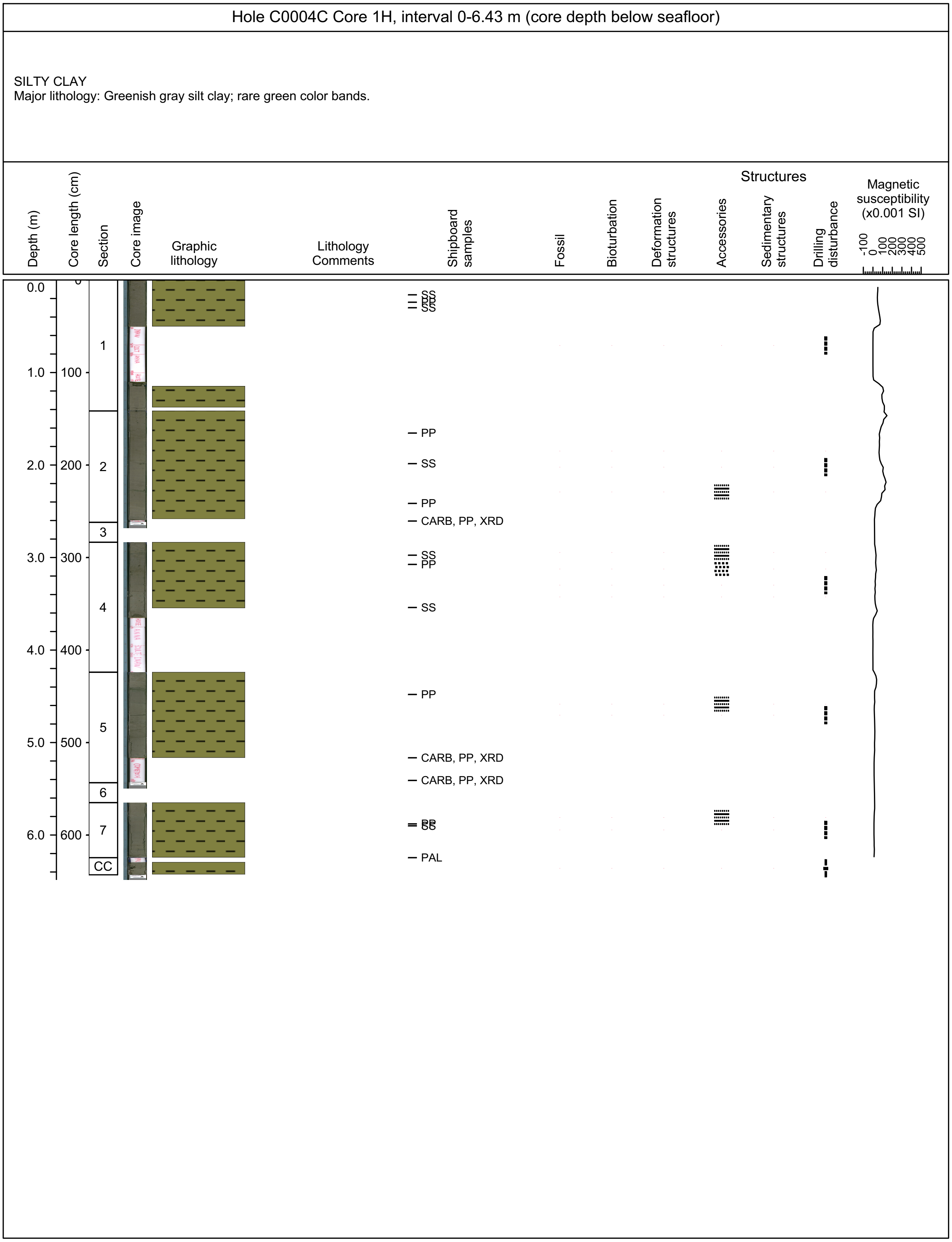
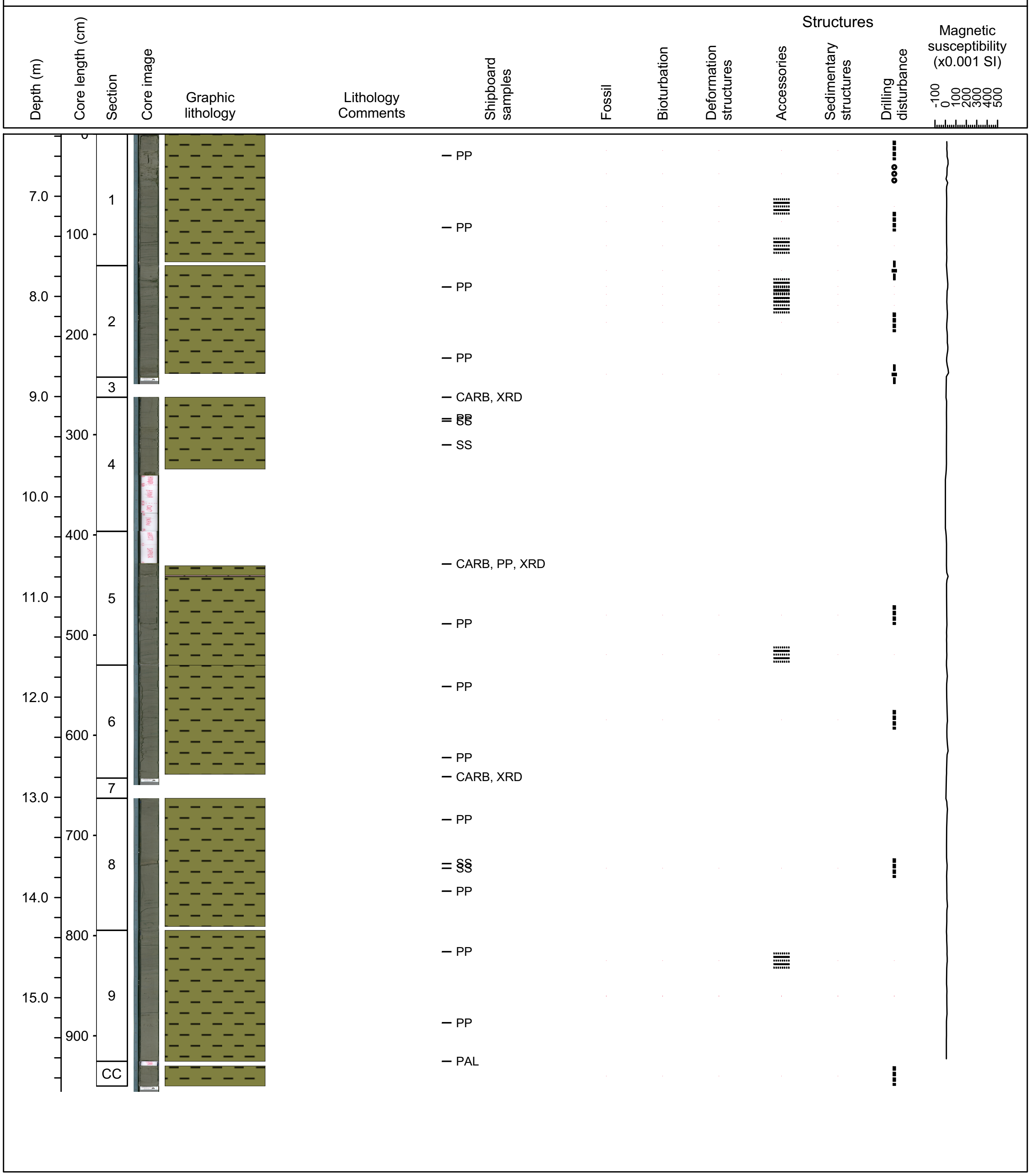
Core Photo


Hole C0004C Core 1H, interval 0-6.43 m (core depth below seafloor)
SILTY CLAY
Major lithology: Greenish gray silt clay; rare green color bands.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Lithology Comments
Shipboard samples
Fossil
Structures
Bioturbation
Deformation structures
Accessories
Sedimentary structures
Drilling disturbance
Magnetic susceptibility (x0.001 SI)
-100
0
100
200
300
400
500
0.0
1.0
2.0
3.0
4.0
5.0
6.0
100
200
300
400
500
600
1
2
3
4
5
6
7
CC
SS
PP
SS
PP
SS
PP
CARB, PP, XRD
SS
PP
SS
PP
CARB, PP, XRD
CARB, PP, XRD
PP
SS
PAL

Core Photo

Hole C0004C Core 2H, interval 6.38-15.882 m (core depth below seafloor)

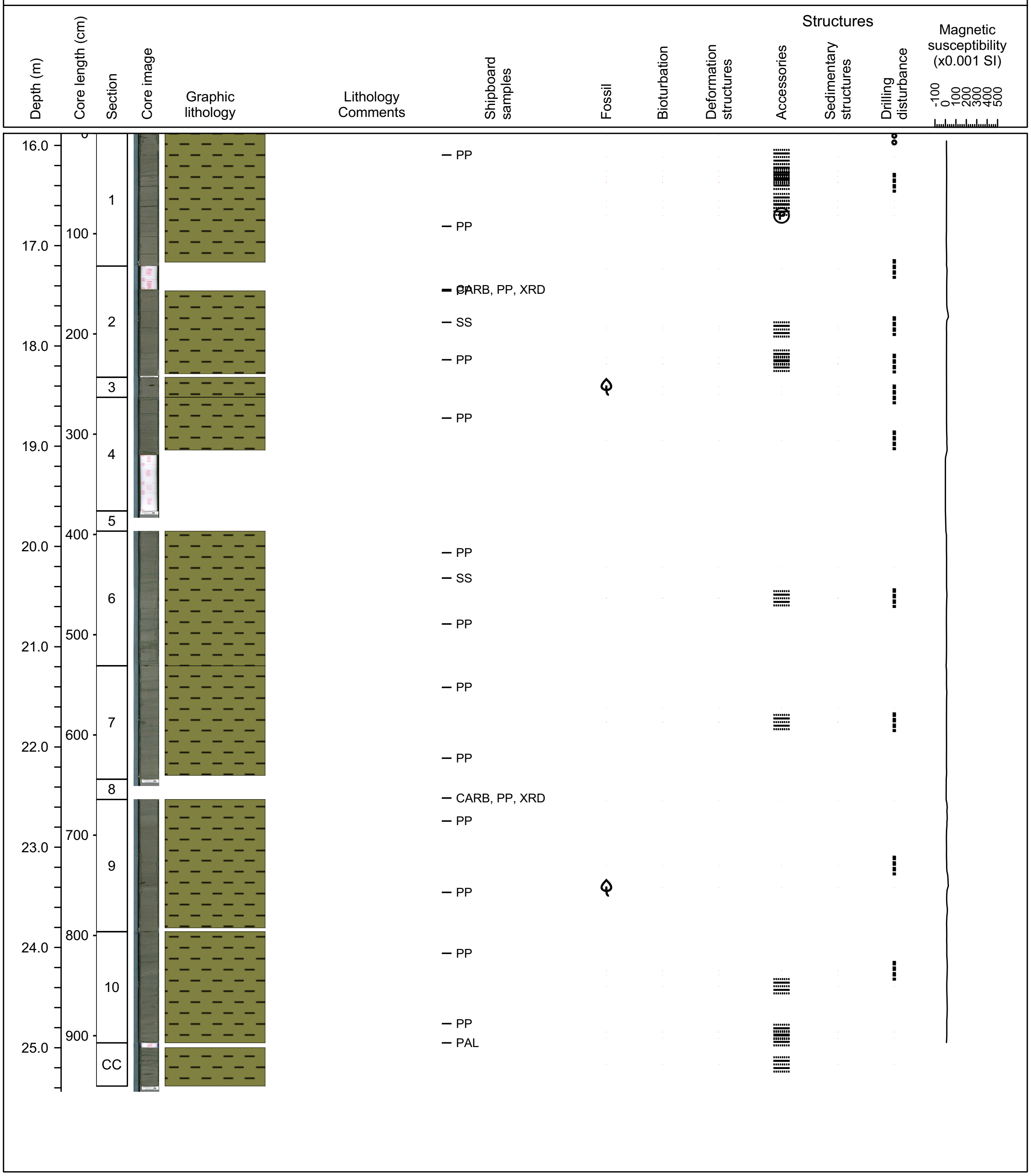
SILTY CLAY
Major lithology: Greenish gray silty clay; green color bands.
Minor lithology: Volcanic ash; nodules in Sections 6 and 9.



Core Photo

Hole C0004C Core 3H, interval 15.88-25.383 m (core depth below seafloor)

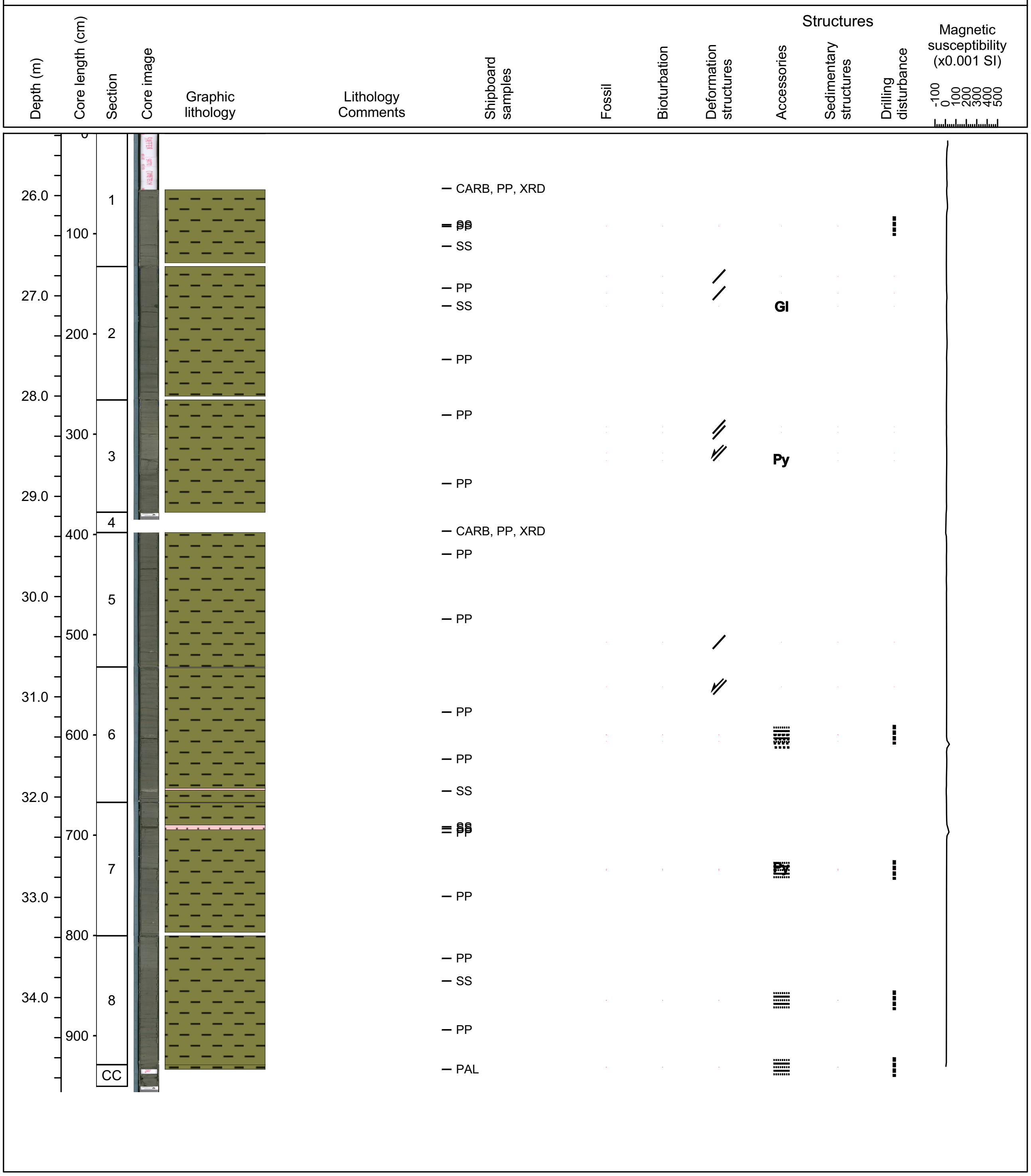
SILTY CLAY
Major lithology: Greenish gray silty clay; green color bands; generally homogeneous; dispersed ash.



Core Photo

Hole C0004C Core 4H, interval 25.38-34.885 m (core depth below seafloor)

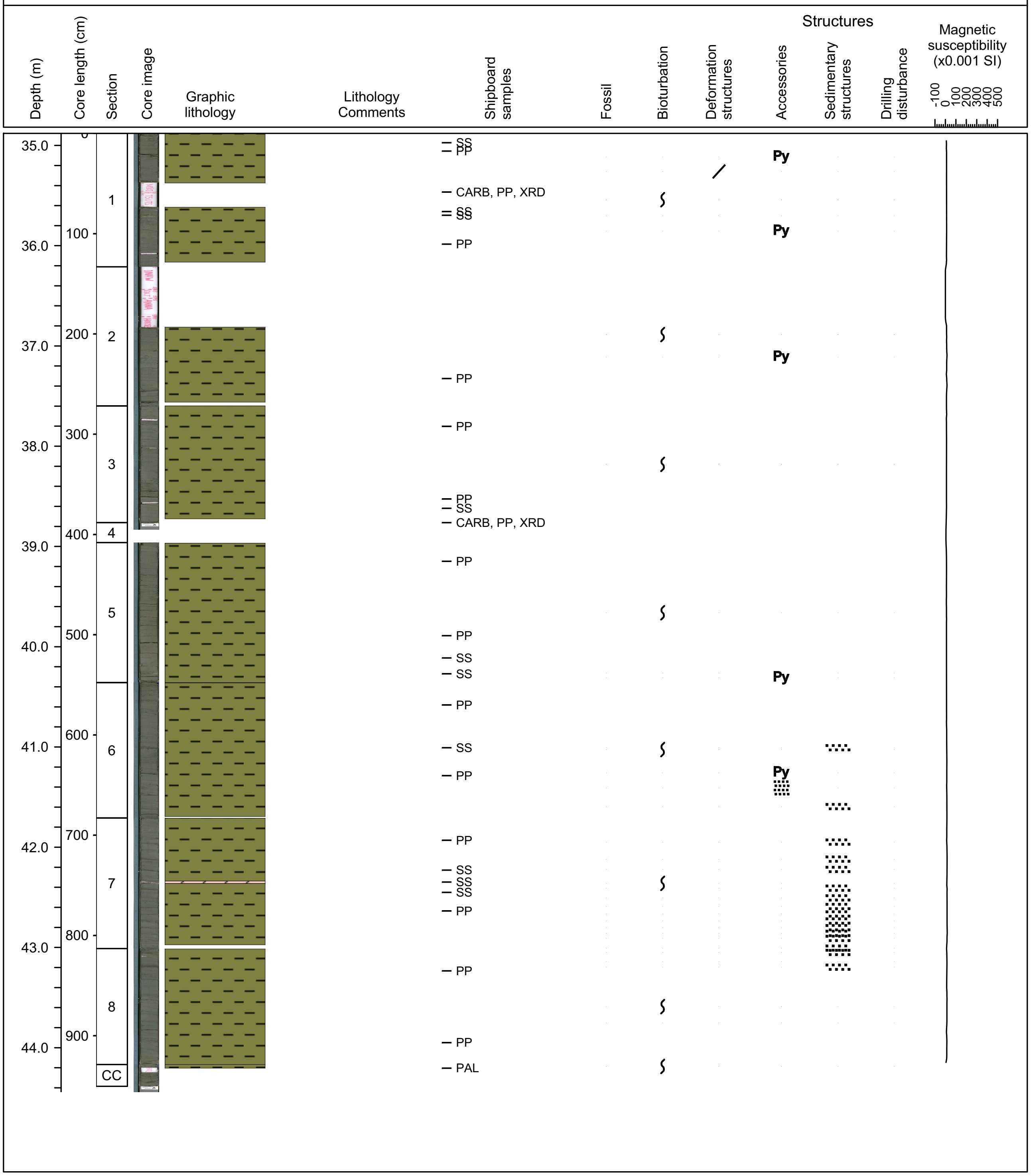
SILTY CLAY
Major lithology: Greenish gray silty clay; generally homogeneous; dispersed ash; glauconitic and pyrite nodules.
Minor lithology: Volcanic ash (notably Sections 6 and 7).



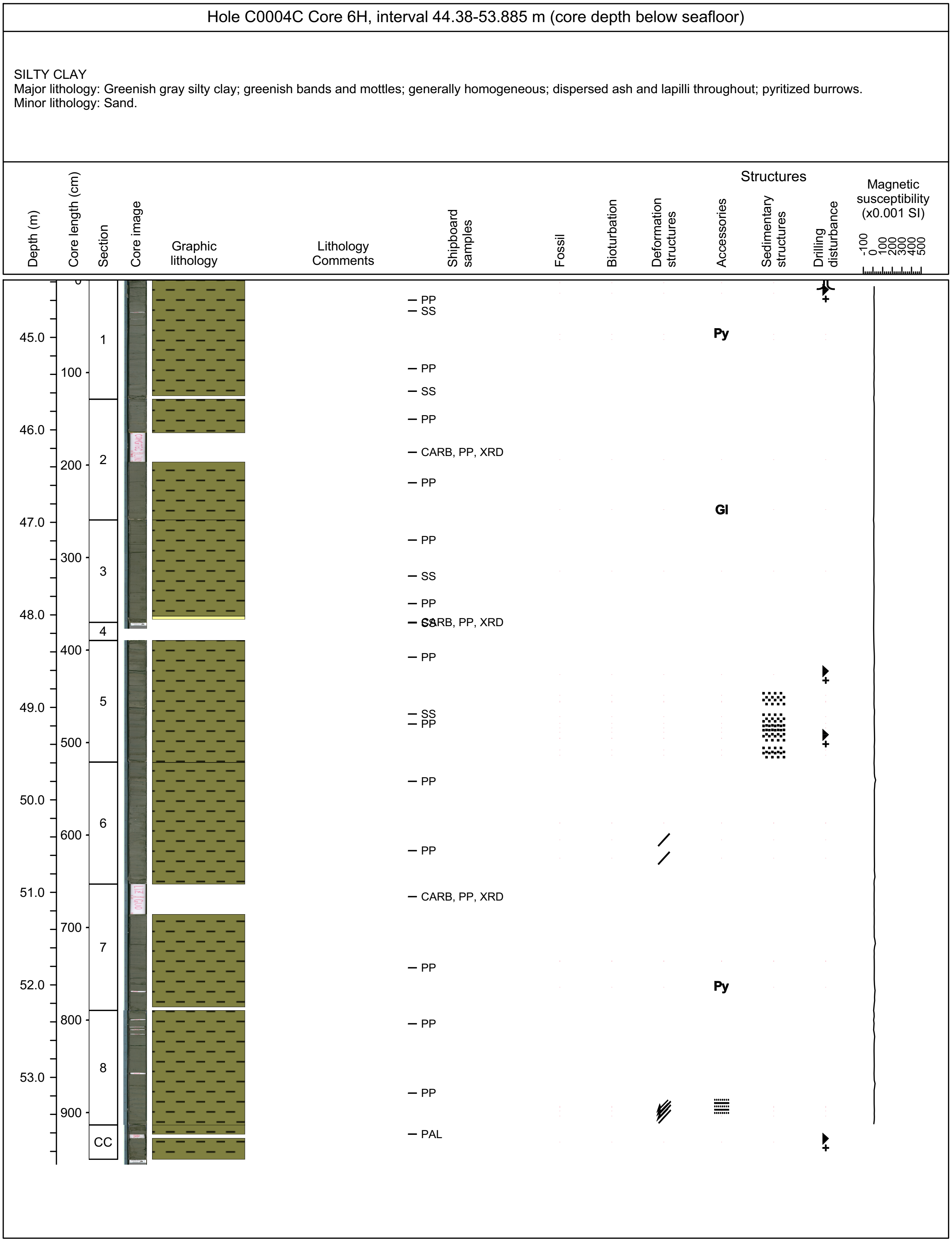
Core Photo

Hole C0004C Core 5H, interval 34.88-44.385 m (core depth below seafloor)

SILTY CLAY
Major lithology: Greenish gray silty clay; greenish bands and mottles; generally homogeneous; dispersed ash and lapilli throughout; pyritized burrows seen clearly on CT images.
Minor lithology: Volcanic ash; siliciclastic sand in Section 6, 70 cm has erosional base; sand also in Section 7.



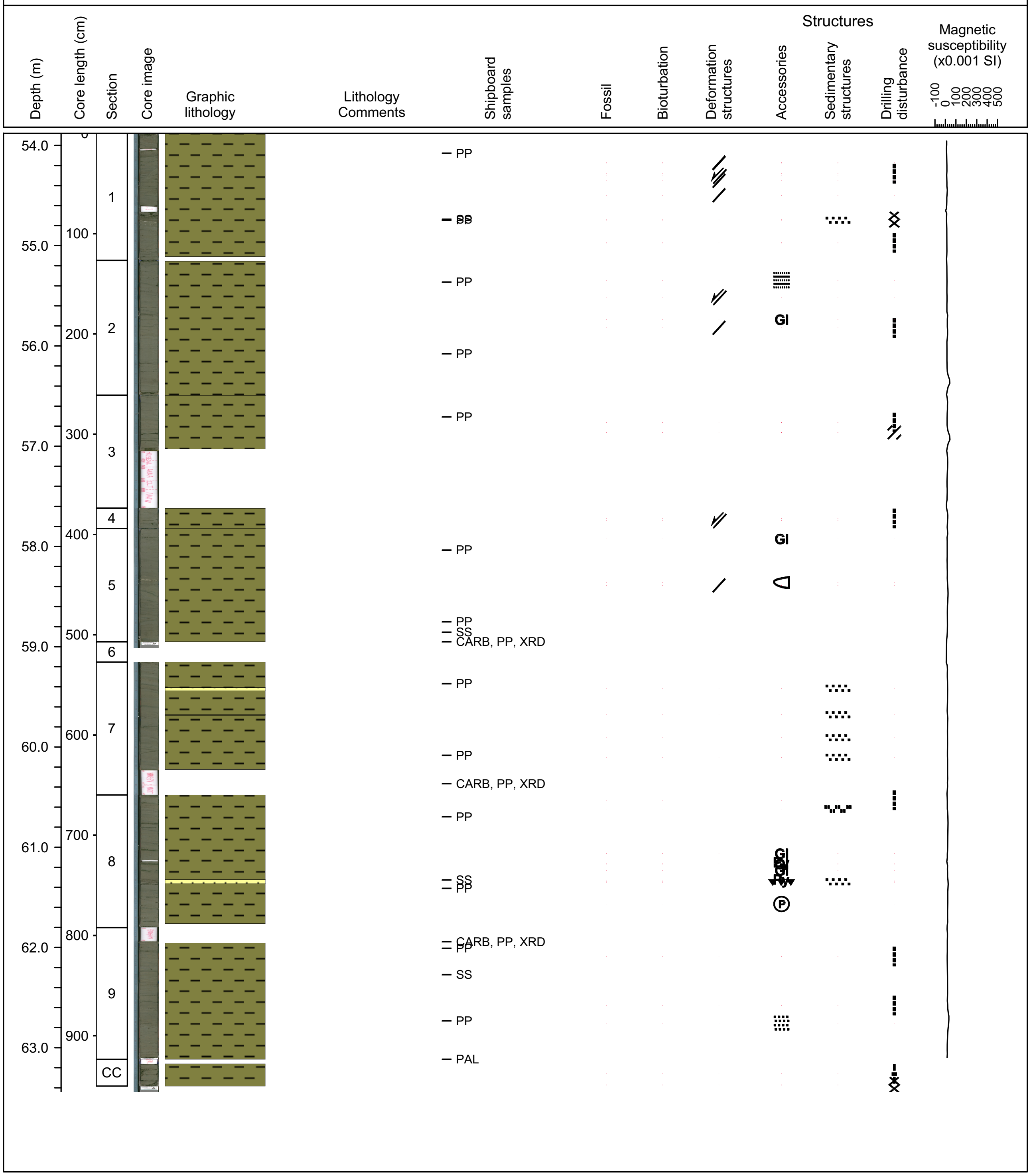
Core Photo


Hole C0004C Core 6H, interval 44.38-53.885 m (core depth below seafloor)
SILTY CLAY
Major lithology: Greenish gray silty clay; greenish bands and mottles; generally homogeneous; dispersed ash and lapilli throughout; pyritized burrows.
Minor lithology: Sand.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Lithology Comments
Shipboard samples
Fossil
Bioturbation
Deformation structures
Accessories
Sedimentary structures
Drilling disturbance
Structures
Magnetic susceptibility (x0.001 SI)
-100
0
100
200
300
400
500
45.0
46.0
47.0
48.0
49.0
50.0
51.0
52.0
53.0
100
200
300
400
500
600
700
800
900
1
2
3
4
5
6
7
8
CC
PP
SS
CARB, PP, XRD
PAL
Py
Gl

Core Photo

Hole C0004C Core 7H, interval 53.88-63.383 m (core depth below seafloor)

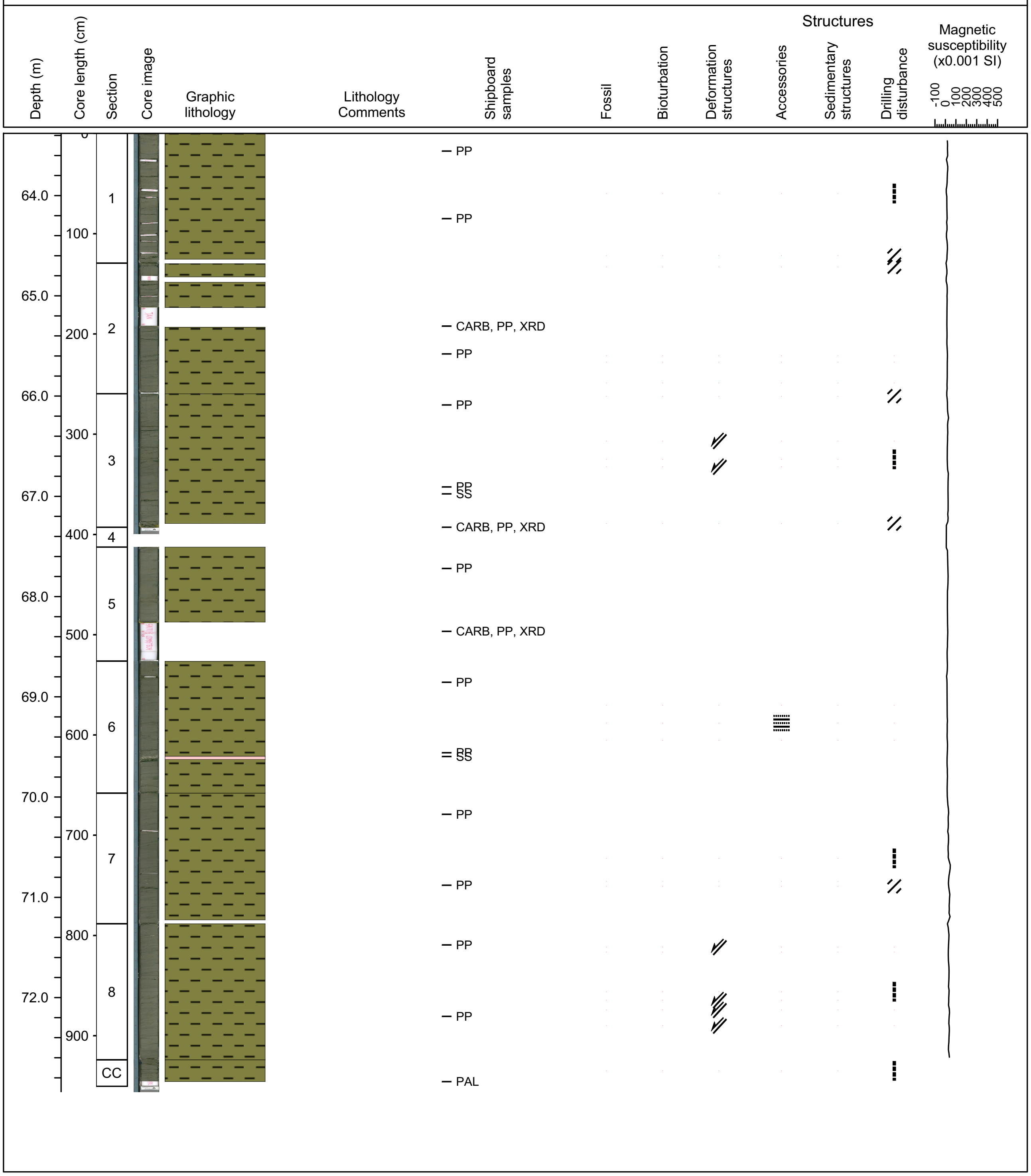
SILTY CLAY
Major lithology: Greenish gray silty clay; glauconite grains; greenish bands and mottles; generally homogeneous; dispersed ash and lapilli throughout; pyritized burrows.
Minor lithology: Sand; 0.5 to 3 cm thick; normally graded; volcanic ash in Section 8, 15-19 cm and 62-65 cm.



