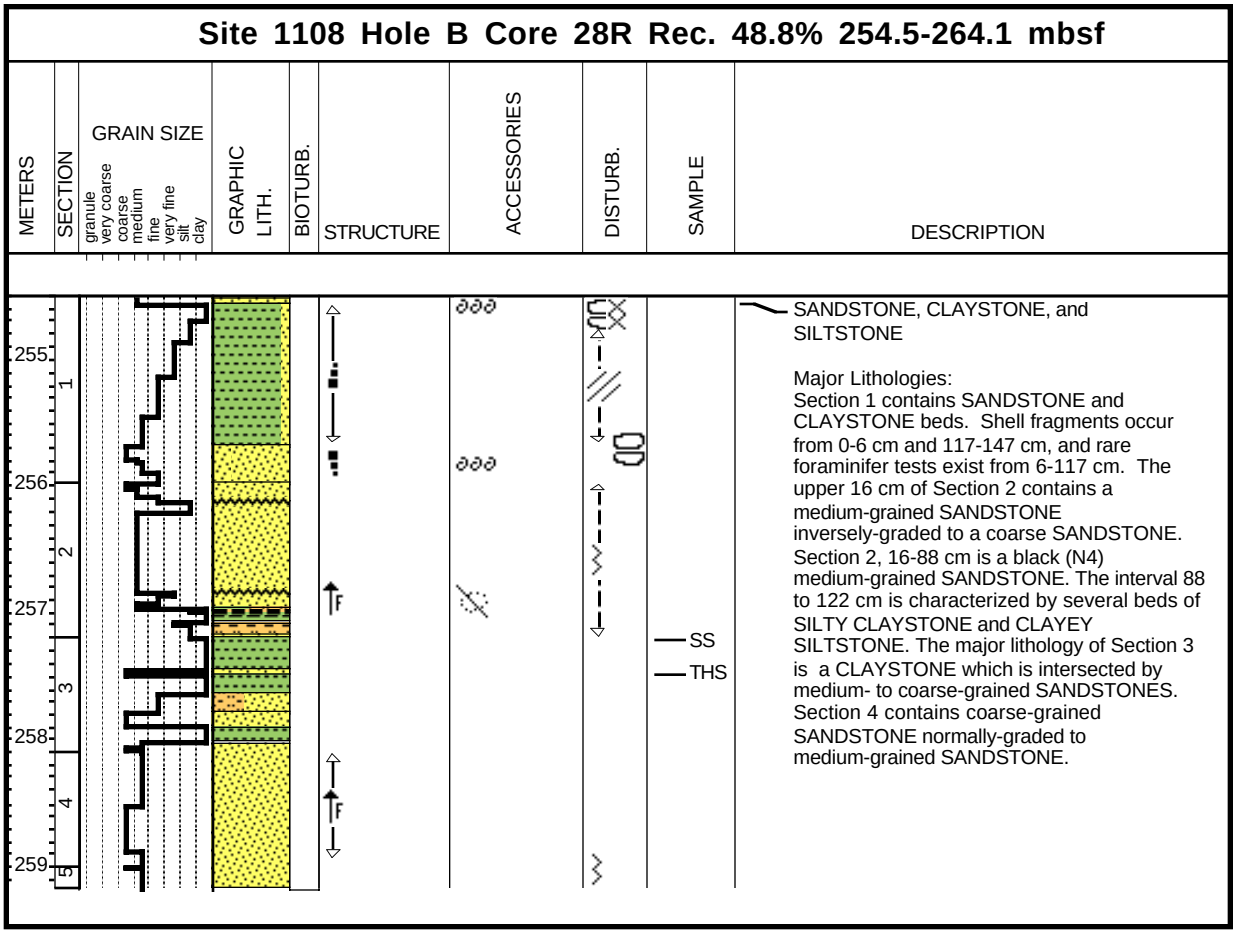
Core Photo


Site 1108 Hole B Core 26R Rec. 47.1% 235.6-244.9 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
236
237
238
239
1
2
3
F
F
THS
XRD
THS
SANDSTONE, SILTSTONE, and CLAYSTONE
Major Lithologies:
Section 1 contains multiple beds of SILTSTONE and fine- to coarse-grained SANDSTONE. Bioturbation is common at 37-49.5 cm and 64.5-67.5 cm. Low-angle lamination exists from 115-120 cm, and convolute bedding occurs at 110 cm. Beds are dark gray (N4/).
Section 2 contains SANDSTONES and SILTSTONES that vary in grainsize. Foraminifers occur from 0-78.5 cm, 80-86.5 cm. Bioturbation is present at 80-82 cm, 130-139 cm, and 144-151 cm. SILTSTONE clasts occur from 86.5-129 cm.
Section 3 contains multiple beds of SANDSTONE, SILTSTONE, and CLAYSTONE. Burrows exist at 45 and 74 cm. Parallel lamination exists at 5-10 cm, and 53 cm. Foraminifers and shell fragments exist at 19-41 cm and 58-96 cm. Rip-up clay clasts exist from 70-80 cm.
Core Catcher: 3 cm recovered. All recovered material went to Paleontology Lab.

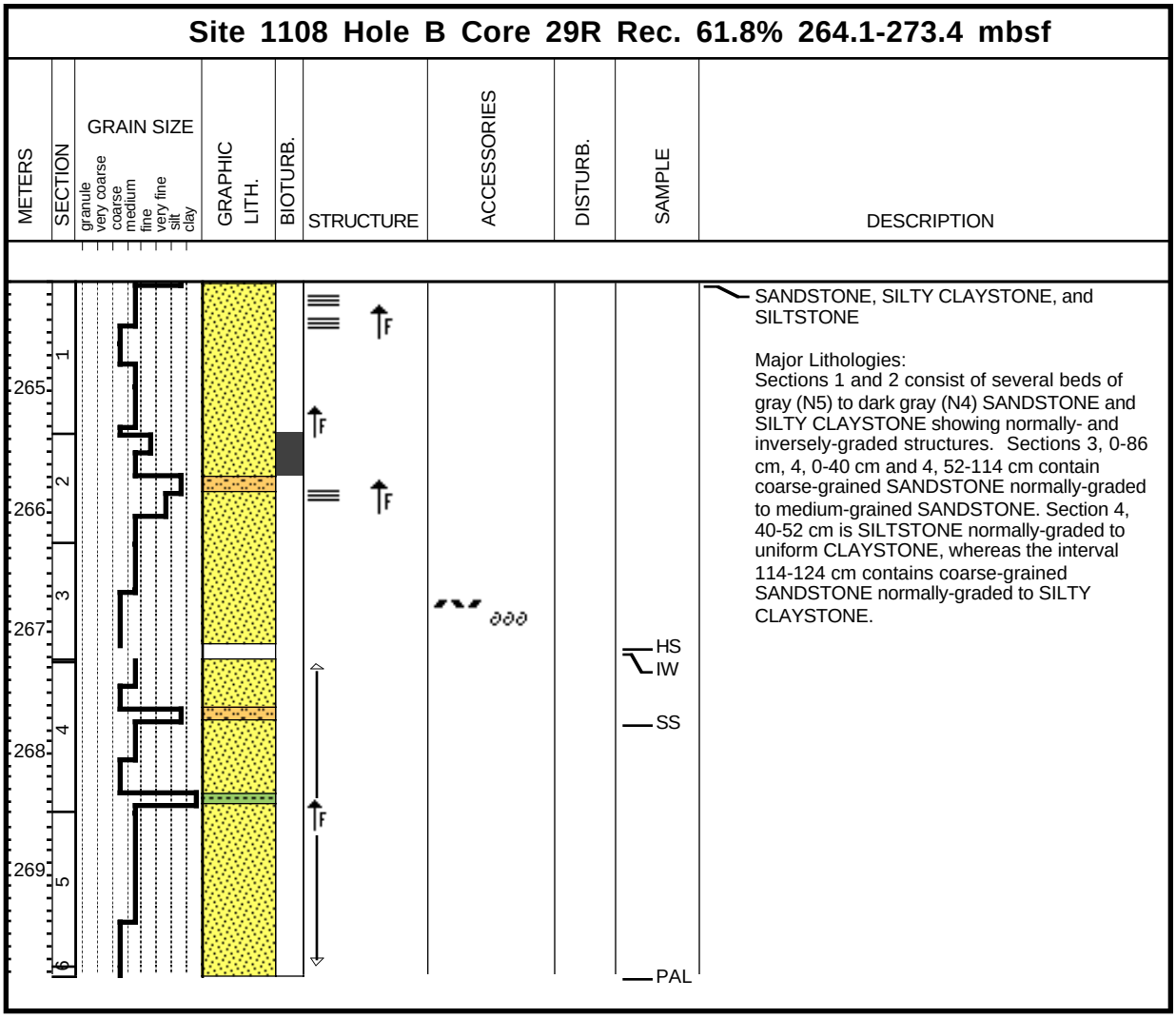
Core Photo


Site 1108 Hole B Core 27R Rec. 91.25% 244.9-254.5 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
245
246
247
248
249
250
251
252
253
1
2
3
4
5
6
F
F
THS
SANDSTONE, SILTSTONE, and CLAYSTONE
Major Lithologies:
Section 1 contains medium, coarse, and fine-grained SANDSTONES. Shell fragments are abundant from 22-91 cm and common from 91-149 cm. Rounded, inclined to bedding mud clasts (2x1 cm) exist from 22-91 cm. Bioturbation is common from 91-149 cm.
Section 2 consists of multiple beds containing SANDSTONES, SILTSTONES, and CLAYSTONES. Beds from 84-86 cm, 86-95 cm, 95-110 cm, 110-114 cm, 114-115 cm, 115-122 cm, 122-130 cm, 133-138 cm, 139-150 cm, and 150-152 cm are classified as couplets, having course grains at the base sharply contrasting clayey or silty grains at the top. Some foraminifers, burrows, and bioturbation exists but are not common.
Section 3 contains mostly SANDSTONES with one couplet with CLAYSTONE (24-26 cm). Beds with both inverse and normal grading exist. Shell and fossil fragments are present throughout and are most abundant in the bottom 40 cm of the section. Mud clasts exist in a bioturbated area at 60 cm.
Section 4 is one SANDSTONE bed that is inversely-graded from 50-150 cm, then normally-graded from 0-50 cm. Bryozoan fragments exist in the upper 50 cm, and shell fragments are common throughout.
Section 5 consists of SANDSTONES and CLAYSTONES. Foraminifer tests, bryozoans, gastropods, and shell fragments exist throughout. Cross laminations exist in the medium grained SANDSTONE layer at 90 cm.
Section 6 contains beds of SANDSTONE and CLAYSTONE. Section has normally-graded and inversely-graded beds. Benthic foraminifers, gastropods, and shell fragments occur near 71 cm.
Core Catcher: 3 cm recovered. All recovered material went to Paleontology Lab.

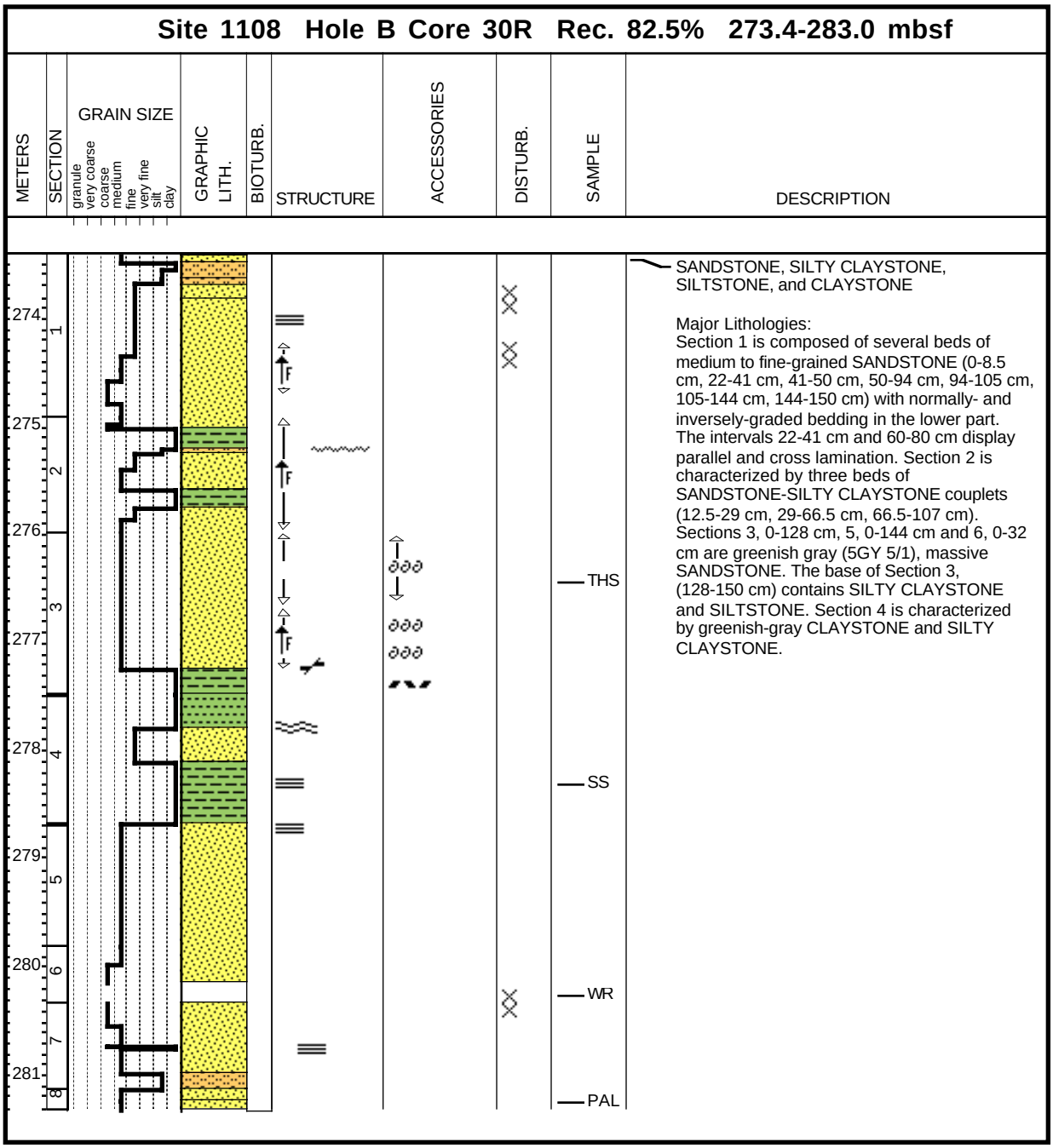
Core Photo


Site 1108 Hole B Core 28R Rec. 48.8% 254.5-264.1 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
255
256
257
258
259
1
2
3
4
5
F
F
SS
THS
SANDSTONE, CLAYSTONE, and SILTSTONE
Major Lithologies:
Section 1 contains SANDSTONE and CLAYSTONE beds. Shell fragments occur from 0-6 cm and 117-147 cm, and rare foraminifer tests exist from 6-117 cm. The upper 16 cm of Section 2 contains a medium-grained SANDSTONE inversely-graded to a coarse SANDSTONE. Section 2, 16-88 cm is a black (N4) medium-grained SANDSTONE. The interval 88 to 122 cm is characterized by several beds of SILTY CLAYSTONE and CLAYEY SILTSTONE. The major lithology of Section 3 is a CLAYSTONE which is intersected by medium- to coarse-grained SANDSTONES. Section 4 contains coarse-grained SANDSTONE normally-graded to medium-grained SANDSTONE.

