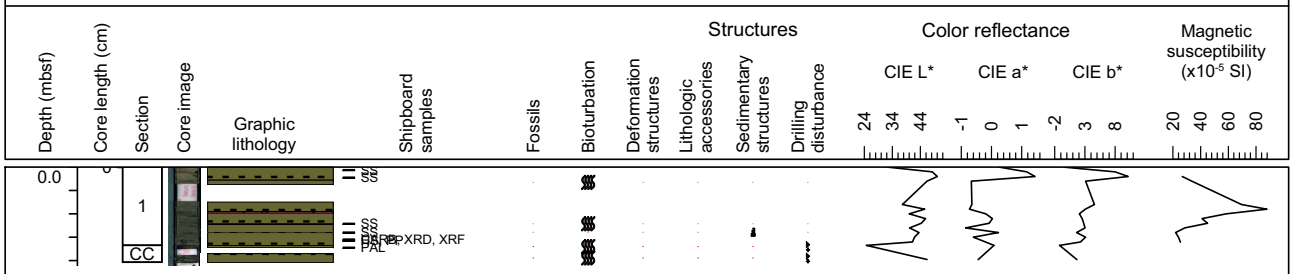
Core Photo

Hole C0012A Core 1R, interval 0-0.815 m (core depth below seafloor)

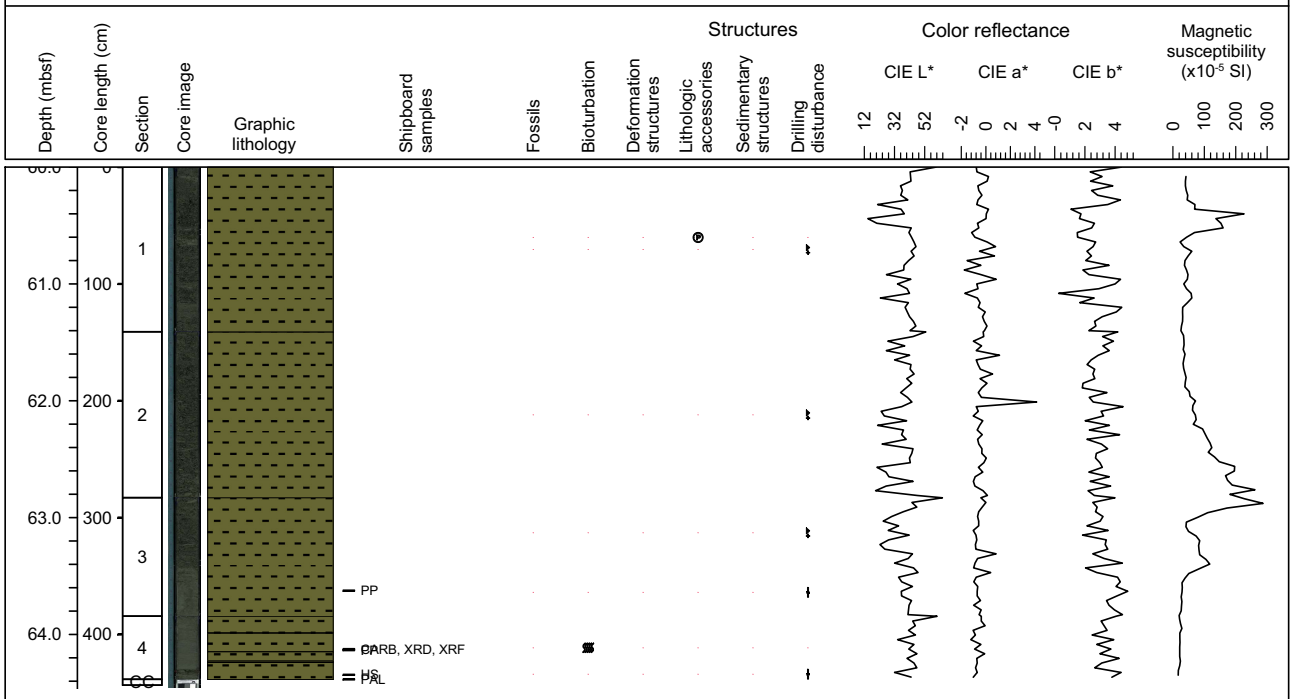
SILTY CLAYSTONE & FINE ASH
Major lithology: Mottled green-gray silty claystone
Minor lithology: Light brown silty claystone, gray-brown fine ash, white-gray fine ash
Bioturbation is moderate to intense.
This core was taken by pushing.



Core Photo

Hole C0012A Core 2R, interval 60-64.435 m (core depth below seafloor)

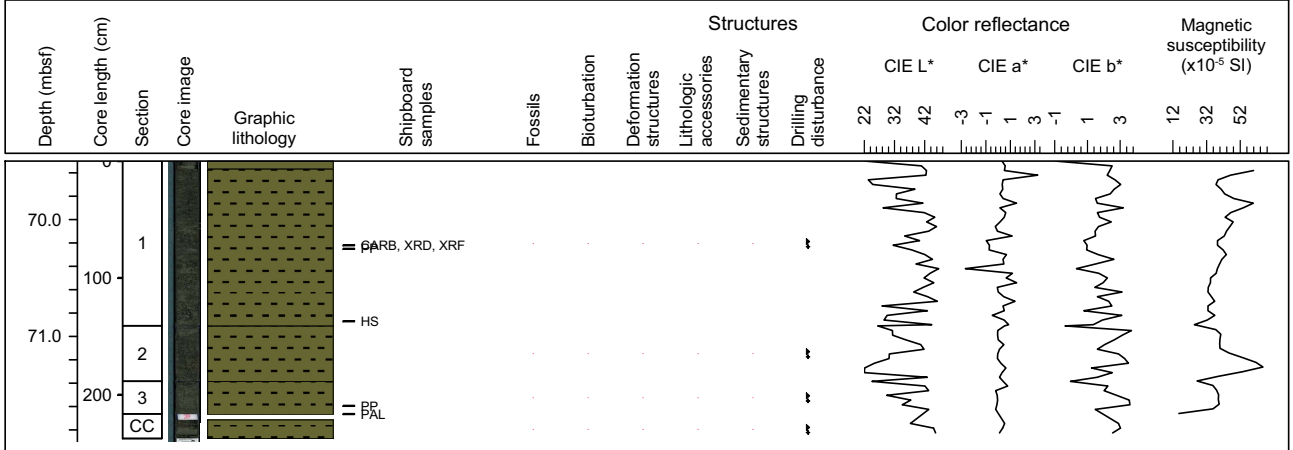
DRILLING DEBRIS & SILTY CLAYSTONE
Major lithology: Mottled green-gray silty claystone
Minor lithology: Green silty claystone layers (<1 cm)
The lithology cannot be determined in Sections 1-3 due to drilling disturbance with complete confidence.
Bioturbation is intense.
Section 1 top to section 3, 60cm consist of drilling cuttings.



Core Photo

Hole C0012A Core 3R, interval 69.5-71.875 m (core depth below seafloor)

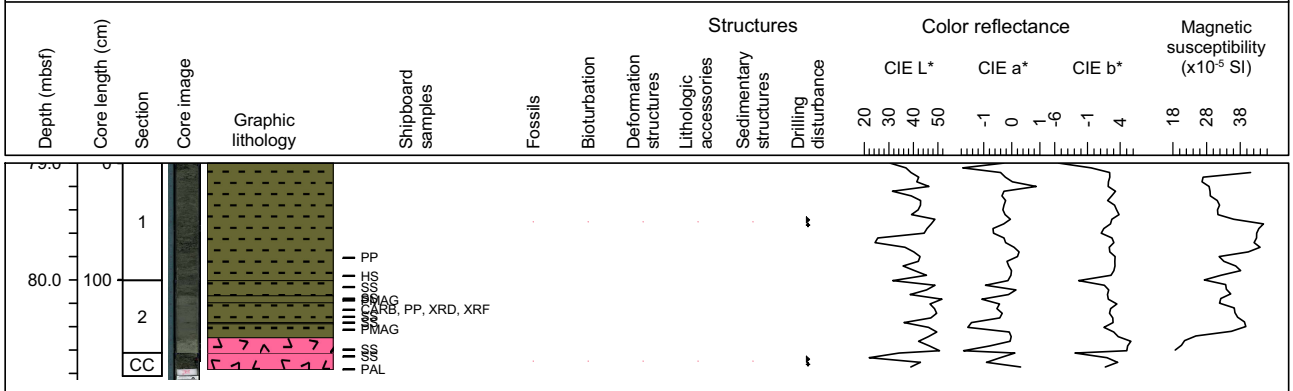
DRILLING DEBRIS
The lithology cannot be determined with complete confidence due to splitting disturbance.



Core Photo

Hole C0012A Core 4R, interval 79-80.825 m (core depth below seafloor)

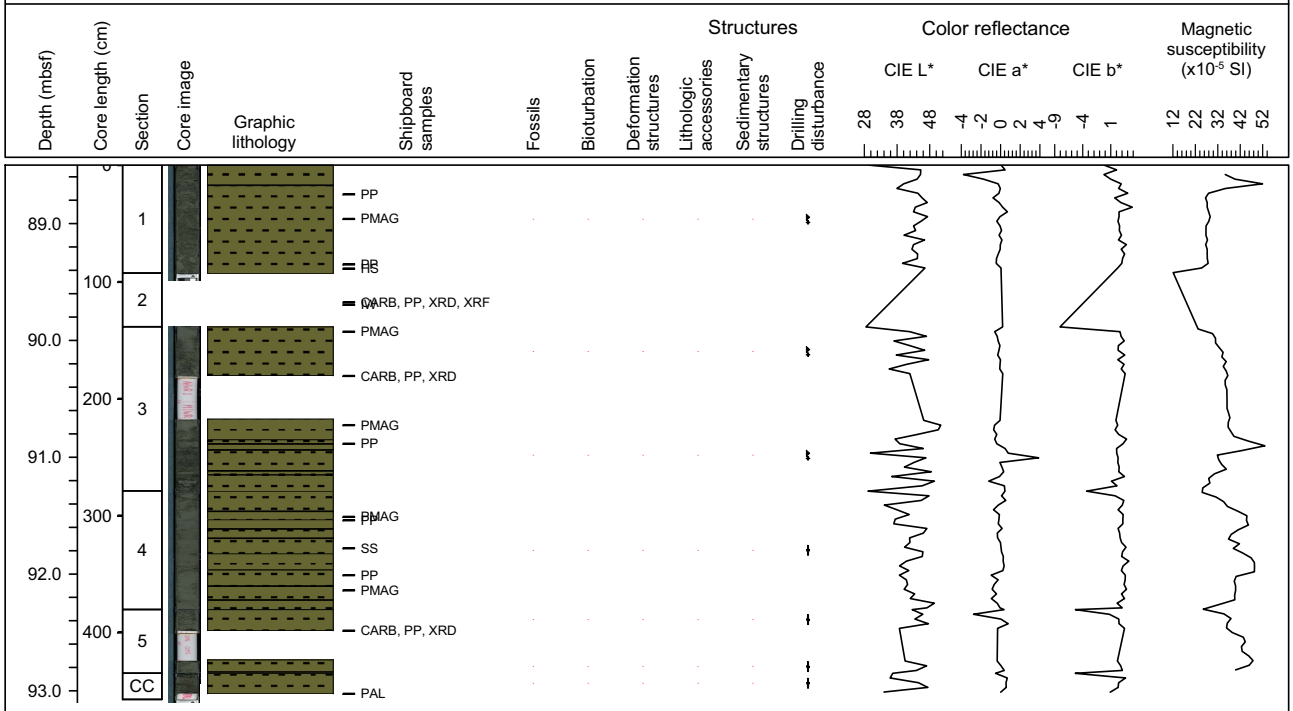
DRILLING DEBRIS, SILTY CLAYSTONE, & FINE ASH
Major lithology: Green-gray silty claystone
Minor lithology: Light olive-gray fine ash, Green silty claystone layers (<1 cm)
The lithology cannot be determined with complete confidence in Section 1 due to splitting disturbance.
Bioturbation cannot be determined with complete confidence.



Core Photo

Hole C0012A Core 5R, interval 88.5-93.075 m (core depth below seafloor)

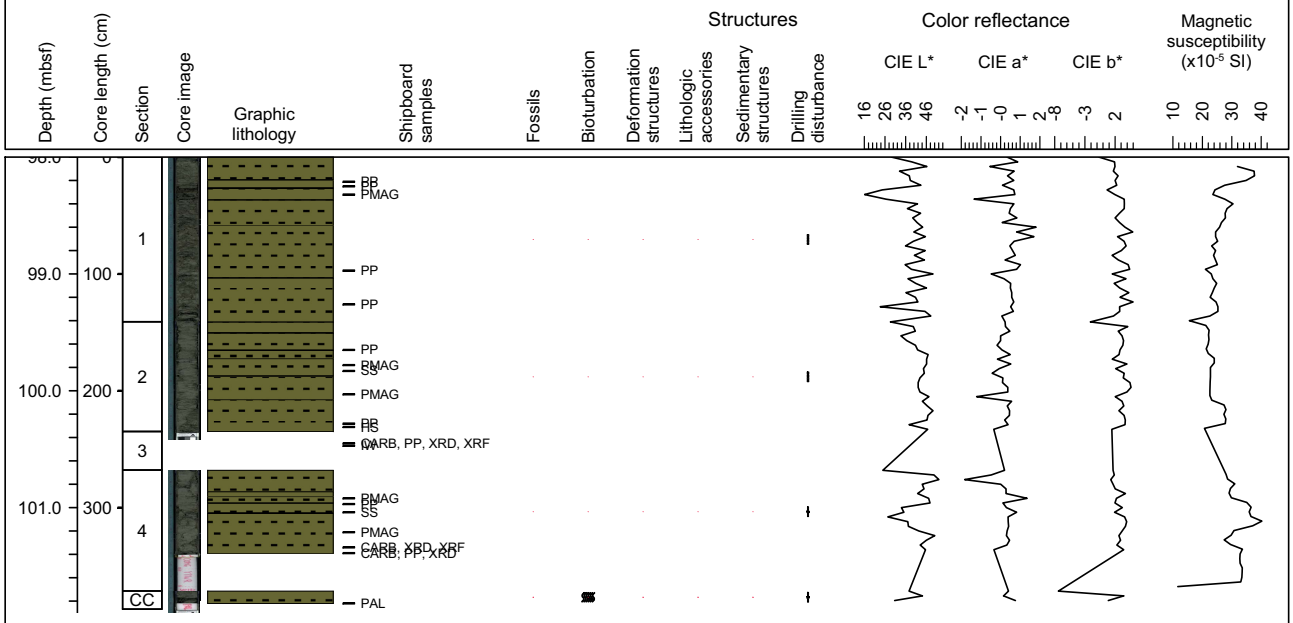
SILTY CLAYSTONE
Major lithology: Green-gray silty claystone
Minor lithology: Green silty claystone layers (<1 cm)
Bioturbation cannot be determined with complete confidence due to heavy disturbance.



Core Photo

Hole C0012A Core 6R, interval 98-101.87 m (core depth below seafloor)

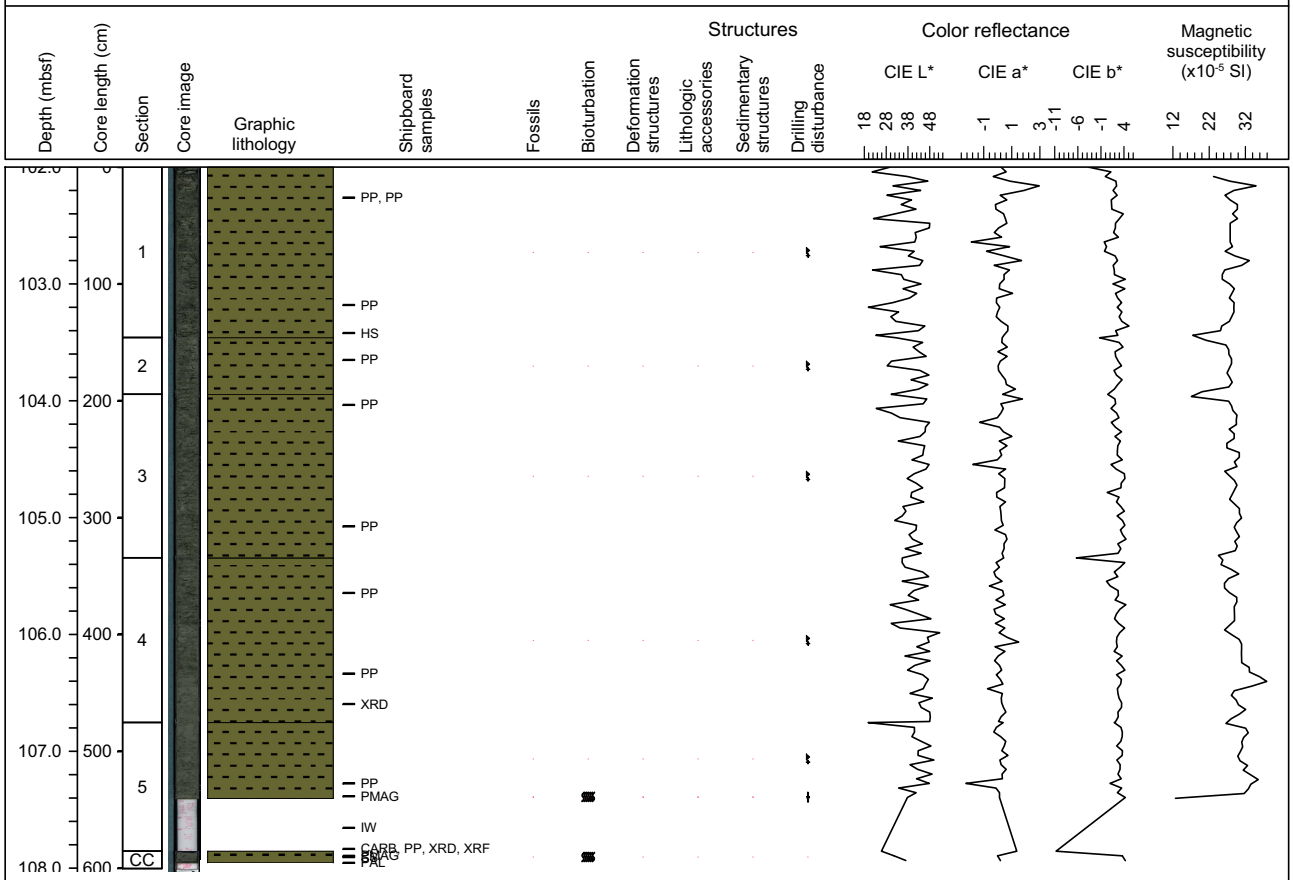
SILTY CLAYSTONE
Major lithology: Green-gray silty claystone
Minor lithology: Dark green silty claystone, Green silty claystone layers (<1 cm)
Bioturbation level cannot be determined.



Core Photo

Hole C0012A Core 7R, interval 102-108.005 m (core depth below seafloor)

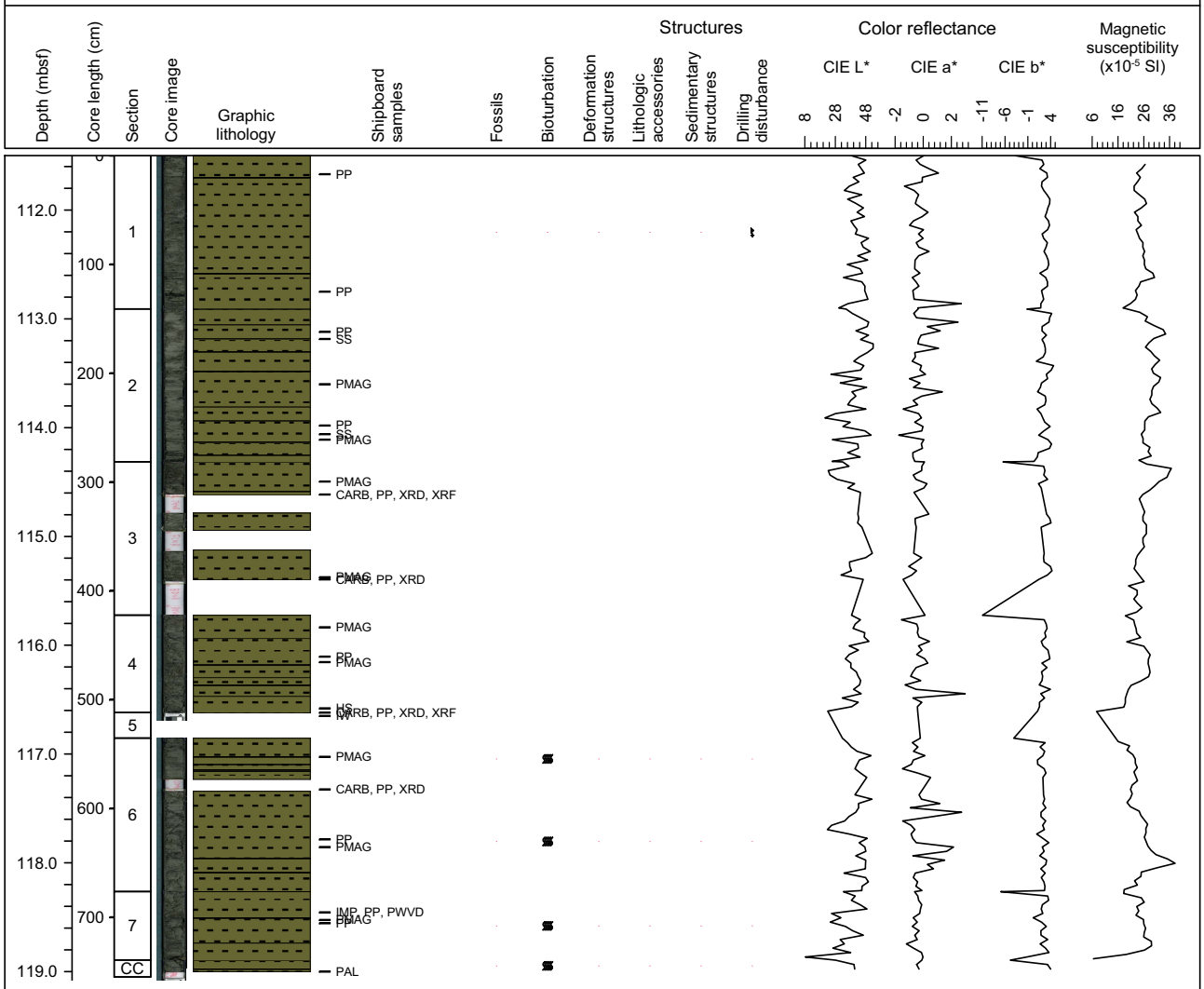
SILTY CLAYSTONE
Major lithology: Green-gray silty claystone
Bioturbation level cannot be determined.



Core Photo

Hole C0012A Core 8R, interval 111.5-119.05 m (core depth below seafloor)

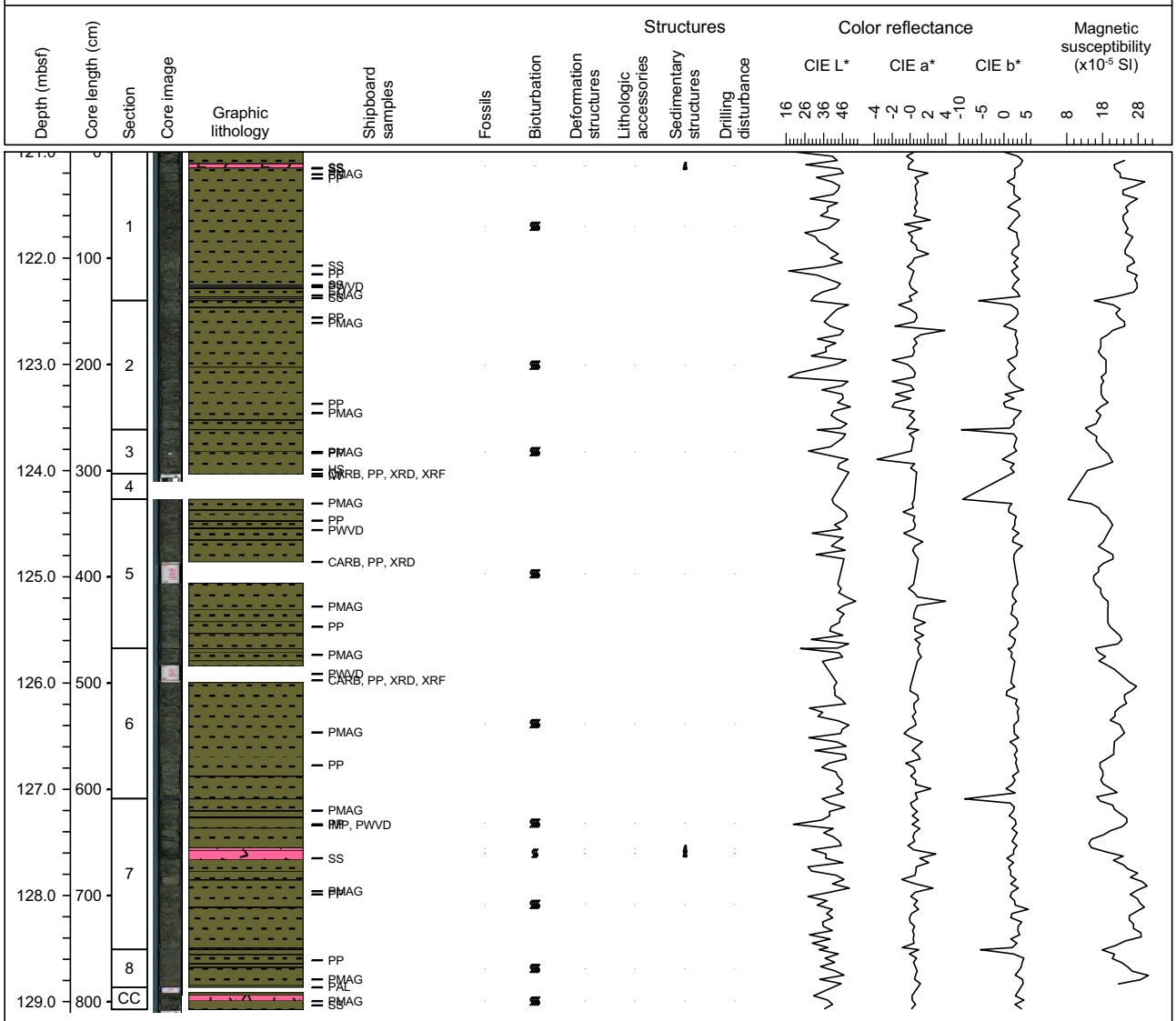
SILTY CLAYSTONE
Major lithology: Green-gray silty claystone
Minor lithology: Dark green and green silty claystone layers (<1 cm)
Some disturbance due to core splitting.
Bioturbation is intense.



Core Photo

Hole C0012A Core 9R, interval 121-129.075 m (core depth below seafloor)

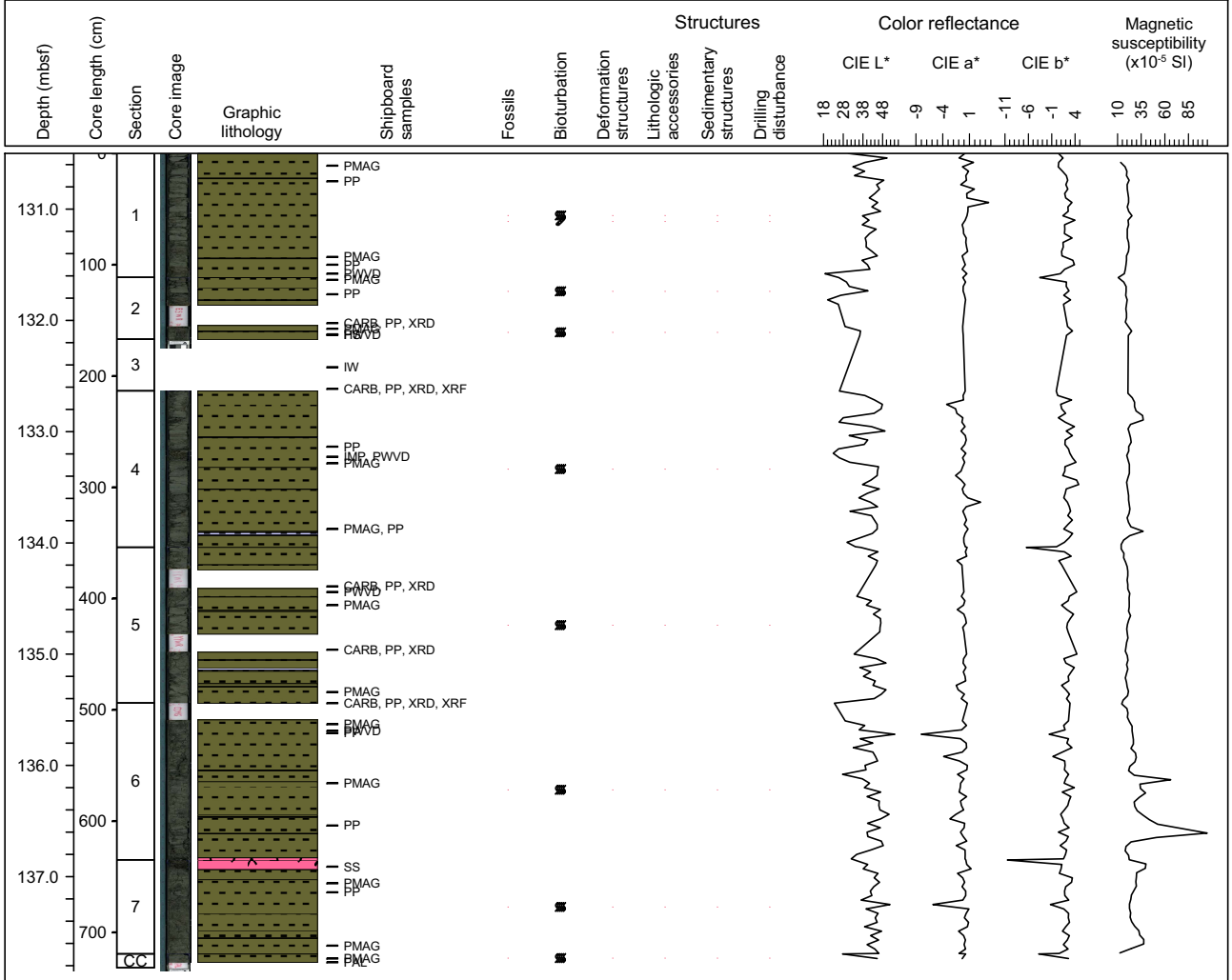
SILTY CLAYSTONE & FINE ASH
Major lithology: Green-gray silty claystone
Minor lithology: Fine ash
Bioturbation is intense.
Disturbance due to core splitting process is present.



Core Photo

Hole C0012A Core 10R, interval 130.5-137.82 m (core depth below seafloor)

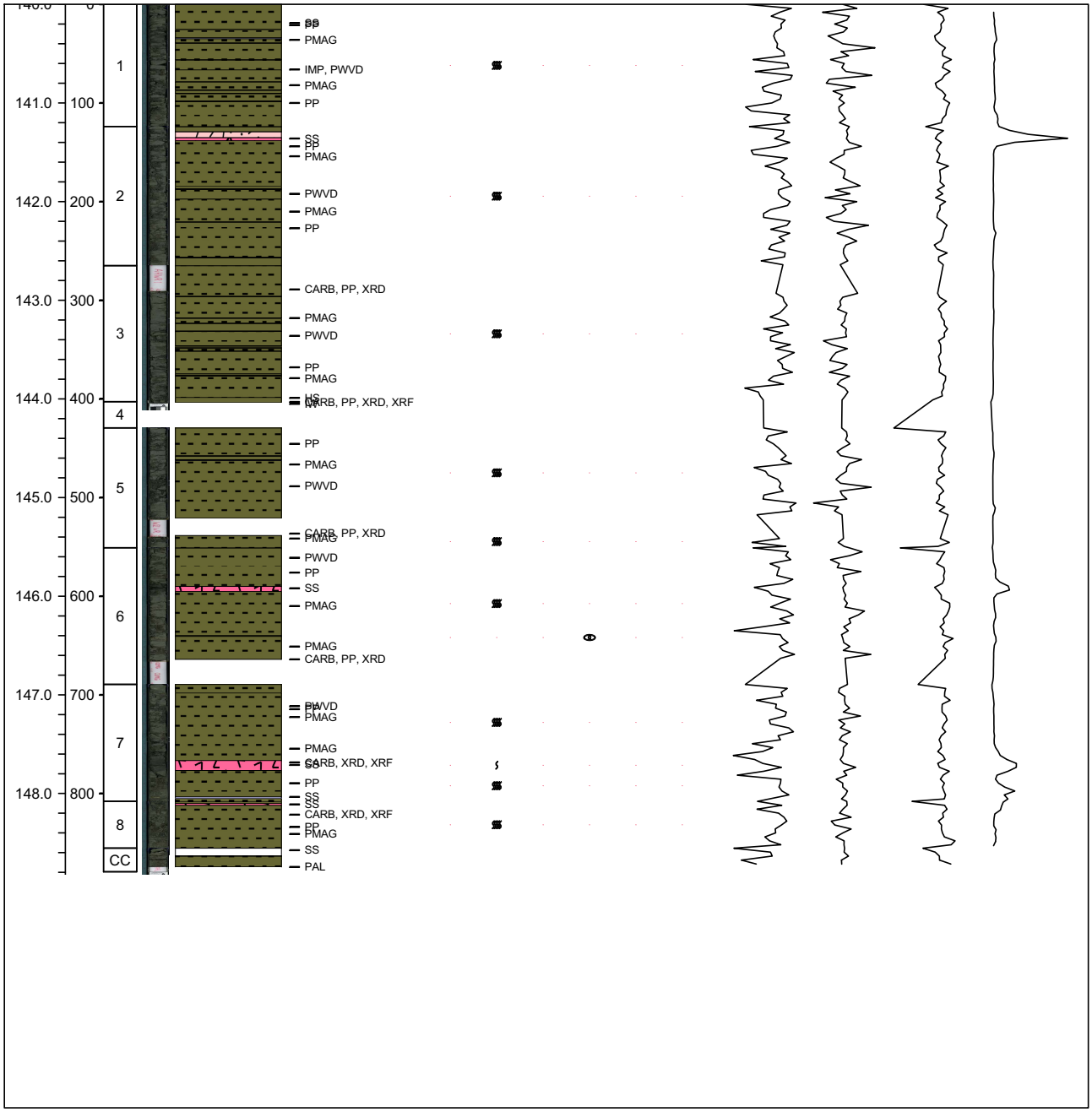
SILTY CLAYSTONE & FINE ASH
Major lithology: Green-gray silty claystone
Minor lithology: Dark gray fine ash, Green silty claystone layers (<1 cm), Ochre calcareous claystone filled burrows
Disturbance due to core splitting process is present.