Core Photo

Hole C0004C Core 8H, interval 63.38-72.885 m (core depth below seafloor)

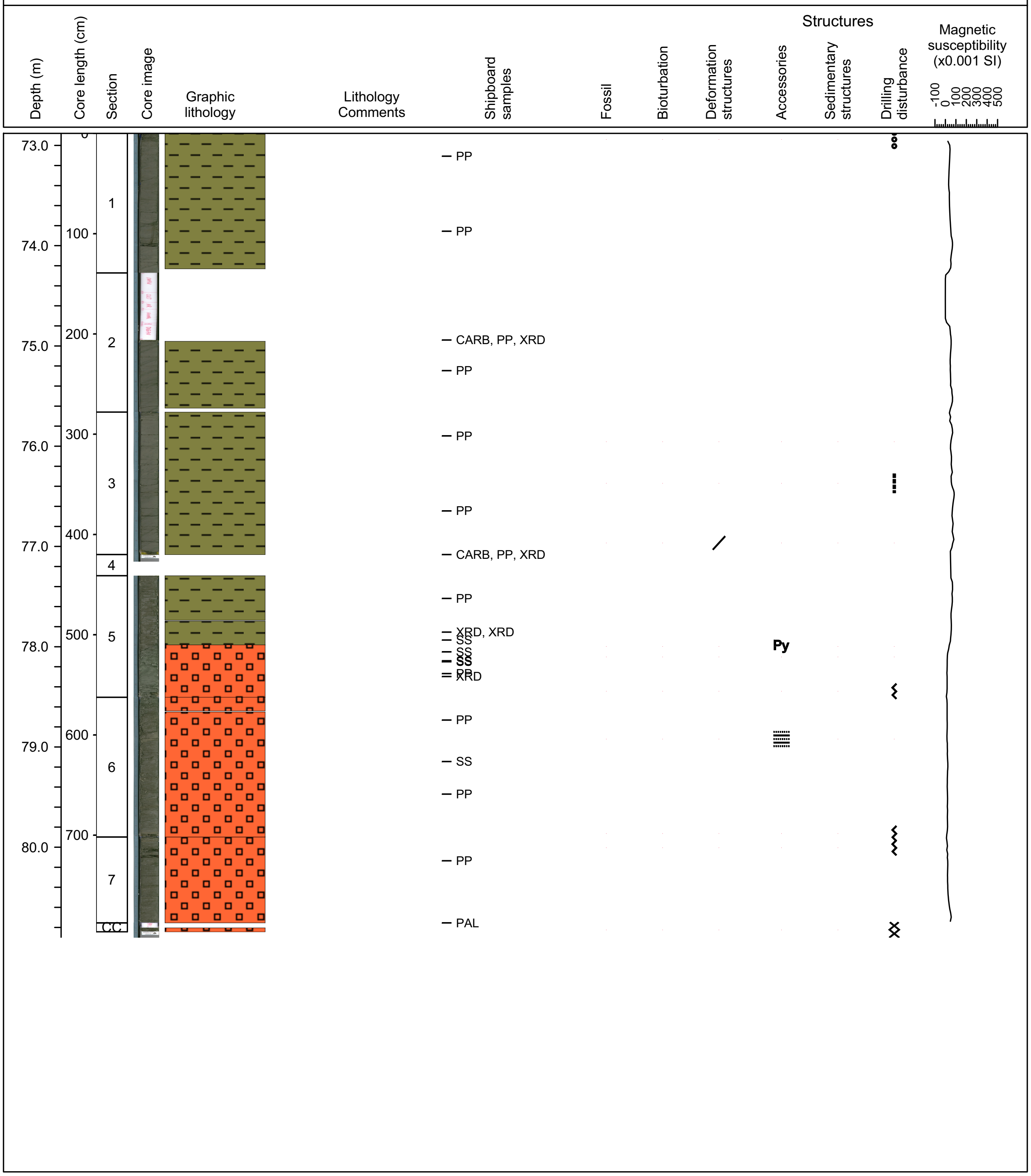
SILTY CLAY
Major lithology: Greenish gray silty clay; glauconite grains; greenish bands and mottles; generally homogeneous; dispersed ash and lapilli throughout; pyritized burrows and nodules; agglutinated fossils (sponge spicules); several microfaults in Section 8, at 23 cm, 68 cm, and 77-105 cm.
Minor lithology: Sand; 0.5 to 3 cm thick; normally graded; volcanic ash in Section 6, 45-50 cm; Section 7, 92-99 cm; and Section 8, 5-58 cm.



Core Photo

Hole C0004C Core 9H, interval 72.88-80.844 m (core depth below seafloor)

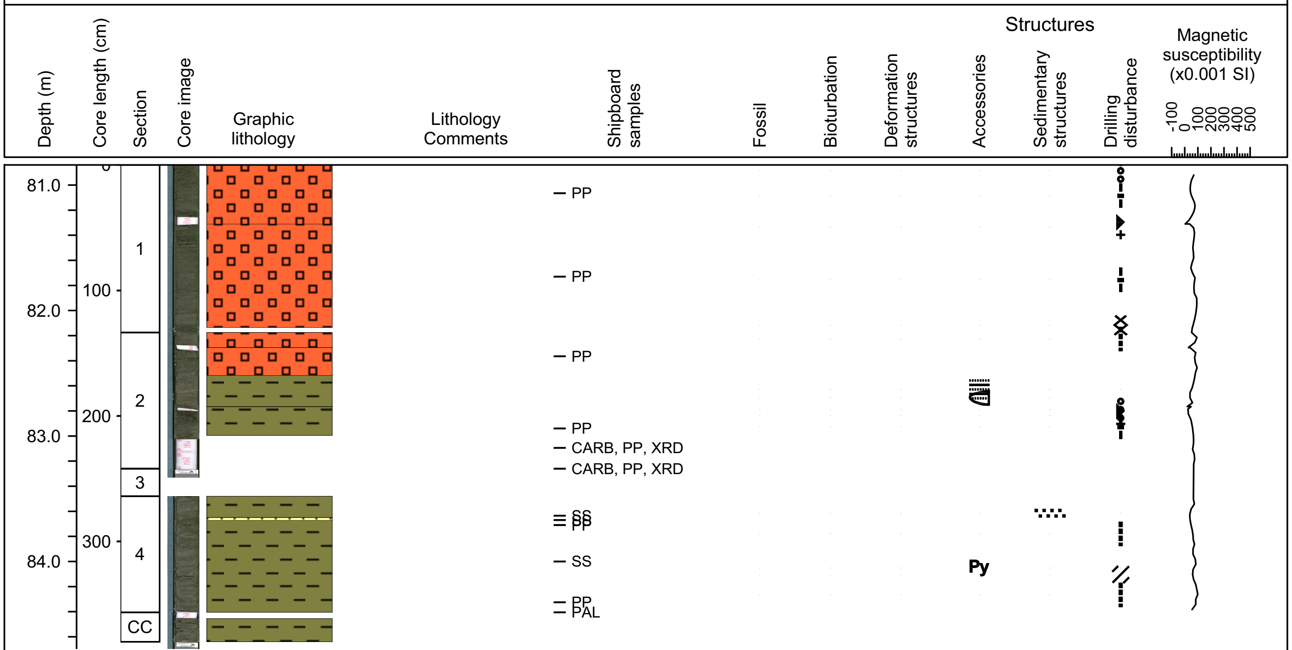
SILTY CLAY AND CONGLOMERATE
Major lithology: Greenish gray silty clay; glauconite grains; greenish bands inclined 40 degrees to horizontal; generally homogeneous; dispersed ash and lapilli throughout.
Minor lithology: Greenish silty claystone mudclast breccia with sharp top that slopes across core in Section 5 at 70-78 cm; matrix-supported with jigsaw texture observed in CT images; clasts up to 3 cm across; upper part of breccia below contact for several millimeters is mineralized by pyrite and possibly other dark minerals.



Core Photo

Hole C0004C Core 10H, interval 80.84-84.64 m (core depth below seafloor)

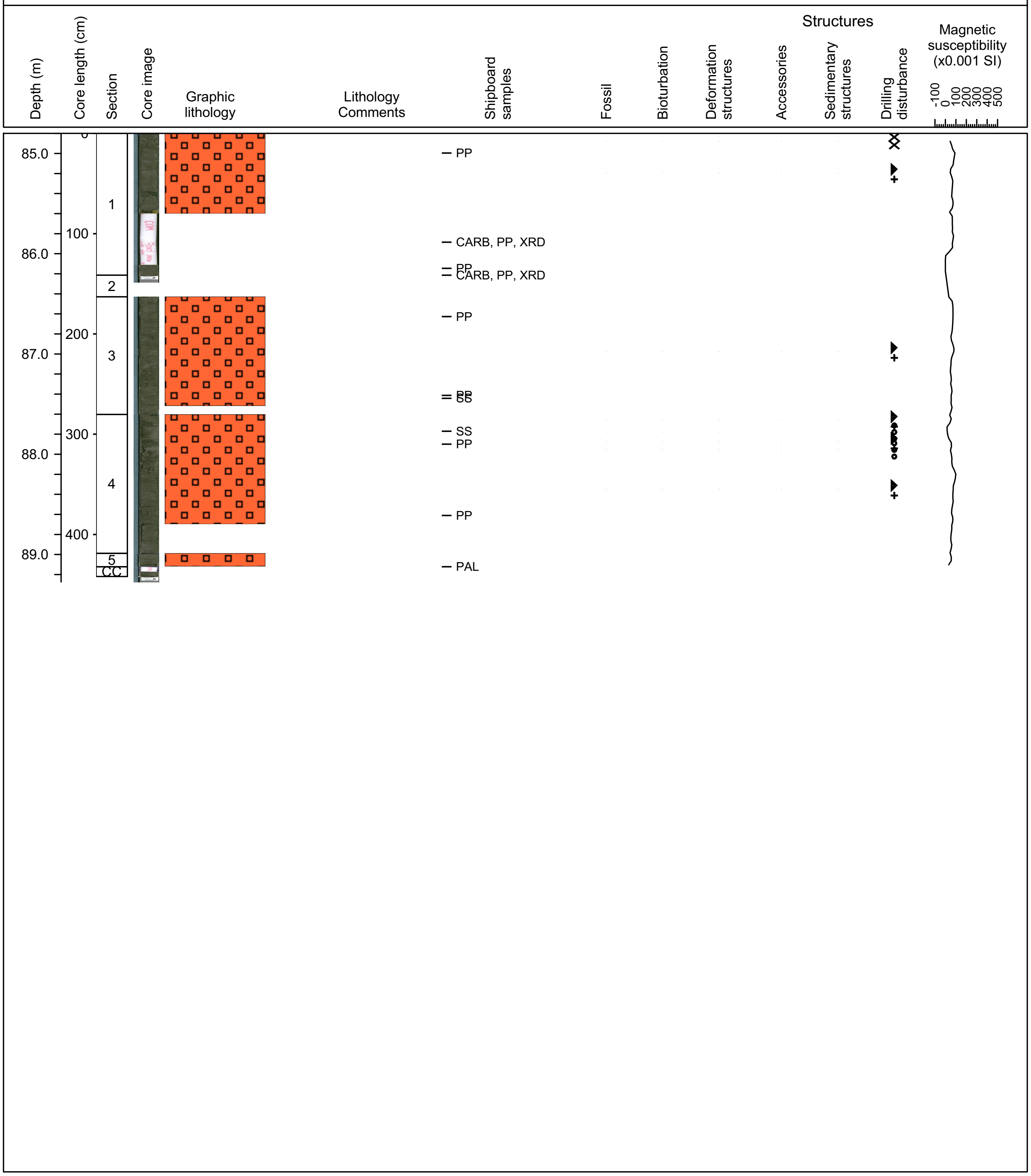
SILTY CLAY AND CONGLOMERATE
Major lithology: Greenish gray silty clay; glauconite grains; greenish bands; generally homogeneous; dispersed ash and lapilli throughout.
Minor lithology: Dark green-gray mudstone breccia; clasts of silty clay have composition similar to materix matrix; clasts up to 2cm in diameter; minor sand in Section 4.



Core Photo

Hole C0004C Core 11H, interval 84.8-89.22 m (core depth below seafloor)

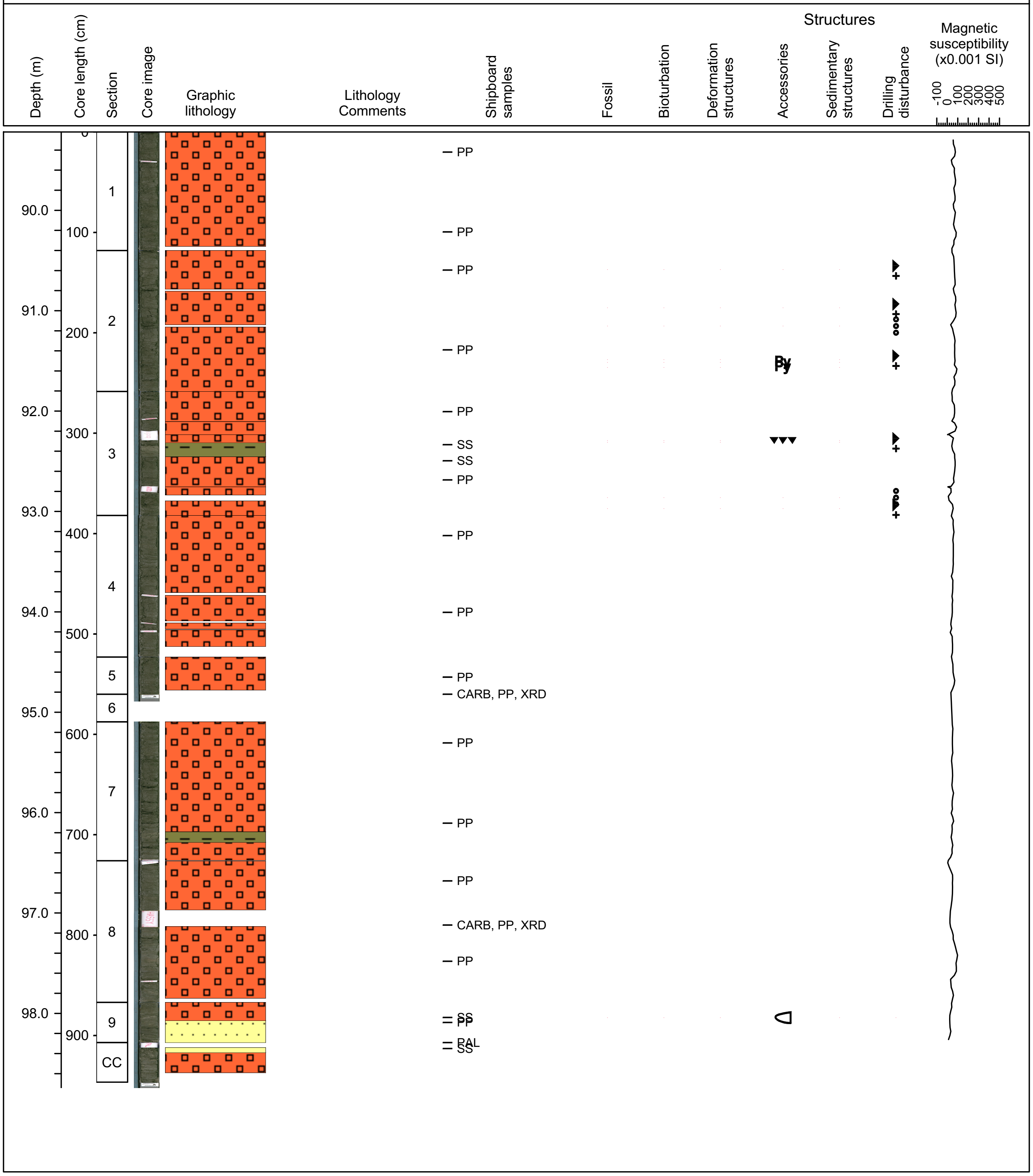
CONGLOMERATE
Major lithology: Dark greenish-grey mudstone breccia throughout. Clasts up to 3 cm across. Internal variation in breccia from matrix supported to clast supported and fractured whole mudrock. Brecciation due to drilling in top 15 cm. CT scan shows evidence of high density spots (probably pyrite) in cracks between clasts suggesting that these cracks were in place prior to drilling. In Section 3 brownish (oxidation?) areas in the matrix from 42-51 cm.
Minor lithology: Parts of section are washed out (soupy) and may be sandier intervals, as suggested by high very fine to fine sand content of corresponding smear slides.



Core Photo

Hole C0004C Core 12X, interval 89.22-98.685 m (core depth below seafloor)

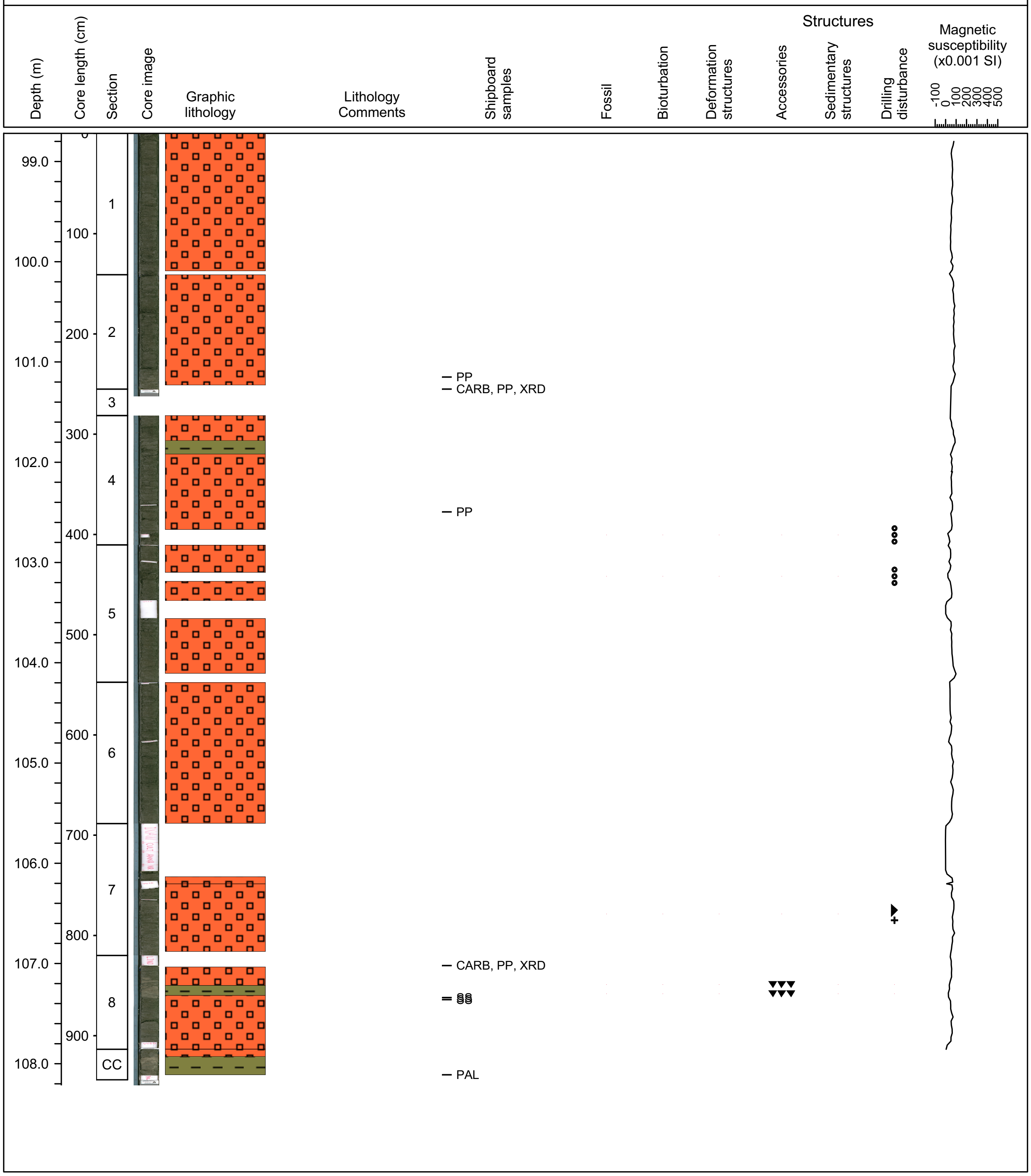
CONGLOMERATE
Major lithology: Dark greenish-grey mudstone breccia throughout.
Minor lithology: Soupy mud around one of the voids in Section 2 76-78 cm and Section 3, 120-126 cm, suggest these sections have been washed out and were sandier; greenish-gray silty clay in Section 3, 62-75 cm, with abundant nannofossils. Lower contact is somewhat gradual, upper contact is sharp, with mudclasts of the clay in the breccia above; In Section 9 ash patches/layers at 15 cm.



Core Photo

Hole C0004C Core 13X, interval 98.72-108.16 m (core depth below seafloor)

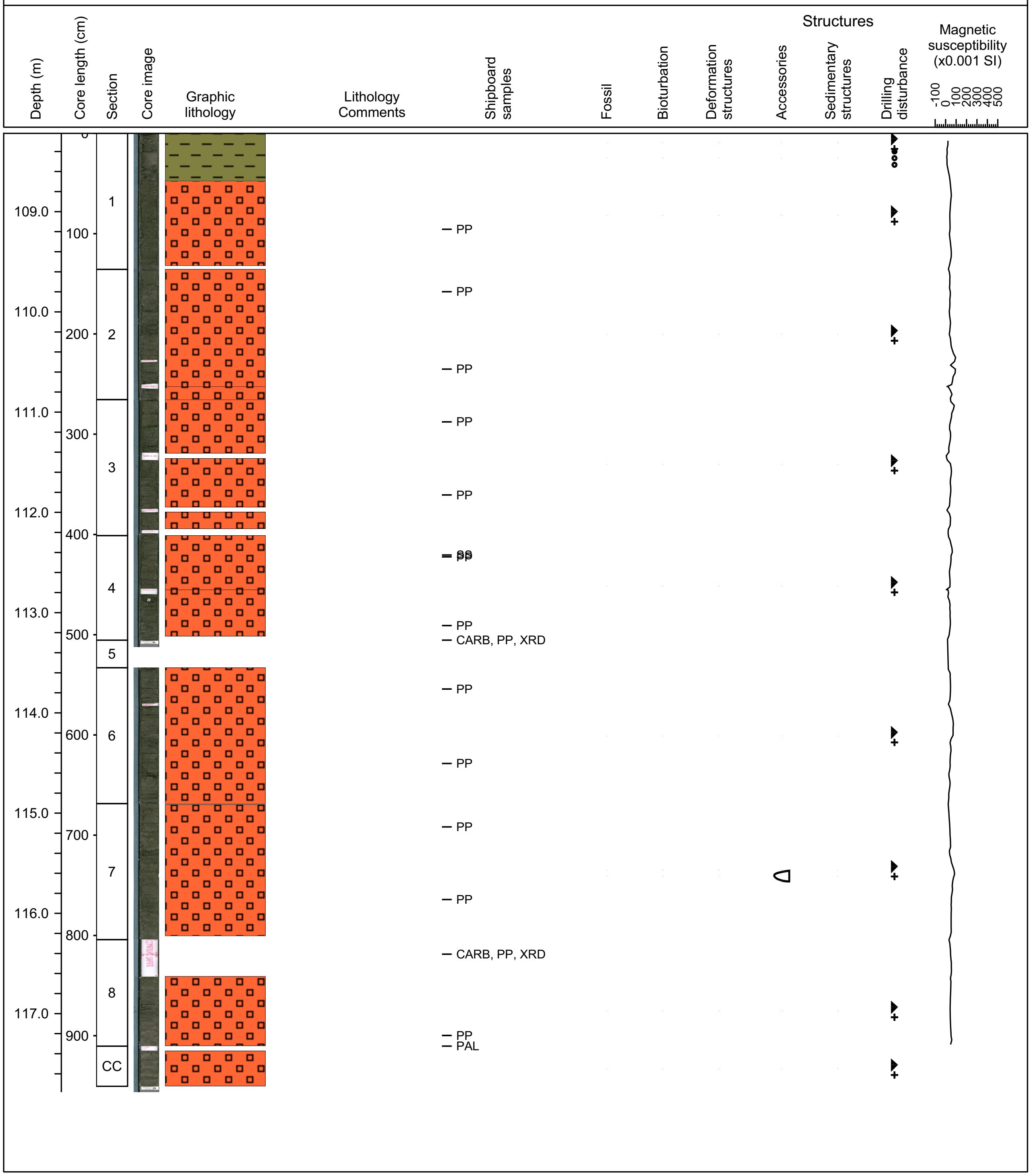
CONGLOMERATE AND SILTY CLAY
Major lithology: Greenish gray mudclast breccia composed of fragments of silty clay.
Minor lithology: Greenish-gray silty clay, dispersed ash.



Core Photo

Hole C0004C Core 14X, interval 108.22-117.725 m (core depth below seafloor)

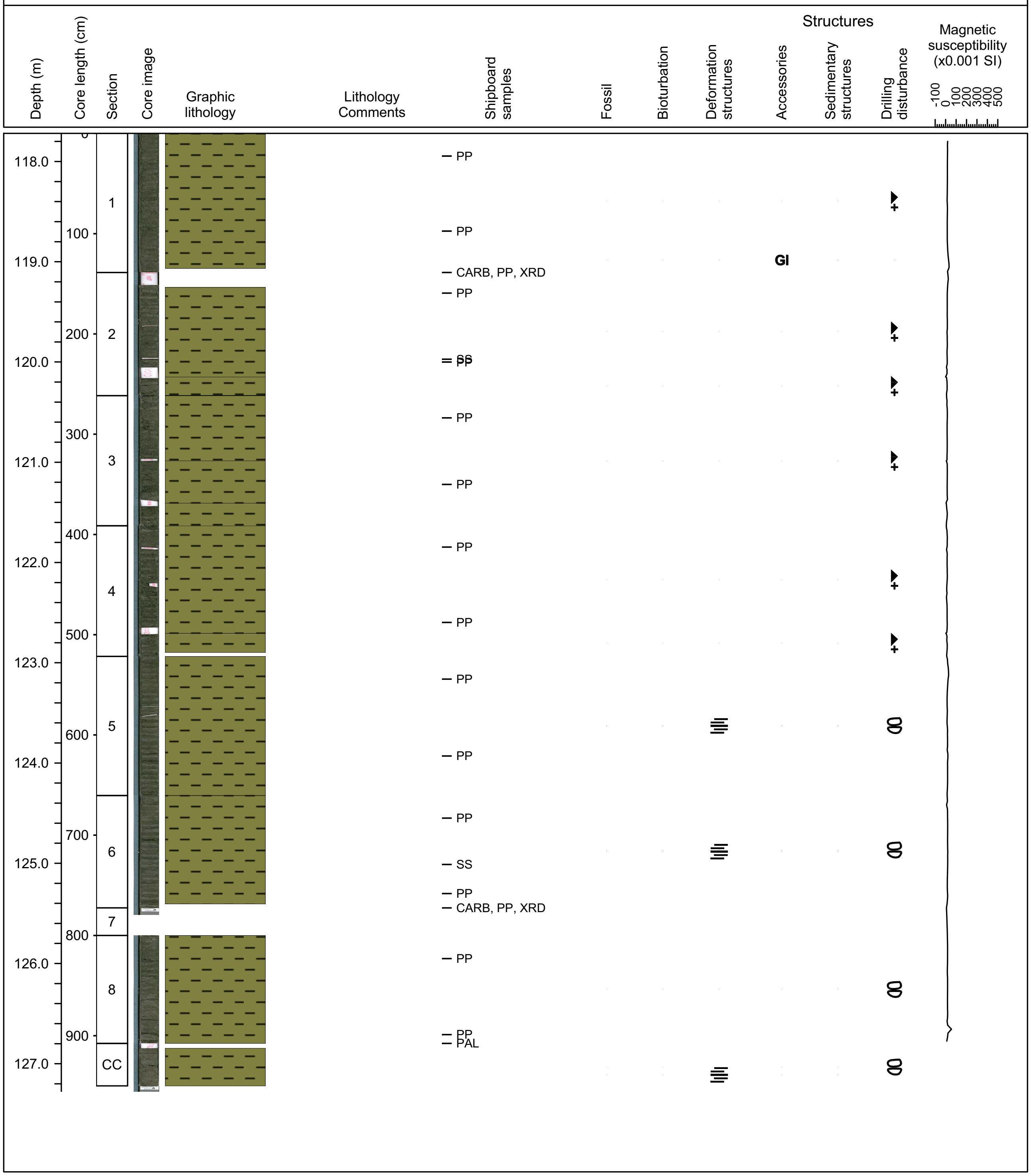
CONGLOMERATE AND SILTY CLAY
Major lithology: Greenish gray mudclast breccia composed of fragments of silty clay.
Minor lithology: Greenish-gray silty clay.



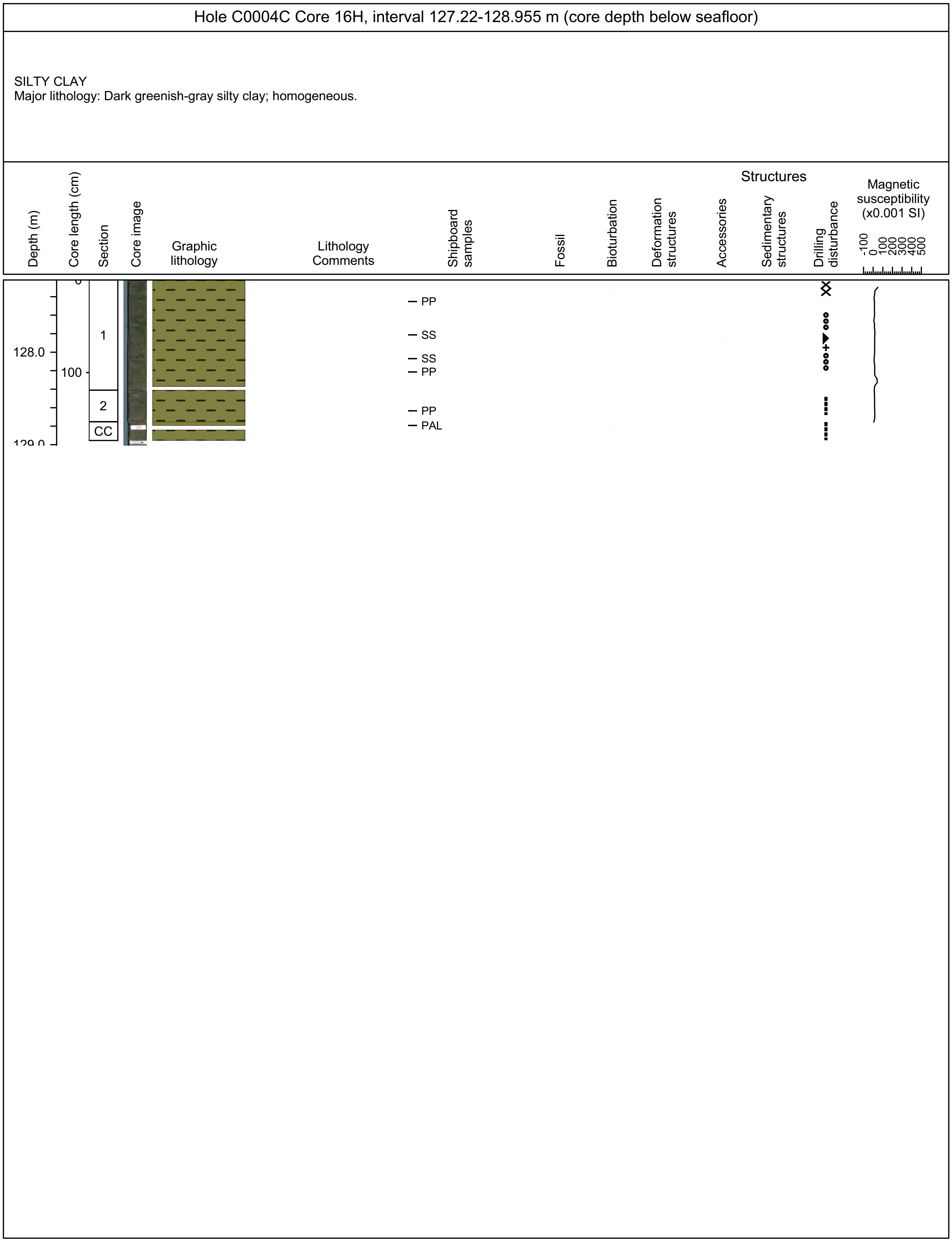
Core Photo

Hole C0004C Core 15X, interval 117.72-127.22 m (core depth below seafloor)

SILTY CLAY
Major lithology: Greenish-gray silty clay; homogeneous.