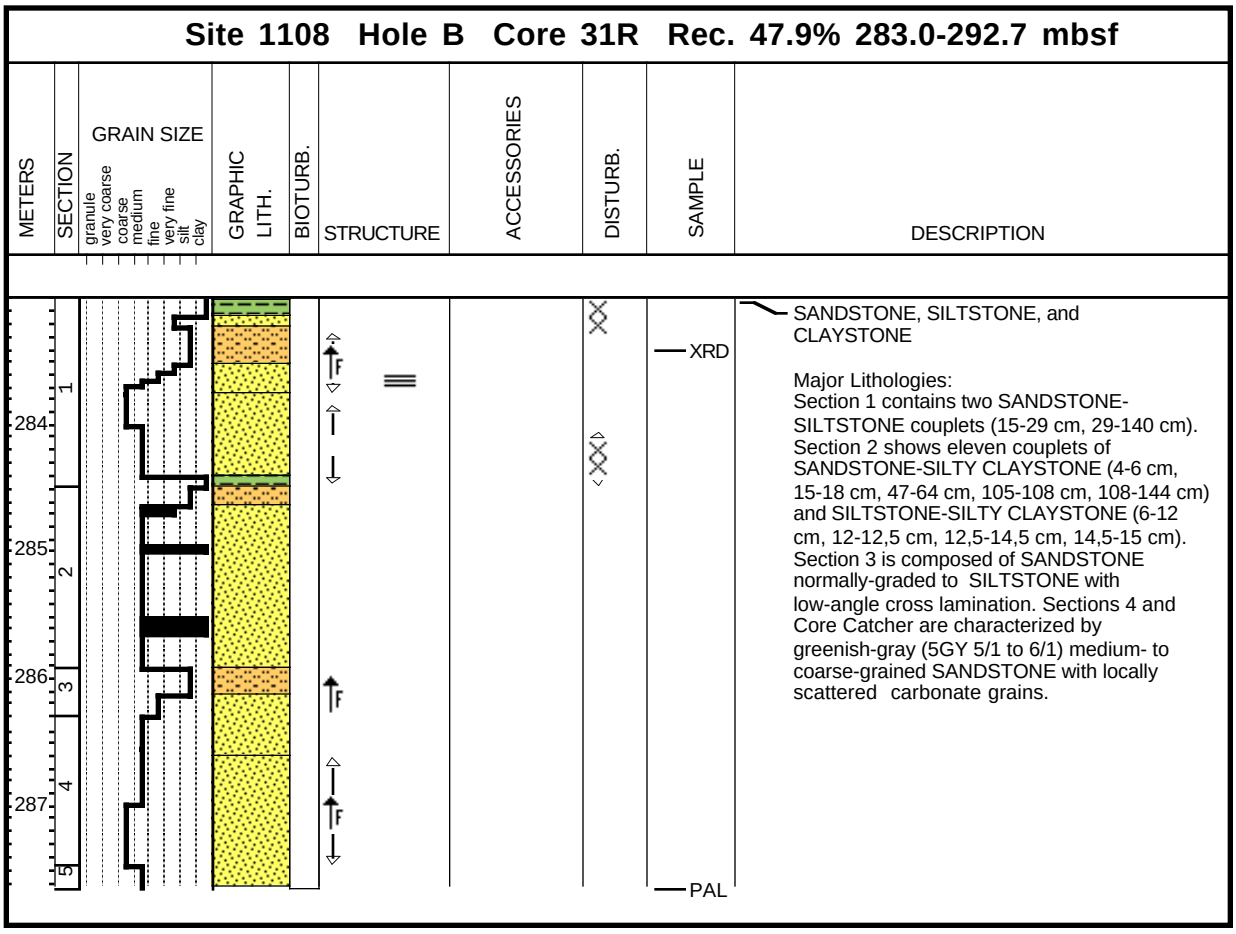
Core Photo


Site 1108 Hole B Core 29R Rec. 61.8% 264.1-273.4 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
265
266
267
268
269
1
2
3
4
5
6
F
F
F
HS
IW
SS
PAL
SANDSTONE, SILTY CLAYSTONE, and SILTSTONE
Major Lithologies:
Sections 1 and 2 consist of several beds of gray (N5) to dark gray (N4) SANDSTONE and SILTY CLAYSTONE showing normally- and inversely-graded structures. Sections 3, 0-86 cm, 4, 0-40 cm and 4, 52-114 cm contain coarse-grained SANDSTONE normally-graded to medium-grained SANDSTONE. Section 4, 40-52 cm is SILTSTONE normally-graded to uniform CLAYSTONE, whereas the interval 114-124 cm contains coarse-grained SANDSTONE normally-graded to SILTY CLAYSTONE.

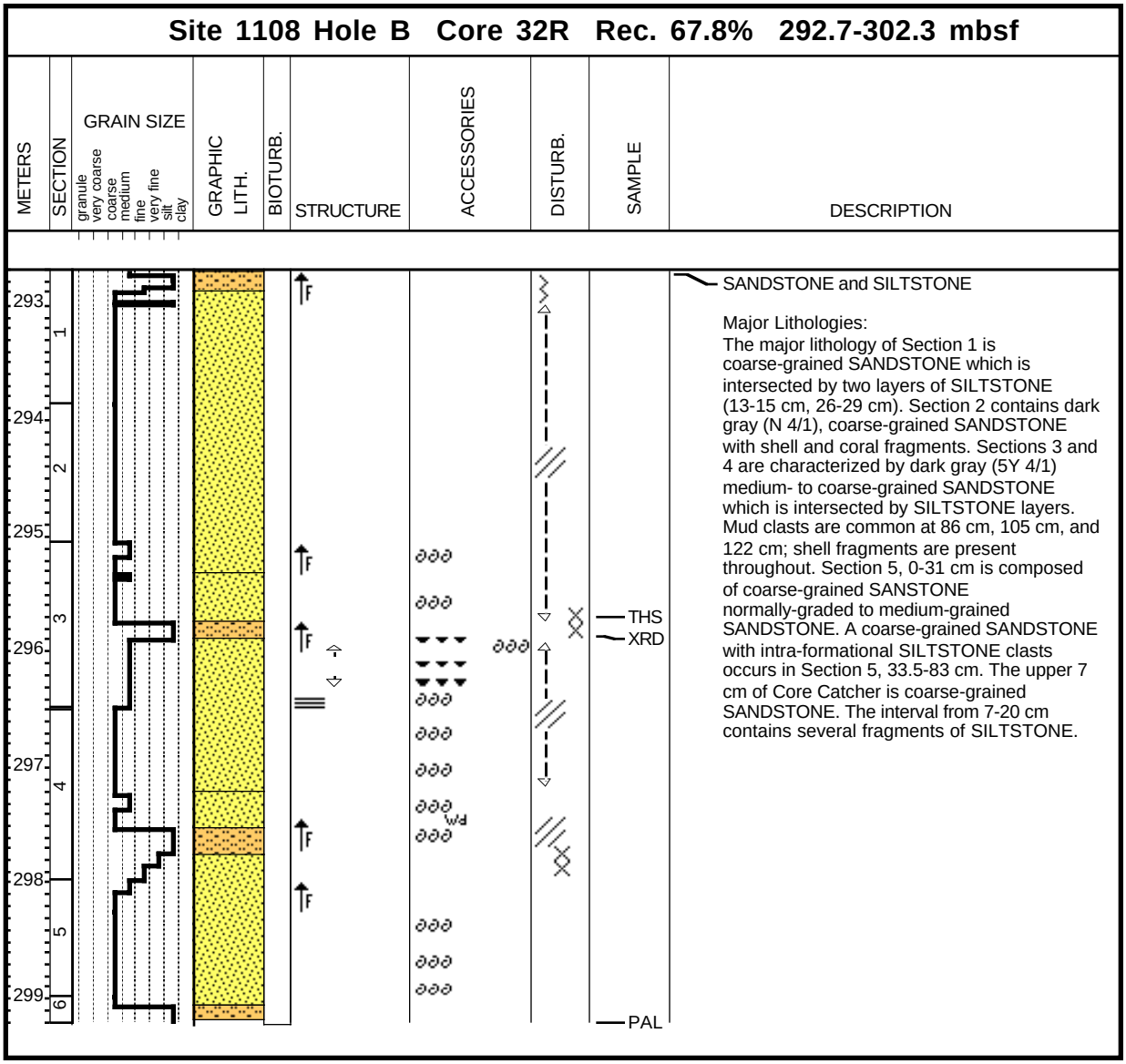
Core Photo


Site 1108 Hole B Core 30R Rec. 82.5% 273.4-283.0 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
274
275
276
277
278
279
280
281
1
2
3
4
5
6
7
8
F
THS
SS
WR
PAL
SANDSTONE, SILTY CLAYSTONE, SILTSTONE, and CLAYSTONE
Major Lithologies:
Section 1 is composed of several beds of medium to fine-grained SANDSTONE (0-8.5 cm, 22-41 cm, 41-50 cm, 50-94 cm, 94-105 cm, 105-144 cm, 144-150 cm) with normally- and inversely-graded bedding in the lower part. The intervals 22-41 cm and 60-80 cm display parallel and cross lamination. Section 2 is characterized by three beds of SANDSTONE-SILTY CLAYSTONE couplets (12.5-29 cm, 29-66.5 cm, 66.5-107 cm). Sections 3, 0-128 cm, 5, 0-144 cm and 6, 0-32 cm are greenish gray (5GY 5/1), massive SANDSTONE. The base of Section 3, (128-150 cm) contains SILTY CLAYSTONE and SILTSTONE. Section 4 is characterized by greenish-gray CLAYSTONE and SILTY CLAYSTONE.

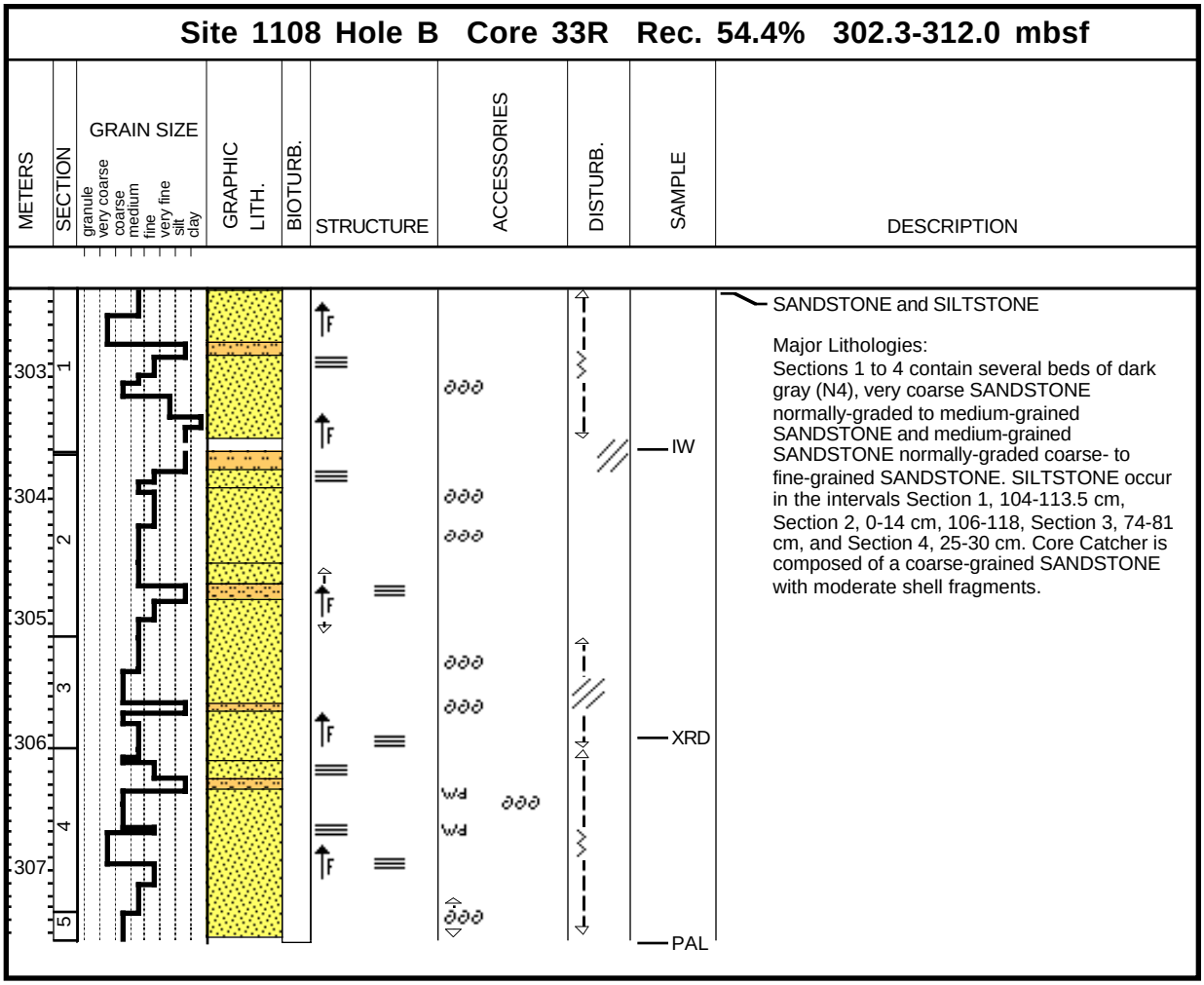
Core Photo


Site 1108 Hole B Core 31R Rec. 47.9% 283.0-292.7 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
284
285
286
287
1
2
3
4
5
F
XRD
PAL
SANDSTONE, SILTSTONE, and CLAYSTONE
Major Lithologies:
Section 1 contains two SANDSTONE-SILTSTONE couplets (15-29 cm, 29-140 cm). Section 2 shows eleven couplets of SANDSTONE-SILTY CLAYSTONE (4-6 cm, 15-18 cm, 47-64 cm, 105-108 cm, 108-144 cm) and SILTSTONE-SILTY CLAYSTONE (6-12 cm, 12-12,5 cm, 12,5-14,5 cm, 14,5-15 cm). Section 3 is composed of SANDSTONE normally-graded to SILTSTONE with low-angle cross lamination. Sections 4 and Core Catcher are characterized by greenish-gray (5GY 5/1 to 6/1) medium- to coarse-grained SANDSTONE with locally scattered carbonate grains.