Core Photo

Hole C0012A Core 11R, interval 140-148.795 m (core depth below seafloor)

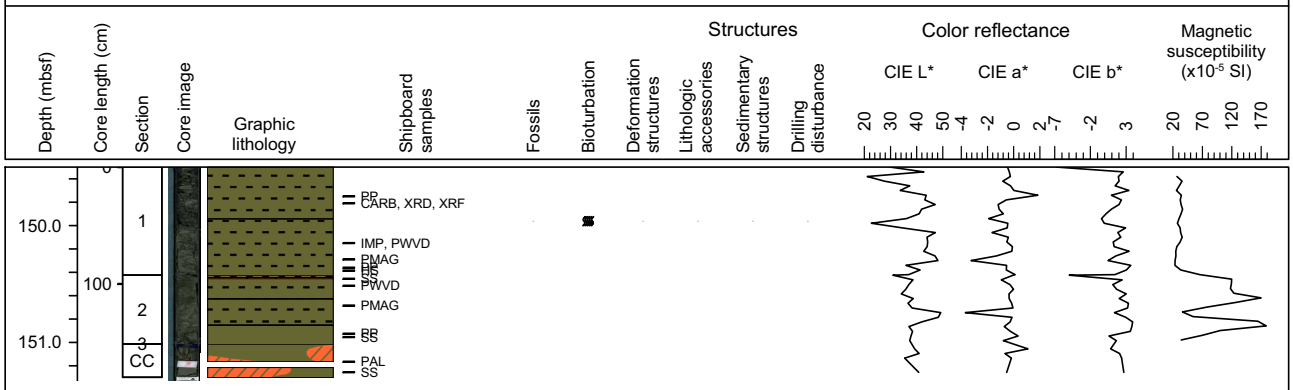
SILTY CLAYSTONE & FINE ASH
Major lithology: Green-gray silty claystone
Minor lithology: Dark green sandy siltstone, Dark gray fine ash, Light olive gray fine ash, Green silty clsystone layers (<1 cm), Ochre calcareous claystone filled burrows
Bioturbation is intense.
Disturbance due to core splitting process is present.



Core Photo

Hole C0012A Core 12R, interval 149.5-151.3 m (core depth below seafloor)

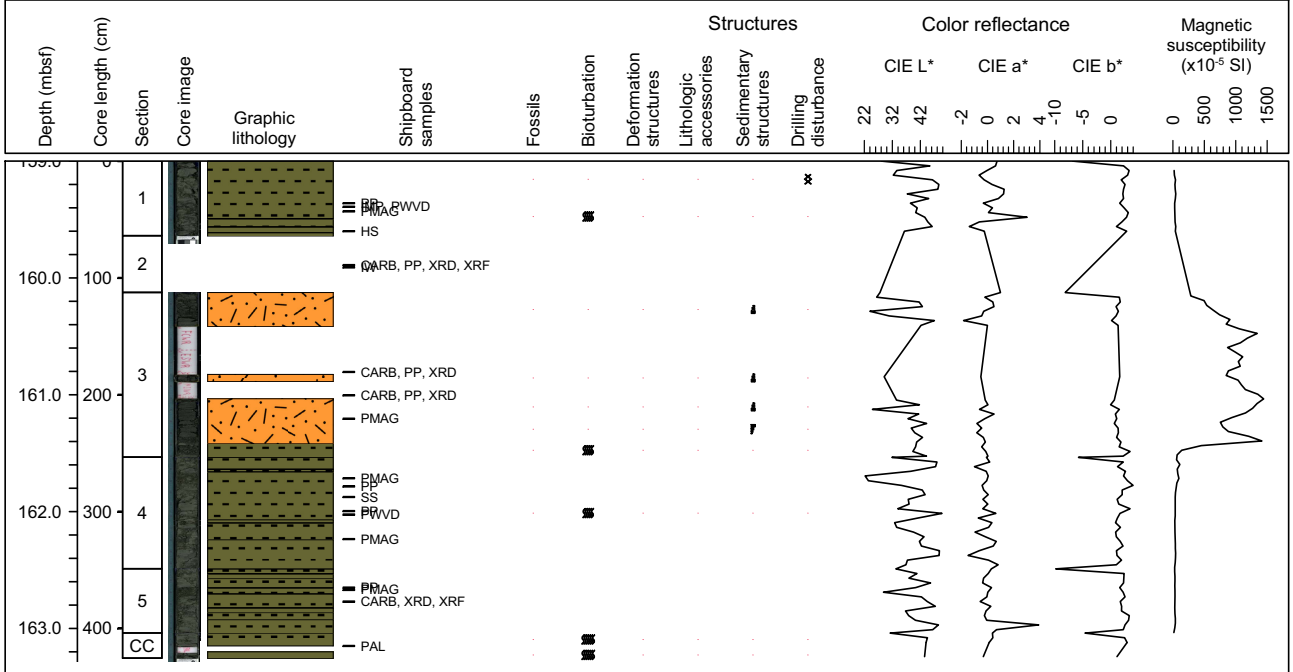
SILTY CLAYSTONE & CHAOTIC DEPOSITS
Major lithology: Green-gray silty claystone
Minor lithology: Chaotic deposit of silty claystone and sandstone, Dark gray fine ash, Lime-mudstone
Bioturbation is intense in silty claystone.
Disturbance due to core splitting process is present.



Core Photo

Hole C0012A Core 13R, interval 159-163.255 m (core depth below seafloor)

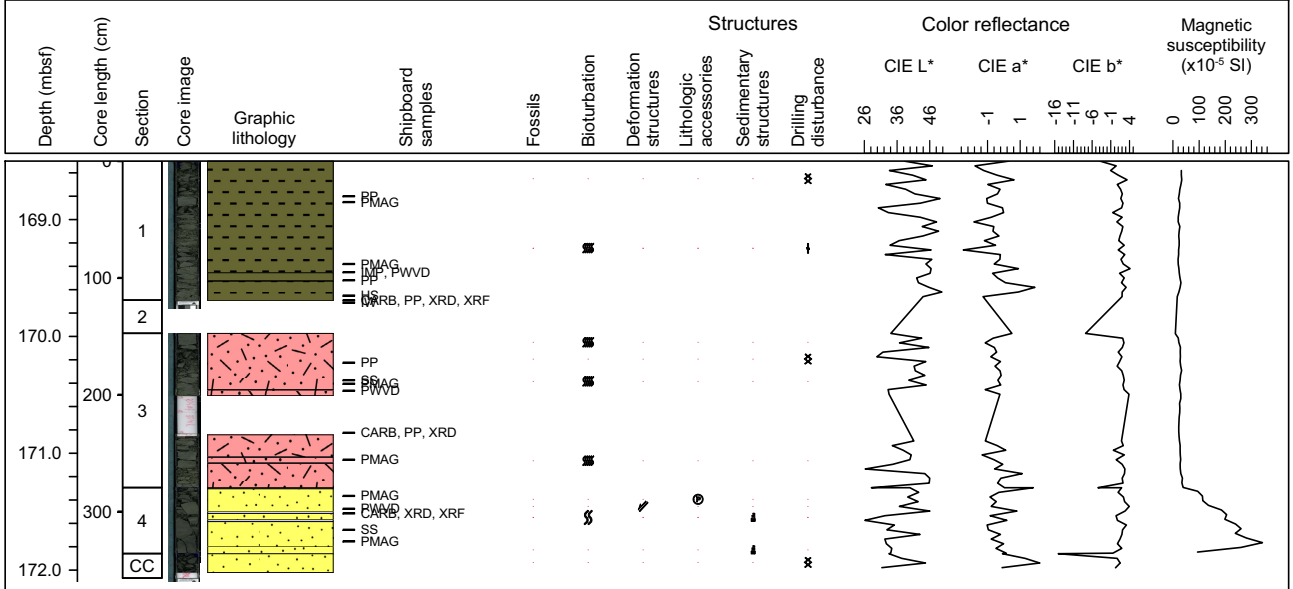
SILTY CLAYSTONE & TUFFACEOUS SANDSTONE
Major lithology: Green-gray silty ckaystone
Minor lithology: Green-gray tuffaceous sandstone, Dark green to Green silty claystone layers (<1cm thick)
Bioturbation is intense in silty claystones.



Core Photo

Hole C0012A Core 14R, interval 168.5-172.07 m (core depth below seafloor)

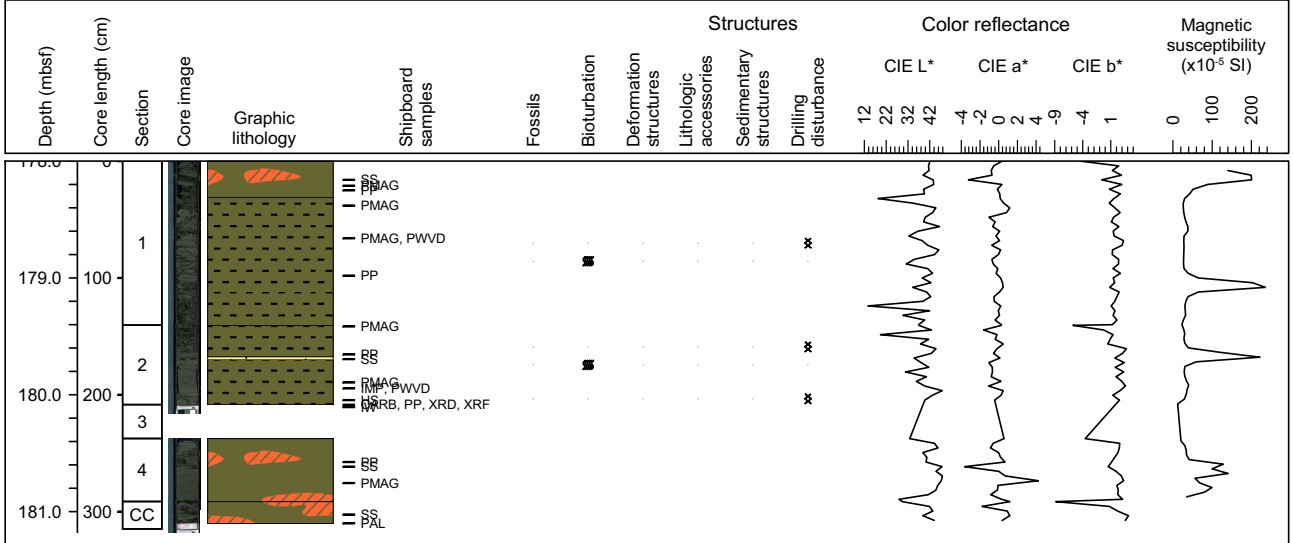
SILTY CLAYSTONEE VOLCANICLASTIC SILTSTONE & SANDSTONE
Major lithology: Green-gray silty claystone
Minor lithology: Green-gray sandstone, Volcaniclastic siltstones, Dark green to Green silty claystone layers (<1cm thick)
Bioturbation is intense in silty claystones.
Drilling disturbance is moderate.



Core Photo

Hole C0012A Core 15R, interval 178-181.15 m (core depth below seafloor)

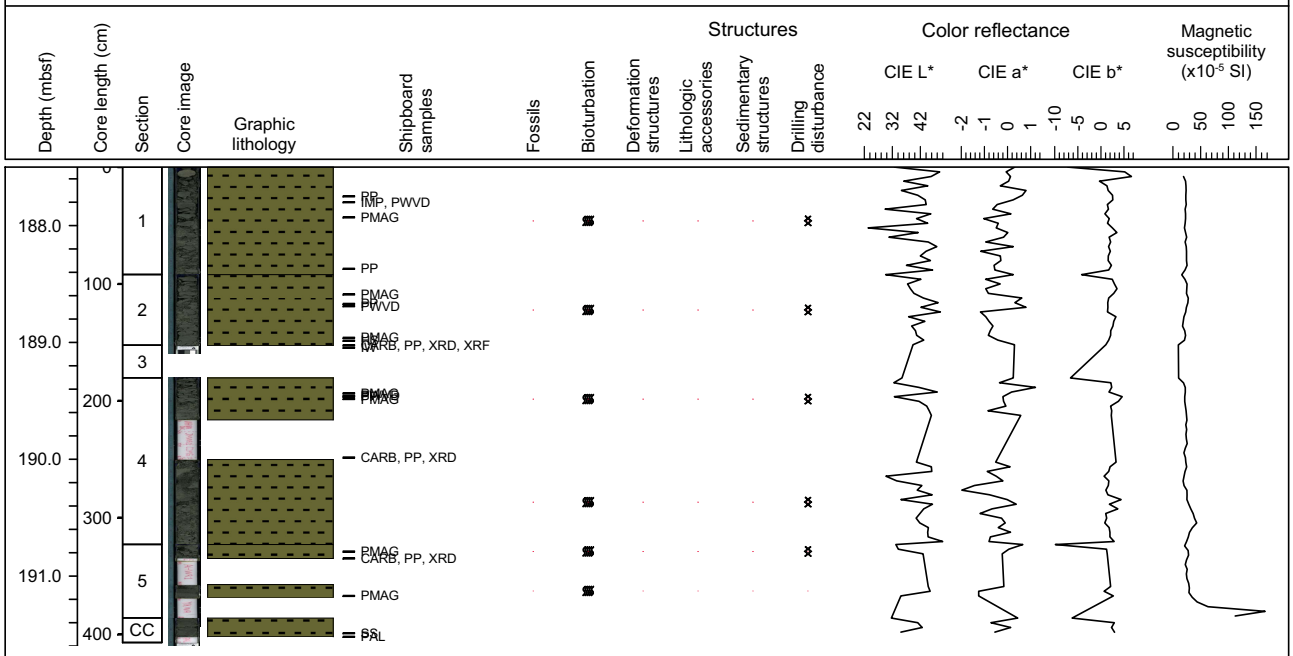
SILTY CLAYSTONESTONESTONE & CHAOTIC DEPOSITS
Major lithology: Green-gray silty claystone
Minor lithology: Chaotic deposit of sandstone and silty claystone, Very coarse grained sandstone
Bioturbation is intense.
Drilling disturbance is intense in Sections 1 and 2.



Core Photo

Hole C0012A Core 16R, interval 187.5-191.57 m (core depth below seafloor)

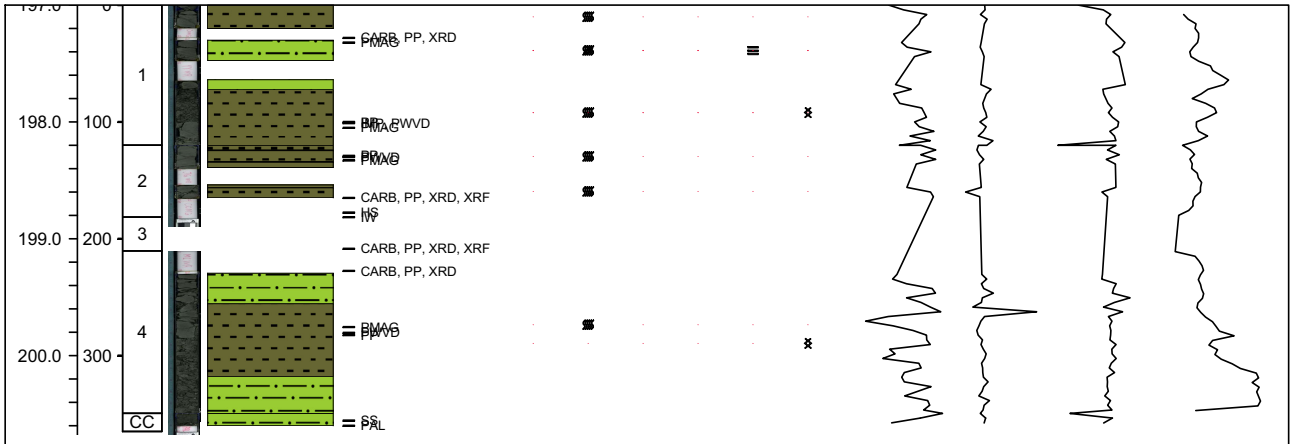
SILTY CLAYSTONESTONESTONE
Major lithology: Green-gray silty claystone
Bioturbation is intense.
Drilling disturbance is intense.



Core Photo

Hole C0012A Core 17R, interval 197-200.65 m (core depth below seafloor)

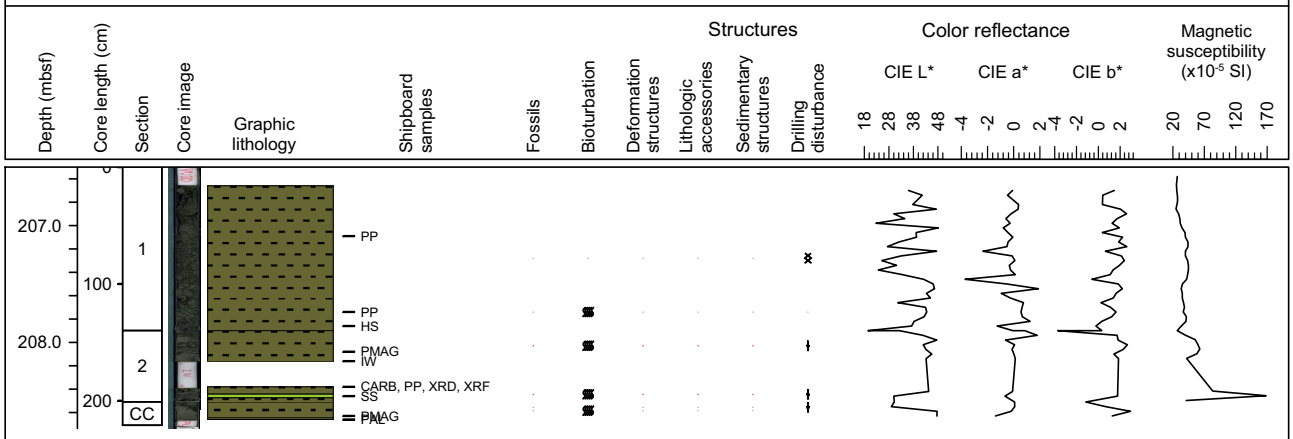
SILTY CLAYSTONE & CLAYEY SILTSTONE
Major lithology: Green-gray silty claystone
Minor lithology: Green-gray clayey siltstone, Green silty claystone layers (<1cm thick)
Bioturbation is intense.



Core Photo

Hole C0012A Core 18R, interval 206.5-208.71 m (core depth below seafloor)

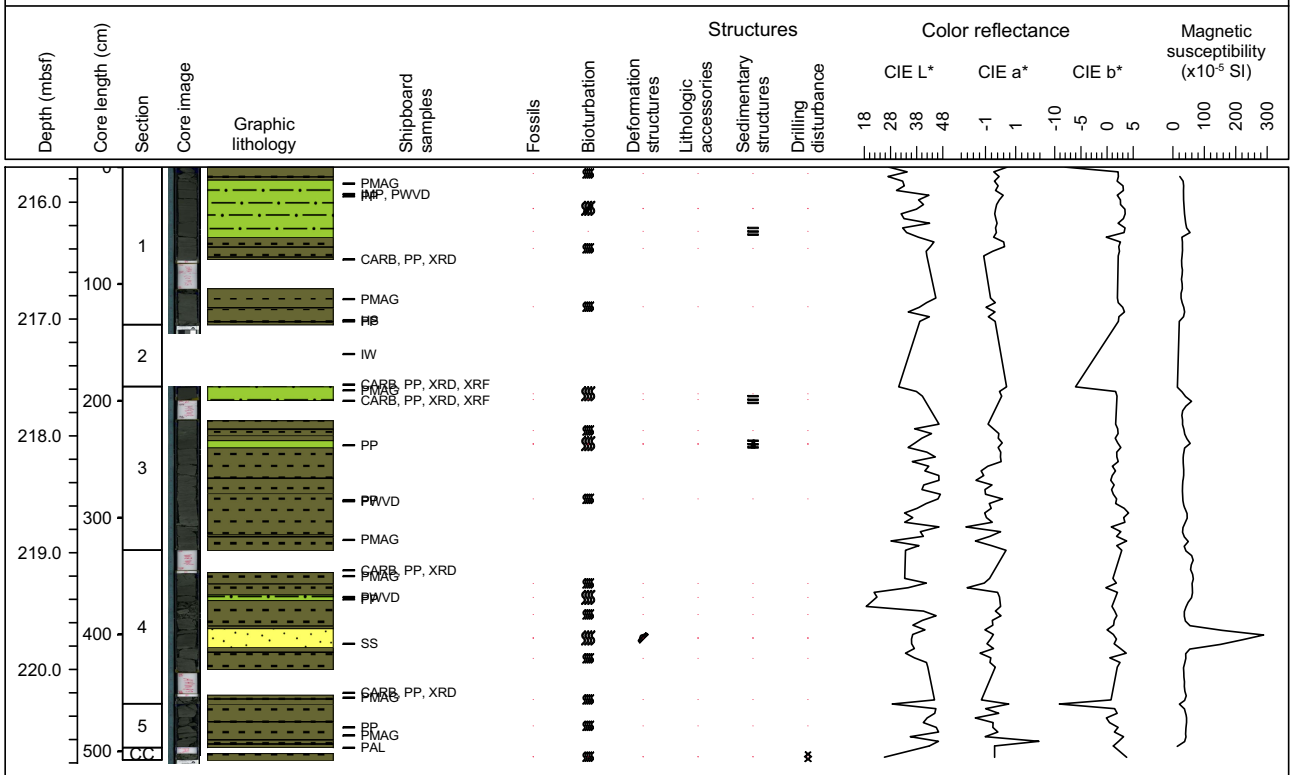
SILTY CLAYSTONE
Major lithology: Green-gray silty claystone
Minor lithology: Green silty claystone layers (<1cm thick)
Bioturbation is intense.
Section 1 consists of drilling cuttings.



Core Photo

Hole C0012A Core 19R, interval 215.7-220.775 m (core depth below seafloor)

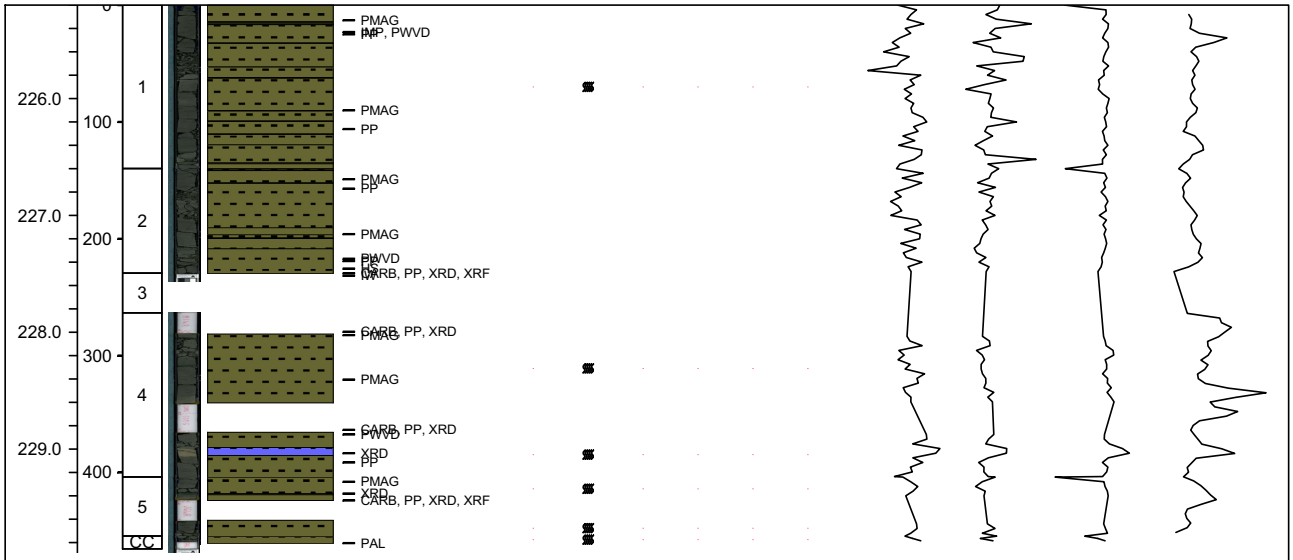
SILTY CLAYSTONE & CLAYEY SILTSTONE
Major lithology: Green-gray silty claystone
Minor lithology: Green-gray clayey siltstone, sandstone, Green silty claystone layers (<1cm thick)
Bioturbation is moderate to intense.



Core Photo

Hole C0012A Core 20R, interval 225.2-229.855 m (core depth below seafloor)

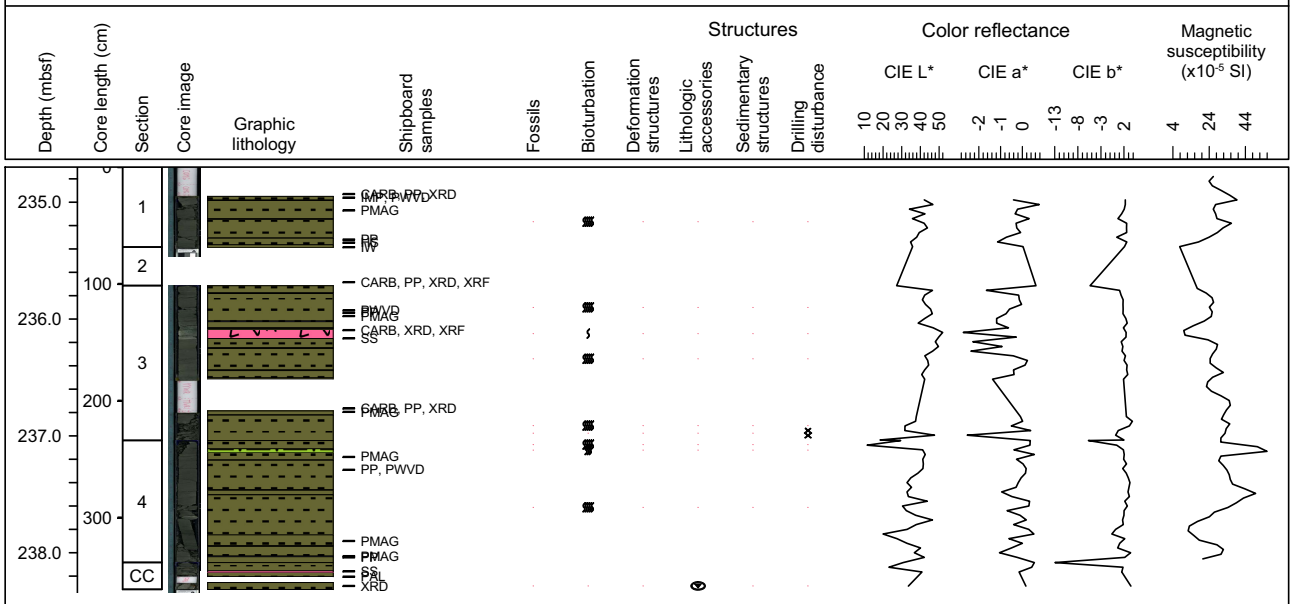
SILTY CLAYSTONE
Major lithology: Green-gray silty claystone
Minor lithology: Lime-mudstone, Green silty claystone layers (<1cm thick)
Bioturbation is intense.



Core Photo

Hole C0012A Core 21R, interval 234.7-238.315 m (core depth below seafloor)

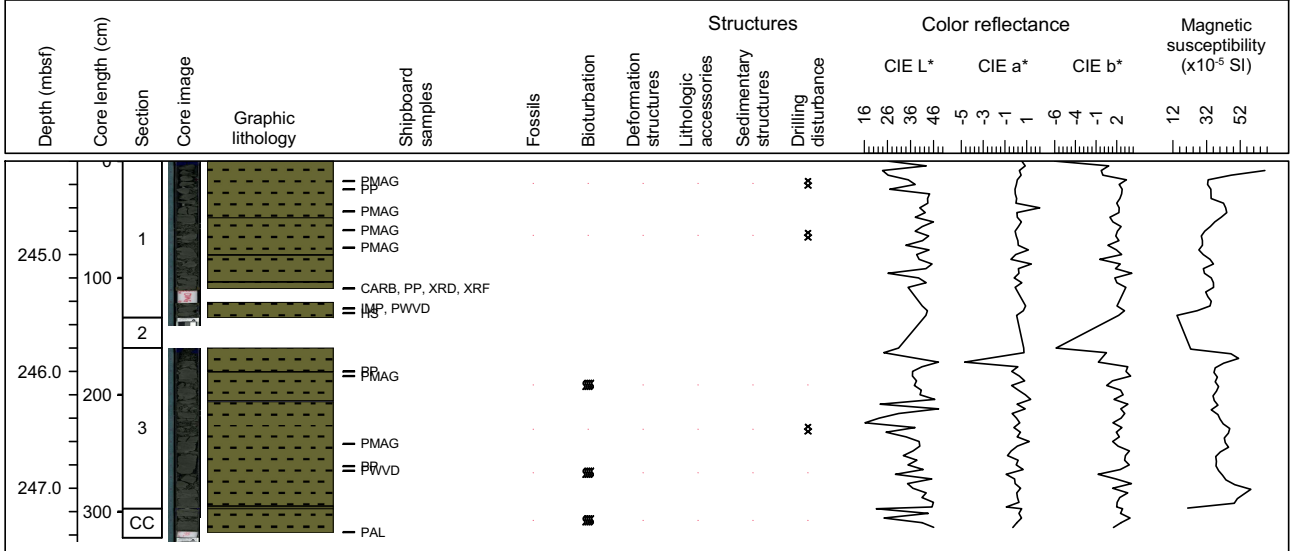
SILTY CLAYSTONE & FINE TUFF
Major lithology: Green-gray silty claystone
Minor lithology: Dark gray clayey siltstone, Green-gray fine tuff, Green silty claystone layers (<1cm thick), calcareous CLAYSTONESTONEstone filled burrows
Bioturbation is intense in silty claystones.



Core Photo

Hole C0012A Core 22R, interval 244.2-247.425 m (core depth below seafloor)

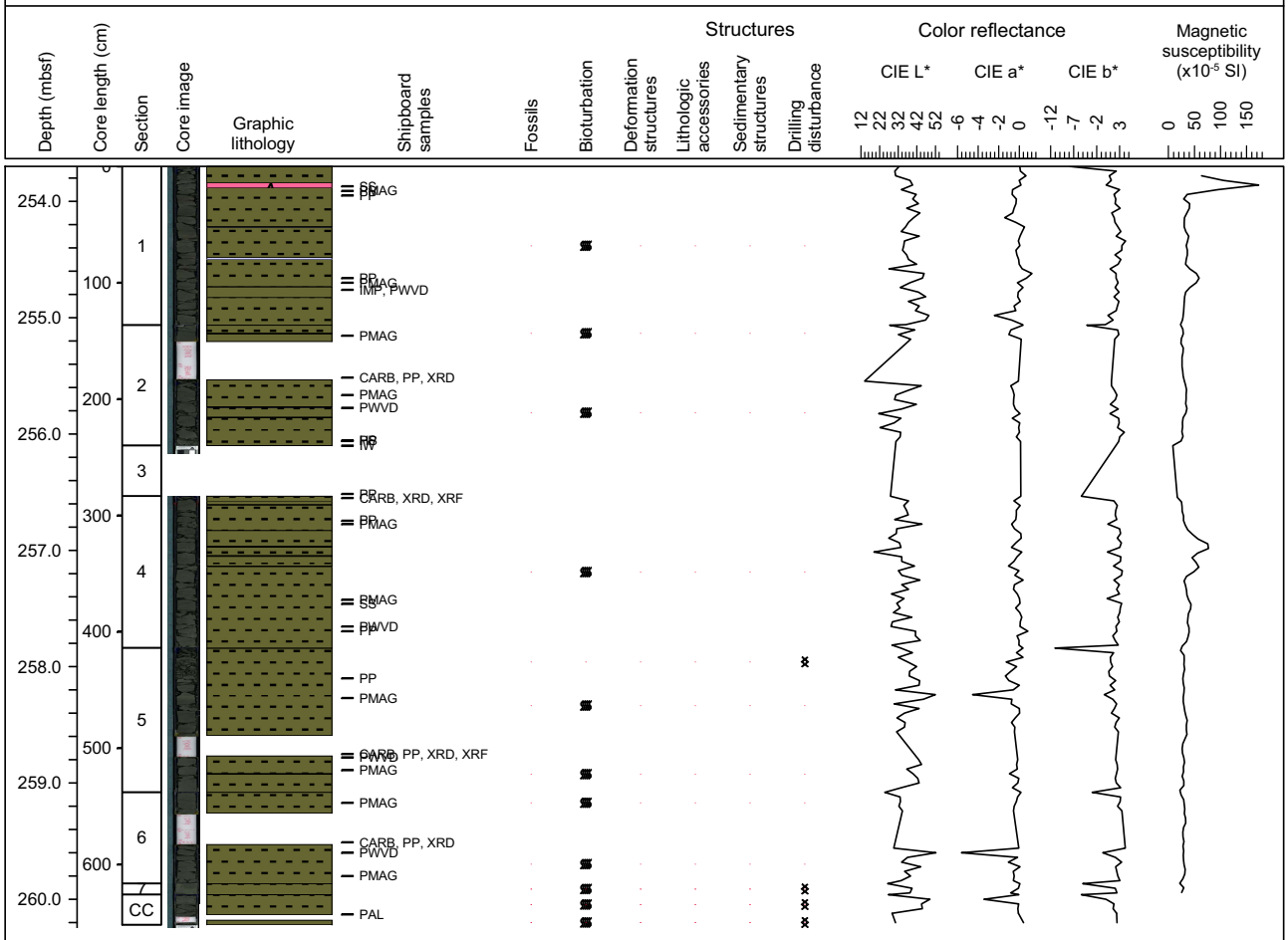
SILTY CLAYSTONE
Major lithology: Green-gray silty claystone
Minor lithology: Green silty claystone layers (<1cm thick)
Bedding plane is steeply inclined (~40 degree).
Bioturbation is intense.



