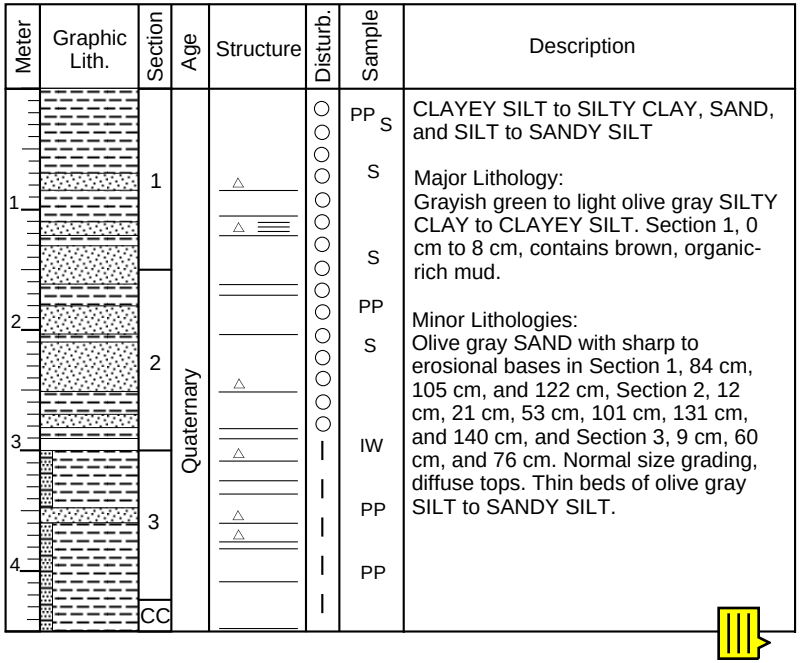
SITE 1029 HOLE A CORE 1H CORED 0.0 - 4.5 mbsf



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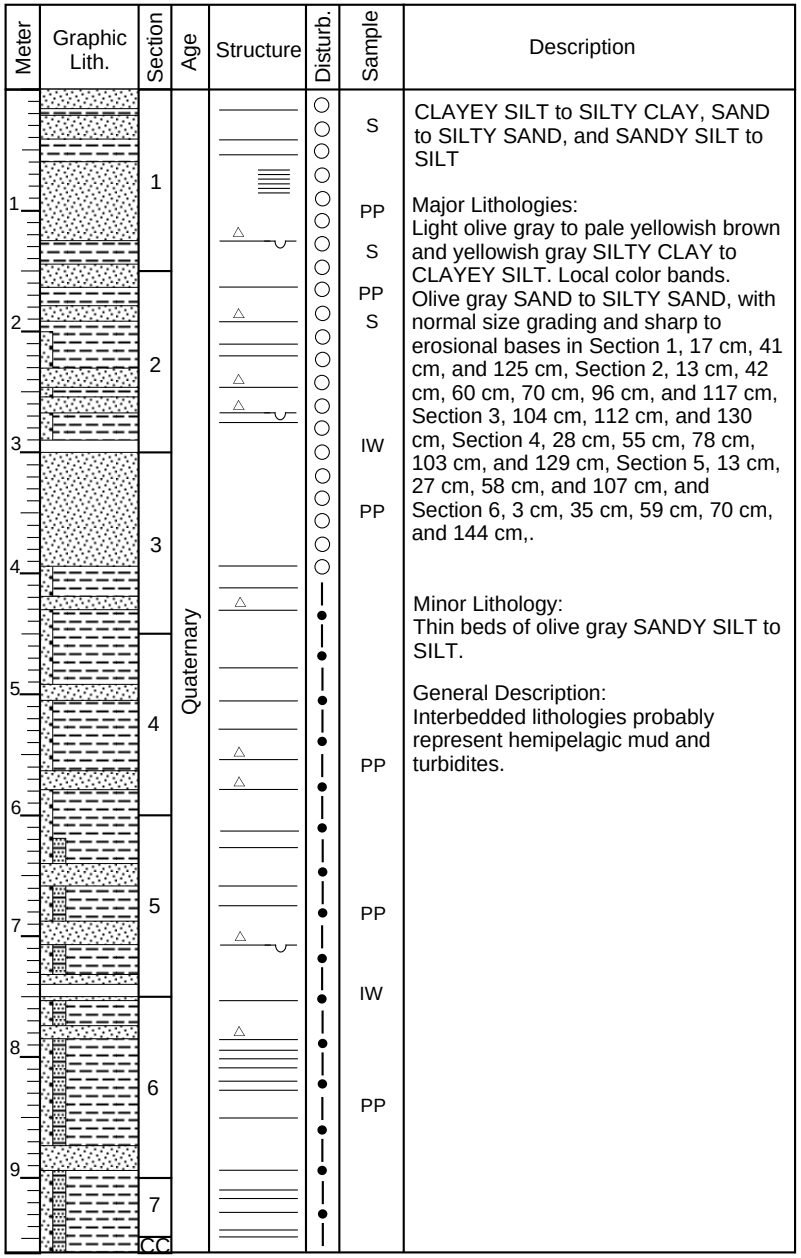
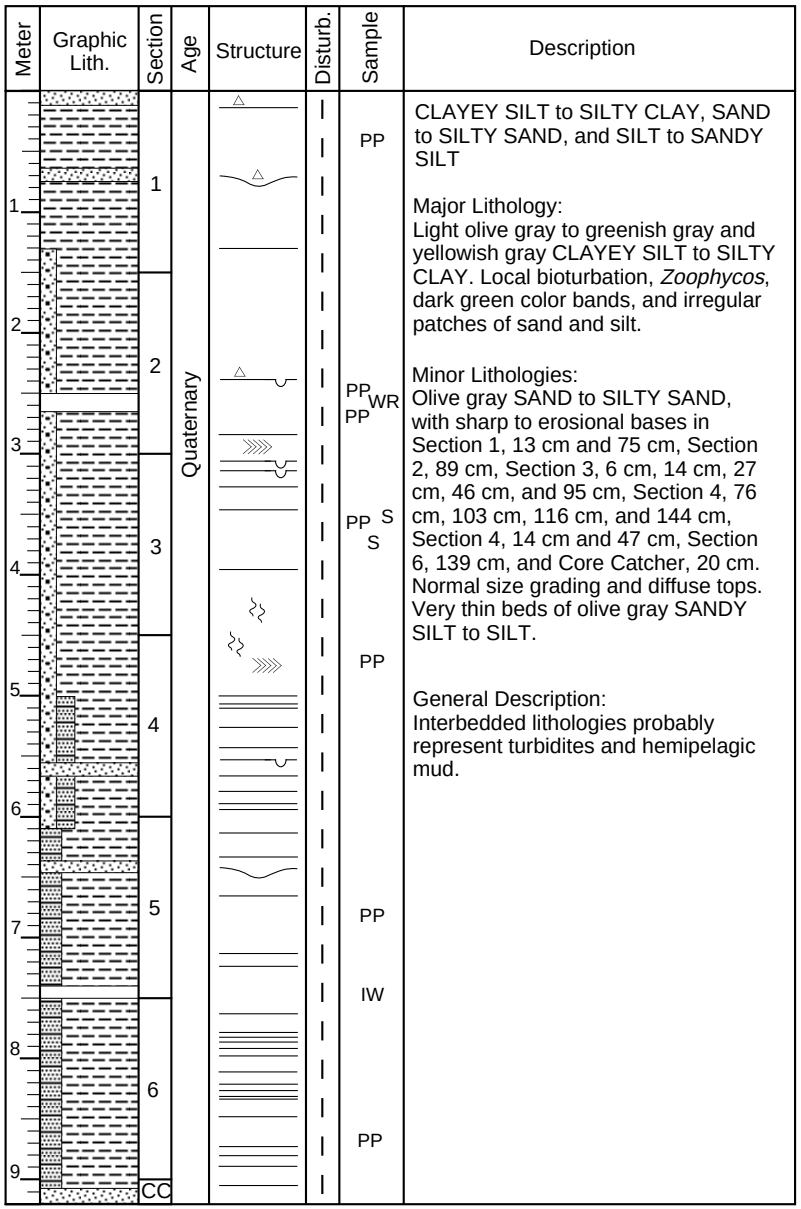
SITE 1029 HOLE A CORE 2H CORED 4.5 - 14.0 mbsf



SITE 1029 HOLE A CORE 3H CORED 14.0 - 23.5 mbsf



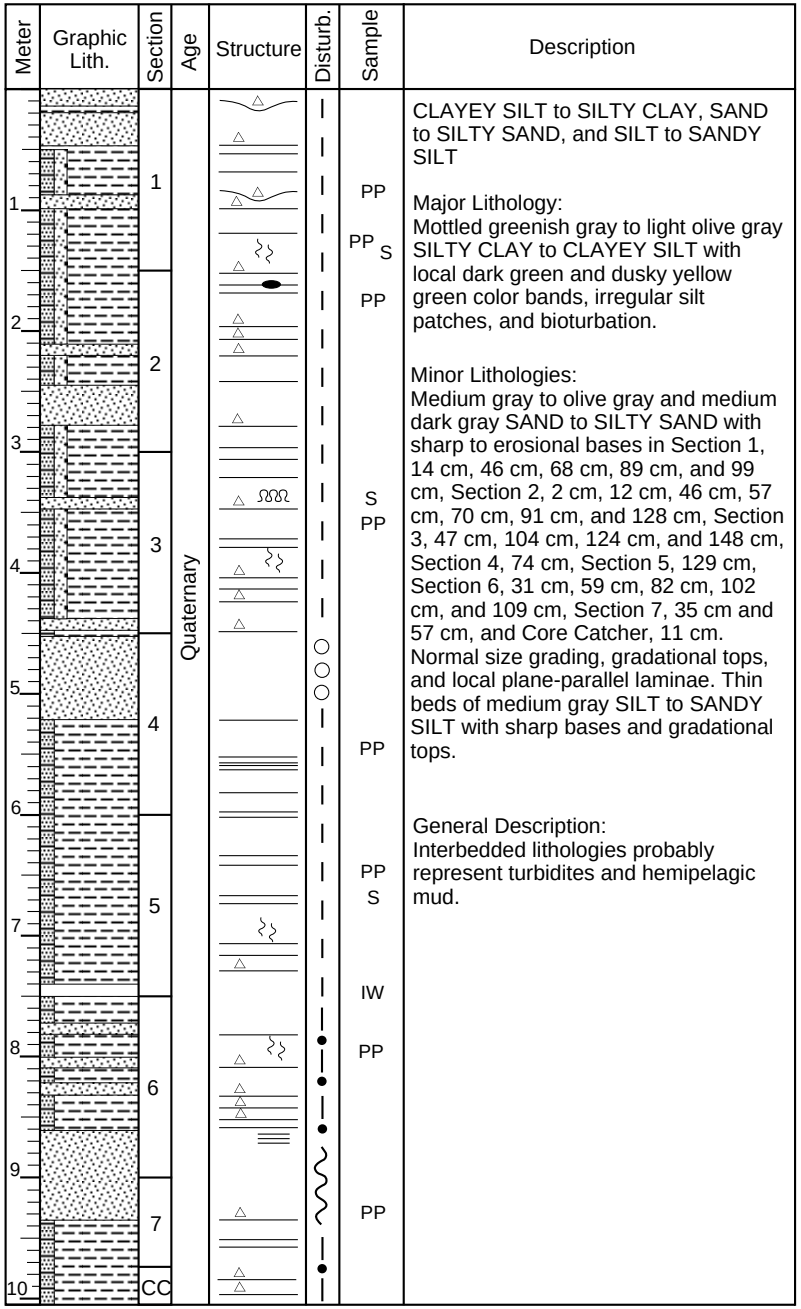
CLAYEY SILT to SILTY CLAY, SAND to SILTY SAND, and SILT to SANDY SILT

Major Lithology:
Light olive gray to greenish gray and yellowish gray CLAYEY SILT to SILTY CLAY. Local bioturbation, *Zoophycos*, dark green color bands, and irregular patches of sand and silt.

