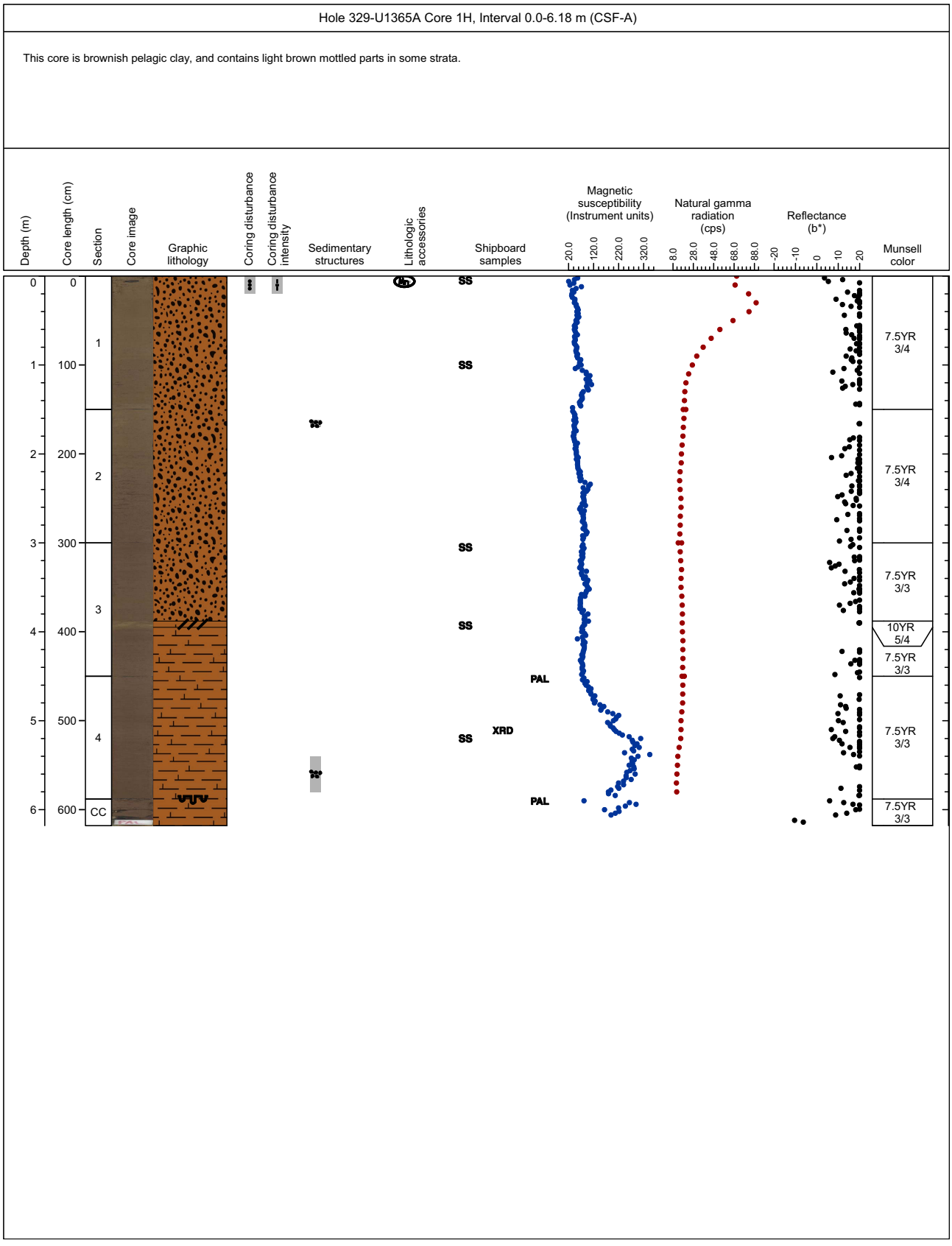
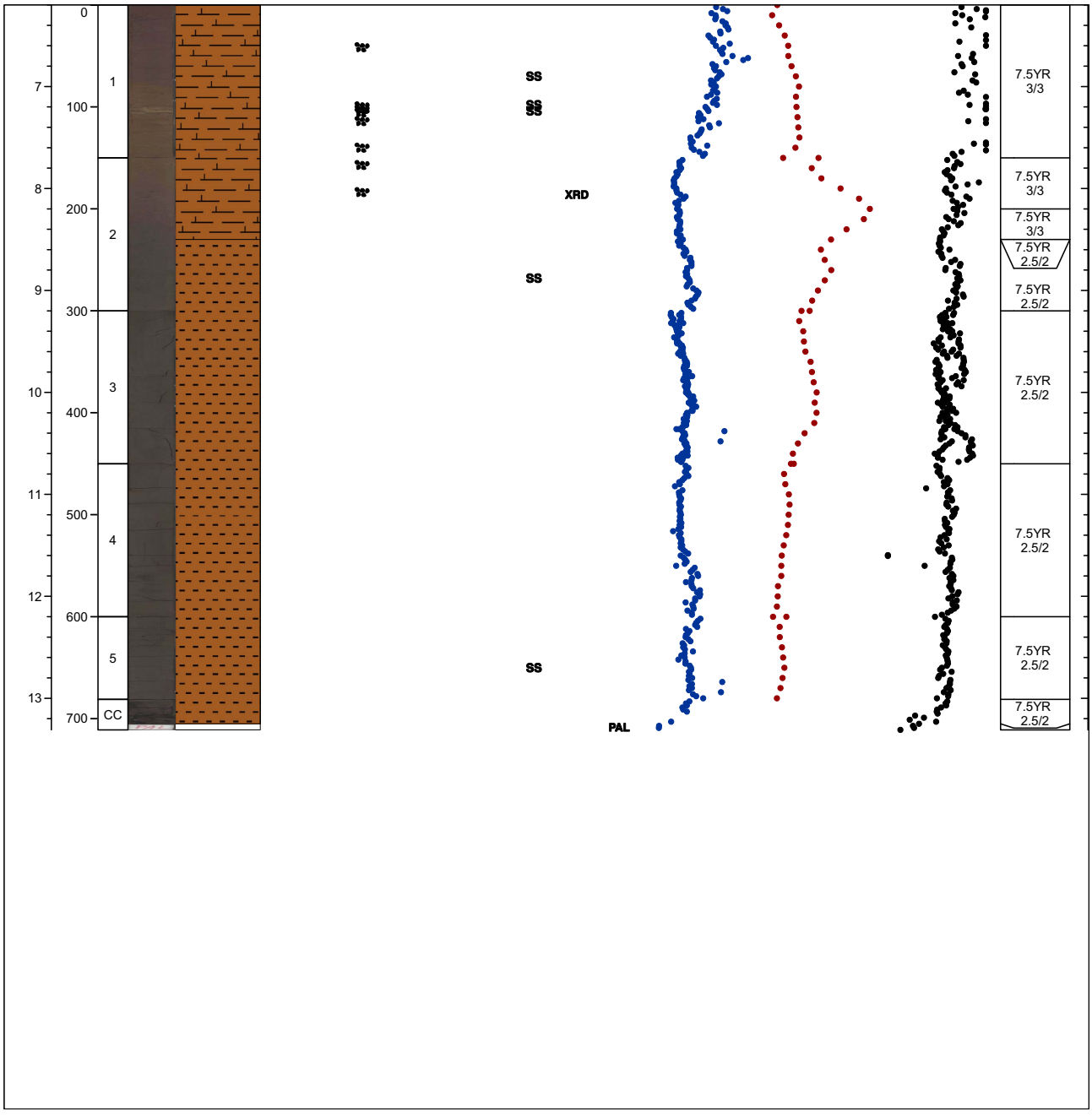
Core Photo


Hole 329-U1365A Core 1H, Interval 0.0-6.18 m (CSF-A)
This core is brownish pelagic clay, and contains light brown mottled parts in some strata.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
20.0
120.0
220.0
320.0
Natural gamma radiation (cps)
8.0
28.0
48.0
68.0
88.0
Reflectance (b*)
-20
-10
0
10
20
Munsell color
0
1
2
3
4
5
6
0
100
200
300
400
500
600
1
2
3
4
CC
SS
PAL
XRD
7.5YR 3/4
7.5YR 3/4
7.5YR 3/3
10YR 5/4
7.5YR 3/3
7.5YR 3/3
7.5YR 3/3

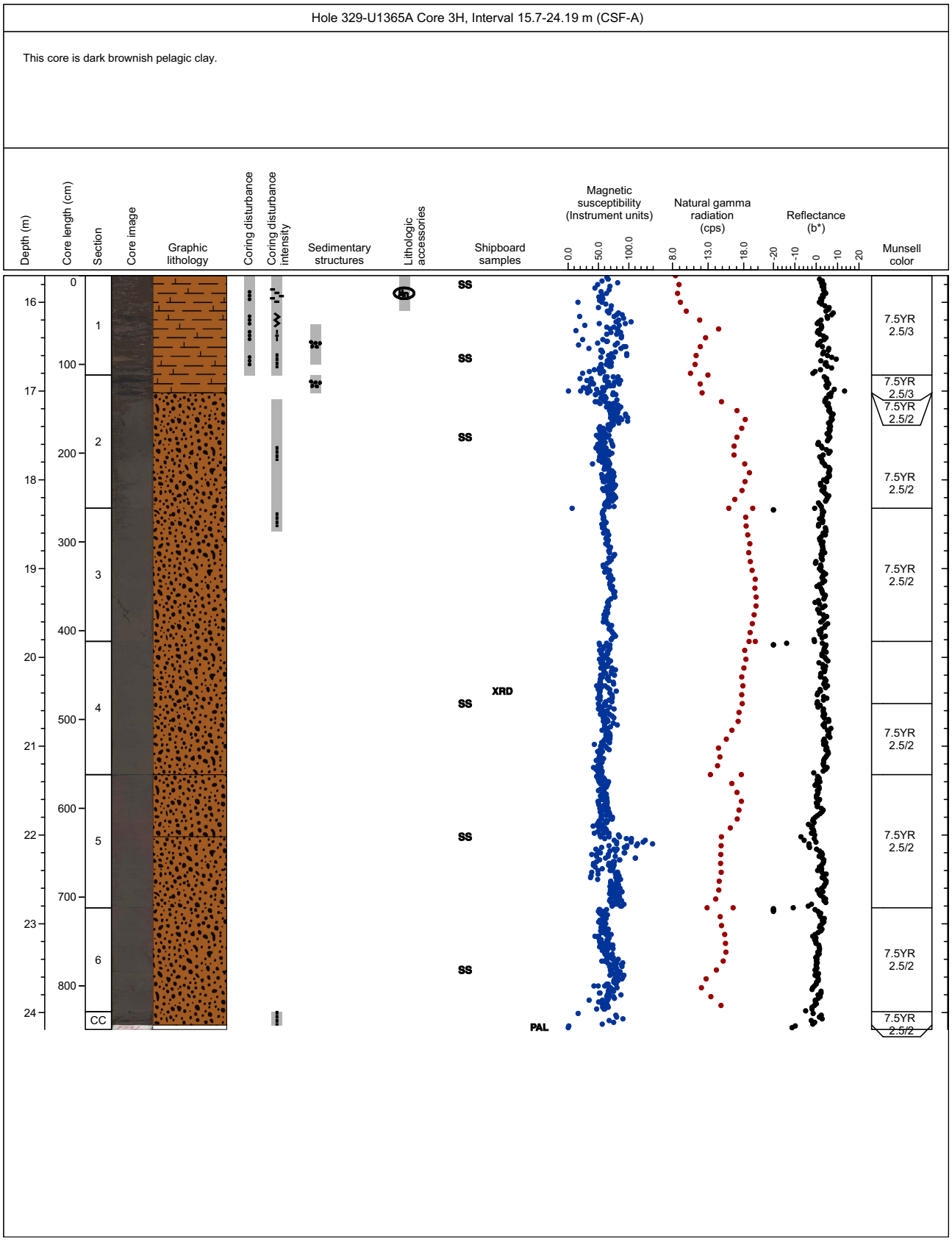
Core Photo

Hole 329-U1365A Core 2H, Interval 6.2-13.31 m (CSF-A)

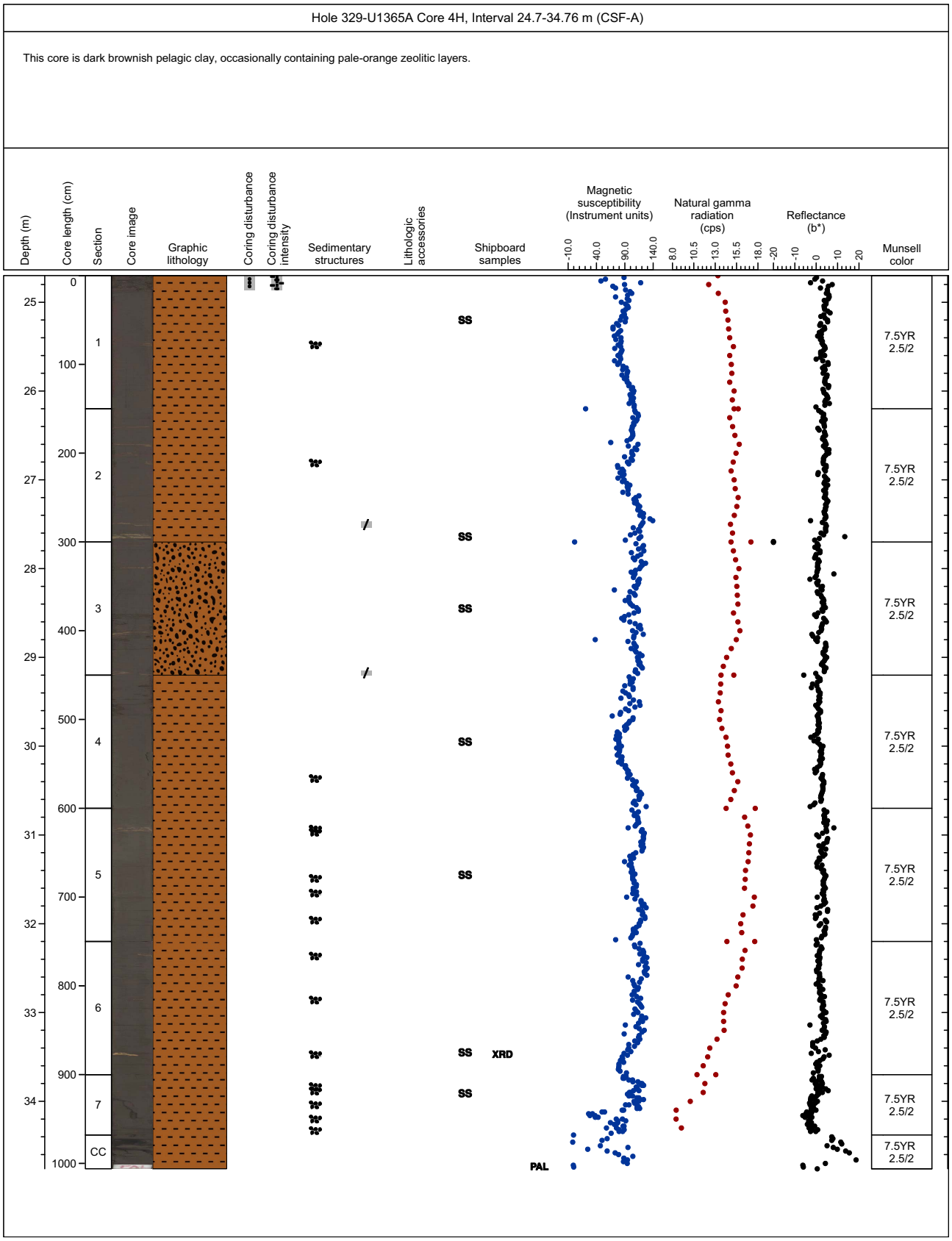
The upper part of the core is dark brown (7.5YR 3/3) zeolitic pelagic clay with rare mottling and the lower part of the core is a very dark brown (7.5YR 3/1) pelagic clay.



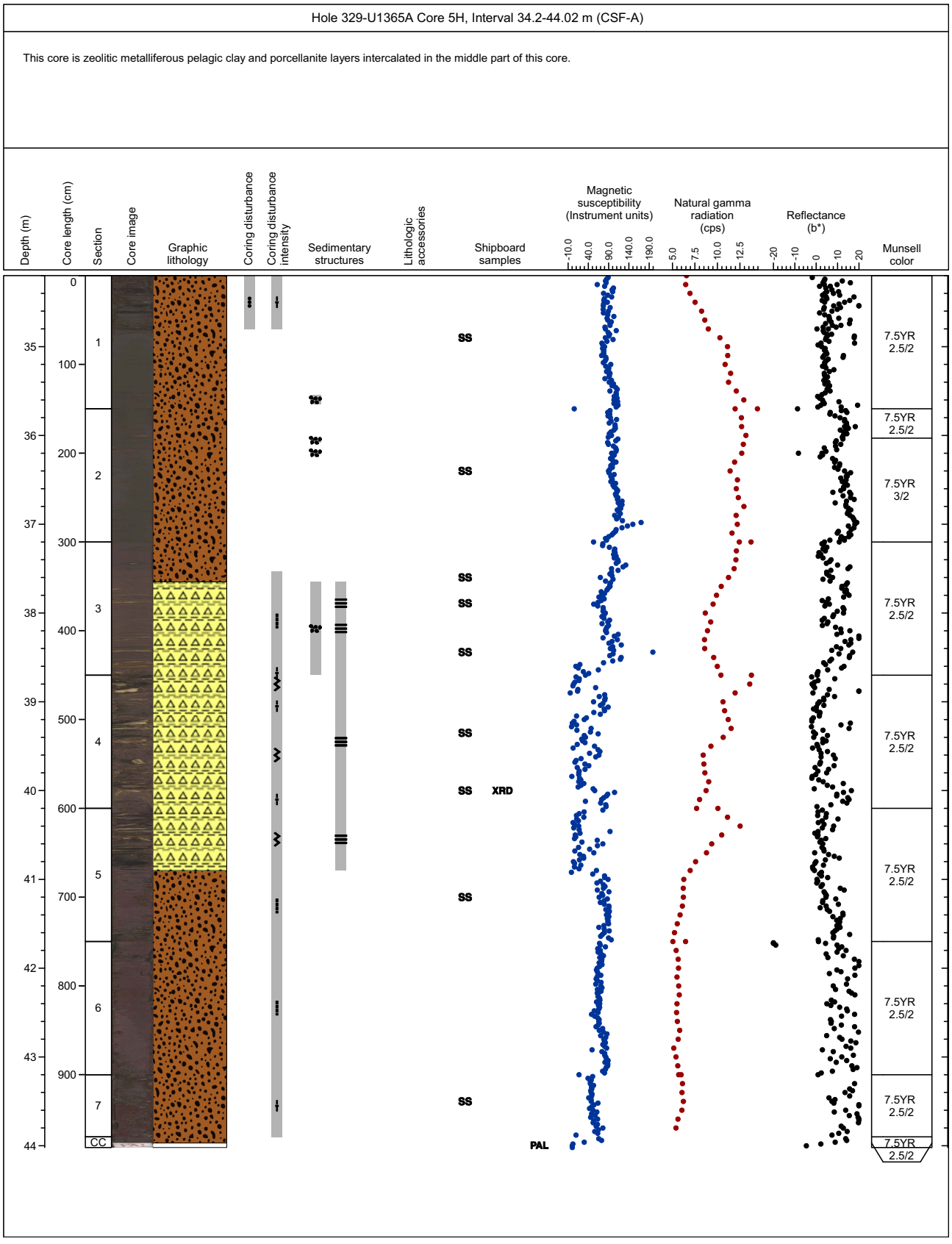
Core Photo


Hole 329-U1365A Core 3H, Interval 15.7-24.19 m (CSF-A)
This core is dark brownish pelagic clay.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
Natural gamma radiation (cps)
Reflectance (b*)
Munsell color
SS
XRD
PAL
7.5YR 2.5/3
7.5YR 2.5/2

Core Photo


Hole 329-U1365A Core 4H, Interval 24.7-34.76 m (CSF-A)
This core is dark brownish pelagic clay, occasionally containing pale-orange zeolitic layers.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
Natural gamma radiation (cps)
Reflectance (b*)
Munsell color
SS
XRD
PAL
7.5YR 2.5/2

Core Photo


Hole 329-U1365A Core 5H, Interval 34.2-44.02 m (CSF-A)
This core is zeolitic metalliferous pelagic clay and porcellanite layers intercalated in the middle part of this core.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
Natural gamma radiation (cps)
Reflectance (b*)
Munsell color
SS
XRD
PAL
CC
7.5YR 2.5/2
7.5YR 3/2

Core Photo

Hole 329-U1365A Core 6H, Interval 43.7-44.77 m (CSF-A)

