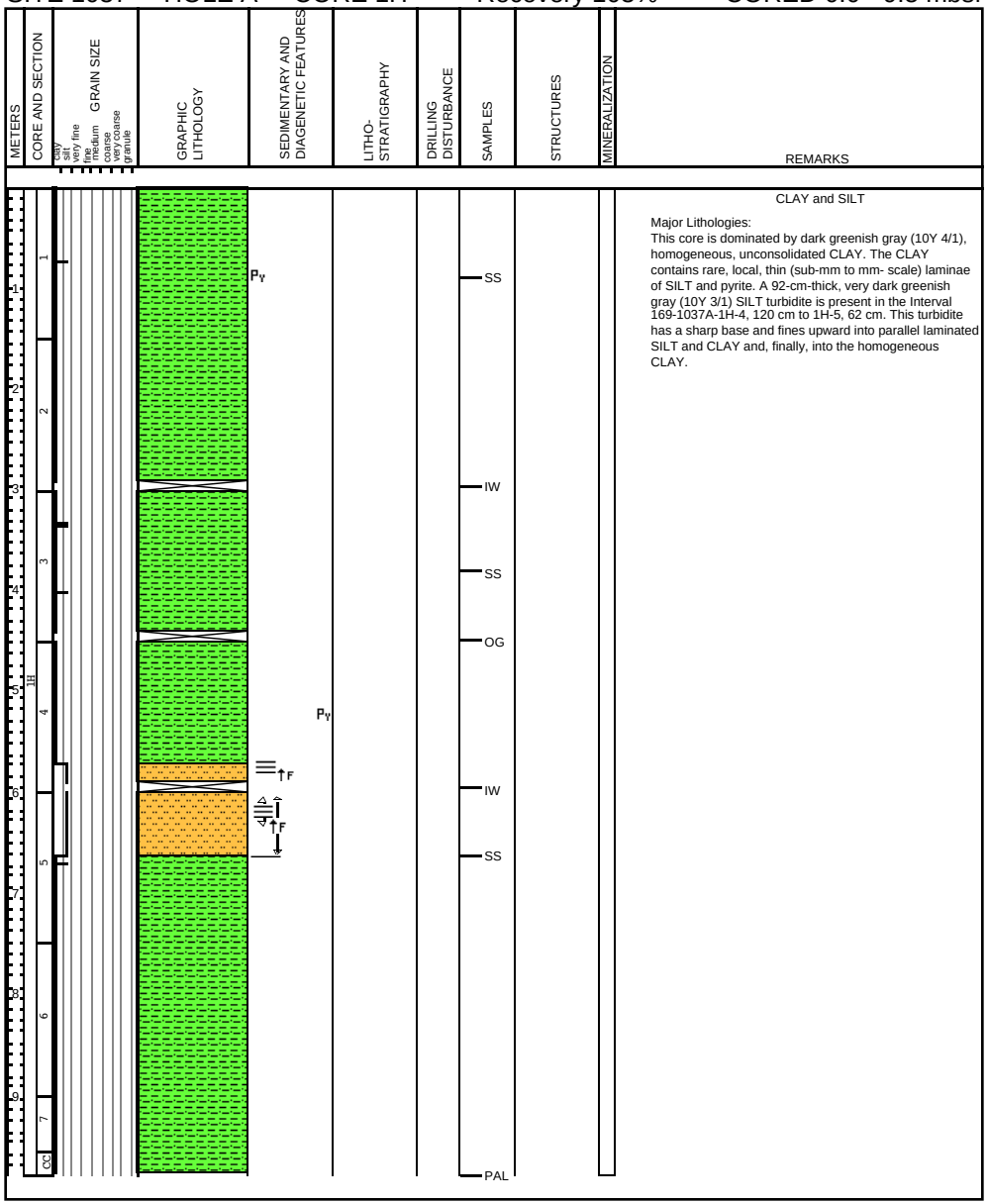
SITE 1037 HOLE A CORE 1H Recovery 103% CORED 0.0 - 9.5 mbsf

1037A-1H



CLAY and SILT

Major Lithologies:
This core is dominated by dark greenish gray (10Y 4/1), homogeneous, unconsolidated CLAY. The CLAY contains rare, local, thin (sub-mm to mm- scale) laminae of SILT and pyrite. A 92-cm-thick, very dark greenish gray (10Y 3/1) SILT turbidite is present in the Interval 169-1037A-1H-4, 120 cm to 1H-5, 62 cm. This turbidite has a sharp base and fines upward into parallel laminated SILT and CLAY and, finally, into the homogeneous CLAY.

Prior Chapter Contents Next Chapter

SITE 1037 HOLE B CORE 1H Recovery 99% CORED 0.0 - 6.6 mbsf

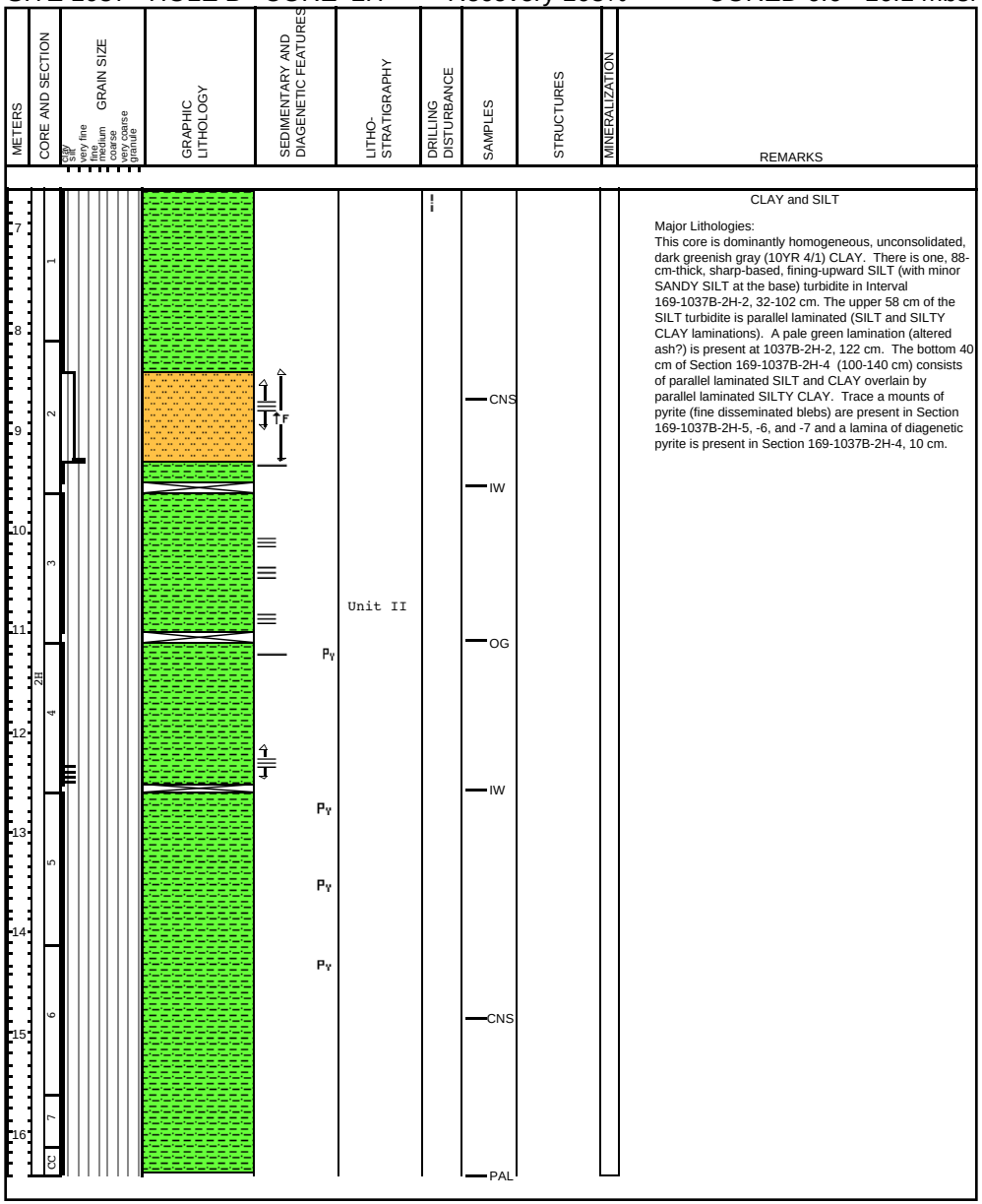
1037B-1H

CLAY

Major Lithologies:
Greenish gray (5GY 5/1 and 10yr 4/1), homogeneous, unconsolidated CLAY with minor pale green (5G 6/2) laminae in Section 169-1037B-1H-1, 69, 108, 118, 132, and 138 cm and-1H-2, 48 cm. The top 9 cm of Section 169-1037B-1H-1 is yellowish green (10YR 3/6) to gray (N 4). Interval 169-1037B-1H-1, 0 to 18 cm has a more hemipelagic "feel" to it than does the rest of the core, which looks like a terrigenous "glacial" SILT.

SITE 1037 HOLE B CORE 2H Recovery 103% CORED 6.6 - 16.1 mbsf

1037B-2H

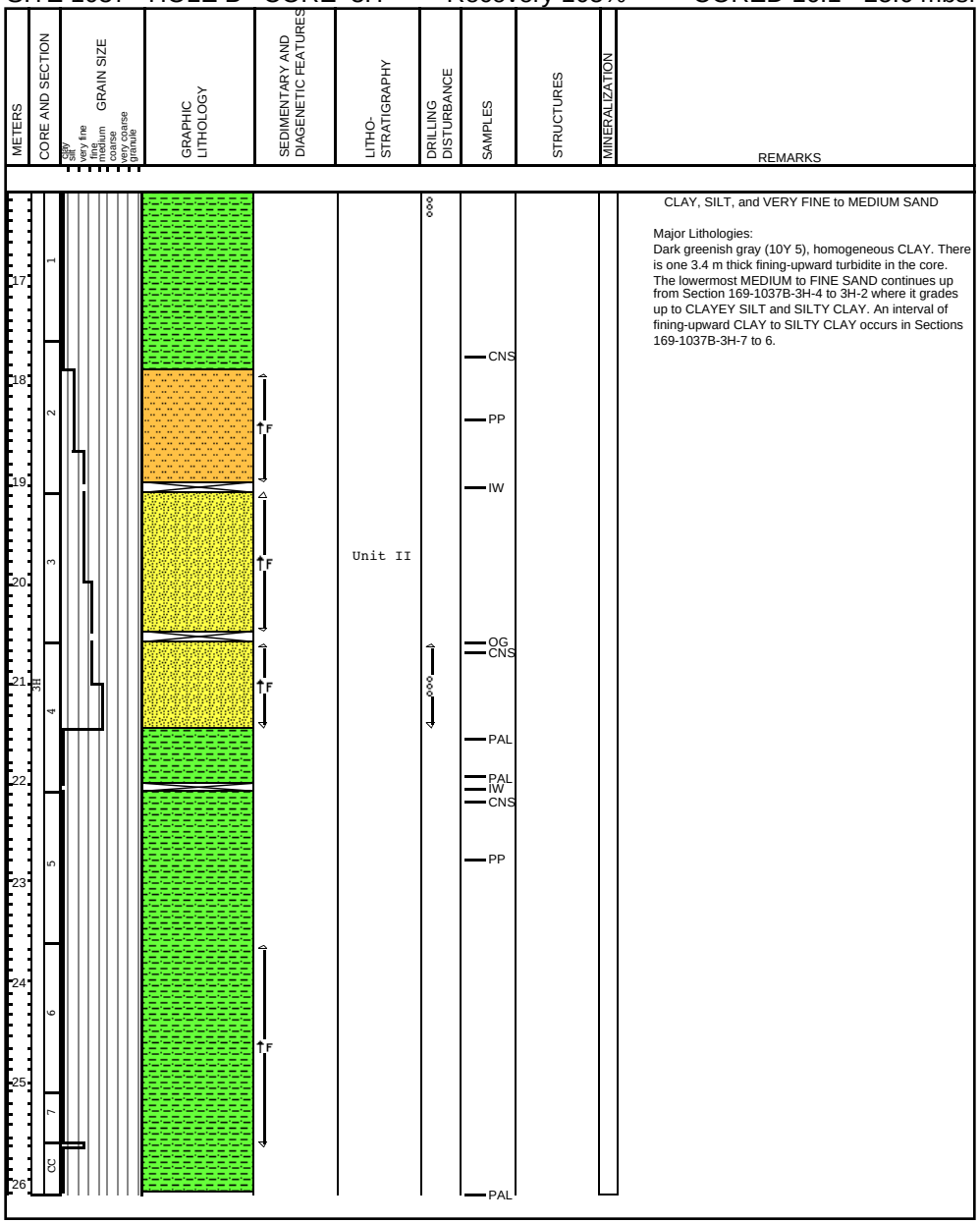


CLAY and SILT

Major Lithologies:
This core is dominantly homogeneous, unconsolidated, dark greenish gray (10YR 4/1) CLAY. There is one, 88-cm-thick, sharp-based, fining-upward SILT (with minor SANDY SILT at the base) turbidite in Interval 169-1037B-2H-2, 32-102 cm. The upper 58 cm of the SILT turbidite is parallel laminated (SILT and SILTY CLAY laminations). A pale green lamination (altered ash?) is present at 1037B-2H-2, 122 cm. The bottom 40 cm of Section 169-1037B-2H-4 (100-140 cm) consists of parallel laminated SILT and CLAY overlain by parallel laminated SILTY CLAY. Trace a mounts of pyrite (fine disseminated blebs) are present in Section 169-1037B-2H-5, -6, and -7 and a lamina of diagenetic pyrite is present in Section 169-1037B-2H-4, 10 cm.

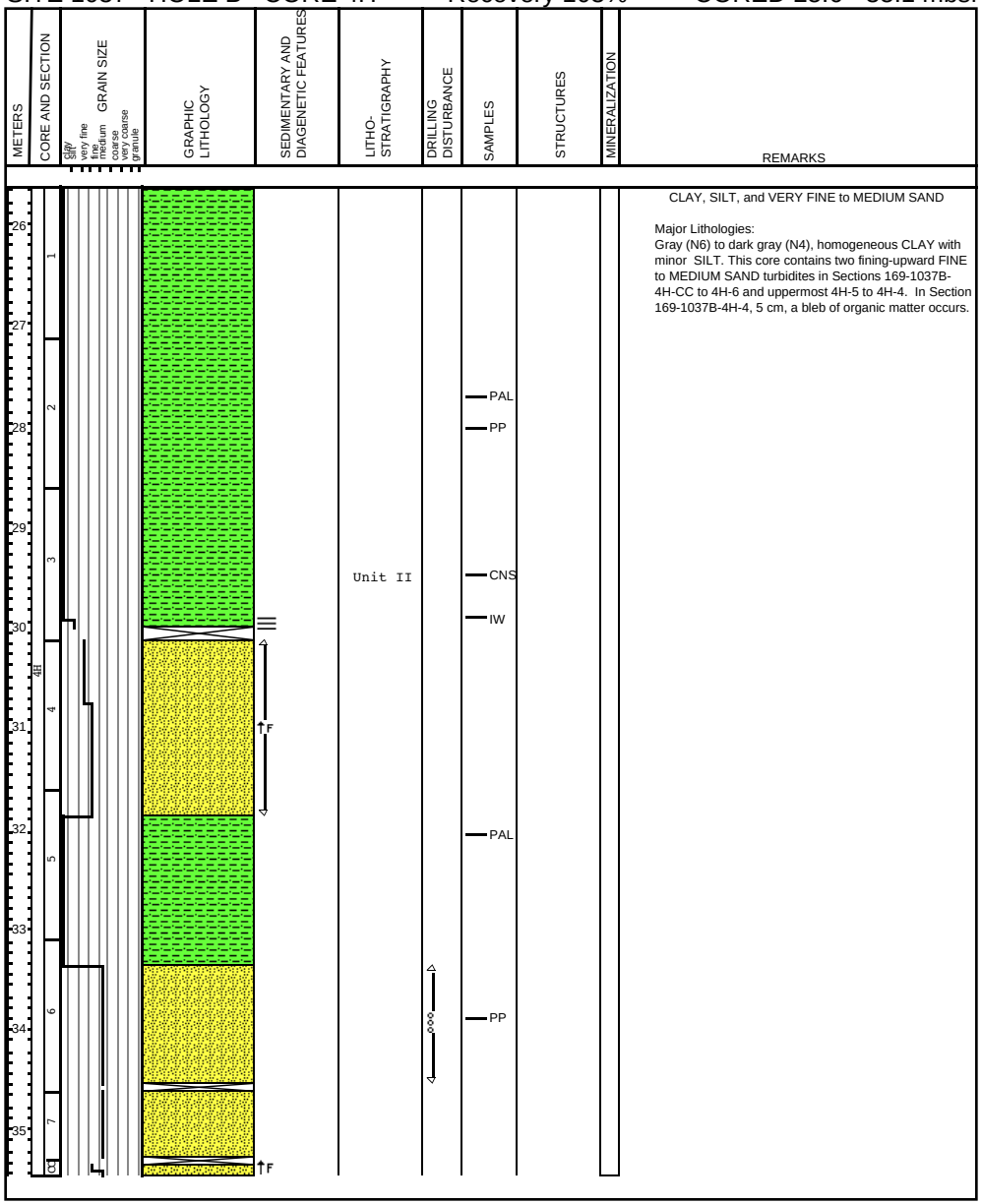
SITE 1037 HOLE B CORE 3H Recovery 105% CORED 16.1 - 25.6 mbsf

1037B-3H



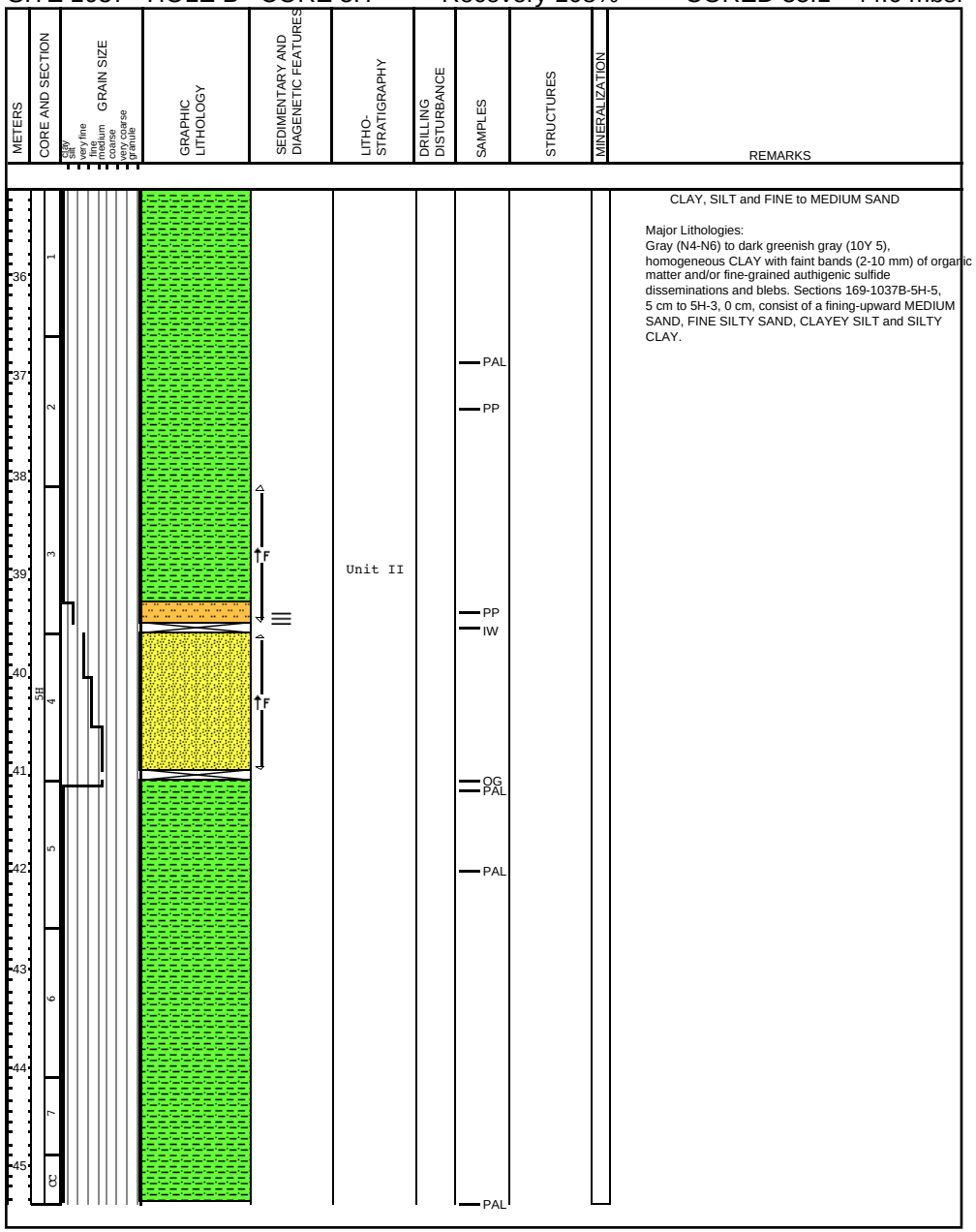
SITE 1037 HOLE B CORE 4H Recovery 103% CORED 25.6 - 35.1 mbsf

1037B-4H



SITE 1037 HOLE B CORE 5H Recovery 108% CORED 35.1 - 44.6 mbsf

1037B-5H

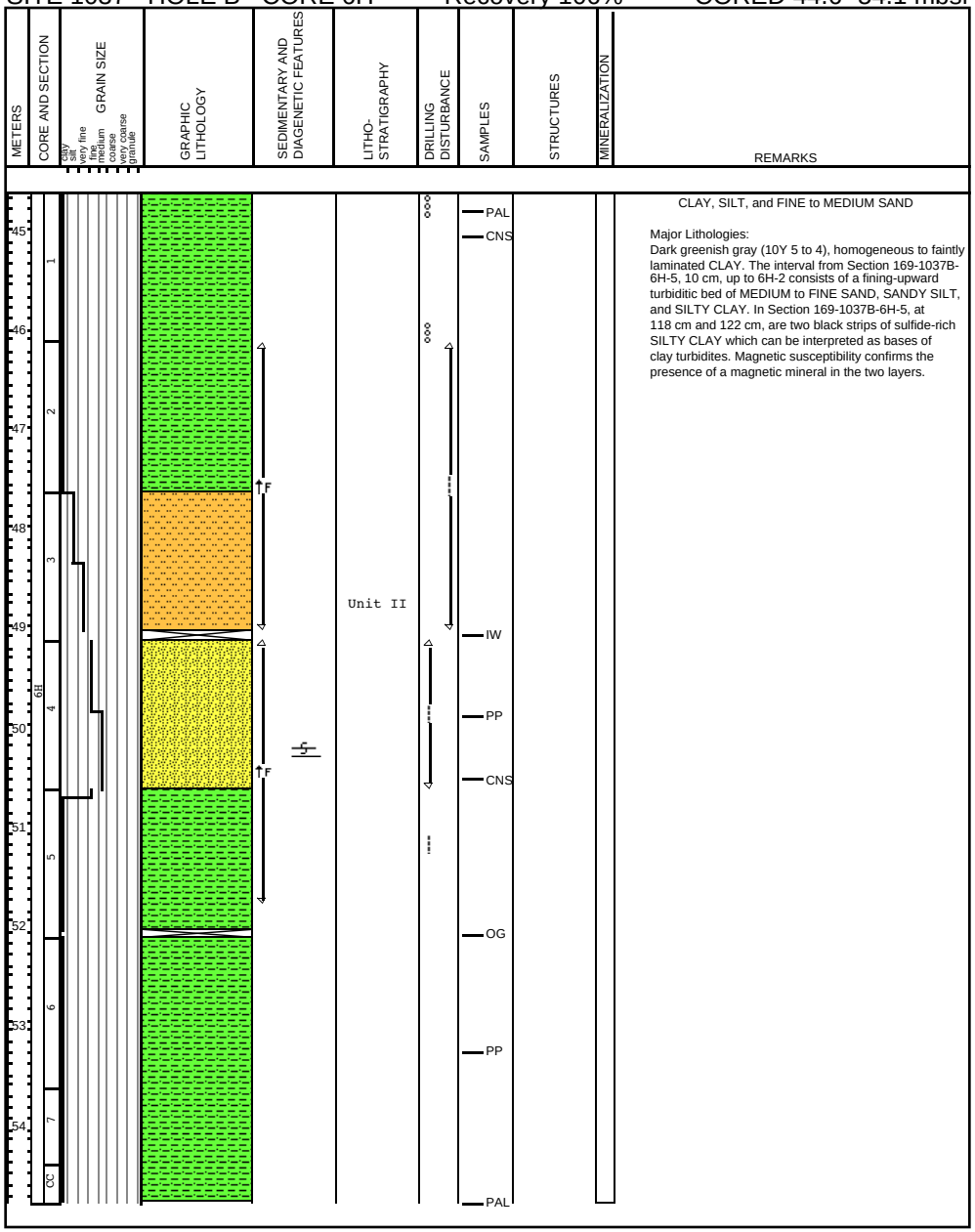


CLAY, SILT and FINE to MEDIUM SAND

Major Lithologies:
Gray (N4-N6) to dark greenish gray (10Y 5), homogeneous CLAY with faint bands (2-10 mm) of organic matter and/or fine-grained authigenic sulfide disseminations and blebs. Sections 169-1037B-5H-5, 5 cm to 5H-3, 0 cm, consist of a fining-upward MEDIUM SAND, FINE SILTY SAND, CLAYEY SILT and SILTY CLAY.

SITE 1037 HOLE B CORE 6H Recovery 106% CORED 44.6 -54.1 mbsf

1037B-6H

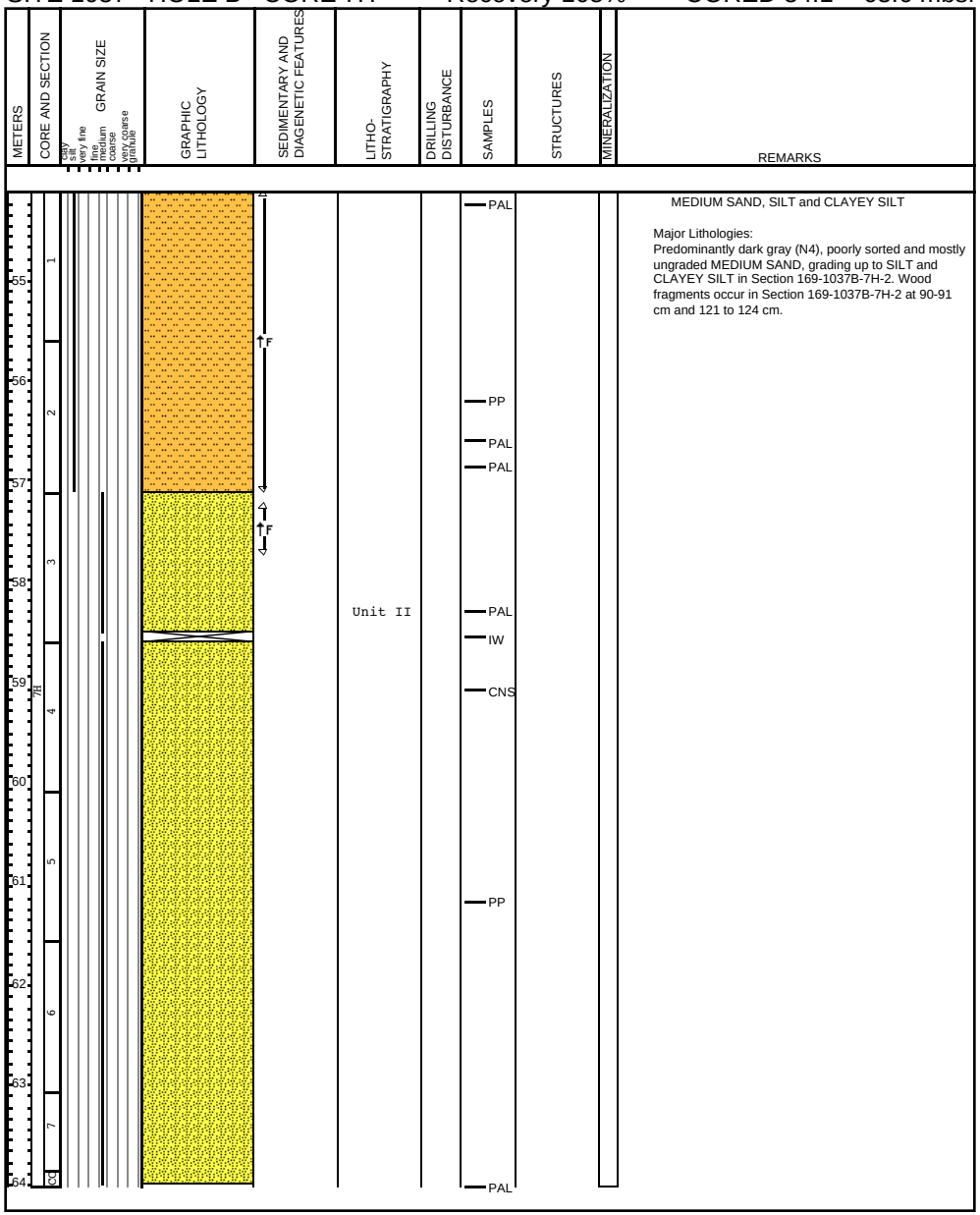


CLAY, SILT, and FINE to MEDIUM SAND

Major Lithologies:
Dark greenish gray (10Y 5 to 4), homogeneous to faintly laminated CLAY. The interval from Section 169-1037B-6H-5, 10 cm, up to 6H-2 consists of a fining-upward turbiditic bed of MEDIUM to FINE SAND, SANDY SILT, and SILTY CLAY. In Section 169-1037B-6H-5, at 118 cm and 122 cm, are two black strips of sulfide-rich SILTY CLAY which can be interpreted as bases of clay turbidites. Magnetic susceptibility confirms the presence of a magnetic mineral in the two layers.

