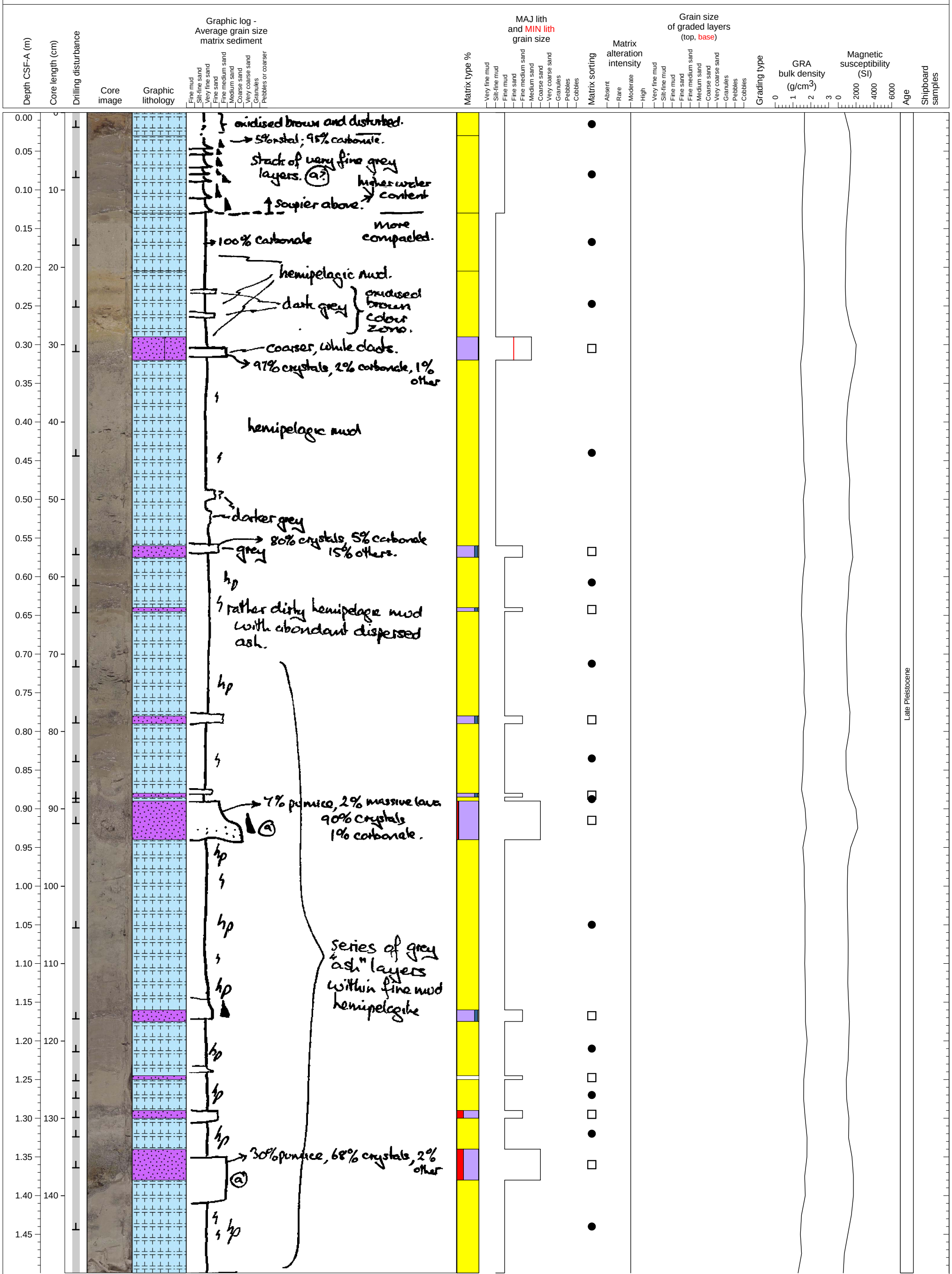
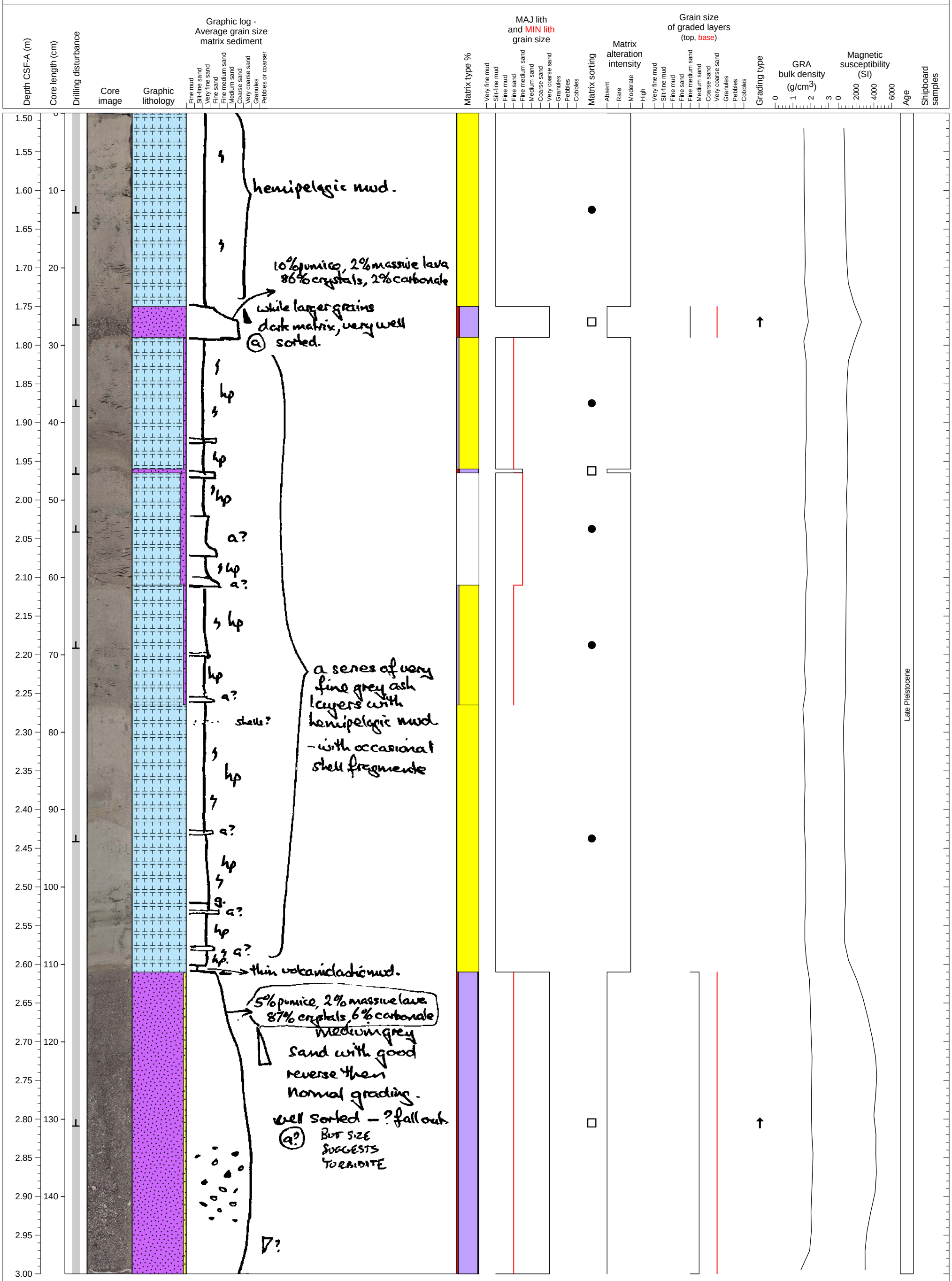
Hole 340-U1397B-1H Section 1, Top of Section: 0.0 CSF-A (m)

Multiple (about 10) tephra layers intercalating hemipelagic sediments.



Hole 340-U1397B-1H Section 2, Top of Section: 1.5 CSF-A (m)

Hemipelagic sediment interlayering with at least two tephra layers and 4 cripto tephra layers. In the lower part, a top of turbidite continuing to the next section.



Hole 340-U1397B-1H Section 3, Top of Section: 3.0 CSF-A (m)

Interlayered volcaniclastic sand and 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)
0
1
2
3
Magnetic susceptibility (SI)
0
2000
4000
6000
Age
Shipboard samples

3.05
3.10
3.15
3.20
3.25
3.30
3.35
3.40
3.45
3.50
3.55
3.60
3.65
3.70
3.75
3.80
3.85
3.90
3.95
4.00
4.05
4.10
4.15
4.20
4.25
4.30
4.35
4.40
4.45
4.50

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

well sorted

V

larger grains white volcanics with darker matrix
~1% Carbonate
99% volcanic

well sorted - could be fallout.

10% massive lava
5% vesicular lava
83% xstals
2% Carbonate.

0.

1cm pumice clast.

hp

hemipelagic mud with a series of bioturbated tephra layers

hp

hp

well sorted, dark grey

hemipelagic mud.

light coloured, well sorted.

hemipelagic mud.

base

sampled.

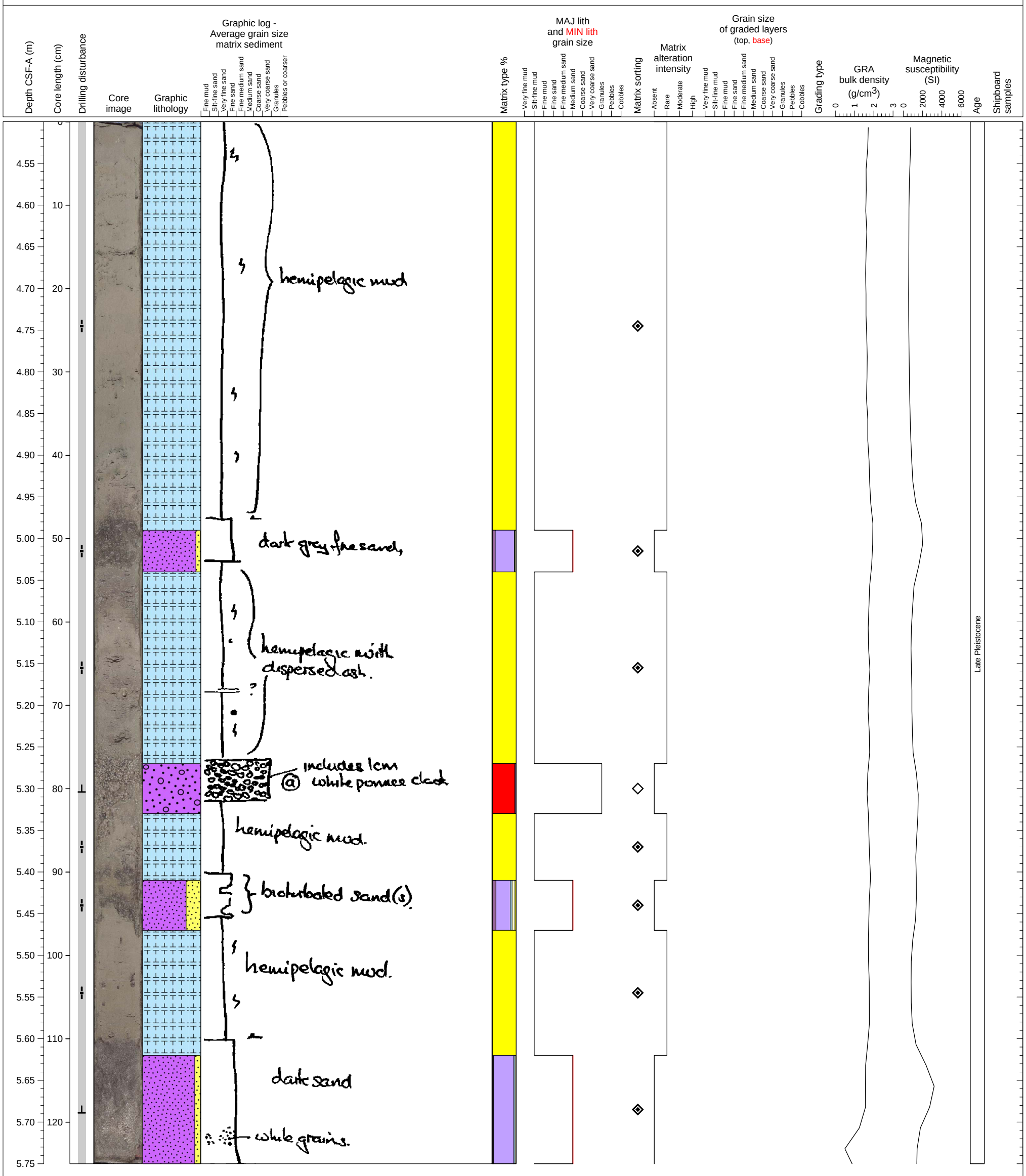
XRD

Late Pleistocene

IW

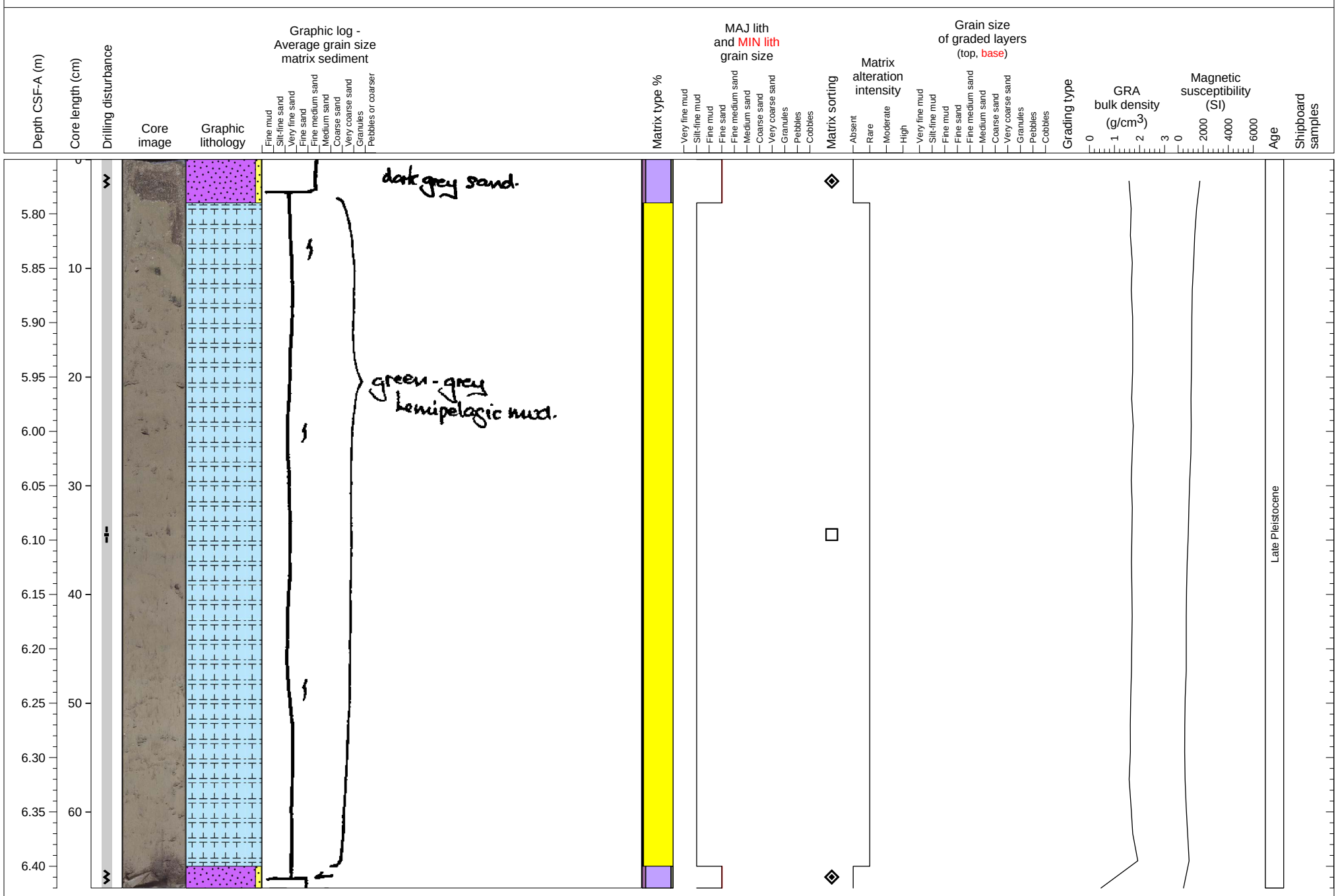
Hole 340-U1397B-1H Section 4, Top of Section: 4.5 CSF-A (m)

Hemipelagic clay interlayered with a mixed volcaniclastic/bioclastic sand. A pumice-rich pebble deposit is present in the center of the section.



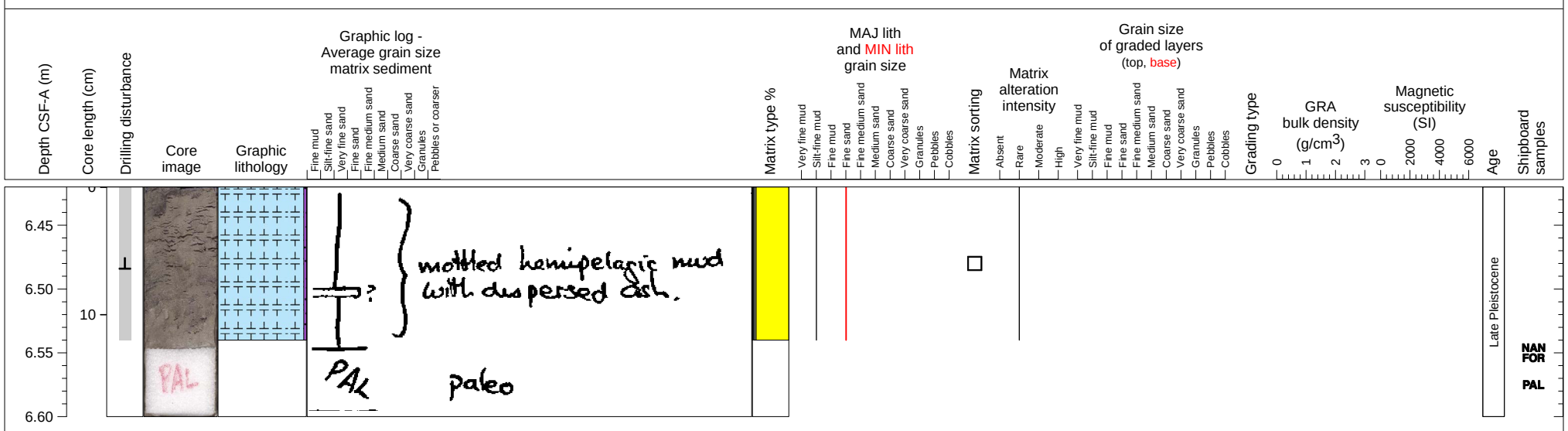
Hole 340-U1397B-1H Section 5, Top of Section: 5.75 CSF-A (m)

Dark sand at very top, underlain by hemipelagic mud



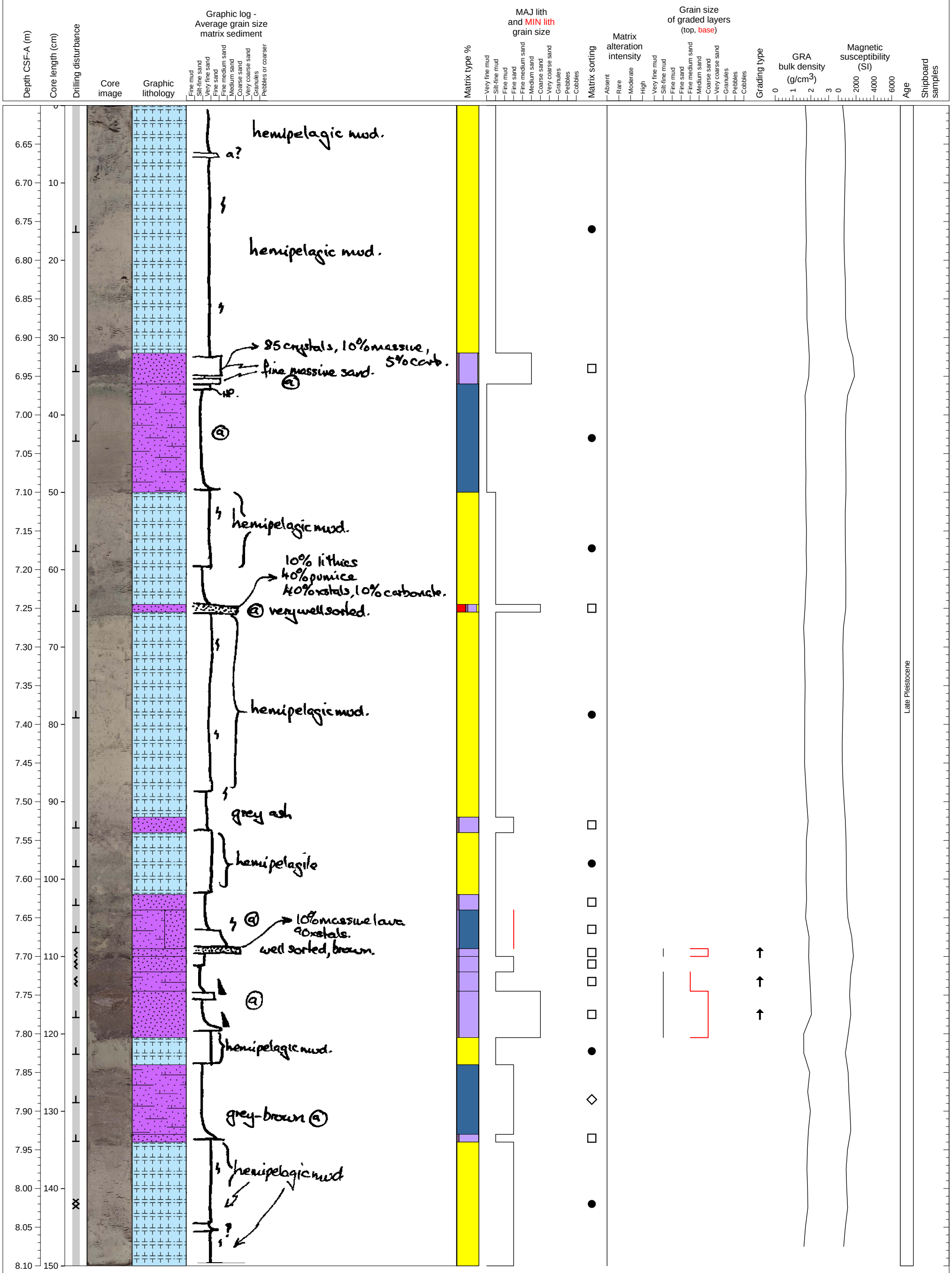
Hole 340-U1397B-1H Section CC, Top of Section: 6.42 CSF-A (m)

Hemipelagic clay with a small addition of volcaniclastic material to darken the color. PAL sample from base.



Hole 340-U1397B-2H Section 1, Top of Section: 6.6 CSF-A (m)

At least 9 tephra layers intercalating thin hemipelagic sediments.



Hole 340-U1397B-2H Section 2, Top of Section: 8.1 CSF-A (m)

Multiple tephra layers intercalating hemipelagic sediments. Thick layers have cyclic sedimentation structures with normal grading.

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

8.15
8.20
8.25
8.30
8.35
8.40
8.45
8.50
8.55
8.60
8.65
8.70
8.75
8.80
8.85
8.90
8.95
9.00
9.05
9.10
9.15
9.20
9.25
9.30
9.35
9.40
9.45
9.50
9.55

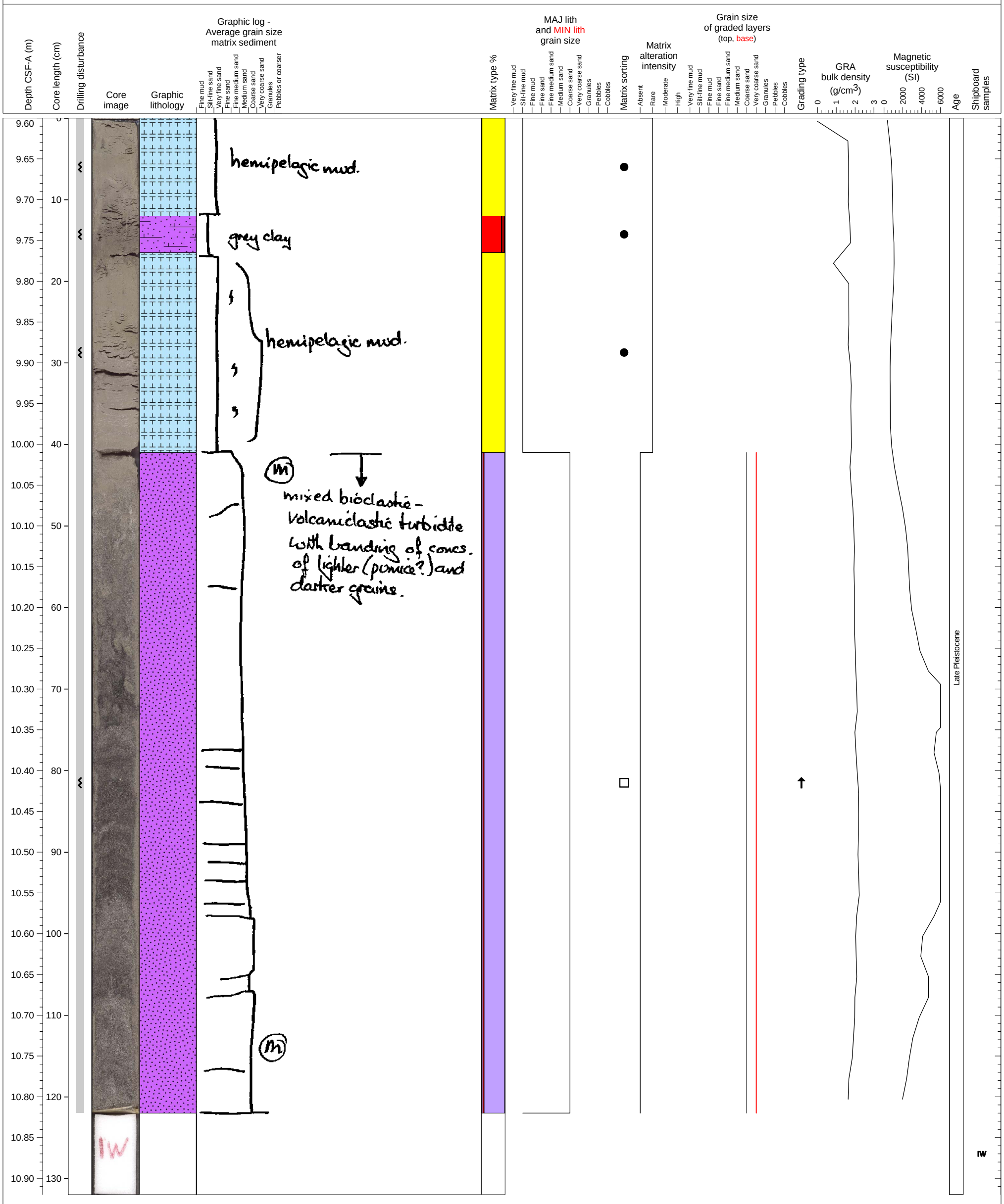
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150

hemipelagic mud
grey sand
hemipelagic mud
hemipelagic mud.
? burrowed sand (a?)
5% massive 10% carbonate. 20% vesicular 5% pumice 60% xstals
hemipelagic mud
a
hemipelagic mud?
hp a
15% massive, 15 vesicular 60% xstals, 8% carbonate.
Stack of graded silts and intervening clays - could be all ashes or with hemipelagic between
20% massive 15% vesicular 50% xstals 25% carbonate.
planar lam
7% massive 10% vesicular 65% crystals 18% carbonate
hemipelagic mud ✓
g.
g.

Late Pleistocene

Hole 340-U1397B-2H Section 3, Top of Section: 9.6 CSF-A (m)

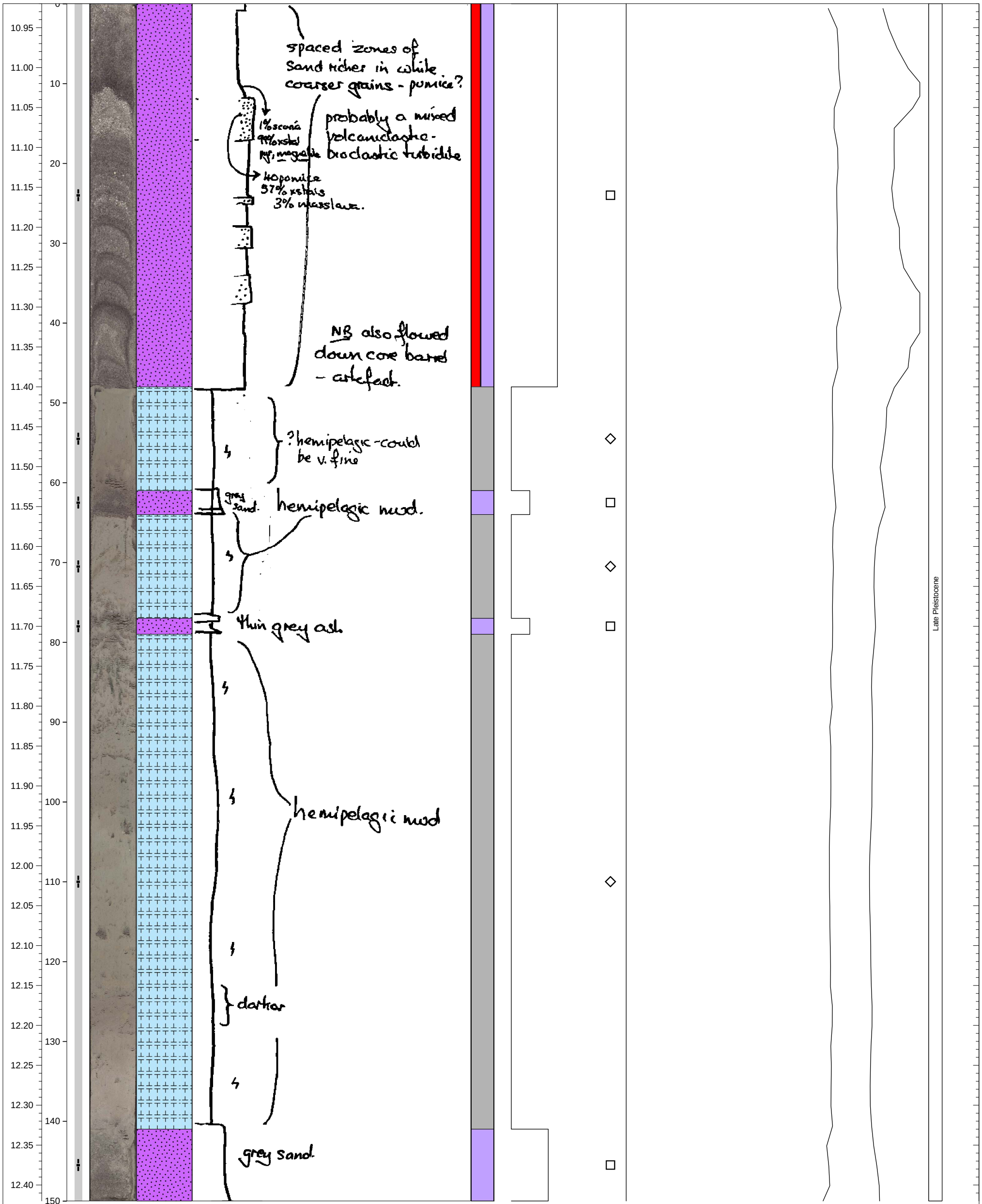
Hemipelagic mud intercalating a potential tephra layer, and the upper part of turbidite with normal grading and black and white color bonding. Black-colored part is concentration zone of mafic crystals.



Hole 340-U1397B-2H Section 4, Top of Section: 10.92 CSF-A (m)

Compositionally banded coarse sand (turbidite) at top, underlain by hemipelagic mud and two thin sands

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-U1397B-2H Section 5, Top of Section: 12.42 CSF-A (m)

Normally graded volcaniclastic fallout deposits interlayered wtih 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

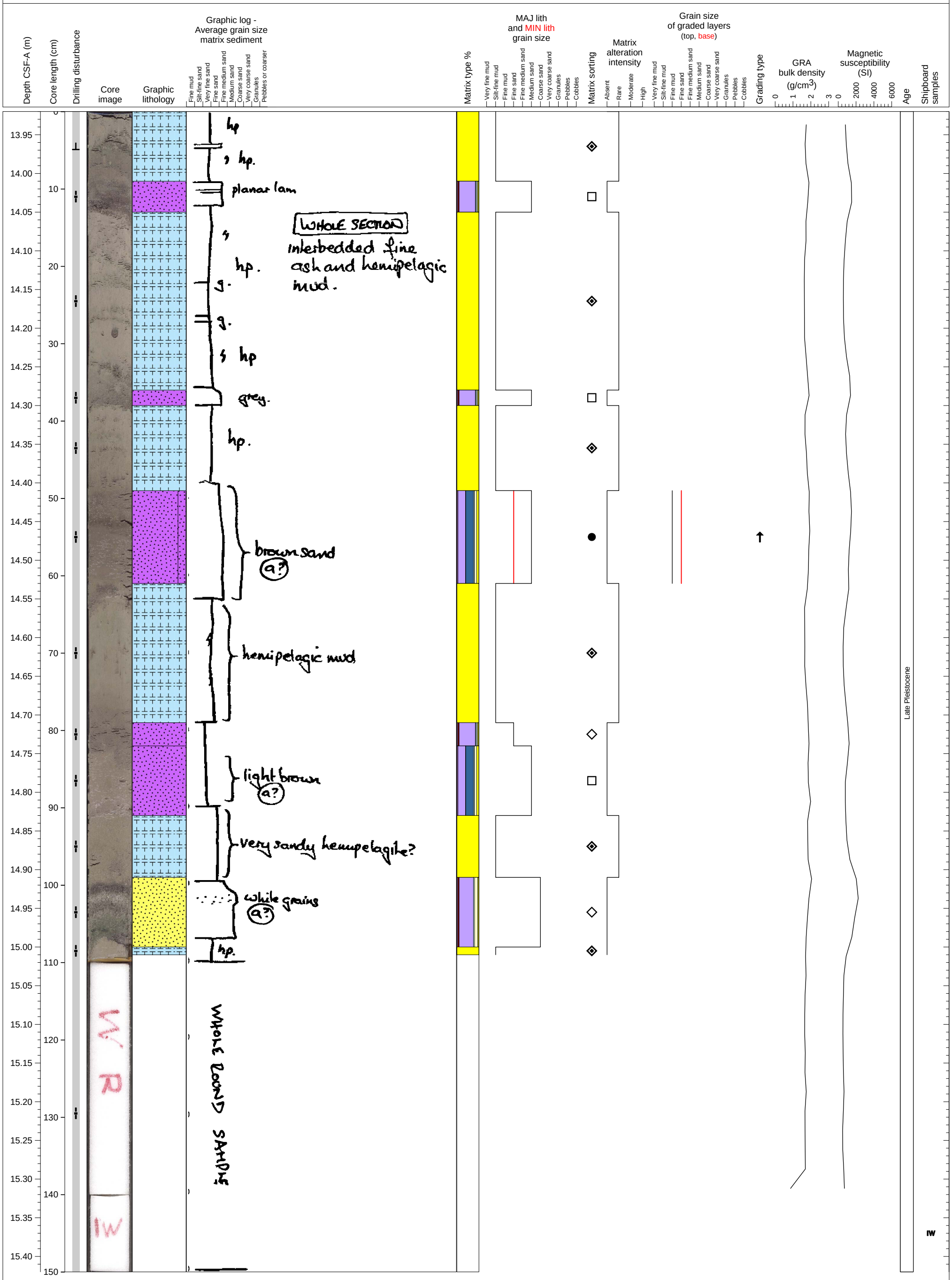
WHOLE ROUND SAMPLE

brown
? ? break
grey fine sand.
2cm large burrow
hemipelagic mud.
banding of cones. of white (pumice) and dark grains
well sorted white pumice
hp.
hemipelagic mud.
?
hemipelagic mud.
well sorted, brown @
hp.
hemipelagic mud.
hp.

Late Pleistocene

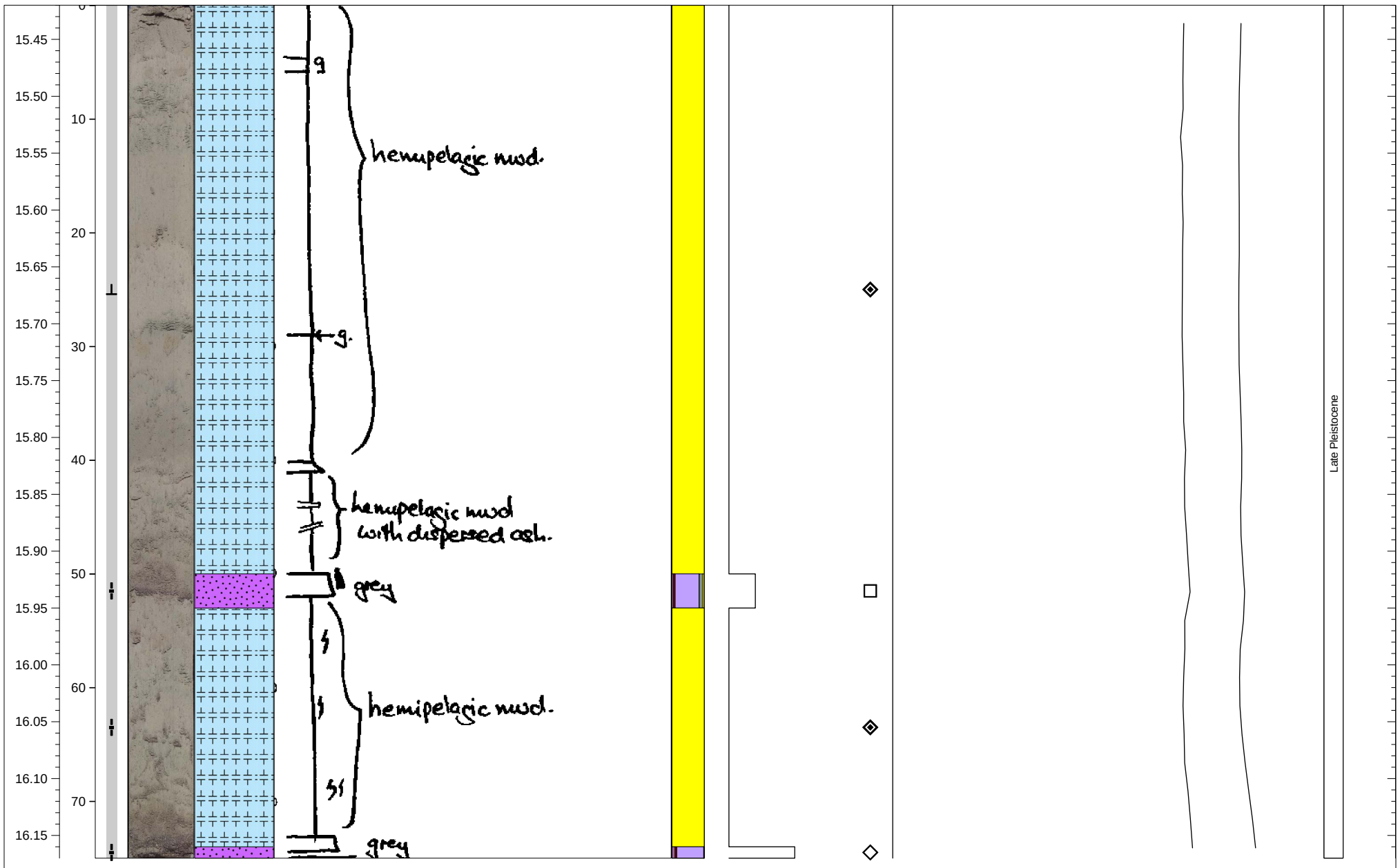
Hole 340-U1397B-2H Section 6, Top of Section: 13.92 CSF-A (m)

Hemipelagic clay with abundant thin tephra deposits.



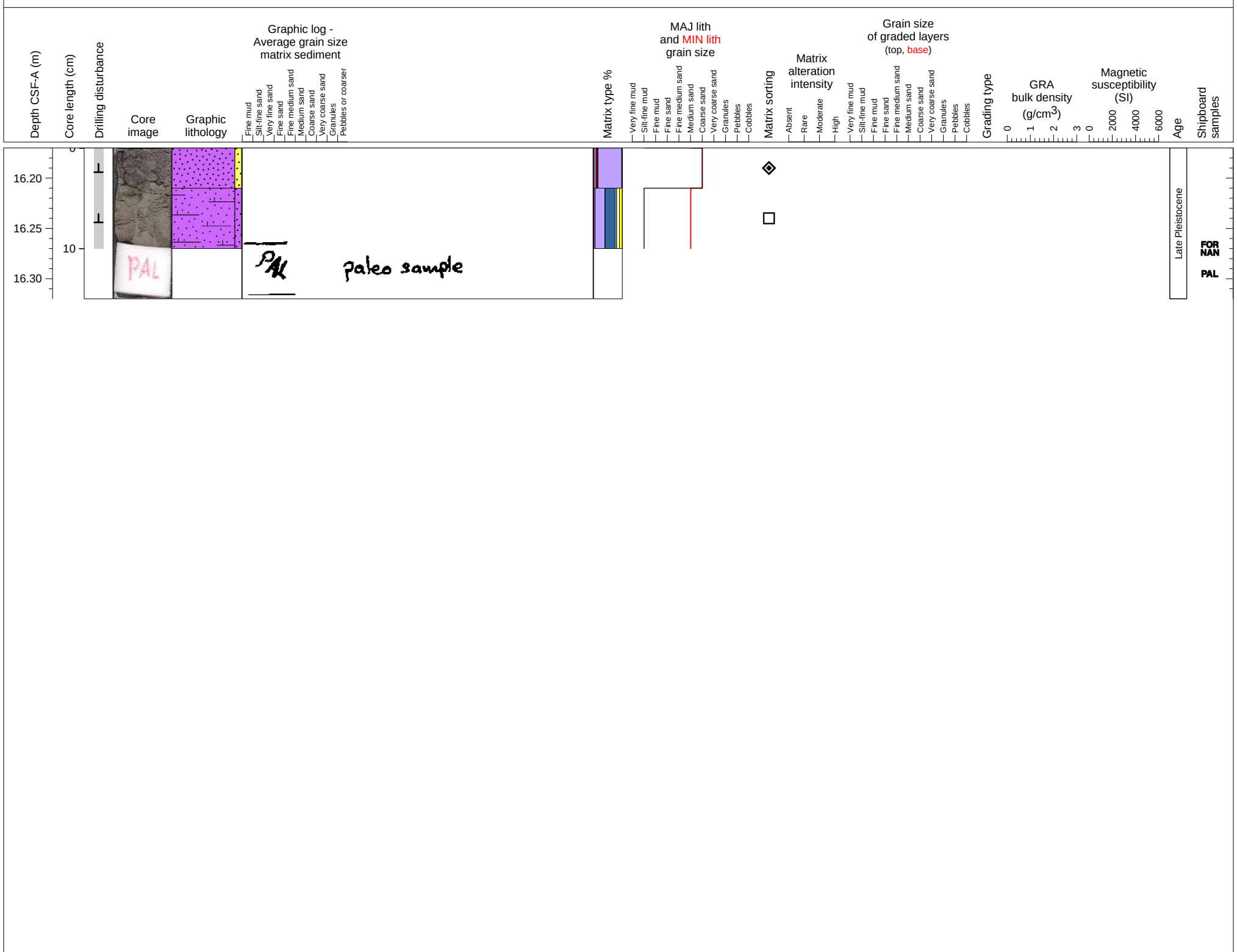
Hole 340-U1397B-2H Section 7, Top of Section: 15.42 CSF-A (m)

Hemipelagic clay interlayered with volcaniclastic sand deposit (tephra).