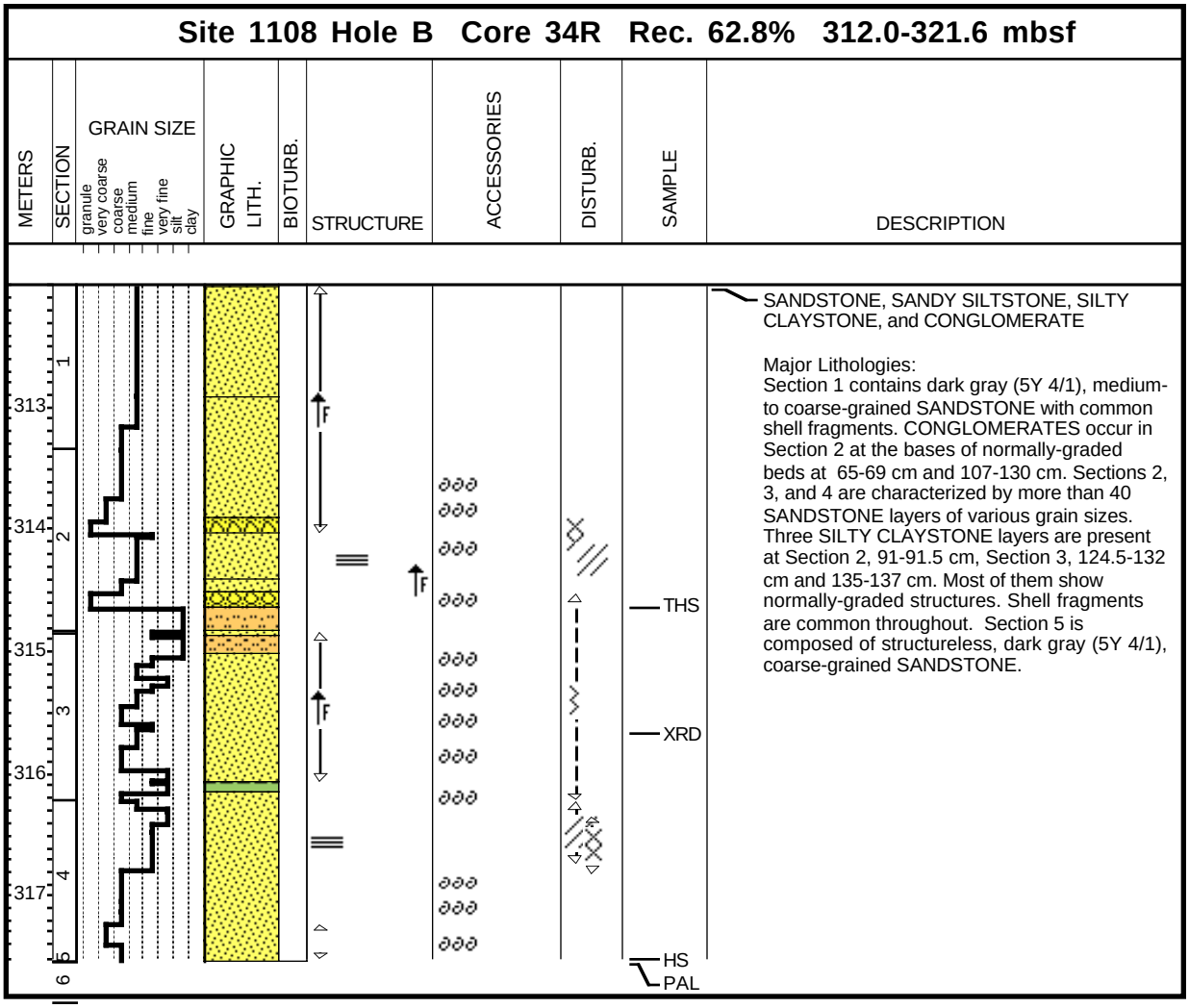
Core Photo


Site 1108 Hole B Core 32R Rec. 67.8% 292.7-302.3 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
293
294
295
296
297
298
299
1
2
3
4
5
6
F
w/d
THS
XRD
PAL
SANDSTONE and SILTSTONE
Major Lithologies:
The major lithology of Section 1 is coarse-grained SANDSTONE which is intersected by two layers of SILTSTONE (13-15 cm, 26-29 cm). Section 2 contains dark gray (N 4/1), coarse-grained SANDSTONE with shell and coral fragments. Sections 3 and 4 are characterized by dark gray (5Y 4/1) medium- to coarse-grained SANDSTONE which is intersected by SILTSTONE layers. Mud clasts are common at 86 cm, 105 cm, and 122 cm; shell fragments are present throughout. Section 5, 0-31 cm is composed of coarse-grained SANSTONE normally-graded to medium-grained SANDSTONE. A coarse-grained SANDSTONE with intra-formational SILTSTONE clasts occurs in Section 5, 33.5-83 cm. The upper 7 cm of Core Catcher is coarse-grained SANDSTONE. The interval from 7-20 cm contains several fragments of SILTSTONE.

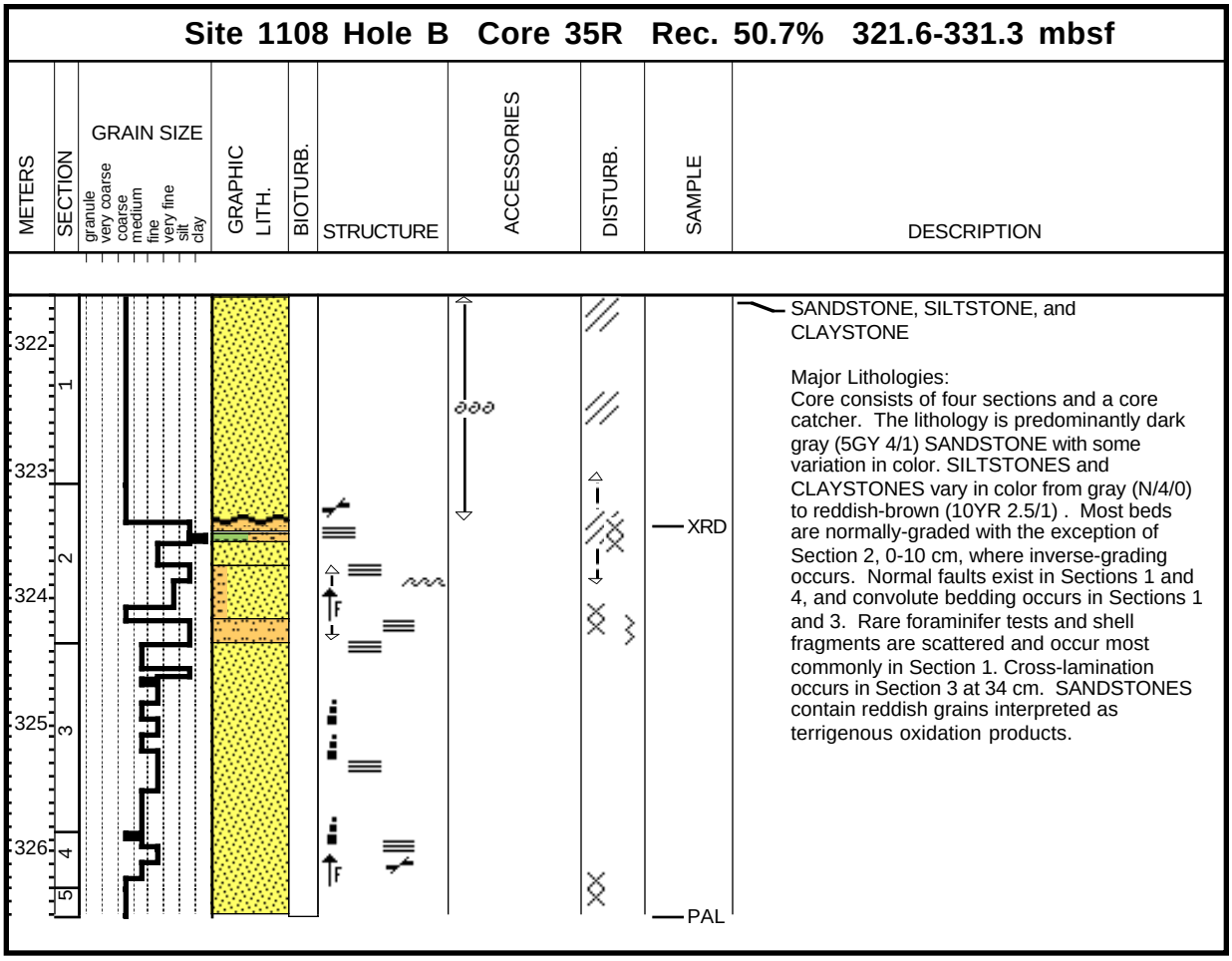
Core Photo


Site 1108 Hole B Core 33R Rec. 54.4% 302.3-312.0 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
303
304
305
306
307
1
2
3
4
5
IW
XRD
PAL
SANDSTONE and SILTSTONE
Major Lithologies:
Sections 1 to 4 contain several beds of dark gray (N4), very coarse SANDSTONE normally-graded to medium-grained SANDSTONE and medium-grained SANDSTONE normally-graded coarse- to fine-grained SANDSTONE. SILTSTONE occur in the intervals Section 1, 104-113.5 cm, Section 2, 0-14 cm, 106-118, Section 3, 74-81 cm, and Section 4, 25-30 cm. Core Catcher is composed of a coarse-grained SANDSTONE with moderate shell fragments.

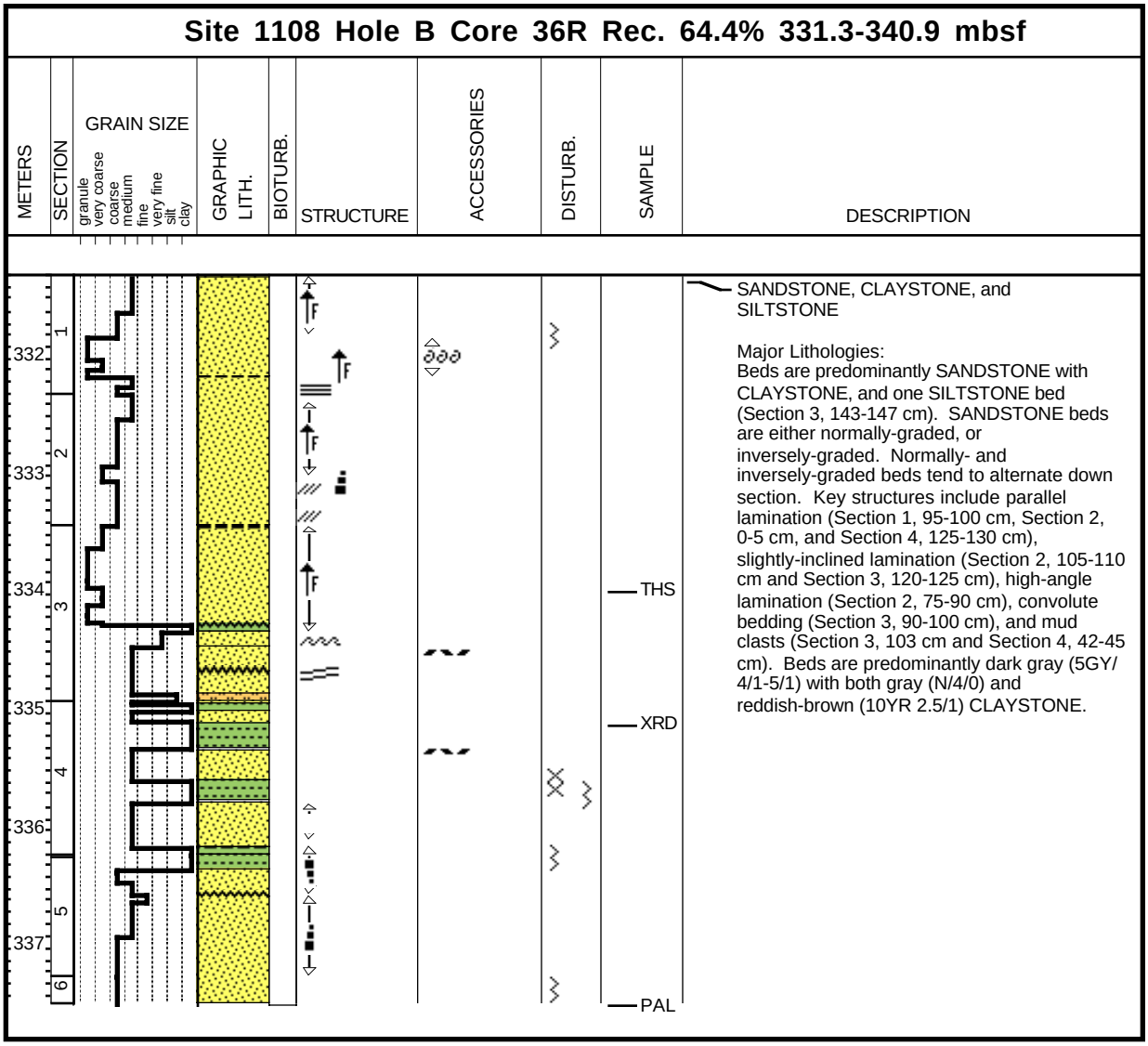
Core Photo


Site 1108 Hole B Core 34R Rec. 62.8% 312.0-321.6 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
313
314
315
316
317
1
2
3
4
5
6
F
F
F
THS
XRD
HS
PAL
SANDSTONE, SANDY SILTSTONE, SILTY CLAYSTONE, and CONGLOMERATE
Major Lithologies:
Section 1 contains dark gray (5Y 4/1), medium- to coarse-grained SANDSTONE with common shell fragments. CONGLOMERATES occur in Section 2 at the bases of normally-graded beds at 65-69 cm and 107-130 cm. Sections 2, 3, and 4 are characterized by more than 40 SANDSTONE layers of various grain sizes. Three SILTY CLAYSTONE layers are present at Section 2, 91-91.5 cm, Section 3, 124.5-132 cm and 135-137 cm. Most of them show normally-graded structures. Shell fragments are common throughout. Section 5 is composed of structureless, dark gray (5Y 4/1), coarse-grained SANDSTONE.