Core Photo

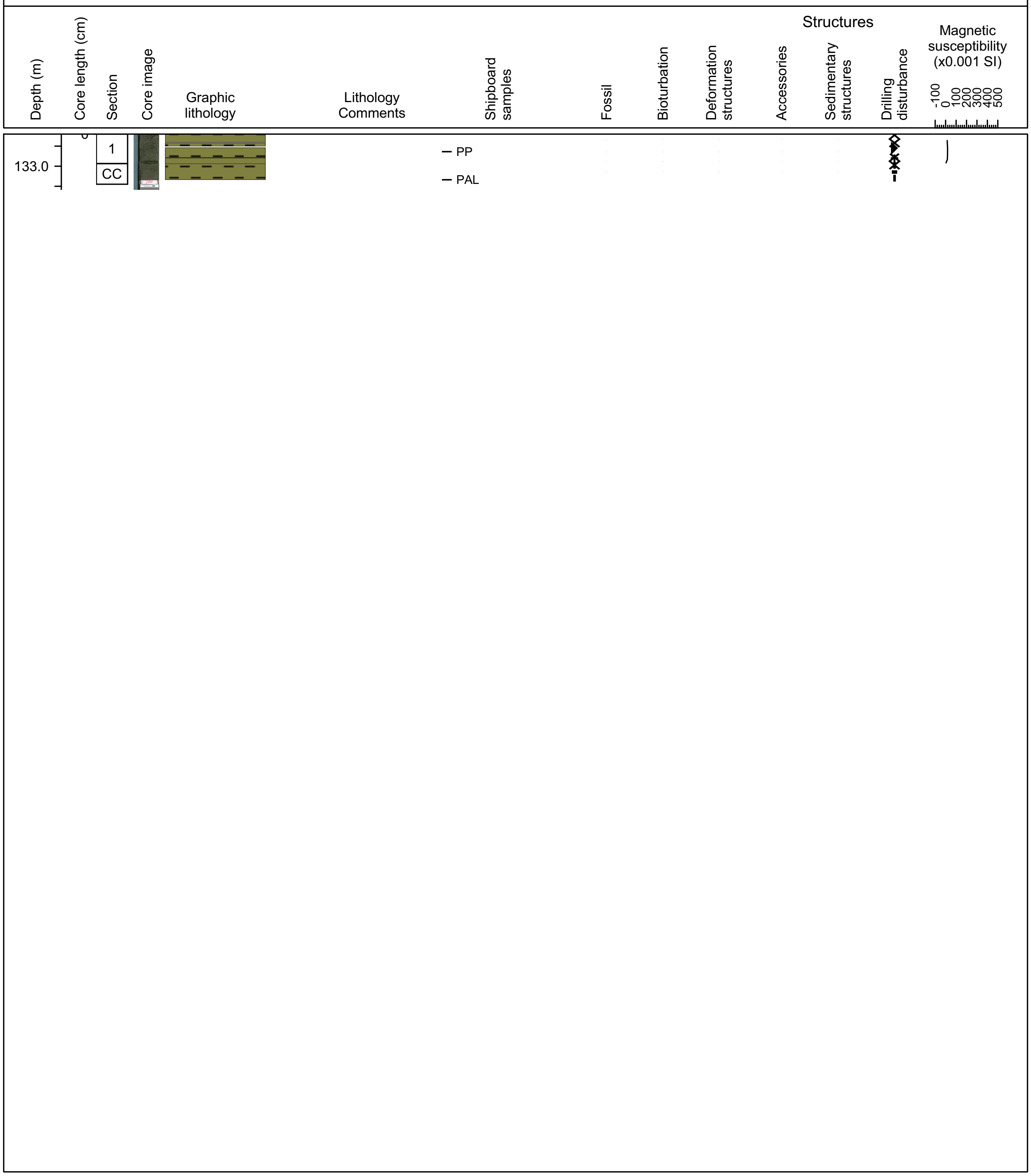


Hole C0004C Core 16H, interval 127.22-128.955 m (core depth below seafloor)
SILTY CLAY
Major lithology: Dark greenish-gray silty clay; homogeneous.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Lithology Comments
Shipboard samples
Fossil
Bioturbation
Deformation structures
Accessories
Sedimentary structures
Drilling disturbance
Structures
Magnetic susceptibility (x0.001 SI)
-100
0
100
200
300
400
500
128.0
100
1
2
CC
PP
SS
SS
PP
PP
PAL

Core Photo

Hole C0004C Core 17H, interval 132.68-133.18 m (core depth below seafloor)

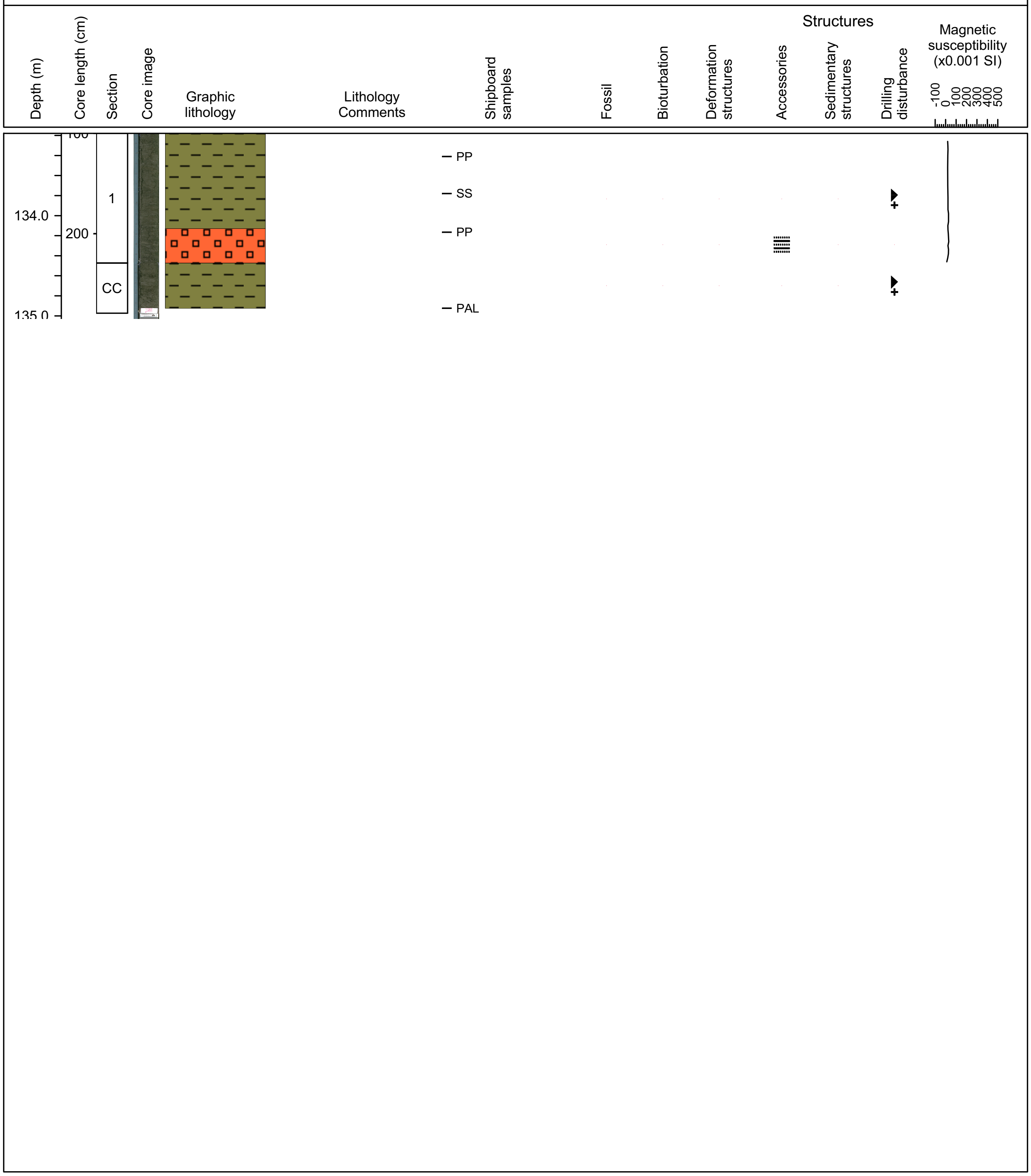
SILTY CLAY
Major lithology: Dark greenish-gray silty clay; homogeneous.



Core Photo

Hole C0004C Core 18H, interval 133.18-134.973 m (core depth below seafloor)

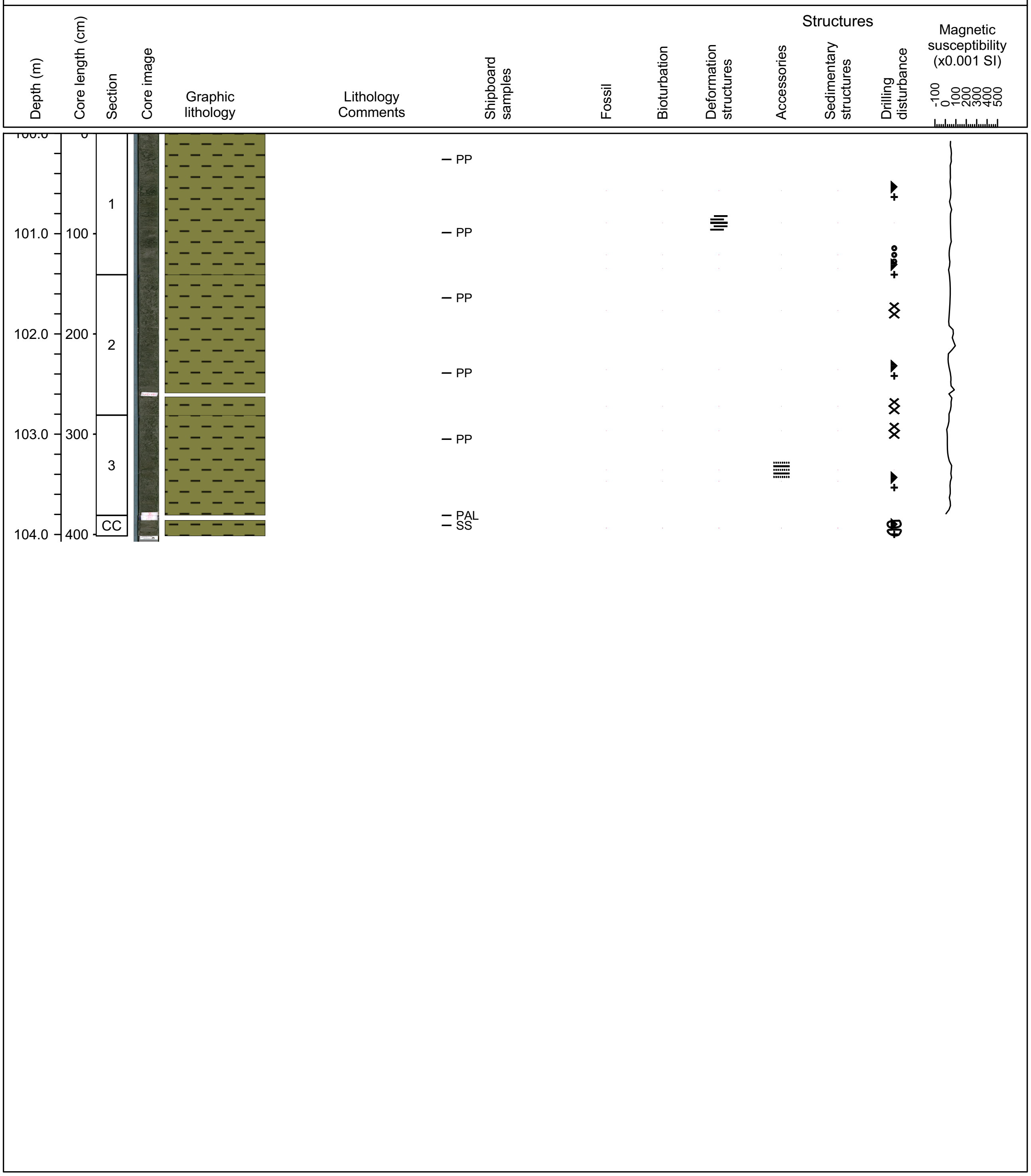
SILTY CLAY
Major lithology: Dark greenish-gray silty clay; homogeneous.
Minor lithology: Greenish gray mudclast breccia composed of fragments of silty clay.



Core Photo

Hole C0004D Core 1R, interval 100-104.015 m (core depth below seafloor)

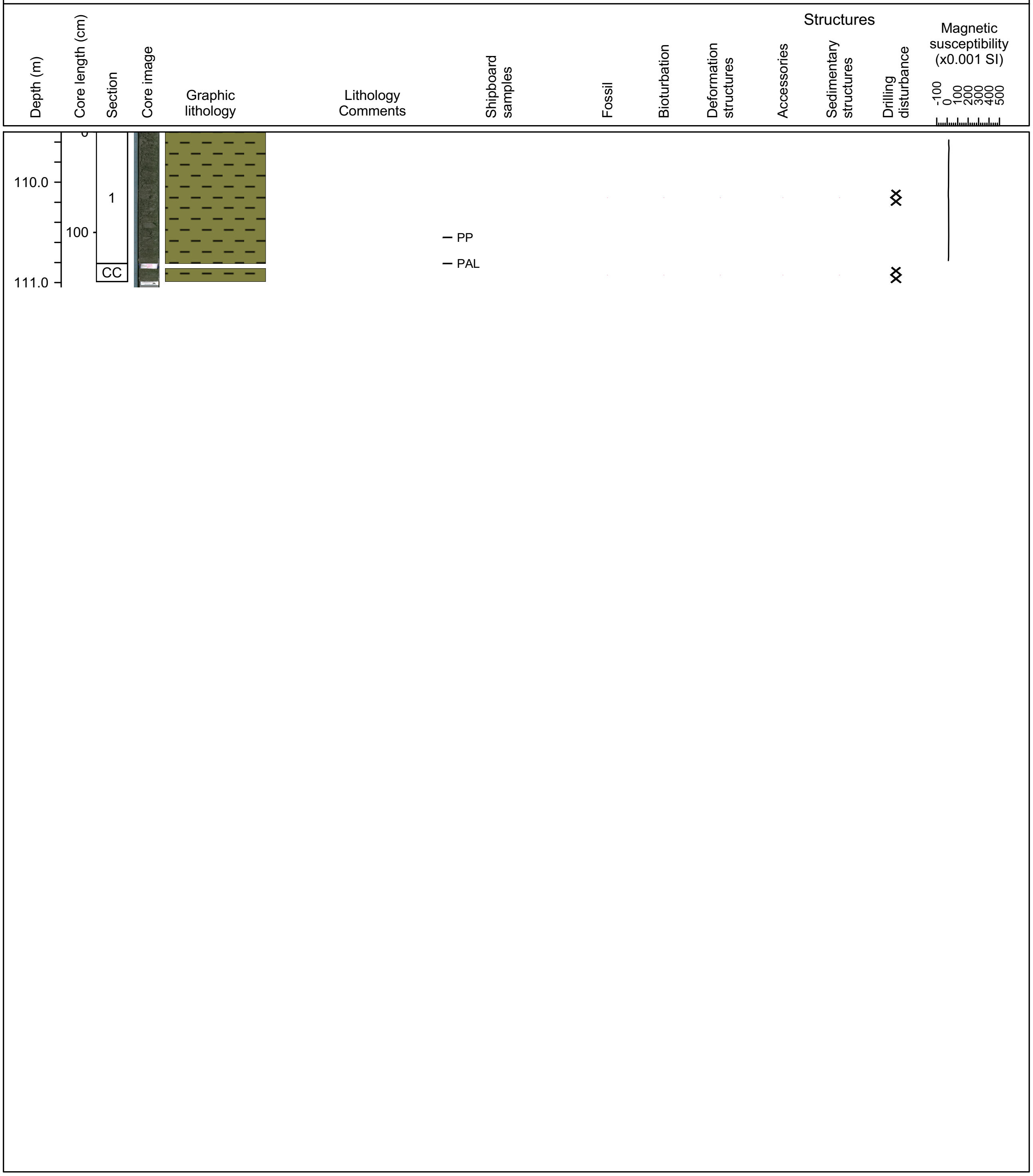
SILTY CLAY
Major lithology: Dark greenish-gray silty clay; homogeneous.



Core Photo

Hole C0004D Core 2R, interval 109.5-110.99 m (core depth below seafloor)

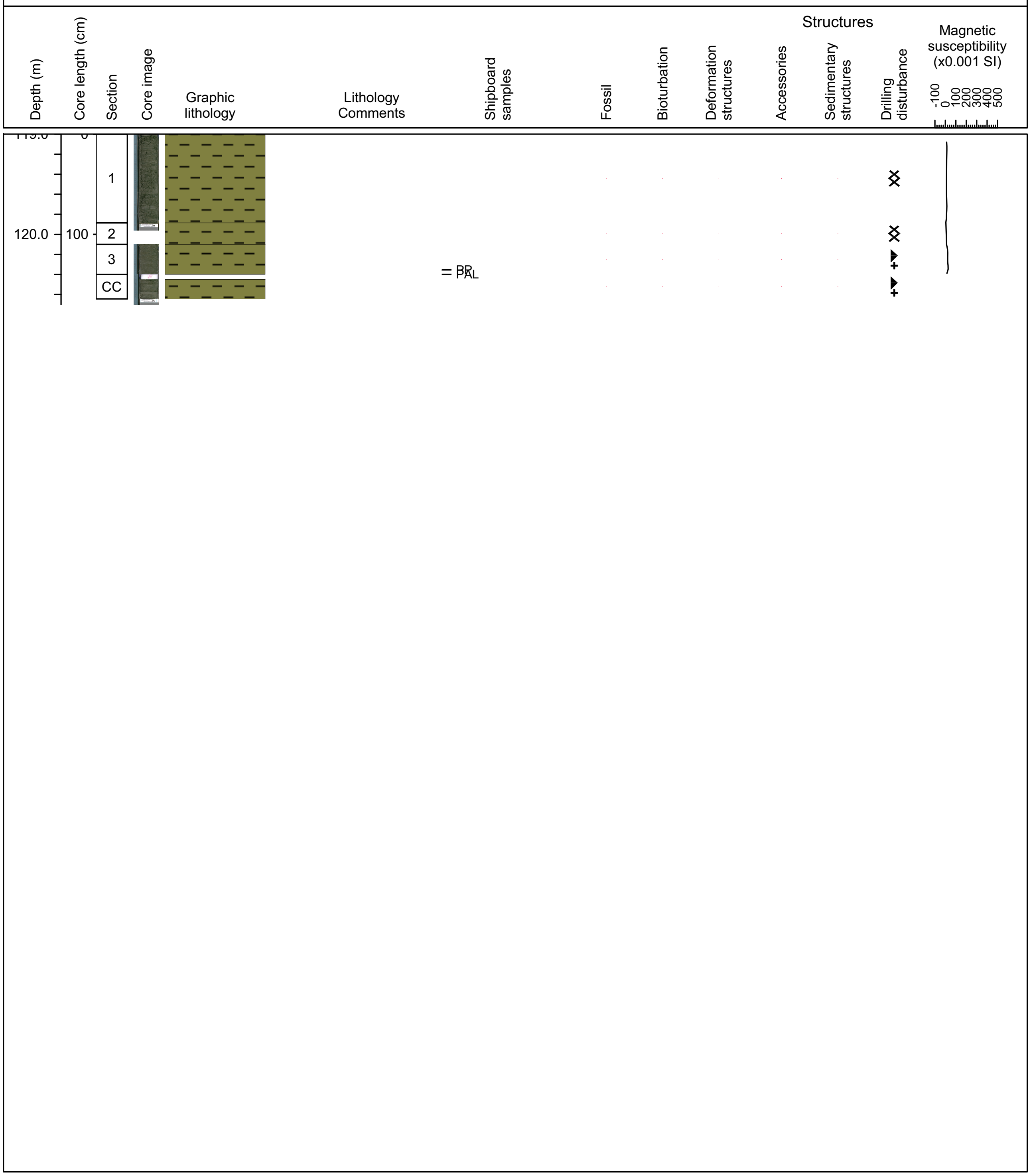
SILTY CLAY
Major lithology: Dark greenish-gray silty clay; homogeneous.



Core Photo

Hole C0004D Core 3R, interval 119-120.645 m (core depth below seafloor)

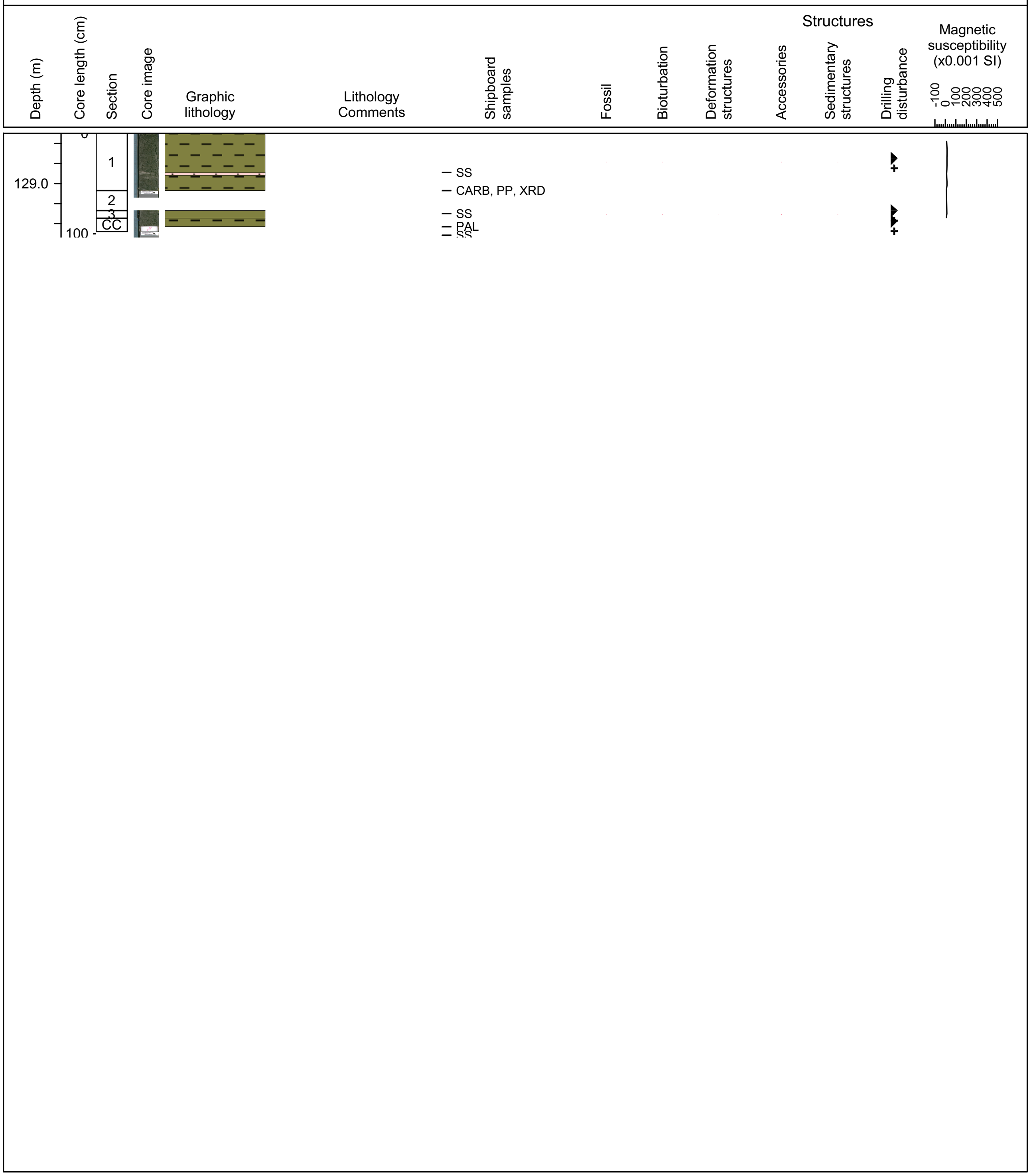
SILTY CLAY
Major lithology: Dark greenish-gray silty clay; homogeneous.



Core Photo

Hole C0004D Core 4R, interval 128.5-129.48 m (core depth below seafloor)

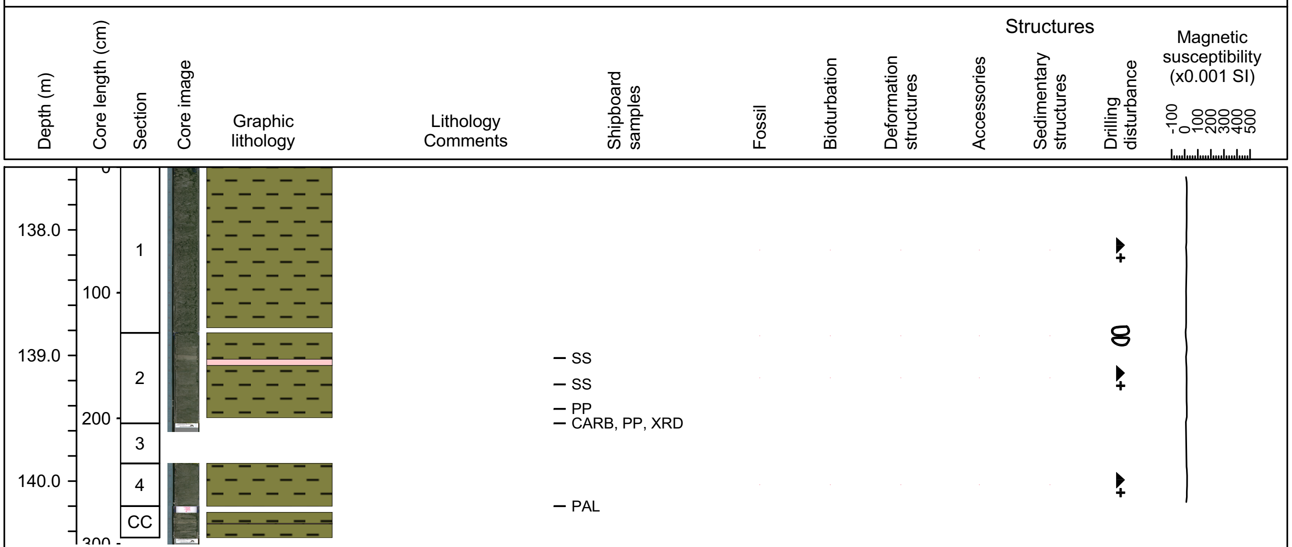
SILTY CLAY
Major lithology: Dark greenish gray silty clays.
Minor lithology: Volcanic ash in Section 1, 40 cm.



Core Photo

Hole C0004D Core 5R, interval 137.5-140.45 m (core depth below seafloor)

SILTY CLAY
Major lithology: Dark greenish gray silty clay.
Minor lithology: Volcanic ash in Section 2, 22-26 cm.

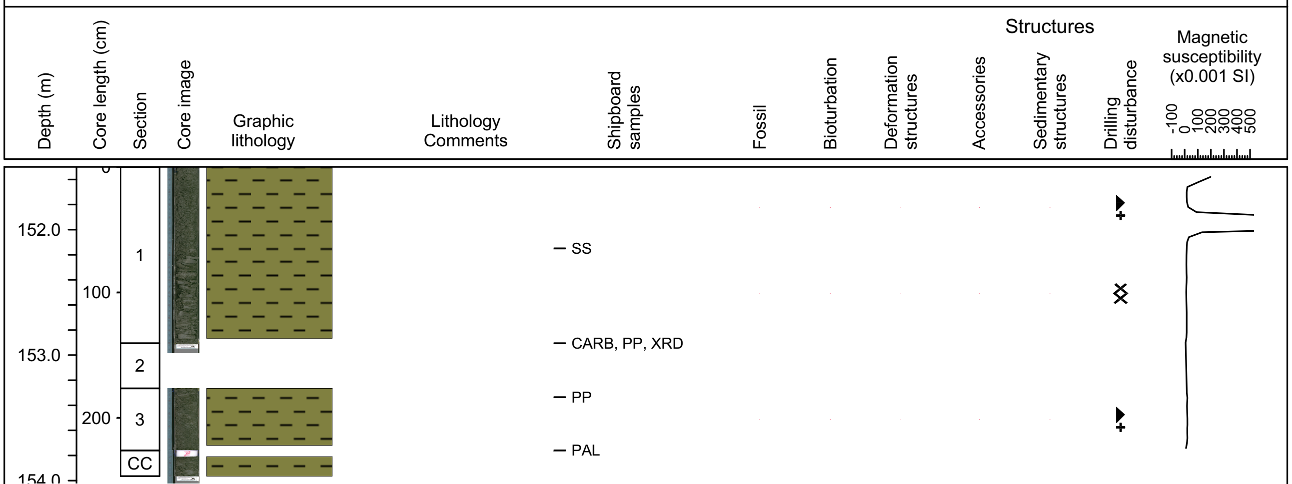


Hole C0004D Core 6R No recovery

Core Photo

Hole C0004D Core 7R, interval 151.5-153.965 m (core depth below seafloor)

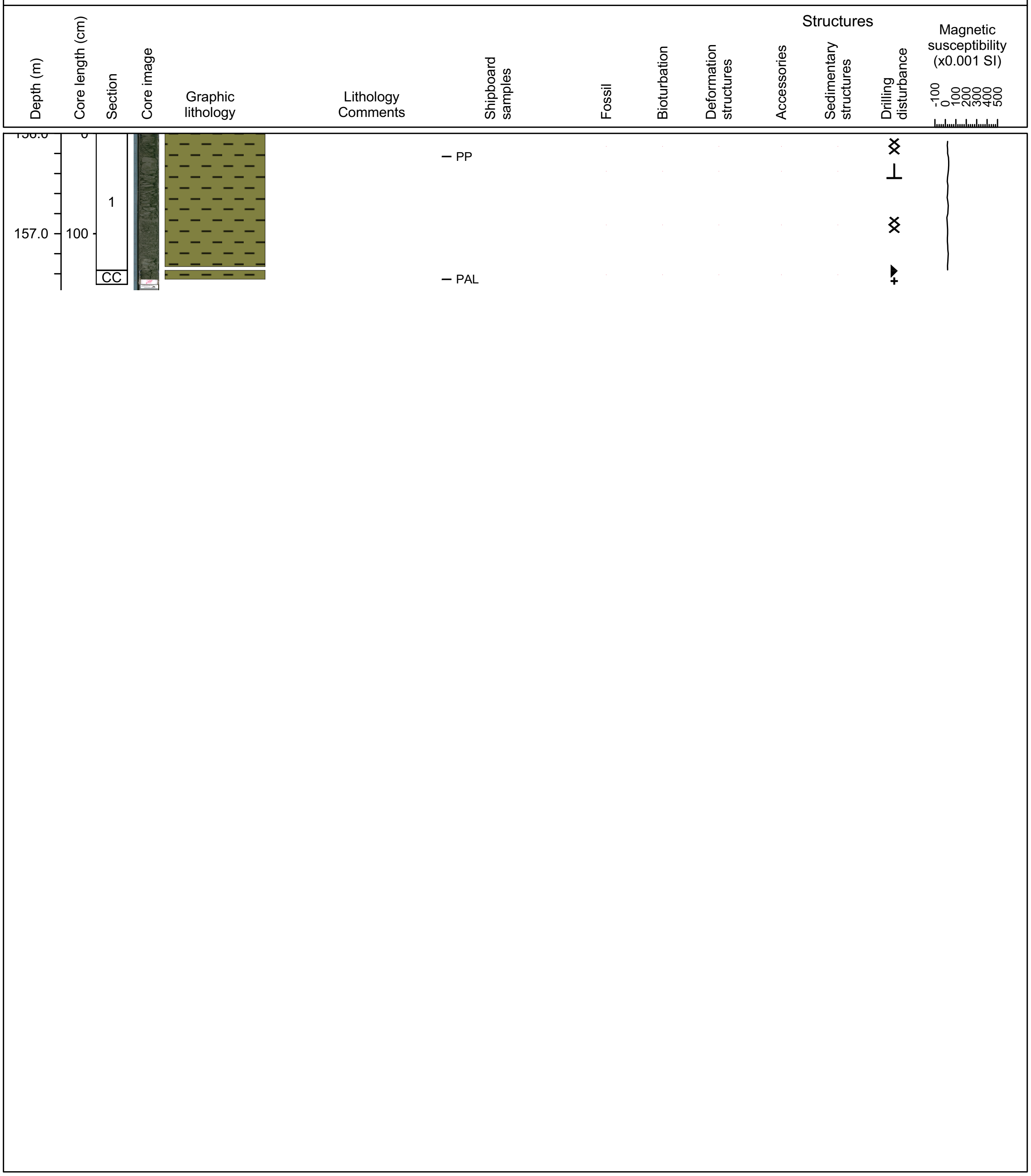
SILTY CLAY
Major lithology: Dark greenish gray silty clay; homogeneous.