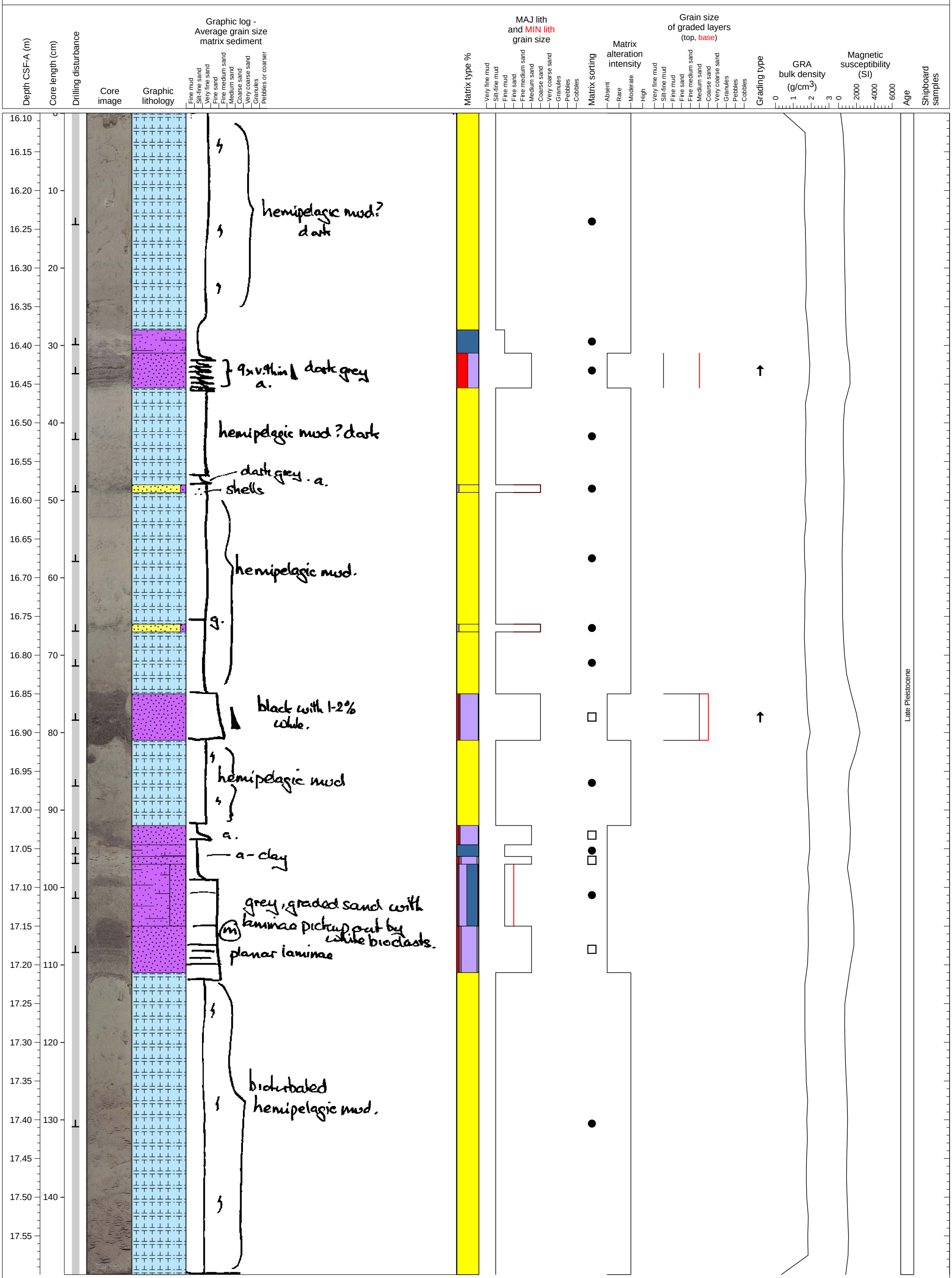
Hole 340-U1397B-2H Section CC, Top of Section: 16.17 CSF-A (m)

Layered volcaniclastic sand and mud. PAL sample from base.



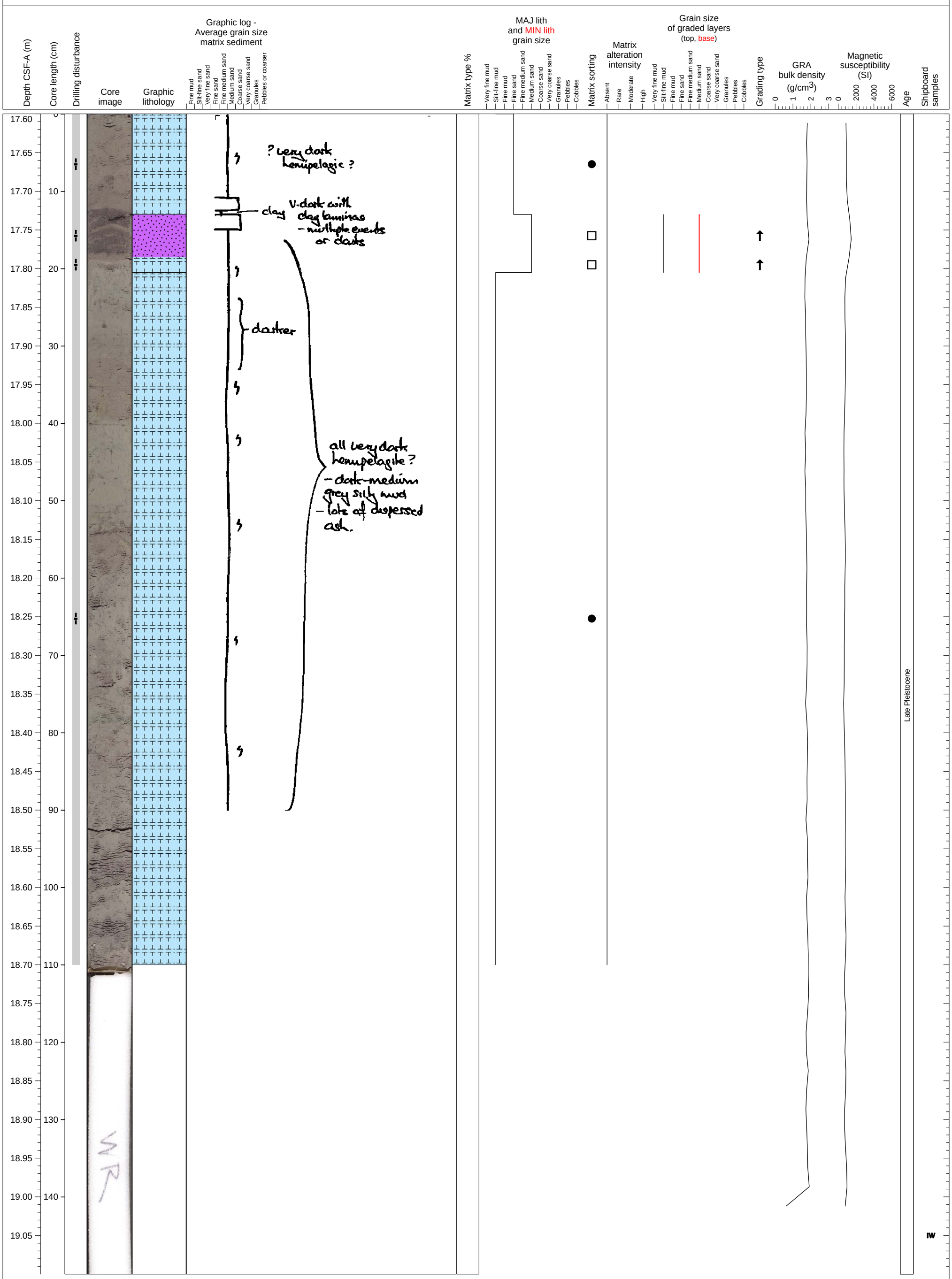
Hole 340-U1397B-3H Section 1, Top of Section: 16.1 CSF-A (m)

At least 7 tephra layers intercalating hemipelagic mud.



Hole 340-U1397B-3H Section 2, Top of Section: 17.6 CSF-A (m)

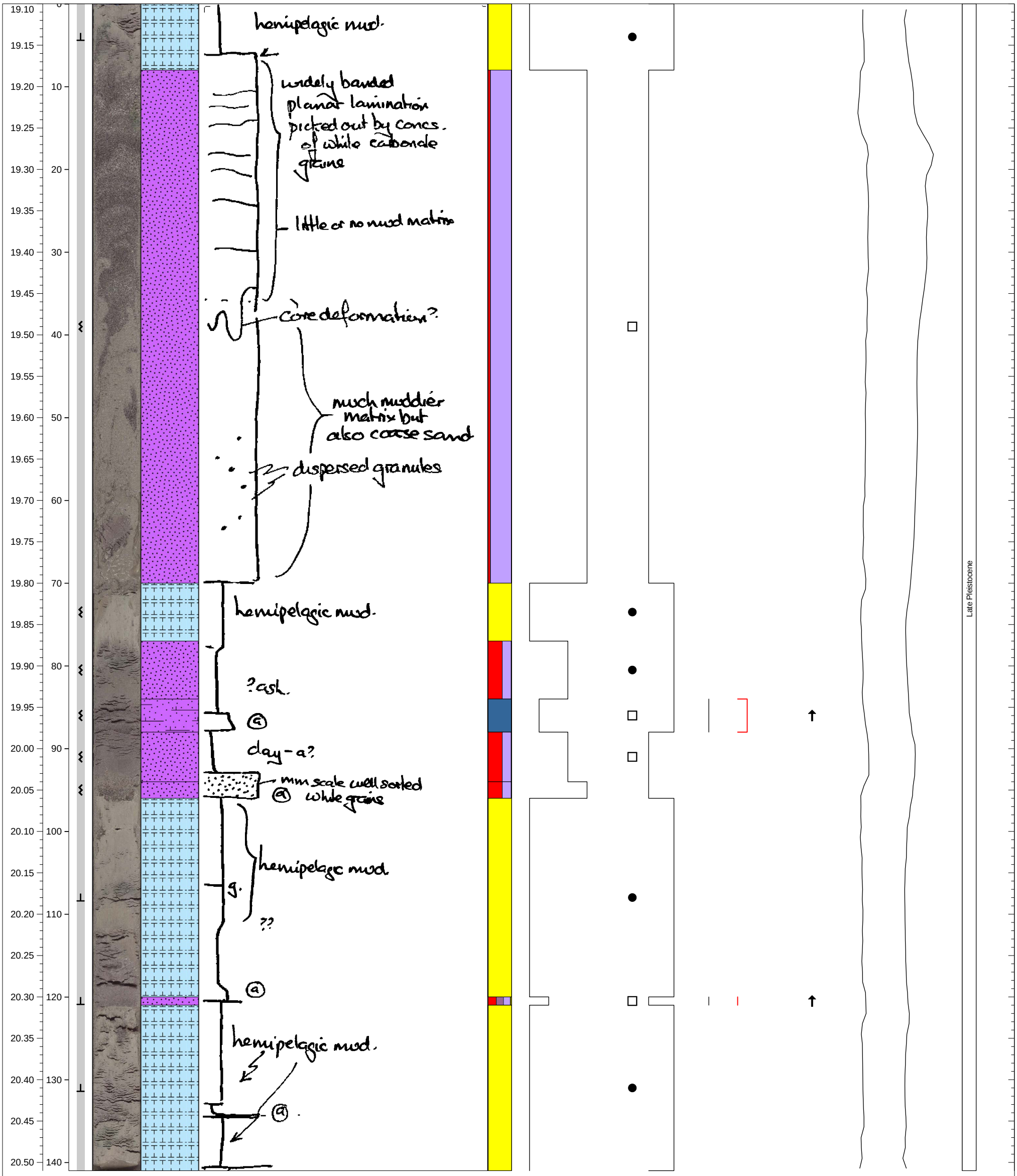
This section has one very dark gray layer of ash from 13-18.5 cm, which is composed of mostly crystals.



Hole 340-U1397B-3H Section 3, Top of Section: 19.1 CSF-A (m)

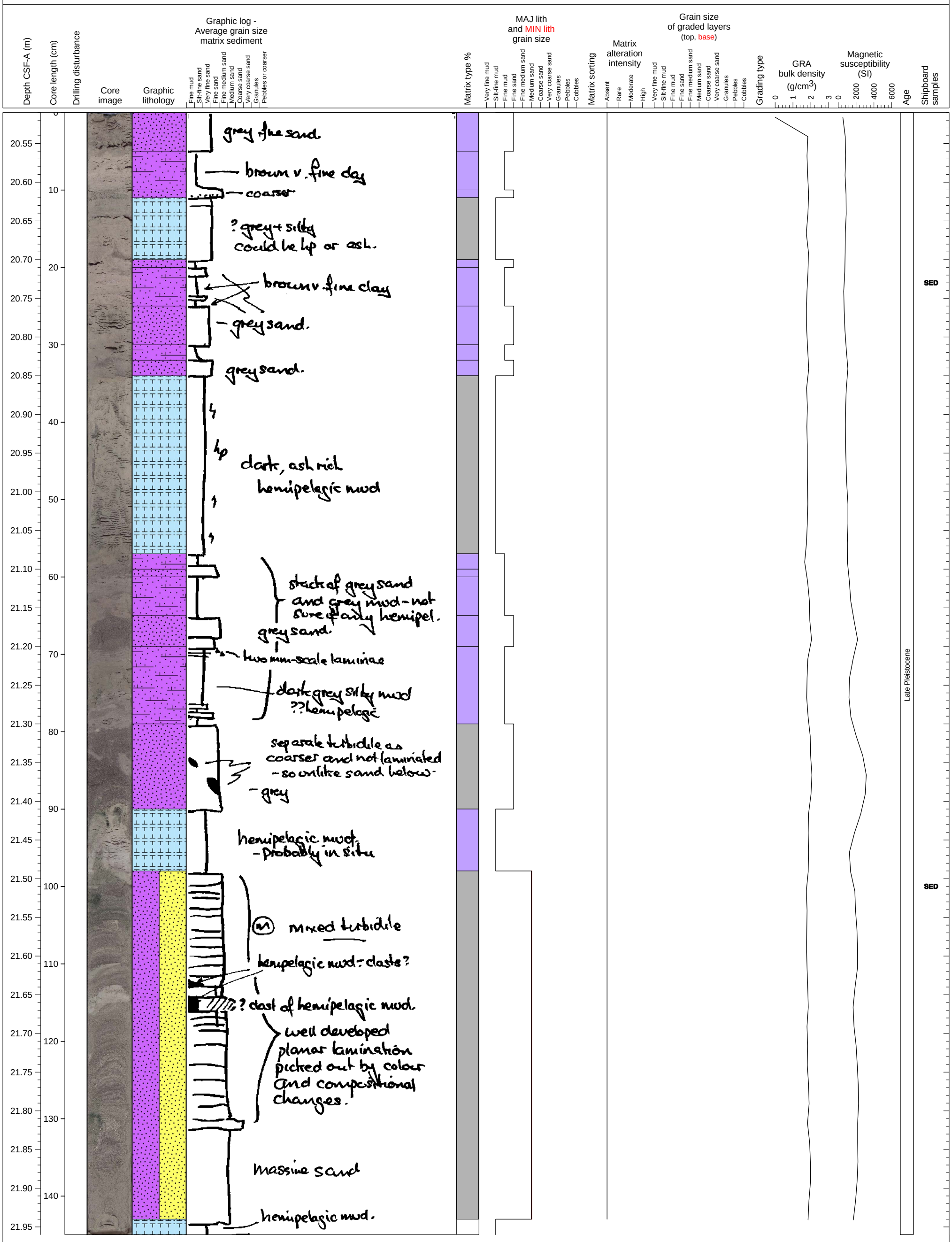
Volacaniclastic turbidite with an internal structure of white and black color banding. The bottom of the turbidite is mixed with mud consisting substrate. In the lower part of this section, at least 4 tephra layers are intercalating with hemipelagic mud.

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/cm^3)
Magnetic susceptibility (SI)
Age
Shipboard samples



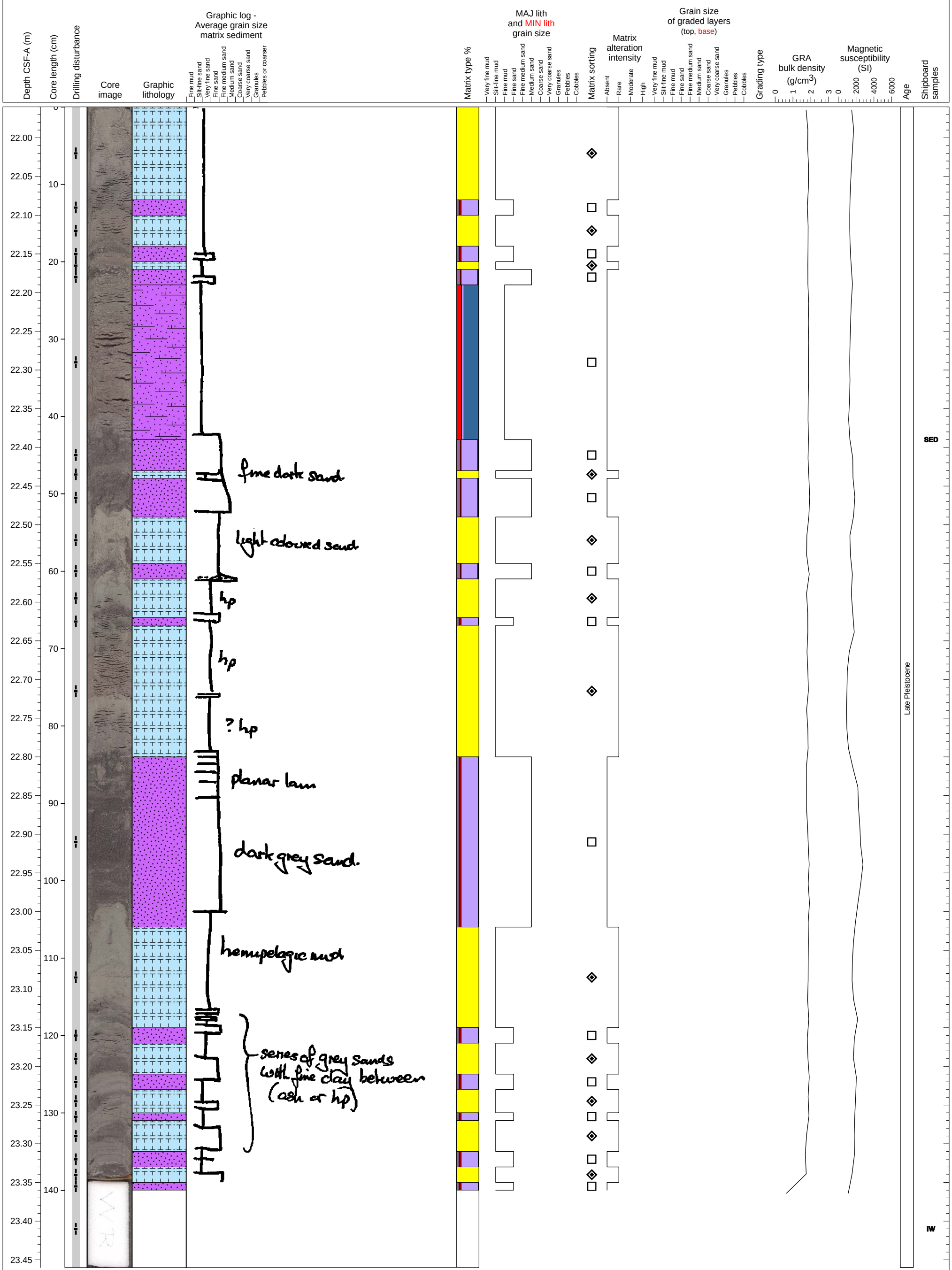
Hole 340-U1397B-3H Section 4, Top of Section: 20.51 CSF-A (m)

Complex sequence of thin tephra layers (about 15) within hemipelagic mud, with a thicker mixed bioclastic-volcaniclastic turbidite at base



Hole 340-U1397B-3H Section 5, Top of Section: 21.96 CSF-A (m)

Hemipelagic clay interlayered with abundant volcaniclastic deposits.



Hole 340-U1397B-3H Section 6, Top of Section: 23.46 CSF-A (m)

Hemipelagic clay interlayered with abundant volcaniclastic deposits, many of which are normally graded.

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

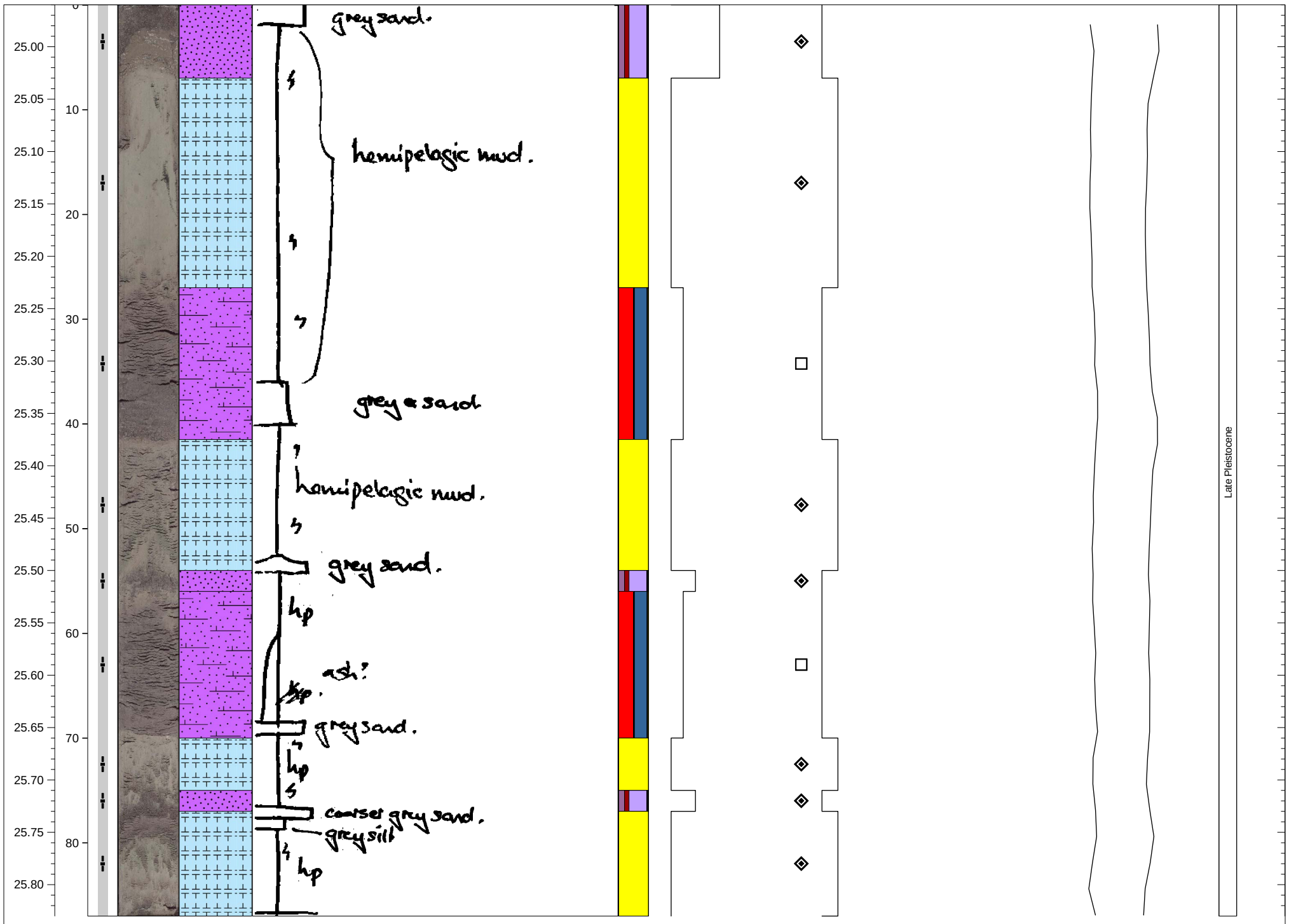
23.50 | 0
23.55 | 10
23.60
23.65 | 20
23.70
23.75 | 30
23.80
23.85 | 40
23.90
23.95 | 50
24.00
24.05 | 60
24.10
24.15 | 70
24.20
24.25 | 80
24.30
24.35 | 90
24.40
24.45 | 100
24.50
24.55 | 110
24.60
24.65 | 120
24.70
24.75 | 130
24.80
24.85 | 140
24.90
24.95

dark hemipelagic?
planar laminae picked out by white clasts.
? hemipelagic
a.
? ash
very well sorted 3cm white grains
hemipelagic mud?
??
hemipelagic mud
a?
more lighter coloured grains
dark grey sand.
hemipelagic mud.
bioturbated sand blebs or clasts
good planar lamination picked out by more or less white grains

SED
Late Pleistocene

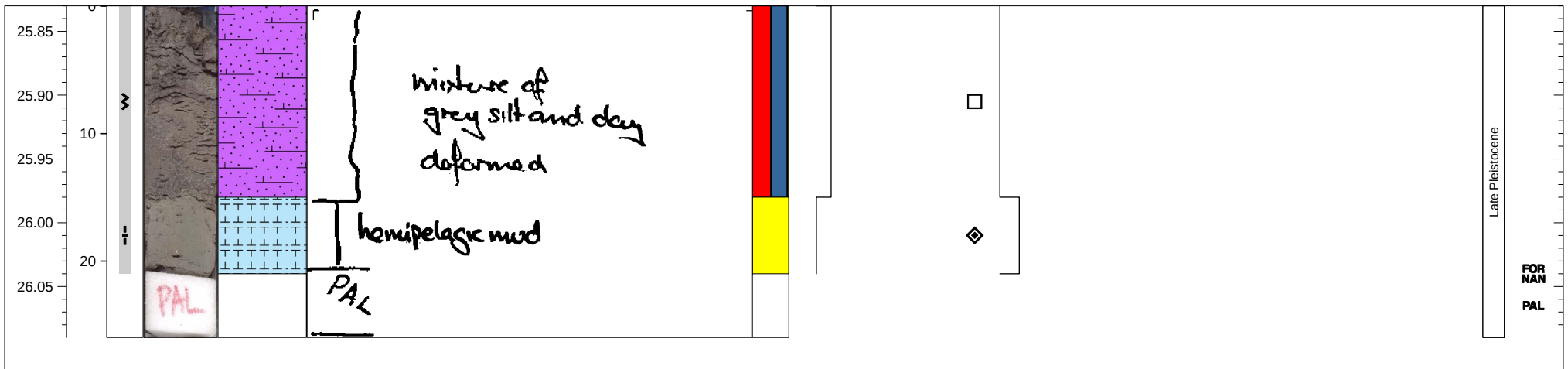
Hole 340-U1397B-3H Section 7, Top of Section: 24.96 CSF-A (m)

Hemipelagic clay with abundant thin volcaniclastic layers.



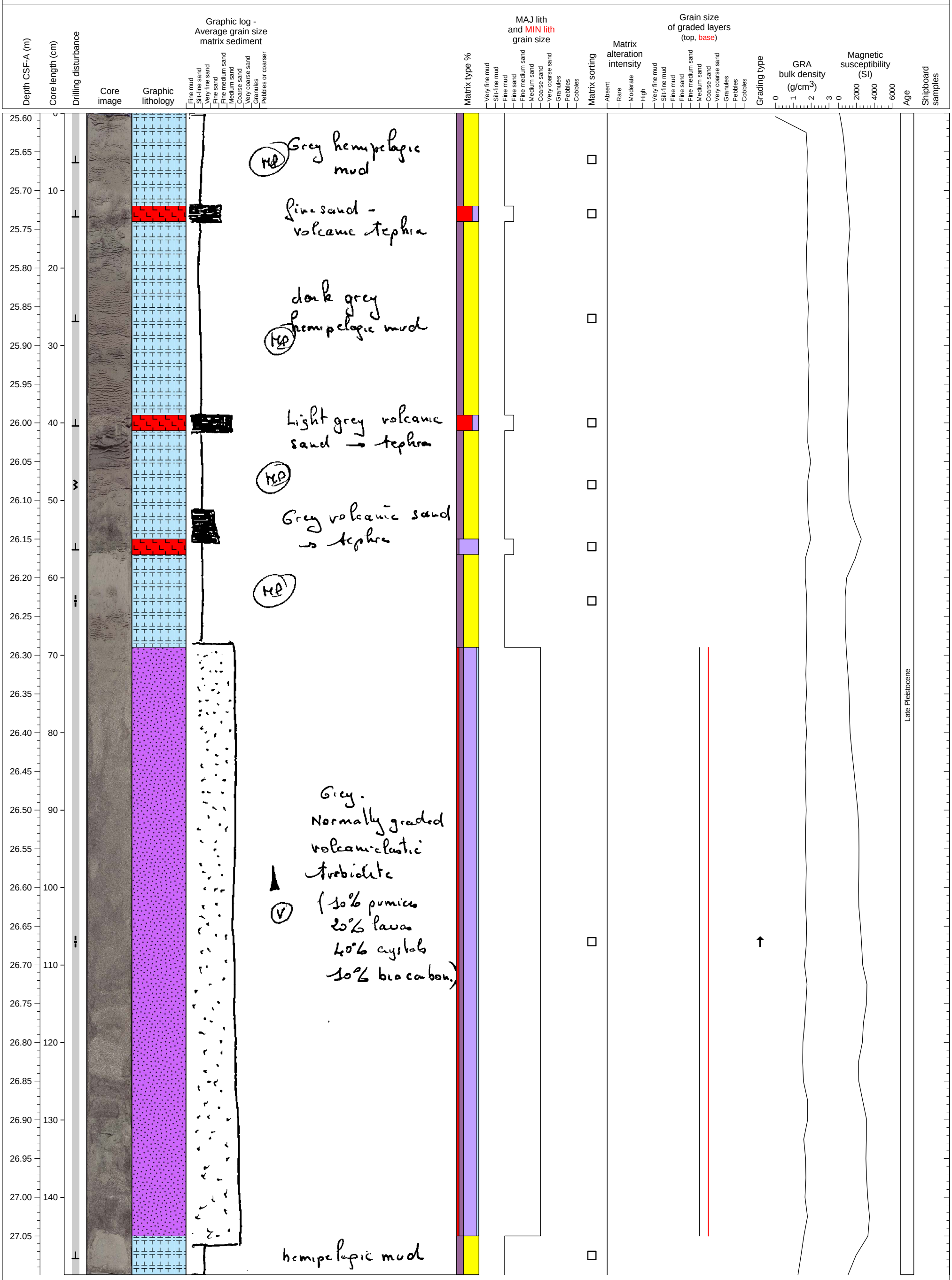
Hole 340-U1397B-3H Section CC, Top of Section: 25.83 CSF-A (m)

Volcaniclastic mud overlying hemipelagic clay. PAL from section base.



Hole 340-U1397B-4H Section 1, Top of Section: 25.6 CSF-A (m)

Hemipelagic sediment with interbedded ash layers and a volcaniclastic turbidite at base.



Hole 340-U1397B-4H Section 2, Top of Section: 27.1 CSF-A (m)

Top half consists of intercalation of hemipelagic sediments with tephra layers, and bottom half is composed of volcaniclastic turbidite

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

27.10 – 0
27.15
27.20 – 10
27.25
27.30 – 20
27.35
27.40 – 30
27.45
27.50 – 40
27.55
27.60 – 50
27.65
27.70 – 60
27.75
27.80 – 70
27.85
27.90 – 80
27.95
28.00 – 90
28.05
28.10 – 100
28.15
28.20 – 110
28.25
28.30 – 120
28.35
28.40 – 130
28.45
28.50 – 140
28.55

hemipelagic mud

two fine-grained dark volcanic layers → tephra

Tephra layer dark at the base grey at the top.

→ Mud mixed with fine ash.

– grey - dark grey hemipelagic mud

grey hemipelagic mud

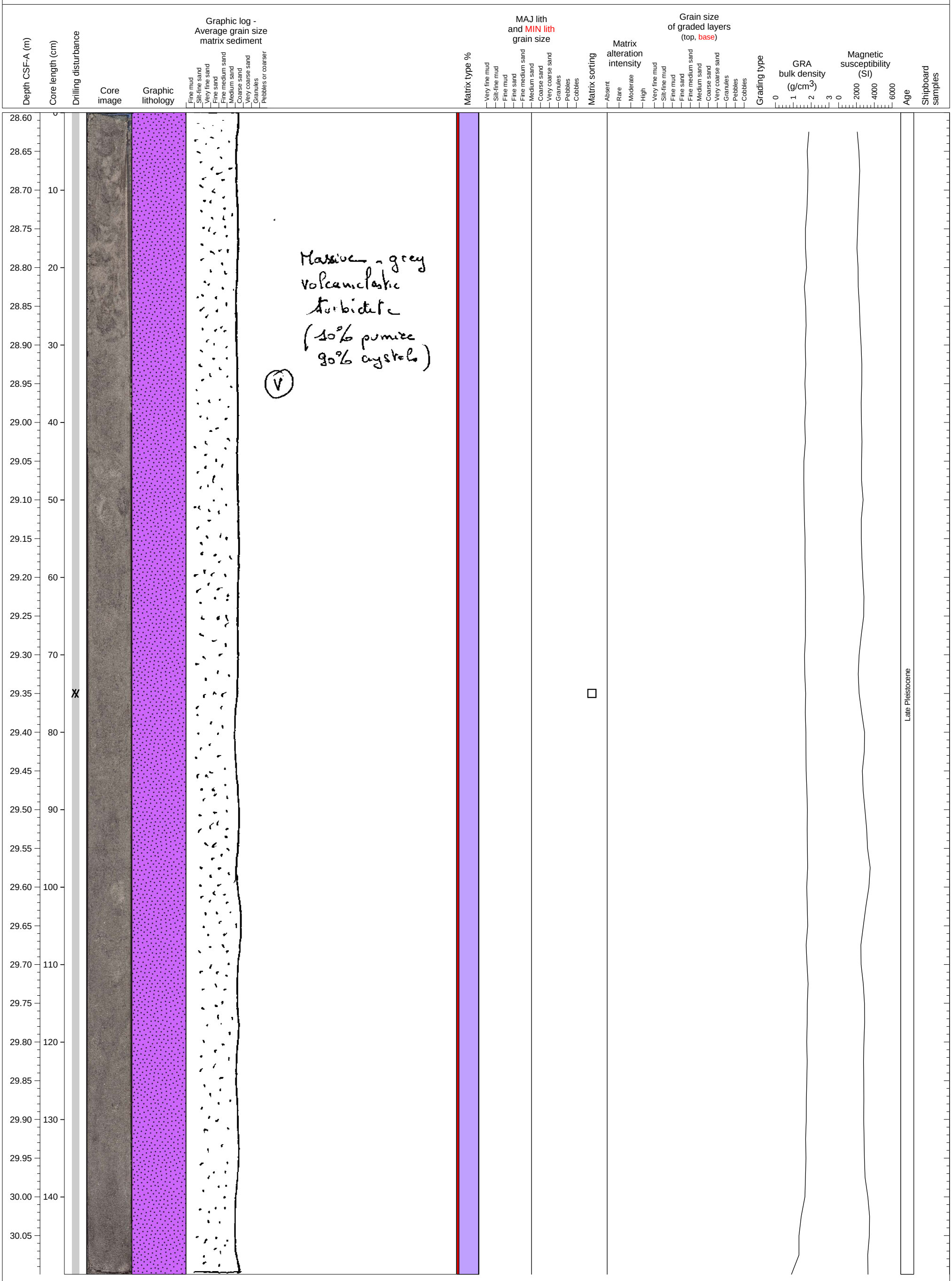
→ very pale brown hemipelagic mud

volcaniclastic turbidite (Top of the turb. date of the section 2)

Late Pleistocene

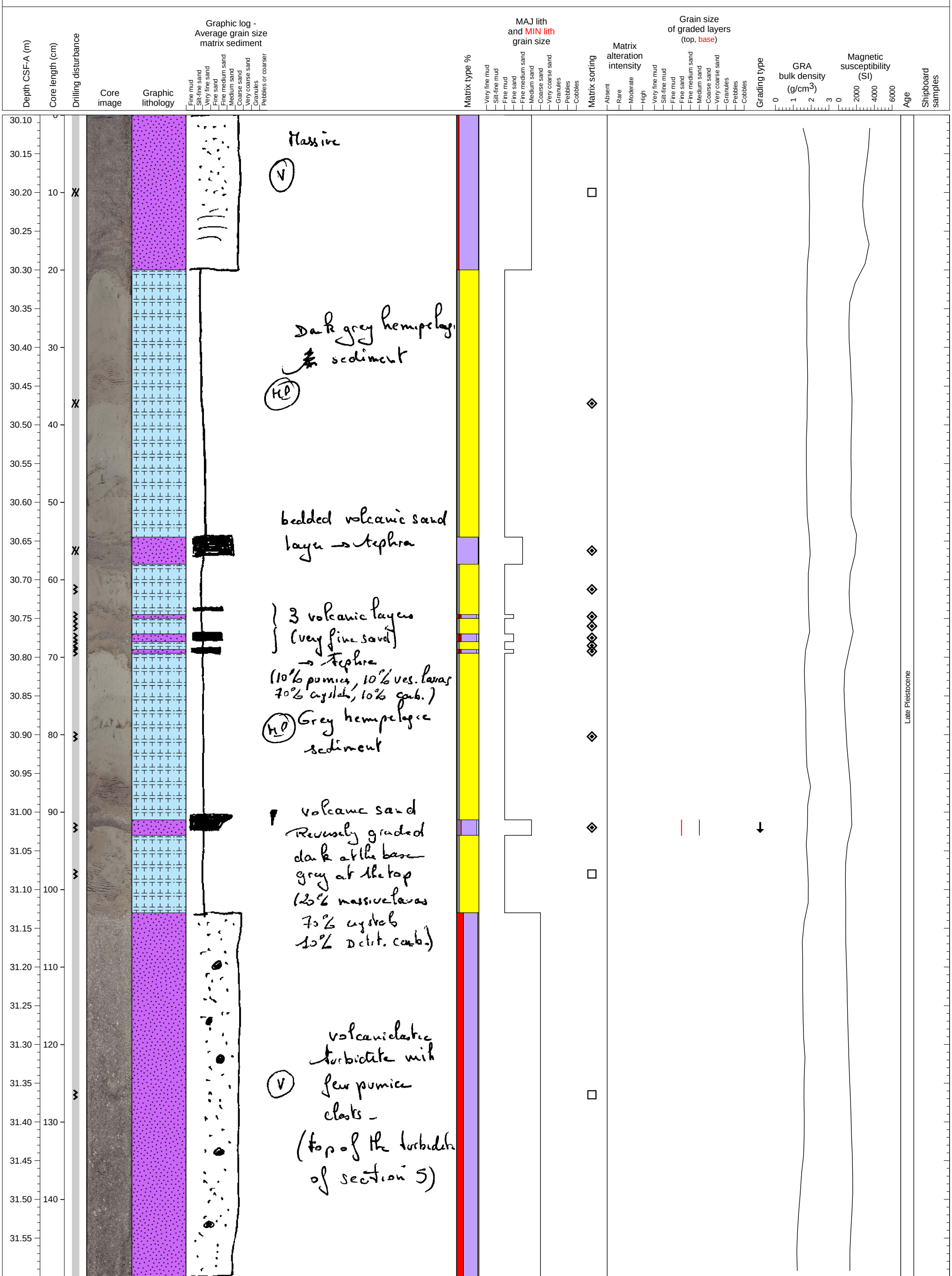
Hole 340-U1397B-4H Section 3, Top of Section: 28.6 CSF-A (m)

Crystals are sand sized, but pumice grains are coarse sand sized. massive part of volcaniclastic turbidite



Hole 340-U1397B-4H Section 4, Top of Section: 30.1 CSF-A (m)

Pumiceous volcaniclastic turbidite units in hemipelagic mud



Hole 340-U1397B-4H Section 5, Top of Section: 31.6 CSF-A (m)

Two coarse volcaniclastic sands (turbidites) with hemipelagic sediments and a thin 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/cm^3)
0
1
2
3
Magnetic susceptibility (SI)
0
2000
4000
6000
Age
Shipboard samples

31.60
31.65
31.70
31.75
31.80
31.85
31.90
31.95
32.00
32.05
32.10
32.15
32.20
32.25
32.30
32.35
32.40
32.45
32.50
32.55
32.60
32.65
32.70
32.75
32.80
32.85
32.90
32.95
33.00
33.05

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

Normally graded volcaniclastic turbidite (grey) (10% pumices 10% ves. lavas 80% crystals)

hempelagic mud mixed with fine ash - (→ dark color)

fine volcanic sand (dark) → tephra

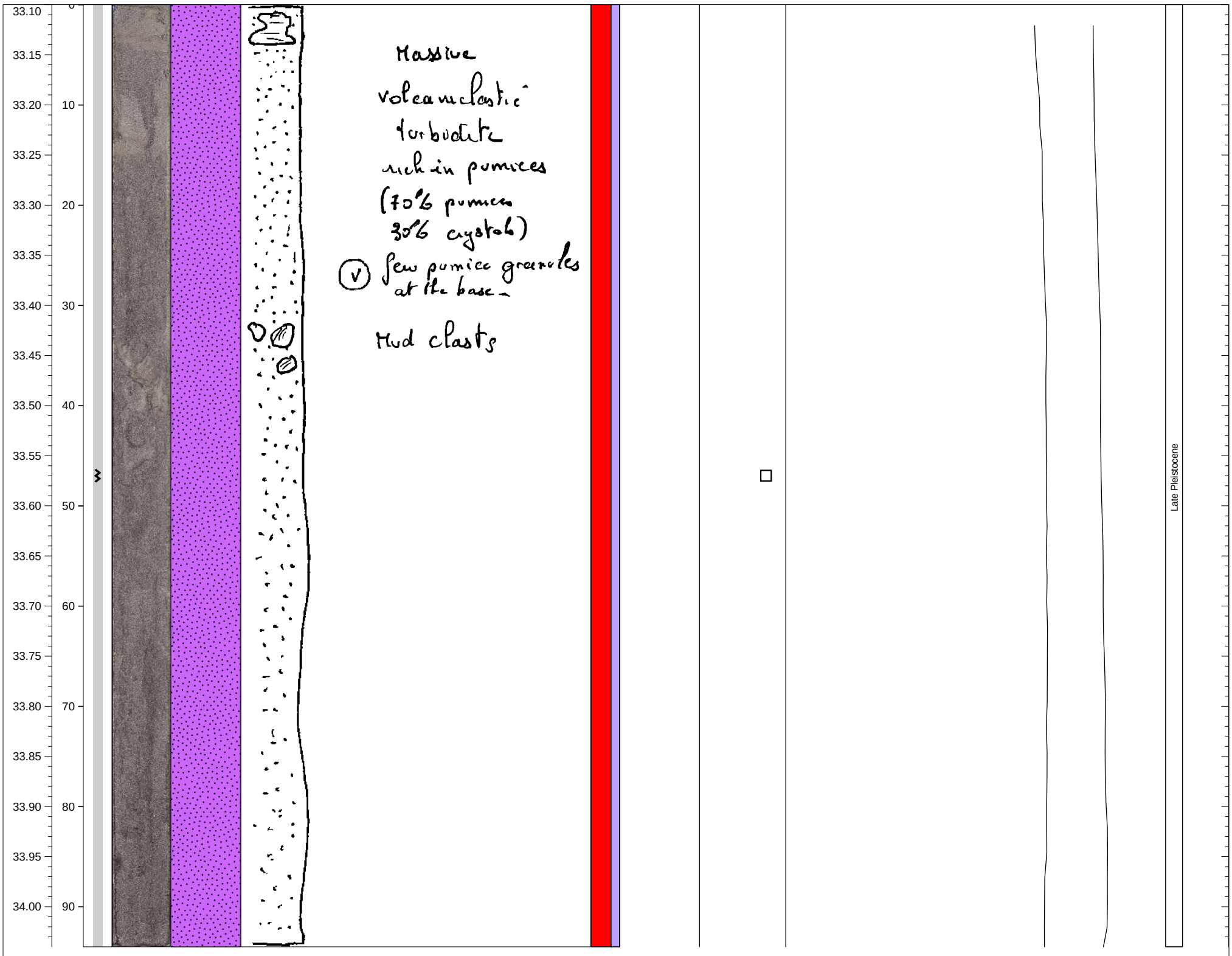
Grey to light grey hempelagic mud

Massive, light grey volcaniclastic turbidite (top of the turbidite from section 6)

Late Pleistocene

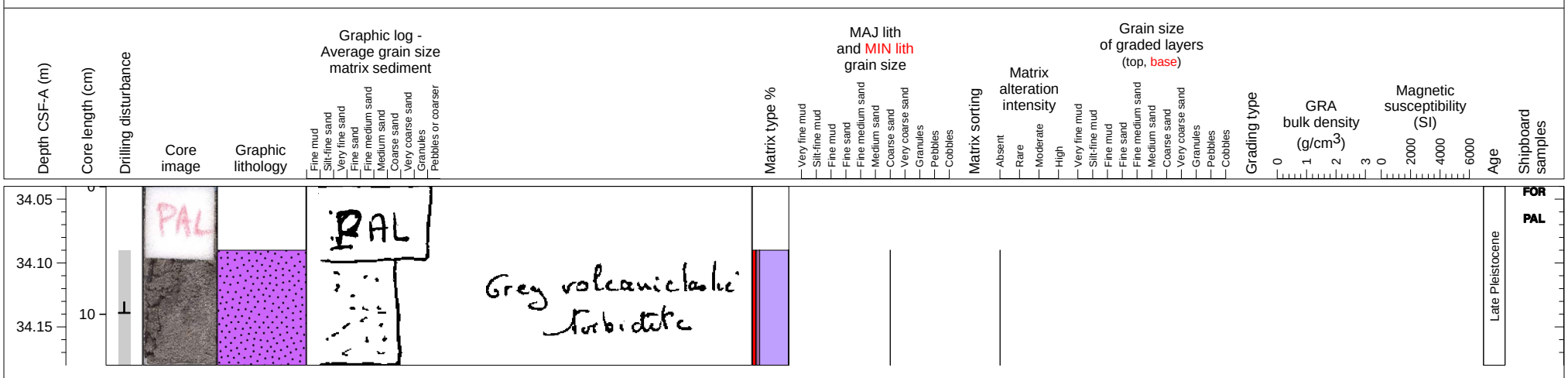
Hole 340-U1397B-4H Section 6, Top of Section: 33.1 CSF-A (m)

Crystals are sand sized, but pumice grains are coarse sand sized. massive part of volcaniclastic turbidite



Hole 340-U1397B-4H Section CC, Top of Section: 34.04 CSF-A (m)

Volcaniclastic sand rich in crystals - turbidite.