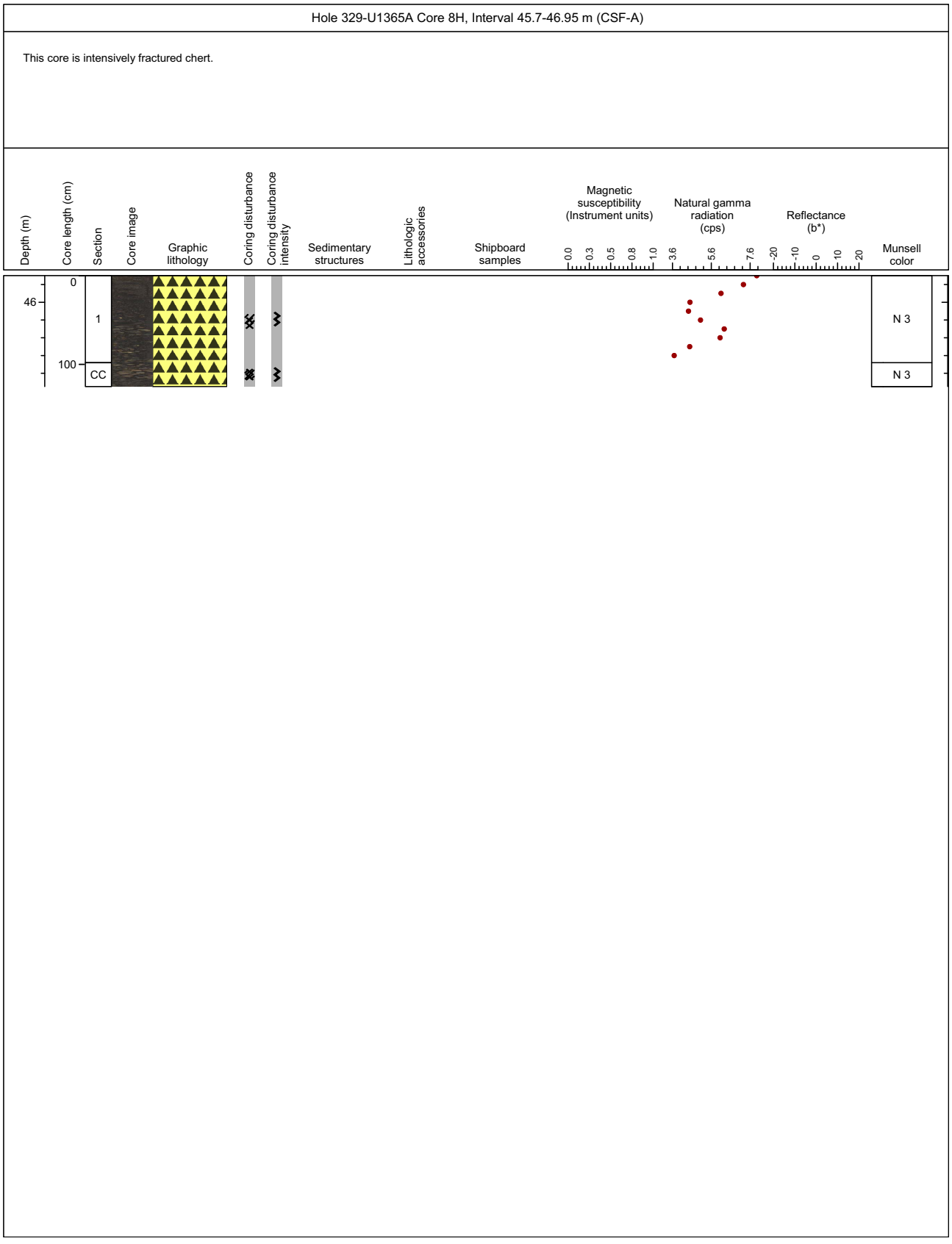
This core is chert, and fractured and soupy throughout.

Core Photo

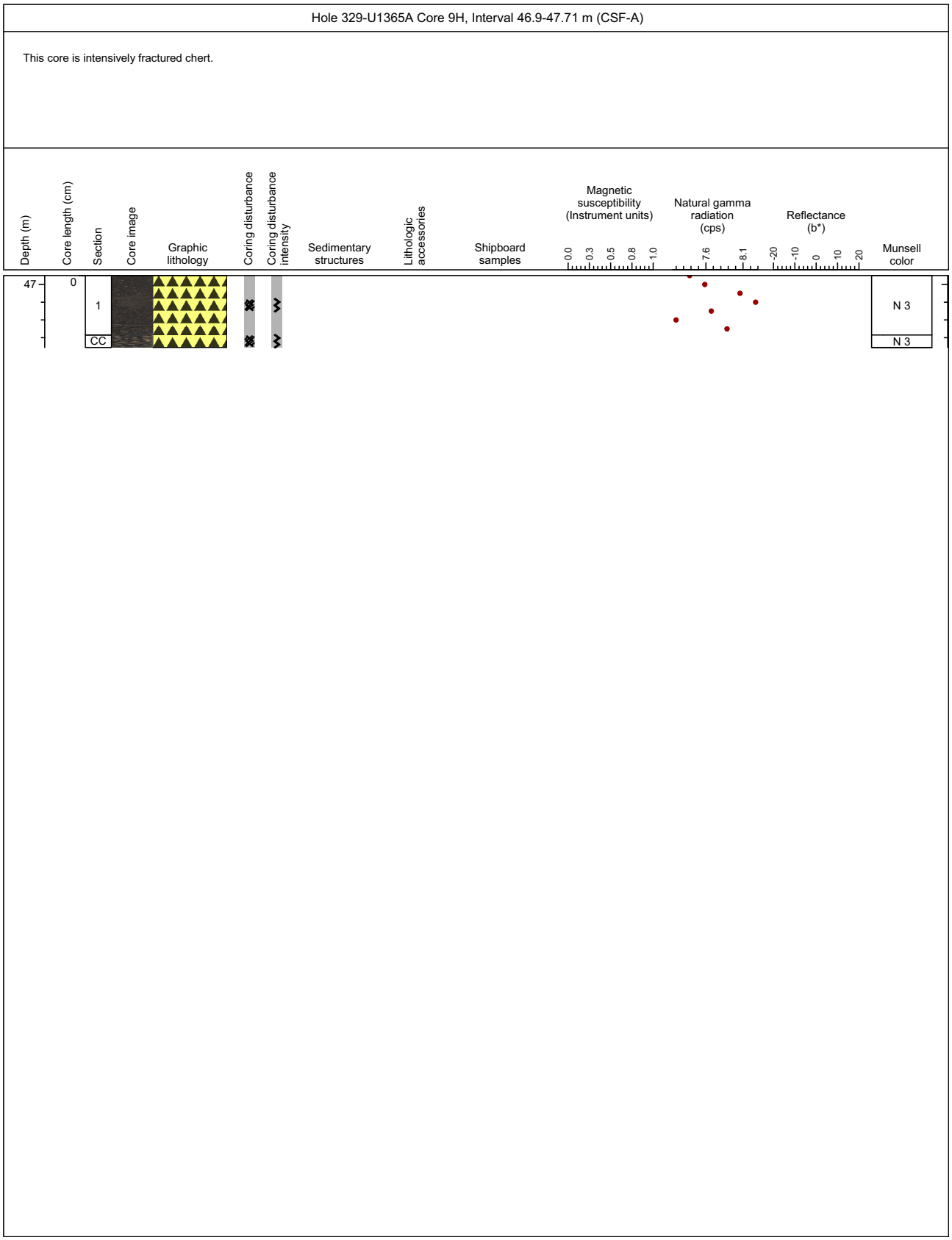
Hole 329-U1365A Core 7H, Interval 44.7-45.75 m (CSF-A)

This core is intensively fractured chert.

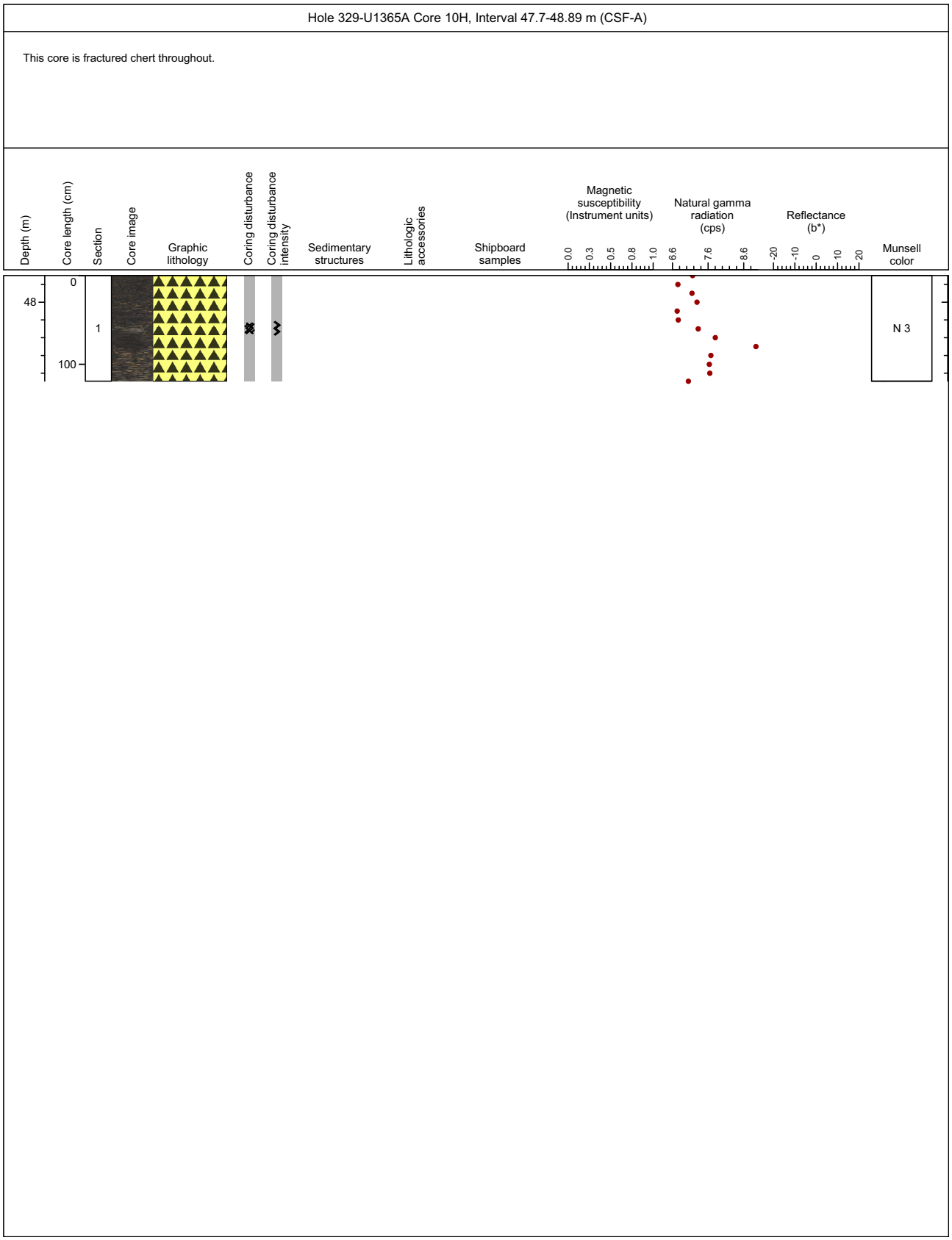
Core Photo


Hole 329-U1365A Core 8H, Interval 45.7-46.95 m (CSF-A)
This core is intensively fractured chert.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
Natural gamma radiation (cps)
Reflectance (b*)
Munsell color
46
0
100
1
CC
0.0
0.3
0.5
0.8
1.0
3.6
5.6
7.6
-20
-10
0
10
20
N 3
N 3

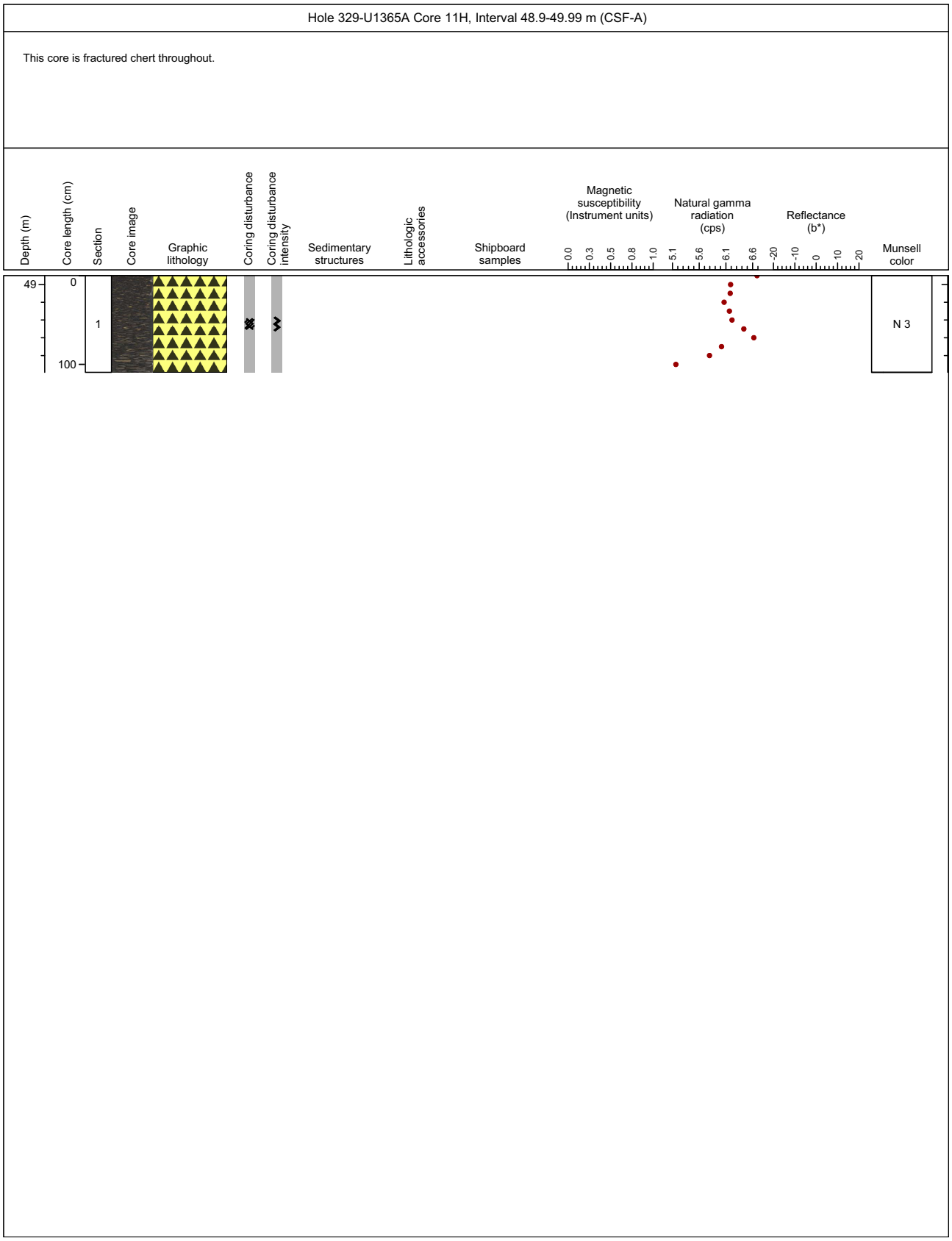
Core Photo


Hole 329-U1365A Core 9H, Interval 46.9-47.71 m (CSF-A)
This core is intensively fractured chert.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
0.0
0.3
0.5
0.8
1.0
Natural gamma radiation (cps)
7.6
8.1
Reflectance (b*)
-20
-10
0
10
20
Munsell color
47
0
1
CC
N 3
N 3

Core Photo


Hole 329-U1365A Core 10H, Interval 47.7-48.89 m (CSF-A)
This core is fractured chert throughout.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
0.0
0.3
0.5
0.8
1.0
Natural gamma radiation (cps)
6.6
7.6
8.6
Reflectance (b*)
-20
-10
0
10
20
Munsell color
0
48
100
1
N 3

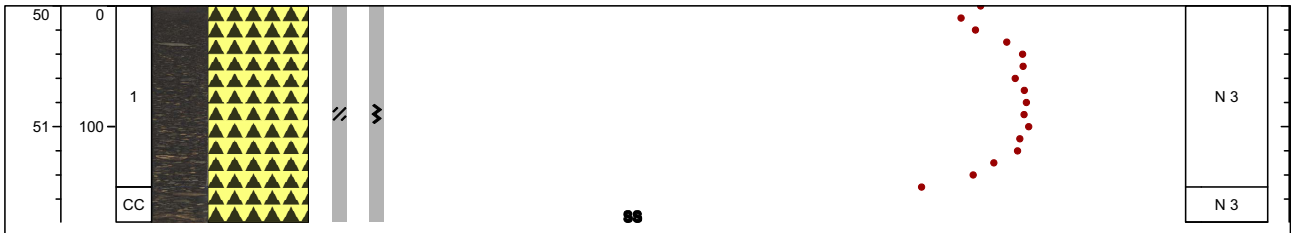
Core Photo


Hole 329-U1365A Core 11H, Interval 48.9-49.99 m (CSF-A)
This core is fractured chert throughout.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
Natural gamma radiation (cps)
Reflectance (b*)
Munsell color
49
0
100
1
N 3

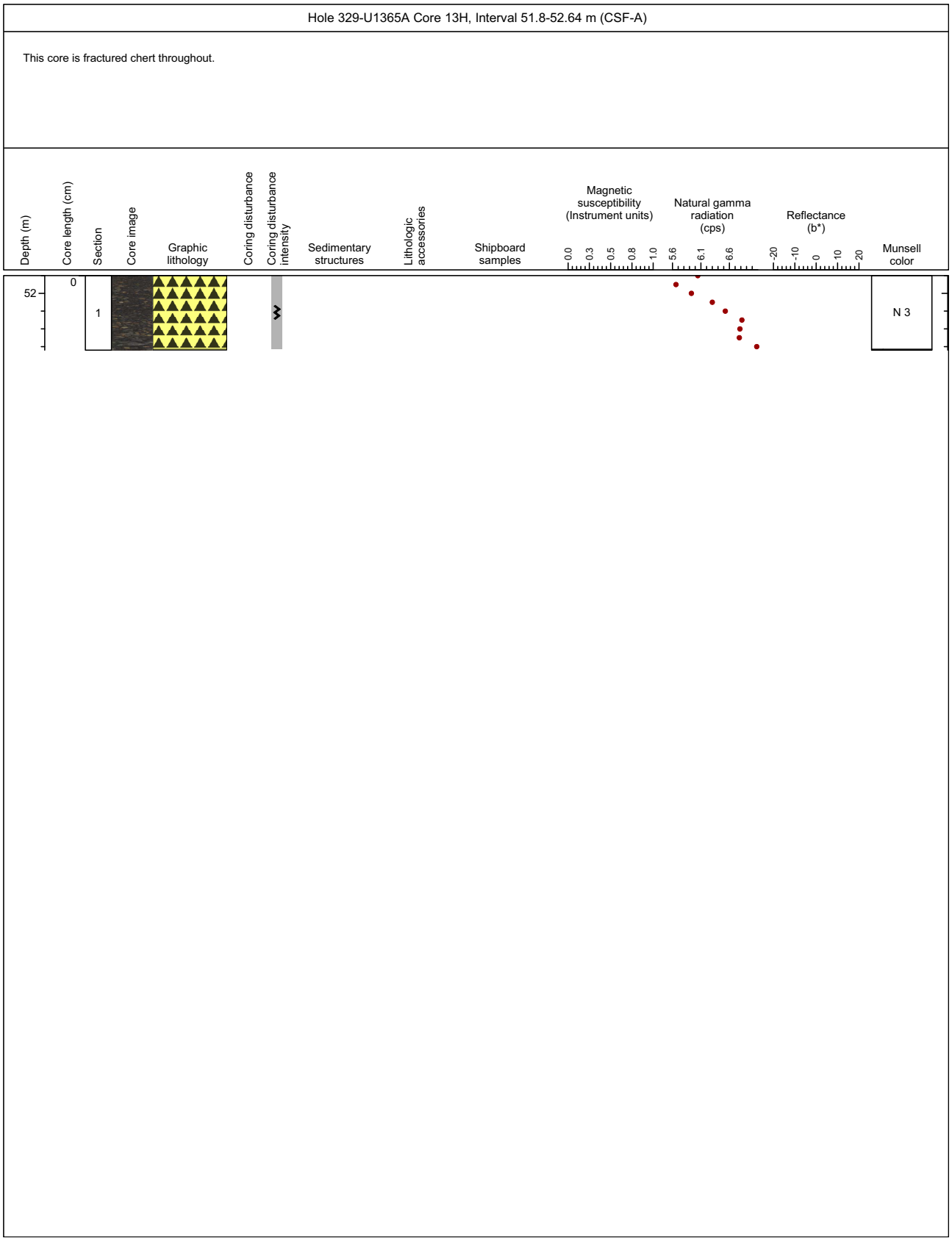
Core Photo

Hole 329-U1365A Core 12H, Interval 50.0-51.79 m (CSF-A)

This core is fractured chert. Pelagic clay fragment at bottom of the core.