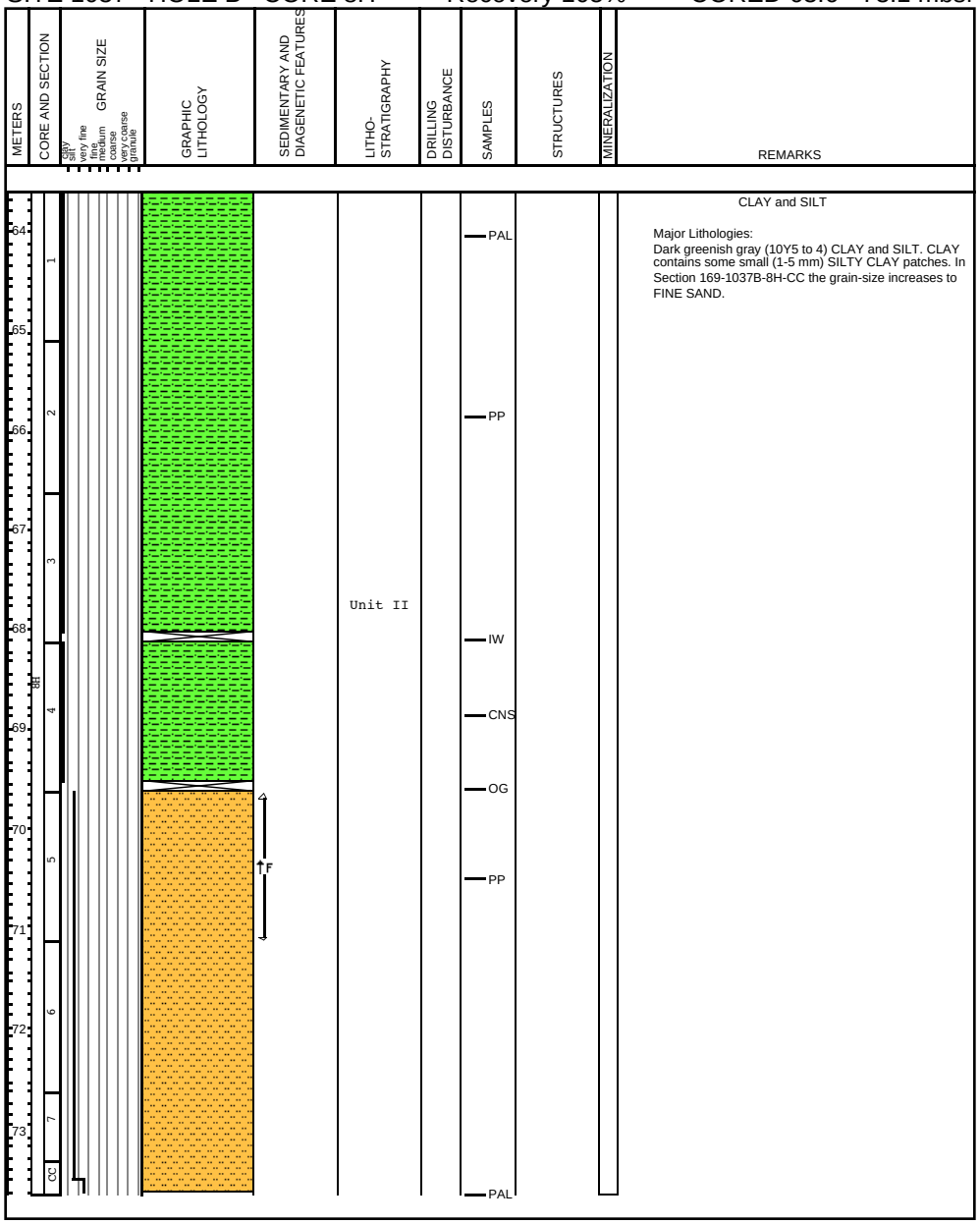
SITE 1037 HOLE B CORE 7H Recovery 105% CORED 54.1 - 63.6 mbsf

1037B-7H



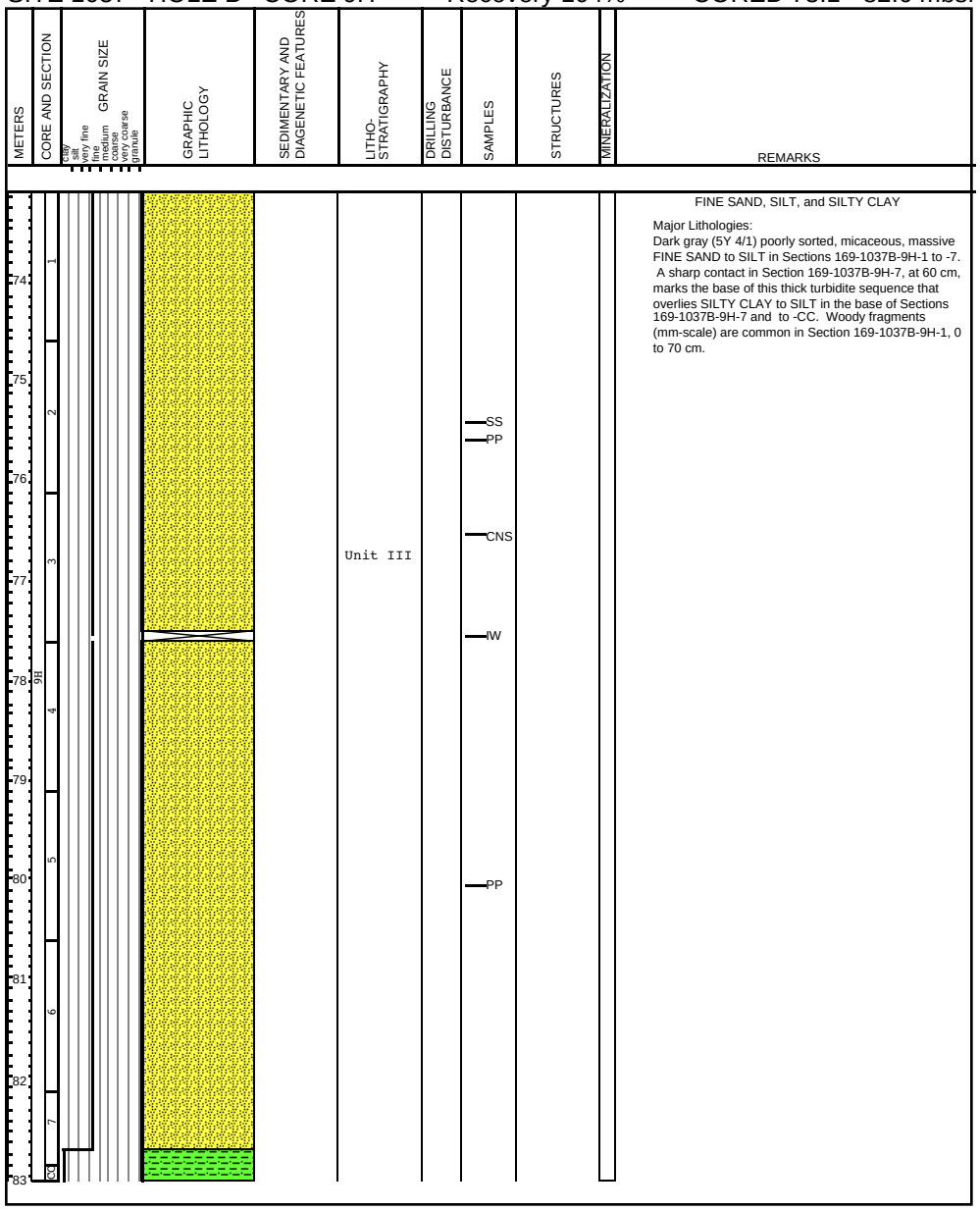
SITE 1037 HOLE B CORE 8H Recovery 105% CORED 63.6 - 73.1 mbsf

1037B-8H



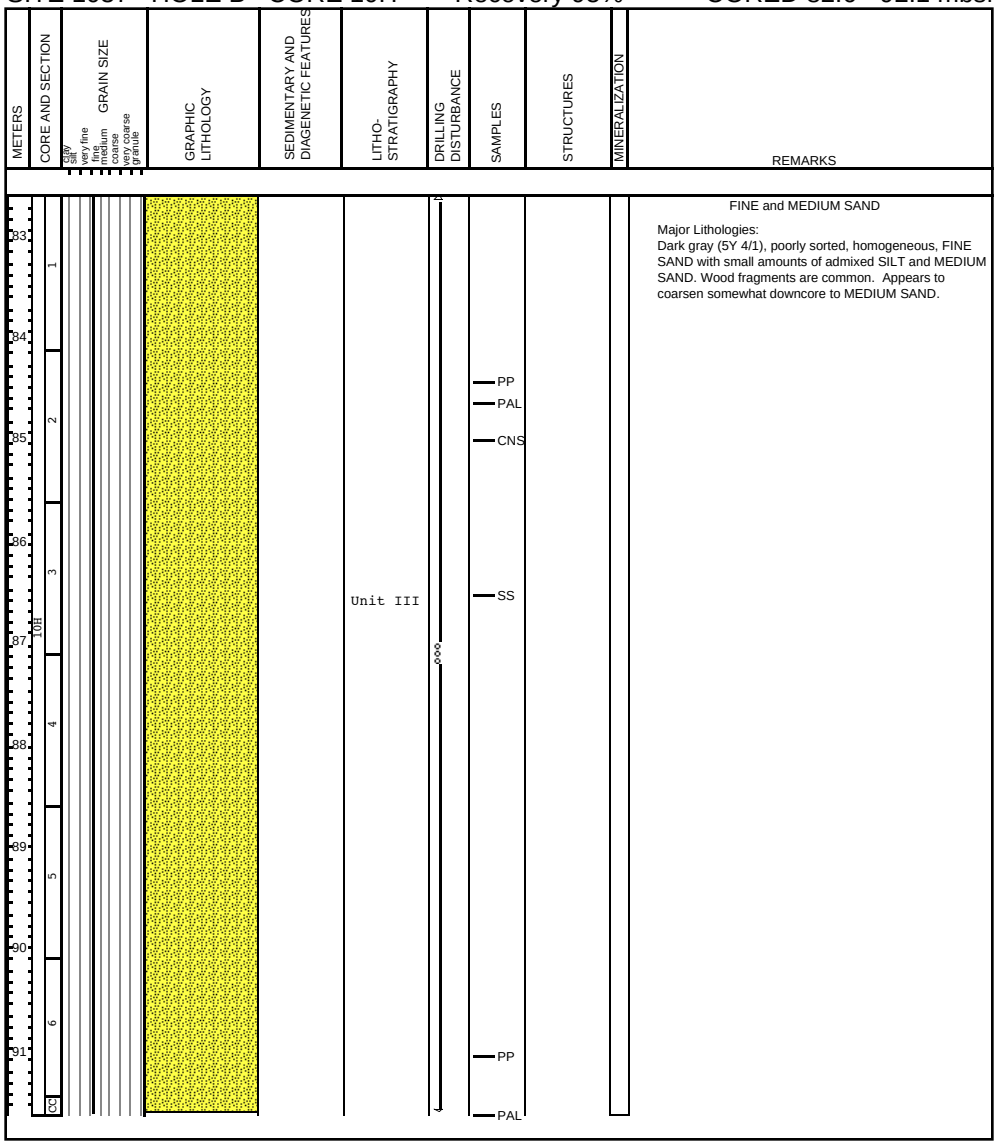
SITE 1037 HOLE B CORE 9H Recovery 104% CORED 73.1 - 82.6 mbsf

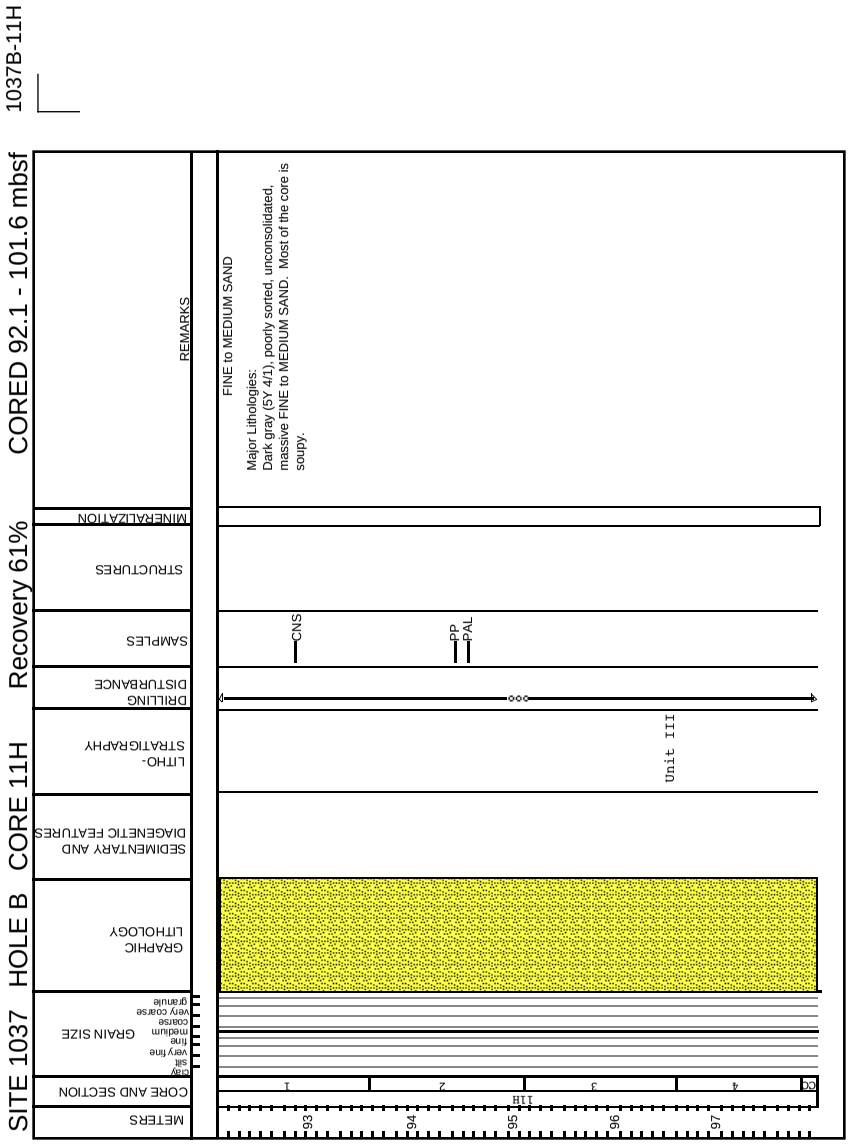
1037B-9H



SITE 1037 HOLE B CORE 10H Recovery 95% CORED 82.6 - 92.1 mbsf

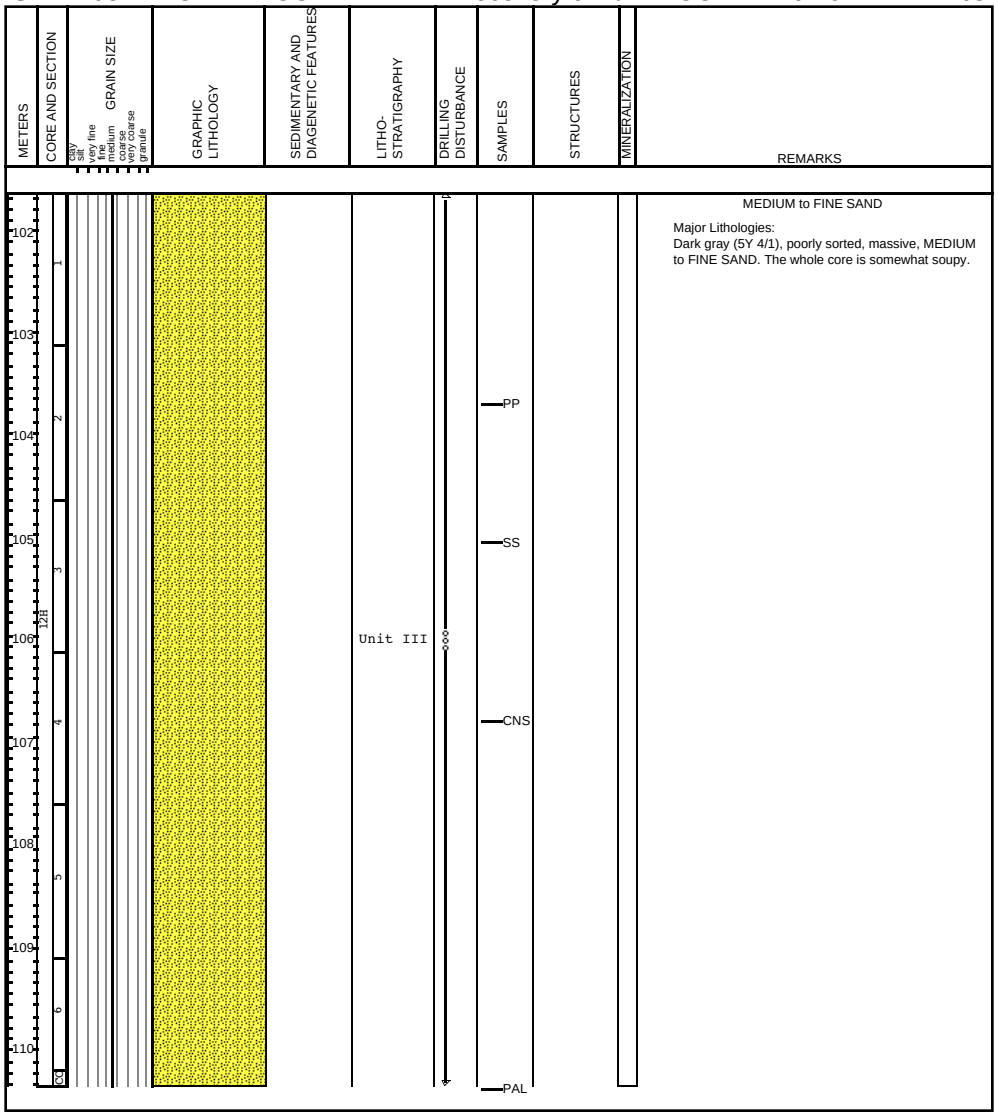
1037B-10H

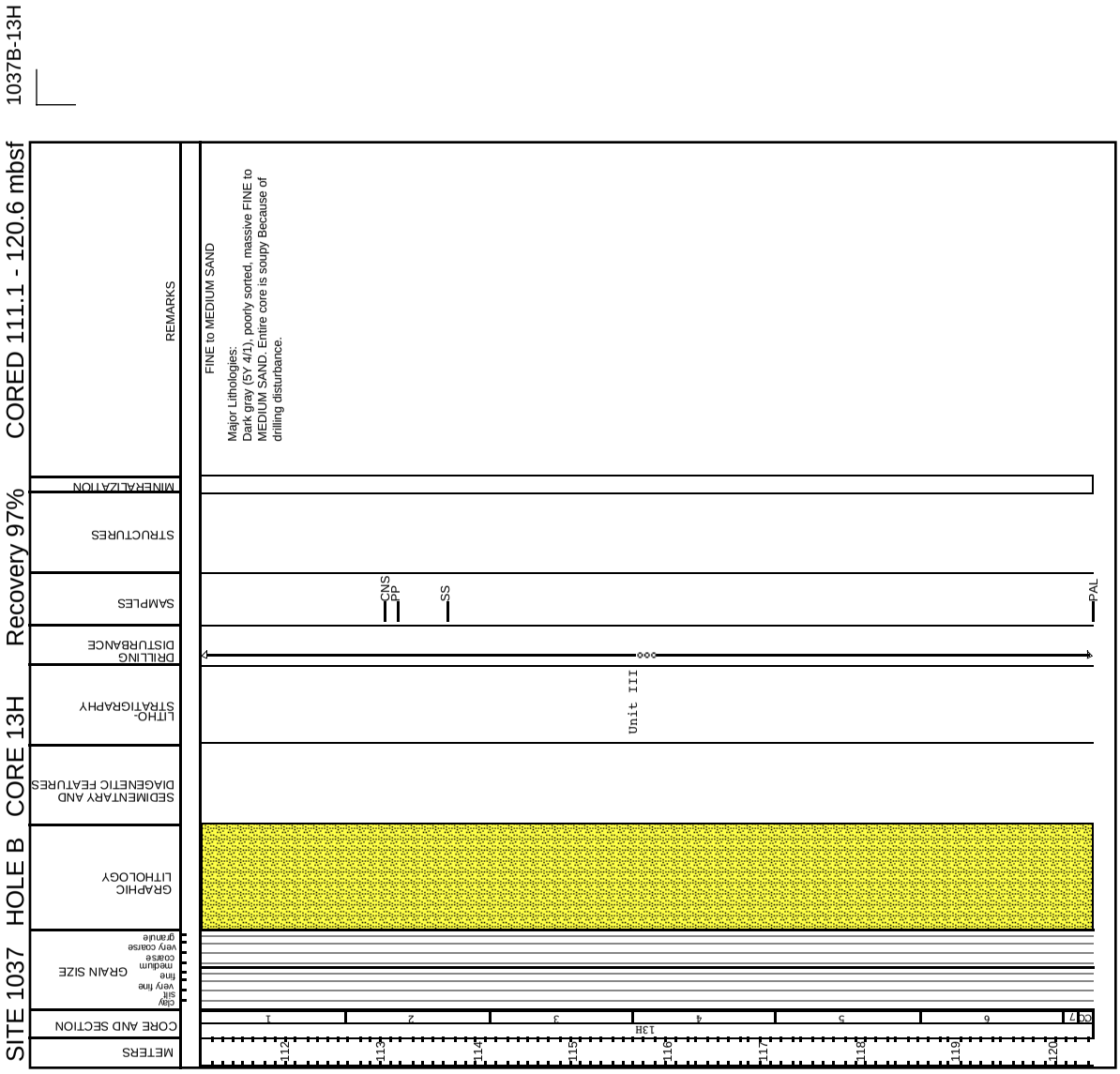



SITE 1037
HOLE B
CORE 11H
Recovery 61%
CORED 92.1 - 101.6 mbsf
1037B-11H
METERS
CORE AND SECTION
GRAIN SIZE
clay
silt
very fine
fine
medium
coarse
very coarse
granule
GRAPHIC LITHOLOGY
SEDIMENTARY AND DIAGENETIC FEATURES
LITHO-STRATIGRAPHY
DRILLING DISTURBANCE
SAMPLES
STRUCTURES
MINERALIZATION
REMARKS
FINE to MEDIUM SAND
Major Lithologies:
Dark gray (5Y 4/1), poorly sorted, unconsolidated, massive FINE to MEDIUM SAND. Most of the core is soupy.
CNS
PP
PAL
Unit III
1
2
3
4
CC
11H
93
94
95
96
97

SITE 1037 HOLE B CORE 12H Recovery 92% CORED 101.6 - 111.1 mbsf

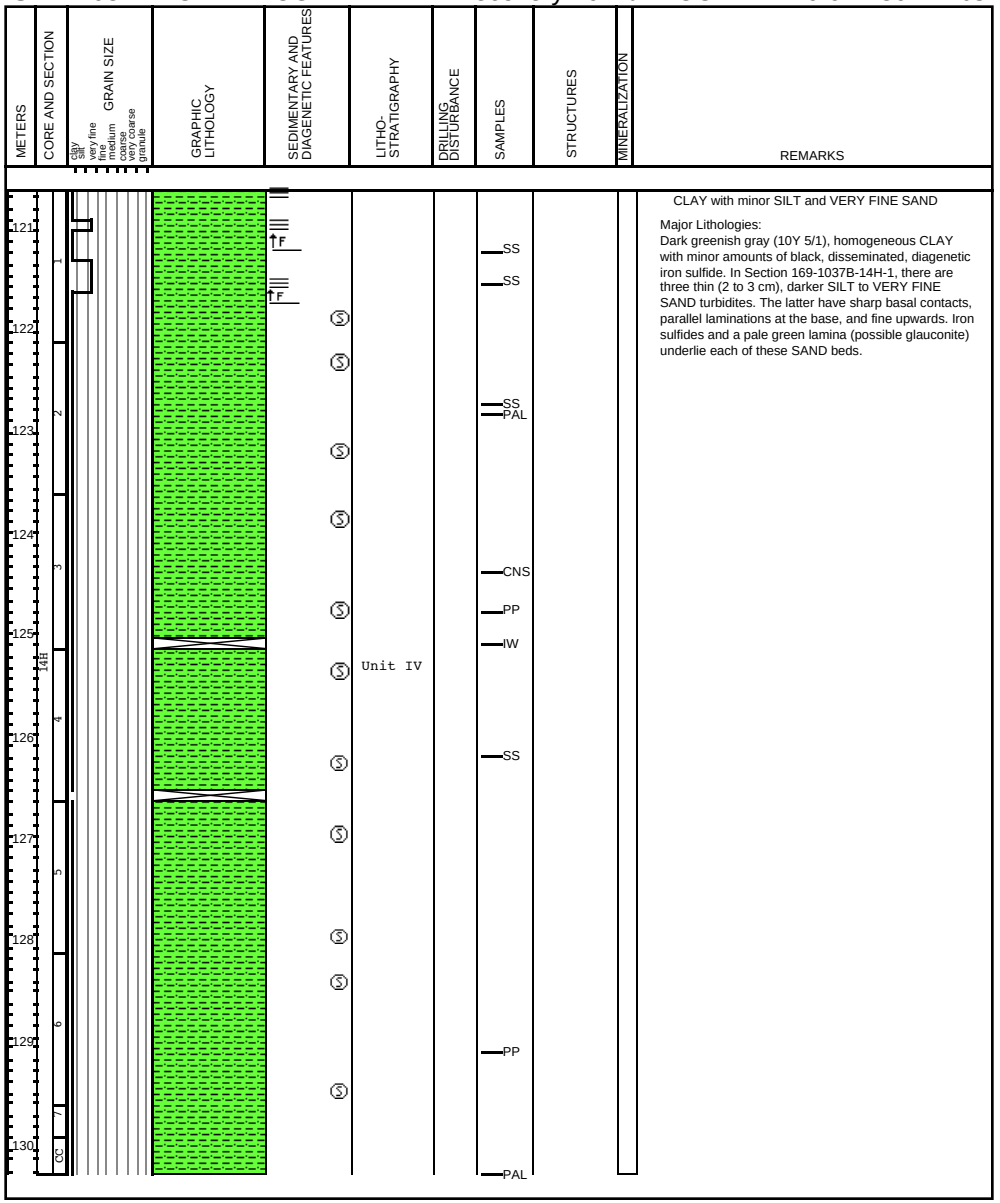
1037B-12H




SITE 1037 HOLE B CORE 13H Recovery 97% CORED 111.1 - 120.6 mbsf
1037B-13H
METERS
CORE AND SECTION
GRAIN SIZE
clay
silt
very fine
fine
medium
coarse
very coarse
granule
GRAPHIC LITHOLOGY
SEDIMENTARY AND DIAGENETIC FEATURES
LITHO-STRATIGRAPHY
DRILLING DISTURBANCE
SAMPLES
STRUCTURES
MINERALIZATION
REMARKS
FINE to MEDIUM SAND
Major Lithologies:
Dark gray (5Y 4/1), poorly sorted, massive FINE to MEDIUM SAND. Entire core is soupy Because of drilling disturbance.
Unit III
CNS
PP
SS
PAL
112
113
114
115
116
117
118
119
120
13H
1
2
3
4
5
6
CC