Core Photo

Hole C0012A Core 23R, interval 253.7-260.22 m (core depth below seafloor)

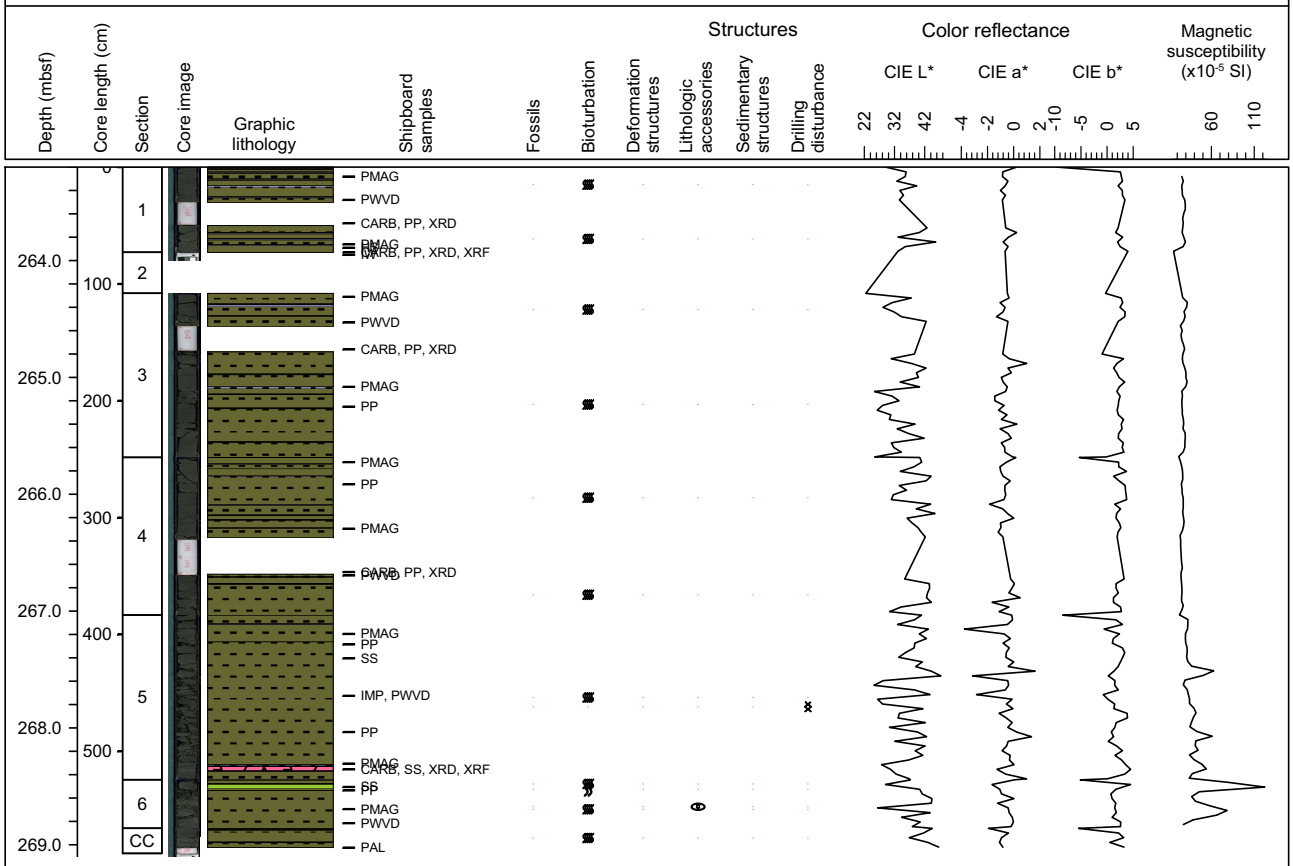
SILTY CLAYSTONE
Major lithology: Green-gray silty claystone
Minor lithology: Green silty claystone layers (<1cm thick), Ochre calcareous claystone filled burrows
Bedding plane is steeply inclined (~40 degree).
Bioturbation is intense.



Core Photo

Hole C0012A Core 24R, interval 263.2-269.075 m (core depth below seafloor)

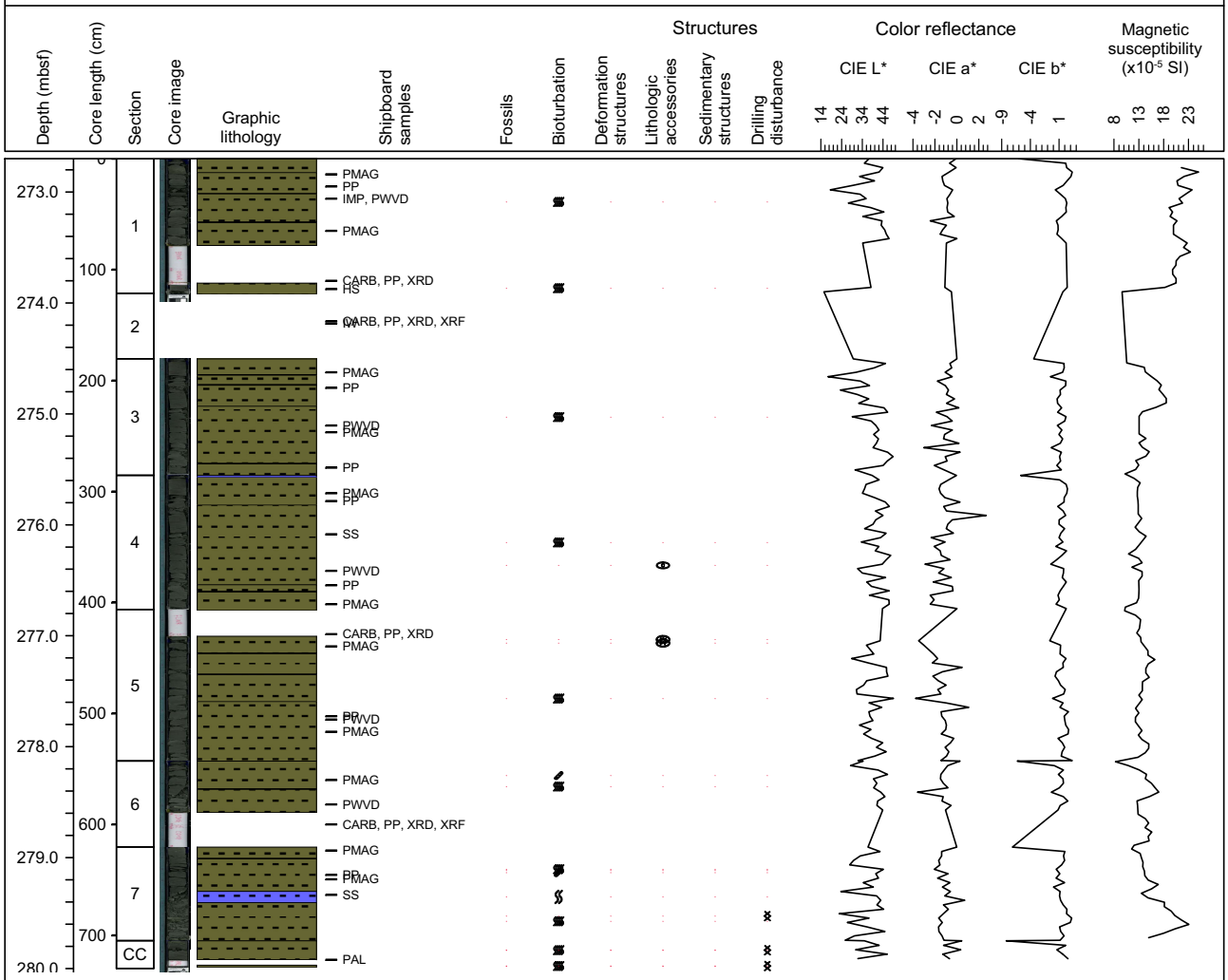
SILTY CLAYSTONESTONESTONE
Major lithology: Green-gray silty claystone
Minor lithology: Green silty claystone layers (<1cm thick), Ochre calcareous claystone filled burrows
Bedding plane is steeply inclined (~40 degree).
Bioturbation is intense.



Core Photo

Hole C0012A Core 25R, interval 272.7-280 m (core depth below seafloor)

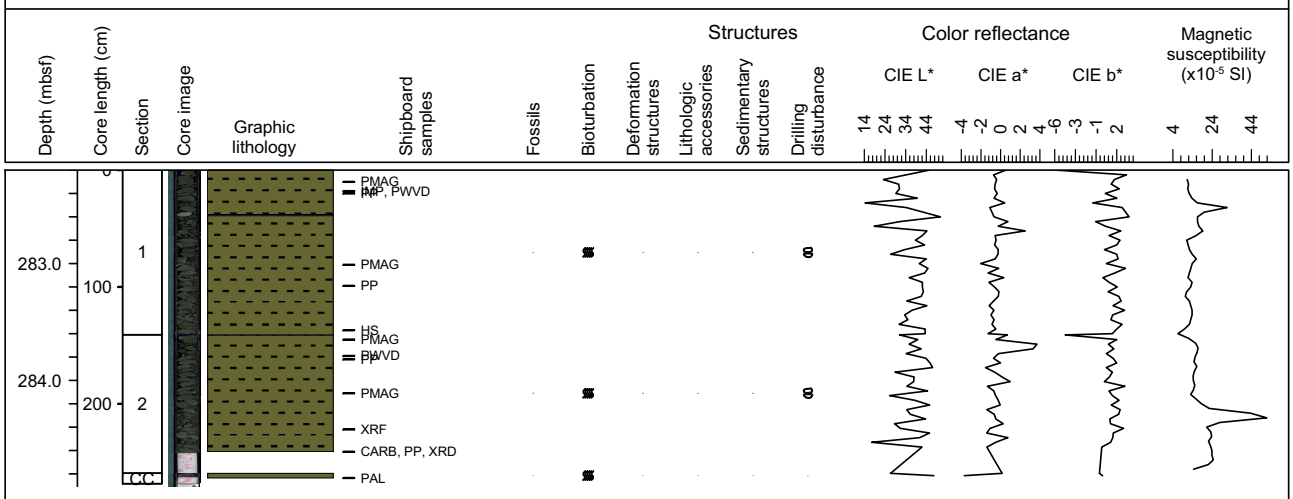
SILTY CLAYSTONE
Major lithology: Green-gray silty claystone
Minor lithology: Green silty claystone layers (<1cm thick), Lime-mudstone, Ochre calcareous claystone filled burrows
Bedding plane is steeply inclined (~40 degree).
Bioturbation is intense.



Core Photo

Hole C0012A Core 26R, interval 282.2-284.885 m (core depth below seafloor)

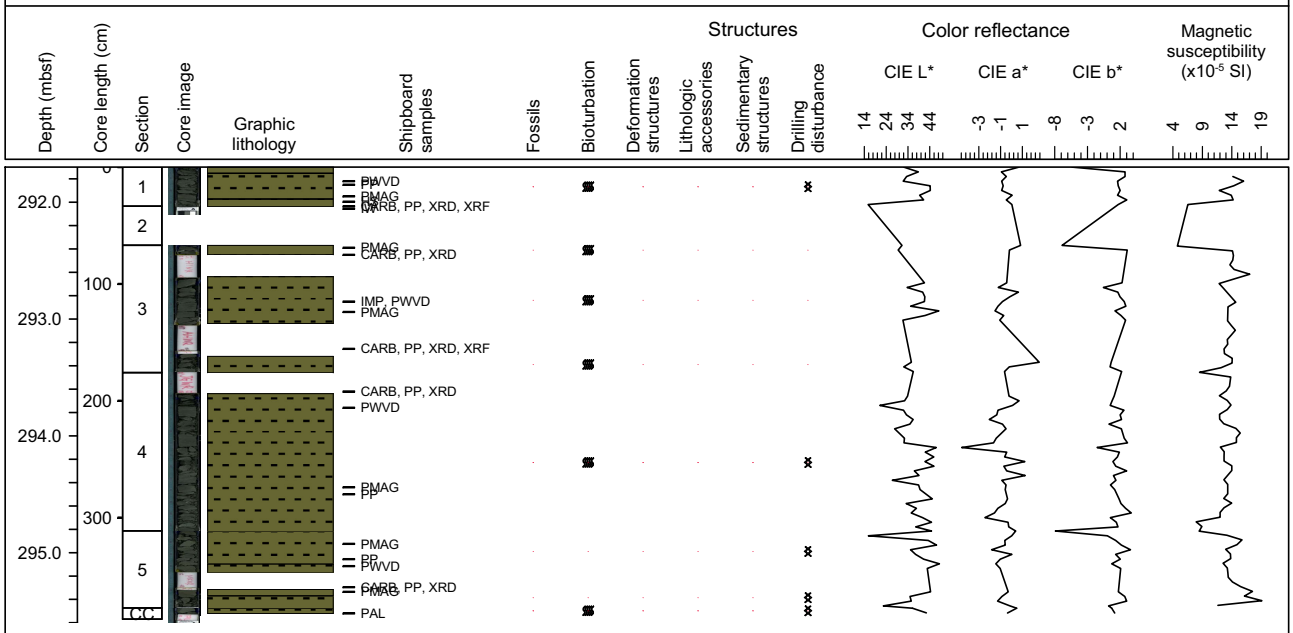
SILTY CLAYSTONE
Major lithology: Green-gray silty claystone
Minor lithology: Lime-mudstone
Bedding plane appears to be inclined steeply, although drilling disturbance is too intense to dinstinguish original inclination of bedding planes.
Bioturbation is intense.



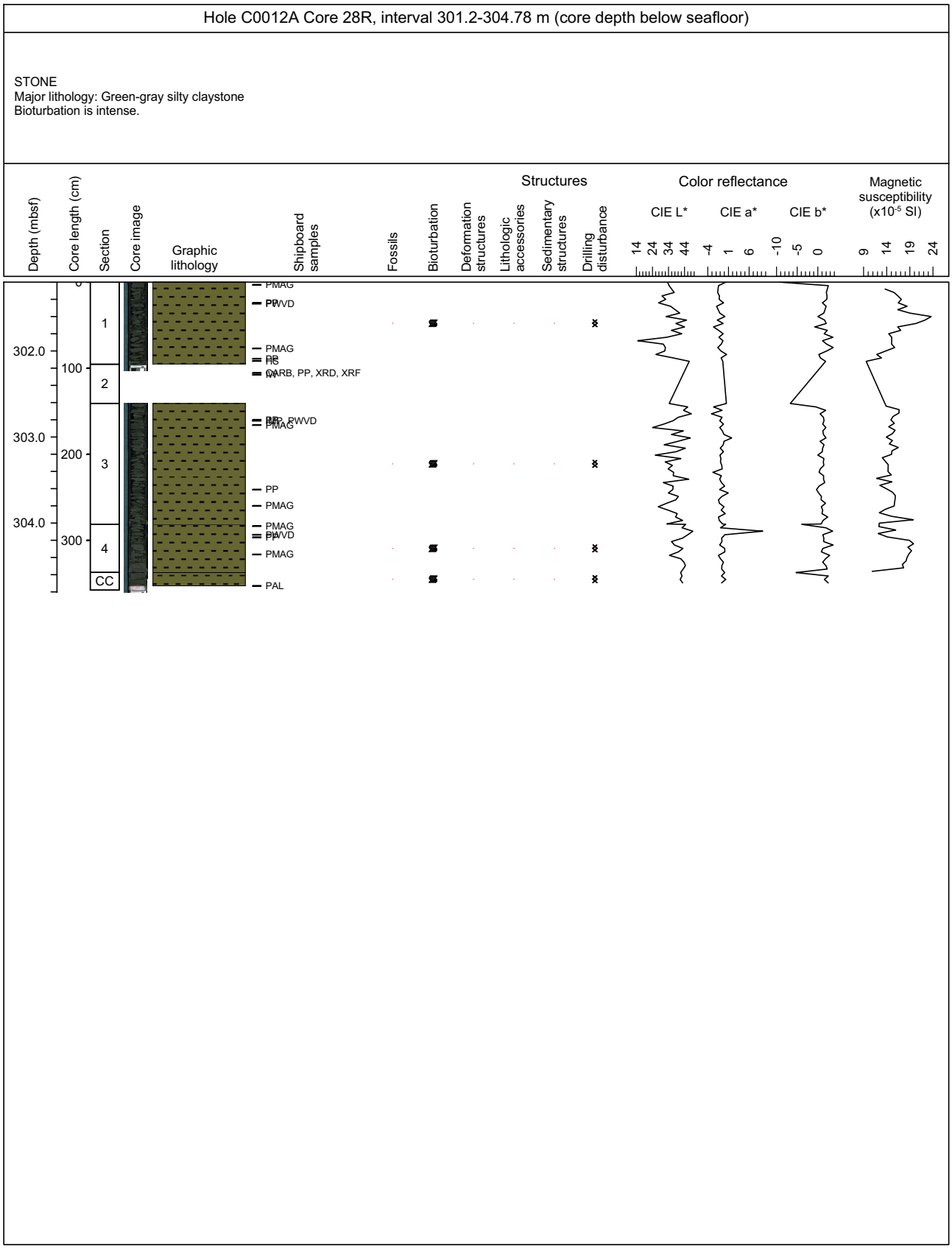
Core Photo

Hole C0012A Core 27R, interval 291.7-295.57 m (core depth below seafloor)

SILTY CLAYSTONE
Major lithology: Green-gray silty claystone
Minor lithology: Green silty claystone layers (<1cm thick)
Bioturbation is intense.



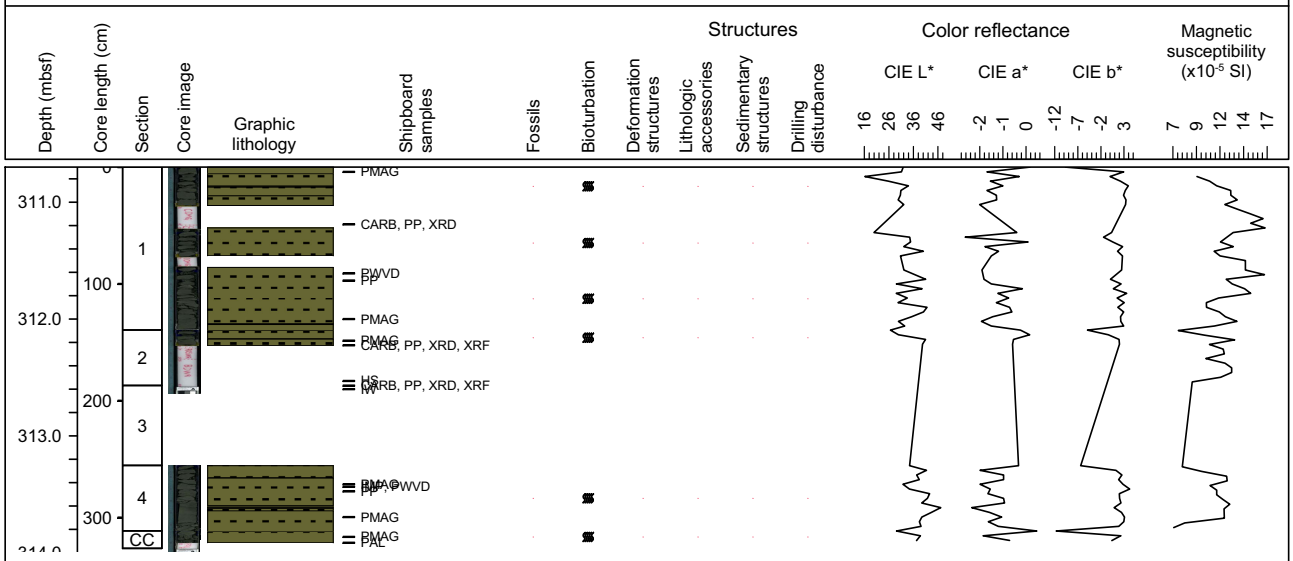
Core Photo


Hole C0012A Core 28R, interval 301.2-304.78 m (core depth below seafloor)
STONE
Major lithology: Green-gray silty claystone
Bioturbation is intense.
Depth (mbsf)
Core length (cm)
Section
Core image
Graphic lithology
Shipboard samples
Fossils
Bioturbation
Structures
Deformation structures
Lithologic accessories
Sedimentary structures
Drilling disturbance
Color reflectance
CIE L*
CIE a*
CIE b*
Magnetic susceptibility (x10-5 SI)
302.0
303.0
304.0
100
200
300
1
2
3
4
CC
PMAG
PP
PWVD
CARB, PP, XRD, XRF
PAL

Core Photo

Hole C0012A Core 29R, interval 310.7-313.965 m (core depth below seafloor)

SILTY CLAYSTONE
Major lithology: Green-gray silty claystone
Minor lithology: Green silty claystone layers (<1cm thick)
Bioturbation is intense.

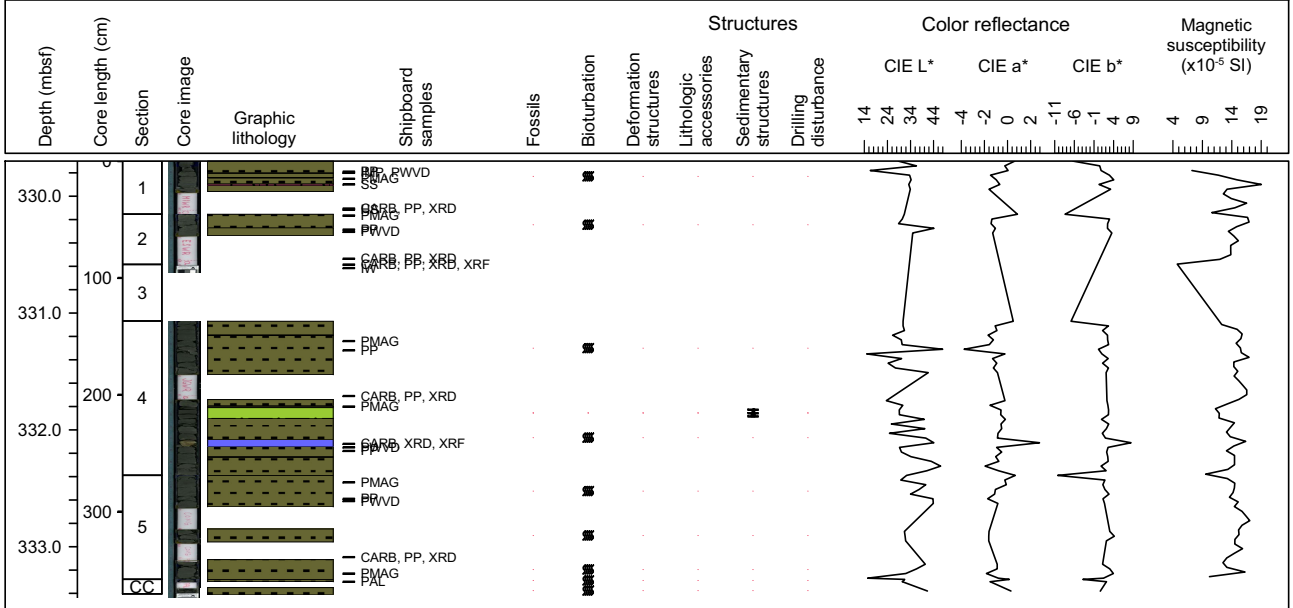


C0012A-30R NO RECOVERY

Core Photo

Hole C0012A Core 31R, interval 329.7-333.405 m (core depth below seafloor)

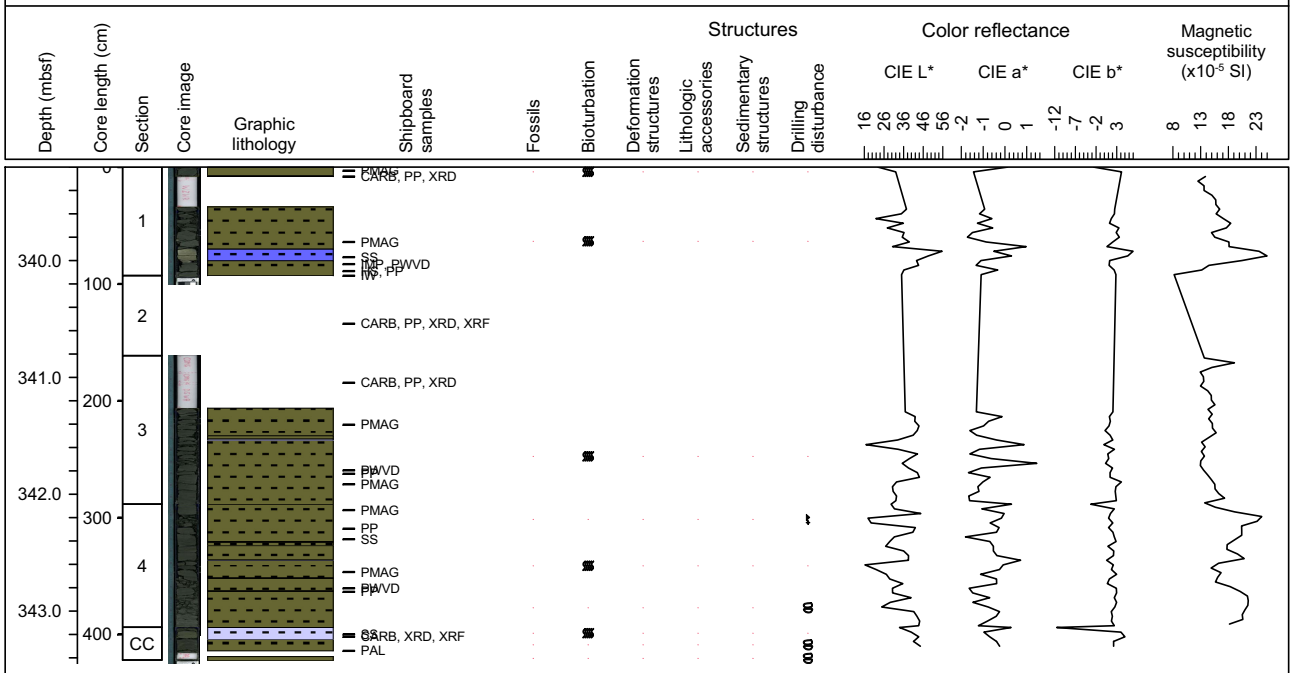
SILTY CLAYSTONE
Major lithology: Green-gray silty claystone
Minor lithology: Green-gray clayey siltstone, Green silty claystone layers (<1cm thick), Lime-mudstone
Bioturbation is intense.



Core Photo

Hole C0012A Core 32R, interval 339.2-343.42 m (core depth below seafloor)

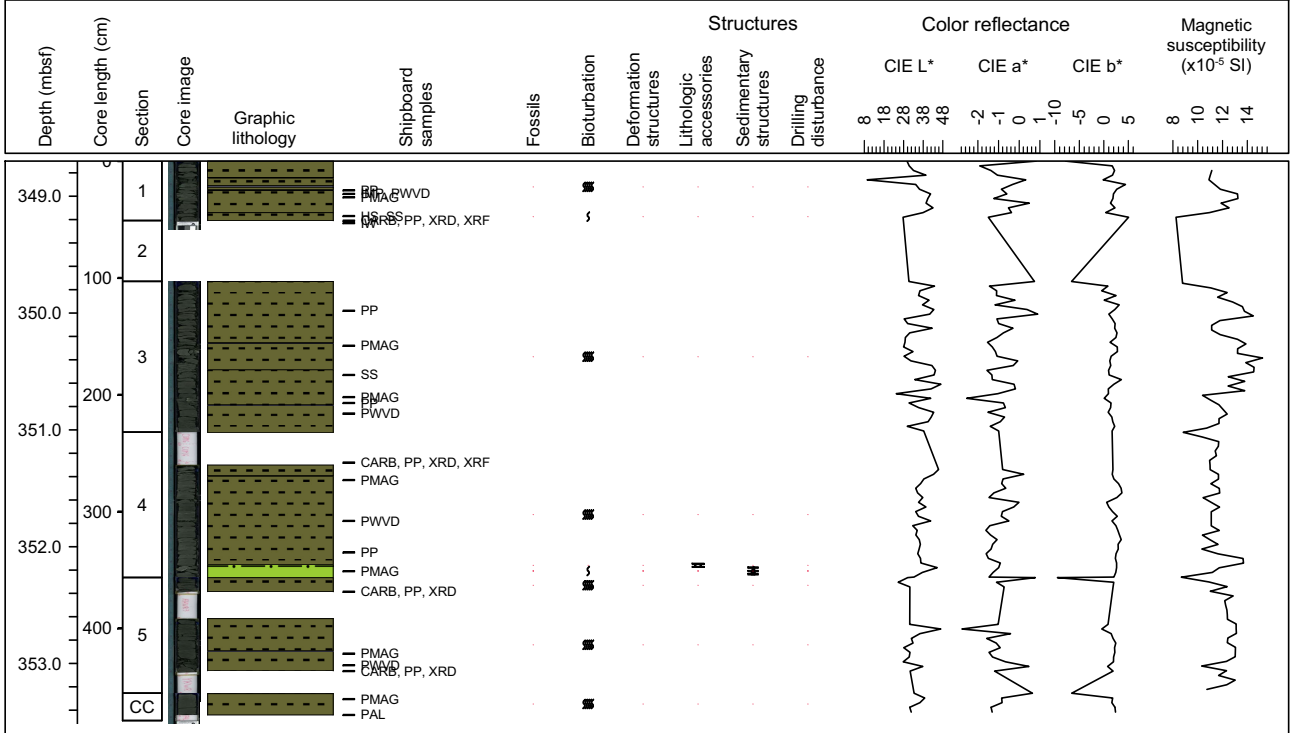
SILTY CLAYSTONE & CALCAREOUS CLAYSTONE
Major lithology: Green-gray silty claystone
Minor lithology: Green silty claystone layers (<1cm thick), Lime-mudstone, Ochre calcareous claystone filled burrows, Light green-gray calcareous claystone
Bioturbation is intense.



Core Photo

Hole C0012A Core 33R, interval 348.7-353.49 m (core depth below seafloor)

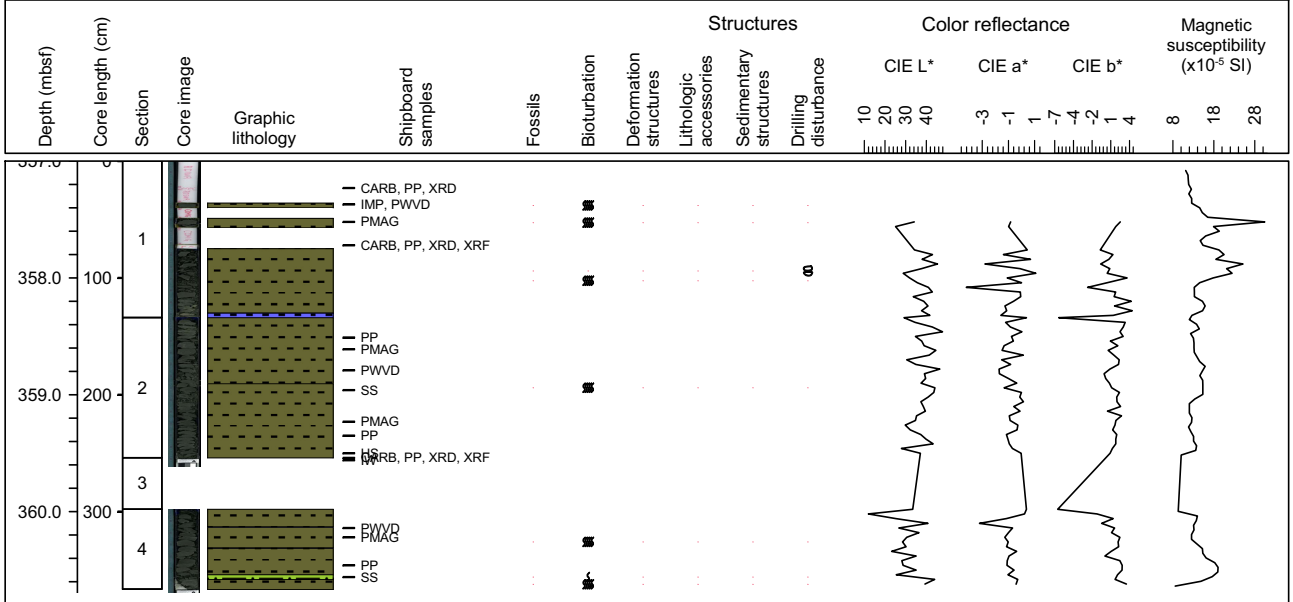
SILTY CLAYSTONE & CLAYEY SILTSTONE
Major lithology: Green-gray silty claystone
Minor lithology: Laminated and Green-gray clayey siltstone, Green silty claystone layers (<1cm thick), Ochre calcareous claystone filled burrows
Bioturbation is intense in silty claystones, slight in clayey siltstones.