Core Photo

Hole C0004D Core 8R, interval 156-157.505 m (core depth below seafloor)

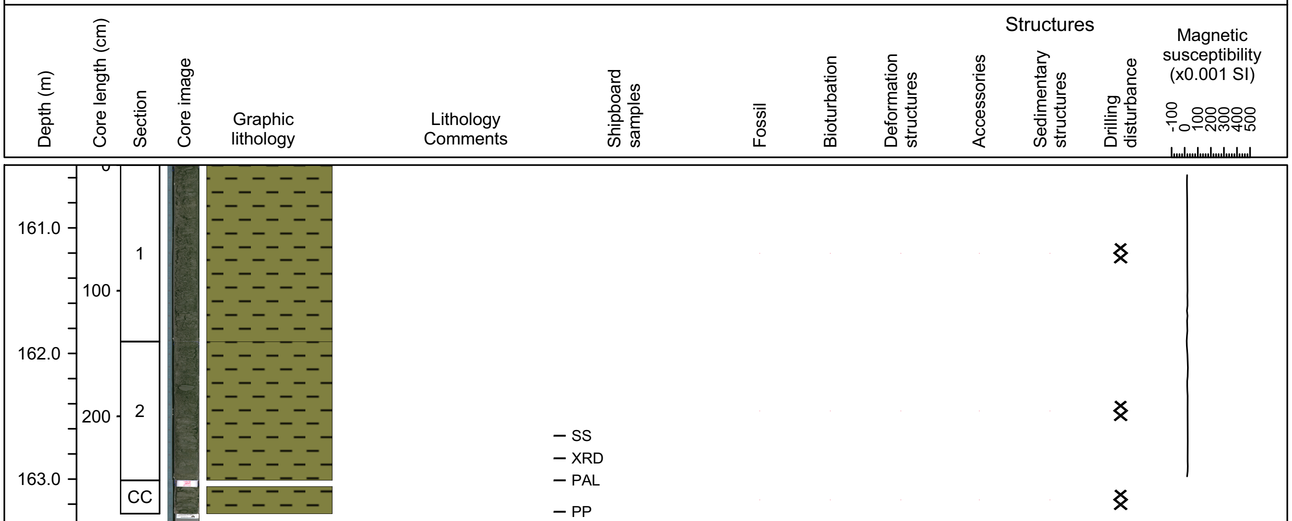
SILTY CLAY
Major lithology: Dark greenish gray silty clay; homogeneous.



Core Photo

Hole C0004D Core 9R, interval 160.5-163.275 m (core depth below seafloor)

SILTY CLAY
Major lithology: Dark greenish gray silty clay; homogeneous; a few concentrations of sponge spicules.



Core Photo

Hole C0004D Core 10R, interval 165-165.105 m (core depth below seafloor)

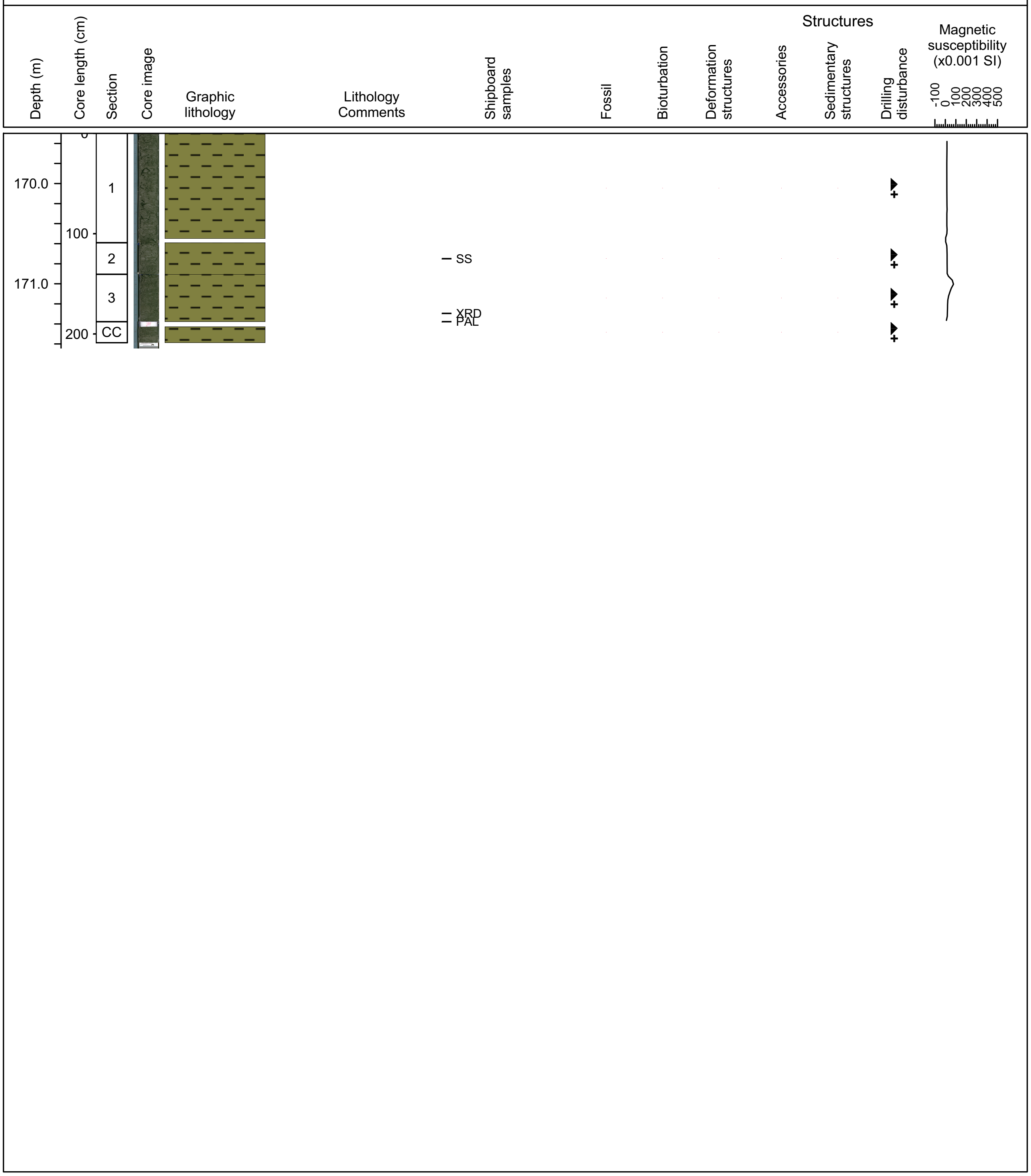
SILTY CLAY
Major lithology: Dark greenish gray silty clay; homogeneous.

Depth (m)	Core length (cm)	Section	Core image	Graphic lithology	Lithology Comments	Shipboard samples	Fossil	Bioturbation	Deformation structures	Accessories	Sedimentary structures	Drilling disturbance	Magnetic susceptibility (x0.001 SI) -100 0 100 200 300 400 500
165.0	0	CC				PP							

Core Photo

Hole C0004D Core 11R, interval 169.5-171.588 m (core depth below seafloor)

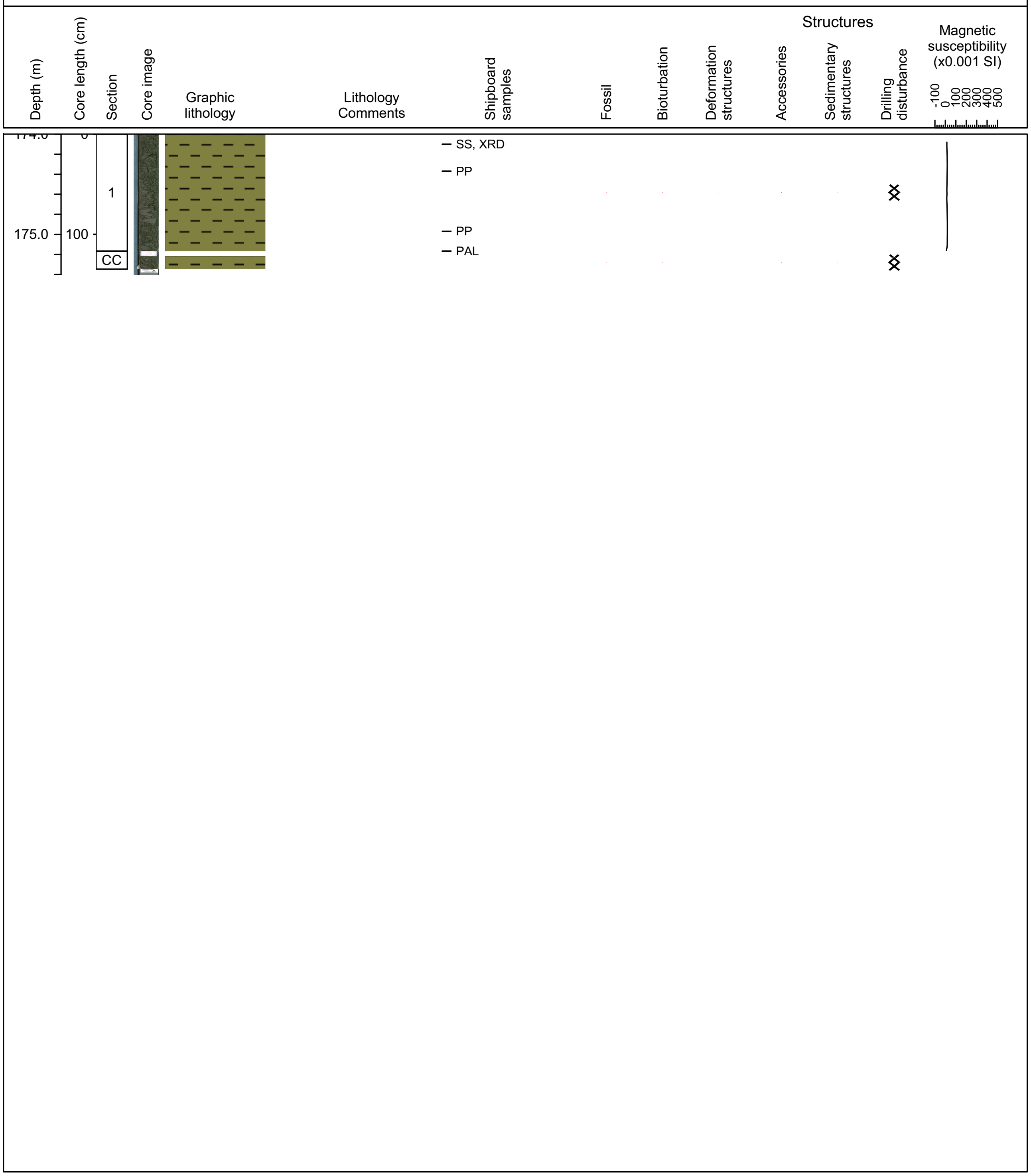
SILTY CLAY
Major lithology: Dark greenish gray silty clay; homogeneous.



Core Photo

Hole C0004D Core 12R, interval 174-175.347 m (core depth below seafloor)

SILTY CLAY
Major lithology: Dark greenish gray silty clay; homogeneous.

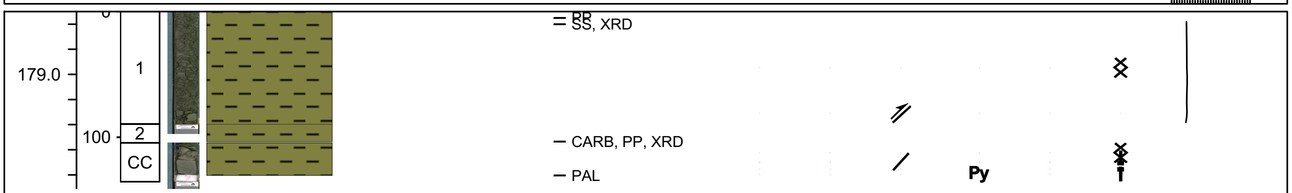


Core Photo

Hole C0004D Core 13R, interval 178.5-179.855 m (core depth below seafloor)

SILTY CLAY
Major lithology: Dark greenish gray silty clay; homogeneous.

Depth (m)	Core length (cm)	Section	Core image	Graphic lithology	Lithology Comments	Shipboard samples	Fossil	Bioturbation	Deformation structures	Accessories	Sedimentary structures	Drilling disturbance	Magnetic susceptibility (x0.001 SI) -100 0 100 200 300 400 500

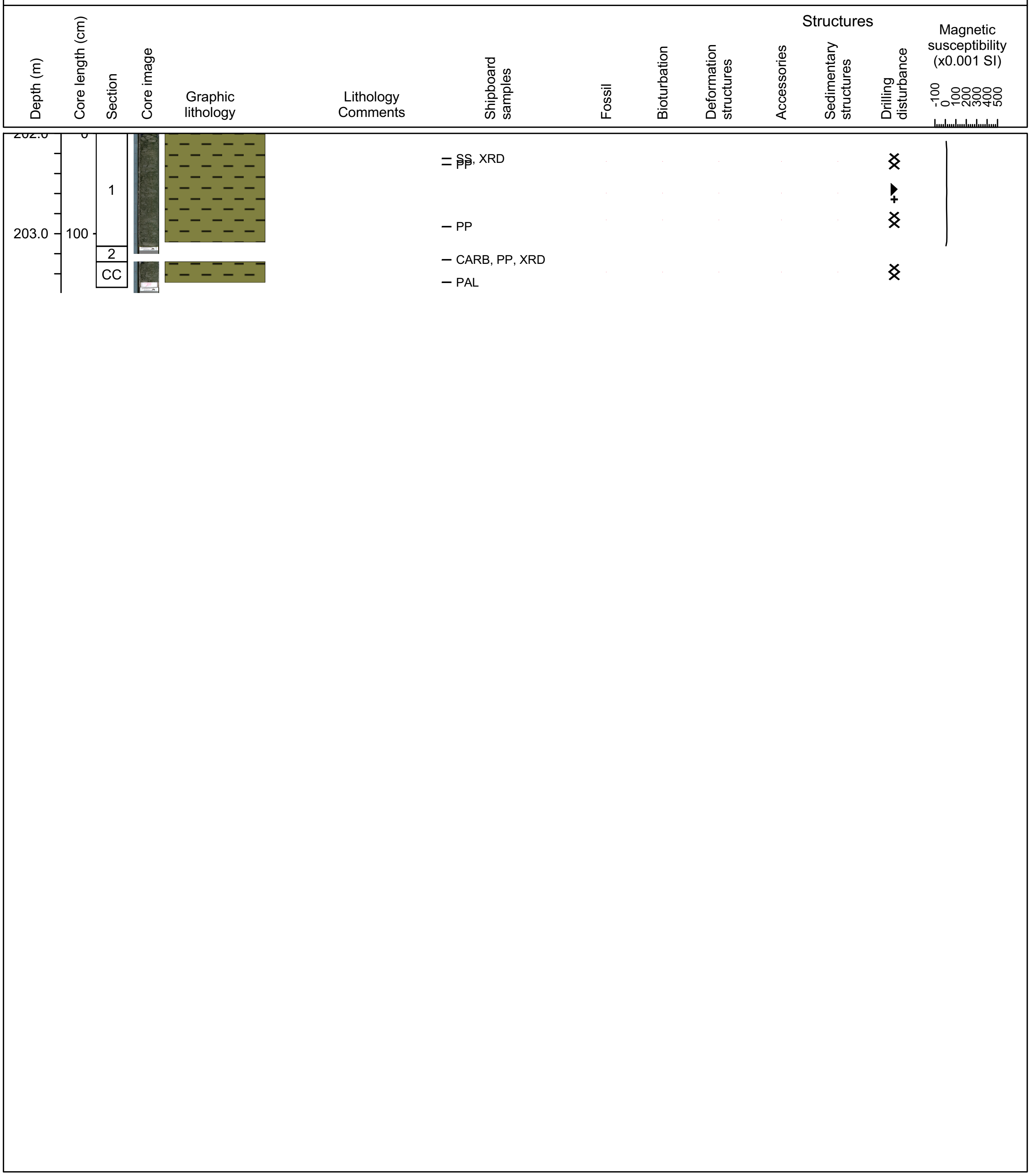


Hole C0004D Cores 14R and 15R No recovery

Core Photo

Hole C0004D Core 16R, interval 202-203.535 m (core depth below seafloor)

SILTY CLAY
Major lithology: Dark greenish gray silty clay; homogeneous.

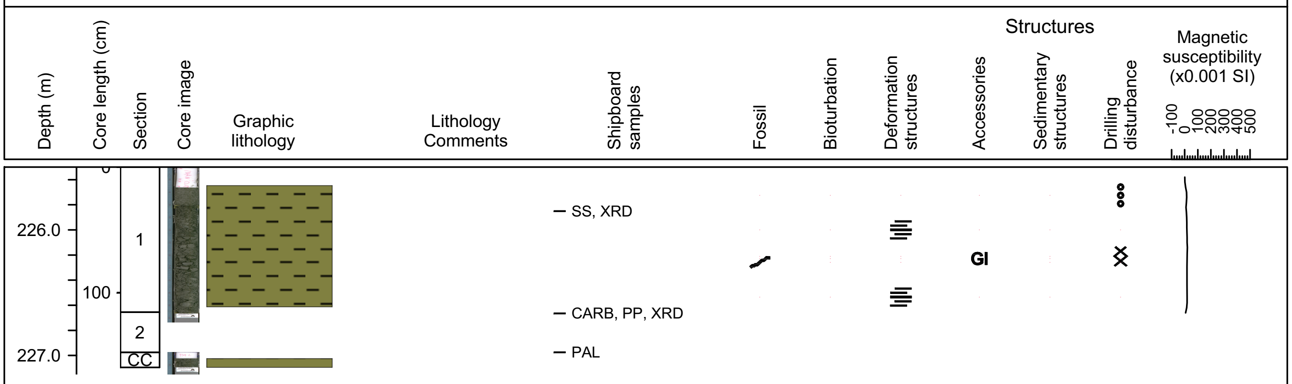


Hole C0004D Core 17R and 18R No recovery

Core Photo

Hole C0004D Core 19R, interval 225.5-227.095 m (core depth below seafloor)

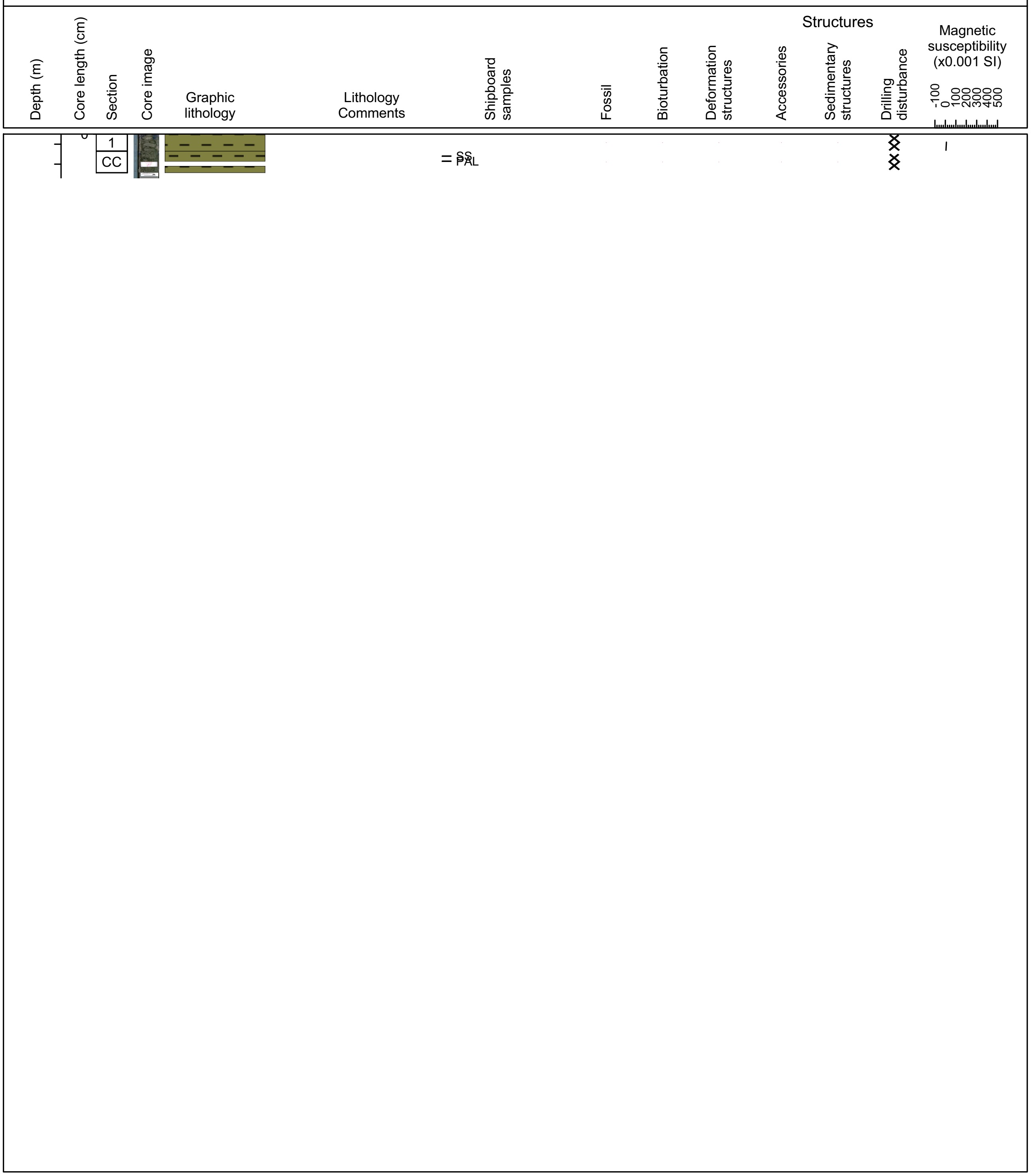
SILTY CLAY
Major lithology: Dark greenish gray silty clay; homogeneous.



Core Photo

Hole C0004D Core 20R, interval 228.5-228.885 m (core depth below seafloor)

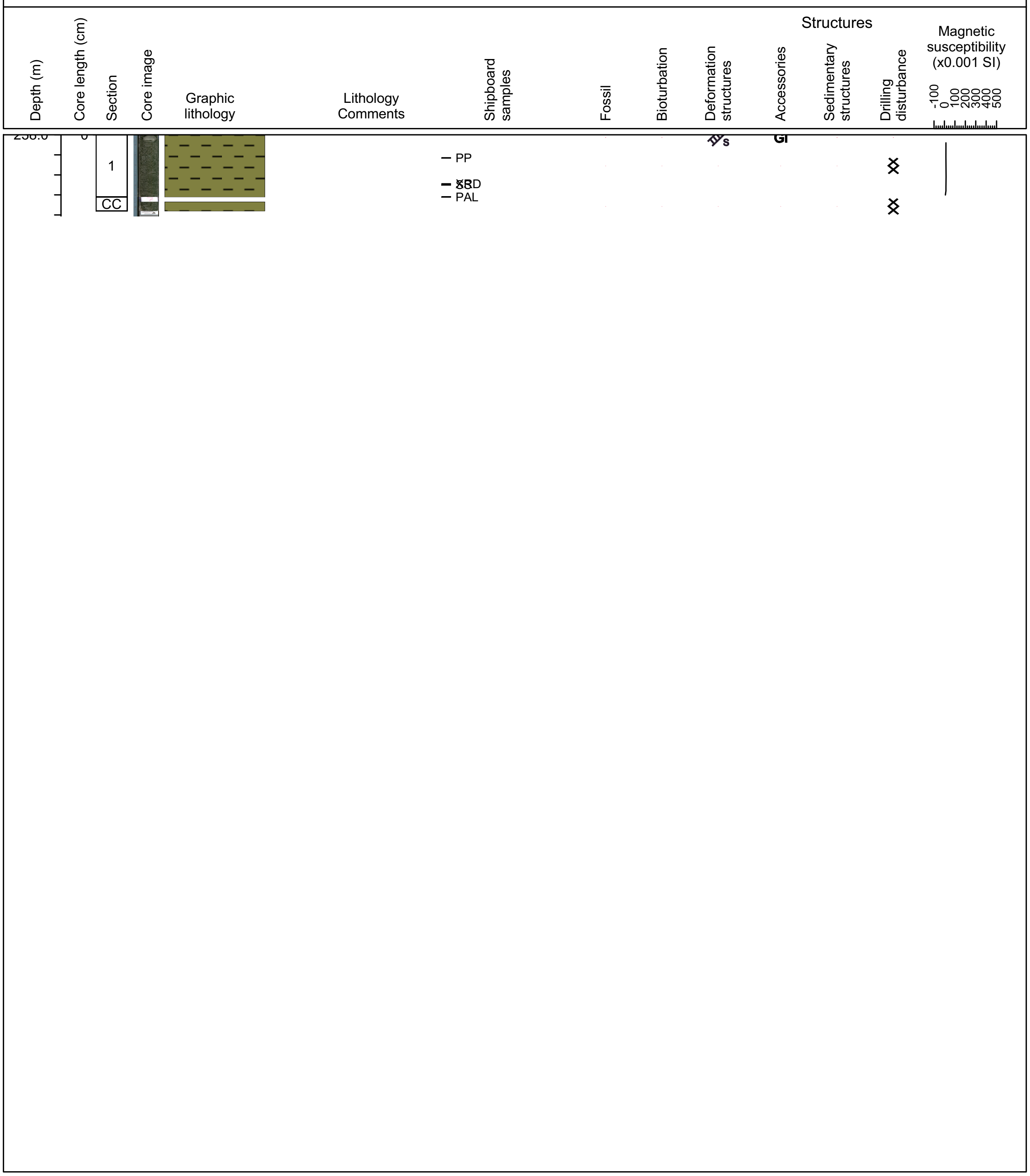
SILTY CLAY
Major lithology: Dark greenish gray silty clay; homogeneous.



Core Photo

Hole C0004D Core 21R, interval 238-238.76 m (core depth below seafloor)

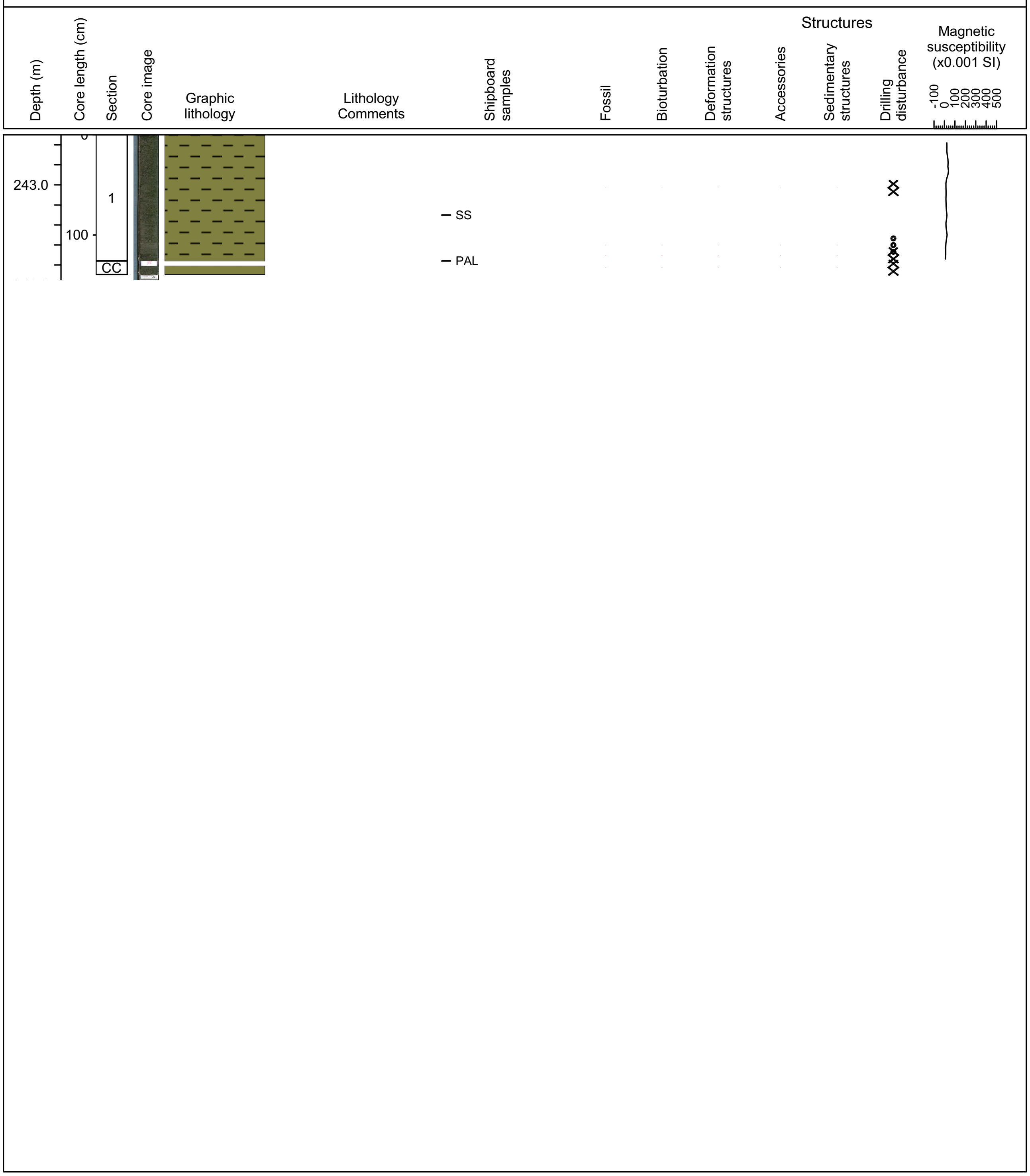
SILTY CLAY
Major lithology: Dark greenish gray silty clay; homogeneous.



Core Photo

Hole C0004D Core 22R, interval 242.5-243.895 m (core depth below seafloor)

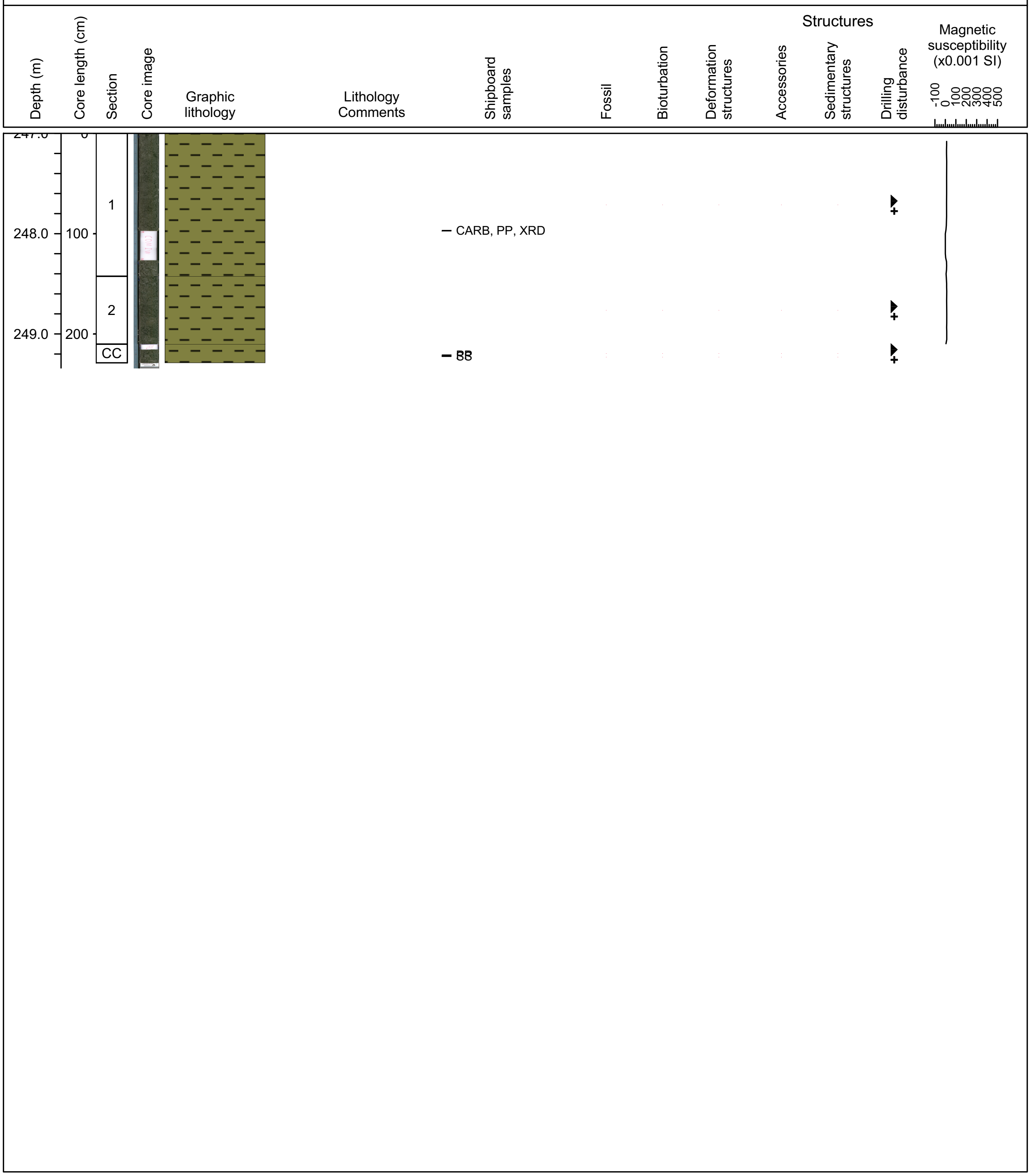
SILTY CLAY
Major lithology: Dark greenish gray silty clay; homogeneous.