Minor Lithologies:
Olive gray SAND to SILTY SAND, with sharp to erosional bases in Section 1, 13 cm and 75 cm, Section 2, 89 cm, Section 3, 6 cm, 14 cm, 27 cm, 46 cm, and 95 cm, Section 4, 76 cm, 103 cm, 116 cm, and 144 cm, Section 4, 14 cm and 47 cm, Section 6, 139 cm, and Core Catcher, 20 cm. Normal size grading and diffuse tops. Very thin beds of olive gray SANDY SILT to SILT.

General Description:
Interbedded lithologies probably represent turbidites and hemipelagic mud.

SITE 1029 HOLE A CORE 4H CORED 23.5 - 33.0 mbsf



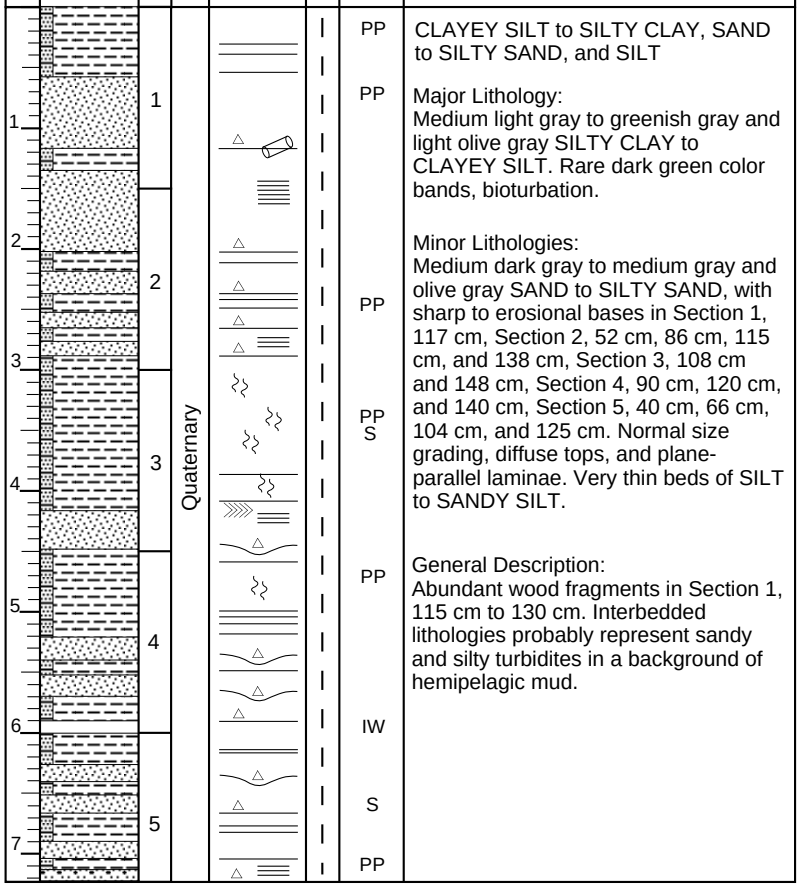
CLAYEY SILT to SILTY CLAY, SAND to SILTY SAND, and SILT to SANDY SILT

Major Lithology:
Mottled greenish gray to light olive gray SILTY CLAY to CLAYEY SILT with local dark green and dusky yellow green color bands, irregular silt patches, and bioturbation.

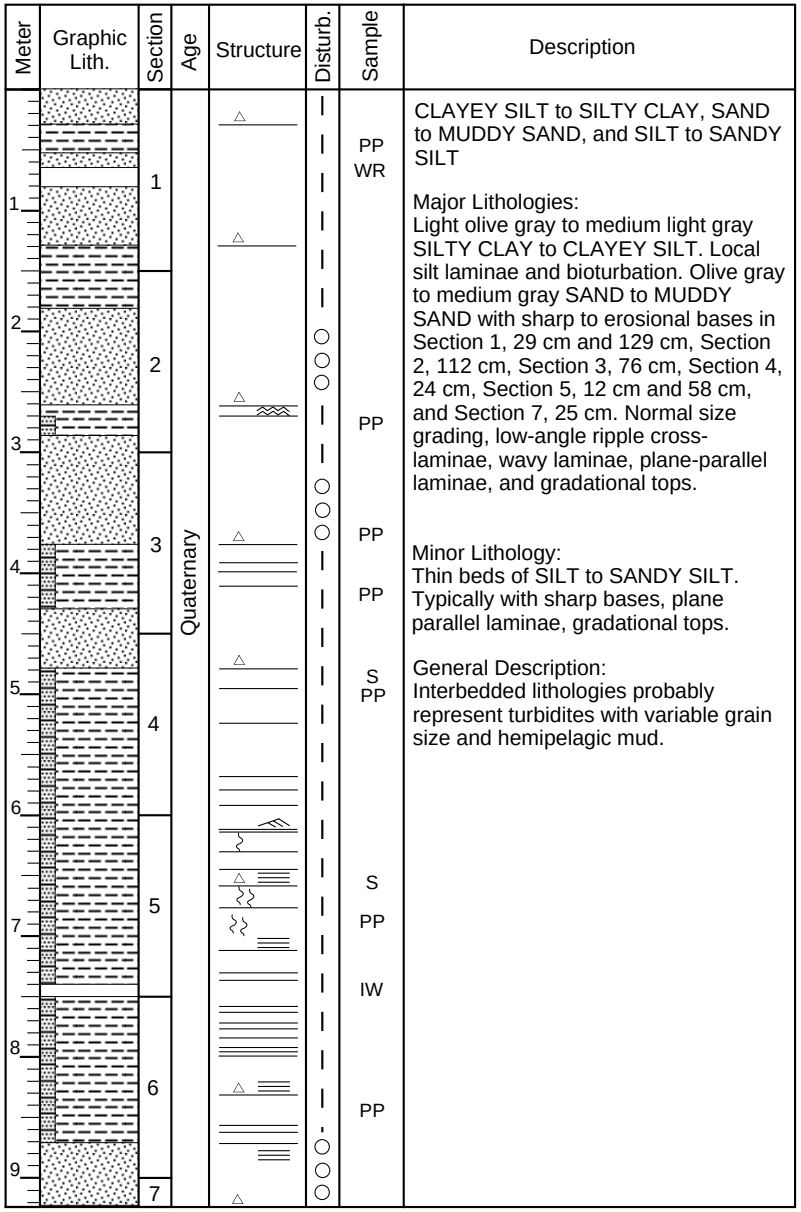
Minor Lithologies:
Medium gray to olive gray and medium dark gray SAND to SILTY SAND with sharp to erosional bases in Section 1, 14 cm, 46 cm, 68 cm, 89 cm, and 99 cm, Section 2, 2 cm, 12 cm, 46 cm, 57 cm, 70 cm, 91 cm, and 128 cm, Section 3, 47 cm, 104 cm, 124 cm, and 148 cm, Section 4, 74 cm, Section 5, 129 cm, Section 6, 31 cm, 59 cm, 82 cm, 102 cm, and 109 cm, Section 7, 35 cm and 57 cm, and Core Catcher, 11 cm. Normal size grading, gradational tops, and local plane-parallel laminae. Thin beds of medium gray SILT to SANDY SILT with sharp bases and gradational tops.

General Description:
Interbedded lithologies probably represent turbidites and hemipelagic mud.

SITE 1029 HOLE A CORE 5H CORED 33.0 - 42.5 mbsf



SITE 1029 HOLE A CORE 6H CORED 42.5 - 52.0 mbsf



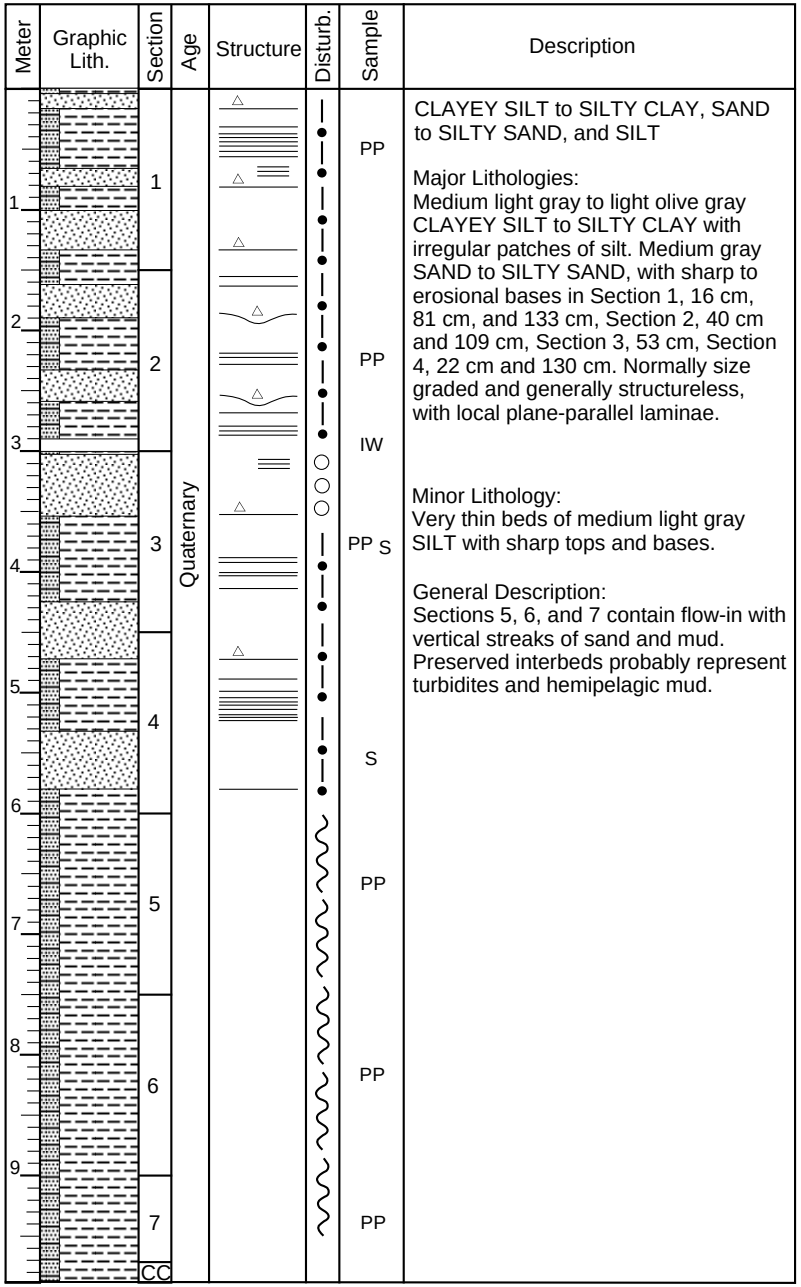
CLAYEY SILT to SILTY CLAY, SAND to MUDDY SAND, and SILT to SANDY SILT

Major Lithologies:
Light olive gray to medium light gray SILTY CLAY to CLAYEY SILT. Local silt laminae and bioturbation. Olive gray to medium gray SAND to MUDDY SAND with sharp to erosional bases in Section 1, 29 cm and 129 cm, Section 2, 112 cm, Section 3, 76 cm, Section 4, 24 cm, Section 5, 12 cm and 58 cm, and Section 7, 25 cm. Normal size grading, low-angle ripple cross-laminae, wavy laminae, plane-parallel laminae, and gradational tops.

