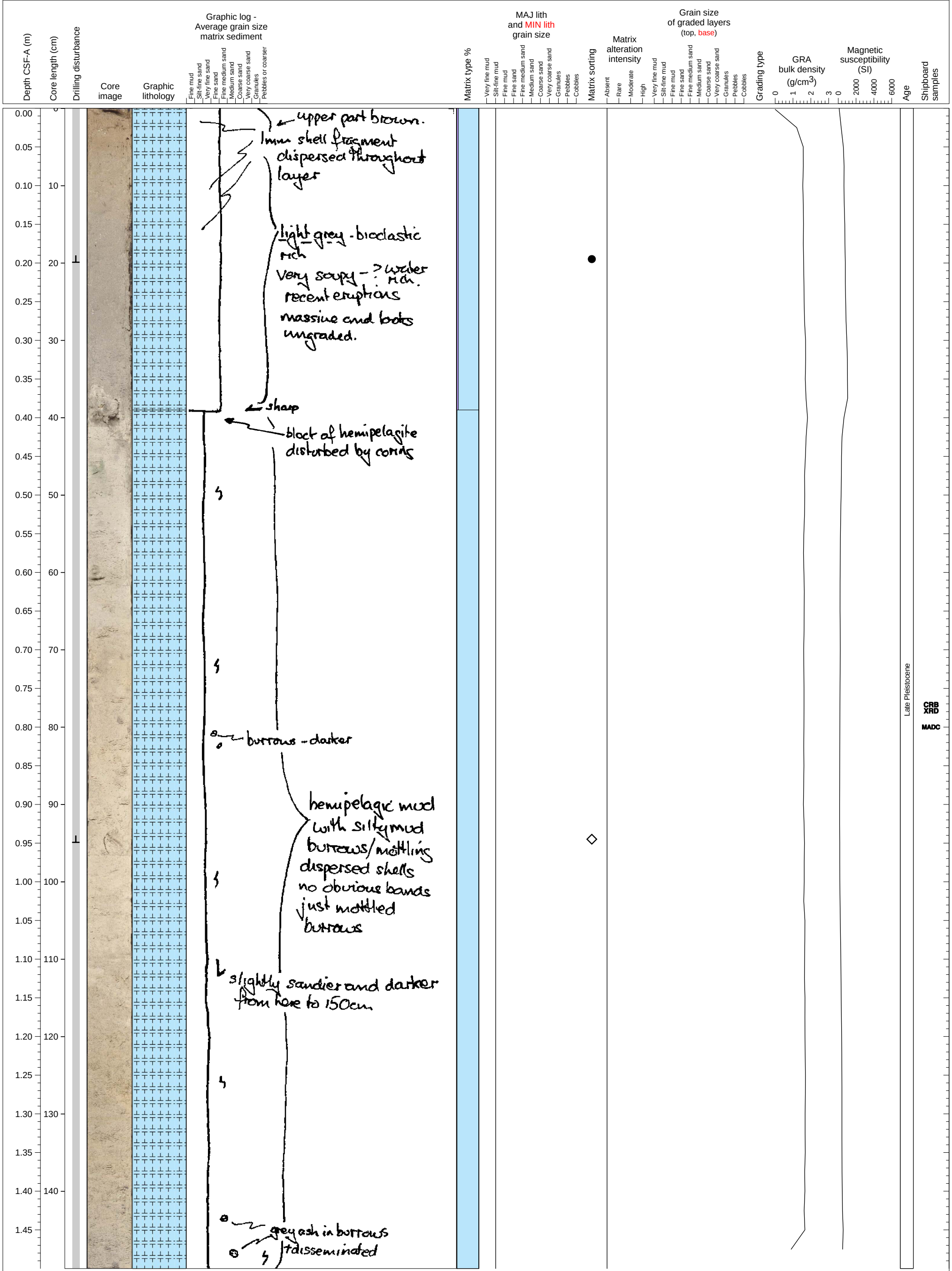
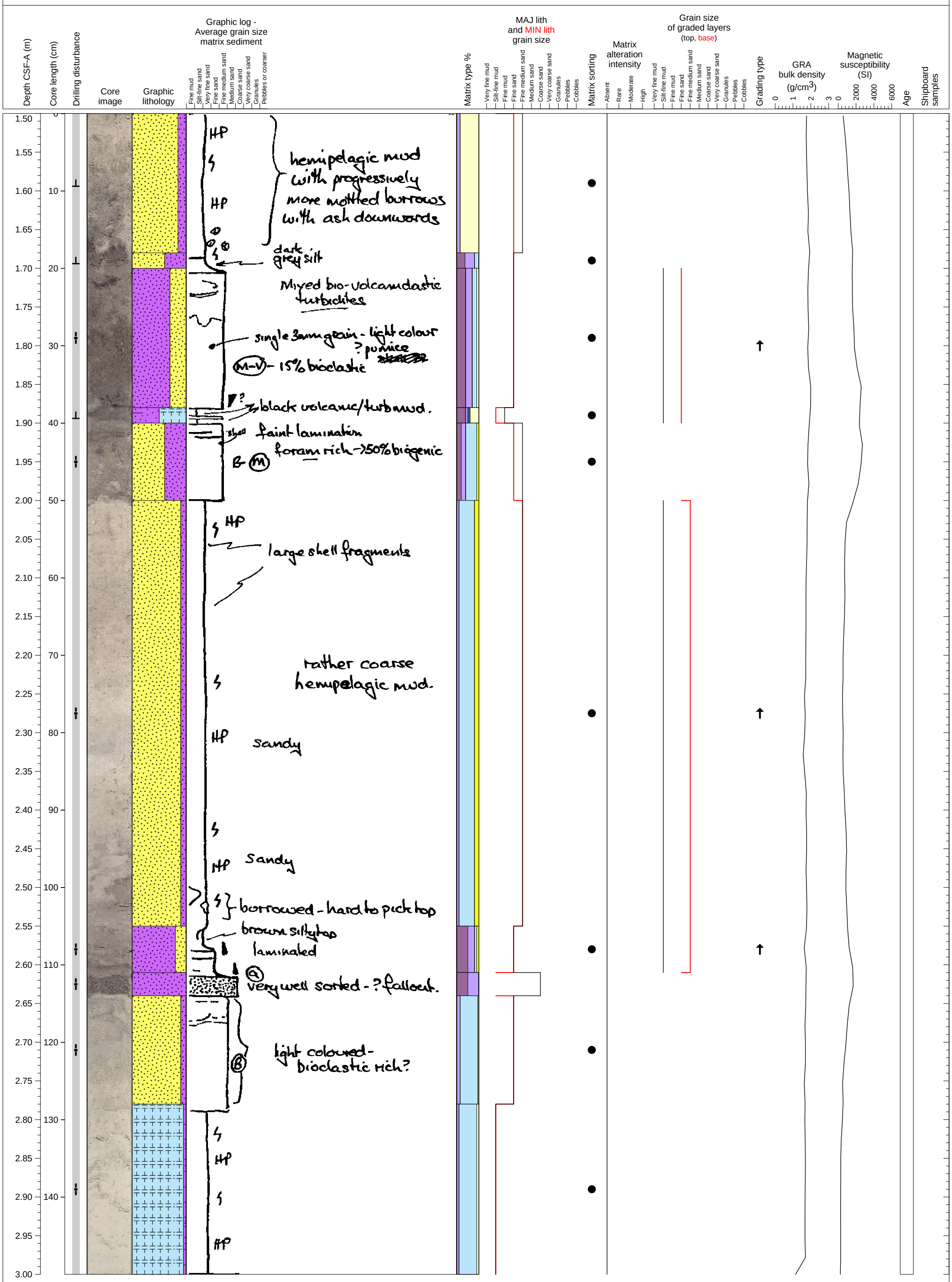
Hole 340-U1396A-1H Section 1, Top of Section: 0.0 CSF-A (m)

There are two calcareous ooze layer in this section which have clear boundary, but both layers consist of mostly biogenic carbonate.



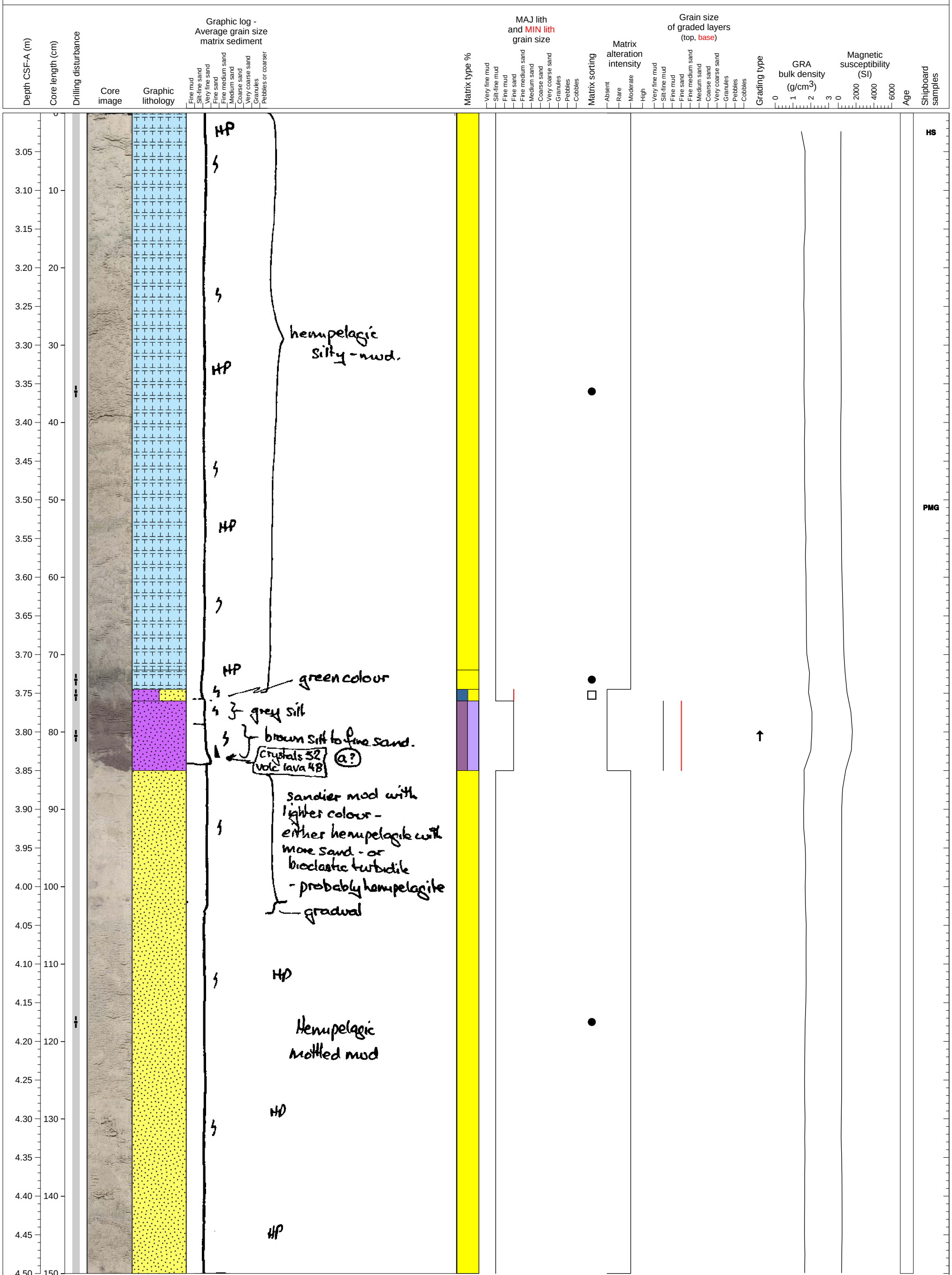
Hole 340-U1396A-1H Section 2, Top of Section: 1.5 CSF-A (m)

Two volcaniclastic turbidite units and a calcareous - volcaniclastic mixed sandy turbidite unit with coarse grained well sorted mafic tephra layer.



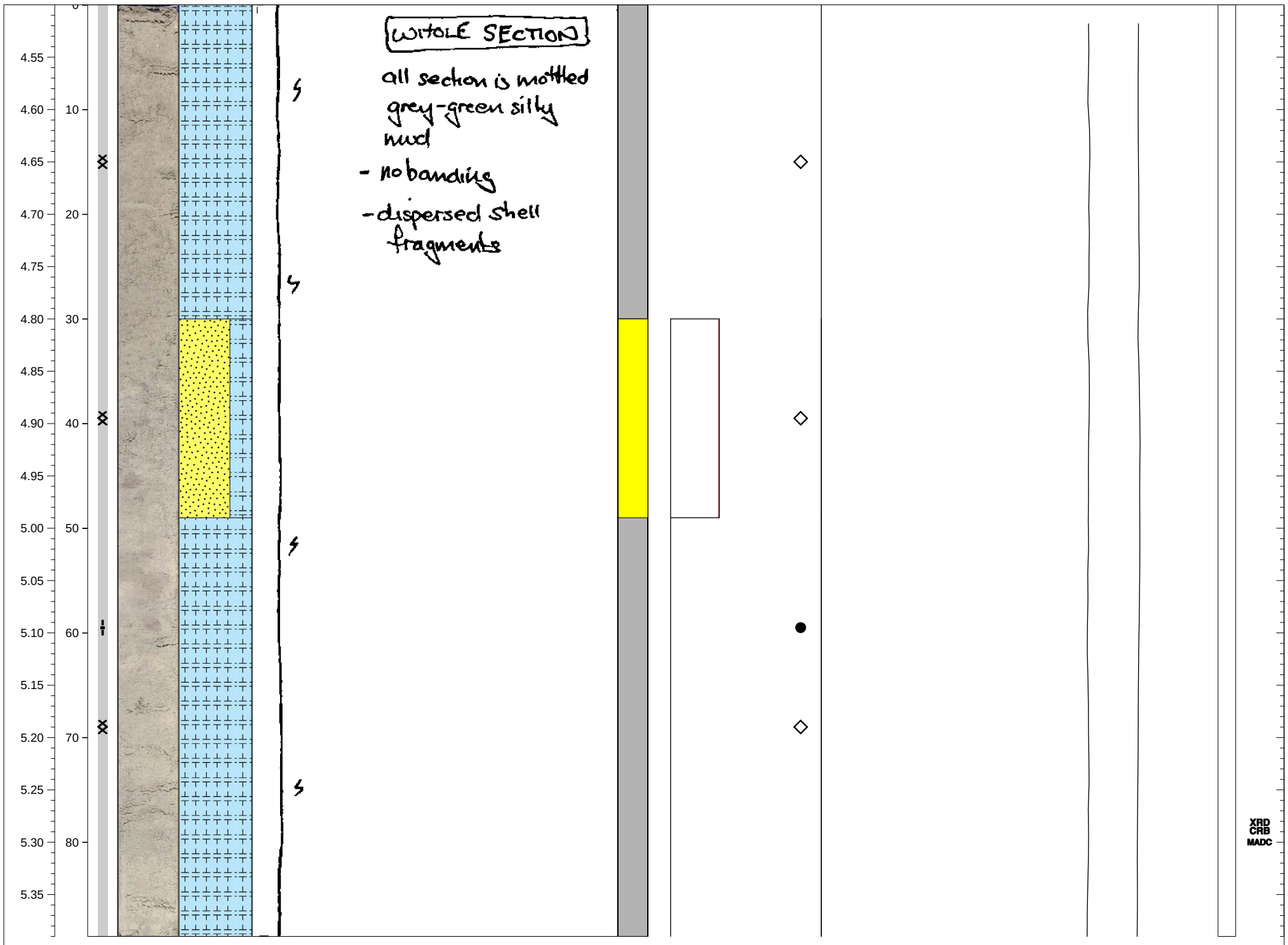
Hole 340-U1396A-1H Section 3, Top of Section: 3.0 CSF-A (m)

Hemipelagic sediments interlayering a pure volcaniclastic tephra or turbidite.



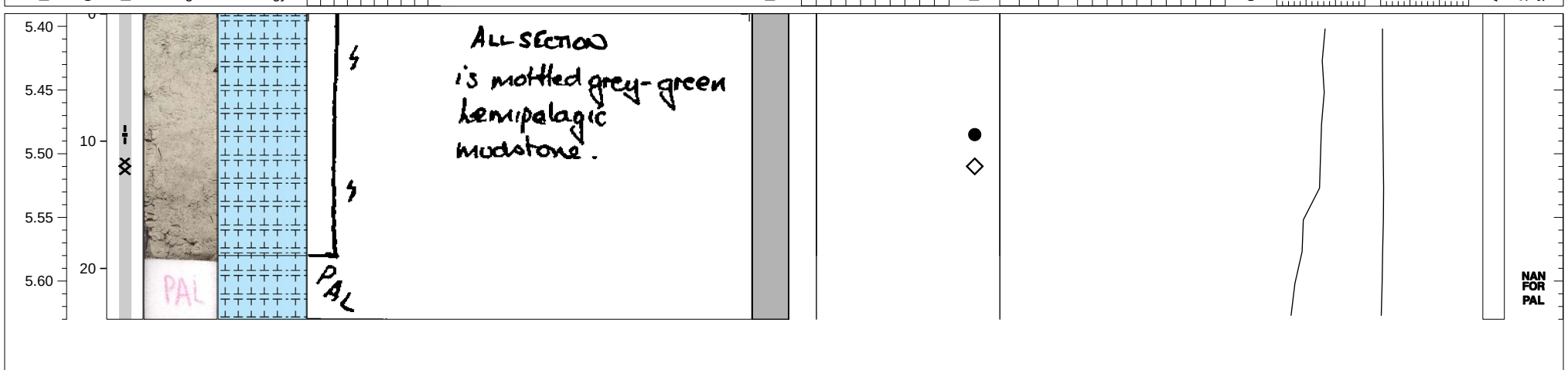
Hole 340-U1396A-1H Section 4, Top of Section: 4.5 CSF-A (m)

Hemipelagic clay.



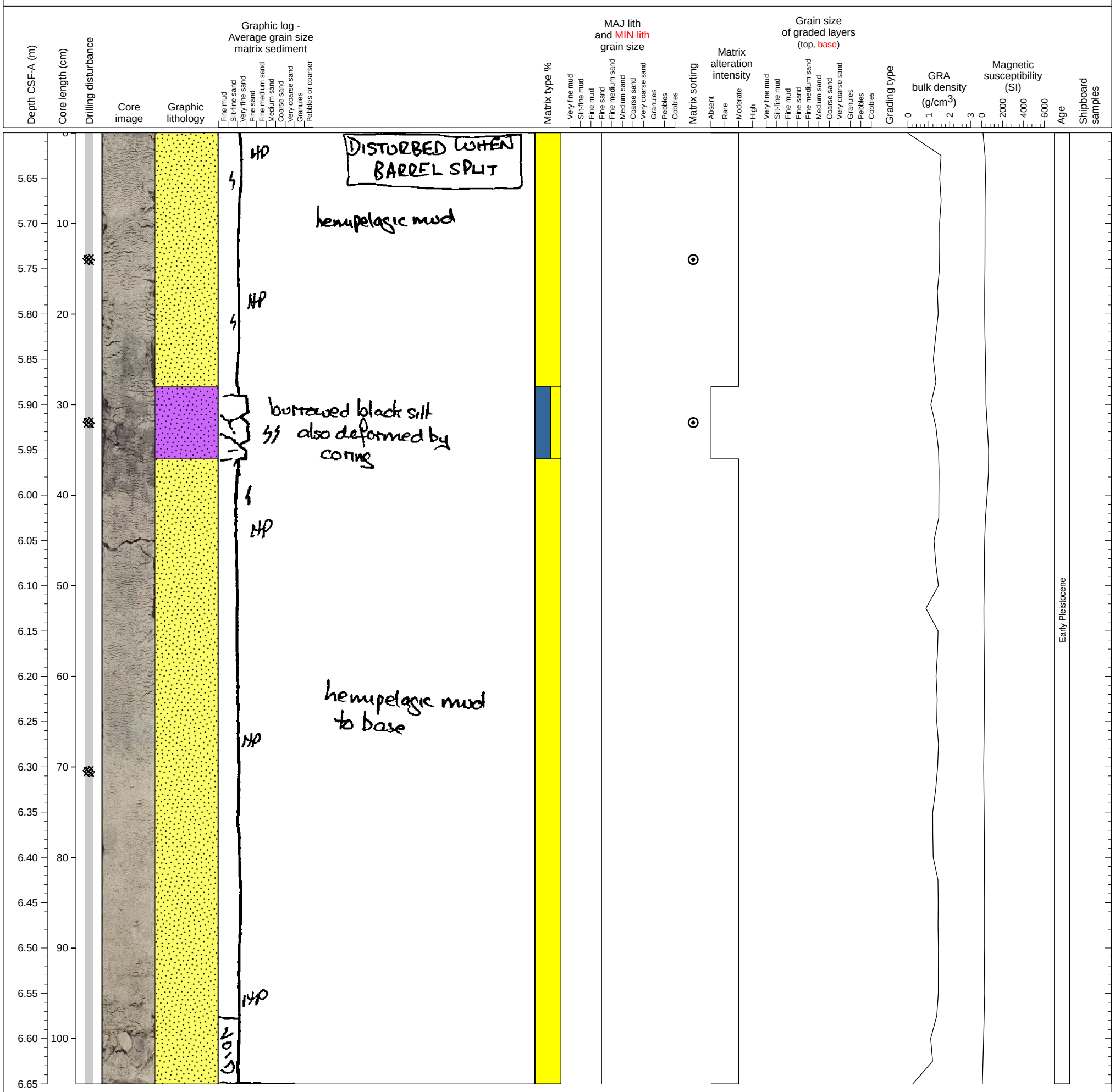
Hole 340-U1396A-1H Section CC, Top of Section: 5.39 CSF-A (m)

Hemipelagic clay. PAL sample from base of section.



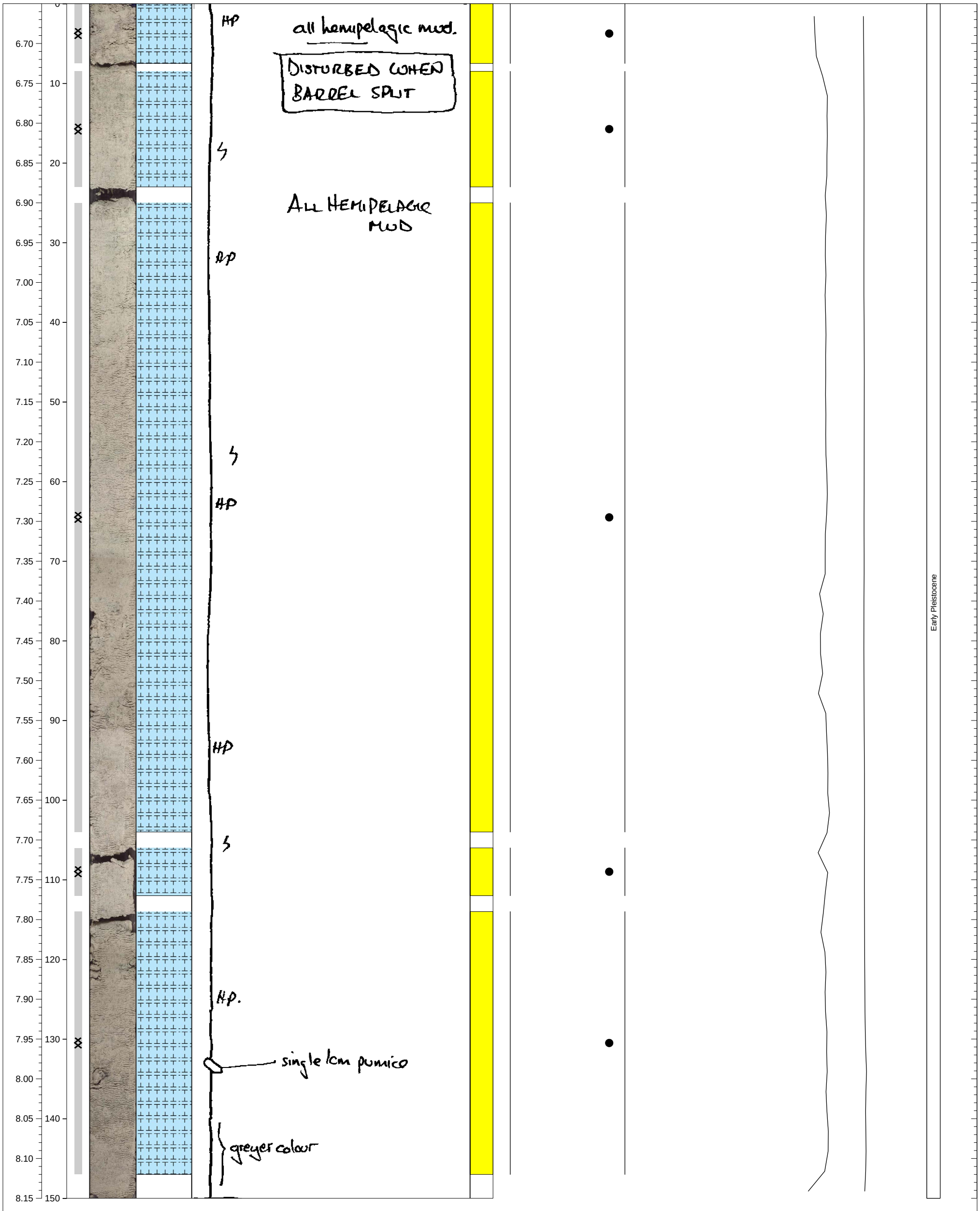
Hole 340-U1396A-2H Section 1, Top of Section: 5.6 CSF-A (m)

Hemipelagic sediments interlayering volcaniclastic sand but severely disturbed by drilling.



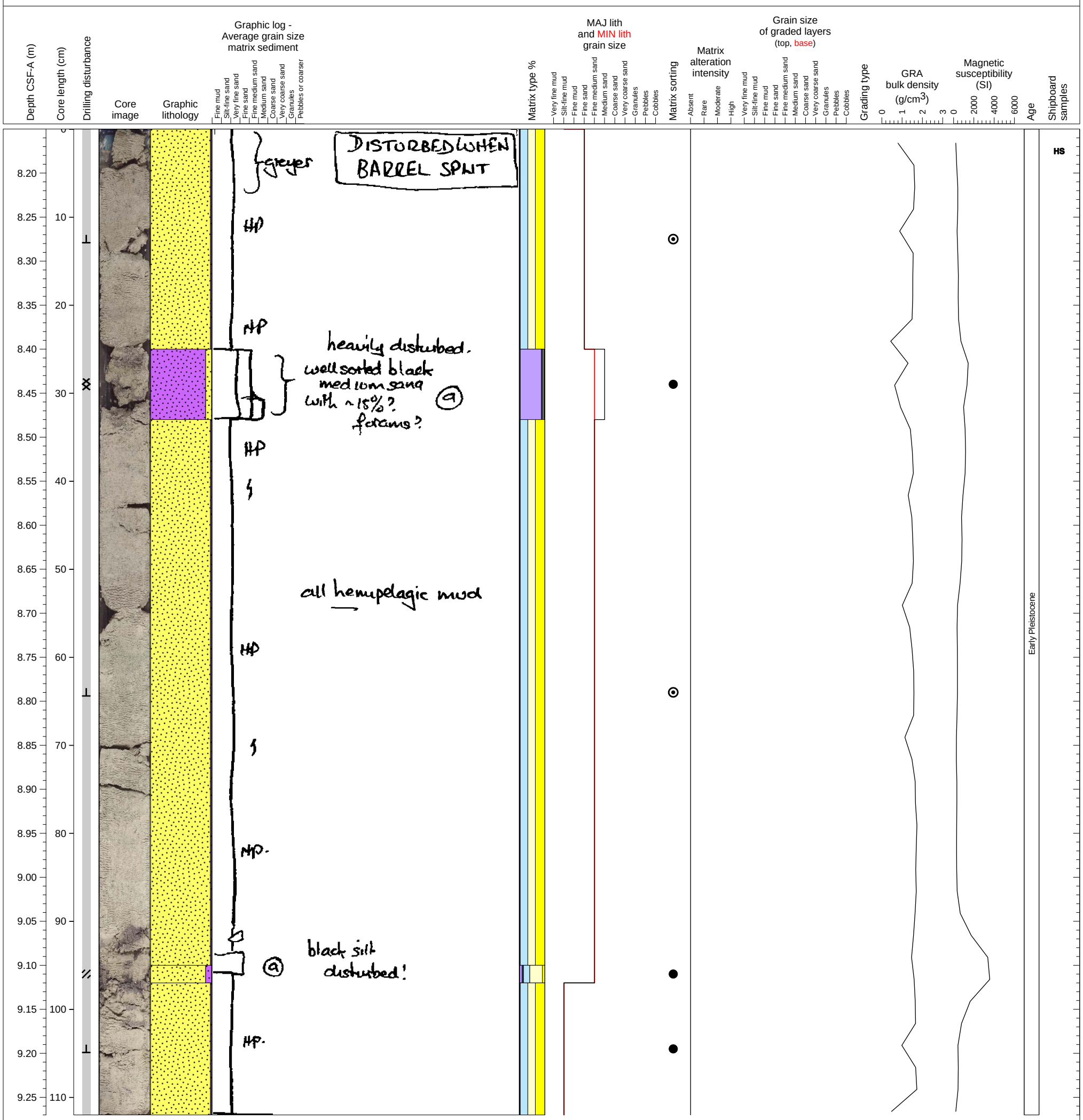
Hole 340-U1396A-2H Section 2, Top of Section: 6.65 CSF-A (m)

Hemipelagic clay with significant voids.



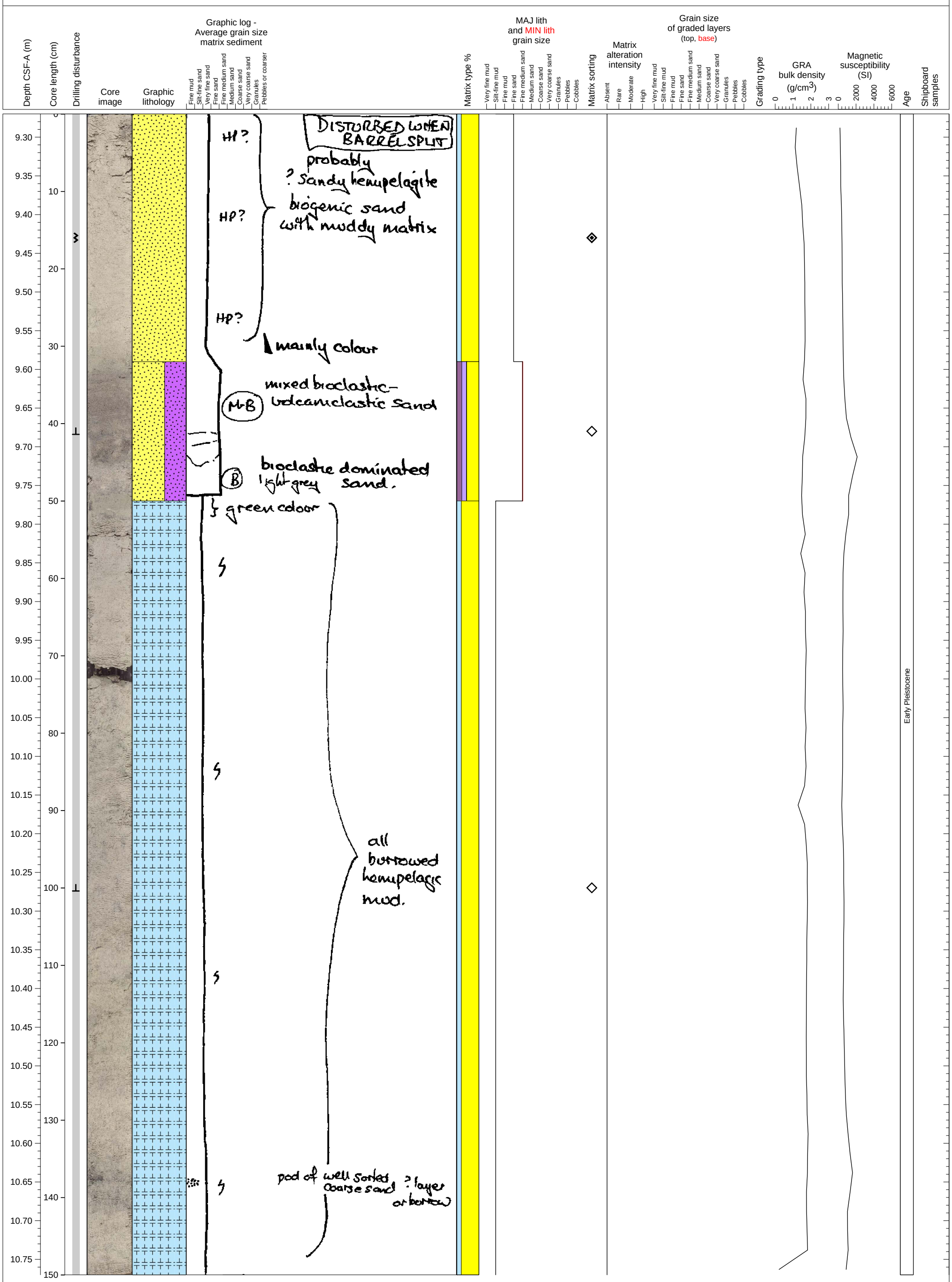
Hole 340-U1396A-2H Section 3, Top of Section: 8.15 CSF-A (m)

Hemipelagic calcareous snad interbed sorted crystal-rich (85 %) volcanic sand layer (severely disturbed by drilling).



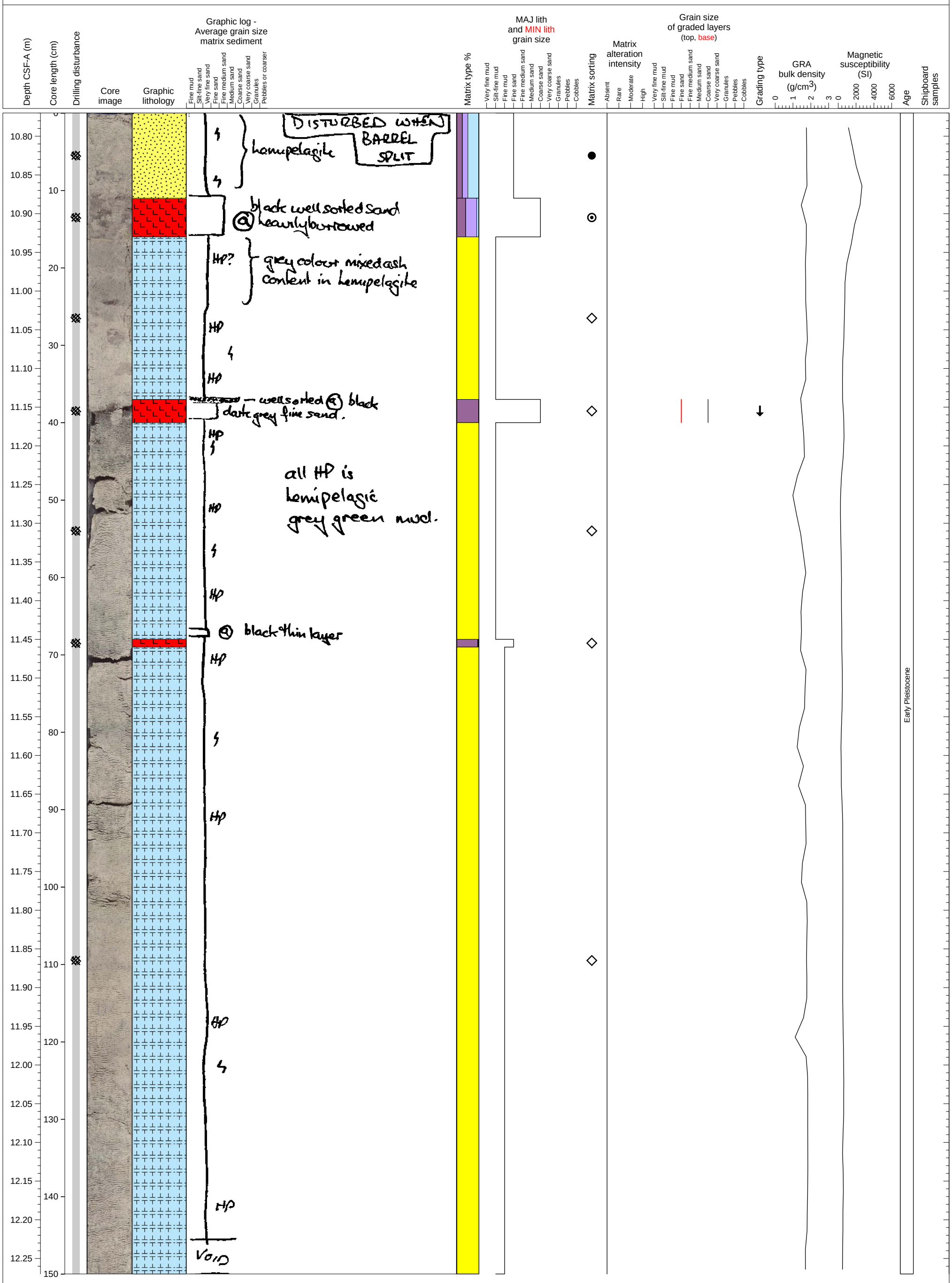
Hole 340-U1396A-2H Section 4, Top of Section: 9.27 CSF-A (m)

Hemipelagic clay with single 17 cm mixed bioclastic-volcaniclastic sand.



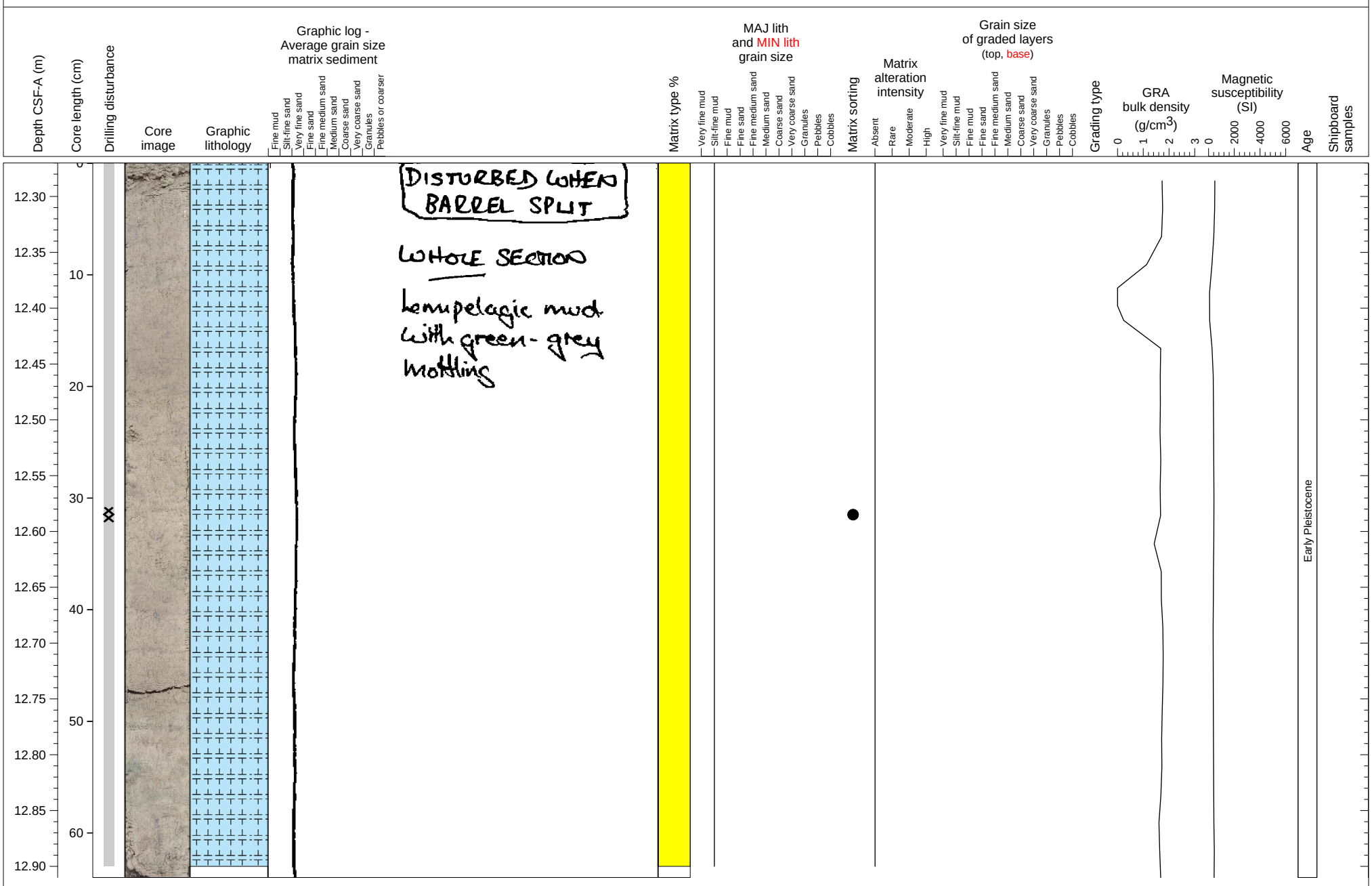
Hole 340-U1396A-2H Section 5, Top of Section: 10.77 CSF-A (m)

Dominantly hemipelagic unconsolidated mud and sand with intercalation of 3 volcanic ash layers. Bioturbation pervasive. Uppermost ash layer is basaltic. The middle ash layer is dacitic and lithic rich. The lowermost ash layer is also dacitic.



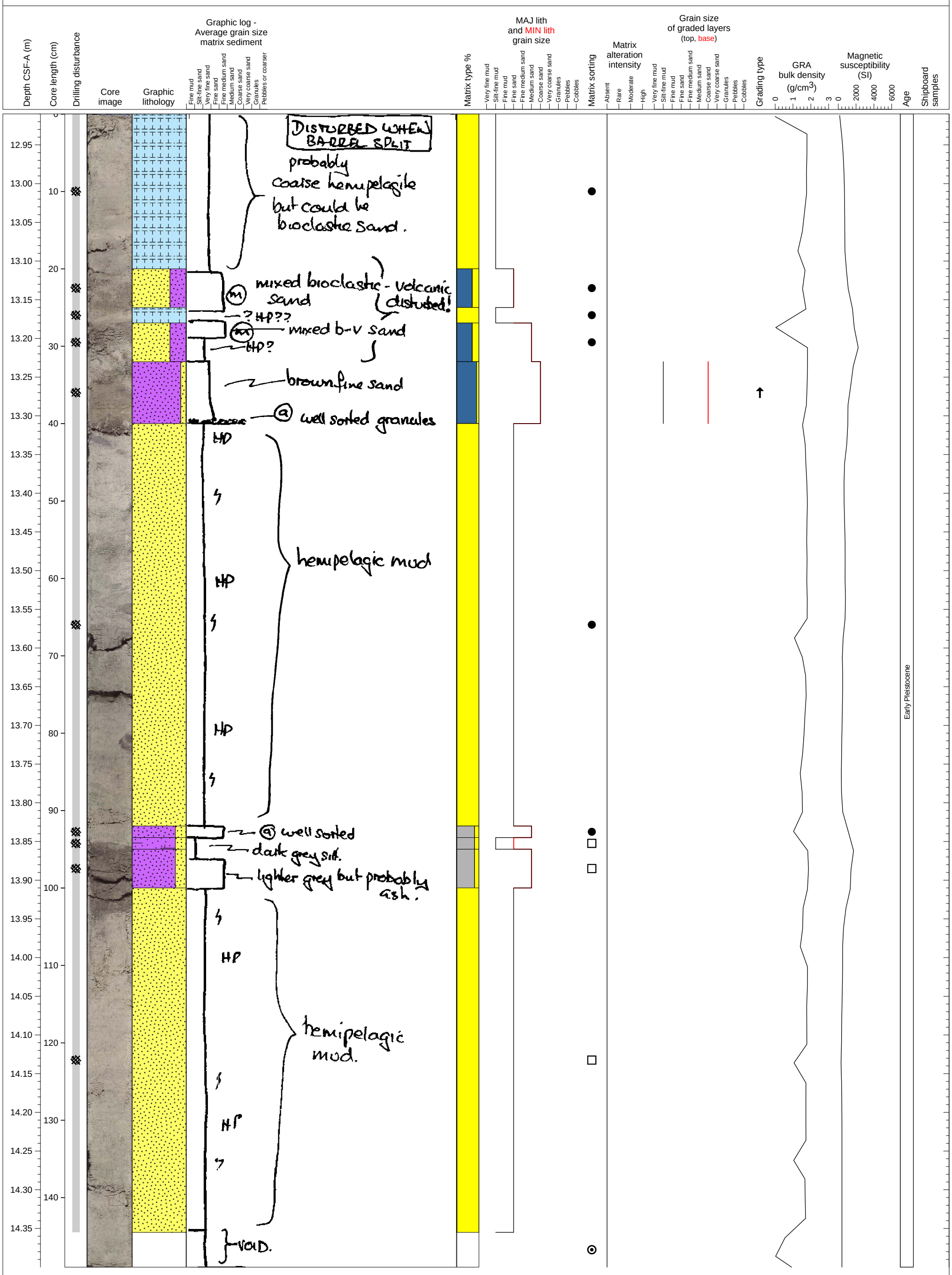
Hole 340-U1396A-2H Section 6, Top of Section: 12.27 CSF-A (m)

Hemipelagic mud.