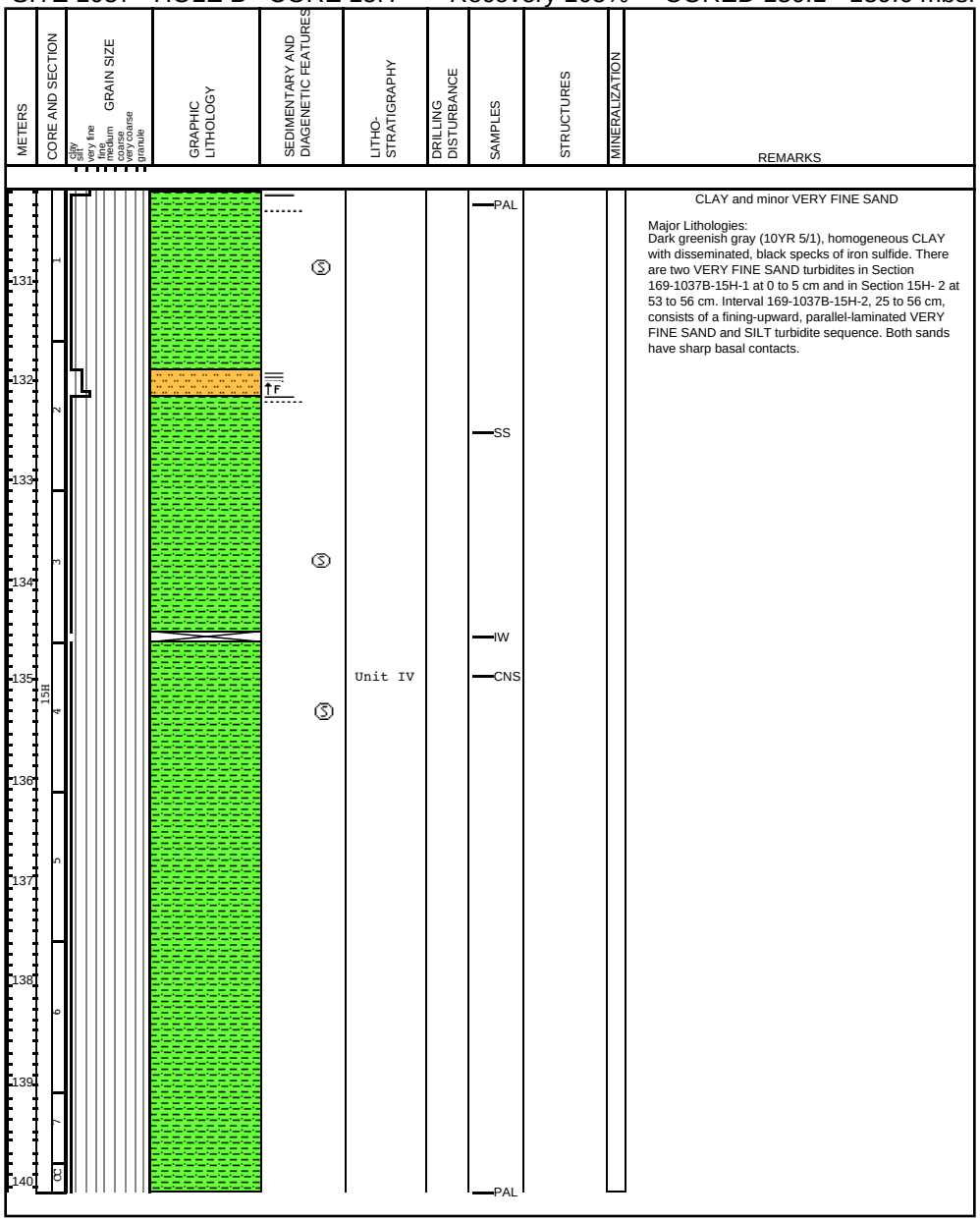
SITE 1037 HOLE B CORE 14H Recovery 102% CORED 120.6 - 130.1 mbsf

1037B-14H



SITE 1037 HOLE B CORE 15H Recovery 105% CORED 130.1 - 139.6 mbsf

1037B-15H

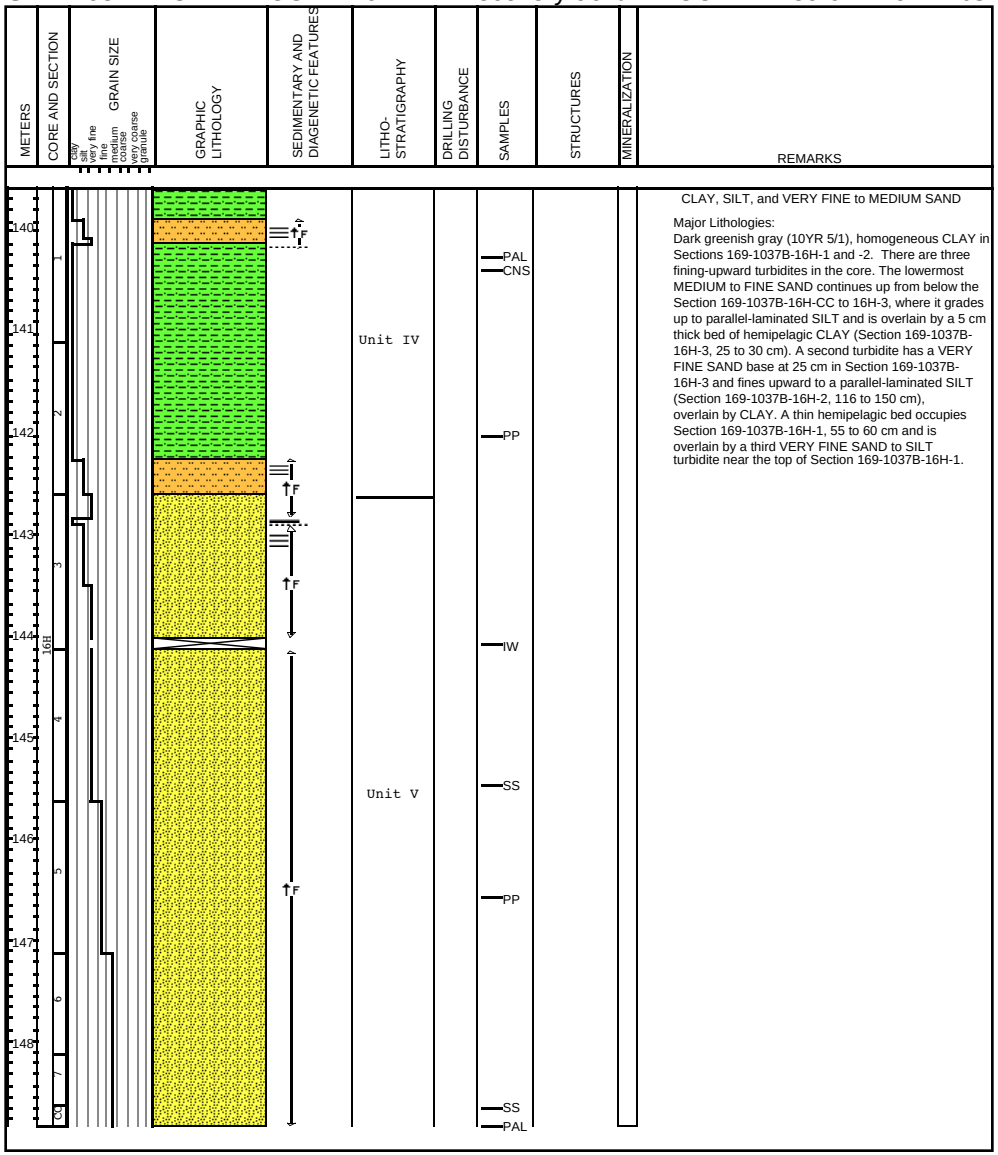


CLAY and minor VERY FINE SAND

Major Lithologies:
Dark greenish gray (10YR 5/1), homogeneous CLAY with disseminated, black specks of iron sulfide. There are two VERY FINE SAND turbidites in Section 169-1037B-15H-1 at 0 to 5 cm and in Section 15H- 2 at 53 to 56 cm. Interval 169-1037B-15H-2, 25 to 56 cm, consists of a fining-upward, parallel-laminated VERY FINE SAND and SILT turbidite sequence. Both sands have sharp basal contacts.

SITE 1037 HOLE B CORE 16H Recovery 96% CORED 139.6 - 149.1 mbsf

1037B-16H

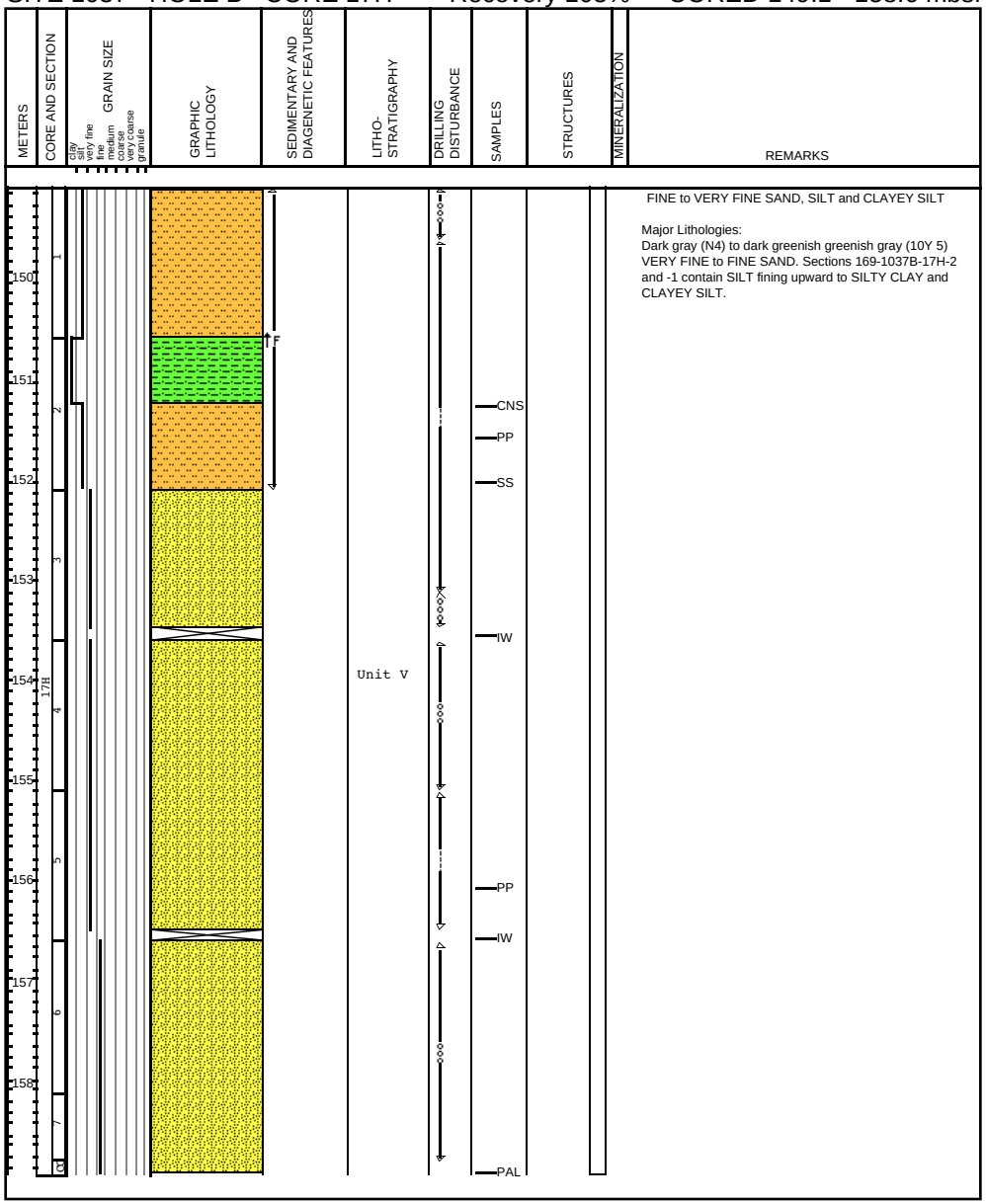


CLAY, SILT, and VERY FINE to MEDIUM SAND

Major Lithologies:
Dark greenish gray (10YR 5/1), homogeneous CLAY in Sections 169-1037B-16H-1 and -2. There are three fining-upward turbidites in the core. The lowermost MEDIUM to FINE SAND continues up from below the Section 169-1037B-16H-CC to 16H-3, where it grades up to parallel-laminated SILT and is overlain by a 5 cm thick bed of hemipelagic CLAY (Section 169-1037B-16H-3, 25 to 30 cm). A second turbidite has a VERY FINE SAND base at 25 cm in Section 169-1037B-16H-3 and fines upward to a parallel-laminated SILT (Section 169-1037B-16H-2, 116 to 150 cm), overlain by CLAY. A thin hemipelagic bed occupies Section 169-1037B-16H-1, 55 to 60 cm and is overlain by a third VERY FINE SAND to SILT turbidite near the top of Section 169-1037B-16H-1.

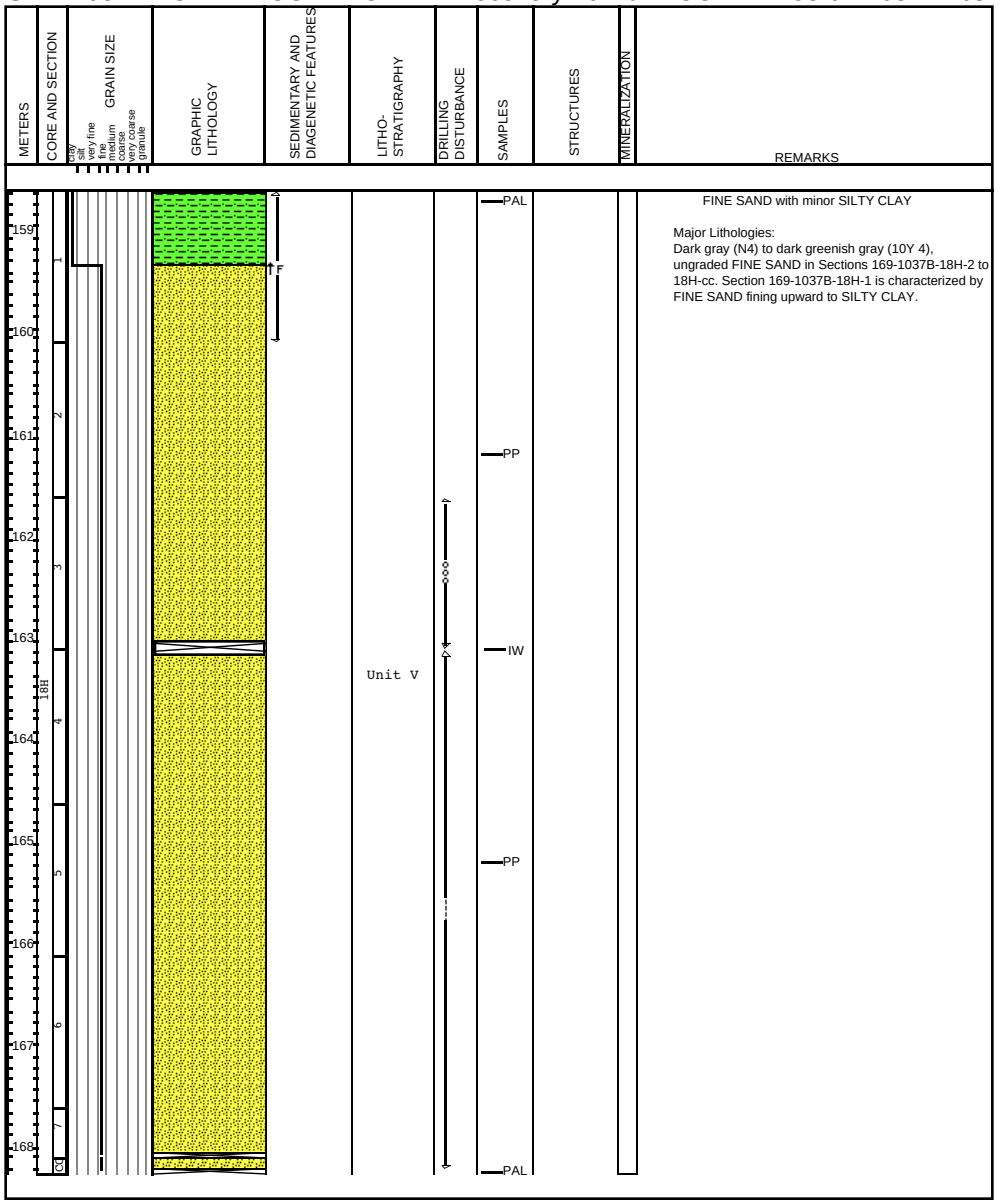
SITE 1037 HOLE B CORE 17H Recovery 103% CORED 149.1 - 158.6 mbsf

1037B-17H



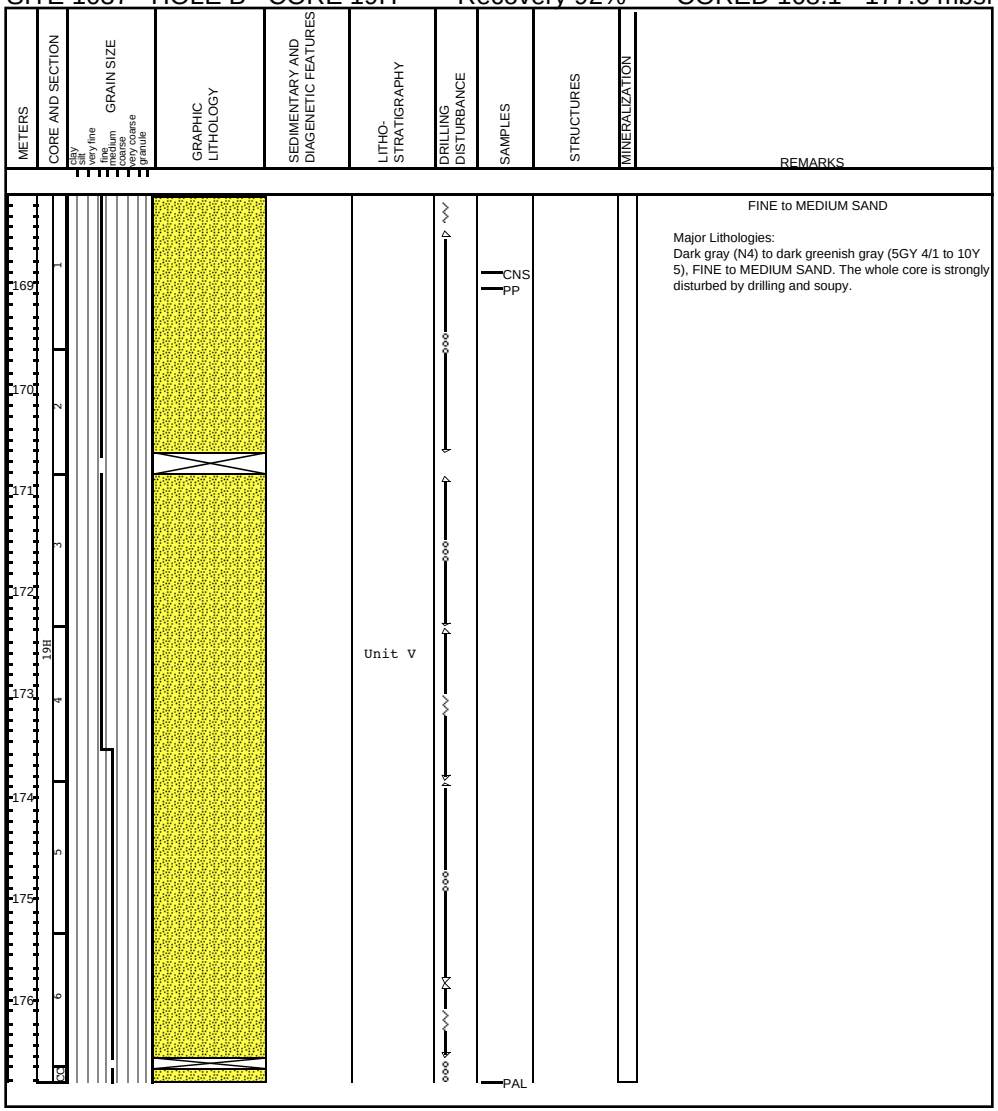
SITE 1037 HOLE B CORE 18H Recovery 101% CORED 158.6 - 168.1 mbsf

1037B-18H



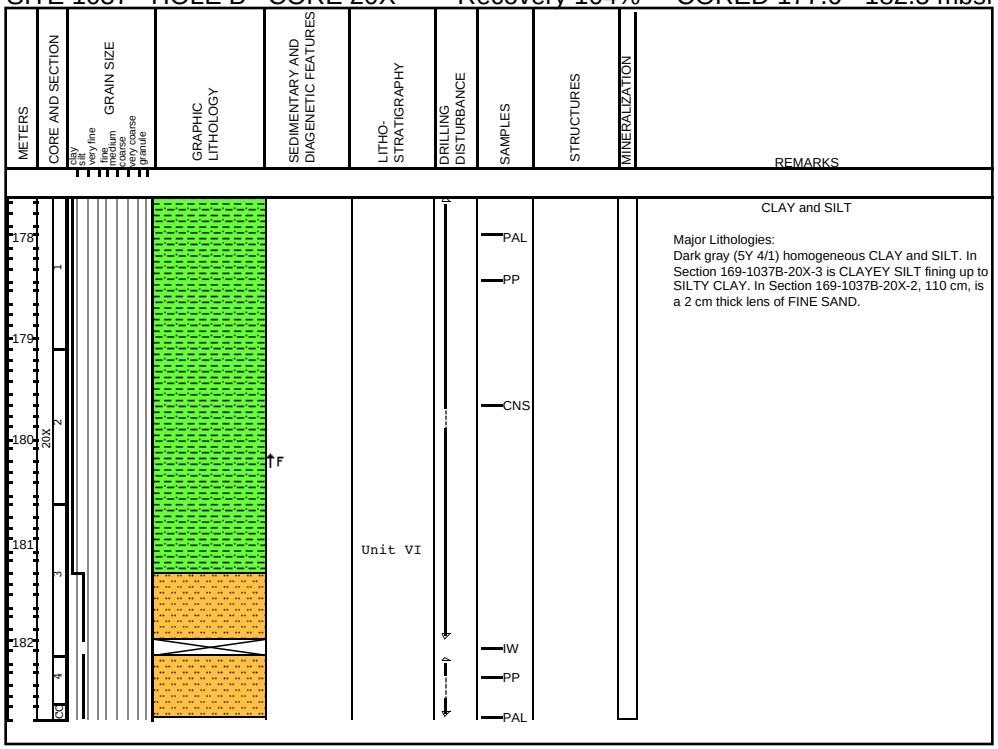
SITE 1037 HOLE B CORE 19H Recovery 92% CORED 168.1 - 177.6 mbsf