Minor Lithology:
Thin beds of SILT to SANDY SILT. Typically with sharp bases, plane parallel laminae, gradational tops.

General Description:
Interbedded lithologies probably represent turbidites with variable grain size and hemipelagic mud.

SITE 1029 HOLE A CORE 7H CORED 52.0 - 61.5 mbsf



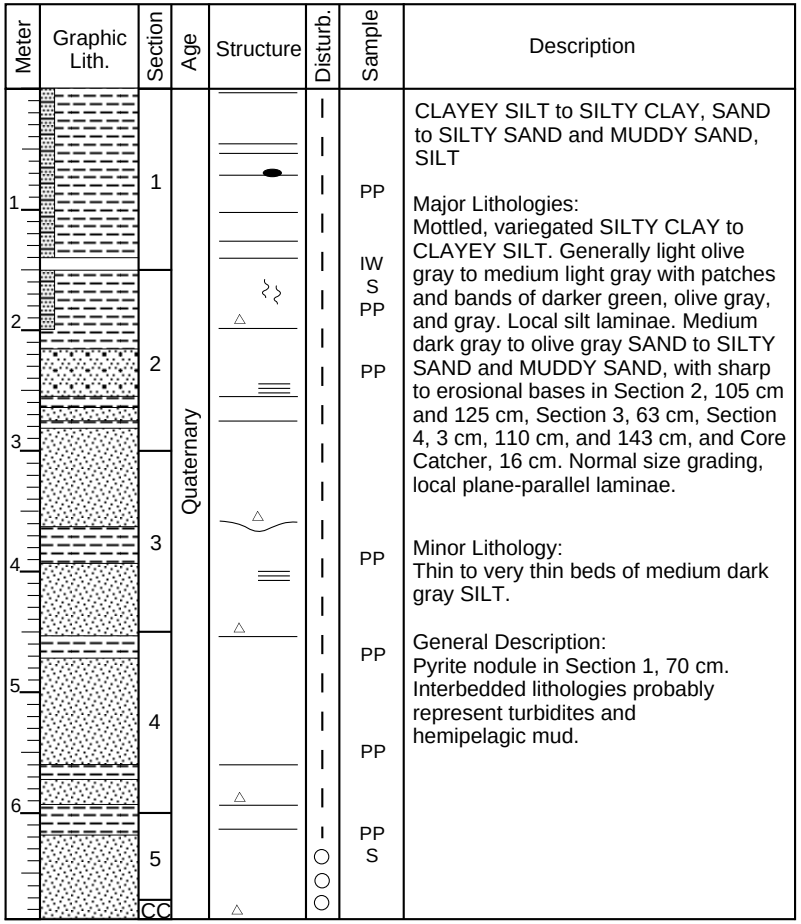
CLAYEY SILT to SILTY CLAY, SAND to SILTY SAND, and SILT

Major Lithologies:
Medium light gray to light olive gray CLAYEY SILT to SILTY CLAY with irregular patches of silt. Medium gray SAND to SILTY SAND, with sharp to erosional bases in Section 1, 16 cm, 81 cm, and 133 cm, Section 2, 40 cm and 109 cm, Section 3, 53 cm, Section 4, 22 cm and 130 cm. Normally size graded and generally structureless, with local plane-parallel laminae.

Minor Lithology:
Very thin beds of medium light gray SILT with sharp tops and bases.

General Description:
Sections 5, 6, and 7 contain flow-in with vertical streaks of sand and mud. Preserved interbeds probably represent turbidites and hemipelagic mud.

SITE 1029 HOLE A CORE 8H CORED 61.5 - 71.0 mbsf



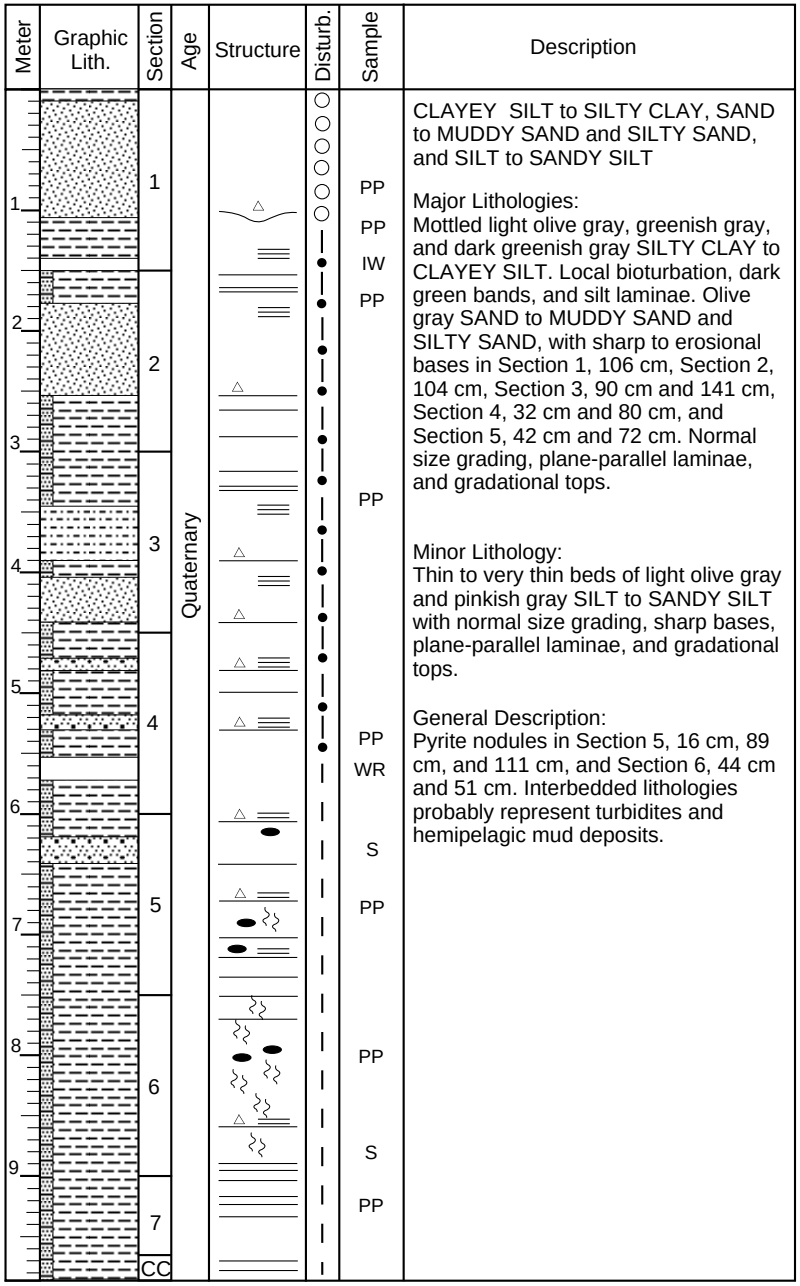
CLAYEY SILT to SILTY CLAY, SAND to SILTY SAND and MUDDY SAND, SILT

Major Lithologies:
Mottled, variegated SILTY CLAY to CLAYEY SILT. Generally light olive gray to medium light gray with patches and bands of darker green, olive gray, and gray. Local silt laminae. Medium dark gray to olive gray SAND to SILTY SAND and MUDDY SAND, with sharp to erosional bases in Section 2, 105 cm and 125 cm, Section 3, 63 cm, Section 4, 3 cm, 110 cm, and 143 cm, and Core Catcher, 16 cm. Normal size grading, local plane-parallel laminae.

Minor Lithology:
Thin to very thin beds of medium dark gray SILT.

General Description:
Pyrite nodule in Section 1, 70 cm. Interbedded lithologies probably represent turbidites and hemipelagic mud.

SITE 1029 HOLE A CORE 9H CORED 71.0 - 80.5 mbsf



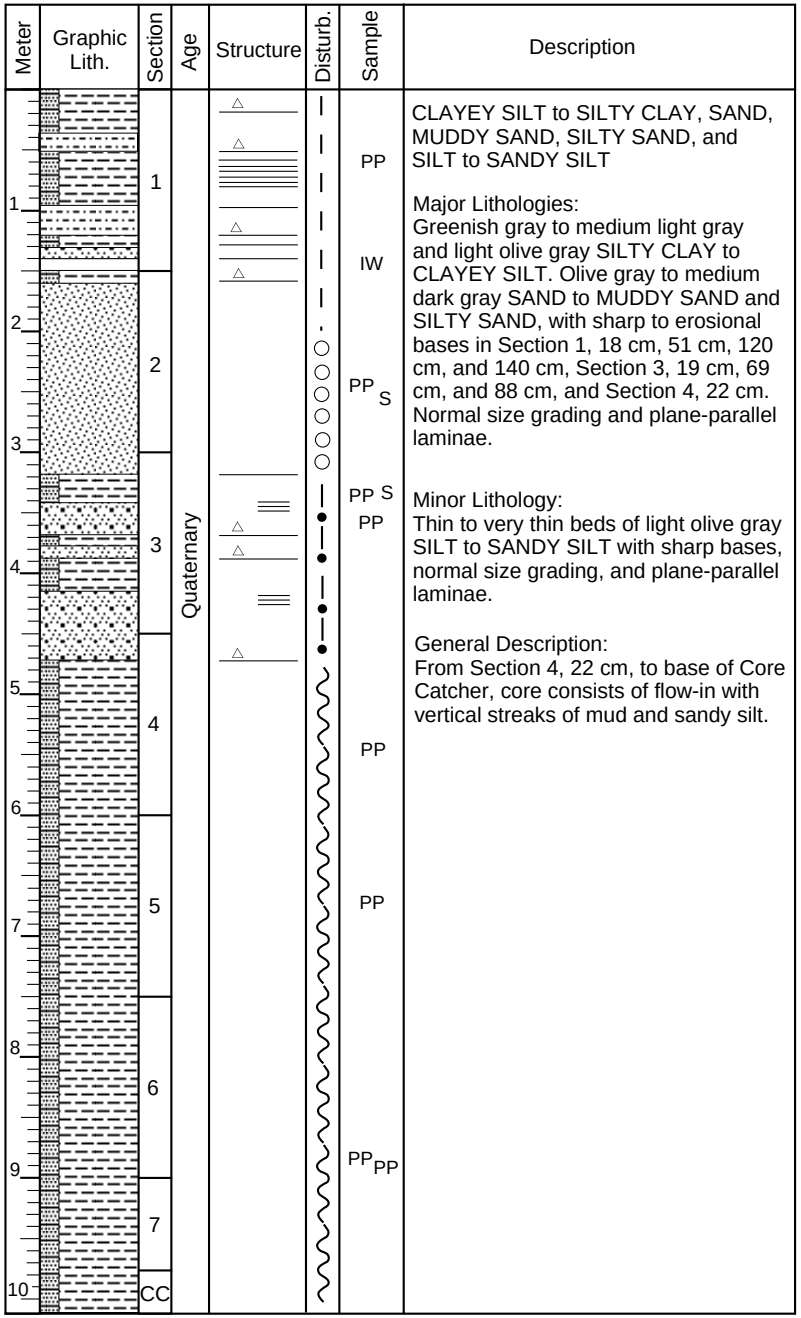
CLAYEY SILT to SILTY CLAY, SAND to MUDDY SAND and SILTY SAND, and SILT to SANDY SILT

