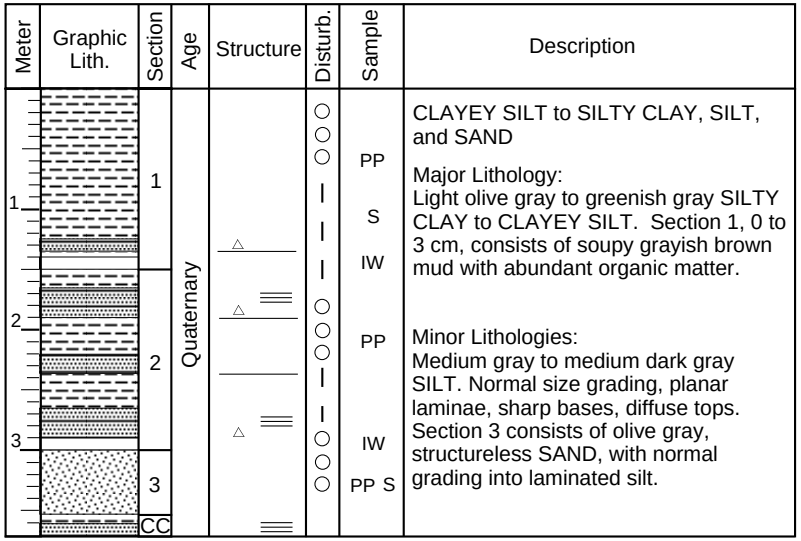
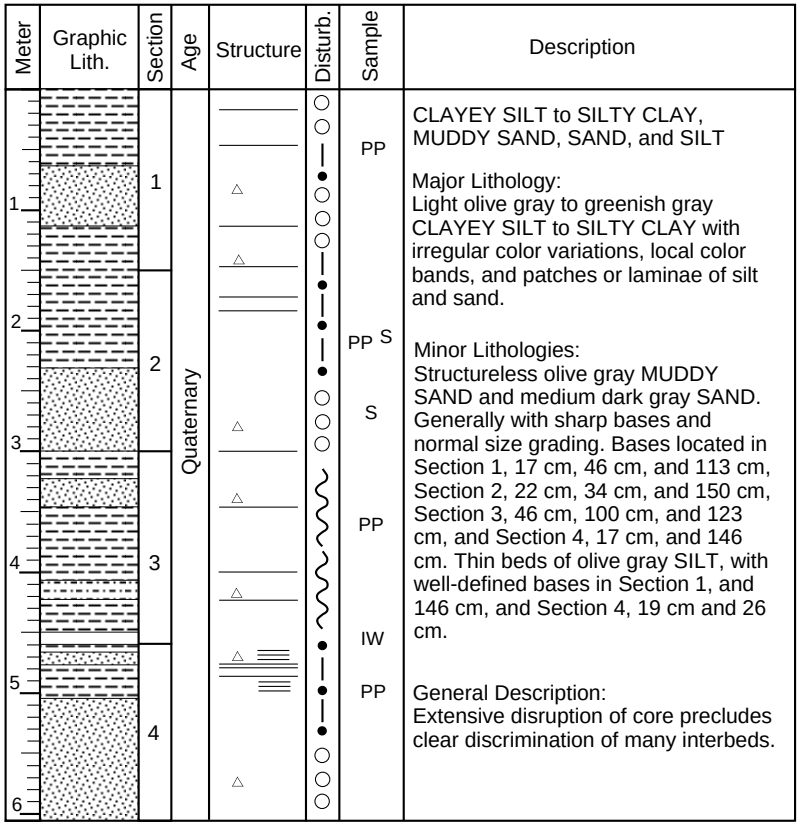
SITE 1028 HOLE A CORE 1H CORED 0.0 - 3.7 mbsf



SITE 1028 HOLE A CORE 2H CORED 3.7 - 13.2 mbsf



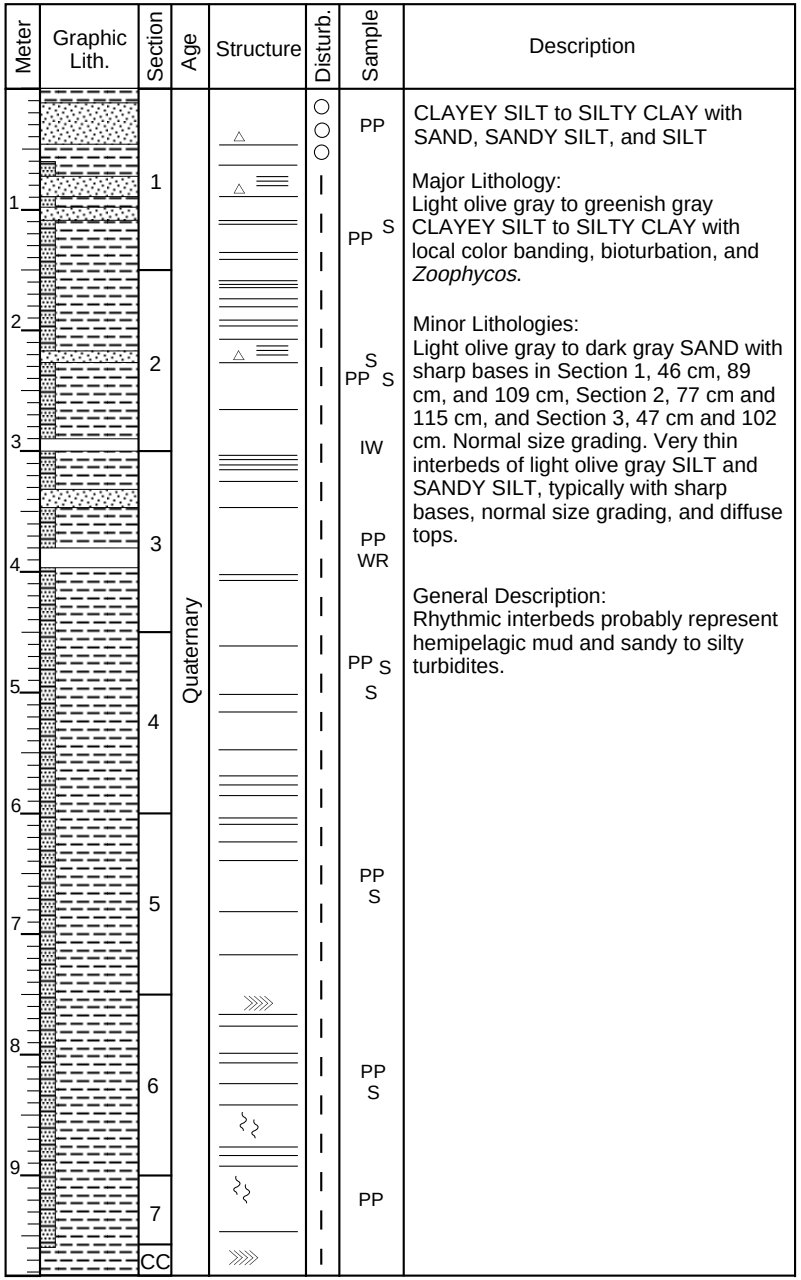
CLAYEY SILT to SILTY CLAY, MUDDY SAND, SAND, and SILT

Major Lithology:
Light olive gray to greenish gray CLAYEY SILT to SILTY CLAY with irregular color variations, local color bands, and patches or laminae of silt and sand.