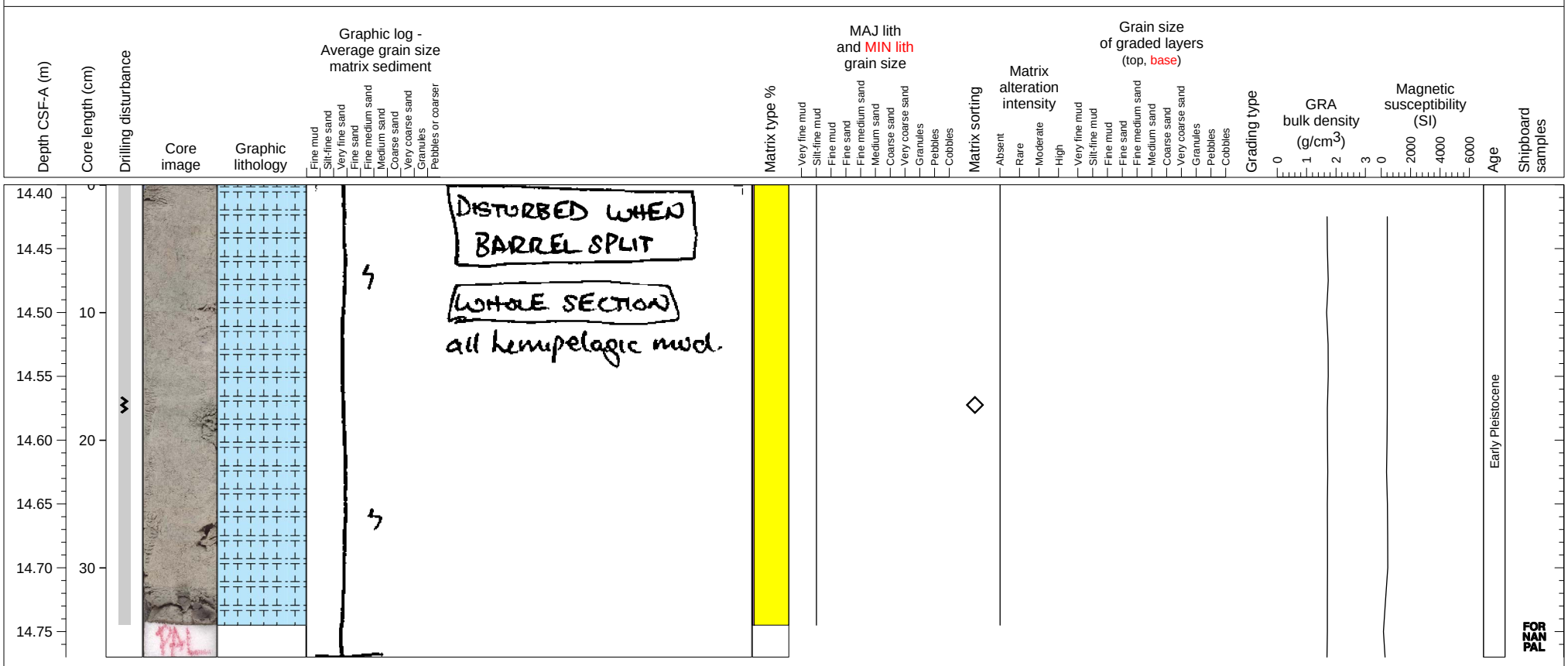
Hole 340-U1396A-2H Section 7, Top of Section: 12.91 CSF-A (m)

Hemipelagic sediments interlayering potential tephra layers but the core is highly disturbed during recovery.



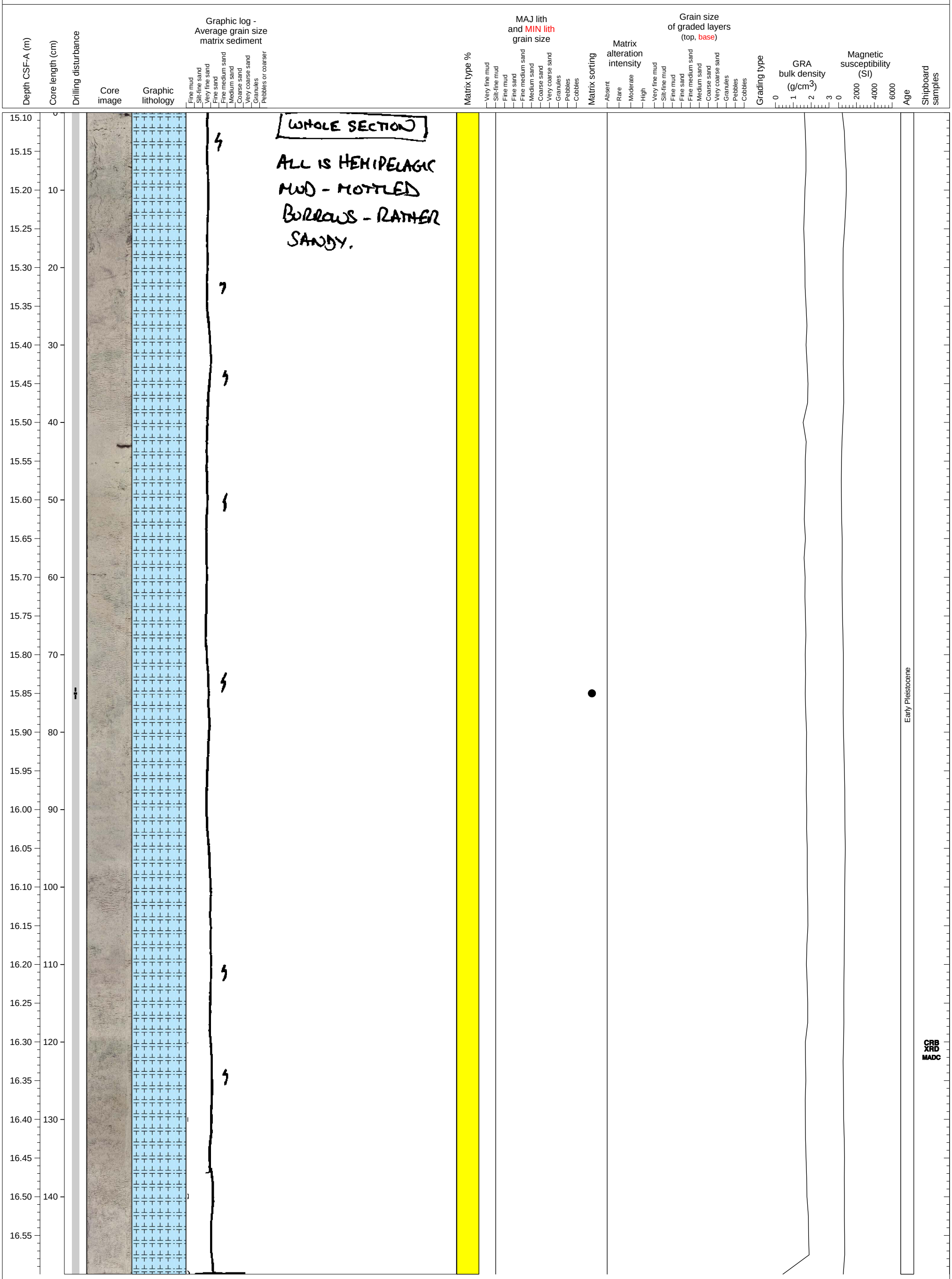
Hole 340-U1396A-2H Section CC, Top of Section: 14.4 CSF-A (m)

Hemipelagic mud.



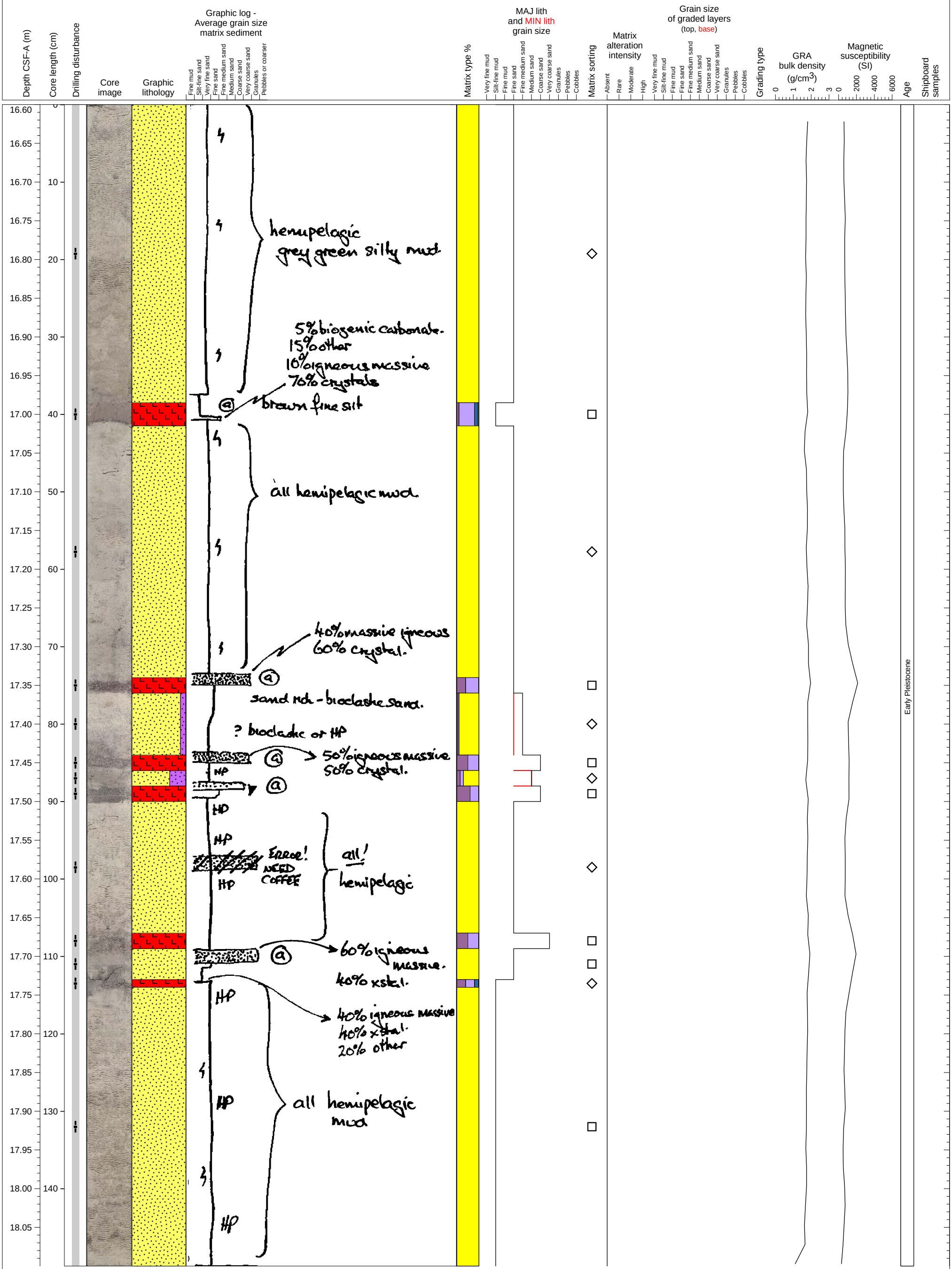
Hole 340-U1396A-3H Section 1, Top of Section: 15.1 CSF-A (m)

Hemipelagic clay.



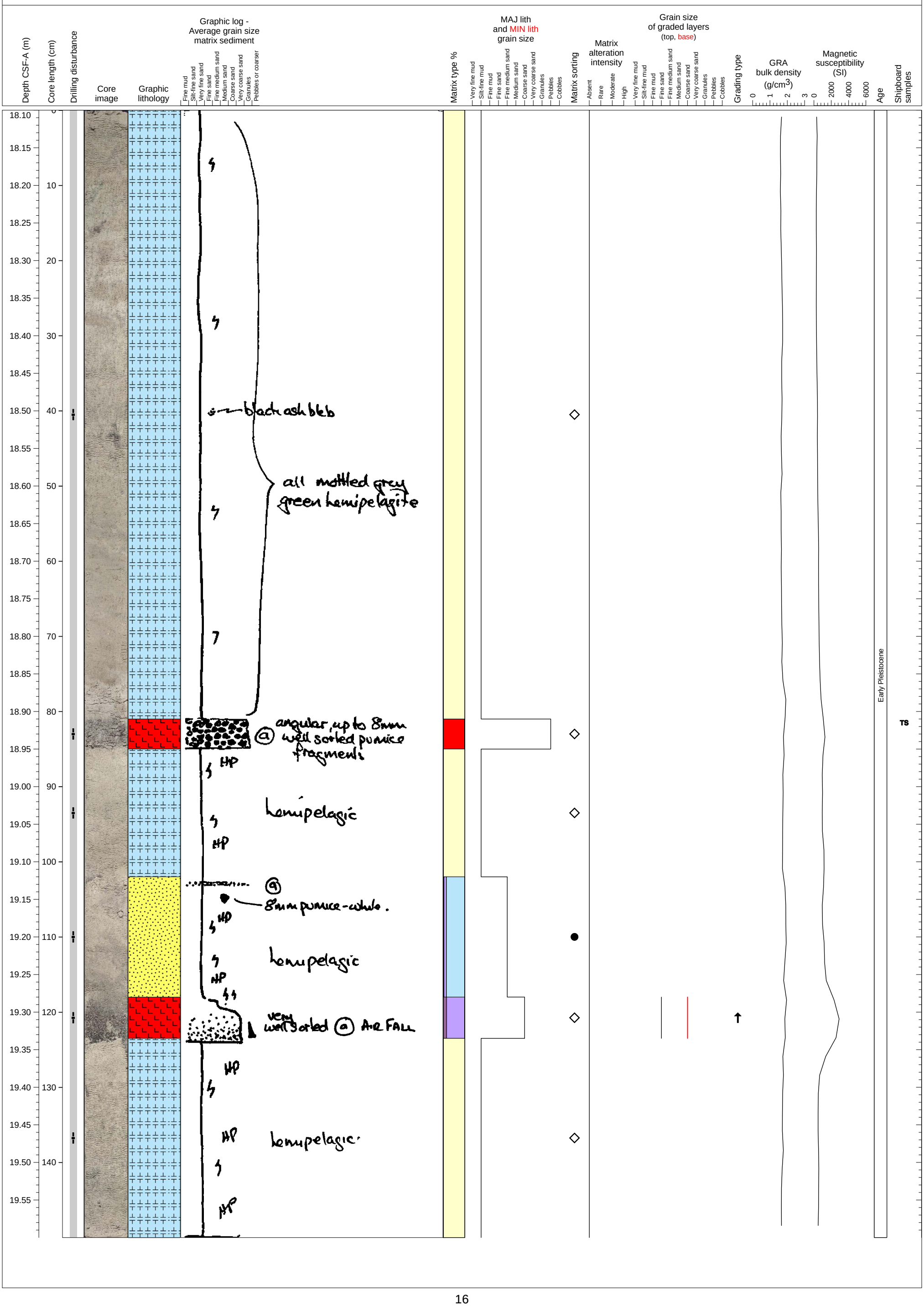
Hole 340-U1396A-3H Section 2, Top of Section: 16.6 CSF-A (m)

Hemipelagic sediments with thin ash layers, some coarse grained.



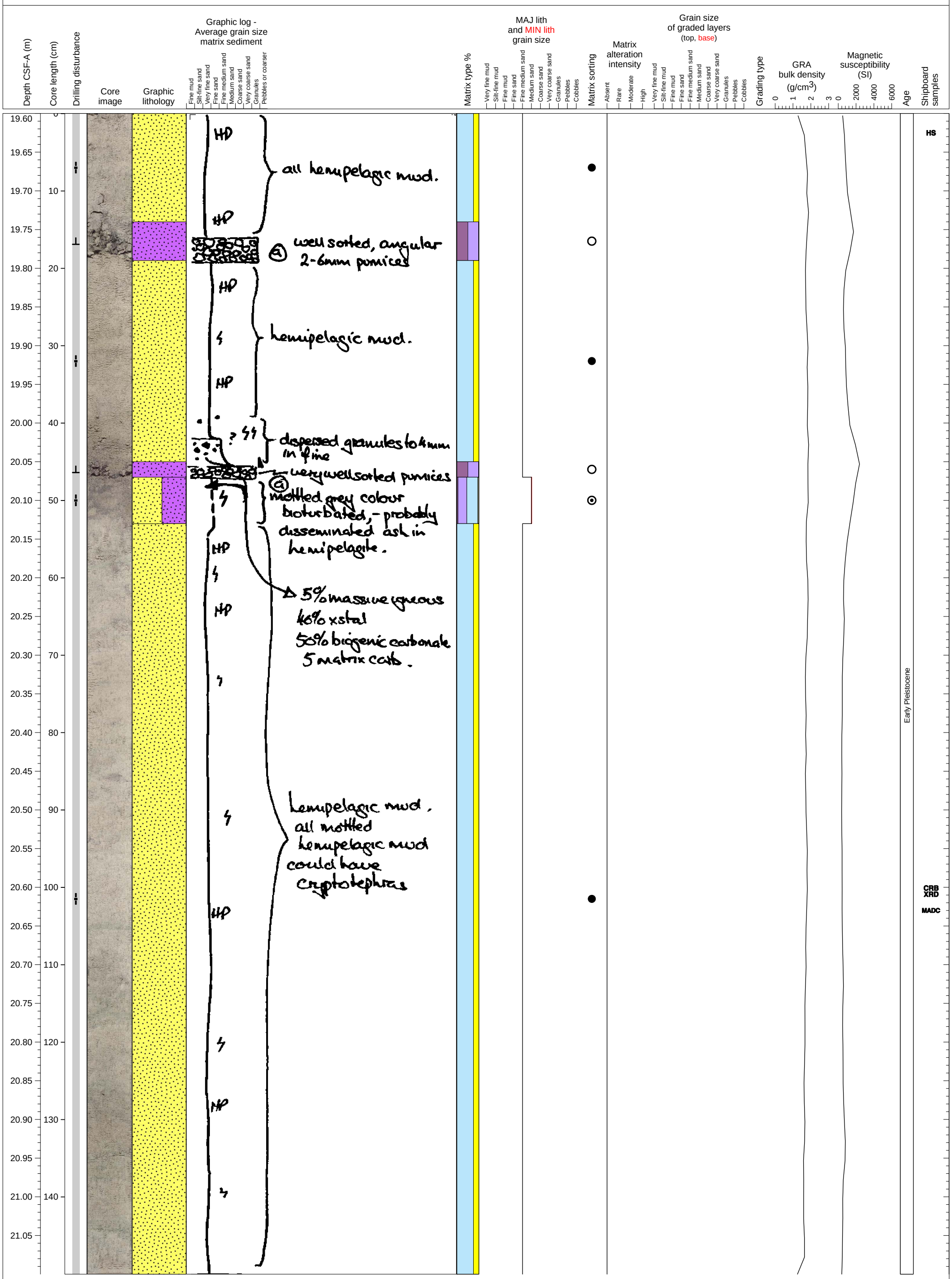
Hole 340-U1396A-3H Section 3, Top of Section: 18.1 CSF-A (m)

This section has two distinct ash layers at 81-85 and 118-123.5 cm. The upper layer has pebble size pumices, which would be a good marker around this area.



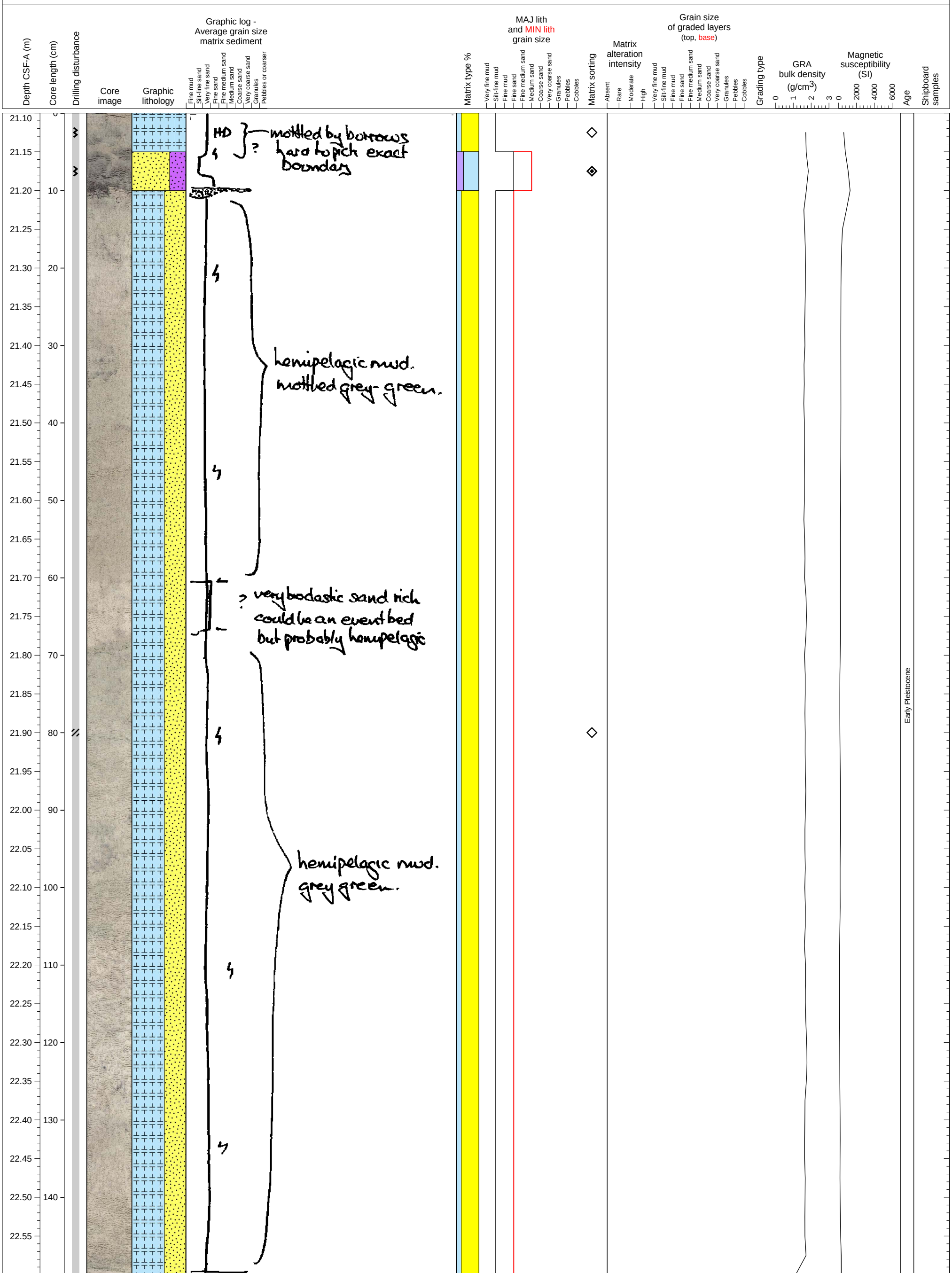
Hole 340-U1396A-3H Section 4, Top of Section: 19.6 CSF-A (m)

Hemipelgic sediments with possible pumice fall (?) layers.



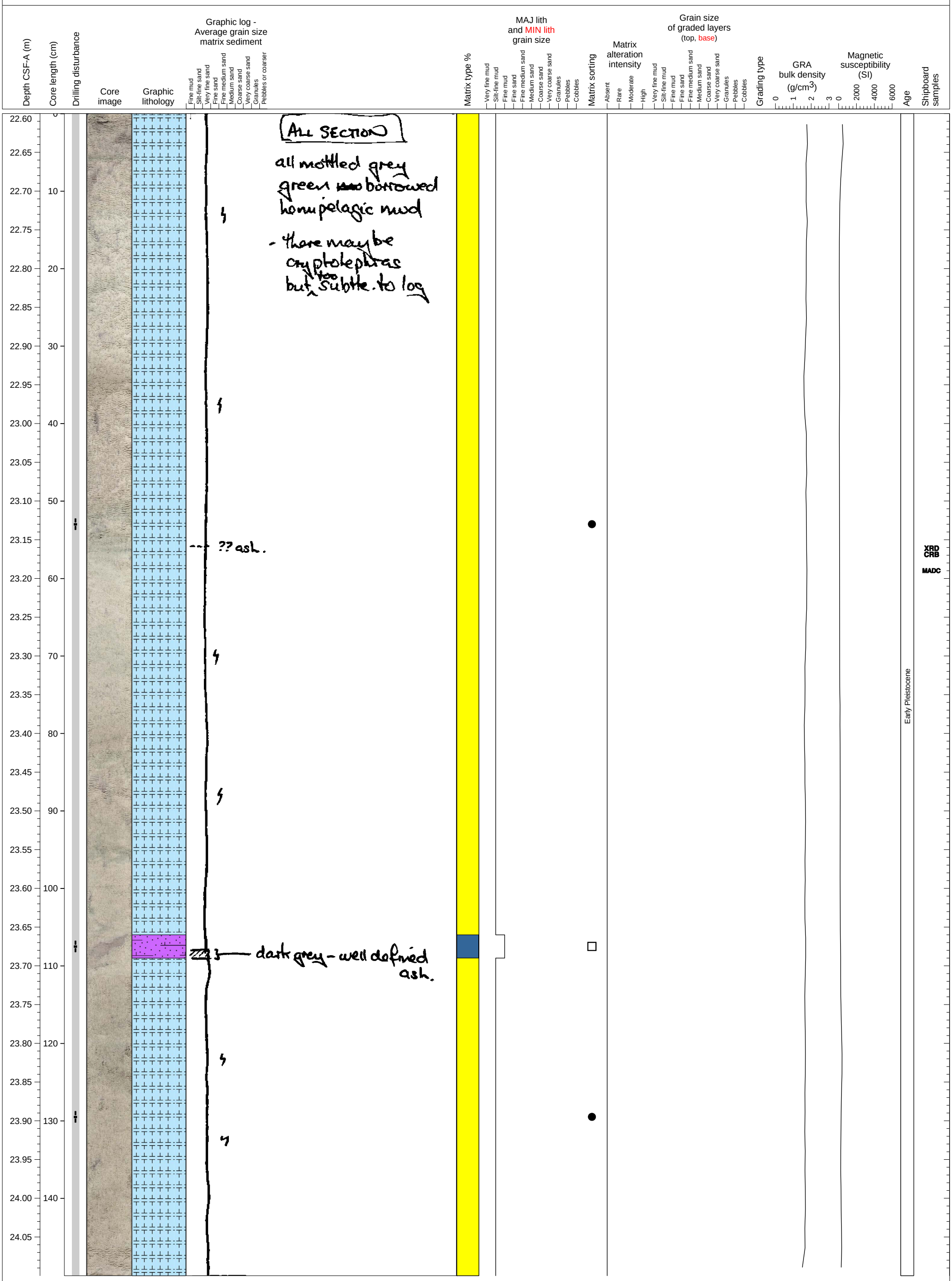
Hole 340-U1396A-3H Section 5, Top of Section: 21.1 CSF-A (m)

Mottled hemipelagic sediments with a thin mixture layer of bioclastics and volcaniclastic layer.



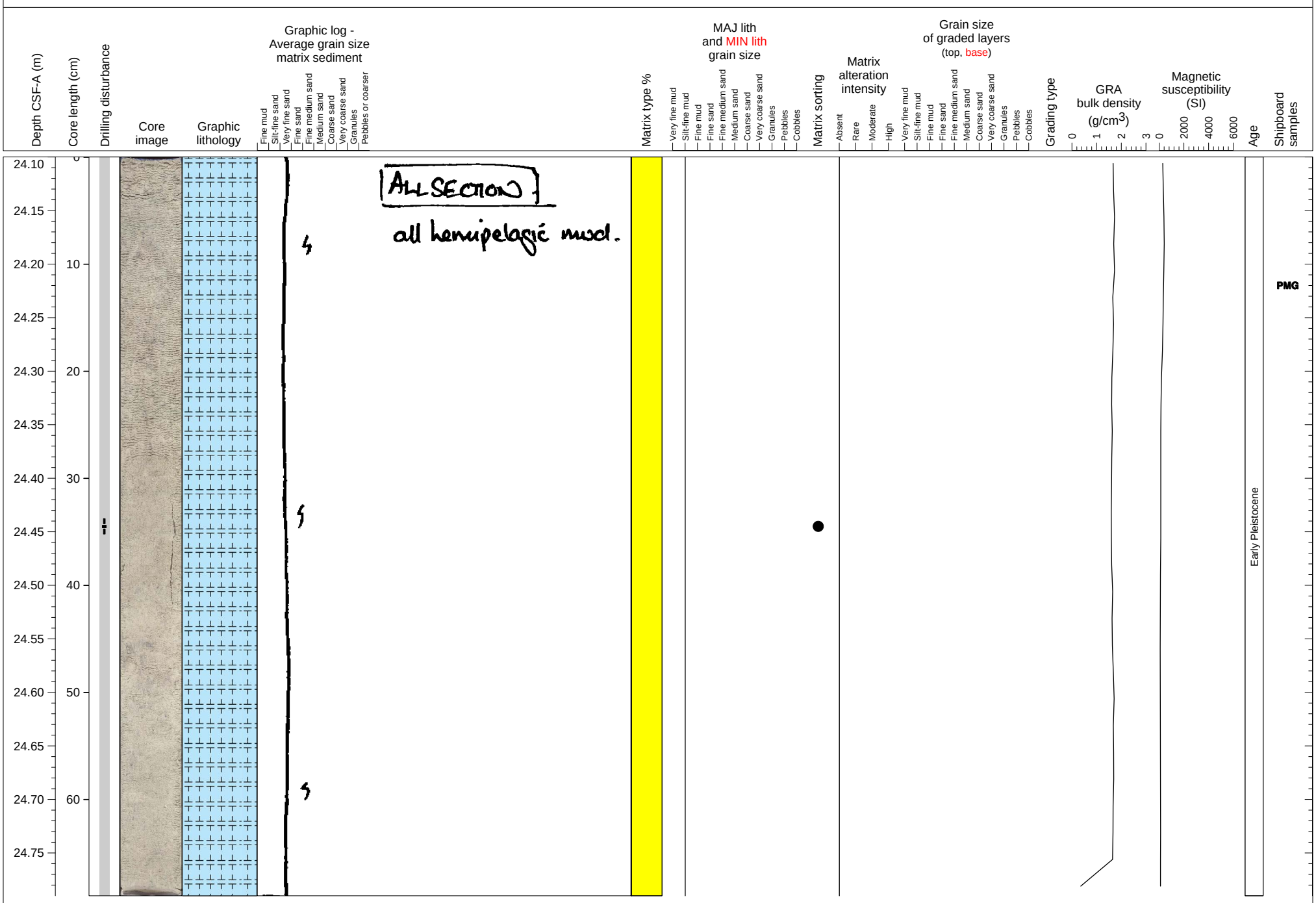
Hole 340-U1396A-3H Section 6, Top of Section: 22.6 CSF-A (m)

Hemipelagic clay with thin volcaniclastic mud layer.



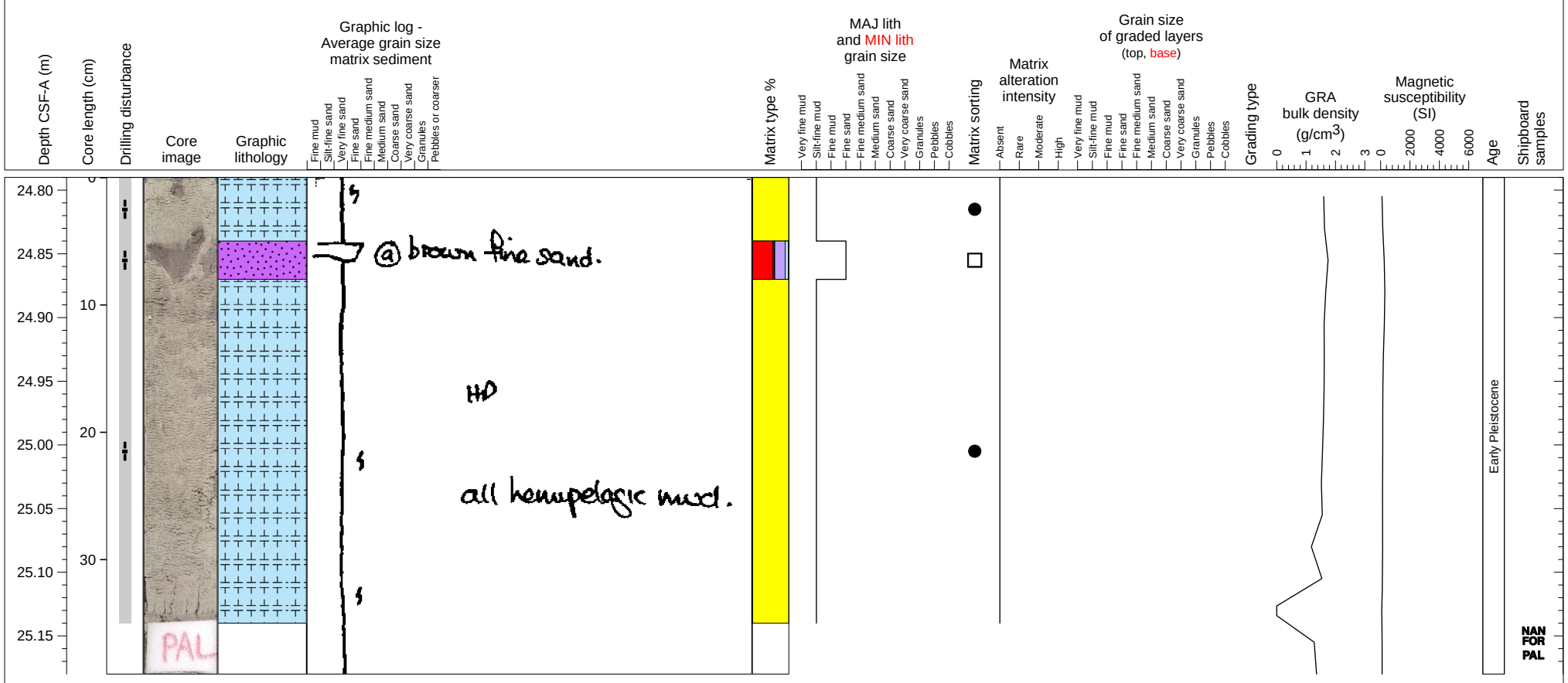
Hole 340-U1396A-3H Section 7, Top of Section: 24.1 CSF-A (m)

Hemipelagic clay.



Hole 340-U1396A-3H Section CC, Top of Section: 24.79 CSF-A (m)

Hemipelagic clay with thin volcaniclastic fine sand layer.



Hole 340-U1396A-4H Section 1, Top of Section: 24.6 CSF-A (m)

fine sandy helgic sediments with two ash layers.

Depth CSF-A (m)
Core length (cm)
Drilling disturbance
Core image
Graphic lithology
Graphic log - Average grain size matrix sediment
Fine mud
Silt-fine sand
Very fine sand
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles or coarser
Matrix type %
MAJ lith and MIN lith grain size
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Matrix sorting
Matrix alteration intensity
Absent
Rare
Moderate
High
Grain size of graded layers (top, base)
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Grading type
GRA bulk density (g/cm3)
Magnetic susceptibility (SI)
Age
Shipboard samples

24.60 0
24.65
24.70 10
24.75
24.80 20
24.85
24.90 30
24.95
25.00 40
25.05
25.10 50
25.15
25.20 60
25.25
25.30 70
25.35
25.40 80
25.45
25.50 90
25.55
25.60 100
25.65
25.70 110
25.75
25.80 120
25.85
25.90 130
25.95
26.00 140
26.05

Grey silty to fine-sandy hemipelagic turbidite with few cystals

HD

- red brown at the top
- dark grey at the base

volcanic sand with a low proportion of cystals (20%) and abundant carbonate matrix (fine sand to silt)

high grey silty to fine-sandy hemipelagic deposit

HD

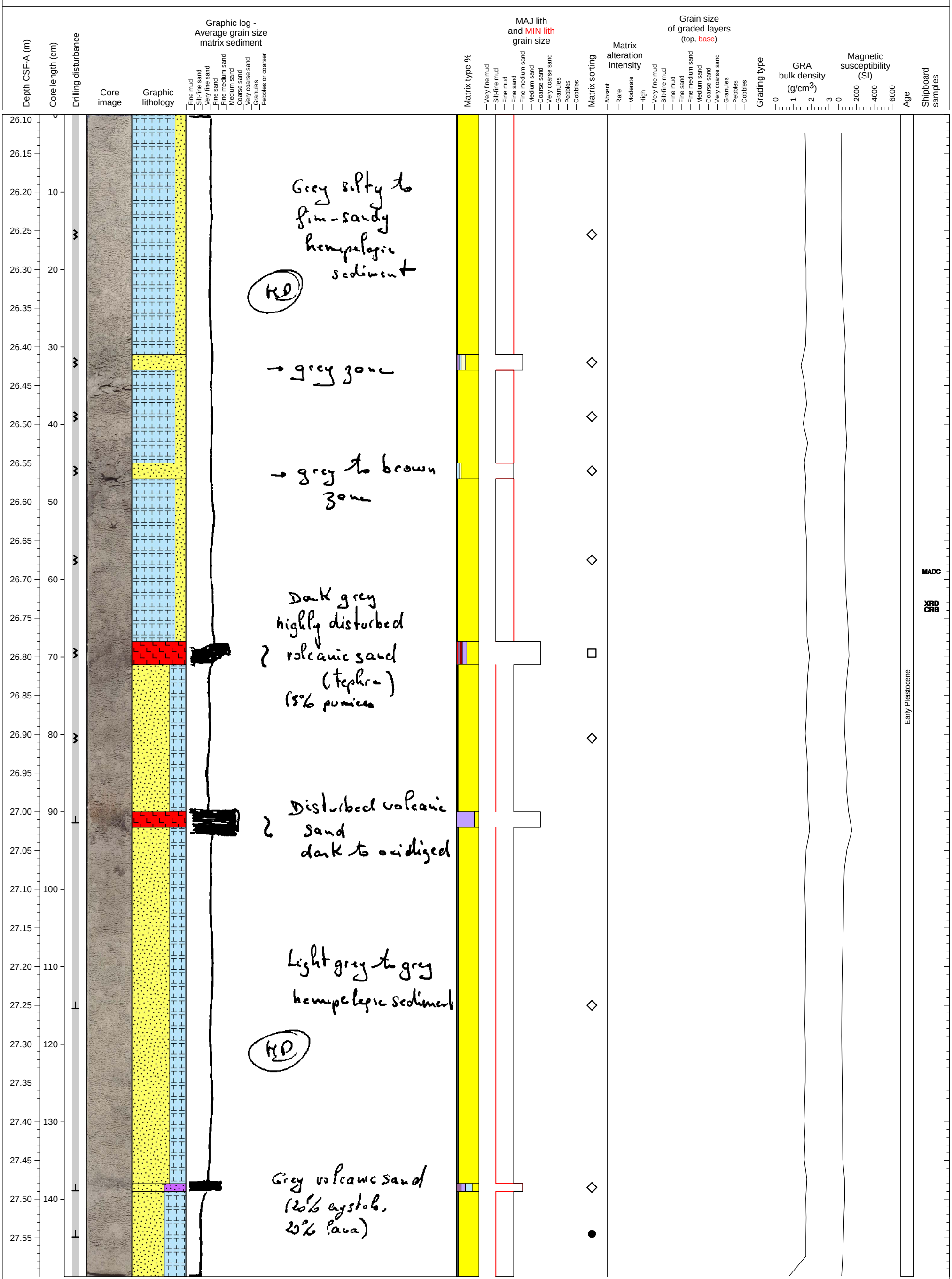
Grey hemipelagite

light grey more silty hemipelagite

Early Pleistocene

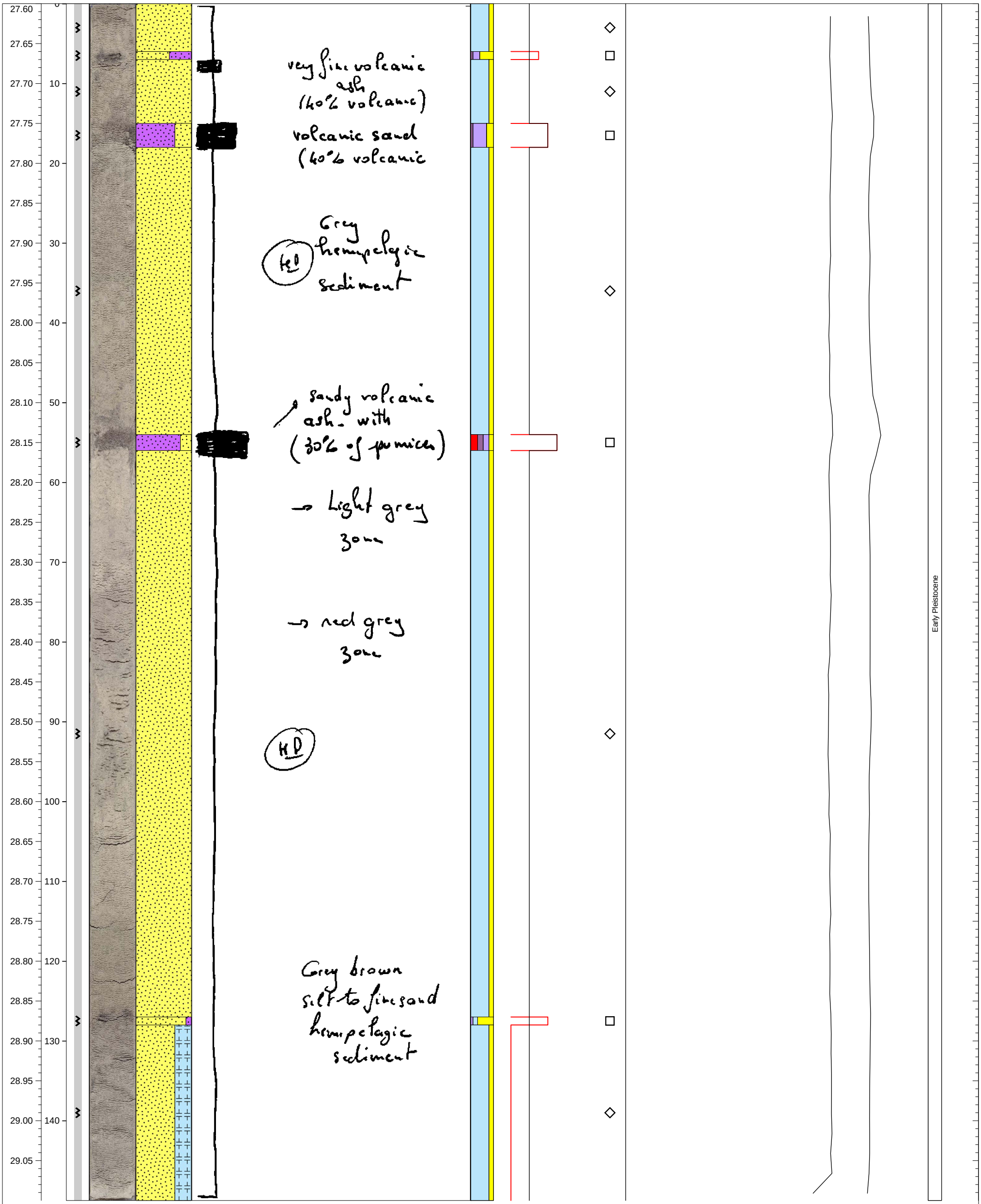
Hole 340-U1396A-4H Section 2, Top of Section: 26.1 CSF-A (m)

hemipelagic fine sand to silt with couple of thin ashfall layers.



Hole 340-U1396A-4H Section 3, Top of Section: 27.6 CSF-A (m)

mottled hemipelagic sediment with intercalated volcaniclastic sand layers.



Hole 340-U1396A-4H Section 4, Top of Section: 29.1 CSF-A (m)

Hemipelagic sediment, slightly bioturbated.