Major Lithologies:
Mottled light olive gray, greenish gray, and dark greenish gray SILTY CLAY to CLAYEY SILT. Local bioturbation, dark green bands, and silt laminae. Olive gray SAND to MUDDY SAND and SILTY SAND, with sharp to erosional bases in Section 1, 106 cm, Section 2, 104 cm, Section 3, 90 cm and 141 cm, Section 4, 32 cm and 80 cm, and Section 5, 42 cm and 72 cm. Normal size grading, plane-parallel laminae, and gradational tops.

Minor Lithology:
Thin to very thin beds of light olive gray and pinkish gray SILT to SANDY SILT with normal size grading, sharp bases, plane-parallel laminae, and gradational tops.

General Description:
Pyrite nodules in Section 5, 16 cm, 89 cm, and 111 cm, and Section 6, 44 cm and 51 cm. Interbedded lithologies probably represent turbidites and hemipelagic mud deposits.

SITE 1029 HOLE A CORE 10H CORED 80.5 - 90.0 mbsf



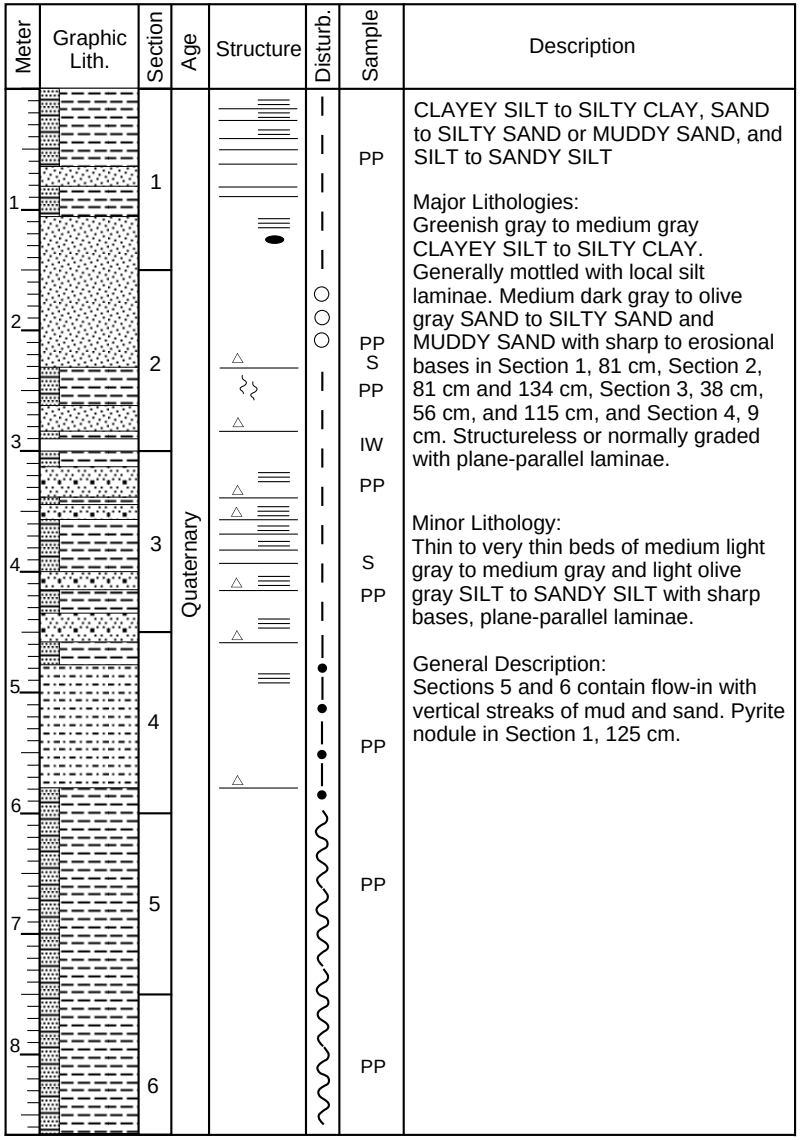
CLAYEY SILT to SILTY CLAY, SAND, MUDDY SAND, SILTY SAND, and SILT to SANDY SILT

Major Lithologies:
Greenish gray to medium light gray and light olive gray SILTY CLAY to CLAYEY SILT. Olive gray to medium dark gray SAND to MUDDY SAND and SILTY SAND, with sharp to erosional bases in Section 1, 18 cm, 51 cm, 120 cm, and 140 cm, Section 3, 19 cm, 69 cm, and 88 cm, and Section 4, 22 cm. Normal size grading and plane-parallel laminae.

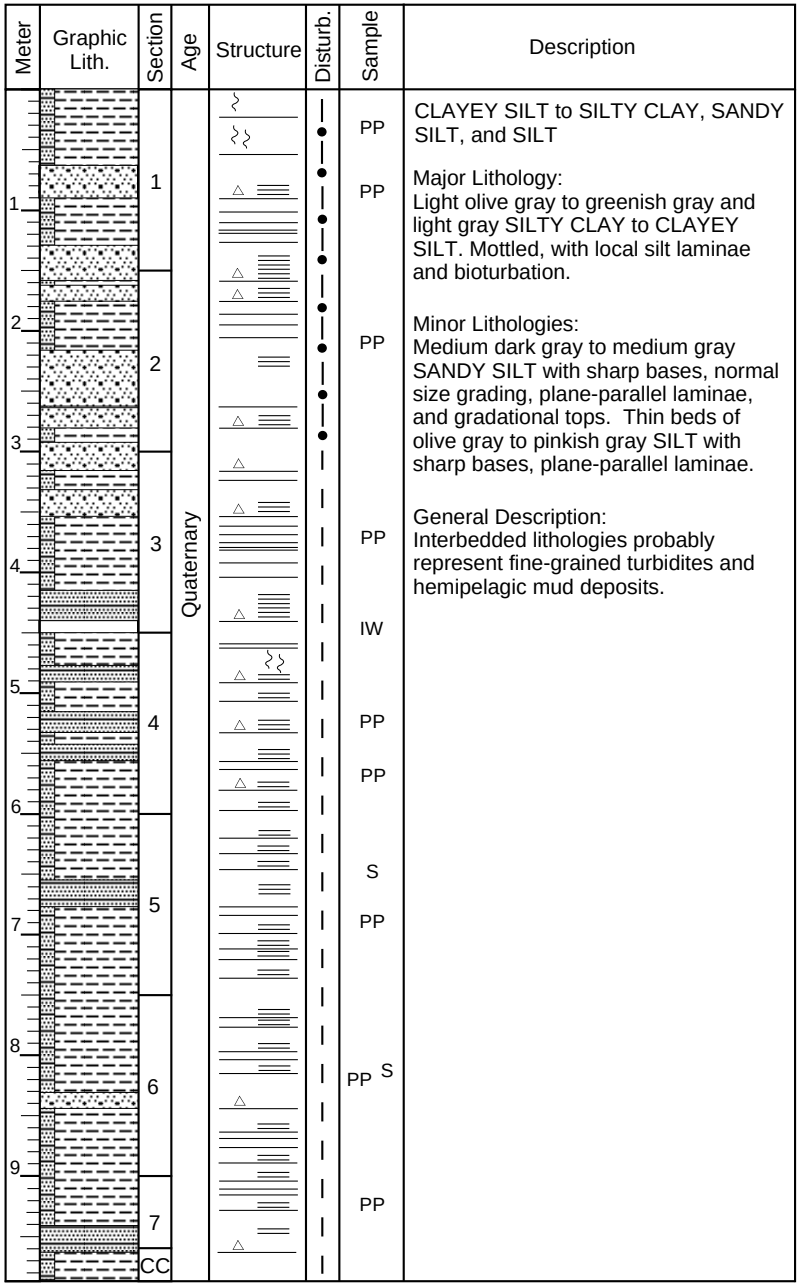
Minor Lithology:
Thin to very thin beds of light olive gray SILT to SANDY SILT with sharp bases, normal size grading, and plane-parallel laminae.

General Description:
From Section 4, 22 cm, to base of Core Catcher, core consists of flow-in with vertical streaks of mud and sandy silt.