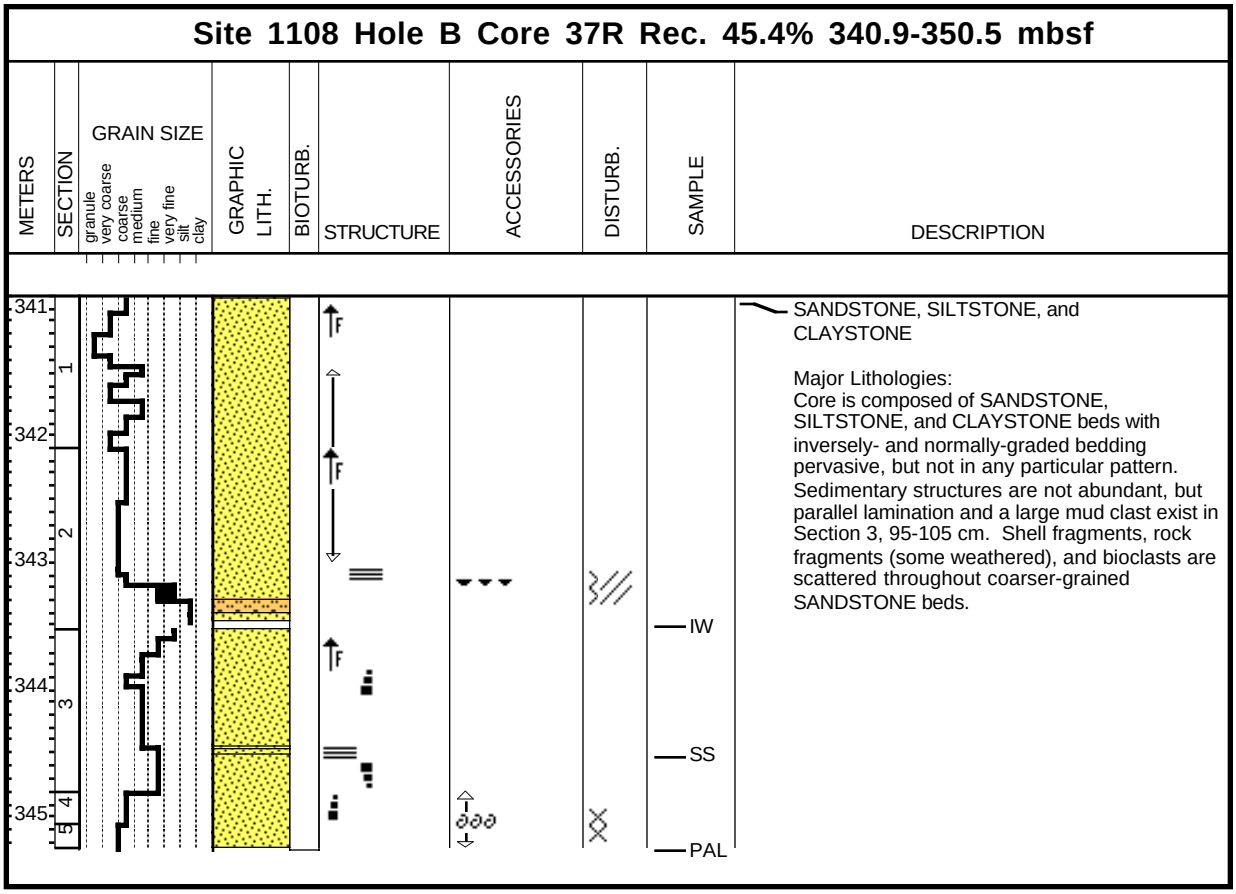
Core Photo


Site 1108 Hole B Core 35R Rec. 50.7% 321.6-331.3 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
322
323
324
325
326
1
2
3
4
5
F
F
XRD
PAL
SANDSTONE, SILTSTONE, and CLAYSTONE
Major Lithologies:
Core consists of four sections and a core catcher. The lithology is predominantly dark gray (5GY 4/1) SANDSTONE with some variation in color. SILTSTONES and CLAYSTONES vary in color from gray (N/4/0) to reddish-brown (10YR 2.5/1) . Most beds are normally-graded with the exception of Section 2, 0-10 cm, where inverse-grading occurs. Normal faults exist in Sections 1 and 4, and convolute bedding occurs in Sections 1 and 3. Rare foraminifer tests and shell fragments are scattered and occur most commonly in Section 1. Cross-lamination occurs in Section 3 at 34 cm. SANDSTONES contain reddish grains interpreted as terrigenous oxidation products.

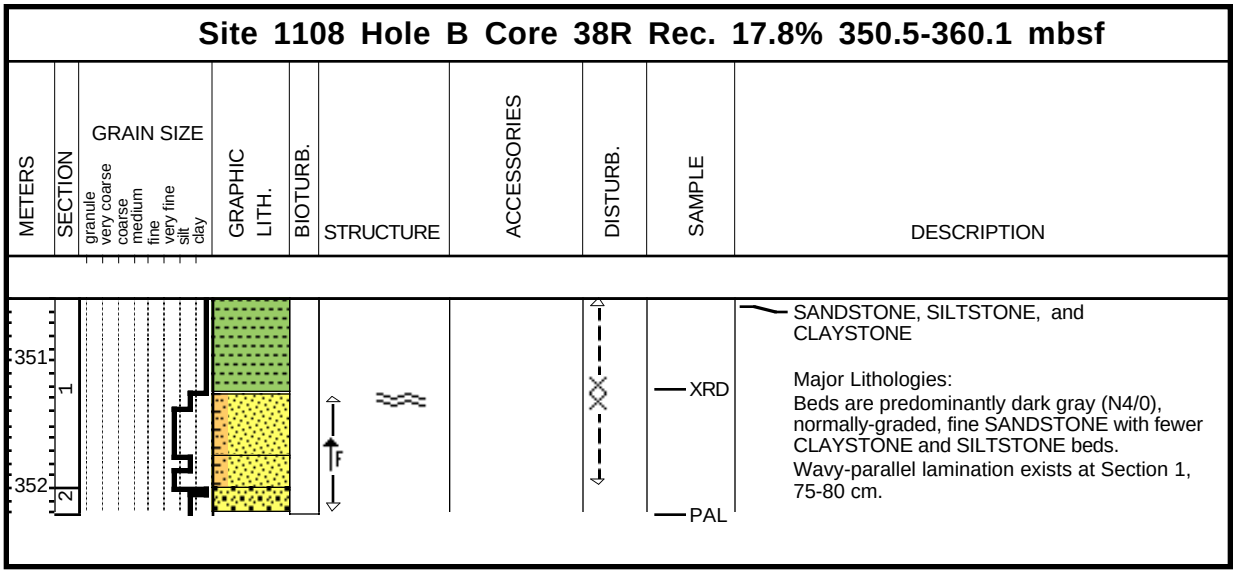
Core Photo


Site 1108 Hole B Core 36R Rec. 64.4% 331.3-340.9 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
332
333
334
335
336
337
1
2
3
4
5
6
F
THS
XRD
PAL
SANDSTONE, CLAYSTONE, and SILTSTONE
Major Lithologies:
Beds are predominantly SANDSTONE with CLAYSTONE, and one SILTSTONE bed (Section 3, 143-147 cm). SANDSTONE beds are either normally-graded, or inversely-graded. Normally- and inversely-graded beds tend to alternate down section. Key structures include parallel lamination (Section 1, 95-100 cm, Section 2, 0-5 cm, and Section 4, 125-130 cm), slightly-inclined lamination (Section 2, 105-110 cm and Section 3, 120-125 cm), high-angle lamination (Section 2, 75-90 cm), convolute bedding (Section 3, 90-100 cm), and mud clasts (Section 3, 103 cm and Section 4, 42-45 cm). Beds are predominantly dark gray (5GY/ 4/1-5/1) with both gray (N/4/0) and reddish-brown (10YR 2.5/1) CLAYSTONE.

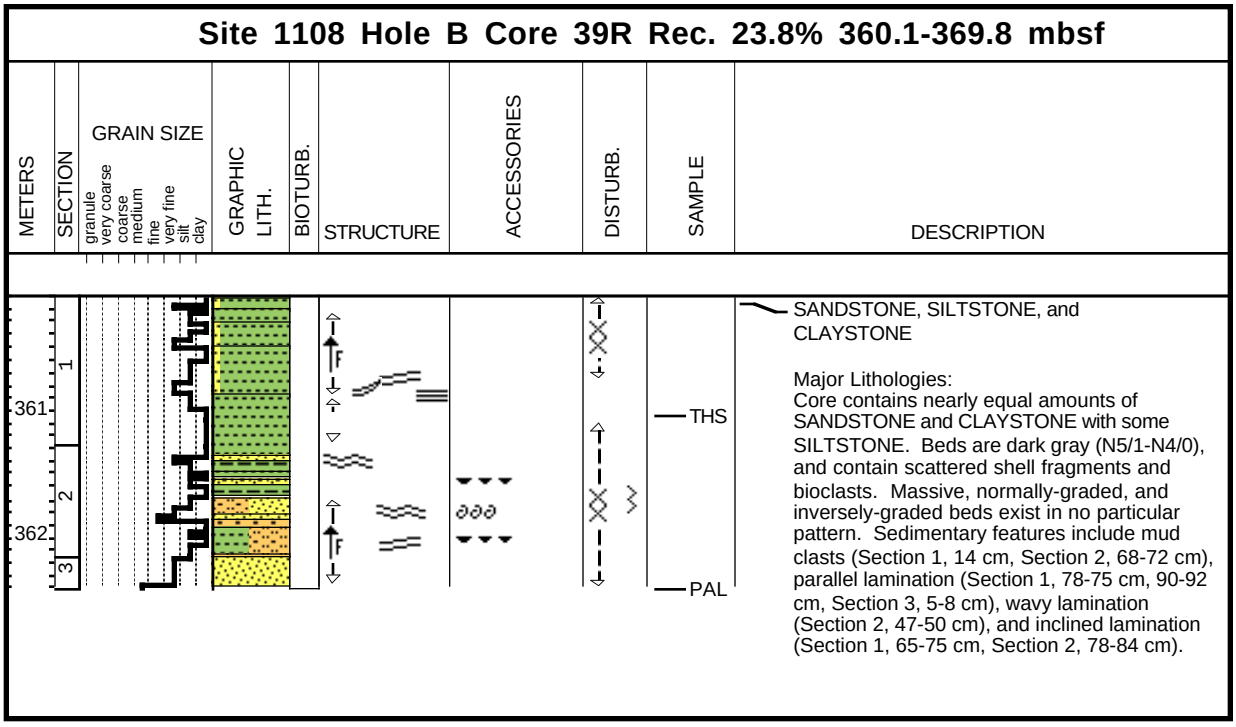
Core Photo


Site 1108 Hole B Core 37R Rec. 45.4% 340.9-350.5 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
341
342
343
344
345
1
2
3
4
5
F
IW
SS
PAL
SANDSTONE, SILTSTONE, and CLAYSTONE
Major Lithologies:
Core is composed of SANDSTONE, SILTSTONE, and CLAYSTONE beds with inversely- and normally-graded bedding pervasive, but not in any particular pattern. Sedimentary structures are not abundant, but parallel lamination and a large mud clast exist in Section 3, 95-105 cm. Shell fragments, rock fragments (some weathered), and bioclasts are scattered throughout coarser-grained SANDSTONE beds.

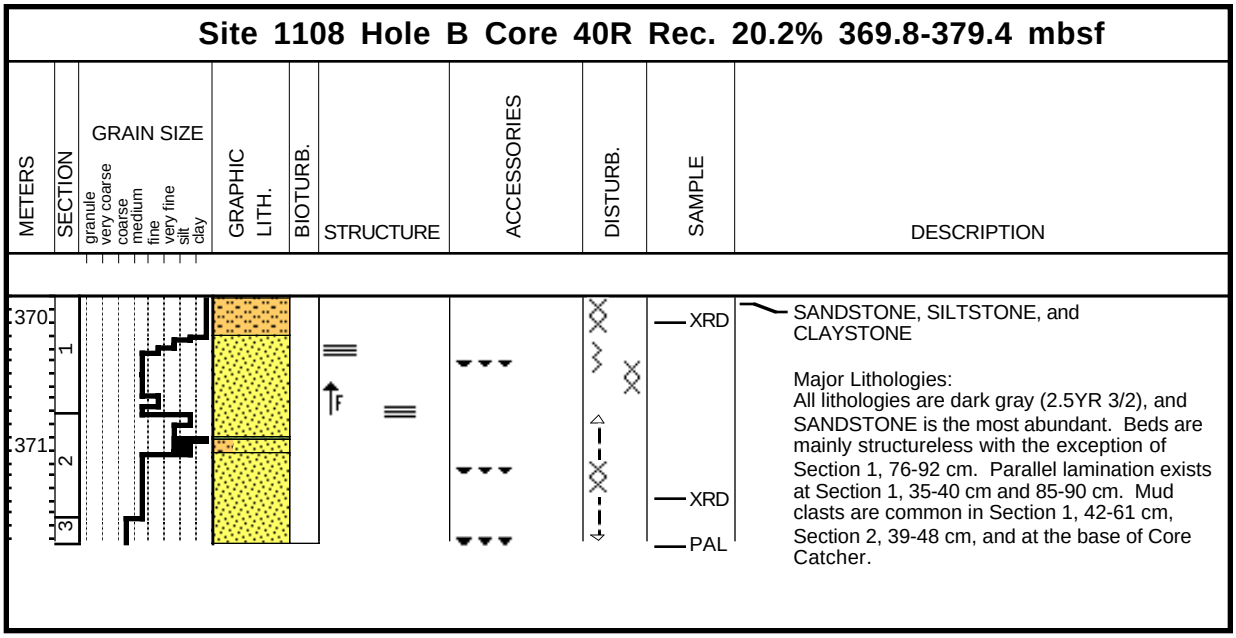
Core Photo


Site 1108 Hole B Core 38R Rec. 17.8% 350.5-360.1 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
351
352
1
2
F
XRD
PAL
SANDSTONE, SILTSTONE, and CLAYSTONE
Major Lithologies:
Beds are predominantly dark gray (N4/0), normally-graded, fine SANDSTONE with fewer CLAYSTONE and SILTSTONE beds.
Wavy-parallel lamination exists at Section 1, 75-80 cm.