Depth CSF-A (m)
Core length (cm)
Drilling disturbance
Core image
Graphic lithology
Graphic log - Average grain size matrix sediment
Fine mud
Silt-fine sand
Very fine sand
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles or coarser
Matrix type %
MAJ lith and MIN lith grain size
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Matrix sorting
Matrix alteration intensity
Absent
Rare
Moderate
High
Grain size of graded layers (top, base)
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Grading type
GRA bulk density (g/cm^3)
0
1
2
3
Magnetic susceptibility (SI)
0
2000
4000
6000
Age
Shipboard samples

29.10 – 0
29.15
29.20 – 10
29.25
29.30 – 20
29.35
29.40 – 30
29.45
29.50 – 40
29.55
29.60 – 50
29.65
29.70 – 60
29.75
29.80 – 70
29.85
29.90 – 80
29.95
30.00 – 90
30.05
30.10 – 100
30.15
30.20 – 110
30.25
30.30 – 120
30.35
30.40 – 130
30.45
30.50 – 140
30.55

Grey to light grey silt - fine sand hemipelagic deposit

HL

→ patch of red brown volcanic sand (90% augstals)

→ green zone

→ green zone

HL

grey brown sediment with patches of dark sediment

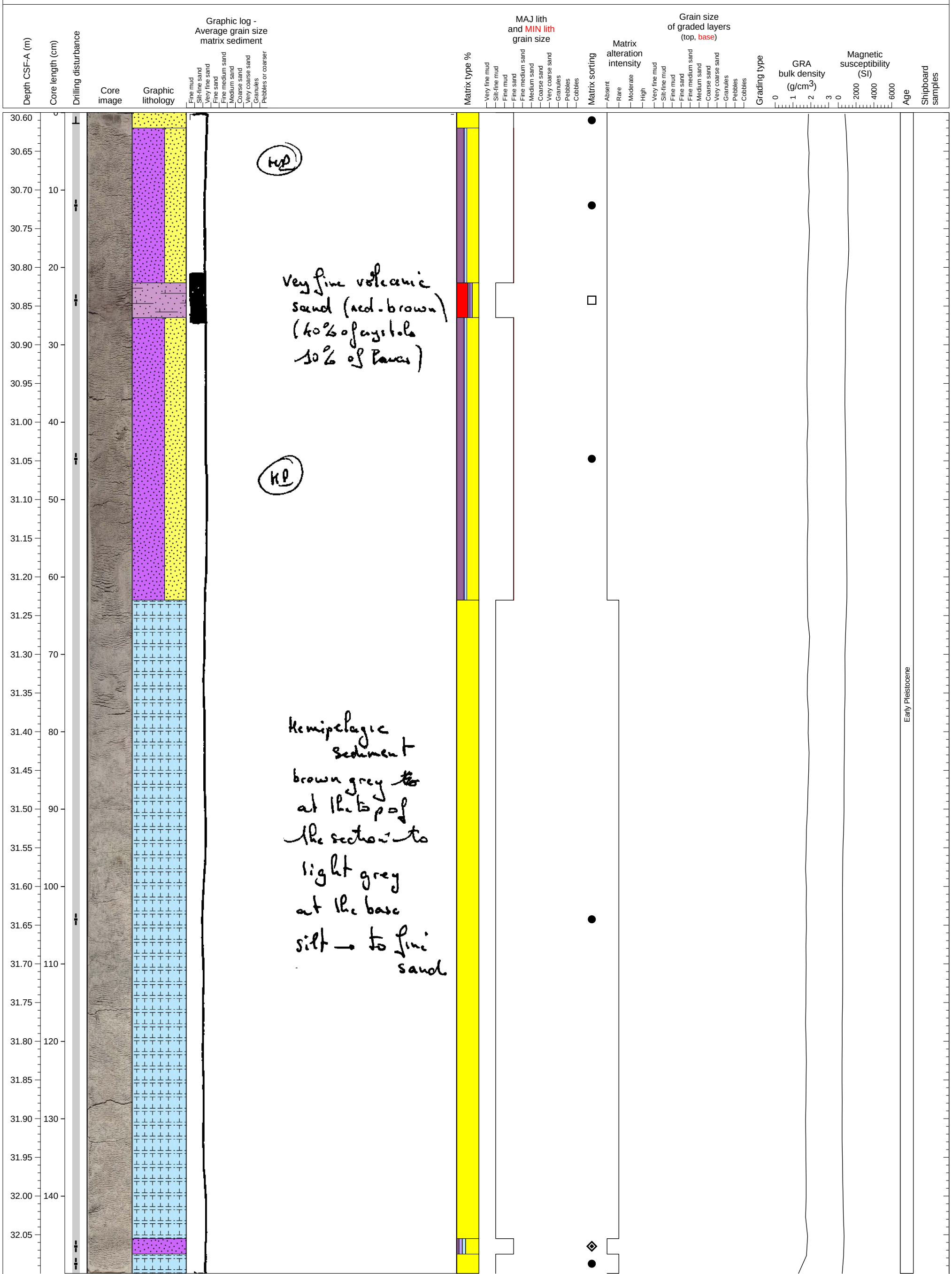
HS

Early Pleistocene

XRD
CRB
MADC

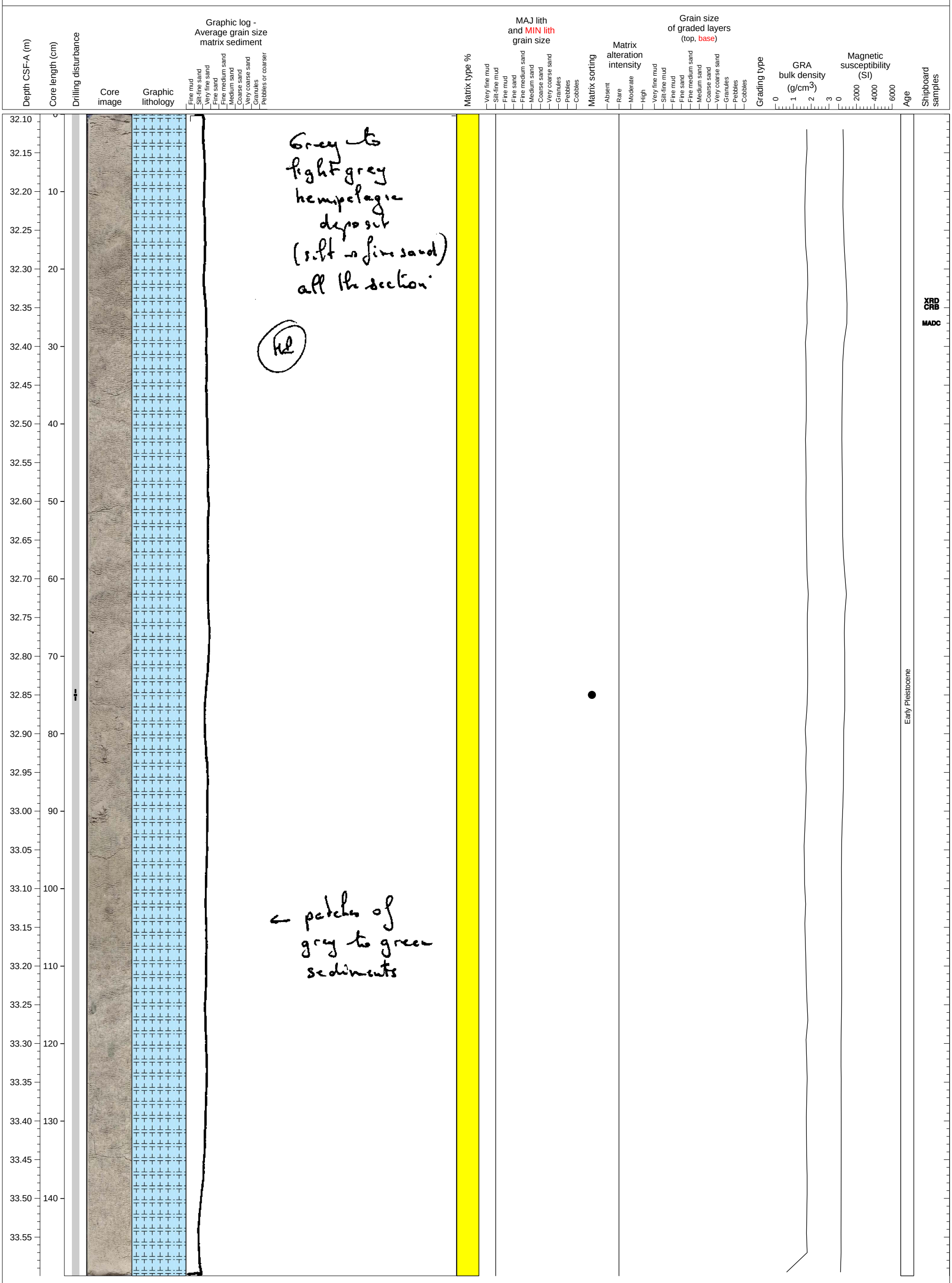
Hole 340-U1396A-4H Section 5, Top of Section: 30.6 CSF-A (m)

Hemipelagic clay overlain by a mixed volcaniclastic/bioclastic sand. Several thin ash/tephra units are present.



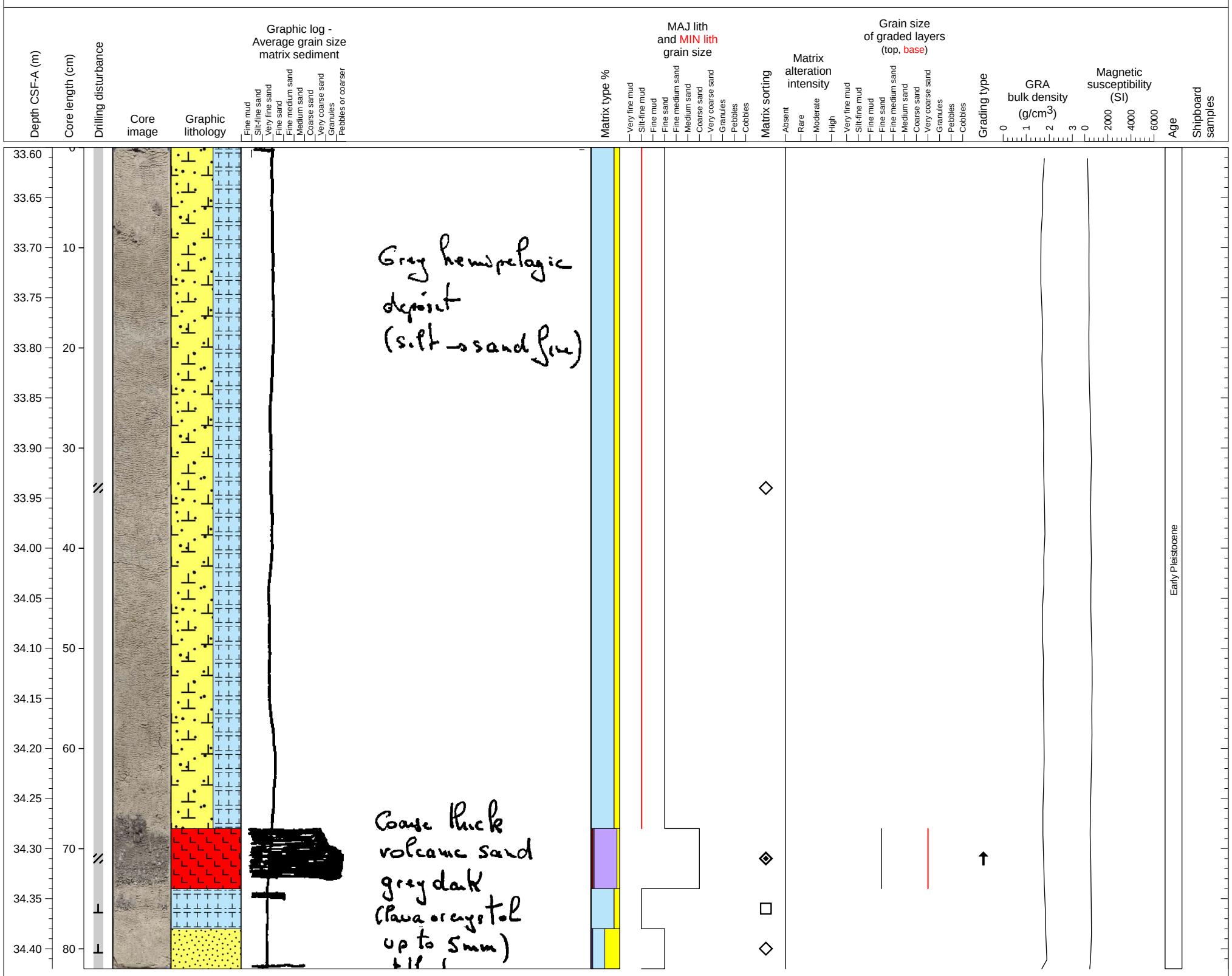
Hole 340-U1396A-4H Section 6, Top of Section: 32.1 CSF-A (m)

Hemipelagic clay layer with moderate bioturbation.



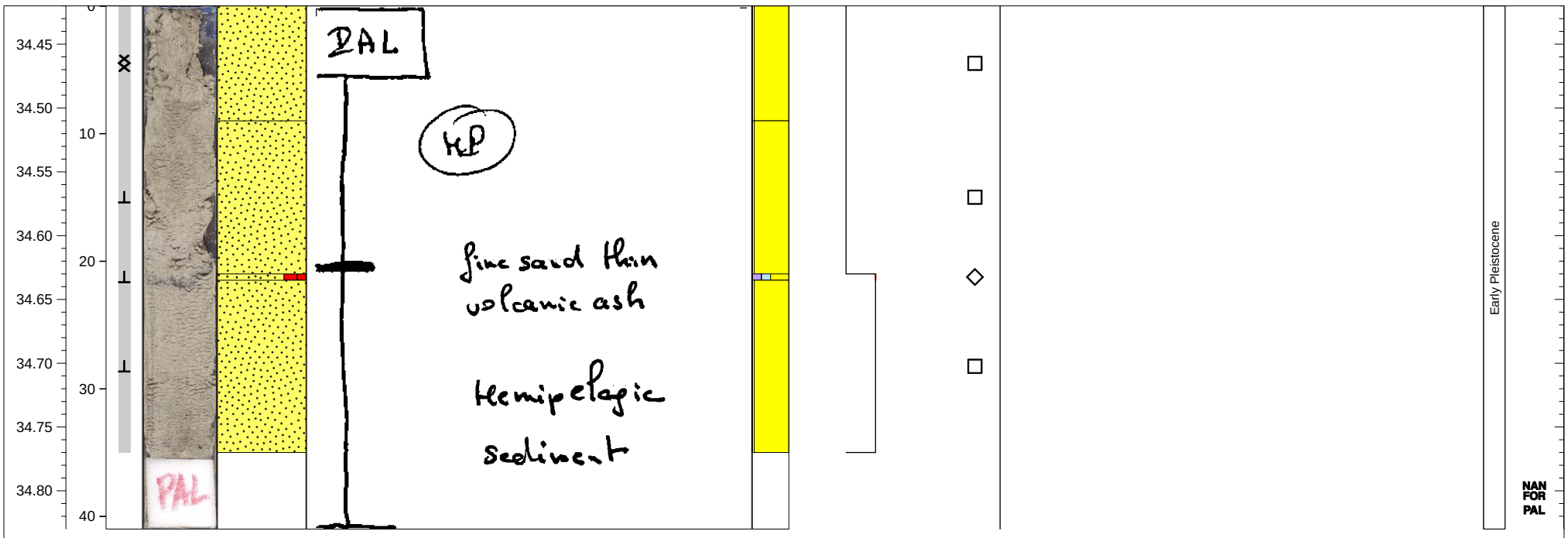
Hole 340-U1396A-4H Section 7, Top of Section: 33.6 CSF-A (m)

Hemipelagic sediments with intercalated ash layer



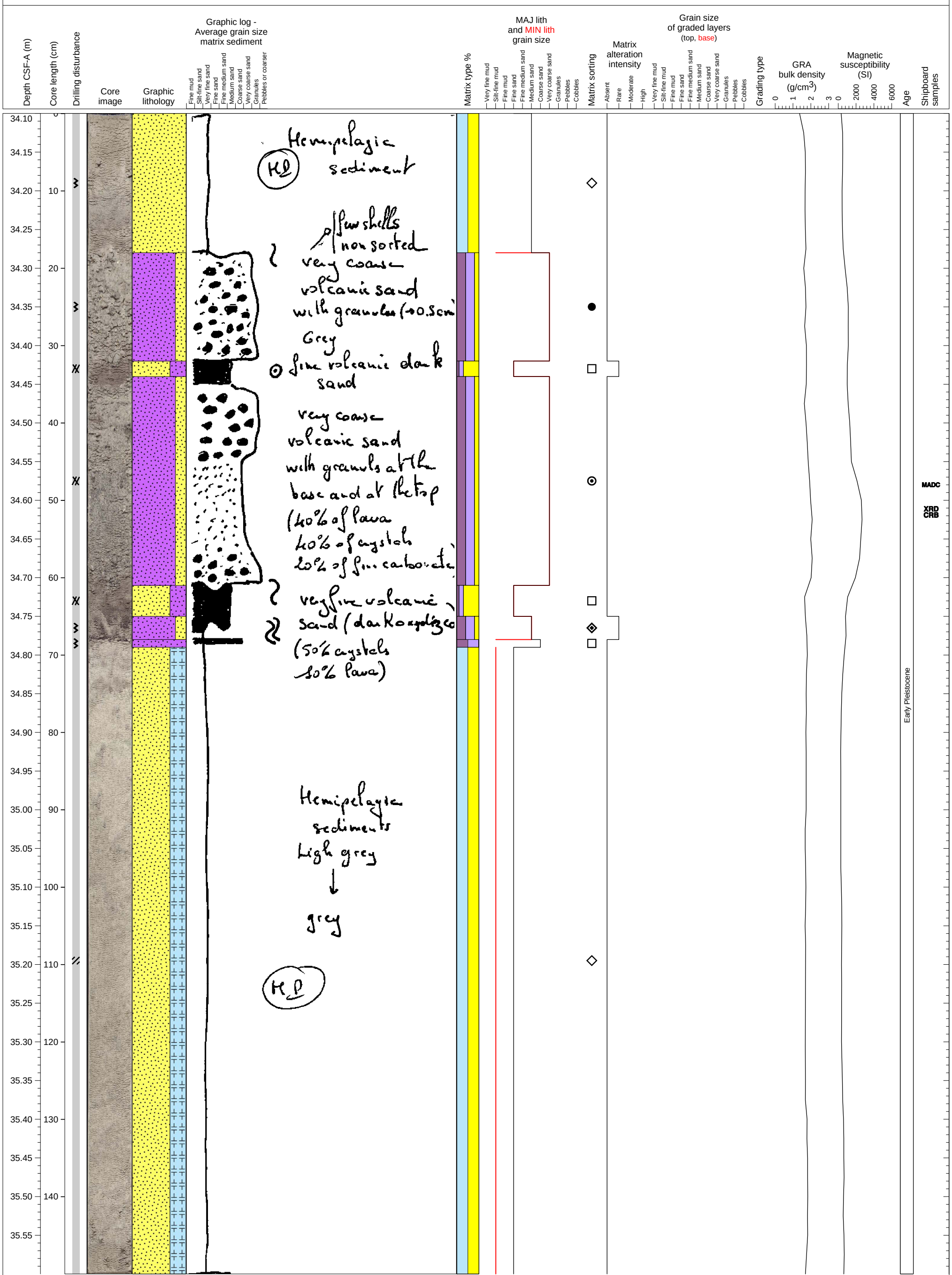
Hole 340-U1396A-4H Section CC, Top of Section: 34.42 CSF-A (m)

Sandy hemipelagic sediments with a single thin ash layer.



Hole 340-U1396A-5H Section 1, Top of Section: 34.1 CSF-A (m)

Mottled hemipelagic sediment with intercalated volcaniclastic sediment layers.



Hole 340-U1396A-5H Section 2, Top of Section: 35.6 CSF-A (m)

Hemipelagic sediments with 1 tephra layer (hopefully).

Depth CSF-A (m)
Core length (cm)
Drilling disturbance
Core image
Graphic lithology
Graphic log - Average grain size matrix sediment
Fine mud
Silt-fine sand
Very fine sand
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles or coarser
Matrix type %
MAJ lith and MIN lith grain size
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Matrix sorting
Matrix alteration intensity
Absent
Rare
Moderate
High
Grain size of graded layers (top, base)
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Grading type
GRA bulk density (g/cm3)
0
1
2
3
Magnetic susceptibility (SI)
0
2000
4000
6000
Age
Shipboard samples

35.60
35.65
35.70
35.75
35.80
35.85
35.90
35.95
36.00
36.05
36.10
36.15
36.20
36.25
36.30
36.35
36.40
36.45
36.50
36.55
36.60
36.65
36.70
36.75
36.80
36.85
36.90
36.95
37.00
37.05

0
10
20
30
40
50
60
70
80
90
100
110
120
130
140

Hemipelagic sediment
grey at the top to light grey at the base of the section
HL
(silt → fine sand)

→ Two lava lapilli (~2cm)

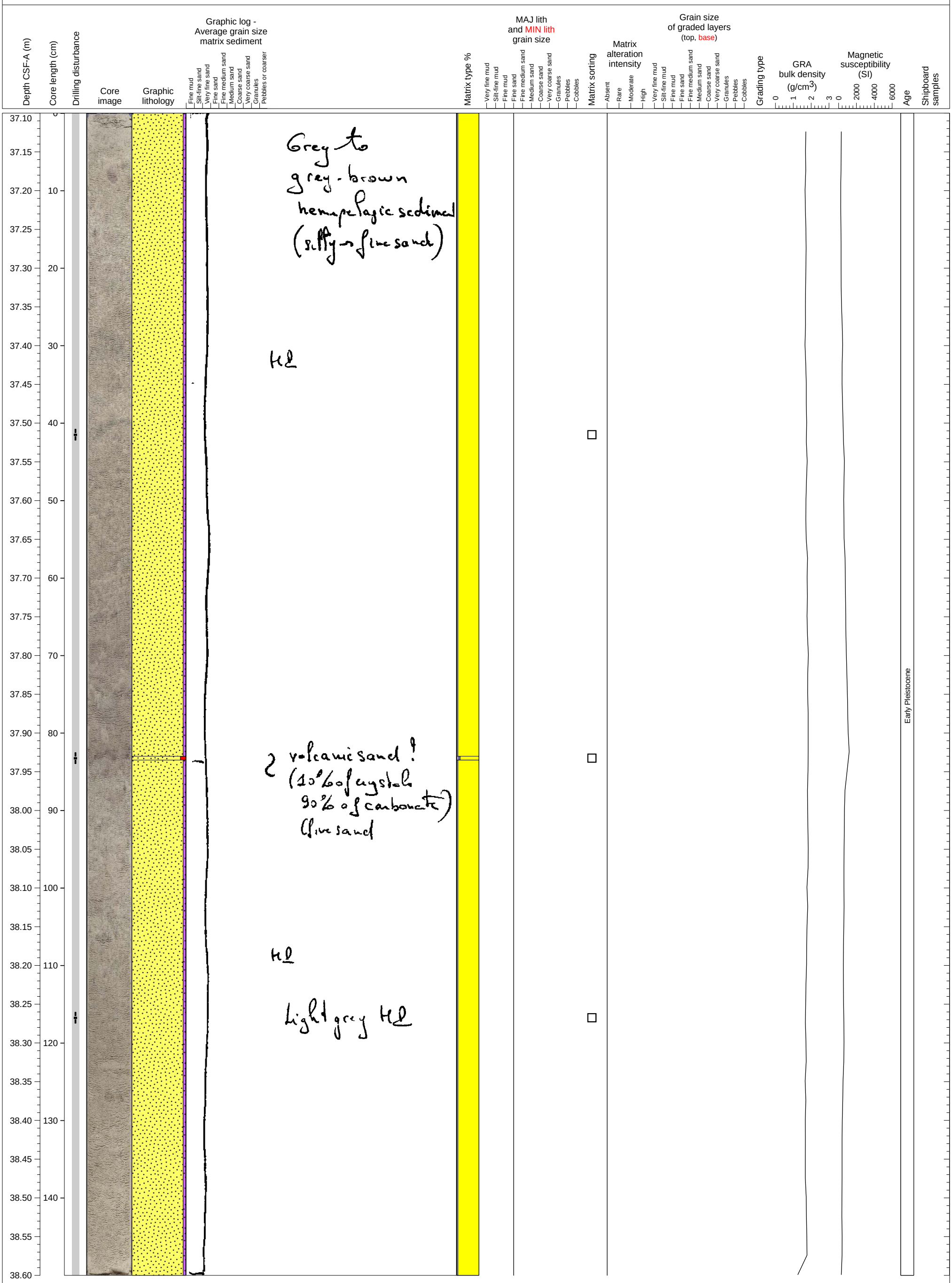
Dark fine sand
(20% ves. lava
50% crystal
30% carbonate matrix)
→ tephra

HL

Early Pleistocene

Hole 340-U1396A-5H Section 3, Top of Section: 37.1 CSF-A (m)

Sandy hemipelagic sediment with a single, very thin ash layer.



Hole 340-U1396A-5H Section 4, Top of Section: 38.6 CSF-A (m)

Mottled hemipelagic sediment.

Depth CSF-A (m)
Core length (cm)
Drilling disturbance
Core image
Graphic lithology
Graphic log - Average grain size matrix sediment
Fine mud
Silt-fine sand
Very fine sand
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles or coarser
Matrix type %
MAJ lith and MIN lith grain size
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Matrix sorting
Matrix alteration intensity
Absent
Rare
Moderate
High
Grain size of graded layers (top, base)
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Grading type
GRA bulk density (g/cm3)
0
1
2
3
Magnetic susceptibility (SI)
0
2000
4000
6000
Age
Shipboard samples

38.65 0
38.70 10
38.75
38.80 20
38.85
38.90 30
38.95
39.00 40
39.05
39.10 50
39.15
39.20 60
39.25
39.30 70
39.35
39.40 80
39.45
39.50 90
39.55
39.60 100
39.65
39.70 110
39.75
39.80 120
39.85
39.90 130
39.95
40.00 140
40.05
40.10

Light olive gray silty to sandy hemipelagic deposit (50% of bioclastic 50% of detritic matrix

HP

Light grey HP

HP

grey HP

HS

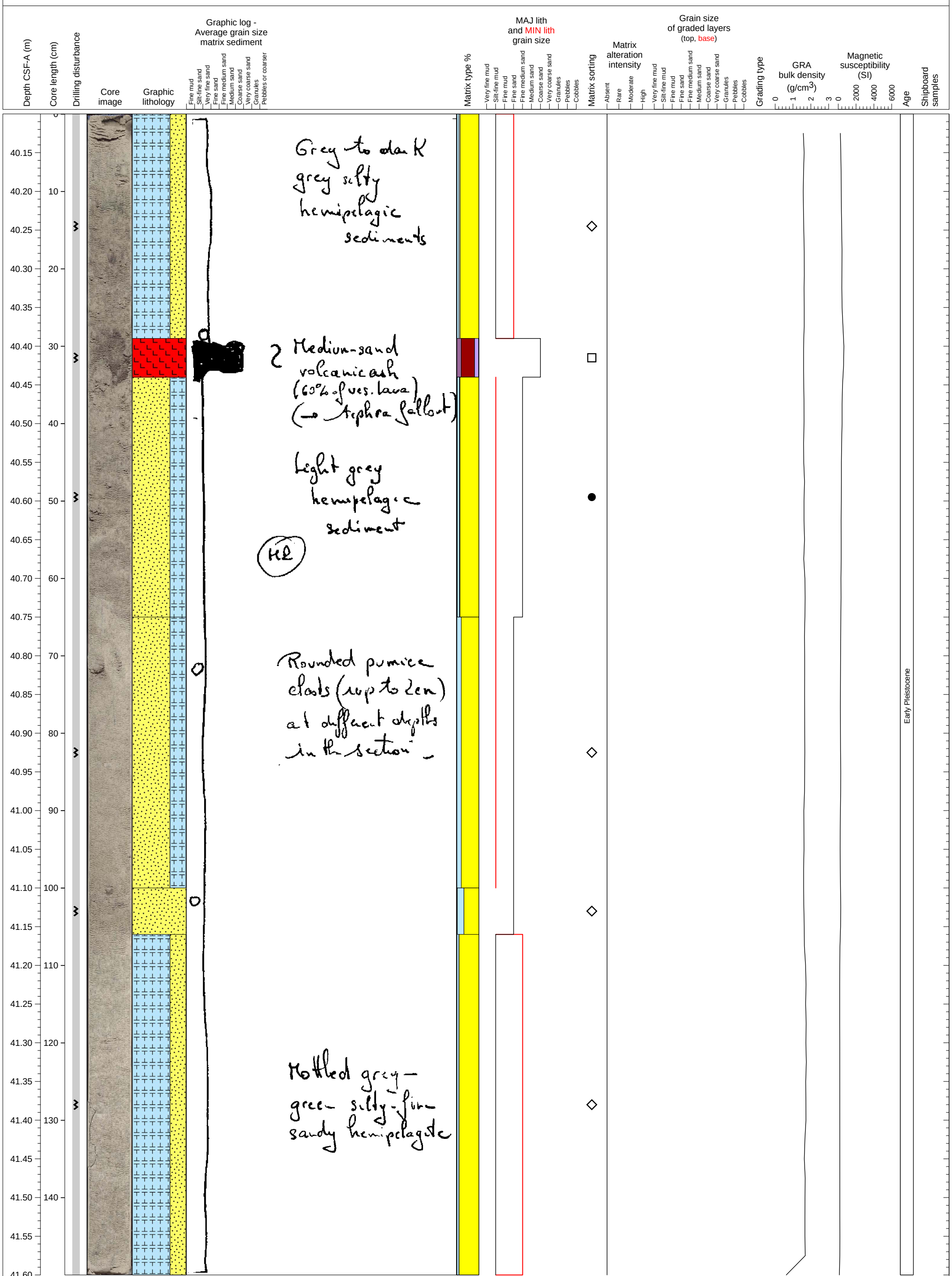
Early Pleistocene

MADC

XRD CRB

Hole 340-U1396A-5H Section 5, Top of Section: 40.1 CSF-A (m)

Hemipelagic sediments with 1 coarse grained ash layer.



Hole 340-U1396A-5H Section 6, Top of Section: 41.6 CSF-A (m)

Hemipelagic fines with 1 vitric ashfall layer.

Depth CSF-A (m)
Core length (cm)
Drilling disturbance
Core image
Graphic lithology
Graphic log - Average grain size matrix sediment
Fine mud
Silt-fine sand
Very fine sand
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles or coarser
Matrix type %
MAJ lith and MIN lith grain size
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Matrix sorting
Matrix alteration intensity
Absent
Rare
Moderate
High
Grain size of graded layers (top, base)
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Grading type
GRA bulk density (g/cm^3)
0
1
2
3
Magnetic susceptibility (SI)
0
2000
4000
6000
Age
Shipboard samples

Hemipelagic sediments grey to grey-brown (silt → fine sand)

Light grey - white volcanic glass

ML

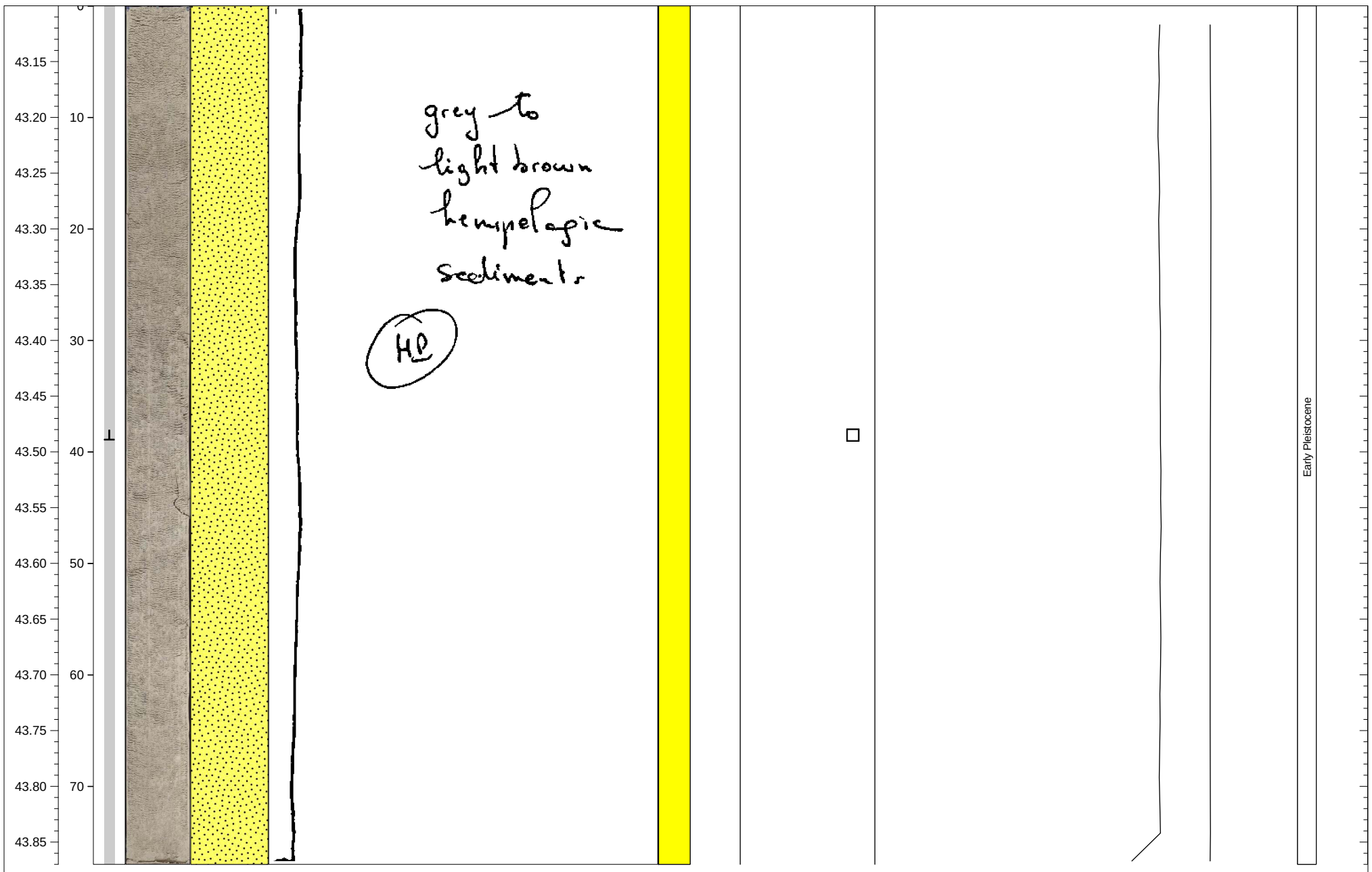
Mottled grey - brown green hemipelagite

Mottled grey light - green hemipelagite

Early Pleistocene

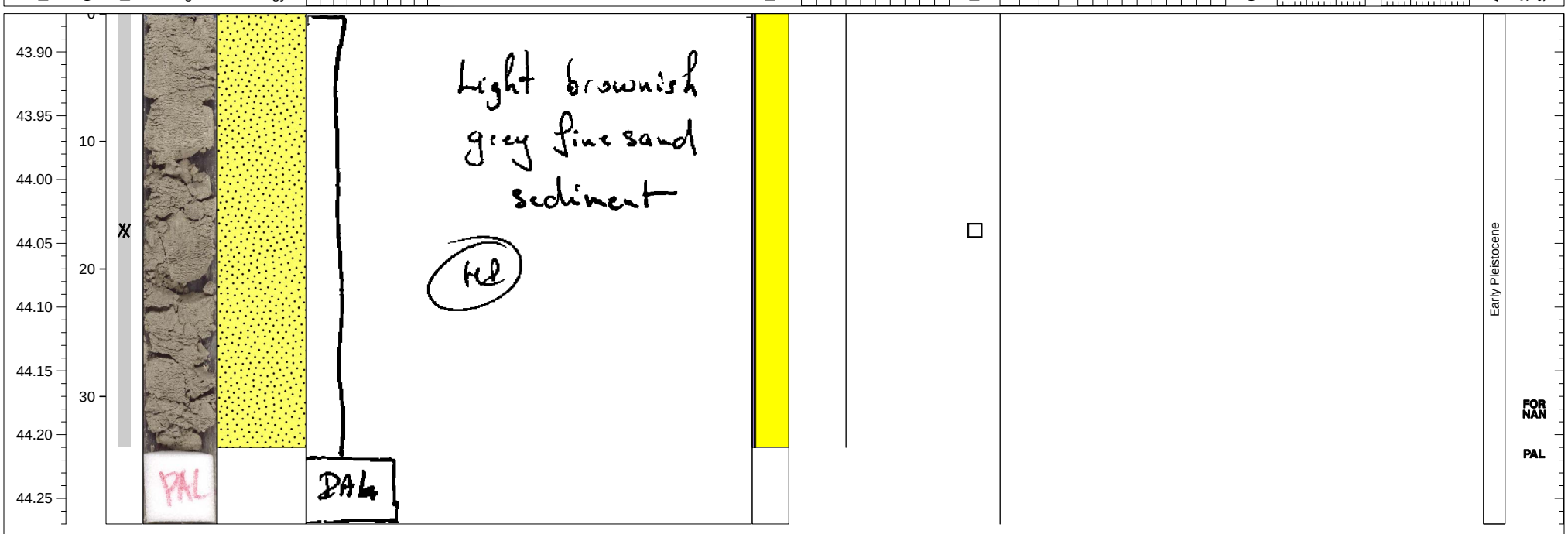
Hole 340-U1396A-5H Section 7, Top of Section: 43.1 CSF-A (m)

Sandy ,mottled hempelagic sediment.



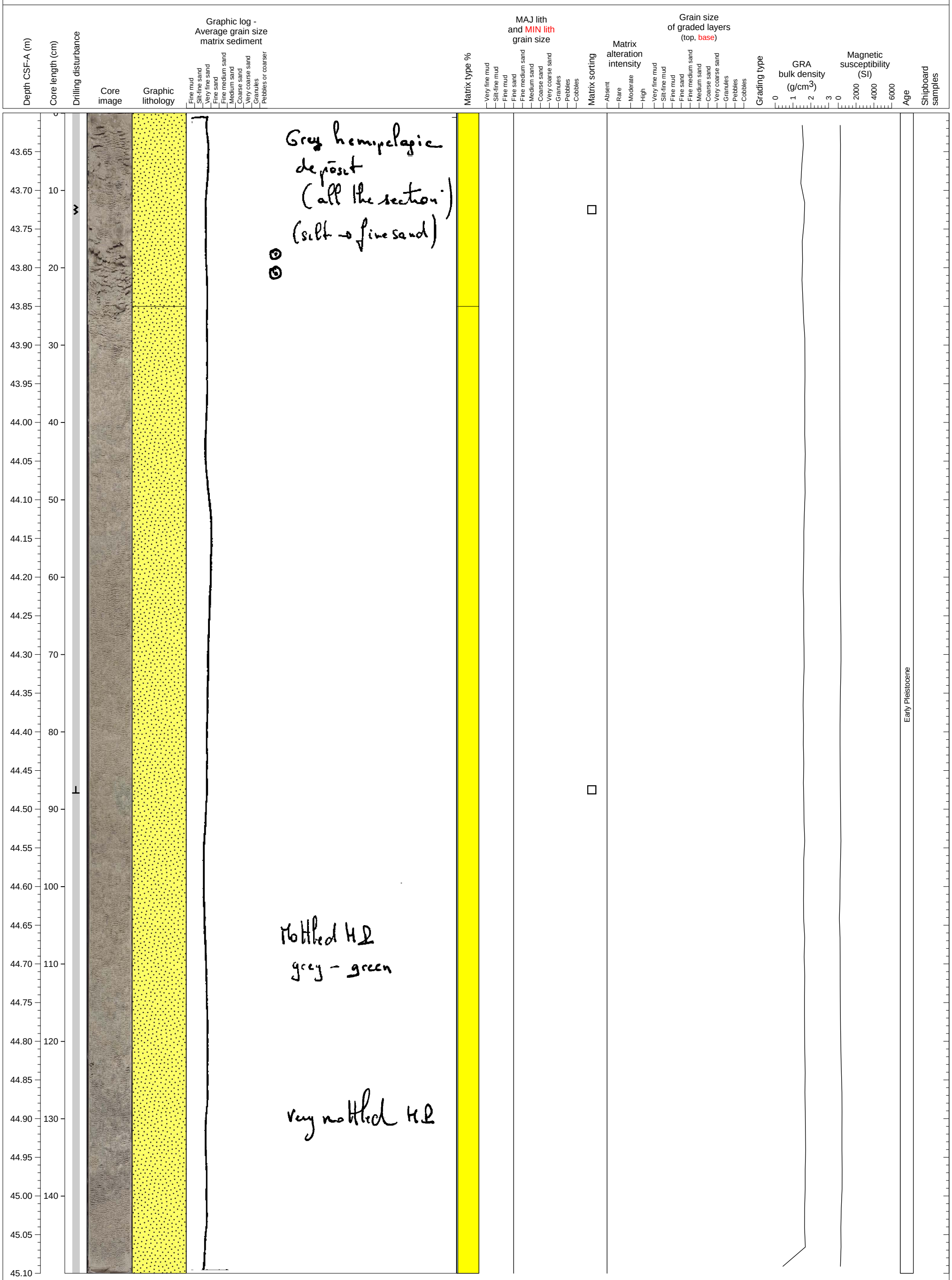
Hole 340-U1396A-5H Section CC, Top of Section: 43.87 CSF-A (m)

Sandy, mottled hemipelagic sediment.



Hole 340-U1396A-6H Section 1, Top of Section: 43.6 CSF-A (m)

Mottled hemipelagic sediment, slightly bioturbated.



Hole 340-U1396A-6H Section 2, Top of Section: 45.1 CSF-A (m)

Sandy hemipelagic sediment, mottled colour.

Depth CSF-A (m)
Core length (cm)
Drilling disturbance
Core image
Graphic lithology
Graphic log - Average grain size matrix sediment
Fine mud
Silt-fine sand
Very fine sand
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles or coarser
Matrix type %
MAJ lith and MIN lith grain size
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Matrix sorting
Matrix alteration intensity
Absent
Rare
Moderate
High
Grain size of graded layers (top, base)
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Grading type
GRA bulk density (g/cm^3)
0
1
2
3
Magnetic susceptibility (SI)
0
2000
4000
6000
Age
Shipboard samples

45.15 – 10
45.20 – 10
45.25 – 20
45.30 – 20
45.35 – 30
45.40 – 30
45.45 – 40
45.50 – 40
45.55 – 50
45.60 – 50
45.65 – 60
45.70 – 60
45.75 – 70
45.80 – 70
45.85 – 80
45.90 – 80
45.95 – 90
46.00 – 90
46.05 – 100
46.10 – 100
46.15 – 110
46.20 – 110
46.25 – 120
46.30 – 120
46.35 – 130
46.40 – 130
46.45 – 140
46.50 – 140
46.55
46.60

Silt- to fine-sand hemipelagic sediment (all along the section)

– grey

grey - brown

Mottled light grey to grey

Mottled - grey - olive brown

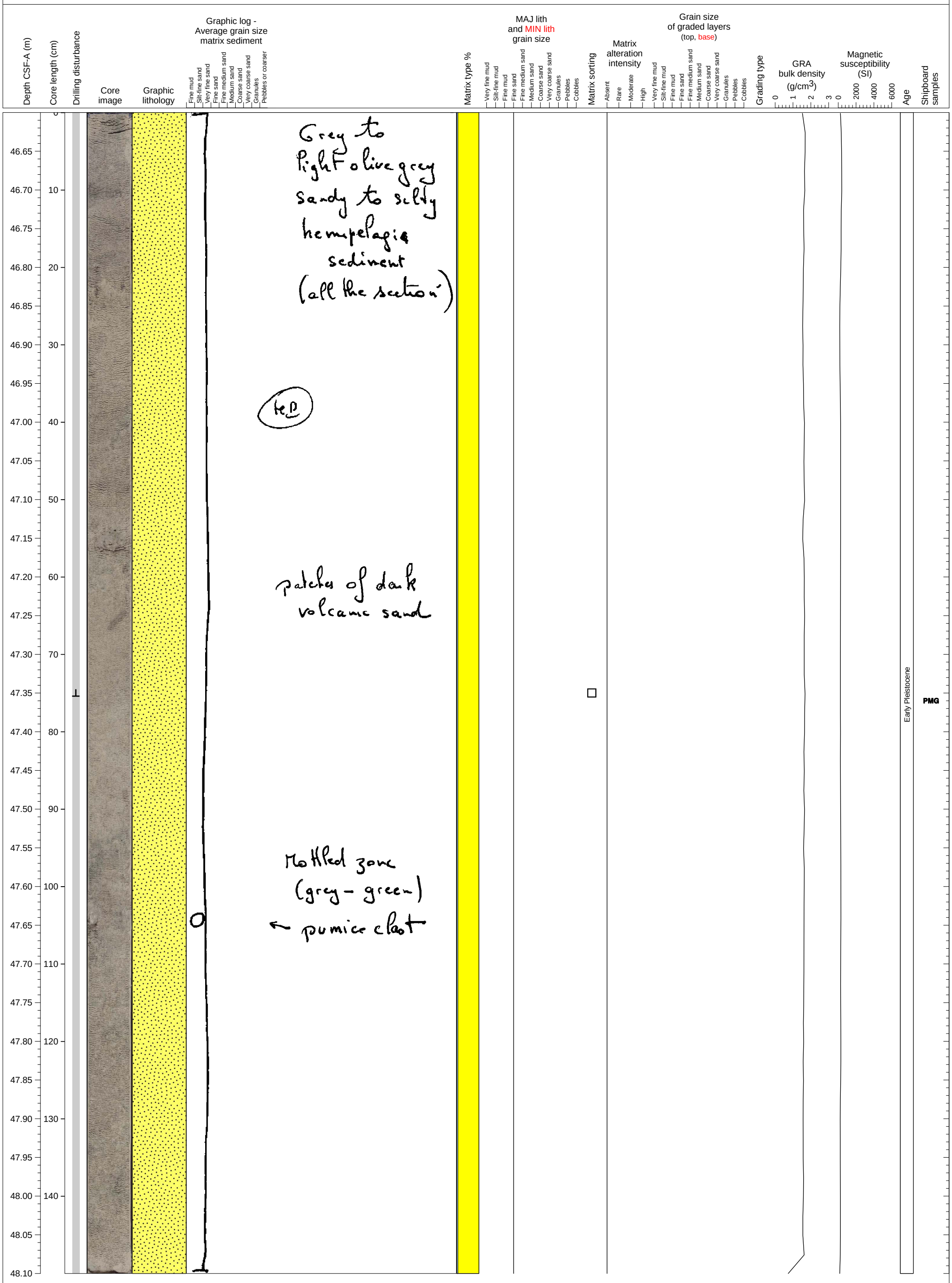
Early Pleistocene

CRB XRD

MADC

Hole 340-U1396A-6H Section 3, Top of Section: 46.6 CSF-A (m)

Sandy, mottled hemipelagic sedimentsd with a single large (15 mm) pumice clast.