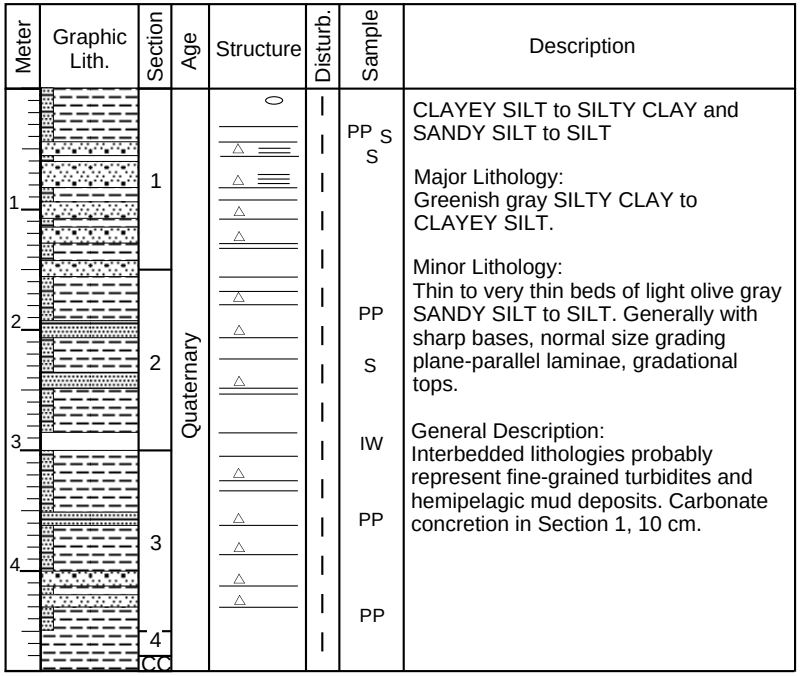
SITE 1029 HOLE A CORE 11H CORED 90.0 - 99.5 mbsf



SITE 1029 HOLE A CORE 12H CORED 99.5 - 109.0 mbsf



SITE 1029 HOLE A CORE 13X CORED 109.0 - 114.9 mbsf



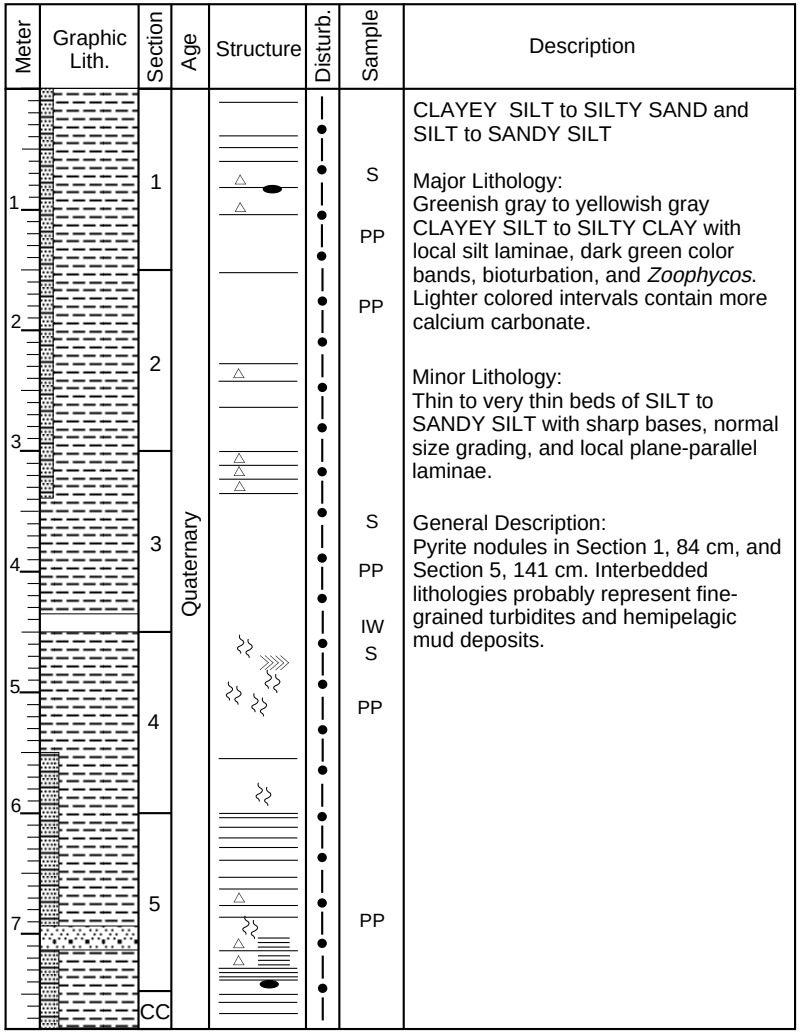
CLAYEY SILT to SILTY CLAY and SANDY SILT to SILT

Major Lithology:
Greenish gray SILTY CLAY to CLAYEY SILT.

Minor Lithology:
Thin to very thin beds of light olive gray SANDY SILT to SILT. Generally with sharp bases, normal size grading plane-parallel laminae, gradational tops.

General Description:
Interbedded lithologies probably represent fine-grained turbidites and hemipelagic mud deposits. Carbonate concretion in Section 1, 10 cm.

SITE 1029 HOLE A CORE 14X CORED 114.9 - 120.8 mbsf



CLAYEY SILT to SILTY SAND and SILT to SANDY SILT

Major Lithology:
Greenish gray to yellowish gray CLAYEY SILT to SILTY CLAY with local silt laminae, dark green color bands, bioturbation, and *Zoophycos*. Lighter colored intervals contain more calcium carbonate.

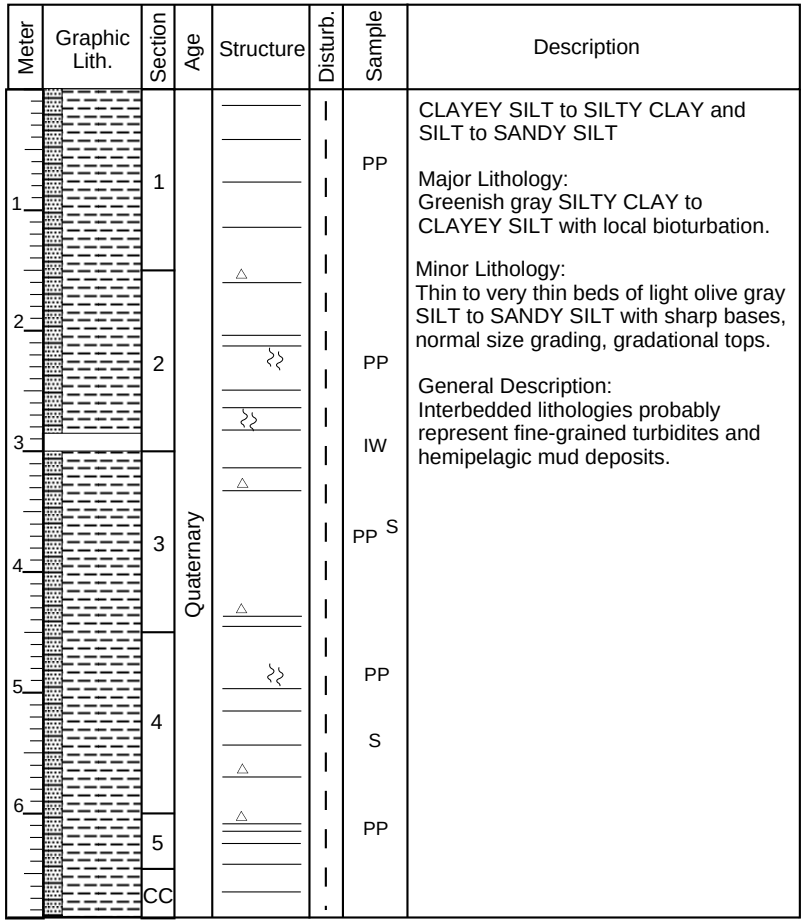
Minor Lithology:
Thin to very thin beds of SILT to SANDY SILT with sharp bases, normal size grading, and local plane-parallel laminae.

General Description:
Pyrite nodules in Section 1, 84 cm, and Section 5, 141 cm. Interbedded lithologies probably represent fine-grained turbidites and hemipelagic mud deposits.

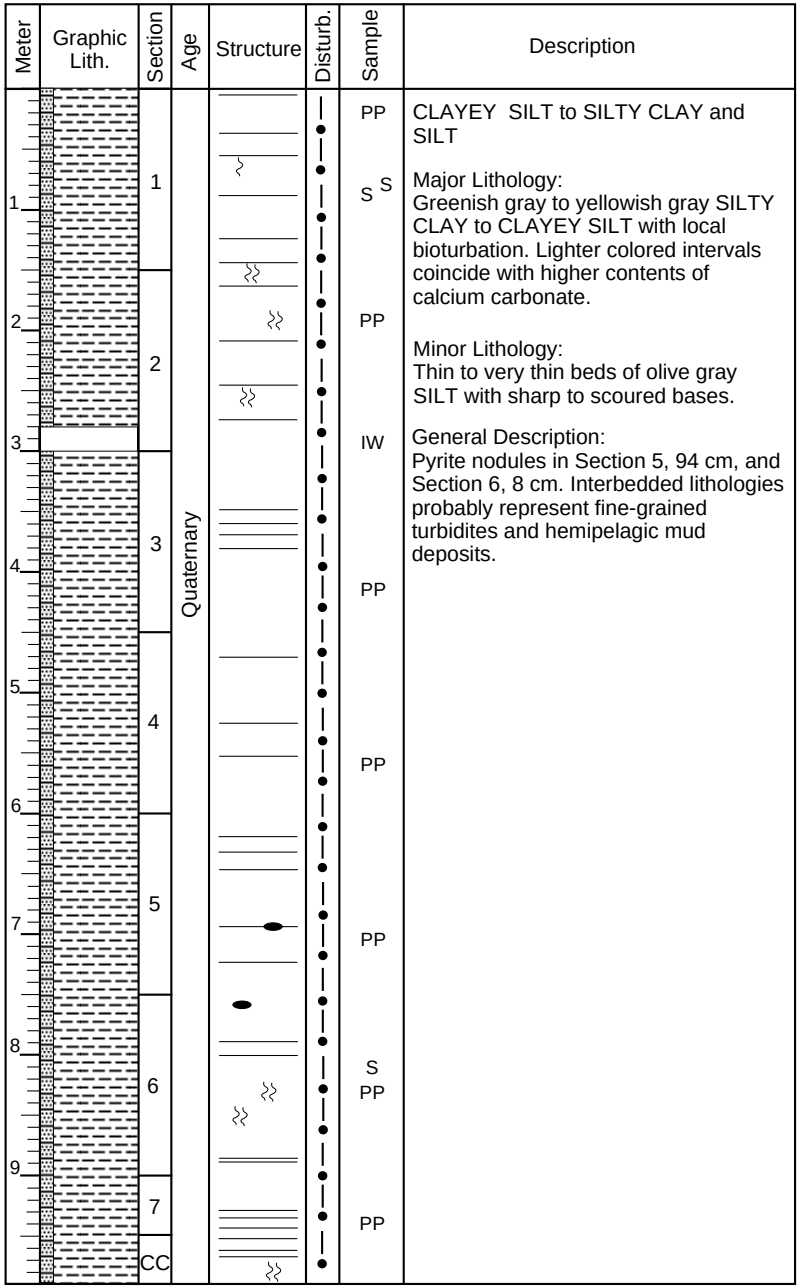
SITE 1029 HOLE A CORE 15X CORED 120.8 - 130.4 mbsf

Meter	Graphic Lith.	Section	Age	Structure	Disturb.	Sample	Description
1	VOID	1	Quaternary			PP S	CLAYEY SILT to SILTY CLAY and SILT to SANDY SILT Major Lithology: Light olive gray to greenish gray CLAYEY SILT to SILTY CLAY with local bioturbation. Minor Lithology: Thin to very thin beds of SILT to SANDY SILT with sharp bases and normal size grading.