Hole 340-U1397B-5H Section 1, Top of Section: 34.1 CSF-A (m)

Hemipelagic sediments with intercalated tephra layerrs

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

34.10
34.15
34.20
34.25
34.30
34.35
34.40
34.45
34.50
34.55
34.60
34.65
34.70
34.75
34.80
34.85
34.90
34.95
35.00
35.05
35.10
35.15
35.20
35.25
35.30
35.35
35.40
35.45
35.50
35.55

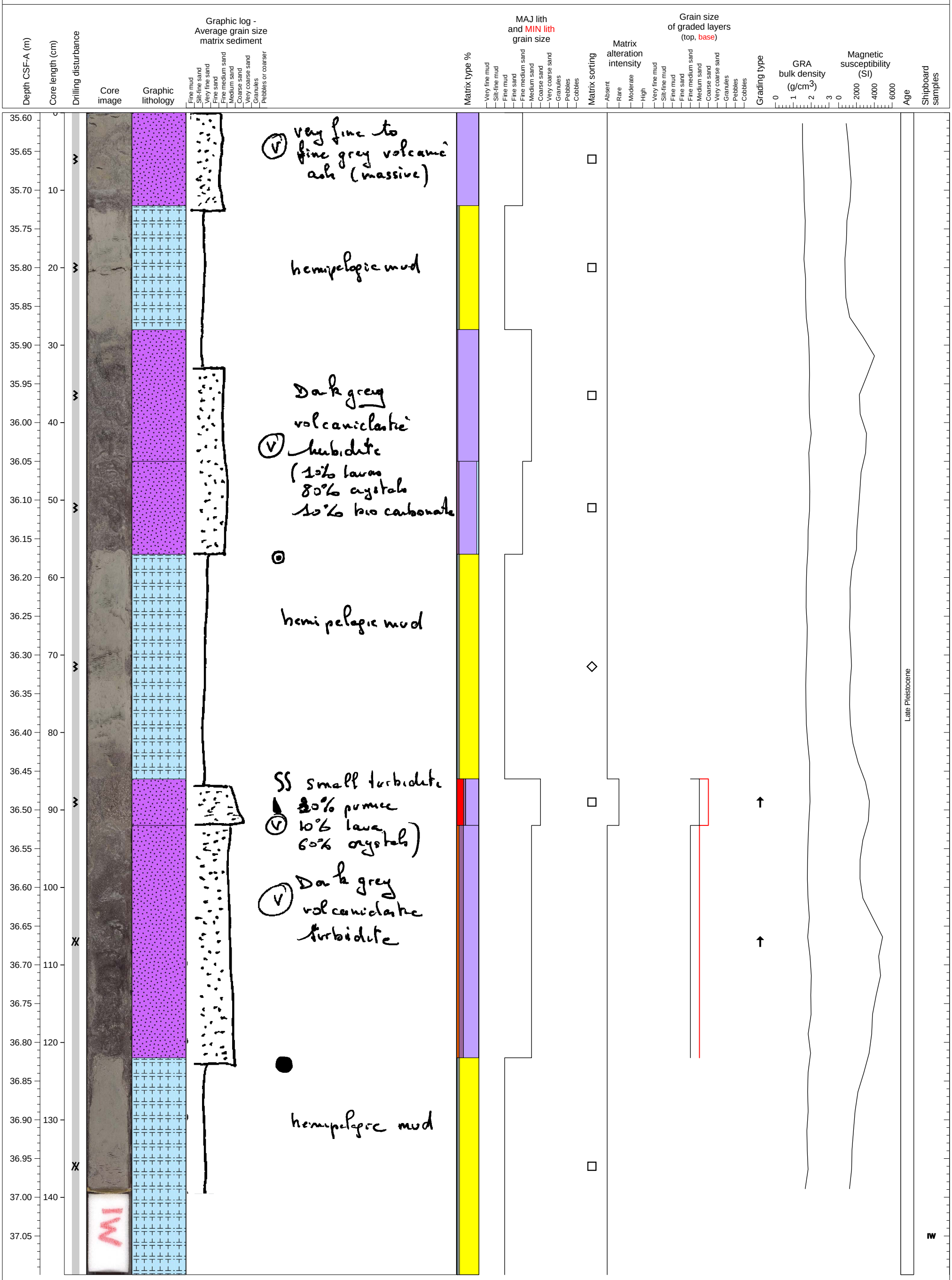
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140

tephra layer
HP
tephra layer
HP
tephra layer
tephra layer
HP
tephra layer
HP
Grey to green hemipelagic mud
Four tephra layers in the mud sediment

Late Pleistocene

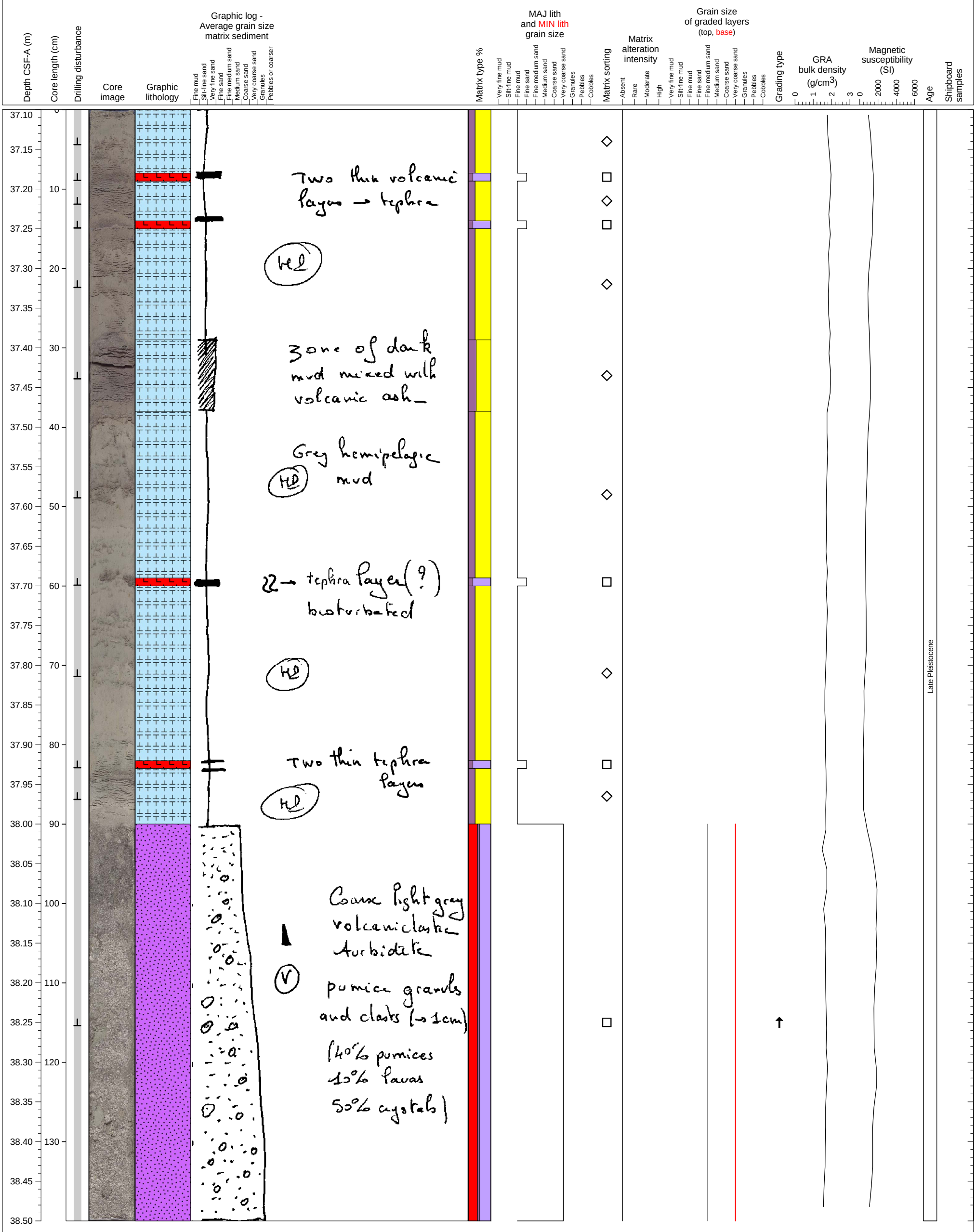
Hole 340-U1397B-5H Section 2, Top of Section: 35.6 CSF-A (m)

Decimetre thick, a couple of volcaniclastic turbidite units (mainly pumiceous) within hemipelagic fine mud



Hole 340-U1397B-5H Section 3, Top of Section: 37.1 CSF-A (m)

Hemipelagic sediments with 4 ash layers interbedded and a normally graded volcaniclastic turbidite at thebase.



Hole 340-U1397B-5H Section 4, Top of Section: 38.5 CSF-A (m)

Intercalation of hemipelagic sediments and volcaniclastic turbidites

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

38.55
38.60
38.65
38.70
38.75
38.80
38.85
38.90
38.95
39.00
39.05
39.10
39.15
39.20
39.25
39.30
39.35
39.40
39.45
39.50
39.55
39.60
39.65
39.70
39.75
39.80
39.85
39.90

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

Coarse light grey turbidite rich in pumices.

V

Grey to brown hemipelagic mud with few green zones

HP

g

g

22

Dark grey fine-grained volcaniclastic turbidite

HP

22

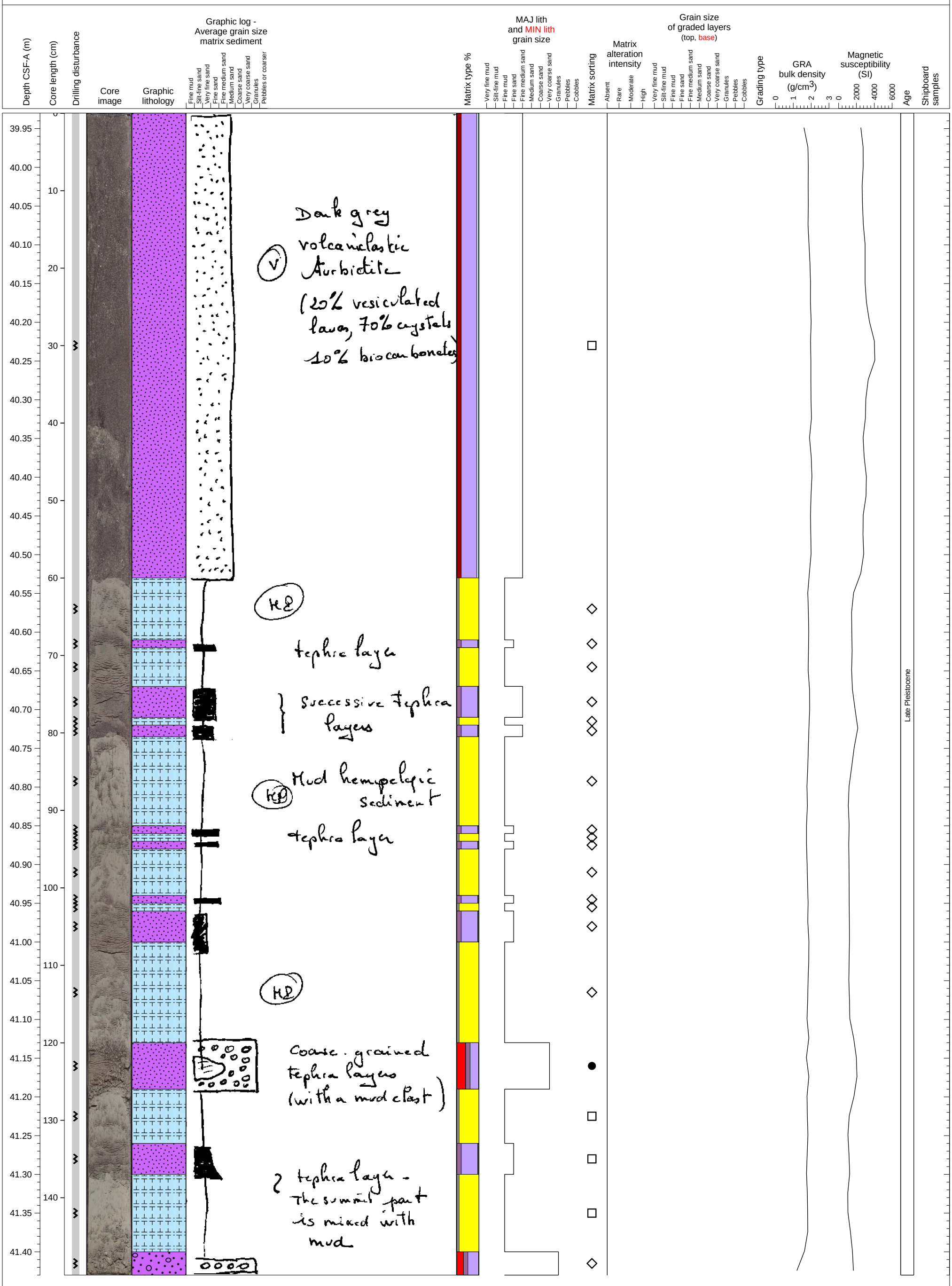
V

top of the dark grey volcanic turbidite of 38.5

Late Pleistocene

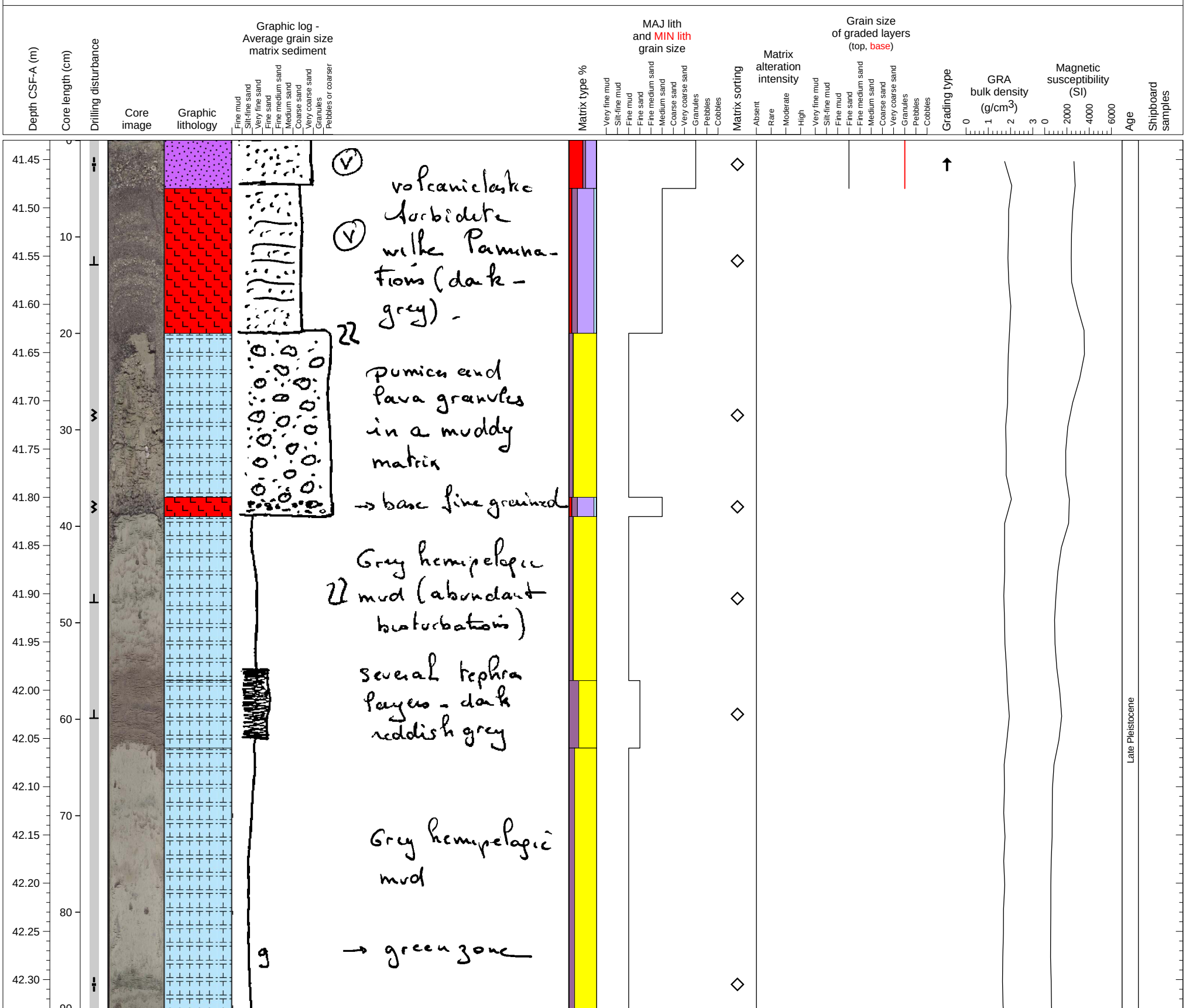
Hole 340-U1397B-5H Section 5, Top of Section: 39.93 CSF-A (m)

8-10 thin ashfall layers and several volcaniclastic turbidite units withni hemipelagic mud



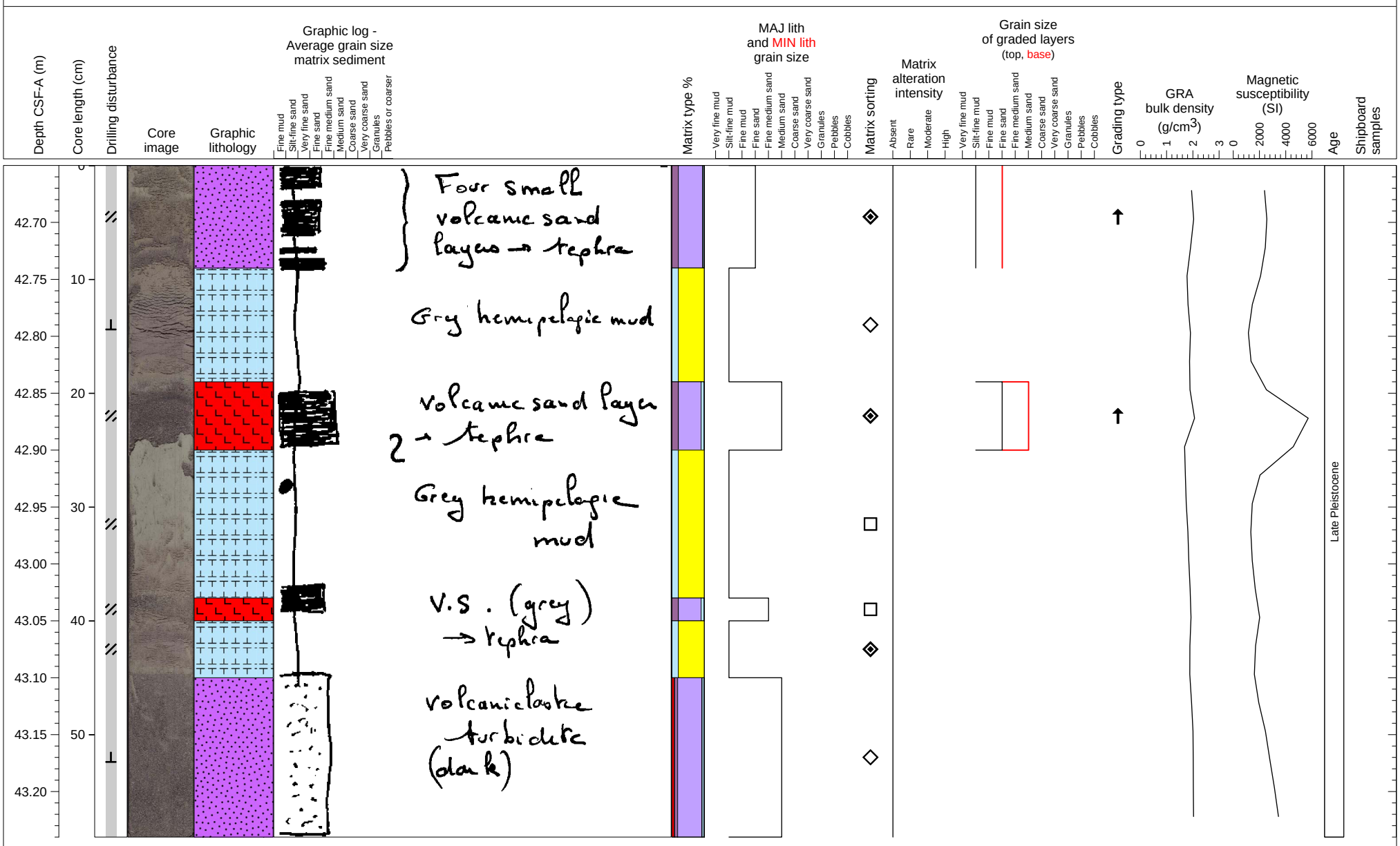
Hole 340-U1397B-5H Section 6, Top of Section: 41.43 CSF-A (m)

Volcaniclastic sands and hemipelagic sediments with a single thin ash layer.



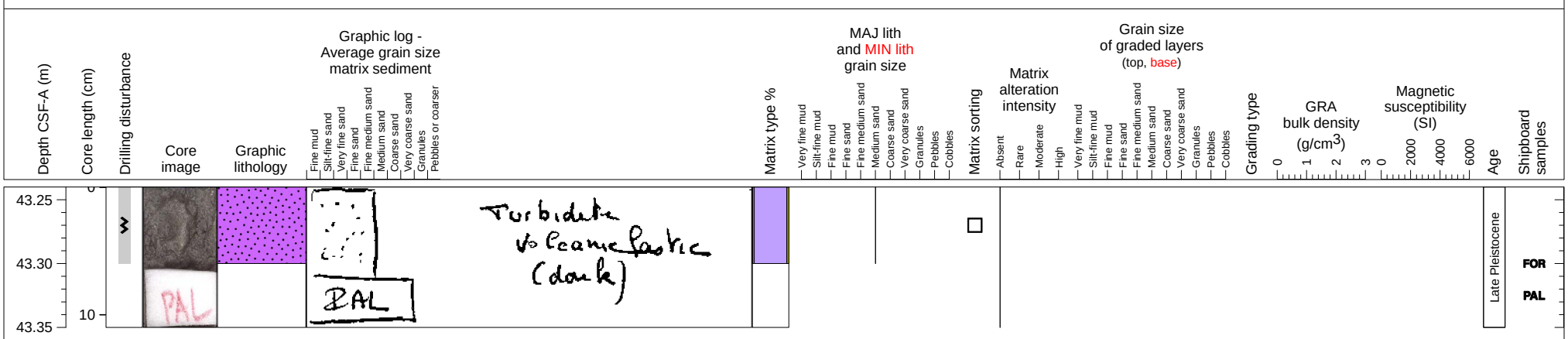
Hole 340-U1397B-5H Section 7, Top of Section: 42.65 CSF-A (m)

Intercalation of hemipelagic sediments and tephra layers with volcaniclastic turbidite



Hole 340-U1397B-5H Section CC, Top of Section: 43.24 CSF-A (m)

Volcaniclastic sand, part of turbidite.



Hole 340-U1397B-6H Section 1, Top of Section: 43.6 CSF-A (m)

Hemipelagic sediments with several intercalations of thin ashfall? layers and 1 volcaniclastic turbidite 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

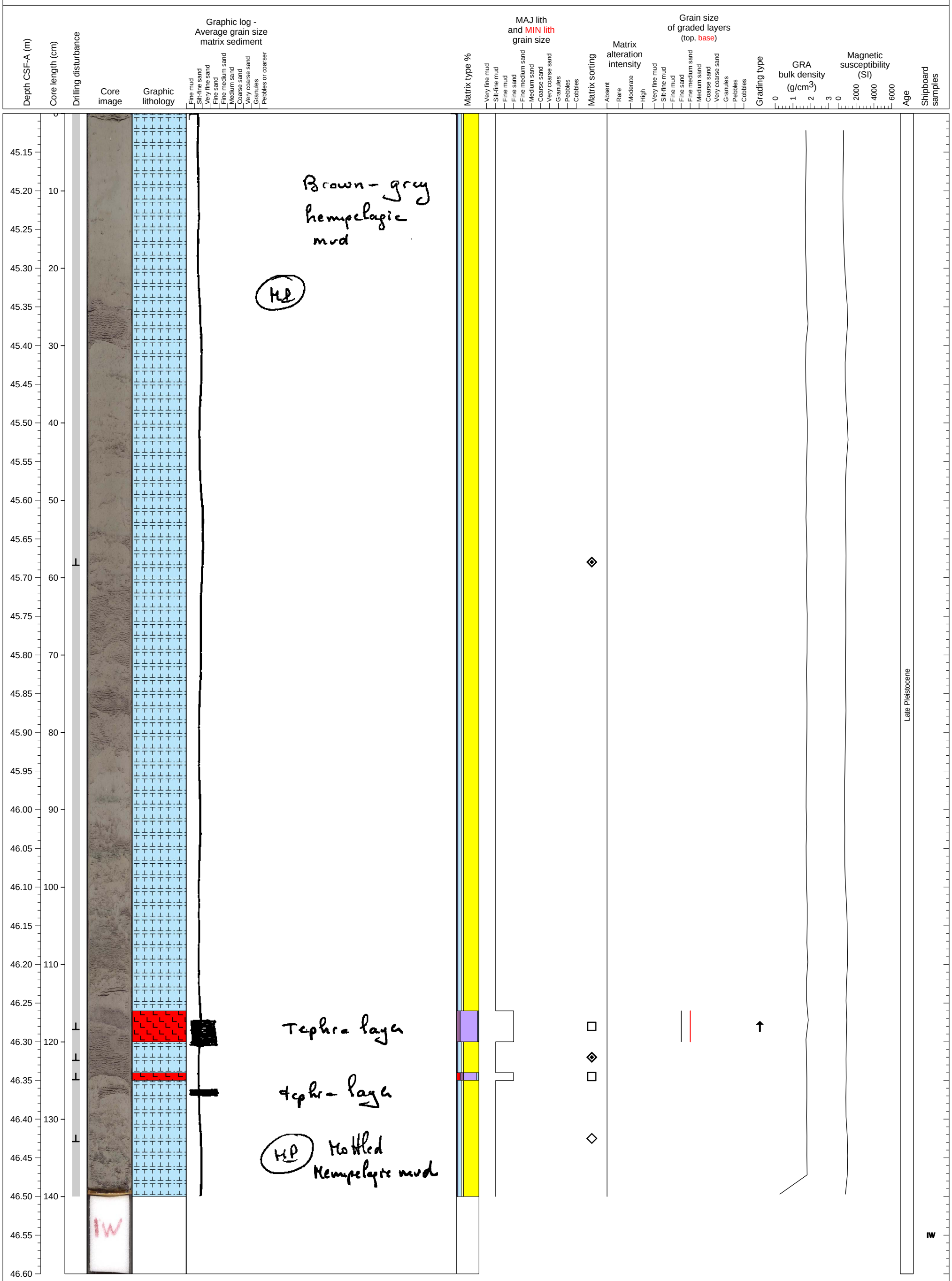
43.65 – 10
43.70
43.75 – 20
43.80
43.85 – 30
43.90
43.95 – 40
44.00
44.05 – 50
44.10
44.15 – 60
44.20
44.25 – 70
44.30
44.35 – 80
44.40
44.45 – 90
44.50
44.55 – 100
44.60
44.65 – 110
44.70
44.75 – 120
44.80
44.85 – 130
44.90
44.95 – 140
45.00
45.05
45.10

Hemipelagic mud
HE
Coarse grained volcanic layer rich in pumice (30% pumices, 20% massive lavas, 50% cystals)
Tephra Layer
Grey hemipelagic mud
HP
2 Tephra Layer with high bioturbation
Hemipelagic mud
HP
2 Tephra layer
Mottled grey hemipelagic mud
HP

Late Pleistocene

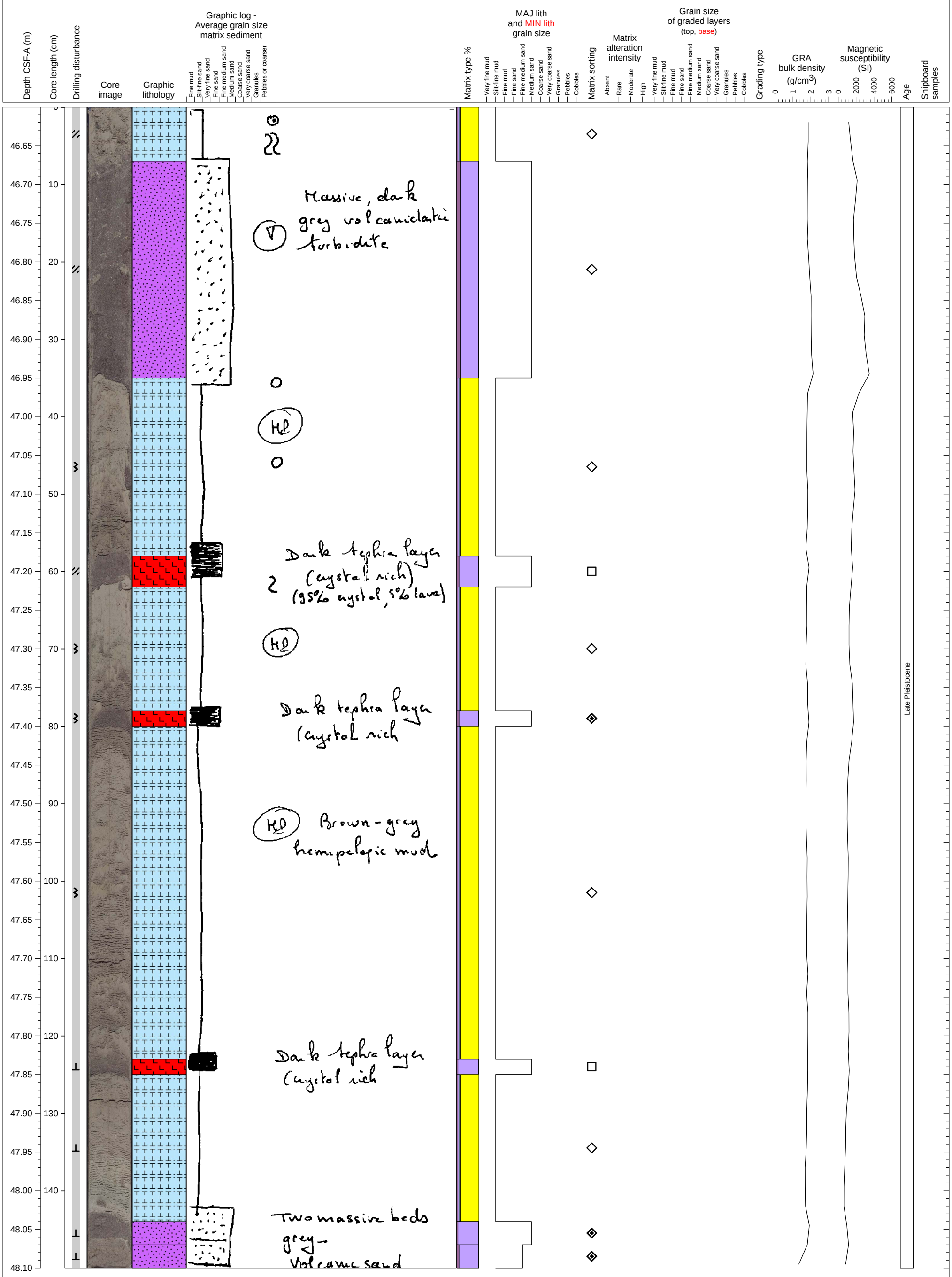
Hole 340-U1397B-6H Section 2, Top of Section: 45.1 CSF-A (m)

Hemipelagic sediments with intercalated tephra layers



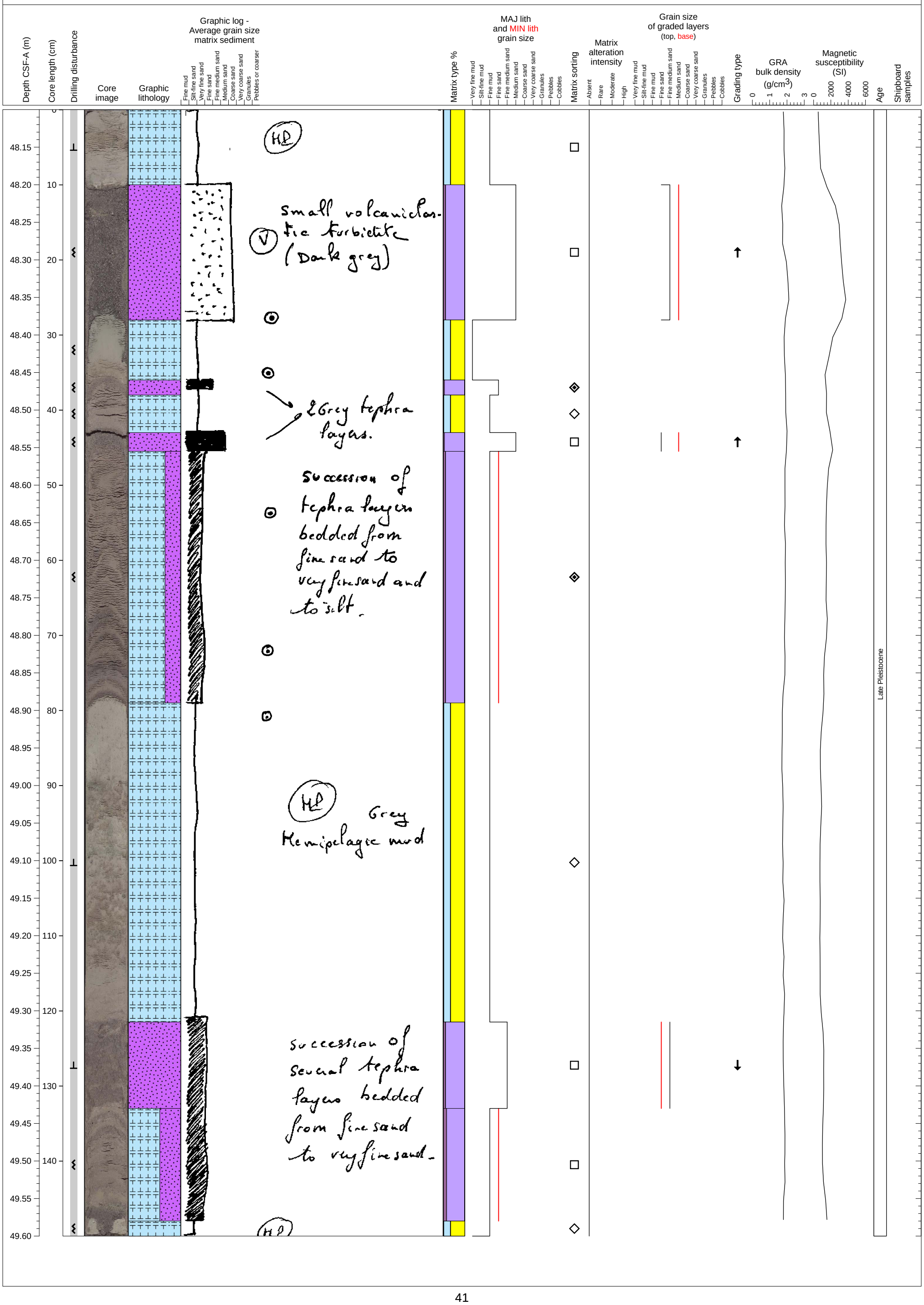
Hole 340-U1397B-6H Section 3, Top of Section: 46.6 CSF-A (m)

Hemipelagic sediments with intercalated tephra and volcanic sand layers



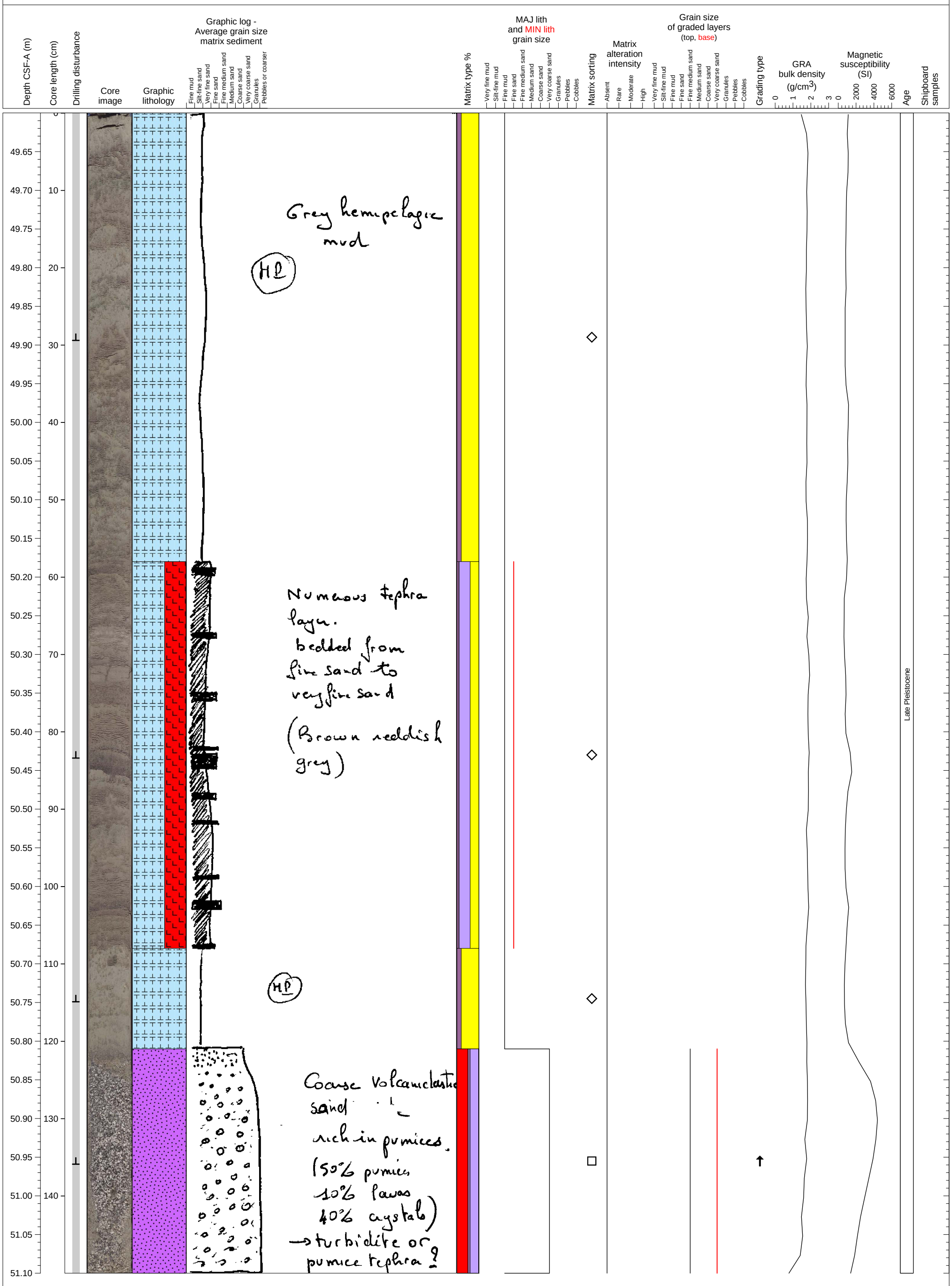
Hole 340-U1397B-6H Section 4, Top of Section: 48.1 CSF-A (m)

Hemipelagic sediments with thin ashfall intercalations and with volcaniclastic turbidite



Hole 340-U1397B-6H Section 5, Top of Section: 49.6 CSF-A (m)

Hemipelagic sediment with a 60 cm thick layer of intebeded ash and hemipelagic sediments. Volcaniclastic sand layer at base.



Hole 340-U1397B-6H Section 6, Top of Section: 51.1 CSF-A (m)

Base of volcaniclastic turbidite rich in pumice overlying hemipelagic sediments interbedded with a thick coarse ash fall layer and a thiner, finer-grained 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 %
Very fine mud
Silt-fine mud
Fine mud
Fine sand
Fine medium sand
Medium sand
Coarse sand
Very coarse sand
Granules
Pebbles
Cobbles

MAJ lith and MIN lith grain size

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
51.20
51.25
51.30
51.35
51.40
51.45
51.50
51.55
51.60
51.65
51.70
51.75
51.80
51.85
51.90
51.95
52.00
52.05
52.10
52.15
52.20
52.25
52.30
52.35
52.40
52.45
52.50
52.55
52.60

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

Tephra or turbidite ?