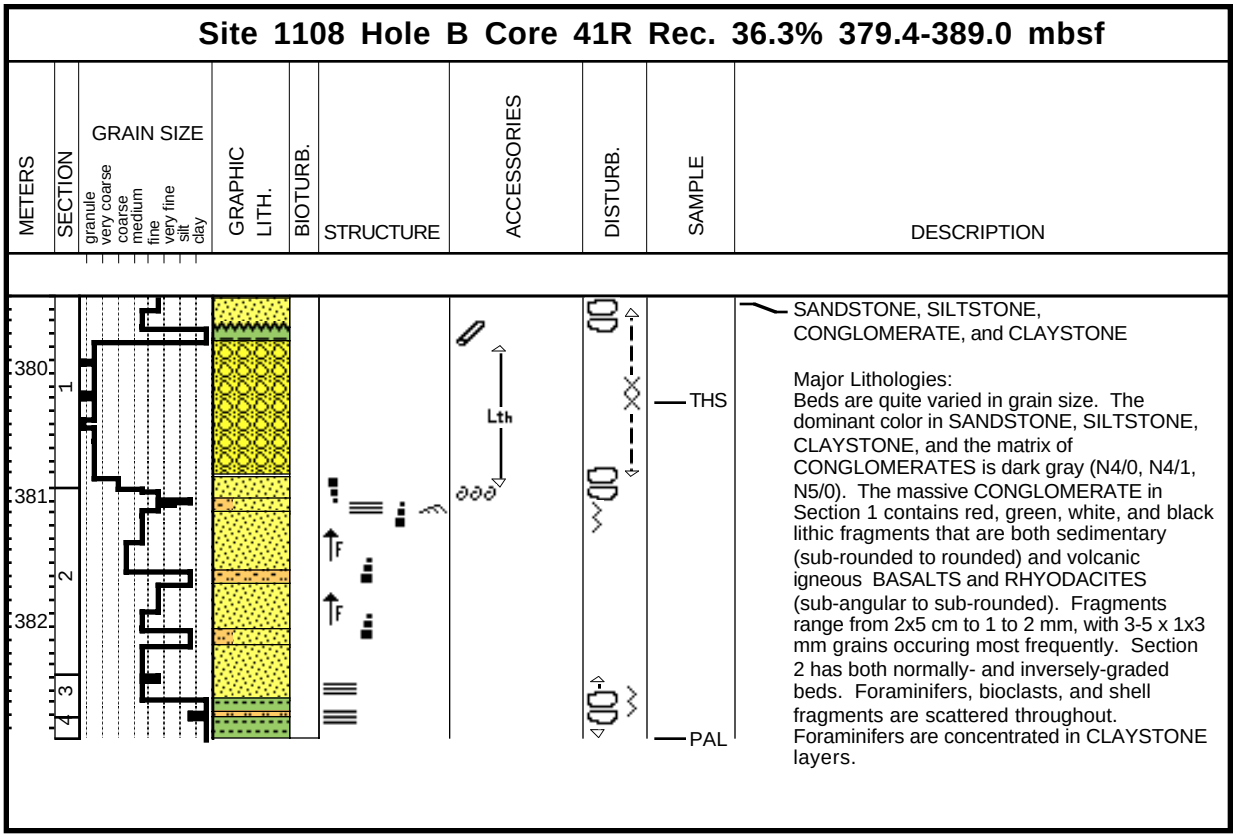
Core Photo


Site 1108 Hole B Core 39R Rec. 23.8% 360.1-369.8 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
361
362
1
2
3
F
F
THS
PAL
SANDSTONE, SILTSTONE, and CLAYSTONE
Major Lithologies:
Core contains nearly equal amounts of SANDSTONE and CLAYSTONE with some SILTSTONE. Beds are dark gray (N5/1-N4/0), and contain scattered shell fragments and bioclasts. Massive, normally-graded, and inversely-graded beds exist in no particular pattern. Sedimentary features include mud clasts (Section 1, 14 cm, Section 2, 68-72 cm), parallel lamination (Section 1, 78-75 cm, 90-92 cm, Section 3, 5-8 cm), wavy lamination (Section 2, 47-50 cm), and inclined lamination (Section 1, 65-75 cm, Section 2, 78-84 cm).

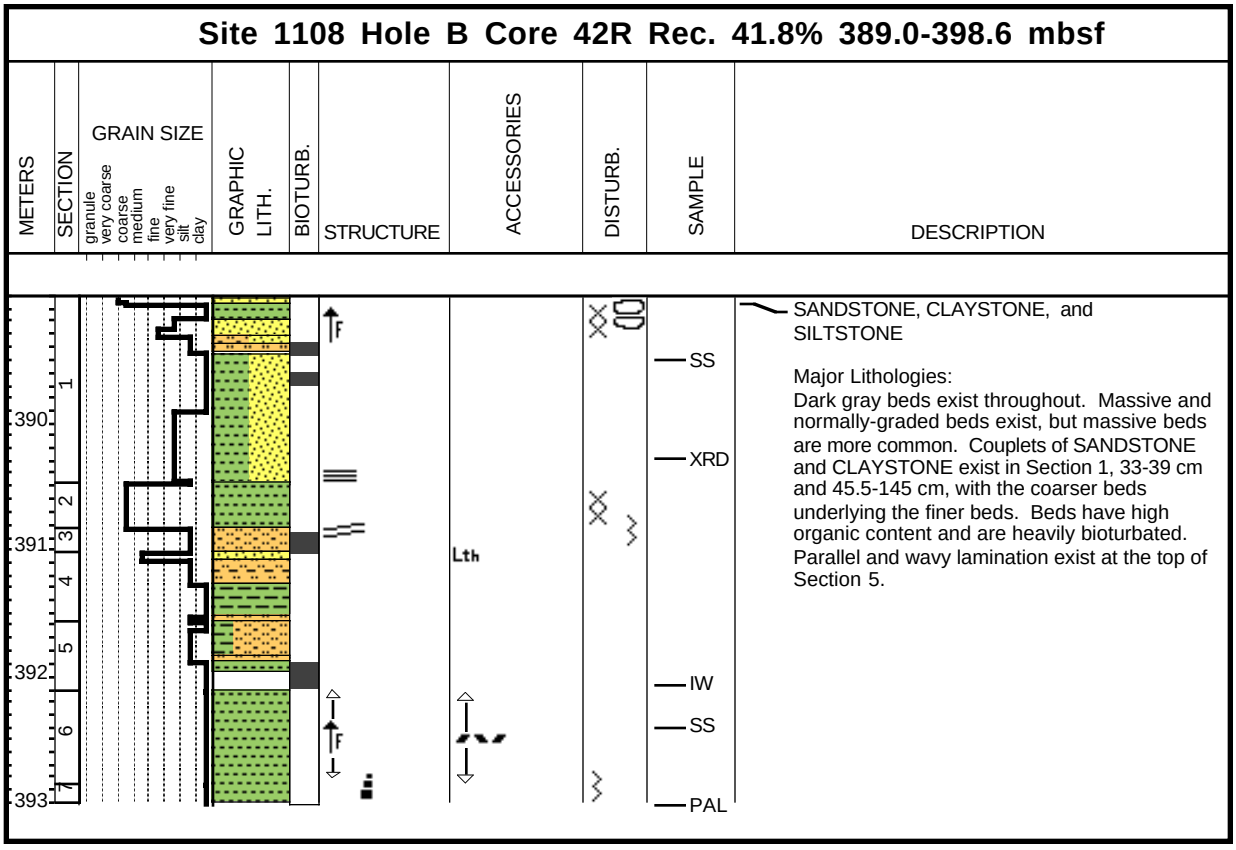
Core Photo


Site 1108 Hole B Core 40R Rec. 20.2% 369.8-379.4 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
370
371
1
2
3
F
XRD
XRD
PAL
SANDSTONE, SILTSTONE, and CLAYSTONE
Major Lithologies:
All lithologies are dark gray (2.5YR 3/2), and SANDSTONE is the most abundant. Beds are mainly structureless with the exception of Section 1, 76-92 cm. Parallel lamination exists at Section 1, 35-40 cm and 85-90 cm. Mud clasts are common in Section 1, 42-61 cm, Section 2, 39-48 cm, and at the base of Core Catcher.

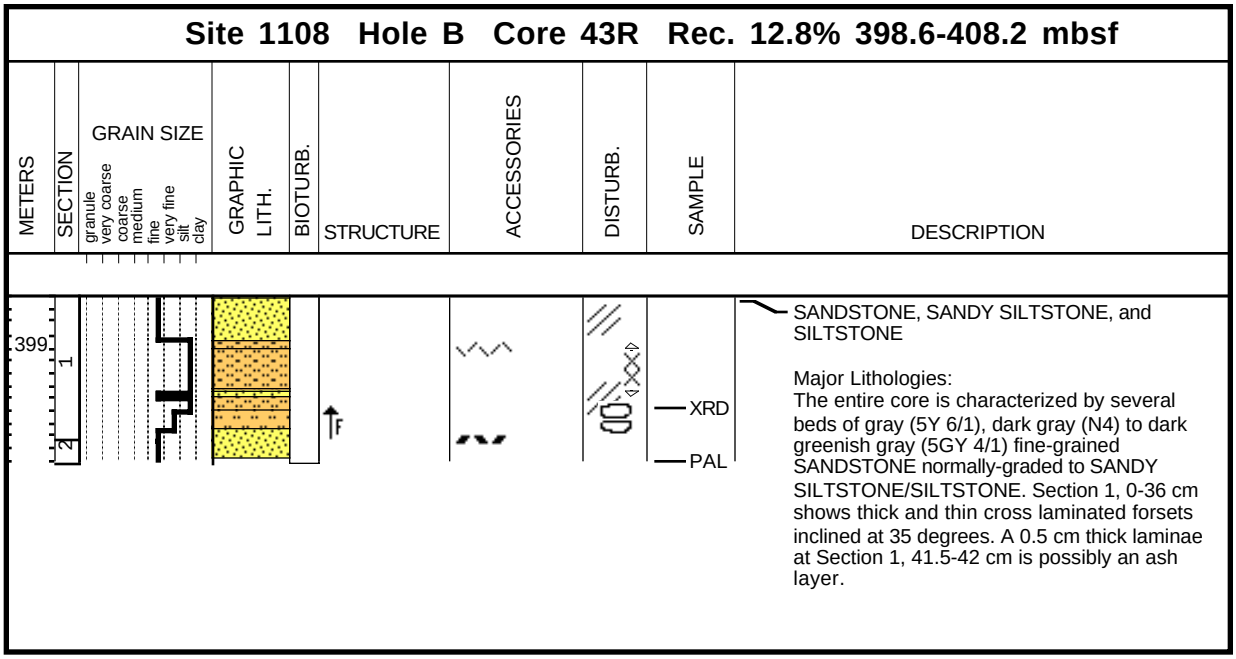
Core Photo


Site 1108 Hole B Core 41R Rec. 36.3% 379.4-389.0 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
380
381
382
1
2
3
4
Lth
F
F
THS
PAL
SANDSTONE, SILTSTONE, CONGLOMERATE, and CLAYSTONE
Major Lithologies:
Beds are quite varied in grain size. The dominant color in SANDSTONE, SILTSTONE, CLAYSTONE, and the matrix of CONGLOMERATES is dark gray (N4/0, N4/1, N5/0). The massive CONGLOMERATE in Section 1 contains red, green, white, and black lithic fragments that are both sedimentary (sub-rounded to rounded) and volcanic igneous BASALTS and RHYODACITES (sub-angular to sub-rounded). Fragments range from 2x5 cm to 1 to 2 mm, with 3-5 x 1x3 mm grains occuring most frequently. Section 2 has both normally- and inversely-graded beds. Foraminifers, bioclasts, and shell fragments are scattered throughout. Foraminifers are concentrated in CLAYSTONE layers.

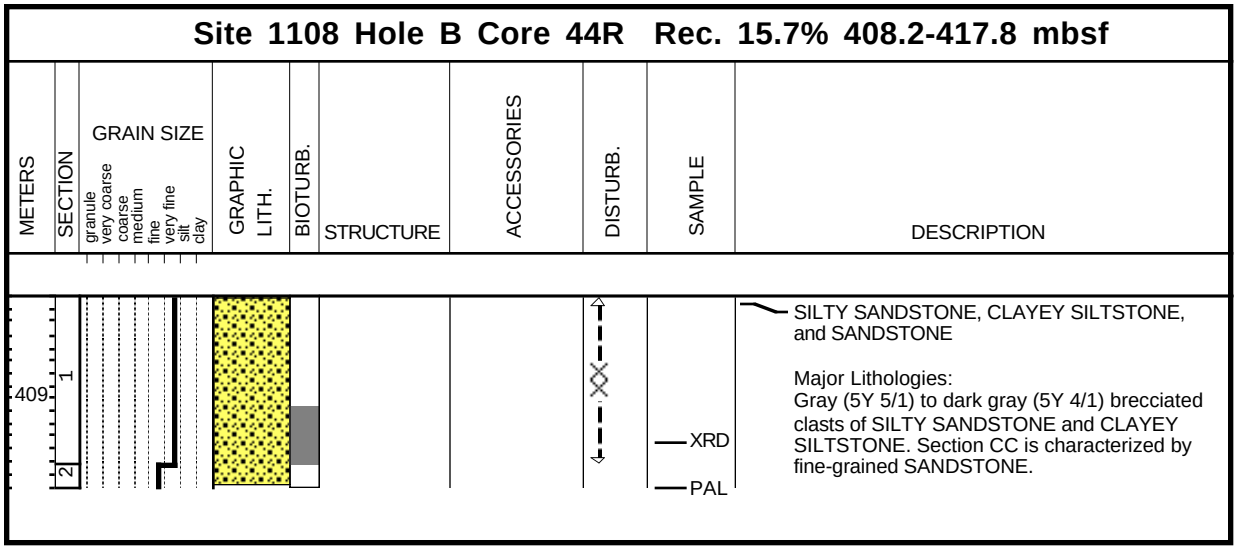
Core Photo


Site 1108 Hole B Core 42R Rec. 41.8% 389.0-398.6 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
390
391
392
393
1
2
3
4
5
6
7
F
F
Lth
SS
XRD
IW
SS
PAL
SANDSTONE, CLAYSTONE, and SILTSTONE
Major Lithologies:
Dark gray beds exist throughout. Massive and normally-graded beds exist, but massive beds are more common. Couplets of SANDSTONE and CLAYSTONE exist in Section 1, 33-39 cm and 45.5-145 cm, with the coarser beds underlying the finer beds. Beds have high organic content and are heavily bioturbated. Parallel and wavy lamination exist at the top of Section 5.