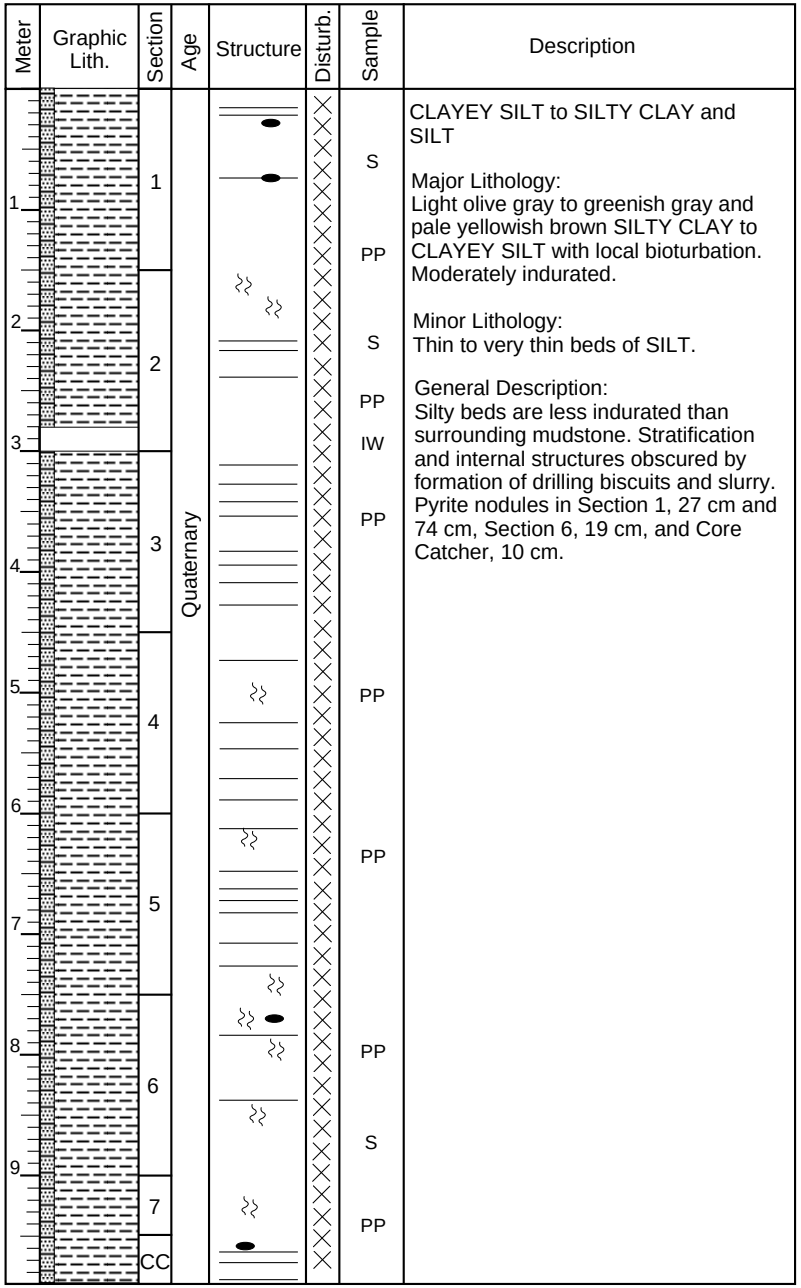
SITE 1029 HOLE A CORE 16X CORED 130.4 - 140.0 mbsf



SITE 1029 HOLE A CORE 17X CORED 140.0 - 149.6 mbsf



SITE 1029 HOLE A CORE 18X CORED 149.6 - 159.2 mbsf



Description

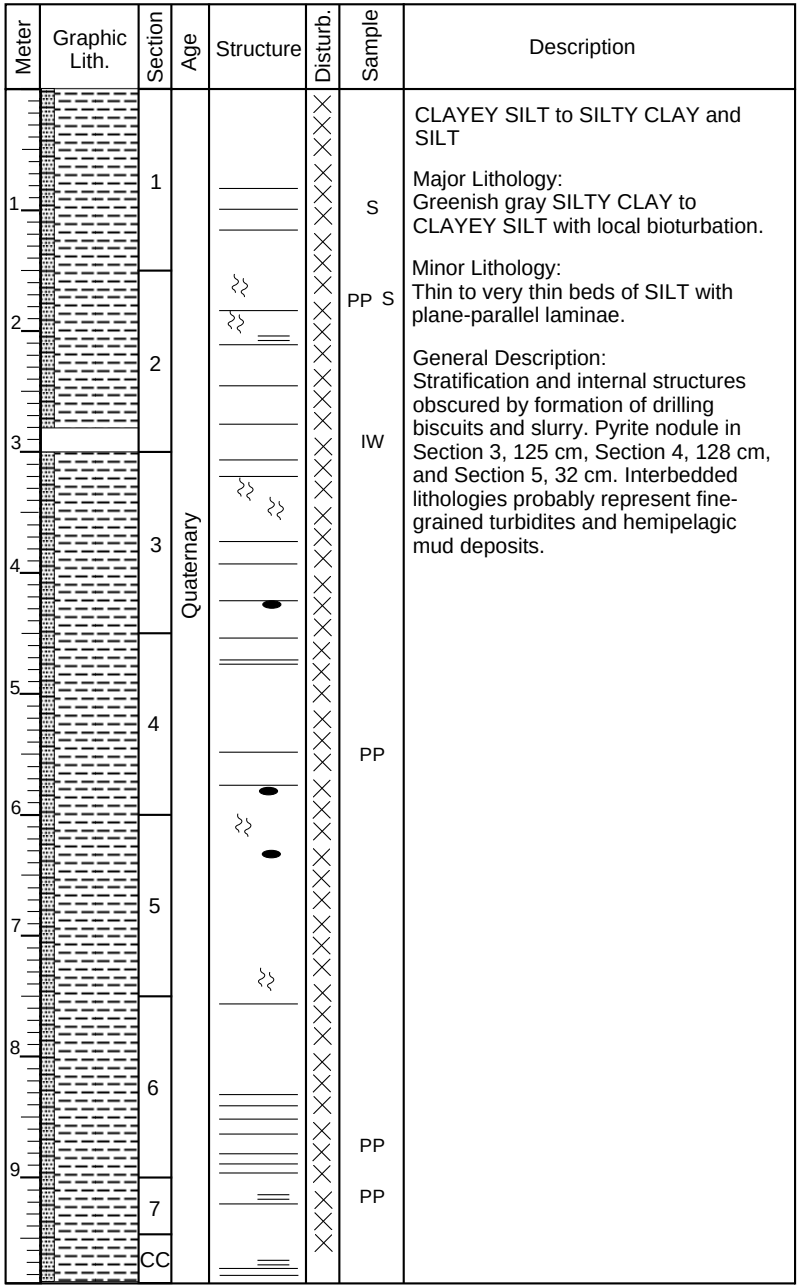
CLAYEY SILT to SILTY CLAY and SILT

Major Lithology:
Light olive gray to greenish gray and pale yellowish brown SILTY CLAY to CLAYEY SILT with local bioturbation. Moderately indurated.

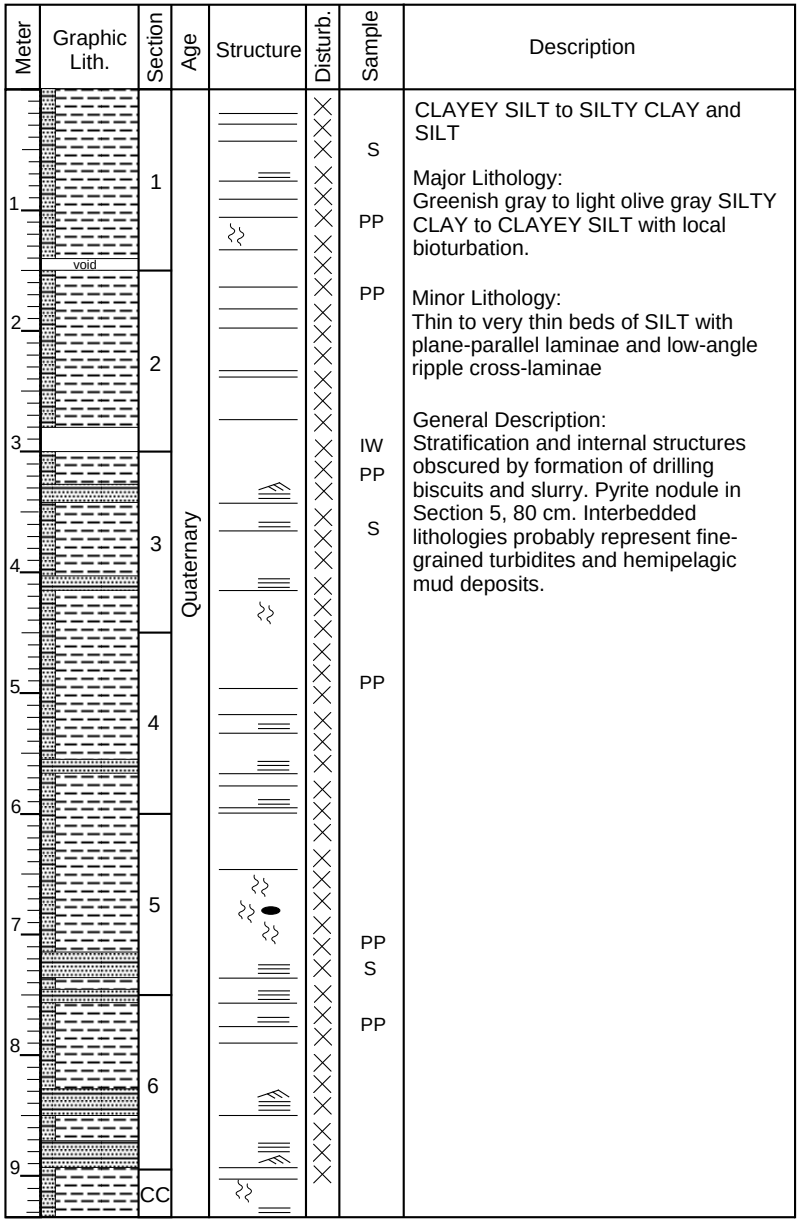
Minor Lithology:
Thin to very thin beds of SILT.

General Description:
Silty beds are less indurated than surrounding mudstone. Stratification and internal structures obscured by formation of drilling biscuits and slurry. Pyrite nodules in Section 1, 27 cm and 74 cm, Section 6, 19 cm, and Core Catcher, 10 cm.