Minor Lithologies:
Structureless olive gray MUDDY SAND and medium dark gray SAND. Generally with sharp bases and normal size grading. Bases located in Section 1, 17 cm, 46 cm, and 113 cm, Section 2, 22 cm, 34 cm, and 150 cm, Section 3, 46 cm, 100 cm, and 123 cm, and Section 4, 17 cm, and 146 cm. Thin beds of olive gray SILT, with well-defined bases in Section 1, and 146 cm, and Section 4, 19 cm and 26 cm.

General Description:
Extensive disruption of core precludes clear discrimination of many interbeds.

SITE 1028 HOLE A CORE 3H CORED 13.2 - 22.7 mbsf



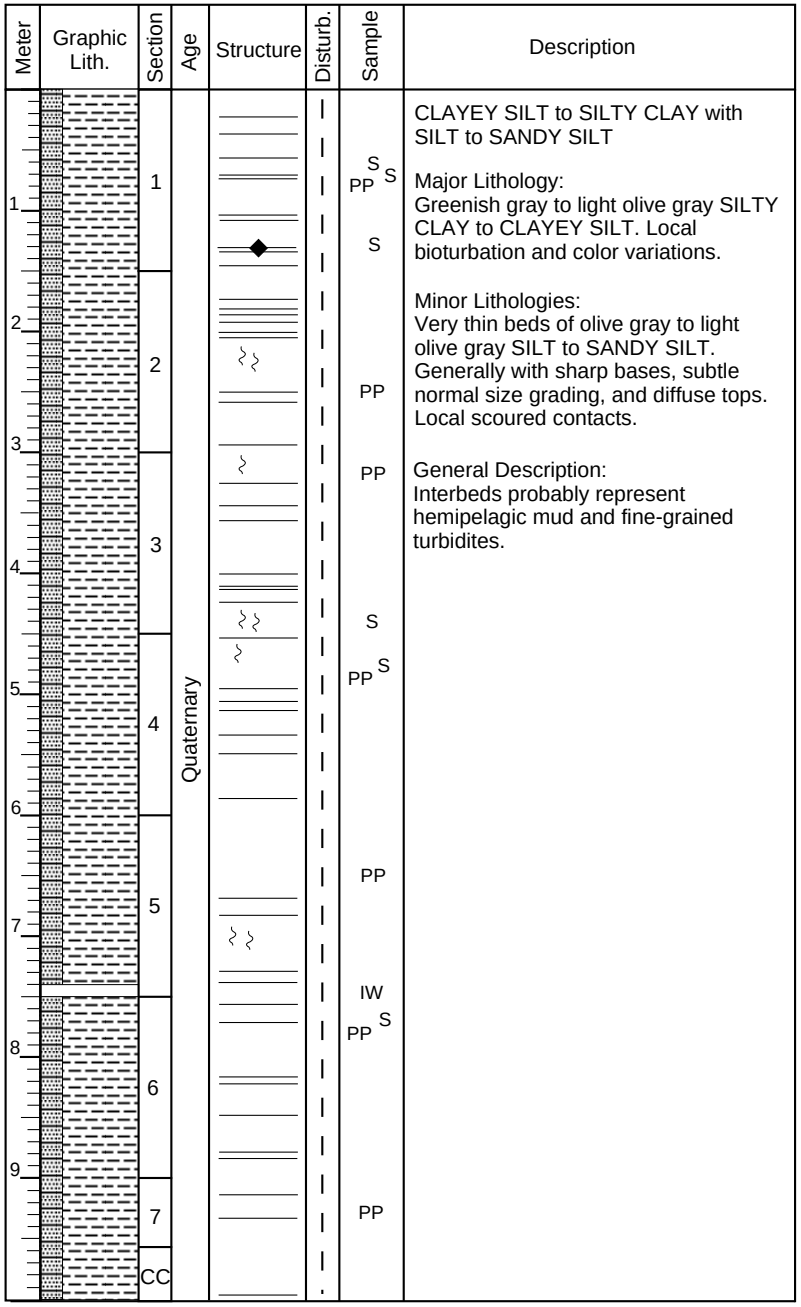
CLAYEY SILT to SILTY CLAY with SAND, SANDY SILT, and SILT

Major Lithology:
Light olive gray to greenish gray CLAYEY SILT to SILTY CLAY with local color banding, bioturbation, and *Zoophycos*.

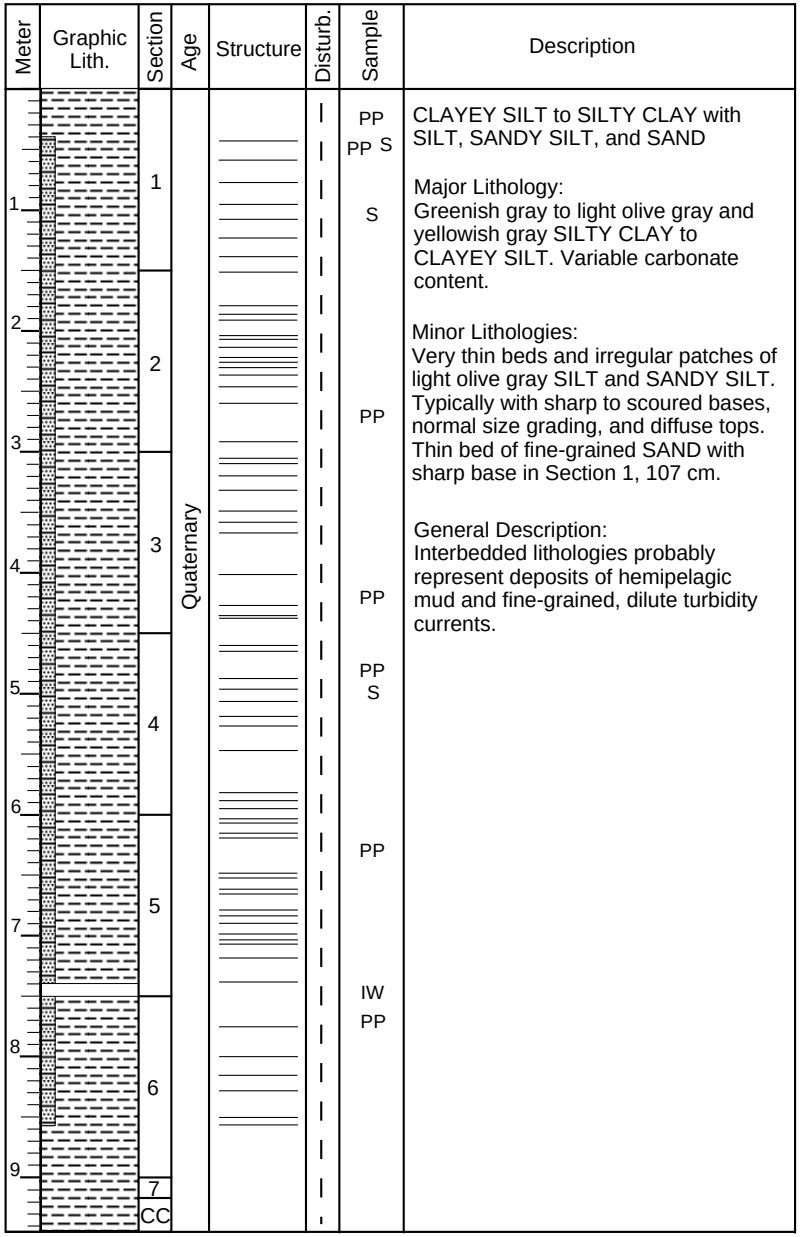
Minor Lithologies:
Light olive gray to dark gray SAND with sharp bases in Section 1, 46 cm, 89 cm, and 109 cm, Section 2, 77 cm and 115 cm, and Section 3, 47 cm and 102 cm. Normal size grading. Very thin interbeds of light olive gray SILT and SANDY SILT, typically with sharp bases, normal size grading, and diffuse tops.