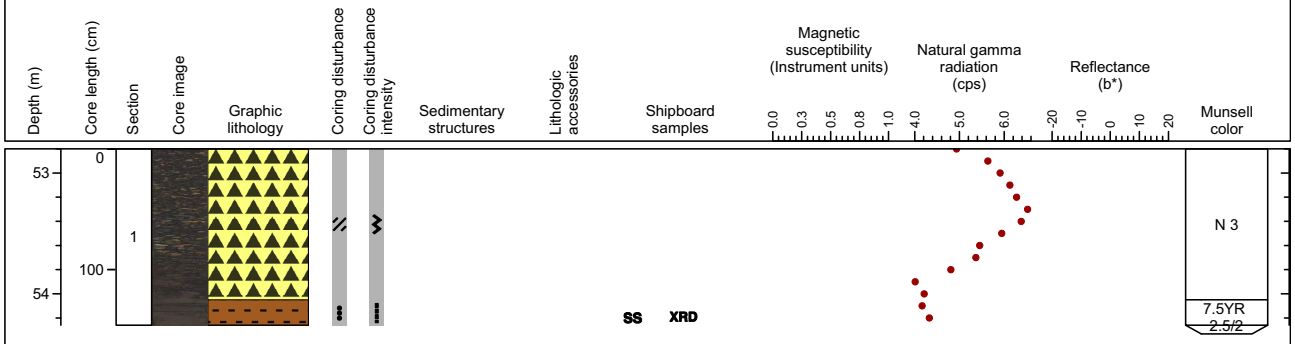
Core Photo


Hole 329-U1365A Core 13H, Interval 51.8-52.64 m (CSF-A)
This core is fractured chert throughout.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
0.0
0.3
0.5
0.8
1.0
Natural gamma radiation (cps)
5.6
6.1
6.6
Reflectance (b*)
-20
-10
0
10
20
Munsell color
52
0
1
N 3

Core Photo

Hole 329-U1365A Core 14H, Interval 52.8-54.26 m (CSF-A)

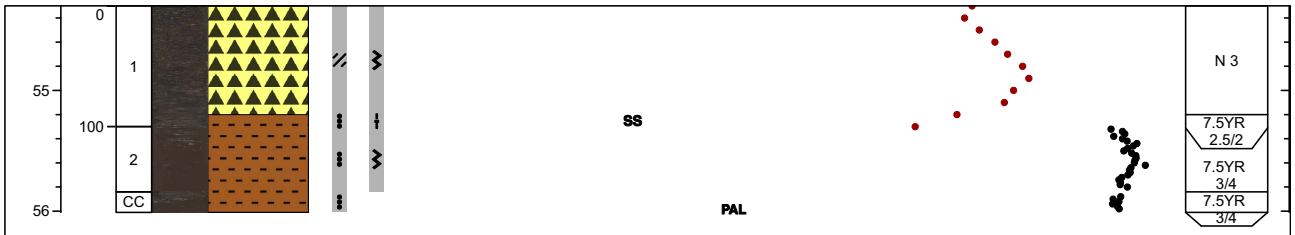
The upper part of this core is fractured chert (0-125 cm) and the lower part of this core is very dark brown pelagic clay (125-147 cm).



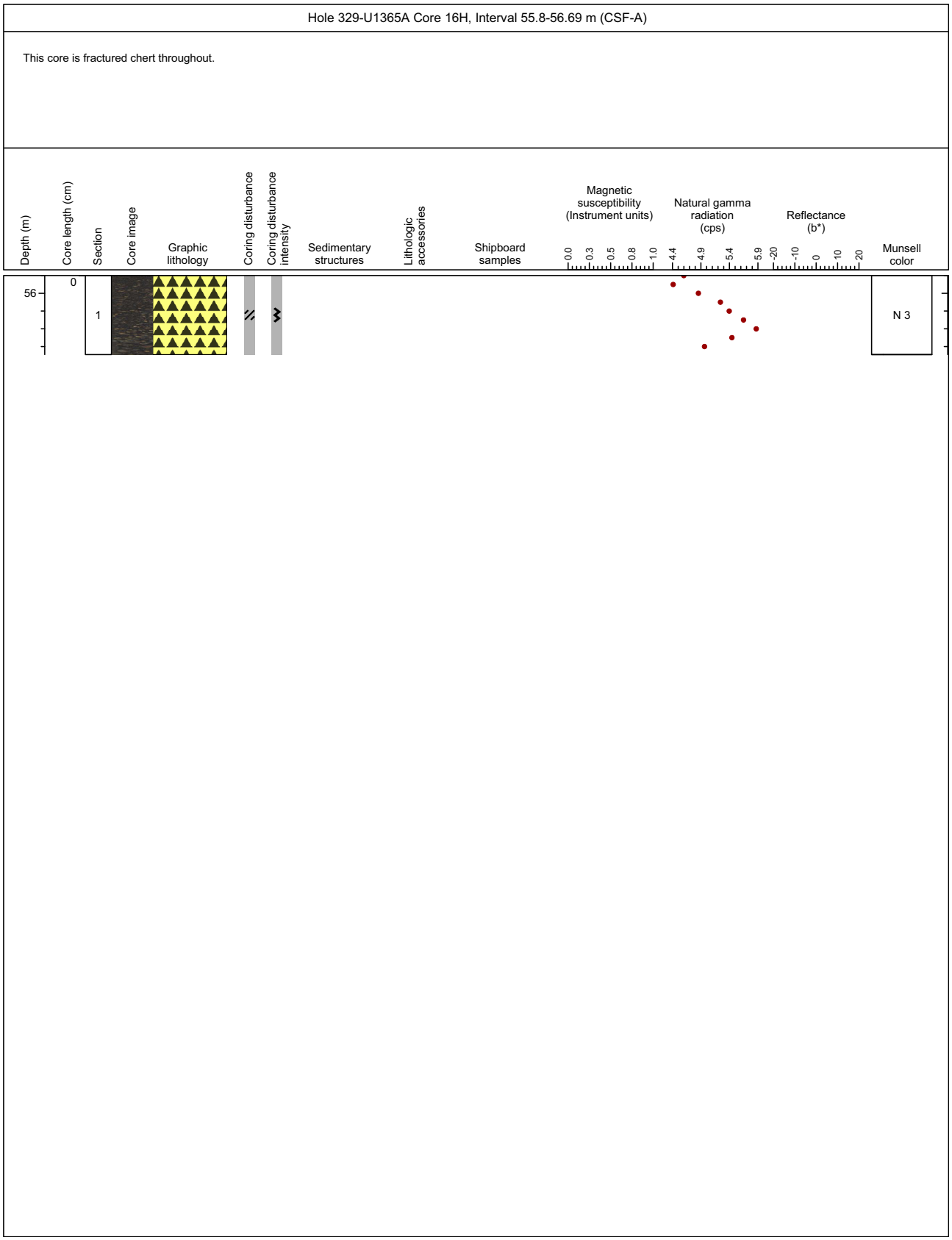
Core Photo

Hole 329-U1365A Core 15H, Interval 54.3-56.01 m (CSF-A)

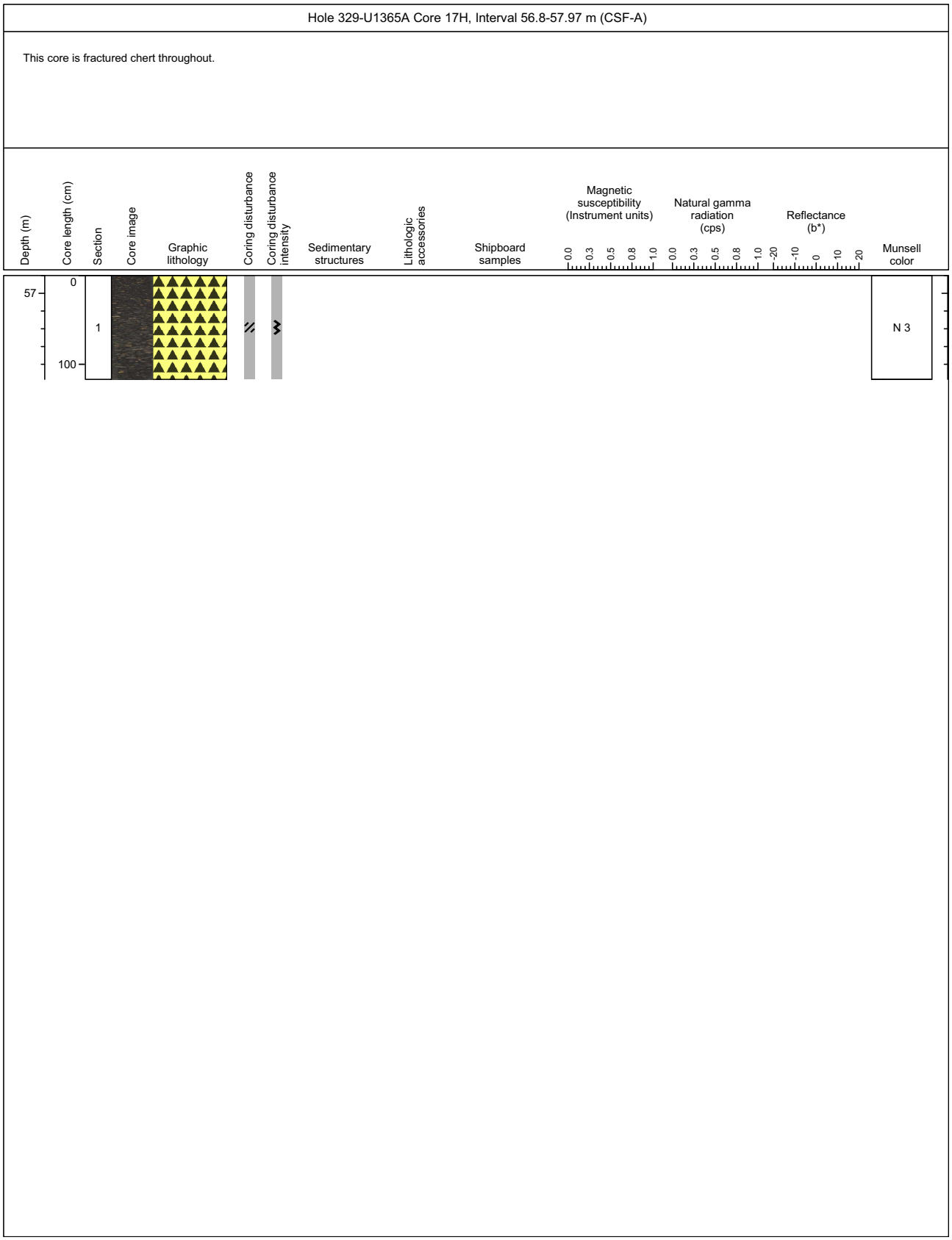
The upper part of this core is fractured chert and the lower part of this core is pelagic clay. The lower part of pelagic clay interval is completely soupy.



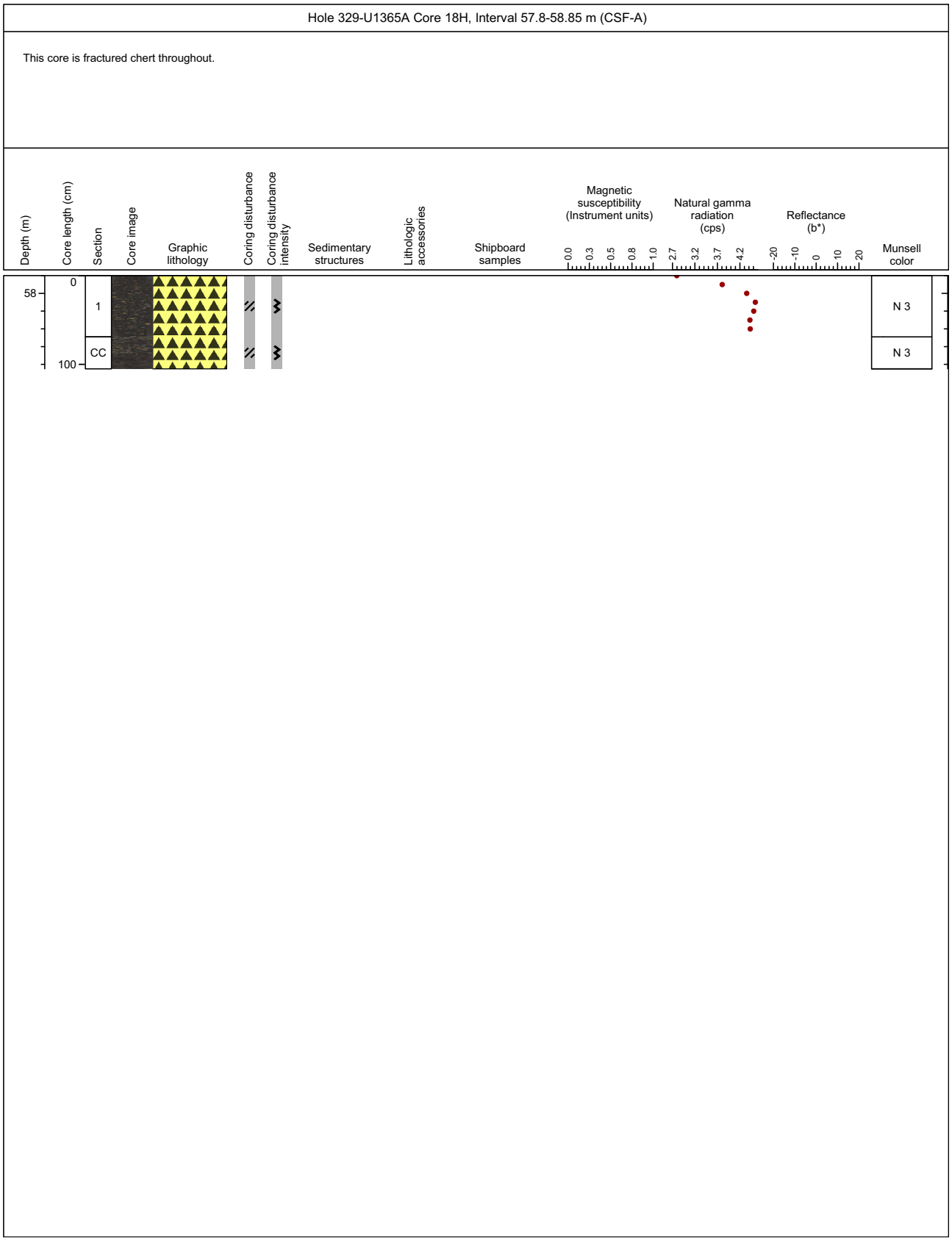
Core Photo


Hole 329-U1365A Core 16H, Interval 55.8-56.69 m (CSF-A)
This core is fractured chert throughout.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
0.0 0.3 0.5 0.8 1.0
Natural gamma radiation (cps)
4.4 4.9 5.4 5.9
Reflectance (b*)
-20 -10 0 10 20
Munsell color
56
0
1
N 3

Core Photo


Hole 329-U1365A Core 17H, Interval 56.8-57.97 m (CSF-A)
This core is fractured chert throughout.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
Natural gamma radiation (cps)
Reflectance (b*)
Munsell color
57
0
100
1
N 3

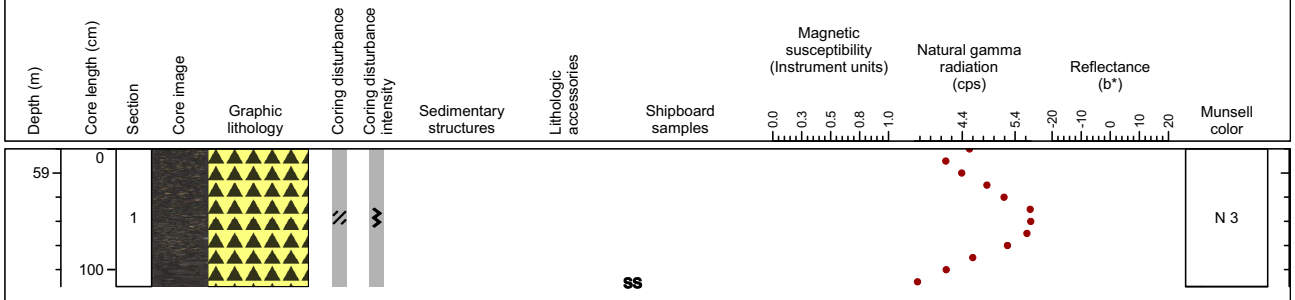
Core Photo


Hole 329-U1365A Core 18H, Interval 57.8-58.85 m (CSF-A)
This core is fractured chert throughout.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
0.0 0.3 0.5 0.8 1.0
Natural gamma radiation (cps)
2.7 3.2 3.7 4.2
Reflectance (b*)
-20 -10 0 10 20
Munsell color
58
100
0
1
CC
N 3
N 3

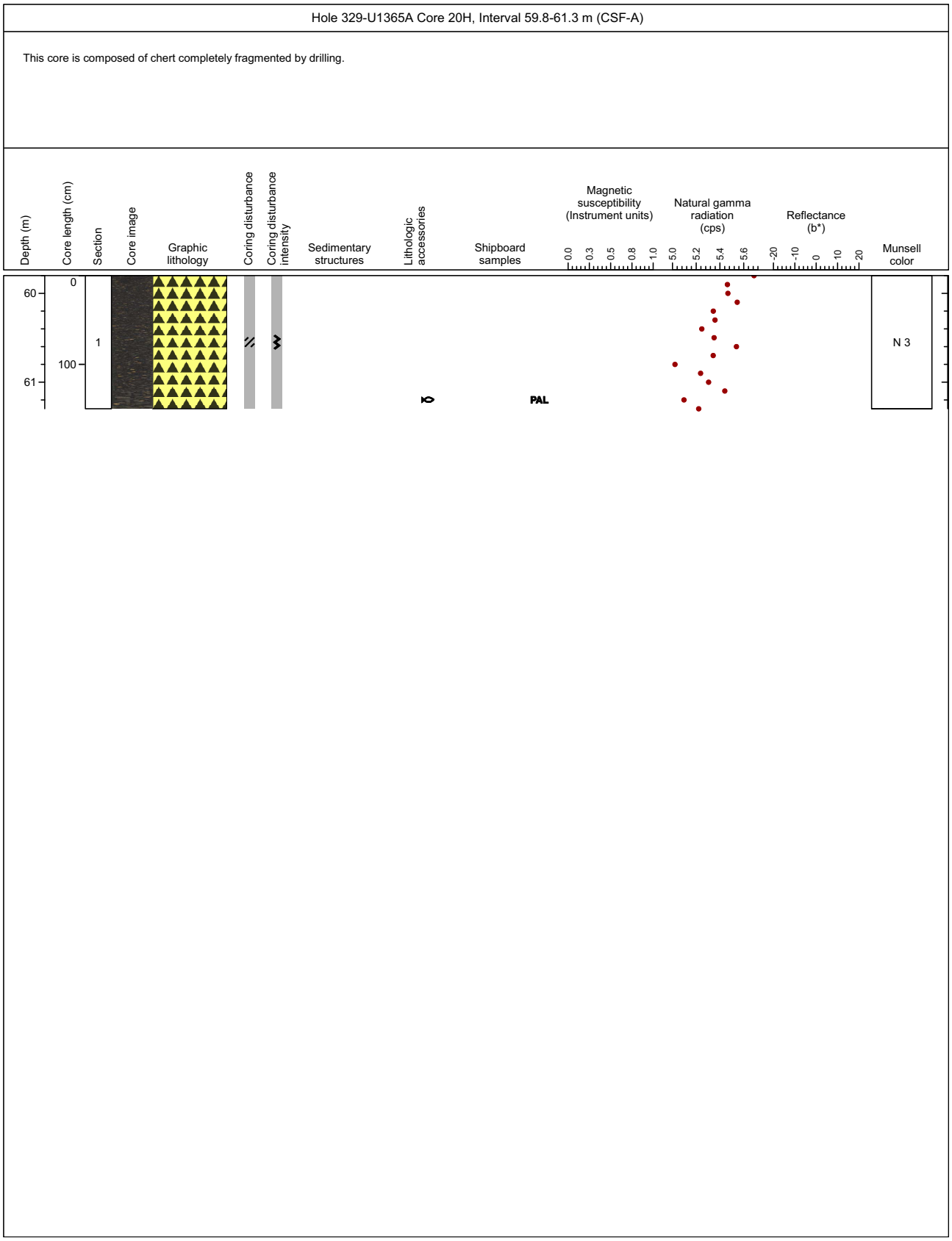
Core Photo

Hole 329-U1365A Core 19H, Interval 58.8-59.94 m (CSF-A)