Small fine-grained volcaniclastic turbidite

V

Grey hemipelagic mud

HP

beige hemipelagic mud

→ zone of light grey HP

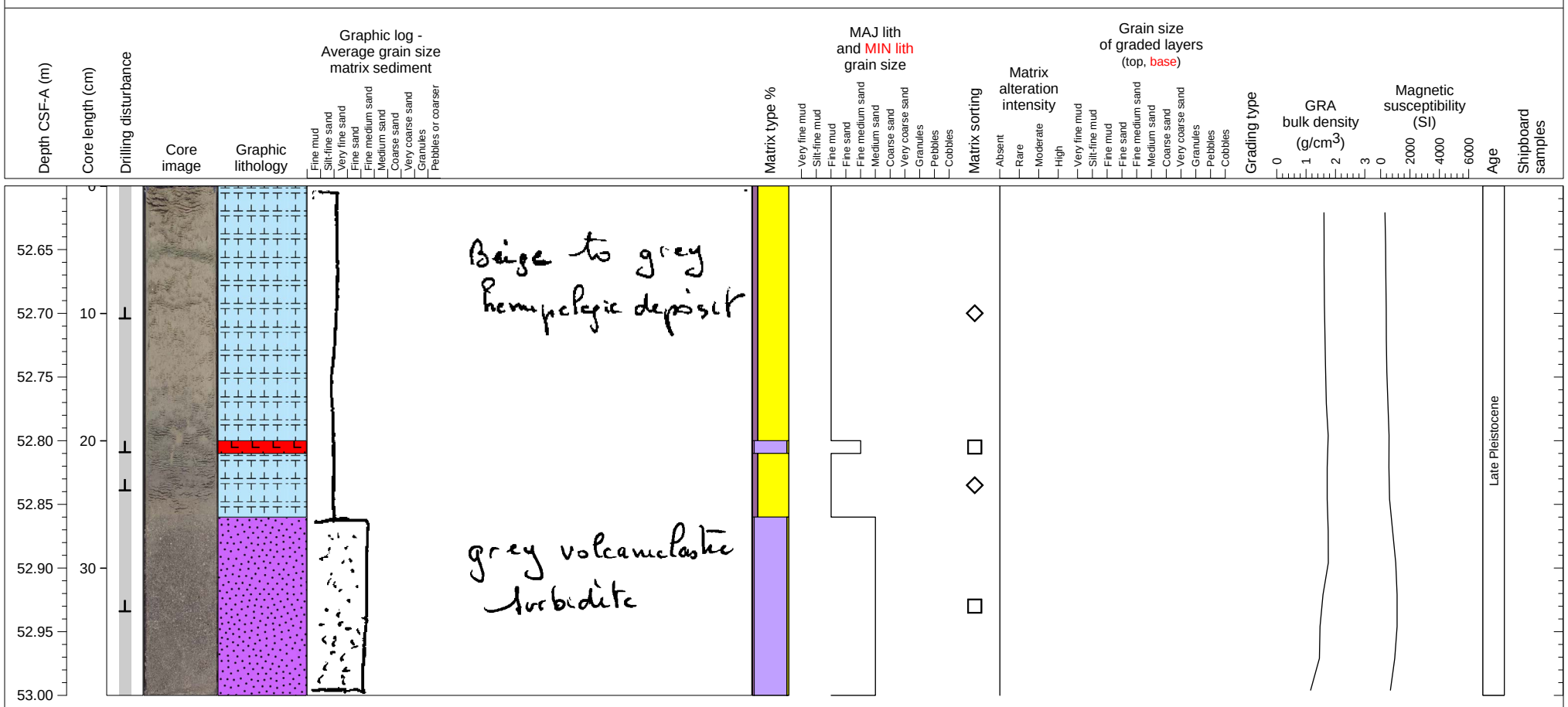
Beige HP

IW

Late Pleistocene

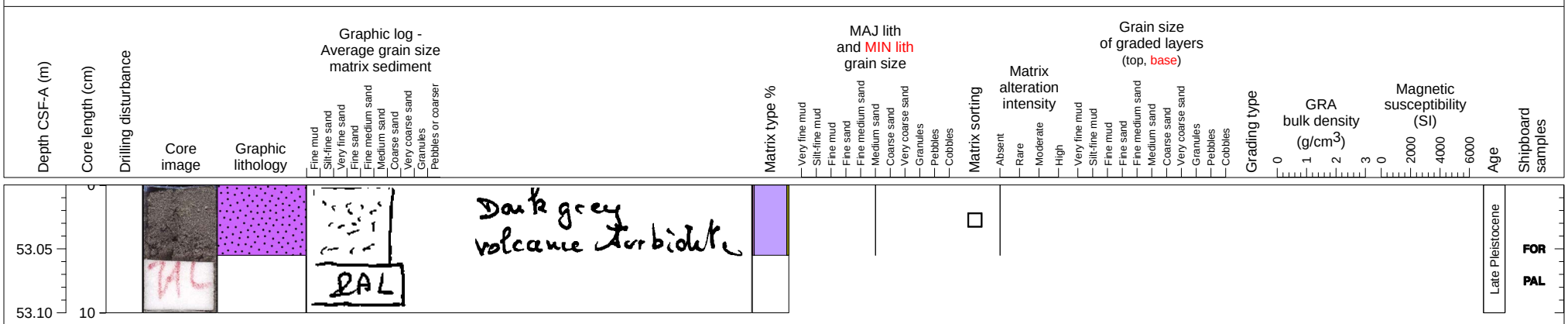
Hole 340-U1397B-6H Section 7, Top of Section: 52.6 CSF-A (m)

Hemipelagic sediment with a thin ash lyer interbedded, overlying a volcaniclastic sand (turbidite?)



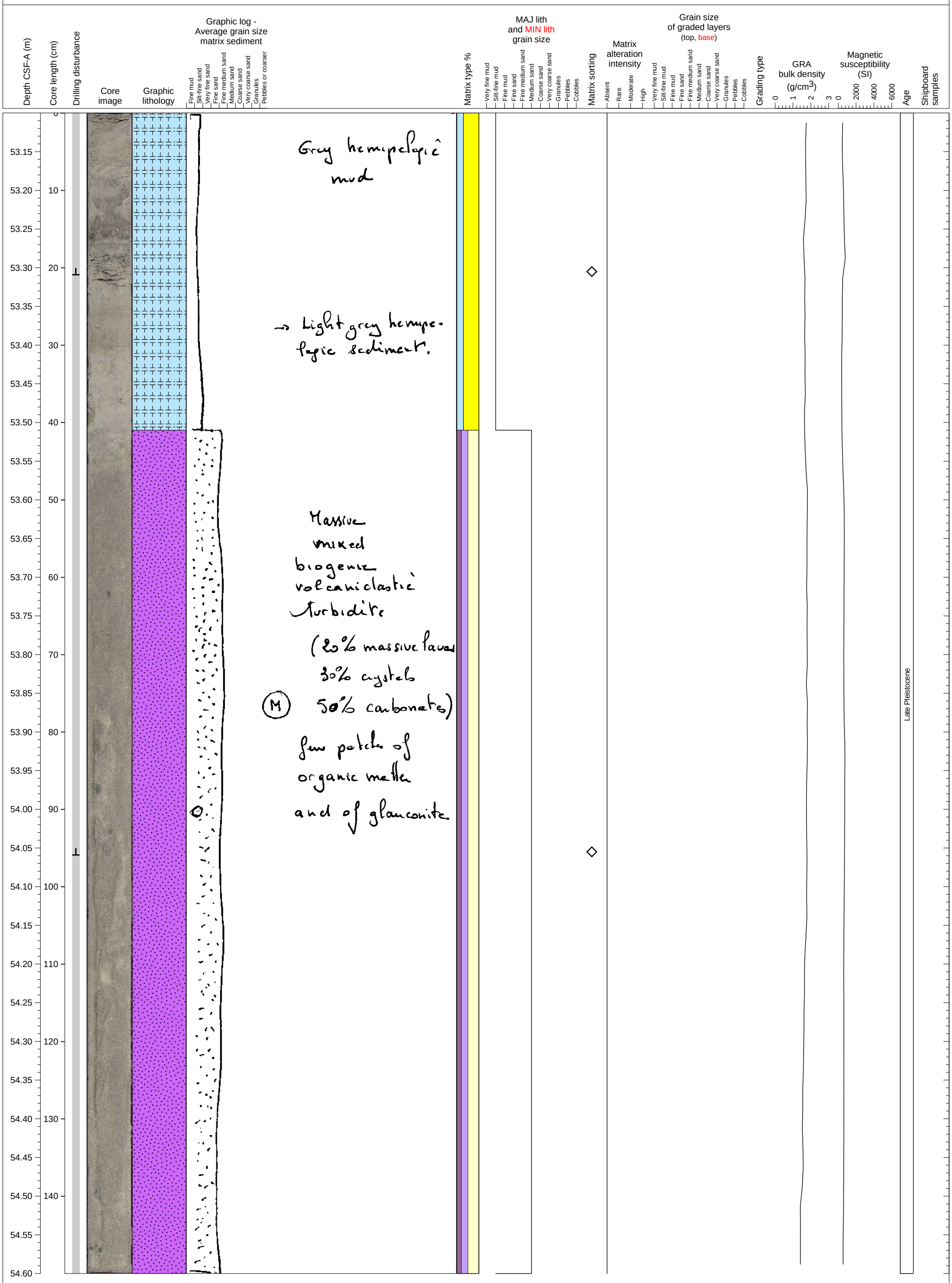
Hole 340-U1397B-6H Section CC, Top of Section: 53.0 CSF-A (m)

Volcaniclastic sand



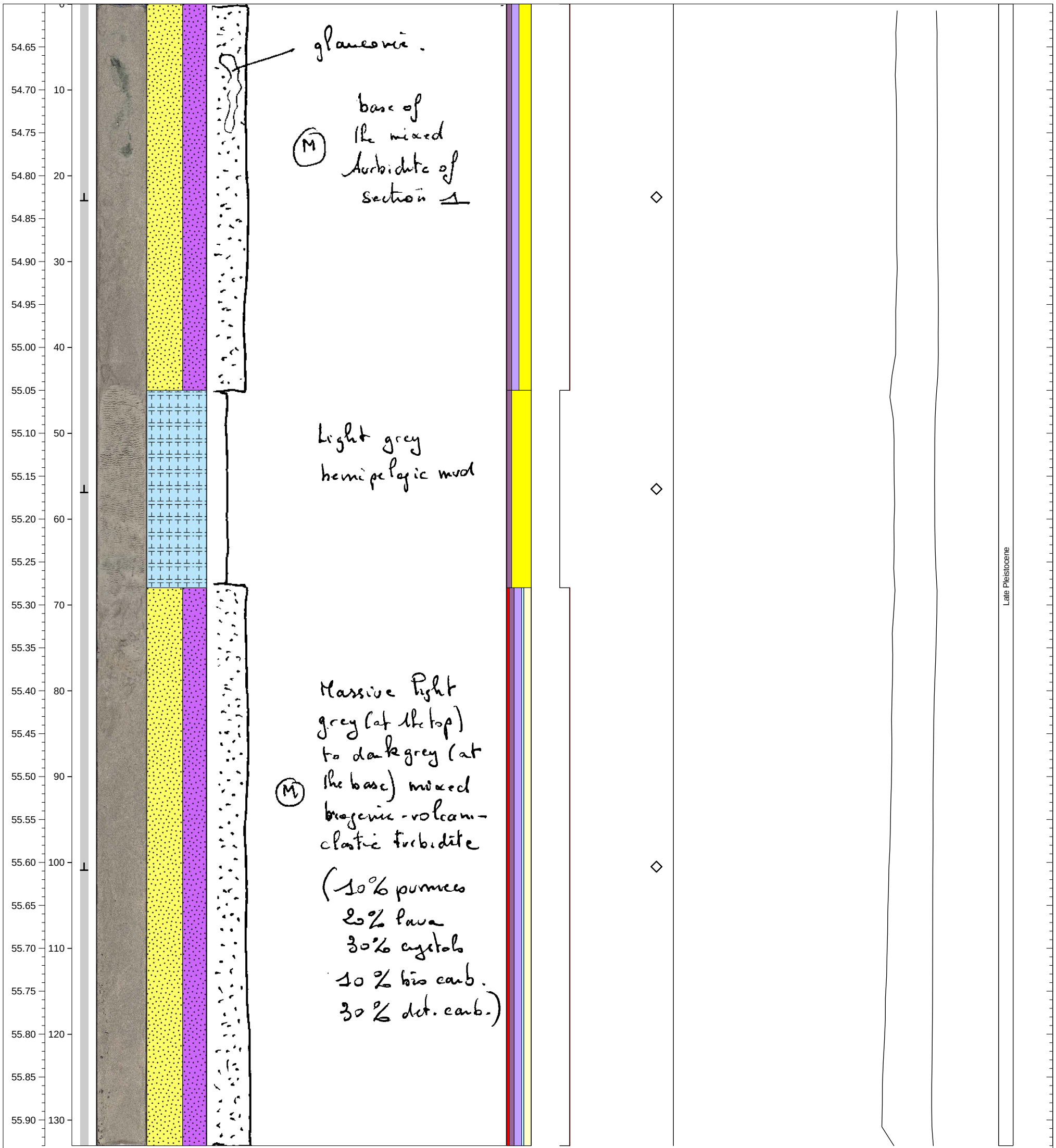
Hole 340-U1397B-7H Section 1, Top of Section: 53.1 CSF-A (m)

Mixed bioclastic and volcaniclastic turbidite and hemipelagic sediment



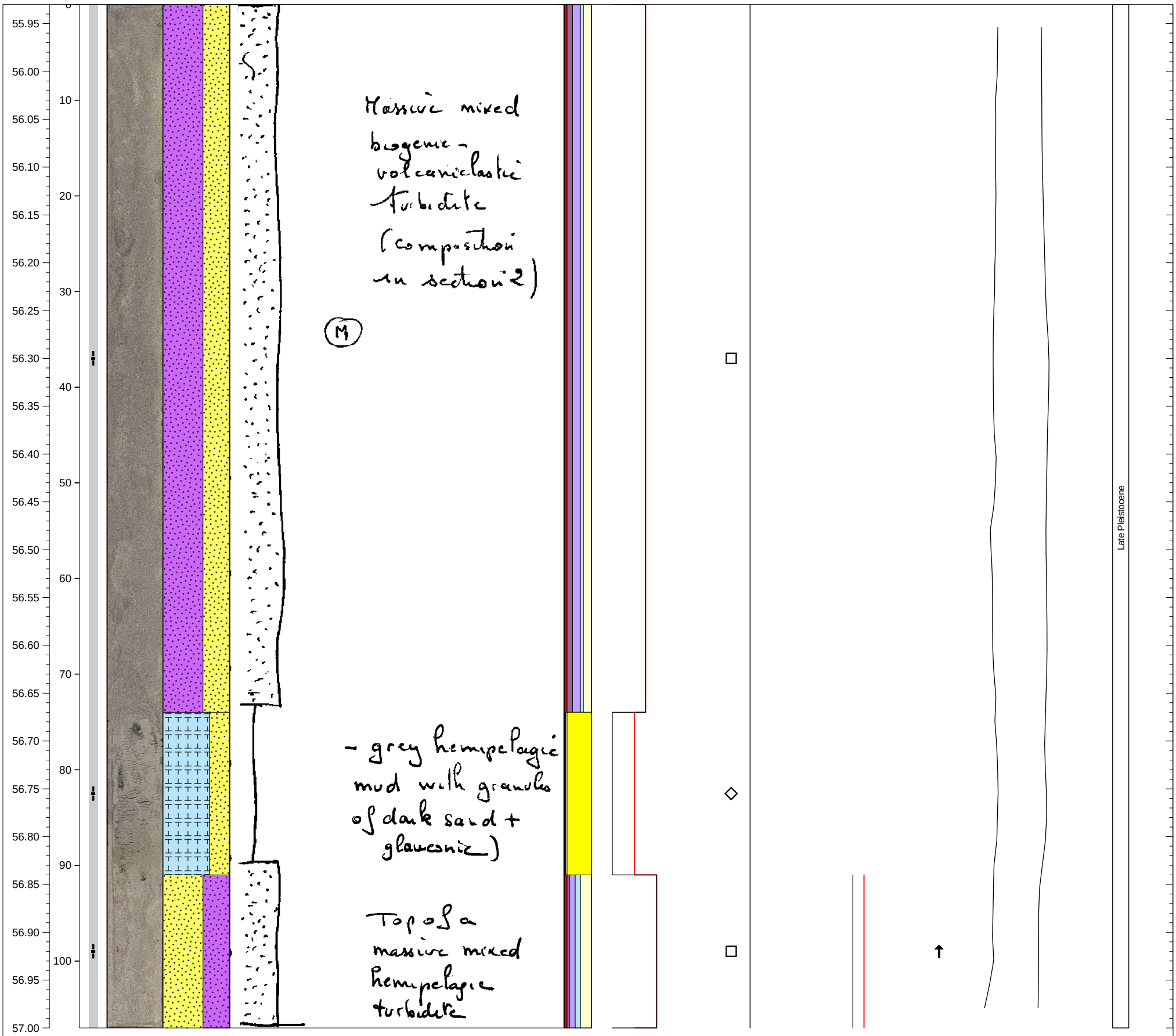
Hole 340-U1397B-7H Section 2, Top of Section: 54.6 CSF-A (m)

The top approximately 50 cm thick is mixed turbidite, overlying hemipelagic sediments



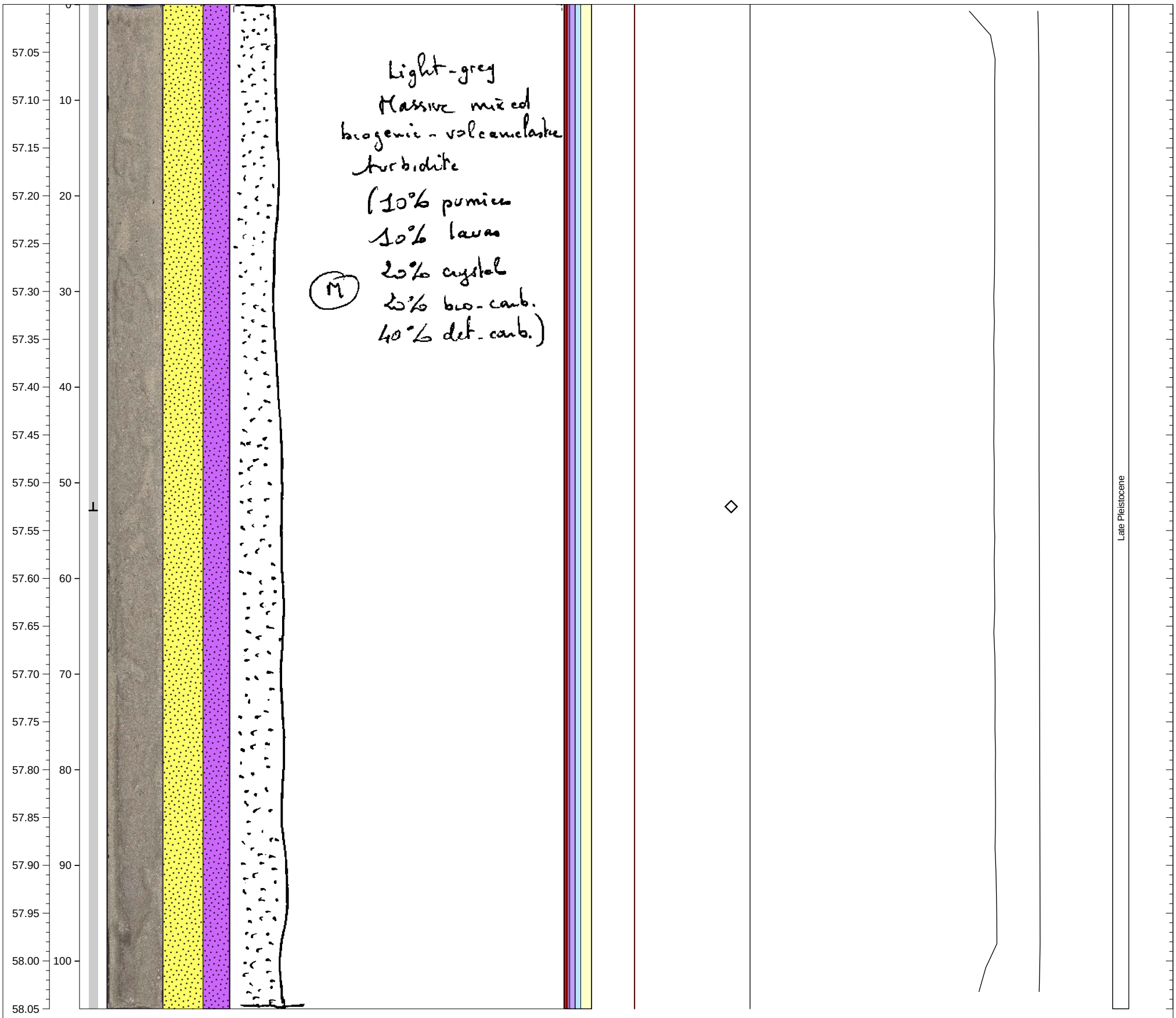
Hole 340-U1397B-7H Section 3, Top of Section: 55.93 CSF-A (m)

Mainly composed of mixted bio/volcaniclastic turbidite



Hole 340-U1397B-7H Section 4, Top of Section: 57.0 CSF-A (m)

Mixed bioclastic/volcaniclastic turbidite.



Hole 340-U1397B-7H Section 5, Top of Section: 58.05 CSF-A (m)

Mixed bioclastic/volcaniclastic turbidite.

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

58.10
58.15
58.20
58.25
58.30
58.35
58.40
58.45
58.50
58.55
58.60
58.65
58.70
58.75
58.80
58.85
58.90
58.95
59.00
59.05
59.10
59.15
59.20
59.25
59.30
59.35
59.40

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

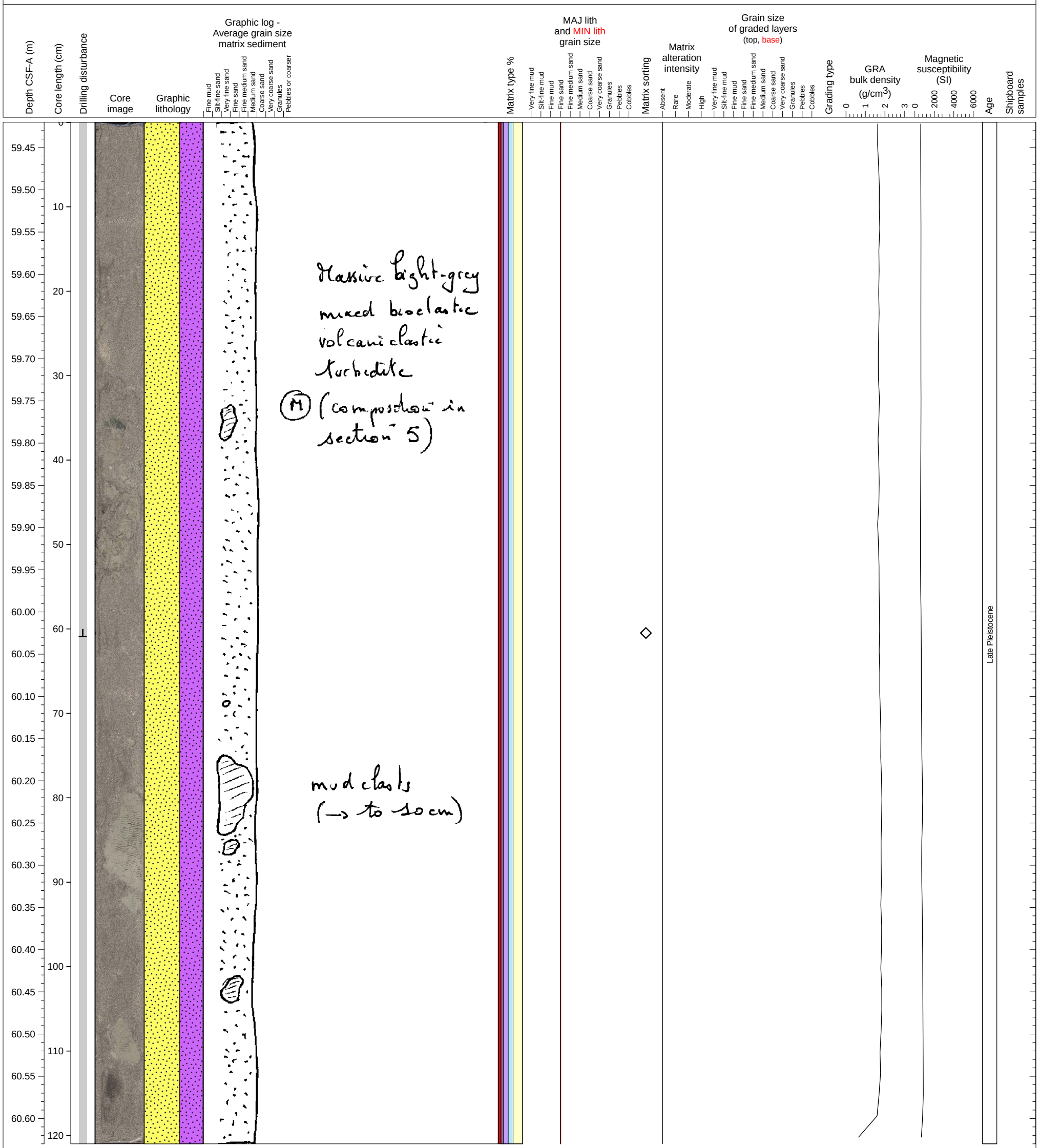
Massive light grey mixed bioclastic volcaniclastic turbidite (composition in section 5)

M

Late Pleistocene

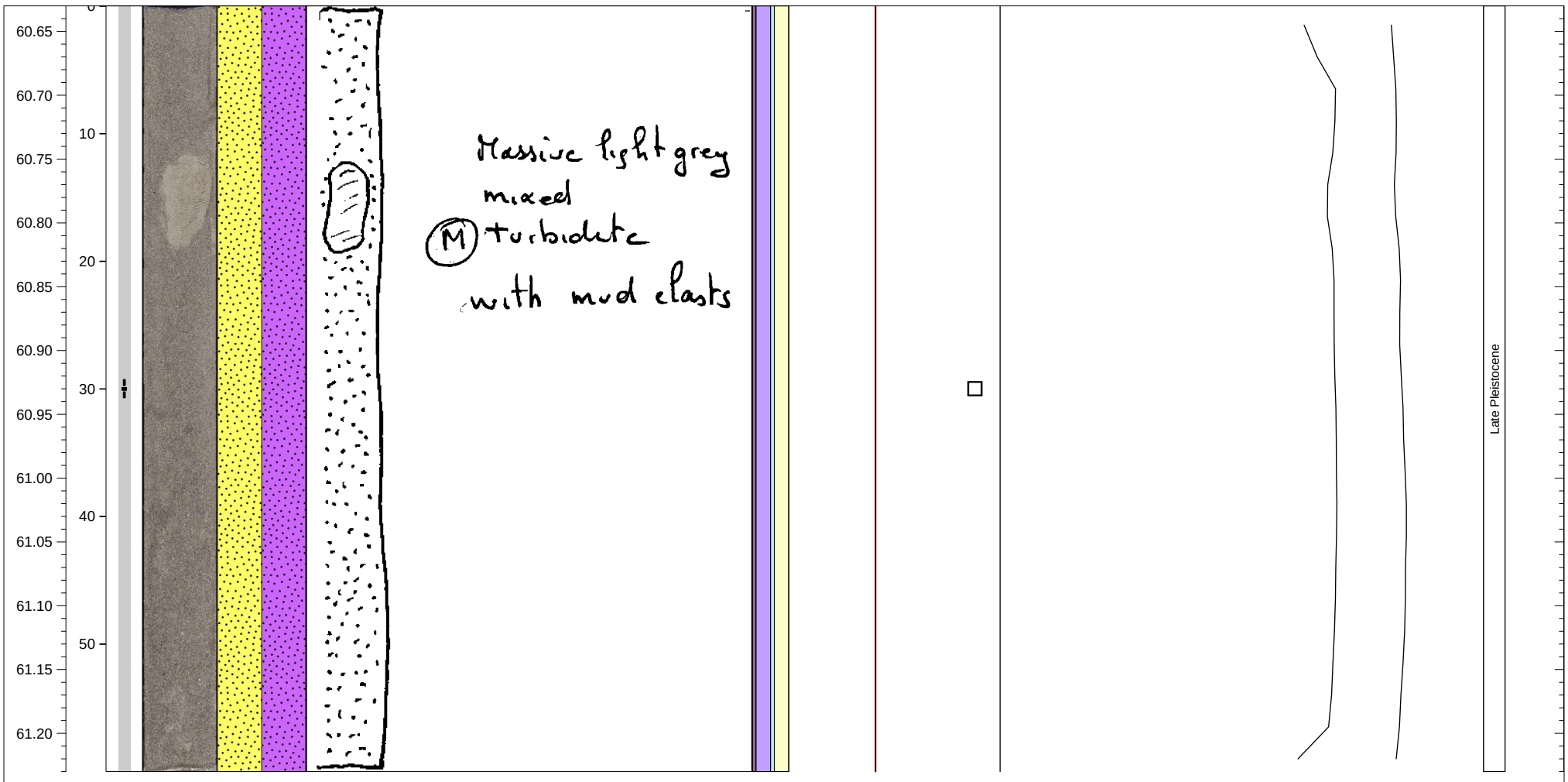
Hole 340-U1397B-7H Section 6, Top of Section: 59.42 CSF-A (m)

Mixed bioclastic/volcaniclastic turbidite.



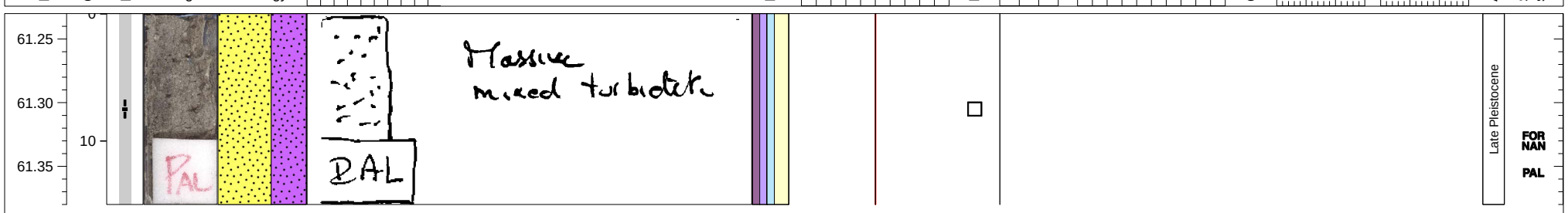
Hole 340-U1397B-7H Section 7, Top of Section: 60.63 CSF-A (m)

Mixed bio/volcaniclastic turbidite



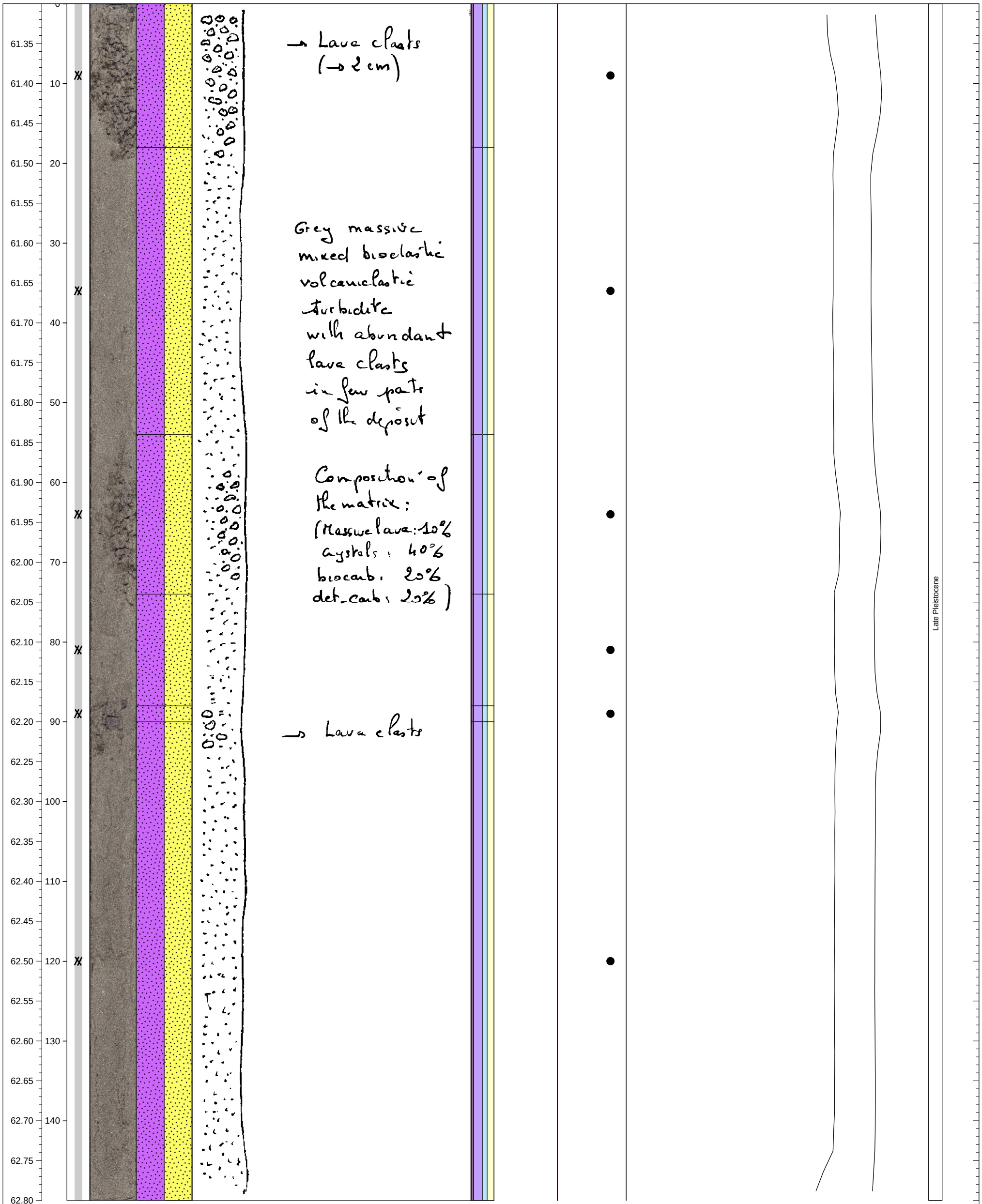
Hole 340-U1397B-7H Section CC, Top of Section: 61.23 CSF-A (m)

Mixed bio/volcaniclastic turbidite



Hole 340-U1397B-8H Section 1, Top of Section: 61.3 CSF-A (m)

Mixed turbidite of bioclastic and volcaniclaastic materials with several clast-concentrated zones



Hole 340-U1397B-8H Section 2, Top of Section: 62.8 CSF-A (m)

Mixed bioclastic-volcaniclastic turbidite overlying 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

62.85 10
62.90
62.95
63.00 20
63.05
63.10 30
63.15
63.20 40
63.25
63.30 50
63.35
63.40 60
63.45
63.50 70
63.55
63.60 80
63.65
63.70 90
63.75
63.80 100
63.85
63.90 110
63.95
64.00 120
64.05
64.10 130
64.15
64.20 140
64.25
64.30 150

Lavaclasts

Grey mixed bioclastic volcaniclastic turbidite (composition in section 1)

Grey hemipelagic deposit

Late Pleistocene

Hole 340-U1397B-8H Section 3, Top of Section: 64.3 CSF-A (m)

Mixed bio/volcaniclastic turbidite 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

64.35 – 10
64.40 – 10
64.45 –
64.50 – 20
64.55 –
64.60 – 30
64.65 –
64.70 – 40
64.75 –
64.80 – 50
64.85 –
64.90 – 60
64.95 –
65.00 – 70
65.05 –
65.10 – 80
65.15 –
65.20 – 90
65.25 –
65.30 – 100
65.35 –
65.40 – 110

Grey hemipelagic mud

Mixed grey volcaniclastic bioclastic turbidite
(M
(10% massive lavas)
40% crystals
10% bio carb.
⊙ 40% det. carb)

Grey hemipelagic mud

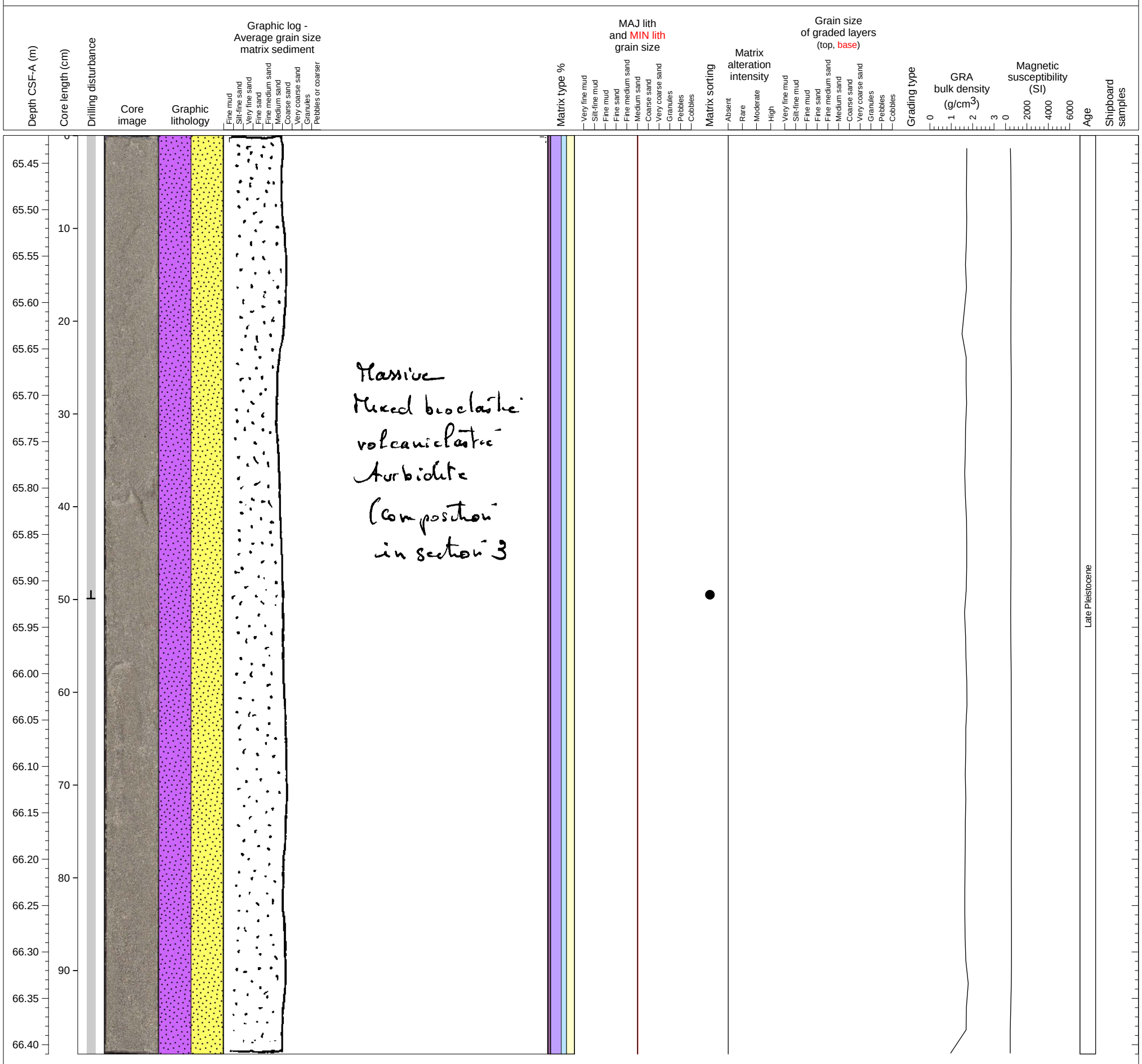
→ few pockets of sand.

Mixed bioclastic volcaniclastic turbidite
(10% pumices
10% massive lavas
30% crystals
10% bio-carb.
40% det. carb.)

Late Pleistocene

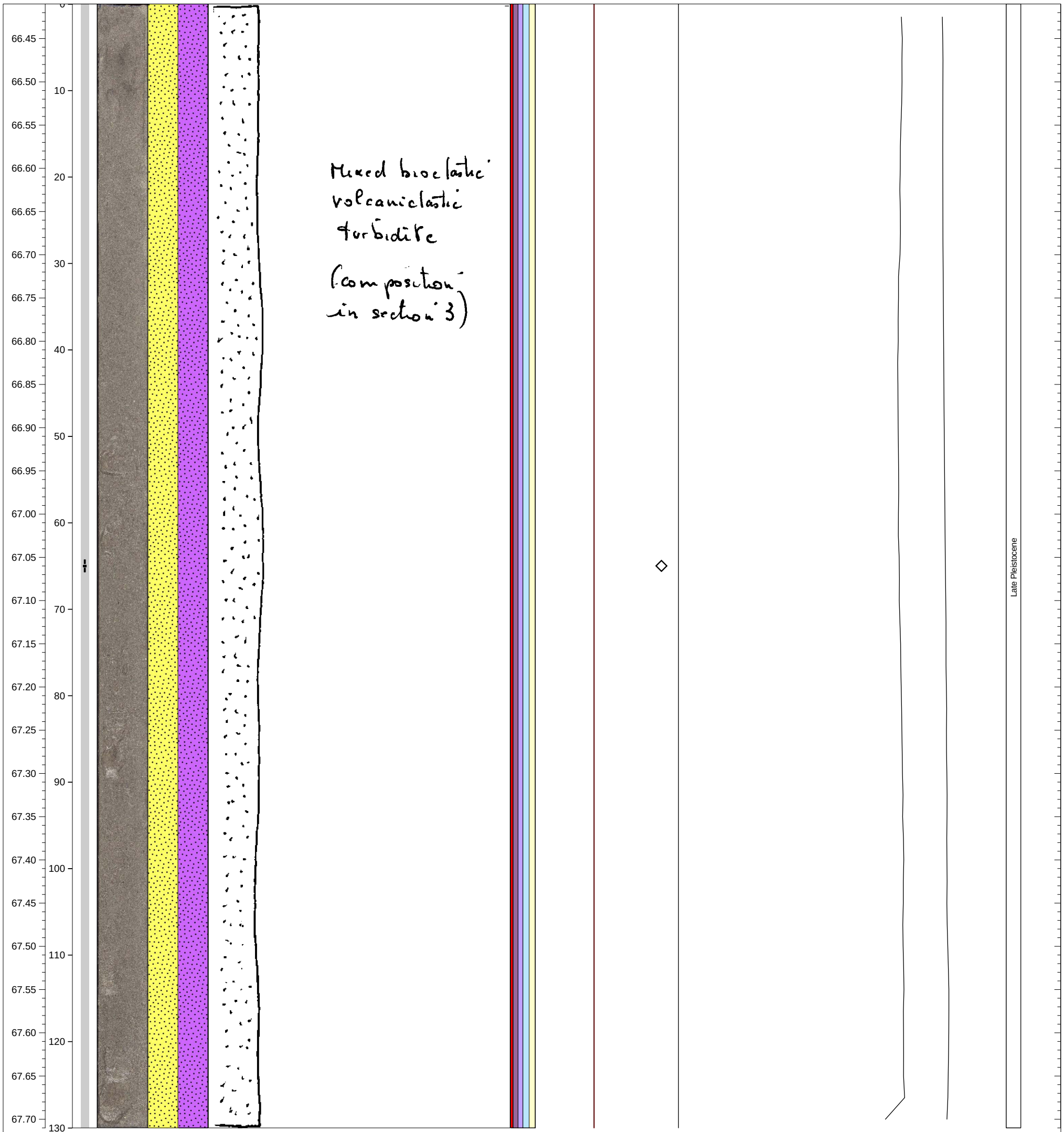
Hole 340-U1397B-8H Section 4, Top of Section: 65.42 CSF-A (m)

Mixted turbidite of bioclastic and volcaniclastic materials



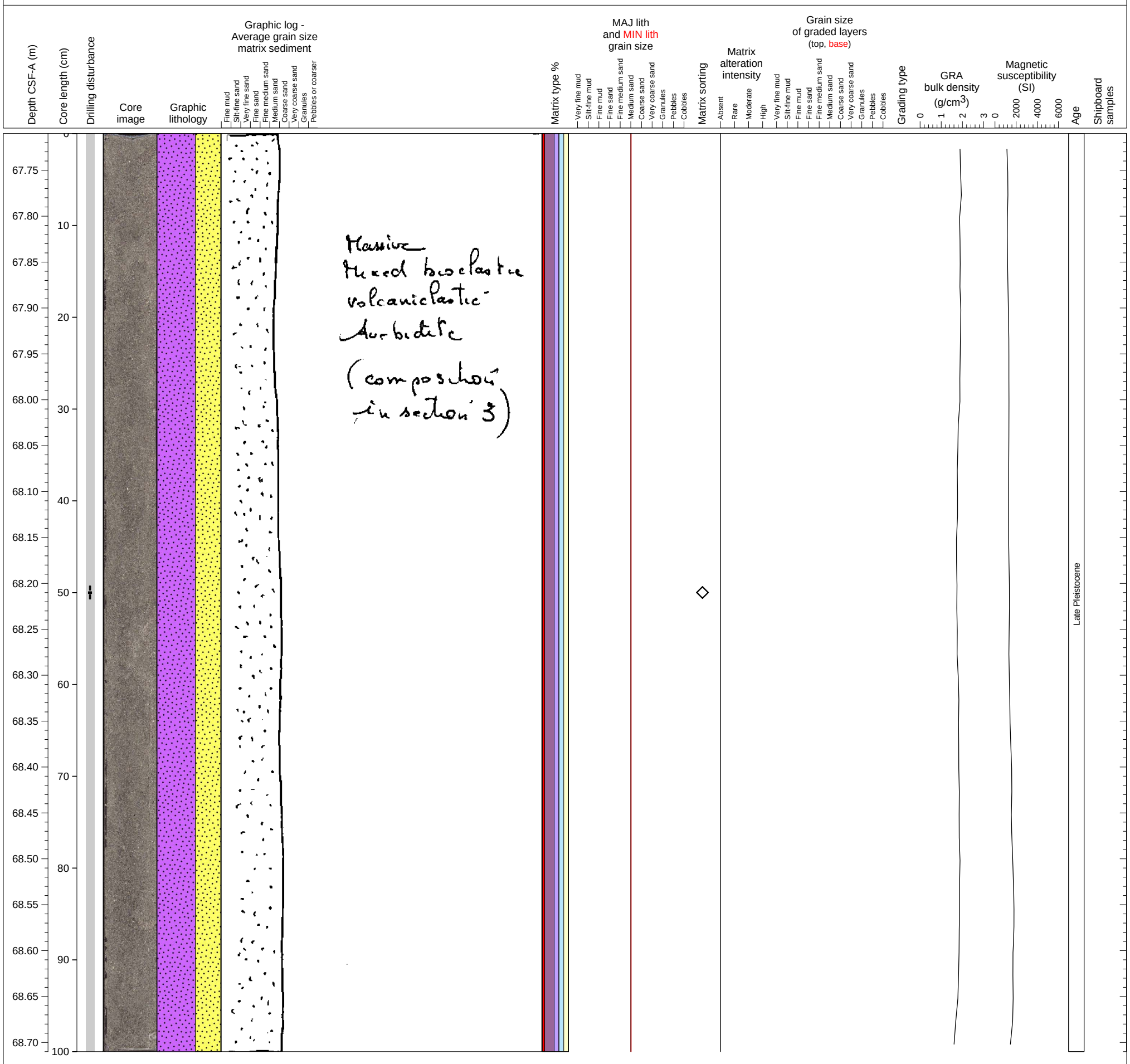
Hole 340-U1397B-8H Section 5, Top of Section: 66.41 CSF-A (m)

Mixed bioclastic-volcaniclastic turbidite



Hole 340-U1397B-8H Section 6, Top of Section: 67.71 CSF-A (m)

Mixed bioclastic-volcaniclastic turbidite



Hole 340-U1397B-8H Section 7, Top of Section: 68.71 CSF-A (m)

Mixed bioclastic-volcaniclastic turbidite

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

68.75
68.80
68.85
68.90
68.95
69.00
69.05
69.10
69.15
69.20
69.25
69.30
69.35
69.40

10
20
30
40
50
60

Massive mixed bioclastic volcaniclastic turbidite

(M) (composition at the base: 10% pumice 3% lavas 30% crystal 30% carbonates)

=> decreasing of the proportion of lava from the base to the top

Late Pleistocene

Hole 340-U1397B-8H Section CC, Top of Section: 69.4 CSF-A (m)

Mixed bioclastic-volcaniclastic turbidite

Hole 340-U1397B-9H Section 1, Top of Section: 69.6 CSF-A (m)

Hemipelagic sediments with intercalated volcaniclastic turbidite

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

69.65 m
69.70 m
69.75 m
69.80 m
69.85 m
69.90 m
69.95 m
70.00 m
70.05 m
70.10 m
70.15 m
70.20 m
70.25 m
70.30 m
70.35 m
70.40 m
70.45 m
70.50 m
70.55 m
70.60 m
70.65 m
70.70 m
70.75 m
70.80 m
70.85 m
70.90 m
70.95 m
71.00 m
71.05 m
71.10 m

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

hemipelagic mud
hP
light grey volcaniclastic turbidite rich in pumices (50% pumices 50% crystals)
base of the deposit laminated but deformed by drilling ?
Grey to brown hemipelagic mud
hP
VOID
Mottled hemipelagic mud

Late Pleistocene
PMG

Hole 340-U1397B-9H Section 2, Top of Section: 71.1 CSF-A (m)

Hemipelagic sediments with 2 volcaniclastic turbidite units (dms thick)

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

brown to grey hemipelagic mud

Dark volcanic Sand - massive → turbidite ?