Core Photo

Hole C0004D Core 23R, interval 247-249.288 m (core depth below seafloor)

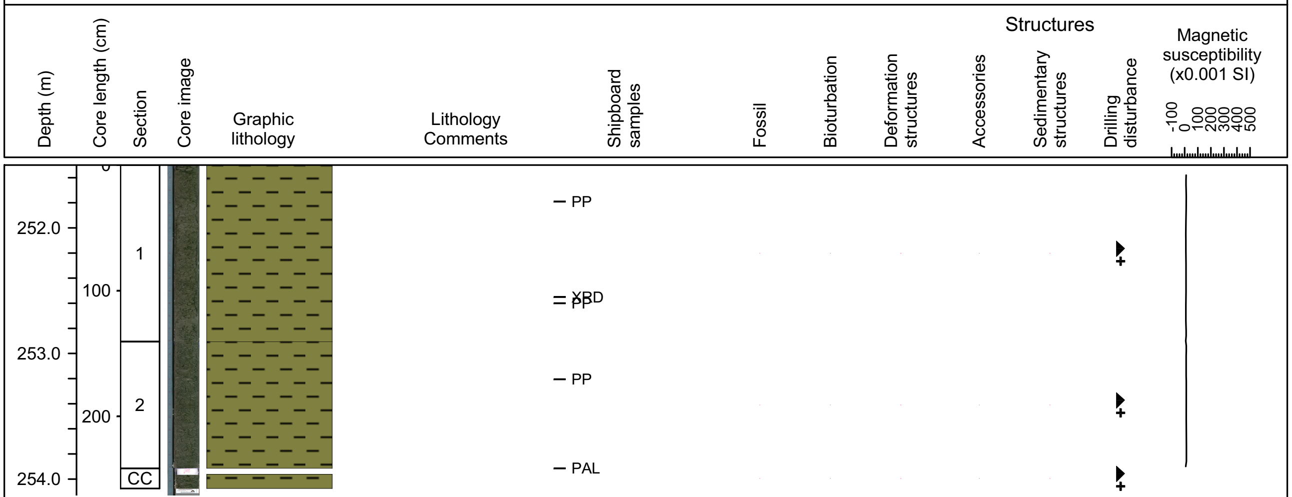
SILTY CLAY
Major lithology: Dark greenish gray silty clay; homogeneous.



Core Photo

Hole C0004D Core 24R, interval 251.5-254.075 m (core depth below seafloor)

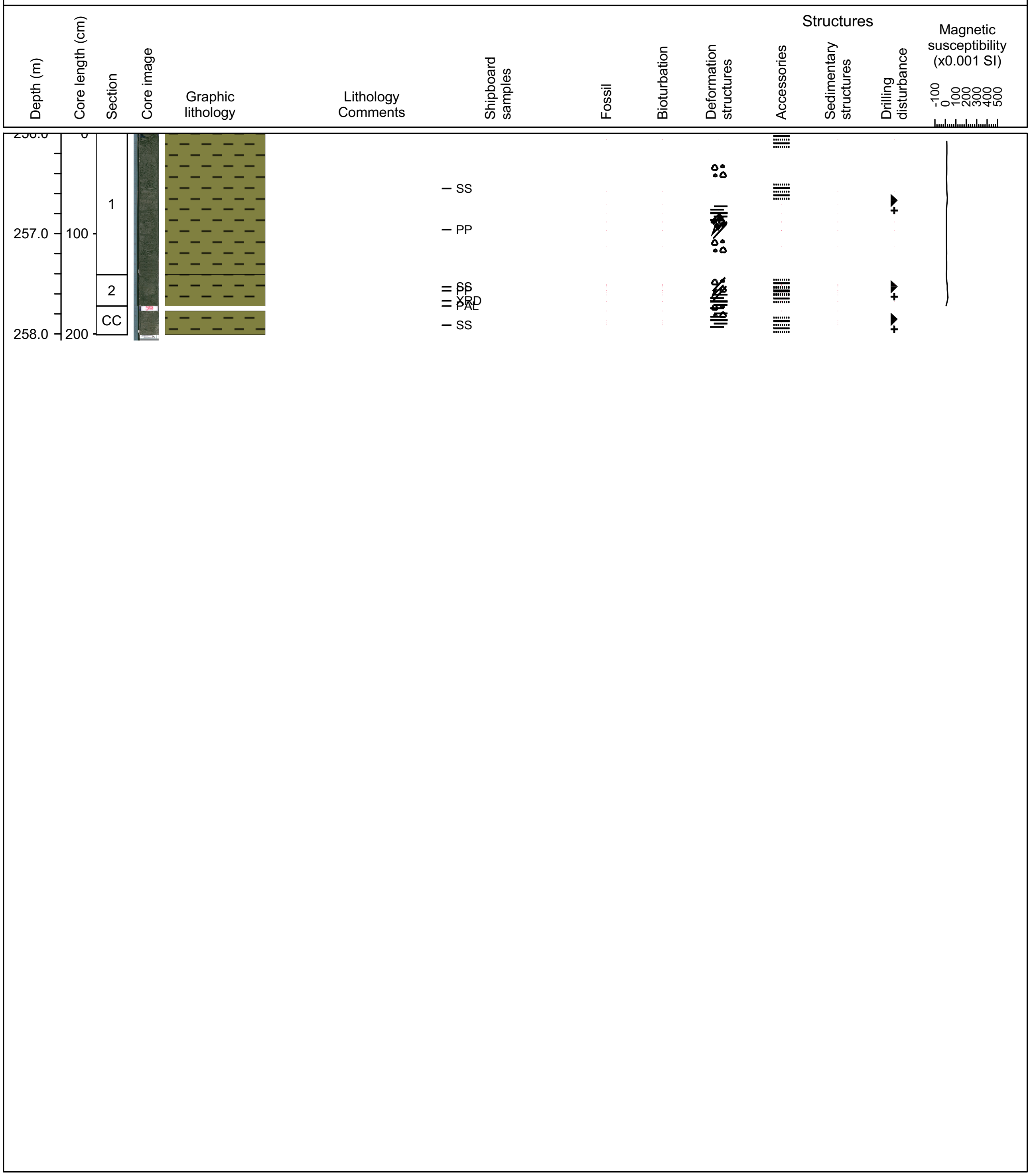
SILTY CLAY
Major lithology: Dark greenish gray silty clay; homogeneous.



Core Photo

Hole C0004D Core 25R, interval 256-258.009 m (core depth below seafloor)

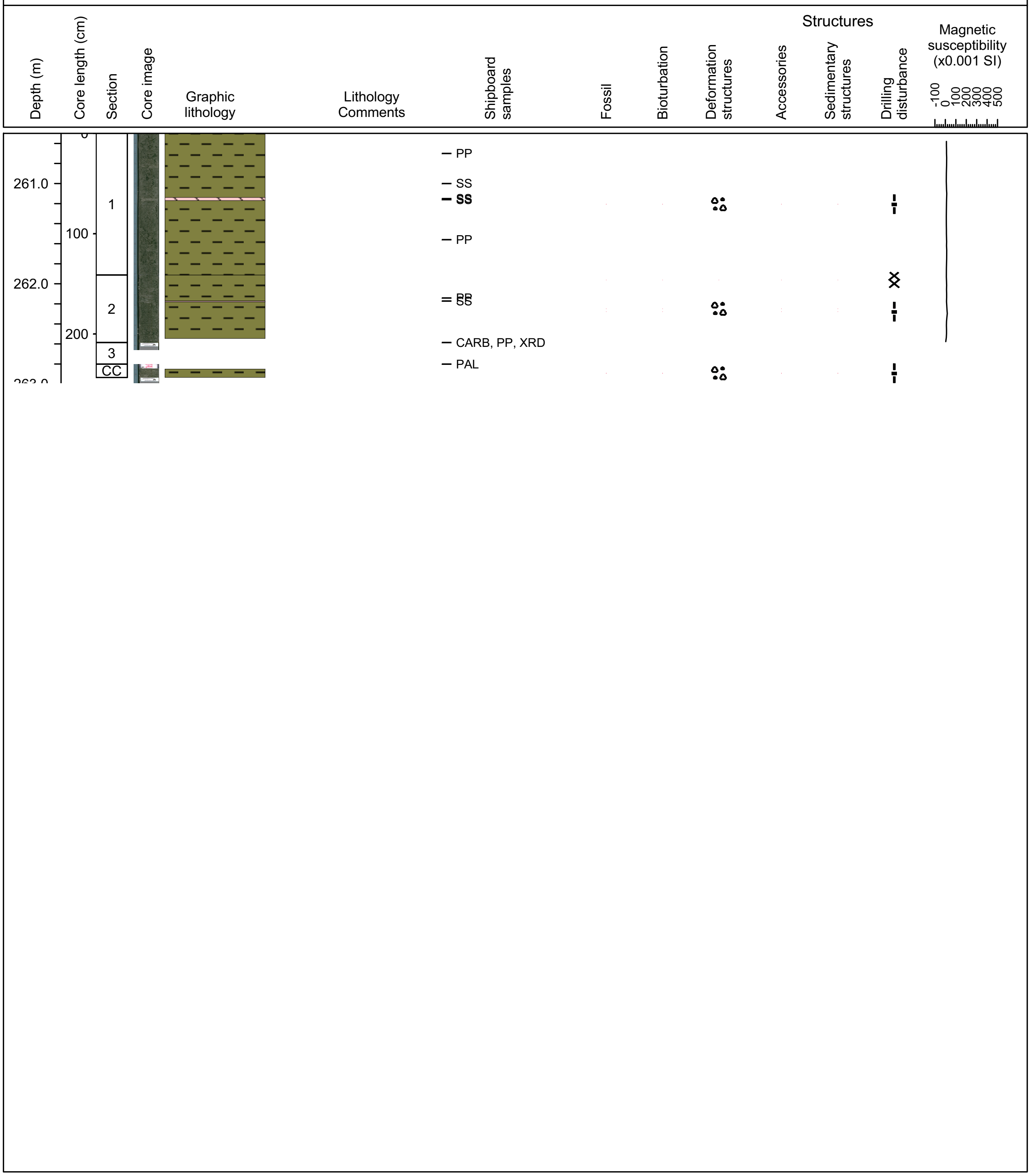
SILTY CLAY
Major lithology: Dark greenish gray silty clay; homogeneous.



Core Photo

Hole C0004D Core 26R, interval 260.5-262.934 m (core depth below seafloor)

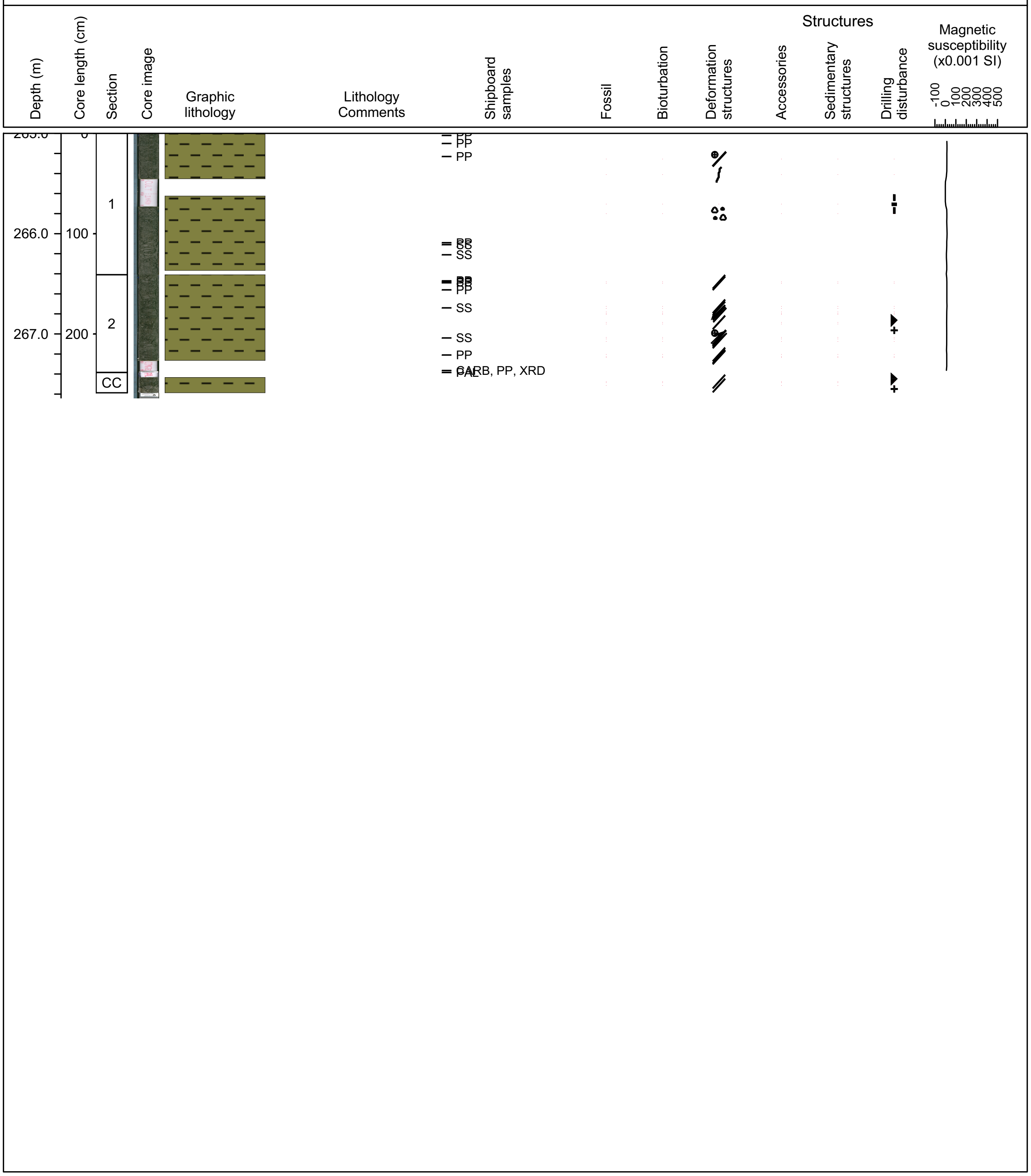
SILTY CLAY
Major lithology: Dark olive-gray silty clay; homogeneous.
Minor lithology: Volcanic ash in Section 1, 64-67 cm, Section 2, 26-27 cm.



Core Photo

Hole C0004D Core 27R, interval 265-267.587 m (core depth below seafloor)

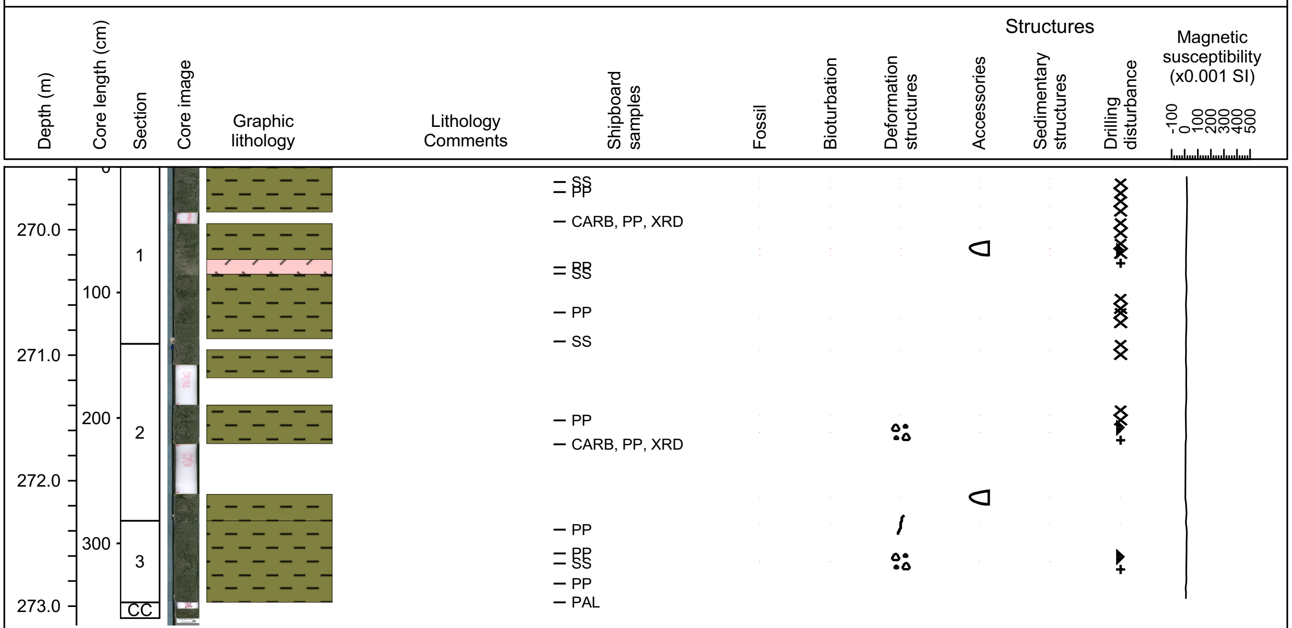
SILTY CLAY
Major lithology: Dark greenish gray silty clay; homogeneous; some local concentrations of dispersed ash.



Core Photo

Hole C0004D Core 28R, interval 269.5-273.095 m (core depth below seafloor)

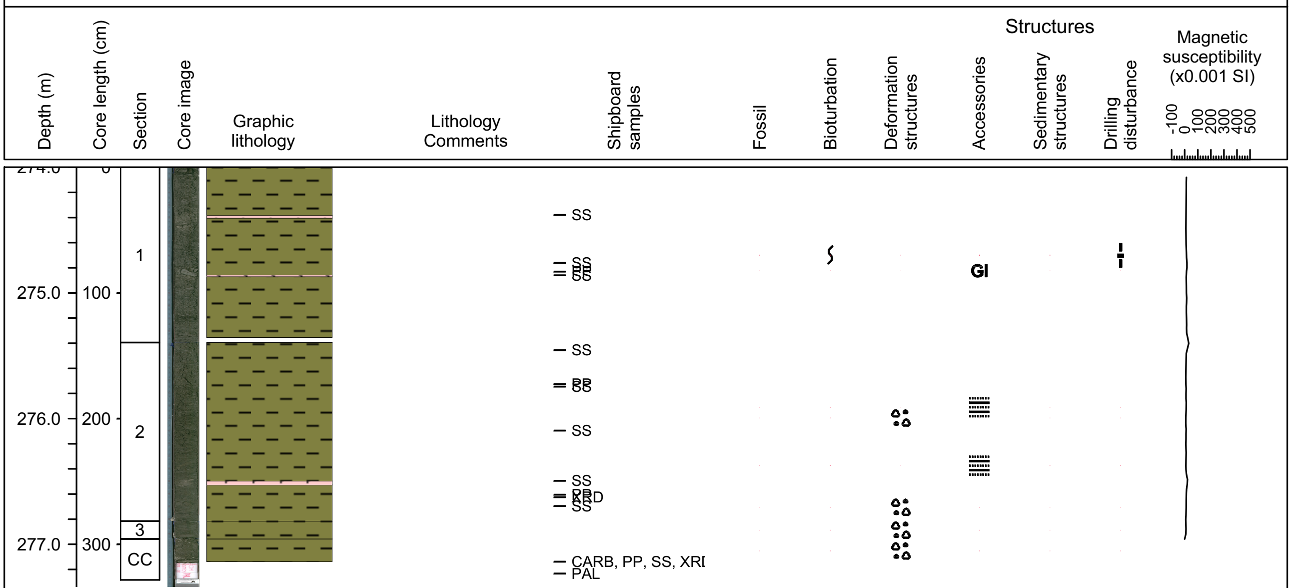
SILTY CLAY
Major lithology: Dark greenish gray silty clay; homogeneous; dispersed ash throughout.
Minor lithology: Light olive gray layer, Section 1, 74-84 cm contains 40% volcanic glass with 10% nanofossils.



Core Photo

Hole C0004D Core 29R, interval 274-277.283 m (core depth below seafloor)

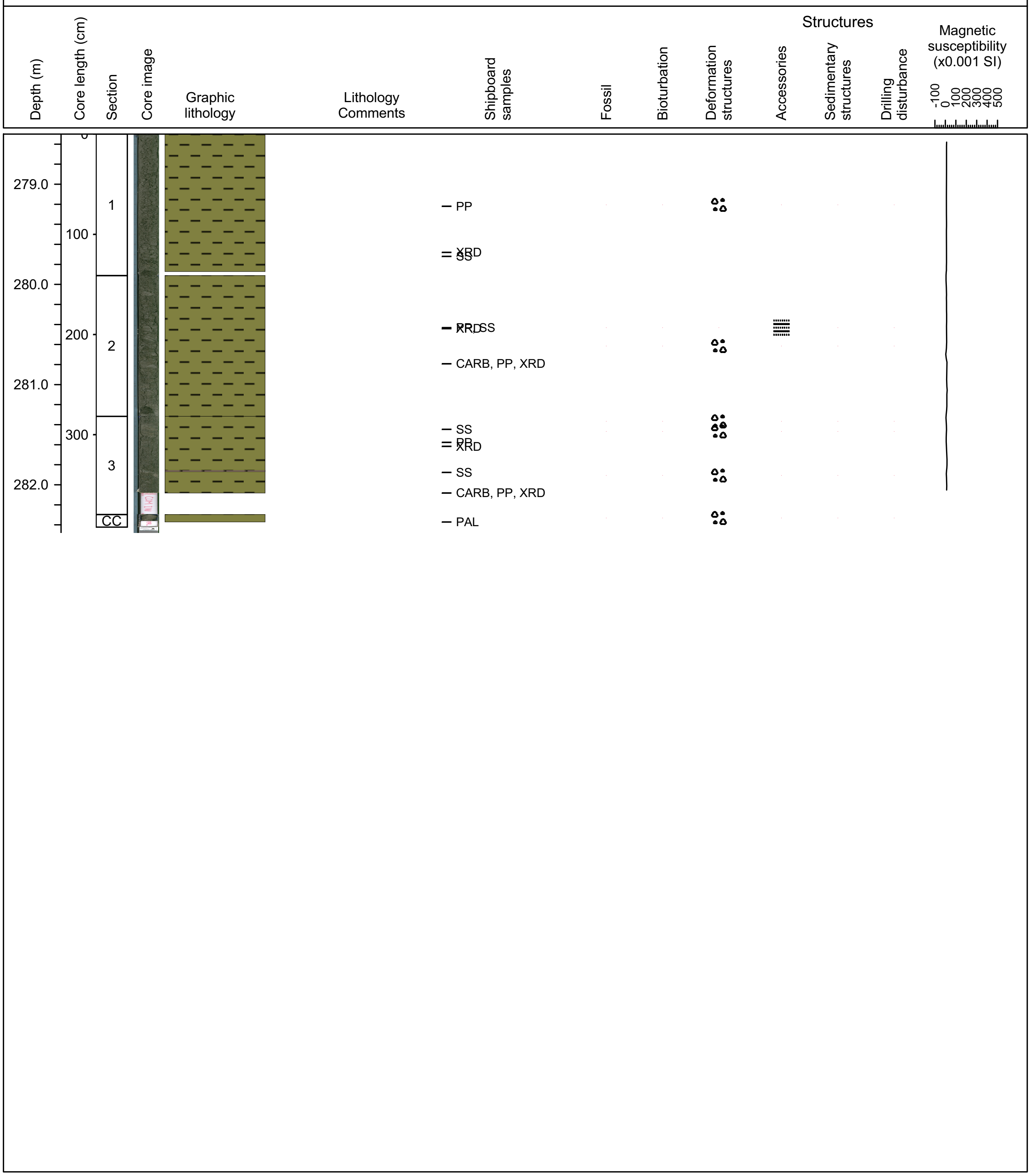
SILTY CLAY
Major lithology: Dark greenish gray silty clay; homogeneous; small black specks (probably pyrite, e.g., Section 1, 81-86 cm).
Minor lithology: Volcanic ash.



Core Photo

Hole C0004D Core 30R, interval 278.5-282.422 m (core depth below seafloor)

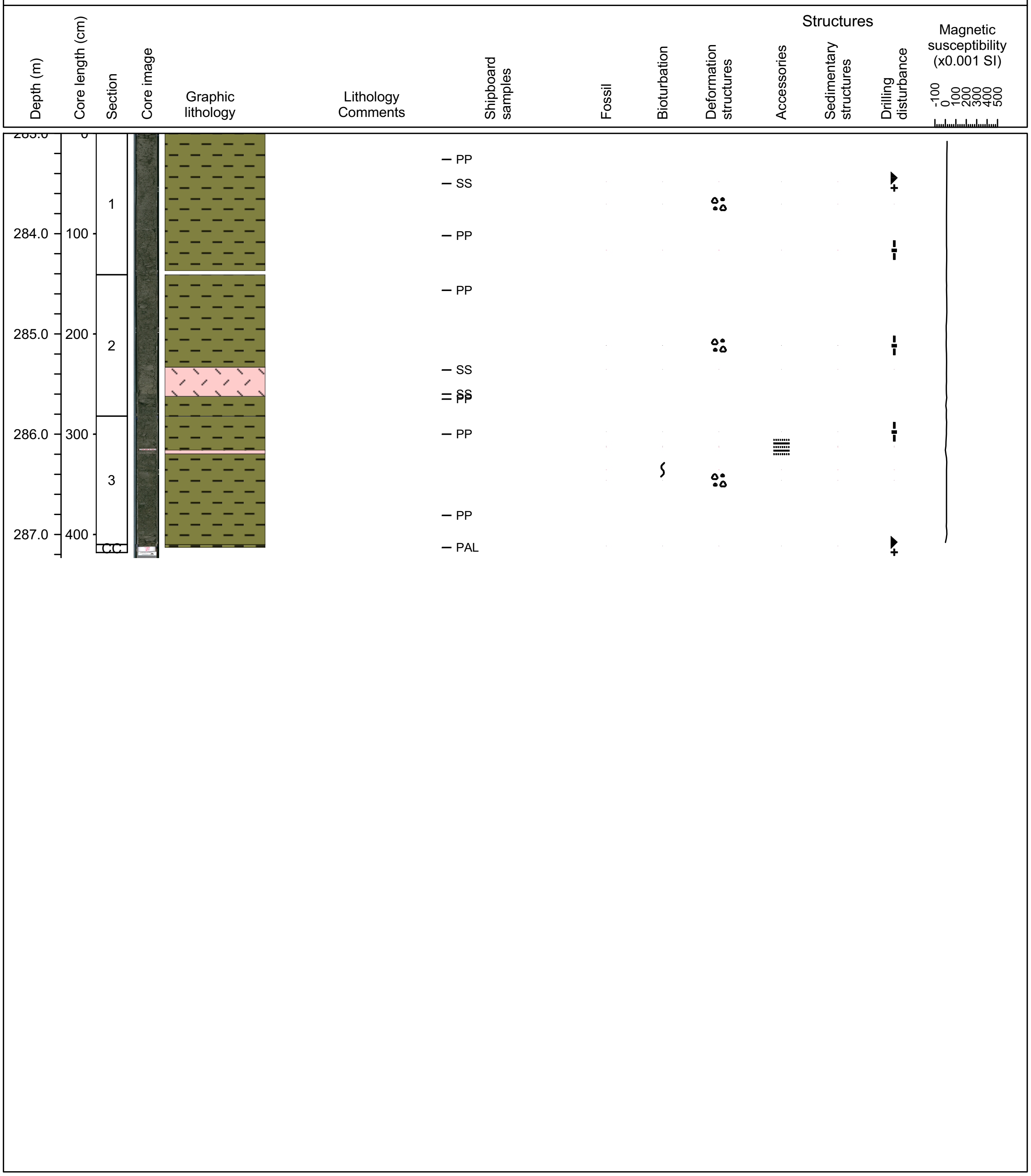
SILTY CLAY
Major lithology: Brecciated greenish-gray silty clay. Core is entirely fault breccia with possible gouge zones.
Minor lithology: Discontinuous greenish volcanic ash at 54 to 55 cm.



Core Photo

Hole C0004D Core 31R, interval 283-287.18 m (core depth below seafloor)

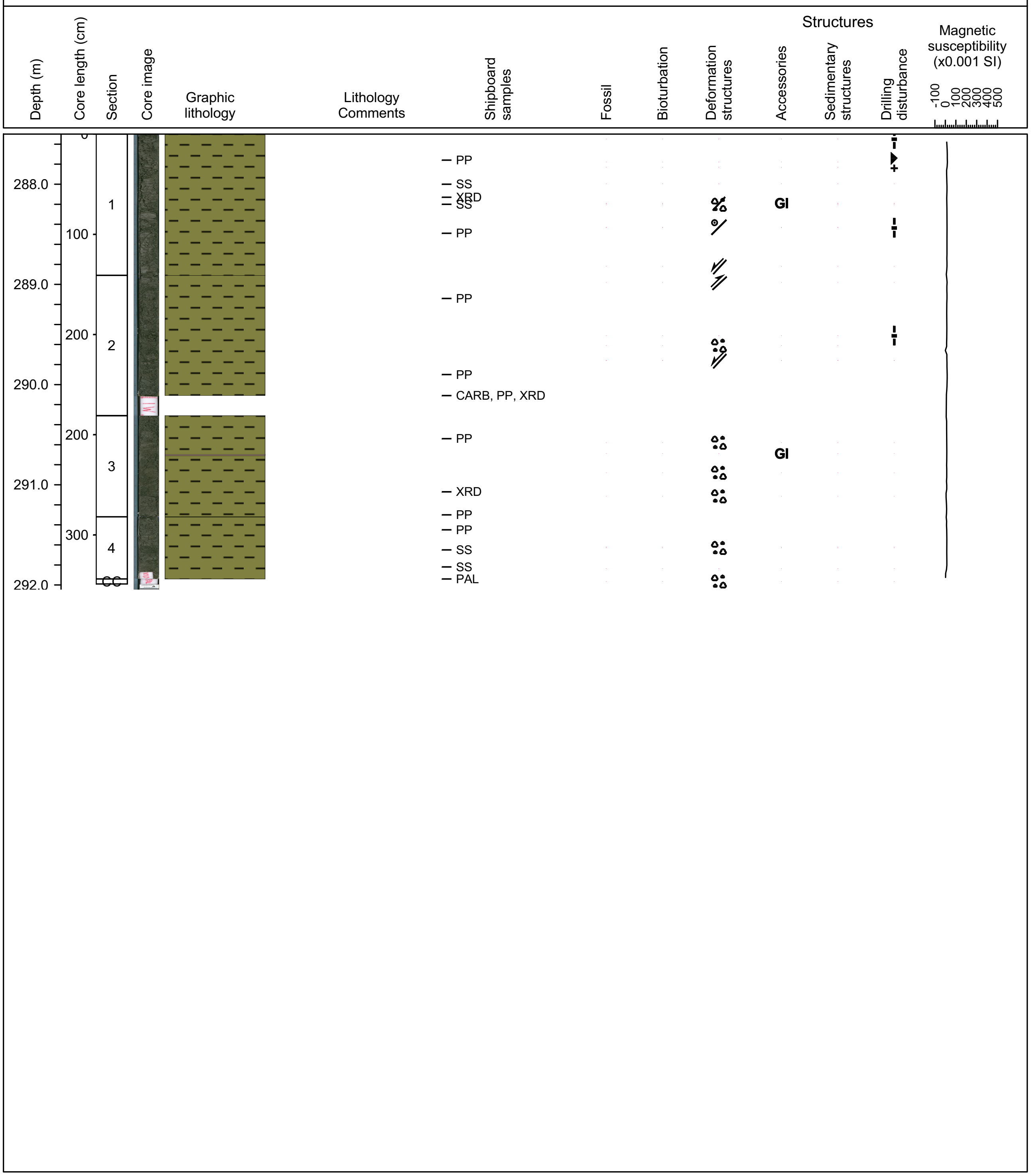
SILTY CLAY
Major lithology: Heavily brecciated silty clay, probably fault breccia. Patchy color throughout from olive-gray to dark greenish gray. Green color banding is apparent in places, associated with ash beds.
Minor lithology: Silty clay in Section 2, 94 to 110 cm is lighter in color than rest of section and contains an elevated volcanic glass component. Black patch at top of main ash bed at 11 cm.