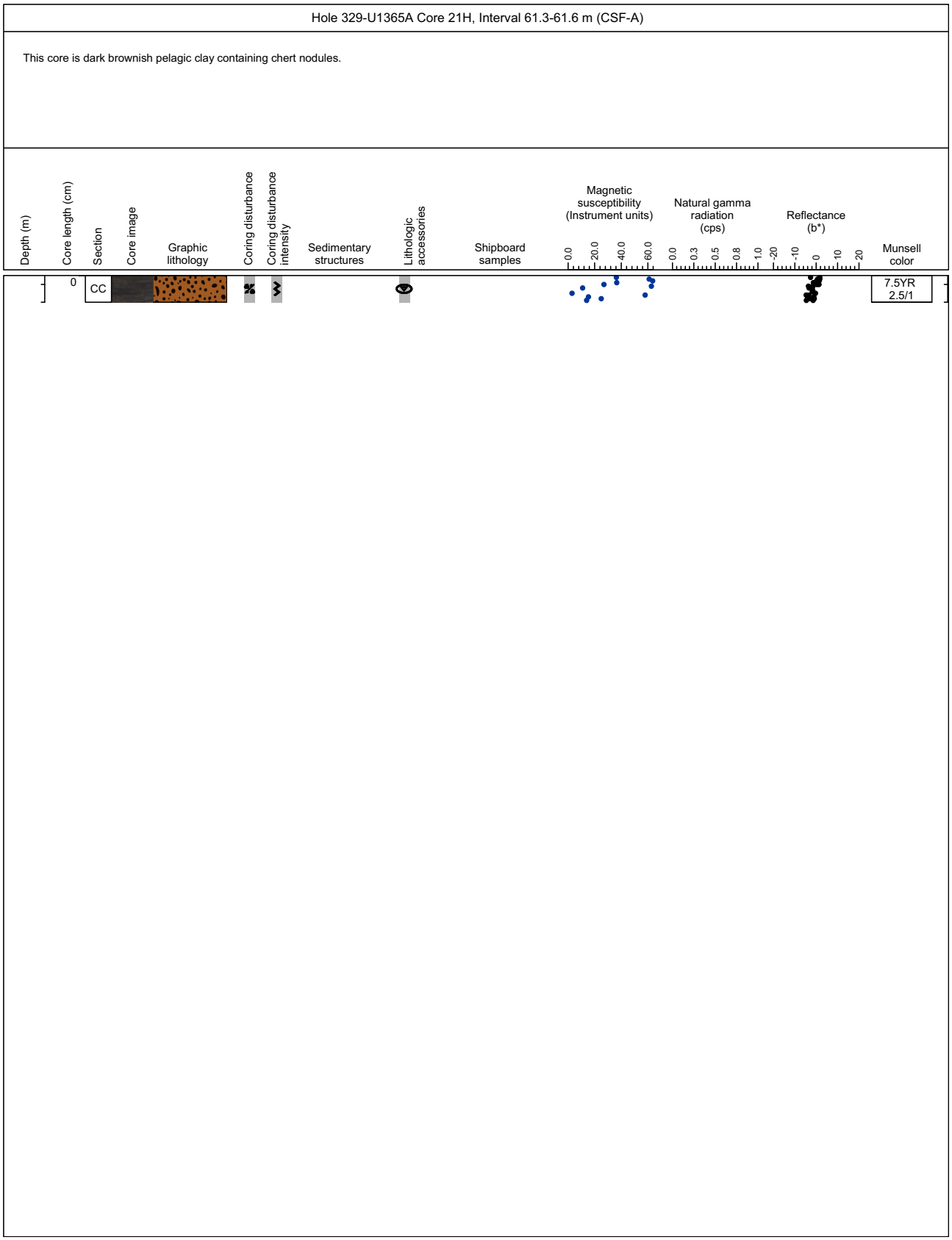
The most part of this core is fractured chert. A bit of pelagic clay at bottom.



Core Photo


Hole 329-U1365A Core 20H, Interval 59.8-61.3 m (CSF-A)
This core is composed of chert completely fragmented by drilling.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
Natural gamma radiation (cps)
Reflectance (b*)
Munsell color
60
61
0
100
1
PAL
N 3

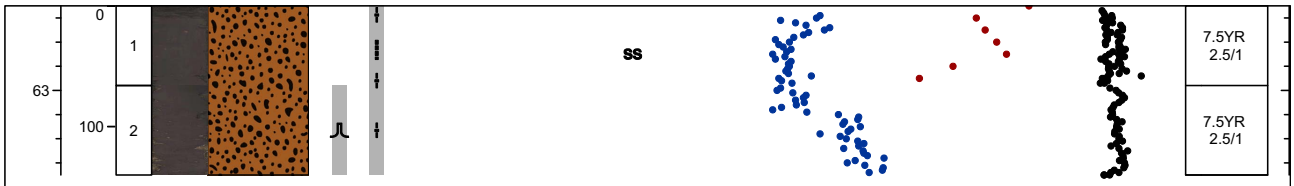
Core Photo


Hole 329-U1365A Core 21H, Interval 61.3-61.6 m (CSF-A)
This core is dark brownish pelagic clay containing chert nodules.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
0.0
20.0
40.0
60.0
Natural gamma radiation (cps)
0.0
0.3
0.5
0.8
1.0
Reflectance (b*)
-20
-10
0
10
20
Munsell color
0
CC
7.5YR 2.5/1

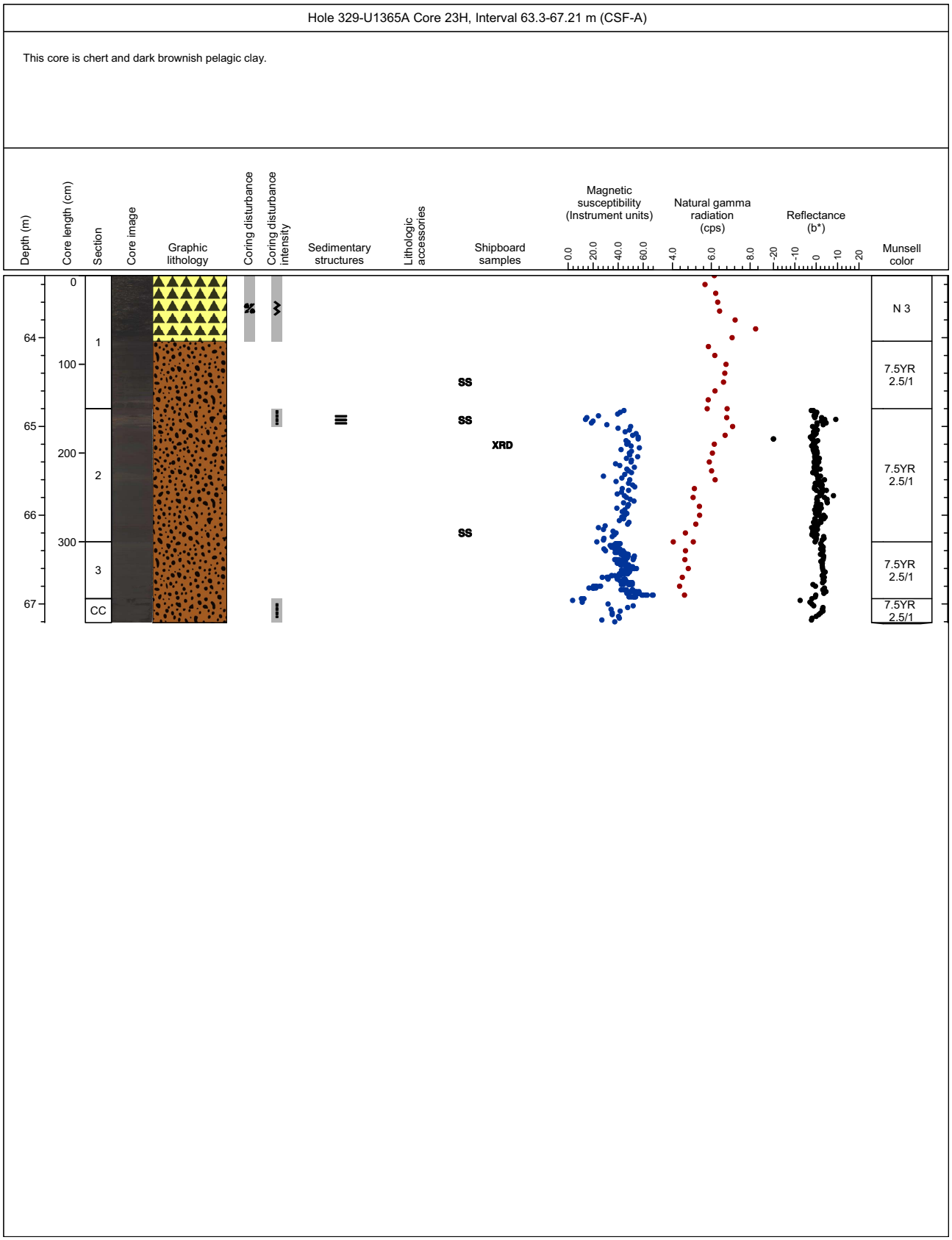
Core Photo

Hole 329-U1365A Core 22H, Interval 62.3-63.7 m (CSF-A)

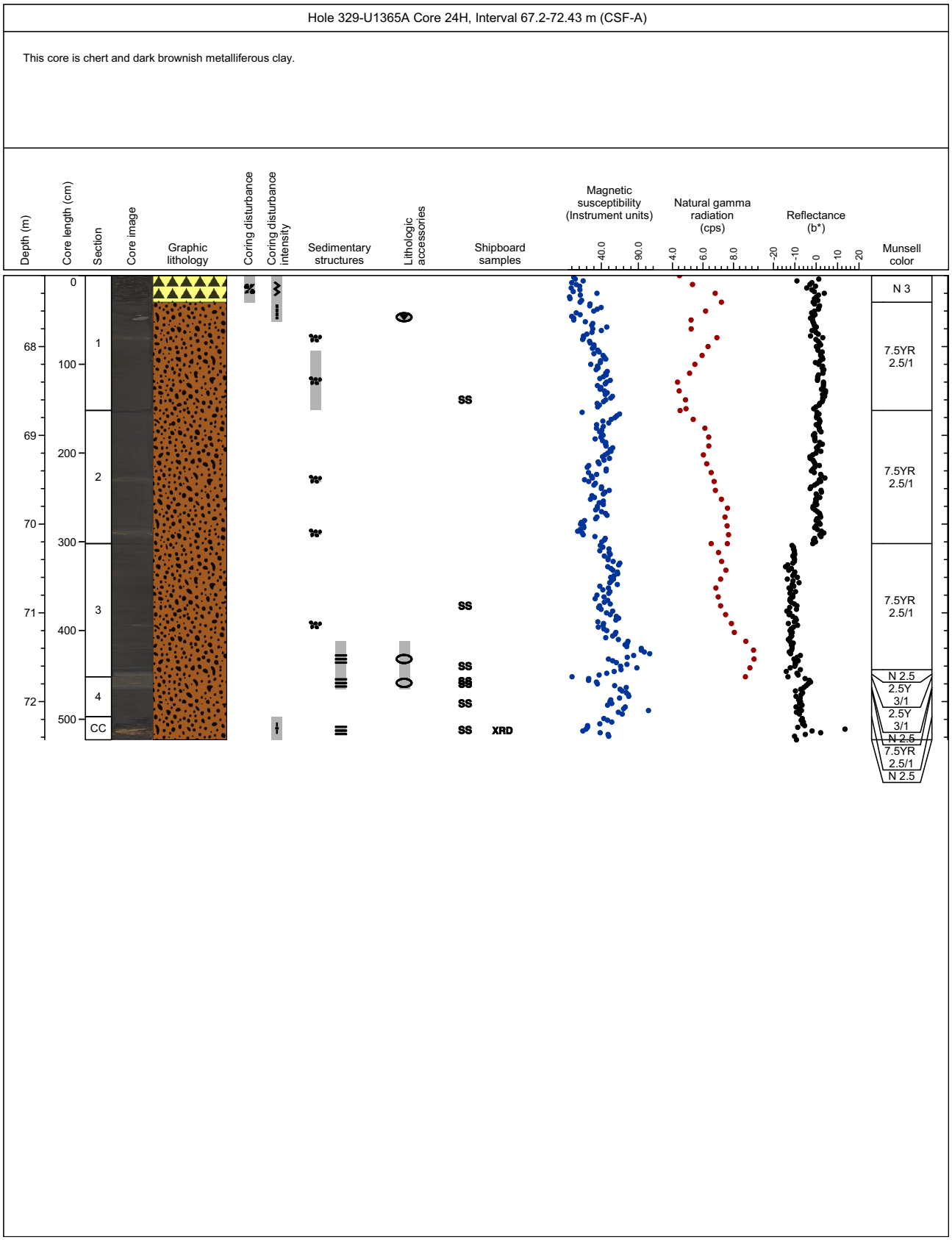
This core is dark brownish pelagic clay.



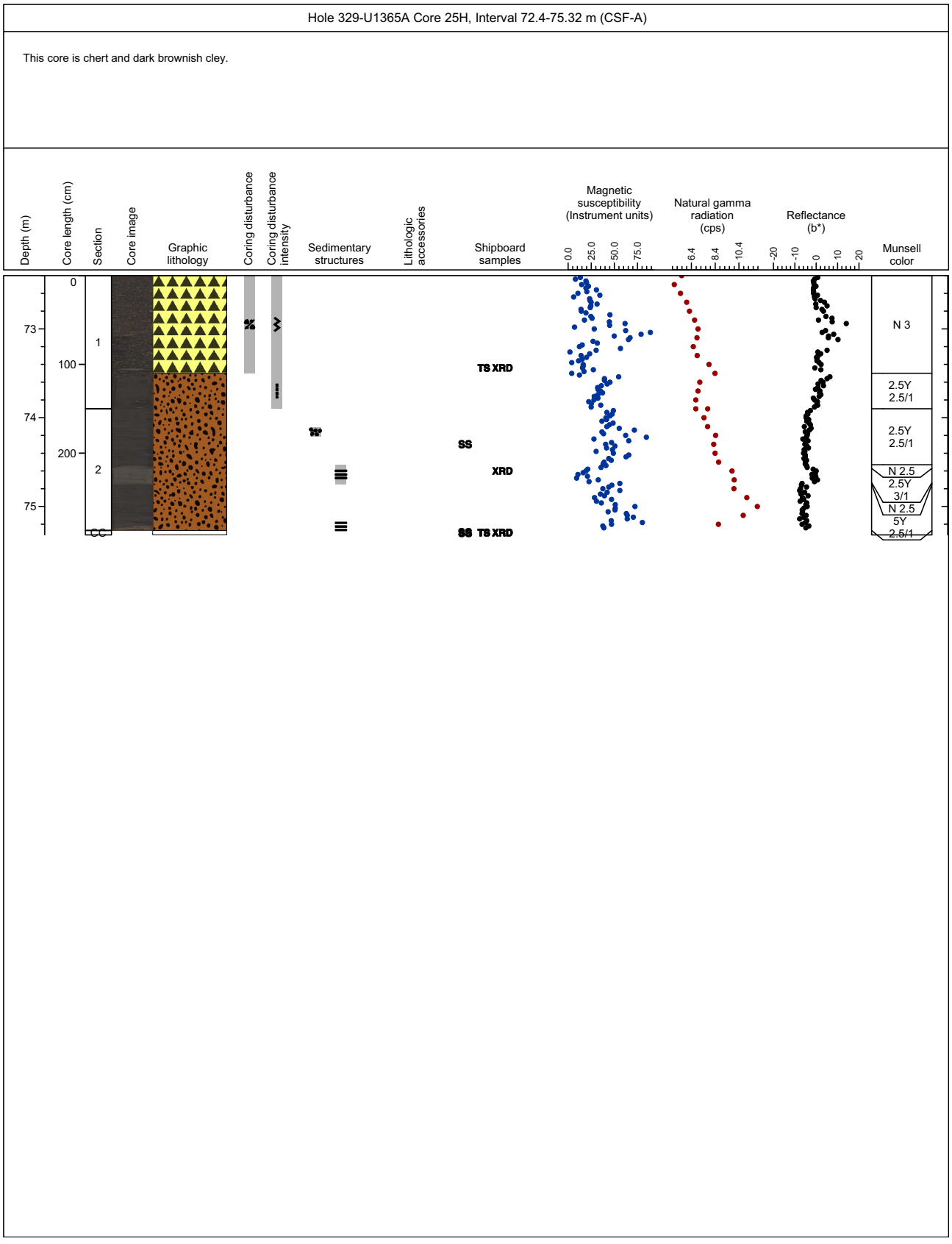
Core Photo


Hole 329-U1365A Core 23H, Interval 63.3-67.21 m (CSF-A)
This core is chert and dark brownish pelagic clay.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
Natural gamma radiation (cps)
Reflectance (b*)
Munsell color
64
65
66
67
0
100
200
300
1
2
3
CC
SS
SS
XRD
SS
0.0
20.0
40.0
60.0
4.0
6.0
8.0
-20
-10
0
10
20
N 3
7.5YR 2.5/1
7.5YR 2.5/1
7.5YR 2.5/1
7.5YR 2.5/1

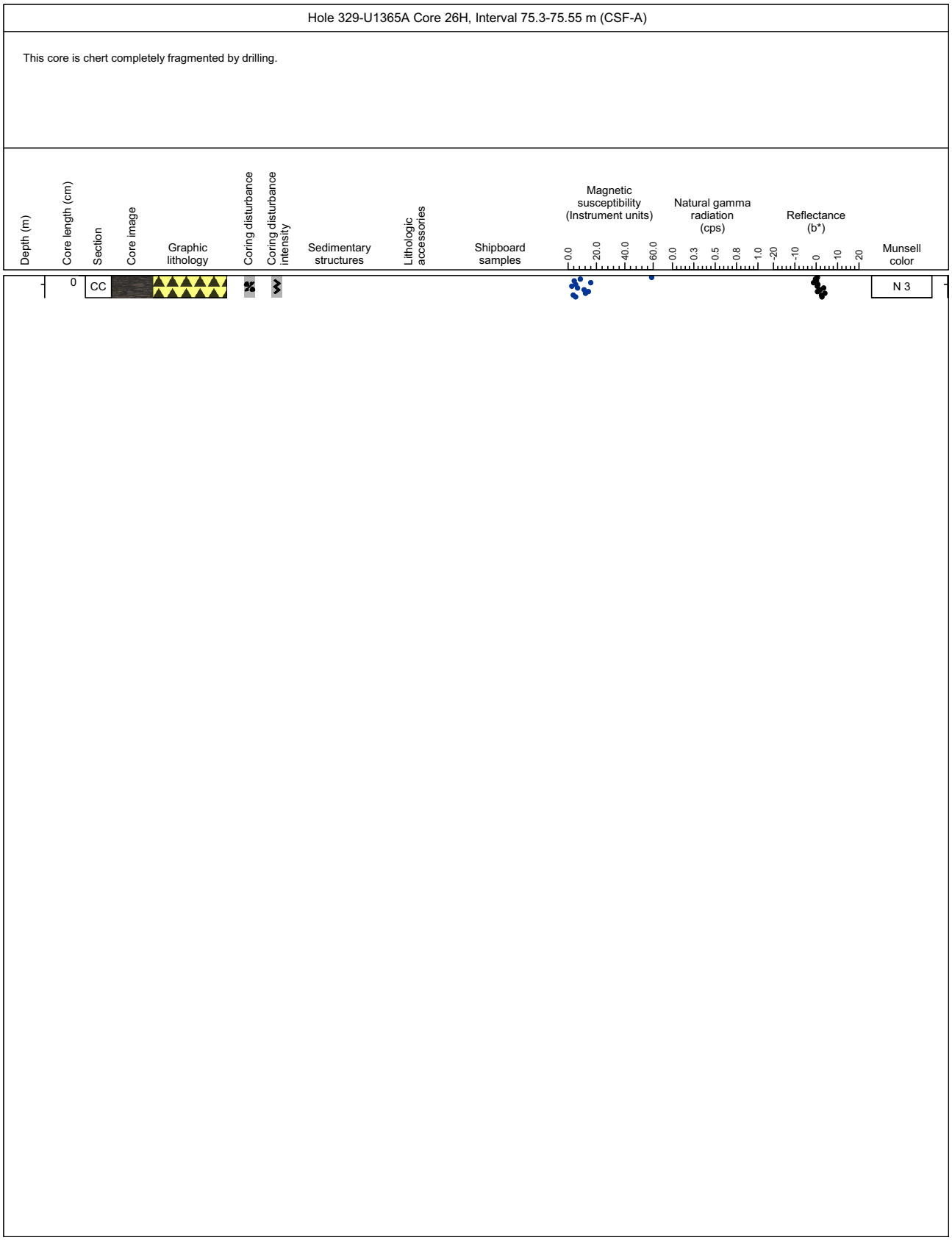
Core Photo


Hole 329-U1365A Core 24H, Interval 67.2-72.43 m (CSF-A)
This core is chert and dark brownish metalliferous clay.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
Natural gamma radiation (cps)
Reflectance (b*)
Munsell color
68
69
70
71
72
0
100
200
300
400
500
1
2
3
4
CC
SS
XRD
40.0
90.0
4.0
6.0
8.0
-20
-10
0
10
20
N 3
7.5YR 2.5/1
7.5YR 2.5/1
7.5YR 2.5/1
N 2.5
2.5Y 3/1
2.5Y 3/1
N 2.5
7.5YR 2.5/1
N 2.5