Core Photo

Hole C0012A Core 34R, interval 357-360.665 m (core depth below seafloor)

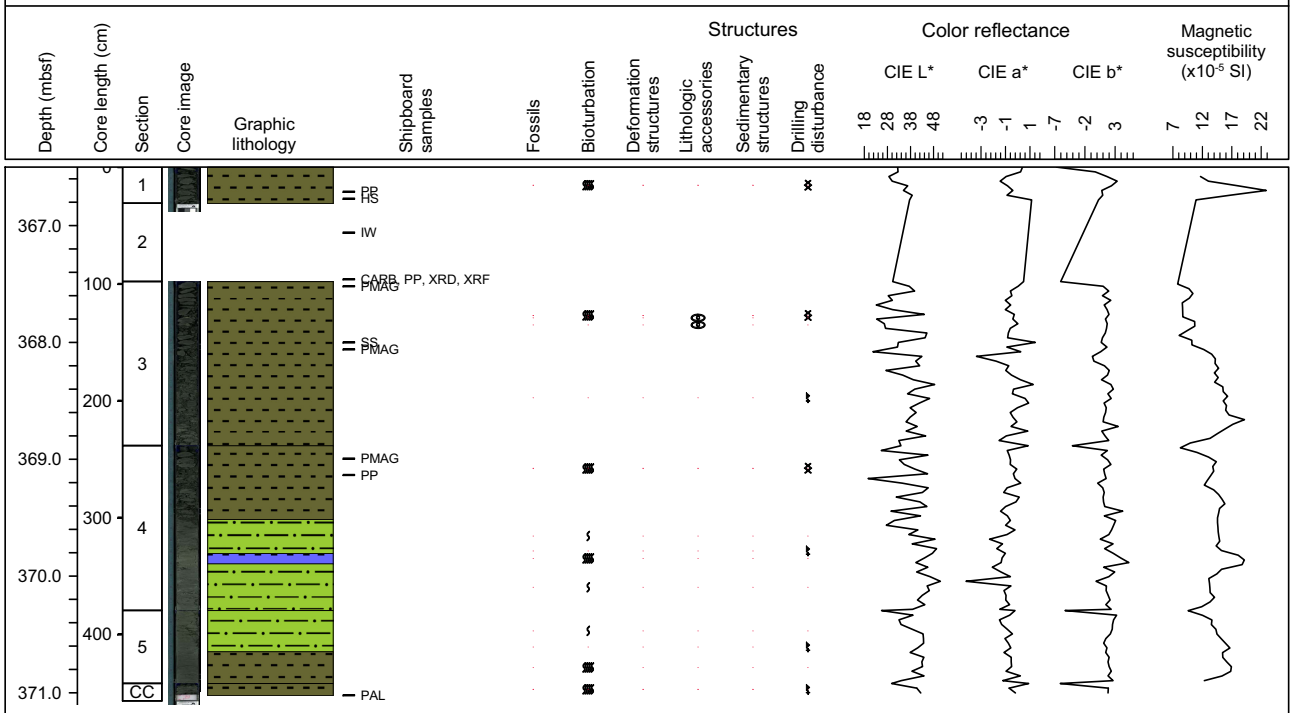
SILTY CLAYSTONE
Major lithology: Green-gray silty claystone
Minor lithology: Lime-mudstone, Dark gray clayey siltstone, Ochre calcareous claystone filled burrows, Green silty claystone layers (<1cm thick)
Bioturbation is intense.



Core Photo

Hole C0012A Core 35R, interval 366.5-371.07 m (core depth below seafloor)

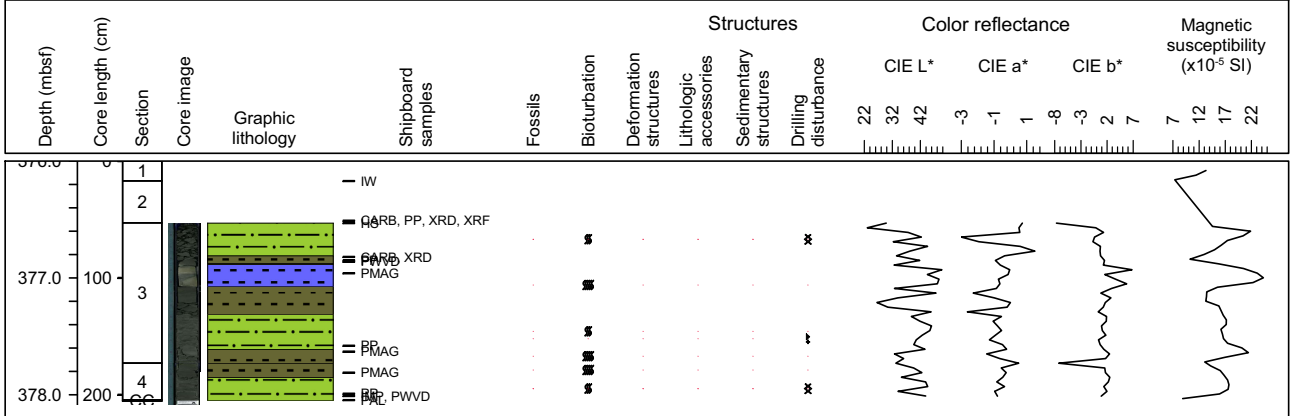
SILTY CLAYSTONE & CLAYEY SILTSTONE
Major lithology: Green-gray silty claystone
Minor lithology: Dark gray clayey siltstone, Lime-mudstone filled burrows.
Bioturbation is intense in silty claystones, slight in clayey siltstones.
Drilling disturbance is intense.



Core Photo

Hole C0012A Core 36R, interval 376-378.055 m (core depth below seafloor)

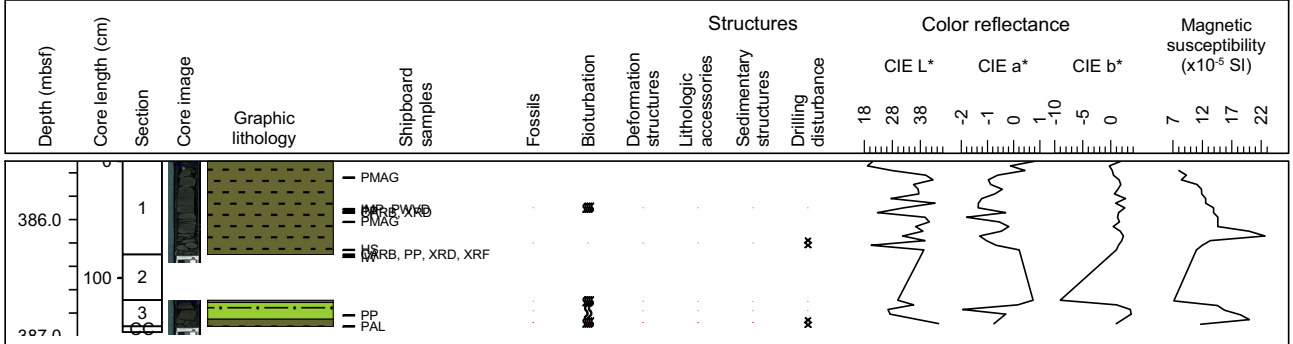
SILTY CLAYSTONE, CLAYEY SILTSTONE & LIME MUDSTONE
Major lithology: Green-gray silty claystone
Minor lithology: Green-gray clayey siltstone, Lime-mudstone
Bioturbation is intense in silty claystones, moderate in clayey siltstones.



Core Photo

Hole C0012A Core 37R, interval 385.5-386.965 m (core depth below seafloor)

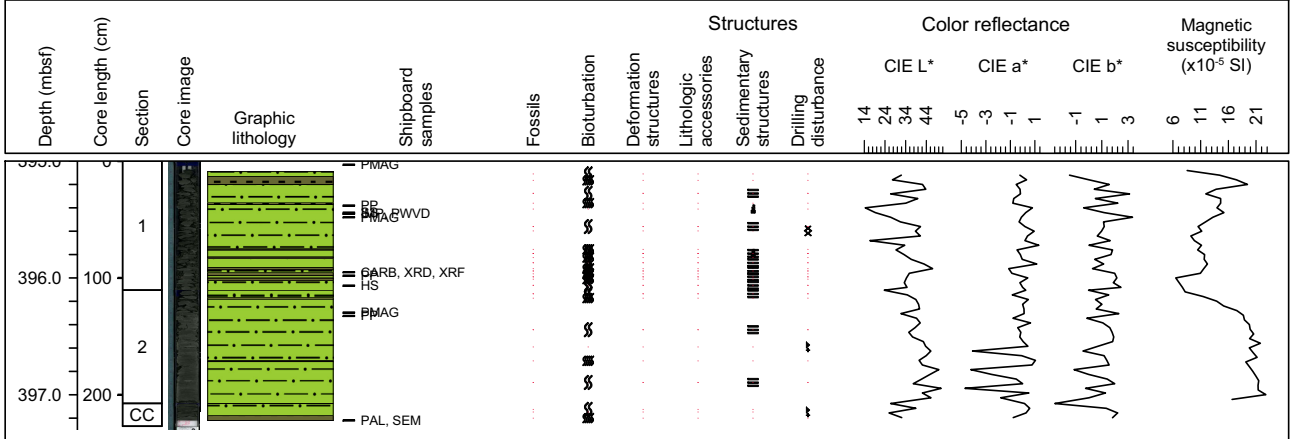
SILTY CLAYSTONE
Major lithology: Green-gray silty claystone
Minor lithology: Dark gray clayey siltstone
Bioturbation is intense in silty claystones, slight in clayey siltstones.



Core Photo

Hole C0012A Core 38R, interval 395-397.27 m (core depth below seafloor)

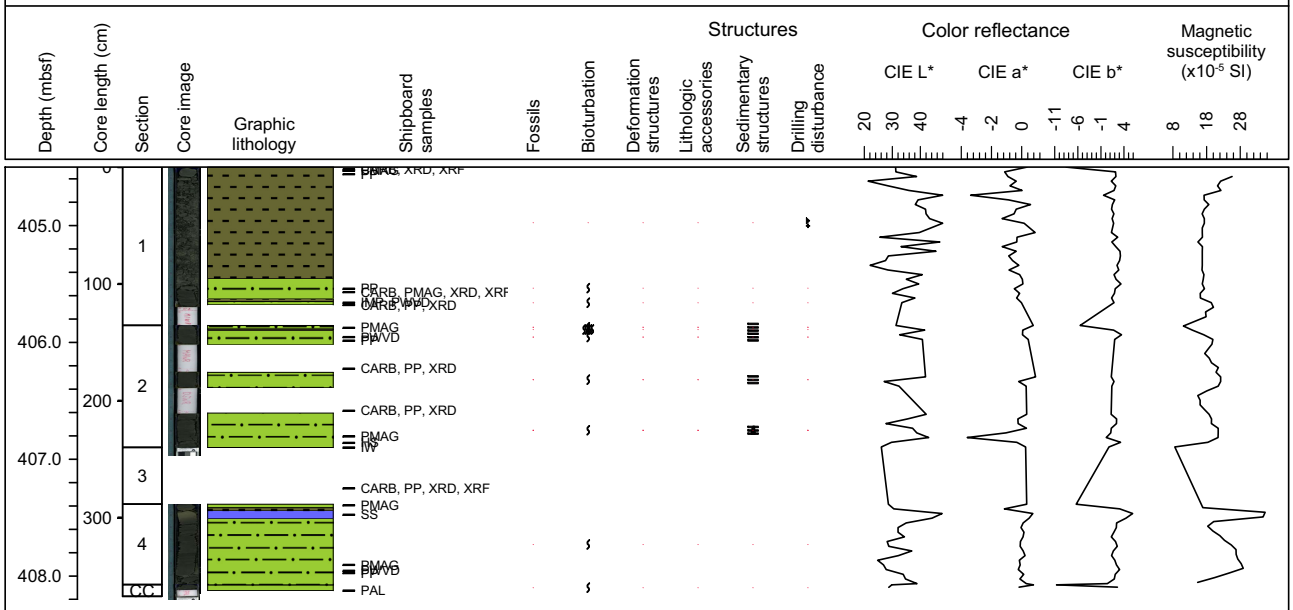
CLAYEY SILTSTONE & SILTY CLAYSTONE
Major lithology: Dark gray clayey siltstone
Minor lithology: Green-gray silty claystone
Bioturbation is slight in silty claystones and intense in clayey siltstones.



Core Photo

Hole C0012A Core 39R, interval 404.5-408.175 m (core depth below seafloor)

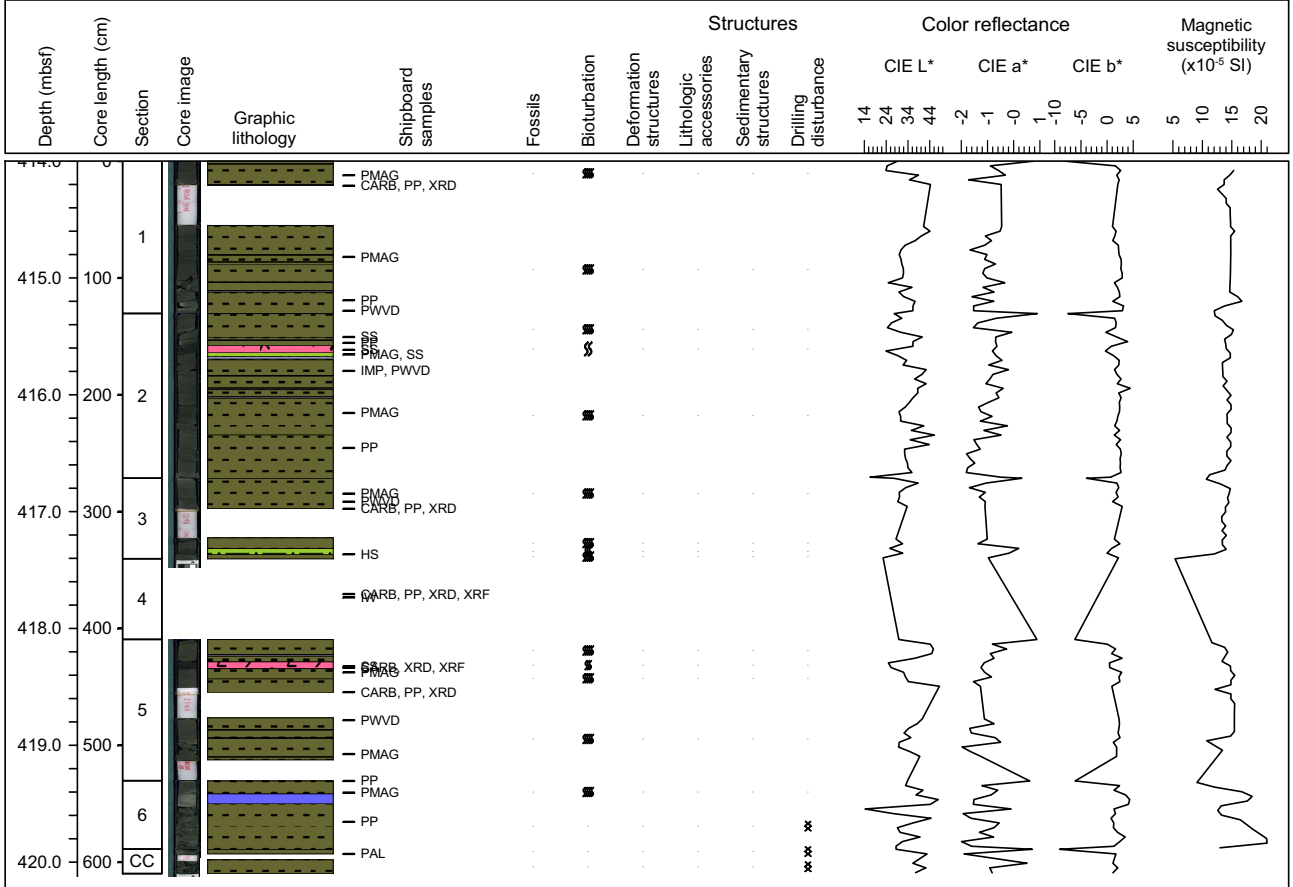
CLAYEY SILTSTONE & SILTY CLAYSTONE
Major lithology: Laminated dark gray clayey siltstone
Minor lithology: Green-gray silty claystone, Calcareous clayey siltstone
Bioturbation is slight.



Core Photo

Hole C0012A Core 40R, interval 414-420.1 m (core depth below seafloor)

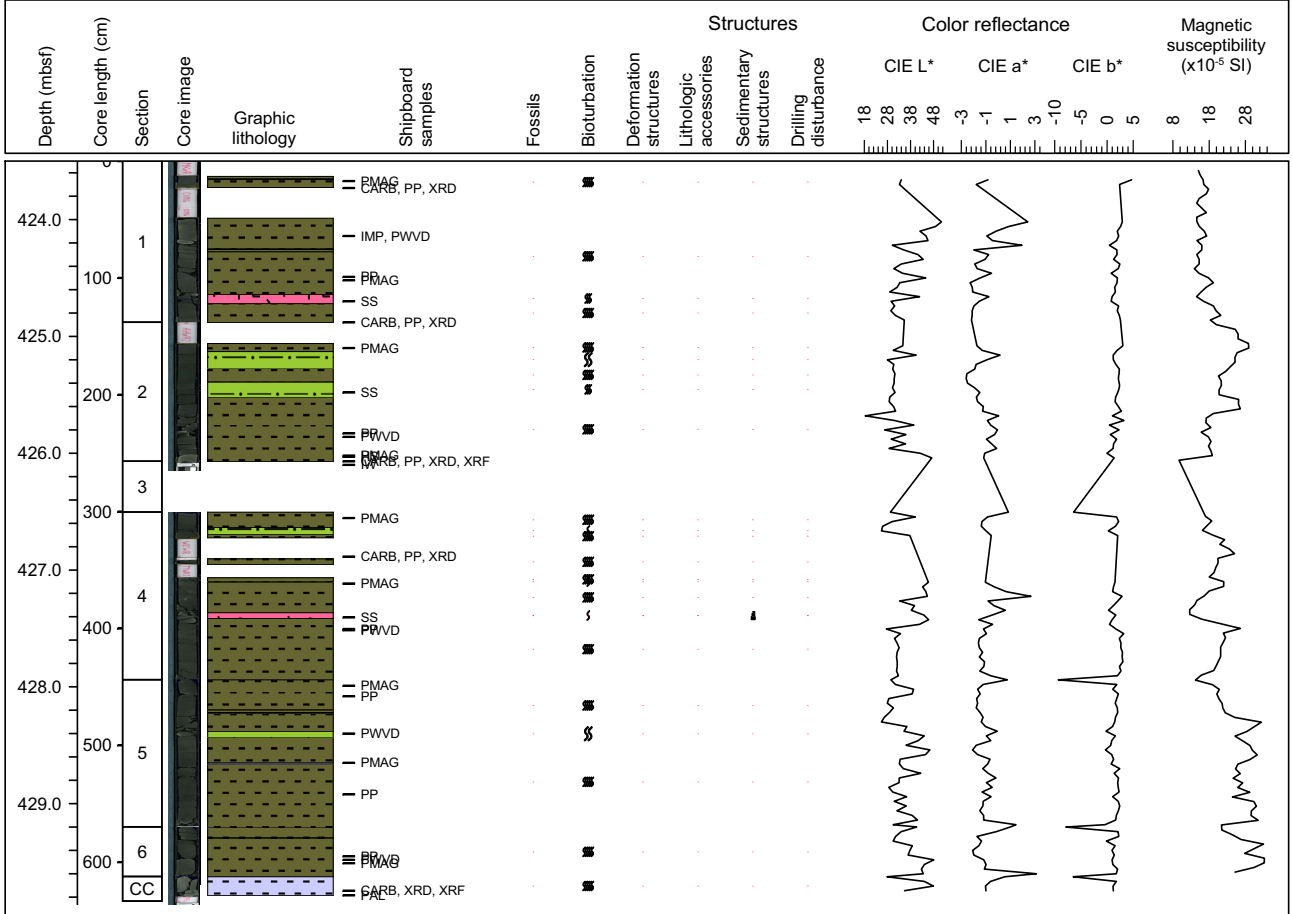
SILTY CLAYSTONE & CLAYEY SILTSTONE
Major lithology: Green-gray silty claystone
Minor lithology: Dark gray clayey siltstone, Green silty claystone layers (<1 cm), Ochre calcareous claystone filled burrows, Lime-mudstone, fine tuff
Bioturbation is intense in silty claystones and moderate in other lithologies.



Core Photo

Hole C0012A Core 41R, interval 423.5-429.835 m (core depth below seafloor)

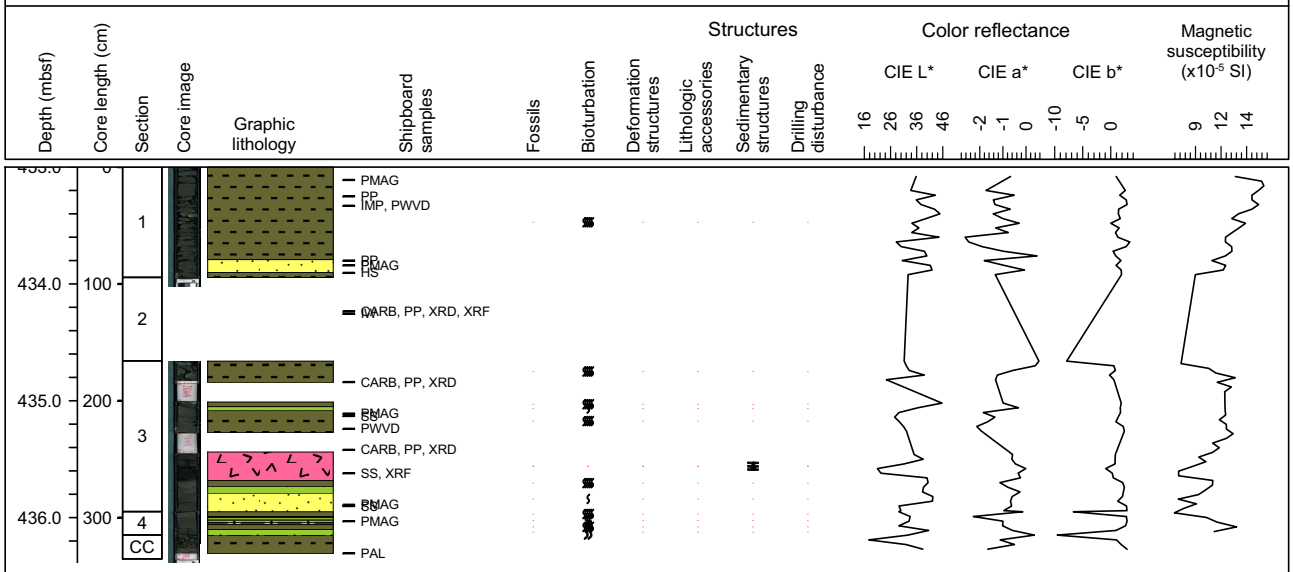
SILTY CLAYSTONESTONE & CLAYSTONEEY SILTSTONE
Major lithology: Green-gray silty claystone
Minor lithology: Green-gray clayey siltstone, Ochre calcareous claystone filling burrows, Green-gray coarse tuff
Bioturbation is intense in silty claystones and slight to moderate in other lithologies.



Core Photo

Hole C0012A Core 42R, interval 433-436.355 m (core depth below seafloor)

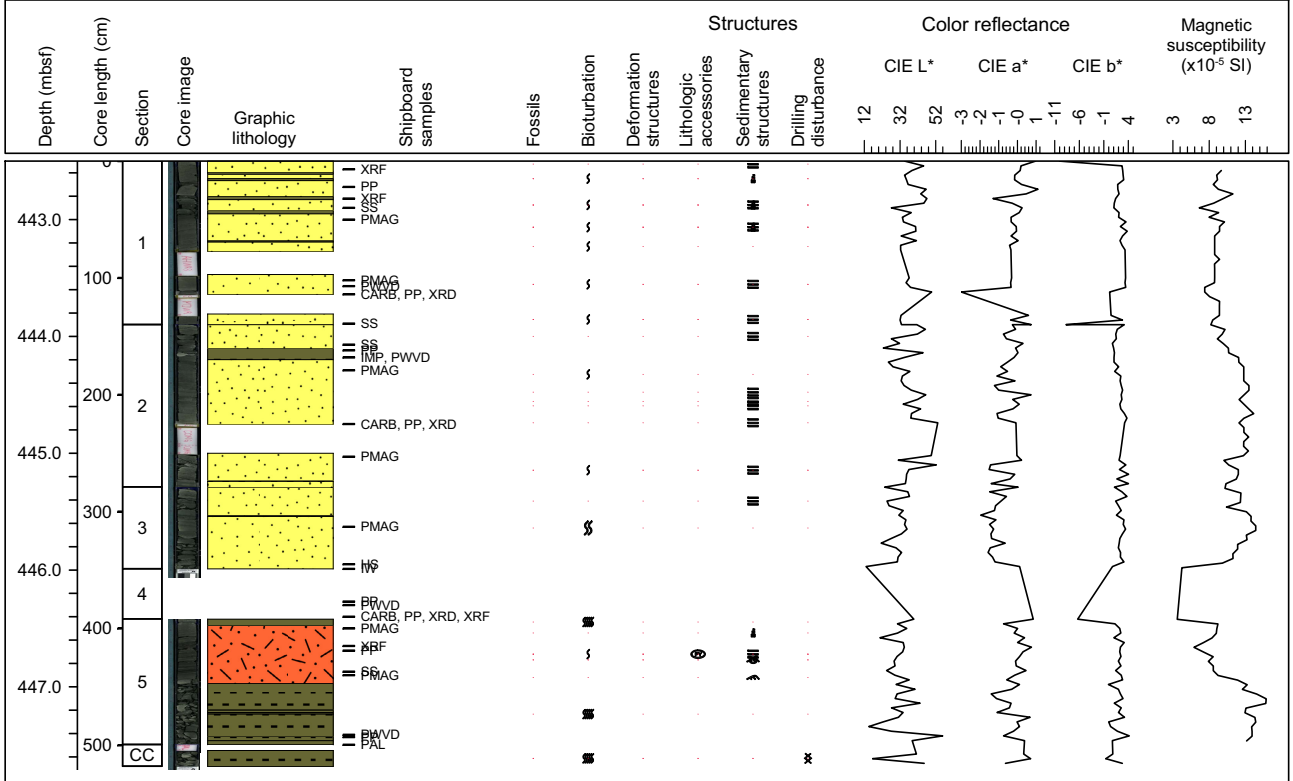
SILTY CLAYSTONE, SANDSTONE & COARSE TUFF
Major lithology: Green-gray silty claystone
Minor lithology: Dark gray clayey siltstone, Mottled green-gray sandstone, Lime-mudstone
Bioturbation is intense in silty claystones, slight to none in other lithologies.



Core Photo

Hole C0012A Core 43R, interval 442.5-447.68 m (core depth below seafloor)

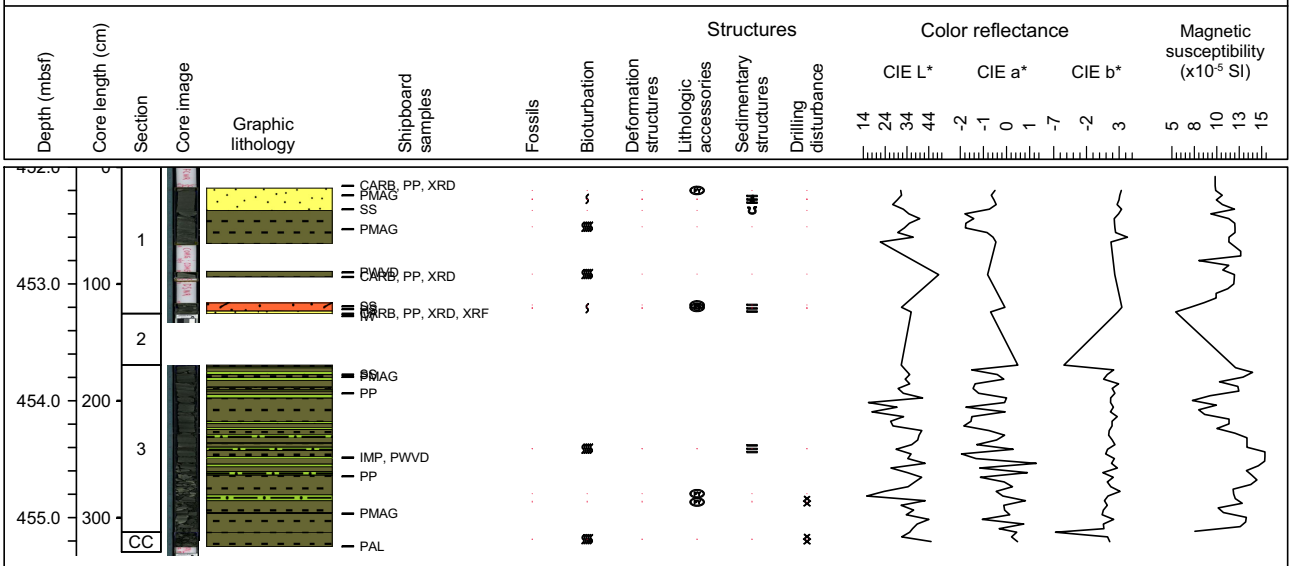
CLAYEY SILTSTONE, SANDSTONE & SILTY CLAYSTONE
Major lithology: Dark gray clayey siltstone & Laminated green-gray sandstone and volcaniclastic sandsone
Minor lithology: Green-gray silty claystone
Bioturbation is slight in all lithologies except silty claystones where it is intense.



Core Photo

Hole C0012A Core 44R, interval 452-455.295 m (core depth below seafloor)

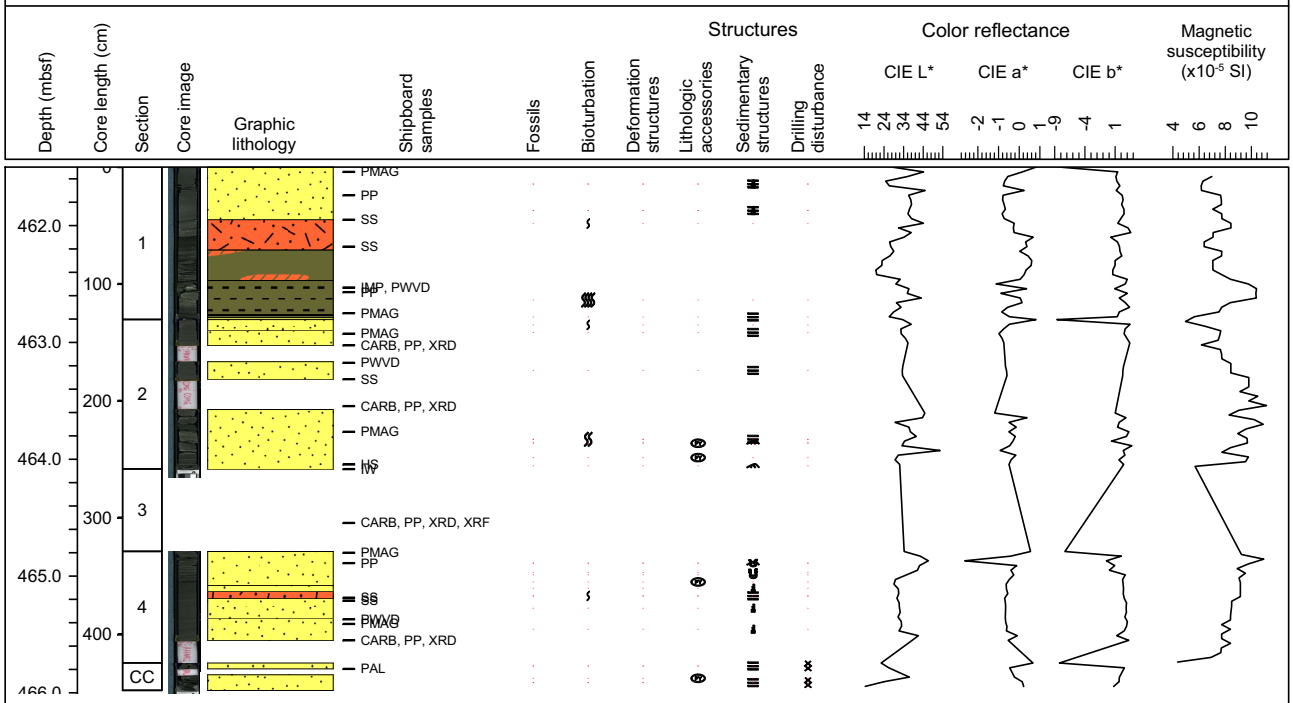
CLAYEY SILTSTONE, SANDSTONE & SILTY CLAYSTONE
Major lithology: Green-gray silty claystone
Minor lithology: Laminated dark gray fine siltstone, Laminated green-gray sandstone
Bioturbation is intense in silty claystones and slight in other lithologies.