1037B-19H



SITE 1037 HOLE B CORE 20X Recovery 104% CORED 177.6 - 182.5 mbsf

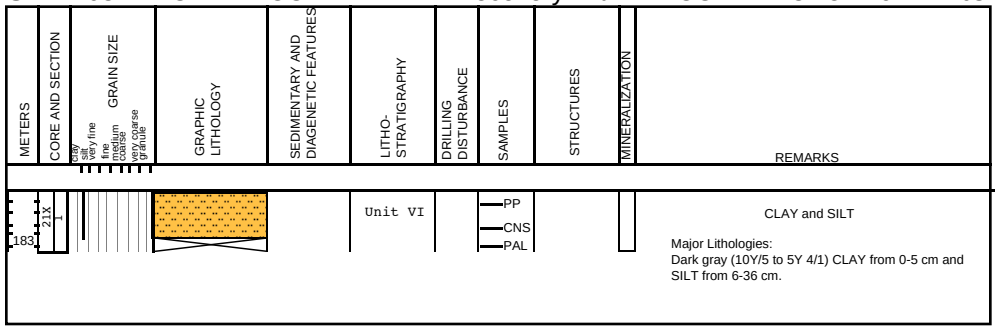
1037B-20X



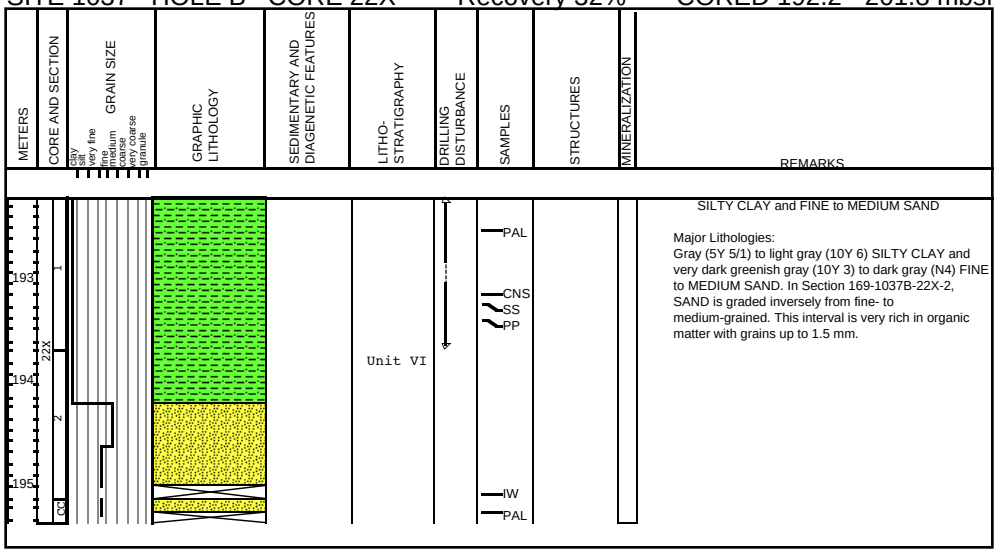
1037B-21X

1037B-22X

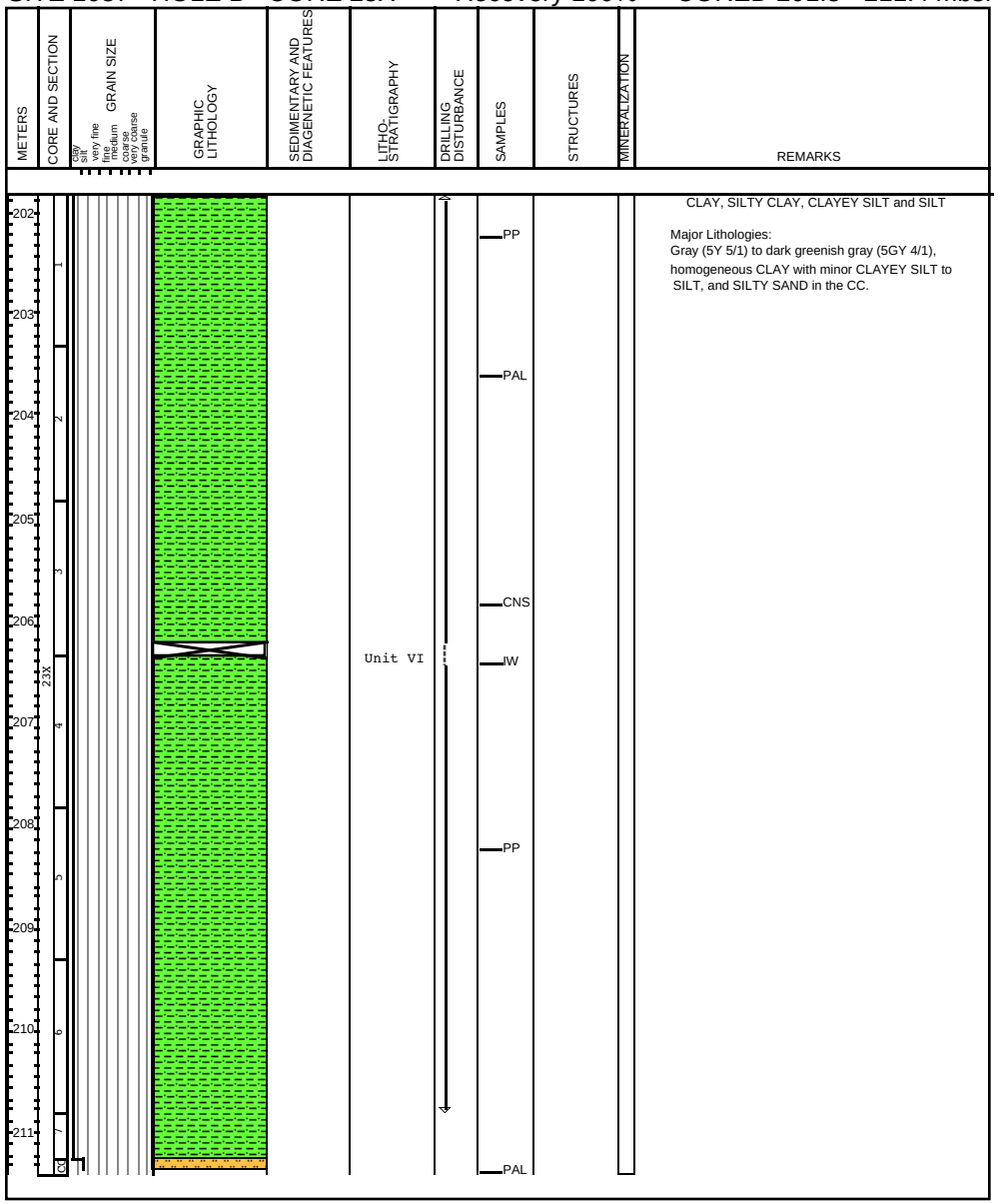
SITE 1037 HOLE B CORE 21X Recovery 4% CORED 182.5 - 192.2 mbsf



SITE 1037 HOLE B CORE 22X Recovery 32% CORED 192.2 - 201.8 mbsf

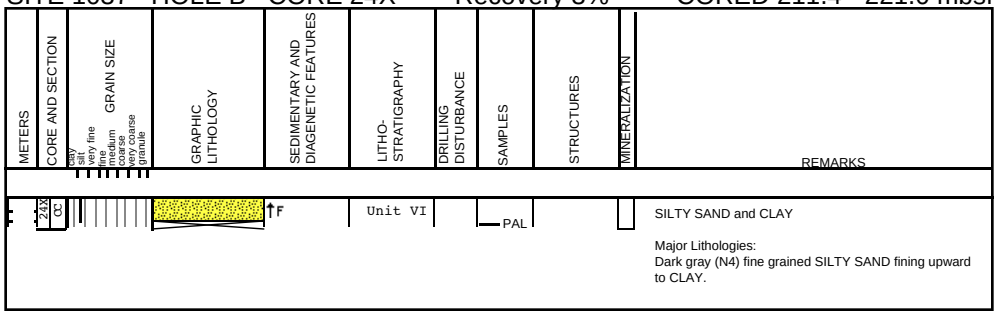


SITE 1037 HOLE B CORE 23X Recovery 100% CORED 201.8 - 211.4 mbsf 1037B-23X



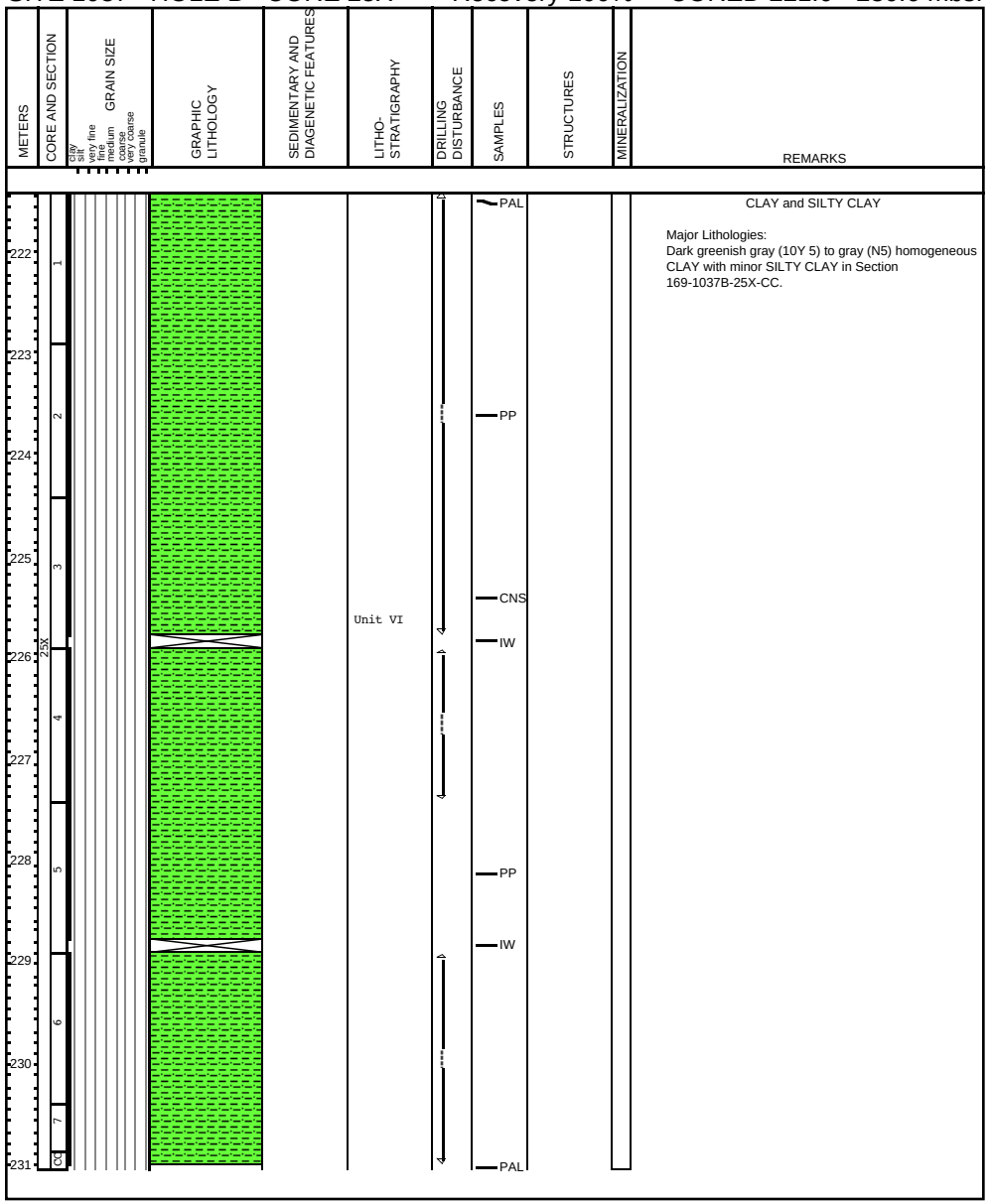
SITE 1037 HOLE B CORE 24X Recovery 3% CORED 211.4 - 221.0 mbsf

1037B-24X



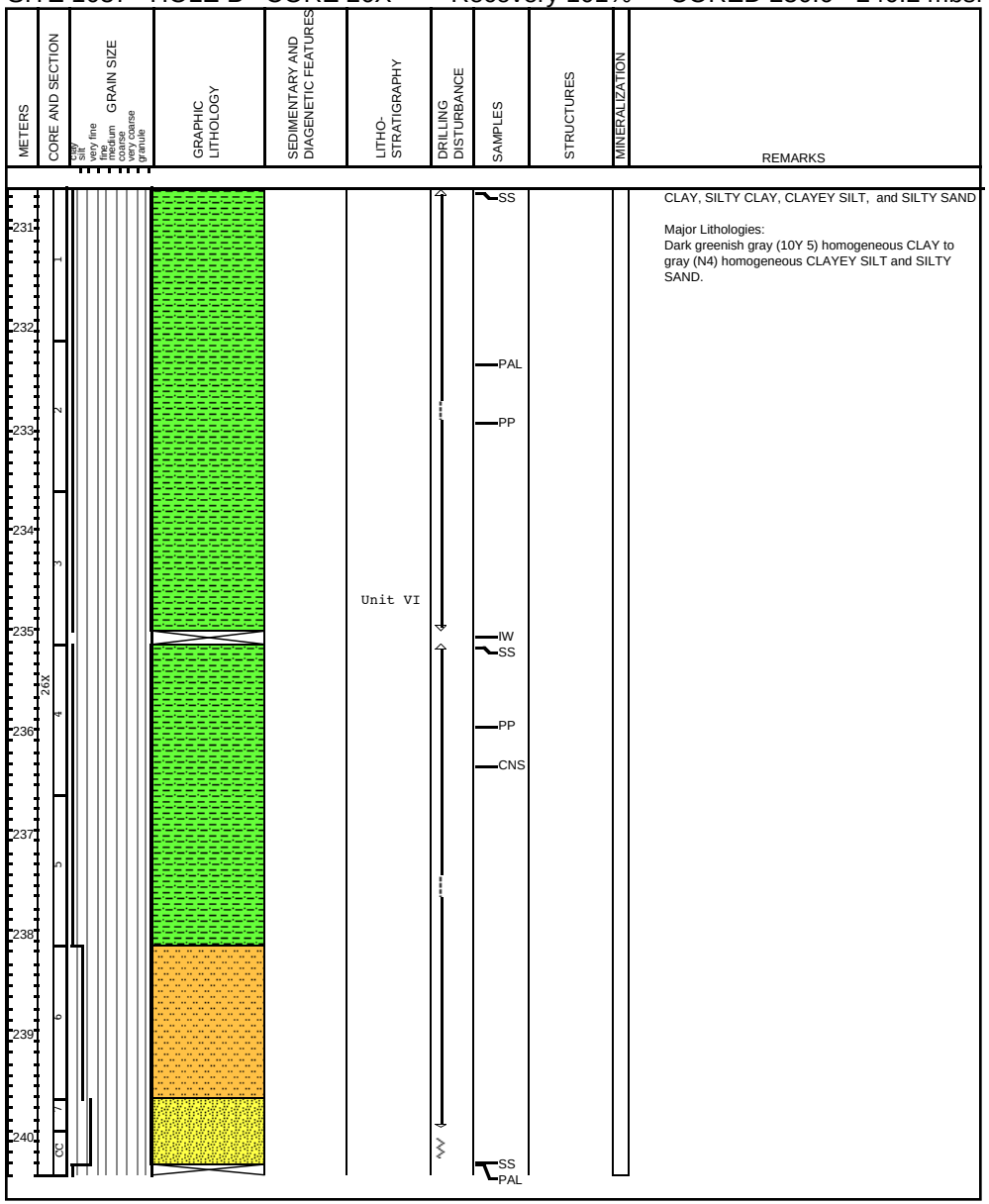
SITE 1037 HOLE B CORE 25X Recovery 100% CORED 221.0 - 230.6 mbsf

1037B-25X



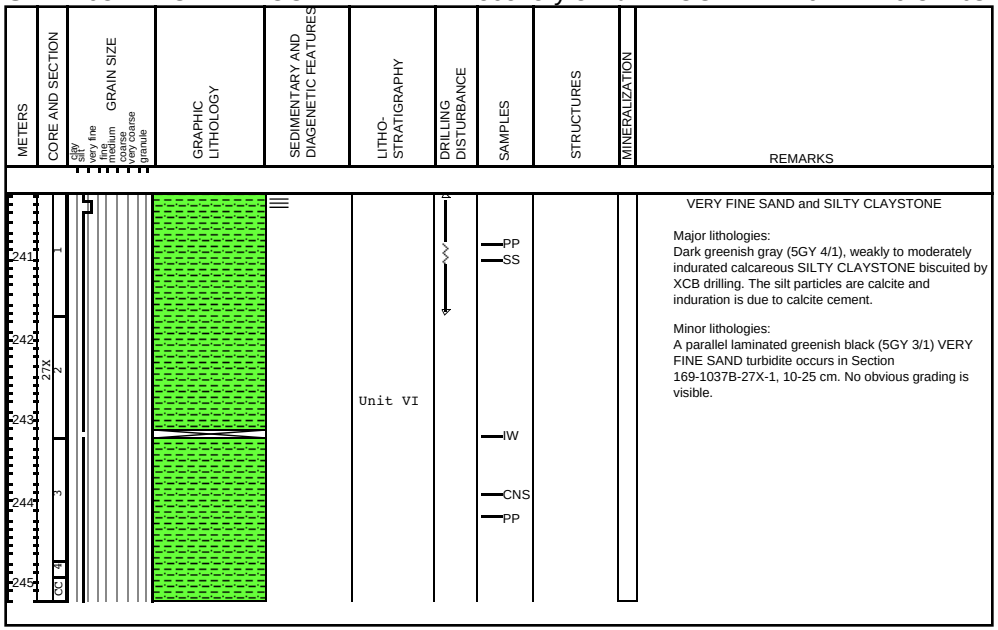
SITE 1037 HOLE B CORE 26X Recovery 101% CORED 230.6 - 240.2 mbsf

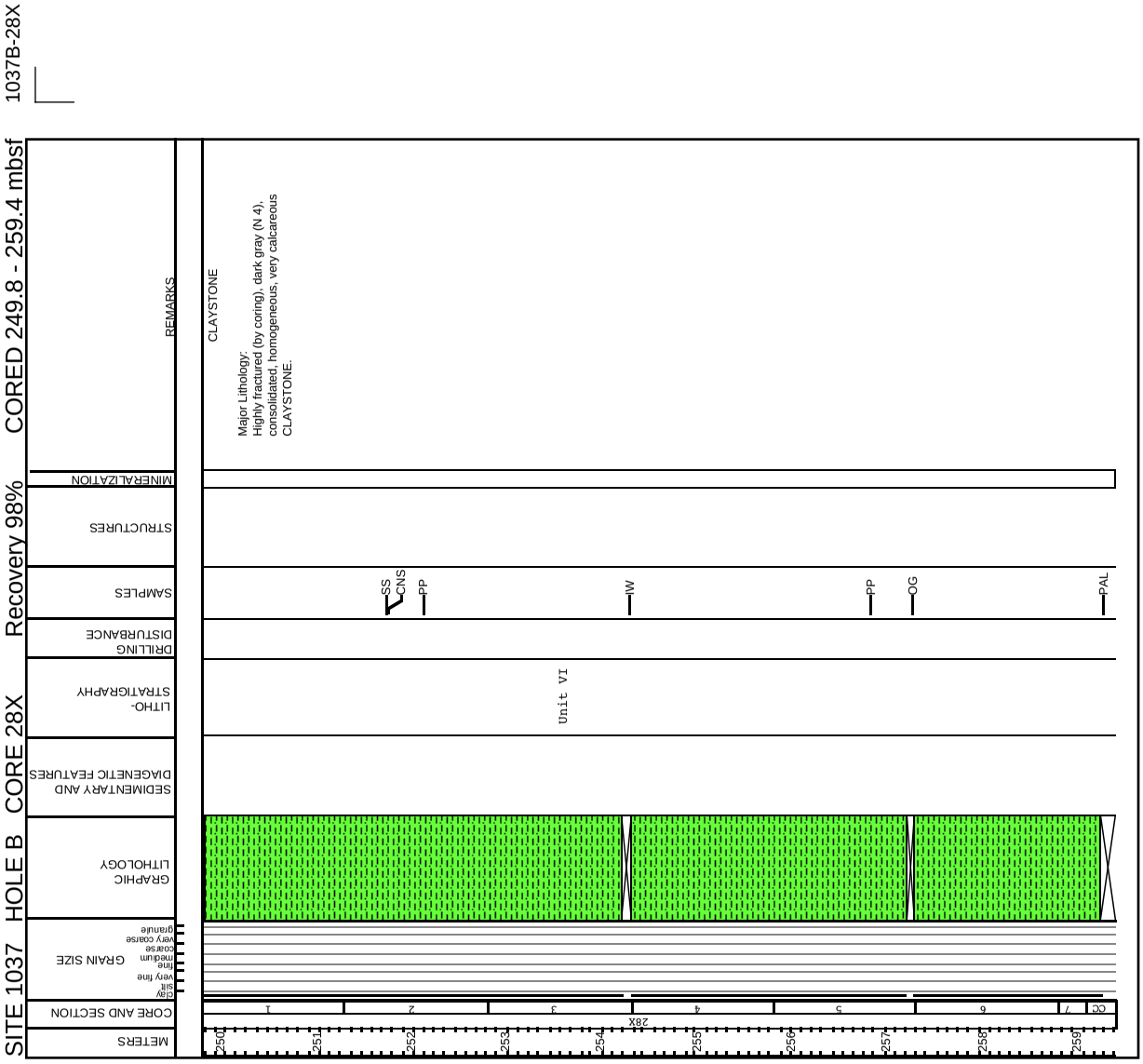
1037B-26X



SITE 1037 HOLE B CORE 27X Recovery 52% CORED 240.2 - 249.8 mbsf

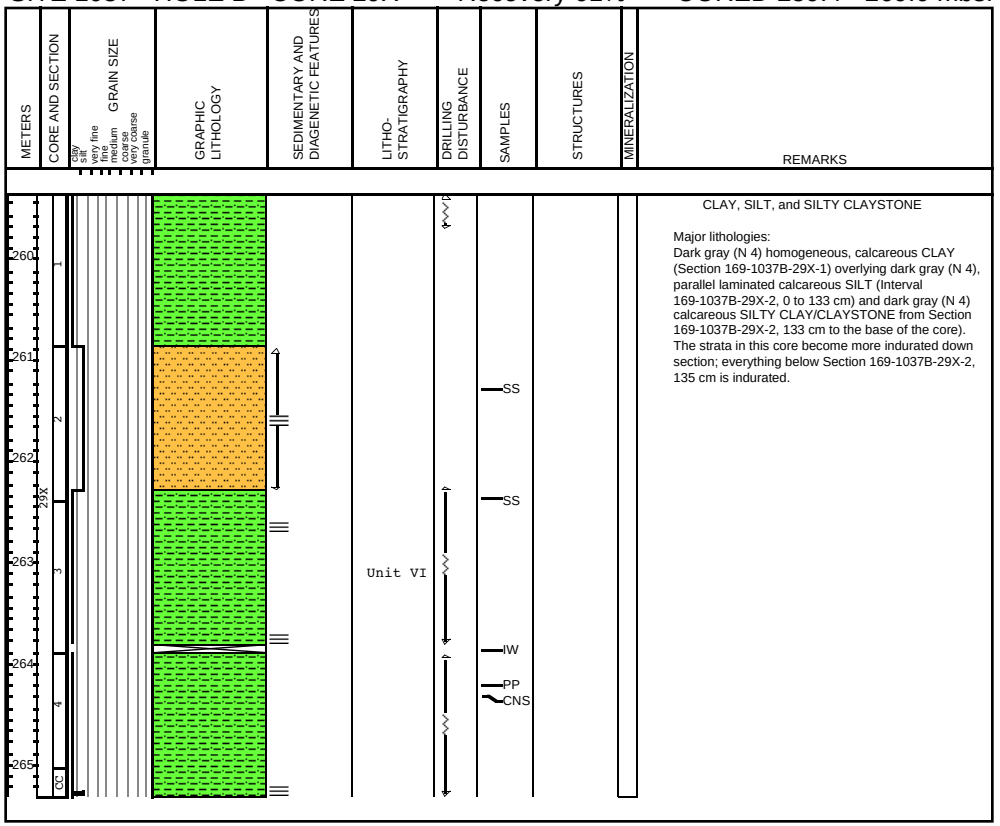
1037B-27X




1037B-28X
SITE 1037 HOLE B CORE 28X Recovery 98% CORED 249.8 - 259.4 mbsf
METERS
CORE AND SECTION
GRAIN SIZE
clay
silt
very fine
fine
medium
coarse
very coarse
granule
GRAPHIC LITHOLOGY
SEDIMENTARY AND DIAGENETIC FEATURES
LITHO-STRATIGRAPHY
DRILLING DISTURBANCE
SAMPLES
STRUCTURES
MINERALIZATION
REMARKS
CLAYSTONE
Major Lithology:
Highly fractured (by coring), dark gray (N 4), consolidated, homogeneous, very calcareous CLAYSTONE.
Unit VI
SS
CNS
PP
W
PP
OG
PAL
28X
1
2
3
4
5
6
7
CC
250
251
252
253
254
255
256
257
258
259

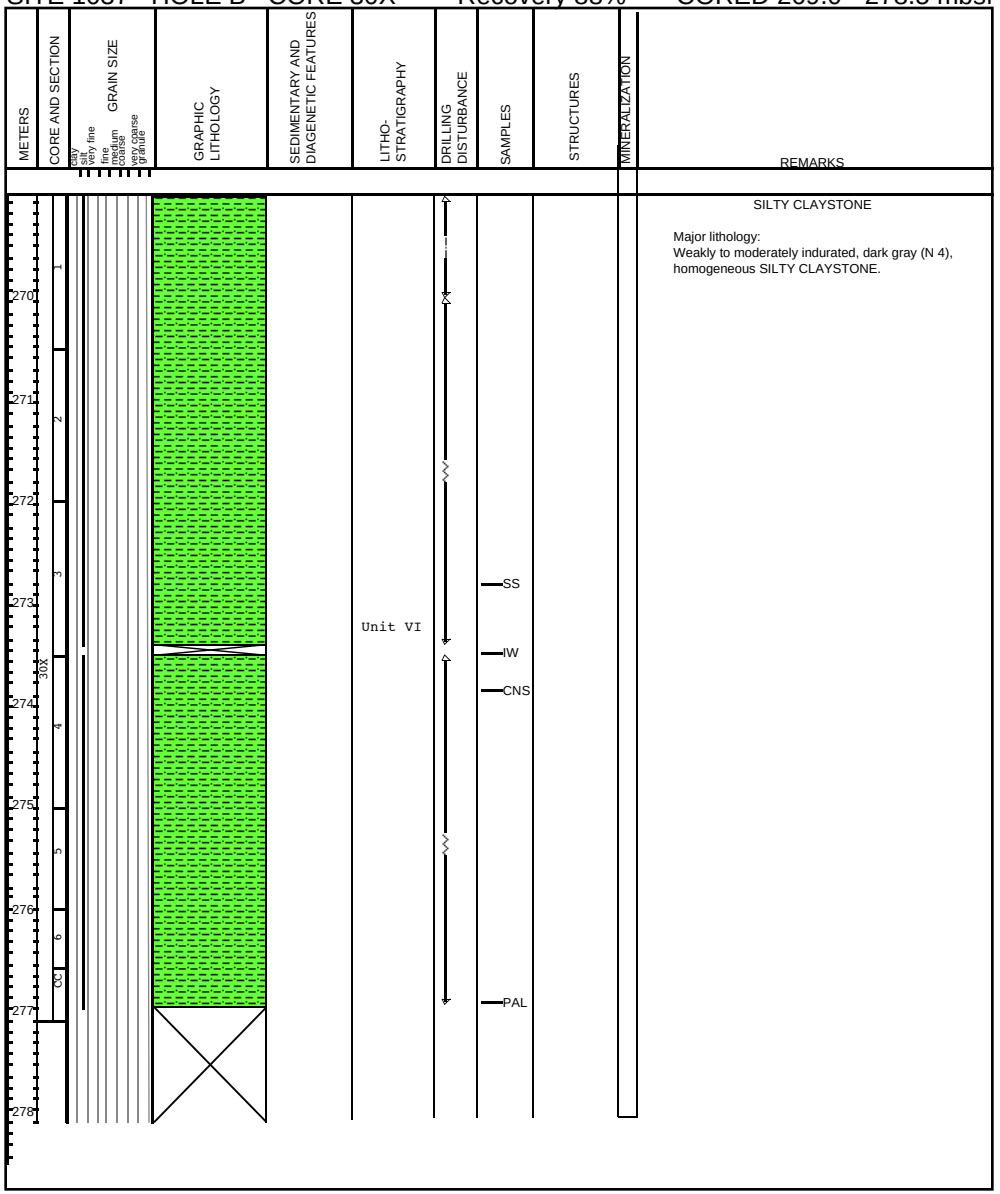
SITE 1037 HOLE B CORE 29X Recovery 61% CORED 259.4 - 269.0 mbsf

1037B-29X



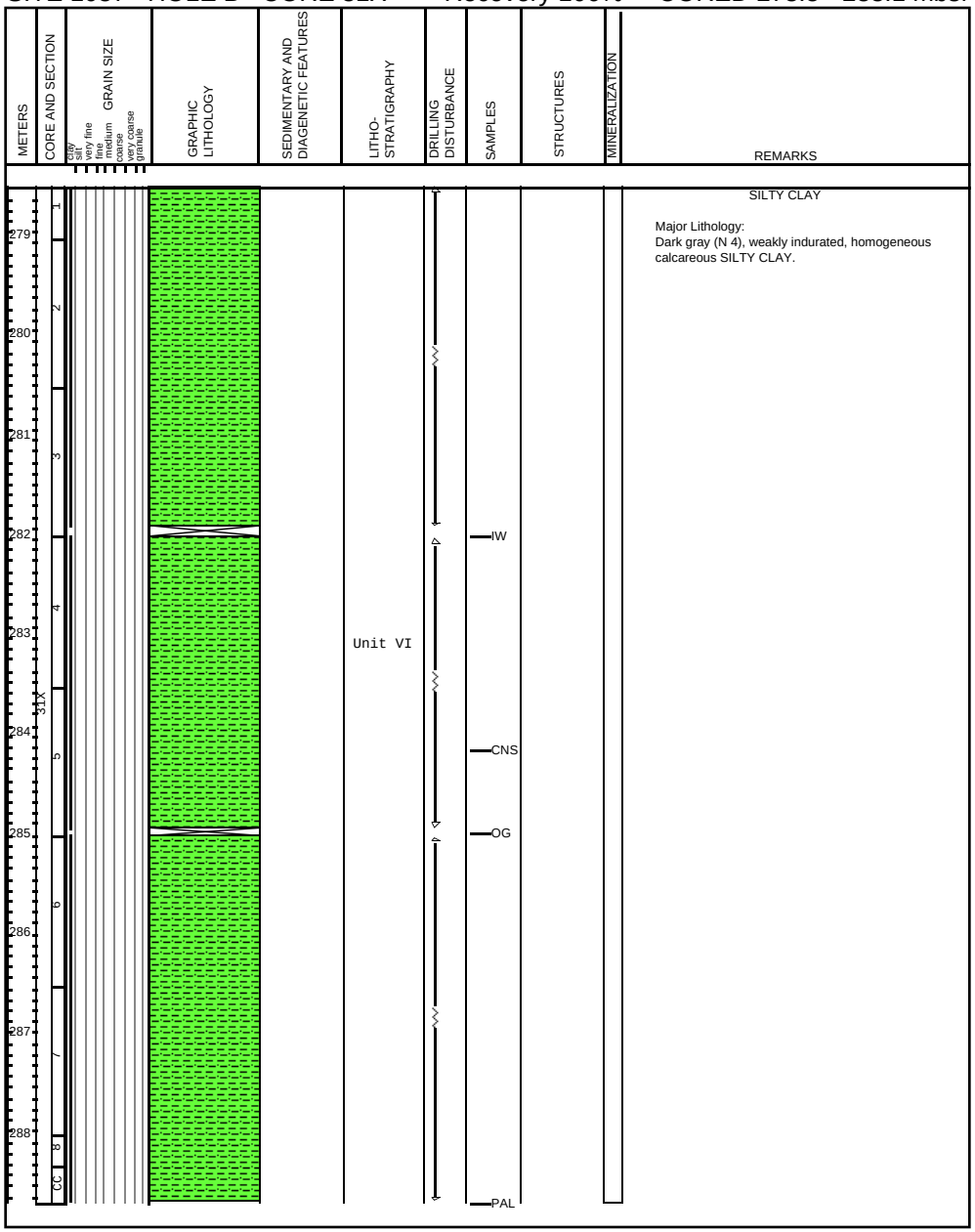
SITE 1037 HOLE B CORE 30X Recovery 88% CORED 269.0 - 278.5 mbsf