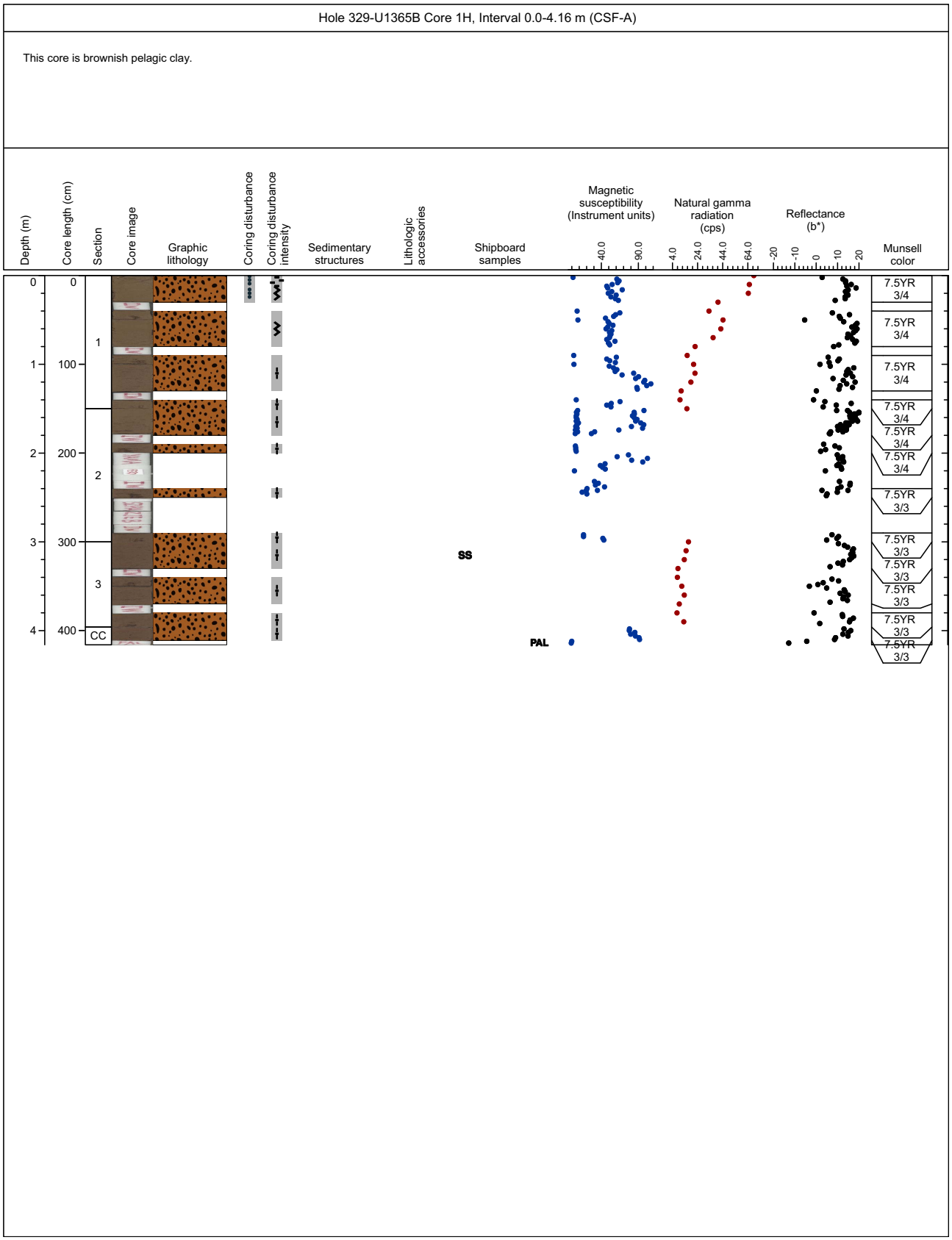
Core Photo


Hole 329-U1365A Core 25H, Interval 72.4-75.32 m (CSF-A)
This core is chert and dark brownish cley.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
Natural gamma radiation (cps)
Reflectance (b*)
Munsell color
0.0
25.0
50.0
75.0
6.4
8.4
10.4
-20
-10
0
10
20
0
73
100
74
200
75
1
2
CC
TS XRD
SS
XRD
SS TS XRD
N 3
2.5Y 2.5/1
2.5Y 2.5/1
N 2.5
2.5Y 3/1
N 2.5
5Y 2.5/1

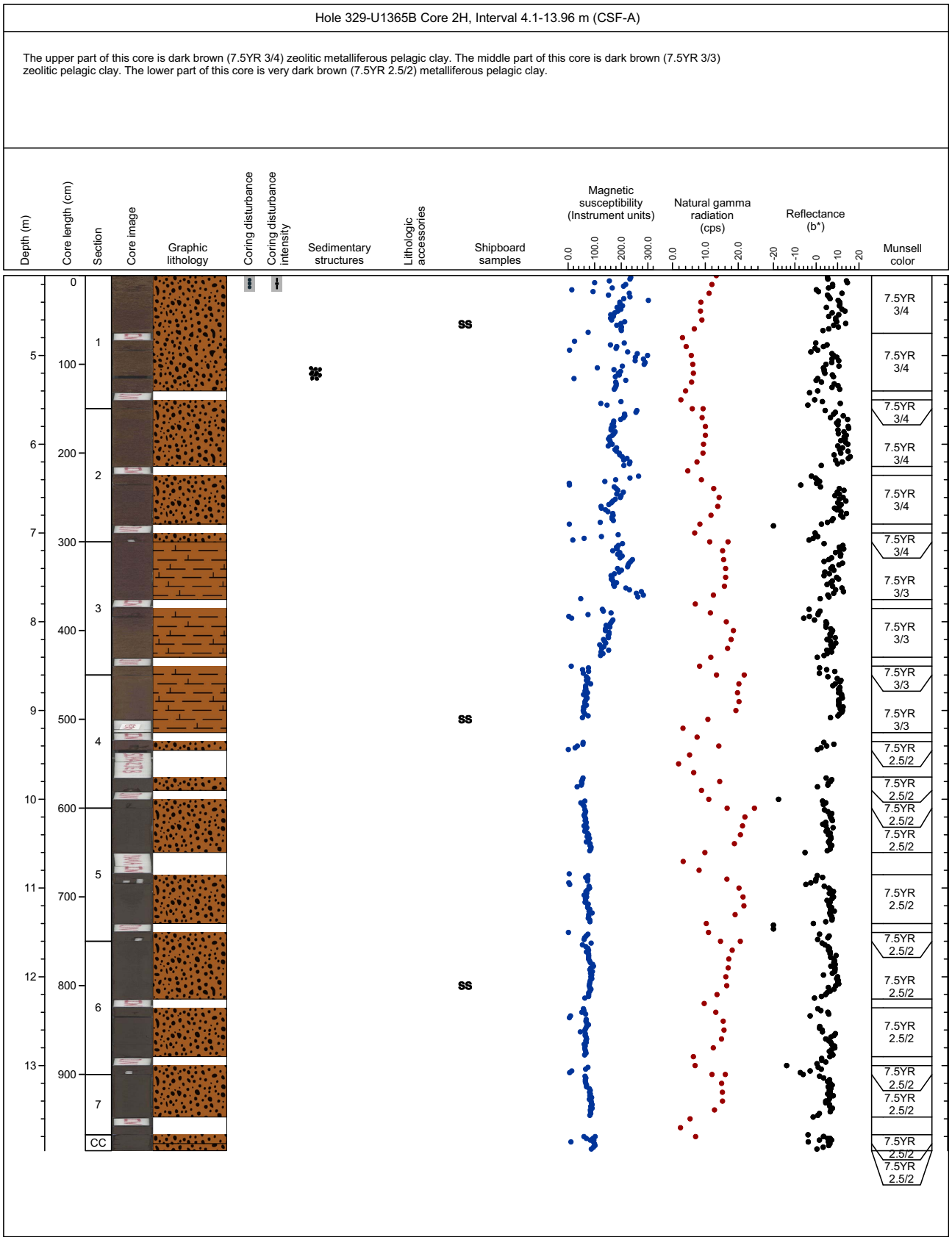
Core Photo


Hole 329-U1365A Core 26H, Interval 75.3-75.55 m (CSF-A)
This core is chert completely fragmented by drilling.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
0.0
20.0
40.0
60.0
Natural gamma radiation (cps)
0.0
0.3
0.5
0.8
1.0
Reflectance (b*)
-20
-10
0
10
20
Munsell color
0
CC
N 3

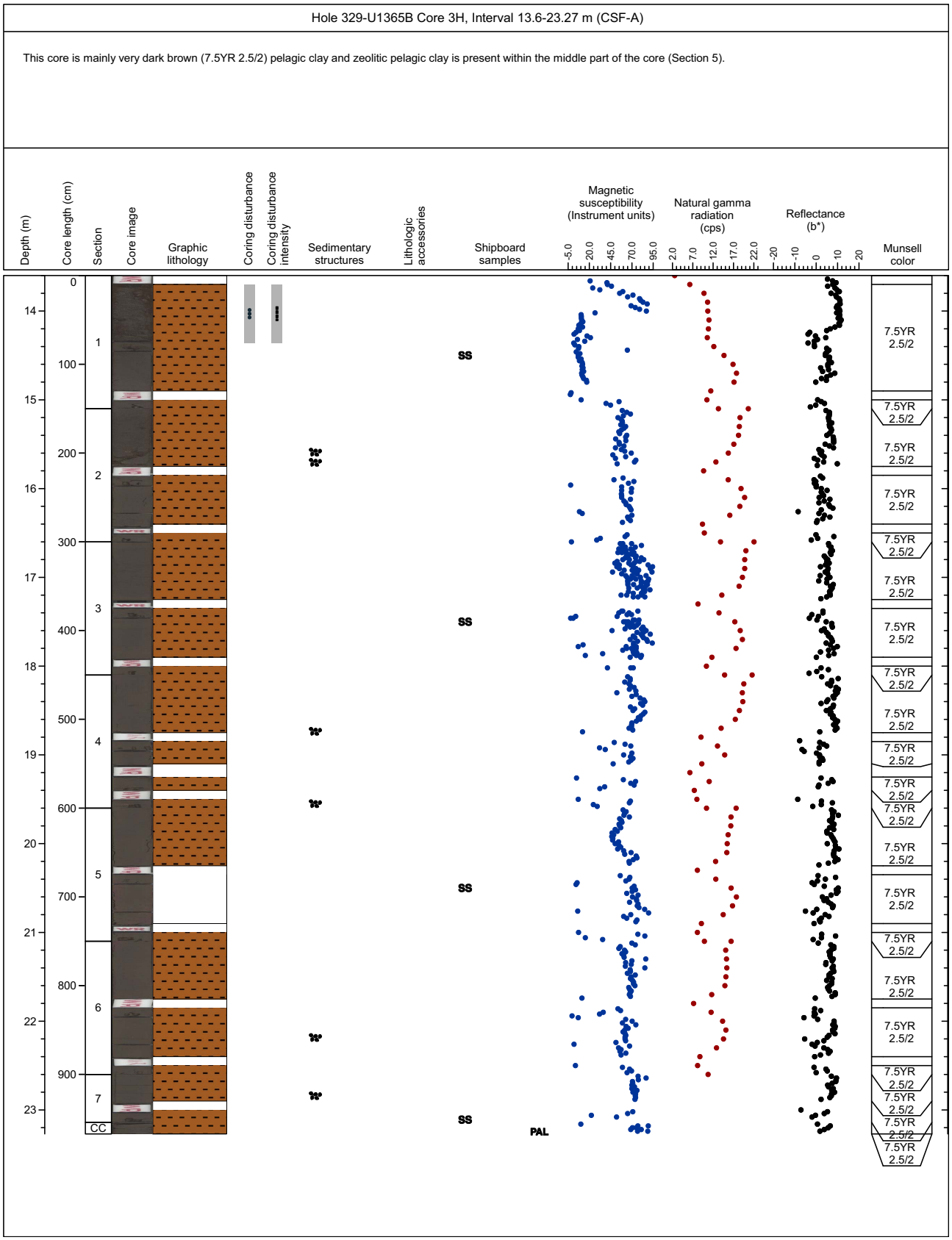
Core Photo


Hole 329-U1365B Core 1H, Interval 0.0-4.16 m (CSF-A)
This core is brownish pelagic clay.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
Natural gamma radiation (cps)
Reflectance (b*)
Munsell color
SS
PAL
7.5YR 3/4
7.5YR 3/3

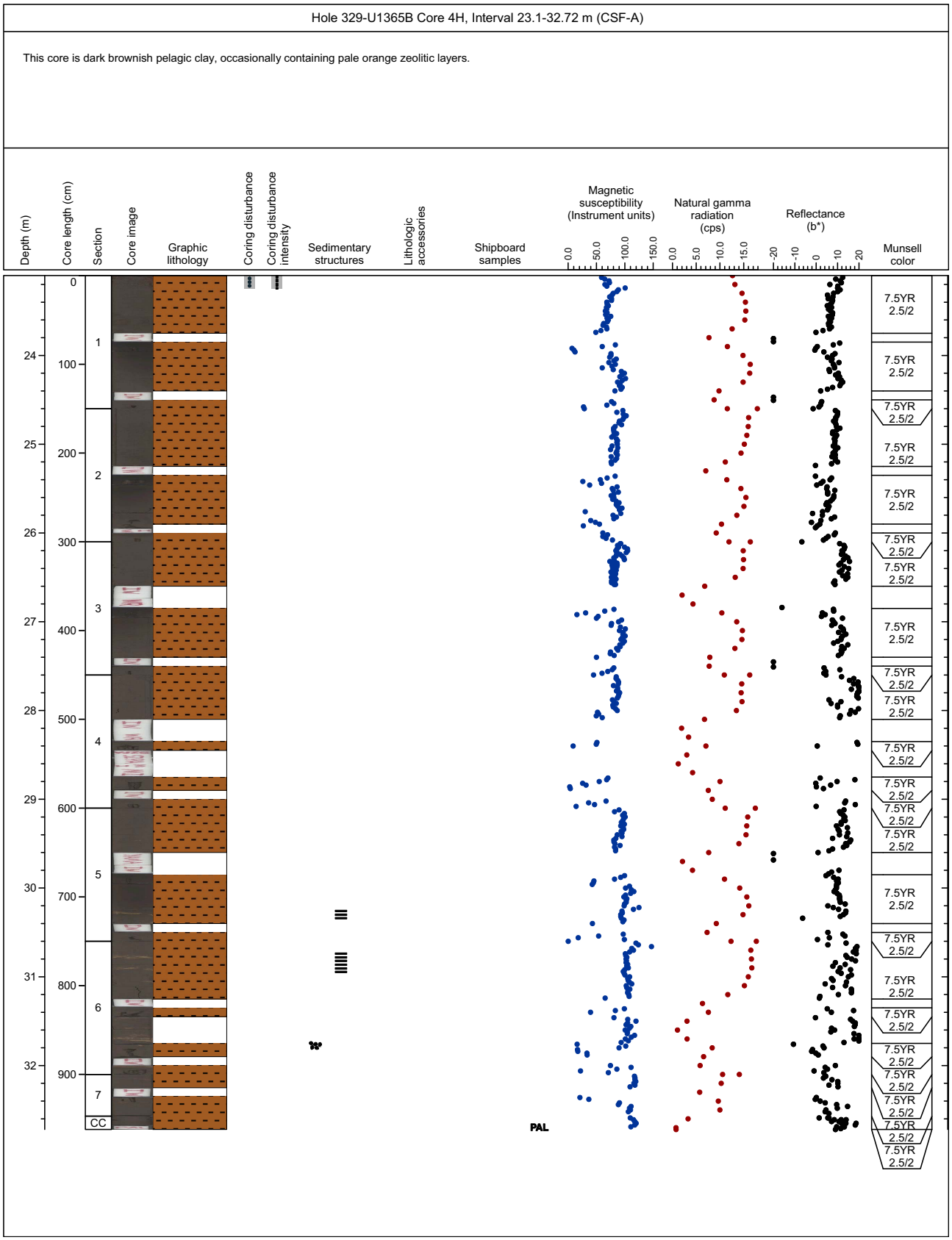
Core Photo


Hole 329-U1365B Core 2H, Interval 4.1-13.96 m (CSF-A)
The upper part of this core is dark brown (7.5YR 3/4) zeolitic metalliferous pelagic clay. The middle part of this core is dark brown (7.5YR 3/3) zeolitic pelagic clay. The lower part of this core is very dark brown (7.5YR 2.5/2) metalliferous pelagic clay.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
Natural gamma radiation (cps)
Reflectance (b*)
Munsell color
SS
7.5YR 3/4
7.5YR 3/3
7.5YR 2.5/2
CC

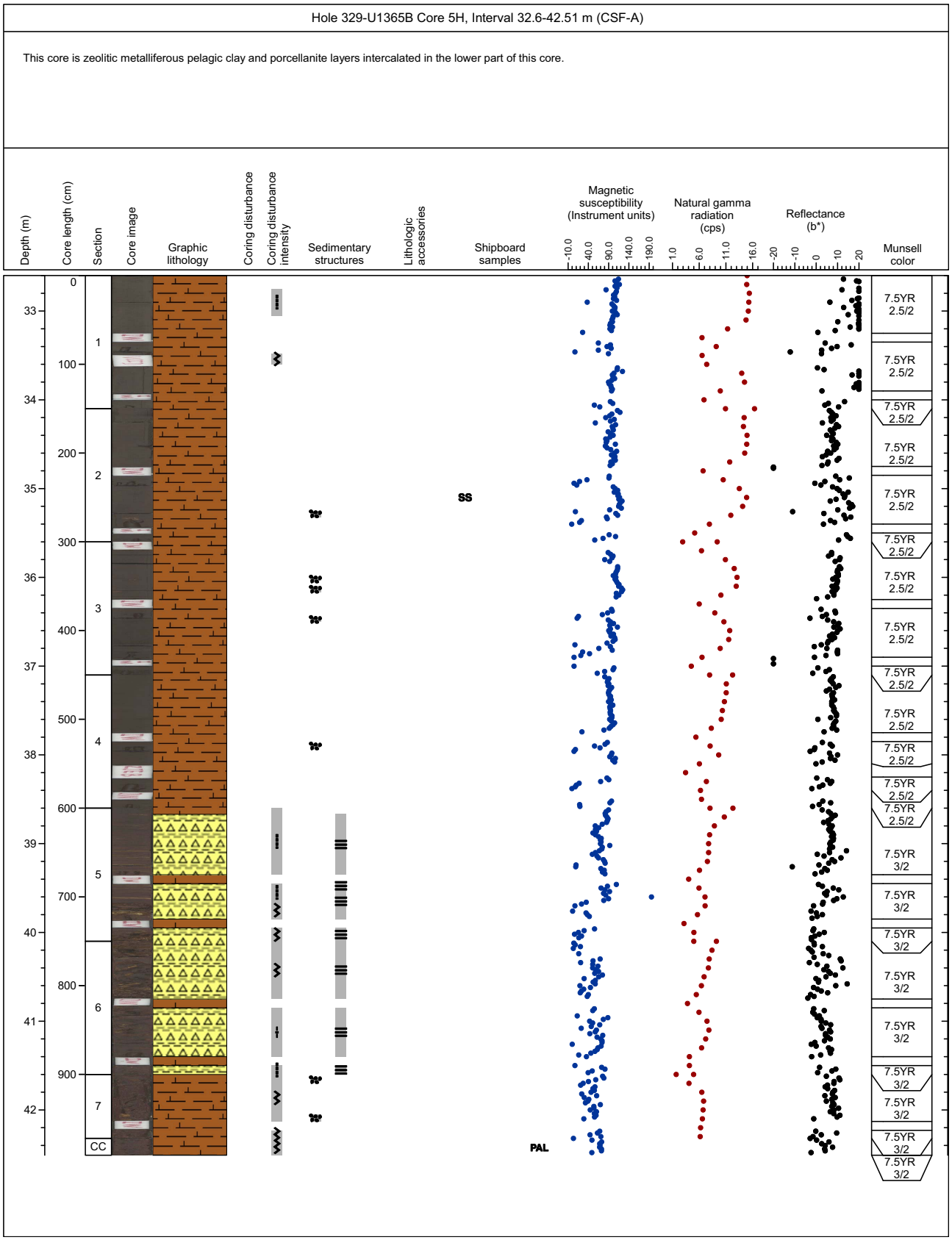
Core Photo


Hole 329-U1365B Core 3H, Interval 13.6-23.27 m (CSF-A)
This core is mainly very dark brown (7.5YR 2.5/2) pelagic clay and zeolitic pelagic clay is present within the middle part of the core (Section 5).
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
Natural gamma radiation (cps)
Reflectance (b*)
Munsell color
SS
PAL
7.5YR 2.5/2