Core Photo

Hole C0012A Core 45R, interval 461.5-465.98 m (core depth below seafloor)

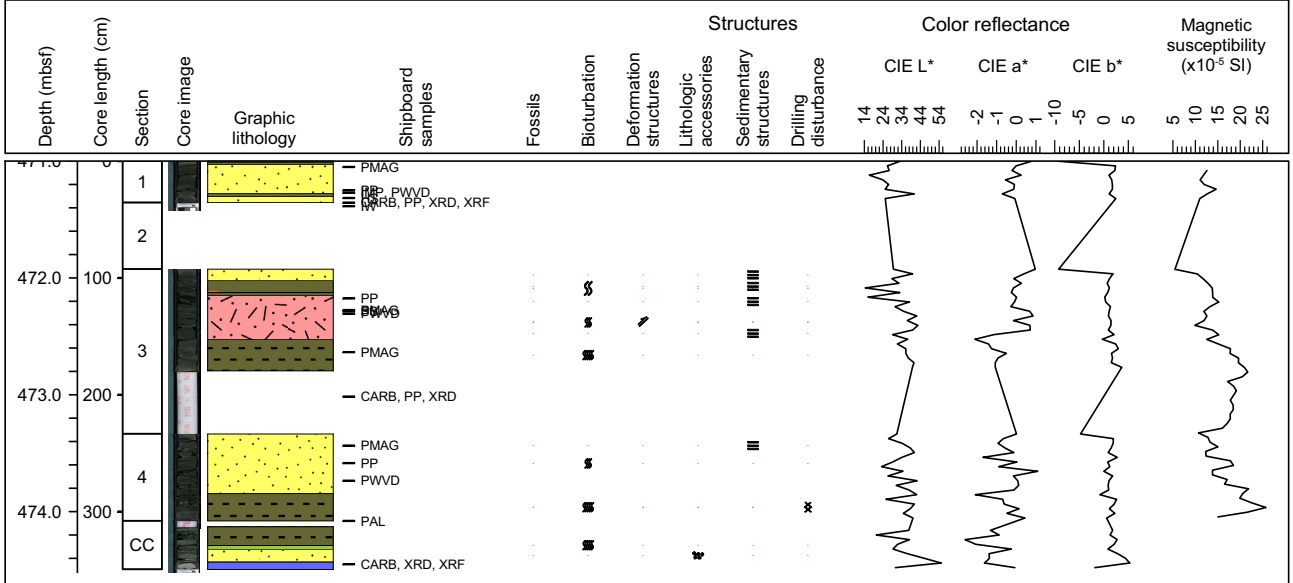
SANDSTONE, VOLCANICLASTIC SANDSTONE, SILTY CLAYSTONE & CHAOTIC DEPOSIT
Major lithology: Laminated green-gray sandstone
Minor lithology: Chaotic deposit of silty claystone and sandstone, Dark green-gray silty claystone, green-gray volcaniclastic sandstone
Bioturbation is slight to moderate.



Core Photo

Hole C0012A Core 46R, interval 471-474.495 m (core depth below seafloor)

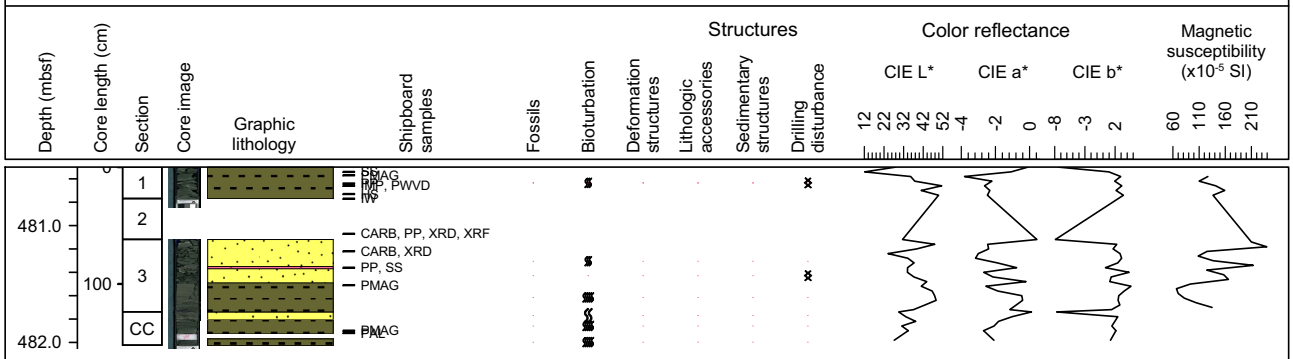
SANDSTONE, SILTY CLAYSTONESTONE, VOLCANICLASTIC SILTSTONE & CHAOTIC DEPOSIT
Major lithology: Green-gray sandstone, Dark green-gray silty claystone
Minor lithology: Volcaniclastic siltstone, Chaotic deposit of silty CLAYSTONEstone and sandstone, Mauve clayey siltstone, Lime-mudstone
Bioturbation is intense in the silty claystones and slight to moderate in the clayey siltstones.



Core Photo

Hole C0012A Core 47R, interval 480.5-482.025 m (core depth below seafloor)

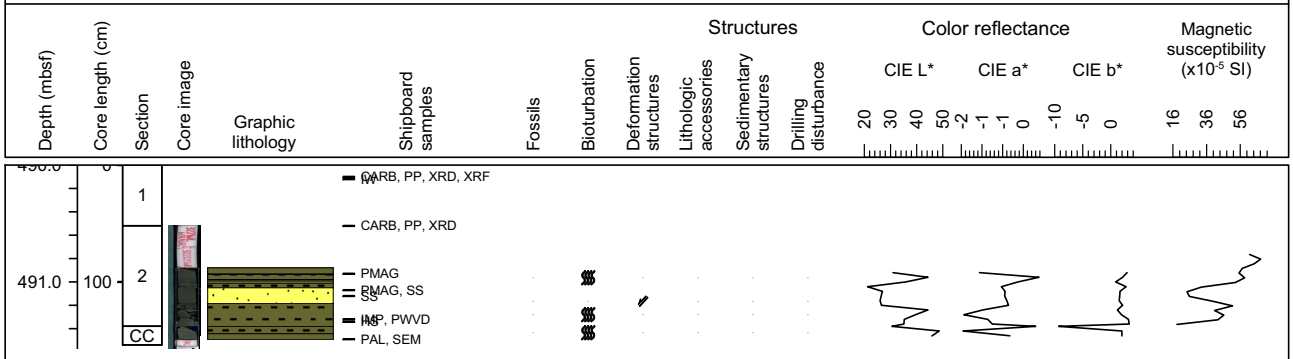
CLAYEY SILTSTONE & SANDSTONE
Major lithology: Dark green-gray silty claystone
Minor lithology: Green-gray sandstone, Black coarse tuff
Bioturbation is moderate to intense.



Core Photo

Hole C0012A Core 48R, interval 490-491.54 m (core depth below seafloor)

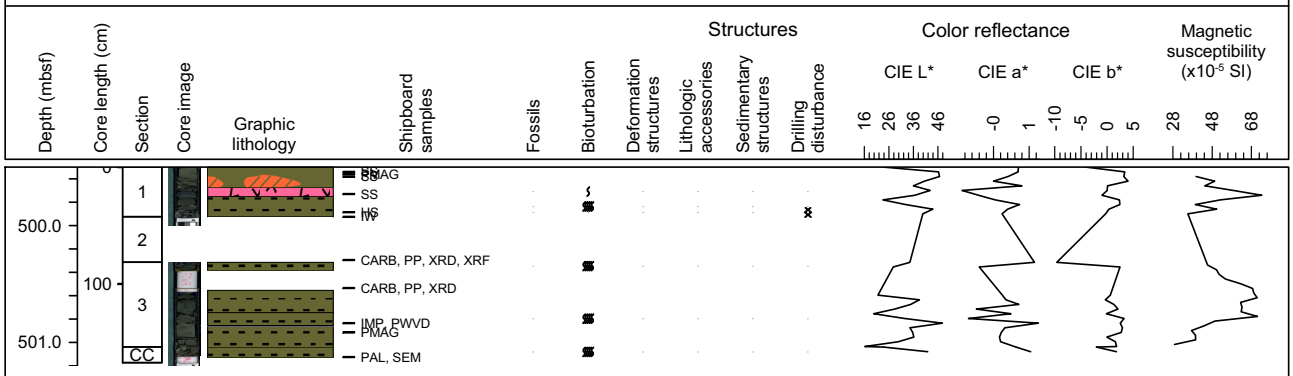
SILTY CLAYSTONE & SANDSTONE
Major lithology: Green-gray silty claystone
Minor lithology: Green-gray sandstone, Green silty claystone layers (<1 cm thick)
Bioturbation is intense.



Core Photo

Hole C0012A Core 49R, interval 499.5-501.175 m (core depth below seafloor)

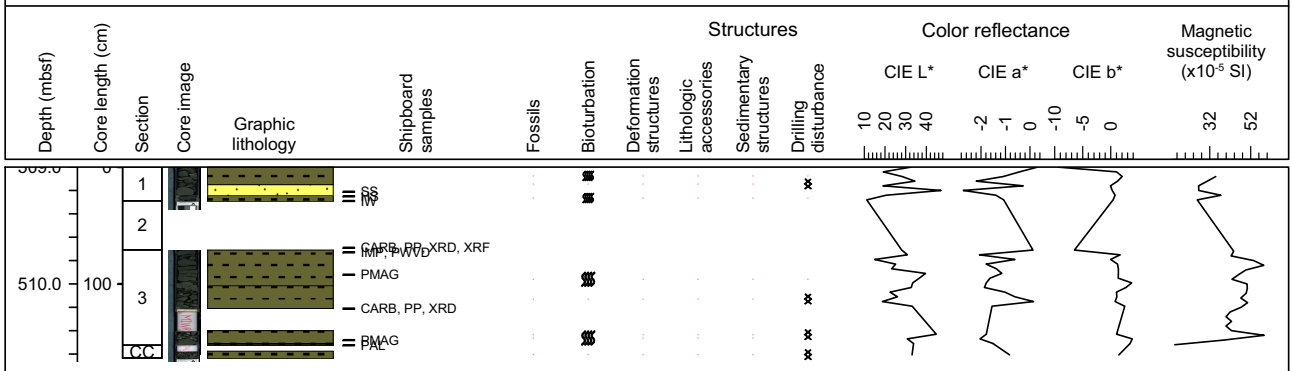
SILTY CLAYSTONE, CHAOTIC DEPOSITS & FINE TUFF
Major lithology: Green-gray silty claystone
Minor lithology: Chaotic deposits, Green-gray fine tuff, Ochre calcareous claystone filled burrows
Bioturbation is intense.



Core Photo

Hole C0012A Core 50R, interval 509-510.635 m (core depth below seafloor)

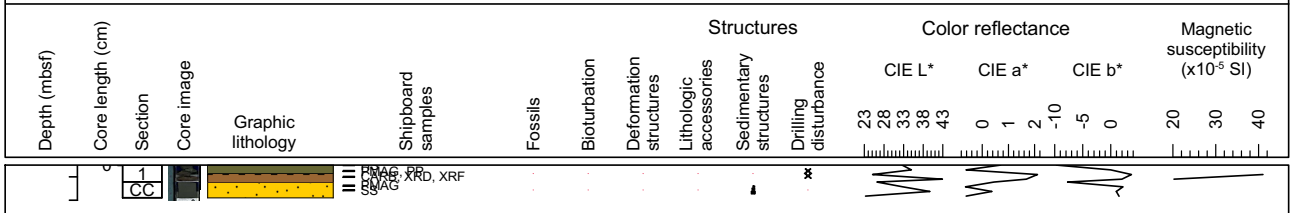
SILTY CLAYSTONE & SANDSTONE
Major lithology: Green-gray silty claystone
Minor lithology: Green-gray vsandstone, Green silty claystone layers (<1 cm thick)
Bioturbation is intense.
Drilling disturbance is intense.



Core Photo

Hole C0012A Core 51R, interval 518.5-518.78 m (core depth below seafloor)

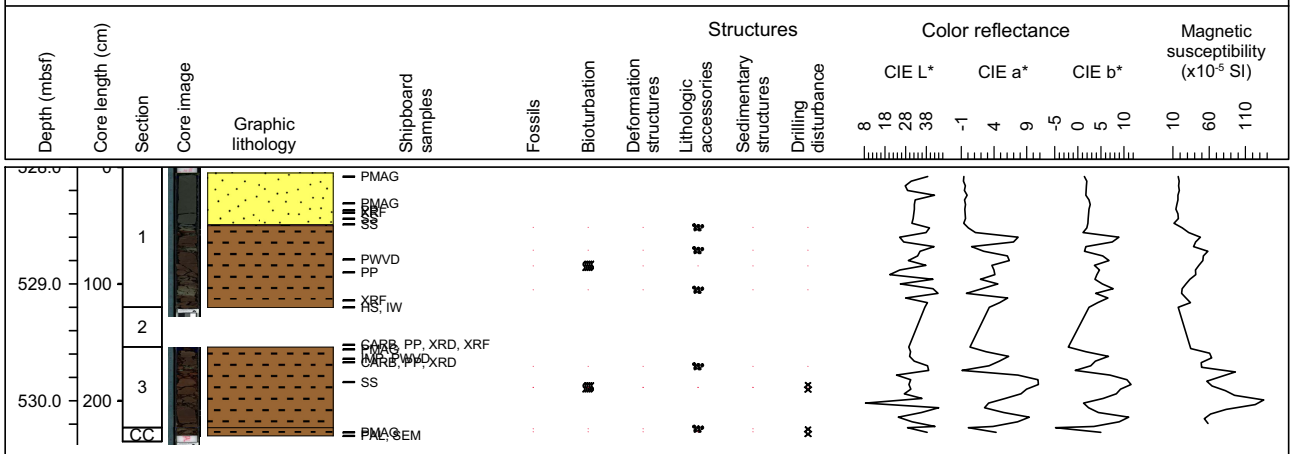
CALCAREOUS CLAYSTONE & SILTY SANDSTONE
Major lithology: Green-gray silty claystone
Minor lithology: Red calcareous claystone, Green-gray silty sandstone
Red silty claystones are intensely drilling disturbed.



Core Photo

Hole C0012A Core 52R, interval 528-530.35 m (core depth below seafloor)

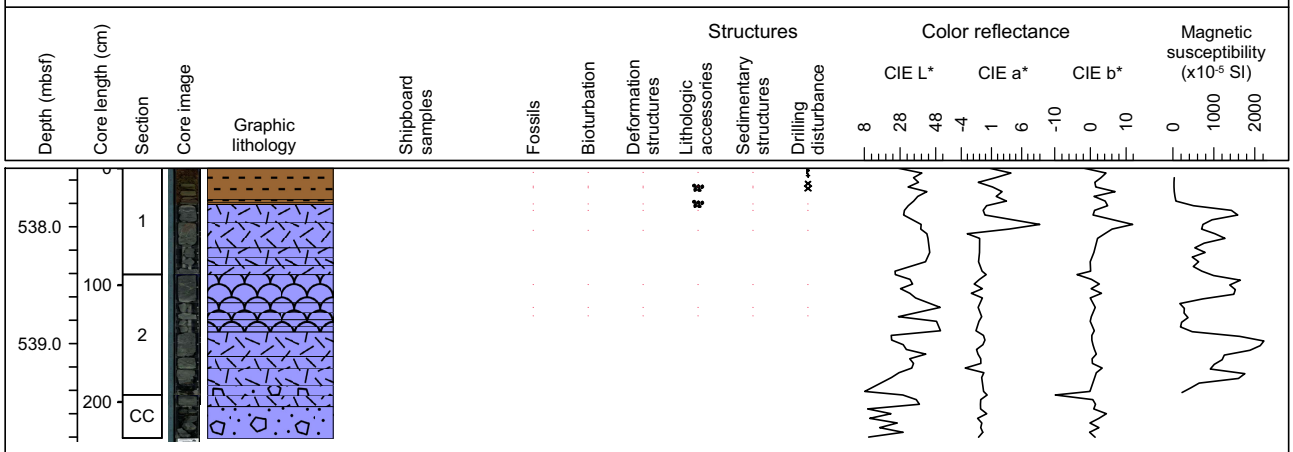
CALCAREOUS CLAYSTONESTONE & SANDSTONE
Major lithology: Red calcareous claystone
Minor lithology: Green-gray coarse sandstone
Bioturbation is intense in red calcareous claystones.
Red calcareous claystones are intensely drilling disturbed.



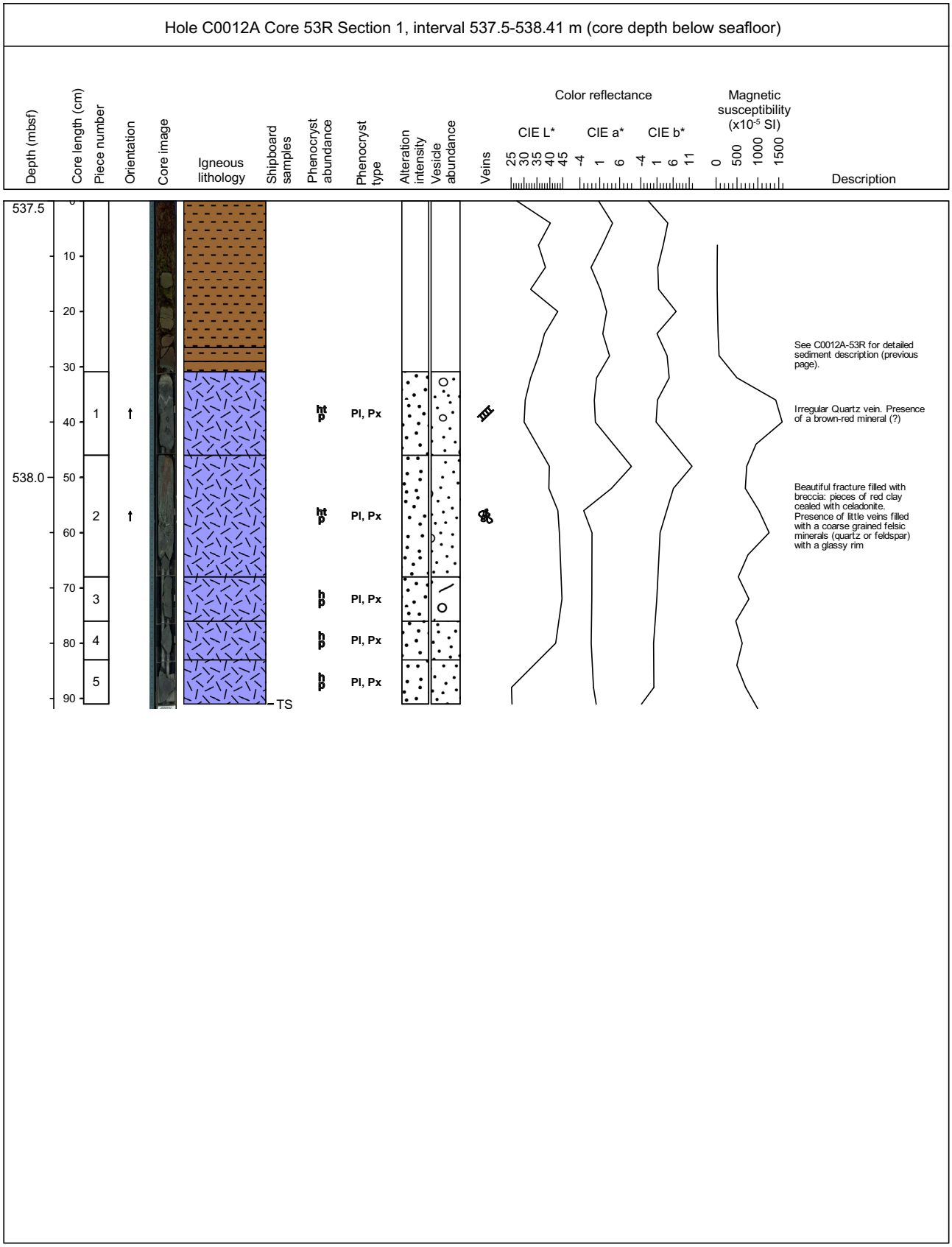
Core Photo

Hole C0012A Core 53R, interval 537.5-539.81 m (core depth below seafloor)

RED CALCAREOUS CLAYSTONESTONE & MODERATLY TO HIGHLY PLAGIOCLASE-PYROXENE PHYRIC BASALT
Major lithology: Basalt
Minor lithology: Red calcareous clalaystone

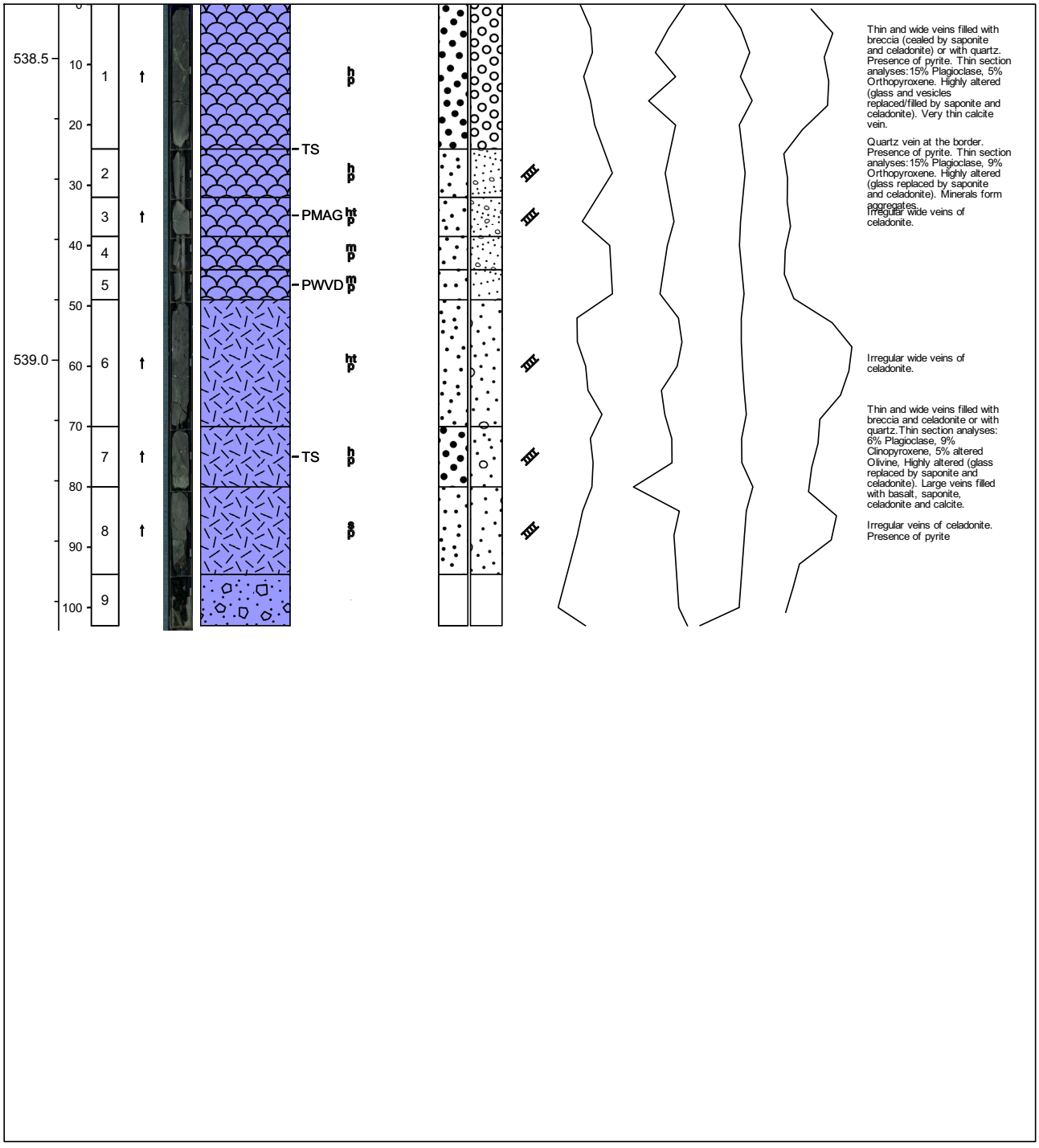


Core Photo

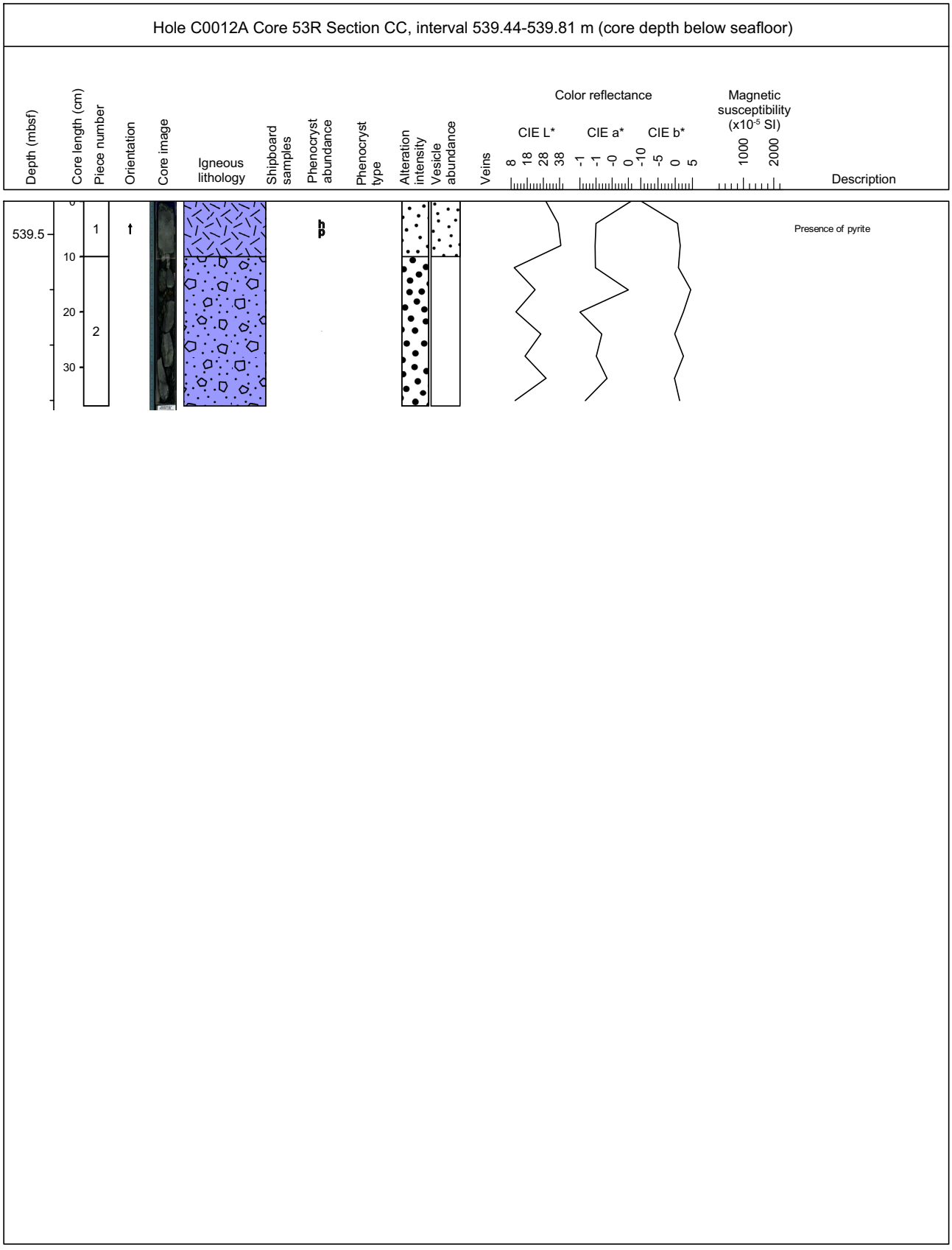

Hole C0012A Core 53R Section 1, interval 537.5-538.41 m (core depth below seafloor)
Depth (mbsf)
Core length (cm)
Piece number
Orientation
Core image
Igneous lithology
Shipboard samples
Phenocryst abundance
Phenocryst type
Alteration intensity
Vesicle abundance
Veins
Color reflectance
CIE L*
CIE a*
CIE b*
Magnetic susceptibility (x10-5 SI)
Description
537.5
538.0
Pl, Px
TS
See C0012A-53R for detailed sediment description (previous page).
Irregular Quartz vein. Presence of a brown-red mineral (?)
Beautiful fracture filled with breccia: pieces of red clay cealed with celadonite. Presence of little veins filled with a coarse grained felsic minerals (quartz or feldspar) with a glassy rim

Core Photo

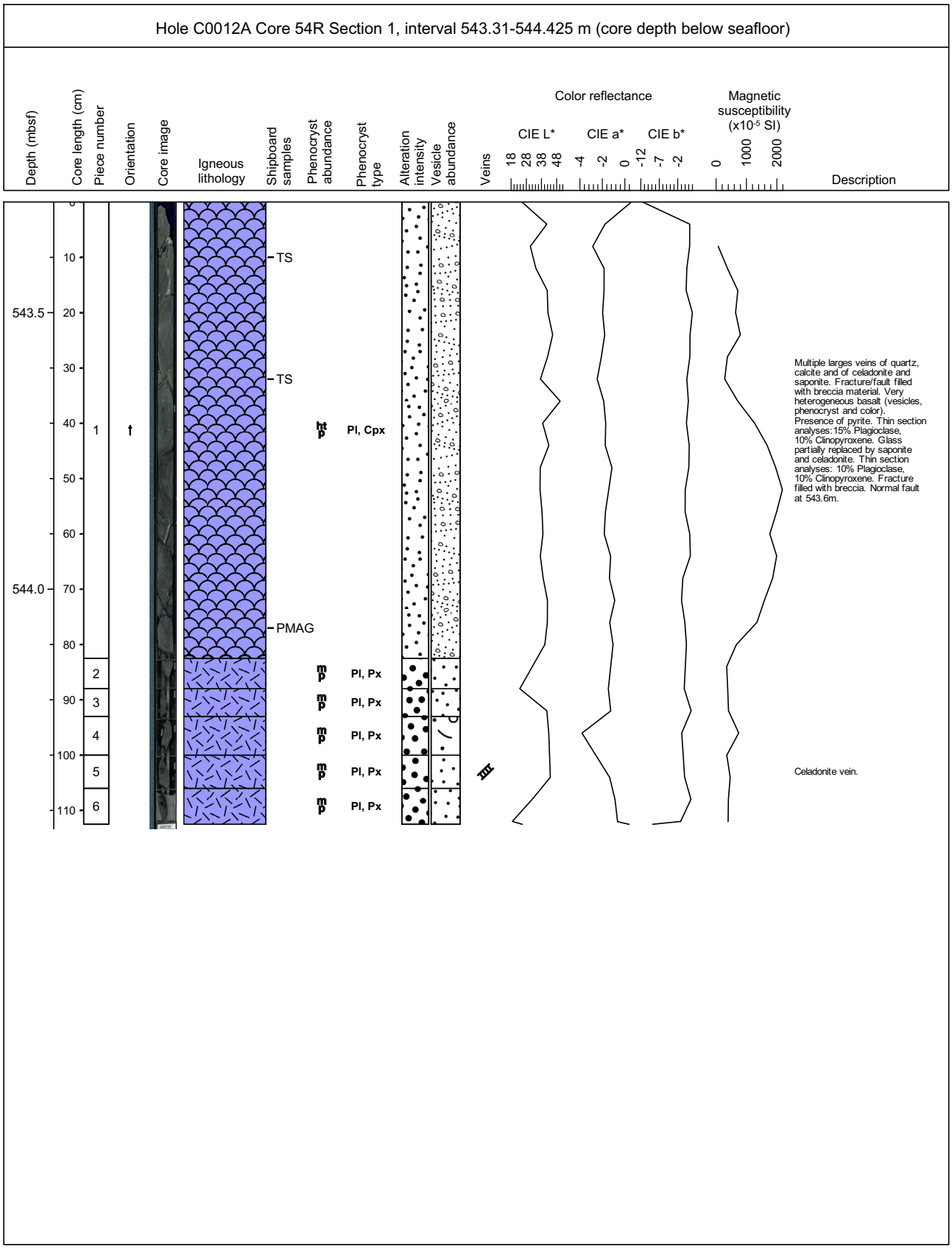
Hole C0012A Core 53R Section 2, interval 538.41-539.44 m (core depth below seafloor)



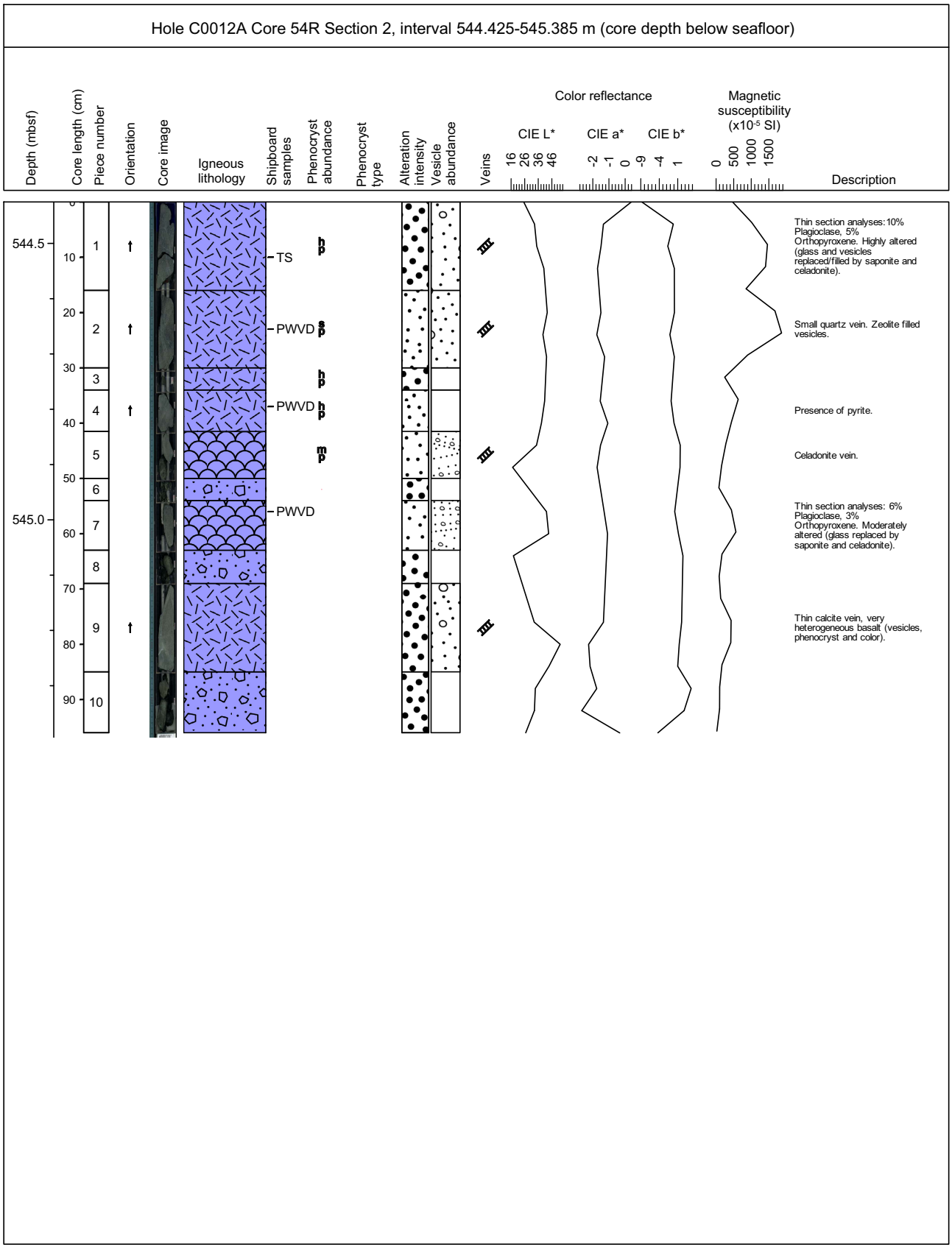
Core Photo


Hole C0012A Core 53R Section CC, interval 539.44-539.81 m (core depth below seafloor)
Depth (mbsf)
Core length (cm)
Piece number
Orientation
Core image
Igneous lithology
Shipboard samples
Phenocryst abundance
Phenocryst type
Alteration intensity
Vesicle abundance
Veins
Color reflectance
CIE L*
CIE a*
CIE b*
Magnetic susceptibility (x10-5 SI)
Description
539.5
10
20
30
1
2
t
hp
Presence of pyrite