Dark grey hemipelagic mud

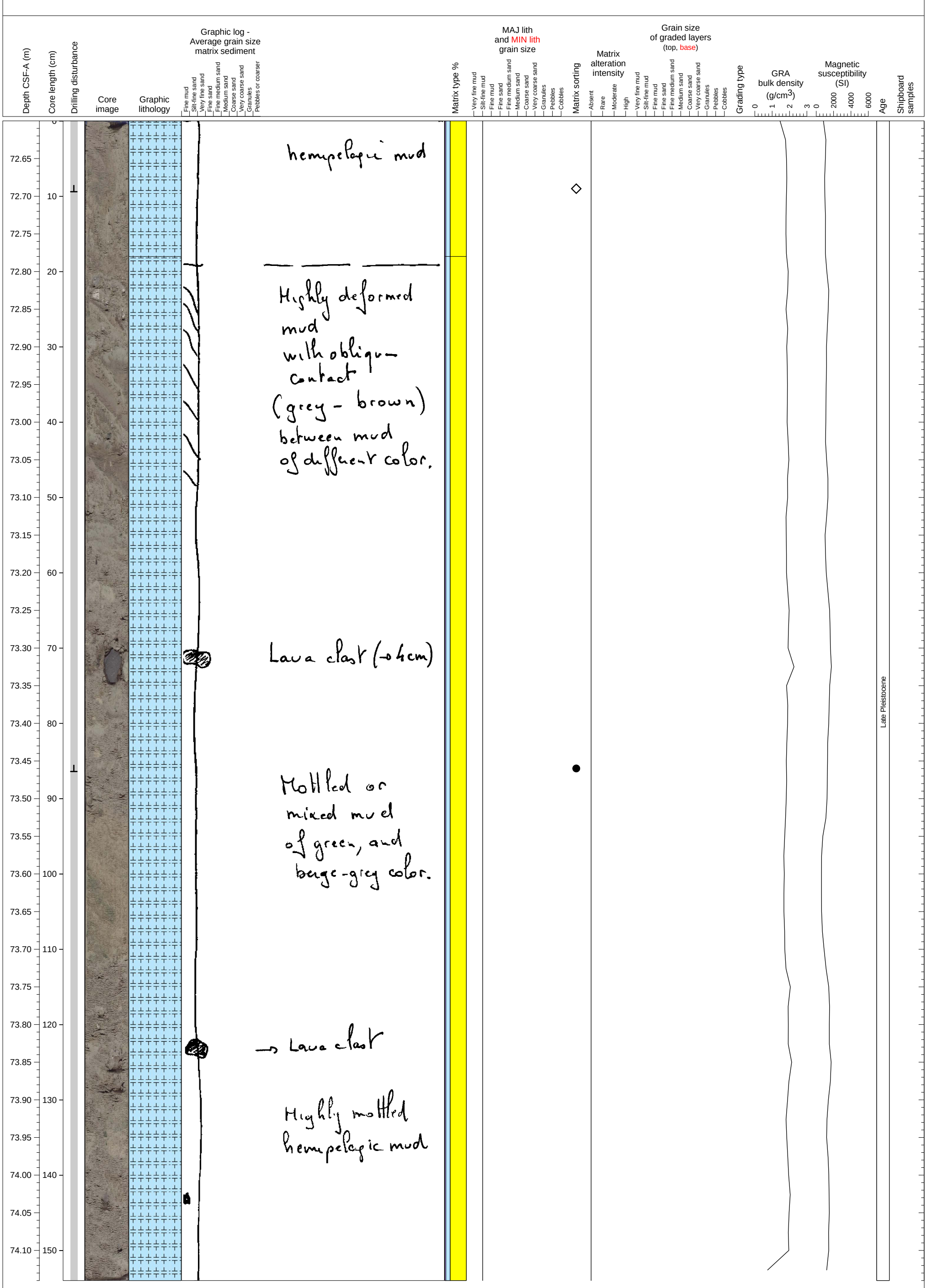
Massive volcaniclastic turbidite with pumice clasts (10% pumices 20% lavas 70% crystals)

Hemipelagic mud

Late Pleistocene

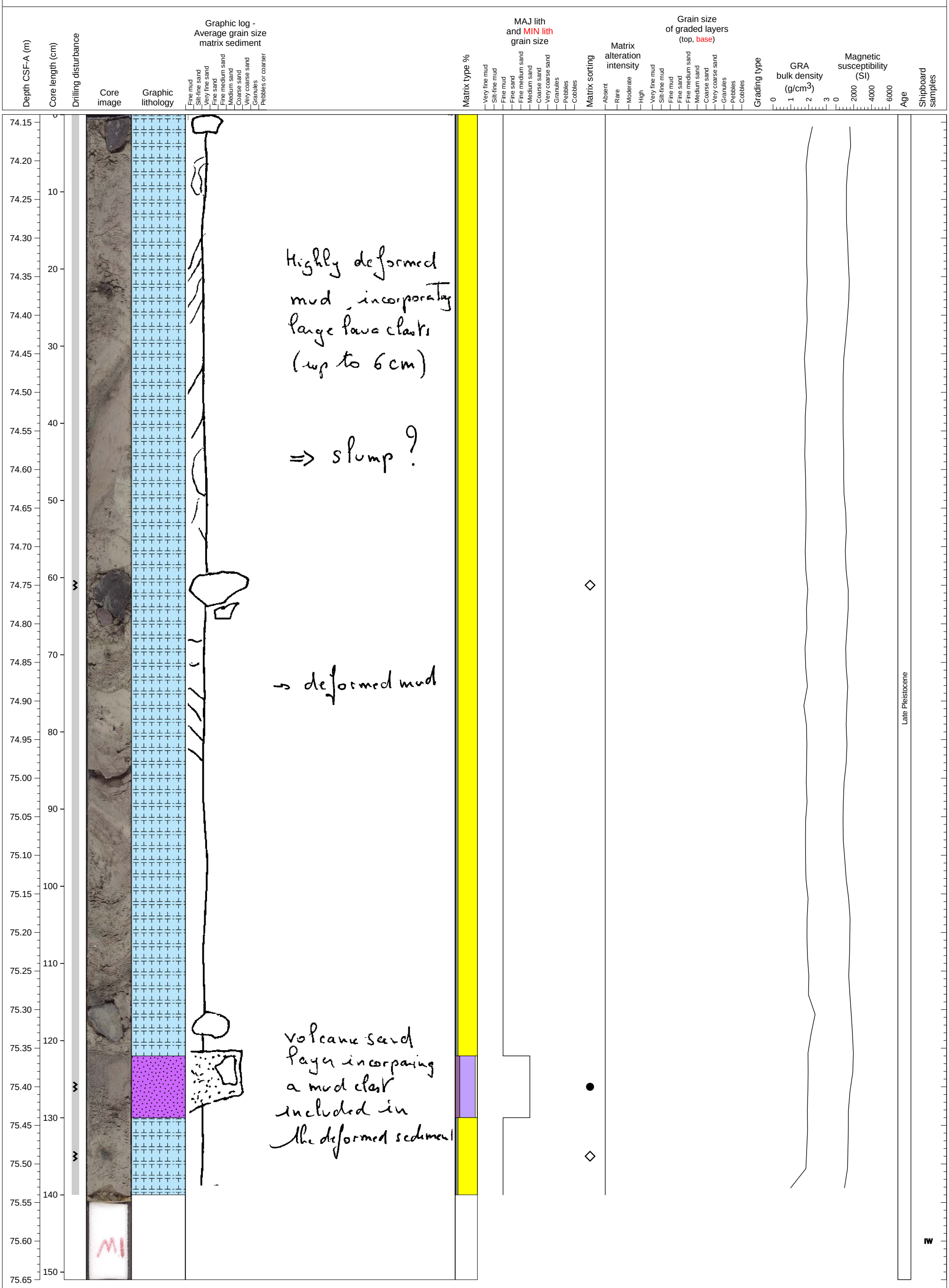
Hole 340-U1397B-9H Section 3, Top of Section: 72.6 CSF-A (m)

Highly deformed hemipelagic sediments with volcaniclastic clasts



Hole 340-U1397B-9H Section 4, Top of Section: 74.14 CSF-A (m)

Heavily deformed hemipelagic mud strata, containing massive lava clasts (pebble-cobble sized).



Hole 340-U1397B-9H Section 5, Top of Section: 75.65 CSF-A (m)

Mixture of mud clasts and silty to sandy matrix consisting of debris flows.

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

75.70
75.75
75.80
75.85
75.90
75.95
76.00
76.05
76.10
76.15
76.20
76.25
76.30
76.35
76.40
76.45
76.50
76.55
76.60
76.65
76.70
76.75
76.80
76.85
76.90
76.95
77.00
77.05
77.10
77.15

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

highly deformed mud

Numerous mud clasts incorporated in a coarse volcanic Sand with pumices.

Large mud clast incorporating a lava clast inside the volcanic sand

Late Pleistocene

Hole 340-U1397B-9H Section 6, Top of Section: 77.16 CSF-A (m)

Volcaniclastic coarse sand unit overlying a chaotic hemipelagic clay unit containing cobble sized lava clasts. Bottom of the section consists of interlayered mud and 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/cm3)
0
1
2
3
Magnetic susceptibility (SI)
0
2000
4000
6000
Age
Shipboard samples

77.20
77.25
77.30
77.35
77.40
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
78.15
78.20
78.25
78.30
78.35
78.40
78.45
78.50
78.55
78.60
78.65
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150

Coarse volcanic Sand incorporating mud clasts

Sediment with numerous granules, mud clasts and lava clasts

base of the slump

Tephra layer (30% pumices)

Tephra layer

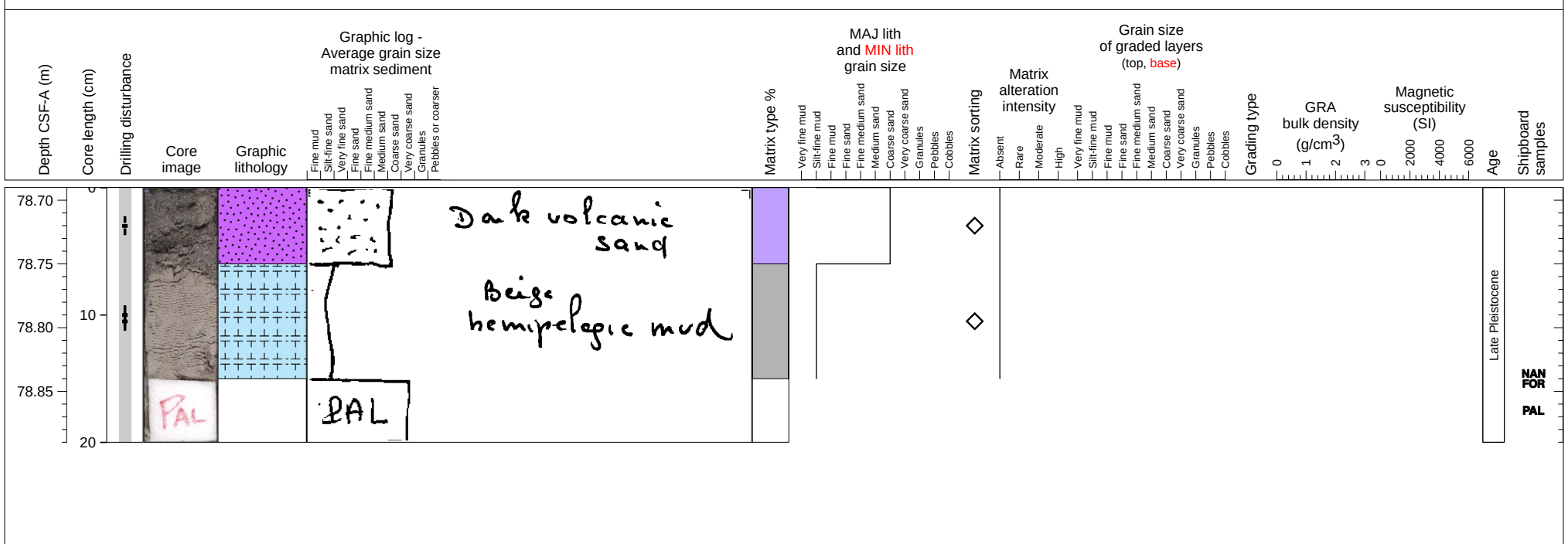
volcanic sand massive, grey

→ turbidite volcaniclastic

Late Pleistocene

Hole 340-U1397B-9H Section CC, Top of Section: 78.69 CSF-A (m)

Dark volcaniclastic sand, underlain by hemipelagic mud



Hole 340-U1397B-10H Section 1, Top of Section: 79.1 CSF-A (m)

Hemipelagic sediments interlayering with at least seven turbidite deposits

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

79.15
79.20
79.25
79.30
79.35
79.40
79.45
79.50
79.55
79.60
79.65
79.70
79.75
79.80
79.85
79.90
79.95
80.00
80.05
80.10
80.15
80.20
80.25
80.30
80.35
80.40
80.45
80.50
80.55
80.60

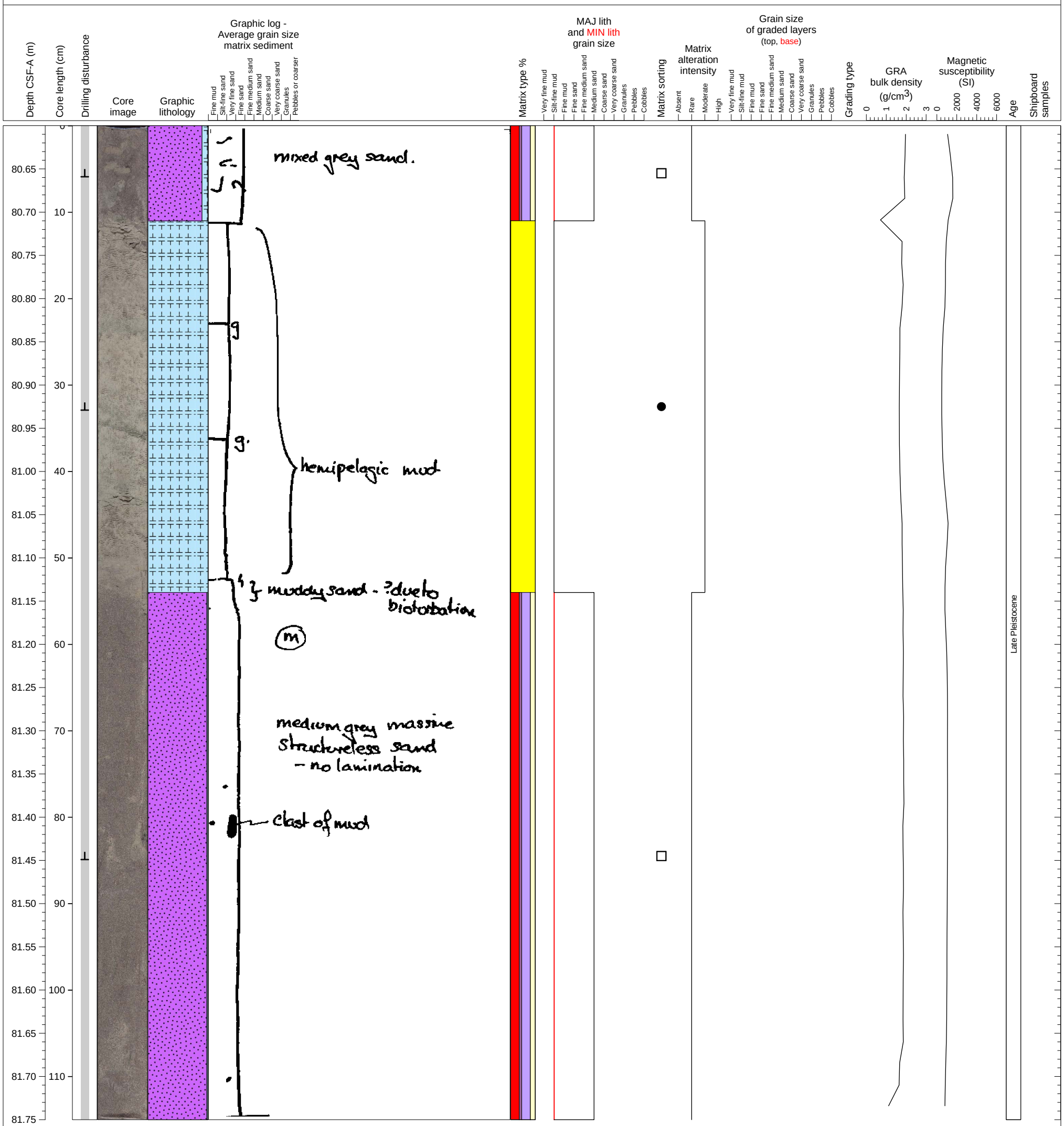
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150

hemipelagic mud
40% pumice, 10% lithic
45% xstals, 5% carbonate
hemipelagic mud.
dark brown fine sand.
light brown
strong variation
? two units
V
30% pumice
5% massive lava
60% x stals
5% carbonate.
hemipelagic mud.
pumice lam 10% other.
15% pumice
15% lithics
50% x stals
10% carbonate
cobble sand bleb.
graded, massive dark grey sand.
V
M
hemipelagic mud.
medium-dark grey sand with contorted zones with more or less light coloured grains
M
35% pumice
5% massive lava
30% crystals
30% carbonate.
28% detritus
hemipelagic mud.
grey fine sand.
hemipelagic mud.

Late Pleistocene

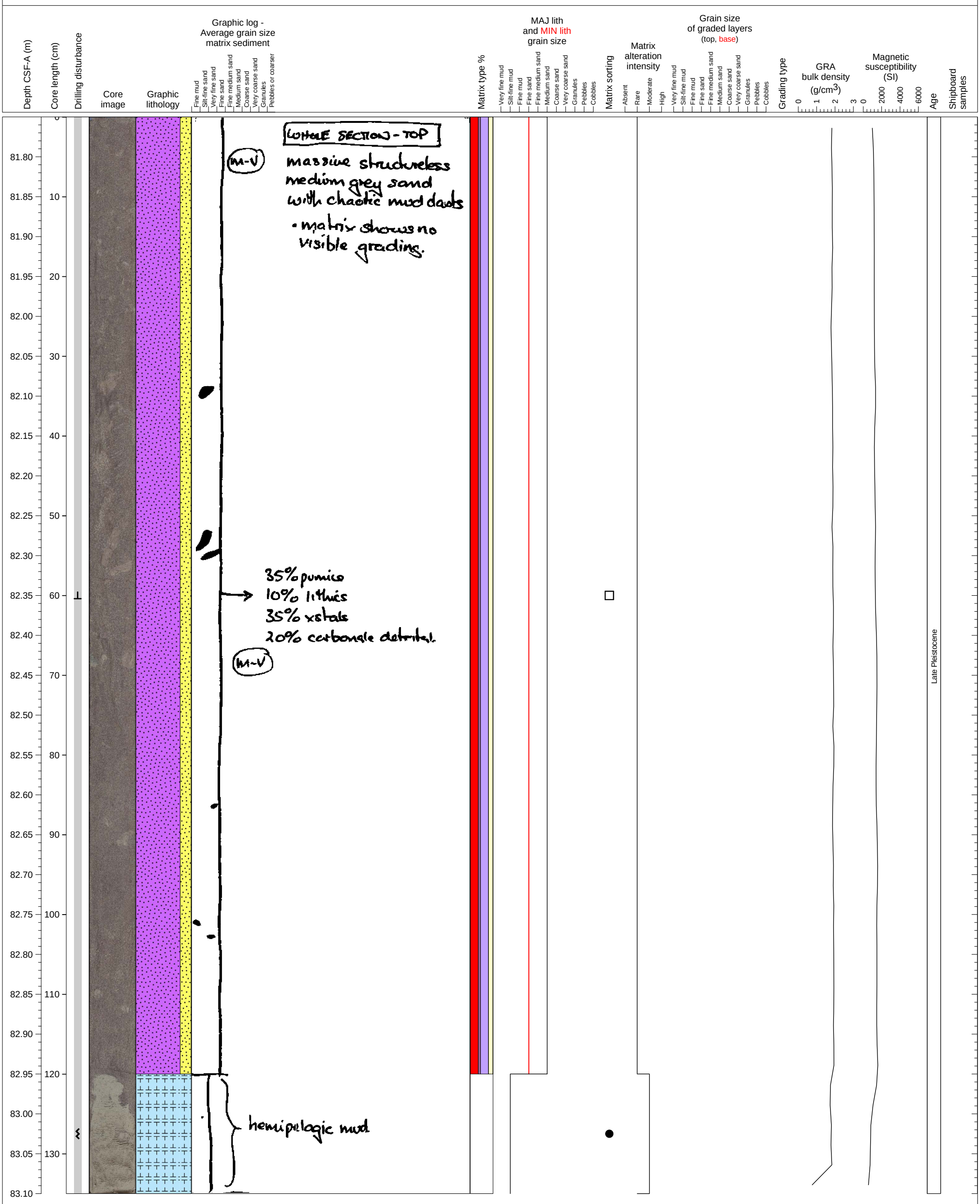
Hole 340-U1397B-10H Section 2, Top of Section: 80.6 CSF-A (m)

Base and bottom of volcaniclastic/bioclastic turbidites interlayering hemipelagic cray.



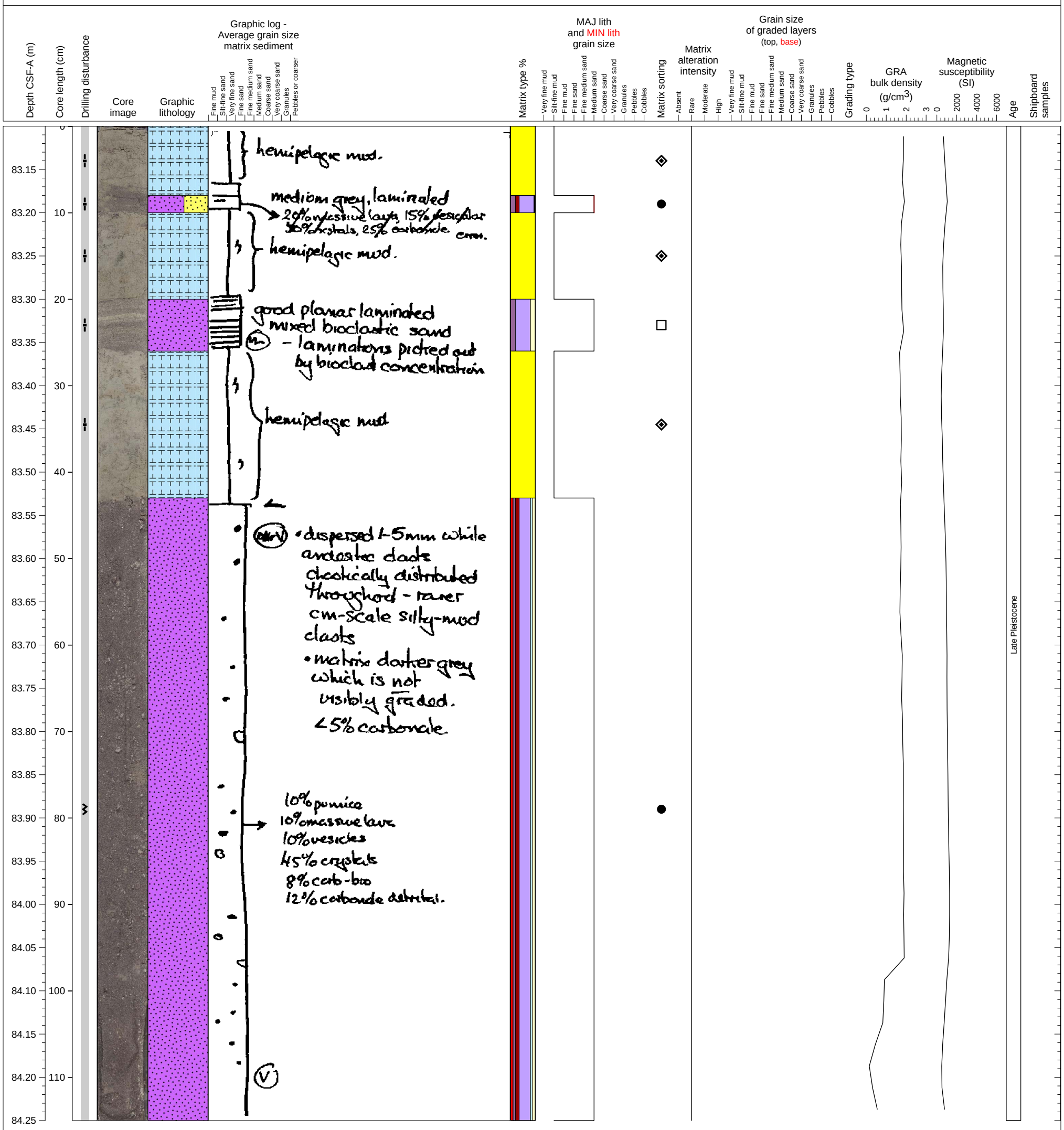
Hole 340-U1397B-10H Section 3, Top of Section: 81.75 CSF-A (m)

Volcaniclastic/bioclastic turbidite



Hole 340-U1397B-10H Section 4, Top of Section: 83.1 CSF-A (m)

Interlayered hemipelagic clay with several volcaniclastic tephra units overlaying a volcaniclastic sand turbidite unit containing pumice and mud clasts.



Hole 340-U1397B-10H Section 5, Top of Section: 84.25 CSF-A (m)

Volcaniclastic sand deposit with abundant mud clasts.

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

84.30
84.35
84.40
84.45
84.50
84.55
84.60
84.65
84.70
84.75
84.80
84.85
84.90
84.95
85.00
85.05
85.10
85.15
85.20
85.25
85.30
85.35
85.40
85.45
85.50
85.55
85.60
85.65
85.70
85.75

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

WHOLE SECTION
massive dark grey medium sand matrix with chaotically assorted mud clasts throughout
- no visible grading in the matrix.

5% carbonate
60% rocks
20% massive lava
15% vesicular lava
nest of clasts
mud clast - hp?
60% pumice
2% massive lava
3% vesicular
5% rocks
30% carbonate.

Late Pleistocene

Hole 340-U1397B-10H Section 6, Top of Section: 85.75 CSF-A (m)

Volcaniclastic sand unit with abundant pumice and mud clasts.

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

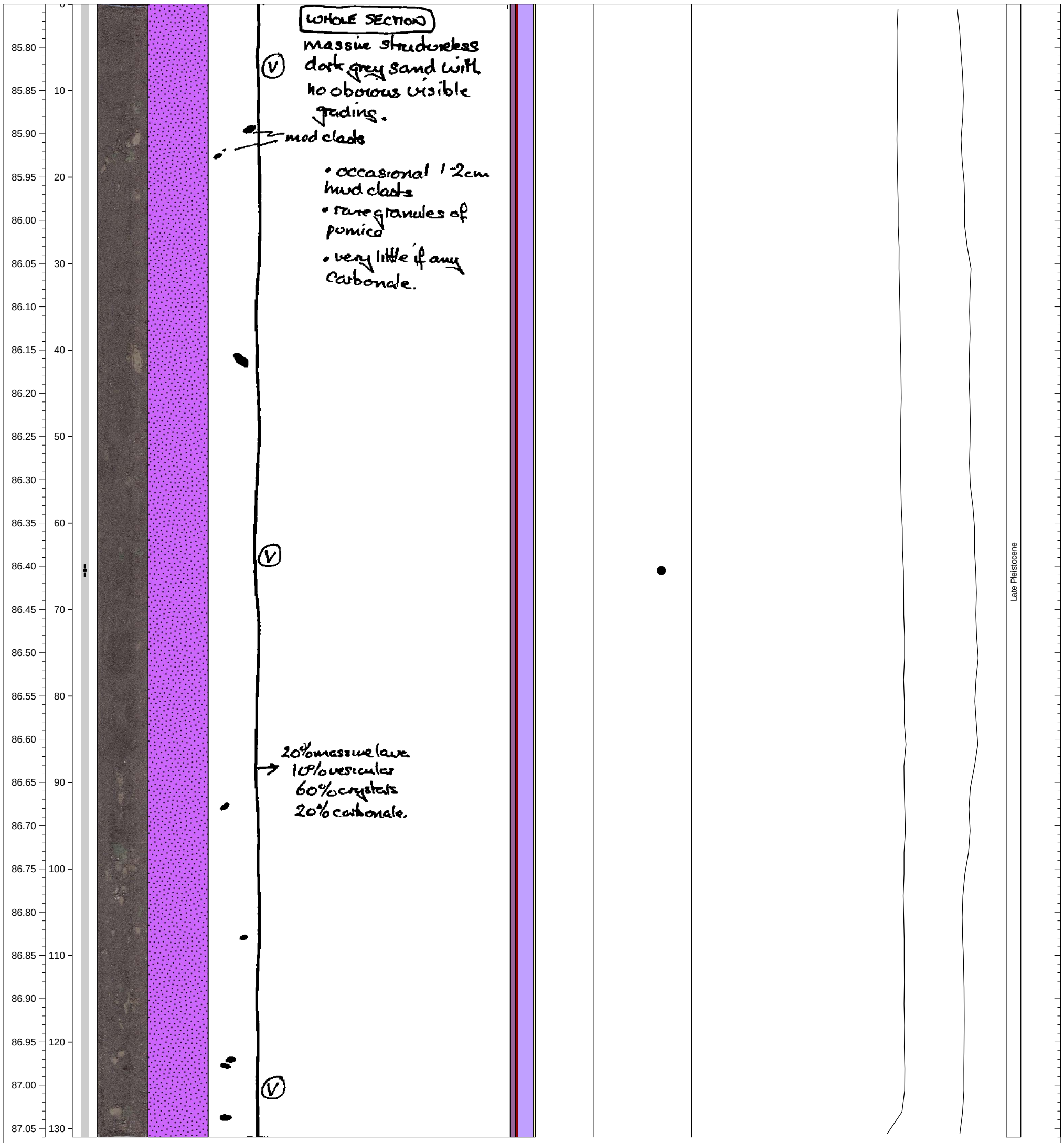
Grading type

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

Magnetic susceptibility (SI)
0
2000
4000
6000

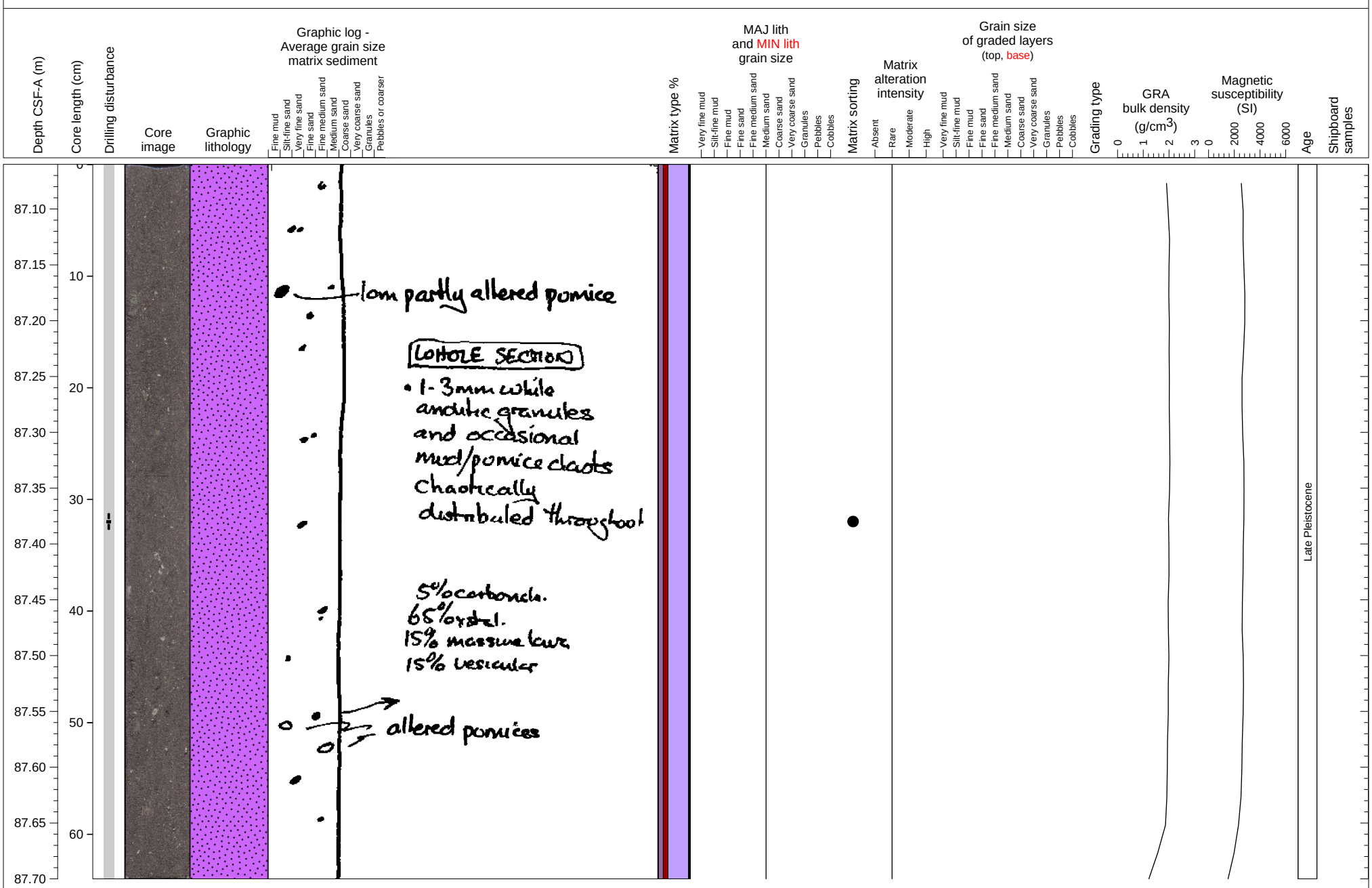
Age

Shipboard samples



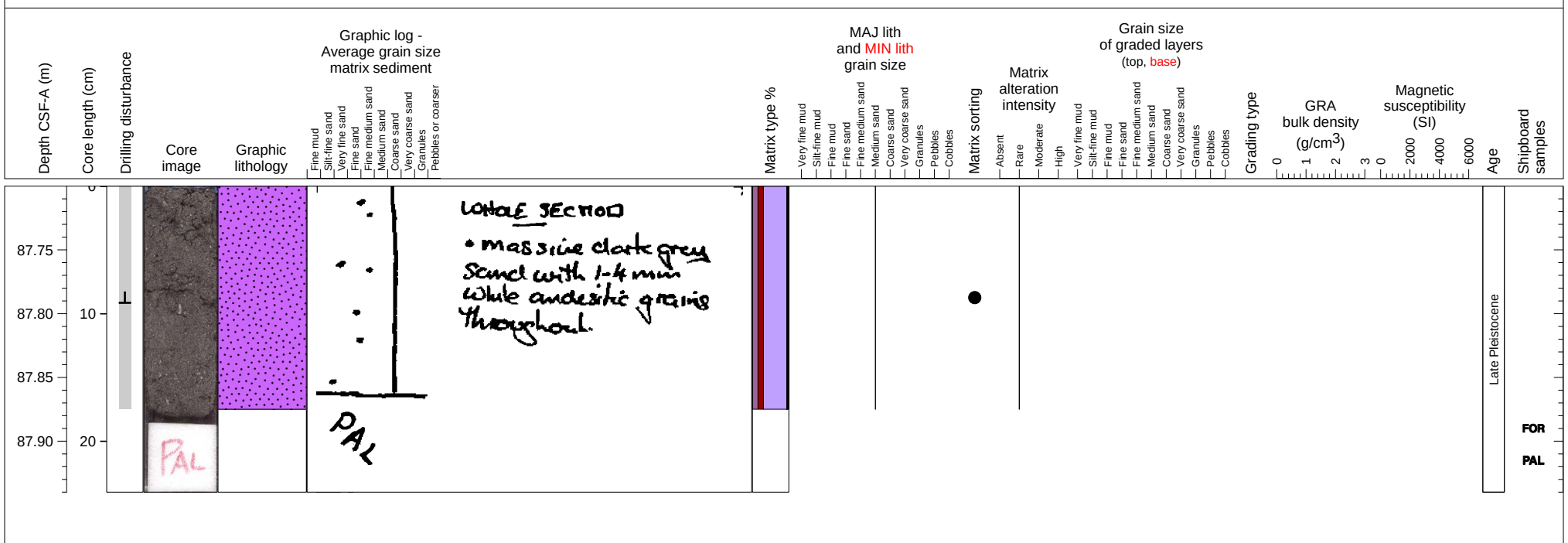
Hole 340-U1397B-10H Section 7, Top of Section: 87.06 CSF-A (m)

Volcaniclastic sand units with abundant pumcie and mud clasts.



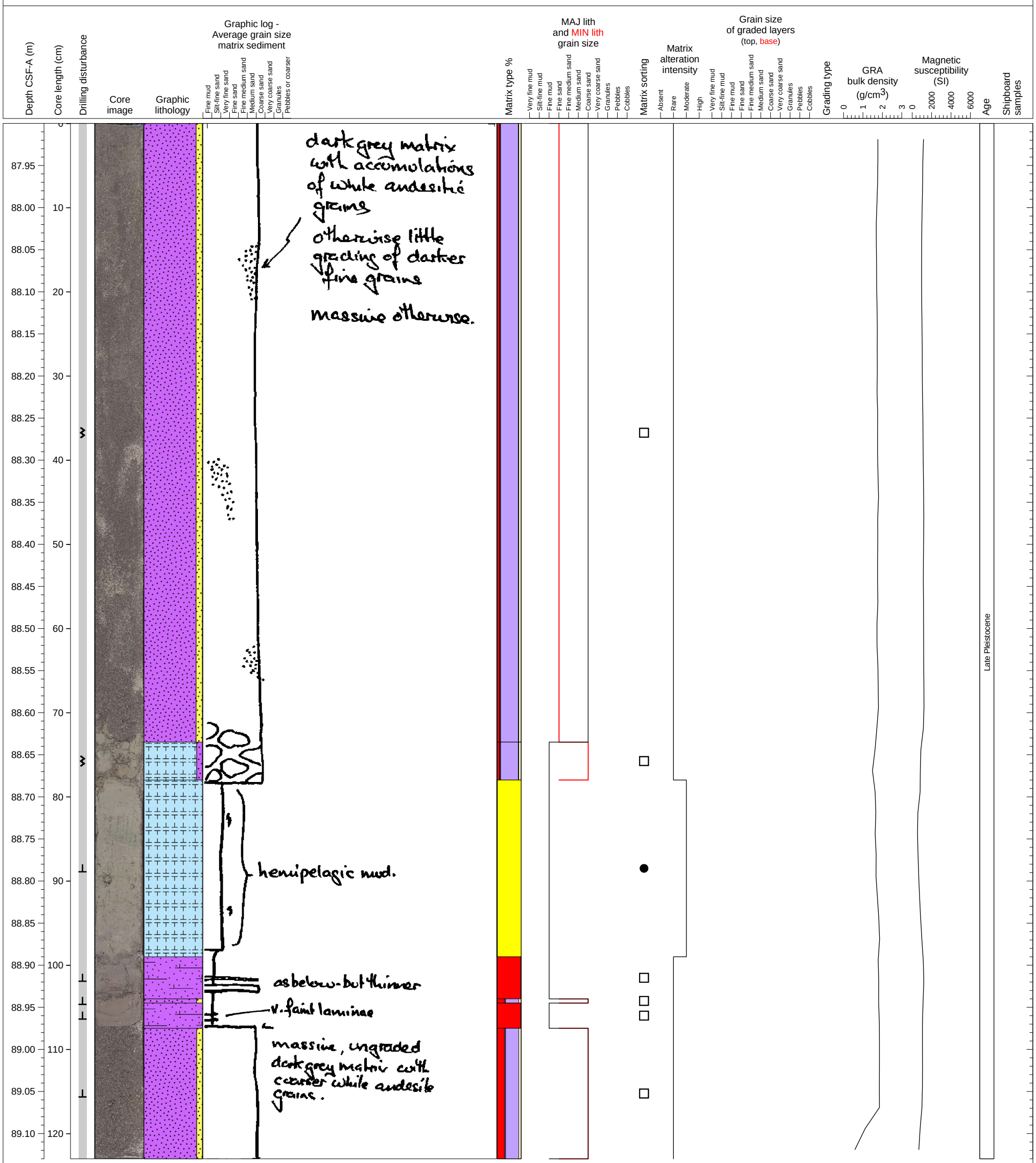
Hole 340-U1397B-10H Section CC, Top of Section: 87.7 CSF-A (m)

Volcaniclastic sand unit with pumice pebble clasts. PAL sample from base.