Core Photo


Hole 329-U1365B Core 4H, Interval 23.1-32.72 m (CSF-A)
This core is dark brownish pelagic clay, occasionally containing pale orange zeolitic layers.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
Natural gamma radiation (cps)
Reflectance (b*)
Munsell color
PAL
7.5YR 2.5/2

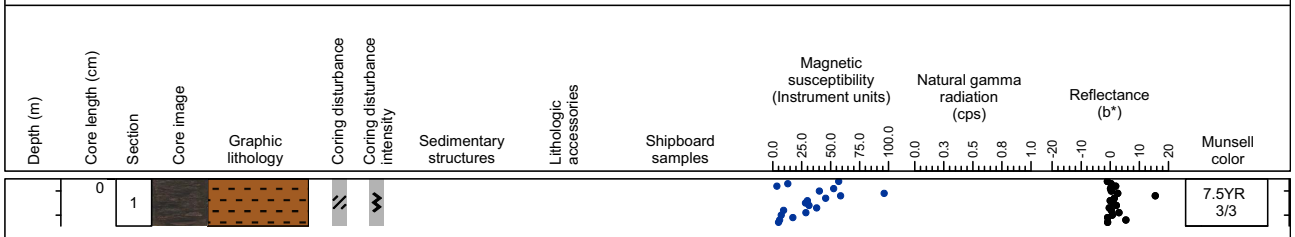
Core Photo


Hole 329-U1365B Core 5H, Interval 32.6-42.51 m (CSF-A)
This core is zeolitic metalliferous pelagic clay and porcellanite layers intercalated in the lower part of this core.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
Natural gamma radiation (cps)
Reflectance (b*)
Munsell color
SS
PAL
CC
7.5YR 2.5/2
7.5YR 3/2

Core Photo

Hole 329-U1365B Core 6H, Interval 42.1-42.49 m (CSF-A)

This core is mixture of soupy pelagic clay and fragmented chert. Completely disturbed by drilling.

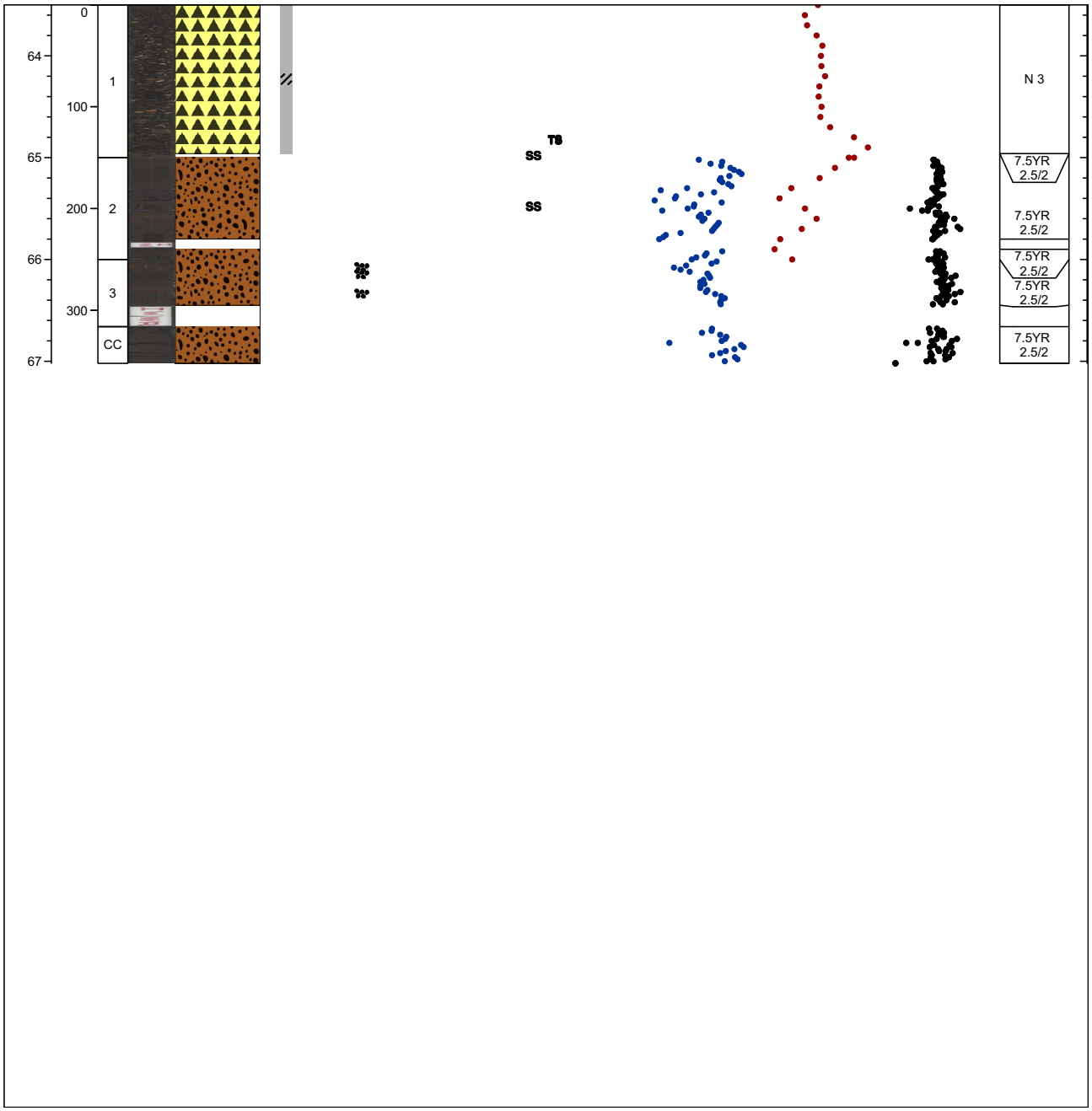


U1365B-7H: NO RECOVERY

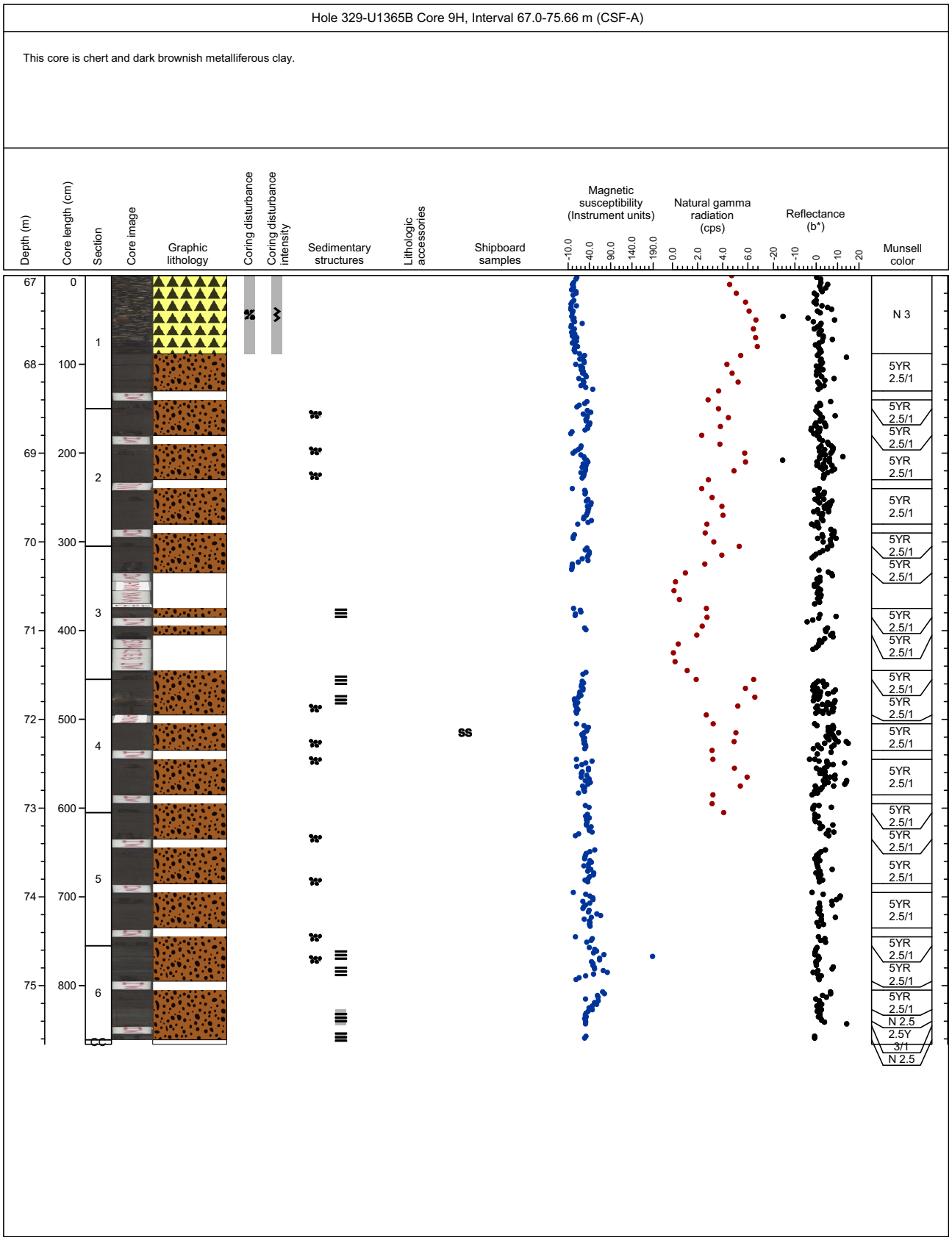
Core Photo

Hole 329-U1365B Core 8H, Interval 63.5-67.02 m (CSF-A)

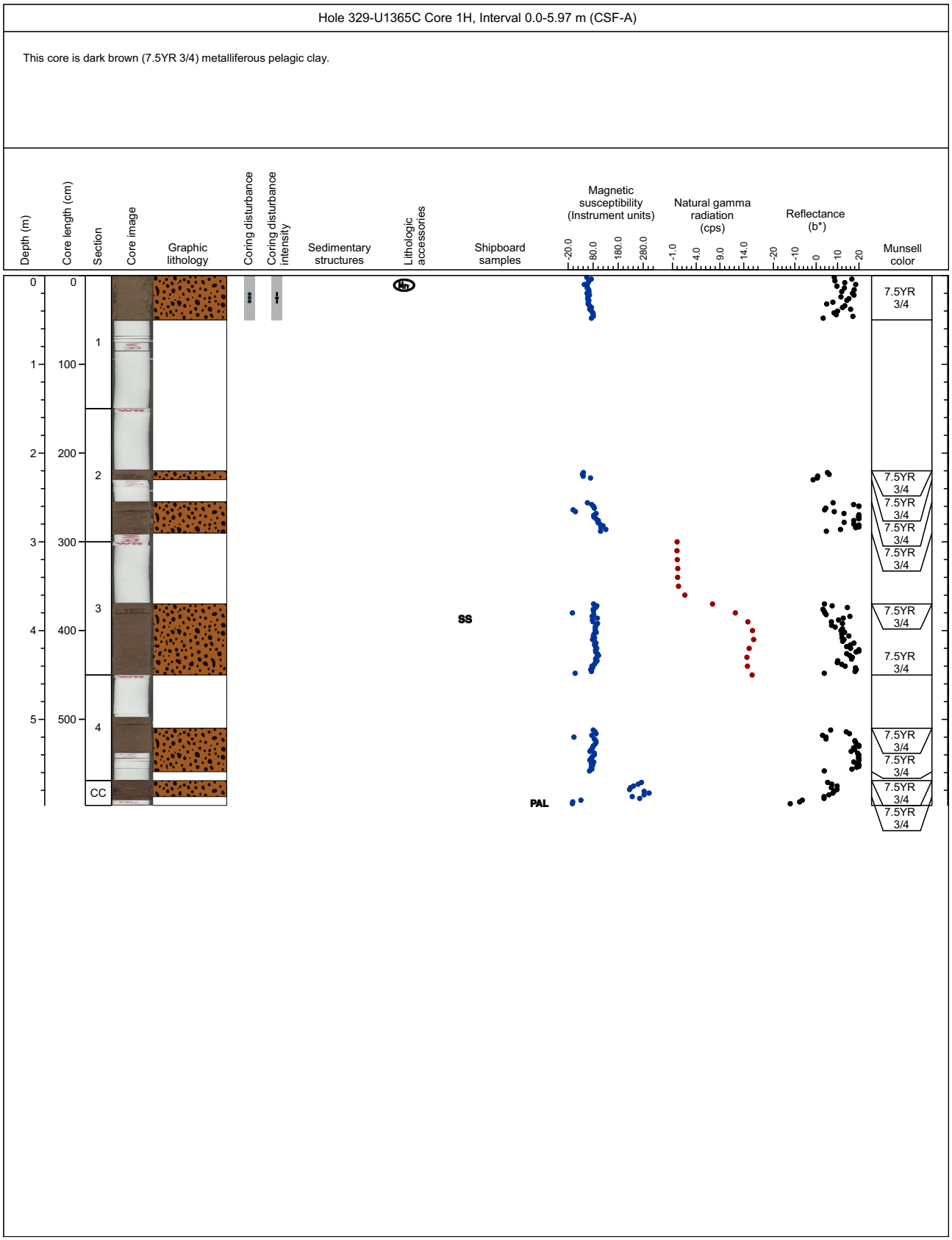
The most part of the Section 1 of this core is fractured chert (0-146 cm). The bottom of the Section 1 and underlying succession are very dark brown (7.5YR 2.5/2) metalliferous pelagic clay



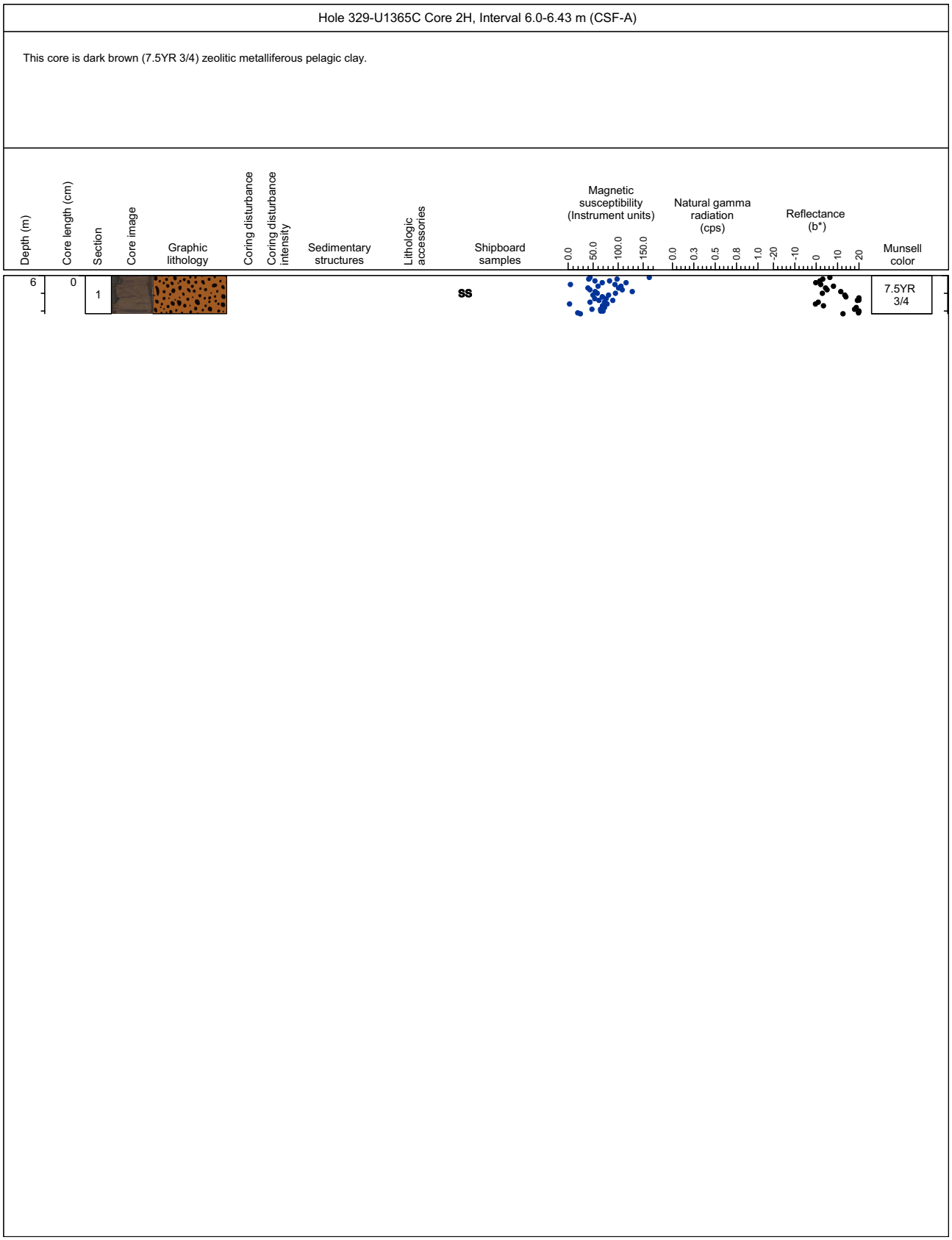
Core Photo


Hole 329-U1365B Core 9H, Interval 67.0-75.66 m (CSF-A)
This core is chert and dark brownish metalliferous clay.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
Natural gamma radiation (cps)
Reflectance (b*)
Munsell color
SS
N 3
5YR 2.5/1
N 2.5
2.5Y 3/1