Hole 340-U1396A-6H Section 4, Top of Section: 48.1 CSF-A (m)

Hemipelagic fines with several thin ashfall or volcanic sand layers and ~15 cm thick lava/scoriaceous pyroclastic fall beds

Depth CSF-A (m)
Core length (cm)
Drilling disturbance
Core image
Graphic lithology
Graphic log - Average grain size matrix sediment
Fine mud
Silt-fine sand
Very fine sand
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles or coarser
Matrix type %
MAJ lith and MIN lith grain size
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Matrix sorting
Matrix alteration intensity
Absent
Rare
Moderate
High
Grain size of graded layers (top, base)
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Grading type
GRA bulk density (g/cm3)
0
1
2
3
Magnetic susceptibility (SI)
0
2000
4000
6000
Age
Shipboard samples

48.15 – 0
48.20 – 10
48.25
48.30 – 20
48.35
48.40 – 30
48.45
48.50 – 40
48.55
48.60 – 50
48.65
48.70 – 60
48.75
48.80 – 70
48.85
48.90 – 80
48.95
49.00 – 90
49.05
49.10 – 100
49.15
49.20 – 110
49.25
49.30 – 120
49.35
49.40 – 130
49.45
49.50 – 140
49.55
49.60

HS

Grey to brown Hl

Volcanic ash (very fine sand) highly bioturbated (dark grey, 100% volcaniclastic)

granule of dense lava

volcanic sand (50% lava - 50% cryst)

volcanic sand

Volcaniclastic sand dark

smoothly bedded the top of the level is made of granules of lava

→ tephra fallout

Mottled grey - green silty to sandy hemipelagic deposit

Hp

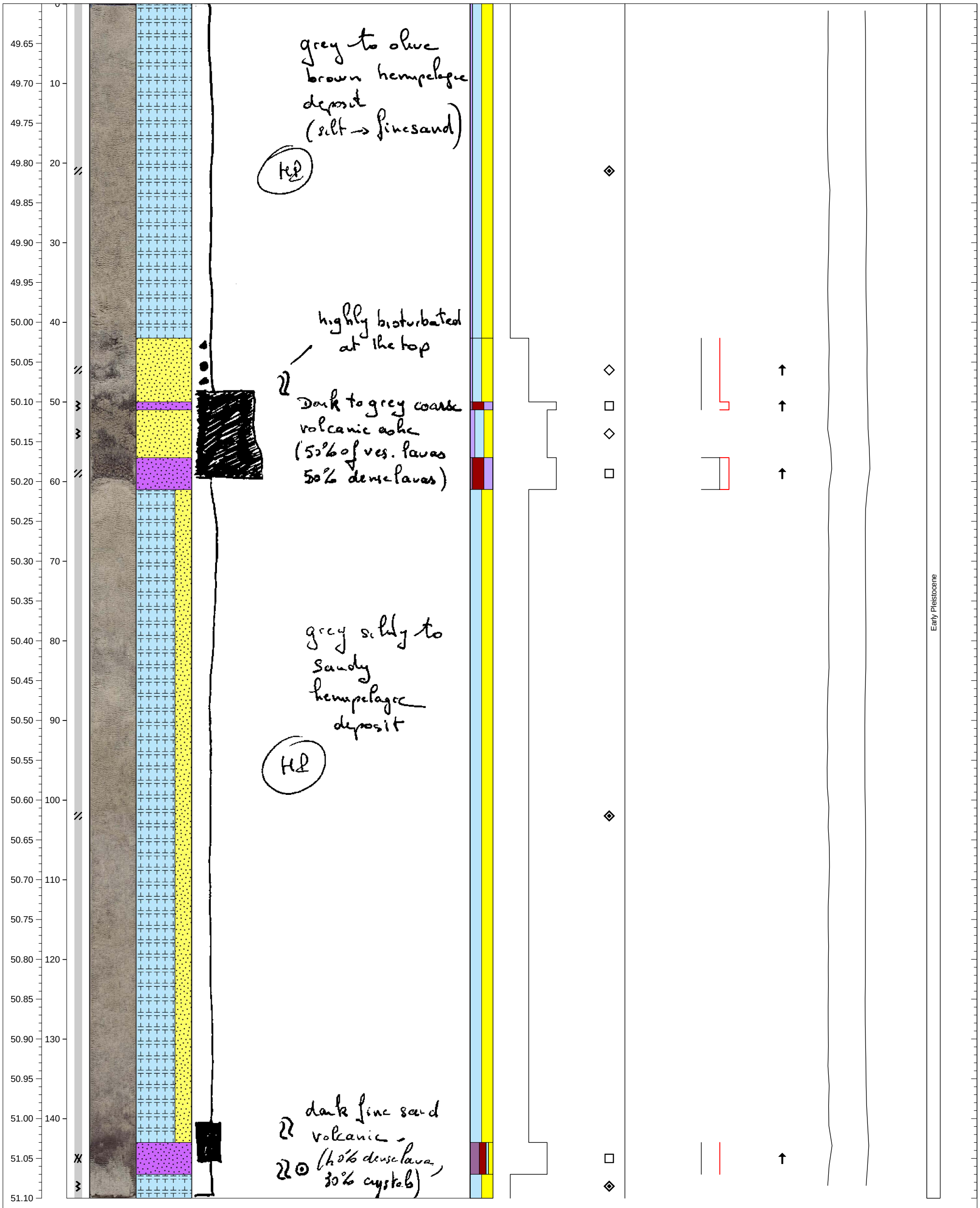
Early Pleistocene

MADC

Hole 340-U1396A-6H Section 5, Top of Section: 49.6 CSF-A (m)

Hemipelagic sediments with intercalated tephra layers.

Depth CSF-A (m)
Core length (cm)
Drilling disturbance
Core image
Graphic lithology
Graphic log - Average grain size matrix sediment
Fine mud
Silt-fine sand
Very fine sand
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles or coarser
Matrix type %
MAJ lith and MIN lith grain size
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Matrix sorting
Matrix alteration intensity
Absent
Rare
Moderate
High
Grain size of graded layers (top, base)
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Grading type
GRA bulk density (g/cm^3)
Magnetic susceptibility (SI)
Age
Shipboard samples



Hole 340-U1396A-6H Section 6, Top of Section: 51.1 CSF-A (m)

Sandy mottled hemipelagic sediments with four ash layers.

Depth CSF-A (m)
Core length (cm)
Drilling disturbance
Core image
Graphic lithology
Graphic log - Average grain size matrix sediment
Fine mud | Silt-fine sand | Very fine sand | Fine sand | Fine medium sand | Medium sand | Coarse sand | Very coarse sand | Granules | Pebbles or coarser
Matrix type %
MAJ lith and MIN lith grain size
Very fine mud | Silt-fine mud | Fine mud | Fine sand | Fine medium sand | Medium sand | Coarse sand | Very coarse sand | Granules | Pebbles | Cobbles
Matrix sorting
Matrix alteration intensity
Absent | Rare | Moderate | High
Grain size of graded layers (top, base)
Very fine mud | Silt-fine mud | Fine mud | Fine sand | Fine medium sand | Medium sand | Coarse sand | Very coarse sand | Granules | Pebbles | Cobbles
Grading type
GRA bulk density (g/cm^3)
0 | 1 | 2 | 3
Magnetic susceptibility (SI)
0 | 2000 | 4000 | 6000
Age
Shipboard samples

51.15 – 0
51.20 – 10
51.25
51.30 – 20
51.35
51.40 – 30
51.45
51.50 – 40
51.55
51.60 – 50
51.65
51.70 – 60
51.75
51.80 – 70
51.85
51.90 – 80
51.95
52.00 – 90
52.05
52.10 – 100
52.15
52.20 – 110
52.25
52.30 – 120
52.35
52.40 – 130
52.45
52.50 – 140
52.55
52.60

volcanic ash (dark - fine ash)

Grey silty - sandy Hemipelagic sediments

(30% scorias) volcanic dark fine sand mixed in the upper part with sediments → tephra

→ patch of volcanic dark sand

light grey hemipelagic sediment

brown to dark fine volcanic sand → tephra

Dark grey hemipelagic sediments

very fine dark volcanic sand

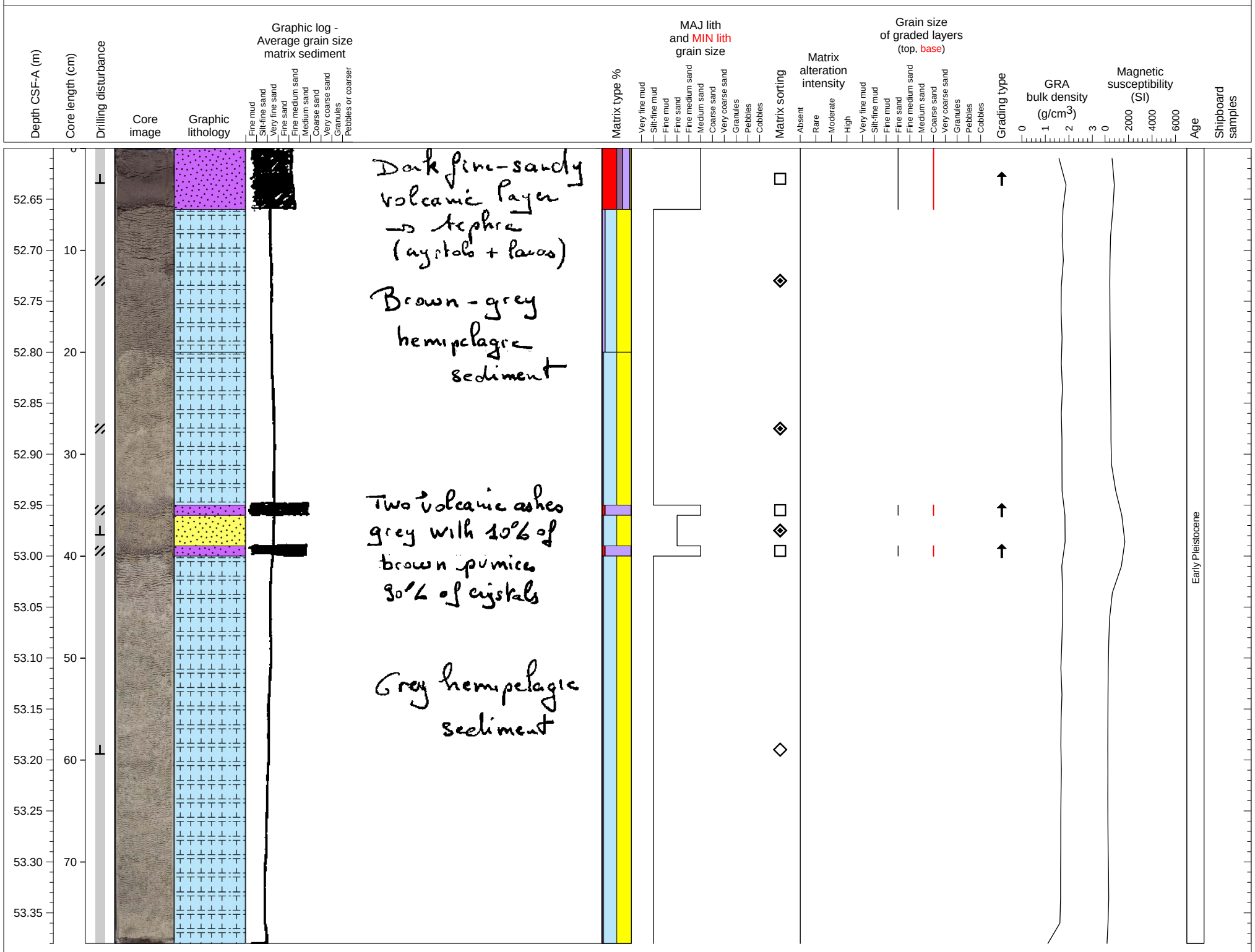
Early Pleistocene

CRB XRD

MADC

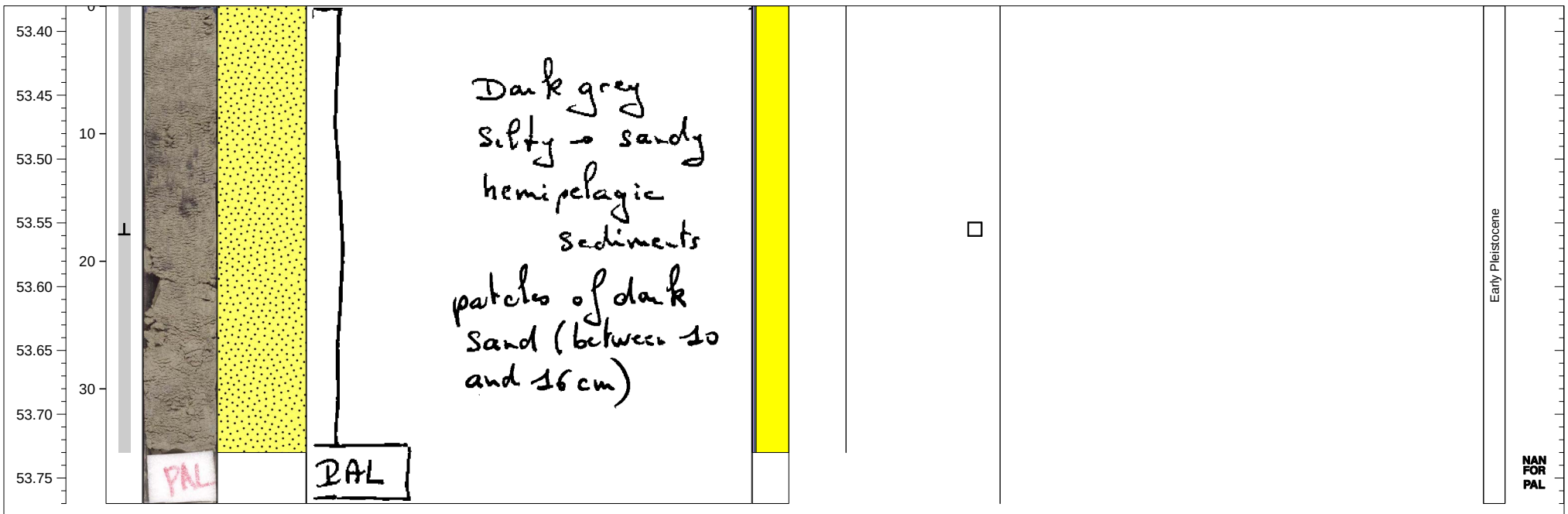
Hole 340-U1396A-6H Section 7, Top of Section: 52.6 CSF-A (m)

Hemipelagic sediments with intercalation of tephra layers.



Hole 340-U1396A-6H Section CC, Top of Section: 53.38 CSF-A (m)

Sandy hemipelagic sediment, moderately bioturbated.



Hole 340-U1396A-7H Section 1, Top of Section: 53.1 CSF-A (m)

Sandy hemipelagic sediment

Depth CSF-A (m)

Core length (cm)

Drilling disturbance

Core image

Graphic lithology

Graphic log - Average grain size matrix sediment
Fine mud
Silt-fine sand
Very fine sand
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles or coarser

Matrix type %

MAJ lith and MIN lith grain size
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles

Matrix sorting

Matrix alteration intensity
Absent
Rare
Moderate
High

Grain size of graded layers (top, base)
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles

Grading type

GRA bulk density (g/cm^3)
0
1
2
3

Magnetic susceptibility (SI)
0
2000
4000
6000

Age

Shipboard samples

53.15 – 0
53.20 – 10
53.25
53.30 – 20
53.35
53.40 – 30
53.45
53.50 – 40
53.55
53.60 – 50
53.65
53.70 – 60
53.75
53.80 – 70
53.85
53.90 – 80
53.95
54.00 – 90
54.05
54.10 – 100
54.15
54.20 – 110
54.25
54.30 – 120
54.35
54.40 – 130
54.45
54.50 – 140
54.55
54.60

Grey silty to sandy (fine) hemipelagic sediments (all the section)

→ patchs of dark sand

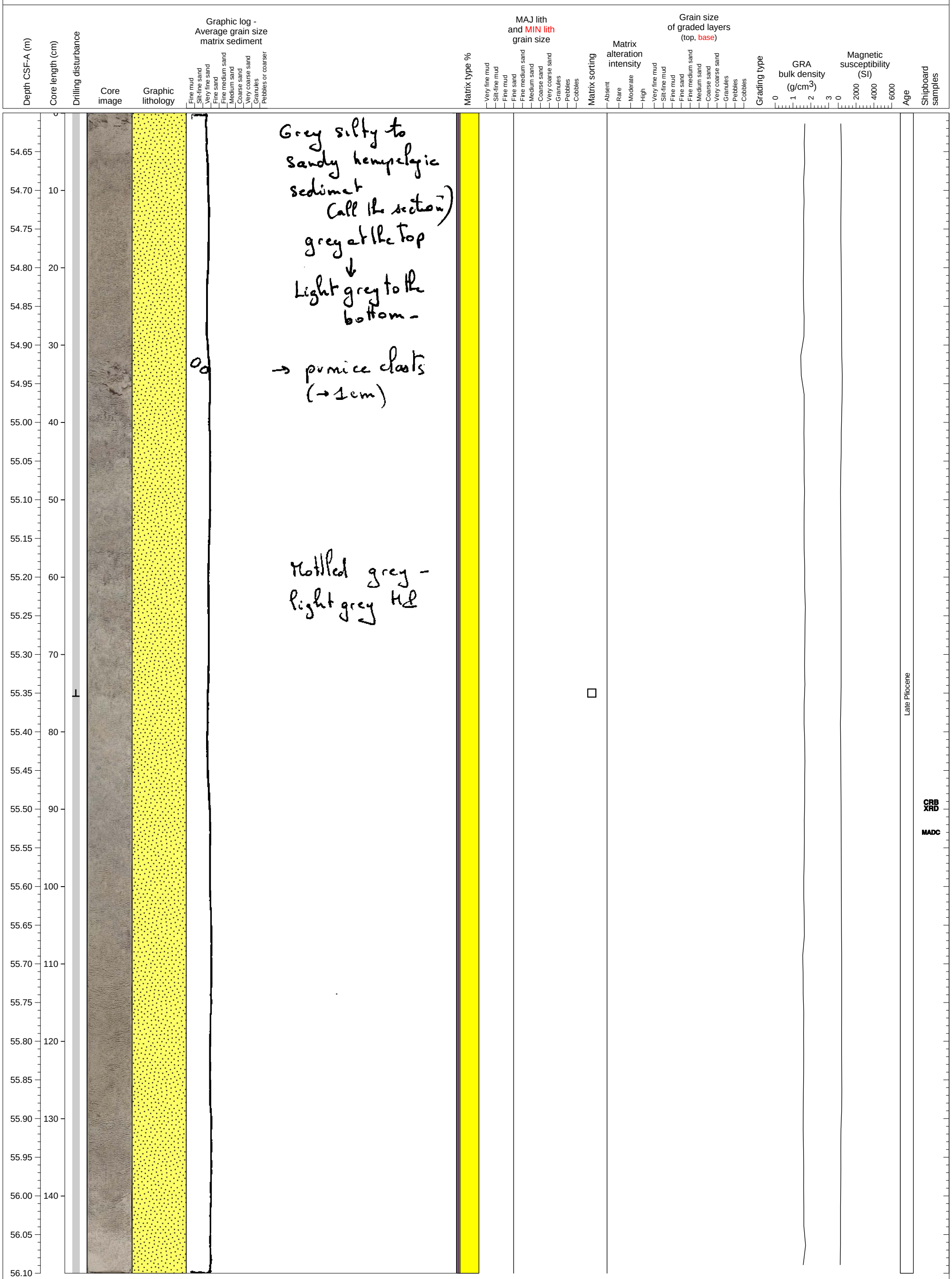
Mottled grey - grey dark HL

Late Pliocene

PMG

Hole 340-U1396A-7H Section 2, Top of Section: 54.6 CSF-A (m)

Sandy hemupelagic sediment, with a single large pumice clast (25 mm).



Hole 340-U1396A-7H Section 3, Top of Section: 56.1 CSF-A (m)

Sandy hemipelagic sediments. SLightly finer grained middle section.

Depth CSF-A (m)
Core length (cm)
Drilling disturbance
Core image
Graphic lithology
Graphic log - Average grain size matrix sediment
Fine mud
Silt-fine sand
Very fine sand
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles or coarser
Matrix type %
MAJ lith and MIN lith grain size
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Matrix sorting
Matrix alteration intensity
Absent
Rare
Moderate
High
Grain size of graded layers (top, base)
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Grading type
GRA bulk density (g/cm^3)
0
1
2
3
Magnetic susceptibility (SI)
0
2000
4000
6000
Age
Shipboard samples

Hemipelagic sediment

grey silty to sandy

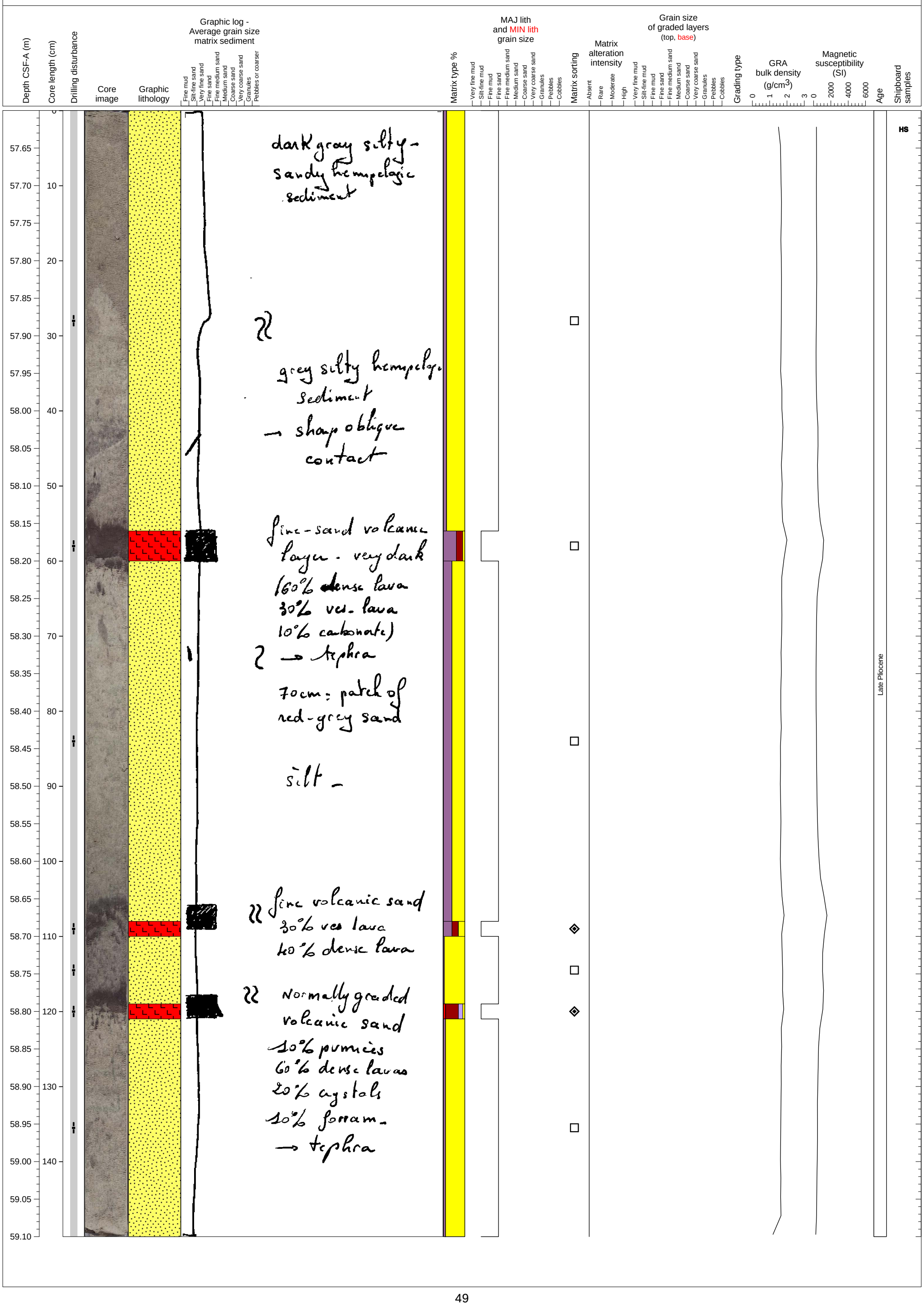
Light grey silt

Mottled grey - Light grey silty to sandy

Late Pliocene

Hole 340-U1396A-7H Section 4, Top of Section: 57.6 CSF-A (m)

Sandy hemipelagic sediments with three ash layers.



Hole 340-U1396A-7H Section 5, Top of Section: 59.1 CSF-A (m)

Hemipelagic sediments

Depth CSF-A (m)
Core length (cm)
Drilling disturbance
Core image
Graphic lithology
Graphic log - Average grain size matrix sediment
Fine mud
Silt-fine sand
Very fine sand
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles or coarser
Matrix type %
MAJ lith and MIN lith grain size
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Matrix sorting
Matrix alteration intensity
Absent
Rare
Moderate
High
Grain size of graded layers (top, base)
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Grading type
GRA bulk density (g/cm3)
Magnetic susceptibility (SI)
Age
Shipboard samples

59.15 – 10
59.20 – 10
59.25 –
59.30 – 20
59.35 –
59.40 – 30
59.45 –
59.50 – 40
59.55 –
59.60 – 50
59.65 –
59.70 – 60
59.75 –
59.80 – 70
59.85 –
59.90 – 80
59.95 –
60.00 – 90
60.05 –
60.10 – 100
60.15 –
60.20 – 110
60.25 –
60.30 – 120
60.35 –
60.40 – 130
60.45 –
60.50 – 140
60.55 –
60.60

Mottled hemipelagite

tcl

22 bioturbation

Dark grey silty-sandy hemipelagic sediment

ml

22

Mottled grey - light grey more silty sediments

Late Pliocene

Hole 340-U1396A-7H Section 6, Top of Section: 60.6 CSF-A (m)

Hemipelagic sediments with intercalated 1 volcanic ash layer.

Depth CSF-A (m)
Core length (cm)
Drilling disturbance
Core image
Graphic lithology
Graphic log - Average grain size matrix sediment
Fine mud
Silt-fine sand
Very fine sand
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles or coarser
Matrix type %
MAJ lith and MIN lith grain size
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Matrix sorting
Matrix alteration intensity
Absent
Rare
Moderate
High
Grain size of graded layers (top, base)
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Grading type
GRA bulk density (g/cm3)
Magnetic susceptibility (SI)
Age
Shipboard samples

60.65 – 10
60.70 – 20
60.75 – 30
60.80 – 40
60.85 – 50
60.90 – 60
60.95 – 70
61.00 – 80
61.05 – 90
61.10 – 100
61.15 – 110
61.20 – 120
61.25 – 130
61.30 – 140
61.35
61.40
61.45
61.50
61.55
61.60
61.65
61.70
61.75
61.80
61.85
61.90
61.95
62.00
62.05
62.10

H.D

Normally graded volcanic sand from coarse sand to fine sand

Two sequence of Dark grey to light grey hemipelagite (silt - sand) (dark grey Sediments are riche in volcanic material → 40% of rounded lava)

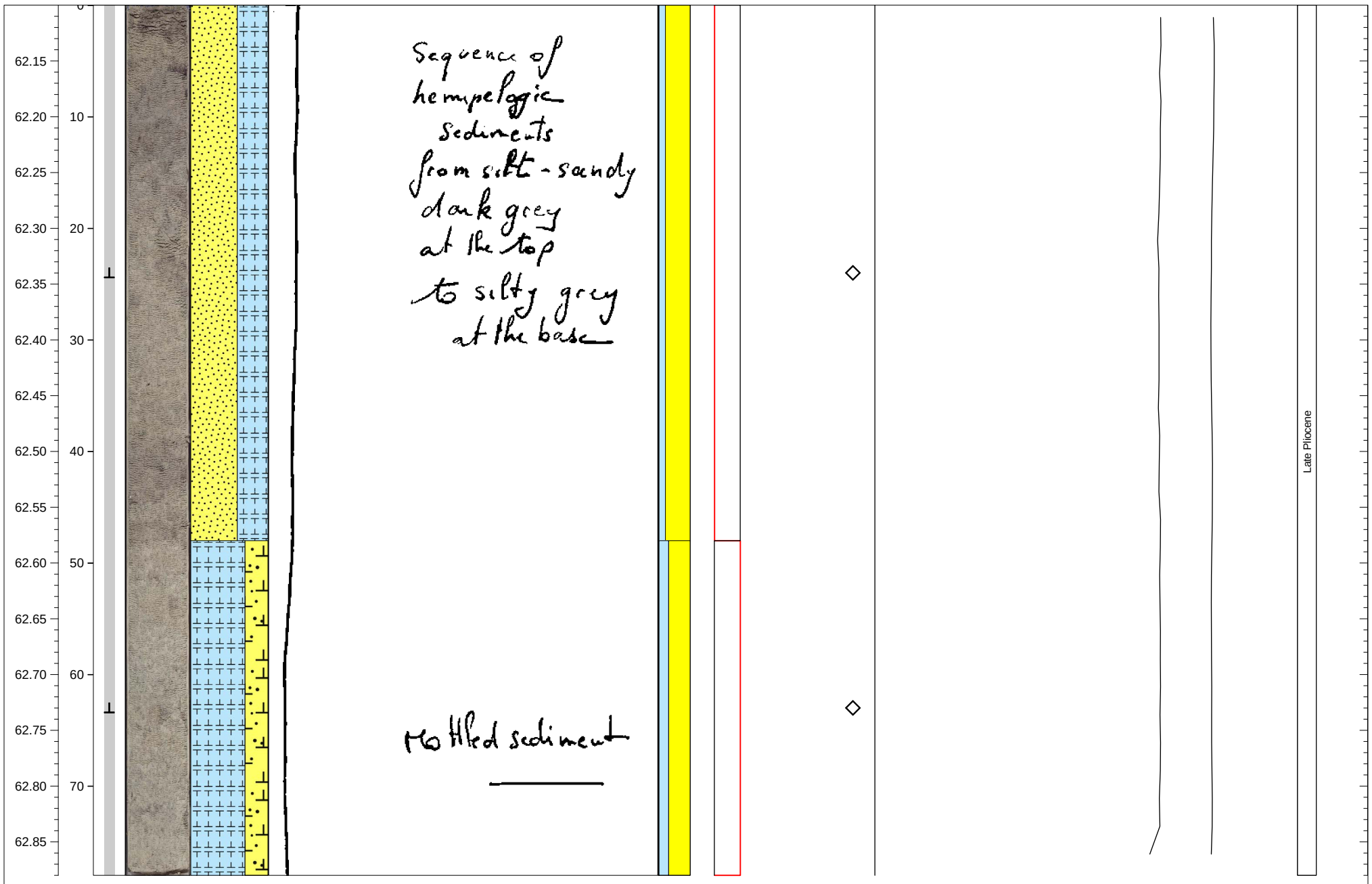
Mottled grey to light grey hemipelagite

Late Pliocene

XRD
CRB
MADC

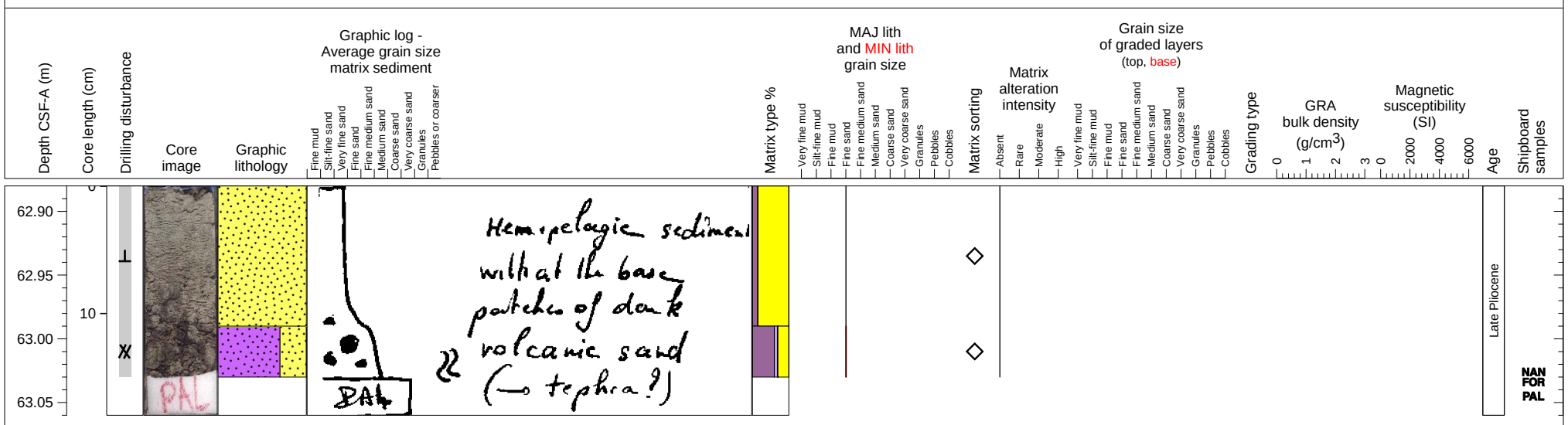
Hole 340-U1396A-7H Section 7, Top of Section: 62.1 CSF-A (m)

Bioturbated hemipelagic fines.



Hole 340-U1396A-7H Section CC, Top of Section: 62.88 CSF-A (m)

Sandy hemipelagic sediment with patches of volcaniclastic sand at base.



Hole 340-U1396A-8H Section 1, Top of Section: 62.6 CSF-A (m)

Hemipelagic sediments with intercalated volcanic tephra layers, bioturbation.

Depth CSF-A (m)
Core length (cm)
Drilling disturbance
Core image
Graphic lithology
Graphic log - Average grain size matrix sediment
Fine mud
Silt-fine sand
Very fine sand
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles or coarser
Matrix type %
MAJ lith and MIN lith grain size
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Matrix sorting
Matrix alteration intensity
Absent
Rare
Moderate
High
Grain size of graded layers (top, base)
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Grading type
GRA bulk density (g/cm^3)
0
1
2
3
Magnetic susceptibility (SI)
0
2000
4000
6000
Age
Shipboard samples

62.65 – 0
62.70 – 10
62.75
62.80 – 20
62.85
62.90 – 30
62.95
63.00 – 40
63.05
63.10 – 50
63.15
63.20 – 60
63.25
63.30 – 70
63.35
63.40 – 80
63.45
63.50 – 90
63.55
63.60 – 100
63.65
63.70 – 110
63.75
63.80 – 120
63.85
63.90 – 130
63.95
64.00 – 140
64.05
64.10 – 150

Mottled dark grey hemipelagic deposits w silt to fine sand with few patches of dark sand

HP

Volcanic sand mixed with the sediments (→ tephra ?)

volcanic sand mixed with sediments (tephra ?)

(50% lava, 50% crystals)

Grey to light grey sediment

HP

(70% lava, 30% crystals)

Volcanic dark sand fine-grained. The upper part is mixed with sediment. (tephra)

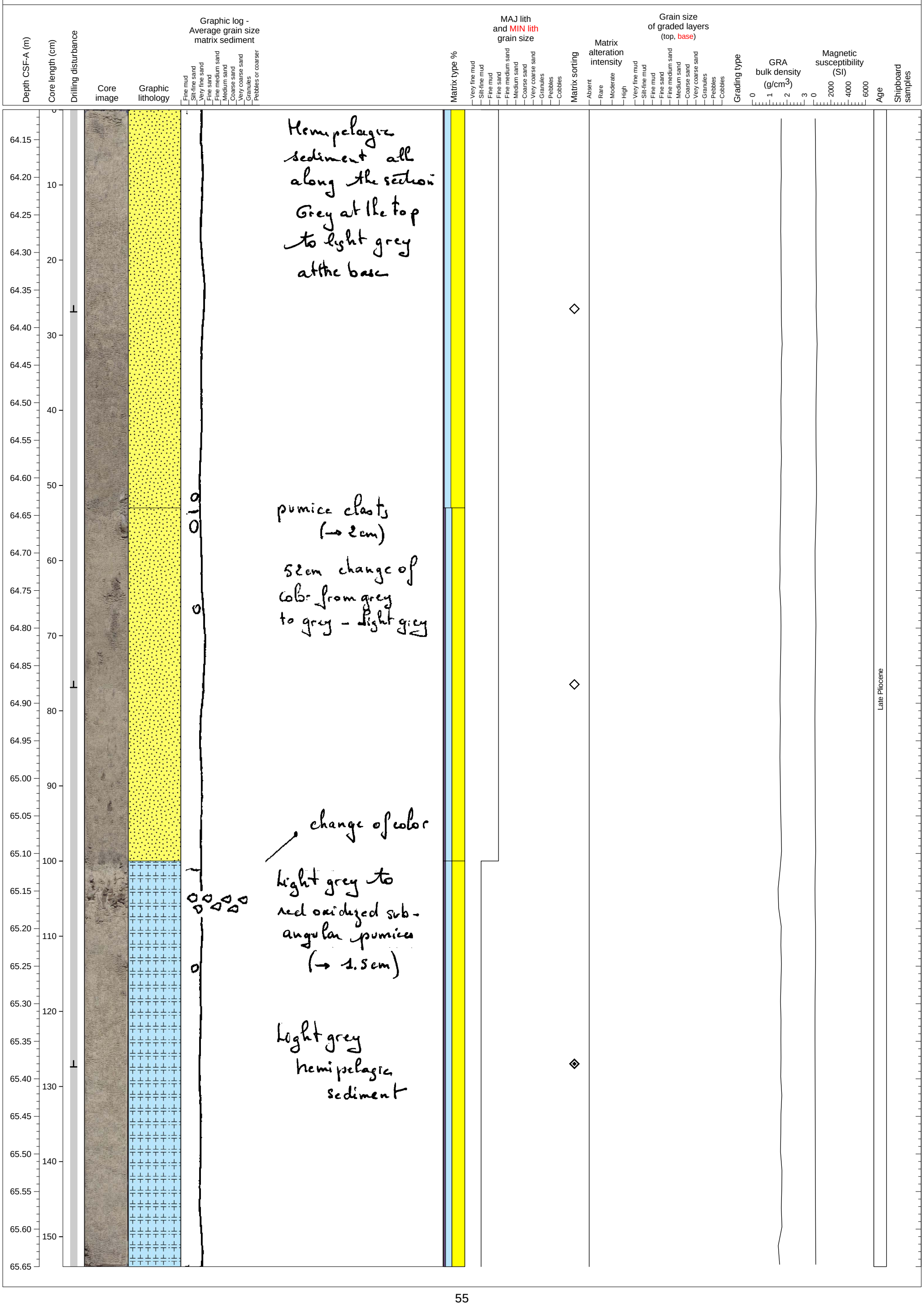
Mottled grey to light grey sediment

HP

Late Pliocene

Hole 340-U1396A-8H Section 2, Top of Section: 64.11 CSF-A (m)

Bioturbated hemipelagic sediments, mottled.



Hole 340-U1396A-8H Section 3, Top of Section: 65.65 CSF-A (m)

Sandy hemipelagic sediment with a single pumice clast (13 mm).

Depth CSF-A (m)
Core length (cm)
Drilling disturbance
Core image
Graphic lithology
Graphic log - Average grain size matrix sediment
Fine mud
Silt-fine sand
Very fine sand
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles or coarser
Matrix type %
MAJ lith and MIN lith grain size
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Matrix sorting
Matrix alteration intensity
Absent
Rare
Moderate
High
Grain size of graded layers (top, base)
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Grading type
GRA bulk density (g/cm^3)
Magnetic susceptibility (SI)
Age
Shipboard samples

Hemipelagic sediment all along the section silt - fine sand dark grey at the top of the section to light grey at the bottom

HP

Mottled zone

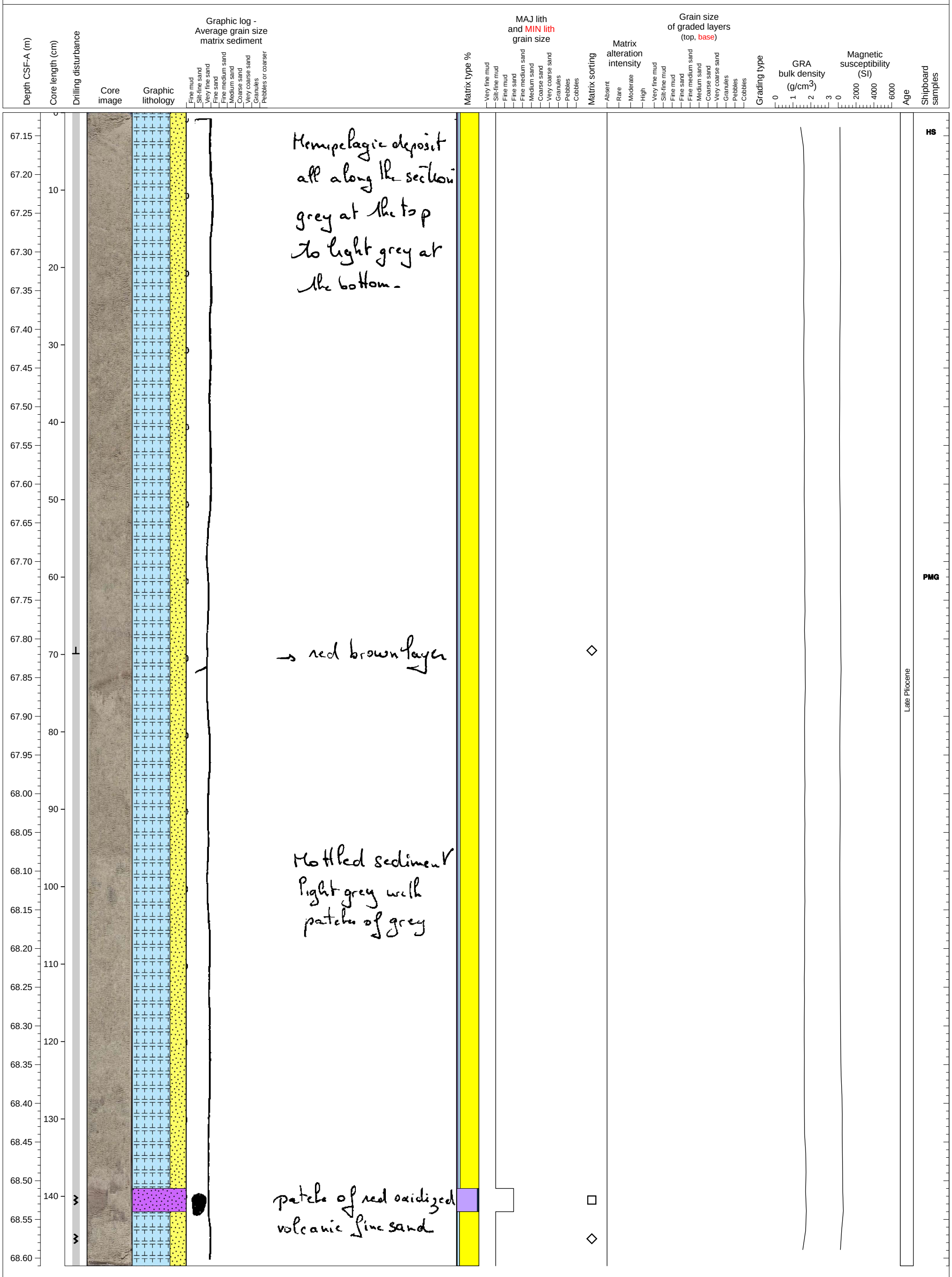
small green layer with a bottom strong contact

Late Pliocene

MADC

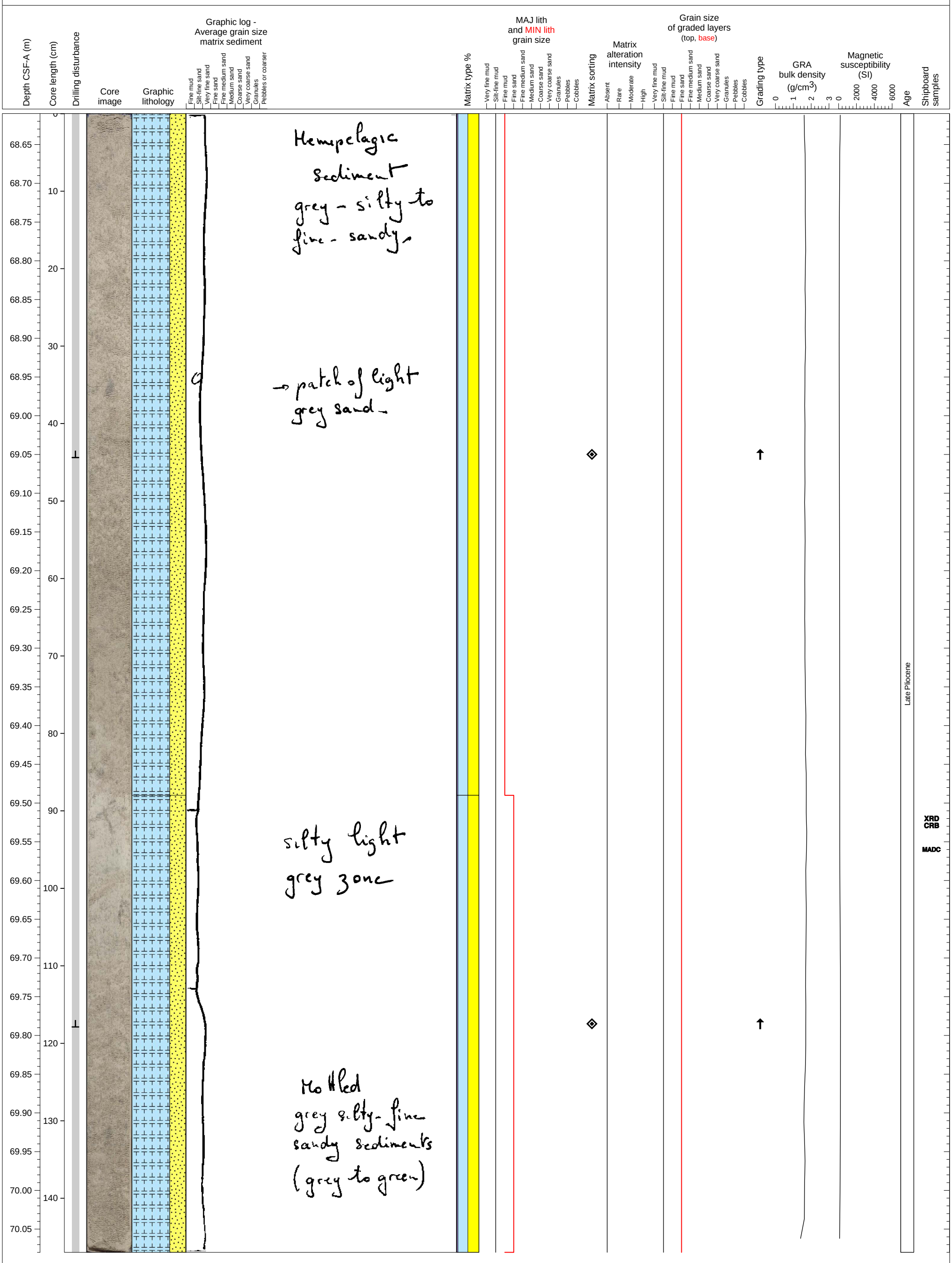
Hole 340-U1396A-8H Section 4, Top of Section: 67.12 CSF-A (m)

Hemipelagic fines.