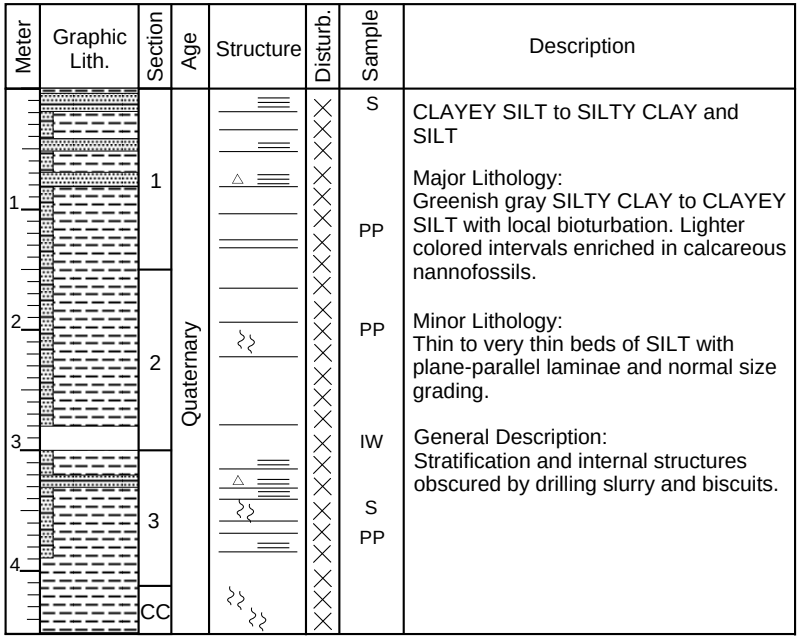
SITE 1029 HOLE A CORE 19X CORED 159.2 - 168.8 mbsf



SITE 1029 HOLE A CORE 20X CORED 168.8 - 178.4 mbsf



SITE 1029 HOLE A CORE 21X CORED 178.4 - 188.0 mbsf



Description

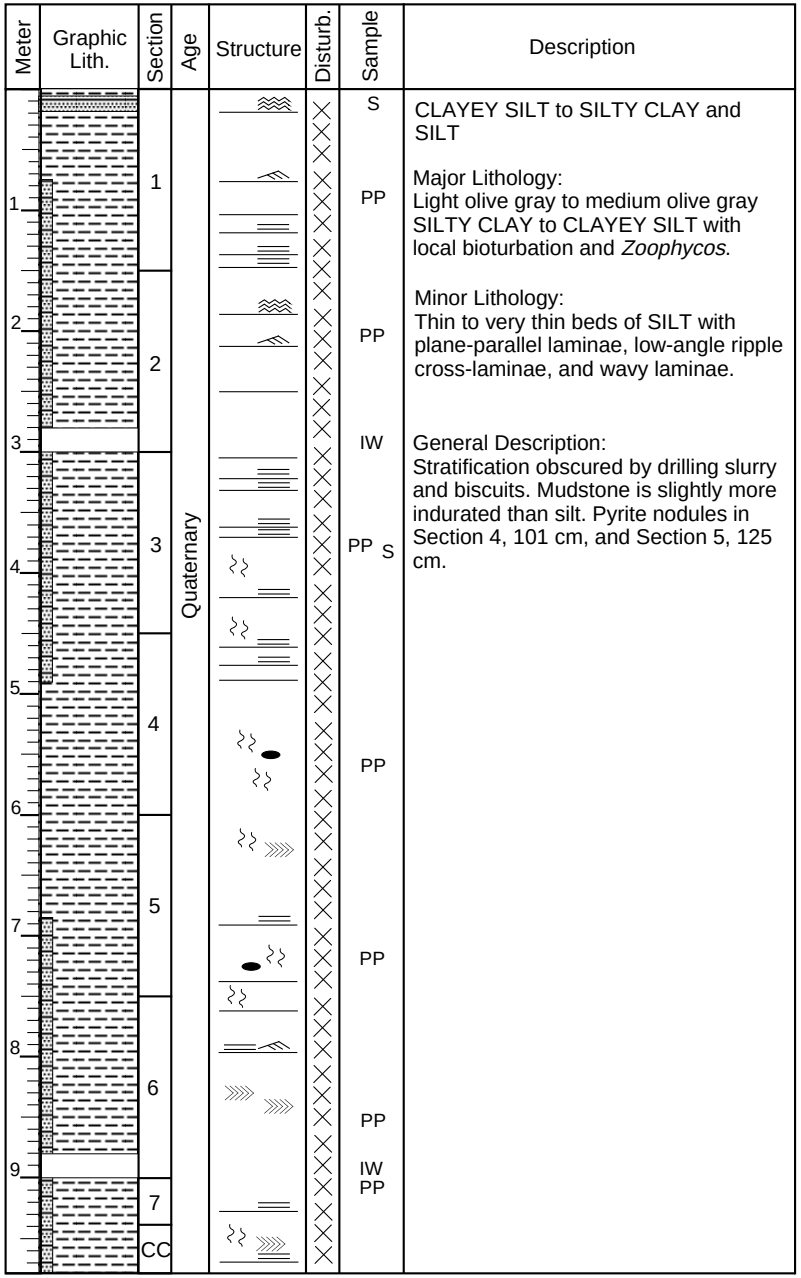
CLAYEY SILT to SILTY CLAY and SILT

Major Lithology:
Greenish gray SILTY CLAY to CLAYEY SILT with local bioturbation. Lighter colored intervals enriched in calcareous nannofossils.

Minor Lithology:
Thin to very thin beds of SILT with plane-parallel laminae and normal size grading.

General Description:
Stratification and internal structures obscured by drilling slurry and biscuits.

SITE 1029 HOLE A CORE 22X CORED 188.0 - 197.6 mbsf



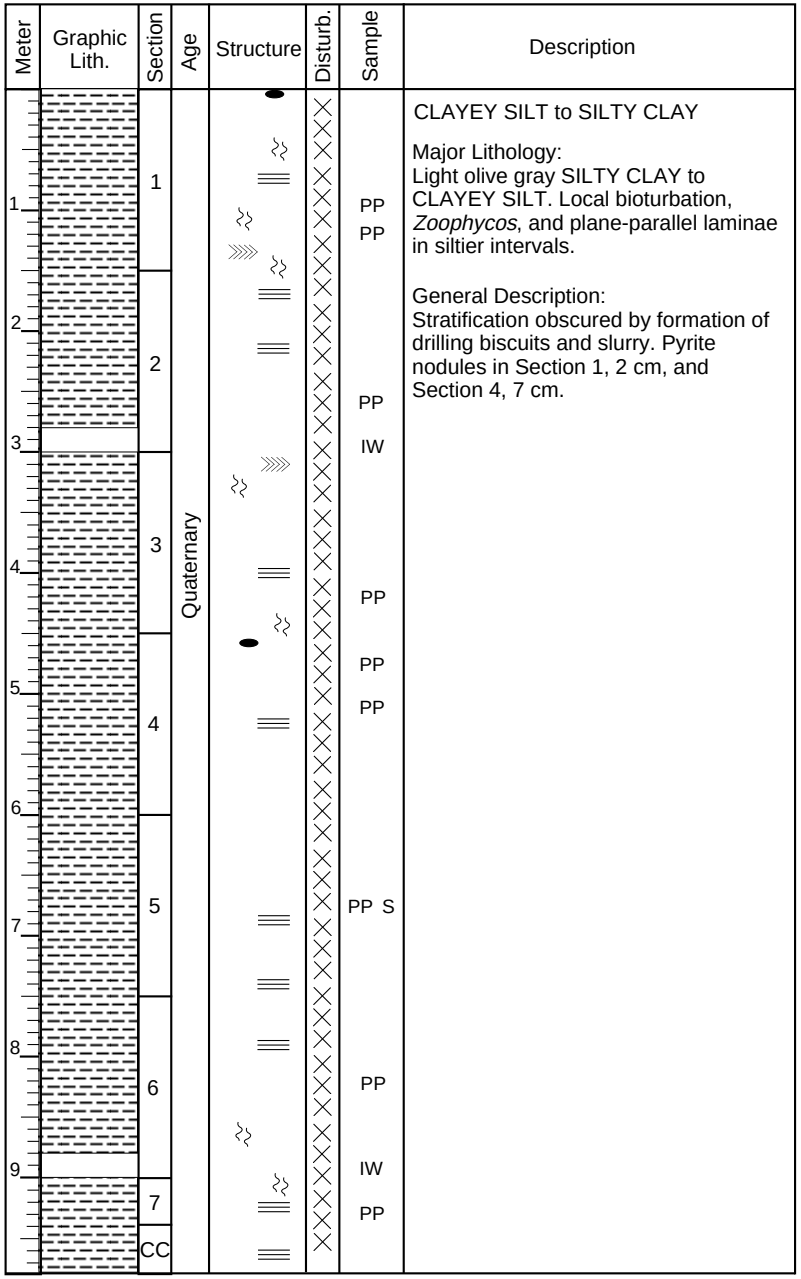
CLAYEY SILT to SILTY CLAY and SILT

Major Lithology:
Light olive gray to medium olive gray SILTY CLAY to CLAYEY SILT with local bioturbation and *Zoophycos*.

Minor Lithology:
Thin to very thin beds of SILT with plane-parallel laminae, low-angle ripple cross-laminae, and wavy laminae.

General Description:
Stratification obscured by drilling slurry and biscuits. Mudstone is slightly more indurated than silt. Pyrite nodules in Section 4, 101 cm, and Section 5, 125 cm.

SITE 1029 HOLE A CORE 23X CORED 197.6 - 207.2 mbsf

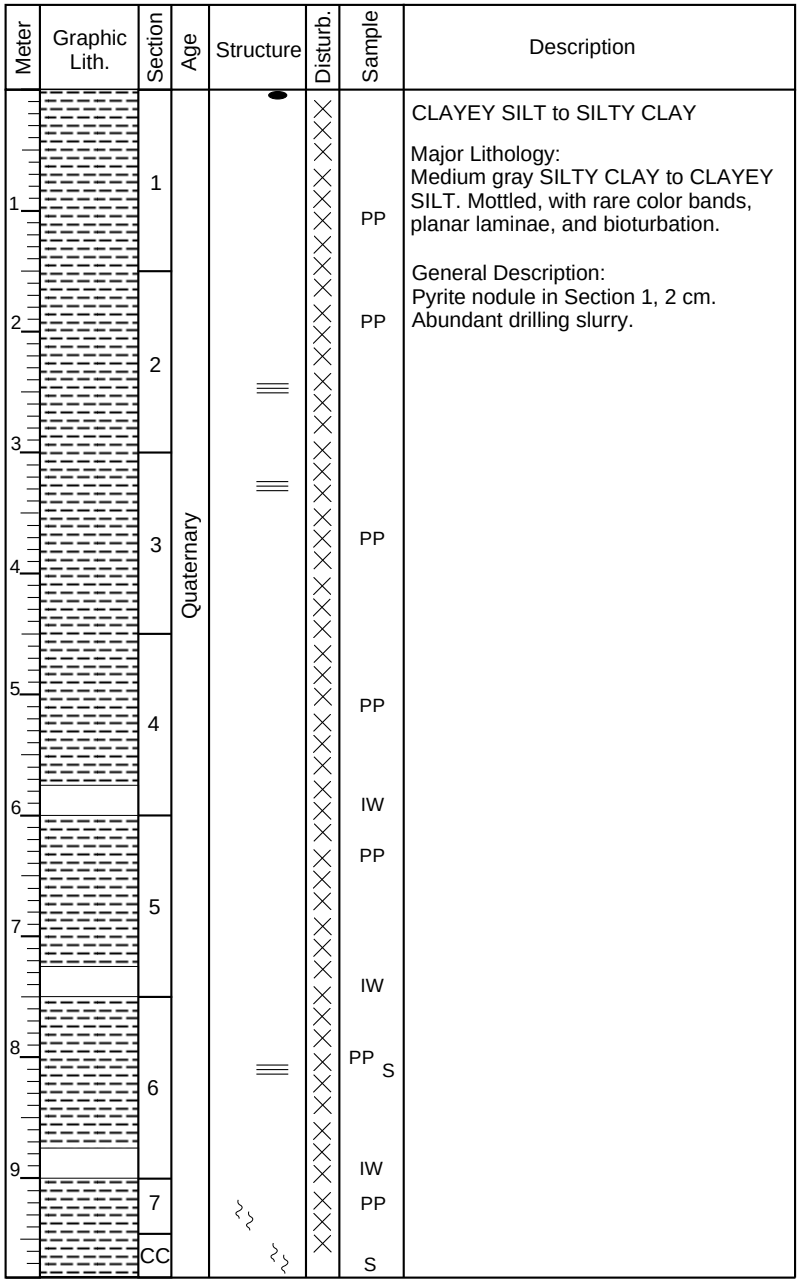


CLAYEY SILT to SILTY CLAY

Major Lithology:
Light olive gray SILTY CLAY to CLAYEY SILT. Local bioturbation, *Zoophycos*, and plane-parallel laminae in siltier intervals.