General Description:
Rhythmic interbeds probably represent hemipelagic mud and sandy to silty turbidites.

SITE 1028 HOLE A CORE 4H CORED 22.7 - 32.2 mbsf



SITE 1028 HOLE A CORE 5H CORED 32.2 - 41.7 mbsf



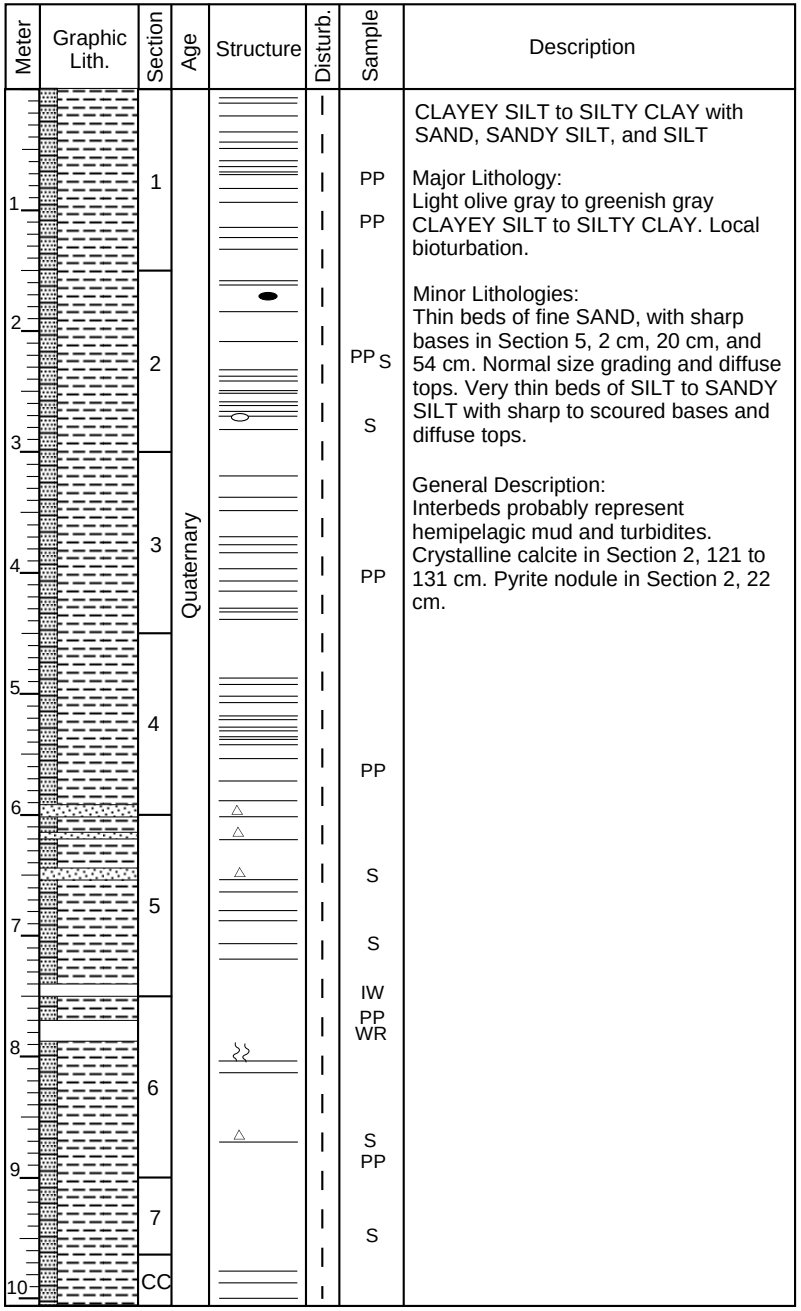
CLAYEY SILT to SILTY CLAY with SILT, SANDY SILT, and SAND

Major Lithology:
Greenish gray to light olive gray and yellowish gray SILTY CLAY to CLAYEY SILT. Variable carbonate content.

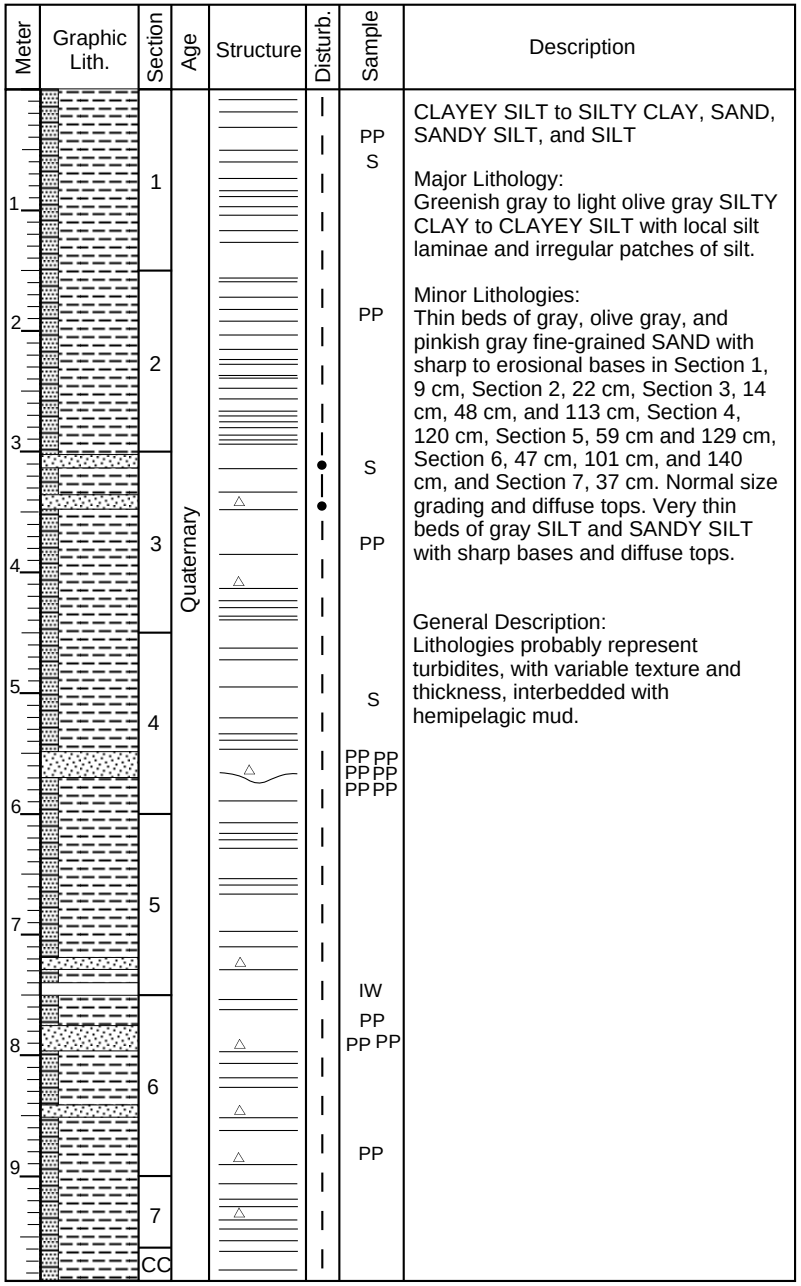
Minor Lithologies:
Very thin beds and irregular patches of light olive gray SILT and SANDY SILT. Typically with sharp to scoured bases, normal size grading, and diffuse tops. Thin bed of fine-grained SAND with sharp base in Section 1, 107 cm.