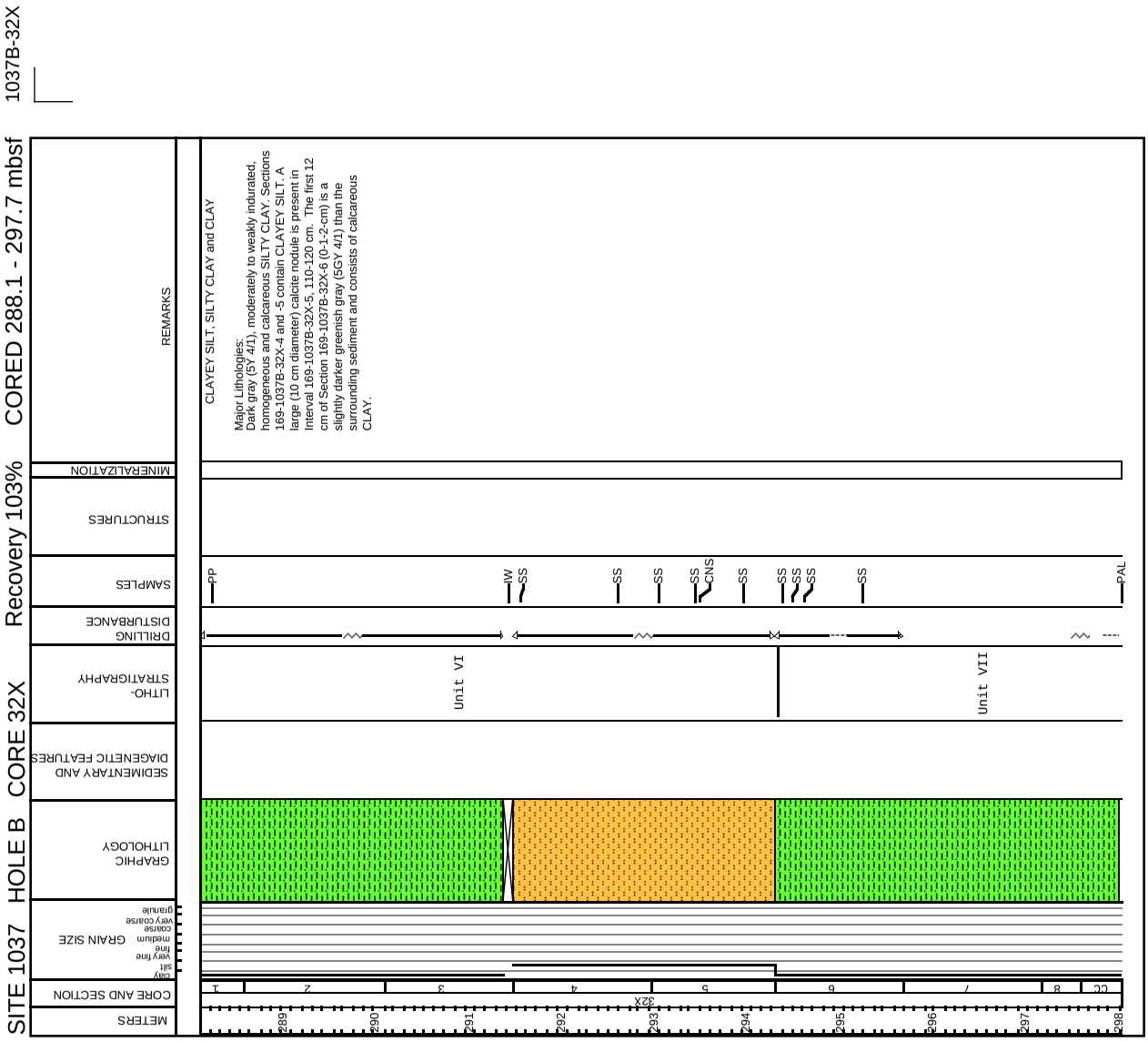
1037B-30X



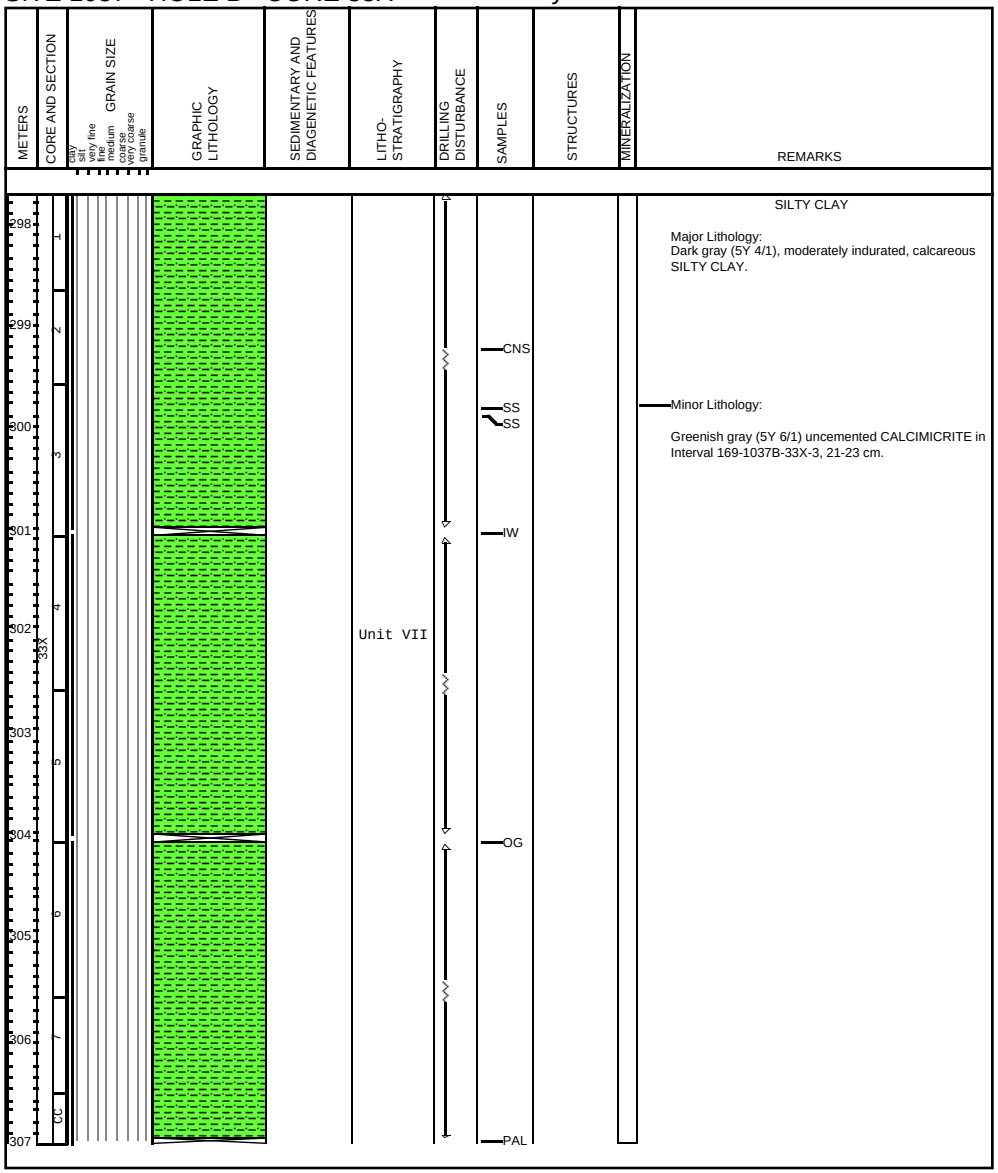
SITE 1037 HOLE B CORE 31X Recovery 106% CORED 278.5 - 288.1 mbsf

1037B-31X




SITE 1037
HOLE B
CORE 32X
Recovery 103%
CORED 288.1 - 297.7 mbsf
1037B-32X
METERS
CORE AND SECTION
GRAIN SIZE
clay
silt
very fine
fine
medium
coarse
very coarse
granule
GRAPHIC LITHOLOGY
SEDIMENTARY AND DIAGENETIC FEATURES
LITHO-STRATIGRAPHY
DRILLING DISTURBANCE
SAMPLES
STRUCTURES
MINERALIZATION
REMARKS
CLAYEY SILT, SILTY CLAY and CLAY
Major Lithologies:
Dark gray (5Y 4/1), moderately to weakly indurated, homogeneous and calcareous SILTY CLAY. Sections 169-1037B-32X-4 and -5 contain CLAYEY SILT. A large (10 cm diameter) calcite nodule is present in Interval 169-1037B-32X-5, 110-120 cm. The first 12 cm of Section 169-1037B-32X-6 (0-1,2-cm) is a slightly darker greenish gray (5GY 4/1) than the surrounding sediment and consists of calcareous CLAY.
Unit VI
Unit VII
PP
IW
SS
CNS
PAL
1
2
3
4
32X
5
6
7
8
CC
289
290
291
292
293
294
295
296
297
298

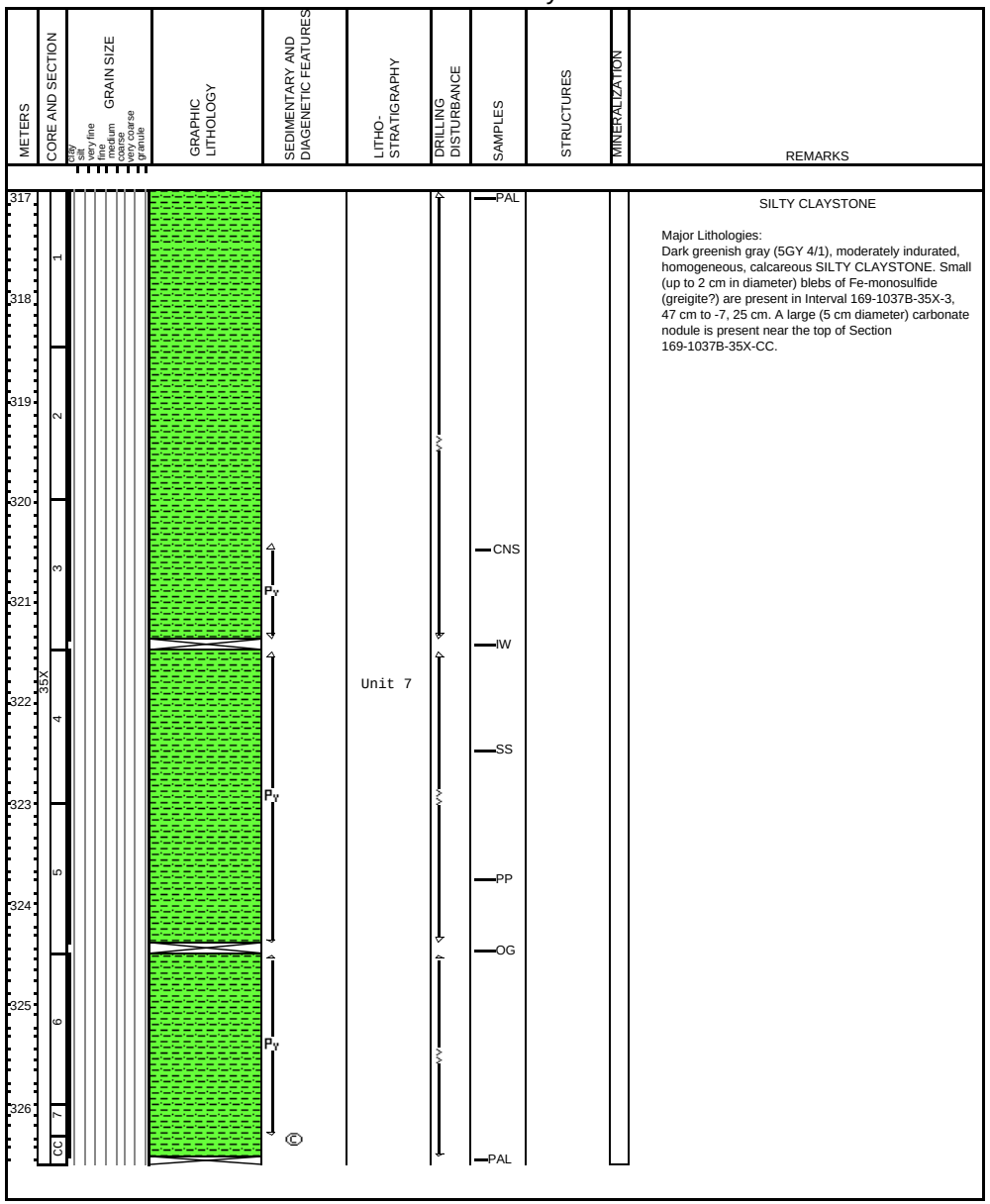
SITE 1037 HOLE B CORE 33X Recovery 96% CORED 297.7 - 307.3 mbsf 1037B-33X



SITE 1037 HOLE B CORE 34X Recovery 107% CORED 307.3 - 316.9 mbsf

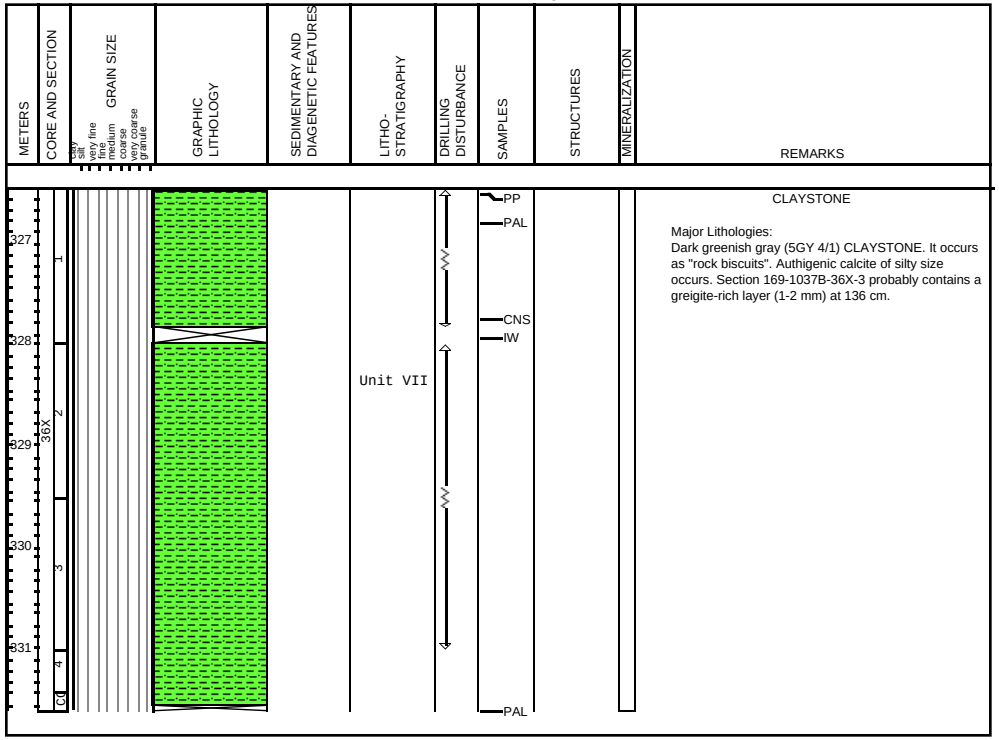
1037B-34X

SITE 1037 HOLE B CORE 35X Recovery 99% CORED 316.9 - 326.5 mbsf 1037B-35X



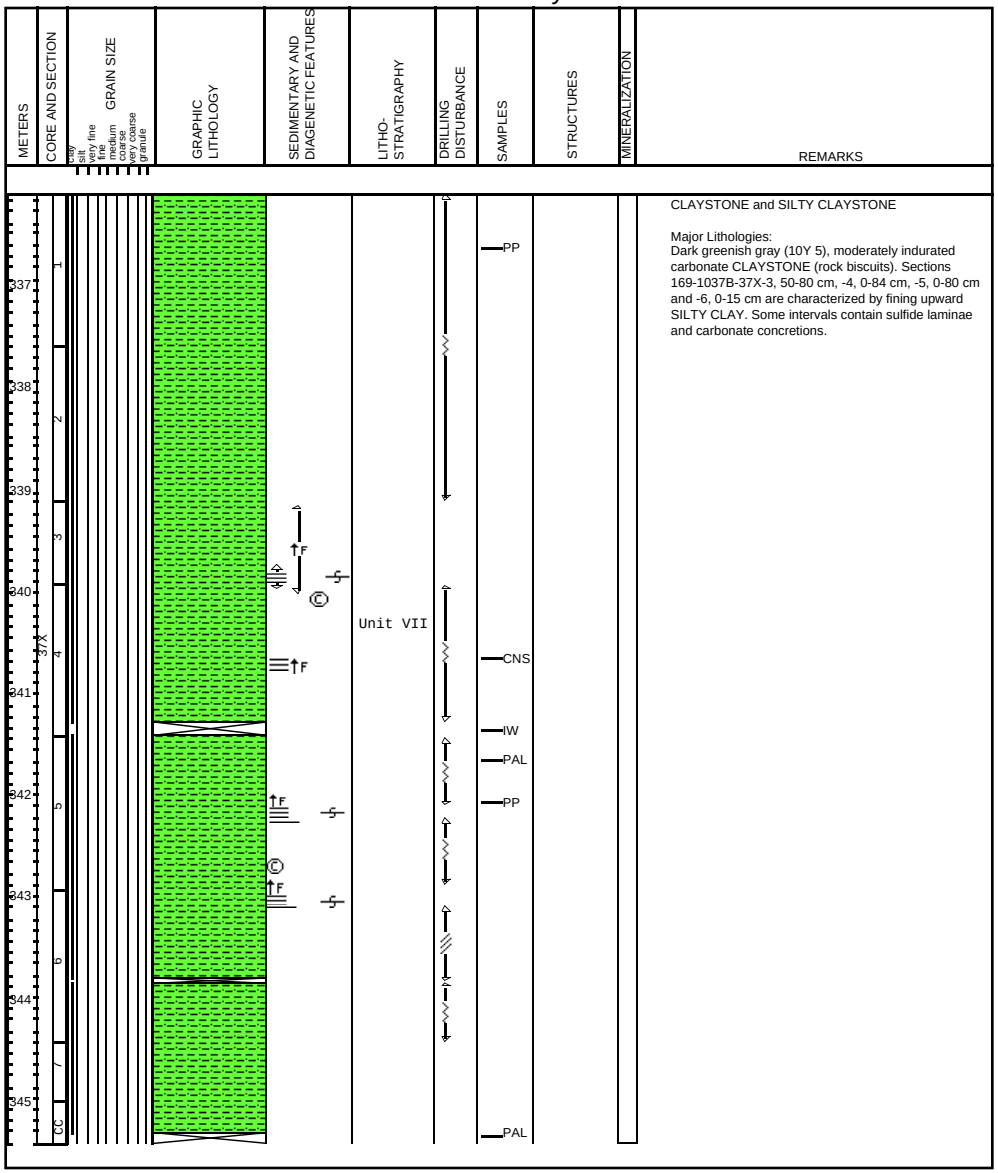
SITE 1037 HOLE B CORE 36X Recovery 52% CORED 326.5 - 336.0 mbsf

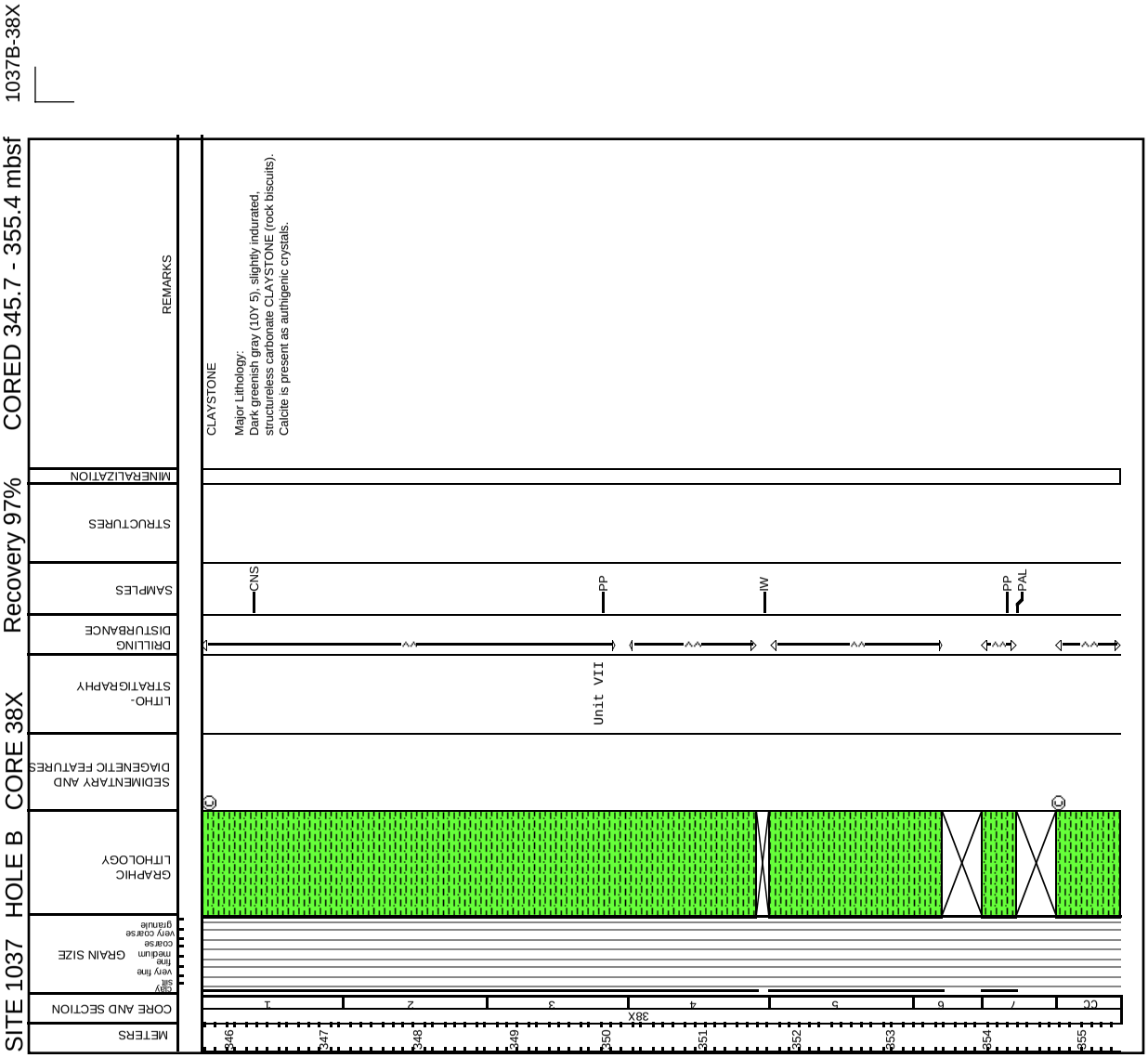
1037B-36X



SITE 1037 HOLE B CORE 37X Recovery 96% CORED 336.1 - 345.7 mbsf

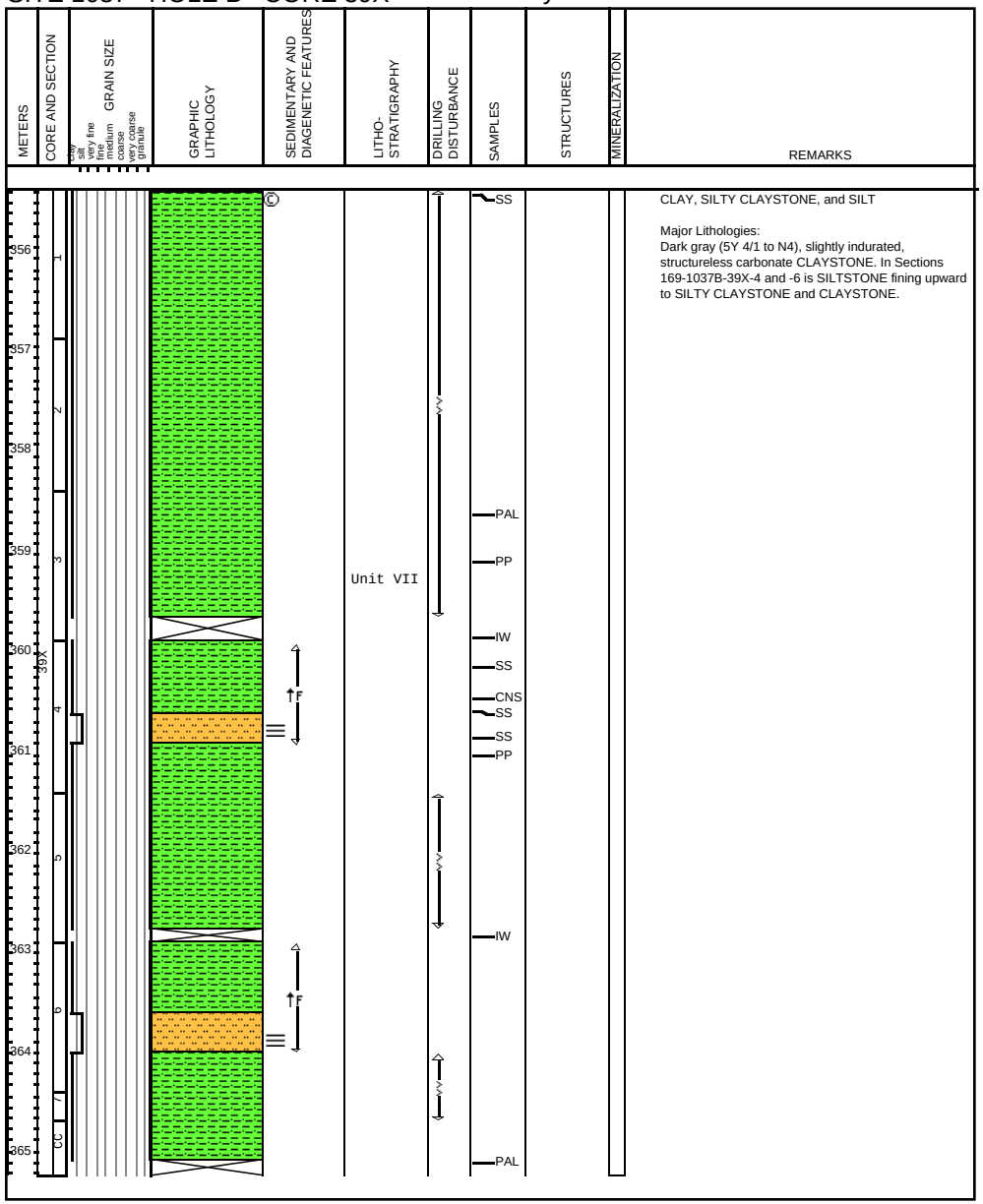
1037B-37X




SITE 1037
HOLE B
CORE 38X
Recovery 97%
CORED 345.7 - 355.4 mbsf
1037B-38X
METERS
CORE AND SECTION
GRAIN SIZE
GRAPHIC LITHOLOGY
SEDIMENTARY AND DIAGENETIC FEATURES
LITHO-STRATIGRAPHY
DRILLING DISTURBANCE
SAMPLES
STRUCTURES
MINERALIZATION
REMARKS
CLAYSTONE
Major Lithology:
Dark greenish gray (10Y 5), slightly indurated, structureless carbonate CLAYSTONE (rock biscuits).
Calcite is present as authigenic crystals.
CNS
PP
IW
PP
PAL
Unit VII
346
347
348
349
350
351
352
353
354
355