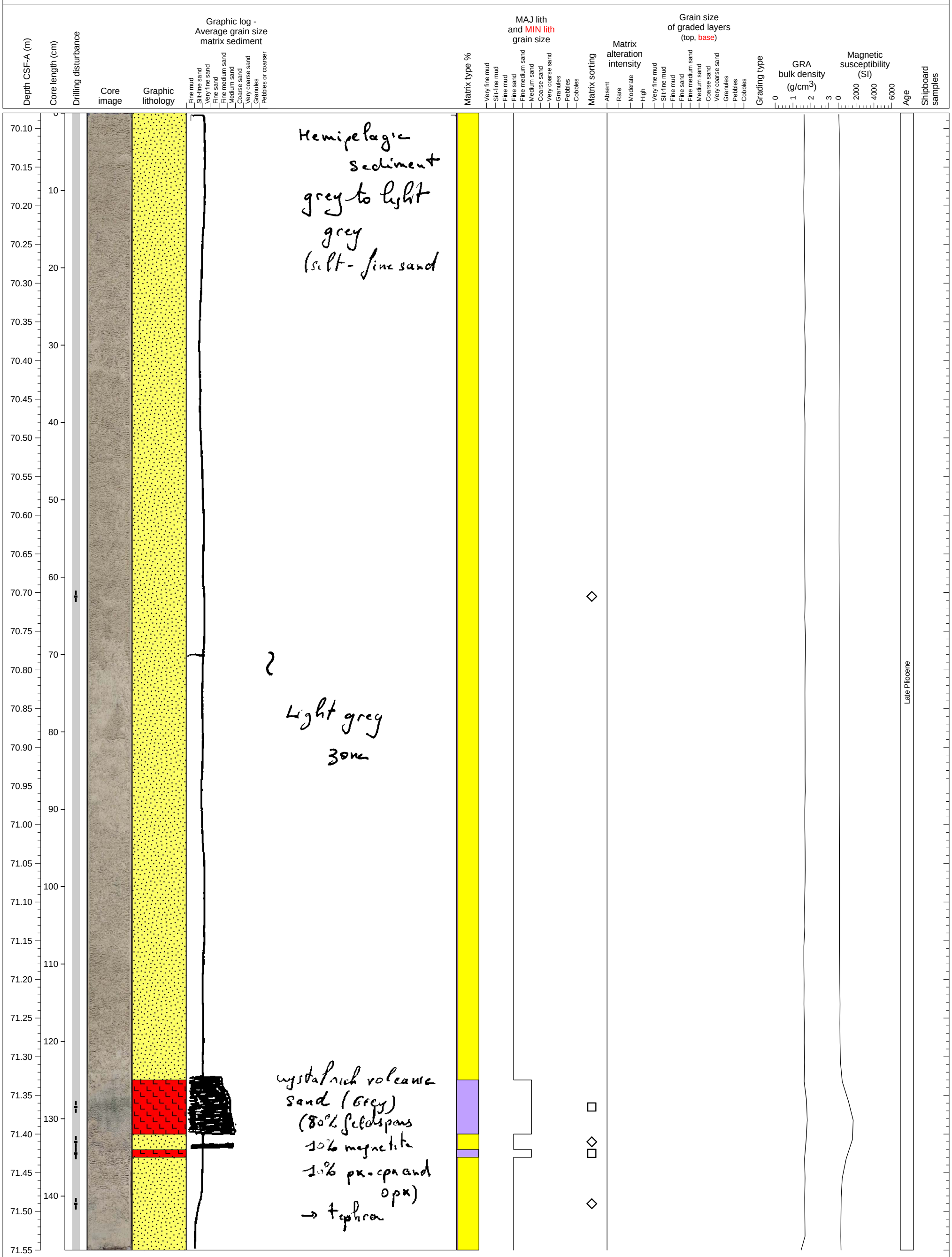
Hole 340-U1396A-8H Section 5, Top of Section: 68.61 CSF-A (m)

Weakly graded fine grained hemipelagic sediments.



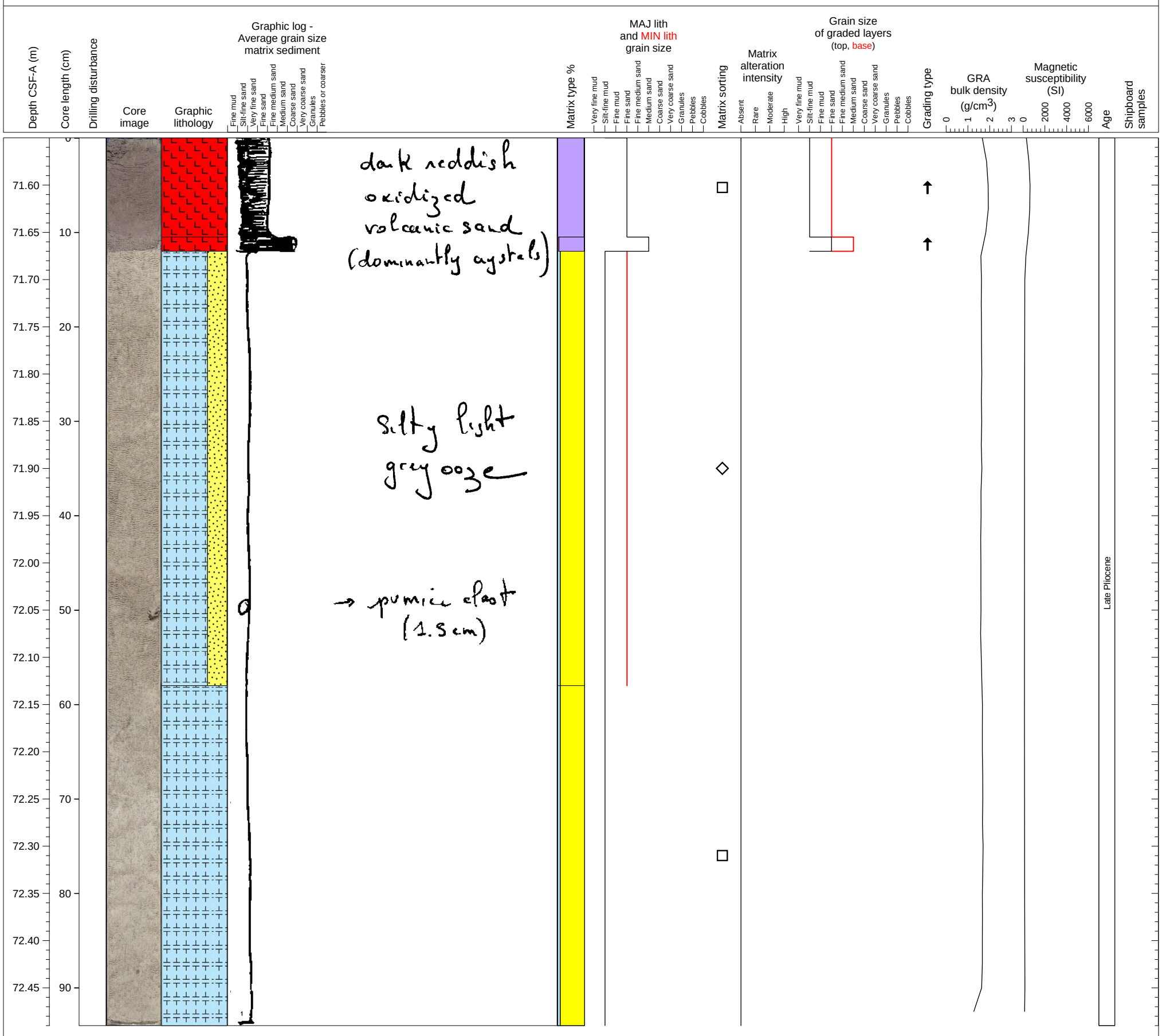
Hole 340-U1396A-8H Section 6, Top of Section: 70.08 CSF-A (m)

Sandy hemipelagice sand with two ash layers, one of which is a thick, crystal rich ash fall containing magnetite.



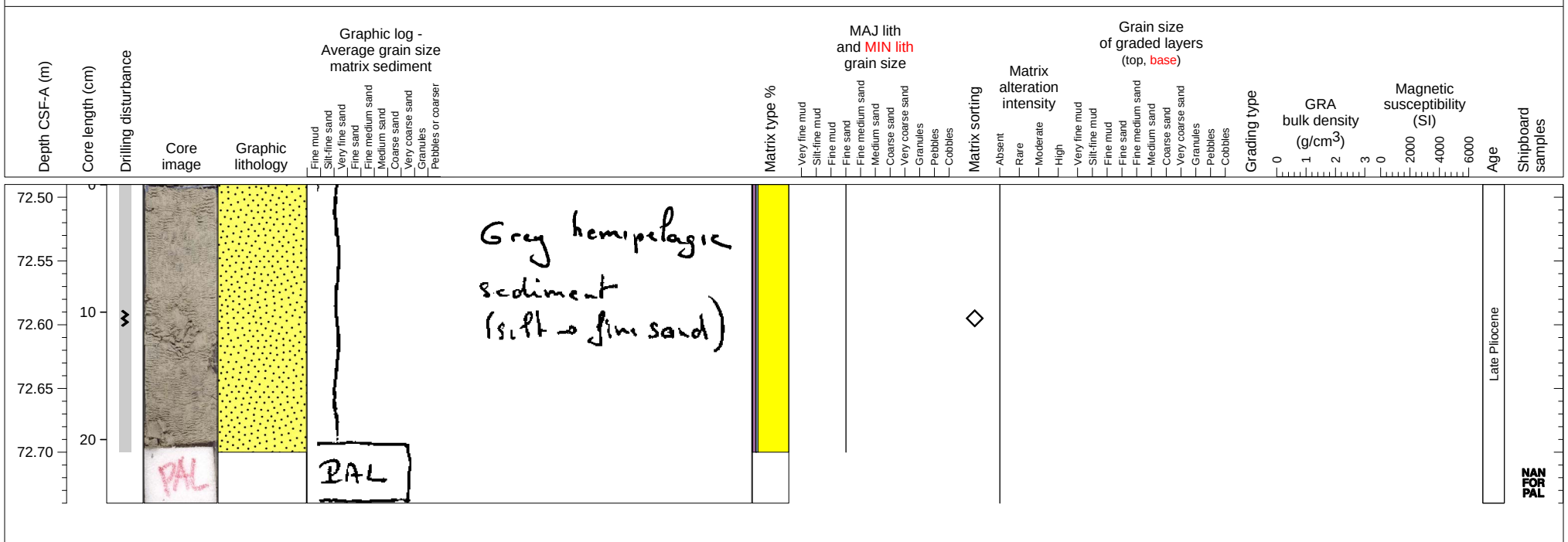
Hole 340-U1396A-8H Section 7, Top of Section: 71.55 CSF-A (m)

Hemipelagic fines, top capped with crystal rich ash fall layer (12 cm thick).



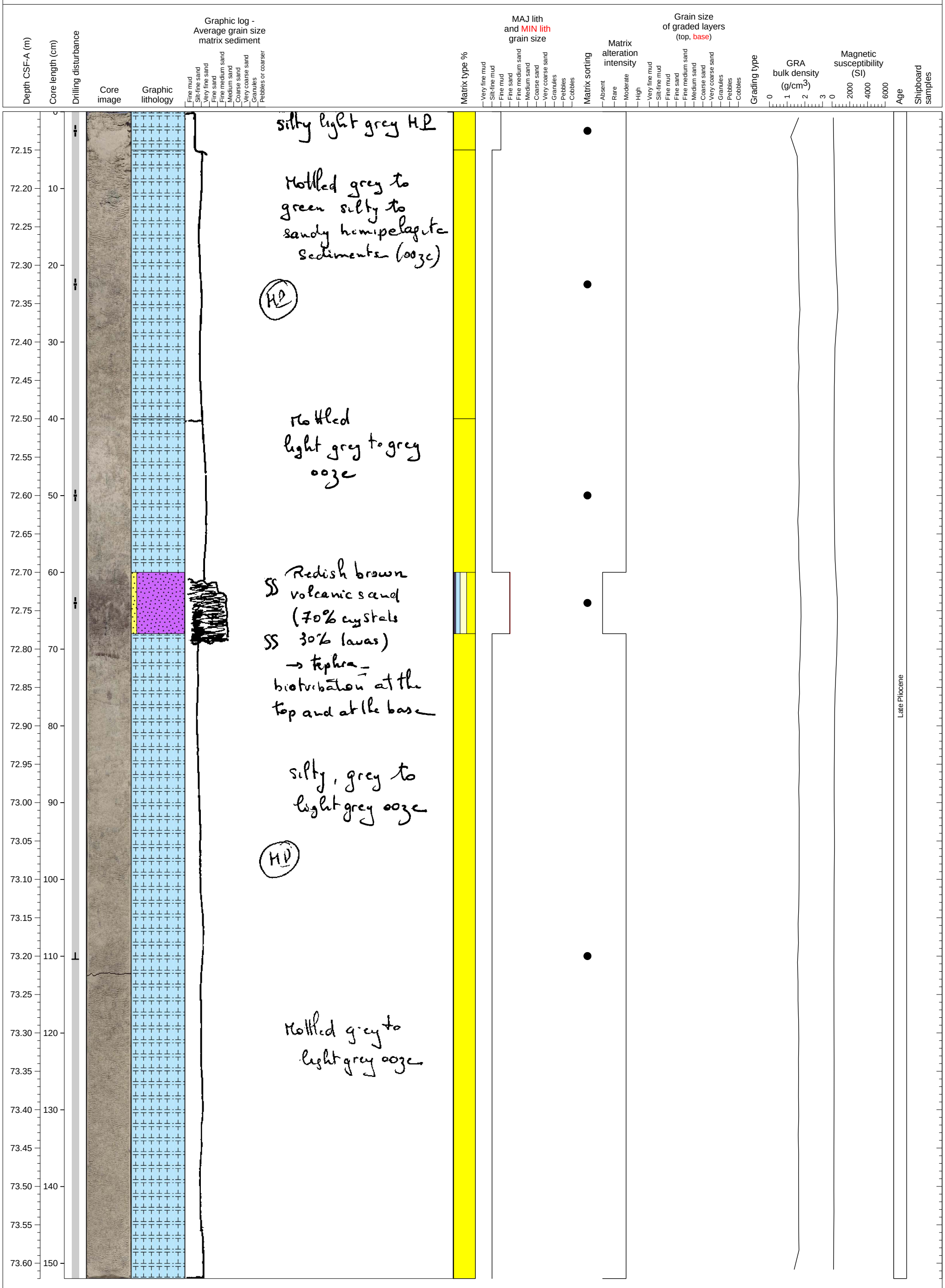
Hole 340-U1396A-8H Section CC, Top of Section: 72.49 CSF-A (m)

Sandy hemipelagic sediment.



Hole 340-U1396A-9H Section 1, Top of Section: 72.1 CSF-A (m)

Hemipelagic sediments interlayering a potential turbidite layer



Hole 340-U1396A-9H Section 2, Top of Section: 73.62 CSF-A (m)

Hemipelagic Mud

Depth CSF-A (m)
Core length (cm)
Drilling disturbance
Core image
Graphic lithology
Graphic log - Average grain size matrix sediment
Fine mud
Silt-fine sand
Very fine sand
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles or coarser
Matrix type %
MAJ lith and MIN lith grain size
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Matrix sorting
Matrix alteration intensity
Absent
Rare
Moderate
High
Grain size of graded layers (top, base)
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Grading type
GRA bulk density (g/cm3)
Magnetic susceptibility (SI)
Age
Shipboard samples

Hemipelagic deposit all along the section

Mottled light grey grey-green ooze (silty)

grey - silty - sandy ooze

Mottled grey - light grey ooze

→ mud clast

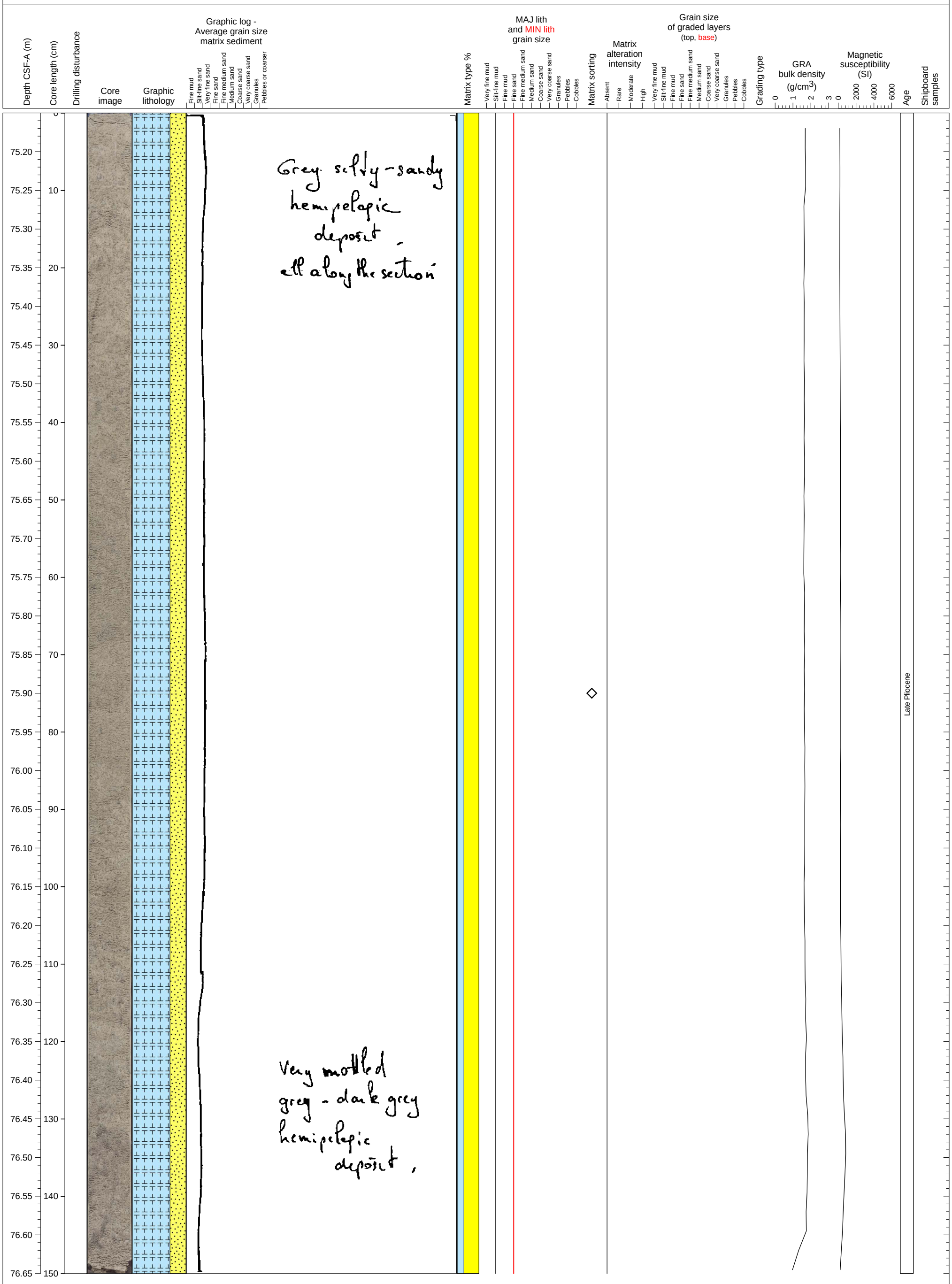
Late Pliocene

XRD
CRB

MADC

Hole 340-U1396A-9H Section 3, Top of Section: 75.15 CSF-A (m)

Mottled, bioturbated hemipelagic fines.



Hole 340-U1396A-9H Section 4, Top of Section: 76.65 CSF-A (m)

Hemipelagite with normally graded volcaniclastic fallout unit.

Depth CSF-A (m)
Core length (cm)
Drilling disturbance
Core image
Graphic lithology
Graphic log - Average grain size matrix sediment
Fine mud | Silt-fine sand | Very fine sand | Fine sand | Fine medium sand | Medium sand | Coarse sand | Very coarse sand | Granules | Pebbles or coarser
Matrix type %
MAJ lith and MIN lith grain size
Very fine mud | Silt-fine mud | Fine mud | Fine sand | Fine medium sand | Medium sand | Coarse sand | Very coarse sand | Granules | Pebbles | Cobbles
Matrix sorting
Matrix alteration intensity
Absent | Rare | Moderate | High
Grain size of graded layers (top, base)
Very fine mud | Silt-fine mud | Fine mud | Fine sand | Fine medium sand | Medium sand | Coarse sand | Very coarse sand | Granules | Pebbles | Cobbles
Grading type
GRA bulk density (g/cm^3)
0 | 1 | 2 | 3
Magnetic susceptibility (SI)
0 | 2000 | 4000 | 6000
Age
Shipboard samples

76.70 – 0
76.75 – 10
76.80 – 20
76.85 – 30
76.90 – 40
76.95 – 50
77.00 – 60
77.05 – 70
77.10 – 80
77.15 – 90
77.20 – 100
77.25 – 110
77.30 – 120
77.35 – 130
77.40 – 140
77.45
77.50
77.55
77.60
77.65
77.70
77.75
77.80
77.85
77.90
77.95
78.00
78.05
78.10

HS

Silty grey hemipelagic deposit

Granules of lightgrey Lava in the ooze

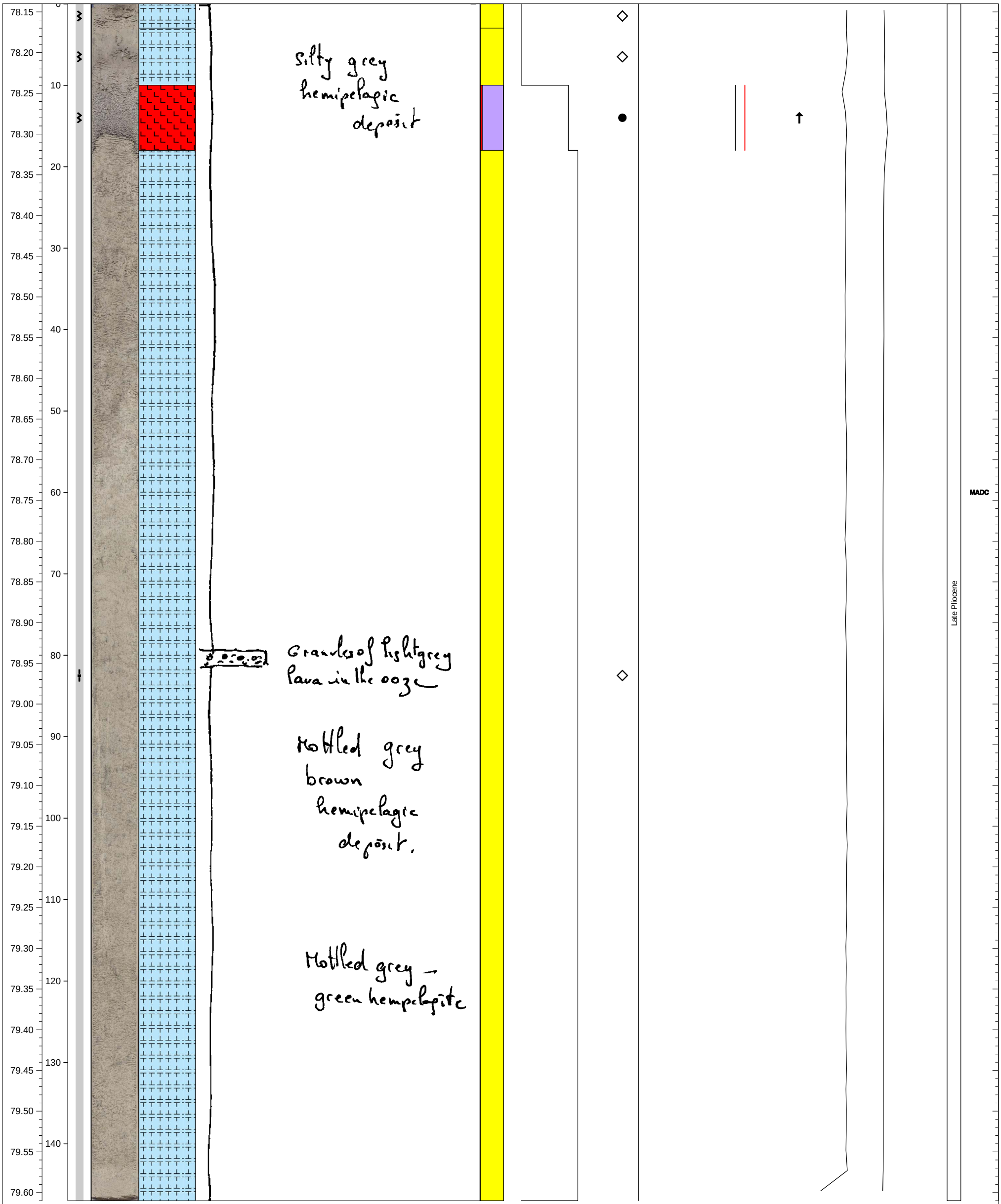
Mottled grey brown hemipelagic deposit.

Mottled grey – green hemipelagite

Late Pliocene

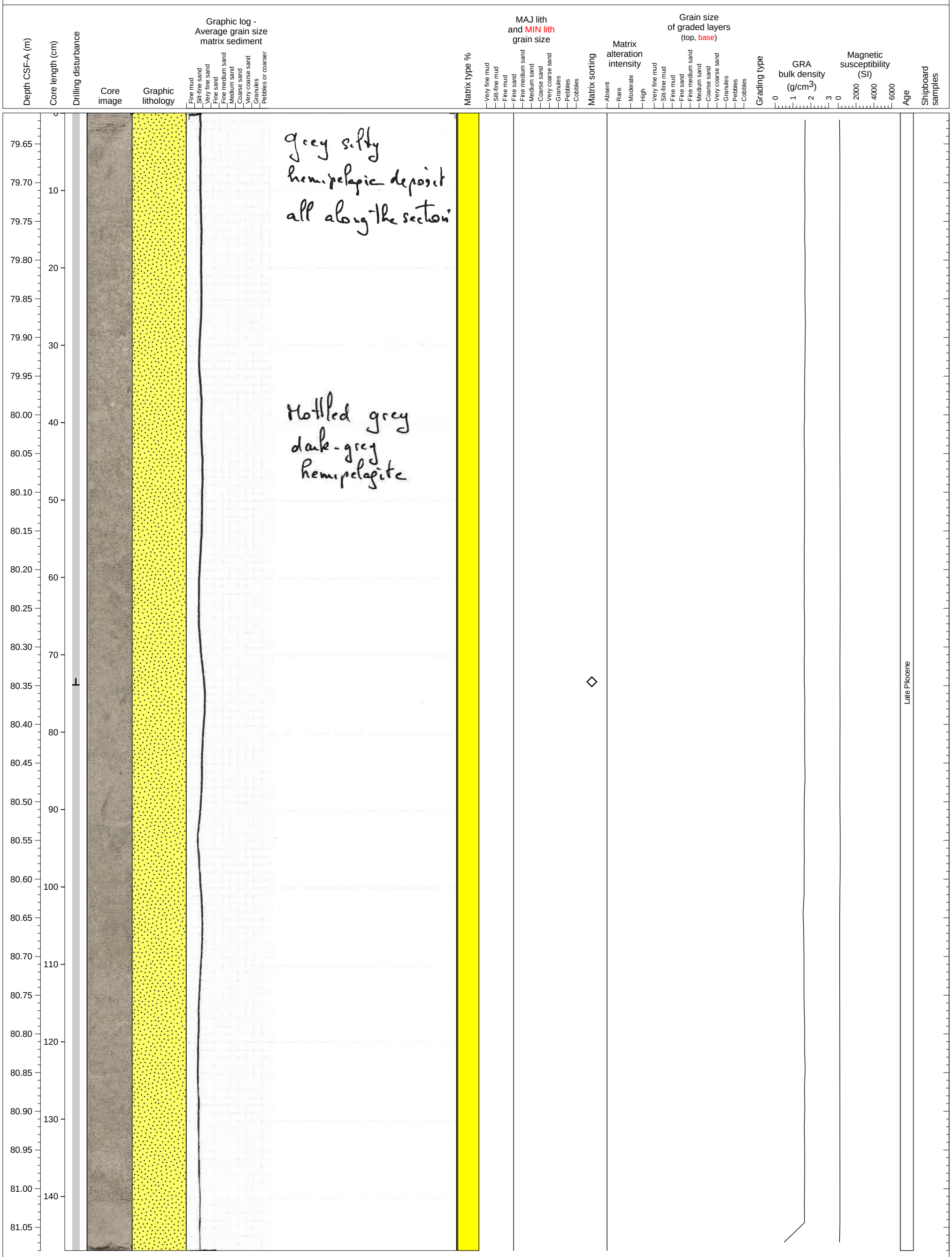
Hole 340-U1396A-9H Section 5, Top of Section: 78.14 CSF-A (m)

This section has one normally-graded ash layer, which is mostly consist of crystals of plagioclase and pyroxene.



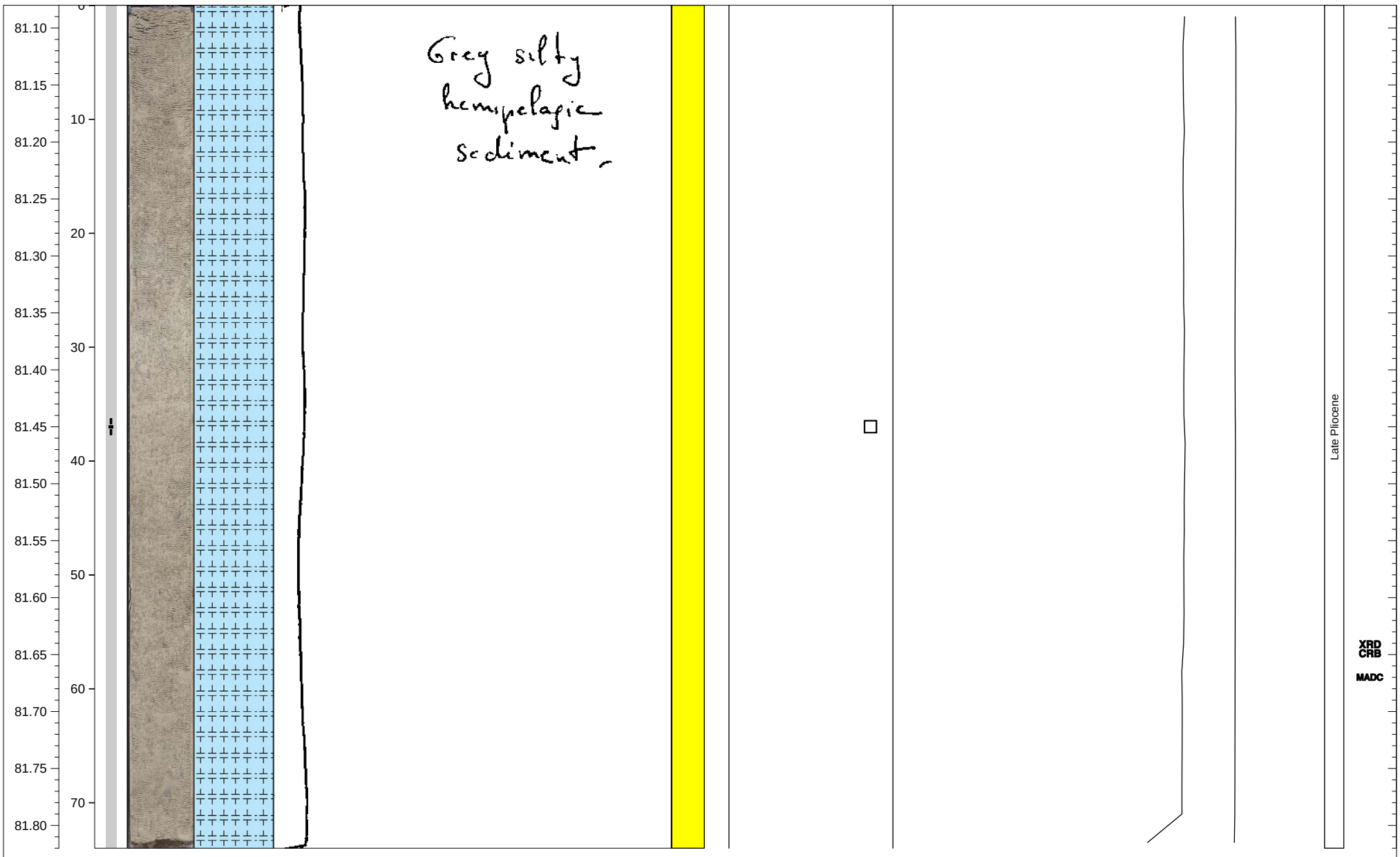
Hole 340-U1396A-9H Section 6, Top of Section: 79.61 CSF-A (m)

Sandy hemipelagic sediment.



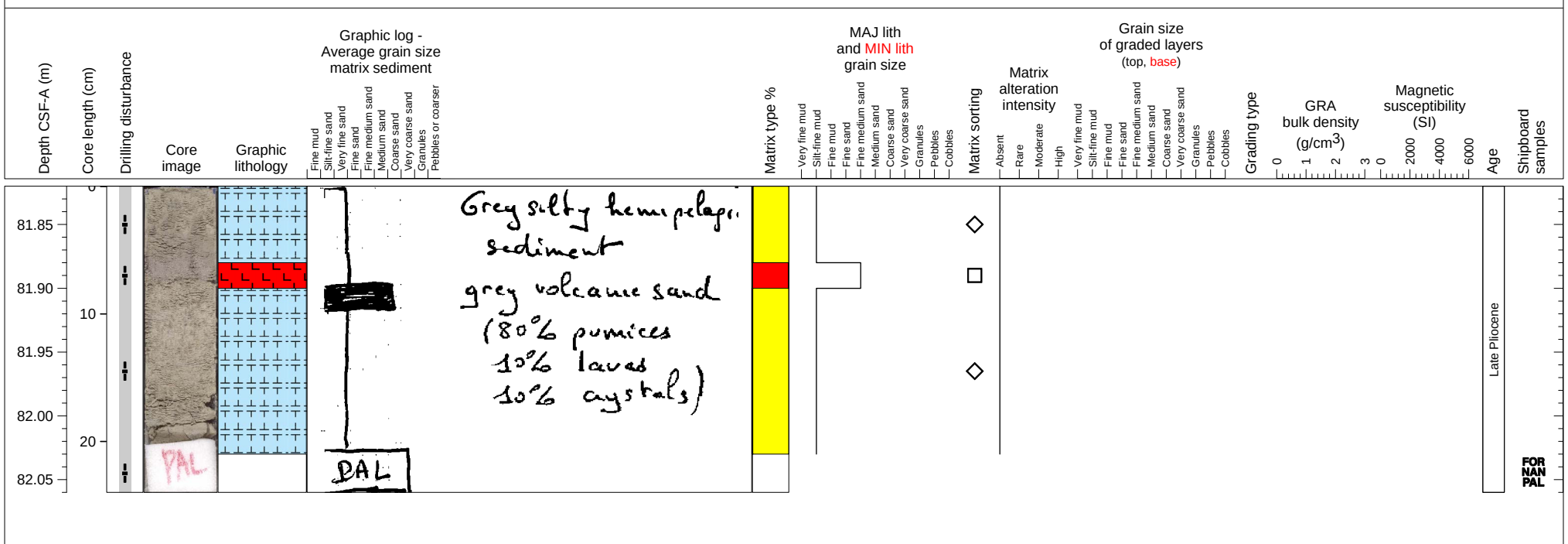
Hole 340-U1396A-9H Section 7, Top of Section: 81.08 CSF-A (m)

Hemipelagic mud.



Hole 340-U1396A-9H Section CC, Top of Section: 81.82 CSF-A (m)

This section contains one ash layer of fine-medium sand size, which consists of pumice and pyroxene crystal.



Hole 340-U1396A-10H Section 1, Top of Section: 81.6 CSF-A (m)

Hemipelagic clay intercalated with fining upward volcaniclastic unit and several thin volcaniclastic beds.

Depth CSF-A (m)
Core length (cm)
Drilling disturbance
Core image
Graphic lithology
Graphic log - Average grain size matrix sediment
Fine mud
Silt-fine sand
Very fine sand
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles or coarser
Matrix type %
MAJ lith and MIN lith grain size
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Matrix sorting
Matrix alteration intensity
Absent
Rare
Moderate
High
Grain size of graded layers (top, base)
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Grading type
GRA bulk density (g/cm3)
0
1
2
3
Magnetic susceptibility (SI)
0
2000
4000
6000
Age
Shipboard samples

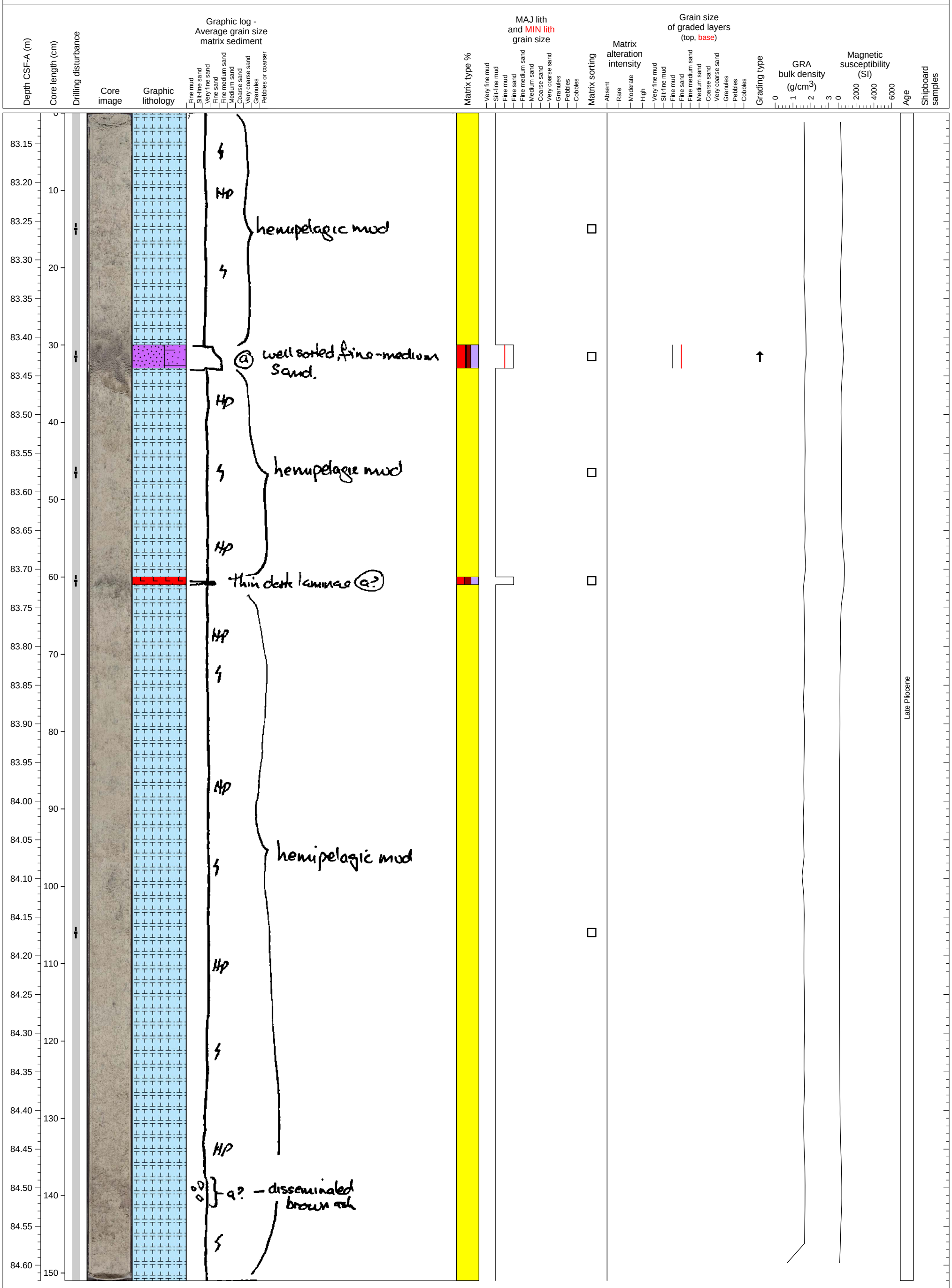
81.65 0
81.70 10
81.75 20
81.80 30
81.85 40
81.90 50
81.95 60
82.00 70
82.05 80
82.10 90
82.15 100
82.20 110
82.25 120
82.30 130
82.35 140
82.40 150
82.45
82.50
82.55
82.60
82.65
82.70
82.75
82.80
82.85
82.90
82.95
83.00
83.05
83.10

HP
hemipelagic mud.
@ black sill
HP
HP
? dispersed ash
HP
hemipelagic mud
HP
5o pumice, 2 lava massive
15 vesicular, 30 xstal
3 other.
HP
some disperse pumice granules
brown clay
45 pumice, 5 lava massive,
10 vesicles, 35 xstals,
5 other
well sorted thick pumice rich layer(s)
5 massive lava
45 pumice
10 vesicular lava.
35 crystals
5 other.
green stain
distinctive contains pyrite
HP
hemipelagic mud
HP

Late Pliocene
XRD
CRB
MADC
SED

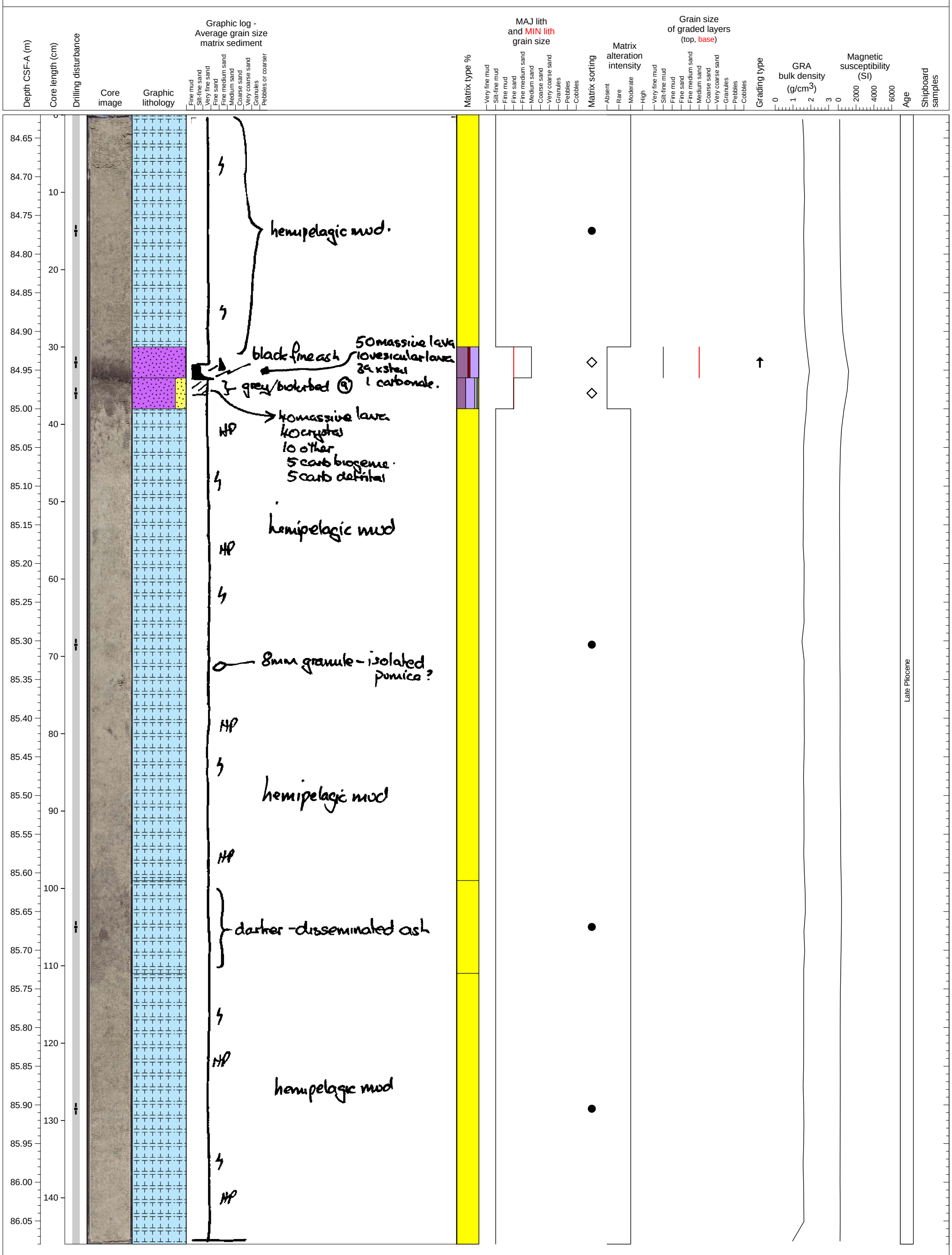
Hole 340-U1396A-10H Section 2, Top of Section: 83.11 CSF-A (m)

Hemipelagic clay interlayered with thin volcaniclastic sand or ash units.



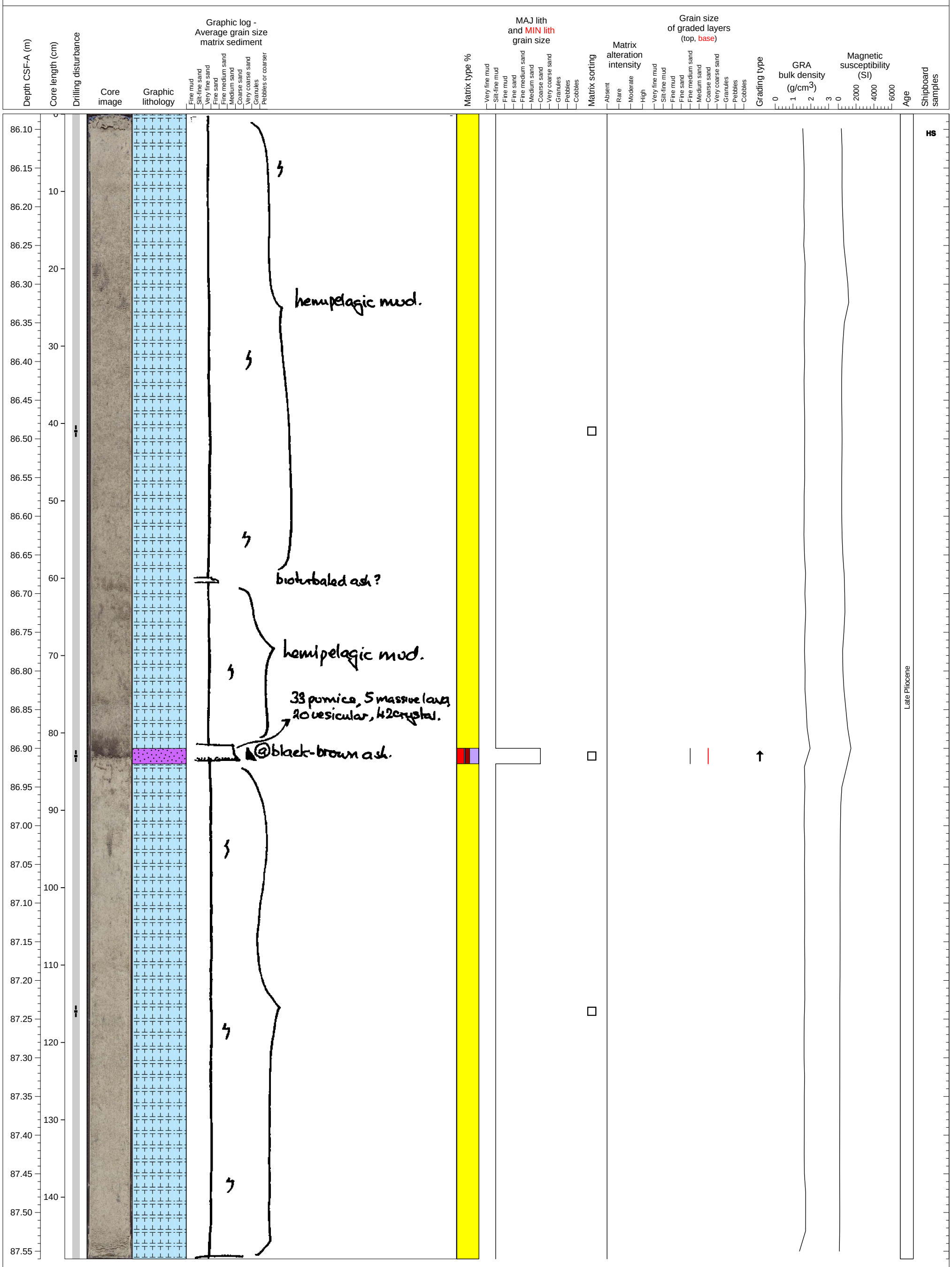
Hole 340-U1396A-10H Section 3, Top of Section: 84.62 CSF-A (m)

Hemipelagic sediments interlayering a tephra layer.