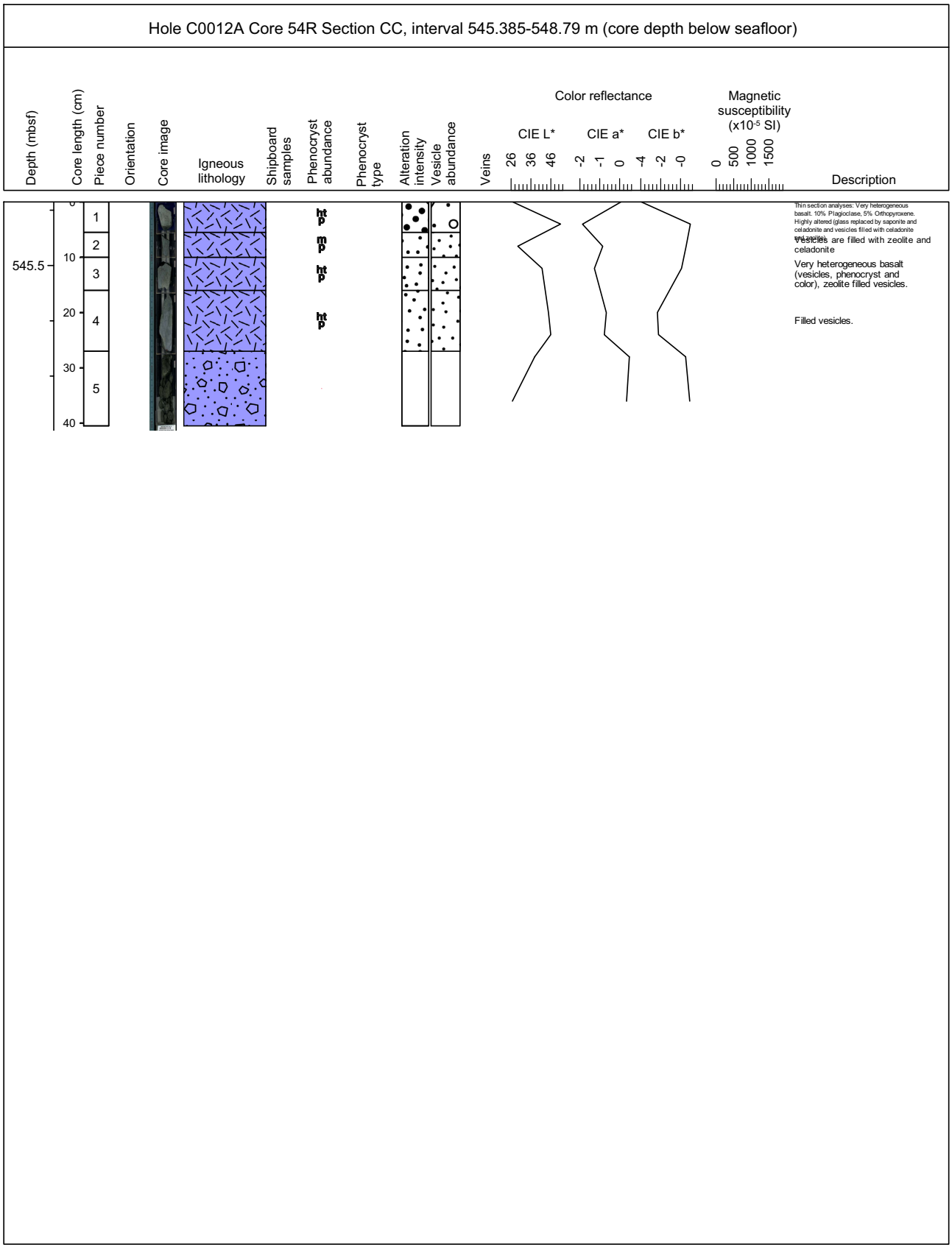
Core Photo


Hole C0012A Core 54R Section 1, interval 543.31-544.425 m (core depth below seafloor)
Depth (mbsf)
Core length (cm)
Piece number
Orientation
Core image
Igneous lithology
Shipboard samples
Phenocryst abundance
Phenocryst type
Alteration intensity
Vesicle abundance
Veins
Color reflectance
CIE L*
CIE a*
CIE b*
Magnetic susceptibility (x10-5 SI)
Description
543.5
544.0
TS
TS
PMAG
Pl, Cpx
Pl, Px
Multiple larges veins of quartz, calcite and of celadonite and saponite. Fracture/fault filled with breccia material. Very heterogeneous basalt (vesicles, phenocryst and color). Presence of pyrite. Thin section analyses: 15% Plagioclase, 10% Clinopyroxene. Glass partially replaced by saponite and celadonite. Thin section analyses: 10% Plagioclase, 10% Clinopyroxene. Fracture filled with breccia. Normal fault at 543.6m.
Celadonite vein.

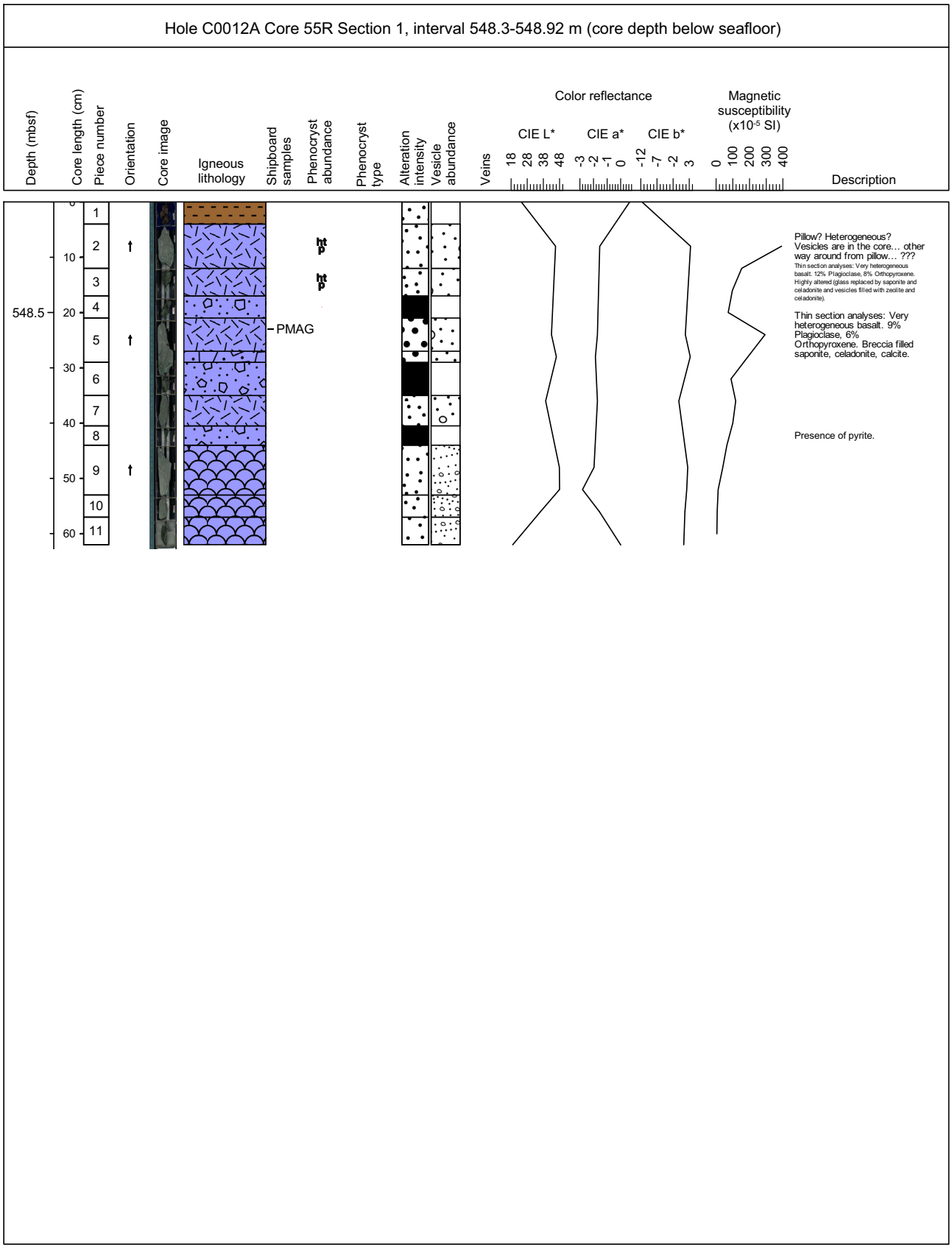
Core Photo


Hole C0012A Core 54R Section 2, interval 544.425-545.385 m (core depth below seafloor)
Depth (mbsf)
Core length (cm)
Piece number
Orientation
Core image
Igneous lithology
Shipboard samples
Phenocryst abundance
Phenocryst type
Alteration intensity
Vesicle abundance
Veins
Color reflectance
CIE L*
CIE a*
CIE b*
Magnetic susceptibility (x10-5 SI)
Description
544.5
545.0
TS
PWVD
PWVD
PWVD
Thin section analyses: 10% Plagioclase, 5% Orthopyroxene. Highly altered (glass and vesicles replaced/filled by saponite and celadonite).
Small quartz vein. Zeolite filled vesicles.
Presence of pyrite.
Celadonite vein.
Thin section analyses: 6% Plagioclase, 3% Orthopyroxene. Moderately altered (glass replaced by saponite and celadonite).
Thin calcite vein, very heterogeneous basalt (vesicles, phenocryst and color).

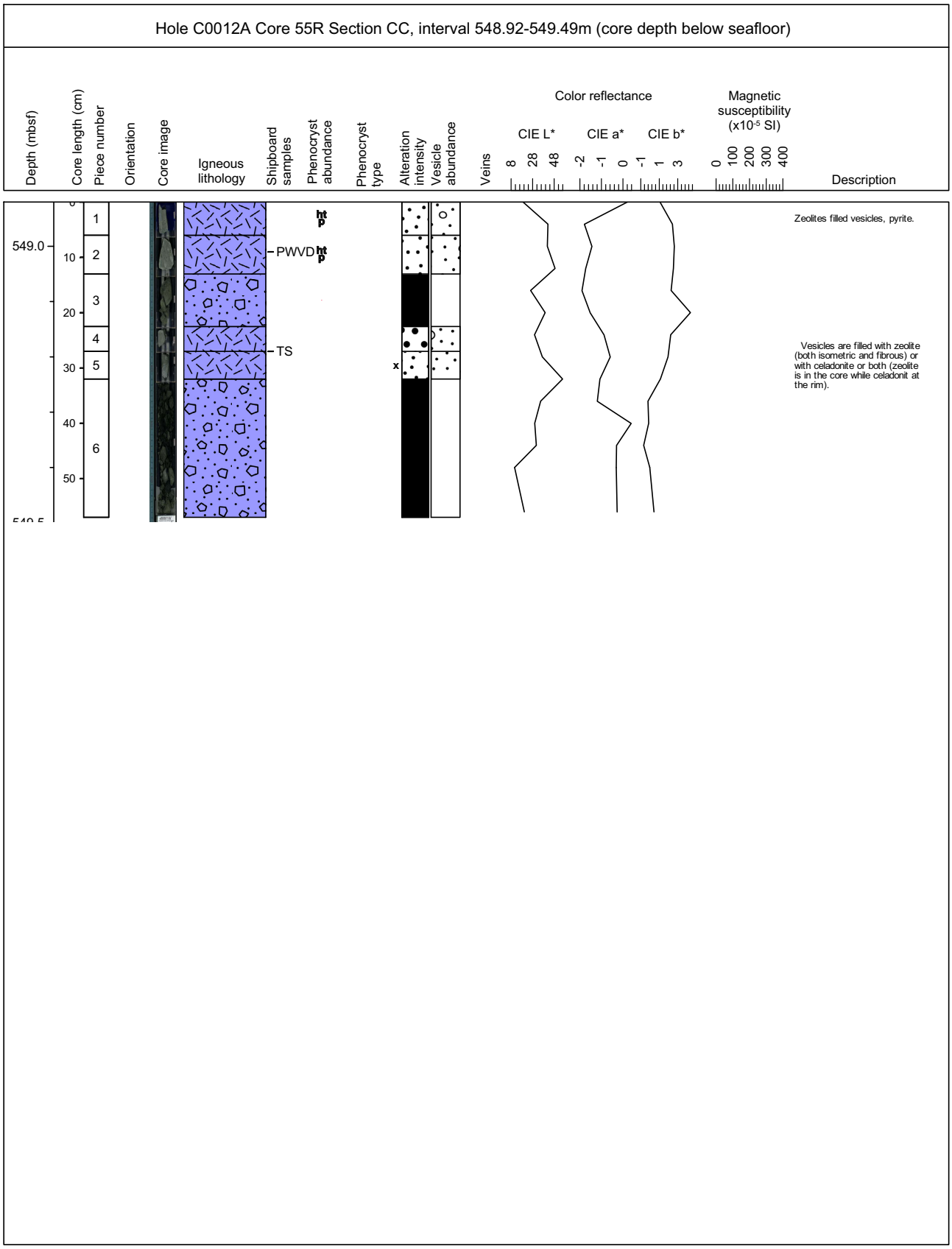
Core Photo


Hole C0012A Core 54R Section CC, interval 545.385-548.79 m (core depth below seafloor)
Depth (mbsf)
Core length (cm)
Piece number
Orientation
Core image
Igneous lithology
Shipboard samples
Phenocryst abundance
Phenocryst type
Alteration intensity
Vesicle abundance
Veins
Color reflectance
CIE L*
CIE a*
CIE b*
Magnetic susceptibility (x10-5 SI)
Description
545.5
Thin section analyses: Very heterogeneous basalt. 10% Plagioclase, 5% Orthopyroxene. Highly altered (glass replaced by saponite and celadonite and vesicles filled with celadonite and zeolite).
Vesicles are filled with zeolite and celadonite
Very heterogeneous basalt (vesicles, phenocryst and color), zeolite filled vesicles.
Filled vesicles.

Core Photo

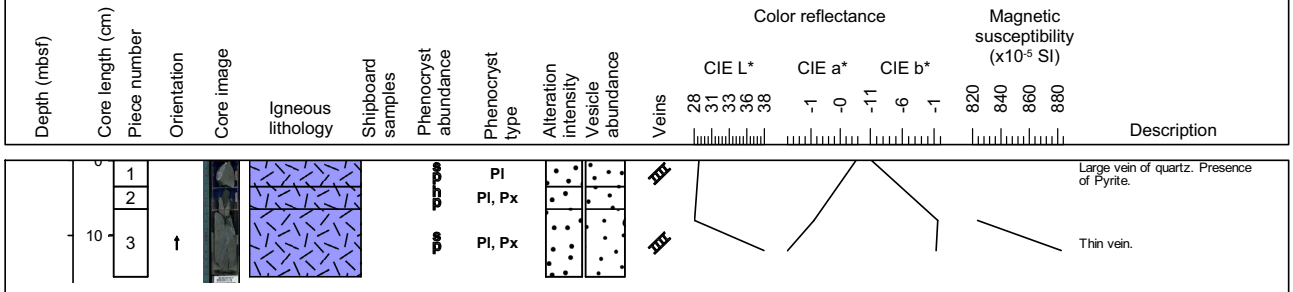

Hole C0012A Core 55R Section 1, interval 548.3-548.92 m (core depth below seafloor)
Depth (mbsf)
Core length (cm)
Piece number
Orientation
Core image
Igneous lithology
Shipboard samples
Phenocryst abundance
Phenocryst type
Alteration intensity
Vesicle abundance
Veins
Color reflectance
CIE L*
CIE a*
CIE b*
Magnetic susceptibility (x10-5 SI)
Description
548.5
PMAG
Pillow? Heterogeneous? Vesicles are in the core... other way around from pillow... ???
Thin section analyses: Very heterogeneous basalt. 12% Plagioclase, 8% Orthopyroxene. Highly altered (glass replaced by saponite and celadonite and vesicles filled with zeolite and celadonite).
Thin section analyses: Very heterogeneous basalt. 9% Plagioclase, 6% Orthopyroxene. Breccia filled saponite, celadonite, calcite.
Presence of pyrite.

Core Photo


Hole C0012A Core 55R Section CC, interval 548.92-549.49m (core depth below seafloor)
Depth (mbsf)
Core length (cm)
Piece number
Orientation
Core image
Igneous lithology
Shipboard samples
Phenocryst abundance
Phenocryst type
Alteration intensity
Vesicle abundance
Veins
Color reflectance
CIE L*
CIE a*
CIE b*
Magnetic susceptibility (x10-5 SI)
Description
549.0
PWVD
TS
Zeolites filled vesicles, pyrite.
Vesicles are filled with zeolite (both isometric and fibrous) or with celadonite or both (zeolite is in the core while celadonit at the rim).

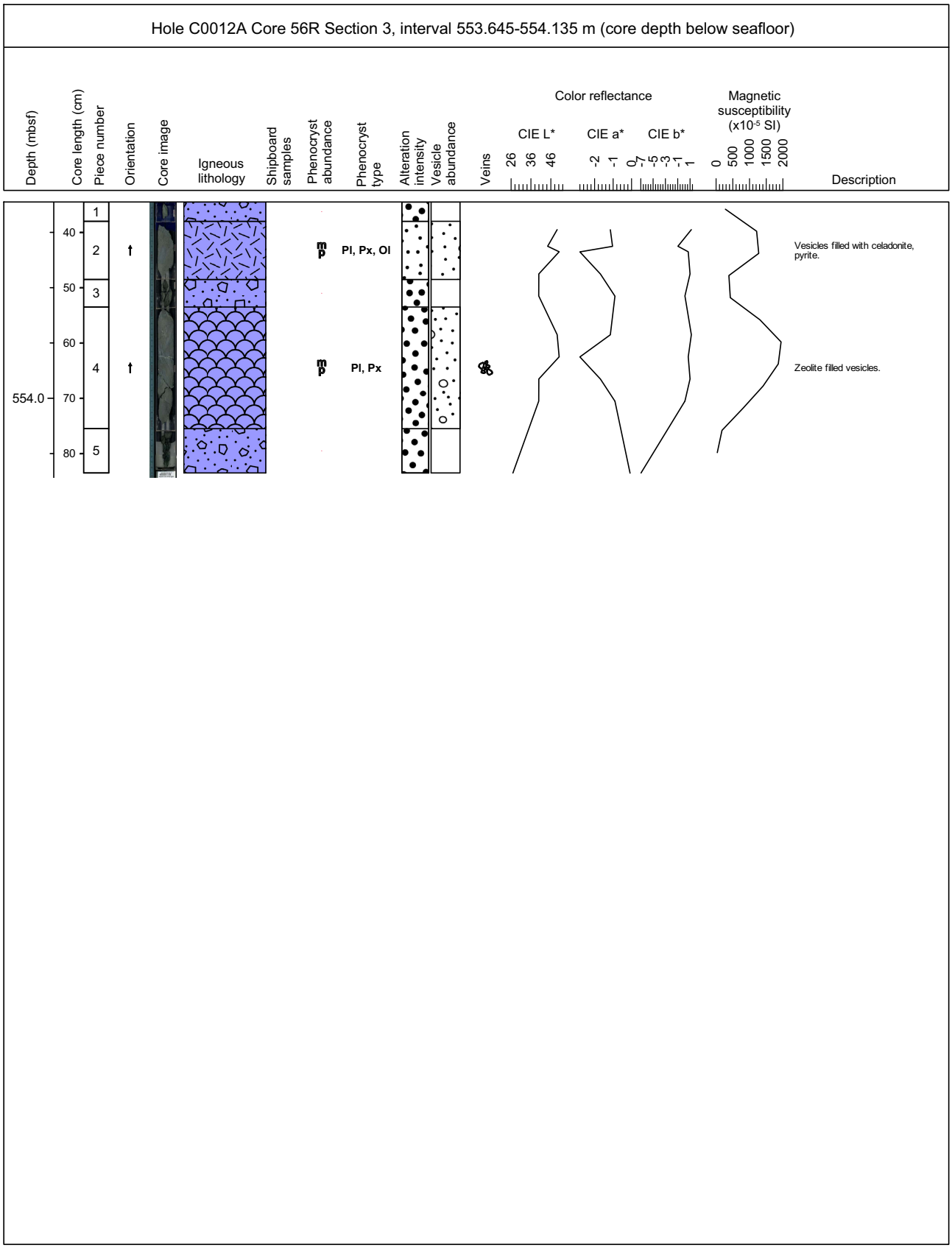
Core Photo

Hole C0012A Core 56R Section 1, interval 553.3-553.455 m (core depth below seafloor)

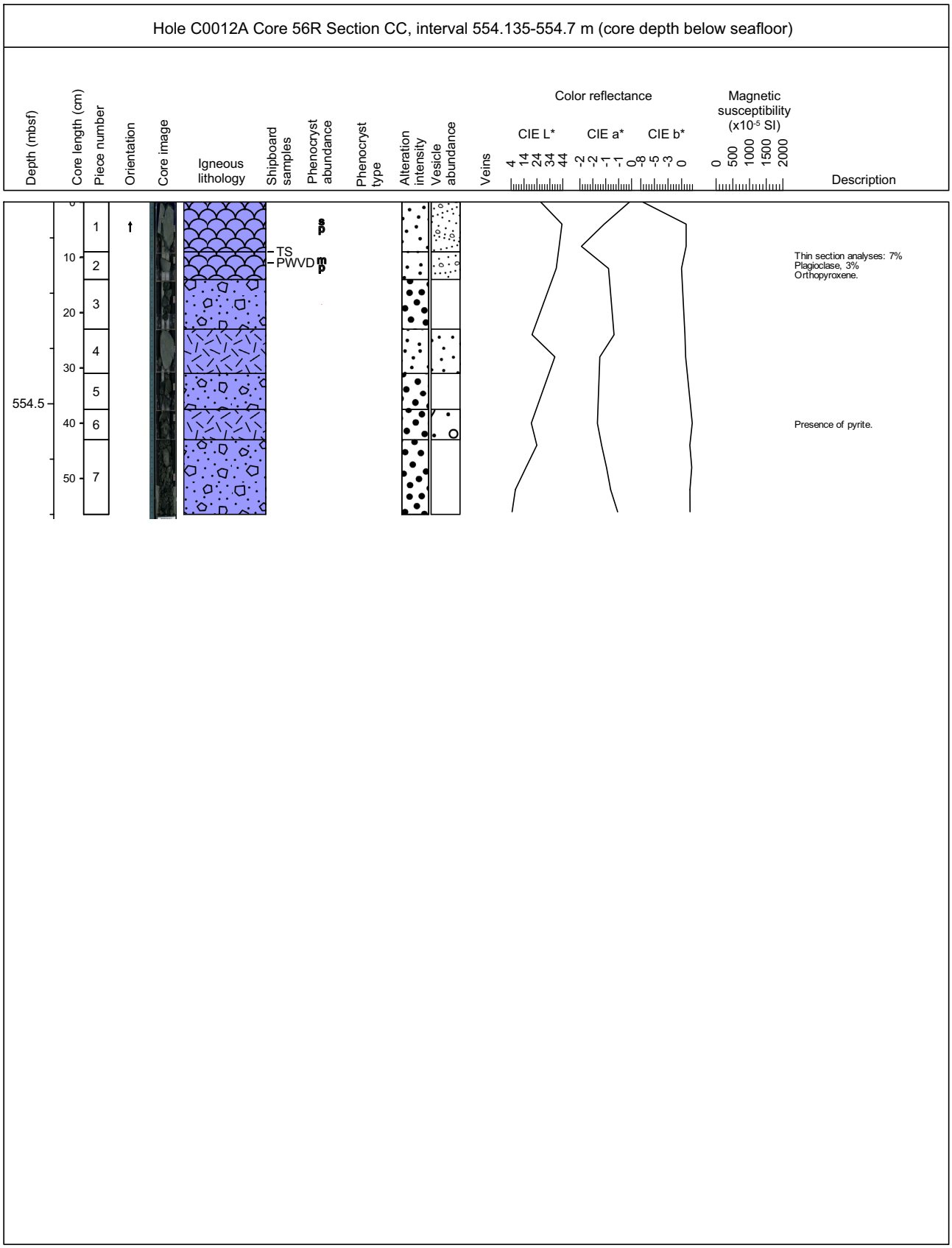


C0012A-56R-2 SAMPLED

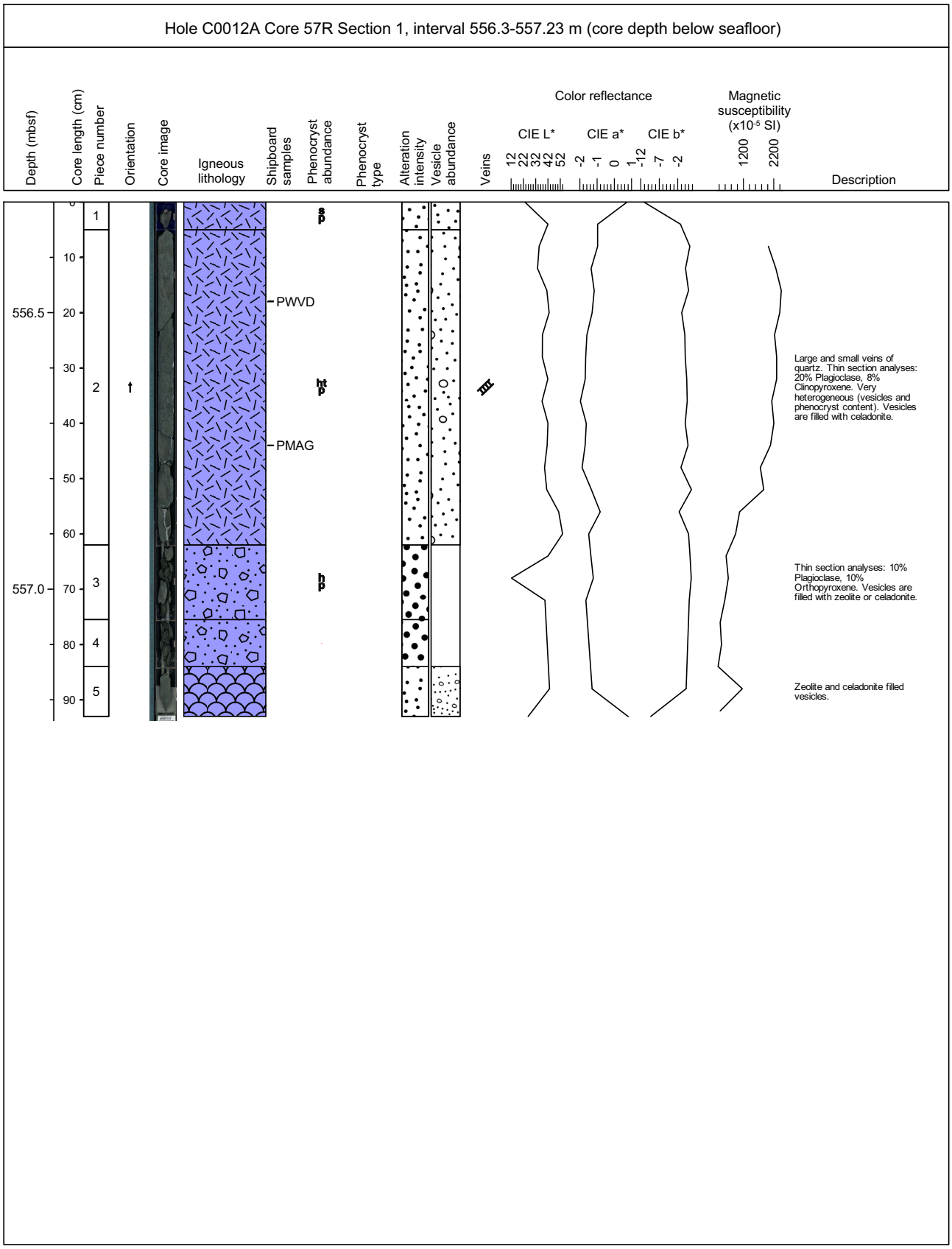
Core Photo


Hole C0012A Core 56R Section 3, interval 553.645-554.135 m (core depth below seafloor)
Depth (mbsf)
Core length (cm)
Piece number
Orientation
Core image
Igneous lithology
Shipboard samples
Phenocryst abundance
Phenocryst type
Alteration intensity
Vesicle abundance
Veins
Color reflectance
CIE L*
CIE a*
CIE b*
Magnetic susceptibility (x10-5 SI)
Description
554.0
40
50
60
70
80
1
2
3
4
5
mp
Pl, Px, Ol
Pl, Px
26 36 46
-2 -1 0
-7 -5 -3 -1 1
0 500 1000 1500 2000
Vesicles filled with celadonite, pyrite.
Zeolite filled vesicles.

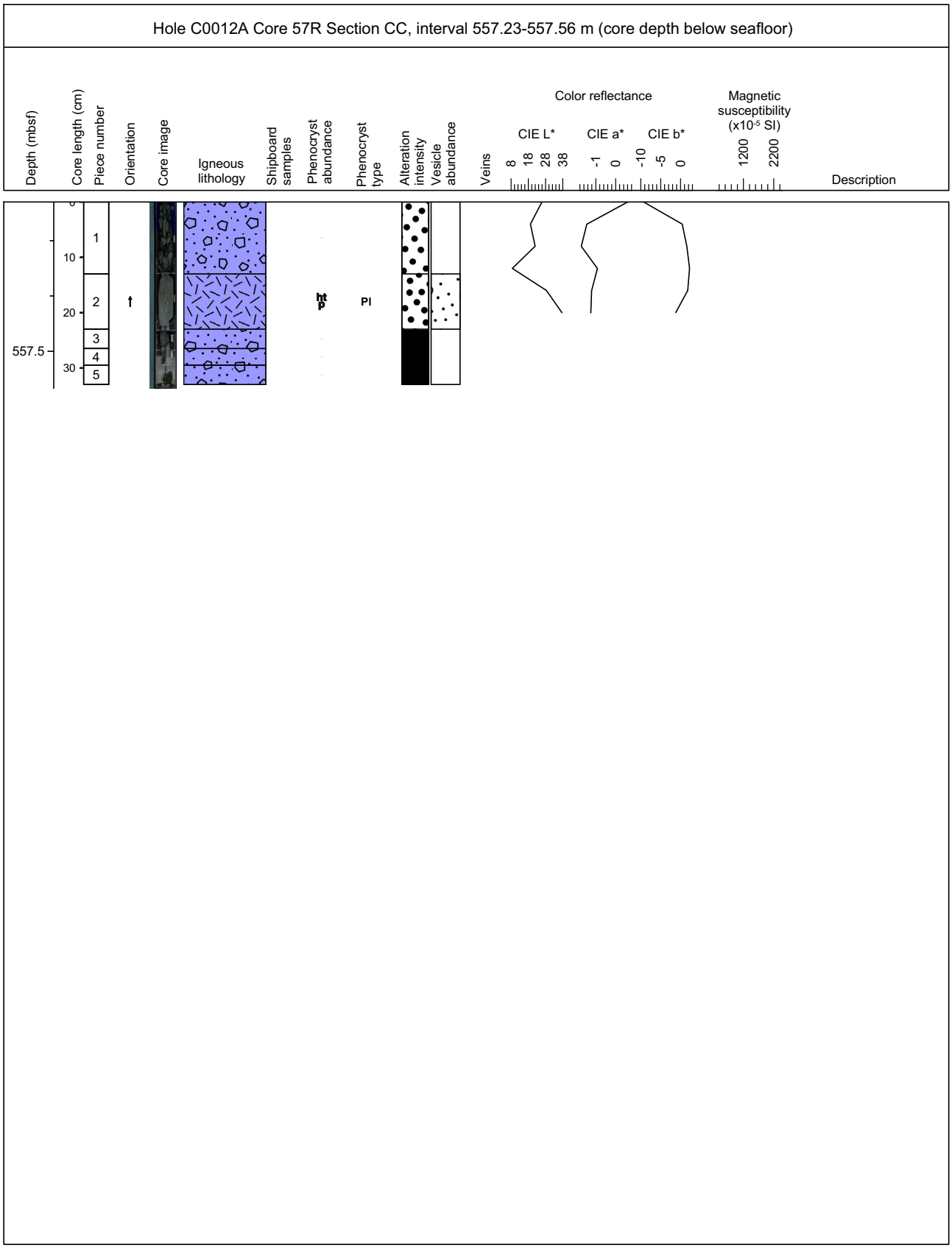
Core Photo


Hole C0012A Core 56R Section CC, interval 554.135-554.7 m (core depth below seafloor)
Depth (mbsf)
Core length (cm)
Piece number
Orientation
Core image
Igneous lithology
Shipboard samples
Phenocryst abundance
Phenocryst type
Alteration intensity
Vesicle abundance
Veins
Color reflectance
CIE L*
CIE a*
CIE b*
Magnetic susceptibility (x10-5 SI)
Description
554.5
TS
PWVD
Thin section analyses: 7% Plagioclase, 3% Orthopyroxene.
Presence of pyrite.