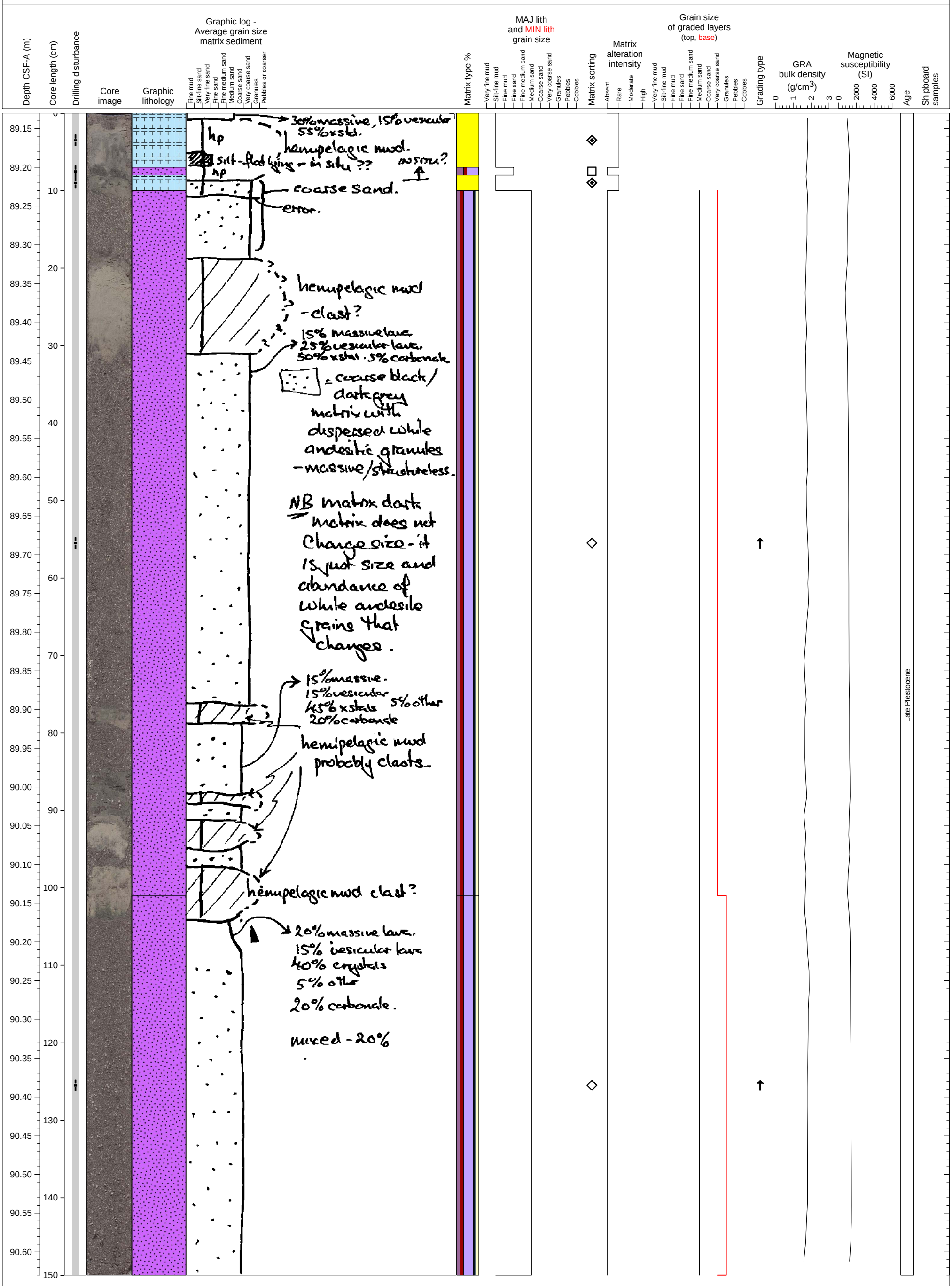
Hole 340-U1397B-11H Section 1, Top of Section: 87.9 CSF-A (m)

Bottom and top of turbidite interlayring thin tephra layers and hemipelagic sediment.



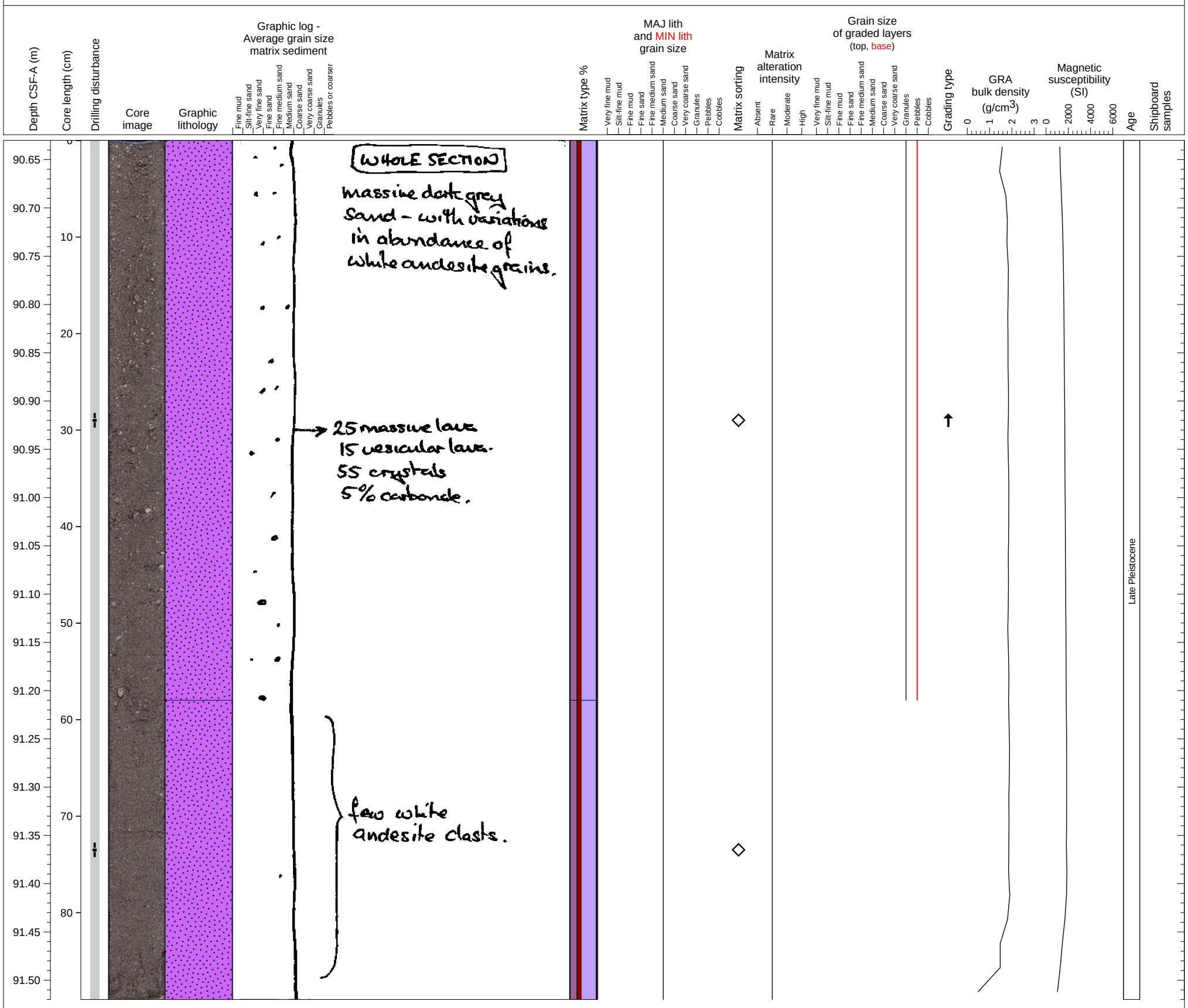
Hole 340-U1397B-11H Section 2, Top of Section: 89.13 CSF-A (m)

Volcaniclastic sand unit, with normal grading at the base, topped with interlayered hemipelagic clay and volcaniclastic sand.



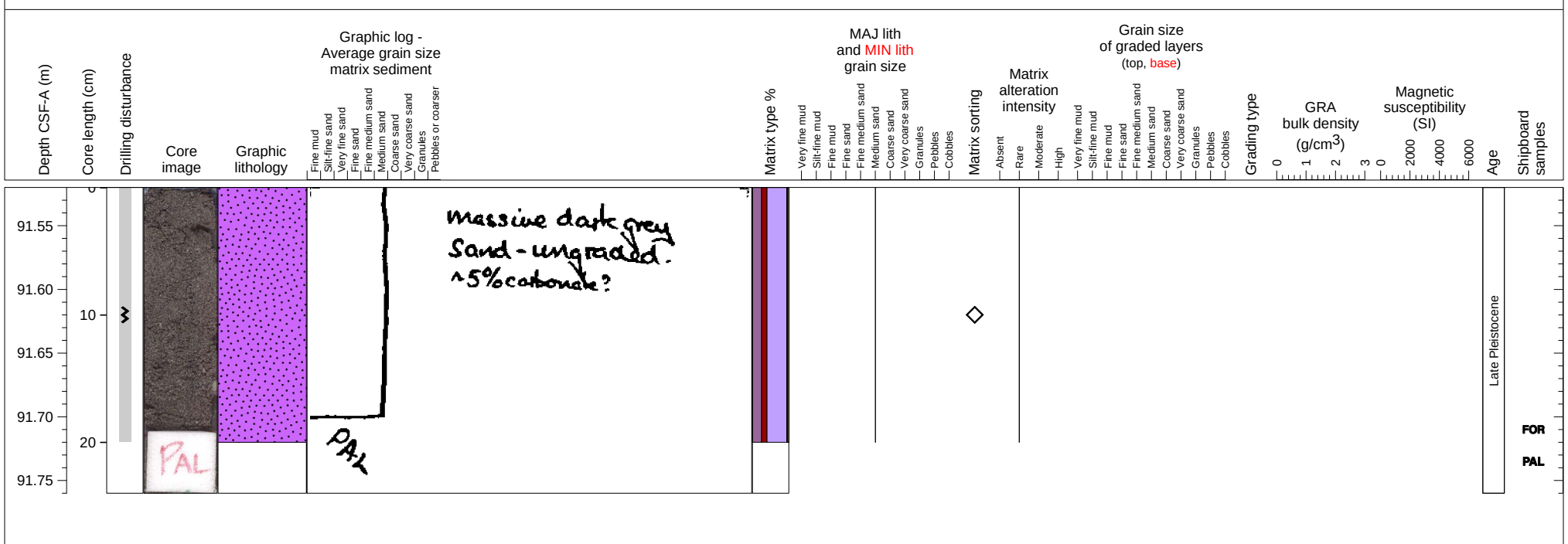
Hole 340-U1397B-11H Section 3, Top of Section: 90.63 CSF-A (m)

Volcaniclastic sand deposit. Upper unit exhibits normal gradation in pumice clasts from pebble to granule. Lower unit is massive sand.



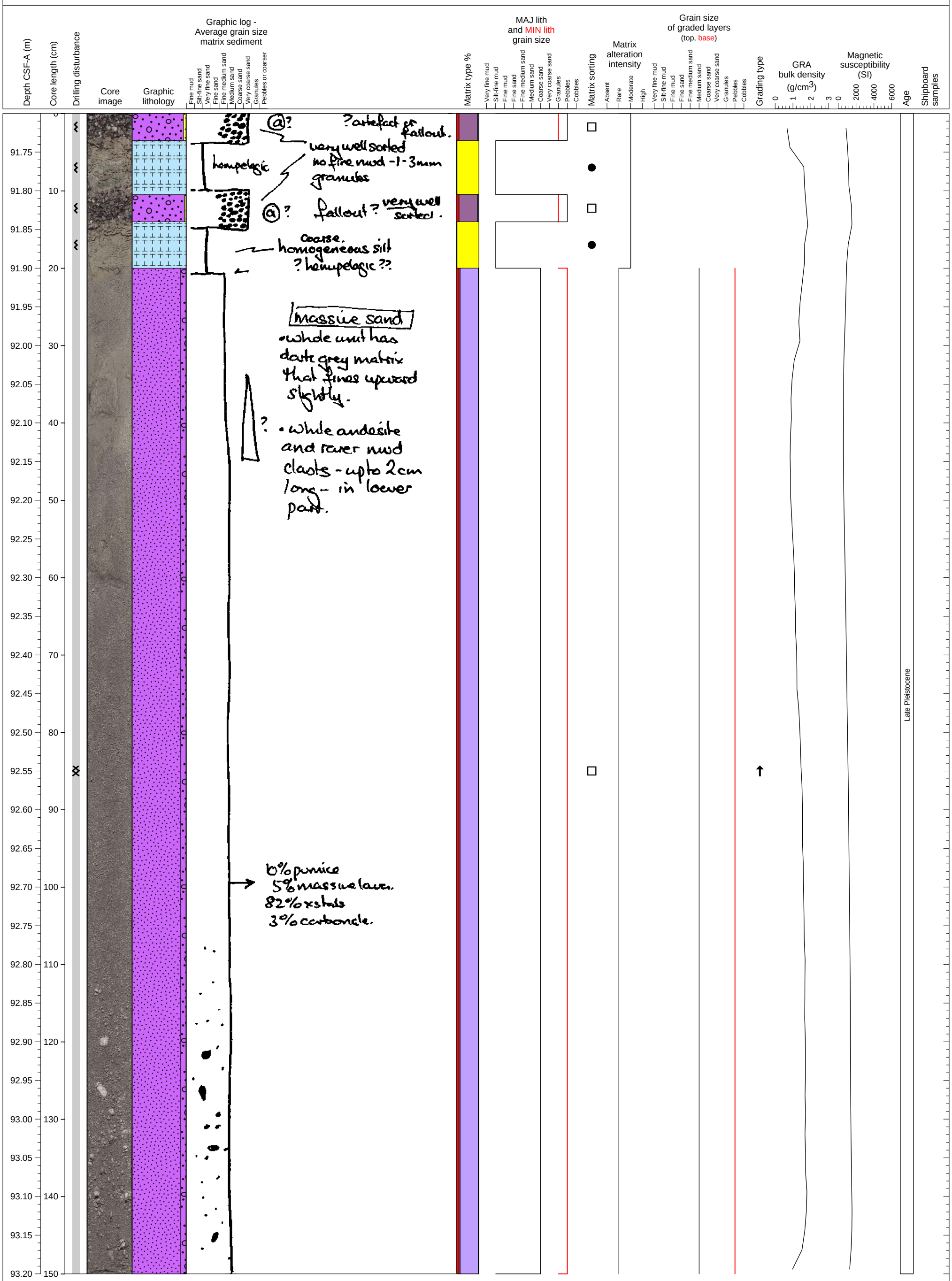
Hole 340-U1397B-11H Section CC, Top of Section: 91.52 CSF-A (m)

Volcaniclastic sand deposit. PAL sample from base.



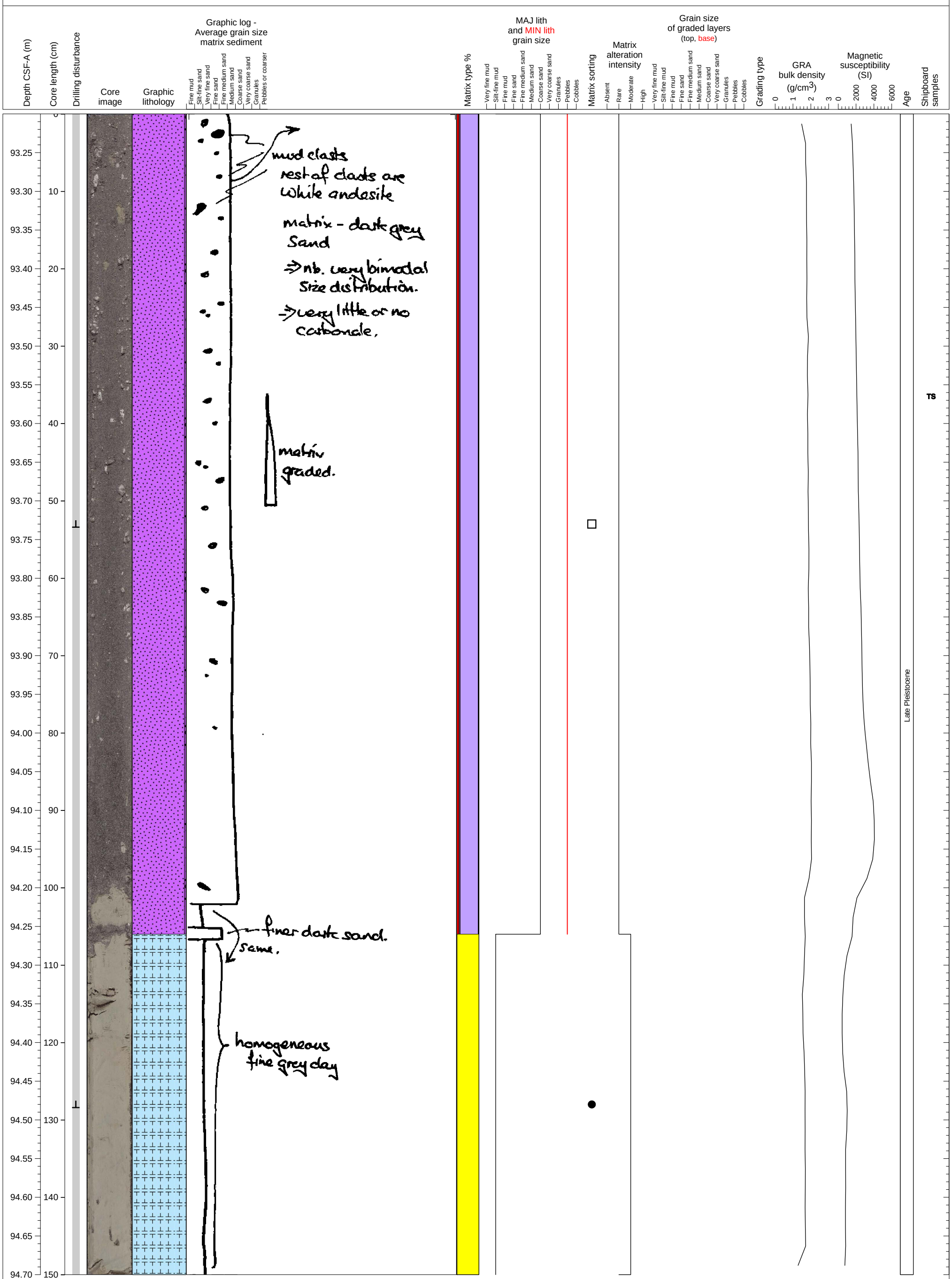
Hole 340-U1397B-12H Section 1, Top of Section: 91.7 CSF-A (m)

Turbidite containing pumice clasts. Clasts are weakly normally graded.



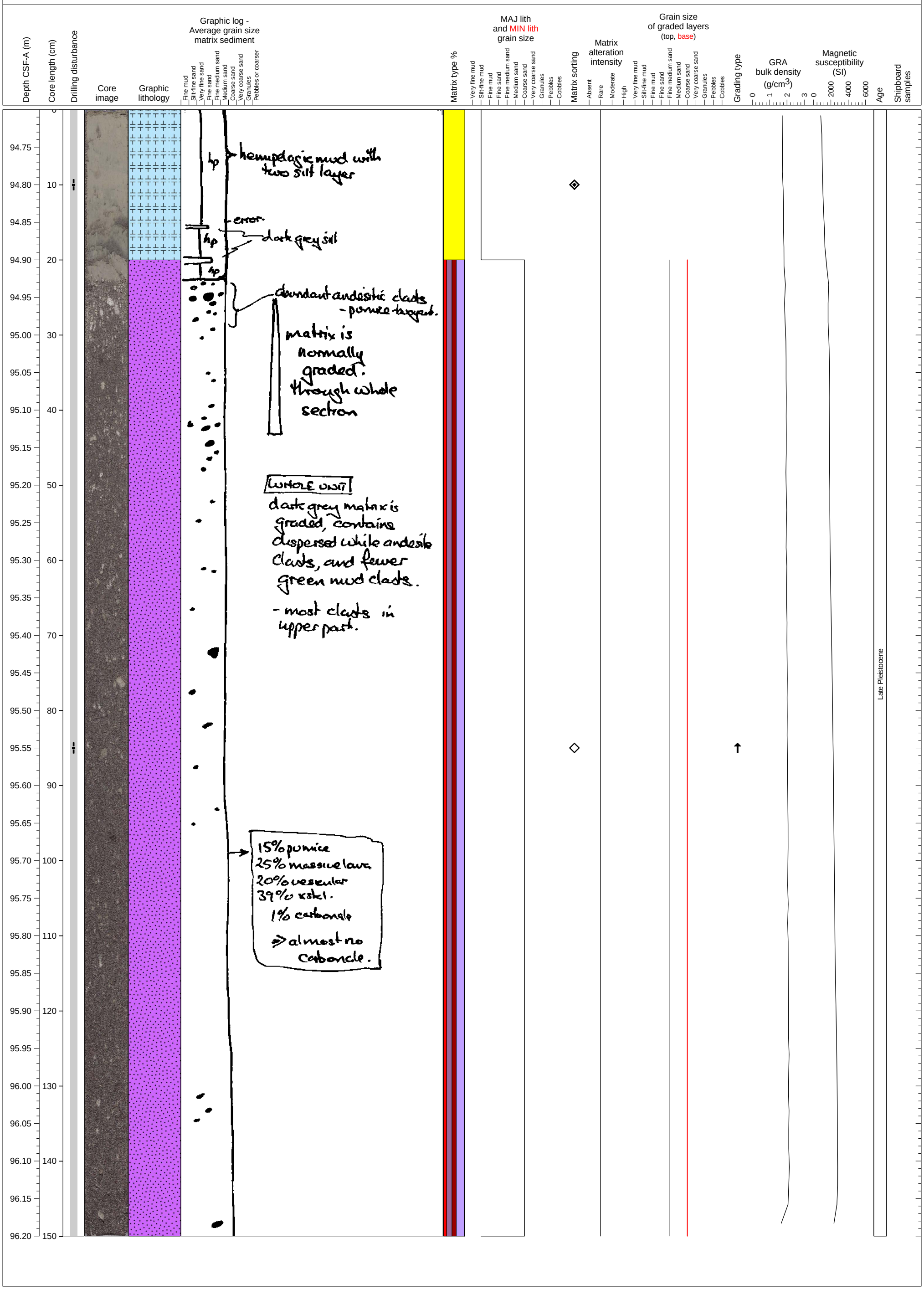
Hole 340-U1397B-12H Section 2, Top of Section: 93.2 CSF-A (m)

Lower half of volcaniclastic turbidite with pumice and mud clasts.



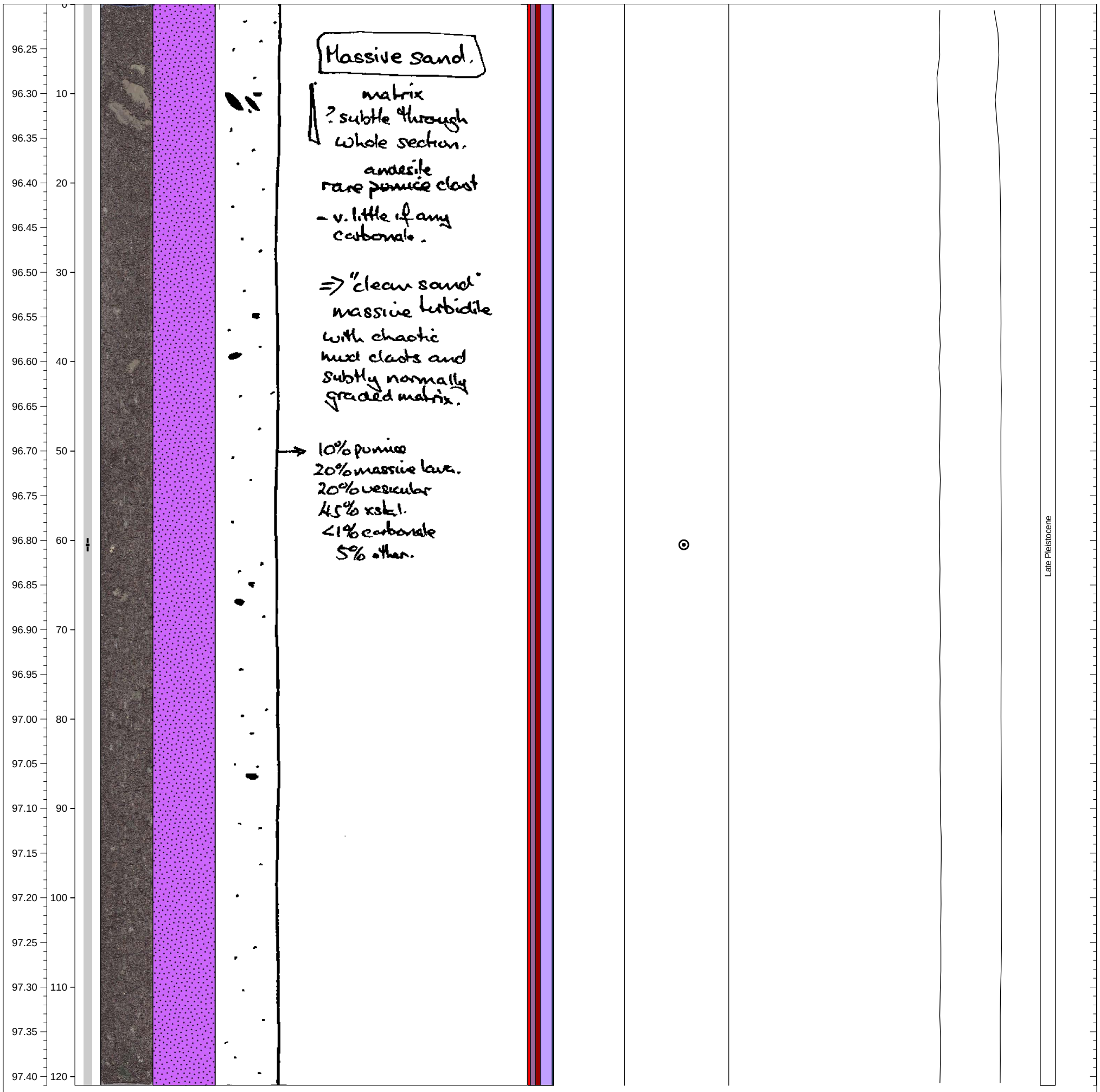
Hole 340-U1397B-12H Section 3, Top of Section: 94.7 CSF-A (m)

Hemipelagic clay overlaying a normally graded volcaniclastic sand unit.



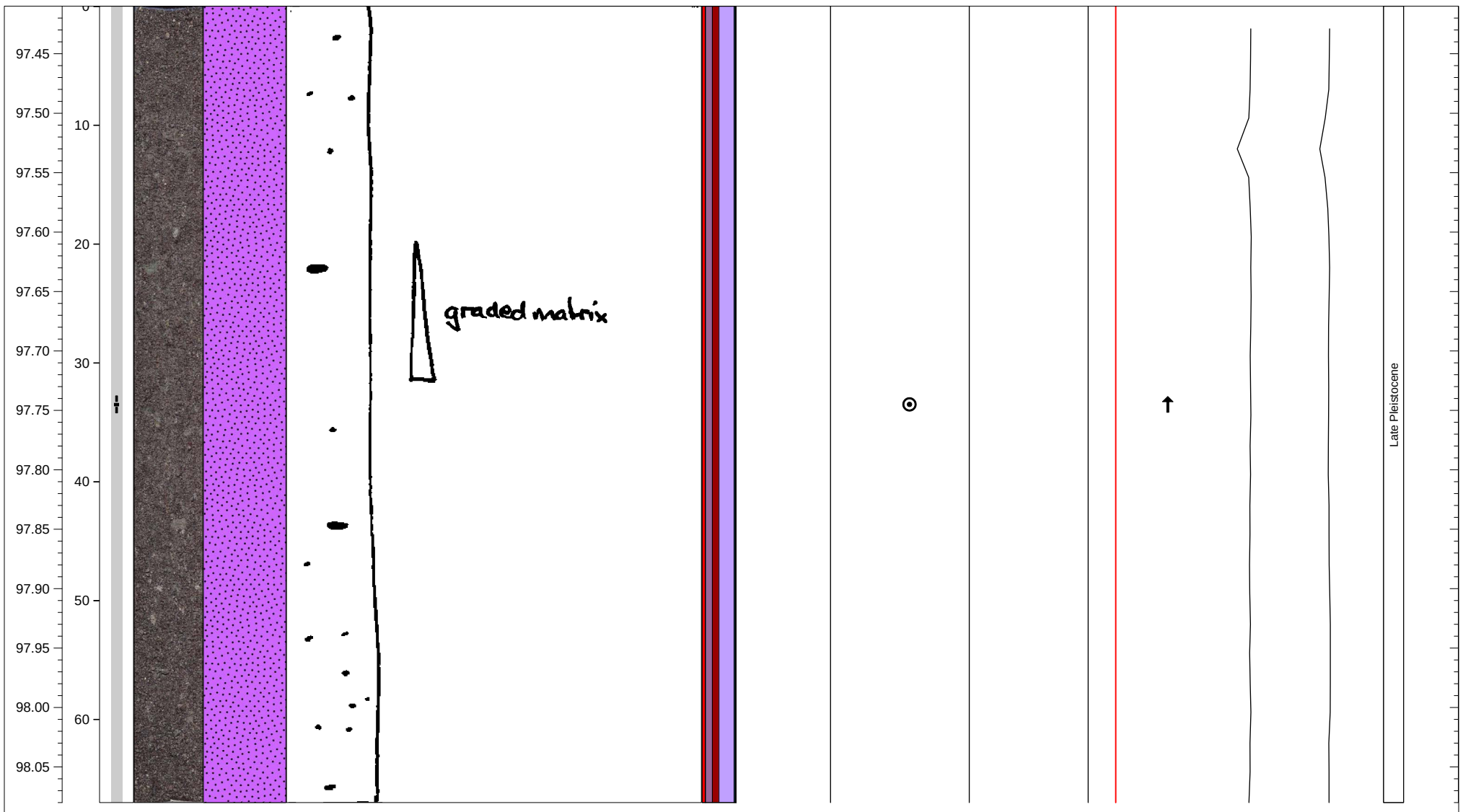
Hole 340-U1397B-12H Section 4, Top of Section: 96.2 CSF-A (m)

Volcaniclastic coarse sand deposit with abundant pumice and mud clasts.



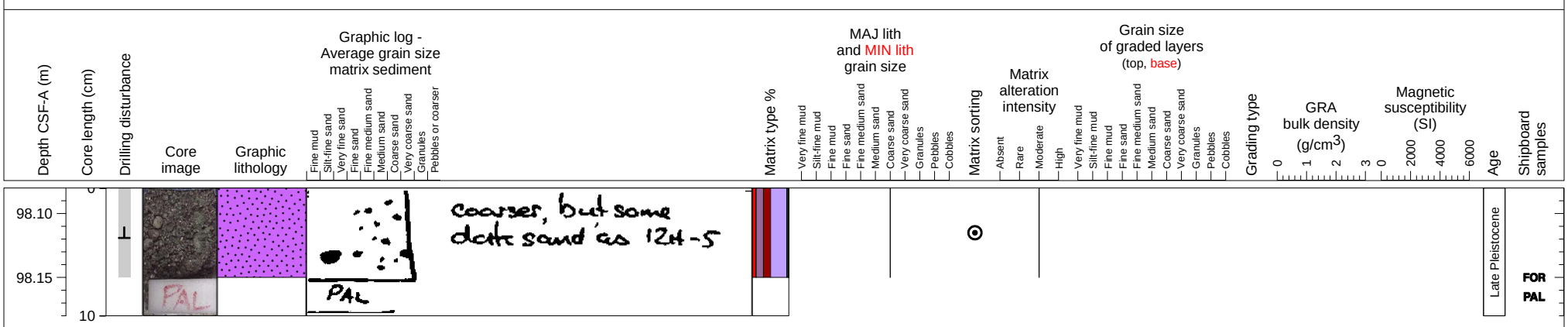
Hole 340-U1397B-12H Section 5, Top of Section: 97.41 CSF-A (m)

Normally graded volcaniclastic sand with pumice and mud clasts.



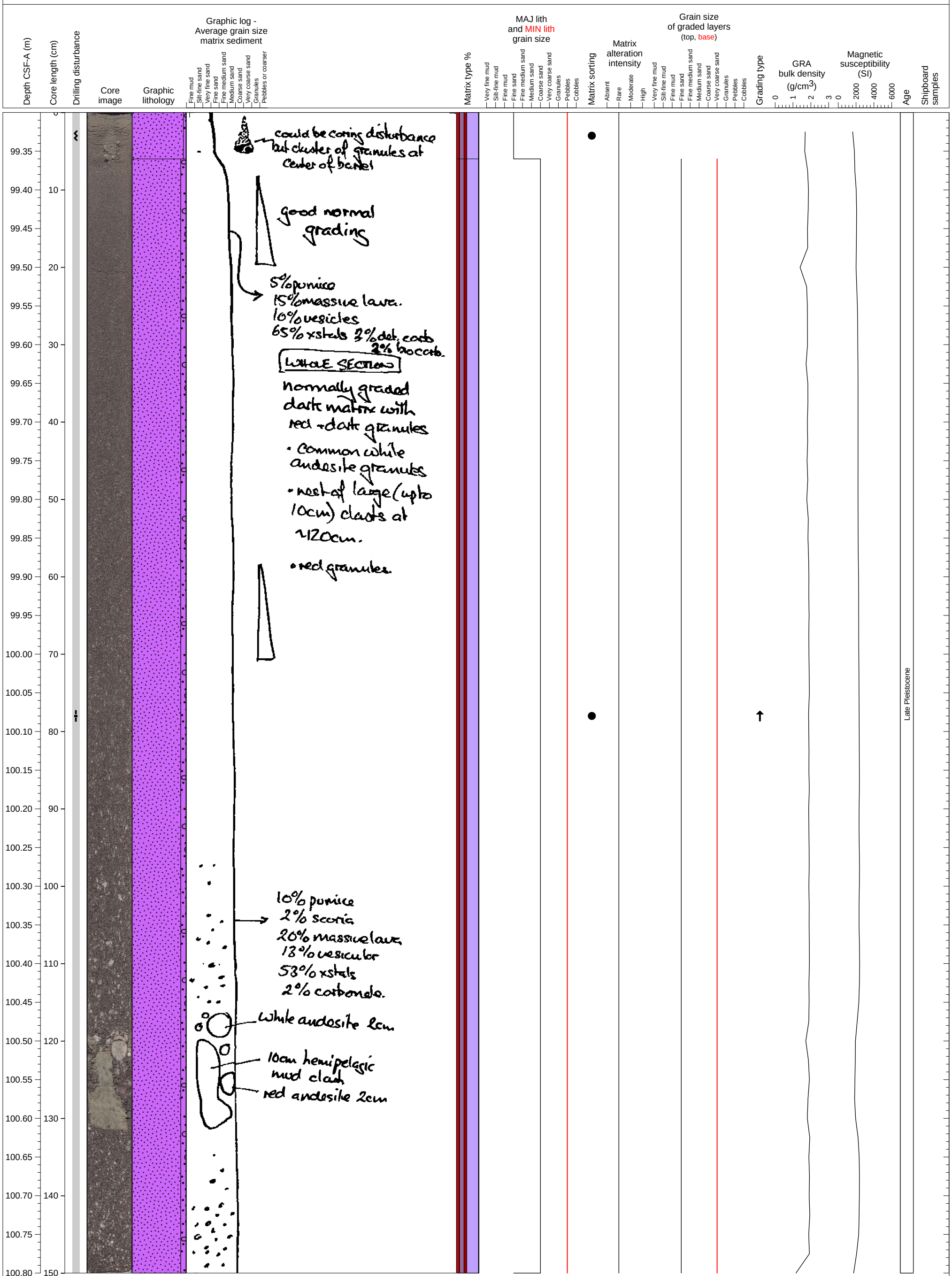
Hole 340-U1397B-12H Section CC, Top of Section: 98.08 CSF-A (m)

Volcaniclastic sand with abundant volcanic pebbles.



Hole 340-U1397B-13H Section 1, Top of Section: 99.3 CSF-A (m)

The upper part of a normally graded thick volcaniclastic turbidite with pumice and mud clasts.



Hole 340-U1397B-13H Section 2, Top of Section: 100.8 CSF-A (m)

Volcaniclastic sand deposit with abundant pumice and mud clasts.

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

100.85
100.90
100.95
101.00
101.05
101.10
101.15
101.20
101.25
101.30
101.35
101.40
101.45
101.50
101.55
101.60
101.65
101.70
101.75
101.80
101.85
101.90
101.95
102.00
102.05
102.10
102.15
102.20
102.25
102.30

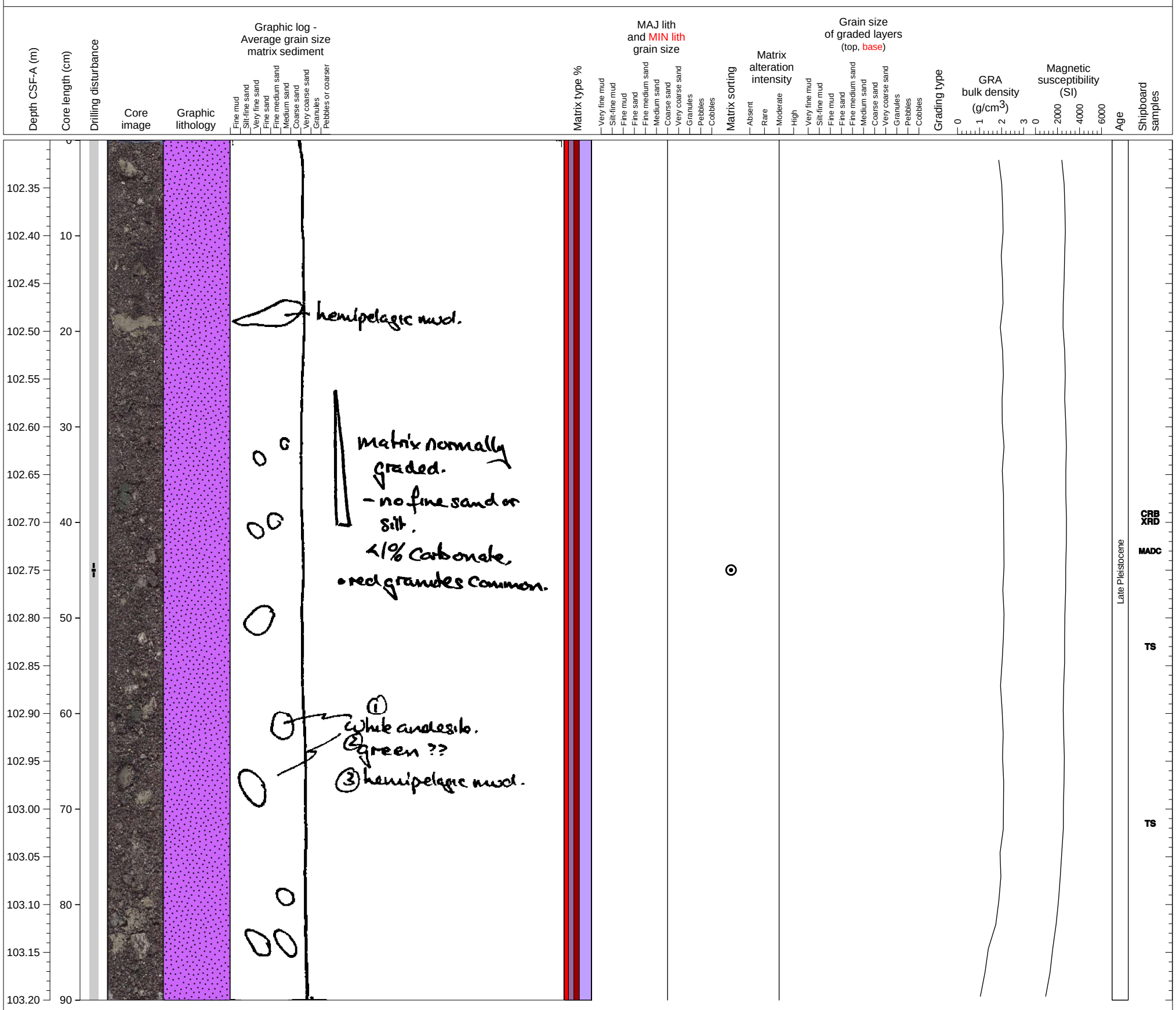
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150

15% pumice, 20% massive, 20 vesicular 45% xstal.
WHOLE SECTION <1% carb.
dark coarse sand matrix with subtle normal grading throughout
- common 0.5-2cm clasts of ③ brown andesite ① white andesite ② green-grey (hemipelagic?) mud.
Red granules common in matrix
- no fine sand or silt
- ~1-2% carbonate.
matrix fines upwards subtly.
NB lack of clasts along sides of barrel suggest flowage during coring
10% pumice
35% massive lava
15% vesicles
35% xstals
2% biogenic carb
3% detrital carb.

Late Pleistocene

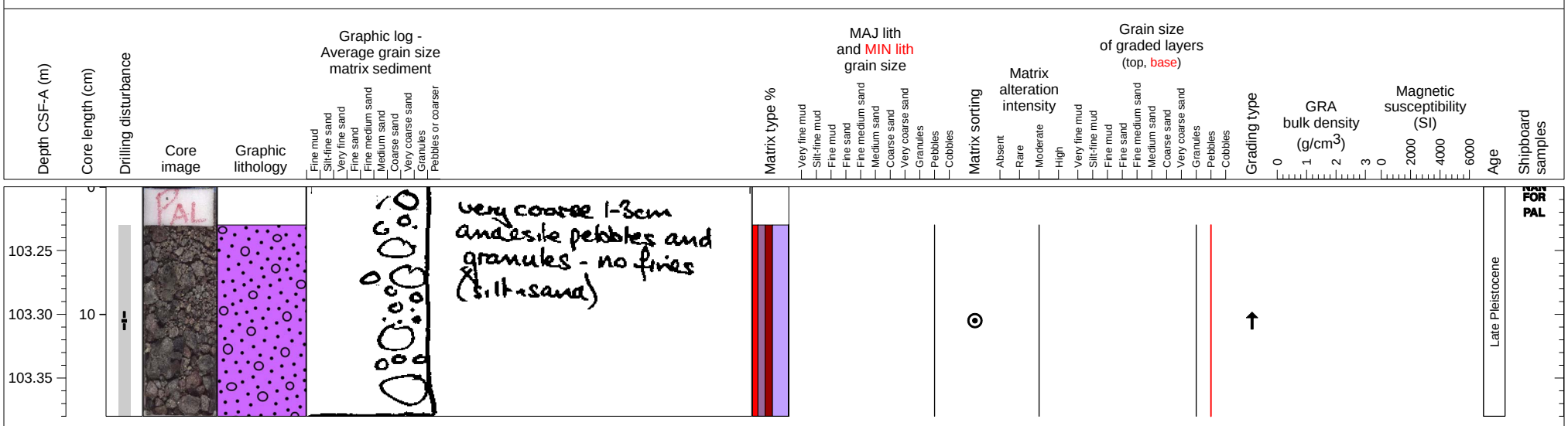
Hole 340-U1397B-13H Section 3, Top of Section: 102.3 CSF-A (m)

Volcaniclastic coarse sand deposit containing abundant pumice and mud clasts.