SITE 1037 HOLE B CORE 39X Recovery 102% CORED 355.4 - 365.0 mbsf

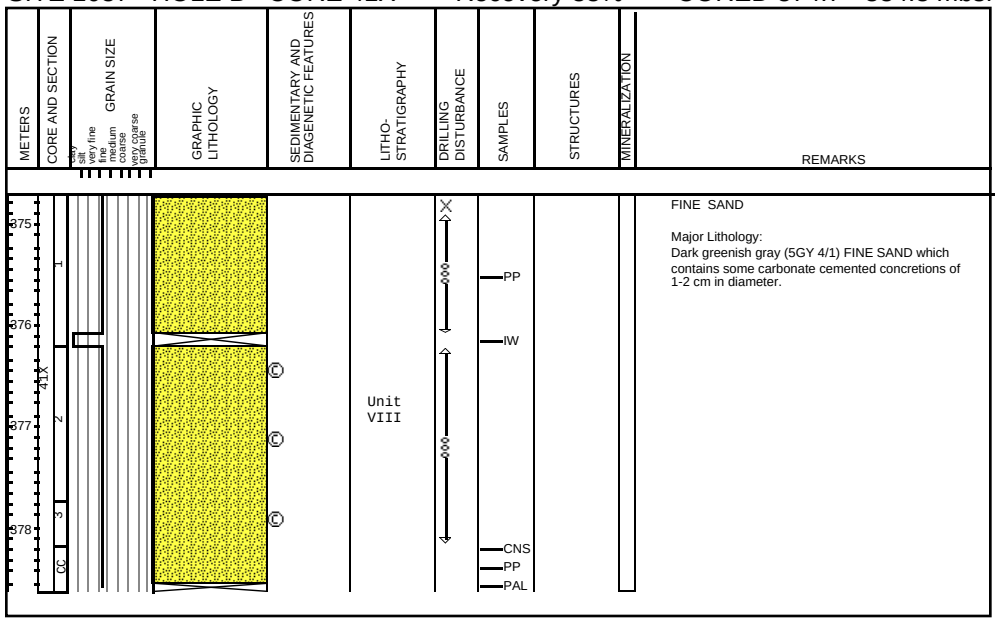
1037B-39X



SITE 1037 HOLE B CORE 40X Recovery 90% CORED 365.0 - 374.7 mbsf

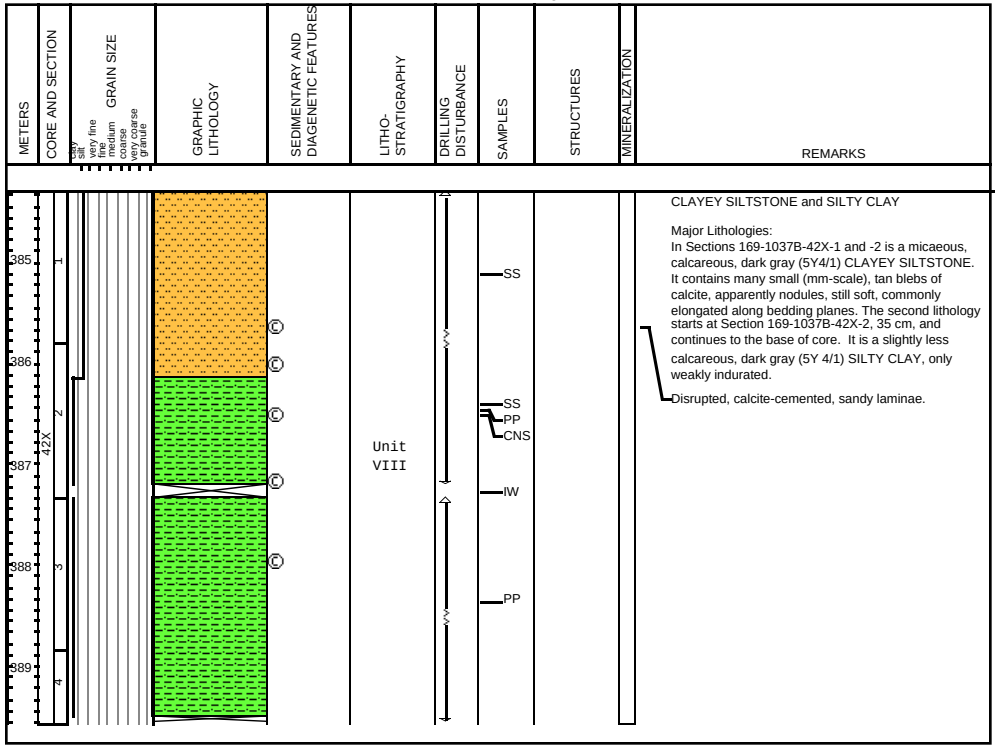
1037B-40X

SITE 1037 HOLE B CORE 41X Recovery 38% CORED 374.7 - 384.3 mbsf 1037B-41X

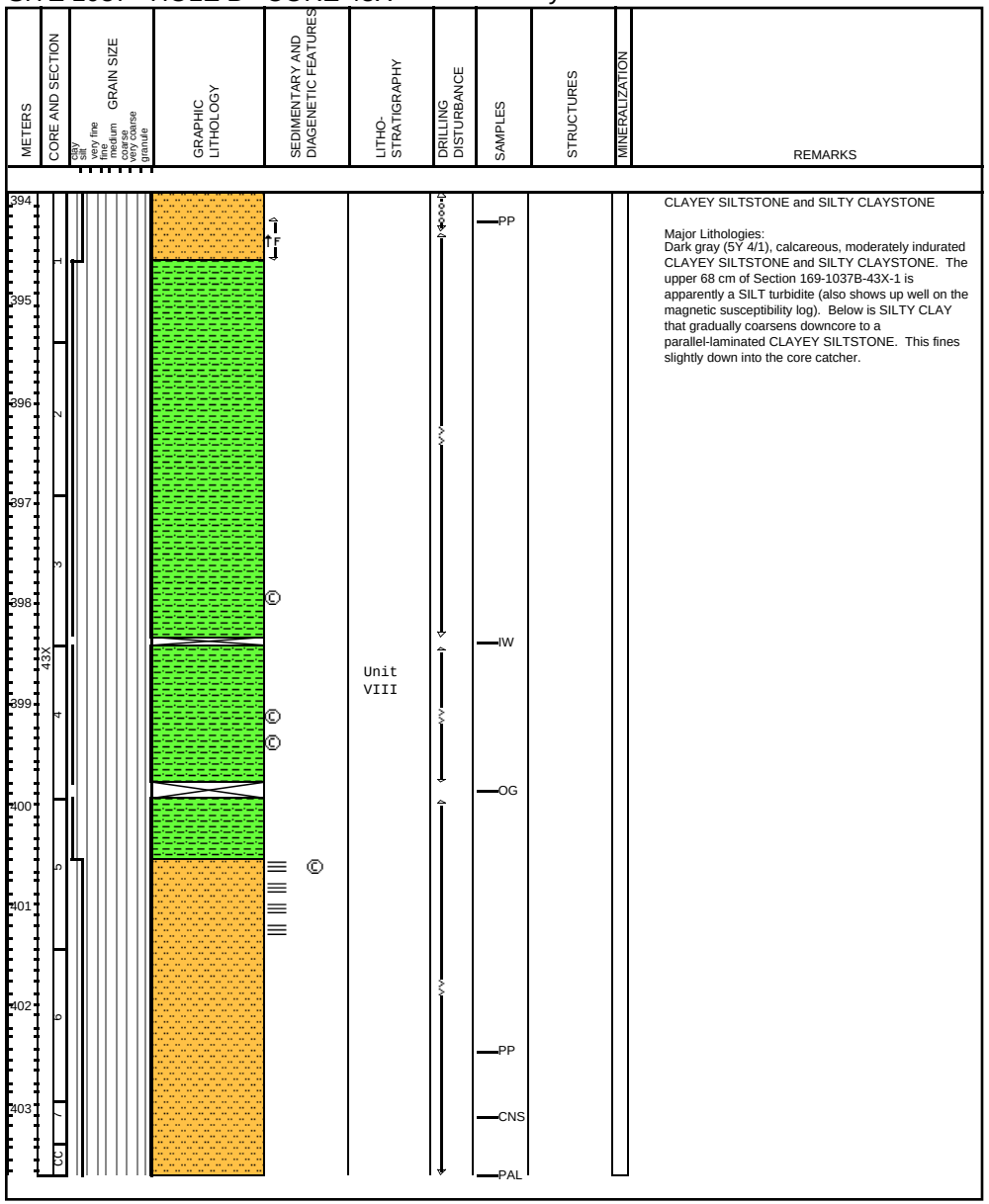


SITE 1037 HOLE B CORE 42X Recovery 55% CORED 384.3 - 393.9 mbsf

1037B-42X

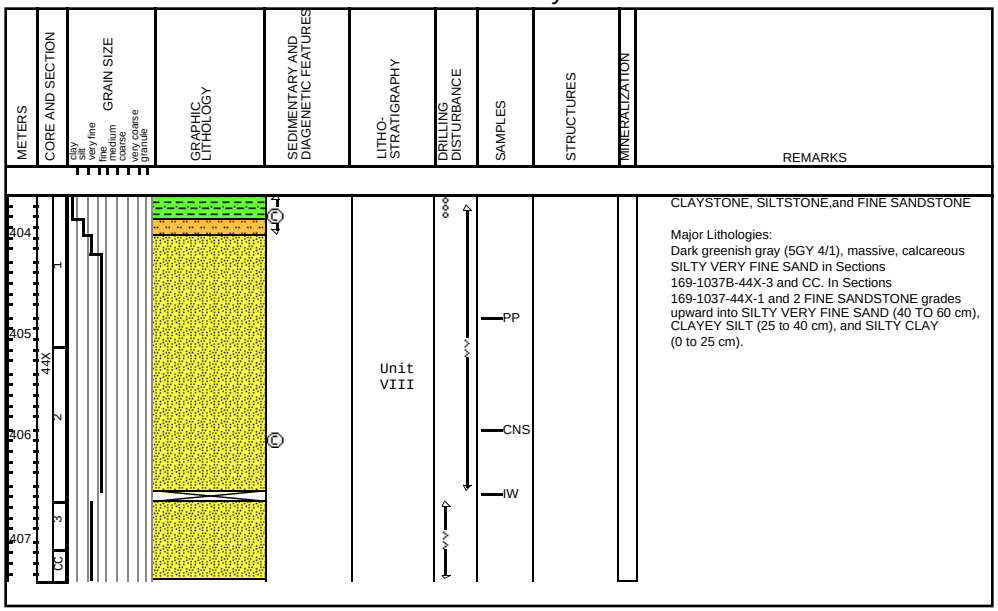


SITE 1037 HOLE B CORE 43X Recovery 100% CORED 393.9 - 403.6 mbsf 1037B-43X



SITE 1037 HOLE B CORE 44X Recovery 39% CORED 403.6 - 413.2 mbsf

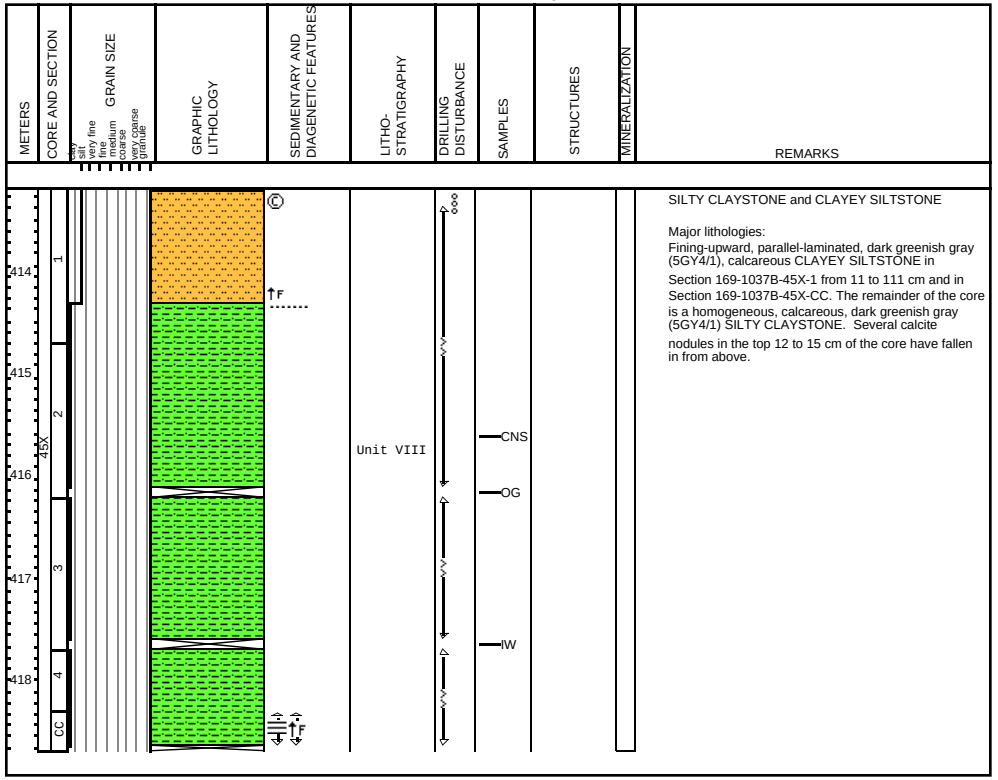
1037B-44X



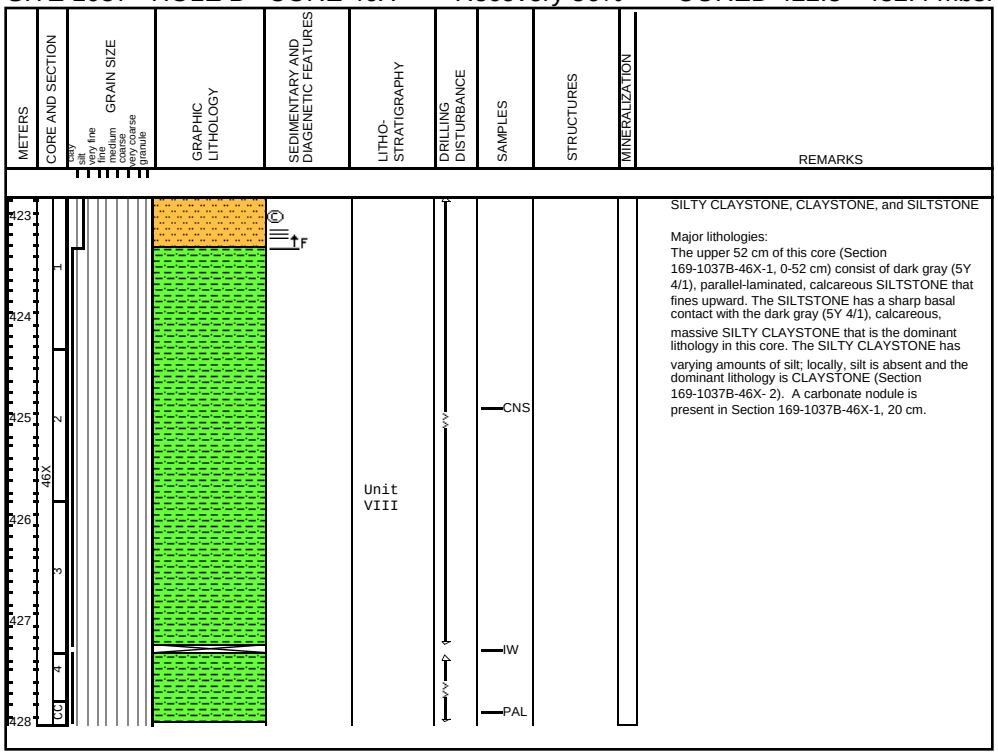
CLAYSTONE, SILTSTONE,and FINE SANDSTONE

Major Lithologies:
Dark greenish gray (5GY 4/1), massive, calcareous SILTY VERY FINE SAND in Sections 169-1037B-44X-3 and CC. In Sections 169-1037-44X-1 and 2 FINE SANDSTONE grades upward into SILTY VERY FINE SAND (40 TO 60 cm), CLAYEY SILT (25 to 40 cm), and SILTY CLAY (0 to 25 cm).

SITE 1037 HOLE B CORE 45X Recovery 56% CORED 413.2 - 422.8 mbsf 1037B-45X



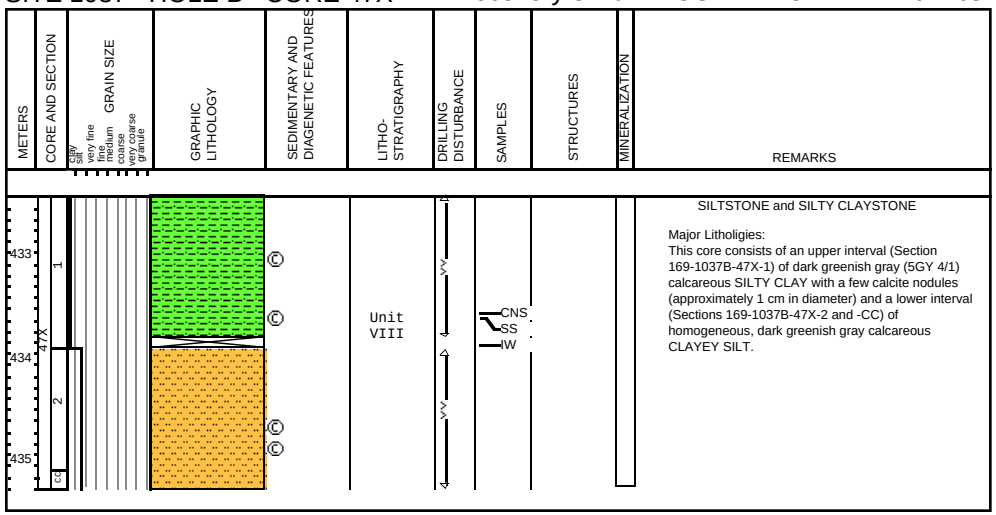
SITE 1037 HOLE B CORE 46X Recovery 56% CORED 422.8 - 432.4 mbsf



SILTY CLAYSTONE, CLAYSTONE, and SILTSTONE

Major lithologies:
The upper 52 cm of this core (Section 169-1037B-46X-1, 0-52 cm) consist of dark gray (5Y 4/1), parallel-laminated, calcareous SILTSTONE that fines upward. The SILTSTONE has a sharp basal contact with the dark gray (5Y 4/1), calcareous, massive SILTY CLAYSTONE that is the dominant lithology in this core. The SILTY CLAYSTONE has varying amounts of silt; locally, silt is absent and the dominant lithology is CLAYSTONE (Section 169-1037B-46X- 2). A carbonate nodule is present in Section 169-1037B-46X-1, 20 cm.

SITE 1037 HOLE B CORE 47X Recovery 31% CORED 432.4 - 442.0 mbsf



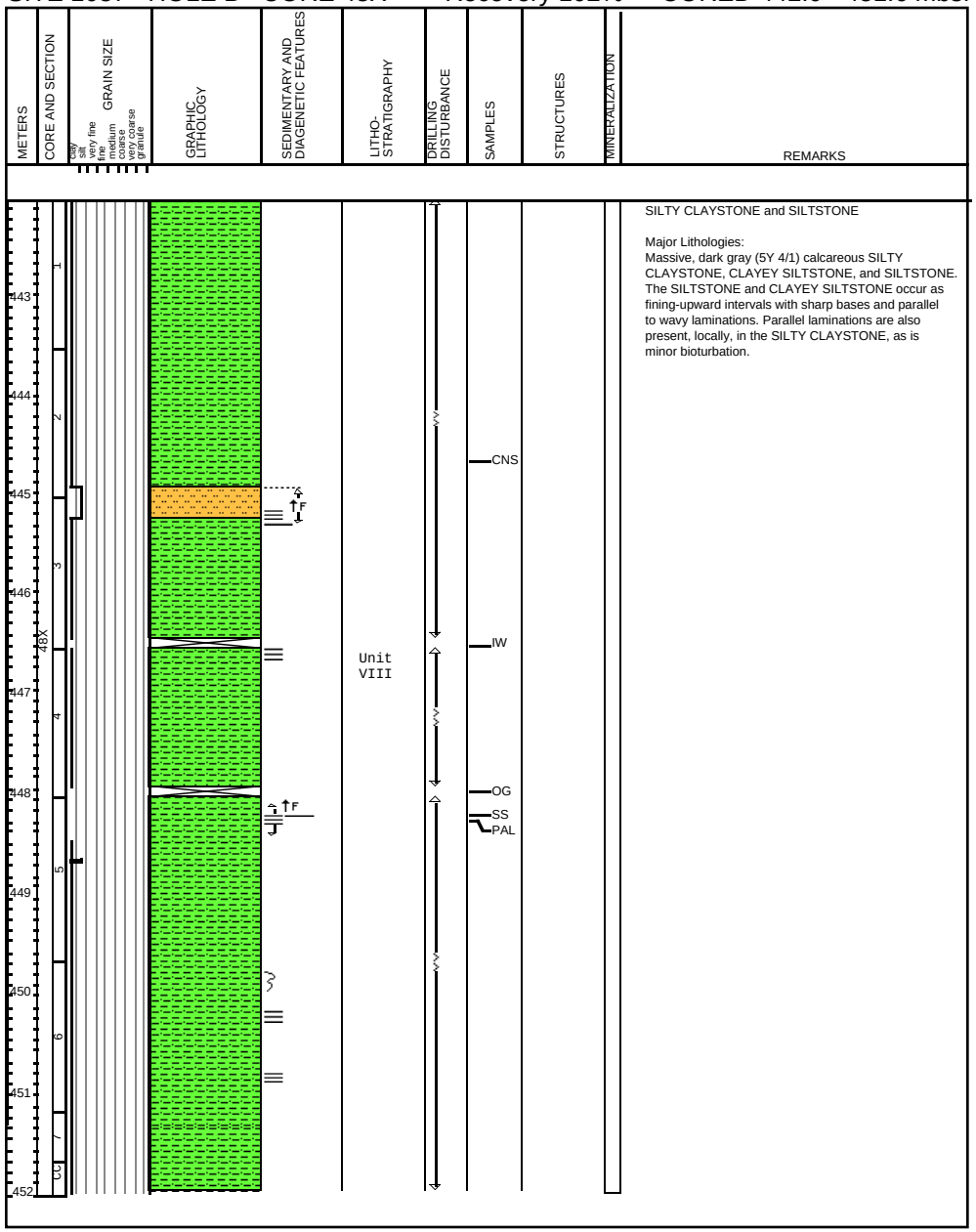
SILTSTONE and SILTY CLAYSTONE

Major Litholigies:
This core consists of an upper interval (Section 169-1037B-47X-1) of dark greenish gray (5GY 4/1) calcareous SILTY CLAY with a few calcite nodules (approximately 1 cm in diameter) and a lower interval (Sections 169-1037B-47X-2 and -CC) of homogeneous, dark greenish gray calcareous CLAYEY SILT.