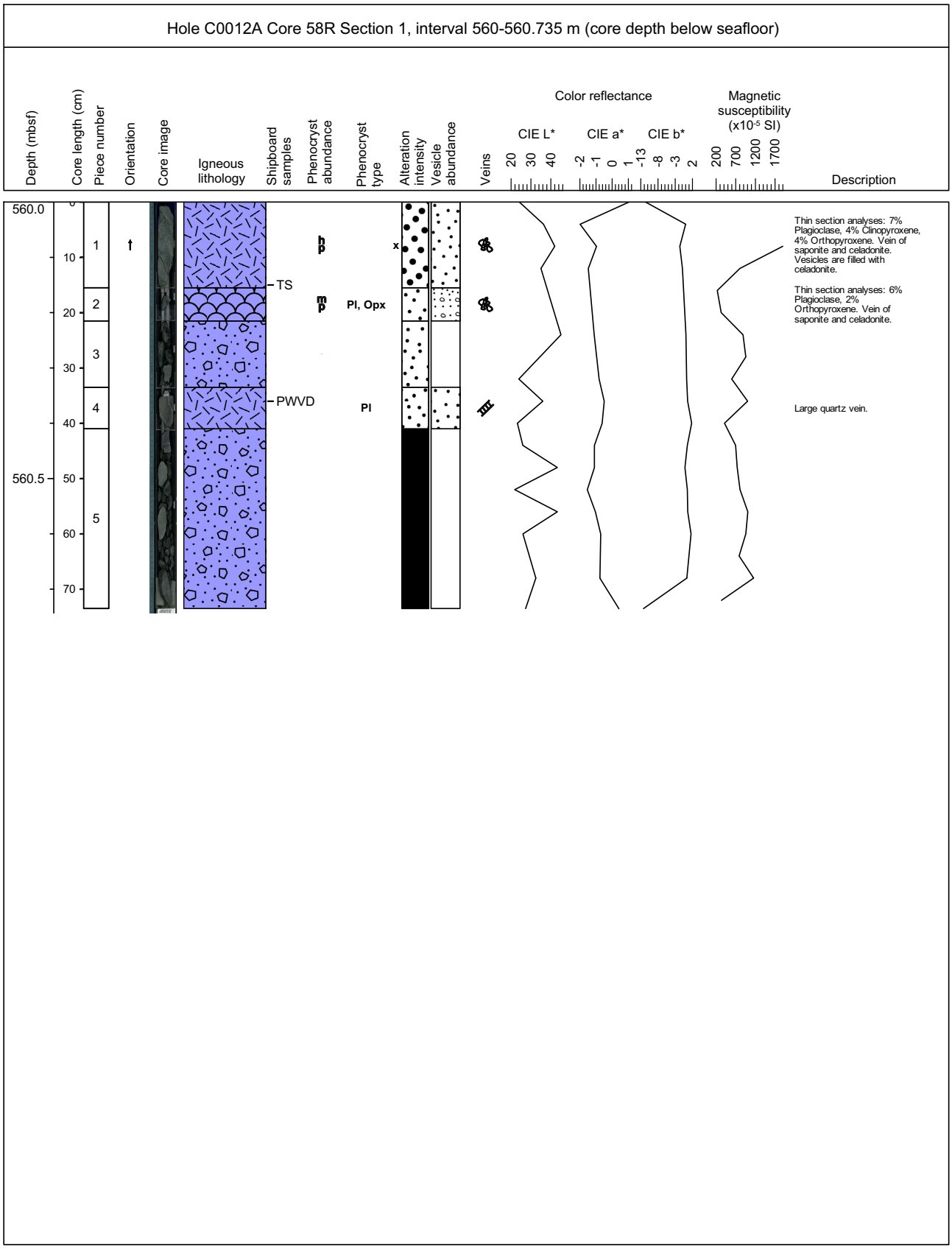
Core Photo


Hole C0012A Core 57R Section 1, interval 556.3-557.23 m (core depth below seafloor)
Depth (mbsf)
Core length (cm)
Piece number
Orientation
Core image
Igneous lithology
Shipboard samples
Phenocryst abundance
Phenocryst type
Alteration intensity
Vesicle abundance
Veins
Color reflectance
CIE L*
CIE a*
CIE b*
Magnetic susceptibility (x10-5 SI)
Description
556.5
557.0
PWVD
PMAG
Large and small veins of quartz. Thin section analyses: 20% Plagioclase, 8% Clinopyroxene. Very heterogeneous (vesicles and phenocryst content). Vesicles are filled with celadonite.
Thin section analyses: 10% Plagioclase, 10% Orthopyroxene. Vesicles are filled with zeolite or celadonite.
Zeolite and celadonite filled vesicles.

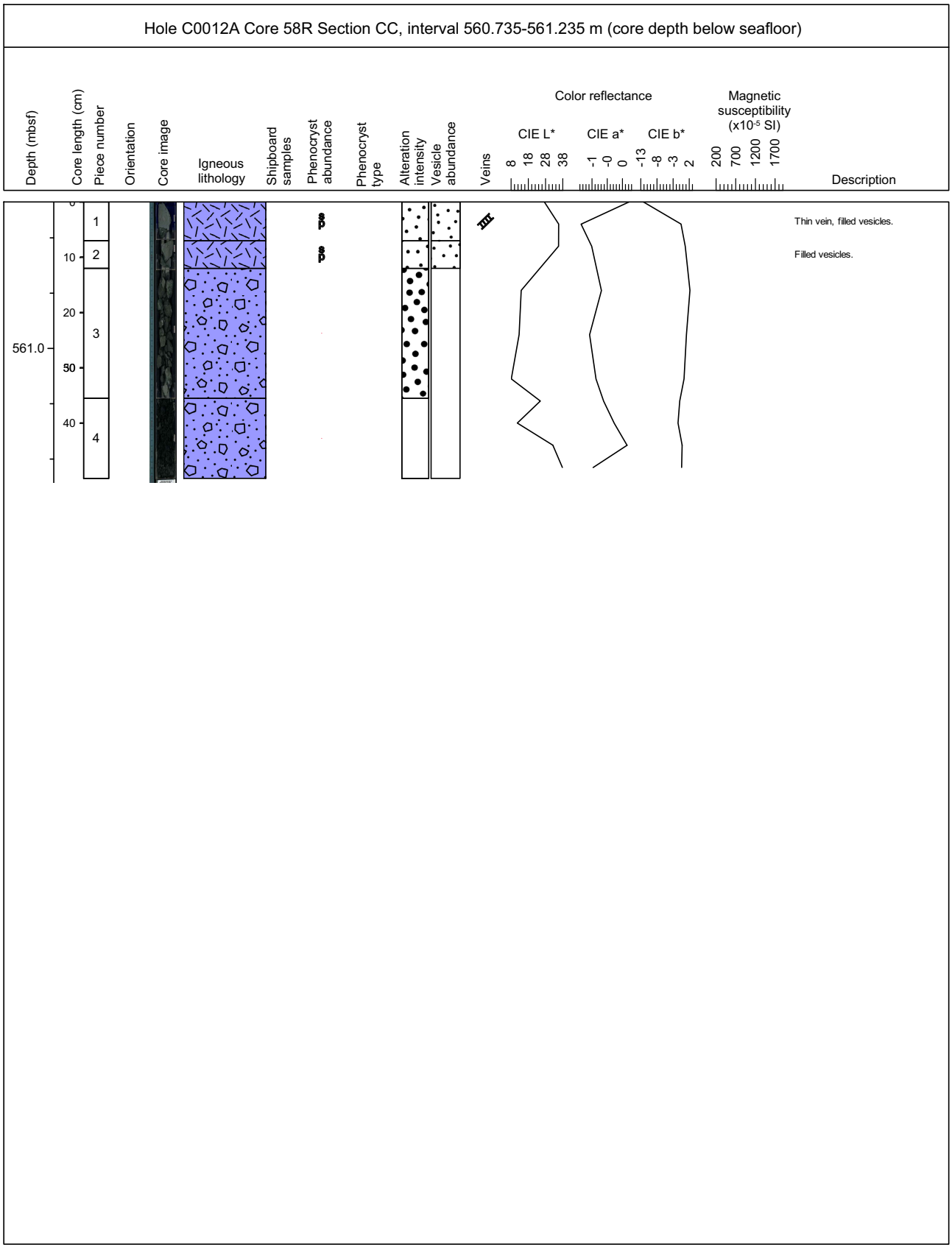
Core Photo


Hole C0012A Core 57R Section CC, interval 557.23-557.56 m (core depth below seafloor)
Depth (mbsf)
Core length (cm)
Piece number
Orientation
Core image
Igneous lithology
Shipboard samples
Phenocryst abundance
Phenocryst type
Alteration intensity
Vesicle abundance
Veins
Color reflectance
CIE L*
CIE a*
CIE b*
Magnetic susceptibility (x10-5 SI)
Description
557.5
1
2
3
4
5
Pl

Core Photo


Hole C0012A Core 58R Section 1, interval 560-560.735 m (core depth below seafloor)
Depth (mbsf)
Core length (cm)
Piece number
Orientation
Core image
Igneous lithology
Shipboard samples
Phenocryst abundance
Phenocryst type
Alteration intensity
Vesicle abundance
Veins
Color reflectance
CIE L*
CIE a*
CIE b*
Magnetic susceptibility (x10-5 SI)
Description
560.0
560.5
TS
PWVD
Pl, Opx
Pl
Thin section analyses: 7% Plagioclase, 4% Clinopyroxene, 4% Orthopyroxene. Vein of saponite and celadonite. Vesicles are filled with celadonite.
Thin section analyses: 6% Plagioclase, 2% Orthopyroxene. Vein of saponite and celadonite.
Large quartz vein.

Core Photo


Hole C0012A Core 58R Section CC, interval 560.735-561.235 m (core depth below seafloor)
Depth (mbsf)
Core length (cm)
Piece number
Orientation
Core image
Igneous lithology
Shipboard samples
Phenocryst abundance
Phenocryst type
Alteration intensity
Vesicle abundance
Veins
Color reflectance
CIE L*
CIE a*
CIE b*
Magnetic susceptibility (x10-5 SI)
Description
561.0
Thin vein, filled vesicles.
Filled vesicles.

							Texture			Monomineralic Grains																					Lithic Grains/Ash					Pelagic Grains						Other		Summary			Ratios							
Hole	Core		Section	Int. (cm)	depth (m CFS)	Lithology	Sand %	Silt %	Clay %	Quartz	Feldspar	Pyroxene	Amphibole	Fe-ox	Glauconite	Zircon	Pyrite	chlorite	Opaque grains	Apatite	Barite	olivine	Garnet	Biotite/Mica	Calcite/Carbonate Mins.	Volcanic glass	Vol. Lithic	Sed. Lithic	Chert	Meta. Lithic	Nannofossils	Foraminifers	Diatoms	Radiolarians	Silicoflagellates	Sponge spicules	Clay Mins.	Zeolithe	Lithic	Minerals	Volcaniclastics	Heavy Minerals	Glass/Lithic	Vol. Lithic/Lithic	Min/Lith	Vol. clasts/Lithics	Sed+Chert/Lithic	Qz/Min	Fsp/Min	Heavy min/Min	Comment
C0012A	1R		1	2.5	0.03	silty clay	0	20	80	1	2								1						4	7					25						60		7	8	7	1	1.00	-	1.14	1.00	-	0.13	0.25	0.13	acc.: goethite, Sponge spicule (silicic); felsic glass dominant, mafic glasses are seldom
C0012A	1R		1	9	0.09	silty clay	0	20	80	3	3								2						2	9		2	1		18						60		12	10	9	2	0.75	-	0.83	0.75	0.25	0.30	0.30	0.20	acc.: chlorite, goethite, Sponge spicule (silicic); mostly felsic glass, mafic are seldom
C0012A	1R		1	48.5	0.49	coarse ash	70	30	0	1	8	3														78		10										88	12	78	3	0.89	-	0.14	0.89	0.11	0.08	0.67	0.25	acc.: hbl, sp; felsic glass with ratio of 1:2 between pumiceous clasts and shards; Blocky versus y-texture of
C0012A	1R		1	56	0.56	coarse ash	80	20	0		12	4												0.1		80		4										84	16	80	4	0.95	-	0.19	0.95	0.05	-	0.75	0.25	acc.: opaque, bi; fresh felsic ash with black spots; mostly blocky shards and some pumice fragments that show
C0012A	4R		2	5.5	80.06	silty clay	10	20	70	5	5	0.1							2						2	9		7	4		5					1	60		20	14	9	2	0.45	-	0.71	0.45	0.55	0.35	0.35	0.15	acc.: px, bi
C0012A	4R		2	15.5	80.16	silty clay	0	20	80	1	3								3						2	2		8	4		7						70		14	9	2	3	0.14	-	0.64	0.14	0.86	0.11	0.33	0.33	
C0012A	4R		2	31	80.32	silty clay	15	20	65	3	6														0.1	1		12	9		6			3			60		22	9	1	0	0.05	-	0.41	0.05	0.95	0.33	0.66	0.00	acc.: carbonate
C0012A	4R		2	36	80.37	silty clay	10	20	70	4	5	0.1		0.1					2							6		9	9									65		24	11	6	2	0.25	-	0.47	0.25	0.75	0.36	0.45	0.19	acc.: px, goethite
C0012A	4R		2	59	80.60	fine ash	30	50	20		2								1							65		20			2							10	0	85	3	65	1	0.76	-	0.04	0.76	0.24	-	0.67	0.33	very blocky felsic glass shards + probably altered or devitrified shards look like cherts
C0012A	4R		CC	3	80.66	volcaniclastic silt	35	45	20	3	1								2							22	2	30	12		8							20		66	6	24	2	0.33	0.03	0.09	0.36	0.64	0.50	0.17	0.33	
C0012A	5R		4	49	91.78	silty clay	10	25	65	2	5								7							5	2	8	25		2							44		40	14	7	7	0.13	0.05	0.35	0.18	0.83	0.14	0.36	0.50	Chert clasts are probably all altered or devitrified glass shards
C0012A	6R		2	42	99.83	silty clay	5	25	70	2	1	0.1		0.1					2						3	2		8	17		5						60		27	8	2	2	0.07	-	0.30	0.07	0.93	0.24	0.12	0.26	acc: px, goethite
C0012A	6R		4	36	101.04	silty clay	5	25	70	3	2	0.1							1						2	1	2	11	14		7						57		28	8	3	1	0.04	0.07	0.29	0.11	0.89	0.37	0.25	0.14	acc: px
C0012A	7R		CC	5	107.91	silty clay	5	25	70	3	4	0.1		1				0.1	3							4	2	6	12		2						63		24	11	6	3	0.17	0.08	0.47	0.25	0.75	0.27	0.36	0.29	acc.: mafic glass, px, chlorite
C0012A	8R		2	27.5	113.19	calcerous mudstone	10	50	40	3	3								6						1			10			37						40		10	13	0	6	-	-	1.30	0.00	1.00	0.23	0.23	0.46	
C0012A	8R		2	115	114.06	silty clay	5	25	70	3	3	0.1													1	1	2	12	11		9						58		26	7	3	0	0.04	0.08	0.27	0.12	0.88	0.42	0.42	0.01	acc.: px; greenish glass shards
C0012A	9R		1	15	121.15	fine ash	25	75	0		4	0.1							4						2	80	2	8											90	10	82	4	0.89	0.02	0.11	0.91	0.09	-	0.40	0.41	acc: px; felsic composition, nearly all class is moderately to strongly altered or devitrified and appears like cherts
C0012A	9R		1	15.5	121.16	coarse ash/sandstone	50	30	20	3	10	0.1							4							15		15	50		3									80	17	15	4	0.19	-	0.21	0.19	0.81	0.18	0.58	0.24	former, now devitrified felsic ash is now strongly altered or devitrified and apperas like chert; fresh glasses in fine fraction
C0012A	9R		1	107	122.07	silty clay/fine ash	5	40	45	2	2	0.1							2							3		10	40		1						40		53	6	3	2	0.06	-	0.12	0.06	0.94	0.33	0.33	0.34	acc.: px, fine grained Chert ist probably all devitrified fine glass
C0012A	9R		1	125.5	122.26	calcerous mudstone	0	20	80		3	0.1							3							2					32						60		2	6	2	3	1.00	-	3.05	1.00	0.00	-	0.49	0.51	acc.: px
C0012A	9R		1	137.5	122.38	clayey silt	25	40	35	3	6								12						3	8	5	15	9		9						30		37	24	13	12	0.22	0.14	0.65	0.35	0.65	0.13	0.25	0.50	chert is probably former, now devitrified glass
C0012A	9R		7	56	127.65	sandy silt/fine ash	25	55	20		6	10							10							10		14	50											74	26	10	20	0.14	-	0.35	0.14	0.86	-	0.23	0.77	blocky glass shards have been strongly devitrified and appear as chert. Well sorted + still available glassy texture
C0012A	9R		CC	7	128.94	sandy silt/fine ash	40	60	0		14	6		0.1					3							8	1	10	58											77	23	9	9	0.10	0.01	0.30	0.12	0.88	-	0.61	0.39	acc: goethite; former glass shards have been moderately to strongly devitrified and appear as chert. Some fresh
C0012A	10R		7	6	136.91	sand/coarse ash	60	30	10		8	4							2							12		17	55							2				84	14	12	6	0.14	-	0.17	0.14	0.86	-	0.57	0.43	former blocky glass shards have been moderately to strongly devitrified and appea as chert. Fresh vs. altered
C0012A	11R		1	19	140.19	silty clay	0	45	55	3	8								1								8	5	25								50		38	12	8	1	-	0.21	0.32	0.21	0.79	0.25	0.67	0.08	acc.: poly-quartz, fresh felsic glass
C0012A	11R		2	12	141.36	fine ash	10	60	30		14								5							60		8	13		0.1									81	19	60	5	0.74	-	0.23	0.74	0.26	-	0.74	0.26	acc.: calc. nannofossils, px; some fresh larger felsic shards but mostly very fine ash matter --> preparation
C0012A	11R		6	41	145.92	coarse ash	65	35	0		27	2							8						3	32	11	8	9											60	40	43	10	0.53	0.18	0.67	0.72	0.28	-	0.68	0.25	acc.: amph, foraminifers, calc. Nannofosils; some few altered or devitrified basaltic glass shards, most of glass is
C0012A	11R		7	81.5	147.71	fine ash	10	60	30		22	2	5						9							41	9	4	6							2		60	38	50	16	0.68	0.15	0.63	0.83	0.17	-	0.58	0.42	mafic composition; greenish altered or devitrified mafic glass; tachylite vs. glass = 3:1
C0012A	11R		7	114	148.04	carbonate mudstone	0	30	70		0.1														100														0	100	0	0	-	-	-	-	-	-	0.00	0.00	acc.: plg
C0012A	11R		8	30	148.38	tuffaceous sand/coarse ash	50	40	10		9	6	0.1						15							28	6	6	30											70	30	34	21	0.40	0.09	0.43	0.49	0.51	-	0.30	0.70	acc.: amph; chert is most probably altered or devitrified mafic glass with still orignal glass texture; ratio glass vs.
C0012A	11R		CC	2	148.58	sandy silt/fine ash	30	50	20		9	0.1	0.1						3						6	4	10	3	45								20		62	18	14	3	0.06	0.16	0.29	0.23	0.77	-	0.49	0.18	acc.: amph, px; chert is most probably altered or devitrified felsic glass with still orignal glass texture; some fresh
C0012A	12R		2	3	150.46	volcaniclastic sand/ coarse ash	70	20	10	3	25	7	0.1						5							16	13	13	18											60	40	29	12	0.27	0.22	0.67	0.48	0.52	0.07	0.62	0.30	acc.: amph; glass is slightly to strong altered or devitrified and appeas as chert but still with glass textures and not
C0012A	12R		2	33	150.76	sandy silt/tuffaceous silt	20	55	25		4	0.1							9							12	9	21	18		2						25		60	13	21	9	0.20	0.15	0.22	0.35	0.65	-	0.31	0.69	acc.: px; most of chert is probably altered or devitrified glass
C0012A	12R		CC	24	151.26	tuffaceous silty sand/fine ash	45	45	10		8	4	0.1													23	8	23	20		4						10		74	12	31	4	0.31	0.11	0.16	0.42	0.58	-	0.66	0.34	acc.: amph; chert is most probably altered or devitrified glass with still orignal glass texture
C0012A	13R		4	34	161.88	silty claystone	0	30	70		4	0.1		0.1					4							9	5	18	10								50		42	8	14	4	0.21	0.12	0.20	0.33	0.67	-	0.49	0.50	acc.: px, goethite; chert most probably is devitrified glass
C0012A	14R		3	40	170.38	volcaniclastic siltstone	20	50	30	4	8	0.1		0.1					4					0.1		10	21	12	8		3						30		51	16	31	4	0.20	0.41	0.32	0.61	0.39	0.25	0.49	0.26	acc.: goethite, px, bi; chert is most proabably altered or devitrified glass
C0012A	14R		4	36	171.66	volcaniclastic sandstone	65	35	0	5	20	2	2						9						2	21	8	25	6										60	40	29	13	0.35	0.13	0.67	0.48	0.52	0.13	0.50	0.33	
C0012A	15R		1	16	178.16	sandstone	60	25	15	2	19	8	2						5							13	5	11	19	1							15		49	36	18	15	0.27	0.10	0.73	0.37	0.61	0.06	0.53	0.42	px is dominant; diopside and augites can be found; green + brown hbl; half of glass is tachylite, chert is most
C0012A	15R		2	29	179.70	sandstone	80	10	10	4	28	14	2						3						2	7	6	15	9								10		37	53	13	19	0.19	0.41	1.43	0.35	0.65	0.08	0.53	0.36	diopside < augite can be found; chert is most probably altered or devitrified glass; amph: normal hornblende but
C0012A	15R		4	24	180.62	sandstone	70	20	10	4	20	7	2					0.1	2							2	4	33	15	1							10		55	35	6	11	0.04	0.07	0.64	0.11	0.87	0.11	0.57	0.32	some diopside, Ol; chert is most probably altered or devitrified glass; only a few tachylites
C0012A	15R		CC	11	181.03	sandy siltstone	30	45	25	5	10	3	1						8							12	3	24	14								20		53	27	15	12	0.23	0.06	0.51	0.28	0.72	0.19	0.37	0.44	glass is mostly tachylites, but also some mafic glass shards can be found; some felsic glasses are also
C0012A	16R		CC	13	190.53	silty claystone	10	30	60	3	3	0.1							2			0.1				0.1	2	20	10								60		32	8	2	2	-	0.06	0.26	0.07	0.93	0.37	0.37	0.27	acc.: ol, px, glass; chert is most probably altered or devitrified glass
C0012A	17R		CC	6	200.56	siltstone	20	65	15	2	7	0.1														12	5	38	19	2							15		76	9	17	0	0.16	0.07	0.12	0.22	0.75	0.22	0.77	0.01	acc.: px; chert is most probably altered or devitrified glass
C0012A	18R		2	56	208.46	clayey siltstone	10	60	30		3	0.1		0.1					10			0.1						22	35								30		57	13	0	10	-	-	0.23	0.00	1.00	-	0.23	0.77	acc.: px, geothite, ol; chert is most probably altered or devitrified mafic ash (glass morhology partly remained)
C0012A	19R		4	80	219.78	sandstone	75	15	10	5	17	4	1	0.1				0.1	6							5	8	26	17		1						10		56	33	13	11	0.09	0.14	0.59	0.23	0.77	0.15	0.51	0.33	acc.: goethite, chert is most probably altered or devitrified mafic glass since all transitions between fresh and altered

							Texture			Monomineralic Grains																						Lithic Grains/Ash					Pelagic Grains							Other		Summary			Ratios								
Hole	Core		Section	Int. (cm)	depth (**m CFS**)	Lithology	Sand %	Silt %	Clay %	Quartz	Feldspar	Pyroxene	Amphibole	Fe-ox	Glauconite	Zircon	Pyrite	chlorite	Opaque grains	Apatite	Barite	olivine	Garnet	Biotite/Mica	Calcite/Carbonate Mins.	Volcanic glass	Vol. Lithic	Sed. Lithic	Chert	Meta. Lithic	Nannofossils	Foraminifera	Diatoms	Radiolarians	Silicoflagellates	Sponge spicules	Clay Mins.	Zeolithe	Lithic	Minerals	Volcaniclastics	Heavy Minerals	Glass/Lithic	Vol. Lithic/Lithic	Met/Lith	Vol. clasts/Lithics	Sed+Chert/Lithic	Qz/Min	Fsp/Min	Heavy min./Min	Comment
C0012A	21R		3	45	236.17	siltstone/fine tuff	15	85	0		0.1	0.1							3							14		13	70												97	3	14	3	0.14	-	0.03	0.14	0.86	-	0.03	0.97	acc.: plg, px; chert is most probably altered or devitrified mafic glass since all transitions between fresh and altered or devitrified glass can be found; ratio fresh vs. altered vs. tachylite= 2:6:0.5
C0012A	21R		CC	7.5	238.16	fine tuff	30	60	10		11	0.1		0.1					16							38	3	11	8		3						10		60	27	41	16	0.63	0.05	0.45	0.68	0.32	-	0.40	0.59	acc.: px, goethite; chert is probably former, now devitrified glass; some mafic glass shards are abundant, but mostly tachylites, ratio fresh/altered/tachylite= 1:10:5
C0012A	23R		1	17	253.87	siltstone/fine tuff	5	75	20		5								5							12	1	24	33								20		70	10	13	5	0.17	0.01	0.14	0.19	0.81	-	0.50	0.50	acc.: goethite, px; chert is most proabably mafic altered or devitrified glass; most of opaque matter is tachylite; some few felsic glass shards can be found --> reworked?
C0012A	23R		4	92.5	257.46	clayey siltstone	0	70	30		10	0.1							7							10	5	8	30								30		53	17	15	7	0.19	0.09	0.32	0.28	0.72	-	0.58	0.42	acc.: px
C0012A	24R		5	37	267.41	clayey siltstone	5	55	40	2	7								5							7	3	20	20		1						35		50	14	10	5	0.14	0.06	0.28	0.20	0.80	0.14	0.50	0.36	
C0012A	24R		5	132	268.36	siltstone/fine tuff	35	65	0		7	0.1							9									14	70										84	16	0	9	-	-	0.19	0.00	1.00	-	0.43	0.57	acc.: px; chert is most probably altered or devitrified glass --> glass morphology still visible
C0012A	24R		6	6	268.51	volcaniclastic siltstone	15	60	25		3	0.1							12						0.1	45		12	8								20		65	15	45	12	0.69	-	0.23	0.69	0.31	-	0.20	0.80	acc.: poly-qz, carbonate clasts, px; mostly scoria clasts within the matrix and some fresh felsic glass shards
C0012A	25R		4	53	276.09	silty claystone	5	35	60	2	5		0.1													7	2	37	5	5	0.1						37		56	7	9	0	0.13	0.04	0.13	0.16	0.75	0.28	0.70	0.01	acc.: calcerous fossils; hbl; Sedimentary clasts exhibits sericite-qtz intergrowth
C0012A	25R		7	43	279.34	carbonate mudstone	5	20	75	0.1	0.1	0.1													100	0.1												0	100	0	0	1.00	-	-	1.00	-	0.00	0.00	0.00	acc.: plg, px, glass, qz (poly-quartz)
C0012A	31R		1	20	329.90	fine tuff	10	70	20	2	8	2							11						0.1	19	3	27	8								20		57	23	22	13	0.33	0.05	0.41	0.39	0.61	0.09	0.35	0.56	acc.: carbonate clasts
C0012A	32R		1	77	339.97	carbonate mudstone	0	100	0					0.1					2						98														0	100	0	2	-	-	-	-	-	-	0.02	acc.: carbonate clasts
C0012A	32R		4	30	342.39	silty claystone	10	40	50	6	2								7							10	2	20	9	4							40		45	15	12	7	0.22	0.04	0.33	0.27	0.64	0.40	0.13	0.47	acc.: goethite; Sedimentary clasts exhibits sericite-qtz intergrowth
C0012A	32R		CC	6	343.20	calcerous mudstone	5	60	35		0.1			0.1					0.1						40			5									55		5	40	0	0	-	-	8.06	0.00	1.00	-	0.00	0.00	acc.: goethite, plg, opaque minerals
C0012A	33R		1	47	349.17	silty claystone	5	20	75	4	1														4	14	2	14	6	2	3						50		38	9	16	0	0.37	0.05	0.24	0.42	0.53	0.44	0.11	0.00	abundant felsic glass in silt size
C0012A	33R		3	80	350.53	silty claystone	0	20	80	6	1	0.1							3							4	2	9	6	1	2						66		22	10	6	3	0.18	0.09	0.46	0.27	0.68	0.59	0.10	0.31	acc.: px, poly-qz; felsic glass is common and mostly fresh, blocky. But also few mafic glass shards can be found;
C0012A	34R		2	62	358.96	silty claystone	0	40	60	10	1	0.1							3						0.1	7	1	18	10	1	4						45		37	14	8	3	0.19	0.03	0.38	0.22	0.76	0.70	0.07	0.22	acc.: carbonate clasts, px; poly-qz is common, felsic glass is mostly fresh
C0012A	34R		4	58	360.56	clayey siltstone	15	60	25		4	0.1		0.1					6							9	1	20	35								25		65	10	10	6	0.14	0.02	0.16	0.15	0.85	-	0.39	0.60	acc.: px, goethite; chert is probably altered or devitrified glass; fsp is also moderate altered or devitrified
C0012A	35R		3	52	368.00	silty claystone	20	30	50	6	1	0.1							4							7	0.1	17	12	1	2						50		37	11	7	4	0.19	0.00	0.30	0.19	0.78	0.54	0.09	0.37	acc.: px, volc. Lithics; chert is most probably altered or devitrified glass
C0012A	38R		1	44	395.44	clayey siltstone	15	45	40	7	1			2					4						0.1	6	0.1	14	15	1							50		36	14	6	4	0.17	0.00	0.39	0.17	0.80	0.50	0.07	0.28	acc.: goethite, volc. Lithics; felsic and mafic glasses can be found
C0012A	39R		4	9	407.48	carbonate mudstone	0	100	0	7				4	4										85														0	100	0	0	-	-	-	-	-	0.07	-	-	
C0012A	40R		2	20	415.51	silty claystone	10	35	55	1	2								1							8	2	14	19	3							50		46	4	10	1	0.17	0.04	0.09	0.22	0.72	0.25	0.50	0.25	chert is probably altered or devitrified glass; Sedimentary clasts exhibits sericite-qtz intergrowth
C0012A	40R		2	31	415.62	coarse tuff	50	40	10		2	0.1							0.1							30		8	50									10	88	2	30	0	0.34	-	0.03	0.34	0.66	-	0.91	0.09	acc.: px, opaque minerals; glass shards are devitrified (medium to strongly) and appears like chert but still with
C0012A	40R		2	35	415.66	clayey siltstone	5	35	60	7	3			0.1					6							6	4	10	14	2	2						46		36	16	10	6	0.17	0.11	0.45	0.28	0.67	0.43	0.19	0.37	acc.: goethite; Sedimentary clasts exhibits sericite-qtz intergrowth
C0012A	40R		5	23	418.33	fine tuff	15	75	10		8	5		0.1					3							75		9											84	16	75	8	0.89	-	0.19	0.89	0.11	-	0.50	0.50	acc.: goethite; Glass is medium to strongly devitrified and appears like chert (not as intensively like in the other
C0012A	41R		1	120	424.70	fine tuff	30	60	10		2	0.1							4							42	3	9	30									10	84	6	45	4	0.50	0.04	0.07	0.54	0.46	-	0.33	0.67	acc.: px; chert is most probably altered or devitrified glass; finer matrix is slighlty to moderate altered or devitrified;
C0012A	41R		2	60	425.48	clayey siltstone	10	50	40	5	1								1							8	2	10	17	1							50	5	38	7	10	1	0.21	0.05	0.18	0.26	0.71	0.71	0.14	0.14	
C0012A	41R		4	90	427.41	coarse tuff	65	35			16	2		0.1					2							40			40										80	20	40	4	0.50	-	0.25	0.50	0.50	-	0.80	0.20	acc.: goethite, sanidine in fsp; brownish large mafic glass shards are mostly blocky with large round vesicles. Matrix
C0012A	42R		3	47	435.13	silty claystone	5	20	75	2			0.1						5							9		14	4		3						50	13	27	7	9	5	0.33	-	0.26	0.33	0.67	0.28	-	0.72	acc.: amph; Sedimentary clasts exhibits sericite-qtz intergrowth
C0012A	42R		3	96	435.62	coarse tuff	55	40	5		10	4							6							36	5	12	22								5		75	20	41	10	0.48	0.07	0.27	0.55	0.45	-	0.50	0.50	mafic composition; fresh glass vs. altered/devitrified glass vs. tachylite = 2:3:1; Chert is likely to be devitrified glass
C0012A	42R		3	124	435.90	sandstone	80	10	10	7	17	34	0.1					0.1	6			0.1				9	3	14	5								5		31	64	12	40	0.29	0.10	2.07	0.39	0.61	0.11	0.26	0.63	acc.: chlorite, amph, ol; glass is mostly mafic fresh and blocky; diopside is acc.
C0012A	43R		1	40	442.90	sandstone	80	15	5	8	16	25	2						3			0.1				10	6	16	8	1							5		41	54	16	30	0.24	0.15	1.32	0.39	0.59	0.15	0.30	0.56	
C0012A	43R		1	139	443.89	sandstone	85	10	5	10	14	37	1						2			0.1				9	7	15	4	1									36	64	16	40	0.25	0.19	1.78	0.44	0.53	0.16	0.22	0.63	acc.: ol; glass is mostly brownish --> blocky mafic shards
C0012A	43R		2	17	444.07	sandstone	85	15	0	8	26	4	2		0.1			0.1	10							7	11	18	14										50	50	18	16	0.14	0.22	1.00	0.36	0.64	0.16	0.52	0.32	acc.: chlorite, ol; more felsic than mafic glass shards, Felsic shards are fresher than mafic; mafic glass is blocky
C0012A	43R		5	45	446.87	vulcanoclastic sandstone	50	25	15	6	17	2							12							20	13	7	8								10	5	48	37	33	14	0.42	0.27	0.77	0.69	0.31	0.16	0.46	0.38	mafic vs felsic glass = 3:1
C0012A	44R		1	36	452.36	sandstone	85	15	0	7	16	24						2	6							5	8	17	13	2									45	55	13	32	0.11	0.18	1.22	0.29	0.67	0.13	0.29	0.58	some poly-qz
C0012A	44R		1	119	453.19	volcanoclastic sandy siltstone	40	50	10	18	10								4							30	8	9	11								10		58	32	38	4	0.52	0.14	0.55	0.66	0.34	0.56	0.31	0.13	acc.: px; chert is devitrified glass; glass is brownish and fresh with some tachylithes abundant, but glass shows no
C0012A	44R		3	8	453.78	silty claystone	10	15	75	5	2								3							7	5	5	10	1						2	50	10	28	10	12	3	0.25	0.18	0.36	0.43	0.54	0.50	0.20	0.30	
C0012A	45R		1	45	461.95	sandstone	90	10	0	10	16	10	1					0.1	5				0.1			4	12	19	21	2									58	42	16	16	0.07	0.21	0.73	0.28	0.69	0.24	0.38	0.38	acc.: epidote?, chlorite, garnet, some poly-qz
C0012A	45R		1	68	462.18	volcanoclastic silty sandstone	40	40	10	1	13															30	9	7	30								10		76	14	39	0	0.39	0.12	0.18	0.51	0.49	0.07	0.93	0.00	chert is mostly devitirified glass; glass is of mafic composition and blocky, vesicle-free --> hyaloclastic?
C0012A	45R		2	51	463.32	sandstone	95	5	0	15	14	20				1		1	11	0.1		1	1			2	11	12	10	0.1									35	64	13	35	0.06	0.31	1.83	0.37	0.63	0.23	0.22	0.55	acc.: poly-qz
C0012A	45R		4	39.5	465.19	vulcanoclastic sandstone	75	25	0	5	19	4							8							17	15	12	19	1		0.1							64	36	32	12	0.27	0.23	0.56	0.50	0.48	0.14	0.53	0.33	acc.: Fforminifera; chert is likely to be devitrified glass; glass is blocky mafic vesicle-free glass --> hyaloclastic?
C0012A	45R		4	42	465.21	sandstone	85	15	0	9	30	2	1					1	4			0.1				4	9	10	30	0.1									53	47	13	8	0.08	0.17	0.89	0.24	0.75	0.19	0.64	0.17	acc.: ol, some poly-qz
C0012A	46R		3	36	472.29	volcanoclastic sandy siltstone	15	70	15	10	10								5							18	8	13	11								15	10	50	25	26	5	0.36	0.16	0.50	0.52	0.48	0.40	0.40	0.20	
C0012A	47R		1	4	480.54	silty claystone	5	45	50	6	3	0.1	0.1										0.1			8	3	18	12	0.1							40	10	41	9	11	0	0.19	0.07	0.23	0.27	0.73	0.65	0.32	0.03	acc.: garnet, amphibole, poly-qz, px