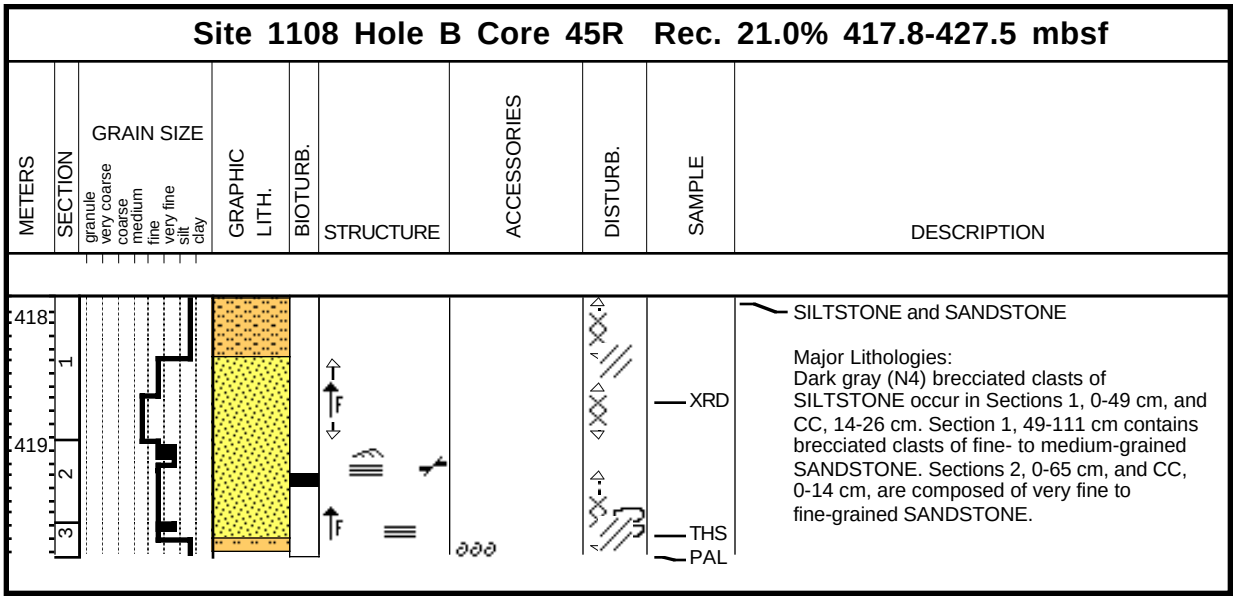
Core Photo


Site 1108 Hole B Core 43R Rec. 12.8% 398.6-408.2 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
399
1
2
F
XRD
PAL
SANDSTONE, SANDY SILTSTONE, and SILTSTONE
Major Lithologies:
The entire core is characterized by several beds of gray (5Y 6/1), dark gray (N4) to dark greenish gray (5GY 4/1) fine-grained SANDSTONE normally-graded to SANDY SILTSTONE/SILTSTONE. Section 1, 0-36 cm shows thick and thin cross laminated forsets inclined at 35 degrees. A 0.5 cm thick laminae at Section 1, 41.5-42 cm is possibly an ash layer.

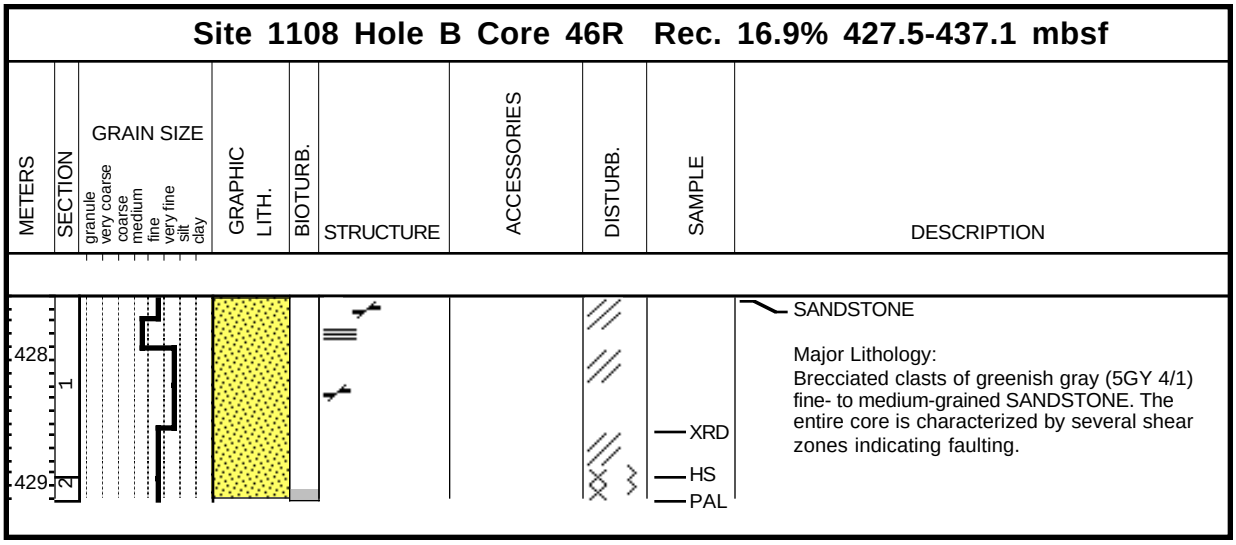
Core Photo


Site 1108 Hole B Core 44R Rec. 15.7% 408.2-417.8 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
409
1
2
XRD
PAL
SILTY SANDSTONE, CLAYEY SILTSTONE, and SANDSTONE
Major Lithologies:
Gray (5Y 5/1) to dark gray (5Y 4/1) brecciated clasts of SILTY SANDSTONE and CLAYEY SILTSTONE. Section CC is characterized by fine-grained SANDSTONE.

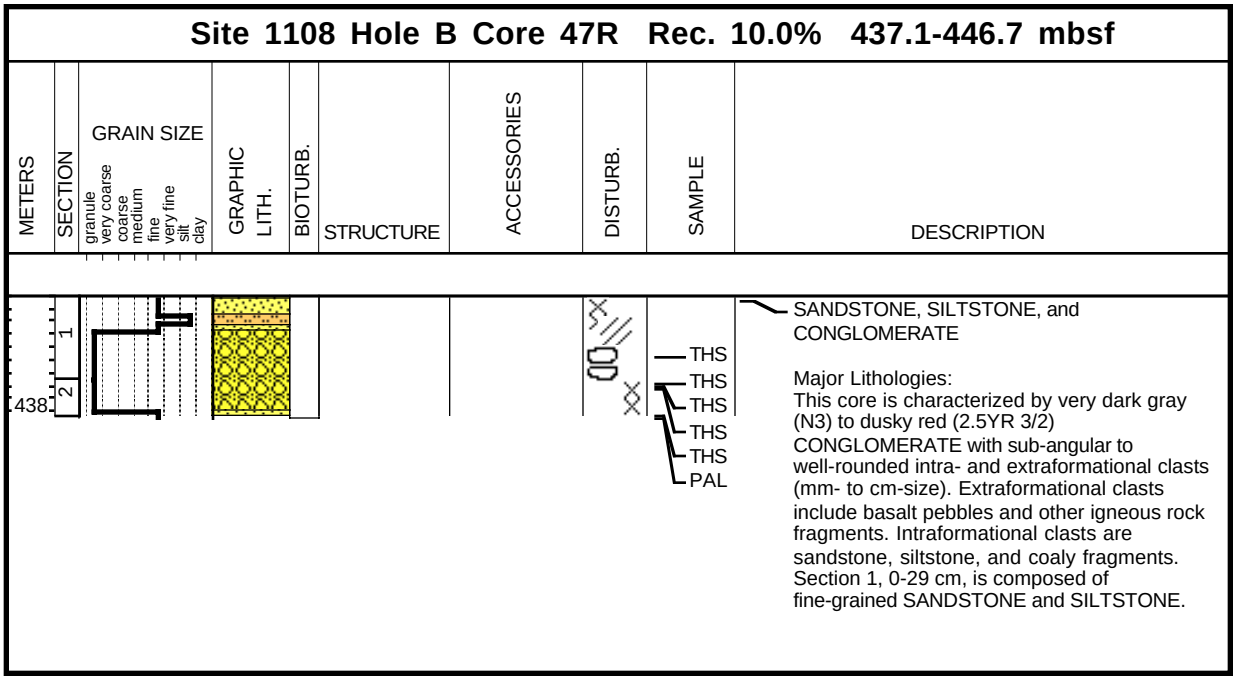
Core Photo


Site 1108 Hole B Core 45R Rec. 21.0% 417.8-427.5 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
418
419
1
2
3
F
F
XRD
THS
PAL
SILTSTONE and SANDSTONE
Major Lithologies:
Dark gray (N4) brecciated clasts of SILTSTONE occur in Sections 1, 0-49 cm, and CC, 14-26 cm. Section 1, 49-111 cm contains brecciated clasts of fine- to medium-grained SANDSTONE. Sections 2, 0-65 cm, and CC, 0-14 cm, are composed of very fine to fine-grained SANDSTONE.

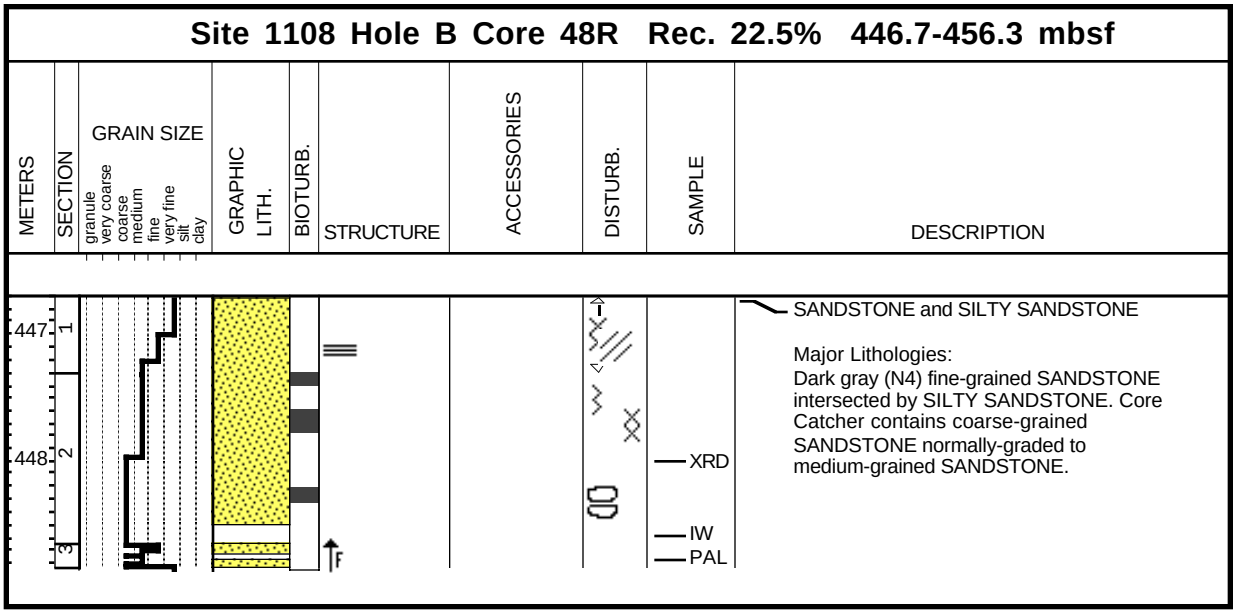
Core Photo


Site 1108 Hole B Core 46R Rec. 16.9% 427.5-437.1 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
428
429
1
2
XRD
HS
PAL
SANDSTONE
Major Lithology:
Brecciated clasts of greenish gray (5GY 4/1) fine- to medium-grained SANDSTONE. The entire core is characterized by several shear zones indicating faulting.

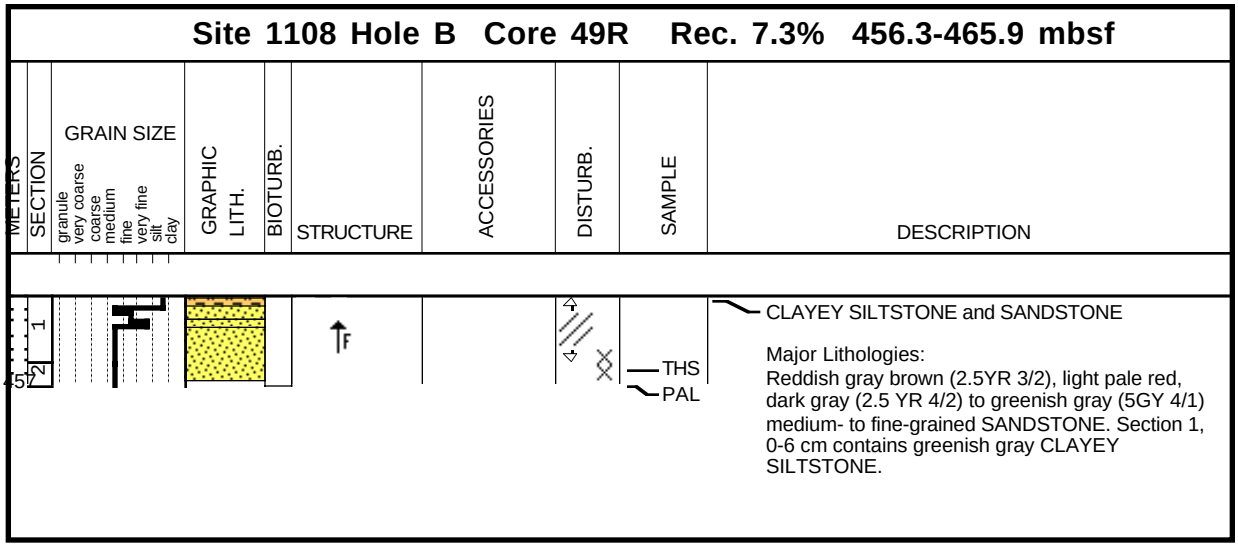
Core Photo


Site 1108 Hole B Core 47R Rec. 10.0% 437.1-446.7 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
438
1
2
THS
THS
THS
THS
THS
PAL
SANDSTONE, SILTSTONE, and CONGLOMERATE
Major Lithologies:
This core is characterized by very dark gray (N3) to dusky red (2.5YR 3/2) CONGLOMERATE with sub-angular to well-rounded intra- and extraformational clasts (mm- to cm-size). Extraformational clasts include basalt pebbles and other igneous rock fragments. Intraformational clasts are sandstone, siltstone, and coaly fragments. Section 1, 0-29 cm, is composed of fine-grained SANDSTONE and SILTSTONE.