Core Photo

Hole C0004D Core 32R, interval 287.5-291.99 m (core depth below seafloor)

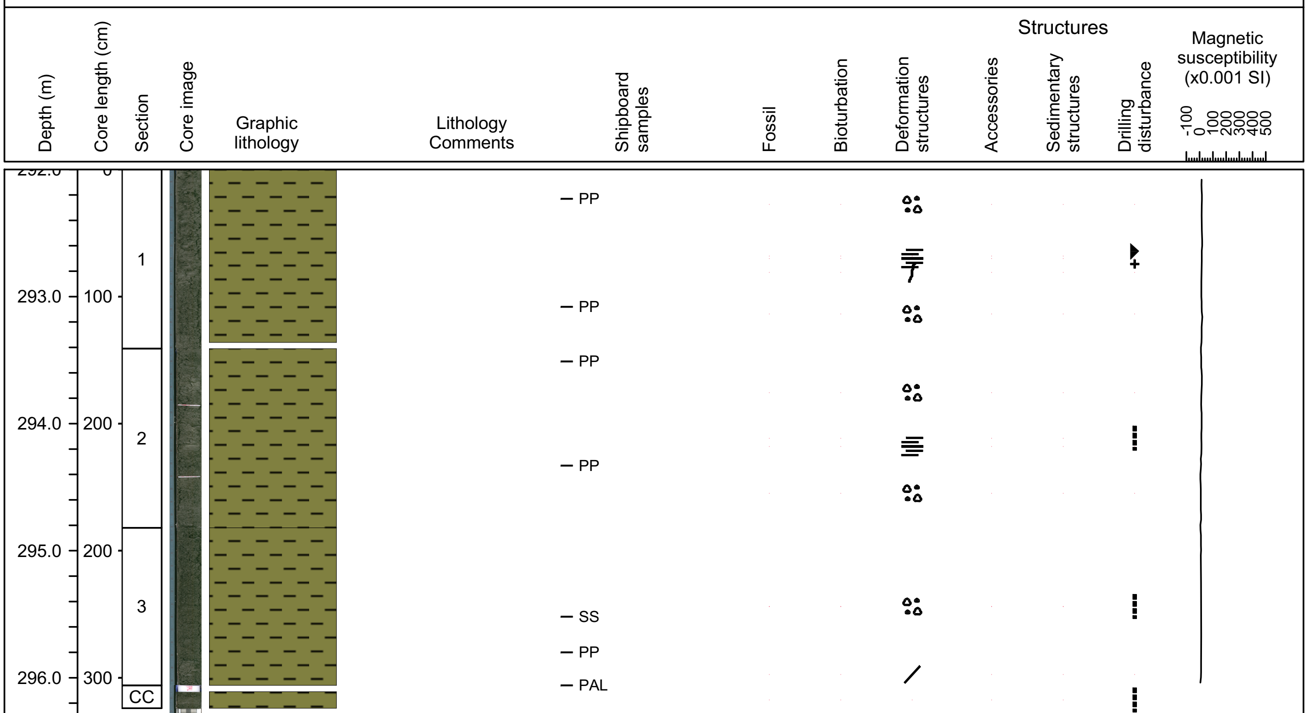
SILTY CLAY
Major lithology: Dark greenish gray silty clay. Green patches (possibly glauconitic) from Section 2, 92 cm to the base of the core.



Core Photo

Hole C0004D Core 33R, interval 292-296.24 m (core depth below seafloor)

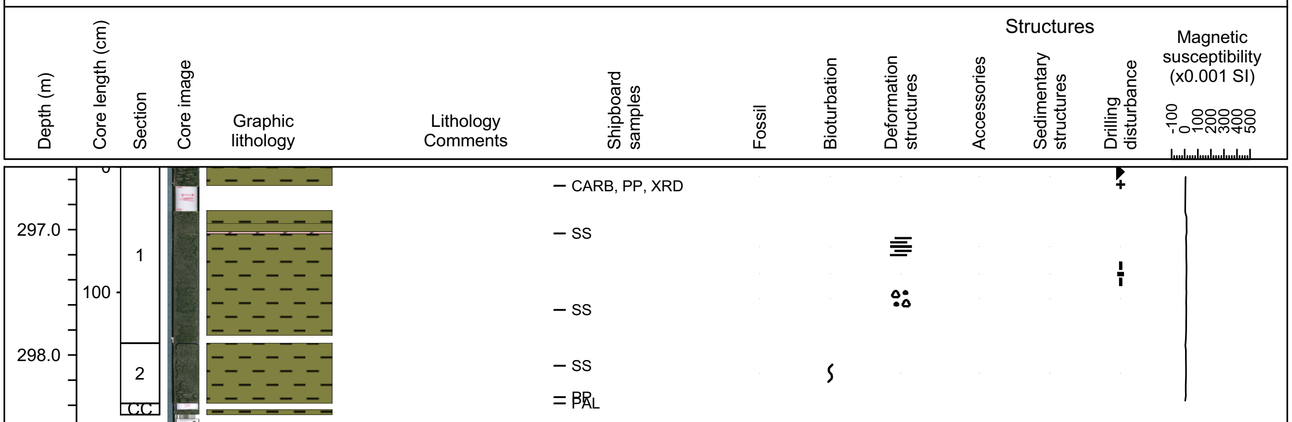
SILTY CLAY
Major lithology: Dark olive greenish gray silty clay; glauconite grains throughout, as well as green patches which are possibly glauconitic. Generally brecciated throughout. Small ash clast Section 2, 99 cm.



Core Photo

Hole C0004D Core 34R, interval 296.5-298.475 m (core depth below seafloor)

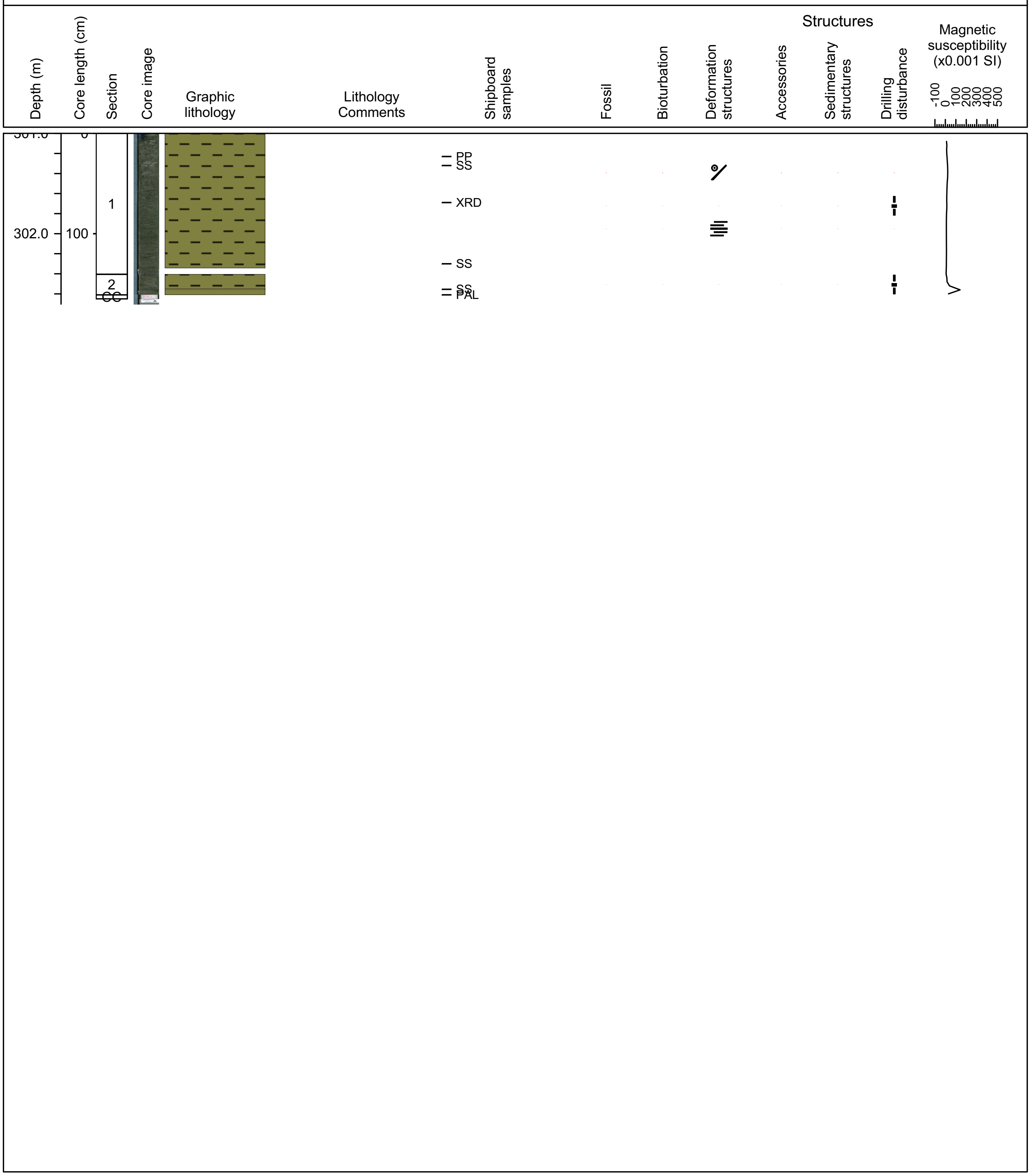
SILTY CLAY
Major lithology: Dark greenish gray silty clay; generally brecciated throughout; patches of greenish color throughout but dominant at Section 1, 62, 89, 102, and 110-140 cm.



Core Photo

Hole C0004D Core 35R, interval 301-302.65 m (core depth below seafloor)

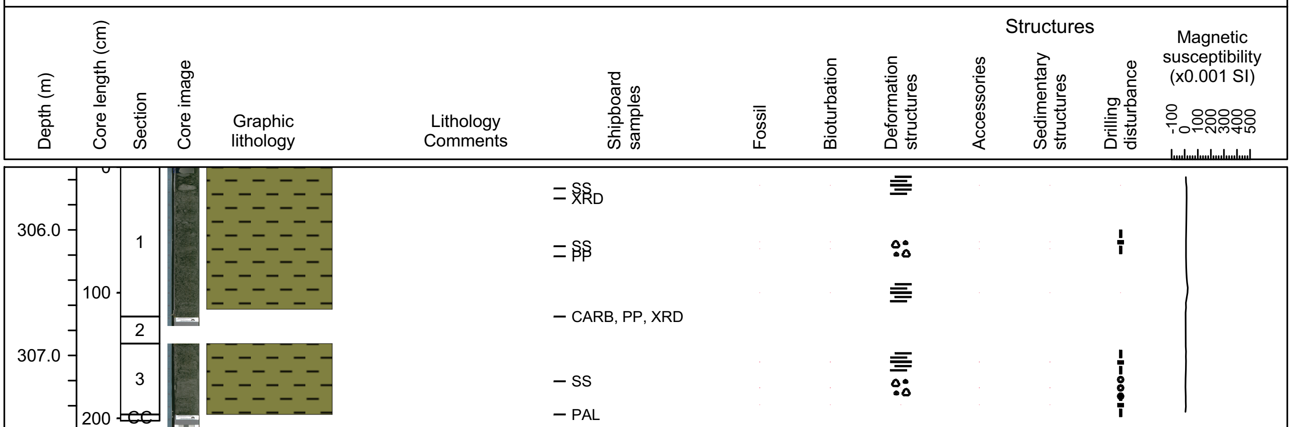
SILTY CLAY
Major lithology: Dark greenish gray silty clay; fractured into pieces of 0.5 to 1 cm. Intervals of more coherent pieces, e.g., Section 1, 28-33 and 39-41 cm, appear to be slightly coarser, however, smear slides shows the same lithology throughout. Slight change in color around Section 1, 130 cm from dark greenish to dark olive gray (dispersed ash?). Greenish mottling throughout (probably more glauconite).
Minor lithology: Basaltic ash at Section 1, 15 cm.



Core Photo

Hole C0004D Core 36R, interval 305.5-307.52 m (core depth below seafloor)

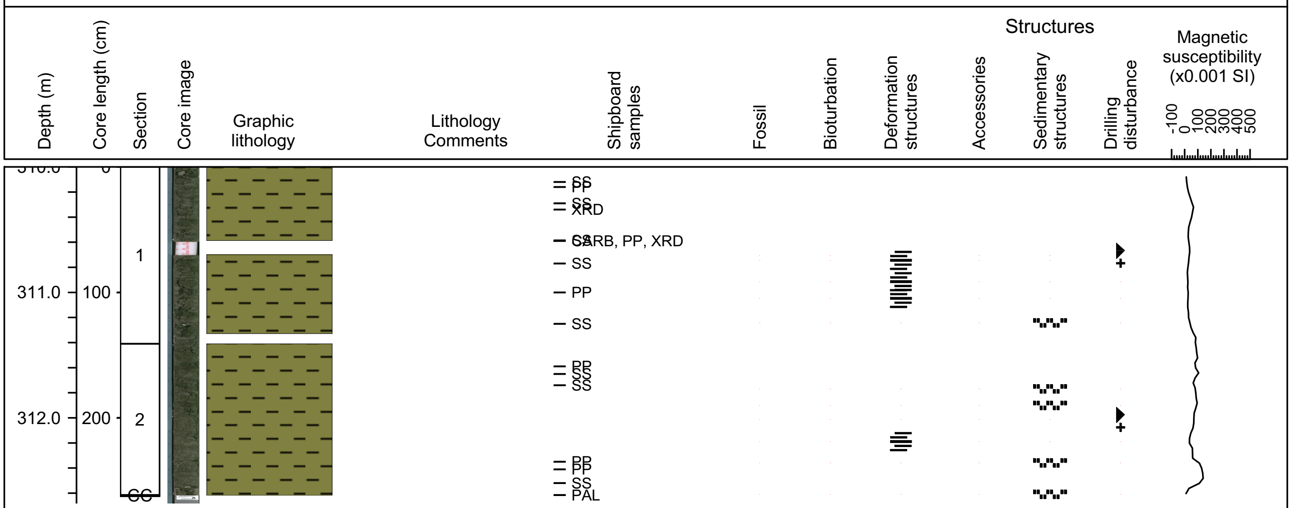
SILTY CLAY
Major lithology: Dark greenish gray silty clay; fractured in mostly small little pieces and chips; greenish areas (increased glauconite); dispersed ash Section 1, 65 cm; Soupy interval in Section 3, 30 and 40 cm.



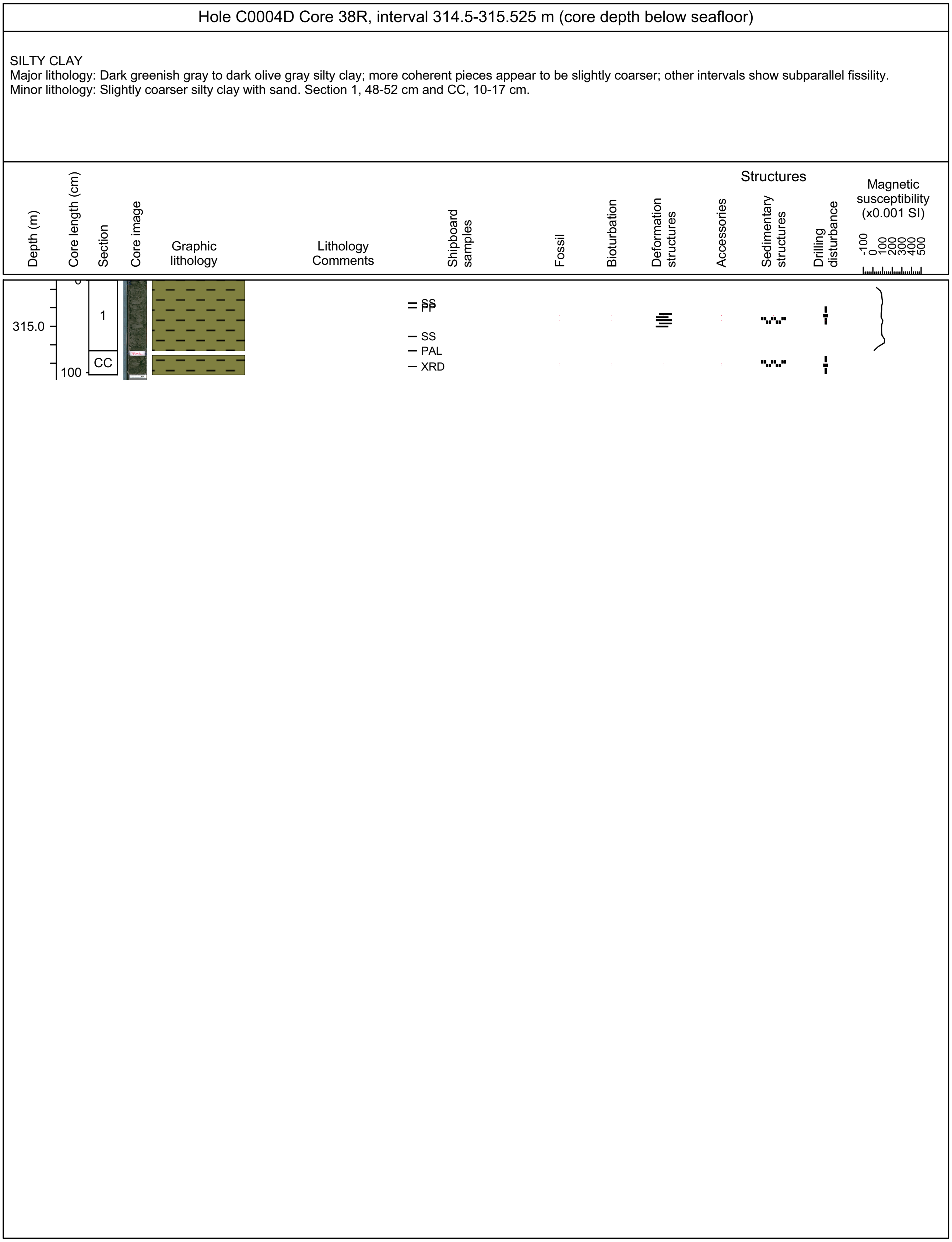
Core Photo

Hole C0004D Core 37R, interval 310-312.625 m (core depth below seafloor)

SILTY CLAY
Major lithology: Dark olive gray silty clay; homogeneous; mostly in small chips (subhorizontal fissility). Slightly lighter, dark olive gray interval interval Section 2, 20 and 30 cm; pieces of more silty clay with sand in the lowermost part of the section.



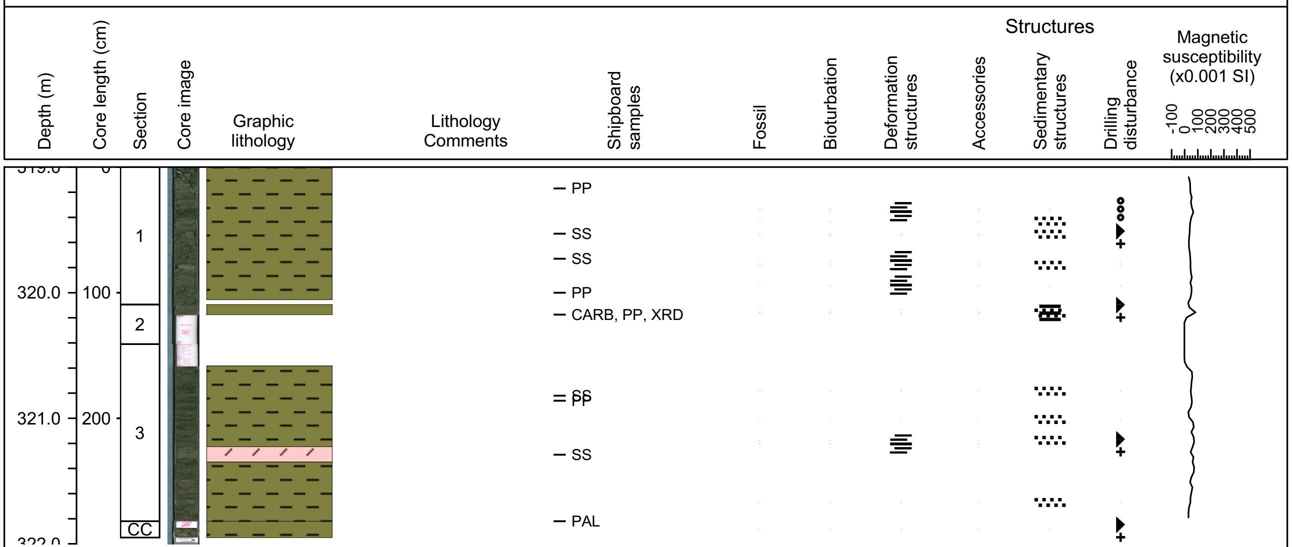
Core Photo


Hole C0004D Core 38R, interval 314.5-315.525 m (core depth below seafloor)
SILTY CLAY
Major lithology: Dark greenish gray to dark olive gray silty clay; more coherent pieces appear to be slightly coarser; other intervals show subparallel fissility.
Minor lithology: Slightly coarser silty clay with sand. Section 1, 48-52 cm and CC, 10-17 cm.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Lithology Comments
Shipboard samples
Fossil
Bioturbation
Deformation structures
Accessories
Sedimentary structures
Drilling disturbance
Structures
Magnetic susceptibility (x0.001 SI)
-100 0 100 200 300 400 500
315.0
0
100
1
CC
SS
PP
SS
PAL
XRD

Core Photo

Hole C0004D Core 39R, interval 319-321.95 m (core depth below seafloor)

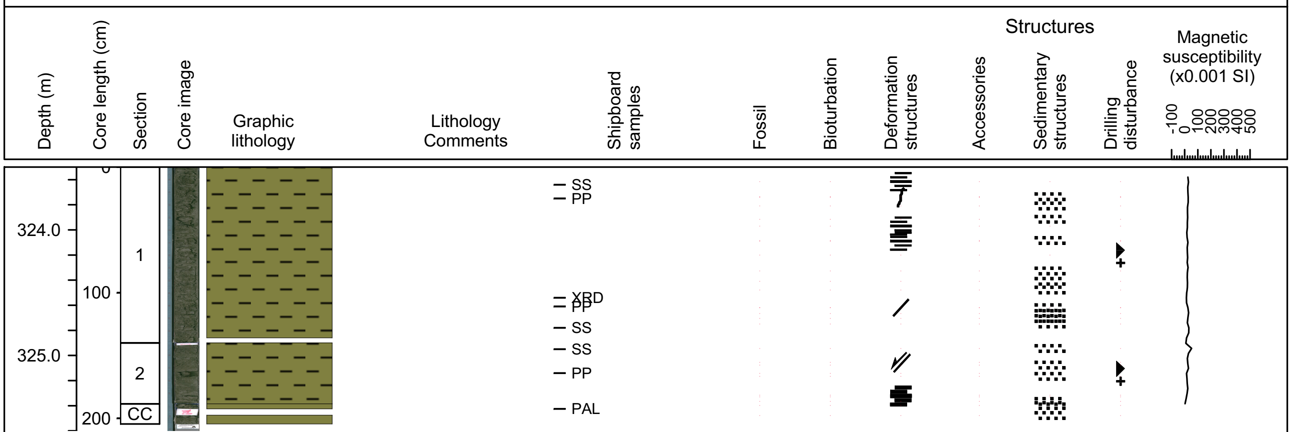
SILTY CLAY
Major lithology: Dark greenish gray silty clay
Minor lithology: Dispersed ash Section 3, 107 and 113 cm (slightly lighter color)



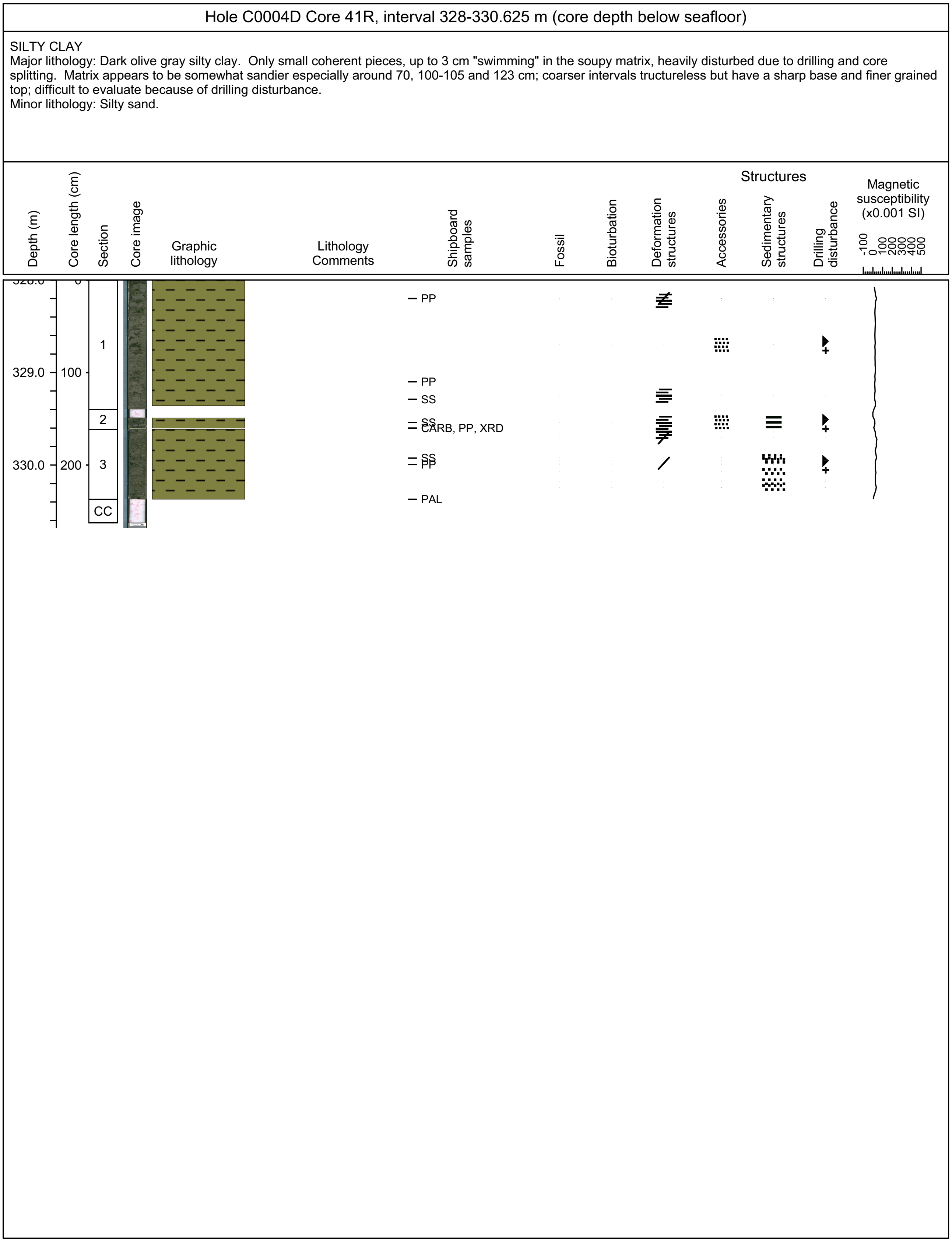
Core Photo

Hole C0004D Core 40R, interval 323.5-325.545 m (core depth below seafloor)

SILTY CLAY
Major lithology: Dark olive gray silty clay; structureless contains intervals of silty clay with sand, and sandy silt.
Minor lithology: Sandy silt; slightly darker.



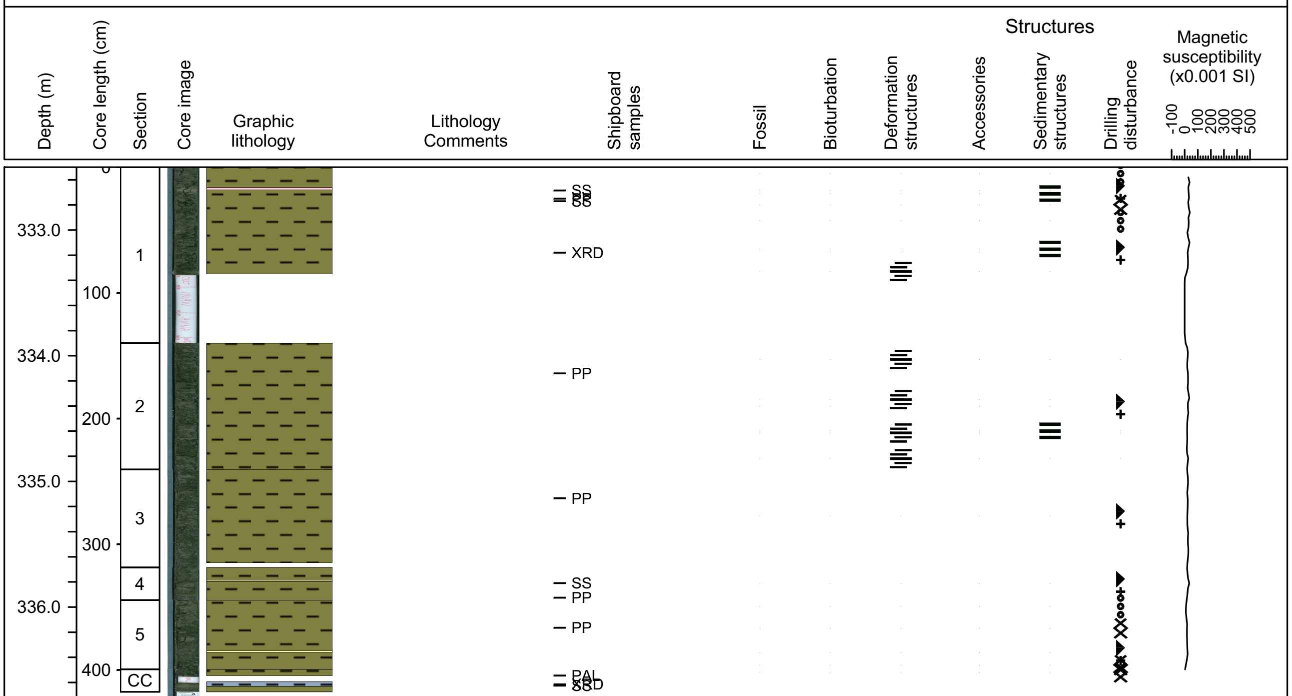
Core Photo


Hole C0004D Core 41R, interval 328-330.625 m (core depth below seafloor)
SILTY CLAY
Major lithology: Dark olive gray silty clay. Only small coherent pieces, up to 3 cm "swimming" in the soupy matrix, heavily disturbed due to drilling and core splitting. Matrix appears to be somewhat sandier especially around 70, 100-105 and 123 cm; coarser intervals tructureless but have a sharp base and finer grained top; difficult to evaluate because of drilling disturbance.
Minor lithology: Silty sand.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Lithology Comments
Shipboard samples
Fossil
Bioturbation
Structures
Deformation structures
Accessories
Sedimentary structures
Drilling disturbance
Magnetic susceptibility (x0.001 SI)
-100 0 100 200 300 400 500
329.0
330.0
0
100
200
1
2
3
CC
PP
PP
SS
SS
CARB, PP, XRD
SS
PP
PAL

Core Photo

Hole C0004D Core 42R, interval 332.5-336.675 m (core depth below seafloor)

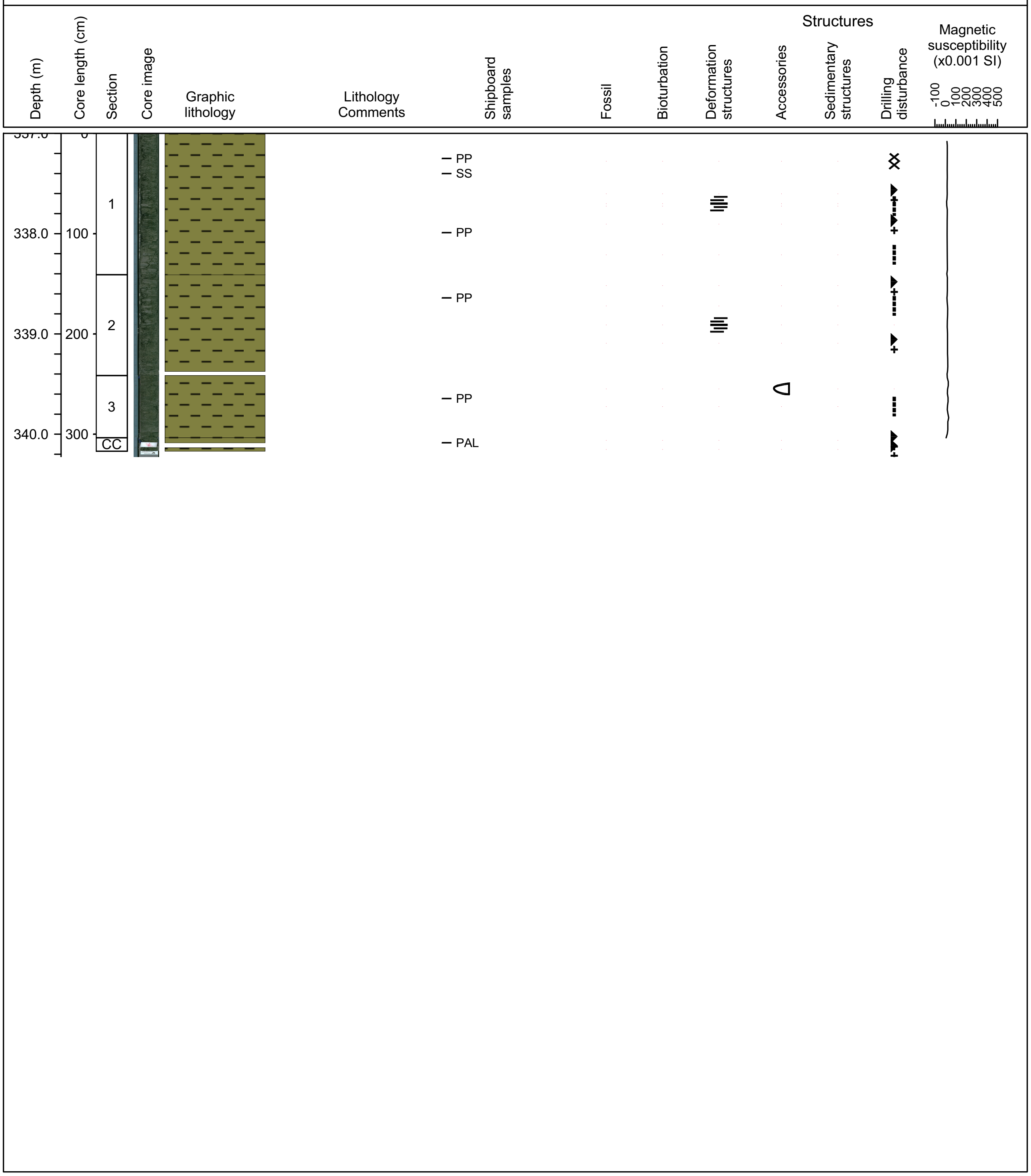
SILTY CLAY
Major lithology: Dark olive gray to black silty clay; partly brecciated by drilling but has clear fissility in places; 1 cm silty layer occurs at Section 4, 10.5 cm.
Minor lithology: Volcanic ash



Core Photo

Hole C0004D Core 43R, interval 337-340.17 m (core depth below seafloor)

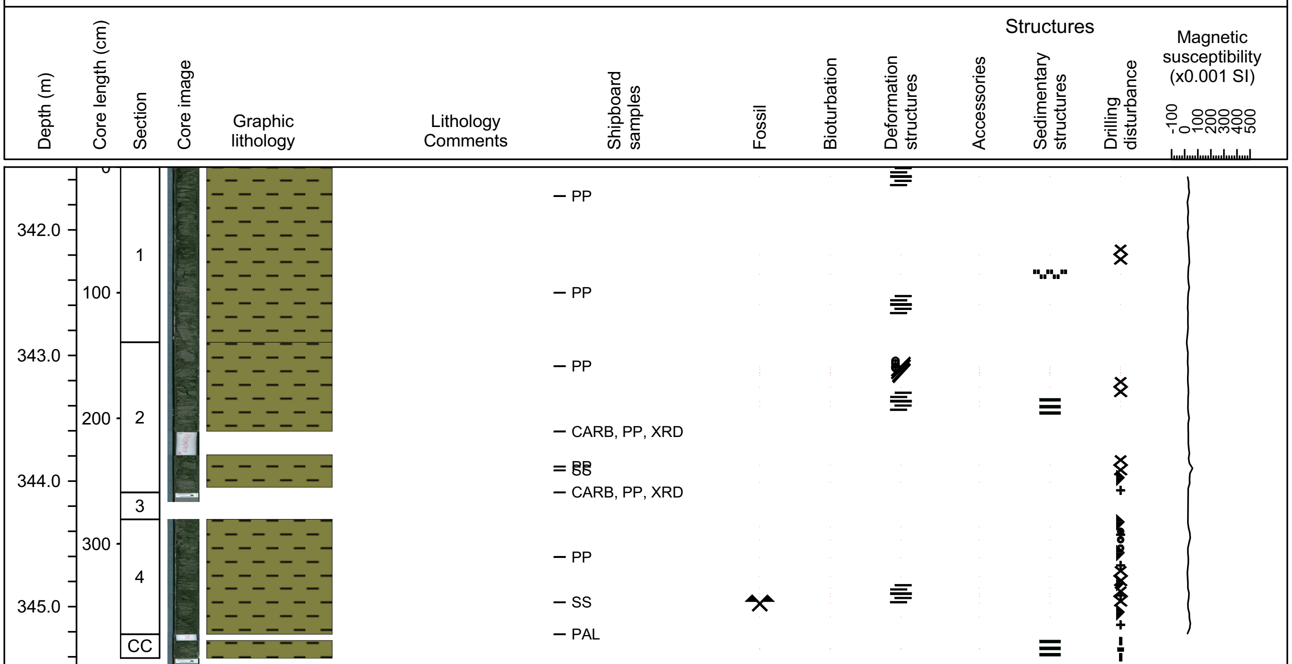
SILTY CLAY
Major lithology: Dark green-gray silty clay, fissility.
Minor lithology: Discontinuous sand lenses at Section 3, 12-14 cm.