General Description:
Stratification obscured by formation of drilling biscuits and slurry. Pyrite nodules in Section 1, 2 cm, and Section 4, 7 cm.

SITE 1029 HOLE A CORE 24X CORED 207.2 - 216.8 mbsf



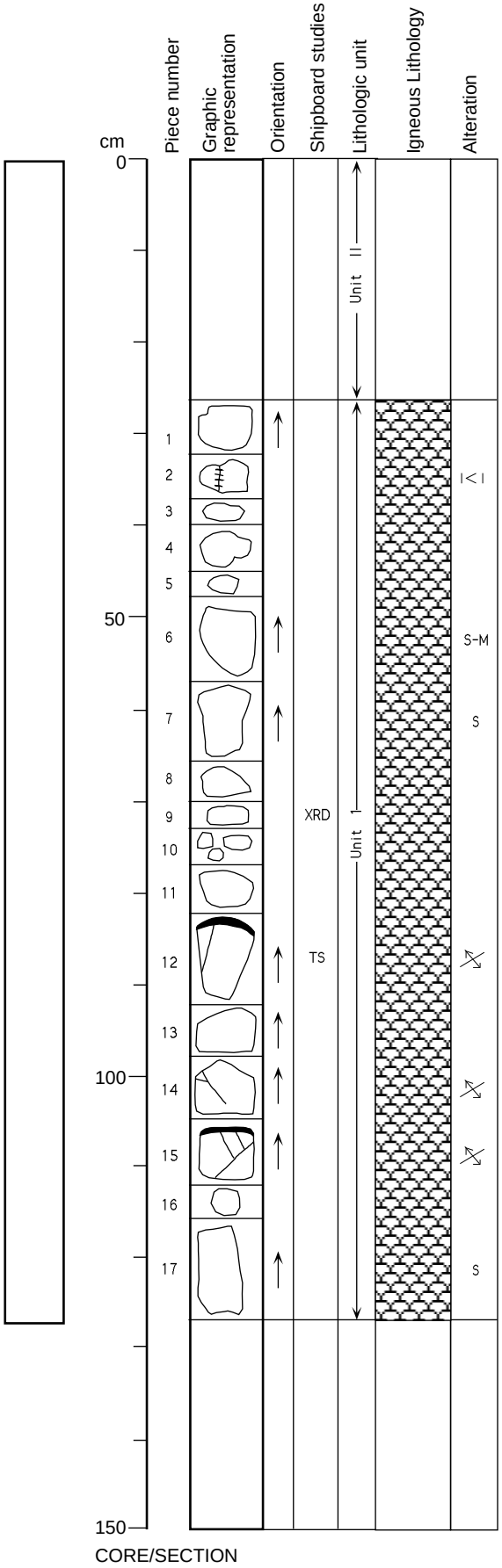
CLAYEY SILT to SILTY CLAY

Major Lithology:
Medium gray SILTY CLAY to CLAYEY SILT. Mottled, with rare color bands, planar laminae, and bioturbation.

General Description:
Pyrite nodule in Section 1, 2 cm.
Abundant drilling slurry.

SITE 1029 HOLE A CORE 25X CORED 216.8 - 223.0 mbsf

Meter	Graphic Lith.	Section	Age	Structure	Disturb.	Sample	Description
1 2 3 4		1 2 3 4	Quaternary			S PP IW PP IW PP S	CLAYEY SILT to SILTY CLAY and BASALT Major Lithology: Greenish gray SILTY CLAY to CLAYEY SILT with local color bands, bioturbation, *Zoophycos*. Lighter colored intervals correspond to higher contents of calcareous nannofossils. Section 3, 0 cm to 27 cm, displays irregular color variations, ranging from pale yellowish green to yellowish brown and grayish green. Minor Lithology: Fragments of BASALT in Section 3 and Section 4. See Hard Rock VCD for more information.



168-1029A-25X-03

UNIT II: Carbonate-rich mud (see Sedimentary VCD)

UNIT 1: MODERATELY PHYRIC PLAGIOCLASE ± OLIVINE ± PYROXENE BASALT

PIECES 1-17

CONTACTS: Sediment is juxtaposed atop piece 1; glass rims represent chilled contacts.

PHENOCRYSTS: Plagioclase is ubiquitous (up to 5% in pillow core), laths averaging 1 mm long, and reaching 2 mm, occuring singly or in glomerocrysts; olivine (totally replaced by clay?) is also sparse; clinopyroxene? (green, fresh, cleaved) in trace.

GROUNDMASS: Aphanitic, cryptocrystalline to microcrystalline.

VESICLES: 1-3%, ≤1mm; vesicles in the chilled margin of piece 12, increase in size and abundance from the glassy rim to the microcrystalline interior.

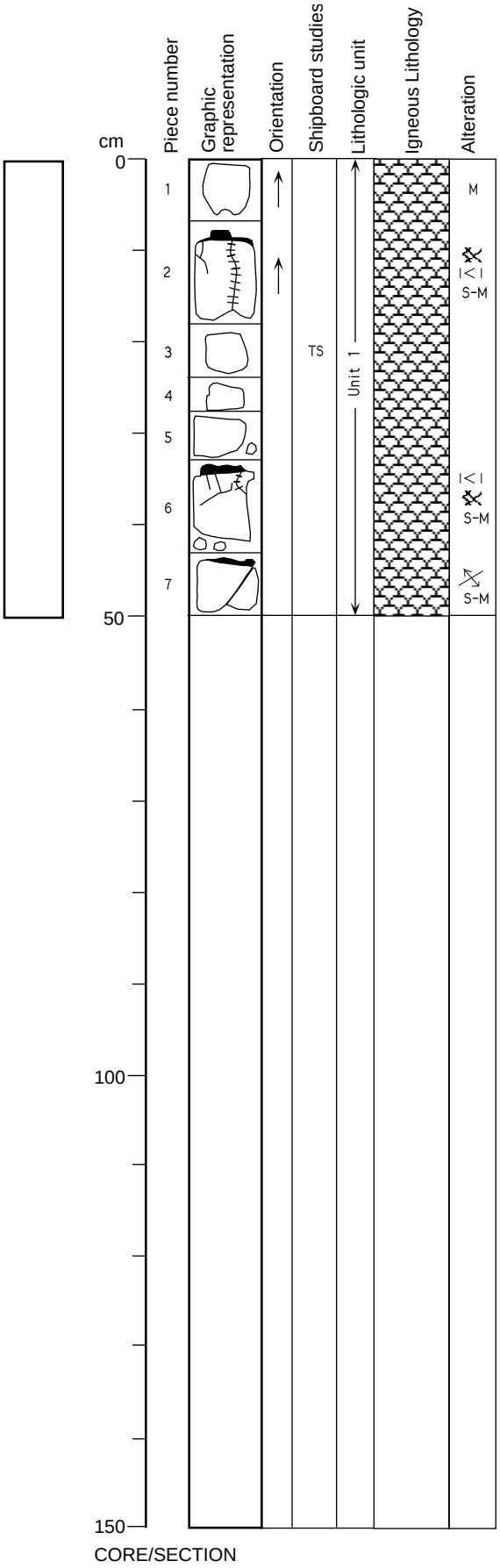
COLOR: Piece 6, 1.0PB 4.8/0.3; piece 7, 2.0PB 4.7/0.3; piece 13, 3.6B 4.5/0.1

STRUCTURE: Pillow basalt.

ALTERATION: Haloes are present on all pieces; haloes vary from 1mm to around 10mm in width, and contain complete vesicle fills that include bright green, orange, and dark green clay; rock interiors contain vesicles that are lined by pale blue clay, which may be followed by botryoidal drusy clear zeolite (in piece 3) or by clusters of drusy pyrite (particularly in pieces 5, 13, 14, 15 and 17).

VEINS/FRACTURES: Vein in piece 2 with green and orange clay filling (1mm wide), has a 1mm halo of rock altered to dark clay; vein with clay ± clear zeolite associated with glass rim in piece 12; piece 14 contains fractures containing clay + pyrite.

ADDITIONAL COMMENTS: Glass rims on pieces 12 and 15.



168-1029A-25X-4

UNIT 1: SPARSELY TO MODERATELY PHYRIC PLAGIOCLASE ± OLIVINE ± PYROXENE BASALT

PIECES 1-6

CONTACTS: None.

PHENOCRYSTS: Euhedral plagioclase laths, ≤2mm (some 3mm crystals in piece 5), ≤3%; euhedral olivine, completely replaced by dark green clay, ≤1mm, trace abundance; subhedral pyroxene, bright to dark green, fresh, ≤1%; ≤1mm.

GROUNDMASS: Varies from glassy-variolitic (pieces 2, 6 & 7) to cryptocrystalline to microcrystalline (all pieces). Piece 1 is solely microcrystalline.

VESICLES: Round to irregular. Inside of the alteration haloes, the vesicles are lined to filled by pale blue saponite. Pieces 1 and 4 contain vesicles filled and/or lined by pyrite. Within the alteration haloes, the vesicles are filled by dark green saponite, green celadonite, orange iddingsite ± hematite(?). The clays either completely fill the vesicles, form concentric layered bands, or form a complex infill. Pieces 6 & 7 contain irregular cavities filled/lined by green (celadonite) and orange (iddingsite) clay.

COLOR: Medium to light gray; 1.3PB 4.7/0.2 to 2.6PB 3.6/0.4

STRUCTURE: Pillow basalt.

ALTERATION: Alteration haloes on pieces 1 (5mm), 3 (4mm), 4 (5mm), 5 (5mm) and 7 (≤10mm). Haloes are dark gray in color, and associated with the outer margin of the rock pieces as well as some veins and fractures. Within the haloes, the vesicles are filled by celadonite and/or iddingsite ± hematite.

VEINS/FRACTURES: Pieces 2, 6 and 7 are cut by a network of hairline to ≤1mm veins. Piece 2 has a ≤0.75mm wide vein filled by a white-green clay. Piece 6 has a 1-1.25mm vein lined by a white clay (≤0.1mm) with the interior filled by light green clay. Piece 7 has a fracture lined by dark green clay. All pieces have a network of hairline veins lined by dark green clay.

ADDITIONAL COMMENTS: Glass rims on pieces 2, 6 and 7. Texture of rock is dominated by clusters of microcrysts (plagioclase + olivine ± pyroxene); clusters are ≤1.5mm.

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