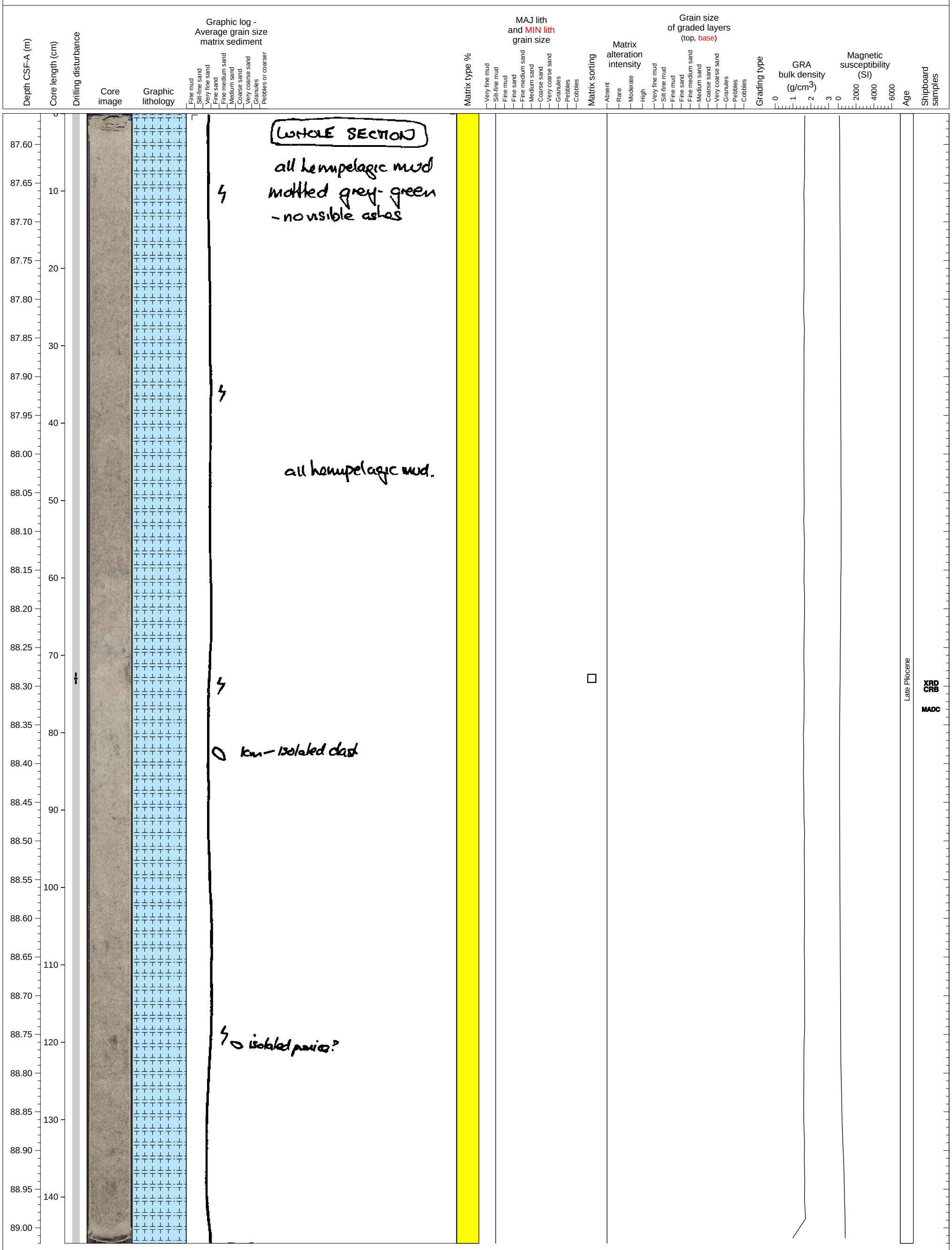
Hole 340-U1396A-10H Section 4, Top of Section: 86.08 CSF-A (m)

Hemipelagic clay with thin volcaniclastic sand layer.



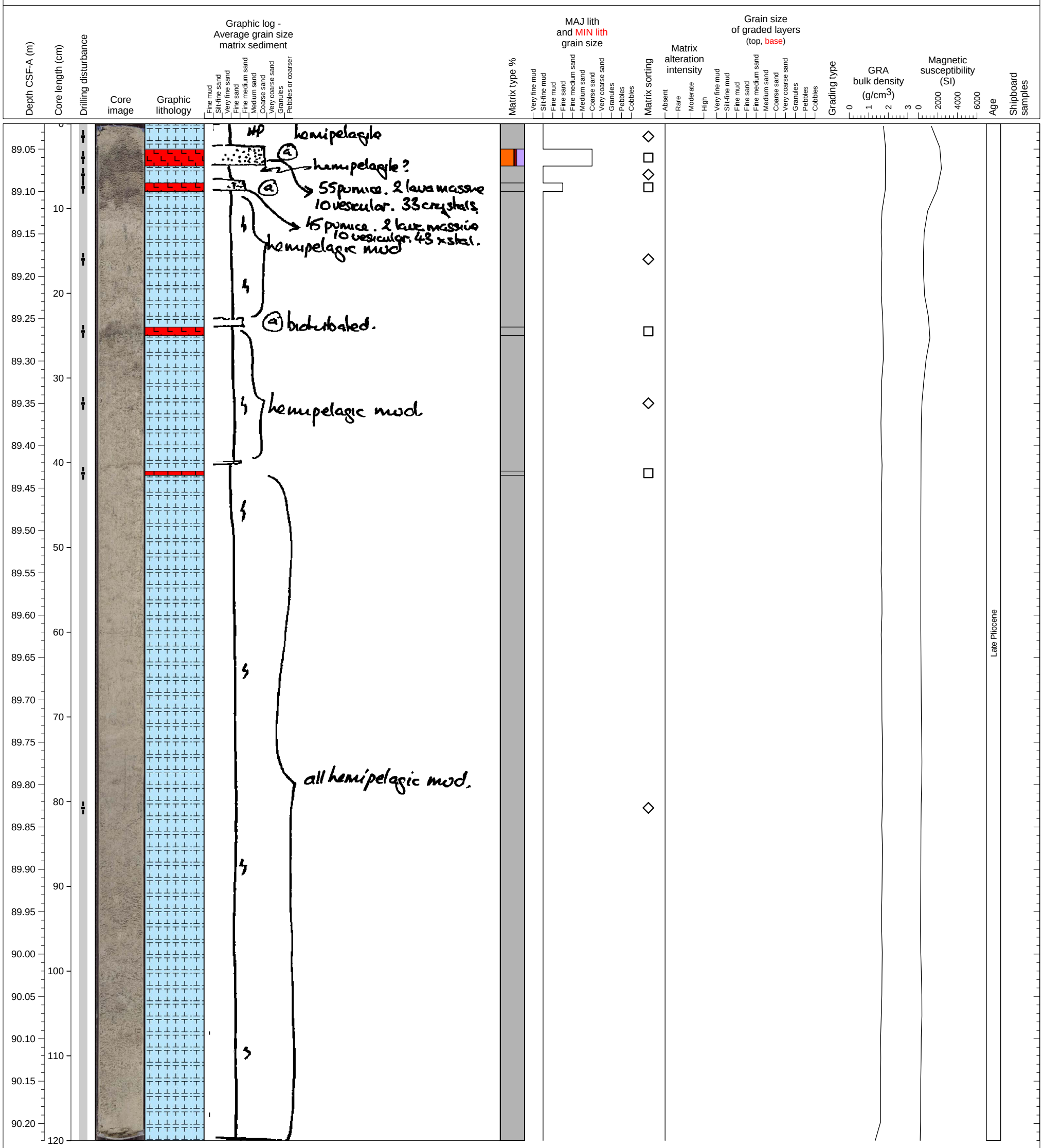
Hole 340-U1396A-10H Section 5, Top of Section: 87.56 CSF-A (m)

Hemipelagic clay with heavy bioturbation.



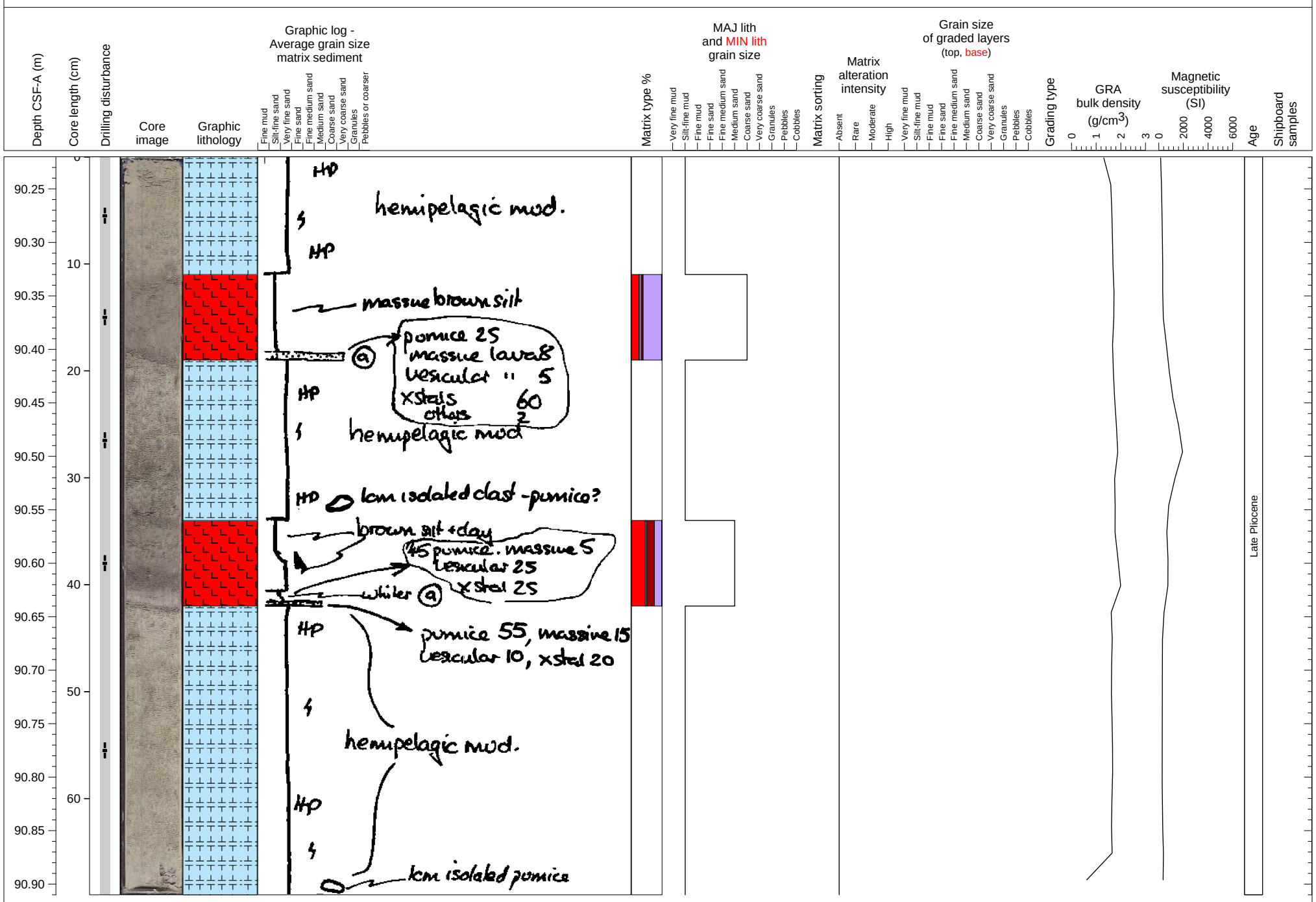
Hole 340-U1396A-10H Section 6, Top of Section: 89.02 CSF-A (m)

Hemipelagic fine sediments with 4 thin ashfall layers.



Hole 340-U1396A-10H Section 7, Top of Section: 90.22 CSF-A (m)

2 thin ashfall layers within hemipelagite.

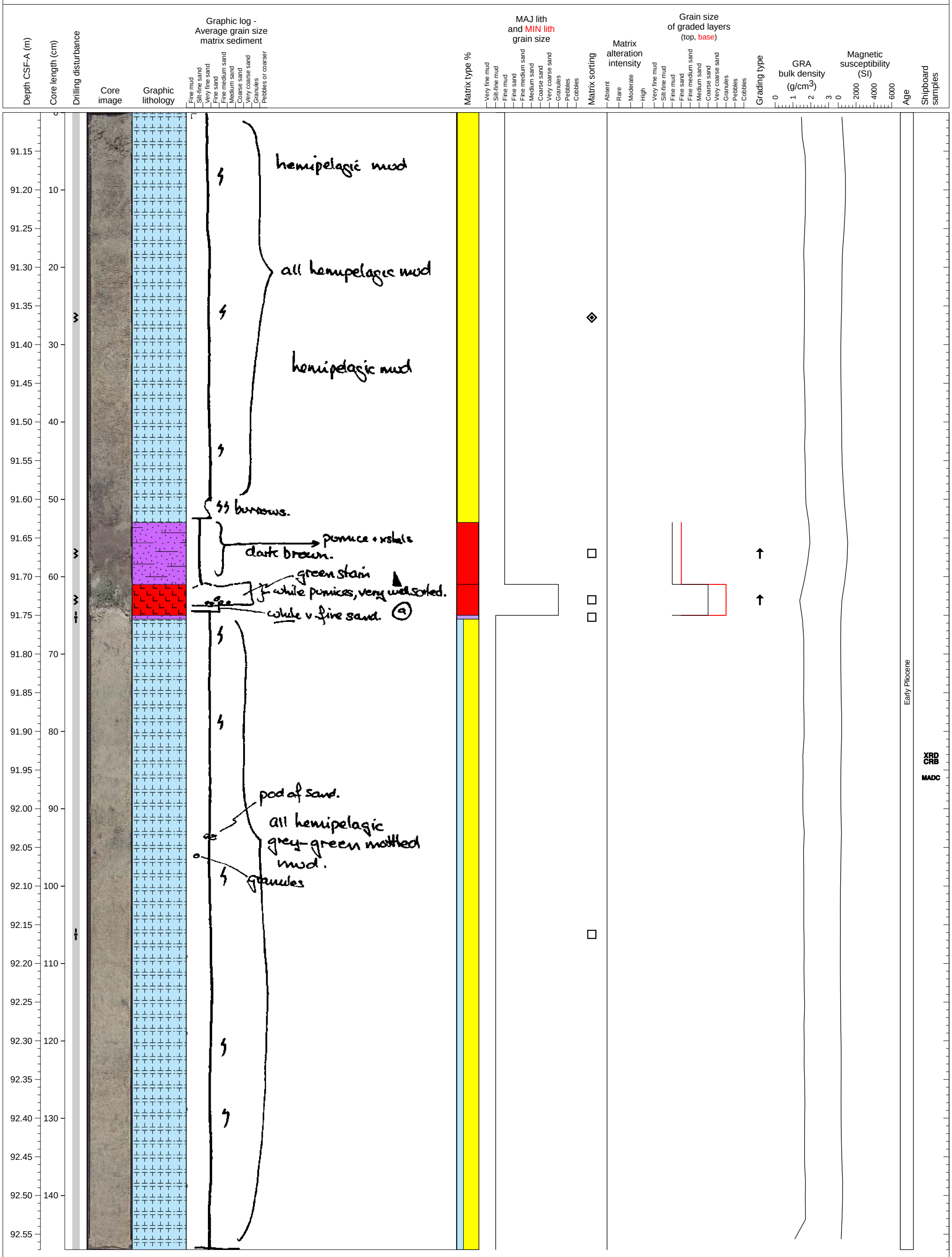


Hole 340-U1396A-10H Section CC, Top of Section: 90.91 CSF-A (m)

1 thin ashfall layer in hemipelagite.

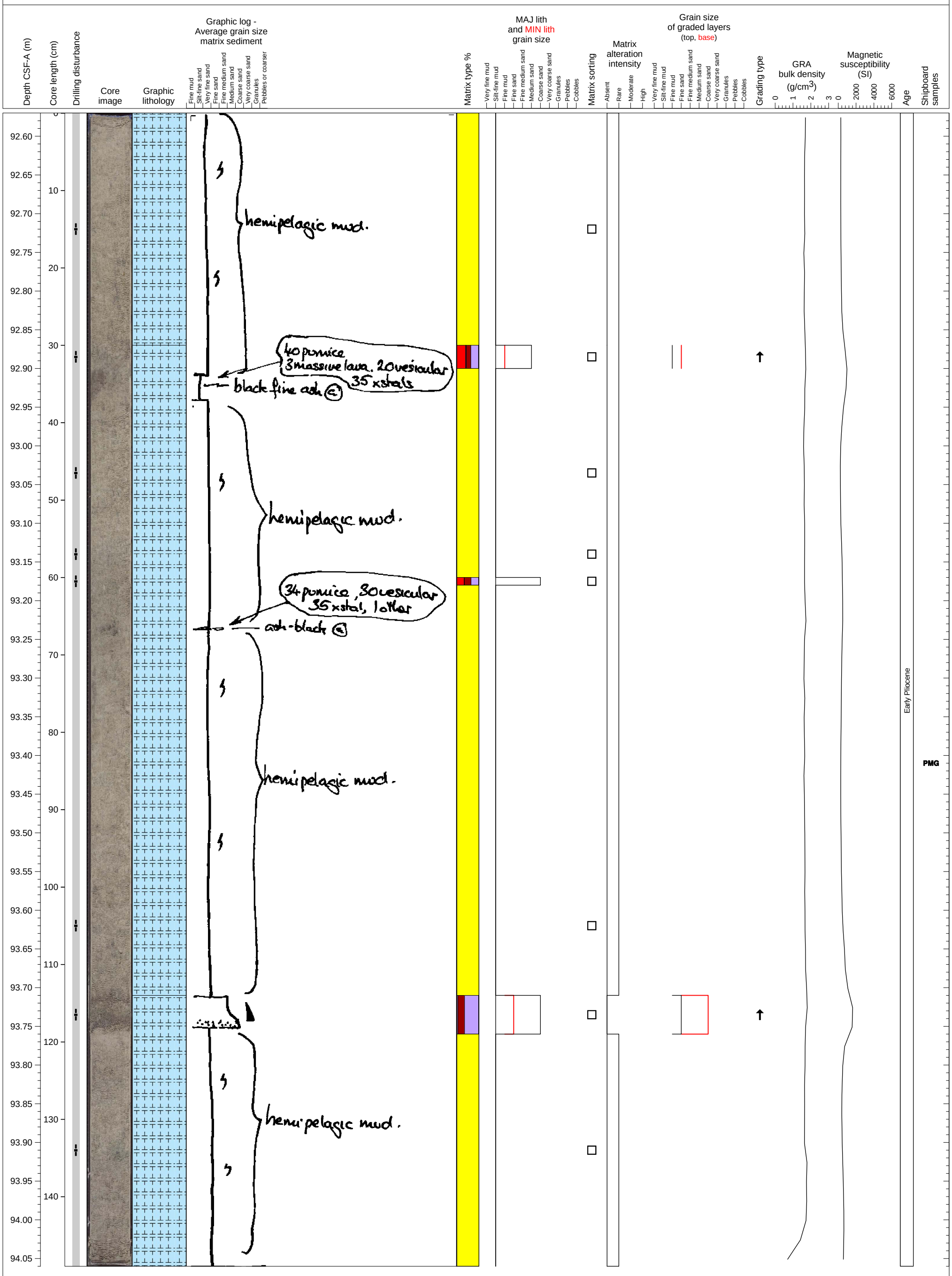
Hole 340-U1396A-11H Section 1, Top of Section: 91.1 CSF-A (m)

This section has one series of ash layer (53-65.5 cm), which have white mud base of clear transparent glass, normally graded granule to medium-sand size pumice, which is overlain by volcanic mud, consisting of mostly pumice fragments.



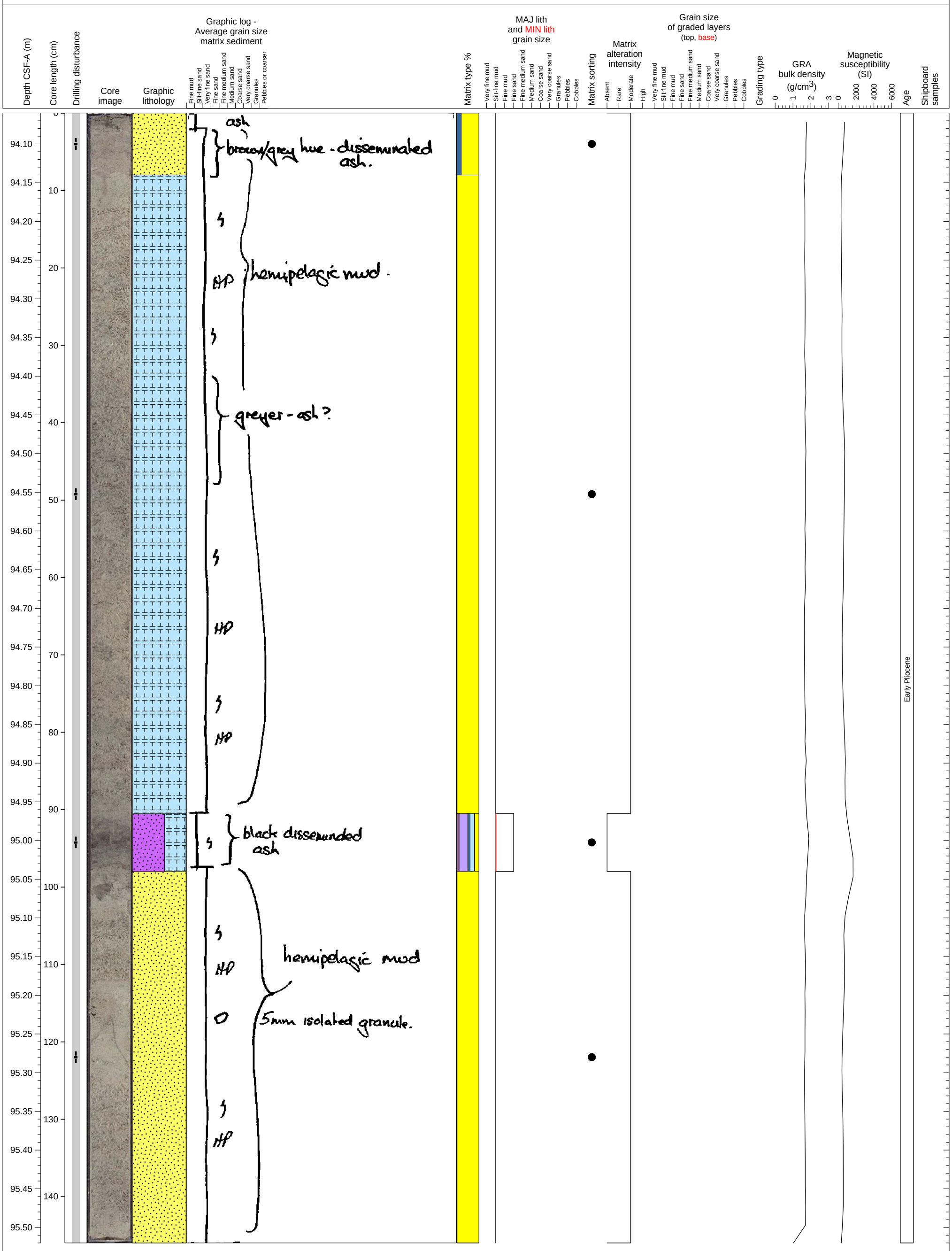
Hole 340-U1396A-11H Section 2, Top of Section: 92.57 CSF-A (m)

Hemipelagic clay interlayered with fining upward volcaniclastic sand deposit.



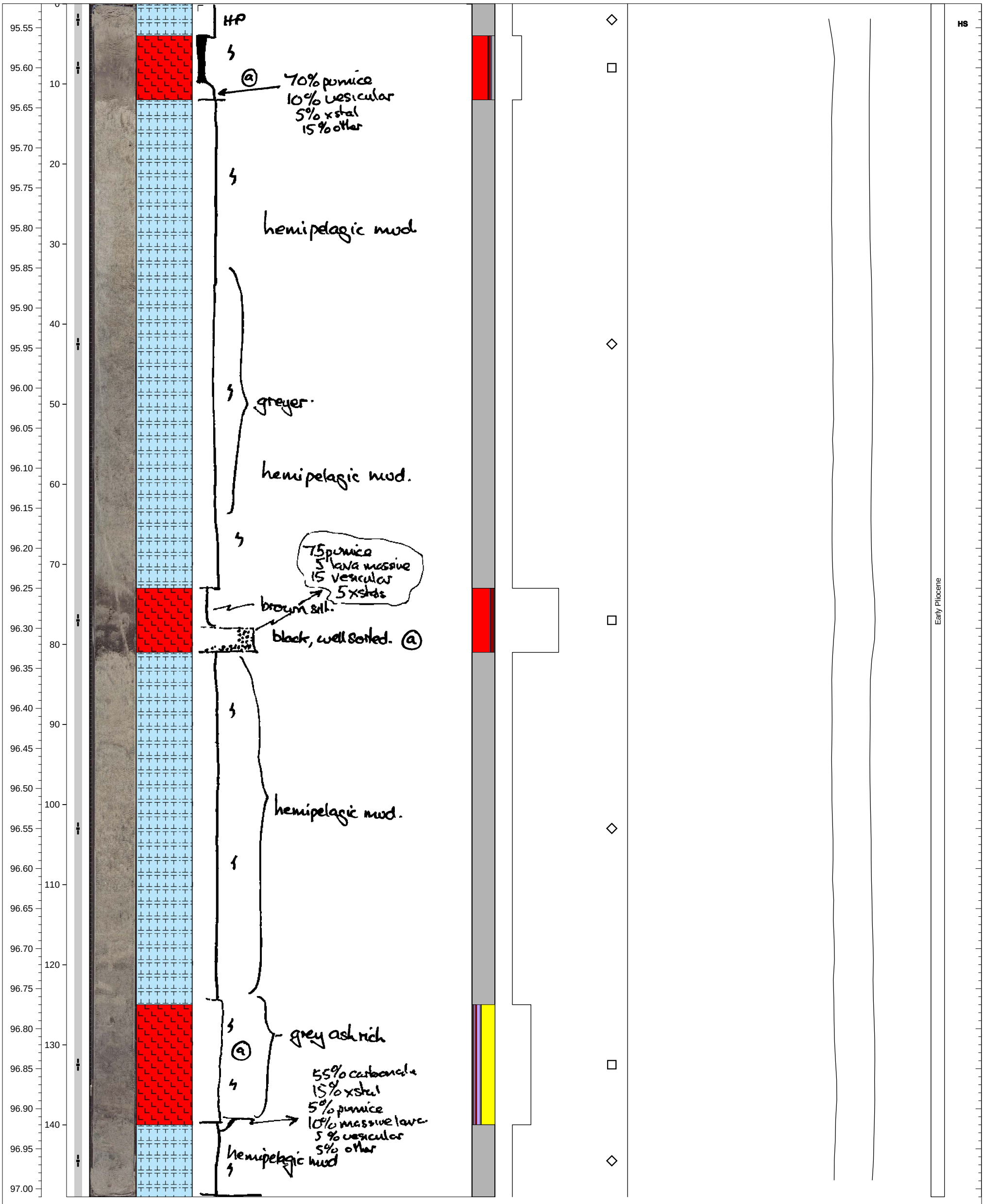
Hole 340-U1396A-11H Section 3, Top of Section: 94.06 CSF-A (m)

Hemipelagic sediments with a potential tephra layer but heavily disturbed by bioturbation



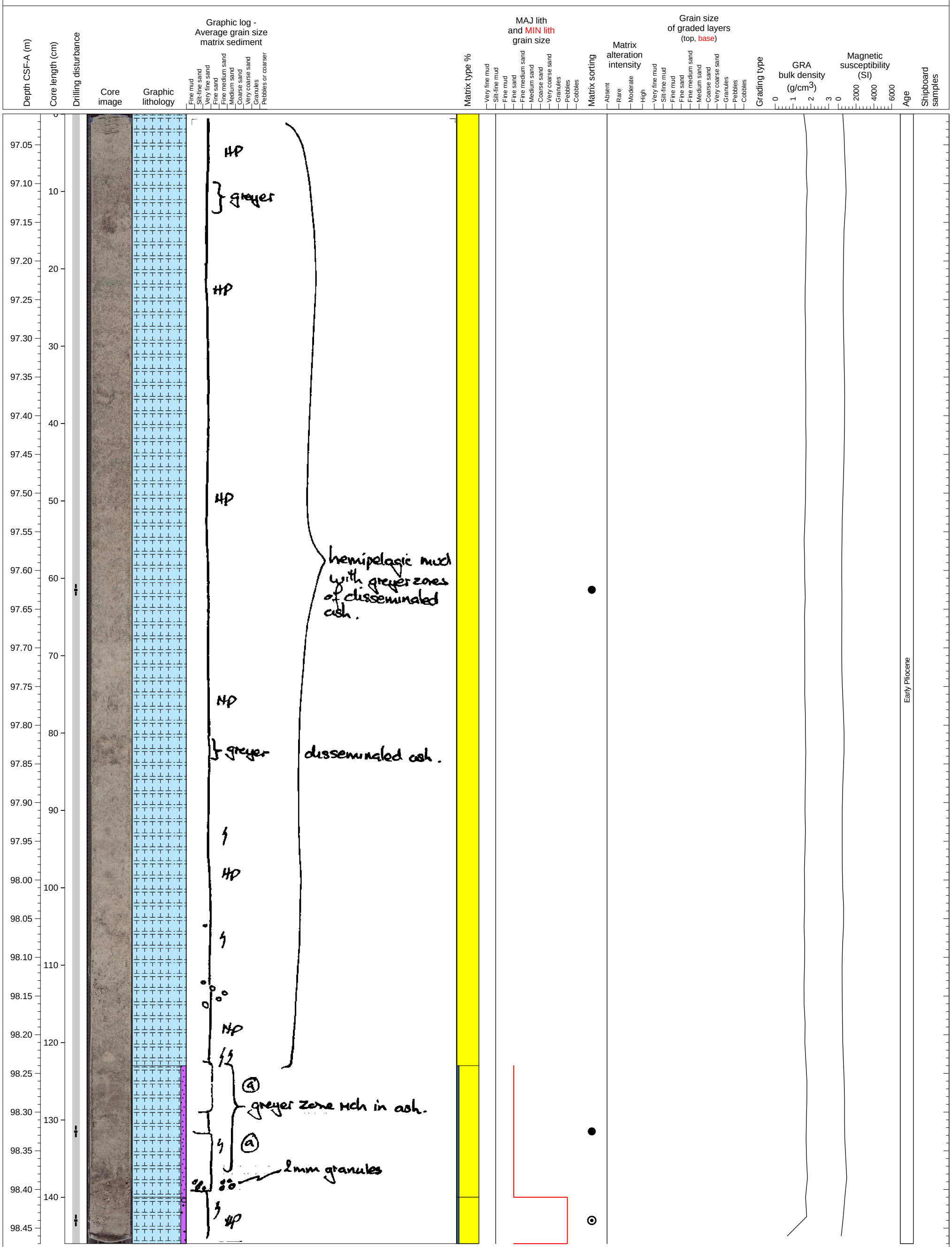
Hole 340-U1396A-11H Section 4, Top of Section: 95.52 CSF-A (m)

Hemipelagic clay. two ashes.



Hole 340-U1396A-11H Section 5, Top of Section: 97.01 CSF-A (m)

Hemiplelagic sediments containing pumice clasts. In the lowermost there is a pumice concentration probably due to reworking. Pumice size is up to pebble size.



Hole 340-U1396A-11H Section 6, Top of Section: 98.47 CSF-A (m)

Alternative successions of hemipelagic clay and volcanic turbidite layer. at least 1 tephra layer is interbedded between hemipelagic clay and volcaniclastic sand.

Depth CSF-A (m)
Core length (cm)
Drilling disturbance
Core image
Graphic lithology
Graphic log - Average grain size matrix sediment
Fine mud
Silt-fine sand
Very fine sand
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles or coarser
Matrix type %
MAJ lith and MIN lith grain size
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Matrix sorting
Matrix alteration intensity
Absent
Rare
Moderate
High
Grain size of graded layers (top, base)
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Grading type
GRA bulk density (g/cm3)
0
1
2
3
Magnetic susceptibility (SI)
0
2000
4000
6000
Age
Shipboard samples

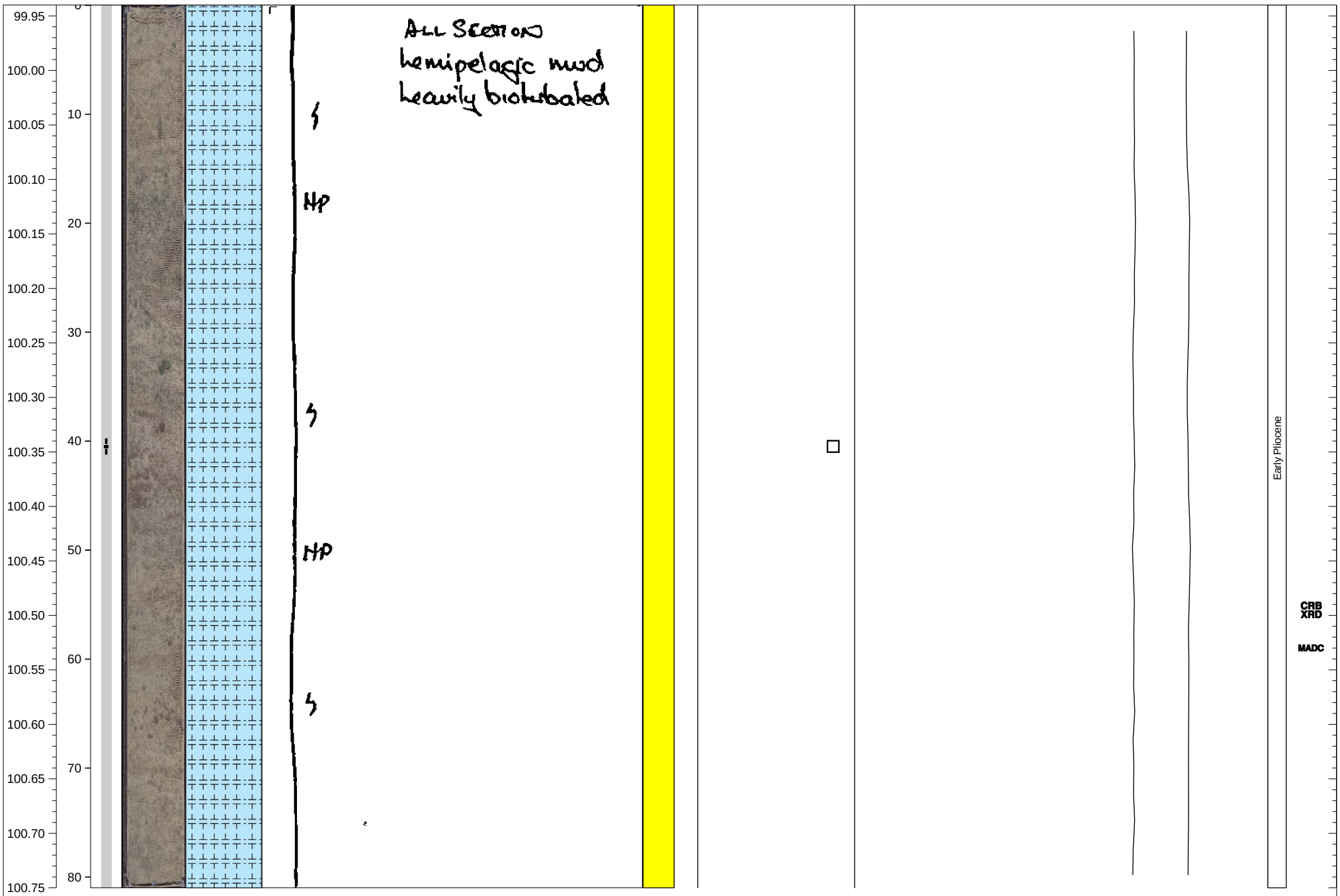
98.50 – 10
98.55
98.60 – 20
98.65
98.70 – 30
98.75
98.80 – 40
98.85
98.90 – 50
98.95
99.00 – 60
99.05
99.10 – 70
99.15
99.20 – 80
99.25
99.30 – 90
99.35
99.40 – 100
99.45
99.50 – 110
99.55
99.60 – 120
99.65
99.70 – 130
99.75
99.80 – 140
99.85
99.90

hemipelagic mud.
HP
line of 4mm pomice granules
a
16% vesicular lava. 70% xstal. 20% other.
hemipelagic mud.
10 massive 20 vesicular 70 xstal.
a
distinctive white colour
hemipelagic mud.
HP
disseminated ash.
hemipelagic mud.
disseminated grey ash.

Early Pliocene

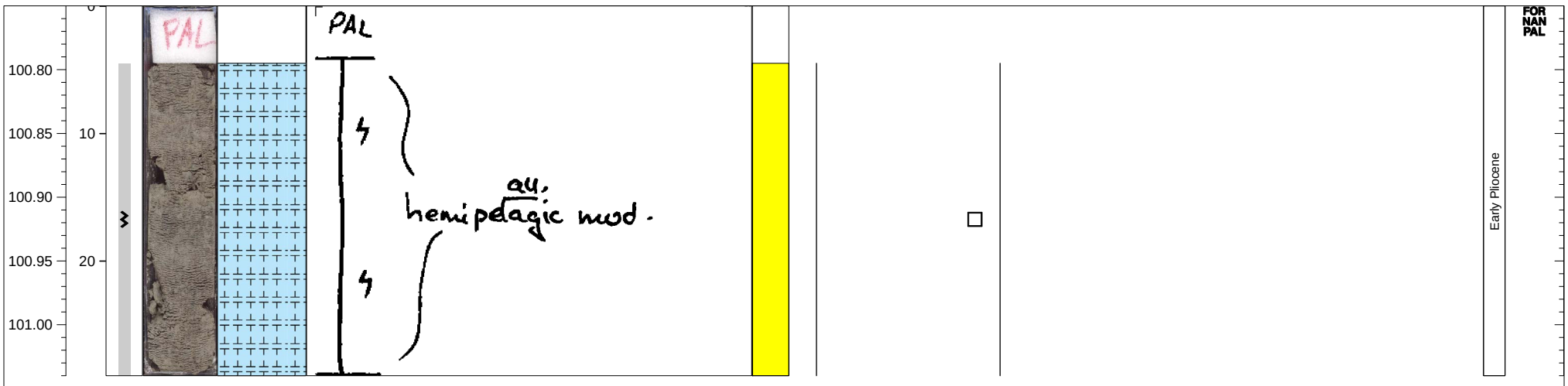
Hole 340-U1396A-11H Section 7, Top of Section: 99.94 CSF-A (m)

Hemipelagic clay.



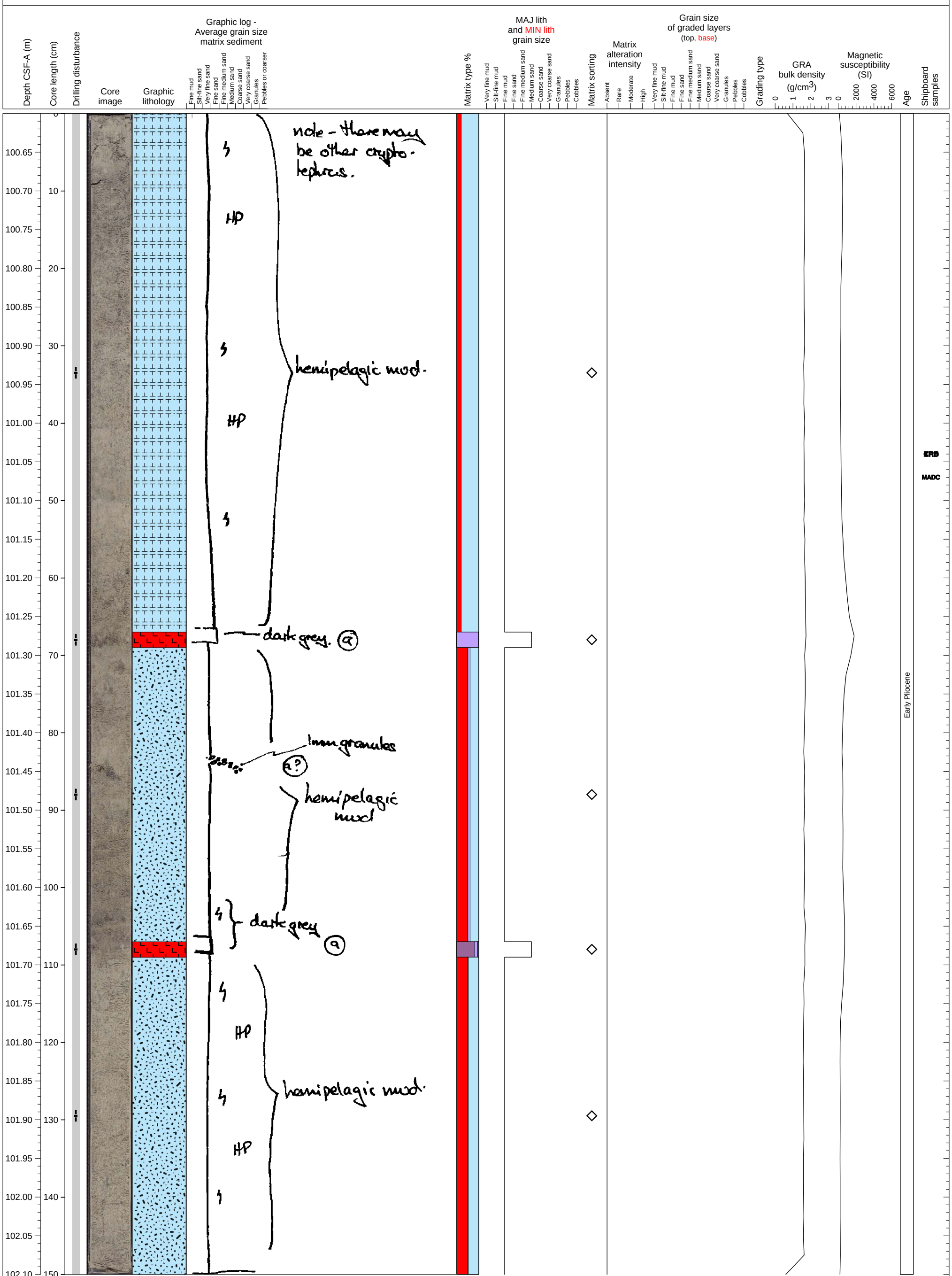
Hole 340-U1396A-11H Section CC, Top of Section: 100.75 CSF-A (m)

Hemipelagic clay. PAL sample from top of section.



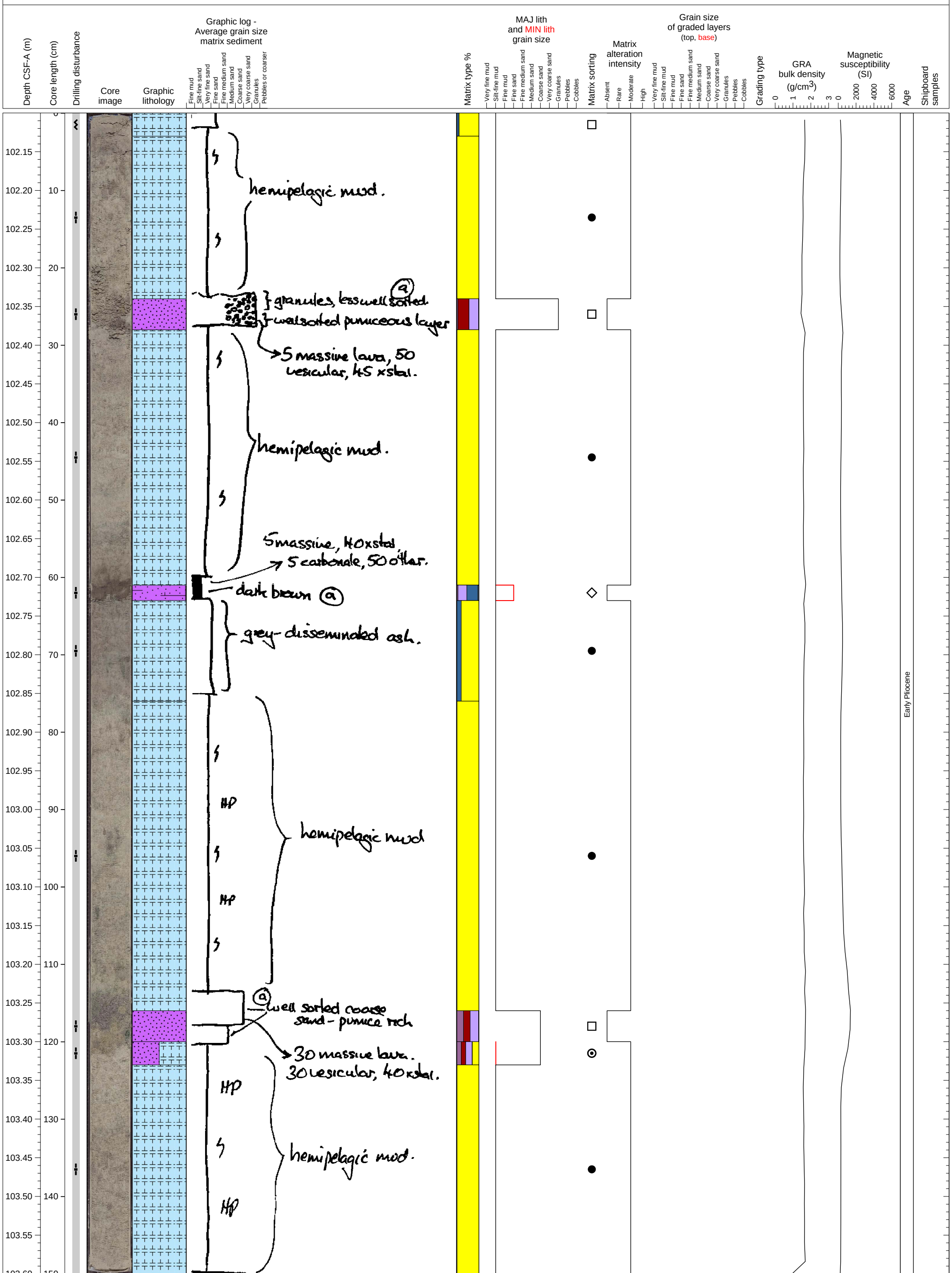
Hole 340-U1396A-12H Section 1, Top of Section: 100.6 CSF-A (m)

Upper section is composed of carbonate-rich ooze with small amount of dispersed pumiceous material. Lower section is dominantly pumiceous sediment with 2 andesitic ash layer. The entire section is affected by moderate bioturbation.