Core Photo

Hole C0004D Core 44R, interval 341.5-345.41 m (core depth below seafloor)

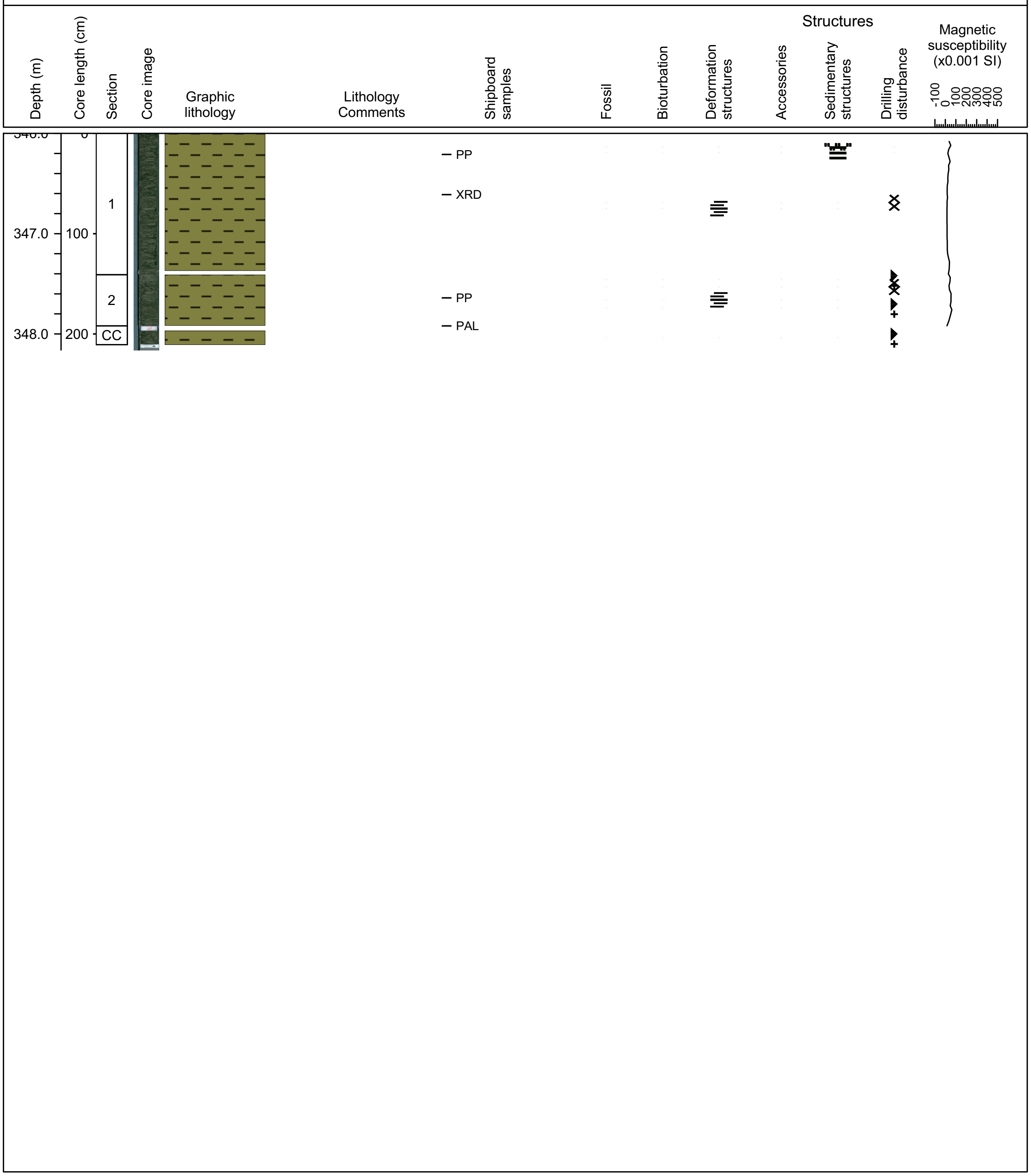
SILTY CLAY
Major lithology: Dark greenish gray silty clay; thin silt lamina at Section 1, 85 cm; Large (8 mm) sponge spicule pellet at Section 4, 66 cm.



Core Photo

Hole C0004D Core 45R, interval 346-348.107 m (core depth below seafloor)

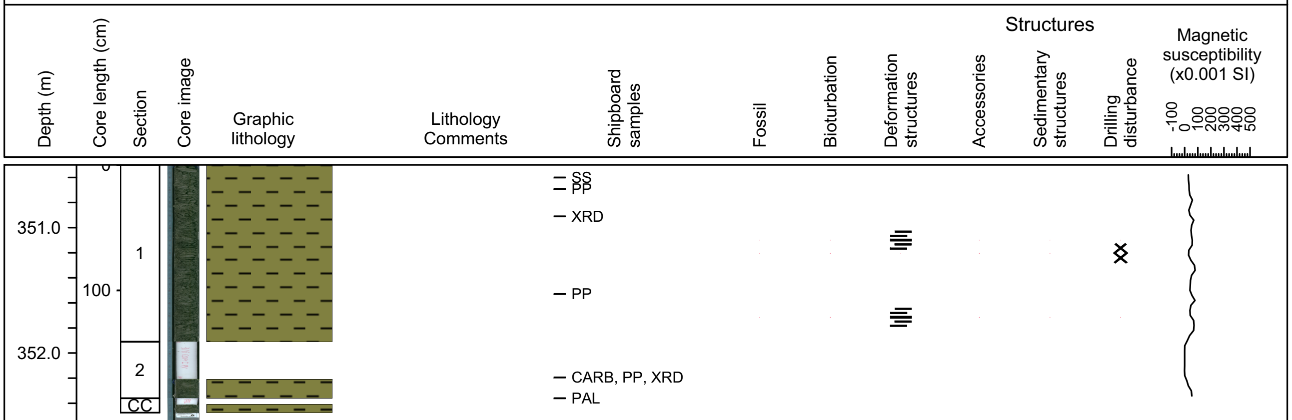
SILTY CLAY
Major lithology: Dark greenish gray silty clay:



Core Photo

Hole C0004D Core 46R, interval 350.5-352.475 m (core depth below seafloor)

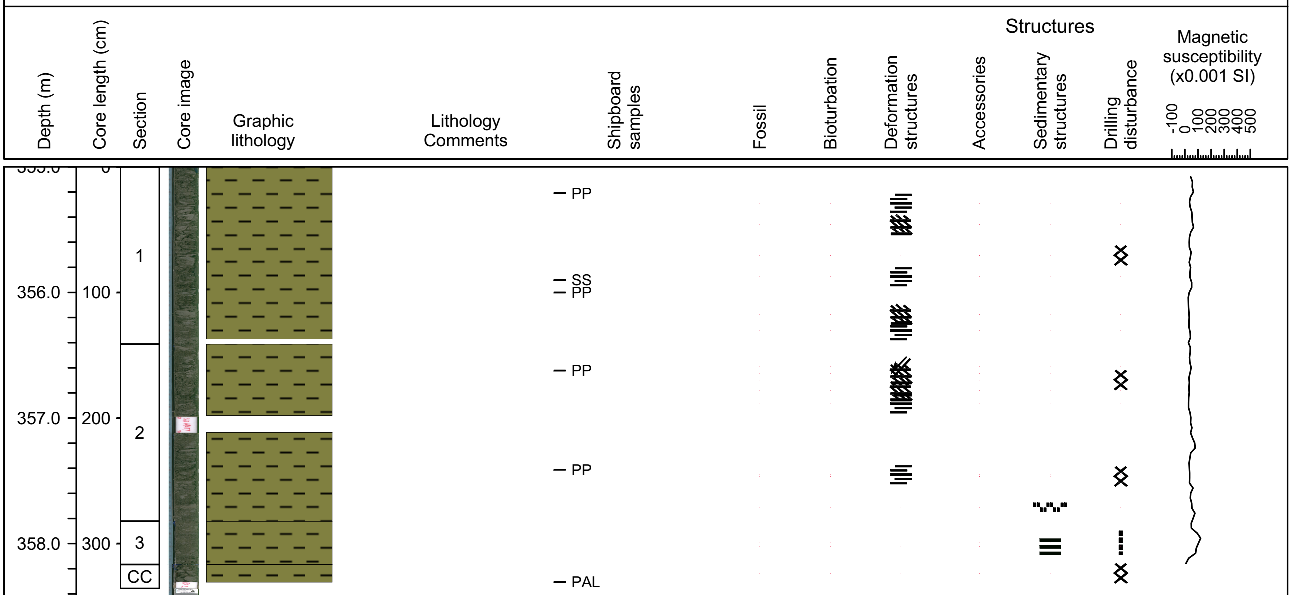
SILTY CLAY
Major lithology: Dark greenish gray silty clay



Core Photo

Hole C0004D Core 47R, interval 355-358.357 m (core depth below seafloor)

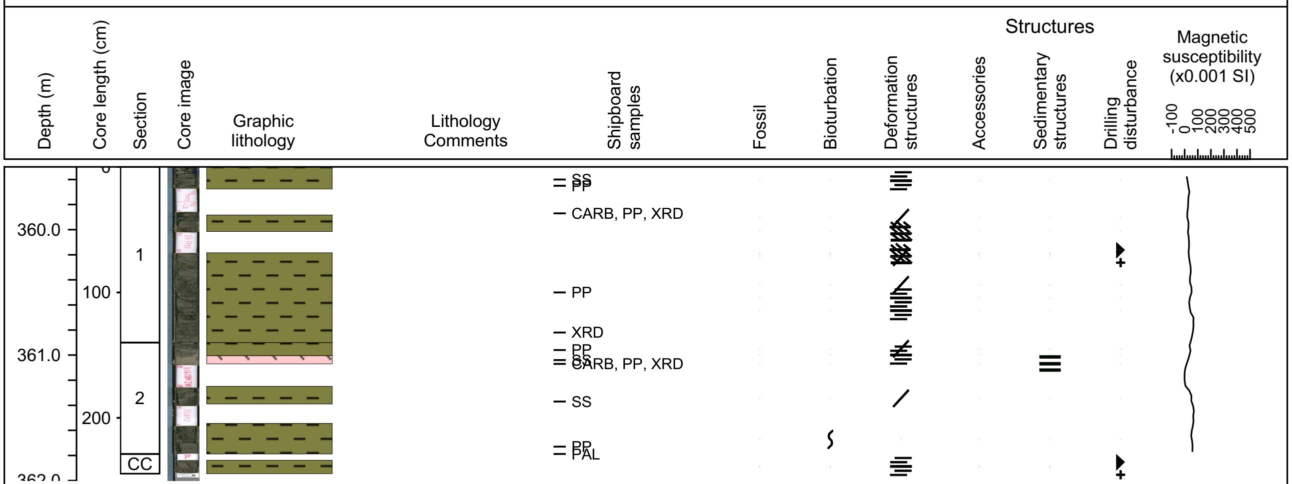
SILTY CLAY
Major lithology: Dark olive-gray silty clay, variably disturbed by drilling. At Section 1, 40 cm a sponge spicule aggregate around organic matter (8 mm long).



Core Photo

Hole C0004D Core 48R, interval 359.5-361.945 m (core depth below seafloor)

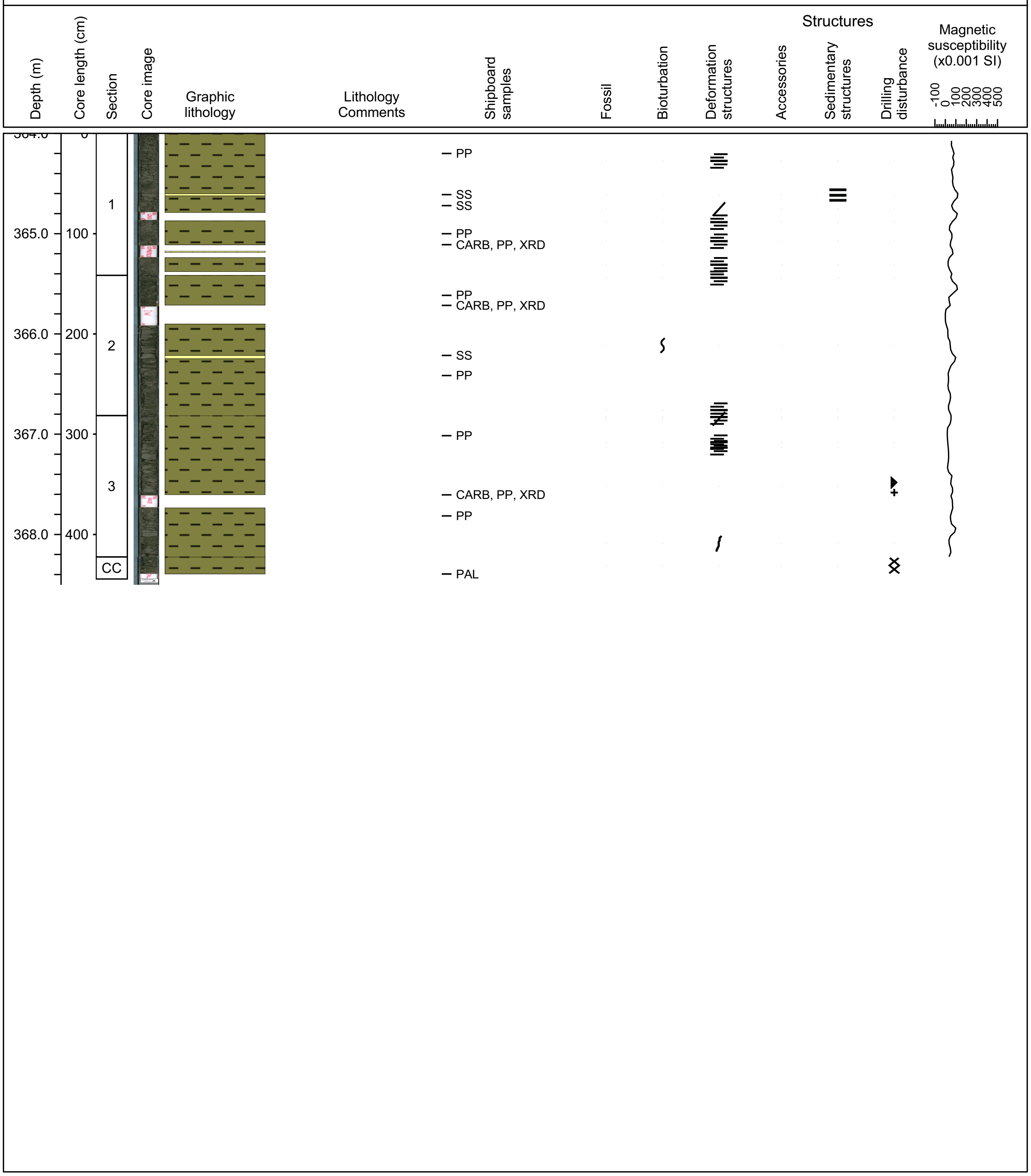
SILTY CLAY
Major lithology: Dark olive gray silty clay, variably disturbed by drilling; fractured pieces up to 5 cm thick and intervals of brecciated clay; more coherent pieces show subhorizontal fissility.



Core Photo

Hole C0004D Core 49R, interval 364-368.445 m (core depth below seafloor)

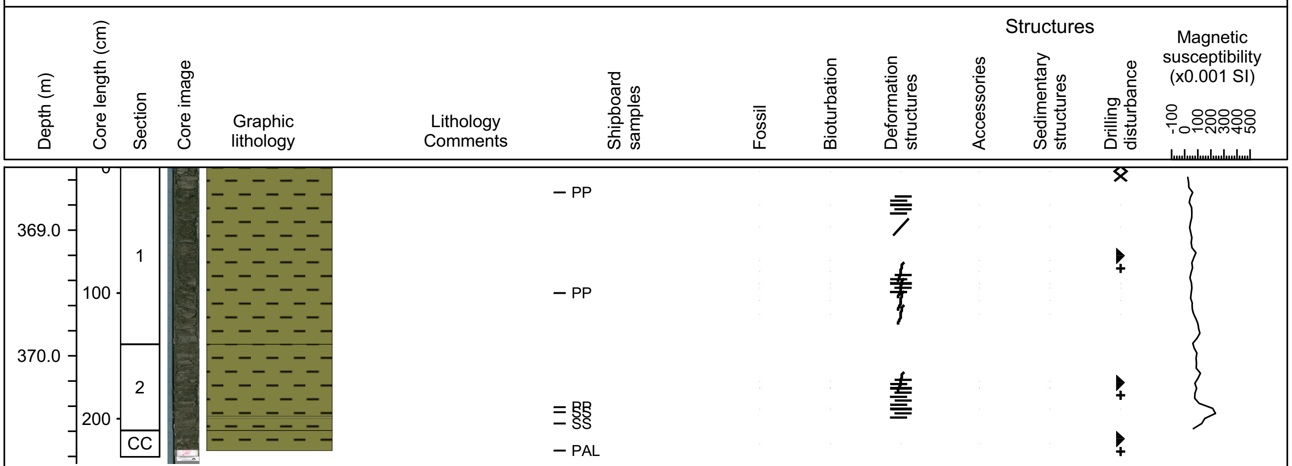
SILTY CLAY
Major lithology: Dark gray silty clay, generally structureless, locally fissile; minor bioturbation. Silty sand layers at Section 1, 60 to 63 cm. Mainly quartz and feldspar with only minor lithic fragments. Seen also in CT scan images as slightly brighter layer. Burrow filled with sponge spicules at Section 3, 135 cm.
Minor lithology: Intervals with more silt and fine sand at Section 3, 43, 80 and 111 cm.



Core Photo

Hole C0004D Core 50R, interval 368.5-370.803 m (core depth below seafloor)

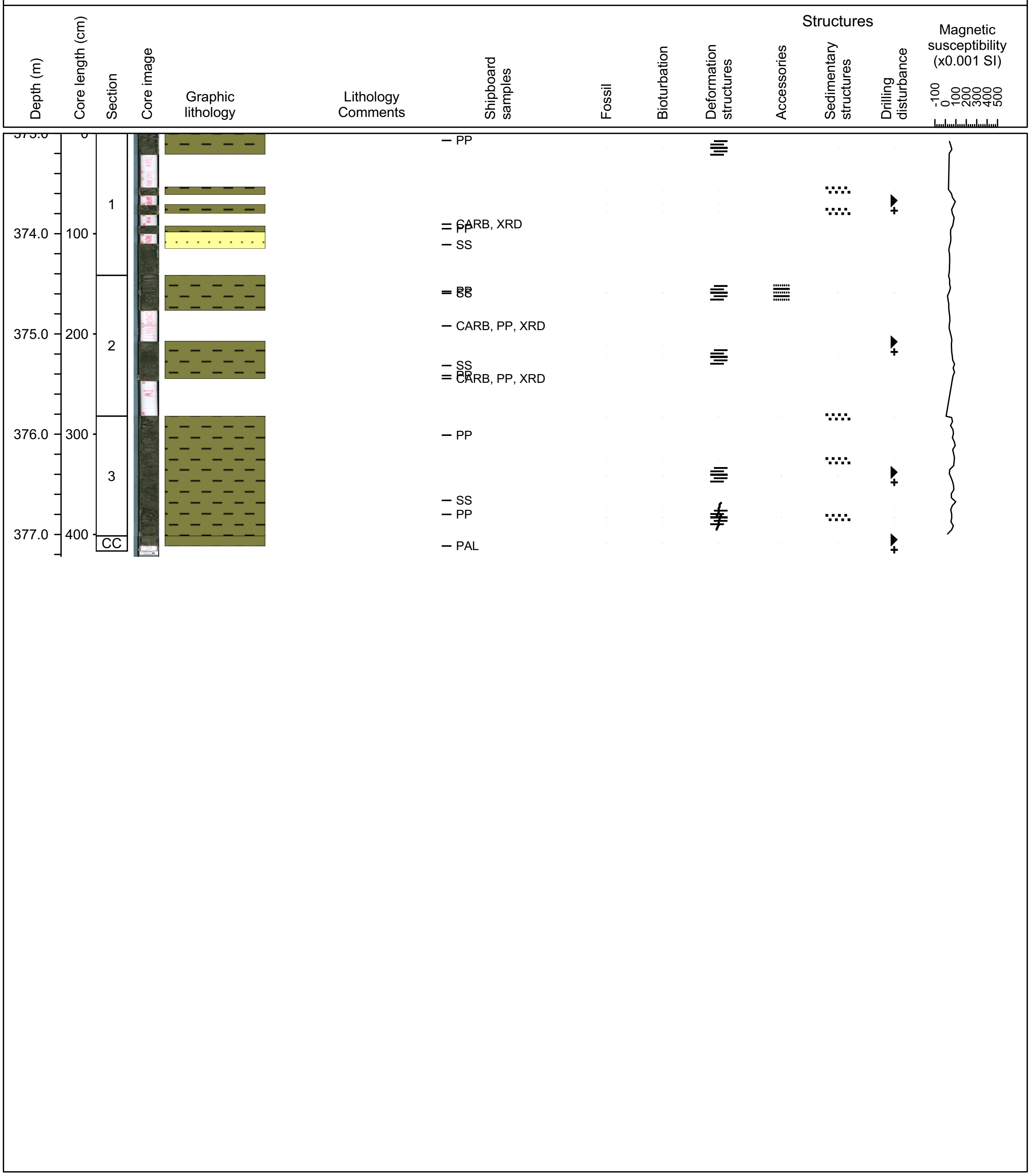
SILTY CLAY
Major lithology: Dark olive gray silty clay; structureless in coherent pieces but a subhorizontal fissility and minor bioturbation is observed in CT scan images. Smear slide analyses reveal greater abundances of volcanic material (glass shards and pumice fragments), increased dispersed ash.



Core Photo

Hole C0004D Core 51R, interval 373-377.165 m (core depth below seafloor)

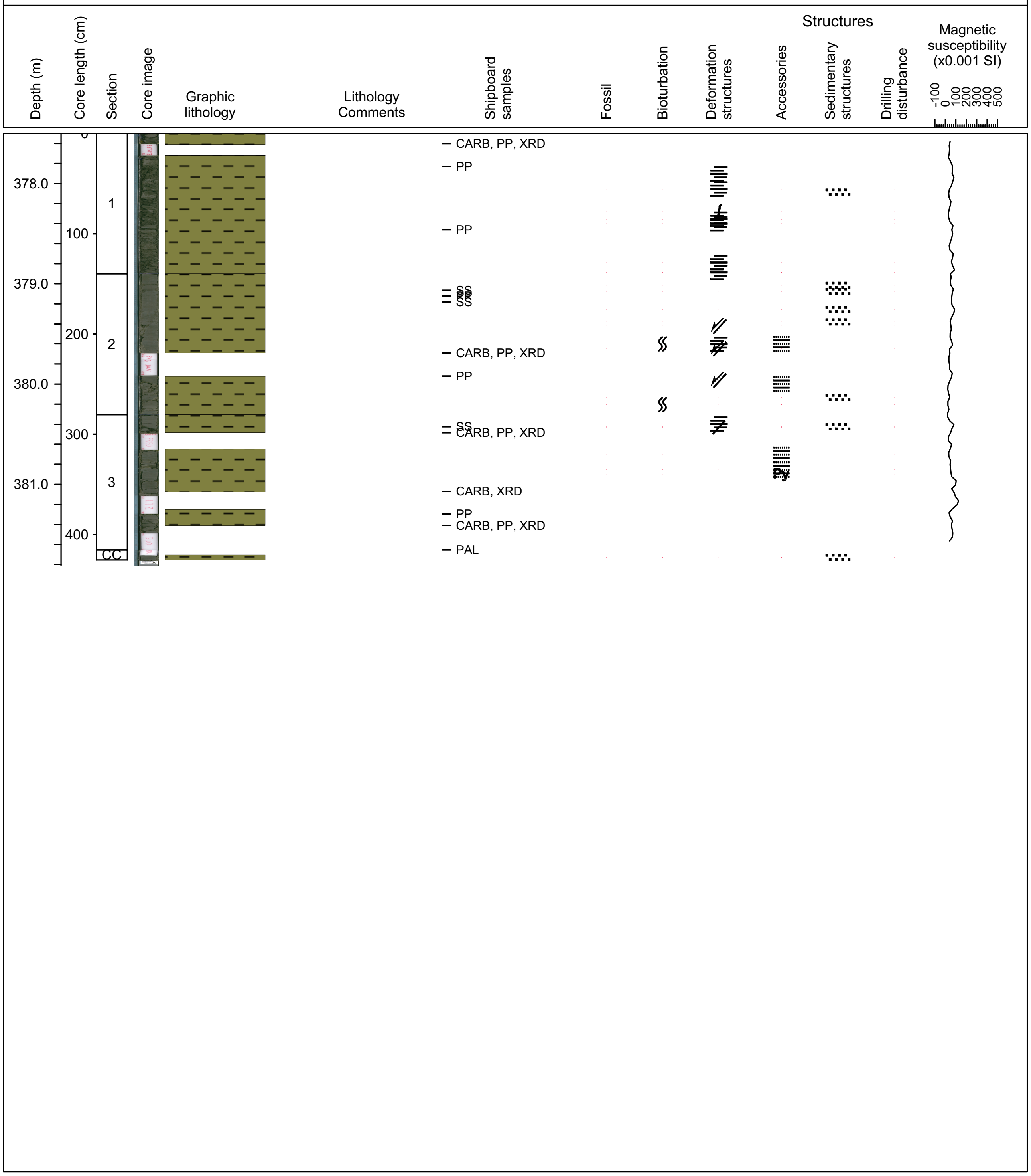
SILTY CLAY
Major lithology: Dark olive gray silty clay; minor bioturbation throughout (pyritized borrows occur as bright spots in CT scan images); locally fissile (especially in more coherent pieces).
Minor lithology: Sand interval Section 1, 99 and 113 cm clearly visible in CT image (more dense). Abundant foraminifera at the base of the sand layer.



Core Photo

Hole C0004D Core 52R, interval 377.5-381.755 m (core depth below seafloor)

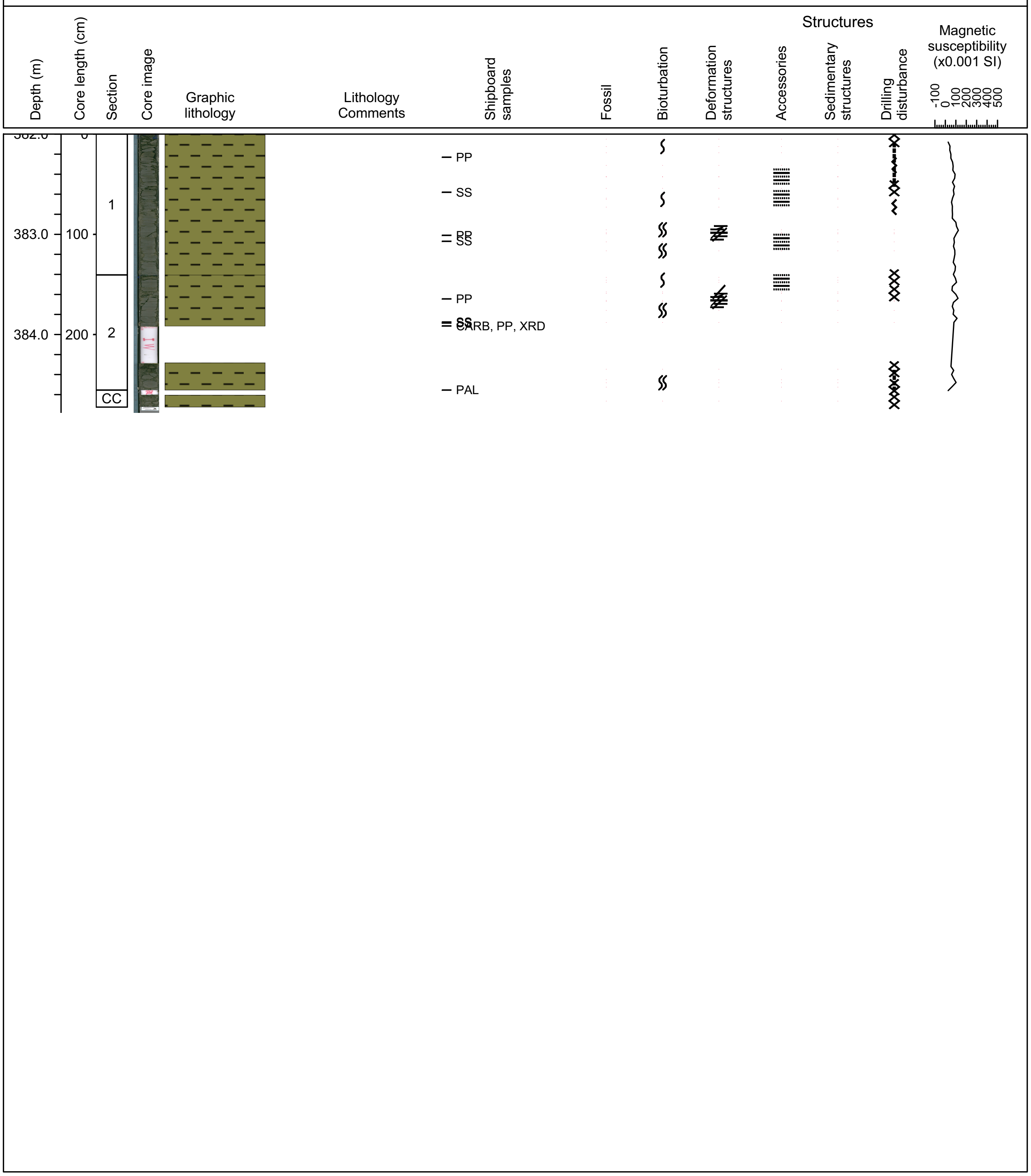
SILTY CLAY
Major lithology: Dark olive gray silty clay; parallel-laminated and fissile.
Minor lithology: Silty sand lamina at Section 1, 58 to 59 cm and Section 3, 11 to 13 cm; sponge spicule bundles at Section 3, 13 cm, 59 cm, and 73 cm.