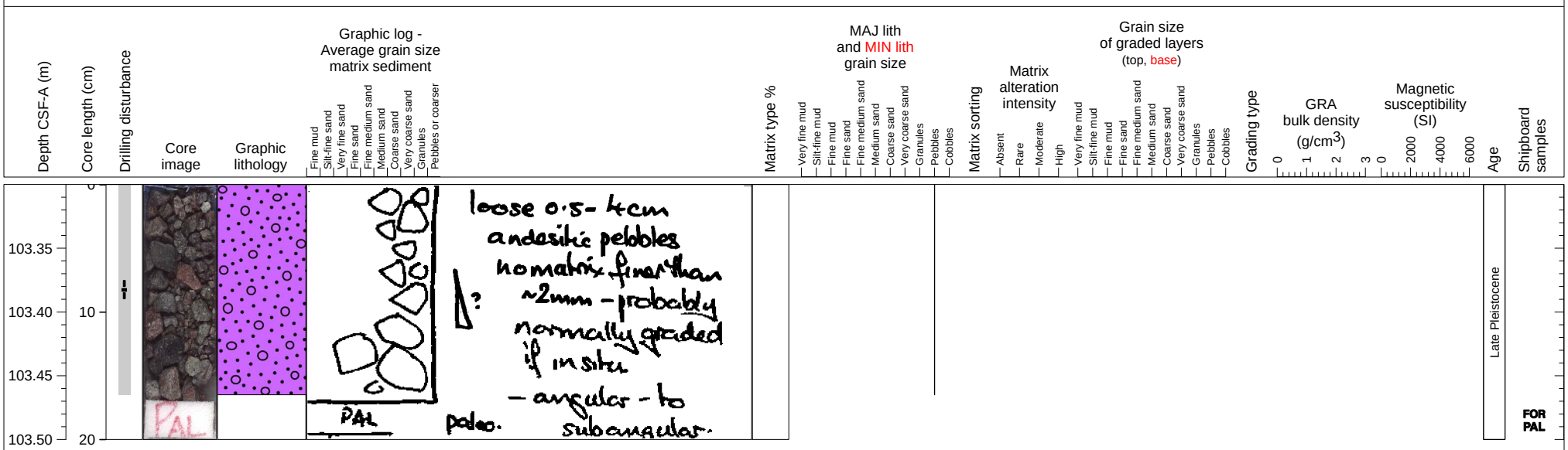


Hole 340-U1397B-13H Section CC, Top of Section: 103.2 CSF-A (m)

Volcaniclastic gravel deposit.

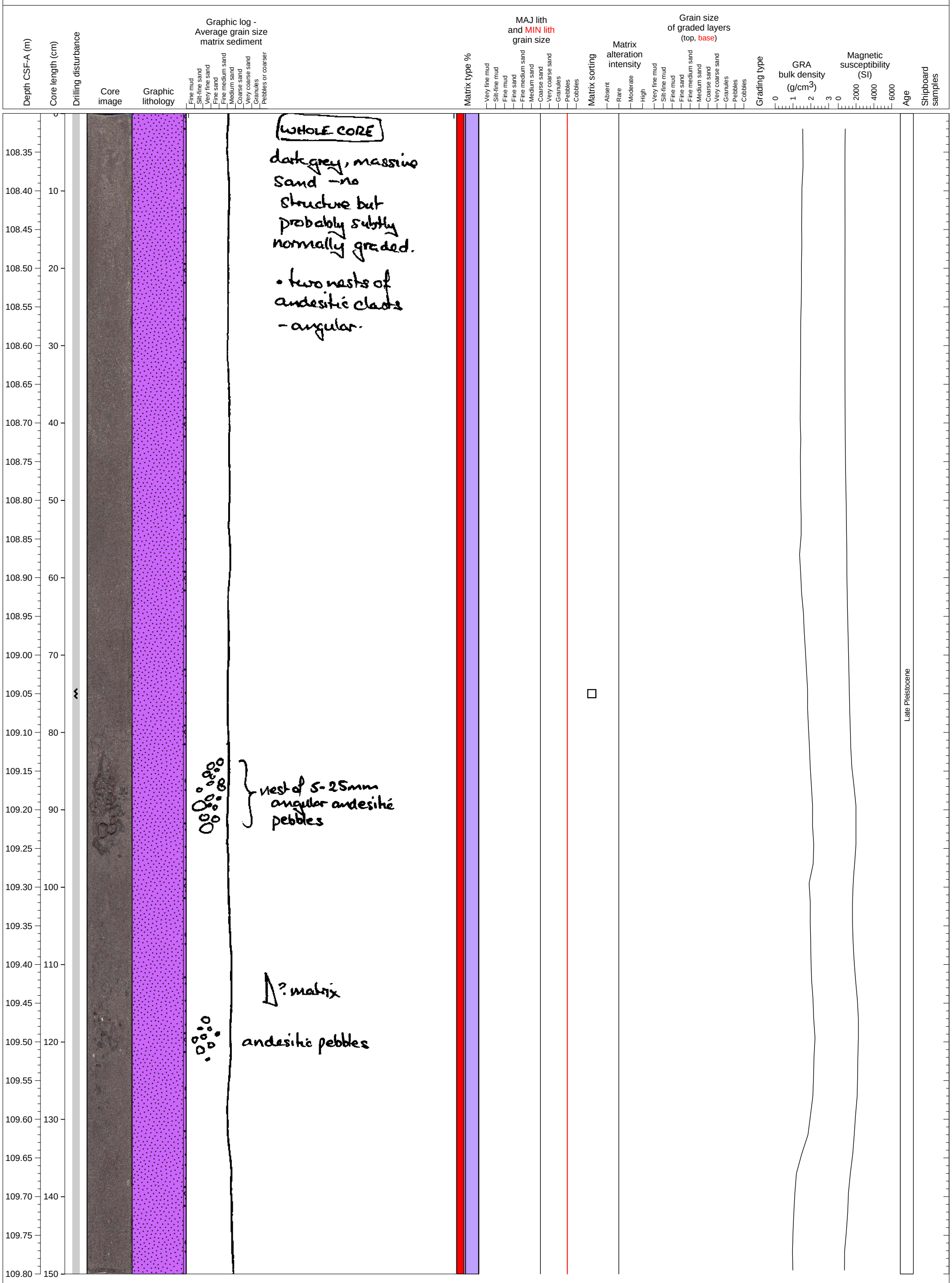


Volcaniclastic gravel composed of volcanic pebbles.



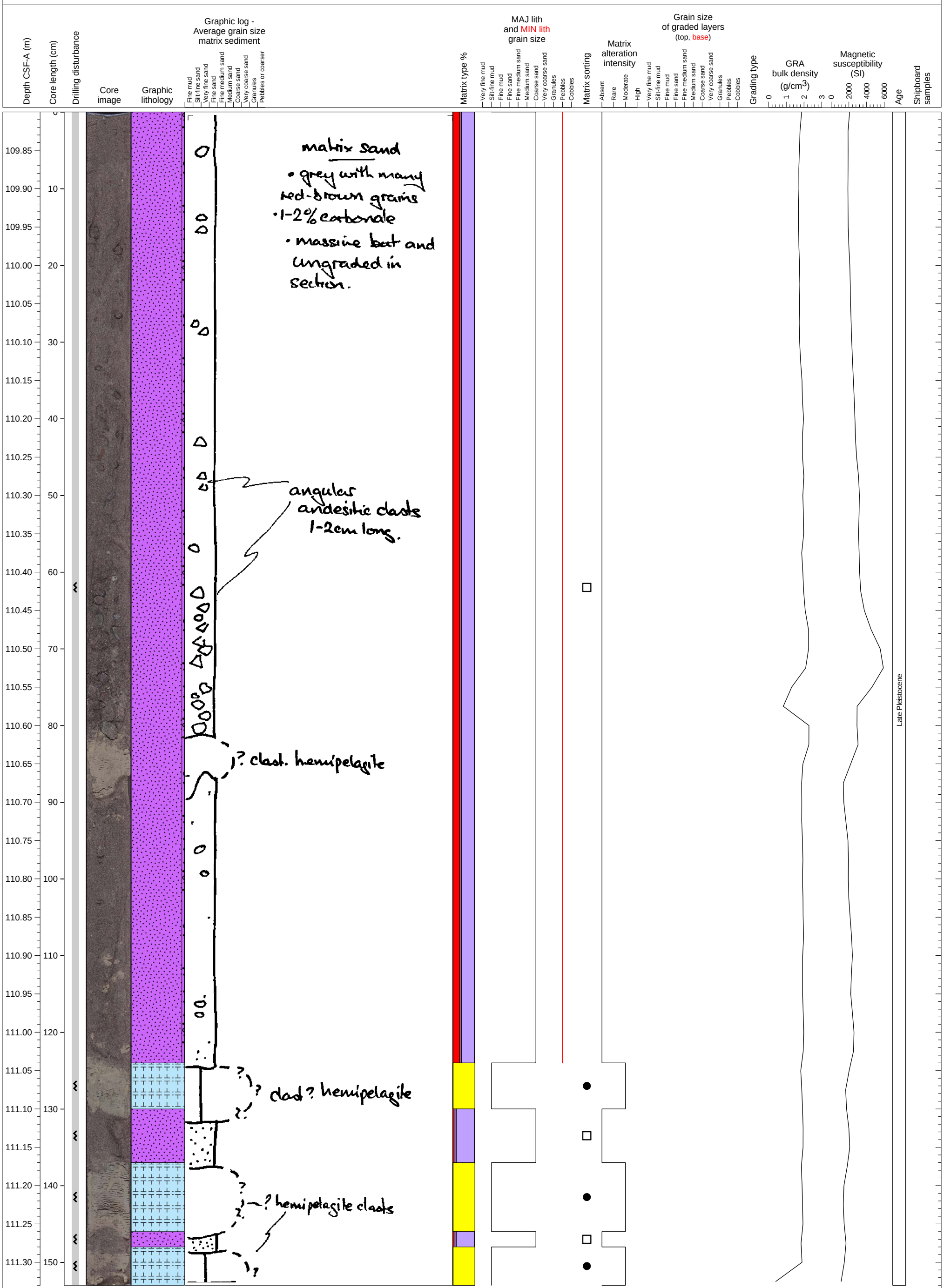
Hole 340-U1397B-16H Section 1, Top of Section: 108.3 CSF-A (m)

Massive volcaniclastic sand with a gravelly portion which is probably due to drilling disturbance.



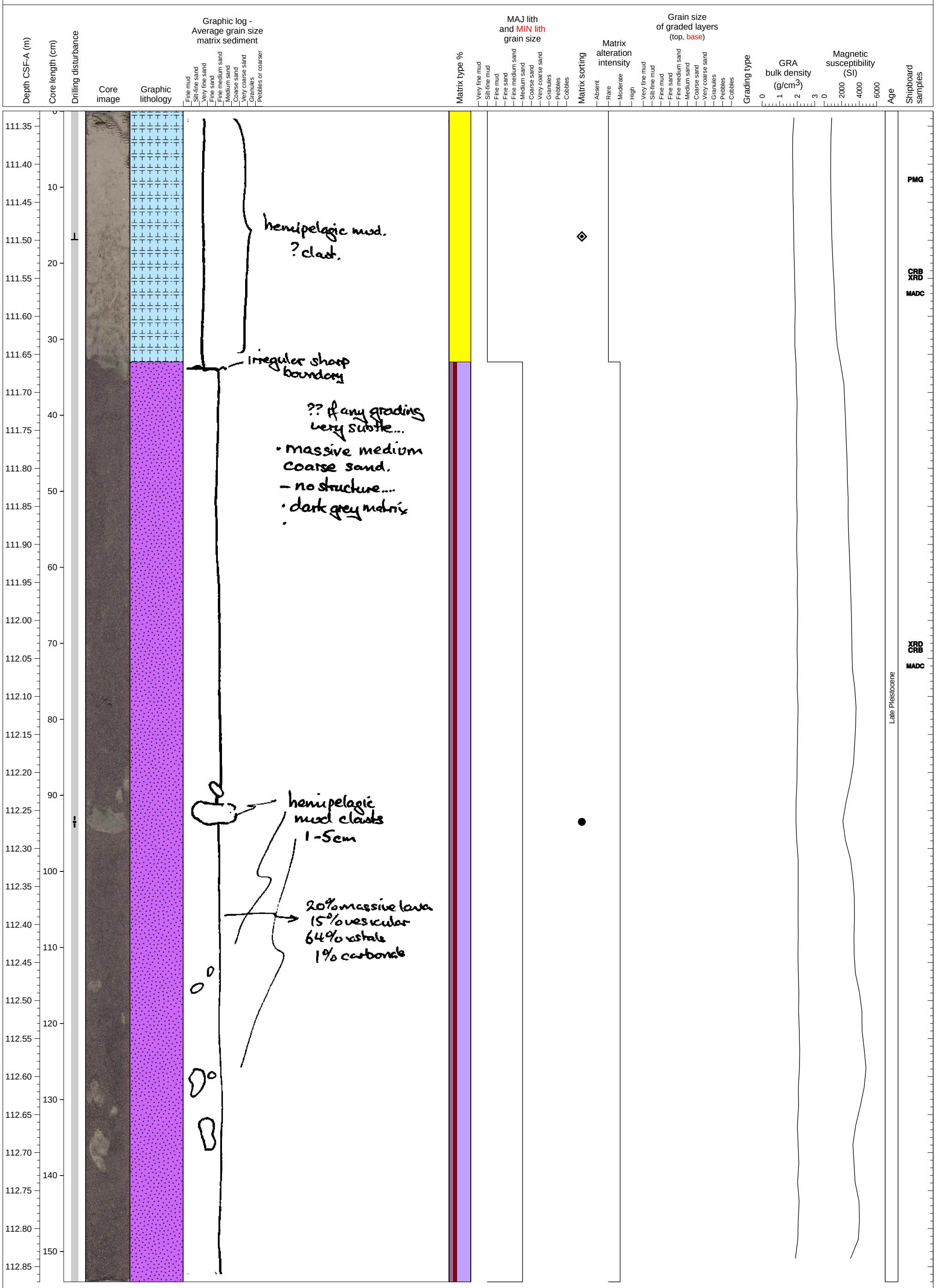
Hole 340-U1397B-16H Section 2, Top of Section: 109.8 CSF-A (m)

Volcaniclastic turbidite with mud clasts and a gravelly portion.



Hole 340-U1397B-16H Section 3, Top of Section: 111.33 CSF-A (m)

Hemipelagic mud in upper part, volcaniclastic sand with mud clasts in lower part

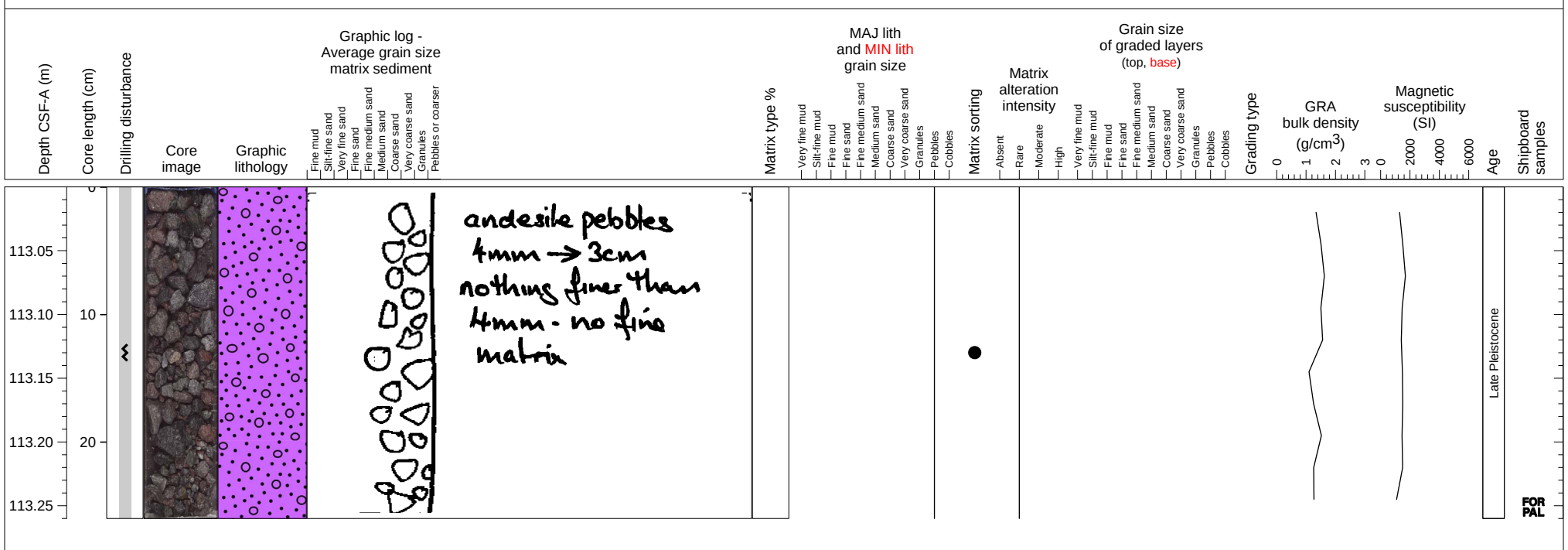


Hole 340-U1397B-16H Section CC, Top of Section: 112.87 CSF-A (m)

Volcaniclastic sand

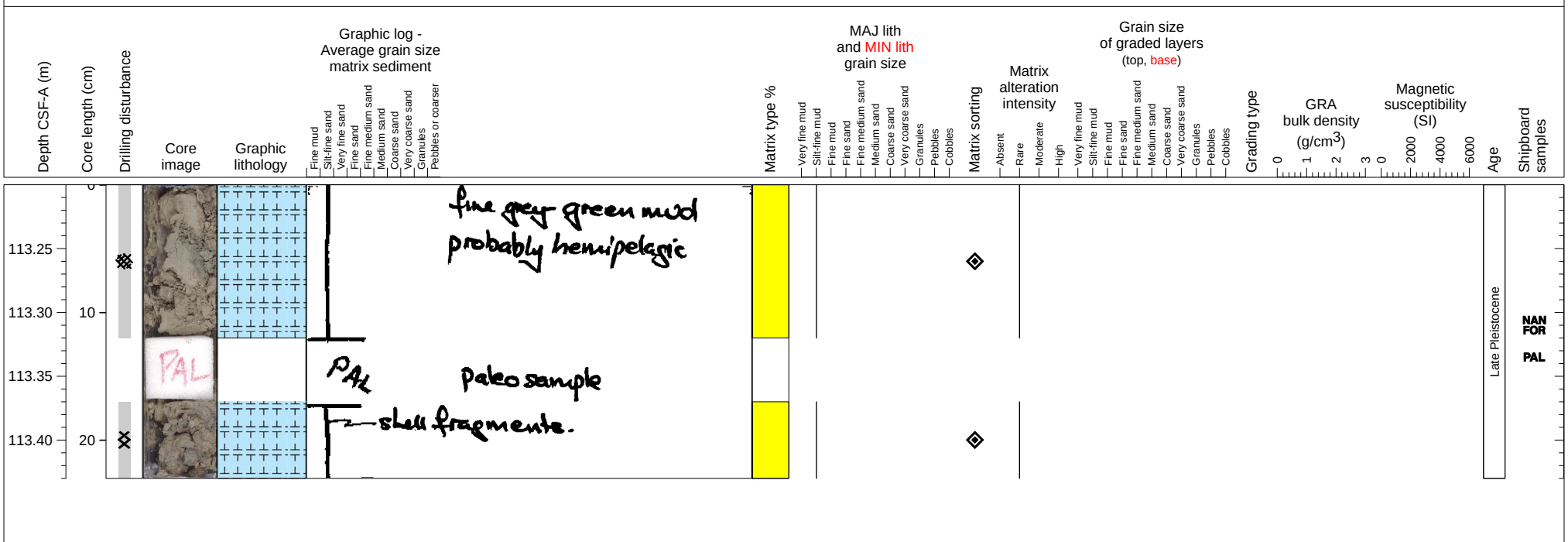
Hole 340-U1397B-17H Section 1, Top of Section: 113.0 CSF-A (m)

Pebble-sized gravels consisting of massive lava.



Hole 340-U1397B-18X Section CC, Top of Section: 113.2 CSF-A (m)

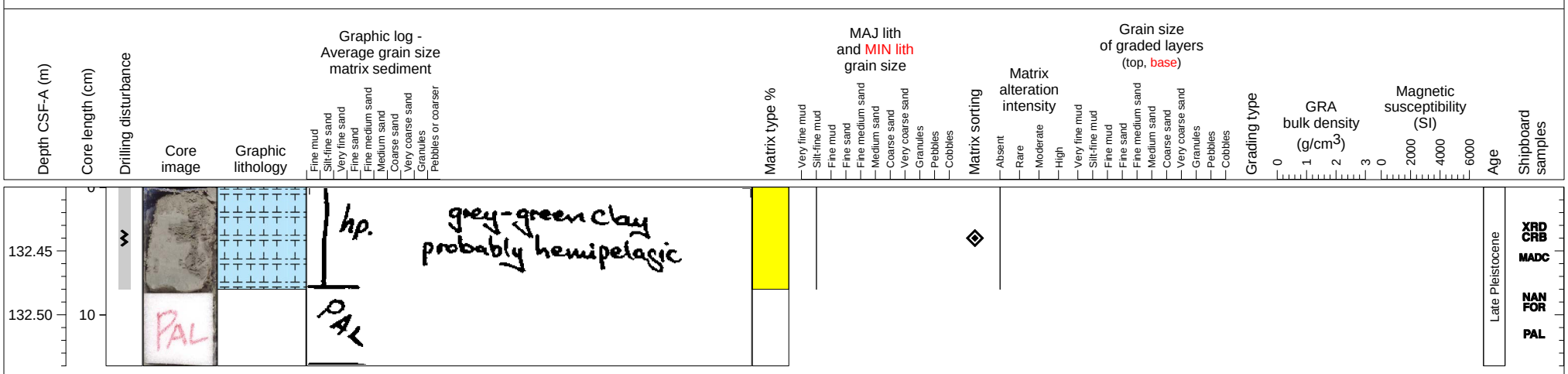
Hemipelagic clay; bottom unit contains large volcanic pebbles. PAL from middle of section.



U1397B-19X NO RECOVERY

Hole 340-U1397B-20X Section CC, Top of Section: 132.4 CSF-A (m)

Hemipelagic clay. PAL sample from section base.

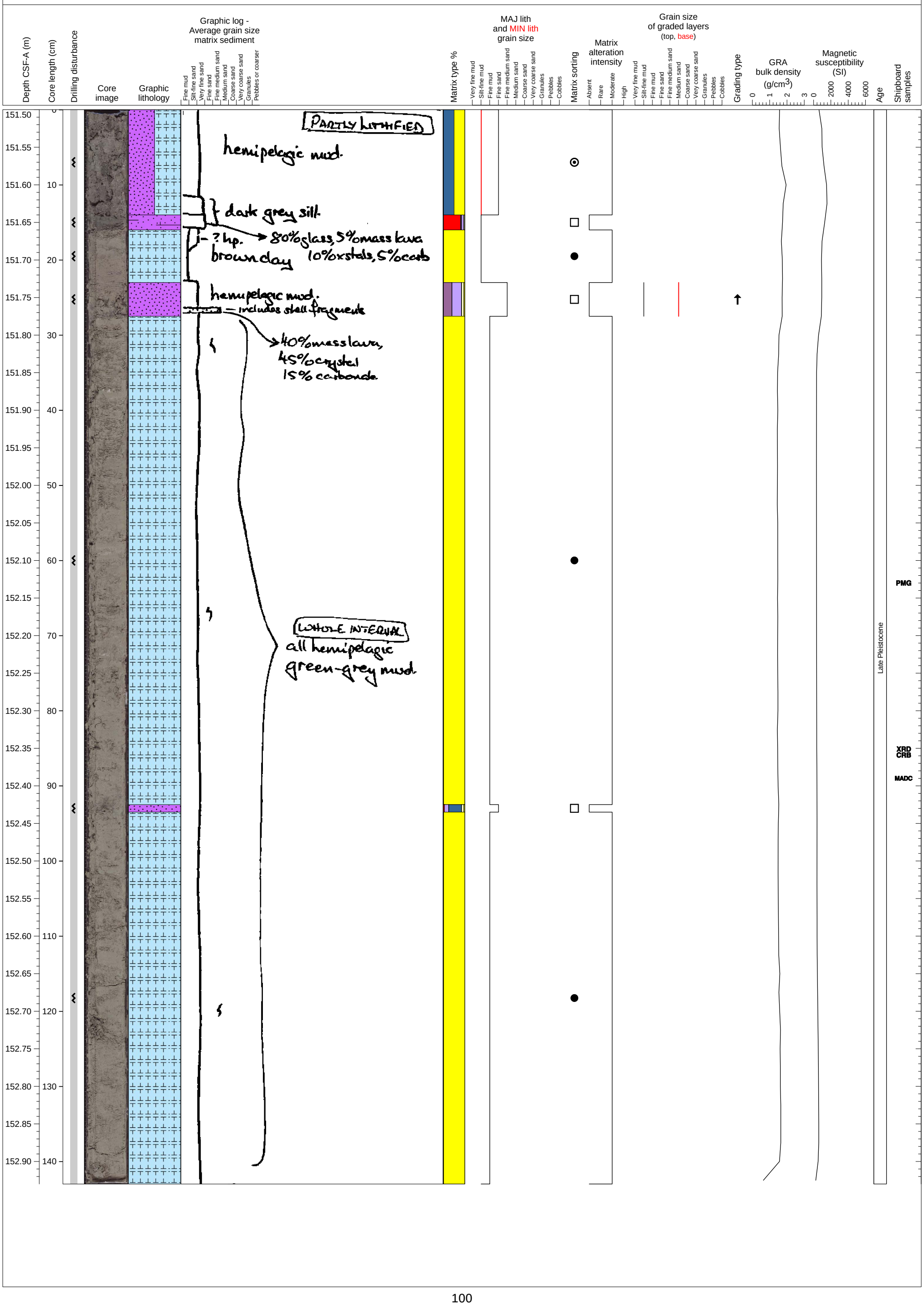


Hole 340-U1397B-21X Section CC, Top of Section: 141.9 CSF-A (m)

Hemipelagic clay. PAL from section base.

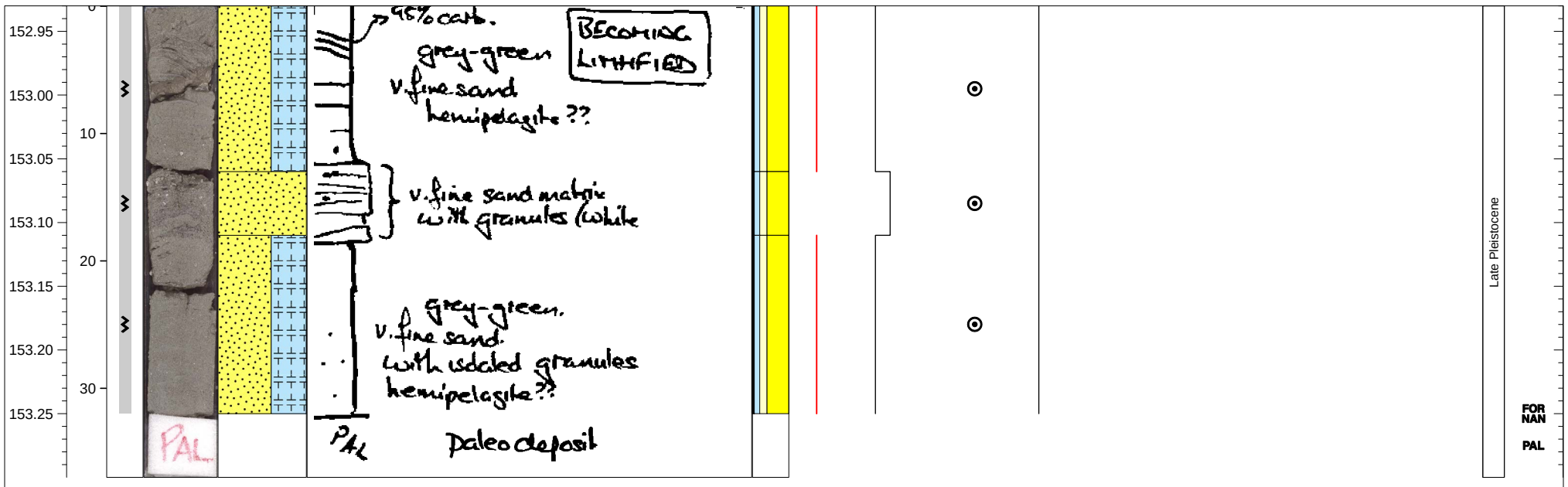
Hole 340-U1397B-22X Section 1, Top of Section: 151.5 CSF-A (m)

Hemipelagic sediment interlayering with a thin turbidite and two tephra layers.



Hole 340-U1397B-22X Section CC, Top of Section: 152.93 CSF-A (m)

Calcareous sand interlayered with hemipelagic clay. Material is partially lithified, but still a sediment. PAL sample from base of section.



Hole 340-U1397B-23X Section 1, Top of Section: 161.1 CSF-A (m)

Lithified heavily bioturbated hemipelagic mud stone interlayering with unconsolidated volcanic sand 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
PMG
Late Pleistocene

heavily deformed (by burrows?) grey green hemipelagic mud.

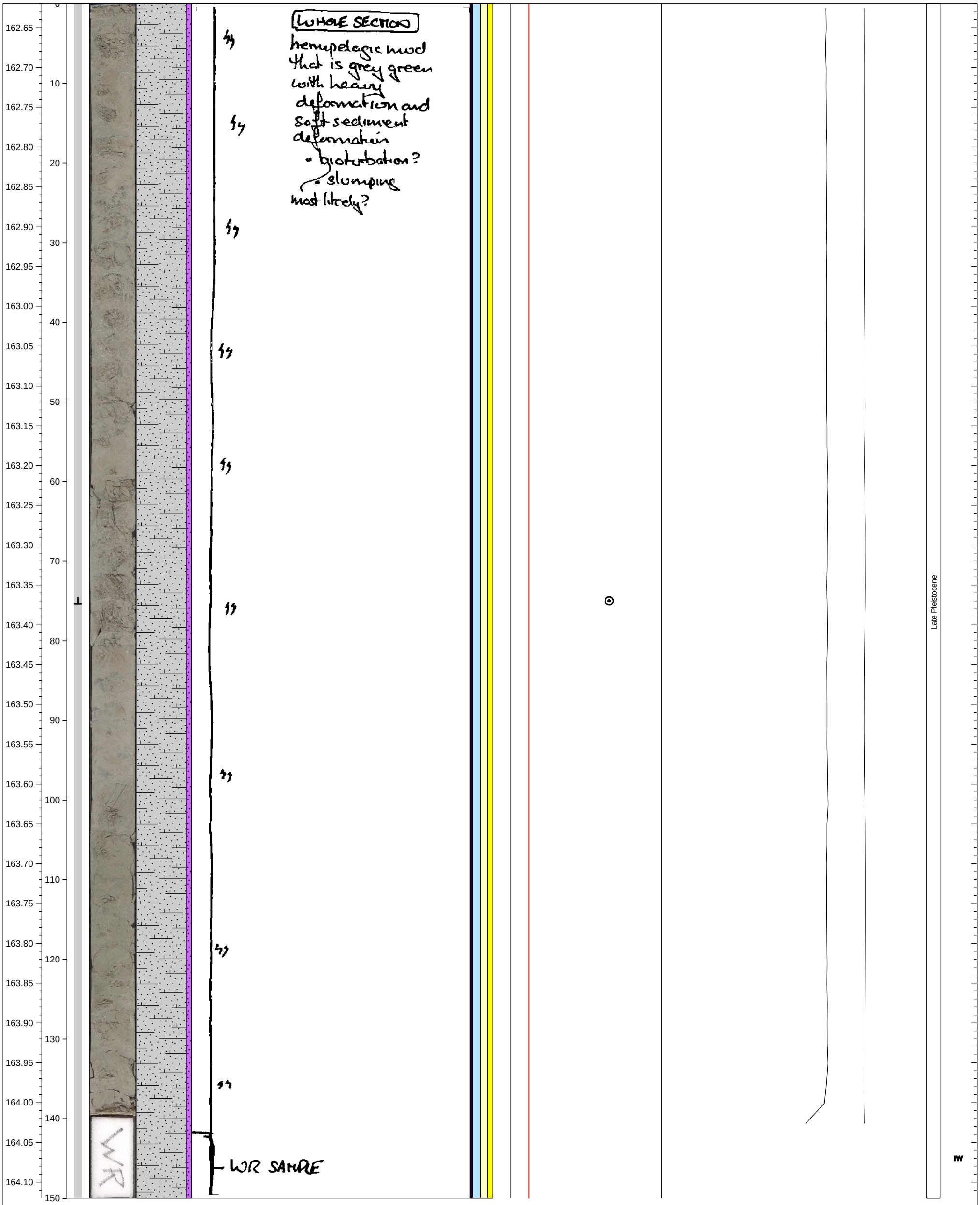
contorted mixture of hemipelagic mud and fine sand with angular fragments.

contorted hemipelagic mud. ?burrows.

Hole 340-U1397B-23X Section 2, Top of Section: 162.62 CSF-A (m)

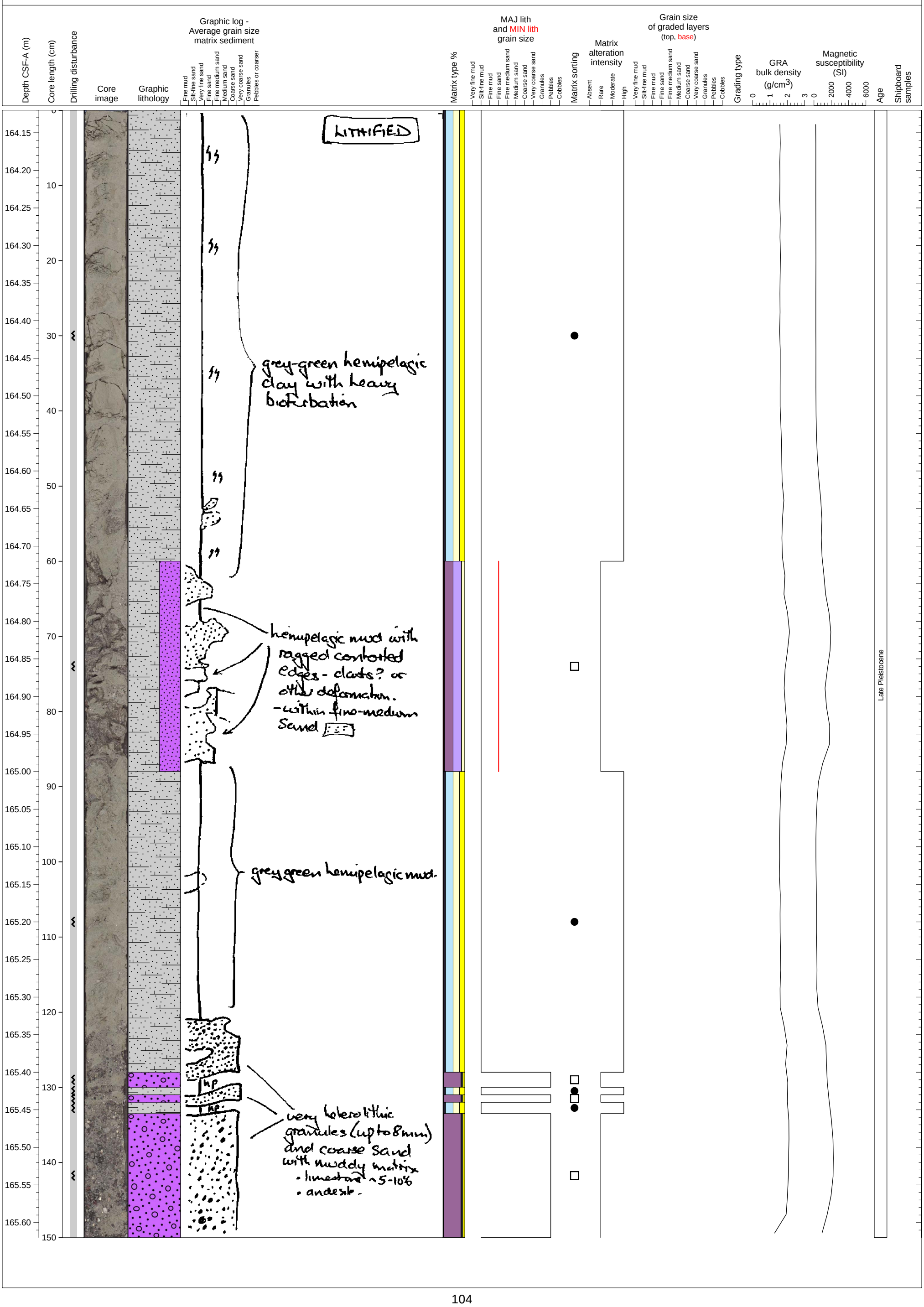
Lithified heavily bioturbated hemipelagic mud stone.

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



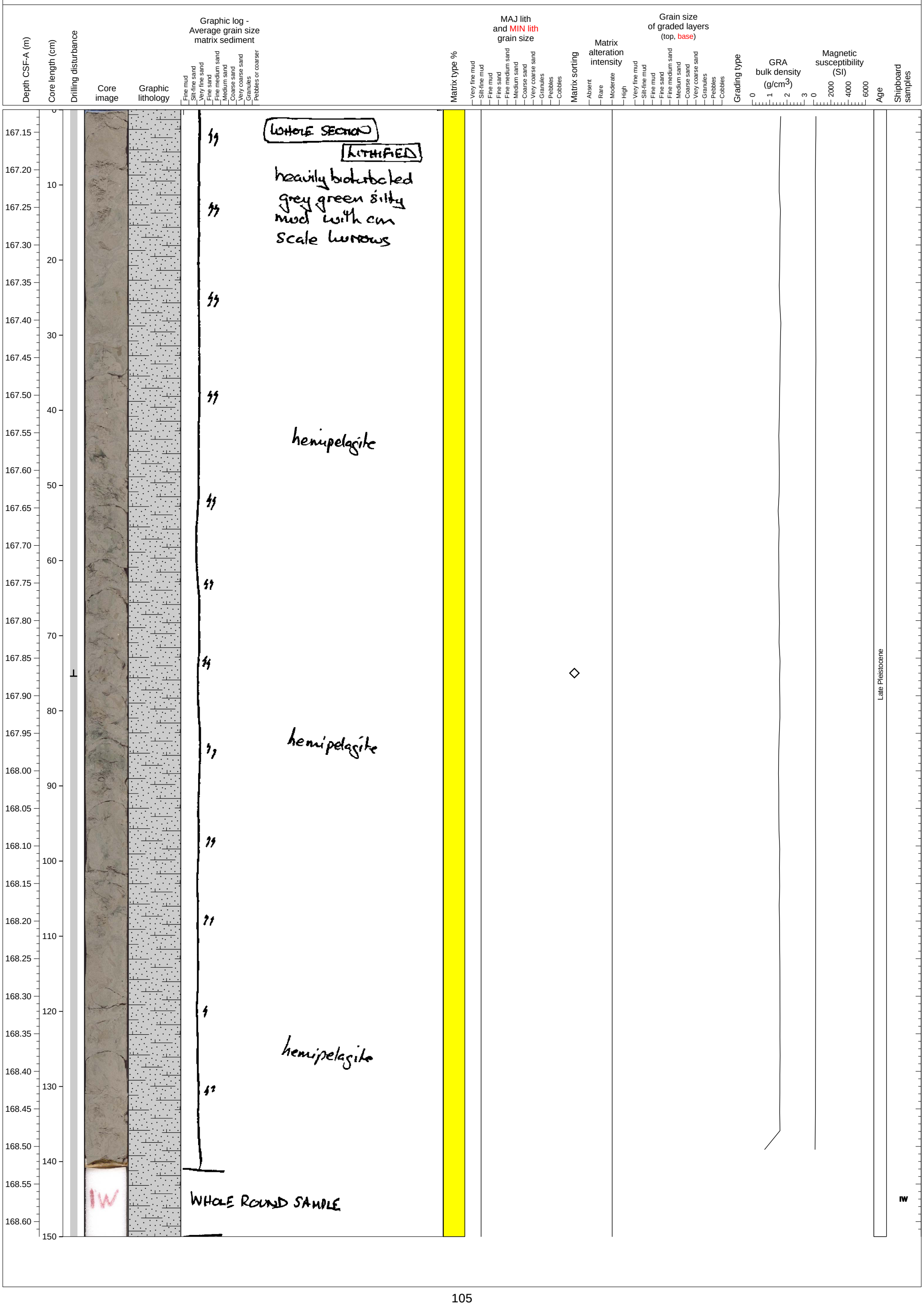
Hole 340-U1397B-23X Section 3, Top of Section: 164.12 CSF-A (m)

Lithified heavily bioturbated hemipelagic clay interlayering with volcaniclastic sand and gravel layers.



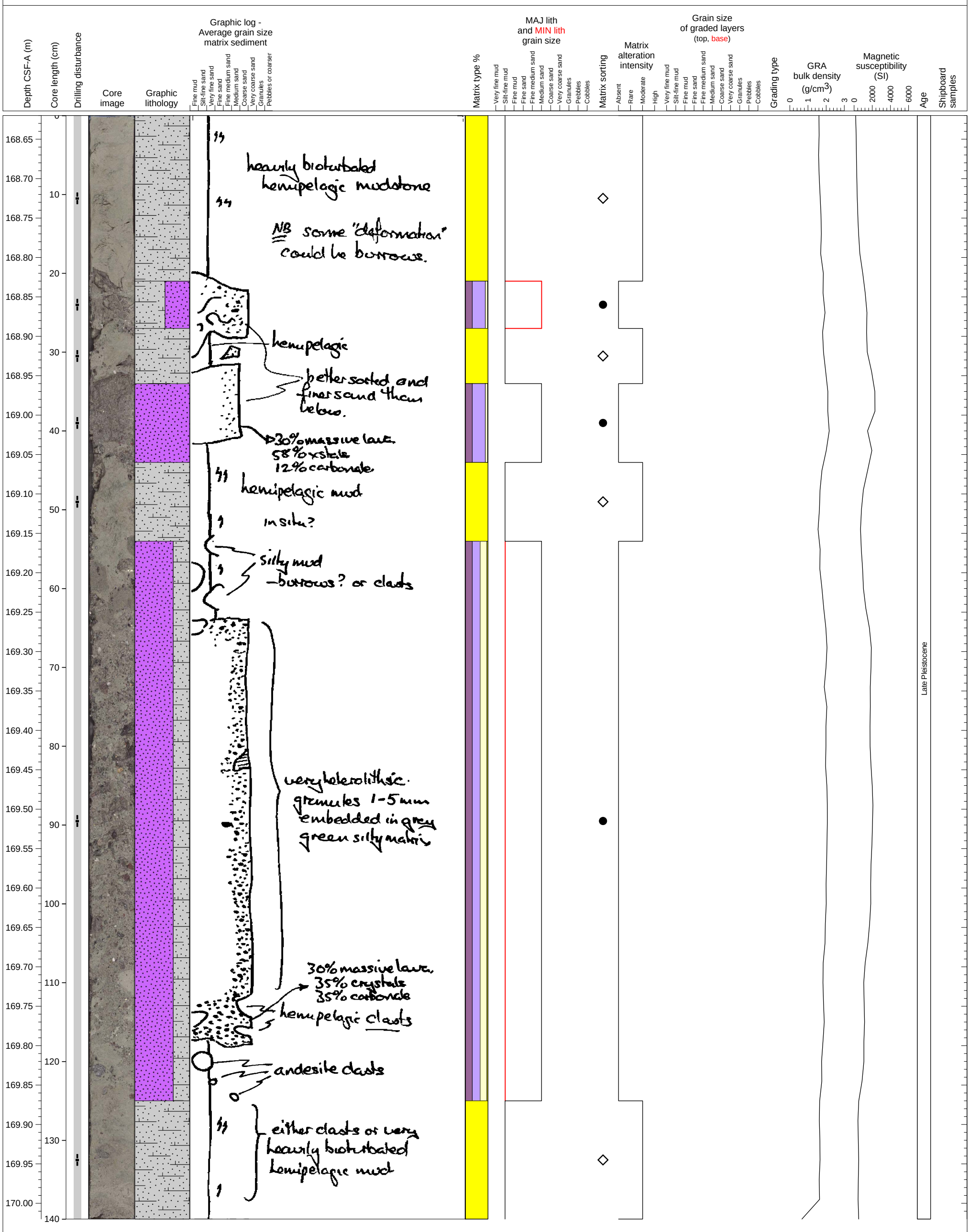
Hole 340-U1397B-23X Section 5, Top of Section: 167.12 CSF-A (m)

Mudstone (partially to moderatley lithified hemipelagic clay) with heavy bioturbation.