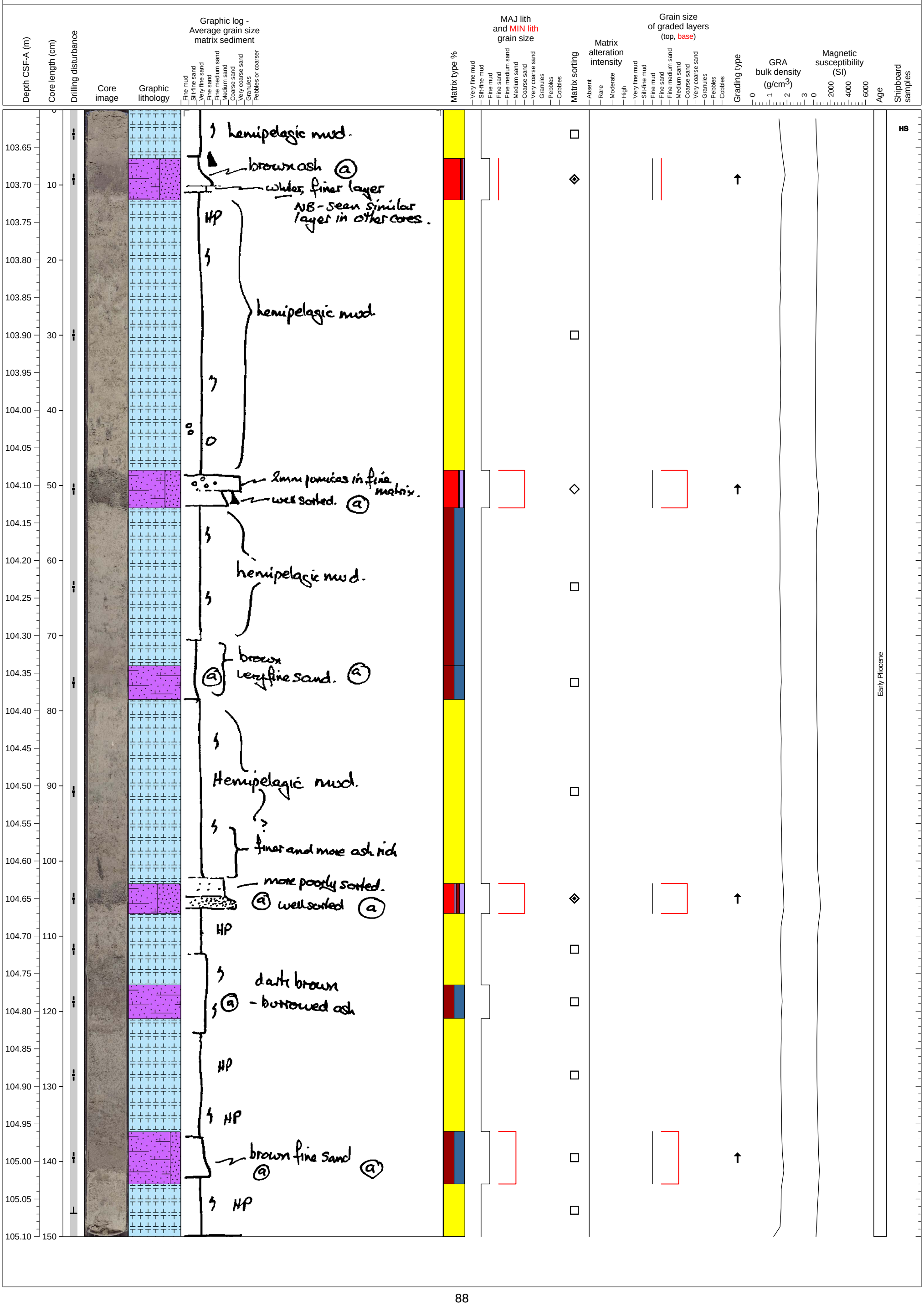
Hole 340-U1396A-12H Section 2, Top of Section: 102.1 CSF-A (m)

Hemipelagic sediments interlayering two coarse-grained crystal-rich tephra layers and one silty tephra or turbidite layer.



Hole 340-U1396A-12H Section 3, Top of Section: 103.6 CSF-A (m)

Hemipelagic clay interlayered with volcaniclastic sand units exhibiting normal grading.



Hole 340-U1396A-12H Section 4, Top of Section: 105.1 CSF-A (m)

An pumicious ash fall out layer and two scoriacious fall out ash layers are interbedded by homogeneous bioturbated hemipelagic clay layers.

Depth CSF-A (m)
Core length (cm)
Drilling disturbance
Core image
Graphic lithology
Graphic log - Average grain size matrix sediment
Fine mud
Silt-fine sand
Very fine sand
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles or coarser
Matrix type %
MAJ lith and MIN lith grain size
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Matrix sorting
Matrix alteration intensity
Absent
Rare
Moderate
High
Grain size of graded layers (top, base)
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Grading type
GRA bulk density (g/cm^3)
Magnetic susceptibility (SI)
Age
Shipboard samples

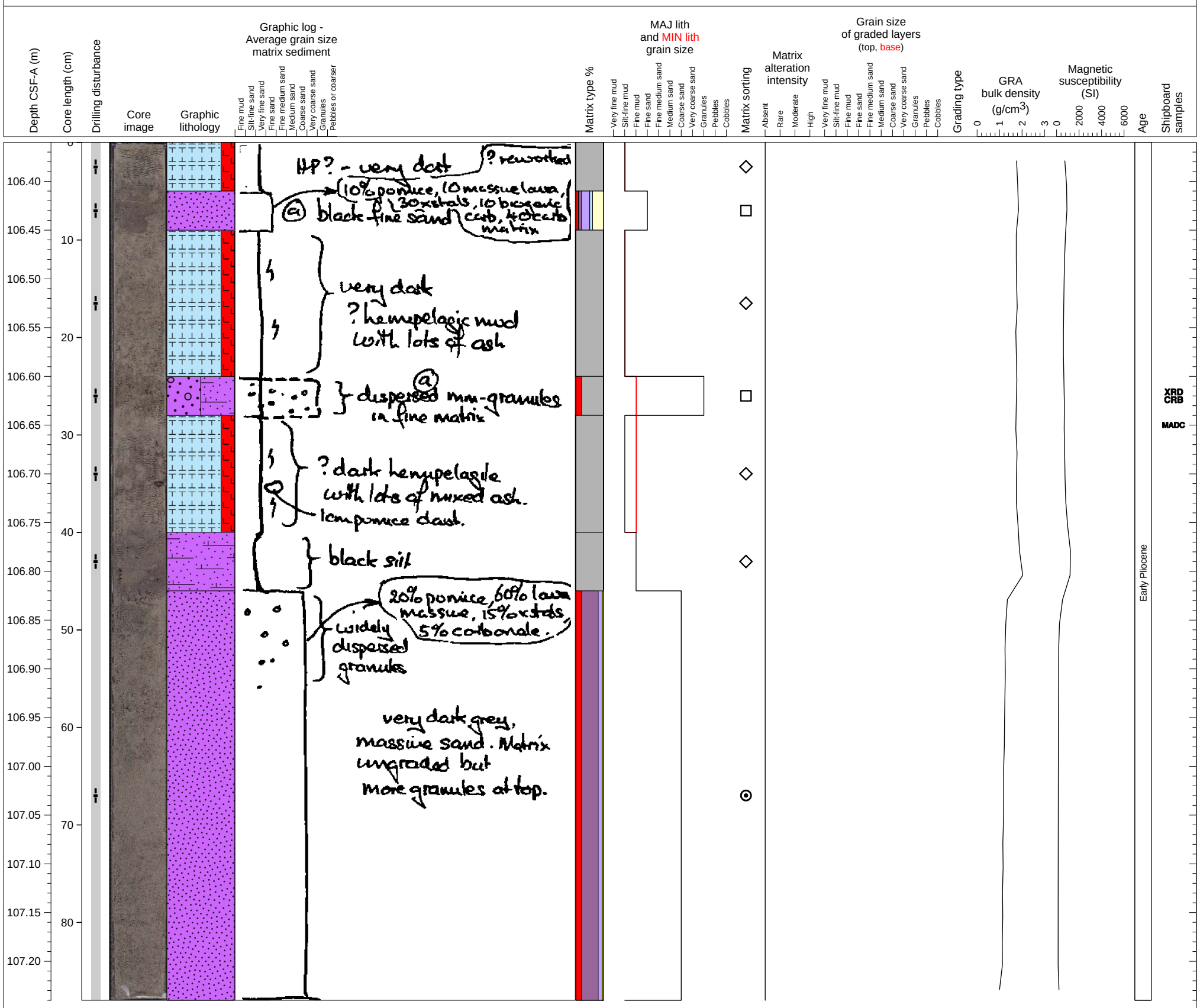
105.15 – 10
105.20
105.25 – 20
105.30
105.35 – 30
105.40
105.45 – 40
105.50
105.55 – 50
105.60
105.65 – 60
105.70
105.75 – 70
105.80
105.85 – 80
105.90
105.95 – 90
106.00
106.05 – 100
106.10
106.15 – 110
106.20
106.25 – 120
106.30
106.35

hemipelagic mud.
well sorted 2-4mm pumices (a)
HP
HP
hemipelagic mud grey-green mottling
HP
HP
95% pumice 5% xstals
brown layer (a)
HP.
grey-more ash
HP
5% other 5% xstals 20% pumice 65% scoriae 5% massive lava
dark brown
(a)
10% pumice 55% scoria 20% massive, 10% vesicular, 5% xstal
hemipelagic mud.
HP

Early Pliocene

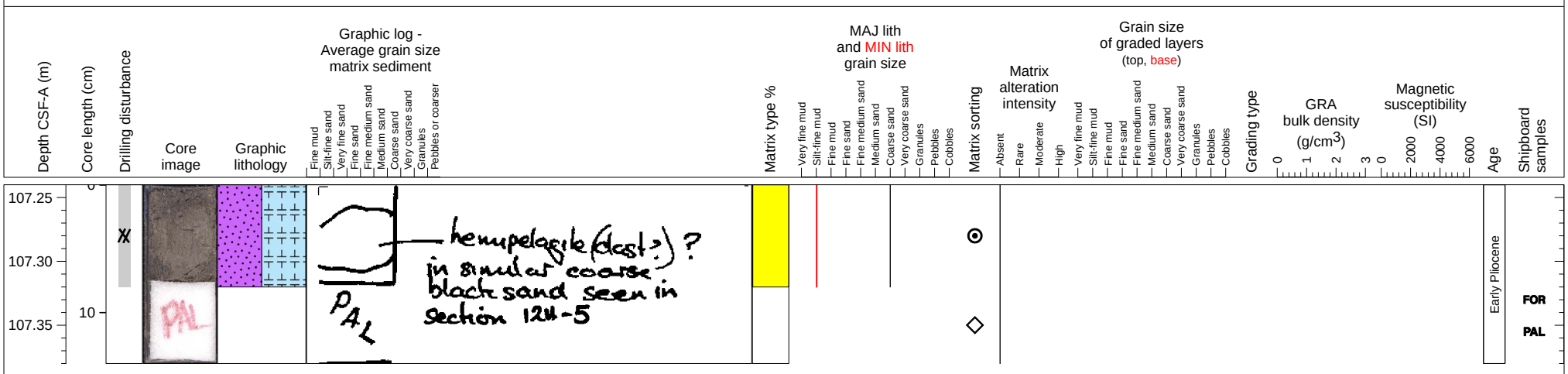
Hole 340-U1396A-12H Section 5, Top of Section: 106.36 CSF-A (m)

One potential tephra layer at the top and massive volcaniclastic sand layer in the bottom half, intercalating hemipelagic clay.



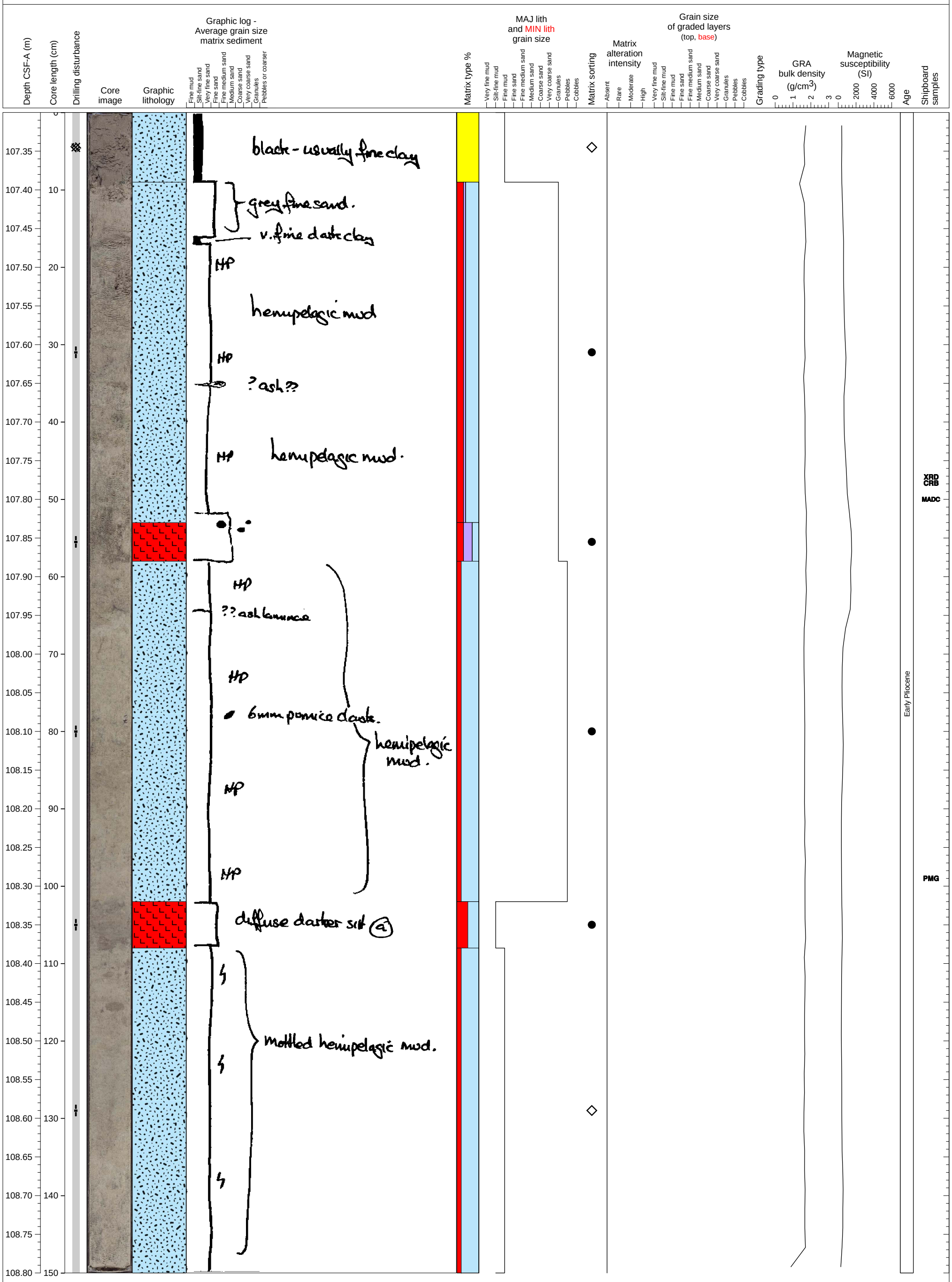
Hole 340-U1396A-12H Section CC, Top of Section: 107.24 CSF-A (m)

Hemipelagic sediment in similar coarse black sand seen in section 12H-5.



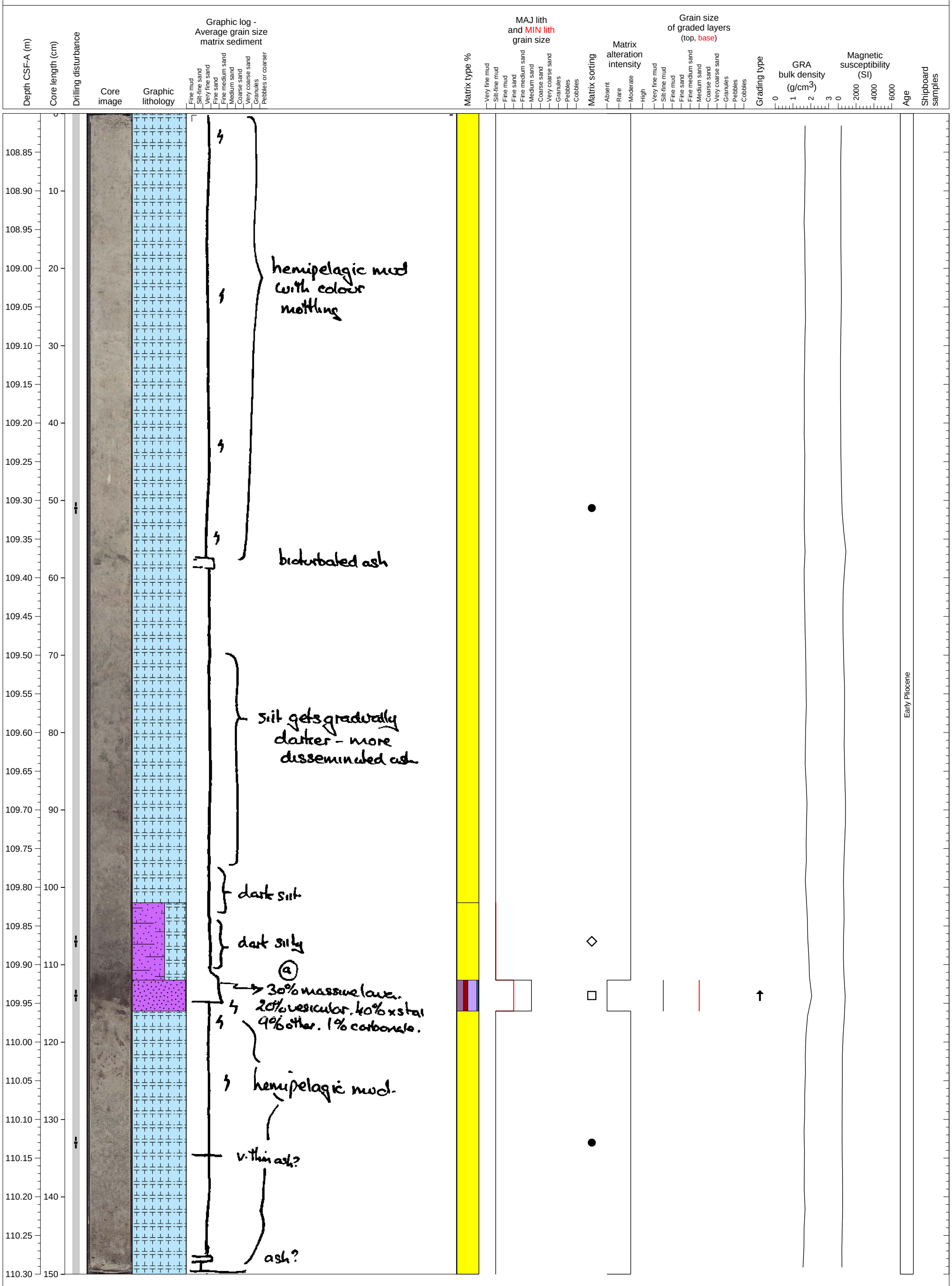
Hole 340-U1396A-13H Section 1, Top of Section: 107.3 CSF-A (m)

Dominantly calcareous sediment with some contamination of pumiceous grains. There are rare granule to pebble-sized pumice clasts. There are 2 pumiceous ash layers, at 53-58cm and 102-108cm.



Hole 340-U1396A-13H Section 2, Top of Section: 108.8 CSF-A (m)

Hemipelagic sediment interlayering a sandy tephra layer.



Hole 340-U1396A-13H Section 3, Top of Section: 110.3 CSF-A (m)

Hemipelagic sediments intercalating a potential turbidite deposit and a granule layer in the bottom. Granule is mainly composed of vesiculated lava fragments, crystals, and minor biogenic carbonate, and normally graded. Crystals concentrates on the top of this layer.

Depth CSF-A (m)
Core length (cm)
Drilling disturbance
Core image
Graphic lithology
Graphic log - Average grain size matrix sediment
Fine mud
Silt-fine sand
Very fine sand
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles or coarser
Matrix type %
MAJ lith and MIN lith grain size
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Matrix sorting
Matrix alteration intensity
Absent
Rare
Moderate
High
Grain size of graded layers (top, base)
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Grading type
GRA bulk density (g/cm3)
0
1
2
3
Magnetic susceptibility (SI)
0
2000
4000
6000
Age
Shipboard samples
HS
PMG
Early Pliocene

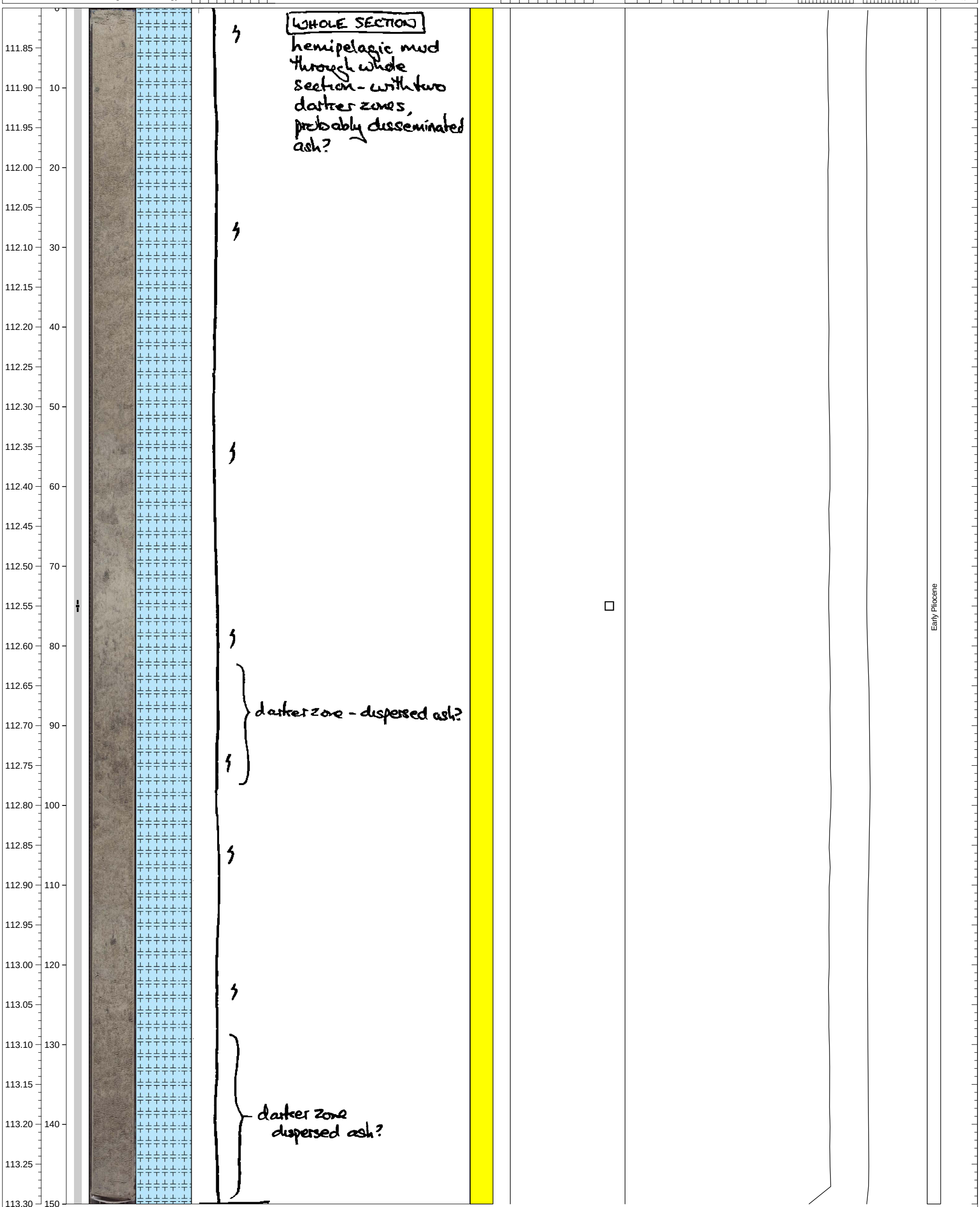
110.35
110.40
110.45
110.50
110.55
110.60
110.65
110.70
110.75
110.80
110.85
110.90
110.95
111.00
111.05
111.10
111.15
111.20
111.25
111.30
111.35
111.40
111.45
111.50
111.55
111.60
111.65
111.70
111.75
111.80

0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150

hemipelagic mud with colour mottling
bioturbated ash
silt gets gradually darker - more disseminated ash
dark silt
dark silty
@
30% massive lava.
20% vesicular. 40% xstal
9% other. 1% carbonate.
hemipelagic mud.
v. thin ash?
ash?

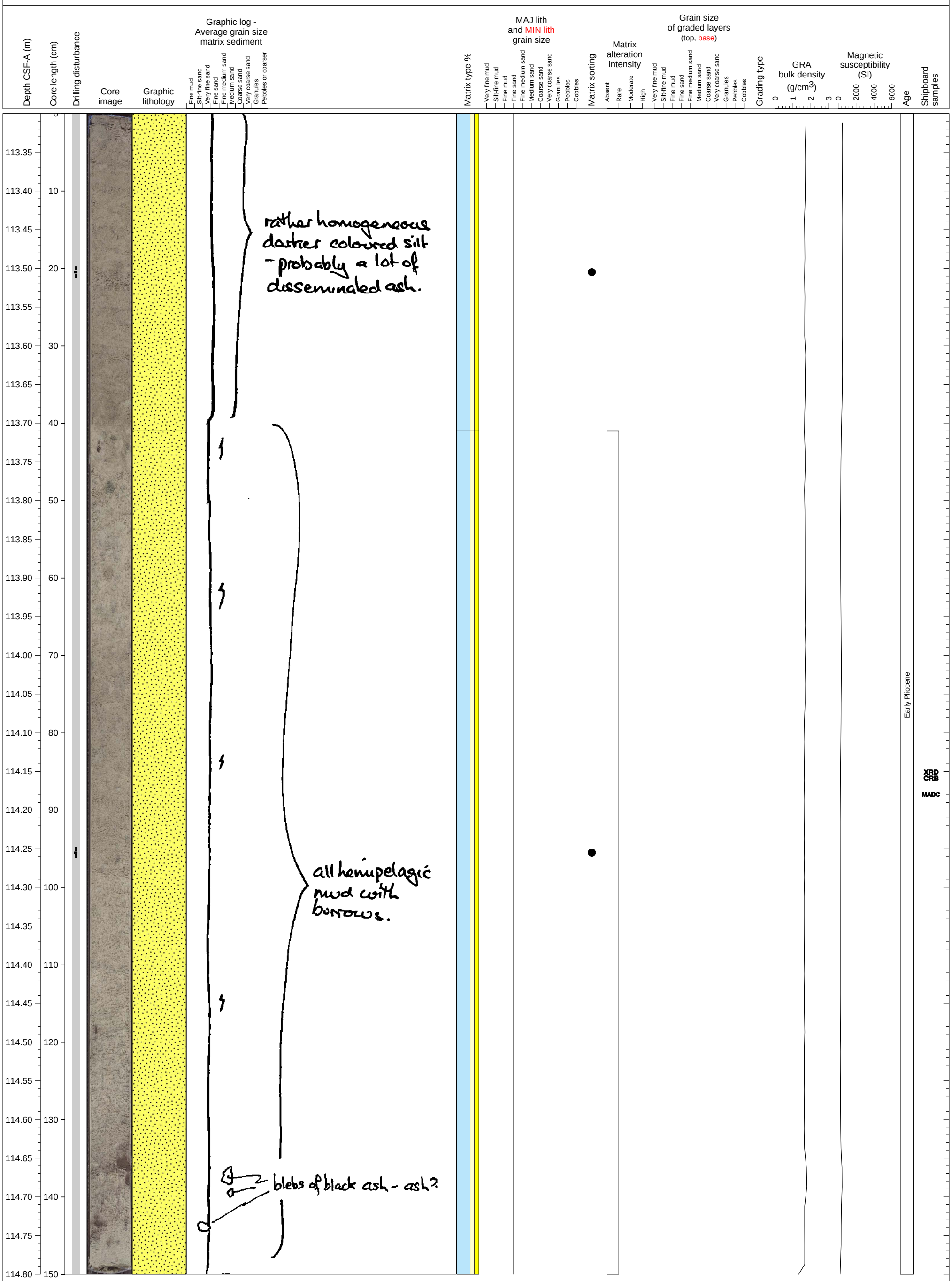
Hole 340-U1396A-13H Section 4, Top of Section: 111.8 CSF-A (m)

Hemipelagic clay with high bioturbation.



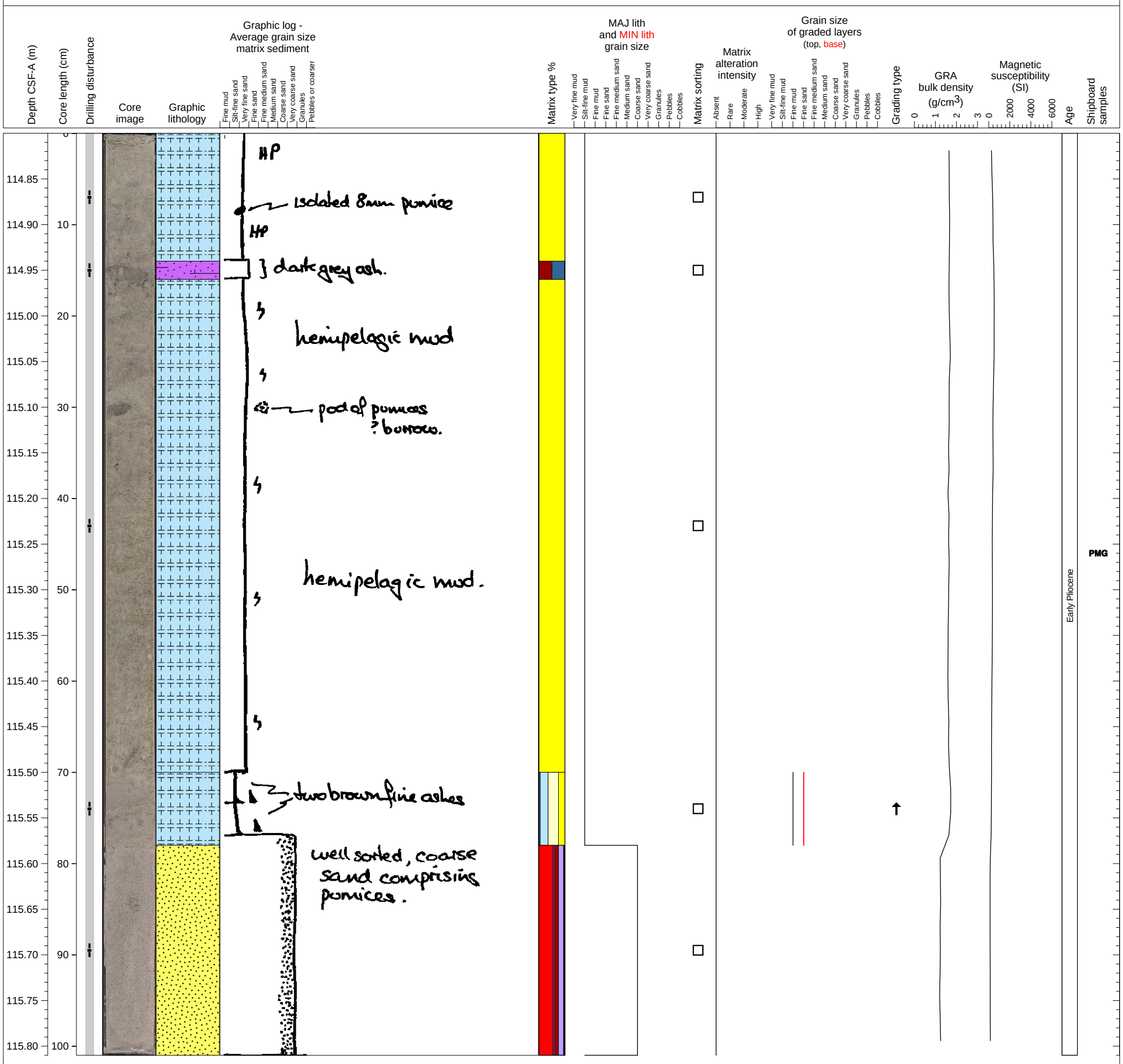
Hole 340-U1396A-13H Section 5, Top of Section: 113.3 CSF-A (m)

Hemipelagic silty sand.



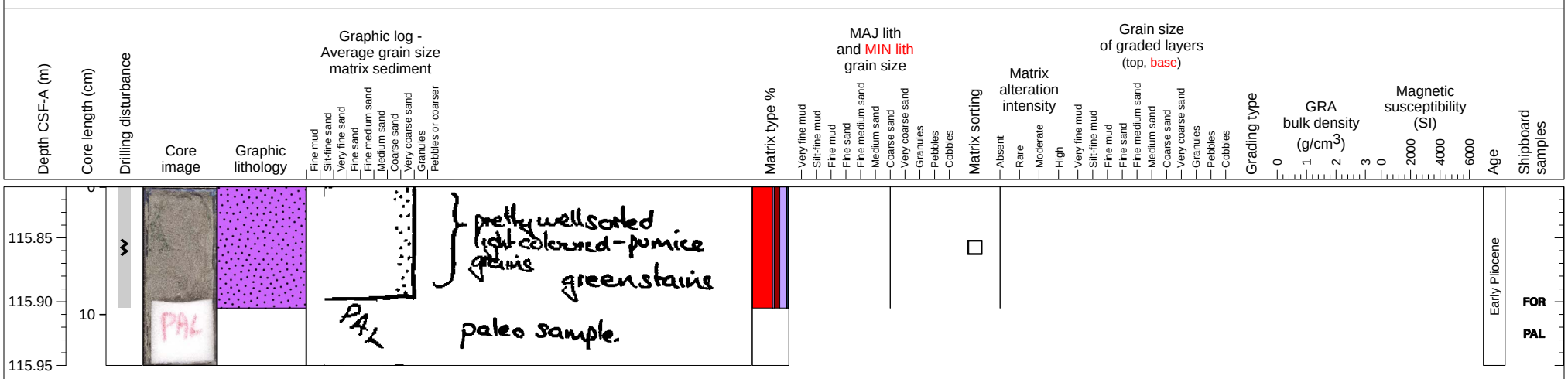
Hole 340-U1396A-13H Section 6, Top of Section: 114.8 CSF-A (m)

Hemipelagic clay with thin volcaniclastic layer (ash?) above two fining upward beds of calcareous mud. Volcaniclastic sand makes up the base of the section.



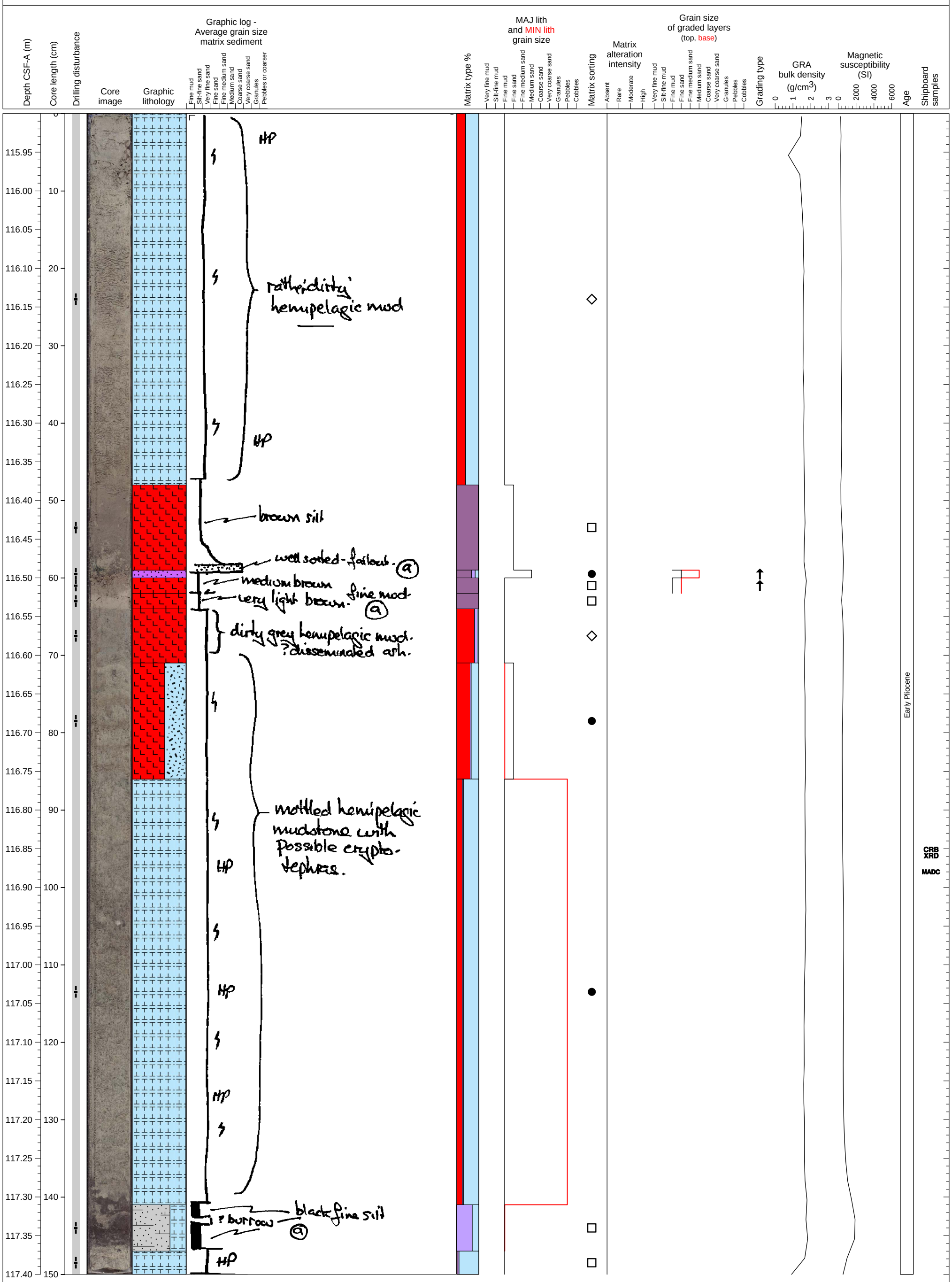
Hole 340-U1396A-13H Section CC, Top of Section: 115.81 CSF-A (m)

Volcaniclastic coarse sand. PAL sample from base of section.



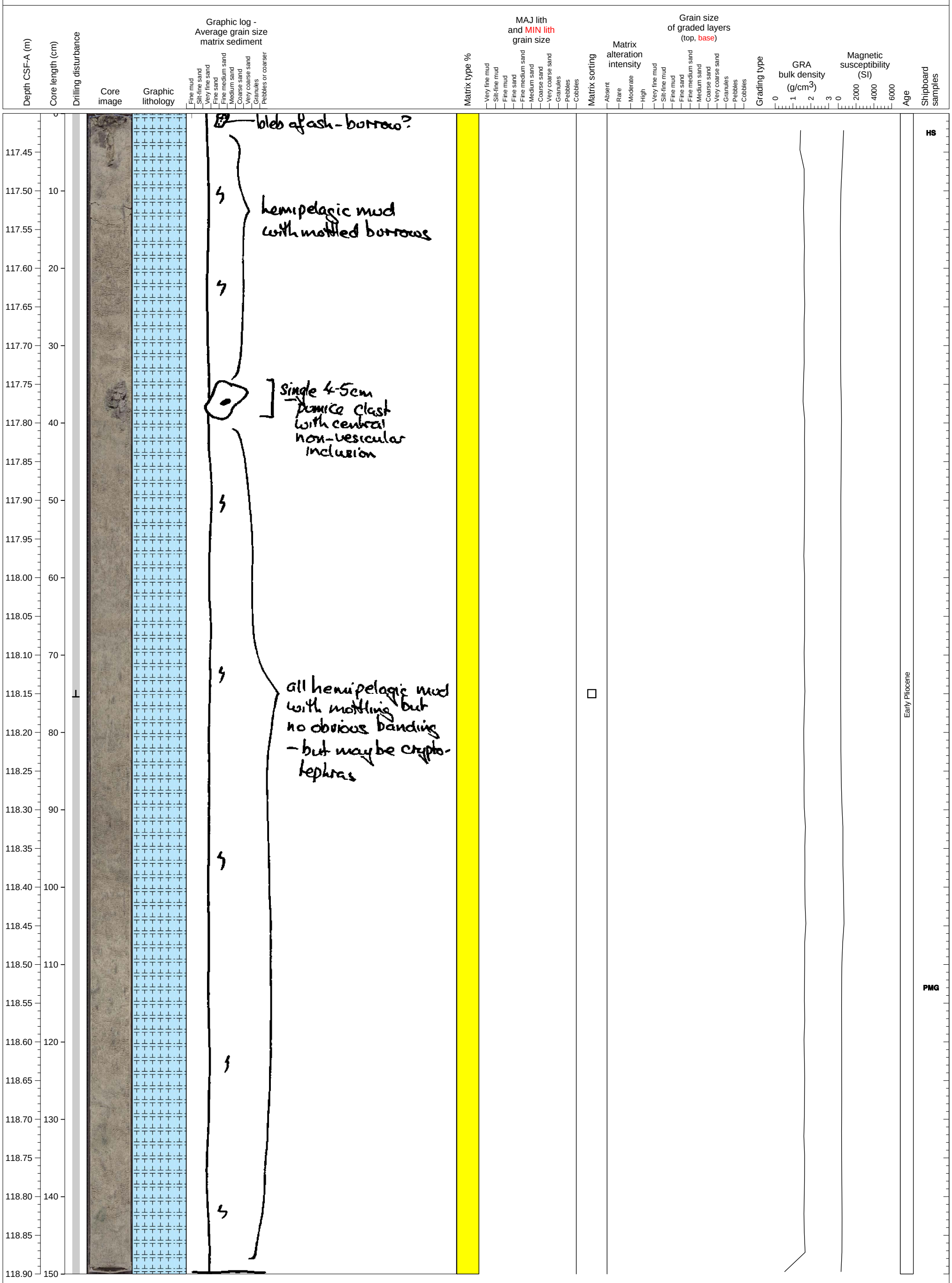
Hole 340-U1396A-14H Section 1, Top of Section: 115.9 CSF-A (m)

At least 4 layers of dacitic ash layers are embedded in calcareous background sediment. There is one layer of volcanic sand, containing dominantly lithic fragments. In the lowermost part of the section, pyrite-rich layer is hosted in calcareous sediment.



Hole 340-U1396A-14H Section 2, Top of Section: 117.4 CSF-A (m)

Hemipelagic clay with a cobble of vesicular lava embedded in it. The cobble is shattered (by core splitting) and has a glassy center.



Hole 340-U1396A-14H Section 3, Top of Section: 118.9 CSF-A (m)

Hemipelagic sediment intercalating at lest one tephra layer

Depth CSF-A (m)
Core length (cm)
Drilling disturbance
Core image
Graphic lithology
Graphic log - Average grain size matrix sediment
Fine mud
Silt-fine sand
Very fine sand
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles or coarser
Matrix type %
MAJ lith and MIN lith grain size
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Matrix sorting
Matrix alteration intensity
Absent
Rare
Moderate
High
Grain size of graded layers (top, base)
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Grading type
GRA bulk density (g/cm3)
0
1
2
3
Magnetic susceptibility (SI)
0
2000
4000
6000
Age
Shipboard samples

118.95
119.00
119.05
119.10
119.15
119.20
119.25
119.30
119.35
119.40
119.45
119.50
119.55
119.60
119.65
119.70
119.75
119.80
119.85
119.90
119.95
120.00
120.05
120.10
120.15
120.20
120.25
120.30
120.35
120.40

10
20
30
40
50
60
70
80
90
100
110
120
130
140
150

hemipelagic mud with dark mottles - probably due to ash

grey hemipelagite with dispersed ash most probably

hemipelagic mud

up

grey fine mud.