General Description:
Interbedded lithologies probably represent deposits of hemipelagic mud and fine-grained, dilute turbidity currents.

SITE 1028 HOLE A CORE 6H CORED 41.7 - 51.2 mbsf



SITE 1028 HOLE A CORE 7H CORED 51.2 - 60.7 mbsf



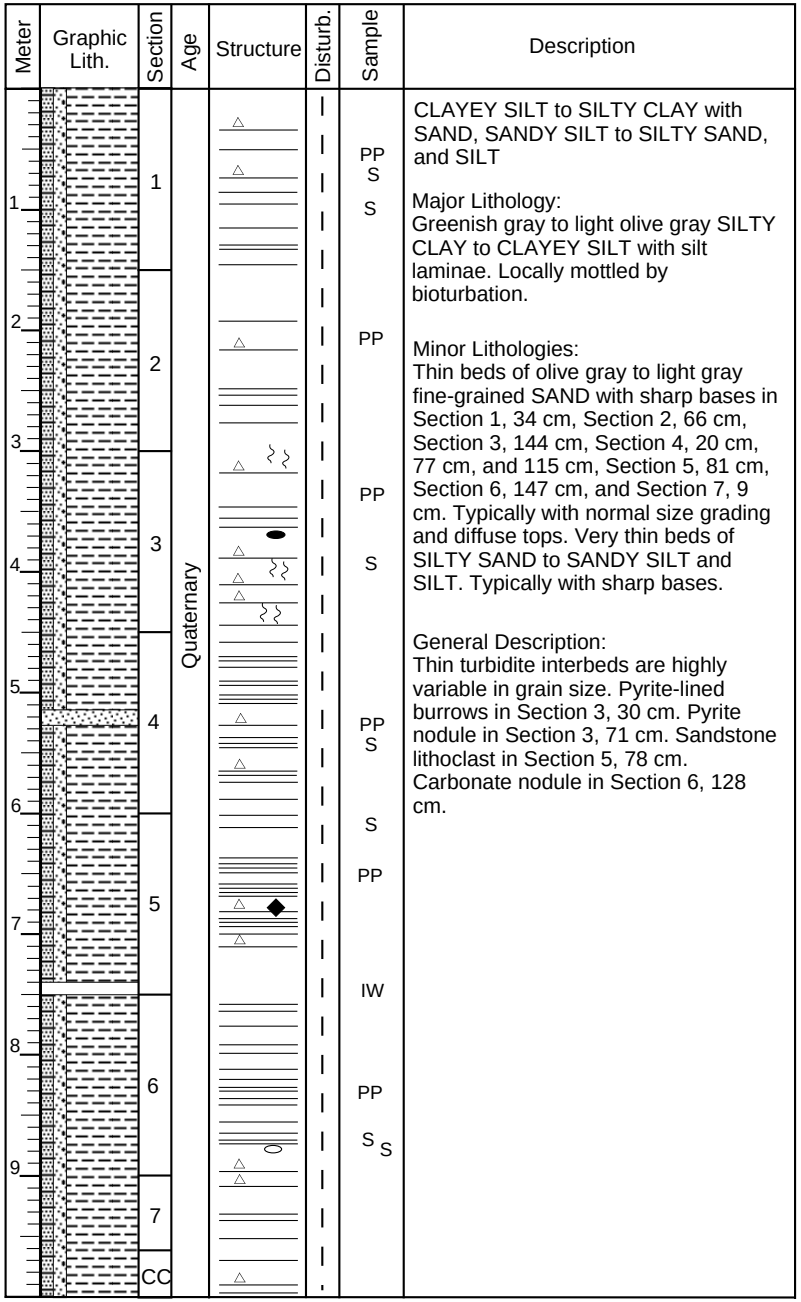
CLAYEY SILT to SILTY CLAY, SAND, SANDY SILT, and SILT

Major Lithology:
Greenish gray to light olive gray SILTY CLAY to CLAYEY SILT with local silt laminae and irregular patches of silt.

Minor Lithologies:
Thin beds of gray, olive gray, and pinkish gray fine-grained SAND with sharp to erosional bases in Section 1, 9 cm, Section 2, 22 cm, Section 3, 14 cm, 48 cm, and 113 cm, Section 4, 120 cm, Section 5, 59 cm and 129 cm, Section 6, 47 cm, 101 cm, and 140 cm, and Section 7, 37 cm. Normal size grading and diffuse tops. Very thin beds of gray SILT and SANDY SILT with sharp bases and diffuse tops.

General Description:
Lithologies probably represent turbidites, with variable texture and thickness, interbedded with hemipelagic mud.

SITE 1028 HOLE A CORE 8H CORED 60.7 - 70.2 mbsf



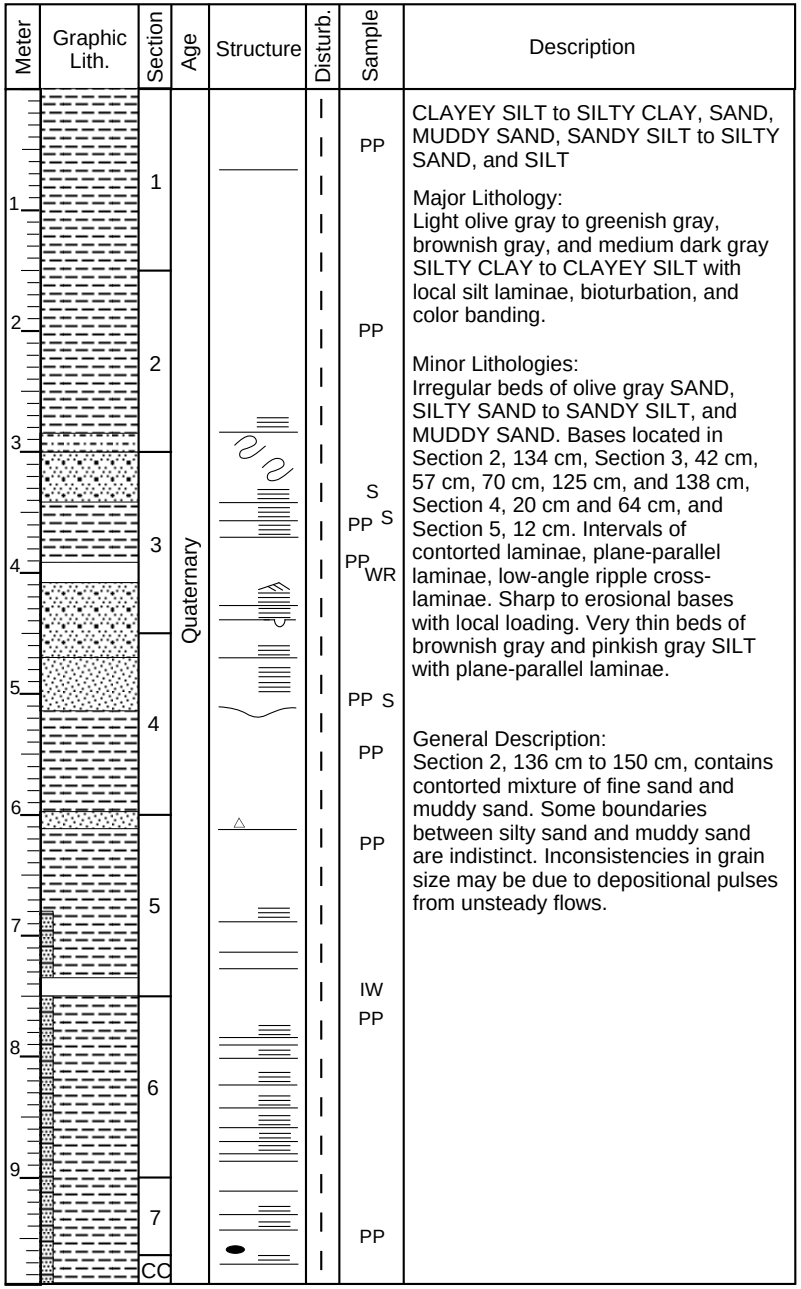
CLAYEY SILT to SILTY CLAY with SAND, SANDY SILT to SILTY SAND, and SILT