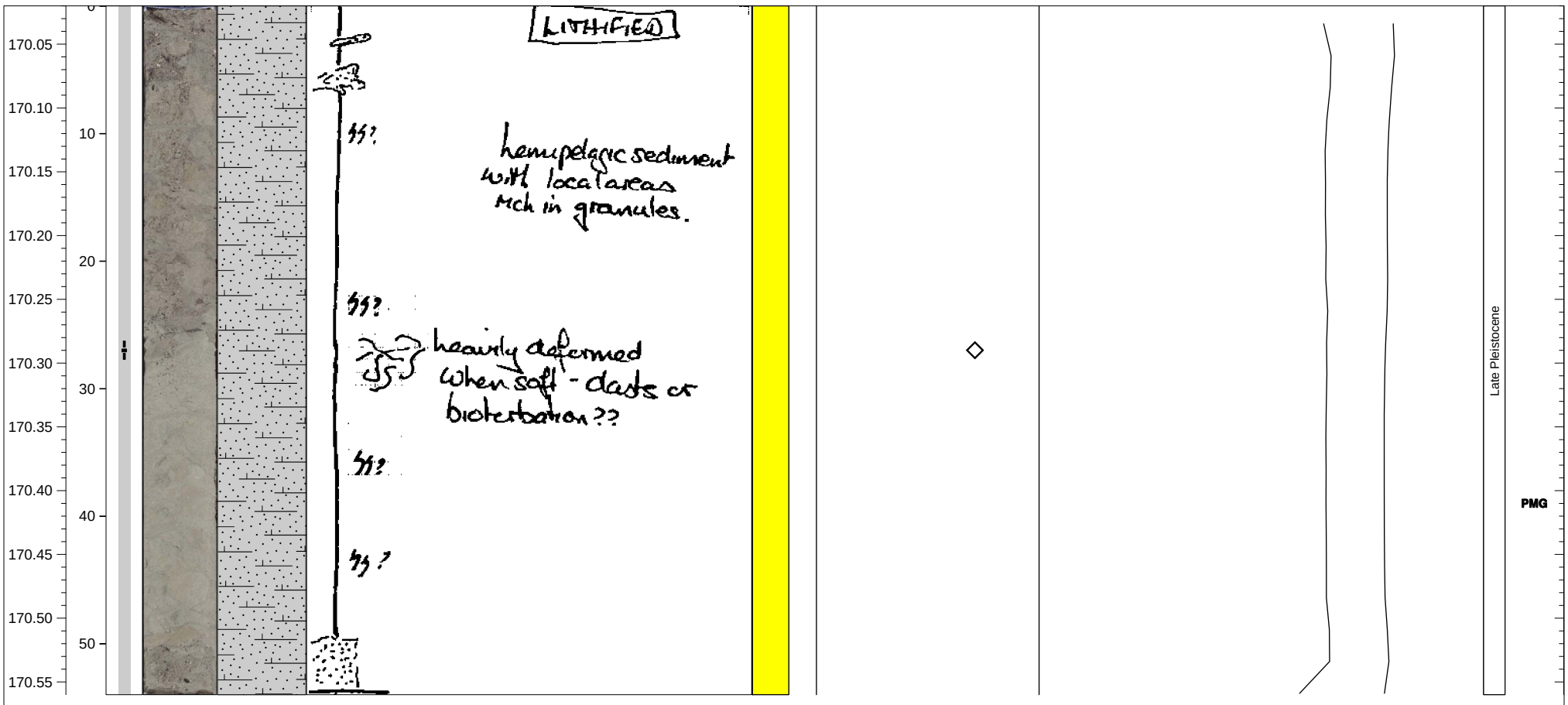
Hole 340-U1397B-23X Section 6, Top of Section: 168.62 CSF-A (m)

Mudstone interlayered and mixed with volcaniclastic sand.



Hole 340-U1397B-23X Section 7, Top of Section: 170.02 CSF-A (m)

Mudstone (partially to moderatley lithified hemipelagic clay) with heavy bioturbation.



Hole 340-U1397B-23X Section CC, Top of Section: 170.56 CSF-A (m)

Mudstone (partailly to moderately lithified hemipelagic clay) with heavy bioturbation. PAL sample from section middle.

Hole 340-U1397B-24X Section 1, Top of Section: 170.7 CSF-A (m)

Lithified heavily bioturbated hemipelagic cray interlayering with reddish massive volcaniclastic breccia and sand 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

170.70
170.75
170.80
170.85
170.90
170.95
171.00
171.05
171.10
171.15
171.20
171.25
171.30
171.35
171.40
171.45
171.50
171.55
171.60
171.65
171.70
171.75
171.80
171.85
171.90
171.95
172.00
172.05
172.10
172.15

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

Same red-brown clast. subrounded as at 60-70cm

clasts (up to 7cm)

grey-green hemipelagic mud.

lava?
?clast.

large block of red-brown and black areas - which form a large clast?
~20cm+.

grey-green hemipelagic mud with mottles and dispersed granules.

steeply inclined coarse sand layers.

hp.

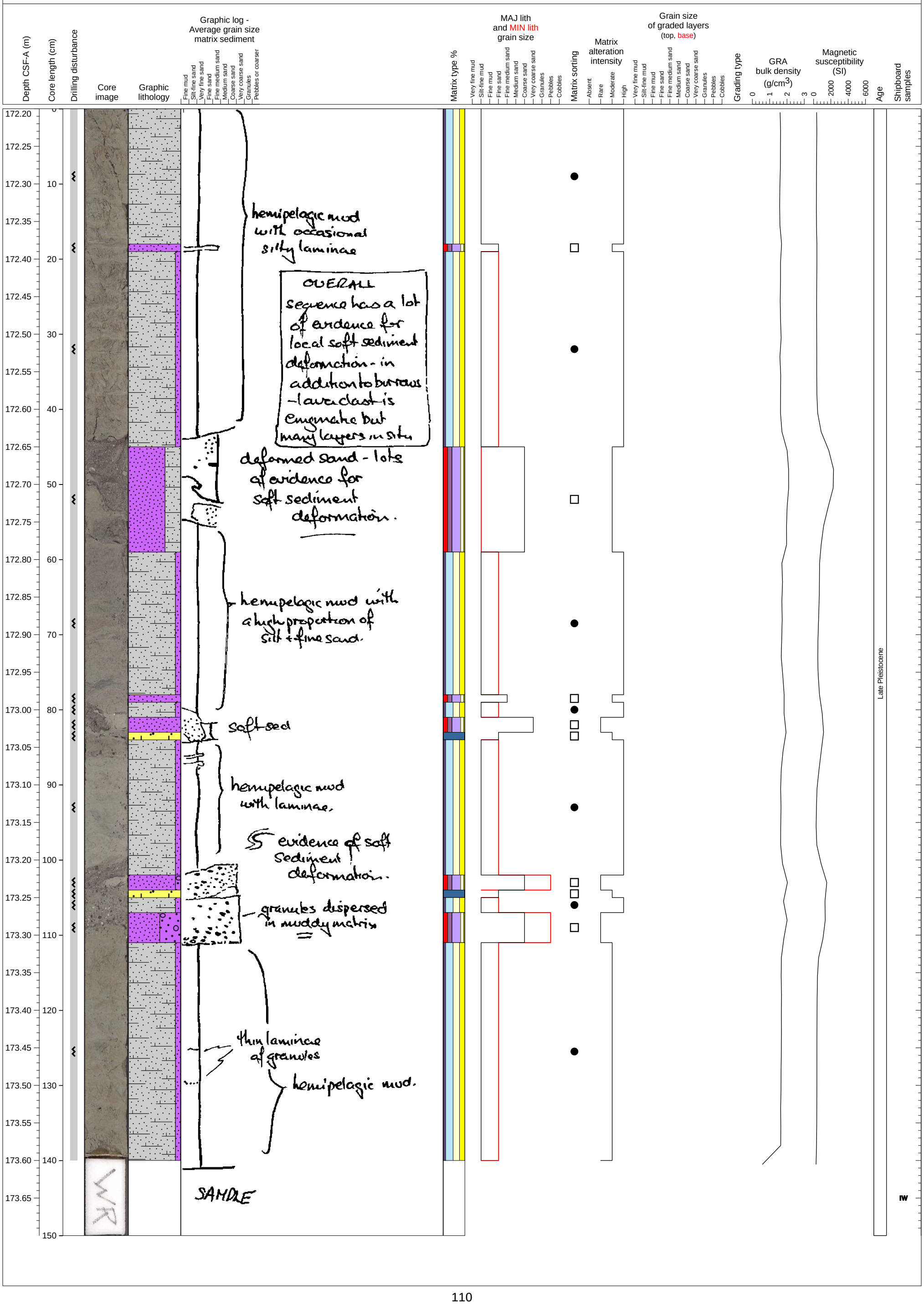
TS

Late Pleistocene

TS
SED

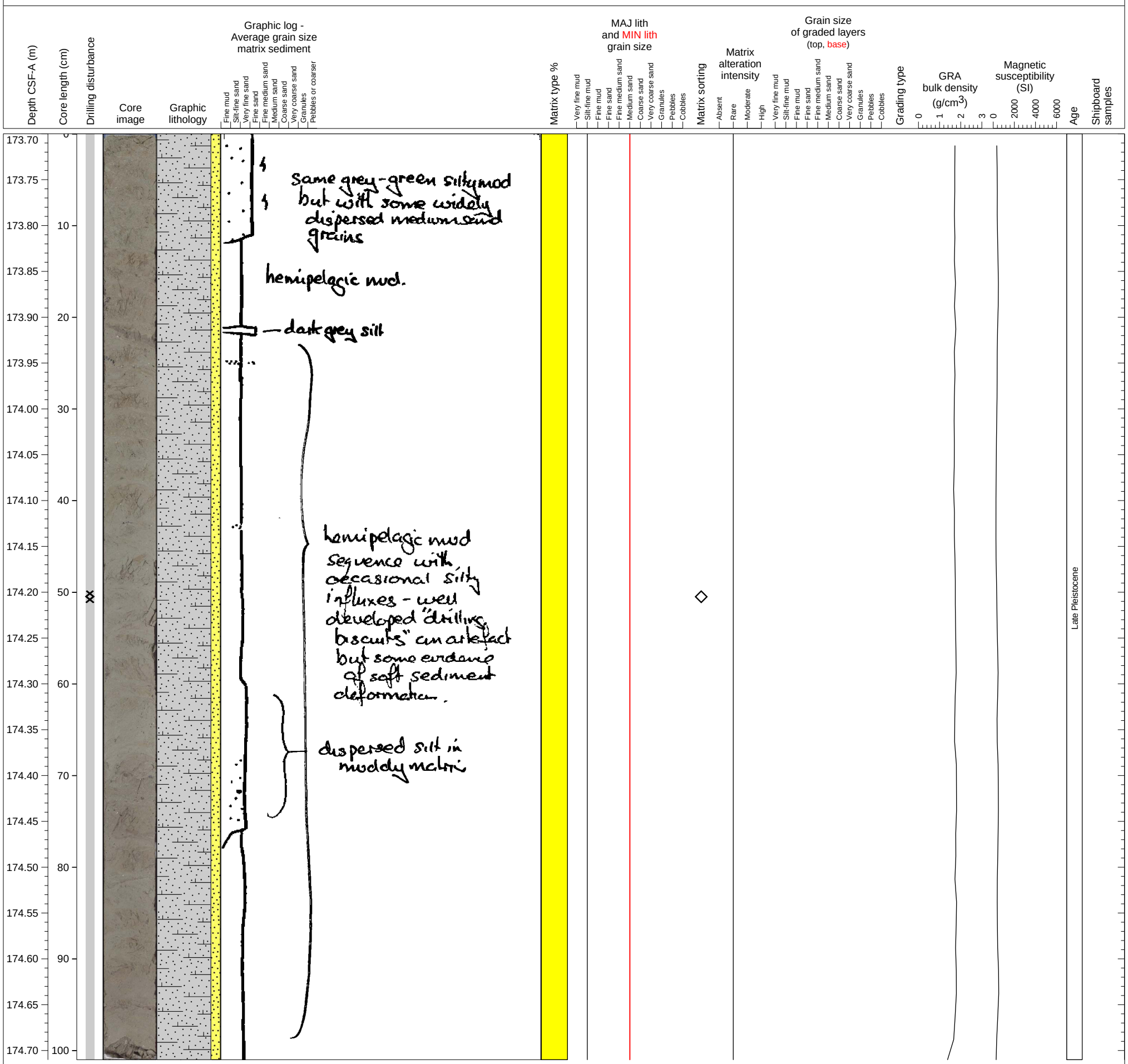
Hole 340-U1397B-24X Section 2, Top of Section: 172.2 CSF-A (m)

udstone and fine interlayered sand material. Drilling biscuits common



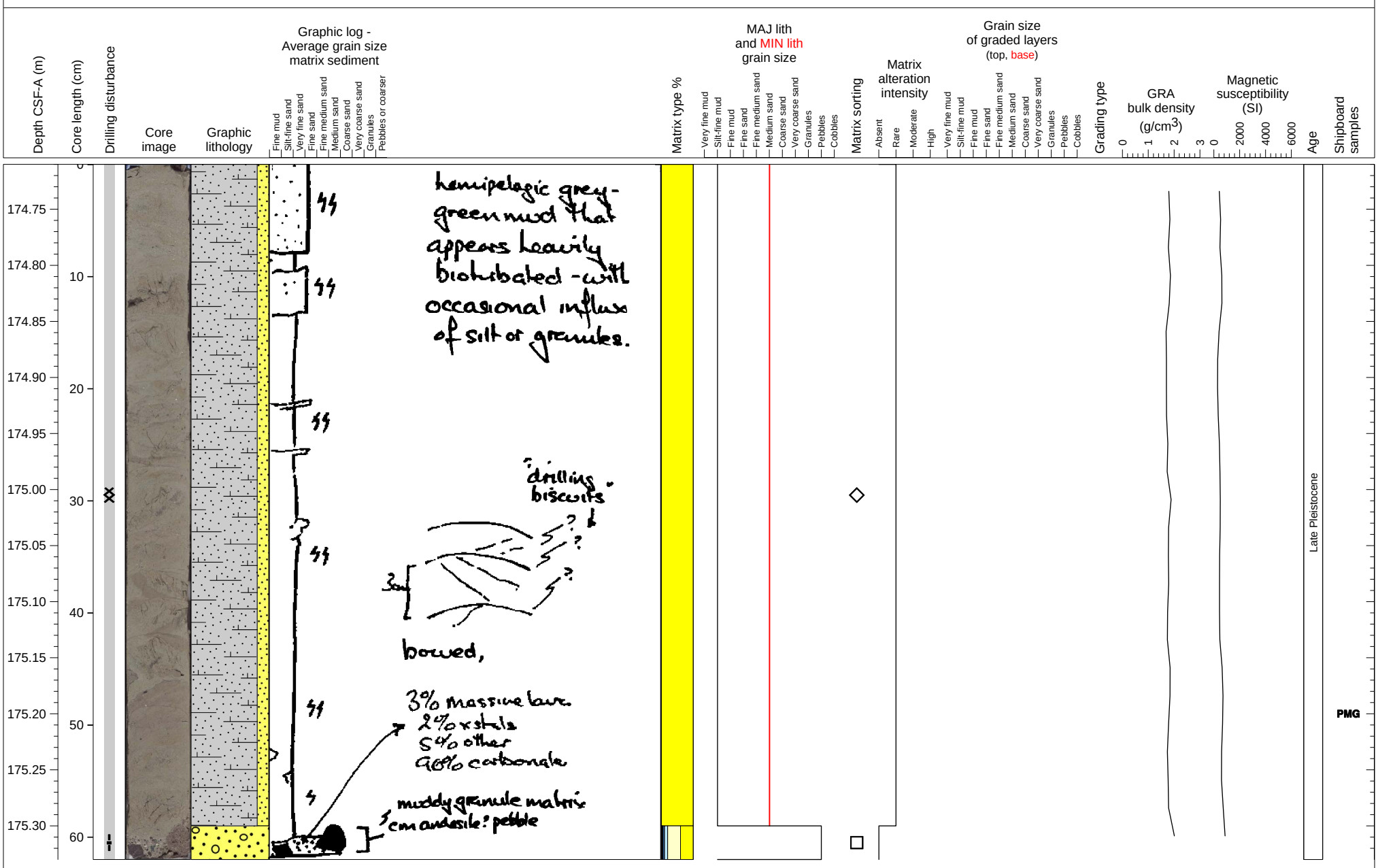
Hole 340-U1397B-24X Section 3, Top of Section: 173.7 CSF-A (m)

Mudstone and fine interlayered sand material. Drilling biscuits common and complicate interpretation.



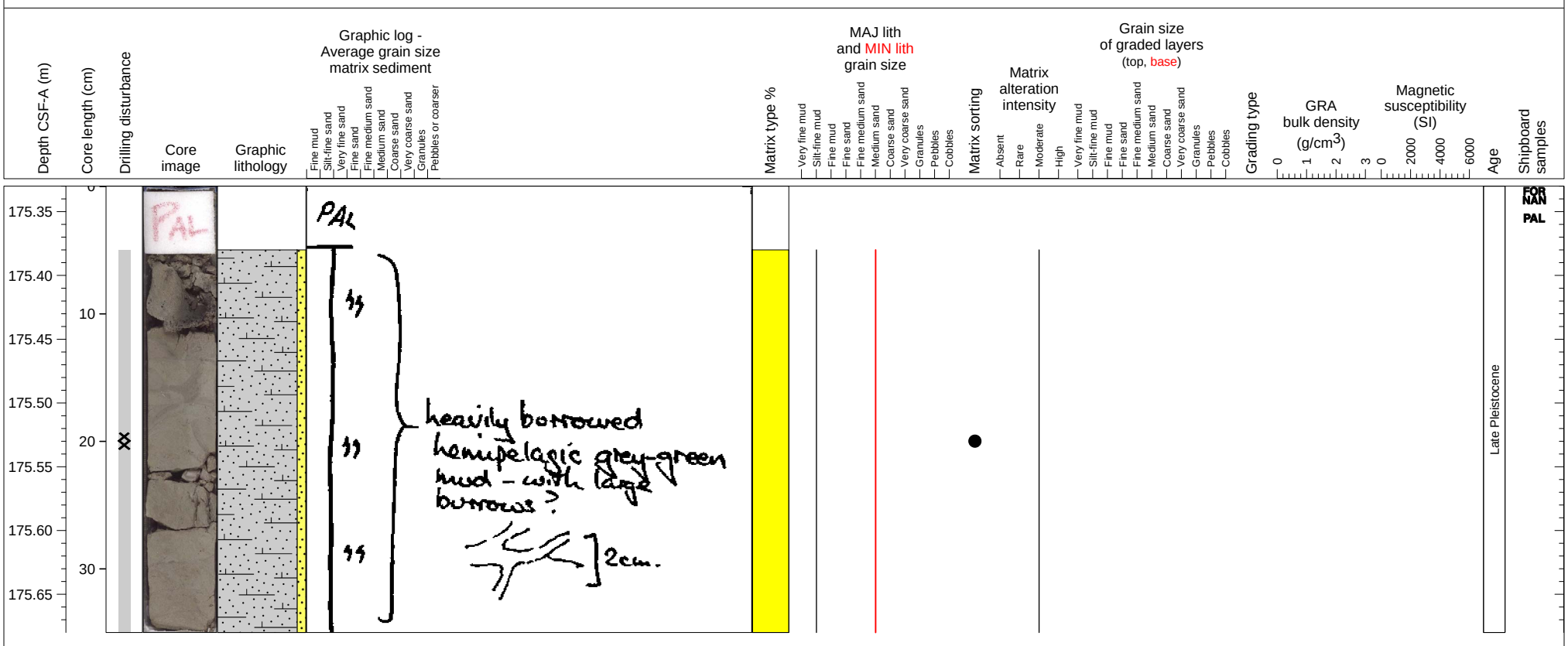
Hole 340-U1397B-24X Section 4, Top of Section: 174.71 CSF-A (m)

Mudstone and fine interlayered sand material. Drilling biscuits common and complicate interpretation. Muddy gravel at base containing large pebbles.



Hole 340-U1397B-24X Section CC, Top of Section: 175.33 CSF-A (m)

Mudstone and fine interlayered sand material. Drilling biscuits common and complicate interpretation. PAL from top.



Hole 340-U1397B-25X Section 1, Top of Section: 180.2 CSF-A (m)

Lithified heavily bioturbated hemipelagic clay interlayering with sandy and gravelly 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)
0
1
2
3
Magnetic susceptibility (SI)
0
2000
4000
6000
Age
Shipboard samples

180.20
180.25
180.30
180.35
180.40
180.45
180.50
180.55
180.60
180.65
180.70
180.75
180.80
180.85
180.90
180.95
181.00
181.05
181.10
181.15
181.20
181.25
181.30
181.35
181.40
181.45
181.50
181.55
181.60
181.65

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

two 3-5cm volcanic clasts - very angular - probably not in situ.

Soft sediment deformation within hemipelagic mud.

blebs of coarser grains

matrix supported granules in fine matrix, with cm-clasts

debritic

hemipelagite with evidence of soft sediment deformation

matrix supported granules rather like matrix in adjacent intervals.

WHOLE SECTION

the hemipelagic mud intervals are deformed in places, and the coarser muddy sand is similar in adjacent intervals. So this may be a debrite with clasts of hemipelagic mud.

hemipelagic mud with slightly deformed character

WHOLE ROUND

Late Pleistocene

IW

Hole 340-U1397B-25X Section 2, Top of Section: 181.7 CSF-A (m)

Lithified heavily bioturbated hemipelagic cray interlayering with sandy and gravelly 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)
0
1
2
3
Magnetic susceptibility (SI)
0
2000
4000
6000
Age
Shipboard samples

181.70
181.75
181.80
181.85
181.90
181.95
182.00
182.05
182.10
182.15
182.20
182.25
182.30
182.35
182.40
182.45
182.50
182.55
182.60
182.65
182.70
182.75
182.80
182.85
182.90

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

there are lots of drilling biscuits through this interval - so hard to see what is primary soft sediment deformation

hemipelagic mud. possibly with deformation

OVERALL

these hemipelagic mud intervals could be clasts in a larger debrite - with the coarse intervals being matrix.

hp.

matrix supported granules + clasts within a finer muddy matrix - debritic

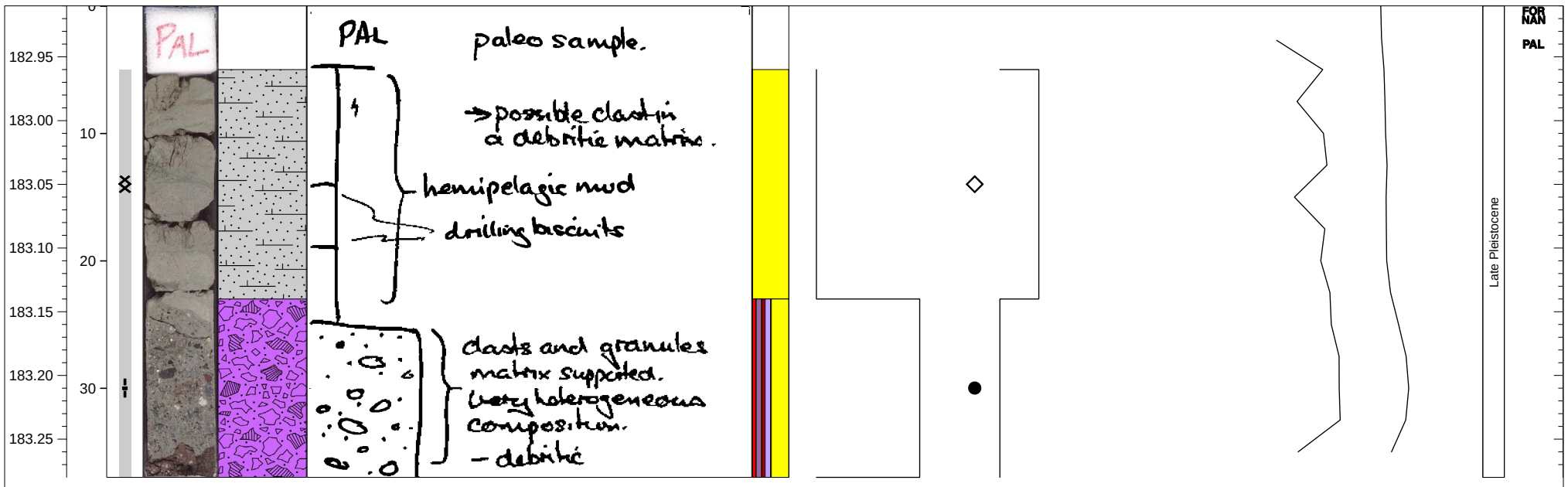
hp

hemipelagic mud - possibly deformed.

Late Pleistocene

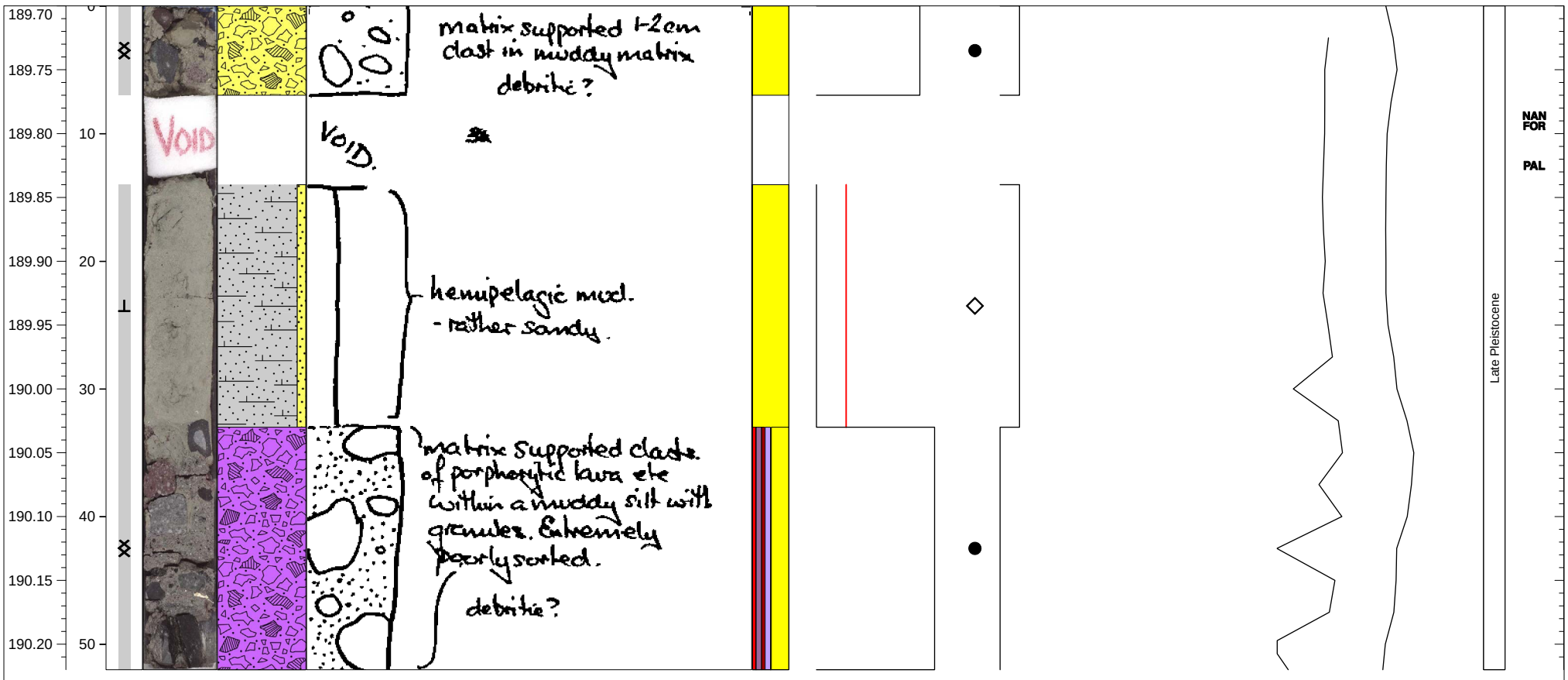
Hole 340-U1397B-25X Section CC, Top of Section: 182.91 CSF-A (m)

Mudstone overlying a volcaniclastic breccia. Breccia unit may represent a large clast within the mudstone unit.



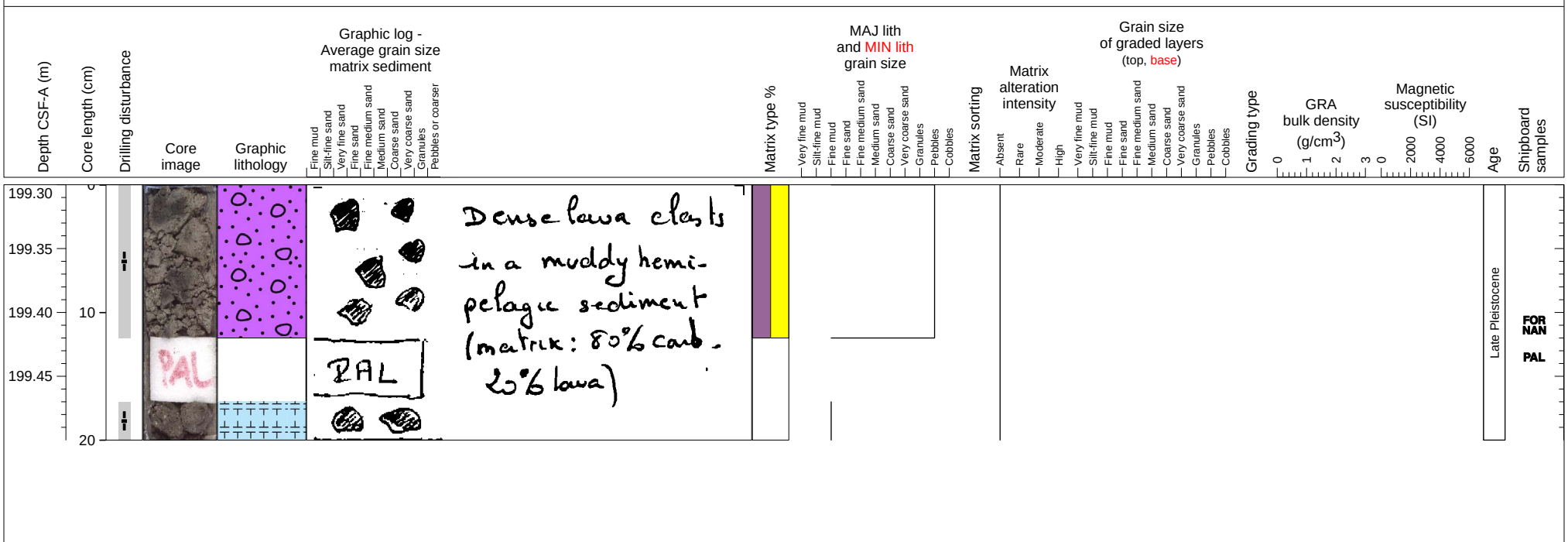
Hole 340-U1397B-26X Section CC, Top of Section: 189.7 CSF-A (m)

Partially lithified calcareous mud containing large volcanic pebbles overlying a sample void. Mudstone overlying a volcaniclastic breccia. Breccia unit may represent a large clast within the mudstone unit.



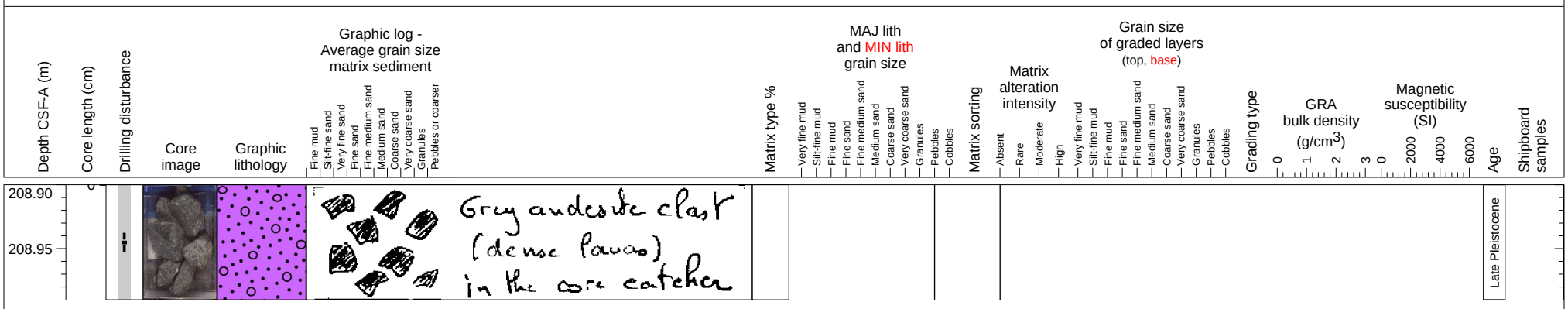
Hole 340-U1397B-27X Section CC, Top of Section: 199.3 CSF-A (m)

small andesite lava clasts coated in a muddy matrix, with a small, highly disturbed peice of Hemipelagic sediment with small lava clasts.



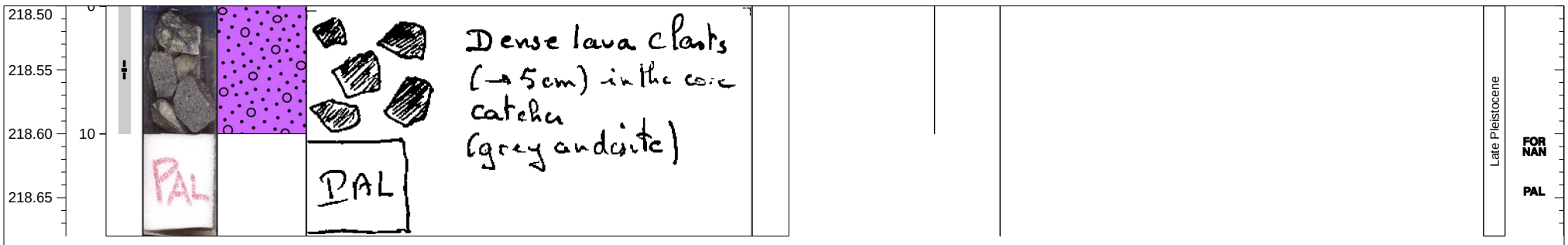
Hole 340-U1397B-28X Section CC, Top of Section: 208.9 CSF-A (m)

Small andesite lava pebbles, up to 5 cm, some slightly vesiculated.



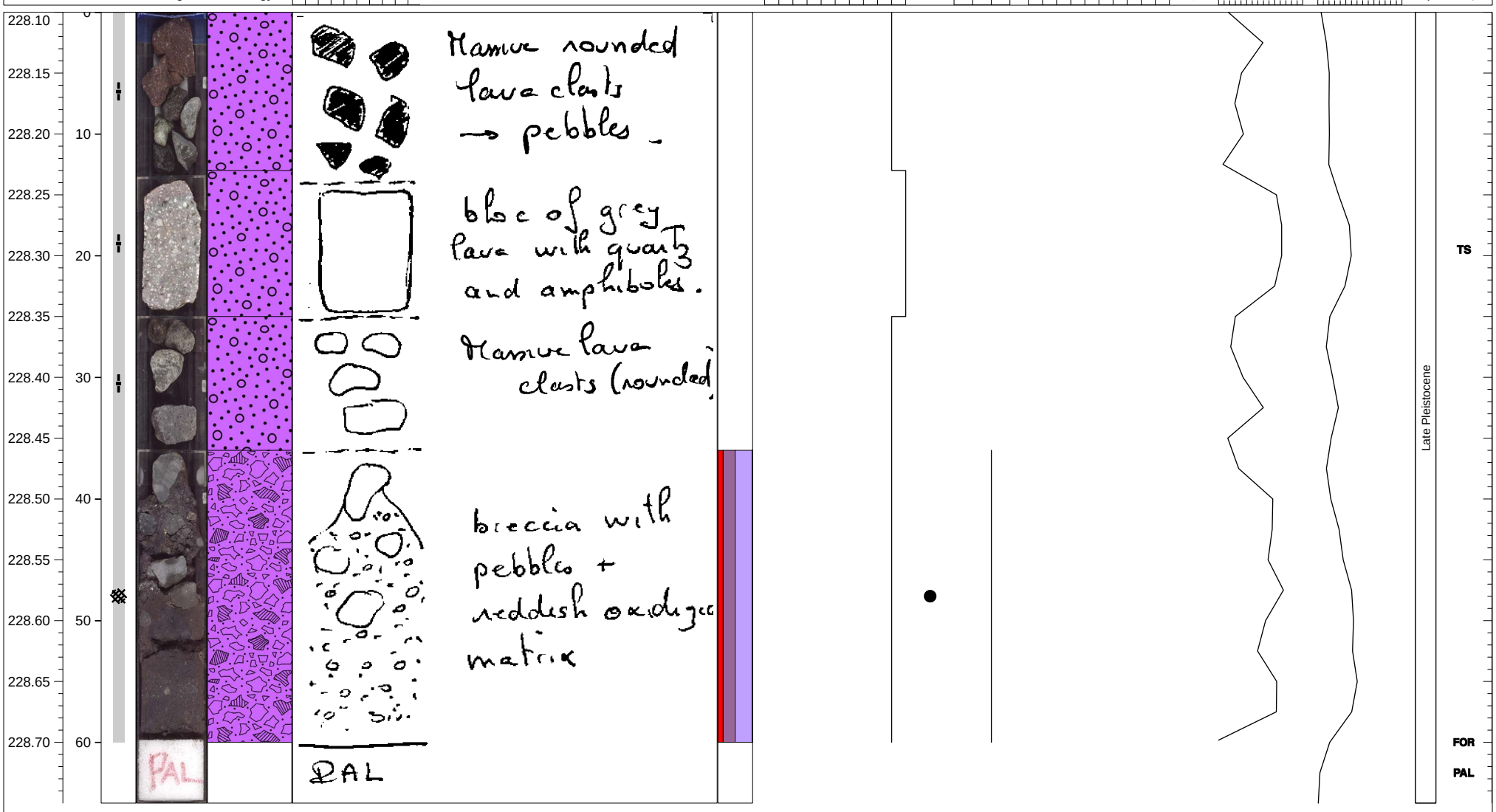
Hole 340-U1397B-29X Section CC, Top of Section: 218.5 CSF-A (m)

Small andesite lava pebbles.



Hole 340-U1397B-30X Section 1, Top of Section: 228.1 CSF-A (m)

volcanic gravels and volcaniclastic breccia with poorly sorted matrix



Hole 340-U1397B-31X Section CC, Top of Section: 233.1 CSF-A (m)

pebbly volcanic gravels of andesitic in composition and silty hemipelagic sedimentary rock

Hole 340-U1397B-32X Section 1, Top of Section: 237.7 CSF-A (m)

Upper and lower parts of this section contain large to very large pebbles of hornblende andesite, aphyric andesite, altered volcanic breccia and limestone. The middle part is hemi pelagic calcareous sandstone and mudstone.

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

237.70 – 0
237.75 –
237.80 – 10
237.85 –
237.90 – 20
237.95 –
238.00 – 30
238.05 –
238.10 – 40
238.15 –
238.20 – 50
238.25 –
238.30 – 60
238.35 –
238.40 – 70
238.45 –
238.50 – 80
238.55 –
238.60 – 90
238.65 –
238.70 – 100
238.75 –
238.80 – 110
238.85 –

loose pebbles
- 1cm to 4cm
- may be not NOT IN SITU.
- no matrix
- Porphyritic and Massive
- igneous, breccia clasts.

LOOSE MATERIAL

divider - perspex

NB has broken into individual drilling biscuits

hemipelagic mud
green - grey
- heavily bioturbated.

disseminated (burrowed?) black fine sand.

VOID

divider perspex

LOOSE
- LOOSE - NOT IN SITU
- igneous, breccia and carbonate clasts
- no matrix.

PAL

paleo sample

Late Pleistocene

TS

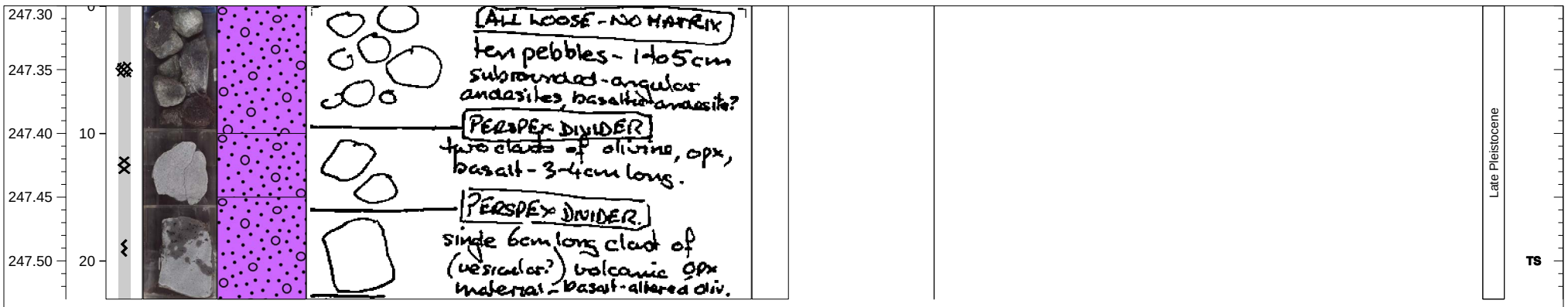
XRD
CRB
MADC

FOR
NAN

PAL

Hole 340-U1397B-33X Section CC, Top of Section: 247.3 CSF-A (m)

13 pieces of middle to large pebble-size volcaniclastic gravel, mainly composed of Ol-Cpx basalt.



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-U1397B-12H-2-W 36/37-TSB-TS#30	0	1	93.56	93.57	85		Groundmass is microcrystalline glass, plagioclase, pyroxene, and oxides.				15								70	0.6	euhedral	lath		15	1.8	lath	elongate								10	1	euhedral	elongate	Unrimmed, green/brown.	5	0.40	subrounded								Pumice clast. Mineral grains are fragmented.
340-U1397B-13H-3-W 52/54-TSB-TS#31	0	2	102.82	102.84	70		Groundmass is ~60% glass/microlites, 40% vesicles.				30								70	1	euhedral	lath		8	1	lath	elongate		2	0.6	equant	tabular		15	1	euhedral	elongate	Unrimmed	5	0.40	subrounded								Pumice clast.
340-U1397B-13H-3-W 71/72-TSB-TS#32	0	1	103.01	103.02	60		Groundmass is microcrystalline with microlites of plagioclase, oxides, and maybe pyroxene.				40								40	2	euhedral	lath				lath	elongate		10	0.4	equant	tabular		40	3	euhedral	elongate	Completely oxidized.	10	0.40	subrounded								Heavily oxidized andesesite clast. Amphibole is nearly completely hematized.
340-U1397B-24X-1-W 6/7-TSB-TS#33	0	1	170.76	170.77	70		Completely hematized. ~40% voids, 60% hematite.				30								70	1.5	elongate	lath		20	2	elongate	lath		10	0.9	equant	tabular																		Basaltic andesite/baslatic clast. Groundmass is completely oxidized to hematite.
340-U1397B-24X-1-W 77/78-TSB-TS#34	0	1	171.47	171.48	70		Completely oxidized.				30																																						Four completely oxidized clasts. A small amount of interior plag remains, but the majority of groundmass and crystals are oxidized/altered.
340-U1397B-30X-1-W 14/25-TSB-TS#35	0	11	228.24	228.35	60		Microcrystalline. Microlites of plag, hematite, and amphibole. Oxidized red.				40								55	8	elongate	lath	Several grains are bigger than the lowest mag FOV, therefore >8mm.												10	3.5	elongate	lath	Big grains are completely oxidized and reacted. Small grains (>8mm) are rimmed, but not reacted throughout.	5	1	subrounded			30	4	equant	tabular	Large block of porphyritic andesite/dacite. Phenocrysts are large and euhedral.
340-U1397B-32X-1-W 12/14-TSB-TS#36	0	2	237.82	237.84	55			40			5																																				Heavily oxidized volcanic breccia clast.
340-U1397B-33X-CC-W 19/21-TSB-TS#37	0	2	247.49	247.51	60		Microcrystalline groundmas. Microlites of plag, oxides, pyroxenes.				40								70	2	elongate	lath		20	1.8	elongate	lath							8	1	elongate		Reacted completely through.	2	0.04	subrounded								Oxidized andesite.