							Texture			Monomineralic Grains																	Lithic Grains/Ash					Pelagic Grains						Other		Summary			Ratios							
Hole	Core		Section	Int. (cm)	depth (**m CFS**)	Lithology	Sand %	Silt %	Clay %	Quartz	Feldspar	Pyroxene	Amphibole	Fe-ox	Glauconite	Zircon	Pyrite	chlorite	Opaque grains	Apatite	Barite	olivine	Garnet	Biotite/Mica	Calcite/Carbonate Mins.	Volcanic glass	Vol. Lithic	Sed. Lithic	Chert	Meta. Lithic	Nannofossils	Foraminifers	Diatoms	Radiolarians	Silicoflagellates	Sponge spicules	Clay Mins.	Zeolithe	Lithic	Minerals	Volcaniclastics	Heavy Minerals	Glass/Lithic	Vol. Lithic/Lithic	Min/Lith	Vol. clasts/Lithics	Sed+Chert/Lithic	Qz/Min	Fsp/Min	Heavy min./Min	Comment
C0012A	47R		3	24	481.36	fine tuff	30	70	0		4	1							6							19	8	22	40									89	11	27	7	0.21	0.09	0.12	0.30	0.70	-	0.36	0.64	acc.: px; chert is mostly devitirified glass; glass is of felsic composition and moderatley to strongly altered or
C0012A	48R		2	55	491.07	sandstone	70	30	0	15	17	23							3			1	0.1			11	8	15	7	0.1								41	59	19	27	0.27	0.19	1.44	0.46	0.54	0.25	0.29	0.46	acc.: garnet, poly-qz, metamorph. Lithic
C0012A	48R		2	60	491.12	silty sandstone	60	40	0	17	15	23				0.1			3				1			3	14	9	15	0.1								41	59	17	27	0.07	0.34	1.44	0.41	0.58	0.29	0.25	0.46	acc.: poly-qz, zr
C0012A	49R		1	23	499.73	fine tuff	20	80	0		6	3							2							65		15	9									89	11	65	5	0.73	-	0.12	0.73	0.27	-	0.55	0.45	glass is fresh felsic glass with nearly no alteration and agglomerates of strongly altered or devitrified glass
C0012A	49R		1	4	499.54	sandstone	70	30	0	31	10	14	2	0.1		0.1			2							8	7	11	15									41	59	15	18	0.20	0.17	1.44	0.37	0.63	0.52	0.17	0.31	acc.: zr, goethite
C0012A	49R		1	8	499.58	calcerous mudstone	0	100	0		0.1								5							5					80				10				5	5	5	5	1.00	-	1.02	1.00	-	-	0.02	0.98	acc.: plg
C0012A	50R		1	21	509.21	sandstone	90	10	0	16	13	28	0.1	0.1				1	3				1			4	8	14	12	0.1								38	62	12	33	0.10	0.21	1.63	0.31	0.68	0.26	0.21	0.53	acc.: amph, poly-qz, goethite, epidote; all minerals seems to be slightly altered or devitrified
C0012A	51R		CC	7	518.72	silty sandstone	50	40	10	2	10	12	1			0.1			3							9	10	12	30	1								62	28	19	16	0.15	0.16	0.45	0.31	0.68	0.07	0.36	0.57	acc.: zr; fsp + qtz are only in silt size to fine-sand abundant, whereas pyroxenes and sedimentary lithics are
C0012A	52R		1	44	528.44	sandstone	60	30	10	27	11	16	1			1		1	2				1		2	5	10	6	17	0.1								38	62	15	22	0.13	0.26	1.63	0.39	0.60	0.44	0.18	0.35	acc.: poly-qz.; Clasts and large crystalls are rounded, brown glass shards are angular and vesical-free -->
C0012A	52R		1	49	528.49	fine tuff	40	50	10	6	2	0.1							4									10	78									88	12	0	4	-	-	0.14	0.00	1.00	0.50	0.17	0.34	acc.: px; all cherts looks like devitirfied fine ash; probably only 1% is real chert with characteristic white-black
C0012A	52R		3	30	529.84	silty claystone	0	30	70					20					2							5		9			14					50		14	22	5	2	0.36	-	1.57	0.36	0.64	-	-	0.09	probably all matter is secondary altered and original grain structures may be destroyed --> FeOH is dominant +

Sample					Grain size							Minerals								Biogenic									Lithic fragments					
Core, type, section	Top (cm)	Bottom (cm)	Lithology	Photos	Clay (<4 µm)	Silt (3.9-62.5µm)	Very Fine sand (62.5-125µm)	Fine sand (125-250µm)	Medium sand (250µm-0.5mm)	Coarse sand (0.5-1mm)	Quartz	Feldspar	Mica	Pyrite	Fe-oxides/opaque	Mg-Fe minerals	Glauconite	Zircon	Diatoms	Foraminifers	Radiolarians	Silicoflagellates	Sponge spicules	Plant debris	Echinoderms fragment	Mollusc fragment	Carbonate	Siliceoclastic	Metamorphic	Pumice/Glass	Igneous	Comments
322-C0012A-13R-3	112	114	Tuffaceous Sandstone	1, 2					C	D	C	A			F	C											F	A	R	D		
322-C0012A-14R-4	44	46	Sandstone	1, 2				D			C	A			C	F											D	A	F	A		
322-C0012A-18R-2	24	26	Silty claystone	1, 2	D																											
322-C0012A-18R-2	24	26	Silty claystone	1, 2	D	A						F			F													R		F		Few calcerous nannofossils
322-C0012A-20R-4	120	121	Lime mudstone	1, 2	D						F	C			F												D			F		
322-C0012A-21R-CC	17	22	Silty claystone	1, 2	D	C						R			F													D		R		
322-C0012A-41R-CC	14	16	Lime mudstone	1, 2	D										F												D	F		R		
322-C0012A-43R-5	41	45	Volcaniclastic sandstone	1, 2, 3		A	D	C			C	C			F													C		A		Large elongated and orientated clasts of basaltic
322-C0012A-50R-1	24	25	Sandstone	1, 2					D		A	C			F	F												D	F	F		

Notes: Abundances: R = rare (<0.1%), F = few (0.1-1%), C = common (1-10%), A = abundant (10-50%), D = dominant (>50%). Polycrystalline quartz was considered a metamorphic grain. Abundances are semi-quantitative.

Basement thin section description

Sample Identification: Site C0012 Hole A
Core **53** Section **2**
Piece **1** Interval **0** - **5**

Rock name: **Highly Pl-Px phyric basalt**

Vesicularity:

Nonvesicular (<1% vesicules)	
Sparsly vesicular (1 - 5% vesicules)	
Moderatly vesicular (5 - 20% vesicules)	
Highly vesicular (>20% vesicules)	X
Heterogeneous	

Degree of cristallinity:

Holohyaline (90 - 100% glass)	
Hypohyaline (>50% glass)	
Hypocrystaline (>50% crystals)	X
Holocrystaline (90 - 100% crystals)	

Constituents of basalt:

	Phenocrysts					Groundmass				Secondary					
	Plagioclase	Clinopyroxene	Orthopyroxene	Olivine	Opaque	Plagioclase	Pyroxene	Opaque	Glass	Saponite	Celadonite	Zeolite	Quartz	Calcite	Iddingsite
%	15		5			30	15	2	10	10	12			In Vein	1
Size*	1		0.2												
Shape**	El		Seq												
Habit***	Eu		SEu												

Description and mineralogy of vein:
Thin vein of calcite (~ 0.4 mm wide)

Comments:
Glass replaced by saponite and celadonite
Vesicles filled with celadonite

Observer: Shasa Labanieh
Note:
* Size = average in mm
** Shape = Eq (Equant), Seq (SubEquant), Tab (Tabular), El (Elongated)
*** Habit = Eu (Euhedral), SEu (Sub-Euhadral), An (Anhedral), In (Interstitial)

Basement thin section description

Sample Identification: Site C0012 Hole A
Core **53** Section **2**
Piece **2** Interval **24** - **32**

Rock name: **Highly Pl-Px phyric basalt**

Vesicularity:

Nonvesicular (<1% vesicules)	
Sparsly vesicular (1 - 5% vesicules)	
Moderatly vesicular (5 - 20% vesicules)	
Highly vesicular (>20% vesicules)	
Heterogeneous **(Pillow rim)**	**X**

Degree of cristallinity:

Holohyaline (90 - 100% glass)	
Hypohyaline (>50% glass)	**X**
Hypocrystaline (>50% crystals)	
Holocrystaline (90 - 100% crystals)	

Constituents of basalt:

	Phenocrysts					Groundmass				Secondary					
	Plagioclase	Clinopyroxene	Orthopyroxene	Olivine	Opaque	Plagioclase	Pyroxene	Opaque	Glass	Saponite	Celadonite	Zeolite	Quartz	Calcite	Iddingsite
%	15		9		1				10	40	25				
Size*	0.5		0.6		0.8										
Shape**	El		Seq		Seq										
Habit***	Eu		SEu		An										

Description and mineralogy of vein:

Comments:
Glass replaced by saponite and celadonite
Minerals form aggregates

Observer: Shasa Labanieh
Note:
* Size = average in mm
** Shape = Eq (Equant), Seq (SubEquant), Tab (Tabular), El (Elongated)
*** Habit = Eu (Euhedral), SEu (Sub-Euhadral), An (Anhedral), In (Interstitial)

Basement thin section description

Sample Identification: Site C0012 Hole A
Core **53** Section **2**
Piece **7** Interval **75** - **80**

Rock name: **Highly Px-Pl-Ol phyric basalt**

Vesicularity:

Nonvesicular (<1% vesicules)	
Sparsly vesicular (1 - 5% vesicules)	
Moderatly vesicular (5 - 20% vesicules)	
Highly vesicular (>20% vesicules)	X
Heterogeneous	

Degree of cristallinity:

Holohyaline (90 - 100% glass)	
Hypohyaline (>50% glass)	X
Hypocrystaline (>50% crystals)	
Holocrystaline (90 - 100% crystals)	

Constituents of basalt:

	Phenocrysts					Groundmass				Secondary					
	Plagioclase	Clinopyroxene	Orthopyroxene	Olivine	Opaque	Plagioclase	Pyroxene	Opaque	Glass	Saponite	Celadonite	Zeolite	Quartz	Calcite	Iddingsite
%	6		9	5		10	7		10	30	20				3
Size*	0.6		0.6	0.6											
Shape**	El		Seq	Seq											
Habit***	Eu		Eu	Seu											

Description and mineralogy of vein:
Large vein filled with breccia
- Fragments of basalt (see description above):
  Ol are altered in iddingsite and glass altered in Saponite
- Sealed by saponite (80%) and celadonite (20%)
  + thin rim of calcite

Comments:

Observer: Shasa Labanieh
Note:
* Size = average in mm
** Shape = Eq (Equant), Seq (SubEquant), Tab (Tabular), El (Elongated)
*** Habit = Eu (Euhedral), SEu (Sub-Euhadral), An (Anhedral), In (Interstitial)

Basement thin section description

Sample Identification: Site C0012 Hole A
Core **54** Section **1**
Piece **1** Interval **10** - **12**

Rock name: **Highly Pl-Px phyric basalt**

Vesicularity:

Nonvesicular (<1% vesicules)	
Sparsly vesicular (1 - 5% vesicules)	
Moderatly vesicular (5 - 20% vesicules)	**X**
Highly vesicular (>20% vesicules)	
Heterogeneous	

Degree of cristallinity:

Holohyaline (90 - 100% glass)	
Hypohyaline (>50% glass)	**X**
Hypocrystaline (>50% crystals)	
Holocrystaline (90 - 100% crystals)	

Constituents of basalt:

	Phenocrysts					Groundmass				Secondary					
	Plagioclase	Clinopyroxene	Orthopyroxene	Olivine	Opaque	Plagioclase	Pyroxene	Opaque	Glass	Saponite	Celadonite	Zeolite	Quartz	Calcite	Iddingsite
%	15		9			20		5	20	10	20		In Vein	In Vein	
Size*	0.7		0.4												
Shape**	El		Tab												
Habit***	Eu		Eu												

Description and mineralogy of vein:
Large fracture filled with breccia
- Quartz vein
- Calcite vein
- Sealed by saponite (80%) and celadonite (20%)
- Fragments of basalt (descrption above)

Comments:

Observer: Shasa Labanieh
Note:
* Size = average in mm
** Shape = Eq (Equant), Seq (SubEquant), Tab (Tabular), El (Elongated)
*** Habit = Eu (Euhedral), SEu (Sub-Euhadral), An (Anhedral), In (Interstitial)

Basement thin section description

Sample Identification: Site C0012 Hole A
Core **54** Section **1**
Piece **1** Interval **32** - **35**

Rock name: **Highly Pl-Px phyric basalt and Breccia**

Vesicularity:

Nonvesicular (<1% vesicules)	
Sparsly vesicular (1 - 5% vesicules)	X
Moderatly vesicular (5 - 20% vesicules)	
Highly vesicular (>20% vesicules)	
Heterogeneous	

Degree of cristallinity:

Holohyaline (90 - 100% glass)	
Hypohyaline (>50% glass)	X
Hypocrystaline (>50% crystals)	
Holocrystaline (90 - 100% crystals)	

Constituents of basalt:

	Phenocrysts					Groundmass				Secondary					
	Plagioclase	Clinopyroxene	Orthopyroxene	Olivine	Opaque	Plagioclase	Pyroxene	Opaque	Glass	Saponite	Celadonite	Zeolite	Quartz	Calcite	Iddingsite
%	10		10	2		8			40	30					
Size*															
Shape**															
Habit***															

Description and mineralogy of vein:
Fracture filled with breccia in basalt (see description above)
In the breccia there is fragments of two types of basalt.
One basalt has large phenocrysts of Pl, Cpx and altered Ol
(similar to surrounding basalt)
The other basalt is aphyric

Comments:

Observer: Shasa Labanieh
Note:
* Size = average in mm
** Shape = Eq (Equant), Seq (SubEquant), Tab (Tabular), El (Elongated)
*** Habit = Eu (Euhedral), SEu (Sub-Euhadral), An (Anhedral), In (Interstitial)

Basement thin section description

Sample Identification: Site C0012 Hole A
Core **54** Section **2**
Piece **1** Interval **10** - **15**

Rock name: **Heterogeneous Pl-Px phyric basalt**

Vesicularity:

Nonvesicular (<1% vesicules)	
Sparsly vesicular (1 - 5% vesicules)	
Moderatly vesicular (5 - 20% vesicules)	
Highly vesicular (>20% vesicules)	
Heterogeneous	**X**

Degree of cristallinity:

Holohyaline (90 - 100% glass)	
Hypohyaline (>50% glass)	**X**
Hypocrystaline (>50% crystals)	
Holocrystaline (90 - 100% crystals)	

Constituents of basalt:

	Phenocrysts					Groundmass				Secondary					
	Plagioclase	Clinopyroxene	Orthopyroxene	Olivine	Opaque	Plagioclase	Pyroxene	Opaque	Glass	Saponite	Celadonite	Zeolite	Quartz	Calcite	Iddingsite
%	10		5		2	10	5	3	5	20	40				
Size*	0.8		0.4		0.3										
Shape**	El		Seq		Seq										
Habit***	EU		Seu		Seu										

Description and mineralogy of vein:

Comments:
Vesicles are heterogeneously distributed and are filled with celadonite
Glass altered in saponite

Observer: Shasa Labanieh
Note:
* Size = average in mm
** Shape = Eq (Equant), Seq (SubEquant), Tab (Tabular), El (Elongated)
*** Habit = Eu (Euhedral), SEu (Sub-Euhadral), An (Anhedral), In (Interstitial)

Basement thin section description

Sample Identification: Site C0012 Hole A
Core **54** Section **2**
Piece **7** Interval **54** - **35**

Rock name: **Moderately Pl-Px phyric basalt**

Vesicularity:

Nonvesicular (<1% vesicules)	
Sparsly vesicular (1 - 5% vesicules)	
Moderatly vesicular (5 - 20% vesicules)	
Highly vesicular (>20% vesicules)	
Heterogeneous **(Pillow Rim)**	**X**

Degree of cristallinity:

Holohyaline (90 - 100% glass)	**X**
Hypohyaline (>50% glass)	
Hypocrystaline (>50% crystals)	
Holocrystaline (90 - 100% crystals)	

Constituents of basalt:

	Phenocrysts					Groundmass				Secondary					
	Plagioclase	Clinopyroxene	Orthopyroxene	Olivine	Opaque	Plagioclase	Pyroxene	Opaque	Glass	Saponite	Celadonite	Zeolite	Quartz	Calcite	Iddingsite
%	6		3		1				30	25	35				
Size*	0.2		0.2		0.1										
Shape**	El		Seq		Seq										
Habit***	EU		Seu		Seu										

Description and mineralogy of vein:

Comments:
Pillow basalt

Observer: Shasa Labanieh
Note:
* Size = average in mm
** Shape = Eq (Equant), Seq (SubEquant), Tab (Tabular), El (Elongated)
*** Habit = Eu (Euhedral), SEu (Sub-Euhadral), An (Anhedral), In (Interstitial)

Basement thin section description

Sample Identification: Site C0012 Hole A
Core **54** Section **CC**
Piece **1** Interval **0** - **6**

Rock name: **Heterogeneous Pl-Px phyric basalt**

Vesicularity:

Nonvesicular (<1% vesicules)	
Sparsly vesicular (1 - 5% vesicules)	
Moderatly vesicular (5 - 20% vesicules)	**X**
Highly vesicular (>20% vesicules)	
Heterogeneous	

Degree of cristallinity:

Holohyaline (90 - 100% glass)	
Hypohyaline (>50% glass)	
Hypocrystaline (>50% crystals)	
Holocrystaline (90 - 100% crystals)	
HETEROGENEOUS	**X**

Constituents of basalt:

	Phenocrysts					Groundmass				Secondary					
	Plagioclase	Clinopyroxene	Orthopyroxene	Olivine	Opaque	Plagioclase	Pyroxene	Opaque	Glass	Saponite	Celadonite	Zeolite	Quartz	Calcite	Iddingsite
%	10		5						50	15	20				
Size*	0.2		0.2												
Shape**	El		Seq												
Habit***	EU		Seu												

Description and mineralogy of vein:

Comments:

Very heterogeneous basalt (some places are aphyric, others highly phyric)
Vesicles are filled with celadonite

Observer: Shasa Labanieh
Note:
* Size = average in mm
** Shape = Eq (Equant), Seq (SubEquant), Tab (Tabular), El (Elongated)
*** Habit = Eu (Euhedral), SEu (Sub-Euhadral), An (Anhedral), In (Interstitial)

Basement thin section description

Sample Identification: Site C0012 Hole A
Core **55** Section **1**
Piece **2** Interval **5** - **13**

Rock name: **Heterogenous Pl-Px phyric basalt**

Vesicularity:

Nonvesicular (<1% vesicules)	
Sparsly vesicular (1 - 5% vesicules)	
Moderatly vesicular (5 - 20% vesicules)	
Highly vesicular (>20% vesicules)	
Heterogeneous	**X**

Degree of cristallinity:

Holohyaline (90 - 100% glass)	
Hypohyaline (>50% glass)	
Hypocrystaline (>50% crystals)	
Holocrystaline (90 - 100% crystals)	
Heterogeneous	**X**

Constituents of basalt:

	Phenocrysts					Groundmass				Secondary					
	Plagioclase	Clinopyroxene	Orthopyroxene	Olivine	Opaque	Plagioclase	Pyroxene	Opaque	Glass	Saponite	Celadonite	Zeolite	Quartz	Calcite	Iddingsite
%	12		8						20	30	28				2
Size*	0.8		0.6												
Shape**	El		Eq												
Habit***	Eu		Eu												

Description and mineralogy of vein:
Glassy rim of pillow completely replaced by celadonite and saponite

Comments:
Very heterogeneous basalt
Diffuse limits between phyric to aphyric and sparsly to highly vesicular
Phenocrysts form aggregates

Observer: Shasa Labanieh
Note:
* Size = average in mm
** Shape = Eq (Equant), Seq (SubEquant), Tab (Tabular), El (Elongated)
*** Habit = Eu (Euhedral), SEu (Sub-Euhadral), An (Anhedral), In (Interstitial)

Sample Identification: Site C0012 Hole A
Core **55** Section **1**
Piece **5** Interval **22** - **31**

Rock name: **Heterogenous Pl-Px phyric basalt**

Vesicularity:

Nonvesicular (<1% vesicules)	
Sparsly vesicular (1 - 5% vesicules)	
Moderatly vesicular (5 - 20% vesicules)	
Highly vesicular (>20% vesicules)	
Heterogeneous	

Degree of cristallinity:

Holohyaline (90 - 100% glass)	
Hypohyaline (>50% glass)	X
Hypocrystaline (>50% crystals)	
Holocrystaline (90 - 100% crystals)	
Heterogeneous	

Constituents of basalt:

	Phenocrysts					Groundmass				Secondary					
	Plagioclase	Clinopyroxene	Orthopyroxene	Olivine	Opaque	Plagioclase	Pyroxene	Opaque	Glass	Saponite	Celadonite	Zeolite	Quartz	Calcite	Iddingsite
%	9		6						15	40	20			In Vein	Tr
Size*	1		0.8												
Shape**	El		Seq												
Habit***	Eu		Seu												

Description and mineralogy of vein:
Vein filled with saponite and celadonite and a little vein of calcite

Comments:
Traces of iddingsite

Observer: Shasa Labanieh
Note:
* Size = average in mm
** Shape = Eq (Equant), Seq (SubEquant), Tab (Tabular), El (Elongated)
*** Habit = Eu (Euhedral), SEu (Sub-Euhadral), An (Anhedral), In (Interstitial)

Basement thin section description

Sample Identification: Site C0012 Hole A
Core **55** Section **CC**
Piece **5** Interval **27** - **32**

Rock name: **Heterogenous Pl-Px phyric basalt**

Vesicularity:

Nonvesicular (<1% vesicules)	
Sparsly vesicular (1 - 5% vesicules)	
Moderatly vesicular (5 - 20% vesicules)	
Highly vesicular (>20% vesicules)	X
Heterogeneous	

Degree of cristallinity:

Holohyaline (90 - 100% glass)	
Hypohyaline (>50% glass)	
Hypocrystaline (>50% crystals)	
Holocrystaline (90 - 100% crystals)	
Heterogeneous	X

Constituents of basalt:

	Phenocrysts					Groundmass				Secondary					
	Plagioclase	Clinopyroxene	Orthopyroxene	Olivine	Opaque	Plagioclase	Pyroxene	Opaque	Glass	Saponite	Celadonite	Zeolite	Quartz	Calcite	Iddingsite
%	8	2	3			10		2	15	20	30	10			
Size*	0.2	0.3	0.3												
Shape**	El	Seq	Seq												
Habit***	Seq	An	An												

Description and mineralogy of vein:

Comments:
Vesicles are filled with zeolite or celadonite or both (zeolite in core)
Presence of aggregates of pyrite

Observer: Shasa Labanieh
Note:
* Size = average in mm
** Shape = Eq (Equant), Seq (SubEquant), Tab (Tabular), El (Elongated)
*** Habit = Eu (Euhedral), SEu (Sub-Euhadral), An (Anhedral), In (Interstitial)

Basement thin section description

Sample Identification: Site C0012 Hole A
Core **56** Section **CC**
Piece **5** Interval **29** - **14**

Rock name: **Heterogenous Pl-Px phyric basalt**

Vesicularity:

Nonvesicular (<1% vesicules)	
Sparsly vesicular (1 - 5% vesicules)	
Moderatly vesicular (5 - 20% vesicules)	
Highly vesicular (>20% vesicules)	
Heterogeneous	**X**

Degree of cristallinity:

Holohyaline (90 - 100% glass)	
Hypohyaline (>50% glass)	**X**
Hypocrystaline (>50% crystals)	
Holocrystaline (90 - 100% crystals)	
Heterogeneous	

Constituents of basalt:

	Phenocrysts					Groundmass				Secondary					
	Plagioclase	Clinopyroxene	Orthopyroxene	Olivine	Opaque	Plagioclase	Pyroxene	Opaque	Glass	Saponite	Celadonite	Zeolite	Quartz	Calcite	Iddingsite
%	7		3						50	30	10				
Size*	1.2		1												
Shape**	El		Seq												
Habit***	Seq		Seu												

Description and mineralogy of vein:

Comments:

Observer: Shasa Labanieh
Note:
* Size = average in mm
** Shape = Eq (Equant), Seq (SubEquant), Tab (Tabular), El (Elongated)
*** Habit = Eu (Euhedral), SEu (Sub-Euhadral), An (Anhedral), In (Interstitial)

Basement thin section description

Sample Identification: Site C0012 Hole A
Core **57** Section **1**
Piece **2** Interval **33** - **35**

Rock name: **Heterogenous Pl-Px phyric basalt**

Vesicularity:

Nonvesicular (<1% vesicules)	
Sparsly vesicular (1 - 5% vesicules)	
Moderatly vesicular (5 - 20% vesicules)	
Highly vesicular (>20% vesicules)	
Heterogeneous	**X**

Degree of cristallinity:

Holohyaline (90 - 100% glass)	
Hypohyaline (>50% glass)	
Hypocrystaline (>50% crystals)	
Holocrystaline (90 - 100% crystals)	
Heterogeneous	**X**

Constituents of basalt:

	Phenocrysts					Groundmass				Secondary					
	Plagioclase	Clinopyroxene	Orthopyroxene	Olivine	Opaque	Plagioclase	Pyroxene	Opaque	Glass	Saponite	Celadonite	Zeolite	Quartz	Calcite	Iddingsite
%	20		8						20	10	40				2
Size*	1		0.5												
Shape**	El		Seq												
Habit***	Seq		Seu												

Description and mineralogy of vein:

Comments:
Very heterogeneous (vesicles and phenocryst content)
Vesicles are filled with celadonite

Observer: Shasa Labanieh
Note:
* Size = average in mm
** Shape = Eq (Equant), Seq (SubEquant), Tab (Tabular), El (Elongated)
*** Habit = Eu (Euhedral), SEu (Sub-Euhadral), An (Anhedral), In (Interstitial)

Sample Identification: Site C0012 Hole A
Core **57** Section **1**
Piece **3** Interval **62** - **75**

Rock name: **Highly Pl-Px phyric basalt**

Vesicularity:

Nonvesicular (<1% vesicules)	
Sparsly vesicular (1 - 5% vesicules)	
Moderatly vesicular (5 - 20% vesicules)	
Highly vesicular (>20% vesicules)	
Heterogeneous	**X**

Degree of cristallinity:

Holohyaline (90 - 100% glass)	
Hypohyaline (>50% glass)	**X**
Hypocrystaline (>50% crystals)	
Holocrystaline (90 - 100% crystals)	
Heterogeneous	

Constituents of basalt:

	Phenocrysts					Groundmass				Secondary					
	Plagioclase	Clinopyroxene	Orthopyroxene	Olivine	Opaque	Plagioclase	Pyroxene	Opaque	Glass	Saponite	Celadonite	Zeolite	Quartz	Calcite	Iddingsite
%	10		10						20	15	30	15			
Size*	0.5		0.2												
Shape**	El		Seq												
Habit***	Eu		Seu												

Description and mineralogy of vein:

Comments:
Vesicles are filled with zeolite or celadonite
Heterogeneous basalt

Observer: Shasa Labanieh
Note:
* Size = average in mm
** Shape = Eq (Equant), Seq (SubEquant), Tab (Tabular), El (Elongated)
*** Habit = Eu (Euhedral), SEu (Sub-Euhadral), An (Anhedral), In (Interstitial)

Basement thin section description

Sample Identification: Site C0012 Hole A
Core **58** Section **1**
Piece **1** Interval **0** - **15**

Rock name: **Highly Px-Pl phyric basalt**

Vesicularity:

Nonvesicular (<1% vesicules)	
Sparsly vesicular (1 - 5% vesicules)	
Moderatly vesicular (5 - 20% vesicules)	
Highly vesicular (>20% vesicules)	**X**
Heterogeneous	

Degree of cristallinity:

Holohyaline (90 - 100% glass)	
Hypohyaline (>50% glass)	**X**
Hypocrystaline (>50% crystals)	
Holocrystaline (90 - 100% crystals)	
Heterogeneous	

Constituents of basalt:

	Phenocrysts					Groundmass				Secondary					
	Plagioclase	Clinopyroxene	Orthopyroxene	Olivine	Opaque	Plagioclase	Pyroxene	Opaque	Glass	Saponite	Celadonite	Zeolite	Quartz	Calcite	Iddingsite
%	7	4	4			5	5	2		23	50				
Size*	0.5	0.6	0.6												
Shape**	El	Seq	Seq												
Habit***	Eu	Seu	Seu												

Description and mineralogy of vein:
Vein of celadonite and saponite (50-50)

Comments:
Vesicles are filled with celadonite

Observer: Shasa Labanieh
Note:
* Size = average in mm
** Shape = Eq (Equant), Seq (SubEquant), Tab (Tabular), El (Elongated)
*** Habit = Eu (Euhedral), SEu (Sub-Euhadral), An (Anhedral), In (Interstitial)

Basement thin section description

Sample Identification: Site C0012 Hole A
Core **58** Section **1**
Piece **2** Interval **15** - **21**

Rock name: **Moderately Pl-Px phyric basalt**

Vesicularity:

Nonvesicular (<1% vesicules)	
Sparsly vesicular (1 - 5% vesicules)	
Moderatly vesicular (5 - 20% vesicules)	
Highly vesicular (>20% vesicules)	X
Heterogeneous	

Degree of cristallinity:

Holohyaline (90 - 100% glass)	X
Hypohyaline (>50% glass)	
Hypocrystaline (>50% crystals)	
Holocrystaline (90 - 100% crystals)	
Heterogeneous	

Constituents of basalt:

	Phenocrysts					Groundmass				Secondary					
	Plagioclase	Clinopyroxene	Orthopyroxene	Olivine	Opaque	Plagioclase	Pyroxene	Opaque	Glass	Saponite	Celadonite	Zeolite	Quartz	Calcite	Iddingsite
%	6		2			5	5	2	20	30	30				
Size*	0.3		0.1												
Shape**	El		Seq												
Habit***	Eu		Seu												

Description and mineralogy of vein:
Vein of celadonite and saponite (50-50)

Comments:

Observer: Shasa Labanieh
Note:
* Size = average in mm
** Shape = Eq (Equant), Seq (SubEquant), Tab (Tabular), El (Elongated)
*** Habit = Eu (Euhedral), SEu (Sub-Euhadral), An (Anhedral), In (Interstitial)