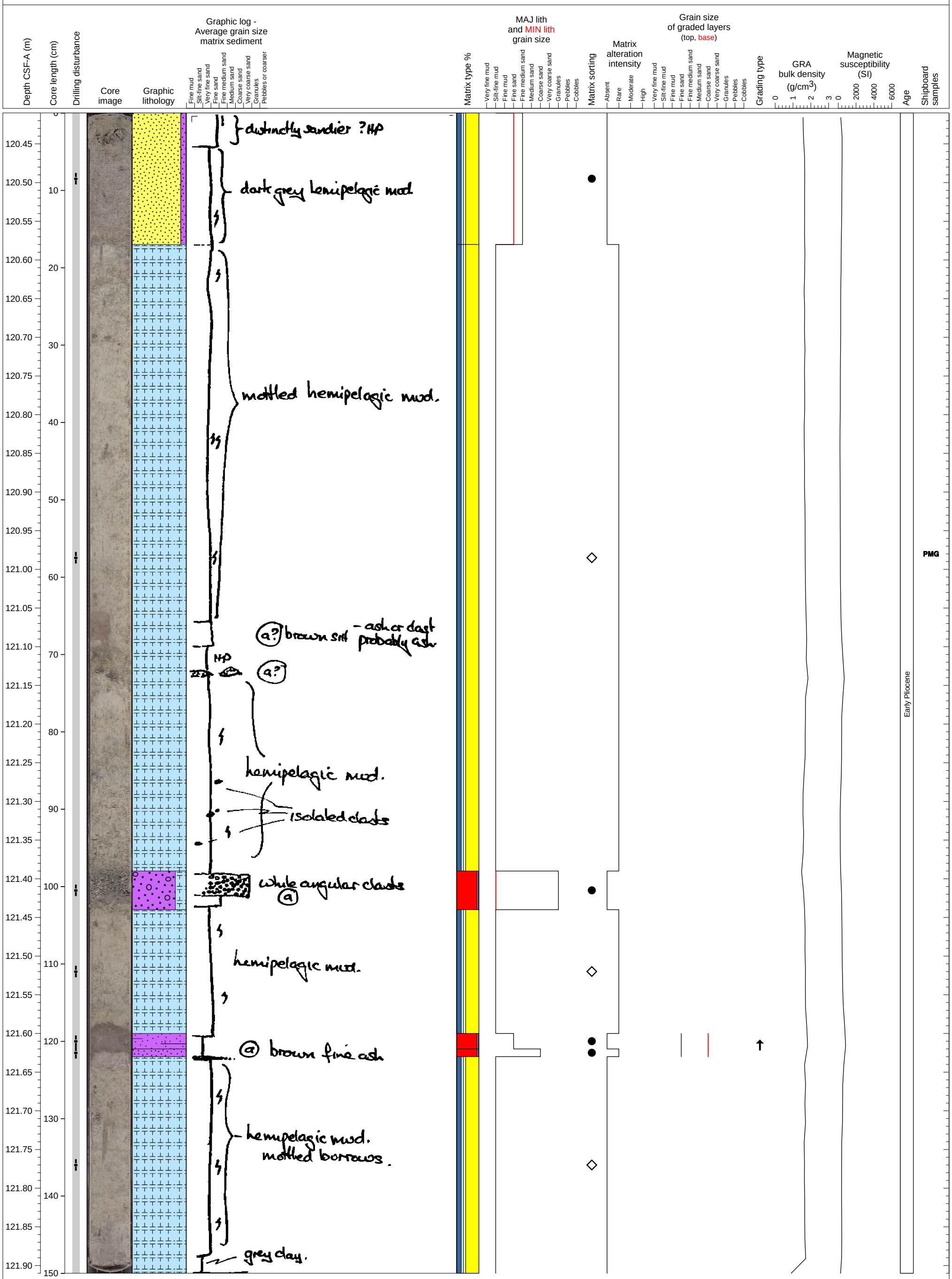
black fine sand/silt.

mottled hemipelagic mud with dispersed ash throughout with mottling - probably dispersed ash.

Early Pliocene

Hole 340-U1396A-14H Section 4, Top of Section: 120.41 CSF-A (m)

Thick hemipelagic clay layer interbed two volcaniclastic layers. The upper one is clast (pumice) supported layer, and the other is normally graded brown pumice ash layer.



Hole 340-U1396A-14H Section 5, Top of Section: 121.91 CSF-A (m)

Hemipelagic clay overlying a thick volcaniclastic breccia deposit. The cobbles in the breccia are composed of vesicular lava. At least five fining upward sequences are observed. The top 70cm of the breccia is massive with no gradational sequencing.

Depth CSF-A (m)

Core length (cm)

Drilling disturbance

Core image

Graphic lithology

Graphic log - Average grain size matrix sediment
Fine mud | Silt-fine sand | Very fine sand | Fine sand | Fine medium sand | Medium sand | Coarse sand | Very coarse sand | Granules | Pebbles or coarser

Matrix type %

MAJ lith and MIN lith grain size
Very fine mud | Silt-fine mud | Fine mud | Fine sand | Fine medium sand | Medium sand | Coarse sand | Very coarse sand | Granules | Pebbles | Cobbles

Matrix sorting

Matrix alteration intensity
Absent | Rare | Moderate | High

Grain size of graded layers (top, base)
Very fine mud | Silt-fine mud | Fine mud | Fine sand | Fine medium sand | Medium sand | Coarse sand | Very coarse sand | Granules | Pebbles | Cobbles

Grading type

GRA bulk density (g/cm^3)
0 | 1 | 2 | 3

Magnetic susceptibility (SI)
0 | 2000 | 4000 | 6000

Age

Shipboard samples

121.95 | 122.00 | 122.05 | 122.10 | 122.15 | 122.20 | 122.25 | 122.30 | 122.35 | 122.40 | 122.45 | 122.50 | 122.55 | 122.60 | 122.65 | 122.70 | 122.75 | 122.80 | 122.85 | 122.90 | 122.95 | 123.00 | 123.05 | 123.10 | 123.15 | 123.20 | 123.25 | 123.30 | 123.35 | 123.40

0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150

HP

HP

HP

hemipelagic mud with occasional 2-5m pumice clasts

reworked pumices?

VERY DISTINCTIVE COARSE (UPTO 2cm) WELL SORTED WHITE TO PINKY-BROWN PUMICE FALLOUT DEPOSIT

—THIS UPPER UNIT SHOWS A SERIES OF SUBTLE GRAIN SIZE FLUCTUATIONS

NB- "PUMICE" IS BETTER DESCRIBED SHATTER DOME MATERIAL - MASSIVE CRYSTALLISED, NOT VESICULAR!

intervals lacking pumice clasts comprising fine mud (ash)

SERIES OF WELLSORTED PUMICEOUS FALL-OUT LAYER - WITH ASH IN MATRIX AT TOP OF EACH UNIT

- PUMICES OFTEN ANGULAR.

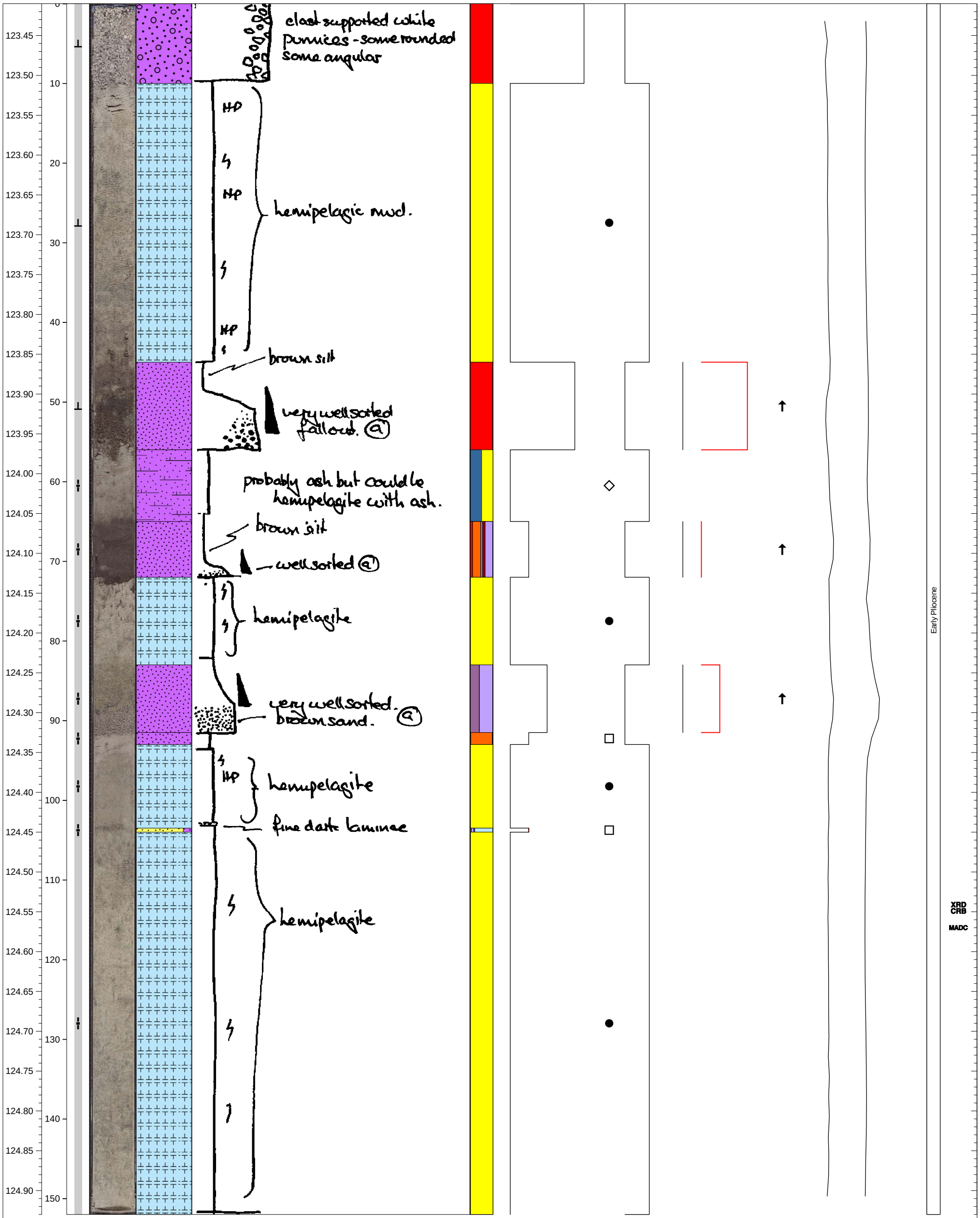
Early Pliocene

TS

Hole 340-U1396A-14H Section 6, Top of Section: 123.41 CSF-A (m)

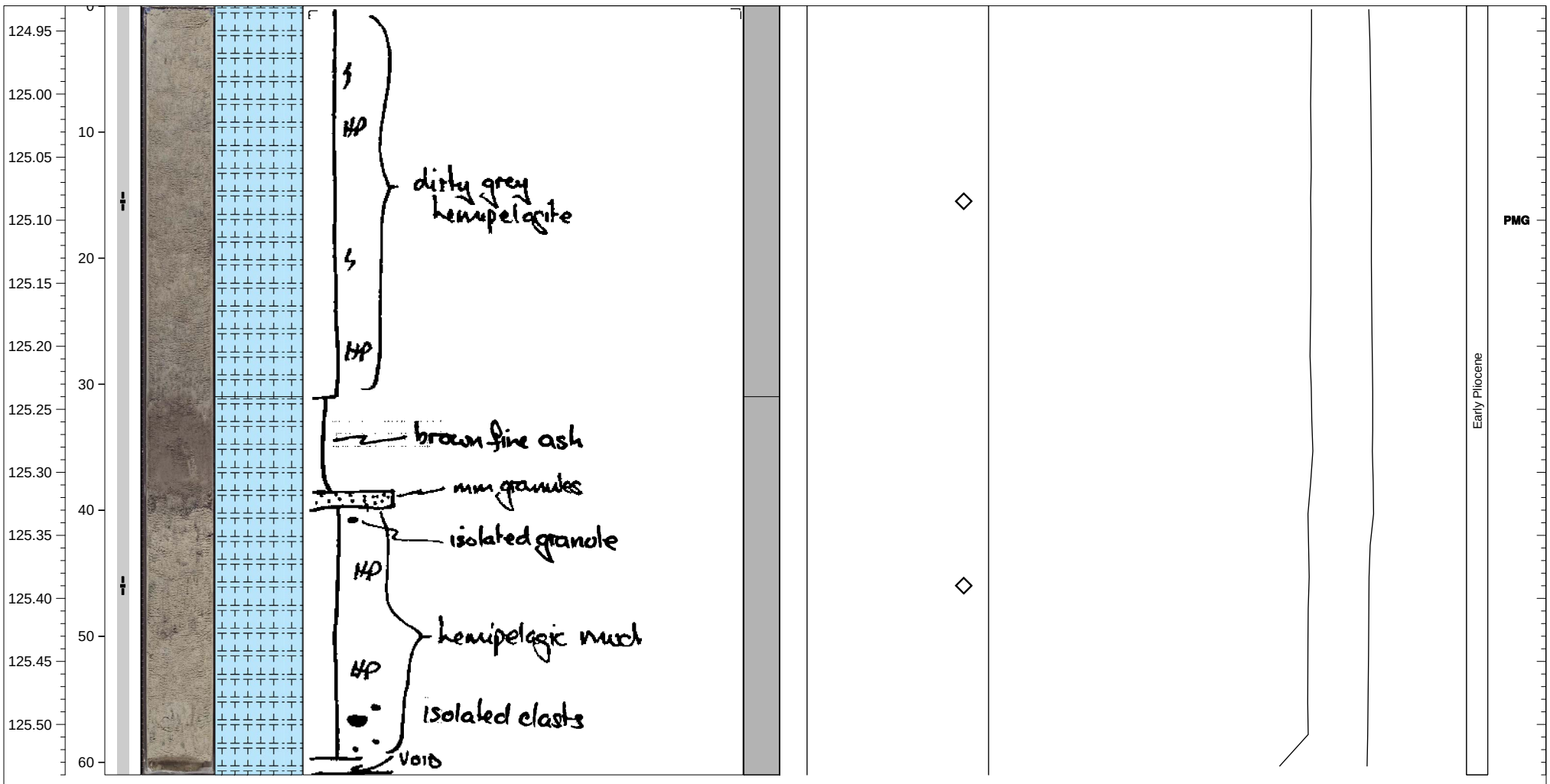
A basal part of pumiceous turbidite at the top of this section. Grain size in this layer is basically granule and pebble in maximum. And at least three normally grading tephra fallouts, intercalated in hemipelagic sediments.

Depth CSF-A (m)
Core length (cm)
Drilling disturbance
Core image
Graphic lithology
Graphic log - Average grain size matrix sediment
Fine mud | Silt-fine sand | Very fine sand | Fine sand | Fine medium sand | Medium sand | Coarse sand | Very coarse sand | Granules | Pebbles or coarser
Matrix type %
MAJ lith and MIN lith grain size
Very fine mud | Silt-fine mud | Fine mud | Fine sand | Fine medium sand | Medium sand | Coarse sand | Very coarse sand | Granules | Pebbles | Cobbles
Matrix sorting
Matrix alteration intensity
Absent | Rare | Moderate | High
Grain size of graded layers (top, base)
Very fine mud | Silt-fine mud | Fine mud | Fine sand | Fine medium sand | Medium sand | Coarse sand | Very coarse sand | Granules | Pebbles | Cobbles
Grading type
GRA bulk density (g/cm^3)
0 | 1 | 2 | 3
Magnetic susceptibility (SI)
0 | 2000 | 4000 | 6000
Age
Shipboard samples



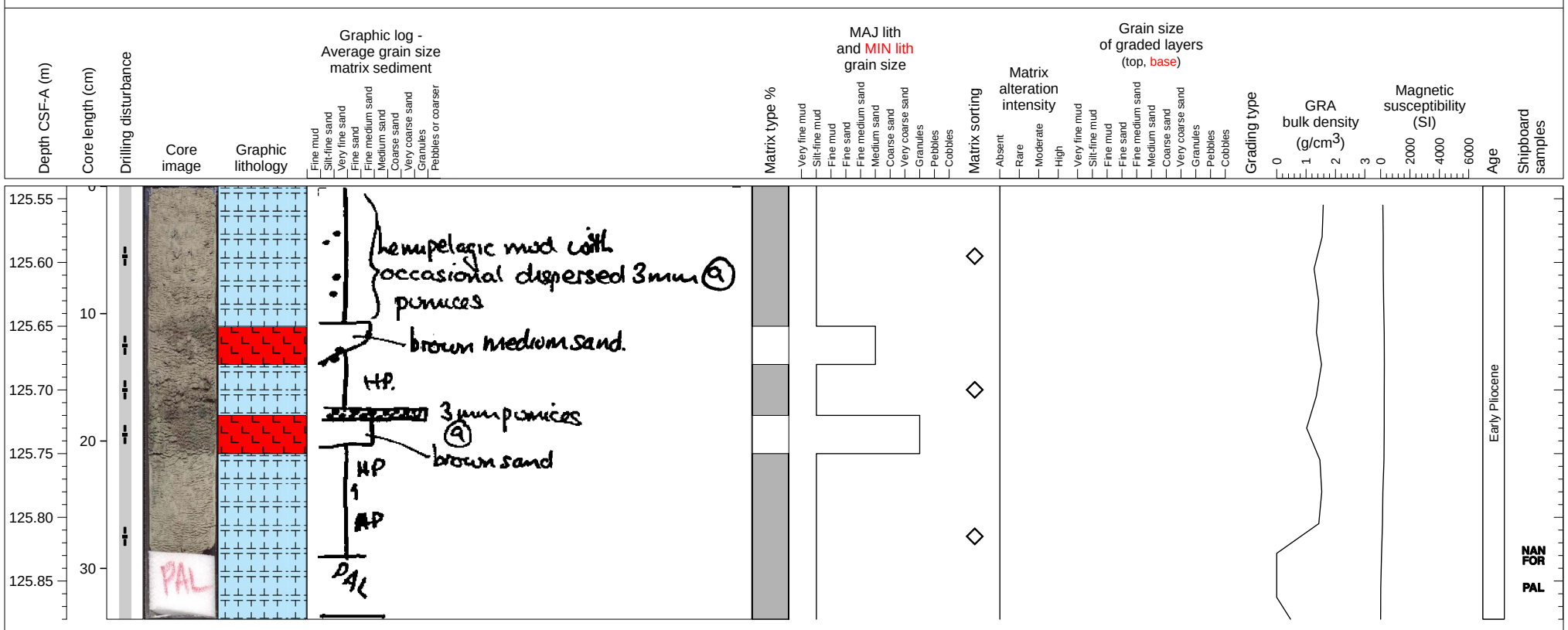
Hole 340-U1396A-14H Section 7, Top of Section: 124.93 CSF-A (m)

Hemipelagic fine sediments.



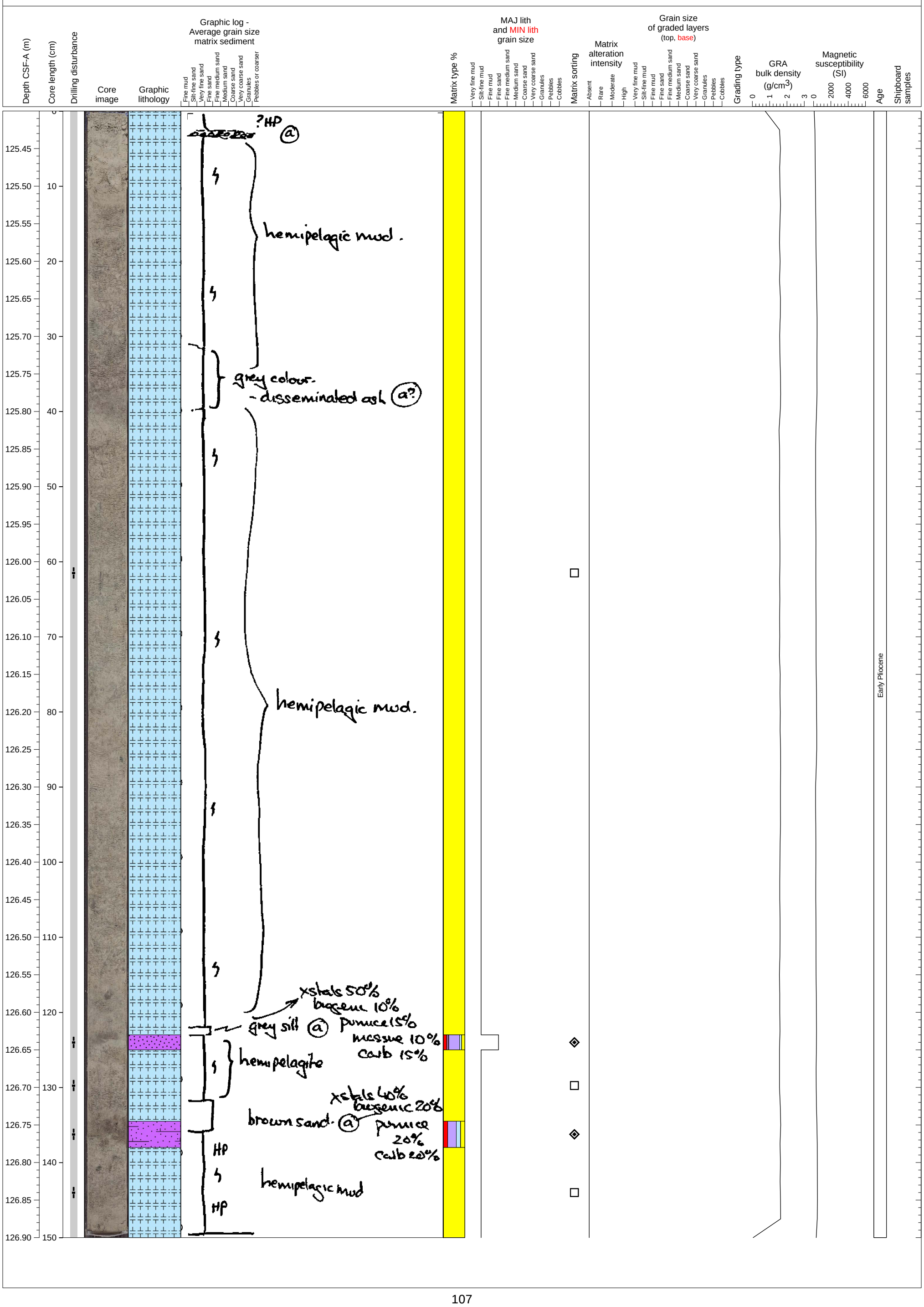
Hole 340-U1396A-14H Section CC, Top of Section: 125.54 CSF-A (m)

Hemipelagic sediments with 2 thin ashfall layers.



Hole 340-U1396A-15H Section 1, Top of Section: 125.4 CSF-A (m)

Hemipelagic clay with two thin volcaniclastic sand layers.



Hole 340-U1396A-15H Section 2, Top of Section: 126.9 CSF-A (m)

At least 6 layers of volcanic ash are embedded in background calcareous ooze. Calcareous sediments are also contaminated by pumiceous material. Bioturbation is pervasive.

Depth CSF-A (m)

Core length (cm)

Drilling disturbance

Core image

Graphic lithology

Graphic log - Average grain size matrix sediment
Fine mud
Silt-fine sand
Very fine sand
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles or coarser

Matrix type %

MAJ lith and MIN lith grain size
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles

Matrix sorting

Matrix alteration intensity
Absent
Rare
Moderate
High

Grain size of graded layers (top, base)
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles

Grading type

GRA bulk density (g/cm^3)
0
1
2
3

Magnetic susceptibility (SI)
0
2000
4000
6000

Age

Shipboard samples

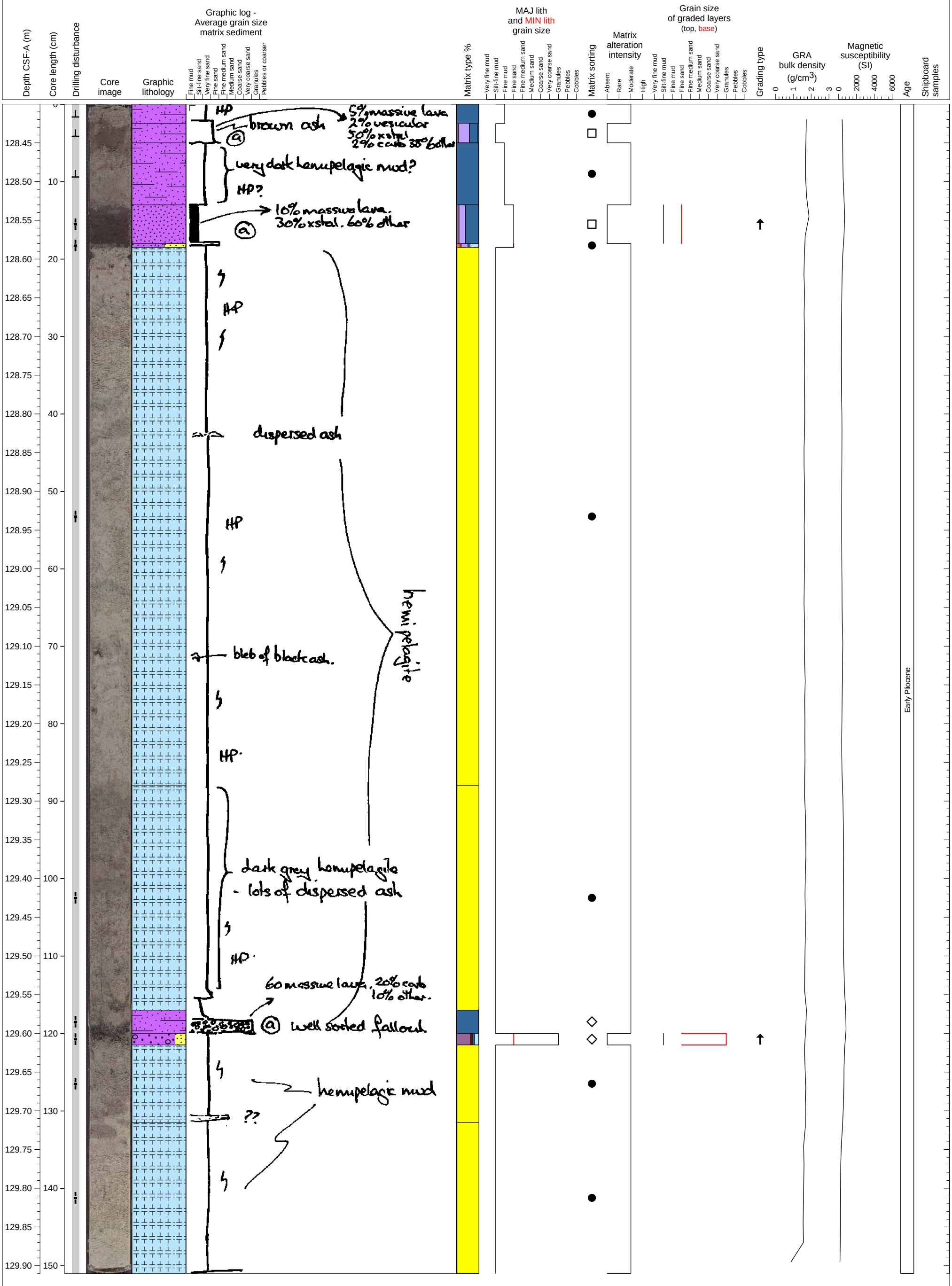
126.95 m / 0 cm: brown ash @ xstal tuff. 80 pumice. 20 xstal.
127.00 m / 10 cm: 95% pumice 5% xstal.
grey mud
white laminae @
127.05 m / 20 cm
127.10 m / 30 cm
127.15 m / 40 cm
127.20 m / 50 cm
hemipelagic mud
127.25 m / 60 cm
127.30 m / 70 cm
127.35 m / 80 cm
127.40 m / 90 cm
5% pumice
90% lithics
5% xstals.
127.45 m / 100 cm
well sorted
127.50 m / 110 cm
? ash in two burrows
127.55 m / 120 cm
127.60 m / 130 cm
127.65 m / 140 cm
3% crystals.
27% pumice
70% carbonate
127.70 m / 150 cm
127.75 m / 160 cm
hemipelagic mud.
With dispersed ash
in blebs....
127.80 m / 170 cm
127.85 m / 180 cm
127.90 m / 190 cm
127.95 m / 200 cm
128.00 m / 210 cm
128.05 m / 220 cm
128.10 m / 230 cm
128.15 m / 240 cm
50% lithics
40% xstals
10 biodastic carb
128.20 m / 250 cm
@
85% pumice. 5% crystal.
10% carbonate
128.25 m / 260 cm
dirty hemipelagite
[see microscope data here]
128.30 m / 270 cm
128.35 m / 280 cm
black @
128.40 m / 290 cm
HP

Early Pliocene

XRD
CRB

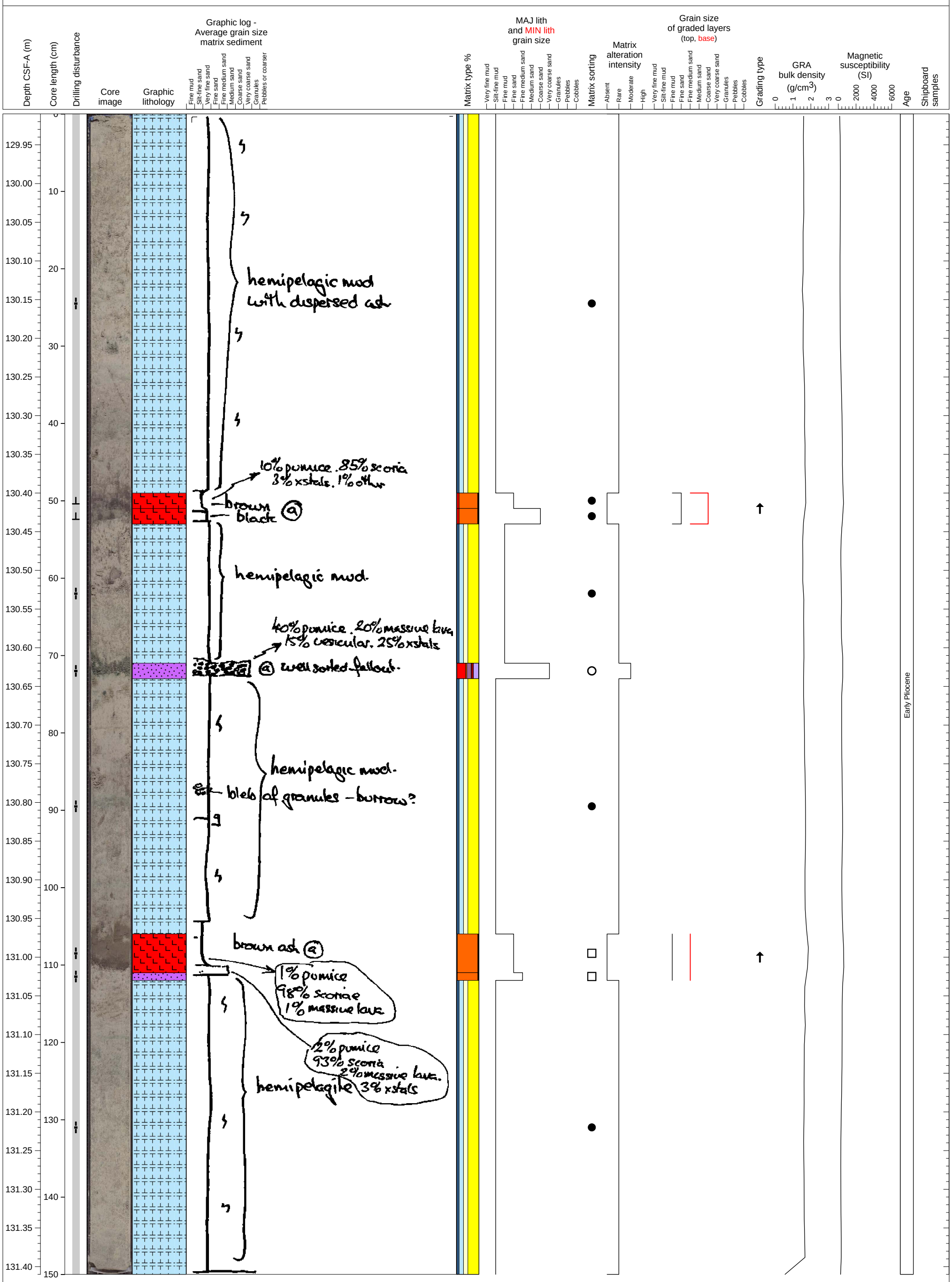
Hole 340-U1396A-15H Section 3, Top of Section: 128.4 CSF-A (m)

Hemipelagic mudy sediments interlayering at least two tephra layers.



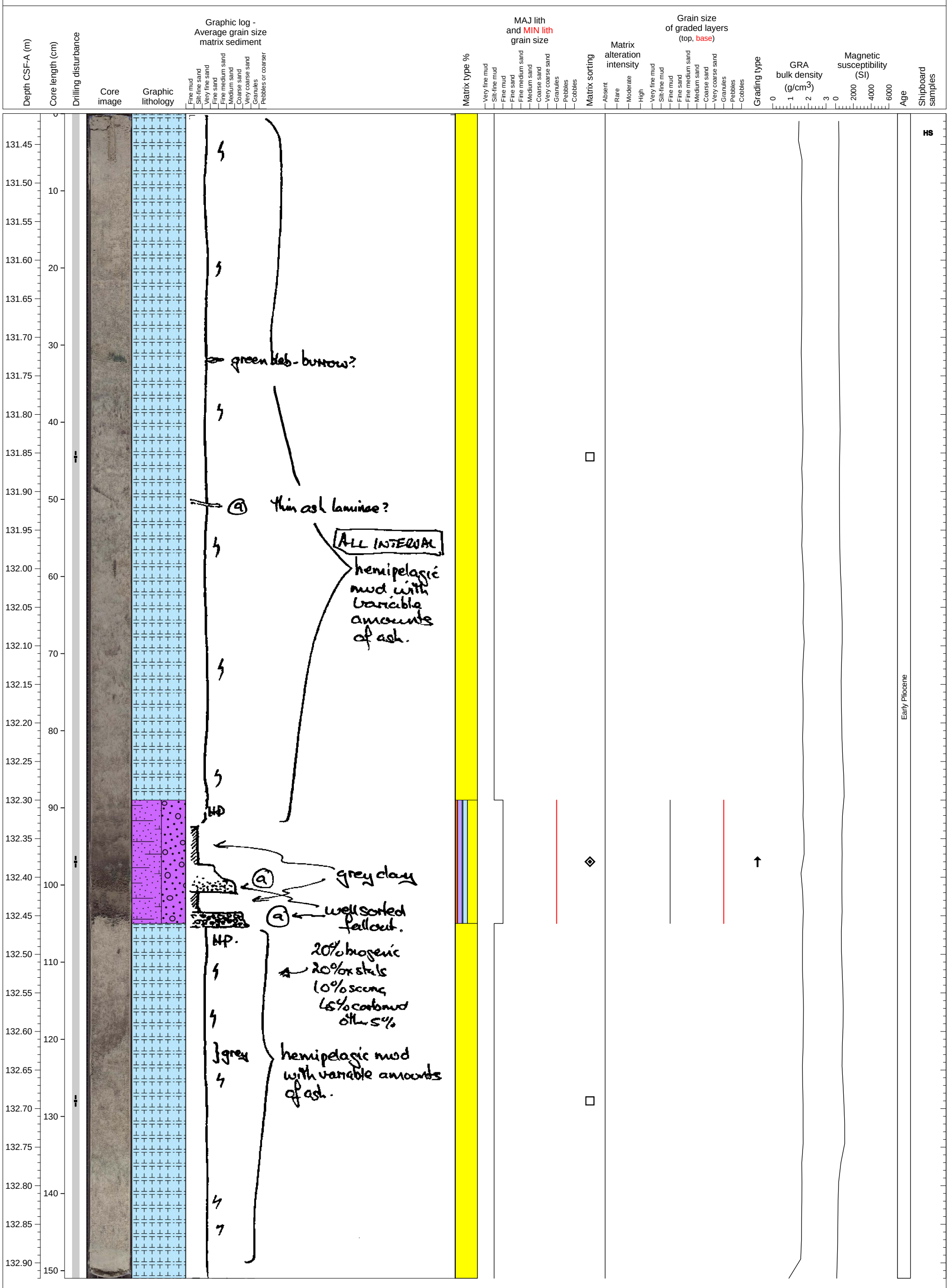
Hole 340-U1396A-15H Section 4, Top of Section: 129.91 CSF-A (m)

Thick hemipelagic layers interbed two scoriacious ash layers (fall out ?) and a very coarse-grain volcaniclastic sand layer.



Hole 340-U1396A-15H Section 5, Top of Section: 131.41 CSF-A (m)

Hemipelagic clay with two fining upward volcaniclastic sequences in the middle.



Hole 340-U1396A-15H Section 6, Top of Section: 132.92 CSF-A (m)

This section contains 4 normally graded ash layers and two brown sand-mud ash layers. Ash layers are well-sorted and the grain sizes of their bases range from granule to fine sand.

Depth CSF-A (m)
Core length (cm)
Drilling disturbance
Core image
Graphic lithology
Graphic log - Average grain size matrix sediment
Fine mud
Silt-fine sand
Very fine sand
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles or coarser
Matrix type %
MAJ lith and MIN lith grain size
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Matrix sorting
Matrix alteration intensity
Absent
Rare
Moderate
High
Grain size of graded layers (top, base)
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles
Grading type
GRA bulk density (g/cm^3)
0
1
2
3
Magnetic susceptibility (SI)
0
2000
4000
6000
Age
Shipboard samples
CRB
XRD
Early Pliocene

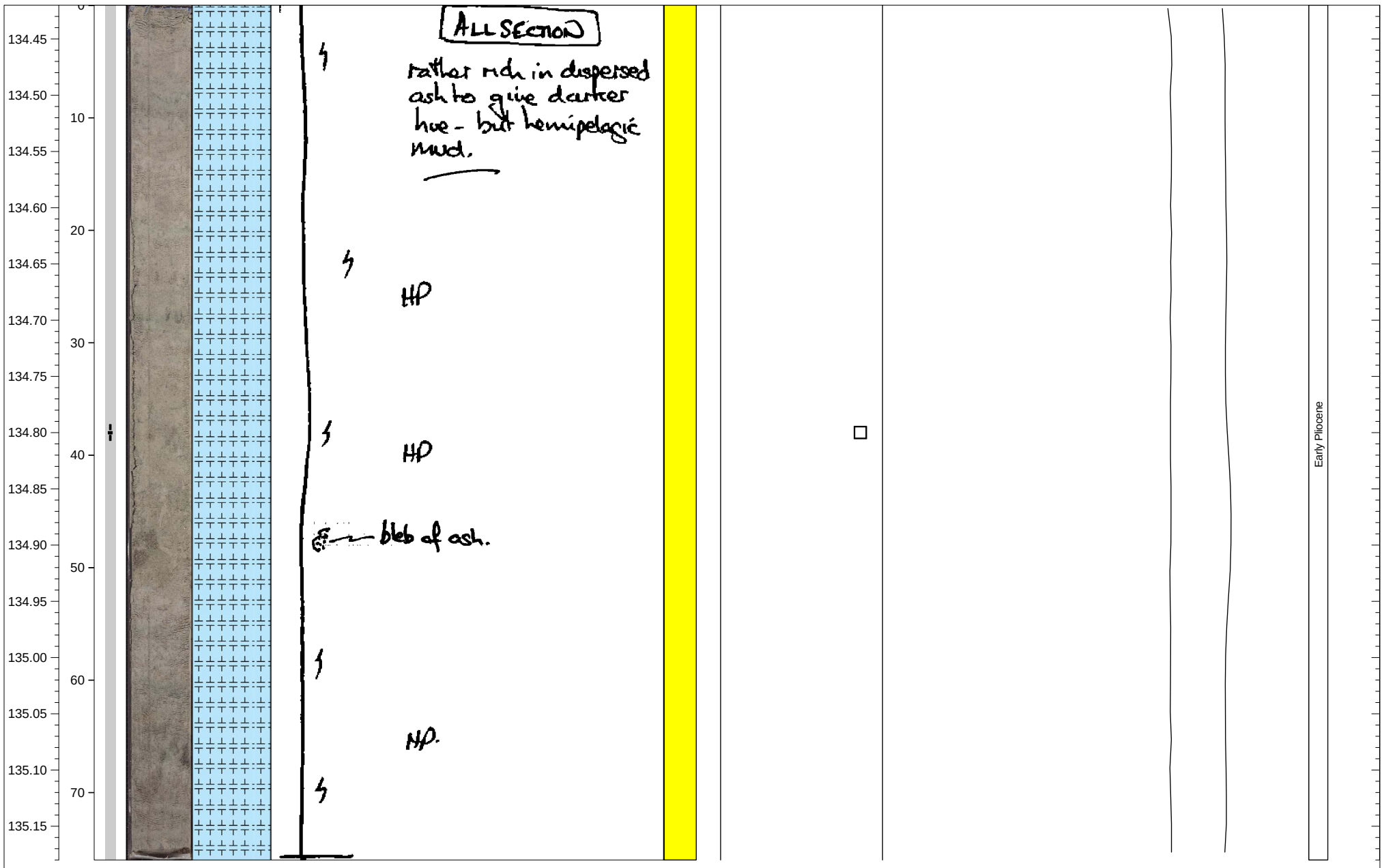
132.95 133.00 133.05 133.10 133.15 133.20 133.25 133.30 133.35 133.40 133.45 133.50 133.55 133.60 133.65 133.70 133.75 133.80 133.85 133.90 133.95 134.00 134.05 134.10 134.15 134.20 134.25 134.30 134.35 134.40

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

hemipelagite with some dispersed granules.
HP.
hemipelagic mud.
brown sand @
brown fine mud.
well sorted @ deformed boundary by coring??
black ash.
@ well sorted.
hemipelagic mud.
3 5mm granules of white massive lava
dark brown.
~5mm granules well sorted @
hemipelagic mud.
brown ash @
HP.
hemipelagic mud.

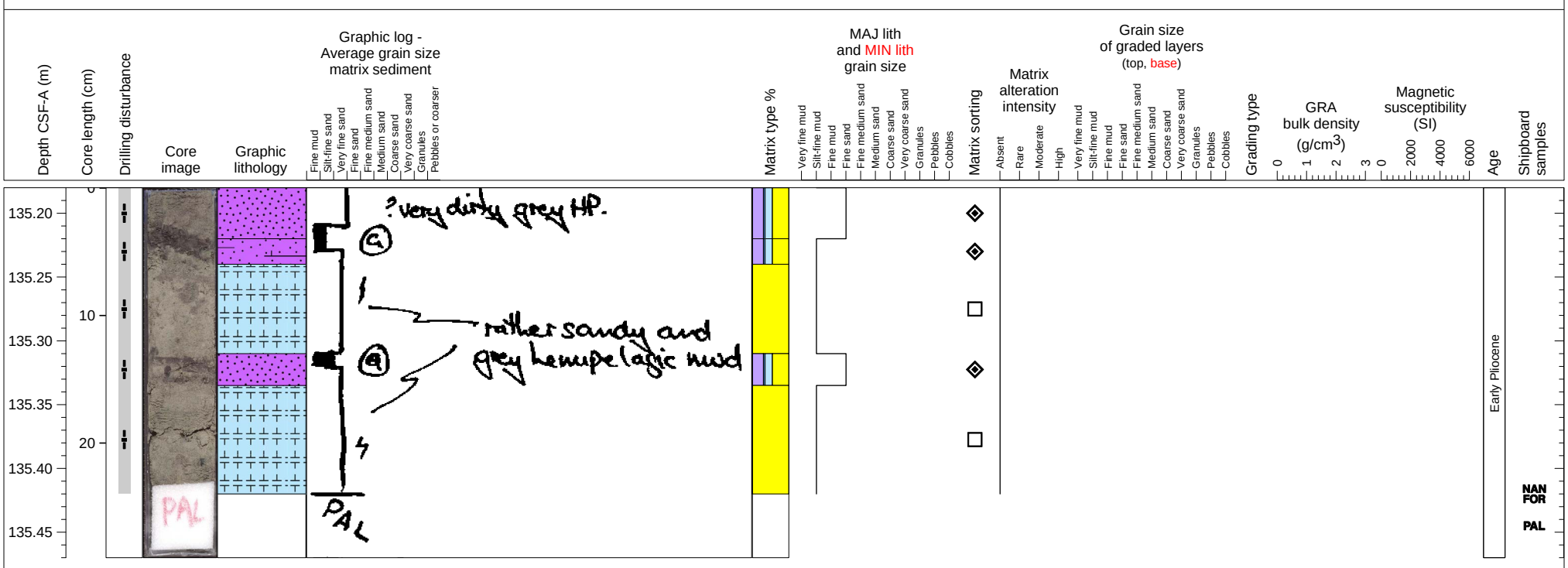
Hole 340-U1396A-15H Section 7, Top of Section: 134.42 CSF-A (m)

Hemipelagic clay.



Hole 340-U1396A-15H Section CC, Top of Section: 135.18 CSF-A (m)

Hemipelagic clay with interlayered volcaniclastic sand. PAL sample from base.



Thin sections

Sample	Top [cm]	Bottom [cm]	Top Depth [m]	Bottom Depth [m]	Groundmass percentage [%]	Groundmass modal grain size [mm]	Groundmass comments	Volcanic grain [%]	Volcanic grain modal size [mm]	Biogenic grain [%]	Mineral grain [%]	Mineral grain modal size [mm]	Lithic grain [%]	Lithic grain modal size [mm]	Olivine present [%]	Olivine size MIN [mm]	Olivine shape	Olivine comment	Plagioclase present [%]	Plagioclase size MAX [mm]	Plagioclase shape	Plagioclase habit	Plagioclase comment	Clinopyroxene present [%]	Clinopyroxene size MAX [mm]	Clinopyroxene shape	Clinopyroxene habit	Clinopyroxene special features	Orthopyroxene present [%]	Orthopyroxene size MAX [mm]	Orthopyroxene shape	Orthopyroxene habit	Orthopyroxene comments	Amphibolite present [%]	Amphibolite size MAX [mm]	Amphibolite shape	Amphibolite habit	Amphibolite comments	Oxides present [%]	Oxides size MAX [mm]	Oxides shape	Oxides habit	Oxides comments	Quartz present [%]	Quartz size MAX [mm]	Quartz shape	Quartz habit	Comment
340-U1396A-3H-3-W 81/82-TSB-TS#17	0	1	18.91	18.92																																													Pumice clast - too thin to properly log.
340-U1396A-10H-1-W 128/129-TSB-TS#18	0	1	82.88	82.89																																													Pumice clast - too thin to properly log.
340-U1396A-14H-5-W 148/149-TSB-TS#19	0	1	123.39	123.4																																													Pumice clast - too thin to properly log.