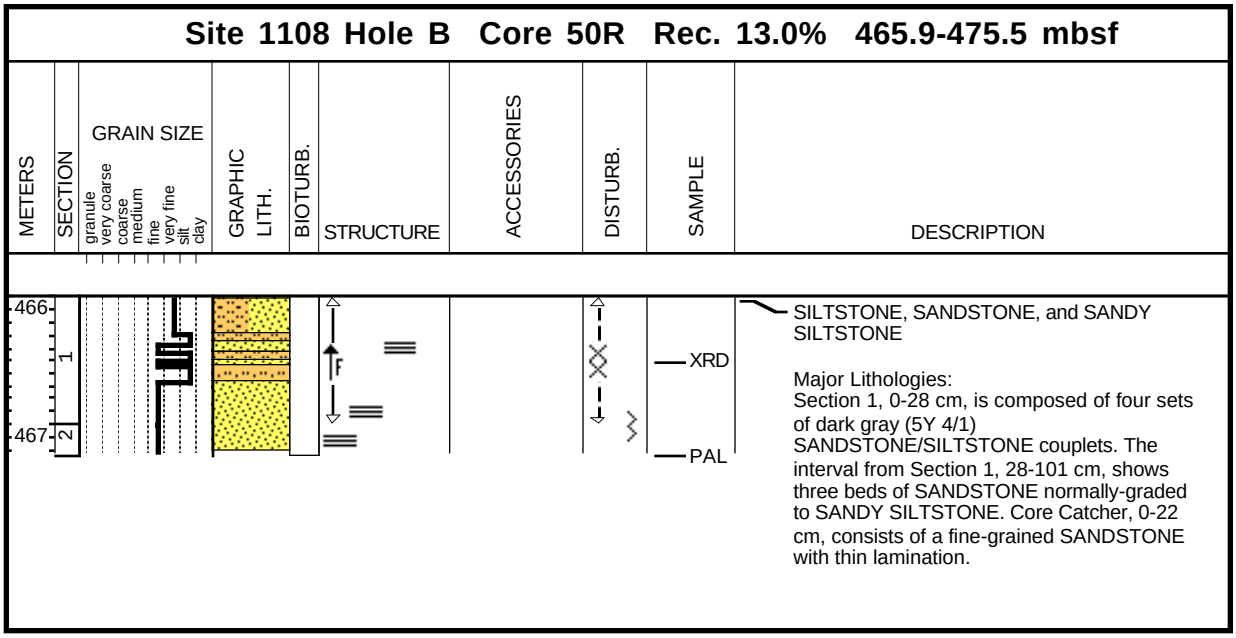
Core Photo


Site 1108 Hole B Core 48R Rec. 22.5% 446.7-456.3 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
447
448
1
2
3
F
XRD
IW
PAL
SANDSTONE and SILTY SANDSTONE
Major Lithologies:
Dark gray (N4) fine-grained SANDSTONE intersected by SILTY SANDSTONE. Core Catcher contains coarse-grained SANDSTONE normally-graded to medium-grained SANDSTONE.

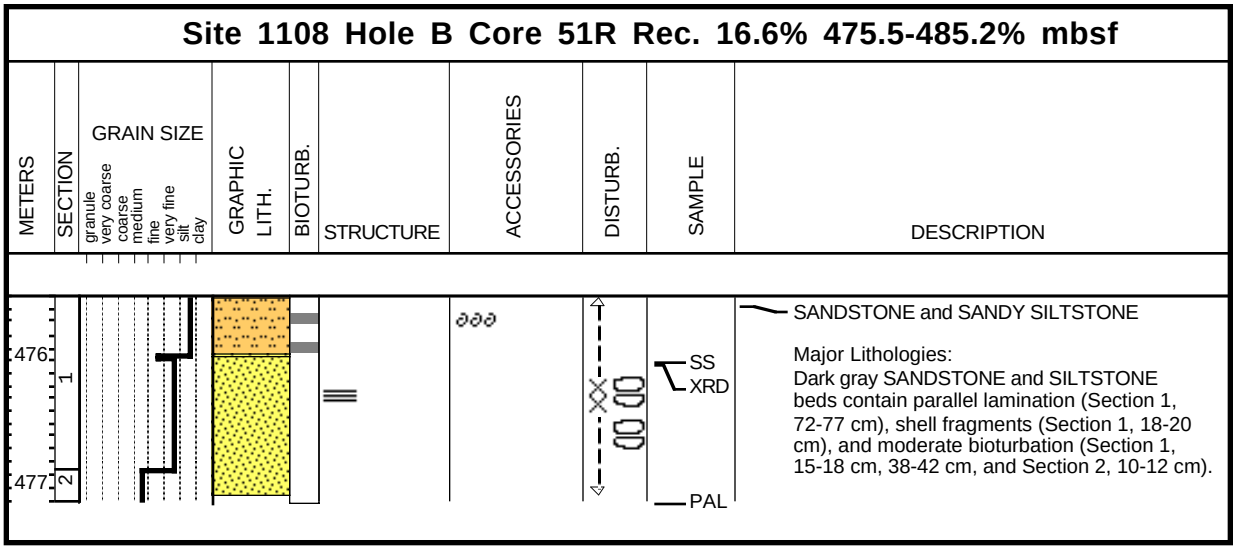
Core Photo


Site 1108 Hole B Core 49R Rec. 7.3% 456.3-465.9 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
1
2
457
F
THS
PAL
CLAYEY SILTSTONE and SANDSTONE
Major Lithologies:
Reddish gray brown (2.5YR 3/2), light pale red, dark gray (2.5 YR 4/2) to greenish gray (5GY 4/1) medium- to fine-grained SANDSTONE. Section 1, 0-6 cm contains greenish gray CLAYEY SILTSTONE.

Core Photo


Site 1108 Hole B Core 50R Rec. 13.0% 465.9-475.5 mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
466
467
1
2
F
XRD
PAL
SILTSTONE, SANDSTONE, and SANDY SILTSTONE
Major Lithologies:
Section 1, 0-28 cm, is composed of four sets of dark gray (5Y 4/1) SANDSTONE/SILTSTONE couplets. The interval from Section 1, 28-101 cm, shows three beds of SANDSTONE normally-graded to SANDY SILTSTONE. Core Catcher, 0-22 cm, consists of a fine-grained SANDSTONE with thin lamination.

Core Photo


Site 1108 Hole B Core 51R Rec. 16.6% 475.5-485.2% mbsf
METERS
SECTION
GRAIN SIZE
granule
very coarse
coarse
medium
fine
very fine
silt
clay
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ACCESSORIES
DISTURB.
SAMPLE
DESCRIPTION
476
477
1
2
SS
XRD
PAL
SANDSTONE and SANDY SILTSTONE
Major Lithologies:
Dark gray SANDSTONE and SILTSTONE beds contain parallel lamination (Section 1, 72-77 cm), shell fragments (Section 1, 18-20 cm), and moderate bioturbation (Section 1, 15-18 cm, 38-42 cm, and Section 2, 10-12 cm).

Core, section, interval (cm)	Depth (mbsf)	Described by	Lithology (dominant/minor)	Size			Siliciclastic and volcaniclastic composition																								Clay	Biogenic composition									Sediment or rock name	Remarks
				Sand	Silt	Clay	Quartz	Feldspar	Plagioclase	Muscovite	Biotite	Glauconite	Amphibole	Pyroxene	Rock fragments (sedimentary)	Rock fragments (metamorphic)	Rock fragments (basaltic)	Volcanic glass	Volcanic glass (brown)	Volcanic glass (colorless)	Accessory minerals	Carbonate	Calcite	Dolomite	Opaque (oxide)	Opaque (sulfide)	Fe oxides	Clinoptilolite	Phillipsite	Other		Nannofossils	Foraminifers	Diatoms	Radiolarians	Sponge spicules	Shell debris	Organic material	Fish debris	Bioclasts	Unidentified/other		
180-1108B-																																									
1R-1, 12.5	0.13	AR	D	r	r	a	r		r		r		r	r			r	r						r					r	r	a	r	r		r					Clay	
1R-1, 19.5	0.20	LAC	M	c	c	a	r		c		r						r				r	r						r	r	c	r	r								Clay	
1R-1, 39.5	0.40	AR	D	r	r	a	r		r								r	r						r				r	c	c	r	r		r					Clay	
1R-2, 34.5	1.35	SA/TRS	M	c	c	a	r		c									r				r	r						r	c	r									Clay	
1R-2, 56	1.56	AR	D	r	r	a	r		c		r							r					r						c	a	r	r		r					Clay	
8R-1, 20	62.90	SAA	D	a	c	c	c		c								c				r			r					c										Sand	Silty clay sand
8R-1, 45	63.15	SAA	D	a	r	a	c	r									c							r					a										Sand	Silt-bearing clay sand
9R-1, 30	72.60	AR	D	c	c	c	r		c		r							r			r	r	tr							c	r	r		r					Ooze	Volcaniclastic nannofossil ooze
9R-1, 106	73.36	AR		c	c	a	tr		tr		tr						r	r			r	c	c	r	r				c	c	c	r		r					Ooze	Clay-bearing nannofossil ooze with foraminifers
14R-1, 4	120.24	LAC	D	r	c	c	r		r	r	r			r				r						r		r			c	r	r								Clay	Silty clay
14R-1, 80	121.00	LAC	D	r	c	c	c	r	r	r	r			r				r					r	r					c									r	Clay	Silty clay
14R-2, 45	121.81	LAC	D	c	r	c	r		c	r	r		r	r				r						r					c	r									Sand	Clayey sand
14R-2, 55	121.91	LAC	M	c	c				r									c						r						r	r								c	Ash	Bioclast-bearing volcanic ash
14R-CC, 3	122.12	LAC	D	c	c	r	c	c			r		r					r						r					r	r									Sand	Silty sand
15R-2, 133	131.96	AR	D	r	c	r	c		c													r	r		r		r		c	c	r								Silt	Volcaniclastic sandy silt
16R-1, 127	140.67	AR	D	r	a	c	c		c		c						r	c				r		r		r			c	c	r								Silt	Volcaniclastic silt
16R-2, 6	140.96	TRS	D	r	c	r	r	a		r								c	r	c	r									r	c	r								Silt	Volcaniclastic sandy silt
16R-2, 16	141.06	AR	D	r	a	c	c	c	c	r								r				r		r						c	c	r								Silt	Clayey siltstone
16R-2, 100	141.90	AR	D	r	a	a	c		r	r								r				r		r			r			a	a	c								Ooze	Silty nannofossil ooze
18R-1, 10	158.70	AR	D	r	c	a	r		r	r								r				r								a	c	r								Clay	Silty nannofossil claystone
18R-2, 130	161.40	AR	D	r	a	c	c		c		r						c	r				r		r		r				a		r								Silt	Volcaniclastic siltstone
19R-1, 24.5	168.245	AR	D	r	c	a	r		r	r								r									r			a	c	r								Clay	Nannofossil claystone
19R-1, 52	168.82	AR	D	r	c	a	r		r		r							r											r	a	c	r								Silt	Clayey siltstone
19R-3, 47	170.27	AR	D	r	a	c			c	r								r				r								c	c	r								Silt	Nannofossil siltstone
19R-5, 10	172.40	BDM	D		r	a	c	r	r														r		c		c			a			r							Clay	Silt-bearing nannofossil claystone
20R-1, 143	179.43	LAC	D	c	c	r	r		r		r			r				r				r	r	r						a	r									Silt	Sandy siltstone
20R-2, 82.5	180.325	LAC	D	r			r	r		r								r											r										Sand	Silty sandstone
21R-1, 24	187.84	LAC	D	r	c	r	r		r	r								r				r		r					r	r	r									Silt	Sand-bearing clayey siltstone
21R-1, 132	188.92	LAC	D	r	c	c	r	r										r				r							r	a	r									Clay	Silty clay
22R-1, 125	198.45	AR	D	c	a	c	r		r	r								r				r		r					r	a	c									Silt	Siltstone
22R-5, 2.5	203.225	AR	D	r	c	a	r		r	r												r					r		r	a									Clay	Silty claystone
22R-5, 3	203.23	AR	D	r	c	a			r	r	r											r							r		r									Clay	Silty claystone
22R-5, 134	204.54	AR	D	c	a	c	c		c	r	r				r							r	r	r					r	c	r									Silt	Sandy siltstone
23R-1, 95	207.75	AR	D	r	a	c	r		c	r												r			r						c	r								Silt	Clayey siltstone with sand
23R-3, 110	210.90	LAC		r	c	c	r	r										r													r	r							r	Silt	Clayey silt
23R-3, 133	210.13	AR		r	c	r	c		c	r												r		r			r			c	c	r								Silt	Volcaniclastic sandy silt
24R-2, 40	218.30	AR	D	r	c	a	r	r		r												r	r						r	a	r									Clay	Silty claystone
24R-4, 39	220.73	AR	D	c	a	c	c		c	r	r											r	r						r	a	r									Silt	Sandy siltstone with clay

Core, section, interval (cm)	Depth (mbsf)	Described by	Lithology (dominant/minor)	Size			Siliciclastic and volcaniclastic composition																									Clay	Biogenic composition									Sediment or rock name	Remarks
				Sand	Silt	Clay	Quartz	Feldspar	Plagioclase	Muscovite	Biotite	Glauconite	Amphibole	Pyroxene	Rock fragments (sedimentary)	Rock fragments (metamorphic)	Rock fragments (basaltic)	Volcanic glass	Volcanic glass (brown)	Volcanic glass (colorless)	Accessory minerals	Carbonate	Calcite	Dolomite	Opaque (oxide)	Opaque (sulfide)	Fe oxides	Clinoptilolite	Phillipsite	Other		Nannofossils	Foraminifers	Diatoms	Radiolarians	Sponge spicules	Shell debris	Organic material	Fish debris	Bioclasts	Unidentified/other		
28R-3, 3	257.21	AR	M	r	a	r	c		c	r	r					r	r	r					r			r					r	r								c			Silt	Volcaniclastic siltstone
29R-4, 52	267.75	AR	M	c	a	r	r		r		r							r			r											r									c			Silt	Volcaniclastic siltstone
30R-4, 82	278.30	TRS		a		c	c	a													a		r																					Sand	Mixed sandstone
37R-3, 100	344.52	AR	M		r	a	r	r		r											r	r	r		r							a												Clay	Claystone
42R-1, 50	389.50	AR	M		r	a	r	r		r											r	r	r		r					a		c	r											Clay	Claystone
42R-6, 20	392.31	TRS	M	r	c	a	c	c		r	r								c	c	r									c		r		r										Clay	Silty claystone

Notes: a = abundant; c = common; r = rare; tr = trace (?); M = minor; D = dominant.