Major Lithology:
Greenish gray to light olive gray SILTY CLAY to CLAYEY SILT with silt laminae. Locally mottled by bioturbation.

Minor Lithologies:
Thin beds of olive gray to light gray fine-grained SAND with sharp bases in Section 1, 34 cm, Section 2, 66 cm, Section 3, 144 cm, Section 4, 20 cm, 77 cm, and 115 cm, Section 5, 81 cm, Section 6, 147 cm, and Section 7, 9 cm. Typically with normal size grading and diffuse tops. Very thin beds of SILTY SAND to SANDY SILT and SILT. Typically with sharp bases.

General Description:
Thin turbidite interbeds are highly variable in grain size. Pyrite-lined burrows in Section 3, 30 cm. Pyrite nodule in Section 3, 71 cm. Sandstone lithoclast in Section 5, 78 cm. Carbonate nodule in Section 6, 128 cm.

SITE 1028 HOLE A CORE 9H CORED 70.2 - 79.7 mbsf



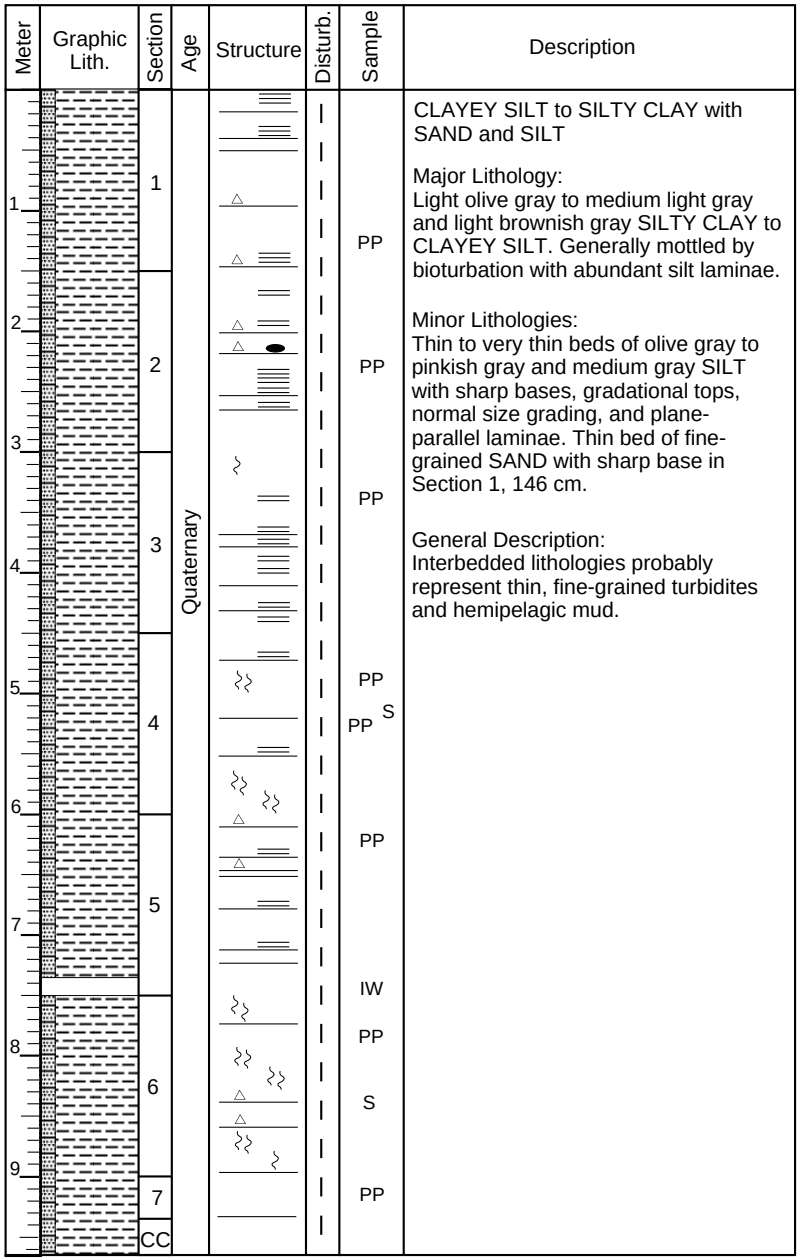
CLAYEY SILT to SILTY CLAY, SAND, MUDDY SAND, SANDY SILT to SILTY SAND, and SILT

Major Lithology:
Light olive gray to greenish gray, brownish gray, and medium dark gray SILTY CLAY to CLAYEY SILT with local silt laminae, bioturbation, and color banding.

Minor Lithologies:
Irregular beds of olive gray SAND, SILTY SAND to SANDY SILT, and MUDDY SAND. Bases located in Section 2, 134 cm, Section 3, 42 cm, 57 cm, 70 cm, 125 cm, and 138 cm, Section 4, 20 cm and 64 cm, and Section 5, 12 cm. Intervals of contorted laminae, plane-parallel laminae, low-angle ripple cross-laminae. Sharp to erosional bases with local loading. Very thin beds of brownish gray and pinkish gray SILT with plane-parallel laminae.

General Description:
Section 2, 136 cm to 150 cm, contains contorted mixture of fine sand and muddy sand. Some boundaries between silty sand and muddy sand are indistinct. Inconsistencies in grain size may be due to depositional pulses from unsteady flows.