Core Photo

Hole C0004D Core 53R, interval 382-384.725 m (core depth below seafloor)

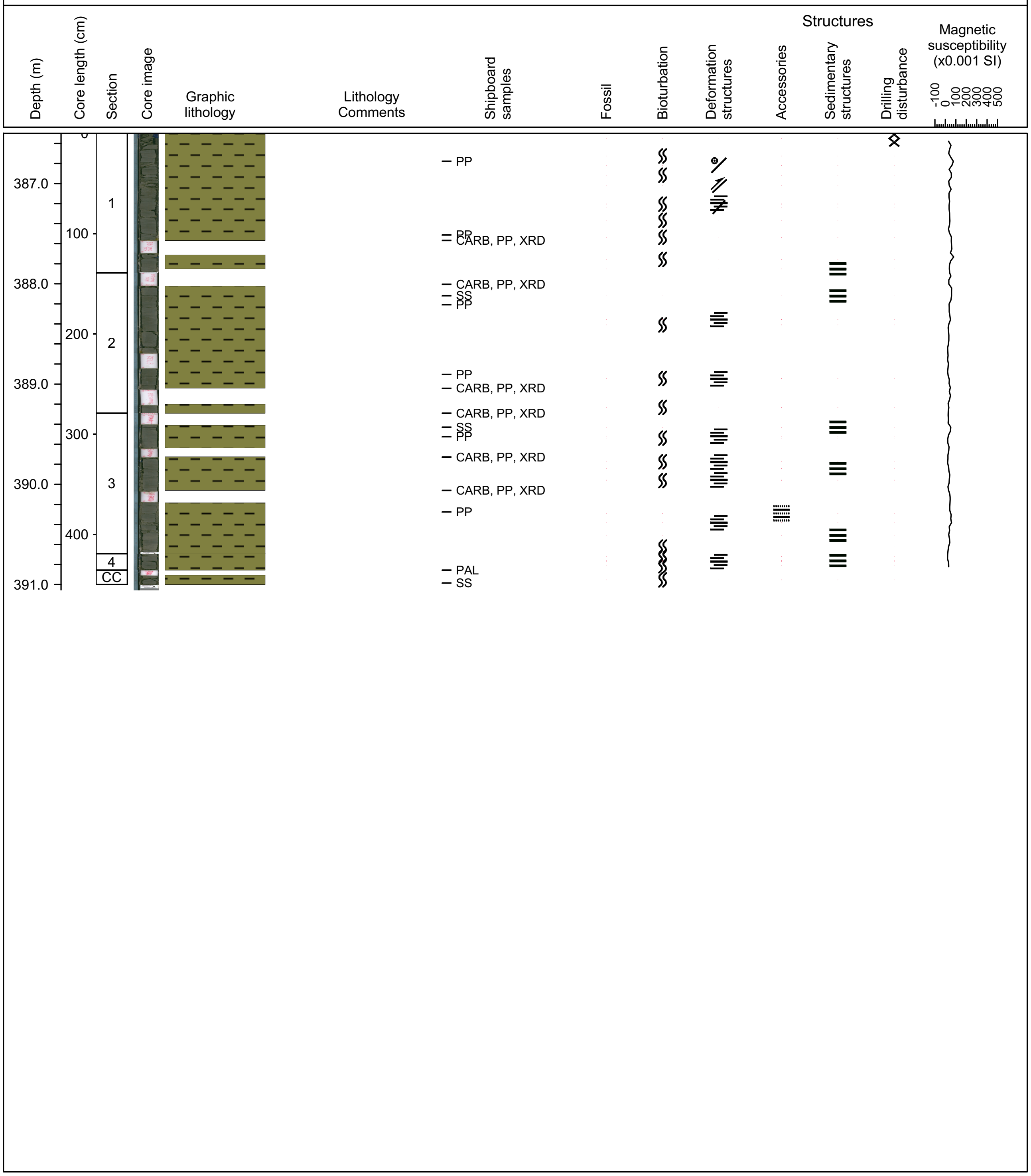
SILTY CLAY
Major lithology: Dark olive gray silty clay with color bands; Chondrites and locall fissility; lapilli balls at Section 2, 47 to 48 cm.



Core Photo

Hole C0004D Core 54R, interval 386.5-391 m (core depth below seafloor)

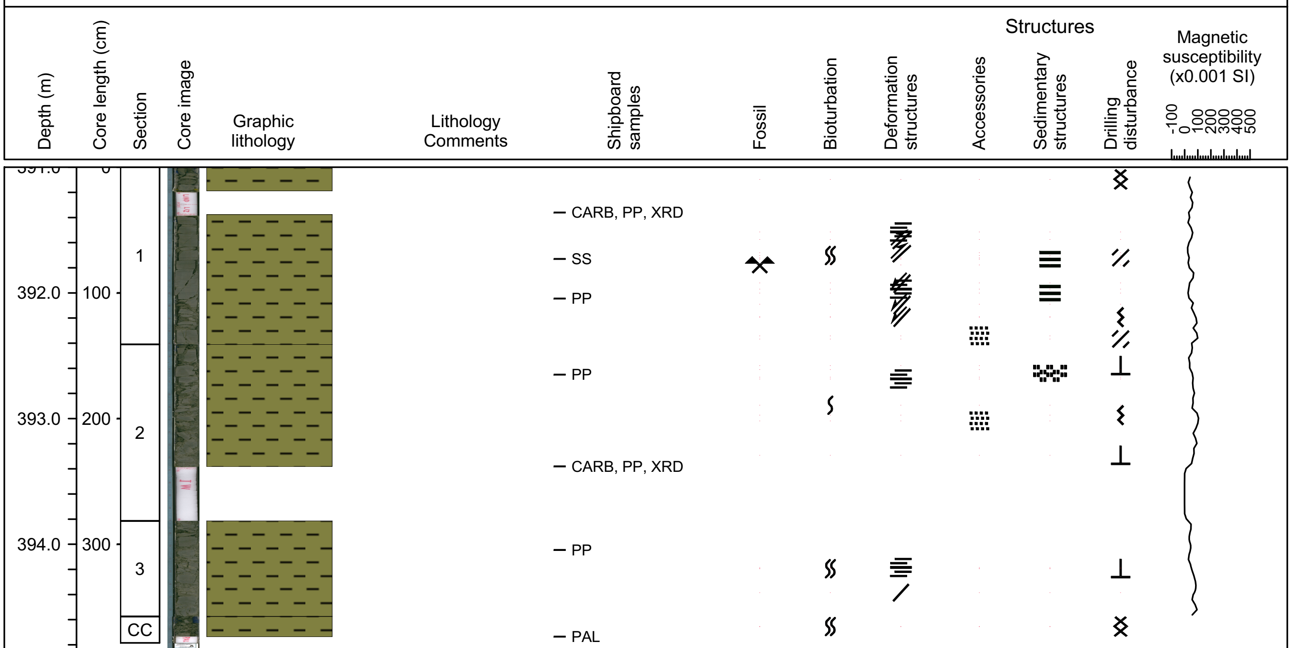
SILTY CLAY
Major lithology: Dark olive-gray silty clay with slightly to moderately bioturbated intervals with Zoophycos and Chondrites; vertical U-shaped burrow at Section 2, 24 to 29 cm.



Core Photo

Hole C0004D Core 55R, interval 391-394.785 m (core depth below seafloor)

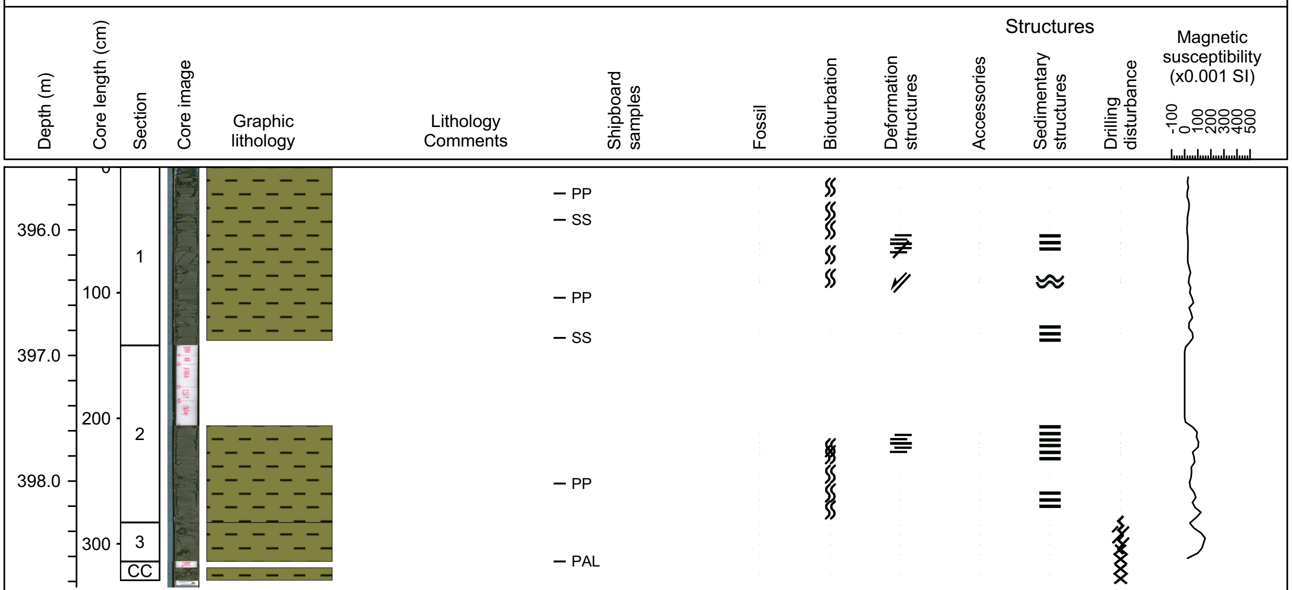
SILTY CLAY
Major lithology: Olive-gray and greenish gray silt clay with color banding on a 1-10 cm scale



Core Photo

Hole C0004D Core 56R, interval 395.5-398.79 m (core depth below seafloor)

SILTY CLAY
Major lithology: Olive gray silty clay with slight to moderate bioturbation (Chondrites and Zoophycos); small narrow tube-like sponge spicule feature at Section 2, 72 cm; darker bands (3 mm) at Section 3, 20 cm.



Expedition 316 Site C0004 Smear Slides

Sample Identification				Texture (%)			Siliciclastic Grains									Lithic Grains/Ash						Pelagic Grains								
Hole-Core-Sec	Int. (cm)	Depth (mbsf)	Lithology	Sand	Silt	Clay	Quartz	Feldspar	Mica	Fe-Mg Mins.	Glauconite	Clay Mins.	Zeolite	Heavy Mins.	Calcite	Sed. Lithic	Ign. Lithic	Meta. Lithic	Vol. Lithic	Crystal ash	Vitric ash	Nannofossils	Foraminifers	Diatoms	Radiolarians	Silicoflagellates	Sponge spicules	Opague grains	Other	Comment
C0004C-1H-1	30	0.3	silty clay	10	50	40	P		R			C										A	C	C		R	P			
C0004C-1H-2	57	1.985	pumice fragment																											Stretched vescicles
C0004C-1H-2	57	1.985	dispersed ash	5	50	45	C	P				C									C	A	P	C			P			
C0004C-1H-4	14	2.975	silty clay	0	40	60	C	C			P	A									C	A		P					R	in greenish zone
C0004C-1H-7	25	5.9	silty clay	5	25	70	C					A									P	A	P	R			P			
C0004C-2H-4	51	9.707	silty clay	10	30	60	C	P	R			C										D	P	C			P			
C0004C-2H-5	47	11.1	volcanic ash	30	50	20	A	C		C				R					C		C			R						
C0004C-2H-8	70	14.19	silty clay with dispersed ash	10	35	55	C	P		C		C		R					C		C	D	P	C			P			
C0004C-2H-8	75	14.24	silty clay	8	22	70	C	P		P		C		R								A	P	P			P			
C0004C-3H-2	60	17.893	silty clay		30	70	C	R		R	R	C									P	A	C	P	R	R	R			
C0004C-3H-6	50	20.618	silty clay	5	20	75	C					A									R	A	C	P	R	R	R			
C0004C-4H-1	97	26.35	pellet	30	30	40	P	P			P	P									R	A	R	C		A				strange granule-size aggregate of spicules
C0004C-4H-1	120	26.58	silty clay	5	25	70	C	P		A												A	P	P		R				from single pebble-size particle
C0004C-4H-2	42	27.215	glauconite pellet	40	30	30	P	R			D			R								R								
C0004C-4H-6	132	32.375	volcanic ash	0	85	15						C							A		D	P								
C0004C-4H-7	26	32.755	volcanic ash	85	10	5	P	P		P		P							A		A	R								central dark layer; pumice contains abundant opaques
C0004C-4H-7	28	32.775	volcanic ash	90	5	5	C			P		R							A		A	P								lower dark layer; many crystals in addition to pumice and glass shards
C0004C-4H-8	48	34.395	silty clay	5	35	60	P					C							C		C	A	P							
C0004C-5H-1	10	34.98	silty clay	0	30	70	C	A													C	A								
C0004C-5H-1	84	35.72	volcanic ash	20	80	0	A	A											P		A									
C0004C-5H-1	88	35.76	silty clay	10	40	50	C	P				C							P		A	A								
C0004C-5H-3	110	38.91	silty clay	0	30	70	P	P				C									A	D	R	R			R			
C0004C-5H-5	123.5	40.52	glauconite pellet	0	30	70	C	P			A	C									C	C	P							
C0004C-5H-5	141	40.69	volcanic ash	10	40	50	C	P		P		C							A		P	A		R			R			
C0004C-5H-6	70	41.485	clayey silt	20	50	30	A	C				C						C			P	C								
C0004C-5H-7	56	42.8	very fine sand	90	10	0	A	C		P	P							A												
C0004C-5H-7	69	42.93	volcanic ash	50	30	20	A	C		P	C								C			C								
C0004C-5H-7	80	43.04	silty clay	0	30	70	C	C				A							P			A								
C0004C-6H-1	37	44.75	silty clay	5	20	75	C					C									C	D	P							
C0004C-6H-1	133	45.71	silty clay	5	20	75	C					A									C	A	P							
C0004C-6H-3	67	47.92	silty clay	10	25	65	C	P				A									C	A	P							
C0004C-6H-3	123	48.48	fine sand	80	15	5	A	C		P		P						A				P	P							
C0004C-6H-5	88	49.57	fine sand	90	10	0	A	A										A			P		P							
C0004C-7H-1	98	54.86	fine sand	40	50	10	C	P	P	R	R	P						A			R	P	C		R					
C0004C-7H-1	110	59.239	silty clay	5	25	70	C					C						C				A	P				R			
C0004C-7H-8	90	61.866	fine sand	70	20	10	C	P	R	R		P						A				P	P				P		C	Pyrite
C0004C-7H-9	50	62.871	silty clay	5	20	75	C					C						P				D	P	R			P			
C0004C-8H-3	108	67.27	silty clay	15	20	65	C	P	P	P		P				P		P				D	P	R			P	R		
C0004C-8H-6	103	70.105	volcanic ash	35	40	25	C	C	C	P		C							C		C	P						P		
C0004C-9H-5	65	78.009	silty clay	0	43	57	C	C	R	P		C				C		C	R			A	P							
C0004C-9H-5	77	78.129	silty clay	5	20	75	C	P				D						P	P											just below contact Units I and II
C0004C-9H-5	86	78.219	silty clay	0	25	75	C	P	R		R	D		R													R			
C0004C-9H-5	87	78.229	sandy silt	30	55	15	C	C	P	R	R	C		R		D					R						R			Matrix of Breccia
C0004C-9H-6	65	79.239	silty clay	0	25	75	C	P				C			P							D								
C0004C-10H-2	157	83.845	silty sand/volcanic ash	70	30	0	C	C										P	D		C									
C0004C-10H-4	19	83.88	(silty) fine sand	80	20	0	A	P	R		R				P			A			C						R		P	Pyrite, woody organic matter

Expedition 316 Site C0004 Smear Slides

Sample Identification				Texture (%)			Siliciclastic Grains									Lithic Grains/Ash						Pelagic Grains								
Hole-Core-Sec	Int. (cm)	Depth (mbsf)	Lithology	Sand	Silt	Clay	Quartz	Feldspar	Mica	Fe-Mg Mins.	Glauconite	Clay Mins.	Zeolite	Heavy Mins.	Calcite	Sed. Lithic	Ign. Lithic	Meta. Lithic	Vol. Lithic	Crystal ash	Vitric ash	Nannofossils	Foraminifers	Diatoms	Radiolarians	Silicoflagellates	Sponge spicules	Opague grains	Other	Comment
C0004C-10H-4	52	84.21	silty clay	0	25	75	C	P	P		P	A							P			A		P			R		T	red-brown organic matter
C0004C-11H-3	103a	87.49	silty clay	5	20	75	C	P	D												P								R	Pyrite present as framboids and grain coatings
C0004C-11H-3	103b	87.49	silty clay	0	25	75	C	P	D																					
C0004C-11H-4	17	87.825	silty v.f. sand	50	50	0	A	C		P								C			P									
C0004C-12X-3	64	92.445	silty clay/ nanno-ooze	2	28	70	C	P				A						P	P		P	A								
C0004C-12X-3	80	92.605	silty clay- brecia matrix	5	25	70	C	P				D						P	P			C								
C0004C-12X-9	15	98.235	sand/volcanic ash	90	10	0	P	P											D		C									
C0004C-12X-CC	6	98.545	silty sand	70	30	0	A	C										A	C		P									
C0004C-13X-8	42	107.6	siliceous ooze/silty clay	0	50	50	A					A						C				C								
C0004C-13X-8	44	107.62	silty clay	0	30	70	C	P				D						C				C								
C0004C-14X-4	20	112.635	silty claystone	5	15	80	C					D				P					R	P					R			
C0004C-15X-2	90	120.03	silty claystone	0	30	70	C	P				D			R						R	C		R		R	R			Discoaster
C0004C-15X-6	70	125.465	silty claystone	0	30	70	C					D				P						C				R	P			
C0004C-16X-1	60	127.82	silty claystone	1	9	90	P					D				P						C		R			P			
C0004C-16X-1	86	128.08	silty claystone	1	24	75	C			R		D									R	A	P				P			
C0004C-18X-1	60	133.78	silty claystone	1	24	75	C		P			D			P	P					P	A					P			
C0004D-1R-CC	10	103.91	silty claystone	5	30	65	C	P	P	P		D				P		P			P	P		R			R			
C0004D-4R-1	39	128.89	volcanic ash	80	20	0	P	P											D		A									
C0004D-4R-3	3	129.3	silty claystone	0	25	75	C	P				A										A		P						
C0004D-4R-CC	17	129.515	silty claystone	0	25	75	C	P				C				R		P				A		C			P			
C0004D-5R-2	20	139.02	volcanic ash	90	10	0	P	R							P				A		A									
C0004D-5R-2	41	139.23	silty claystone	0	25	75	C	P				C									C	D								
C0004D-7R-1	65	152.15	sponge spicules	100	0	0																								
C0004D-9R-2	75	162.655	silty claystone	0	30	70	C	P				A										A		P			D			possible burrow fill or coating (agglutinated?)
C0004D-11R-2	16	170.75	silty claystone	0	25	75	C	P				A									P	A		P						
C0004D-12R-1	10	174.1	silty claystone	2	25	73	C	P		P		C						P			P	A					P			
C0004D-13R-1	10	178.6	silty claystone	1	24	75	C	P		R		D						R			R	C					R			
C0004D-16R-1	25	202.25	silty claystone	2	23	75	C	R		R		D						R				A	R				R			
C0004D-19R-1	35	225.85	silty claystone	1	18	80	C	R				A									R	A					P			
C0004D-20R-CC	5	228.72	silty claystone	2	23	75	C	P	R			A			R						R	D					P			
C0004D-21R-1	50	238.5	silty claystone	2	23	75	C	C	R	R		A		T							R	A					P			
C0004D-22R-1	80	243.3	silty claystone	10	30	60	A	C		R		A									R	A	R	R			R			
C0004D-23R-CC	12	249.222	silty claystone	0	25	75	C	P				A										A		C						
C0004D-25R-1	55	256.55	clay	0	20	80	C	P				D										P								
C0004D-25R-2	12	257.53	silty clay	5	25	70	C	P				D									C									greenish mottles but glauconite not apparent, difficult to disaggregate
C0004D-25R-CC	19	257.912	silty clay	0	25	75	C	P				D							T			P		T			P	P		
C0004D-26R-1	50	261	silty claystone	0	25	75	C	P		R		D						P	R		P	P					R			
C0004D-26R-1	65	261.15	volcanic ash	40	30	30	C	C				A			P				C		A									marked "area of interest"
C0004D-26R-1	66	261.16	volcanic ash	5	60	35	P	P				A							P		D	C								
C0004D-26R-2	26	262.172	volcanic ash	10	70	20	P	P				C							C		D	P								
C0004D-27R-1	111	266.11	silty clay	10	40	50	C	C				A							P		C									
C0004D-27R-1	121	266.21	volcanic ash	90	5	5	P					P							C		D									
C0004D-27R-2	7	266.48	claystone	0	20	80	C	P				D							P		P									
C0004D-27R-2	33	266.74	claystone	0	15	85	P					D							C											
C0004D-27R-2	63	267.04	claystone	0	15	85	P					D									C	P								
C0004D-28R-1	12	269.62	claystone	0	25	75	C	P				D									C									

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Sample Identification				Texture (%)			Siliciclastic Grains									Lithic Grains/Ash						Pelagic Grains								
Hole-Core-Sec	Int. (cm)	Depth (mbsf)	Lithology	Sand	Silt	Clay	Quartz	Feldspar	Mica	Fe-Mg Mins.	Glauconite	Clay Mins.	Zeolite	Heavy Mins.	Calcite	Sed. Lithic	Ign. Lithic	Meta. Lithic	Vol. Lithic	Crystal ash	Vitric ash	Nannofossils	Foraminifers	Diatoms	Radiolarians	Silicoflagellates	Sponge spicules	Opague grains	Other	Comment
C0004D-28R-1	85	270.35	dispersed ash	10	40	50	P	P				A							P		A	C								
C0004D-28R-1	139	270.89	silty clay with dispersed ash	0	25	75	P	P				D		T					C			C							T	
C0004D-28R-3	34	272.66	silty clay	0	35	65	C	P				D									C									
C0004D-29R-1	38	274.38	volcanic ash	90	10	0	P												P		D									
C0004D-29R-1	76	274.76	silty clay	5	45	50	C	P				A							P		C									
C0004D-29R-1	86	274.86	silty clay	25	20	55	C	P				A							C		C	P								
C0004D-29R-2	6	246.745	silty claystone	1	24	75	P	P		R		D							P		C	P								Discoaster
C0004D-29R-2	35	275.745	silty claystone	2	18	80	C	P				D									P	P					R			
C0004D-29R-2	70	276.095	silty claystone	2	18	80	C			R		D							R		R	P					R			
C0004D-29R-2	110	276.495	volcanic ash	30	65	5	C					P				P			A		A	P								
C0004D-29R-2	130	276.695	silty claystone	0	15	85	P					D							P		C	R					R			
C0004D-29R-CC	18	277.138	silty claystone	0	20	80	C	P	R			D									C	T					P			
C0004D-30R-1	122	279.72	silty claystone	2	23	75	C					D							P		C	P					R			
C0004D-30R-2	52	280.432	silty claystone	2	23	75	C					D							P		C	P					R			
C0004D-30R-3	13	281.447	silty claystone	2	23	75	C	P				D									P	C	P				R			
C0004D-30R-3	56	281.877	volcanic ash	30	70	0	C	C											P		D									
C0004D-31R-1	50	283.5	silty clay	2	13	85	C	C		T		D										C					R			including Discoaster
C0004D-31R-2	95	285.36	silty clay with volcanic ash	5	45	50	C	C	T	T		A							P		A	C					P			including Discoaster
C0004D-31R-2	119	285.6	volcanic ash	5	60	35	P	P		T		A							P		D	C					R			
C0004D-32R-1	50	288	silty clay with ash component	2	18	80	C	C	R	R		A									C	C					R	T		
C0004D-32R-1	70	288.2	galuconite grain	2	13	85	C				A	A									C	P					R			including Discoaster; includes some green glass? Minor component. Lots of poorly disaggregated material, glauconite rich.
C0004D-32R-4	33	291.65	silty clay with ash component	1	27	72	C	P	T	T	P	A							P		A									
C0004D-32R-4	50	291.82	silty clay with ash component	1	29	70	C	P	P	T	P	A							P		A	T					P			
C0004D-33R-3	70	295.52	silty clay (glauconite)	3	22	75	C	C			C	D							P		C	P								
C0004D-34R-1	53	297.03	volcanic ash	85	10	5	P					P			P				C		D	P	T	T						traces of colored glass
C0004D-34R-1	114	297.64	silty clay	10	30	60	C	P			C	D							P		C						P			glauc. heavily pyritized.
C0004D-34R-2	18	298.085	silty claystone	5	40	65	C	C				D							P		C									minor amounts of colored glass
C0004D-35R-1	32	301.32	silty clay	5	30	65	C	P				D							P		C									minor red-brown organic matter
C0004D-35R-1	130	302.3	silty clay	5	30	65	C	P			T	D							P		C	P		T			T			minor red-brown organic matter
C0004D-35R-2	15	302.555	basaltic ash	30	70	0	P	C									A		P		A									clear glass also present, distinct brown layer, visible in CT
C0004D-36R-1	17	305.67	silty clay	10	30	60	C	P				D							P		C									
C0004D-36R-1	63	306.13	silty clay	5	20	75	C					D									C									
C0004D-36R-3	30	307.205	silty clay	5	20	75	C	P				D							P		P	C								
C0004D-37R-1	12	310.12	silty clay	0	30	70	P	P				D							P		C									
C0004D-37R-1	29	310.29	claystone	5	15	80	C	P										T	P		P									
C0004D-37R-1	58.5	310.59	silty clay	5	20	75	C	C				D									P	C	P		R	T	T			pyroxene, green amphiboles; only trace amounts of red-brown organic matter
C0004D-37R-1	77	310.77	silty clay	20	30	50	C	C				A						T	P			P	C							pyroxene, green amphiboles; red-brown organic matter; basaltic lithics
C0004D-37R-1	125	311.25	silty clay	0	20	75	C	P				D			P						P	C							T	red-brown organic matter
C0004D-37R-2	24	311.65	silty clay	5	35	60	C	C			D			R				P	P		P							R		red-brown organic matter; pyroxenes, green amphiboles
C0004D-37R-2	33	311.74	silty clay	10	40	50	C	C				A		R	P			C	P		P	P						R		red-brown organic matter; green amphiboles; pyroxenes
C0004D-37R-2	111	312.52	silty clay	0	25	75	C	P				D						T	T		C	T								red-brown organic matter; green amphiboles; some feld rather large
C0004D-38R-1	25	314.75	silty clay	5	20	75	C	P				D									P									minor red-brown organic matter
C0004D-38R-1	61	315.11	silty clay	5	40	65	C	P			P	D			P				P		C									red-brown organic matter

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Hole-Core-Sec	Int. (cm)	Depth (mbsf)	Lithology	Sand	Silt	Clay	Quartz	Feldspar	Mica	Fe-Mg Mins.	Glauconite	Clay Mins.	Zeolite	Heavy Mins.	Calcite	Sed. Lithic	Ign. Lithic	Meta. Lithic	Vol. Lithic	Crystal ash	Vitric ash	Nannofossils	Foraminifers	Diatoms	Radiolarians	Silicoflagellates	Sponge spicules	Opague grains	Other	Comment
C0004D-39R-1	53	319.53	silty clay	10	30	60	C	C				D									C									some brown glass; red-brown organic matter
C0004D-39R-1	73	319.73	sandy silt	30	60	10	A	C				C		T				C	P		C									red-brown organic matter; glass includes green and brown as wella s clear, pyroxenes, amphiboles
C0004D-39R-3	41	320.82	sandy silt with dispersed ash	40	50	10	A	C				C						C	P		C			T			T			red-brown organic matter; green and brown glass fragments contain crystals
C0004D-39R-3	88	321.29	silty sand /volcanic ash	50	40	10	C	P				C						P	A		A									
C0004D-40R-1	14	323.64	sand/silt/clay	20	40	30	C	C				A			P			C	C											
C0004D-40R-1	128	324.78	silty clay	10	30	60	C	C				D						C			P									
C0004D-40R-2	5	324.95	silty clay	10	25	65	C	P				D			P				P		P									red-brown organic matter
C0004D-41R-1	129	329.29	silty claystone	0	25	75	C	P				A						P					R				R			
C0004D-41R-2	14	329.54	silty clay	10	30	60	C	P				A			R			P			C			P			R			red-brown organic matter
C0004D-41R-3	31	329.925	sandy silt /claystone	25	40	35	A	C				A		R				C	P		P									red-brown organic matter
C0004D-42R-1	18.5	332.67	volcanic ash	10	50	40	C	C	P	R		C							A		A				R					
C0004D-42R-1	27	332.77	silty claystone	2	23	75	C	C	P	R		A		R							P	C					R	R		
C0004D-42R-4	12.5	335.81	very fine sand/silt	45	40	15	A	A	P	P		C		T				A				P						P		
C0004D-42R-CC	13	336.625	clayey siltstone	20	45	35	C	C		R		C			A				P			C	C	P			P			Unusually high calcite content, esp in silt component- siliciclastic or cement?
C0004D-43R-1	40	337.4	silty claystone	2	23	75	C	C				D			P						R	P					P			
C0004D-44R-2	102	343.915	silty claystone	2	28	70	C	C	R			D						R			R	P		R			P			
C0004D-44R-4	66	344.965	sponge spicules	95	5	0																					D			
C0004D-46R-1	10	350.6	silty claystone	1	19	80	C	C	R	R		D						R				C	P				R			
C0004D-47R-1	90	355.9	silty claystone	2	21	77	C	C		R		D							R		R	P	R				P			
C0004D-48R-1	10	359.6	silty claystone	0	30	70	C	C				D									C	C		T			T			
C0004D-48R-2	14	361.04	volcanic ash	0	90	10	C					C									D									
C0004D-48R-2	47	361.37	dispersed ash	20	50	30	C	P				A									D									taken from small white area on slicken-sided surface
C0004D-49R-1	61	364.61	silty very fine sand	60	30	10	D	C				C						C				R					T			visible on CT as sl. brighter zone
C0004D-49R-1	72	364.72	silty clay	0	40	60	A	C				A									P	C								
C0004D-49R-2	80	366.215	sandy silt	20	70	10	D	C				C																		
C0004D-50R-2	54	370.448	silty sand	50	30	20	A	A				C						P			P	P								diverse heavies present
C0004D-50R-2	63	370.538	dispersed ash/clayey silt	10	50	40	C	P				A									A	P	P							
C0004D-51R-1	111	374.11	silty clay	10	30	60	C	C				D			C						T	P	P				T			
C0004D-51R-2	18	374.595	silty clay	1	29	70	C	C				D									T						R			
C0004D-51R-2	90	375.315	silty clay	0	25	75	C	P				D										P								
C0004D-51R-3	84	376.66	spicules	100	0	0																					D			collected from burrow wall
C0004D-52R-2	16.5	379.07	silty v.f. sand	50	40	10	A	C			R	C		R				C			R						R		R	red-brown organic matter
C0004D-52R-2	28	379.18	silty clay	0	20	80	C	P				D										C					P			
C0004D-52R-3	12	380.425	silty v.f. sand	60	30	10	A	A			R	C		R			A		P		P						P		R	pyrite, red-brown organic matter
C0004D-53R-1	58	382.58	silty claystone	2	23	75	C	P				D						P	R		P	P	T							
C0004D-53R-1	107	383.07	silty claystone	2	23	75	C	C			R	D							R			P								
C0004D-53R-2	47	383.875	silty claystone	5	25	70	C	P				D			P			P	P		P	P								Calcite- calcareous grains
C0004D-53R-2	48	383.885	Lapilli (ash ball)	2	80	18	C	P				P							C		D	P								
C0004D-54R-2	23	388.13	silty claystone	10	30	60	C	C				D						P	P		P	P	R	R		T	P			
C0004D-54R-3	14	389.45	silty claystone	5	35	60	C	C		R		D						P	P		P	P	R	R			R			
C0004D-54R-CC	13	391.015	carbonate fossil	10	60	30						A			A						P	C					R	C		broken up part of carbonate fossil
C0004D-55R-1	73	391.73	silty claystone	2	23	75	C	C		R		D						R	R		P	P					P			
C0004D-56R-1	42	395.92	sponge spicules	75	15	10	P	P				P										P					D			
C0004D-56R-1	136	396.86	slightly siltier claystone	8	32	60	C	C		P		D		T				P				P					R			