Thin-section number	Core, section, interval (cm)	Depth (mbsf)	Described by	Lithology (dominant/minor)	Size	Minerals	Rock fragments	Matrix (%)	Cement	Bioclasts	Sediment or rock name	Comments
					Sand Silt Clay	**Minerals (%)** Quartz Strained Unstrained Feldspar Multiple twins Single/untwinned Mica Biotite Muscovite Carbonate Chlorite Glauconite Accessory minerals Clinopyroxene Amphibole Epidote Opaques	**Rock fragments (%)** Plutonic Volcanic Rhyolitic/dacitic Vitric Andesitic/basaltic Sedimentary Siltstone Limestone Metamorphic Phyllite Schist Quartzite Serpentinite Recrystallized limestone		**Cement (%)** Sparry calcite Micrite Siliceous	**Bioclasts (%)** Foraminifers Planktonic Shell debris Algae Bryozoa Carbonaceous detritus		
	180-1108B-											
1	3R-CC, 0-4	14.50	TRS/AR	M	A	30 R a A c c R a R a	40 R A r a R a R r r c c		30 A	2 A a R	Fine-grained sandstone	
7	3R-CC, 16-20	14.66	TRS/AR	M	A C R	50 C a r C c a C a r R R R r a R	9 A a	40		1 A a	Fine-grained sandstone	Highly micaceous
10	5R-CC, 6-8	33.86	TRS/AR	M	A R	40 C r a C c a R a R c a r R	30 C c r c C c c r		29 C A	1 A a	Medium-grained sandstone	
17	15R-CC, 11-14.5	129.91	TRS/AR	M	A R R	45 C a c C a c C a c C R c a r	35 R A a c C a c r		15 A	5 A a	Fine-grained sandstone	
18	16R-CC, 1-3	142.05	TRS/AR	M	A R	5 R a A a c R a R c R			10 C A	85 a	Packstone	Pyrite filled foraminifer tests
19	20R-CC, 0-3	180.55	TRS/AR	M	A R	50 C a C c c R a r R C R c a r R	40 R C c c r R a C r c c r		5 A	5 A a R R	Medium-grained sandstone	Fresh and recrystallized plagioclase
20	21R-CC, 1-3	189.08	TRS/AR	D	R R A	10 R a r C a c A a r R R	5 A a c	80		5 A a	Silty claystone	Highly micaceous
21	22R-6, 20.5-22.5	204.87	TRS/AR	M	A R	50 C a C c c C r a A R c a r R	30 R C c r c C R a r r r		18 A	2 A a	Fine-grained sandstone	Possible calcareous mylonite fragment
22	23R-3, 35-36.5	210.15	TRS/AR	M	A	30 C a A a c R a R R c c r	67 R A c a C R c r c		2 A	1 A a	Coarse-grained sandstone	Flow-banded fresh basaltic and calcareous schist fragments
24	26R-3, 39-41	238.99	TRS/AR	M	A R	55 C a r C c a R a R R R c c	42 R A a c C R a		2	1 A a R	Medium-fine-grained sandstone	Chloritized basaltic fragments
25	27R-5, 61-63	251.51	TRS/AR	M	A R	68 R c A c c C a r R R r a r R	29 C c c C R a r r r		2 A	1 a R	Coarse-grained sandstone	Fresh and recrystallized plagioclase fragments
26	28R-3, 28.5-31.5	257.46	TRS/AR	D	C A R	60 C a A c a A a c C R a c R	10 A a r r	10		20 A a C	Sandy siltstone	Typical turbidite type sediment
27	30R-3, 42-44	276.39	TRS/AR	M	A R	60 R a r A c a C a R R c a	35 R A c c C R c c r		4 A	1 A a R	Medium-grained sandstone	Possible mylonitic texture in schist fragment
28	32R-3, 61.5-64	295.67	TRS/AR	M	A R	60 C a A c c C a r C R r a R	38 R A c r a R c r			2 A a	Medium-grained sandstone	Rock fragments more rounded than detrital mineral grains
29	34R-2, 126-128	314.60	TRS/AR	M	A R	40 R c a A c c C a R c a r	59 R A c a R a c r			1 A a R R	Medium-grained sandstone	Zoned plagioclase
30	36R-3, 52-56	333.94	TRS/AR	M	A R	30 R a C c c C a R R r a R	69 R A c c C c c			1 A a	Coarse-grained sandstone	
31	39R-1, 92-98	361.02	TRS/AR	D	R C A	60 R a C c c A a A c a	5 A a	34		1 A a	Silty claystone	Highly micaceous, burrows filled with claystone
32	41R-1, 64-68	380.04	TRS/AR	M	A R	30 R a C c c R a c	50 A c c	18		2 A a	Coarse-grained sandstone	
33	47R-1, 45-48	419.67	TRS/AR	M	A C R	40 C a C r c C a R R a	20 A c a r	30		10 R a A	Fine-grained sandstone	Carbonaceous fragments aligned indicating laminae
36	47R-CC, 5.5-7	437.82	TRS/AR	M	A C	15 R a C a c R R a	50 R A c r a R a	34		1 A a	Granule rich coarse-grained sandstone	
37	47R-CC, 25-29	438.01	TRS/AR	M	A R	35 R a C c c R a R R a r	54 R A a a r		10 A R	1 A a	Medium-grained sandstone	
39	49R-CC, 5-6	456.87	TRS/AR	M	A R	30 R a C a c R a R a r	60 A a	10			Medium-grained sandstone	

Note: A = abundant (51%–100%); C = common (11%–50%); R = rare (1%–10%); lower case letters indicate subcatagories of the major constituents.

180-1108B-3R-CC, 4-5 cm
Thin section #: 2
ROCK NAME: Porphyry
GRAIN SIZE: Bimodal
TEXTURE: Porphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
Phenocryst						
Plagioclase	60	40	> 10		Euhedral	Zoned.
Quartz	10	10	< 0.2-10		Anhedral	
Hornblende	5	5	2-5		Euhedral	
Groundmass						
Quartz	25	25	< 0.2		Anhedral	Very fine-grained.

COMMENTS:

180-1108B-3R-CC, 5-6 cm
Thin section #: 3
ROCK NAME: Mylonite
GRAIN SIZE: Fine-grained
TEXTURE: Cataclastic

PRIMARY MINERALOGY	PERCENTPRESENT	PERCENTORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS

COMMENTS: Minerals too fine-grained to identify.

180-1108B-3R-CC, 4-8 cm
Thin section #: 4
ROCK NAME: Green schist facies (retrograded igneous rock?)
GRAIN SIZE: Fine-grained
TEXTURE: Brecciated

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
Plagioclase	5	?	2	?	Anhedral	Replaced by sericite and epidote.

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Sericite	60	Plagioclase	
Epidote	10	Plagioclase	
Calcite	10	Veins	
Quartz	10	Veins	
Plagioclase	5	Veins	Albite.
Actinolite	5		Needles in quartz.

COMMENTS:

180-1108B-3R-CC, 4-8 cm
Thin section #: 5
ROCK NAME: Sericite schist
GRAIN SIZE: Fine-grained
TEXTURE: Mylonitic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
Quartz	0					

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	COMMENTS
Quartz	50	Quartz I , veins	
Sericite	40	Plagioclase or micas	Elongated in the foliation plane.
Clay, dark brown	10		Elongated in the foliation plane.

COMMENTS: Very low grade (Green Schist facies) schist, the main structure is a very well developed foliation plane, some shear bands are evidenced by the occurrence of sygmoidal trails surrounding lenses of quartz.

180-1108B-3R-CC, 9-13 cm
Thin section #: 6
ROCK NAME: Glassy basalt
GRAIN SIZE: Inequigranular
TEXTURE: Porphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
Olivine	~2	~2	1		Euhedral	Very fresh
Plagioclase	~5	~5	1-8		Lath-shaped	
Clinopyroxene	~1	~1	1		Subhedral	In glomeroporpyritic aggregates with olivine and plagioclase.
Groundmass	>90	>90	-		-	Opaque, glassy.

SECONDARY MINERALOGY	REPLACING/ PERCENT	FILLING	COMMENTS
			Negligible

COMMENTS: This is a sparsely porphyritic olivine basalt with a tachylitic groundmass, suggesting submarine eruption.

180-1108B-4R-CC, 6-7 cm
Thin section #: 9
ROCK NAME: Olivine basalt
GRAIN SIZE: Inequigranular
TEXTURE: Variolitic with phenocrysts

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	~2	0.5			Euhedral	Fresh.
Plagioclase	~5	0.5-1.0			Laths to platy	Fresh.
GROUNDMASS	~83					Variolitic.

SECONDARY MINERALOGY	REPLACING/ PERCENT	FILLING	COMMENTS
			None

VESICLES/ CAVITIES	SIZE PERCENT	(mm)	FILLING	SHAPE	COMMENTS
Vesicles	~10	Variable	None	Variable	

COMMENTS: This is a submarine basalt with plagioclase and olivine phenocrysts. The groundmass is variolitic (devitrified basaltic glass) with beautiful quench crystals, such as lanterns and swallow-tails. The presence of vesicles suggests that the depth of eruption cannot have been very deep (<55 m).

180-1108B-6R-CC, 1-3 cm
Thin section #: 11
ROCK NAME: Olivine basalt
GRAIN SIZE: Inequigranular
TEXTURE: Porphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
Olivine	~5	~5	0.5		Euhedral	Generally fresh.
Plagioclase	~2	~2	<2		Euhedral, blocky	Strongly and complexly zoned.
Groundmass	>90	>90	-		-	Pilotaxitic-laths of plagioclase in glass.

SECONDARY MINERALOGY	REPLACING/ PERCENT	FILLING	COMMENTS
			Negligible

COMMENTS: Murky patches appear to be pseudomorphs after an unknown primary mineral (pyroxene?).

180-1108B-6R-CC, 5-7 cm
Thin section #: 12
ROCK NAME: Granite or granodiorite
GRAIN SIZE: Medium-grained
TEXTURE: Crushed

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
Plagioclase	60	-	up to 2		Anhedral to subhedral	Sizes variable.
Alkali Feldspar?	10	-	up to 4		Anhedral	Perthitic texture.
Quartz	25	-	up to 1		Irregular	Variable size, larger have undulose extinction.
Biotite	5	-	0.5 max.		In clumps	

SECONDARY MINERALOGY	REPLACING/ PERCENT	FILLING	COMMENTS
Chlorite	< 2	Biotite	
Sericite	< 2	Feldspar	

COMMENTS: This rock appears to have undergone crushing, it has a mortar texture, rather than a true igneous texture.

180-1108B-8R-1, 4-6 cm
Thin section #: 13
ROCK NAME: Basalt
GRAIN SIZE: Fine-grained
TEXTURE: Vesicular

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
Plagioclase	>90-		0.1		Laths	Cloudy.
Iron ore	< 1					

SECONDARY MINERALOGY	REPLACING/ PERCENT	FILLING	COMMENTS
Epidote	2.5	Vugs	
Chlorite	2.5	Vugs	

COMMENTS: This rock is a vesicular basalt in which only plagioclase and iron ore can be identified, although other minerals may be present. Alteration is moderate. Vesicles are filled with secondary minerals.

180-1108B-8R-1, 10-12 cm
Thin section #: 14
ROCK NAME: Gneiss
GRAIN SIZE: Medium-grained
TEXTURE: Lepidoblastic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
Feldspar	60	-	2	-	Aligned, rounded	Porphyroblasts are broken down to smaller domains.
Quartz	25	-	1	-	Milled down to small sizes	Shows shadowy extinction.
Biotite	10	-	0.1	-	Flakes	Occurs along foliations.
Garnet(?)						
Sphene	<1	<1	1			
Zircon	<1	<1				

SECONDARY MINERALOGY	REPLACING/ PERCENT	FILLING	COMMENTS
Chlorite	< 2	Biotite	
Sericite	1	Plagioclase	

COMMENTS:

180-1108B-13R-CC (Piece, 0-5 cm)
Thin section #: 16
ROCK NAME: Porphyry
GRAIN SIZE: Up to 2 mm
TEXTURE: Porphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Feldspar	~10-		up to 2	Alkali plagioclase	Euhedral	Usually strongly zoned.
Biotite	~5		up to 5		Euhedral	
Hornblende	~2 -		1			
Apatite	Accessory					
GROUNDMASS						
Quartzo-feldspathic	75		Very fine			
XENOLITHS						
Finely divided hornblende	2-5					

SECONDARY MINERALOGY	REPLACING/ PERCENT FILLING	COMMENTS
		Feldspars partly sericitized. Biotite partly chloritized.

COMMENTS: This is a typical feldspar porphyry, possibly a dike rock. Amphibole has dark rims probably representing reaction with the magma. There is a weak flow structure shown by biotite alignment.

180-1108B-26R-1 (Piece, 0-2 cm)
Thin section #: 23
ROCK NAME: Olivine basalt
GRAIN SIZE: Fine-grained
TEXTURE: Porphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	<5	-	2	-	Euhedral	Phenocrysts often occur in glomero porphyritic aggregates.
Plagioclase	~5	-	1	-	Euhedral	
GROUNDMASS						
Glass	>80	-	-	-	Variolitic	

SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING	SIZE (mm)	COMMENTS
Chlorite	~10	Vesicles	1	Subspherical.

COMMENTS: A typical sparsely porphyritic olivine basalt. The groundmass is variolitic with abundant plagioclase quench crystals (some very beautiful swallow-tails). The rock was erupted underwater, but in no great water depth as vesicles would not be found.