SITE 1028 HOLE A CORE 10H CORED 79.7 - 89.2 mbsf



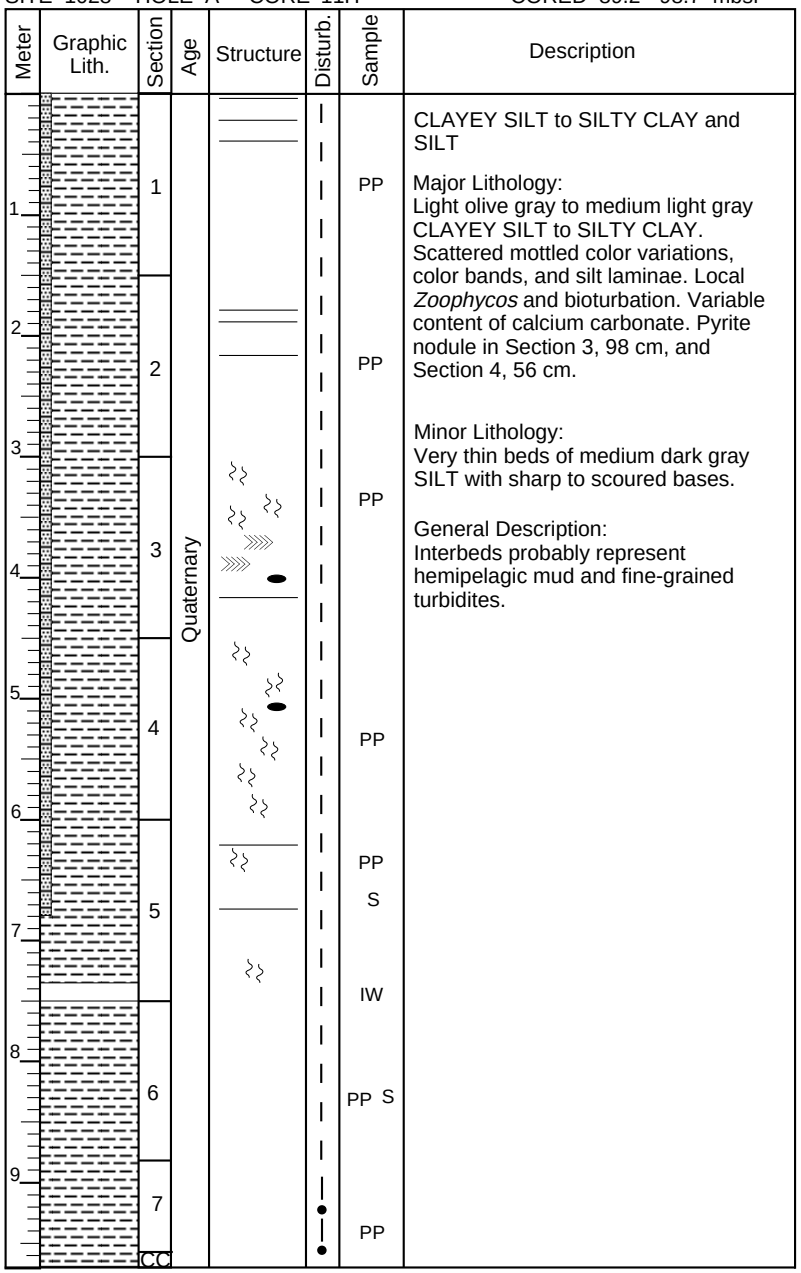
CLAYEY SILT to SILTY CLAY with SAND and SILT

Major Lithology:
Light olive gray to medium light gray and light brownish gray SILTY CLAY to CLAYEY SILT. Generally mottled by bioturbation with abundant silt laminae.

Minor Lithologies:
Thin to very thin beds of olive gray to pinkish gray and medium gray SILT with sharp bases, gradational tops, normal size grading, and plane-parallel laminae. Thin bed of fine-grained SAND with sharp base in Section 1, 146 cm.

General Description:
Interbedded lithologies probably represent thin, fine-grained turbidites and hemipelagic mud.

SITE 1028 HOLE A CORE 11H CORED 89.2 - 98.7 mbsf



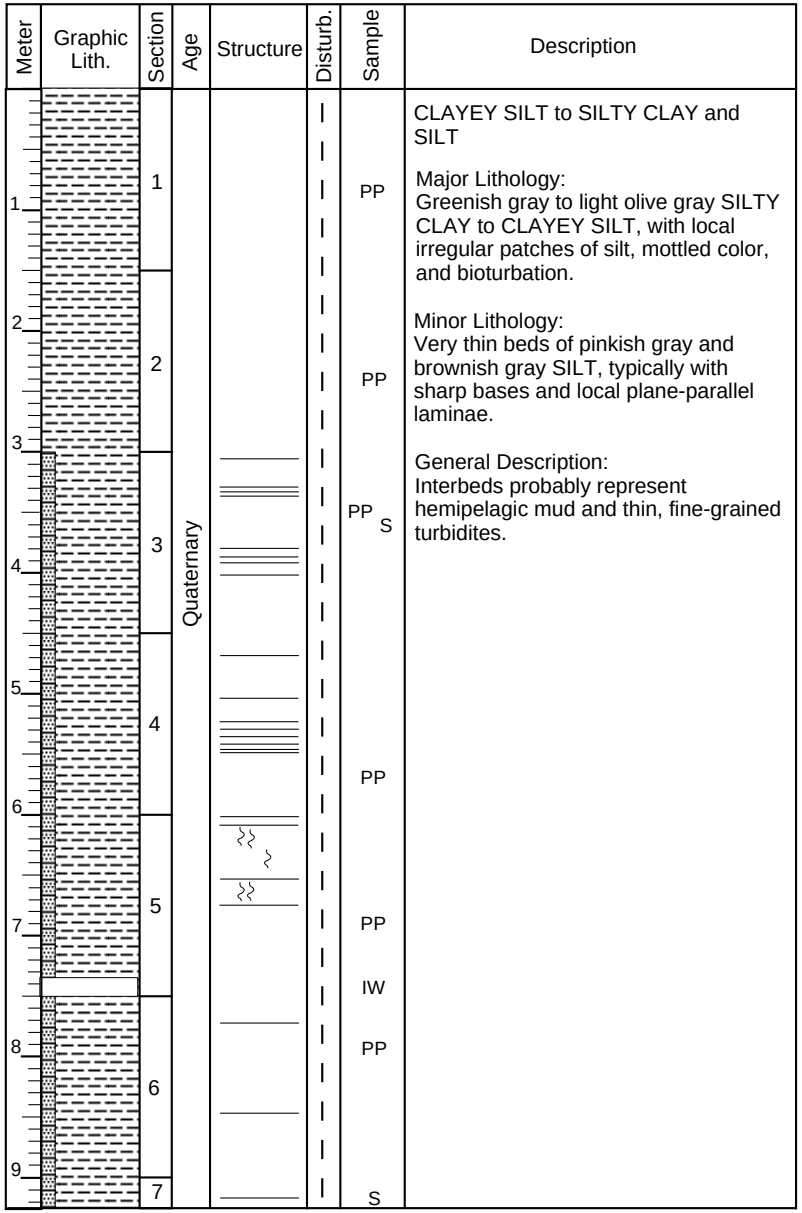
CLAYEY SILT to SILTY CLAY and SILT

Major Lithology:
Light olive gray to medium light gray CLAYEY SILT to SILTY CLAY. Scattered mottled color variations, color bands, and silt laminae. Local *Zoophycos* and bioturbation. Variable content of calcium carbonate. Pyrite nodule in Section 3, 98 cm, and Section 4, 56 cm.