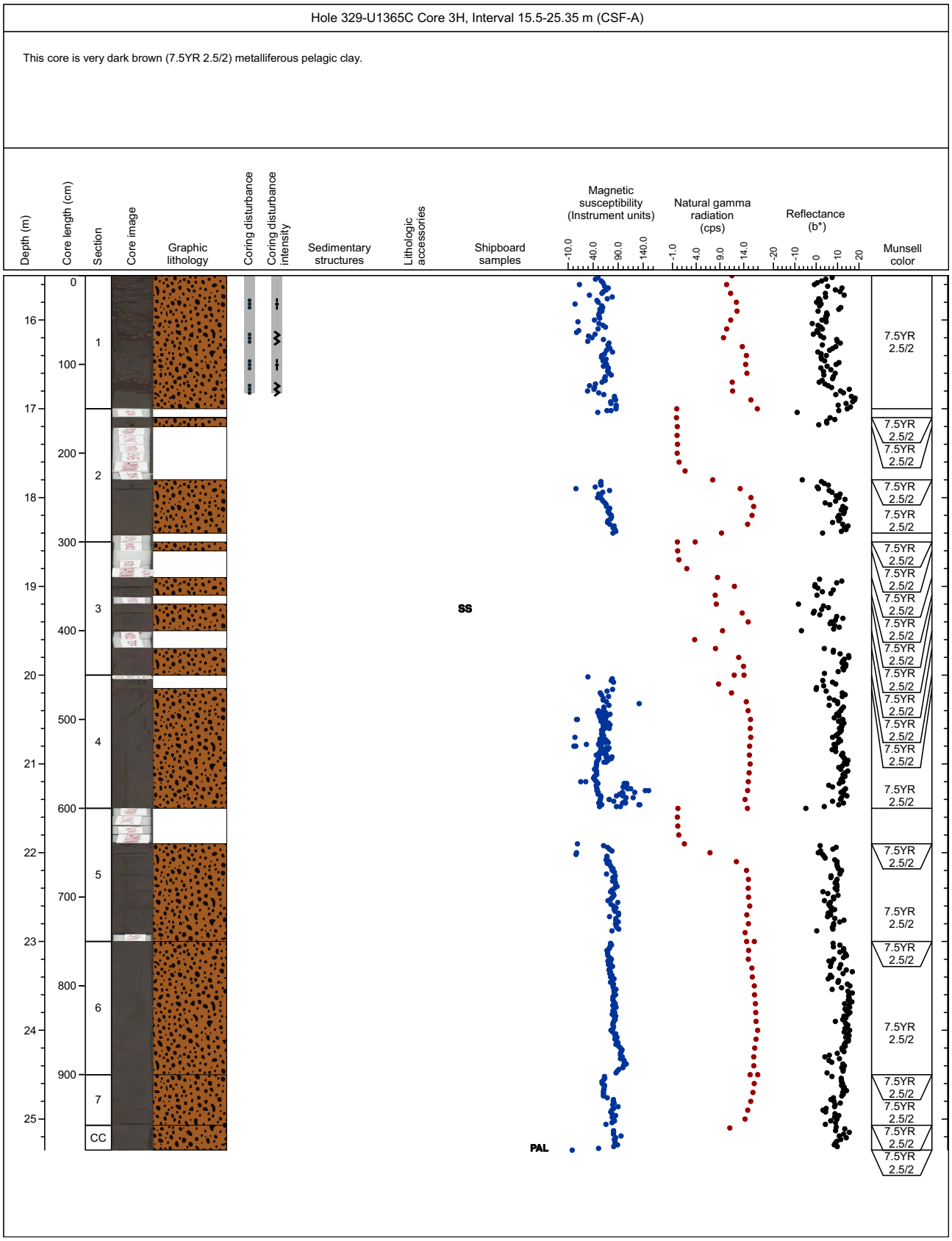
Core Photo


Hole 329-U1365C Core 1H, Interval 0.0-5.97 m (CSF-A)
This core is dark brown (7.5YR 3/4) metalliferous pelagic clay.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
-20.0
80.0
180.0
280.0
Natural gamma radiation (cps)
-1.0
4.0
9.0
14.0
Reflectance (b*)
-20
-10
0
10
20
Munsell color
0
1
2
3
4
5
0
100
200
300
400
500
1
2
3
4
CC
SS
PAL
7.5YR 3/4

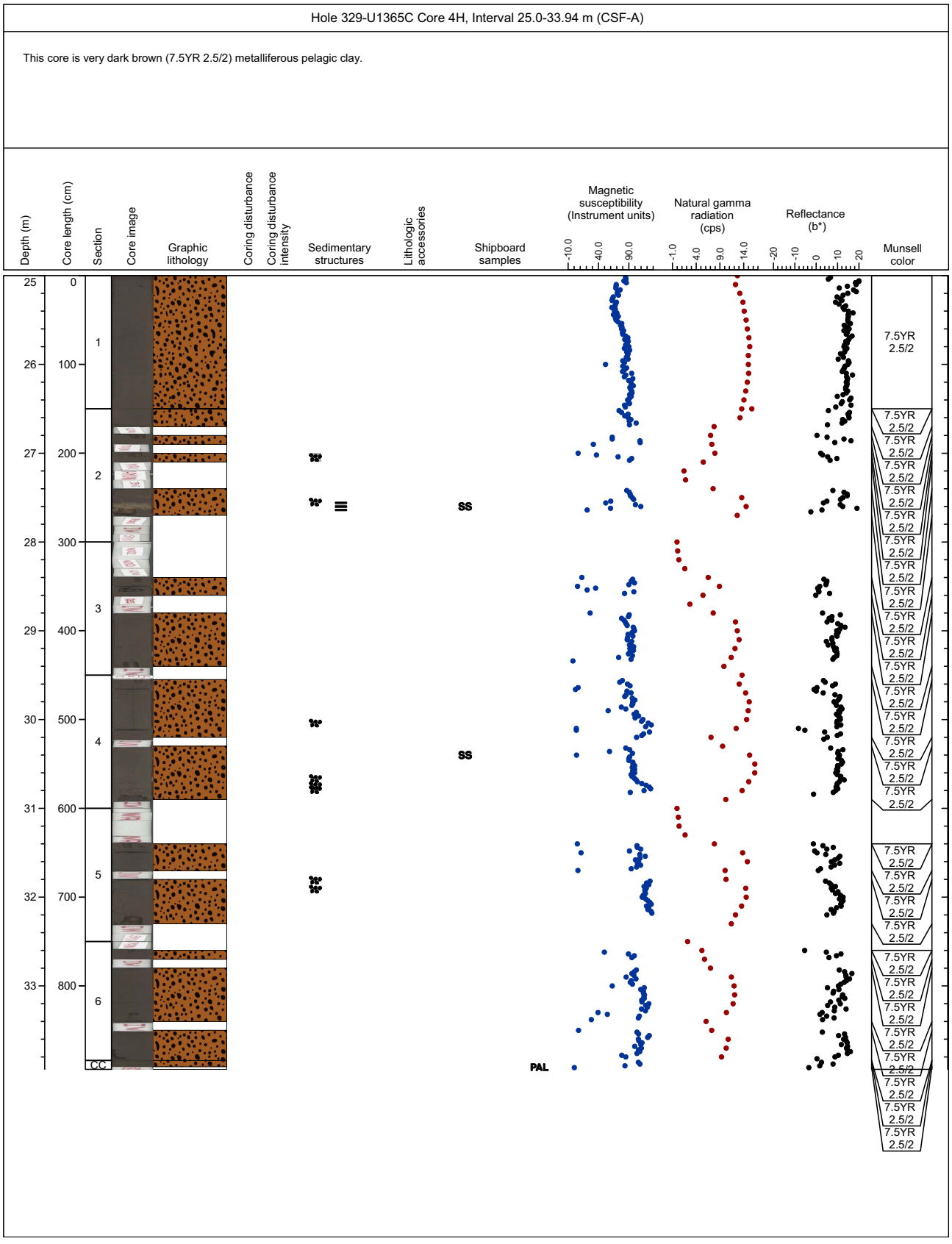
Core Photo


Hole 329-U1365C Core 2H, Interval 6.0-6.43 m (CSF-A)
This core is dark brown (7.5YR 3/4) zeolitic metalliferous pelagic clay.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
0.0
50.0
100.0
150.0
Natural gamma radiation (cps)
0.0
0.3
0.5
0.8
1.0
Reflectance (b*)
-20
-10
0
10
20
Munsell color
6
0
1
SS
7.5YR 3/4

Core Photo


Hole 329-U1365C Core 3H, Interval 15.5-25.35 m (CSF-A)
This core is very dark brown (7.5YR 2.5/2) metalliferous pelagic clay.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
-10.0
40.0
90.0
140.0
Natural gamma radiation (cps)
-1.0
4.0
9.0
14.0
Reflectance (b*)
-20
-10
0
10
20
Munsell color
SS
PAL
7.5YR 2.5/2

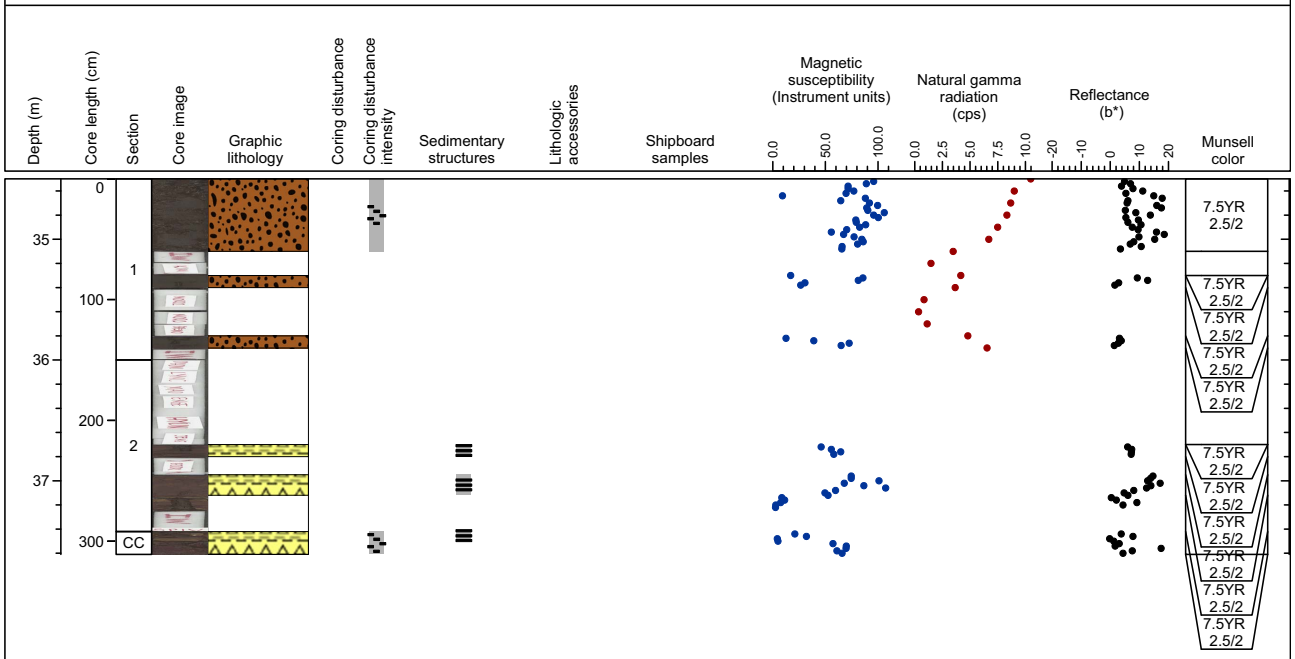
Core Photo


Hole 329-U1365C Core 4H, Interval 25.0-33.94 m (CSF-A)
This core is very dark brown (7.5YR 2.5/2) metalliferous pelagic clay.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
Natural gamma radiation (cps)
Reflectance (b*)
Munsell color
SS
SS
PAL
7.5YR 2.5/2

Core Photo

Hole 329-U1365C Core 5H, Interval 34.5-37.61 m (CSF-A)

This core is dark brownish pelagic lay, occasionally containing pale-orange zeolitic layers.

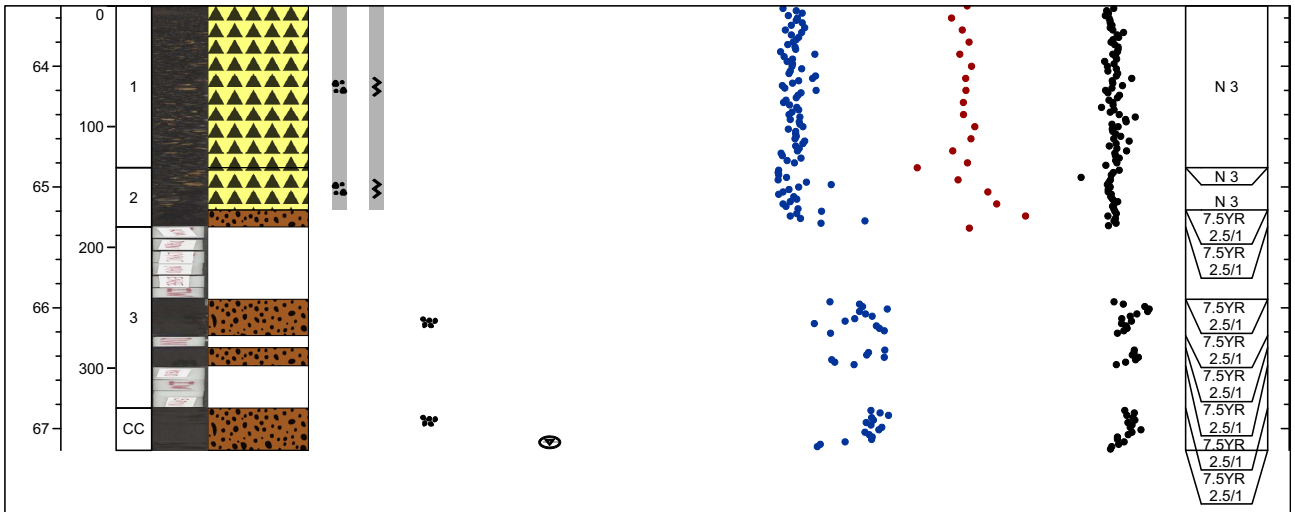


U1365C-6H: NO RECOVERY

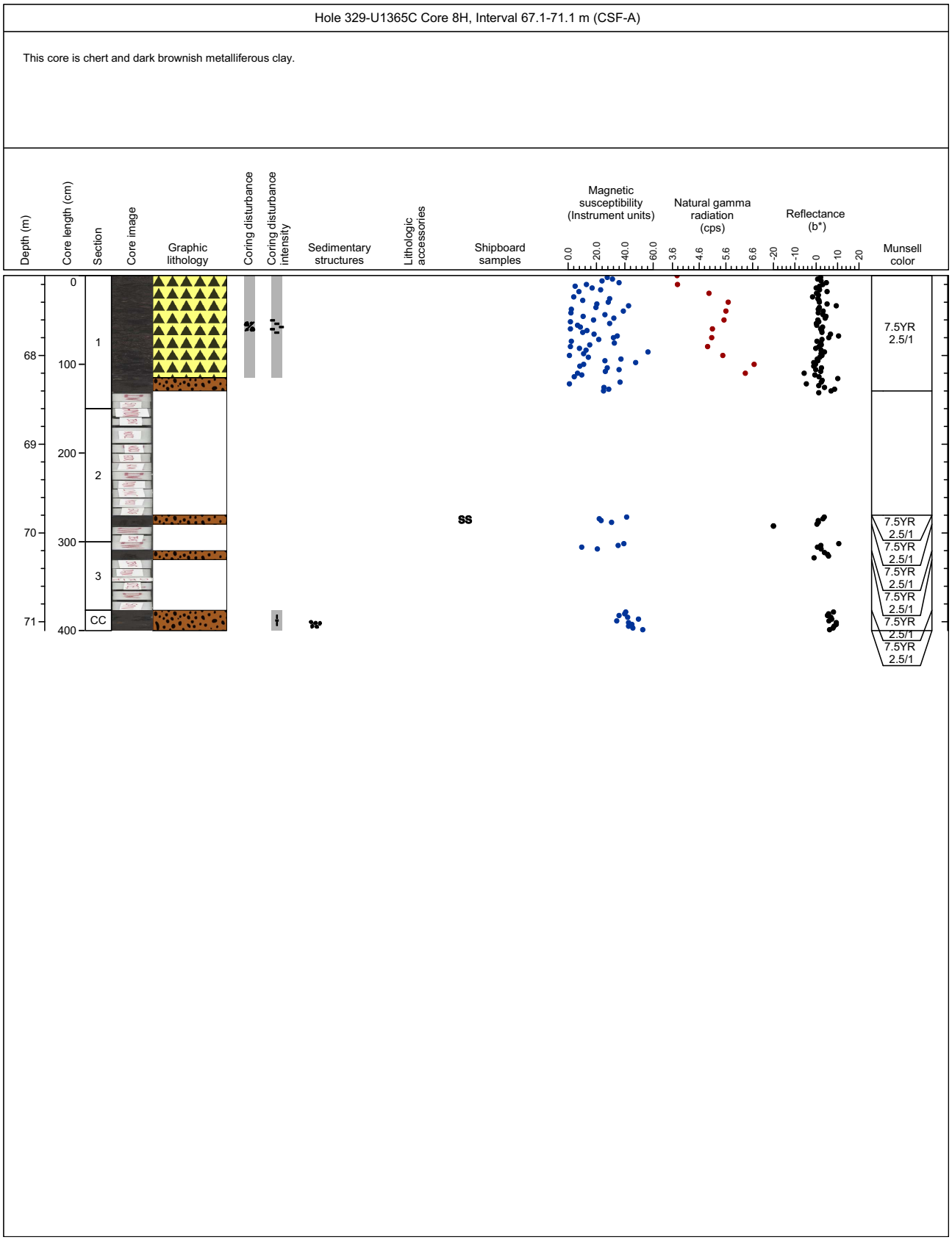
Core Photo

Hole 329-U1365C Core 7H, Interval 63.5-67.18 m (CSF-A)

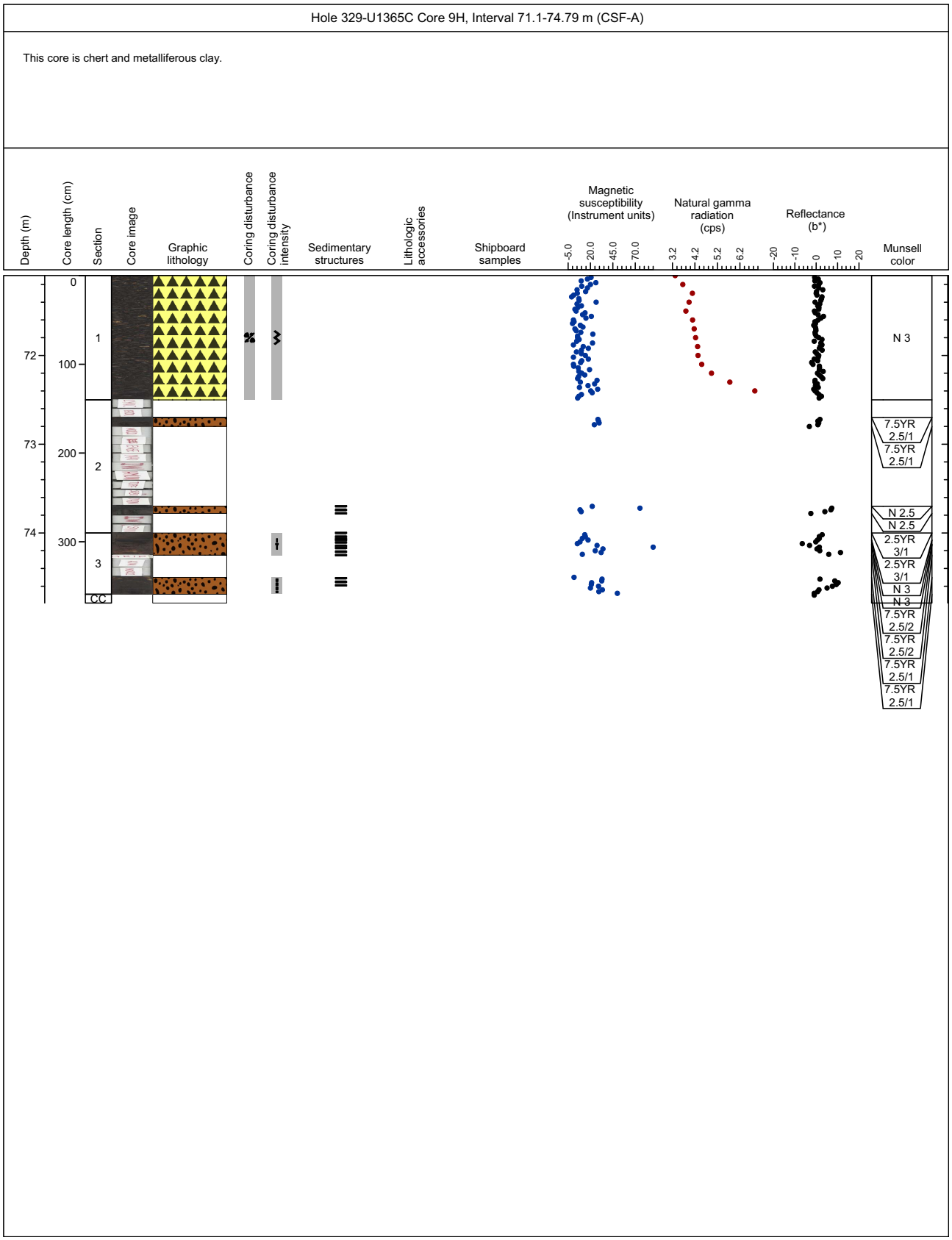
The upper part of this core is fractured chert and the lower part is dark brownish pelagic clay.