1037B-46X

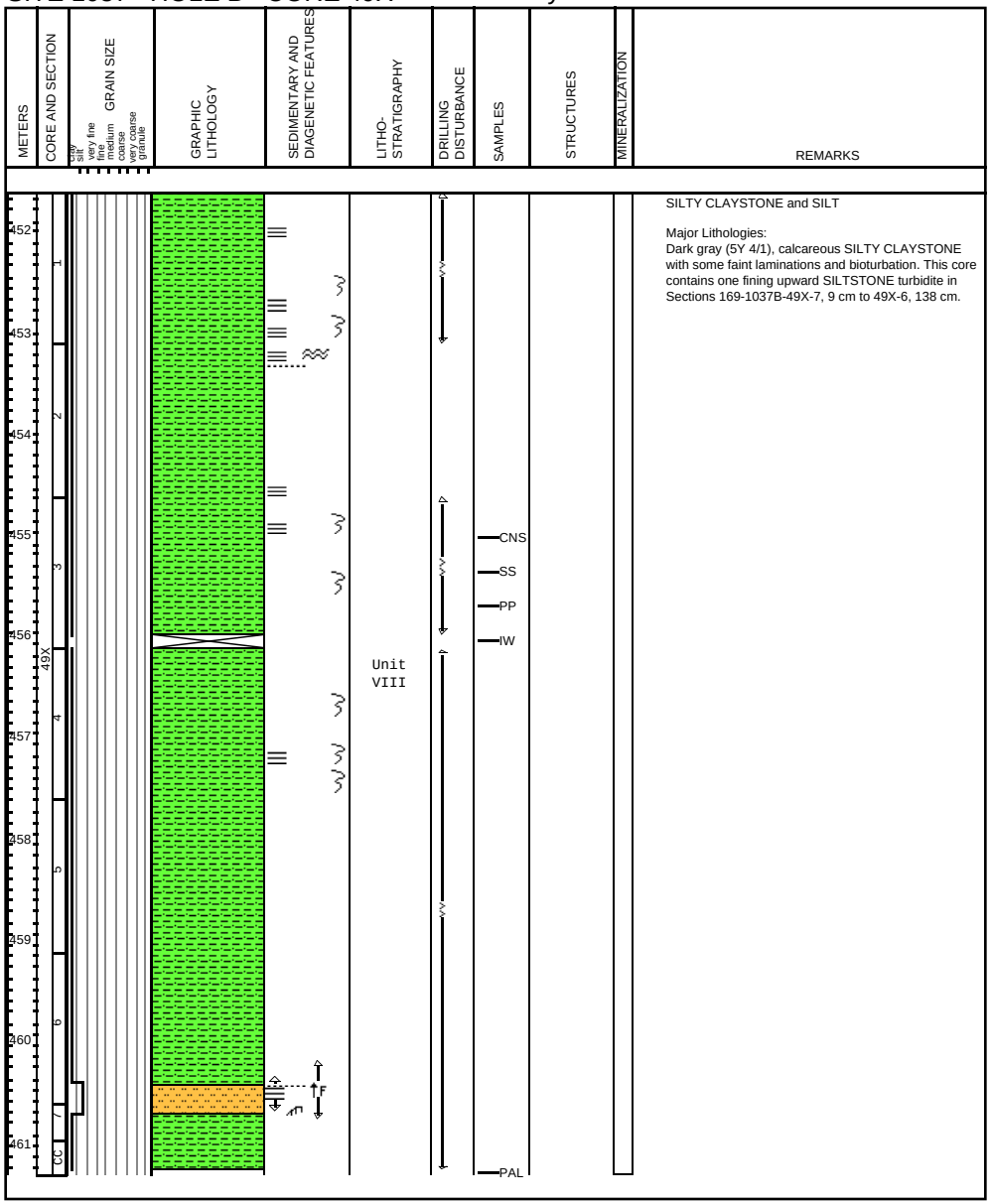
1037B-47X

SITE 1037 HOLE B CORE 48X Recovery 102% CORED 442.0 - 451.6 mbsf 1037B-48X



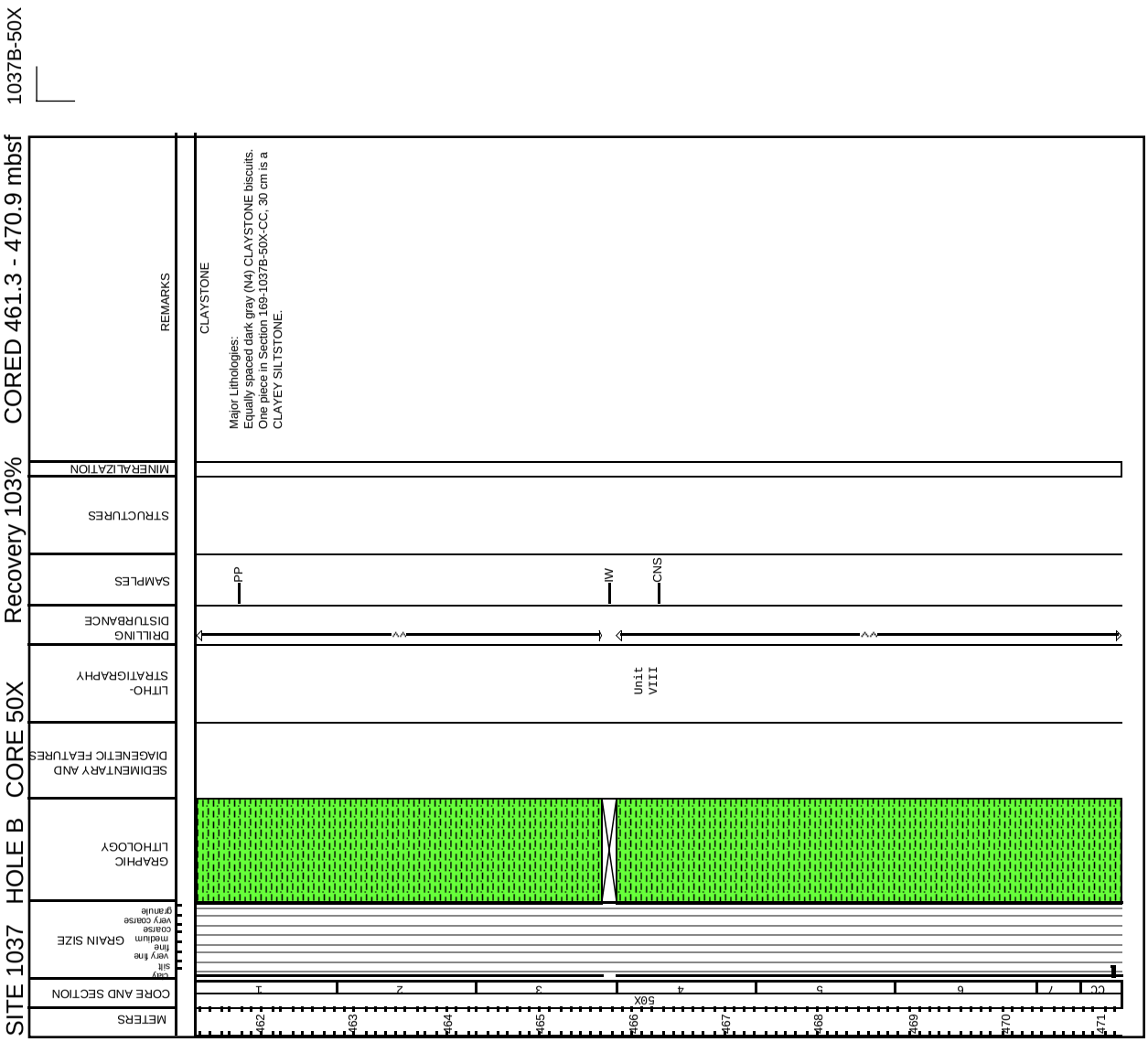
SITE 1037 HOLE B CORE 49X Recovery 99% CORED 451.6 - 461.3mbsf

1037B-49X



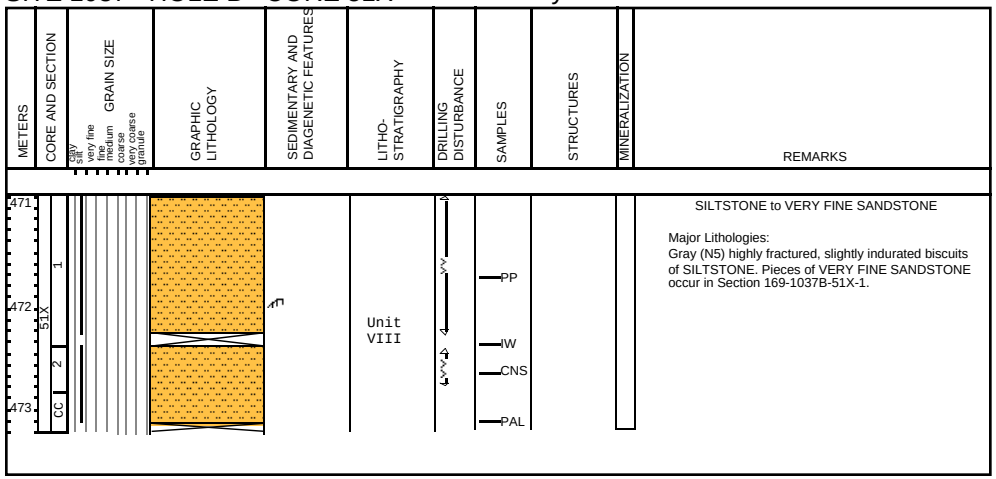
SILTY CLAYSTONE and SILT

Major Lithologies:
Dark gray (5Y 4/1), calcareous SILTY CLAYSTONE with some faint laminations and bioturbation. This core contains one fining upward SILTSTONE turbidite in Sections 169-1037B-49X-7, 9 cm to 49X-6, 138 cm.

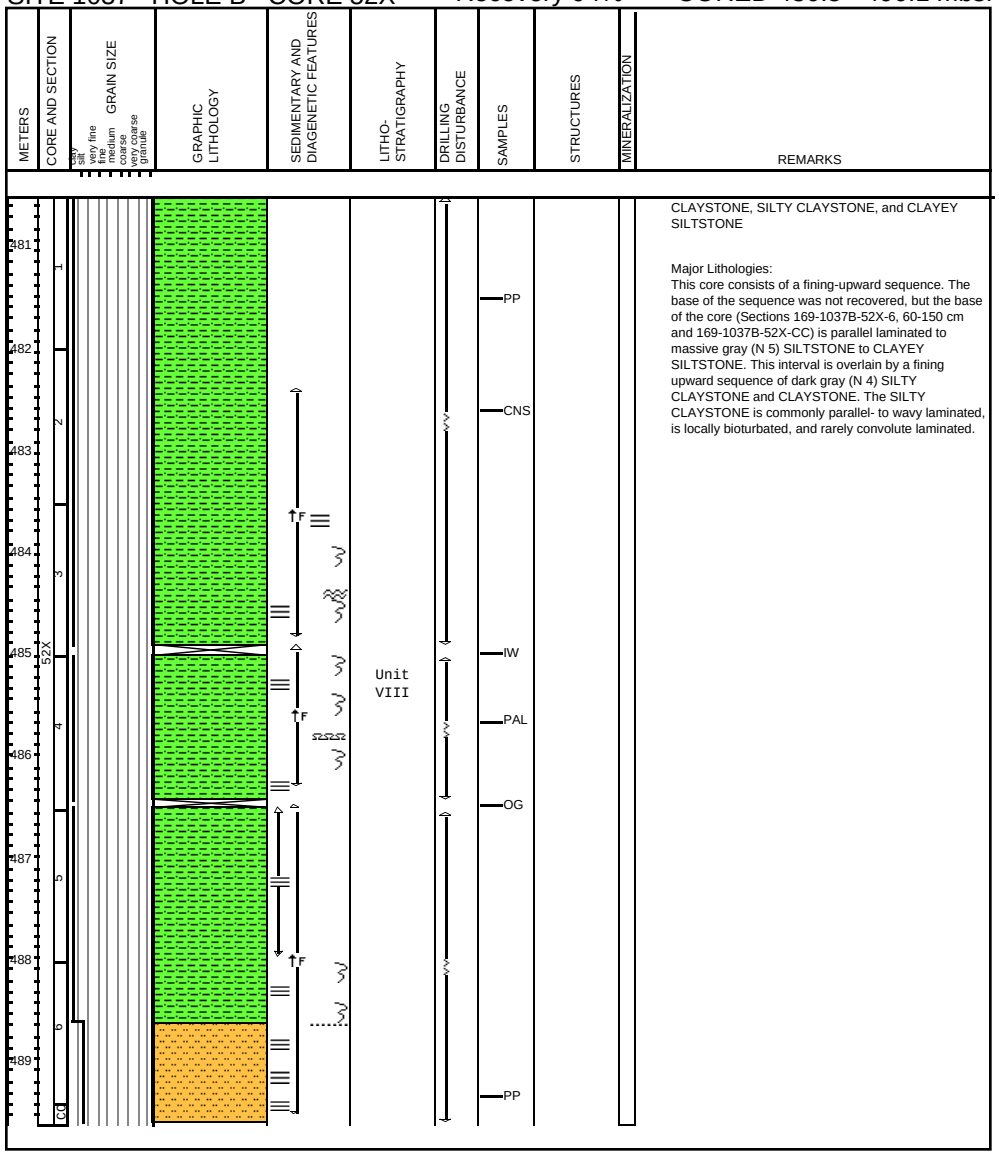

SITE 1037 HOLE B CORE 50X Recovery 103% CORED 461.3 - 470.9 mbsf
1037B-50X
METERS
CORE AND SECTION
GRAIN SIZE
clay
silt
very fine
fine
medium
coarse
very coarse
granule
GRAPHIC LITHOLOGY
SEDIMENTARY AND DIAGENETIC FEATURES
LITHO-STRATIGRAPHY
DRILLING DISTURBANCE
SAMPLES
STRUCTURES
MINERALIZATION
REMARKS
CLAYSTONE
Major Lithologies:
Equally spaced dark gray (N4) CLAYSTONE biscuits.
One piece in Section 169-1037B-50X-CC, 30 cm is a
CLAYEY SILTSTONE.
PP
IW
CNS
Unit VIII
1
2
3
4
5
6
7
CC
50X
462
463
464
465
466
467
468
469
470
471

SITE 1037 HOLE B CORE 51X Recovery 23% CORED 470.9 - 480.5 mbsf

1037B-51X



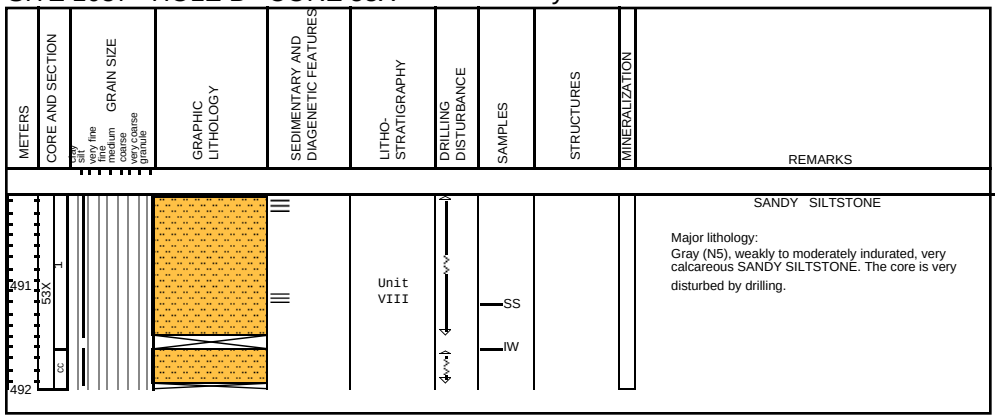
SITE 1037 HOLE B CORE 52X Recovery 94% CORED 480.5 - 490.1 mbsf 1037B-52X



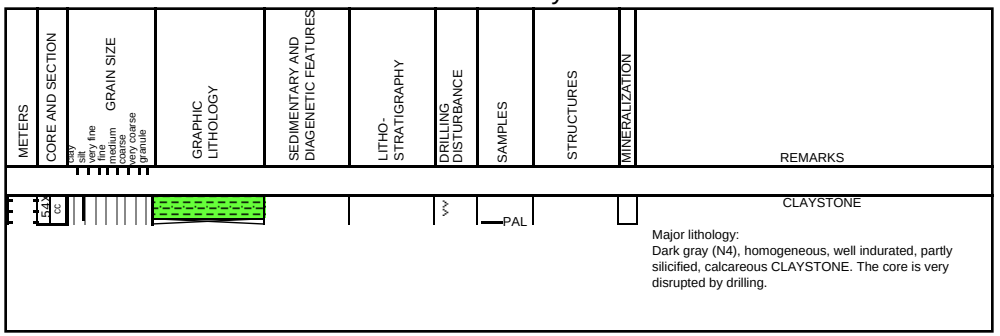
CLAYSTONE, SILTY CLAYSTONE, and CLAYEY SILTSTONE

Major Lithologies:
This core consists of a fining-upward sequence. The base of the sequence was not recovered, but the base of the core (Sections 169-1037B-52X-6, 60-150 cm and 169-1037B-52X-CC) is parallel laminated to massive gray (N 5) SILTSTONE to CLAYEY SILTSTONE. This interval is overlain by a fining upward sequence of dark gray (N 4) SILTY CLAYSTONE and CLAYSTONE. The SILTY CLAYSTONE is commonly parallel- to wavy laminated, is locally bioturbated, and rarely convolute laminated.

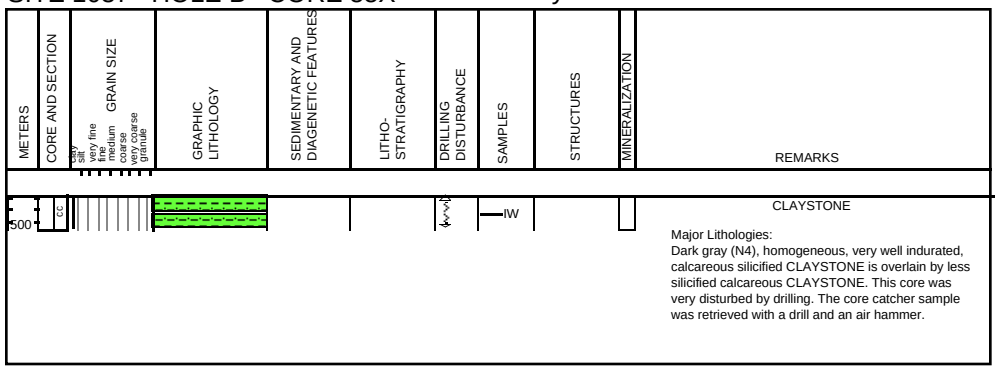
SITE 1037 HOLE B CORE 53X Recovery 34% CORED 490.1 - 495.6 mbsf



SITE 1037 HOLE B CORE 54X Recovery 7% CORED 495.6 - 499.7 mbsf



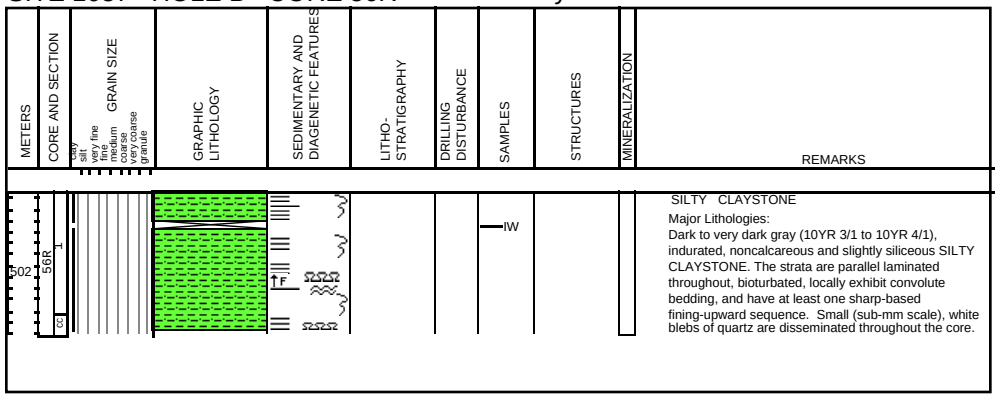
SITE 1037 HOLE B CORE 55X Recovery 21% CORED 499.7 - 501.2 mbsf



SITE 1037 HOLE B CORE 56R Recovery 23% CORED 501.2 - 507.2 mbsf

1037B-56R

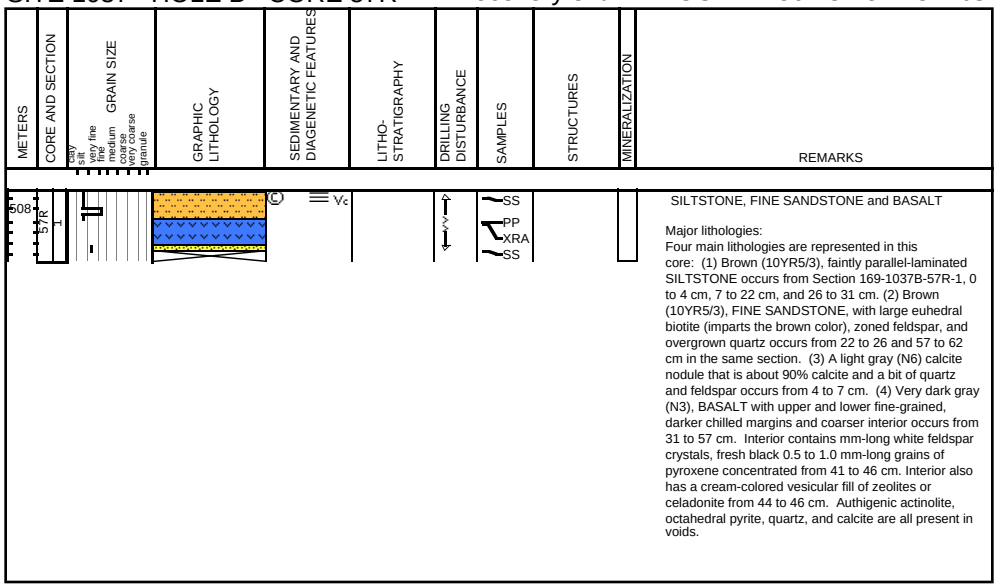
1037B-57R



SILTY CLAYSTONE

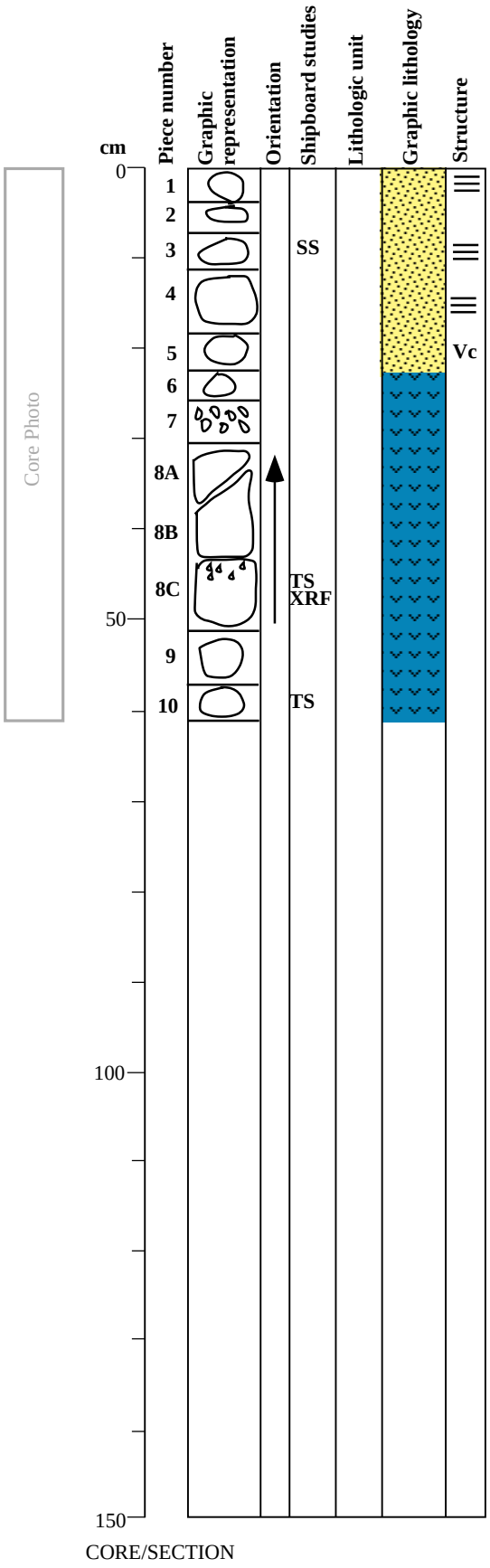
Major Lithologies:
Dark to very dark gray (10YR 3/1 to 10YR 4/1), indurated, noncalcareous and slightly siliceous SILTY CLAYSTONE. The strata are parallel laminated throughout, bioturbated, locally exhibit convolute bedding, and have at least one sharp-based fining-upward sequence. Small (sub-mm scale), white blebs of quartz are disseminated throughout the core.

SITE 1037 HOLE B CORE 57R Recovery 5% CORED 507.8 - 517.3 mbsf



SILTSTONE, FINE SANDSTONE and BASALT

Major lithologies:
Four main lithologies are represented in this core: (1) Brown (10YR5/3), faintly parallel-laminated SILTSTONE occurs from Section 169-1037B-57R-1, 0 to 4 cm, 7 to 22 cm, and 26 to 31 cm. (2) Brown (10YR5/3), FINE SANDSTONE, with large euhedral biotite (imparts the brown color), zoned feldspar, and overgrown quartz occurs from 22 to 26 and 57 to 62 cm in the same section. (3) A light gray (N6) calcite nodule that is about 90% calcite and a bit of quartz and feldspar occurs from 4 to 7 cm. (4) Very dark gray (N3), BASALT with upper and lower fine-grained, darker chilled margins and coarser interior occurs from 31 to 57 cm. Interior contains mm-long white feldspar crystals, fresh black 0.5 to 1.0 mm-long grains of pyroxene concentrated from 41 to 46 cm. Interior also has a cream-colored vesicular fill of zeolites or celadonite from 44 to 46 cm. Authigenic actinolite, octahedral pyrite, quartz, and calcite are all present in voids.



169-1037B-57R-1
Top of Core 57R - 507.8 mbsf

Pieces 1, 3, 4, 5, 7

ROCK TYPE: SILTSTONE
COLOR: Brown (10YR 5/3)
TEXTURE: Faintly parallel laminated. Piece 5 has a 0.5 mm calcite vein.

Piece 2

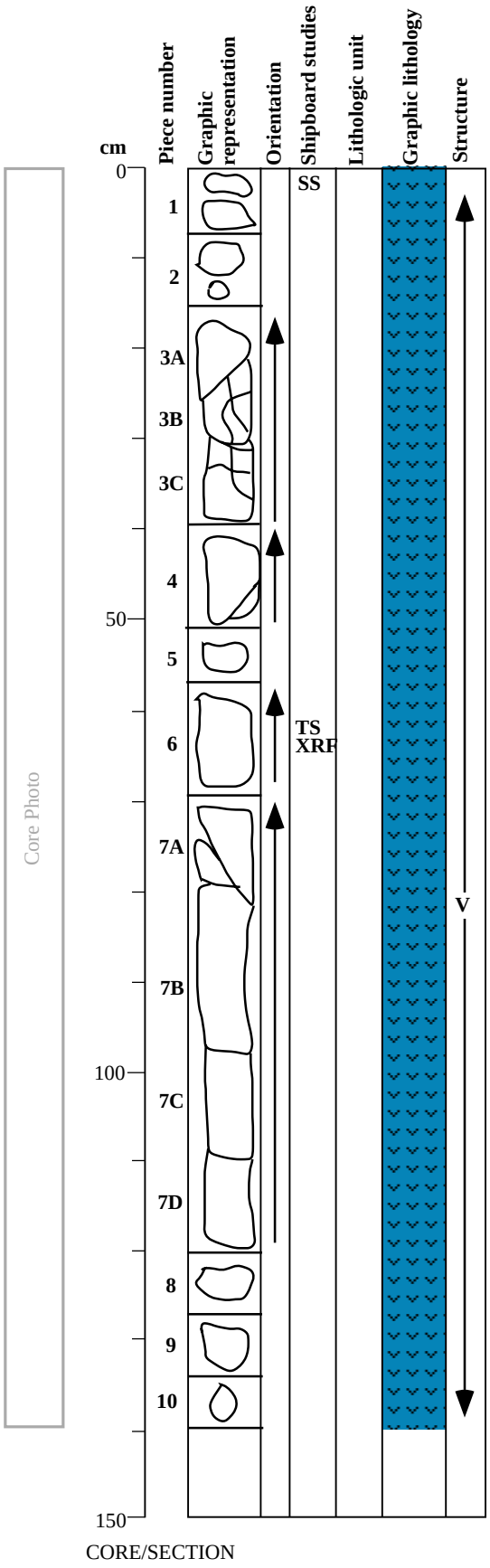
ROCK TYPE: CALCITE
COLOR: Gray (N6)
TEXTURE: Nodule, 90% calcite with quartz and feldspar.

Pieces 6 and 10

ROCK TYPE: FINE SANDSTONE
COLOR: Brown (10YR 5/3)
TEXTURE: Recrystallized euhedral brown biotite, zoned feldspar.

Pieces 8 and 9

ROCK TYPE: BASALT
COLOR: Gray
COMMENTS: Fine-grained, chilled margin at the top of Piece 8. Plagioclase crystals are 1 - 2 mm long, altered pyroxene grains are dark, but fade to green when powdered (actinolite?).