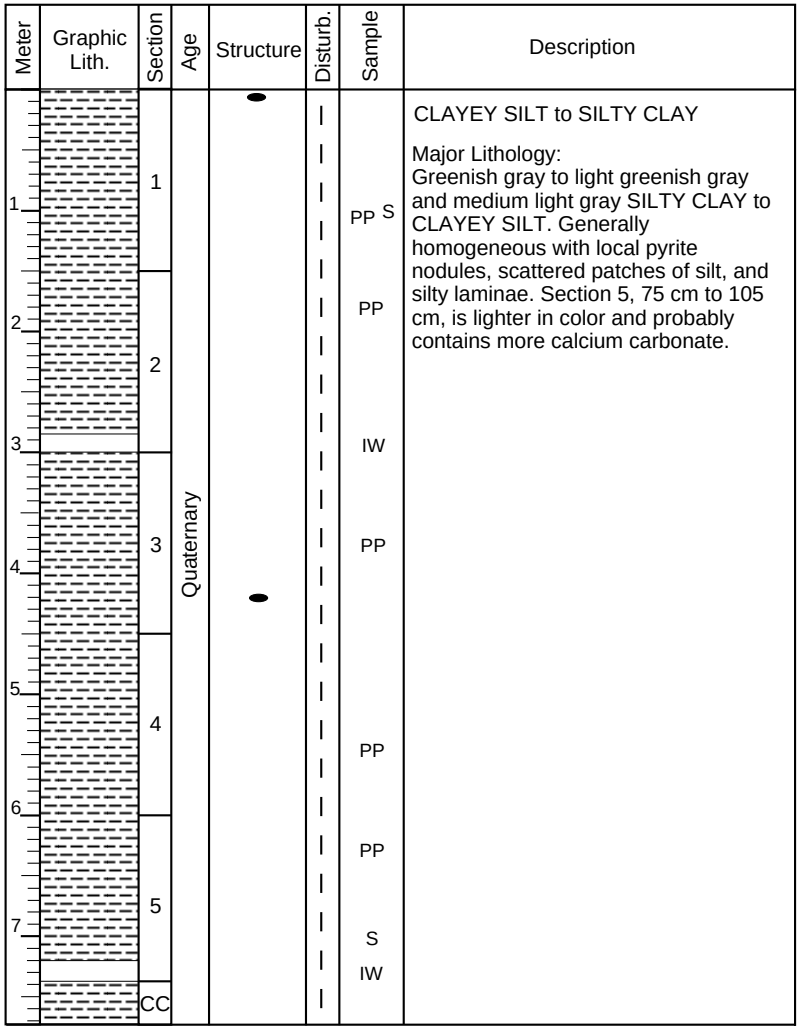
Minor Lithology:
Very thin beds of medium dark gray SILT with sharp to scoured bases.

General Description:
Interbeds probably represent hemipelagic mud and fine-grained turbidites.

SITE 1028 HOLE A CORE 12H CORED 98.7 - 108.2 mbsf

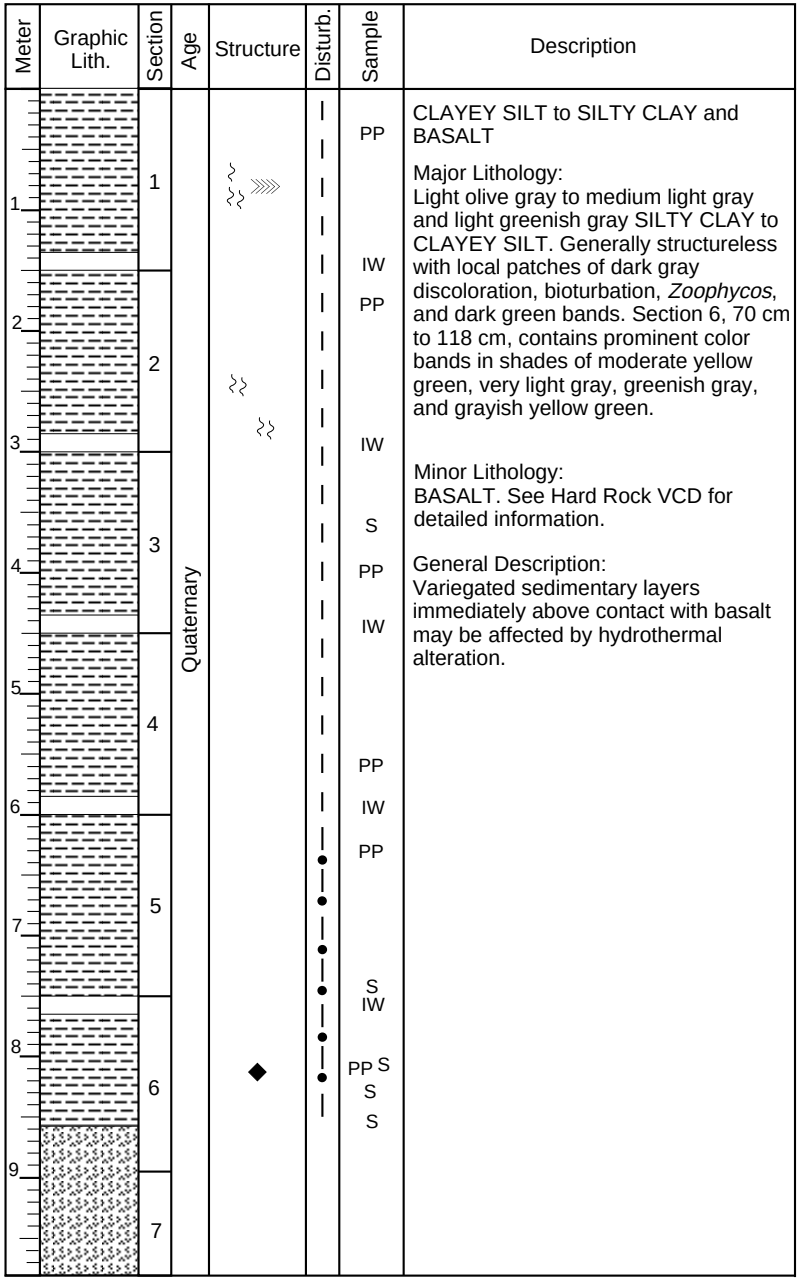


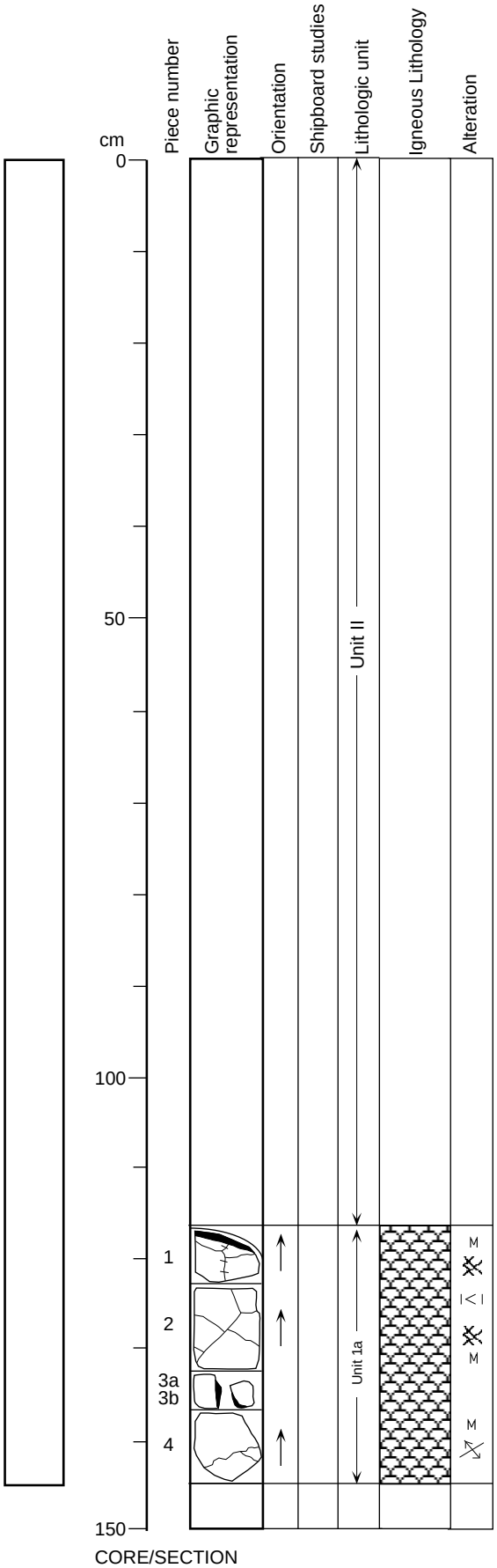
SITE 1028 HOLE A CORE 13X CORED 108.2 - 114.2 mbsf



1028A-14X NO RECOVERY

SITE 1028 HOLE A CORE 15X CORED 123.8 - 131.5 mbsf





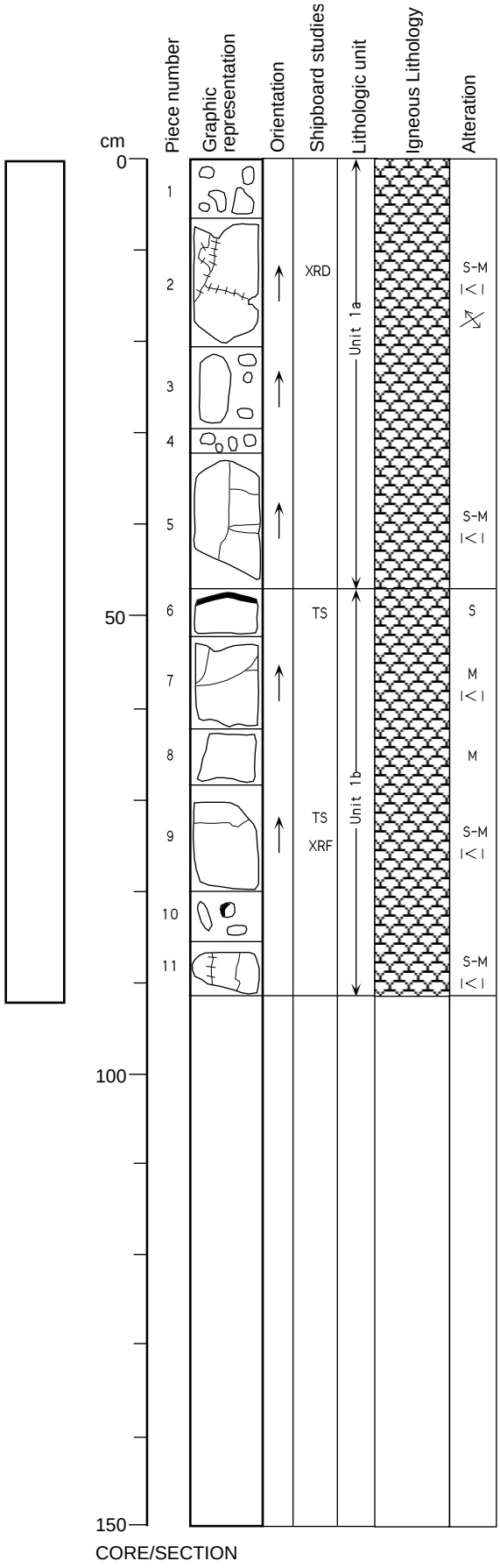
168-1028A-15X-06

UNIT II: Muddy lithology (see Sedimentary VCD).

UNIT 1a: SPARSELY TO MODERATELY PHYRIC PLAGIOCLASE-OLIVINE BASALT

PIECES 1-4

CONTACTS: None.
PHENOCRYSTS: Up to 2% plagioclase phenocrysts (≤3 mm, subhedral to euhedral) and 1-2% olivine phenocrysts (≤2 mm, subhedral to euhedral) completely replaced by soft dark green clay mineral (saponite) ± carbonate.
GROUNDMASS: Cryptocrystalline.
VESICLES: <1%, ≤0.4mm; completely filled by pale to dark green-blue clay mineral.
COLOR: Medium to dark blue-gray, 3.5PB 2.2/0.1 to 5.8PB 2.3/0.1
STRUCTURE: Pillow fragments.
ALTERATION: Moderate to slight. Blue-gray clay minerals on outer surfaces. Black alteration haloes (up to 1.5 cm), around the vein network, visible on pieces 2 and 4.
VEINS/FRACTURES: Carbonate + clay veinlet (<1mm) on piece 1. Carbonate + clay vein (1.5 mm) cuts across piece 2 and form a network with carbonate veinlets (<<1mm). Vein (1.3 mm) filled by bright green clay mineral (celadonite) cuts across the glassy margin of piece 1.
ADDITIONAL COMMENTS: Glassy rim on pieces 1, 3a and 3b. The glass is partially altered to dark grayish (not translucent) patches on the outer surface.



168-1028A-15X-07

UNIT 1a–b: SPARSELY TO MODERATELY PHYRIC PLAGIOCLASE-OLIVINE ± PYROXENE BASALT

PIECES 1-11

CONTACTS: Subunits defined by the presence of chilled margin on unoriented piece 6.

PHENOCRYSTS: 1-5% euhedral to subhedral plagioclase (2-5mm). Single crystals and grouped as glomerocrysts. Trace to 2% euhedral to subhedral olivine (1-2mm), mostly altered to pale green clay (saponite) or sometimes black clay. Pyroxene (<1mm) observed in thin section.

GROUNDMASS: Aphanitic, microcrystalline to cryptocrystalline. Sub-millimetric plagioclase microlites.

VESICLES: Rare, <1mm in diameter. Completely filled with green-blue clay mineral.

COLOR: Pale to medium gray; 5.8PB 3.2/0.1 to 0.9 PB 2.2/0.2

STRUCTURE: Possibly pillow fragments as indicated by curved chilled margin in piece 6.

ALTERATION: Slight to moderate alteration away from green clay veins, while moderate in rock adjacent to veins. Dark alteration haloes around veins in pieces 5, 9, 11. In piece 5, the halo is 1cm-thick on each side of the green (saponite) and orange (iddingsite) clay veins. Interstitial pockets (<1cm) of green clay locally concentrated (for instance in piece 8).

VEINS/FRACTURES: Fibrous aragonite-filled anastomosing vein (width 1-2mm) in piece 2. Green clay ± white granular carbonate? in pieces 5, 7, 9, and 11.

ADDITIONAL COMMENTS: Very thin glassy rim on one small fragment of piece 10. Quenched margin with well developed variolitic zone (without fresh glass) on piece 6.

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