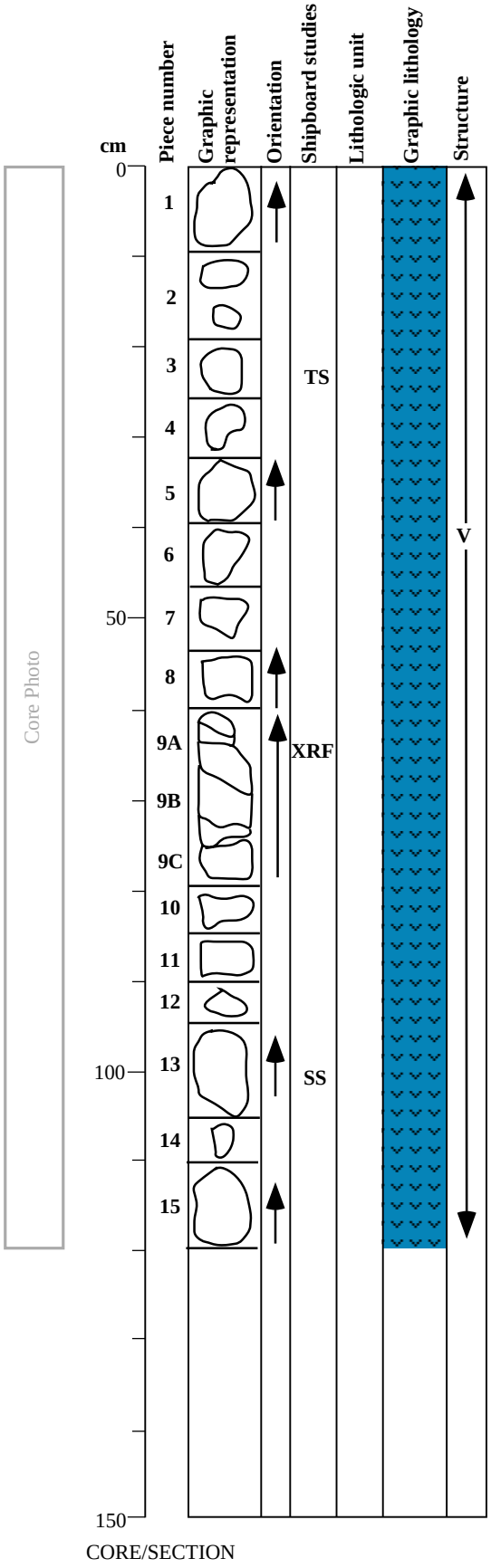


CORE/SECTION

169-1037B-58R-1
Top of Core 58R - 517.3 mbsf

Pieces 1-10

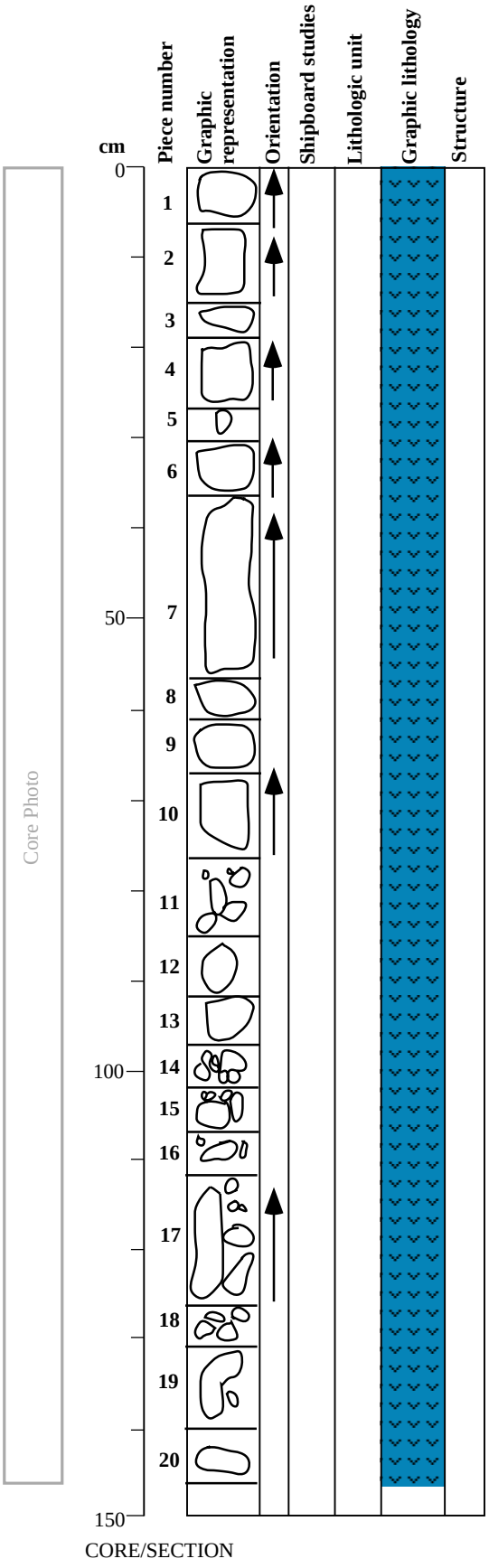
ROCK TYPE: BASALT
CONTACTS: None
COLOR: Green gray
MAJOR MINERALS:
Altered plagioclase and pyroxene
COMMENTS: Fine-grained basalt with plagioclase phenocrysts, pyroxenes all altered to actinolite. Subrounded patches of green chlorite/ smectite presant. Plagioclase laths are 1-2 mm long, and consitute less than 20% of the rock. Veins, less than 1 mm thick, consisting of calcite, with selvages of chlorite are in Pieces 3, 4, 7, and 8.
Note: Piece 1 is a fine- to medium-grained, highly metamorphosed sandstone that contains epidote and biotite and probably fell into the hole.



169-1037B-58R-2
Top of Core 58R - 517.3 mbsf

Pieces 1-15

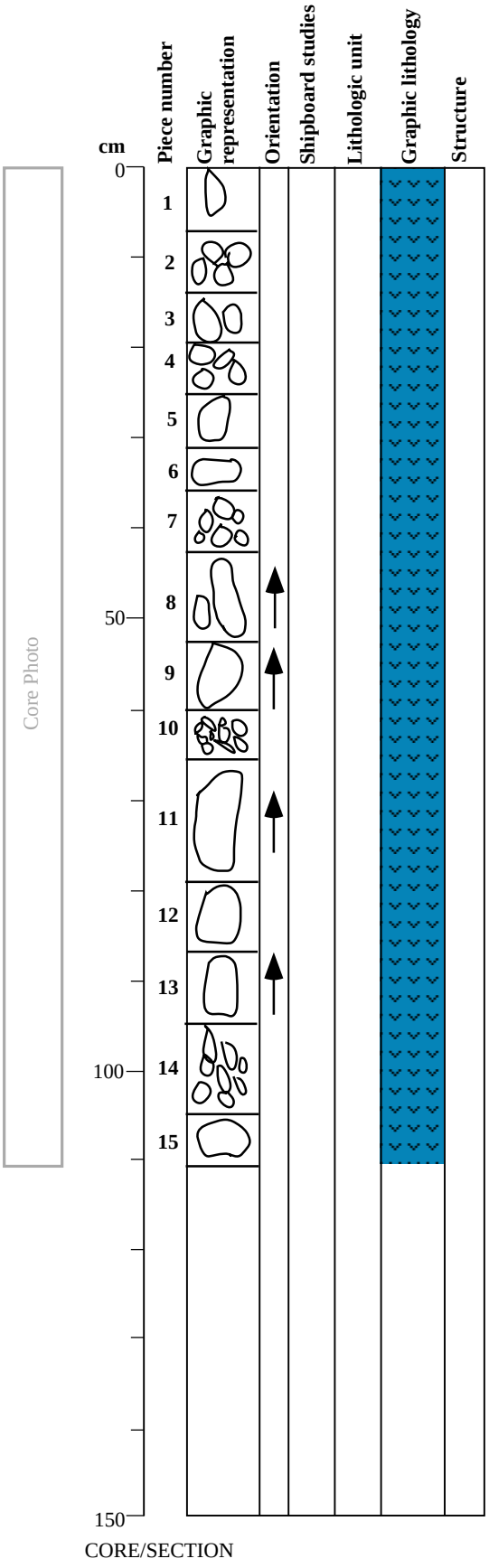
ROCK TYPE: BASALT
CONTACTS: None
COLOR: Gray green
MAJOR MINERALS:
Altered plagioclase and pyroxene.
COMMENTS: Very fine-grained, in parts microcrystalline, with mm-sized laths of plagioclase and black specks of pyroxene altered to actinolite. Chlorite and amphibole seem to be the major groundmass components. Abundant veins of actinolite are presant. Thicker veins in Pieces 8, 9, 10, and 13 have grayish white selvages around them, possibly silicification. Vein thickness varies from <1 to 3 mm. Veins in Pieces 8, 9, 10, and 13 were open space, now filled with euhedral actinolite needles. Some veins contain chlorite and calcite. Piece 3 has a thin vein of a yellowish material surrounded by a gray selvage, rich in magnetite (high magnetic susceptibility). Piece 1 has a vertical boundary, very fine-grained on one side, that could be a chilled margin. Numerous veins are truncated at this boundary and may be slightly offset. There also appears to be a chilled margin in Piece 3. Broken, quenched, hyaloclastic fragments with concentric alteration rinds are in Pieces 4, 5, and 6.



169-1037B-59R-1
Top of Core 59R - 526.8 mbsf

Pieces 1-20

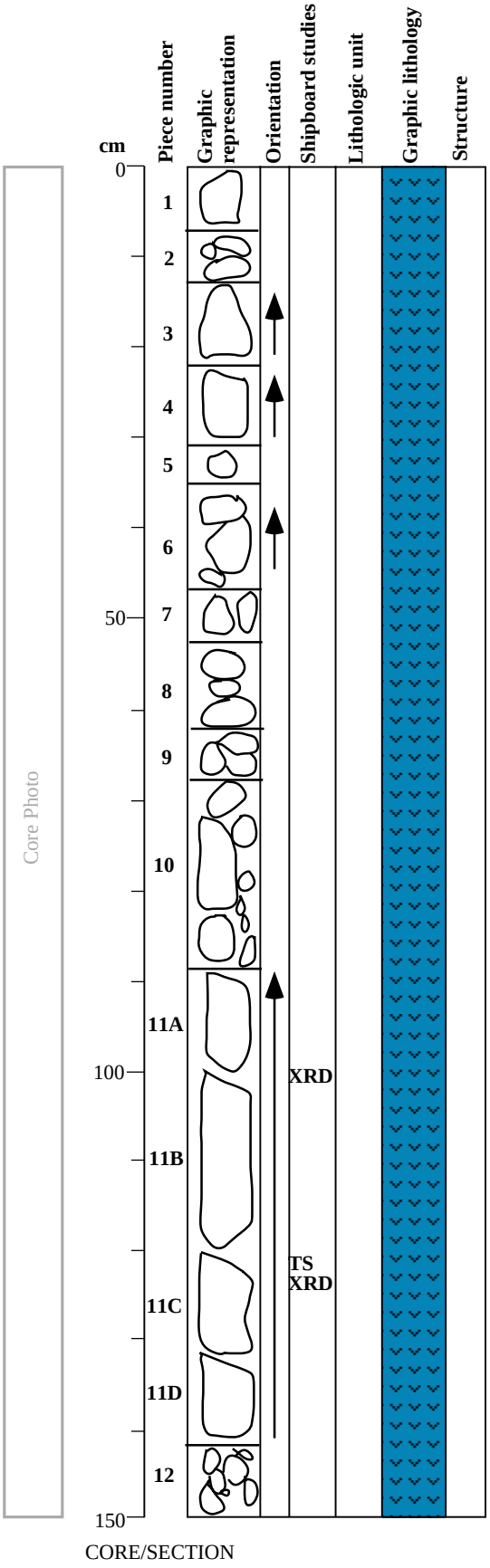
ROCK TYPE: BASALT
CONTACTS: None
COLOR: Gray green
MAJOR MINERALS:
Altered plagioclase and pyroxene
COMMENTS:
Pieces 1-7: Very fine-grained porphyritic basalt with abundant acicular plagioclase phenocrysts and stubby, equant, clinopyroxene. Clinopyroxene is altered to actinolite-chlorite. Groundmass is gray. A chilled upward, sub-horizontal margin occurs in Piece 4. Numerous sub-horizontal irregular veins (0.5 to 2 mm wide) filled with whiskeryactinolite and botryoidal clays or zeolites are presant. Veins may connect elongate, subhorizontal vugs/cavities. Aphyric, 8 mm bleached/quench zones are around vugs and veins. Piece 7 has a conjugate set of veins/fractures and a faint oxidative staining.
Pieces 8-10: Transition from very fine-grained basalt to intensely altered, dessicated basalt. A subvertical contact between relatively fresh basalt and slightly coarser grained material that displays exfoliative dessication (Pieces 8 and 9). Numerous chloritic subvertical fractures are in Piece 10.
Pieces 11-20: Fine- to medium-grained basalt. Pieces were coherent when initially recovered, crosscut by numerous chlorite-filled veins/fractures. On drying, intense dessication results in flakey, spheroidal exfoliation and disaggregation. Suggested mineralogy: albitized plagioclase, chlorite/smectite, and actinolite. No sulfate.



169-1037B-59R-2
Top of Core 59R - 526.8 mbsf

Pieces 1-15

ROCK TYPE: BASALT
CONTACTS: None
COLOR: Gray green
MAJOR MINERALS:
Altered plagioclase and pyroxene.
COMMENTS: Very fine-grained to medium-grained plagioclase-phyric basalt exhibiting variable degrees of exfoliative dessication. Pieces 11, 12, and 13 are very fine grained and cut by subvertical clay/smectite veins. Dessication is more advanced in coarser grained rocks.

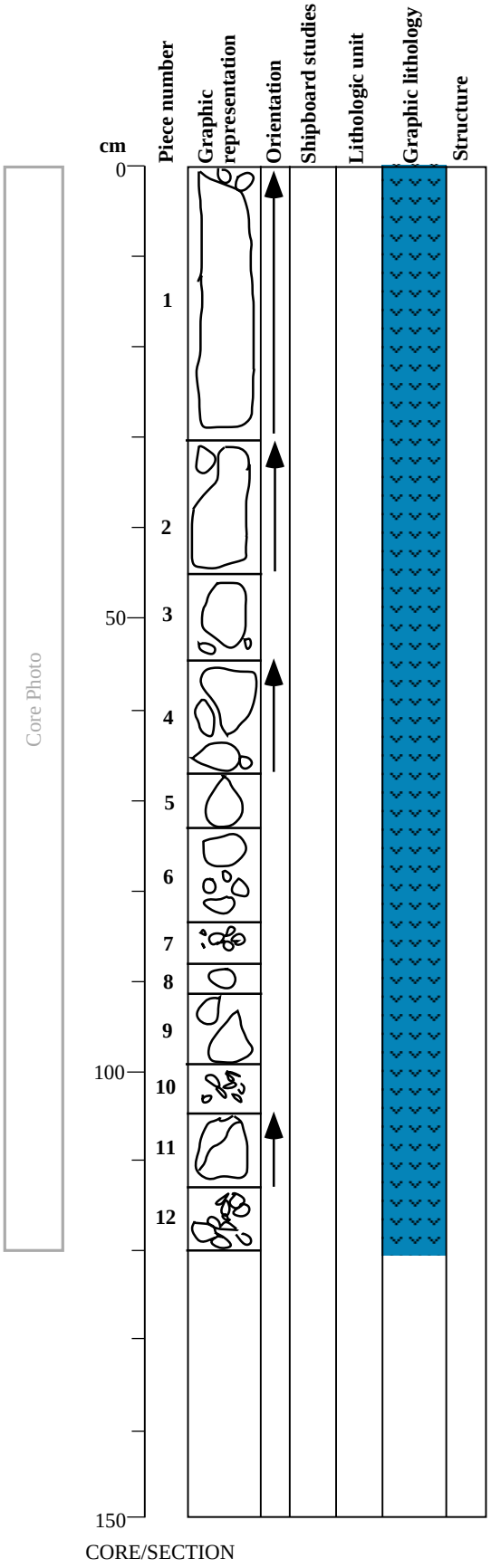


CORE/SECTION

169-1037B-60R-1
Top of Core 60R - 529.4 mbsf

Pieces 1-12

ROCK TYPE: BASALT
CONTACTS: None
COLOR: Green gray
MAJOR MINERALS:
Altered plagioclase and pyroxene
COMMENTS: Fine- to medium-grained, vesicular, intersertal to subophitic altered basalt. Displays various degrees of exfoliative dessication. Amygdaloidal (5% filled vesicles), larger vesicles commonly occur in linear arrays. Vesicles are more common in Pieces 7 - 12. Most vesicles are completely filled with green, platey phyllosilicates (chlorite-smectite). Piece 11 is less intensely dissagregated and primary igneous textures are apparent. Abundant clinopyroxene is altered to actinolite. Mesostasis is greenish in patches, presumably altered to chlorite, smectite, and actinolite.

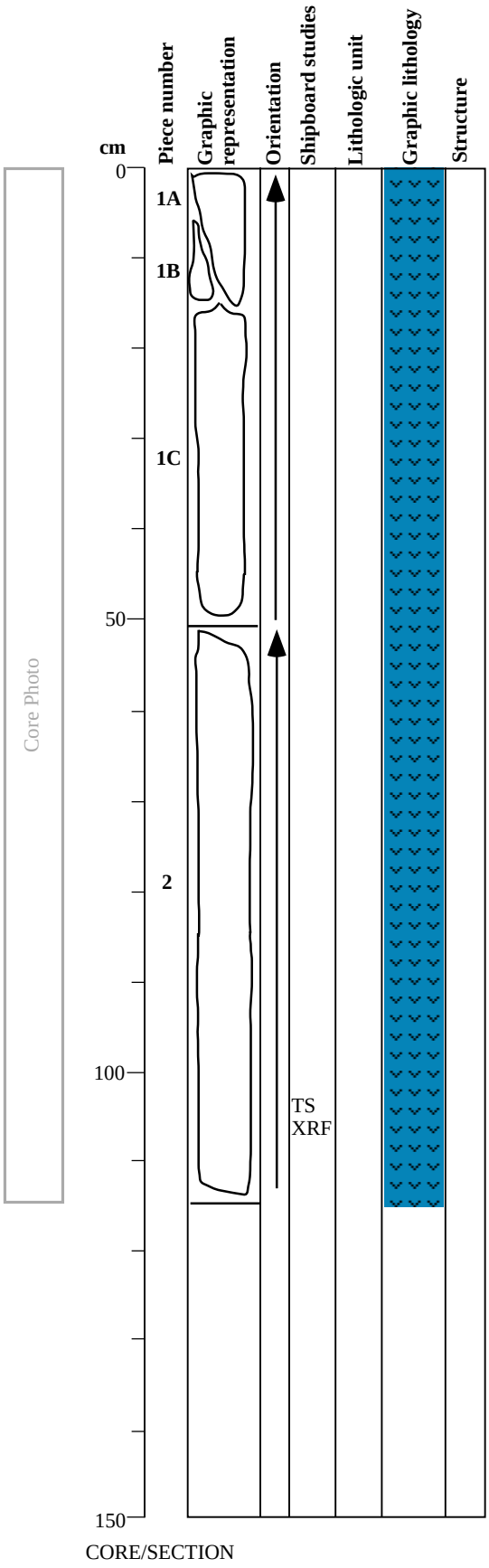


CORE/SECTION

169-1037B-60R-2
Top of Core 60R - 529.4 mbsf

Pieces 1-12

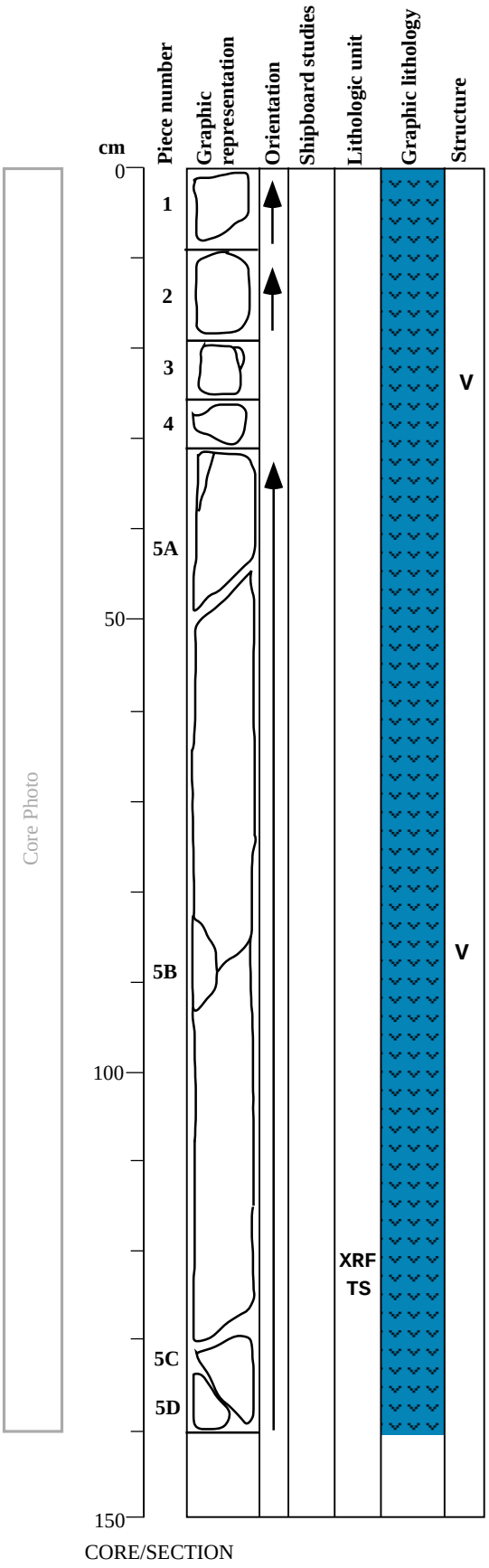
ROCK TYPE: BASALT
CONTACTS: None
COLOR: Green gray
MAJOR MINERALS:
Altered plagioclase and pyroxene
COMMENTS: Fine- to medium-grained and vesicular. Strongly to completely disrupted by exfoliative dessication. Pieces 1, 2, and 11 are coherent enough to retain an igneous texture. Abundant, 1-3 mm clay/chlorite filled vesicles are commonly occur in concentrically aligned arrays. The basalt has an intersertal to subophitic texture. Conjugate, chlorite-filled fractures occur throughout the section, and are well preserved in Piece 1. Piece 11 is a medium-(aspiring to be coarse) grained basalt. Plagioclase (3 mm long) crystals are in an altered, green chlorite/smectite/actinolite groundmass.



169-1037B-61R-1
Top of Core 61R - 533.9 mbsf

Pieces 1-2

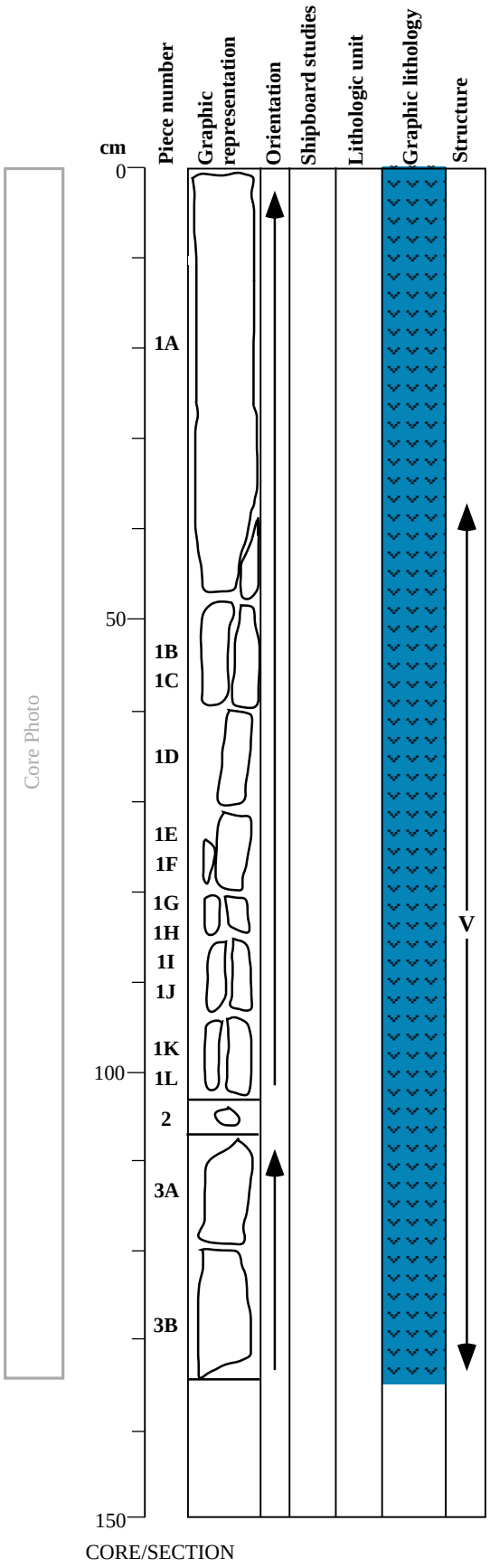
ROCK TYPE: BASALT
CONTACTS: None
COLOR: Gray
MAJOR MINERALS:
Plagioclase, altered
Clinopyroxene, altered
COMMENTS: Fine- to medium-grained and structureless apart from steeply dipping fractures in Piece 1. Slightly vesicular, with vesicles up to 5 mm filled with a pale green smectite-chlorite mixture. Mesostasis appears more altered at the base of Piece 1.



169-1037B-62R-1
Top of Core 62R - 538.0 mbsf

Pieces 1-5

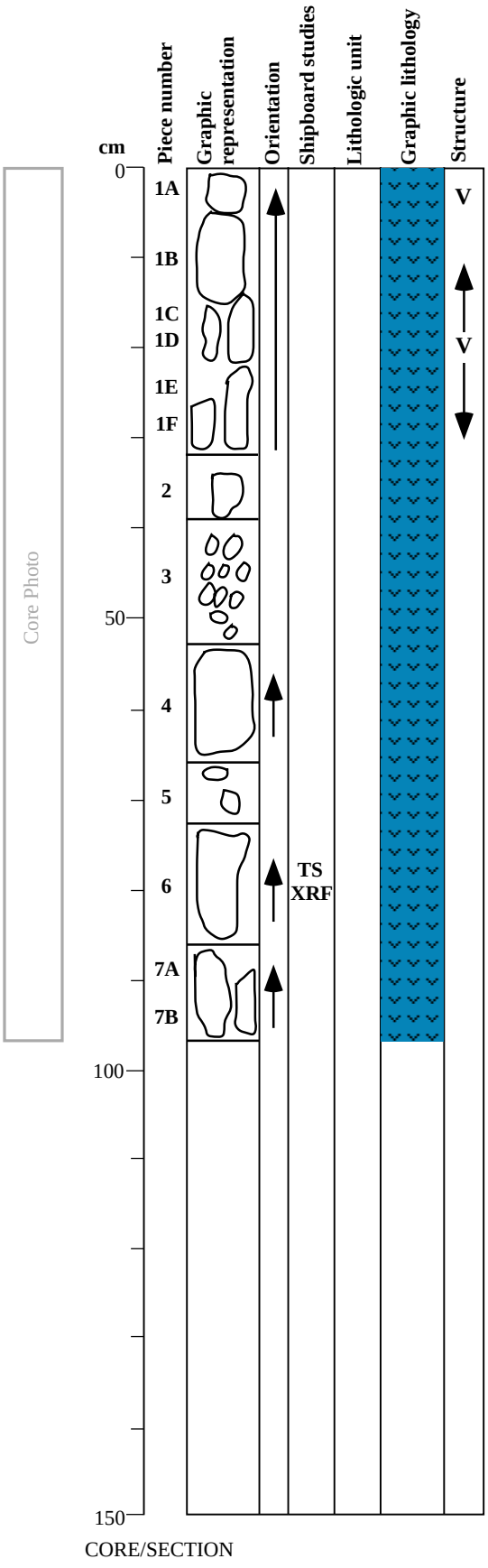
ROCK TYPE: BASALT
CONTACTS: None
COLOR: Bluish gray
MAJOR MINERALS:
Plagioclase, 40%
Clinopyroxene, few percent
COMMENTS: Medium-grained, homogeneous, plagioclase-phyric basalt. 1-2 mm long feldspar laths, in a matrix of green chlorite with larger crystals of altered pyroxene.
VEINS: A few thin, irregular veins of green, platy chlorite and white zeolites in rounded blebs.



169-1037B-62R-2
Top of Core 62R - 538.0 mbsf

Pieces 1-3

ROCK TYPE: BASALT
CONTACTS: None
COLOR: Bluish gray
MAJOR MINERALS:
Plagioclase, 30-35%
Clinopyroxene, few percent
COMMENTS: Medium-grained and homogeneous, grain size appears to increase slightly down section, and this section is more coarse grained than Section 169-1037B-62R-1. 1- to 3-mm-long feldspar laths are embedded in a greenish matrix of chlorite.
VEINS: There is a long, 2- to 3-mm-wide, subvertical vein of white, radiating aggregates of zeolite from 38-133 cm. In places this vein also has blue-green patches, possibly zeolites or clays or chlorite.



169-1037B-62R-3
Top of Core 62R - 538.0 mbsf

Pieces 1-7

ROCK TYPE: BASALT
CONTACTS: None
COLOR: Bluish gray
MAJOR MINERALS:
Plagioclase, 45-50%
Clinopyroxene, few percent
COMMENTS: Grain size increases down section, and is relatively coarse in Pieces 6 and 7. Plagioclase phenocrysts as large as 4 mm. Ferromagnesian minerals are green to black and 2 mm.
VEINS: 2- to 3-mm-long, subvertical veins of white, patchy, radiating aggregates of zeolites and greenish patches of chlorite.

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