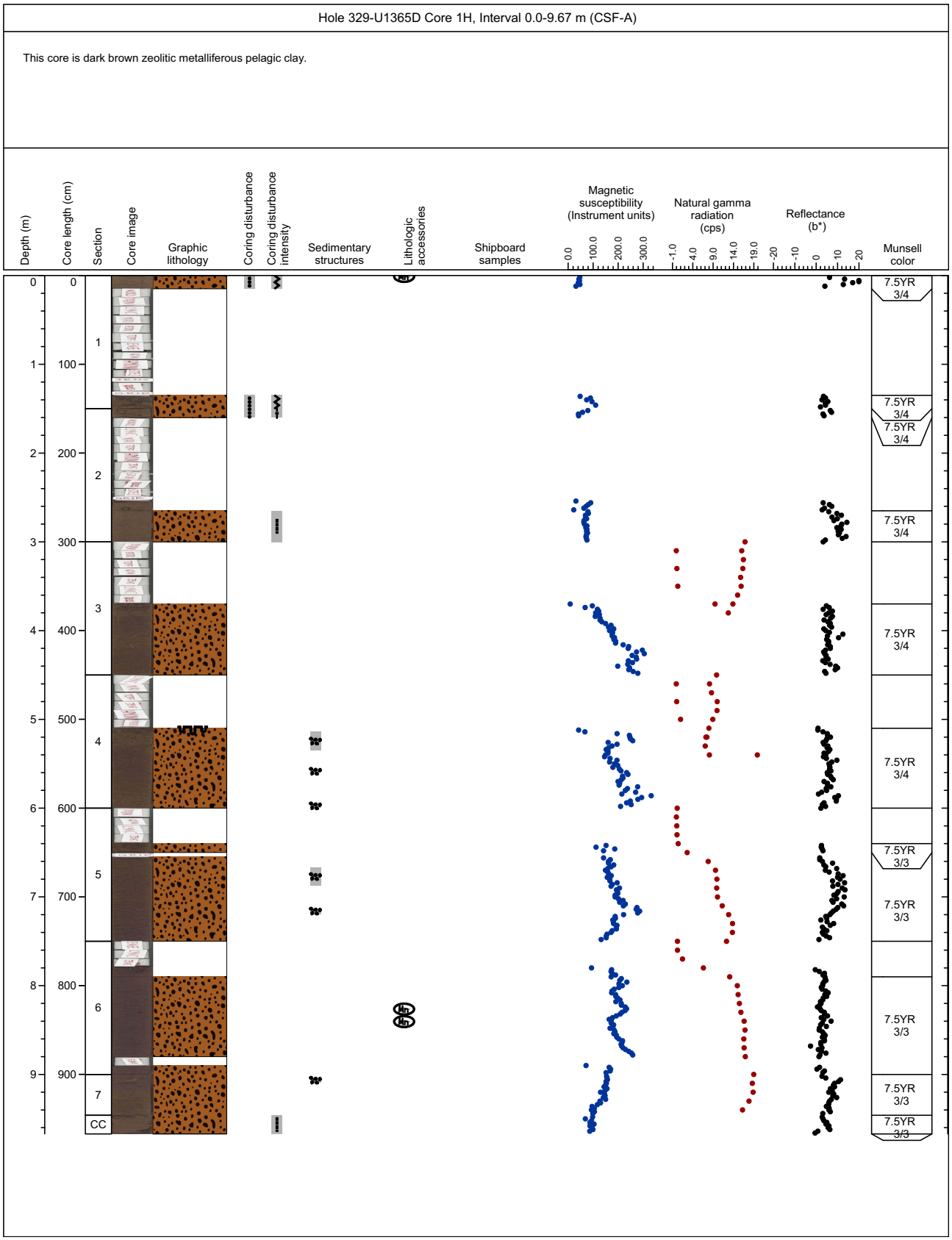
Core Photo


Hole 329-U1365C Core 8H, Interval 67.1-71.1 m (CSF-A)
This core is chert and dark brownish metalliferous clay.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
Natural gamma radiation (cps)
Reflectance (b*)
Munsell color
0.0
20.0
40.0
60.0
3.6
4.6
5.6
6.6
-20
-10
0
10
20
68
69
70
71
0
100
200
300
400
1
2
3
CC
SS
7.5YR 2.5/1

Core Photo


Hole 329-U1365C Core 9H, Interval 71.1-74.79 m (CSF-A)
This core is chert and metalliferous clay.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
Natural gamma radiation (cps)
Reflectance (b*)
Munsell color
0
100
200
300
72
73
74
1
2
3
CC
-5.0
20.0
45.0
70.0
3.2
4.2
5.2
6.2
-20
-10
0
10
20
N 3
7.5YR 2.5/1
7.5YR 2.5/1
N 2.5
N 2.5
2.5YR 3/1
2.5YR 3/1
N 3
N 3
7.5YR 2.5/2
7.5YR 2.5/2
7.5YR 2.5/1
7.5YR 2.5/1

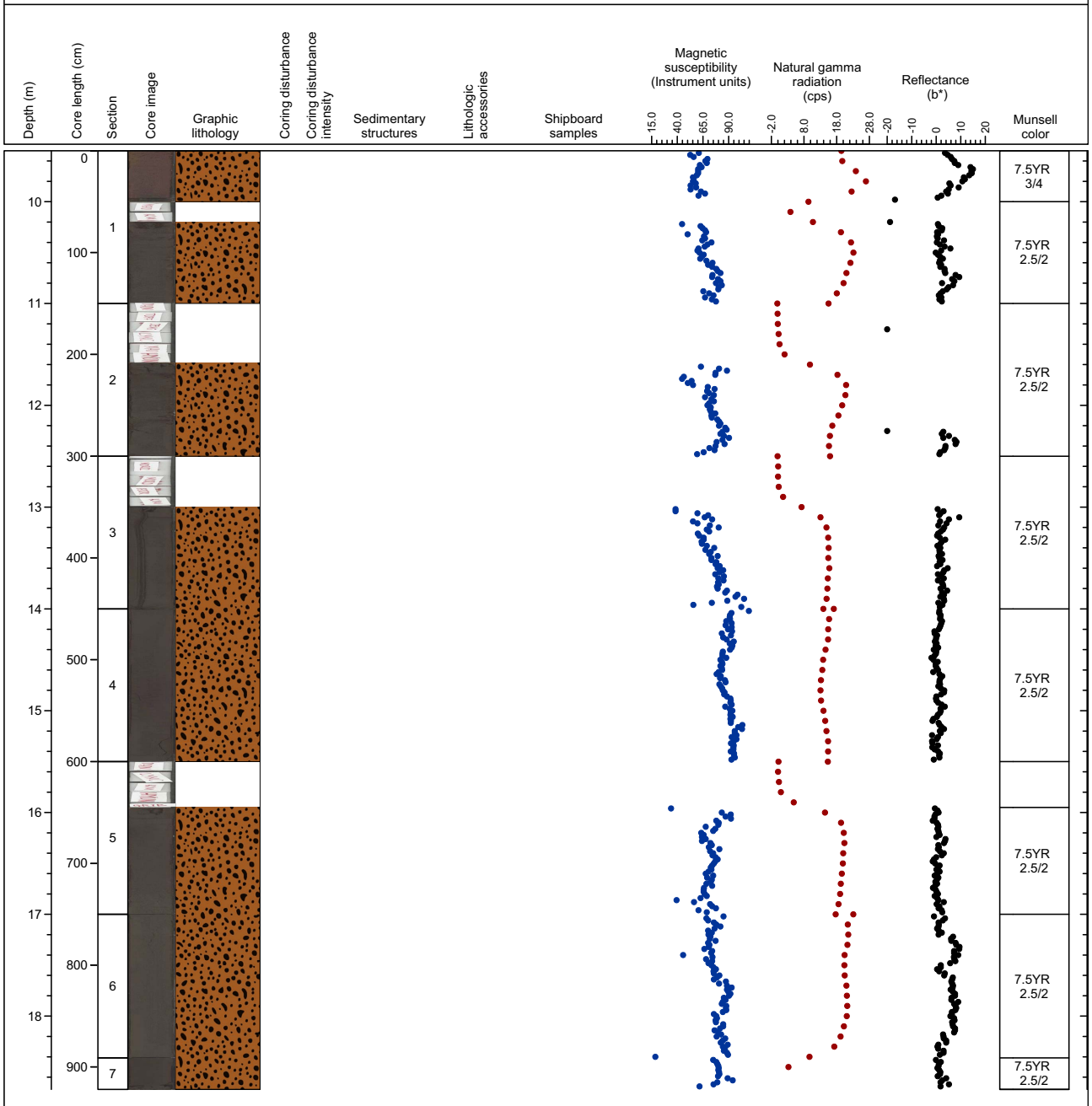
Core Photo


Hole 329-U1365D Core 1H, Interval 0.0-9.67 m (CSF-A)
This core is dark brown zeolitic metalliferous pelagic clay.
Depth (m)
Core length (cm)
Section
Core image
Graphic lithology
Coring disturbance
Coring disturbance intensity
Sedimentary structures
Lithologic accessories
Shipboard samples
Magnetic susceptibility (Instrument units)
Natural gamma radiation (cps)
Reflectance (b*)
Munsell color
7.5YR 3/4
7.5YR 3/3
CC

Core Photo

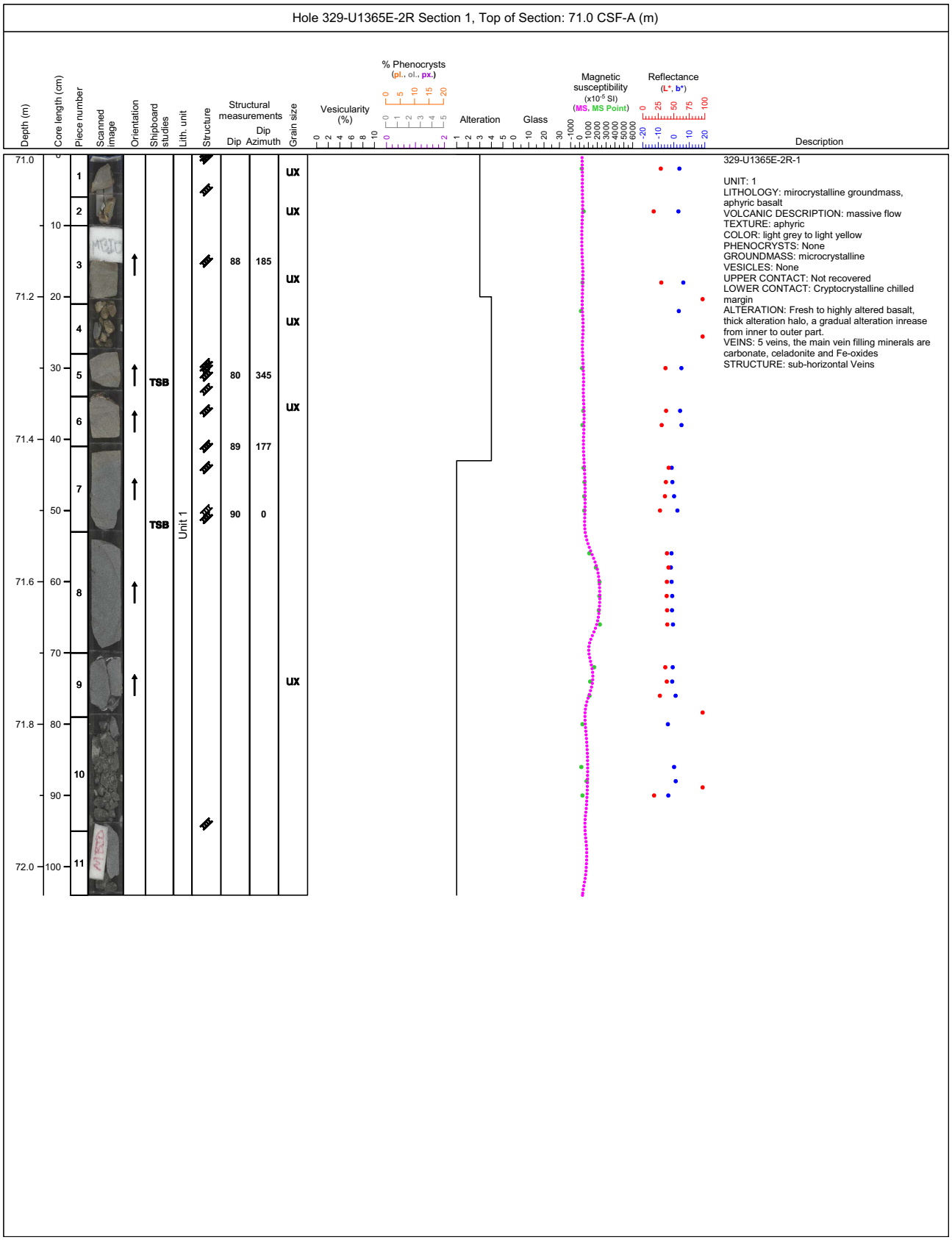
Hole 329-U1365D Core 2H, Interval 9.5-18.72 m (CSF-A)

The most upper of this core (Section 1, 0-50 cm) is dark brown zeolitic metalliferous pelagic clay and the underlying core is very dark brown metalliferous pelagic clay.

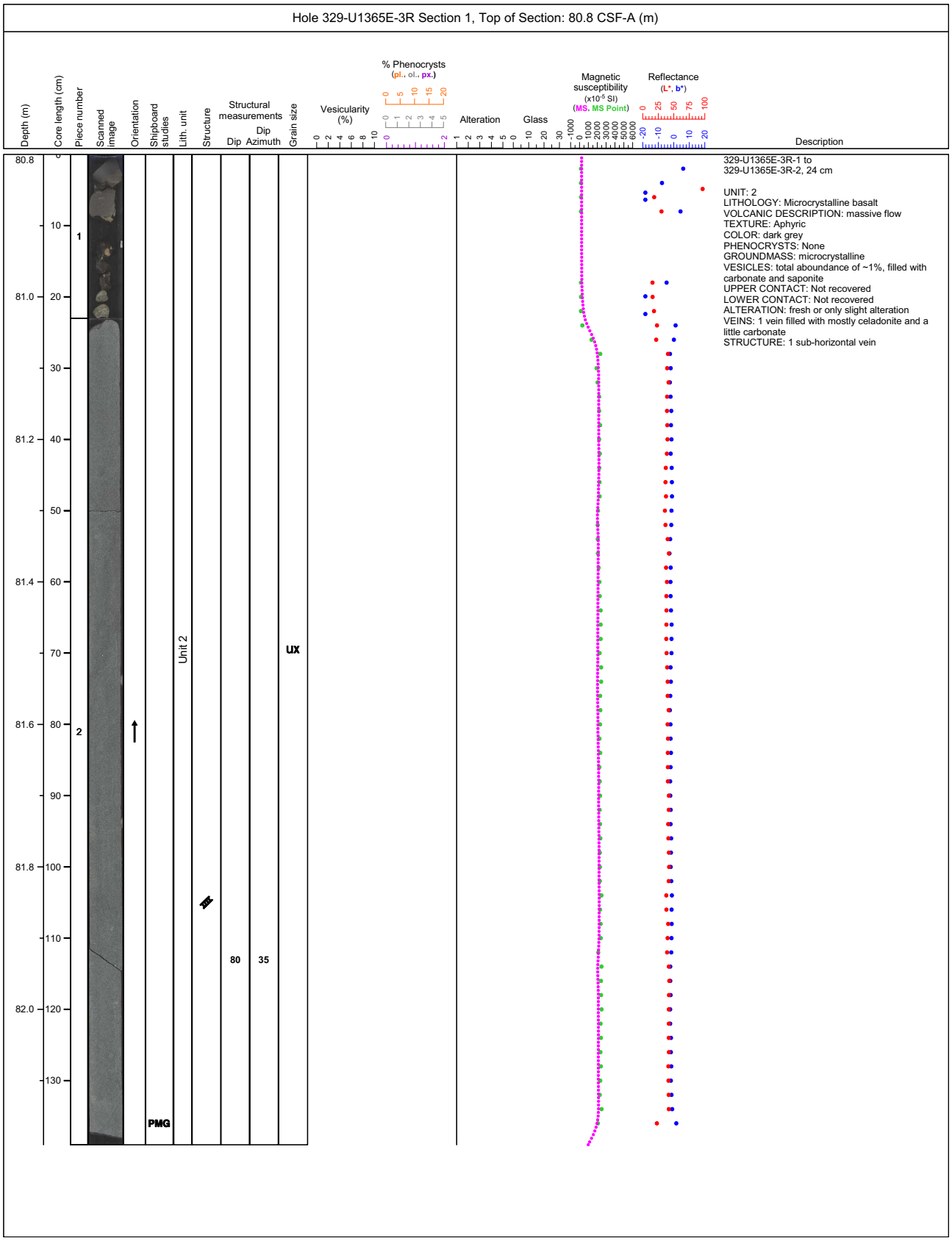


U1365E-1R: NO RECOVERY

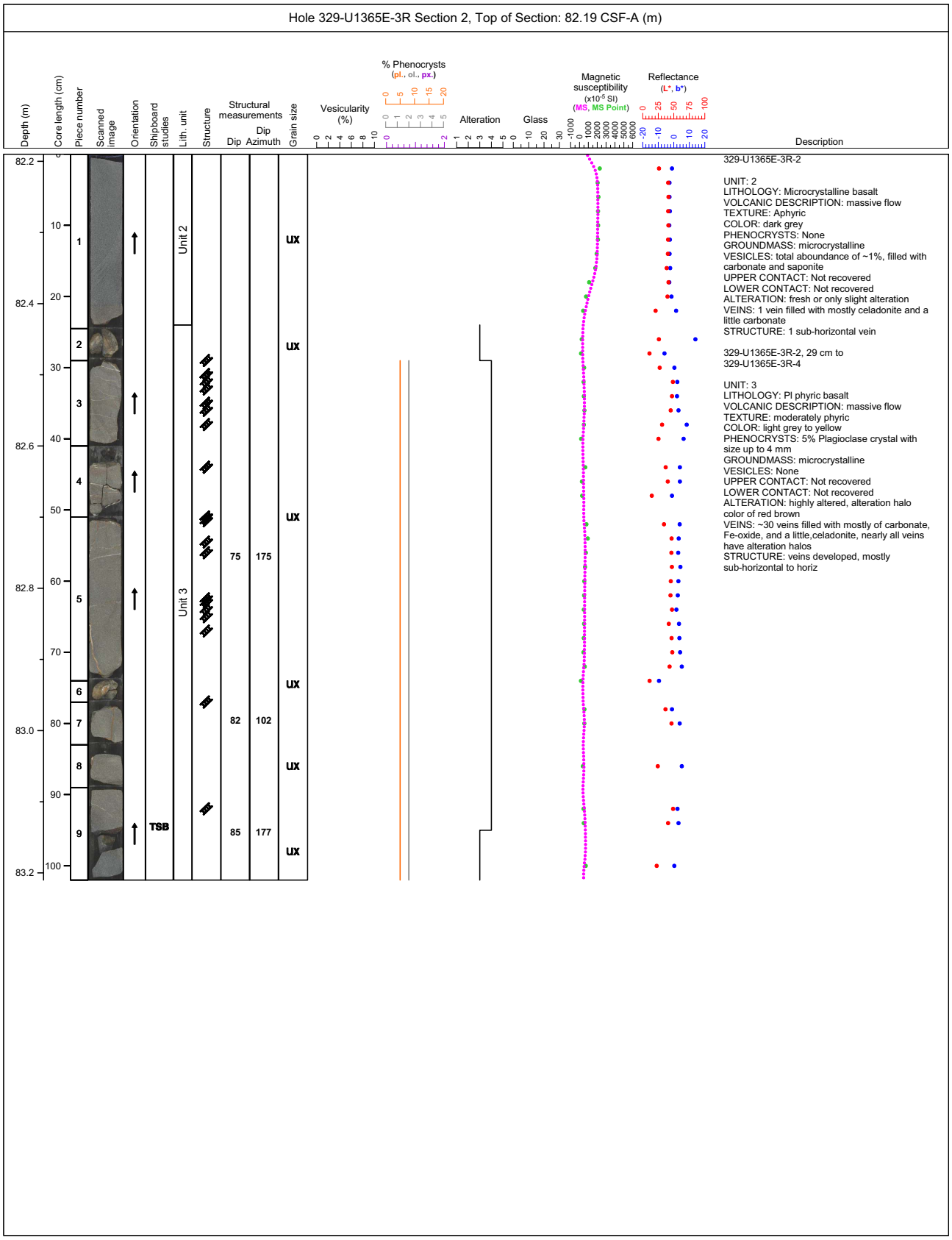
Core Photo


Hole 329-U1365E-2R Section 1, Top of Section: 71.0 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
71.0
71.2
71.4
71.6
71.8
72.0
TSB
TSB
Unit 1
88
185
80
345
89
177
90
0
UX
329-U1365E-2R-1
UNIT: 1
LITHOLOGY: mirocrystalline groundmass, aphyric basalt
VOLCANIC DESCRIPTION: massive flow
TEXTURE: aphyric
COLOR: light grey to light yellow
PHENOCRYSTS: None
GROUNDMASS: microcrystalline
VESICLES: None
UPPER CONTACT: Not recovered
LOWER CONTACT: Cryptocrystalline chilled margin
ALTERATION: Fresh to highly altered basalt, thick alteration halo, a gradual alteration inrease from inner to outer part.
VEINS: 5 veins, the main vein filling minerals are carbonate, celadonite and Fe-oxides
STRUCTURE: sub-horizontal Veins

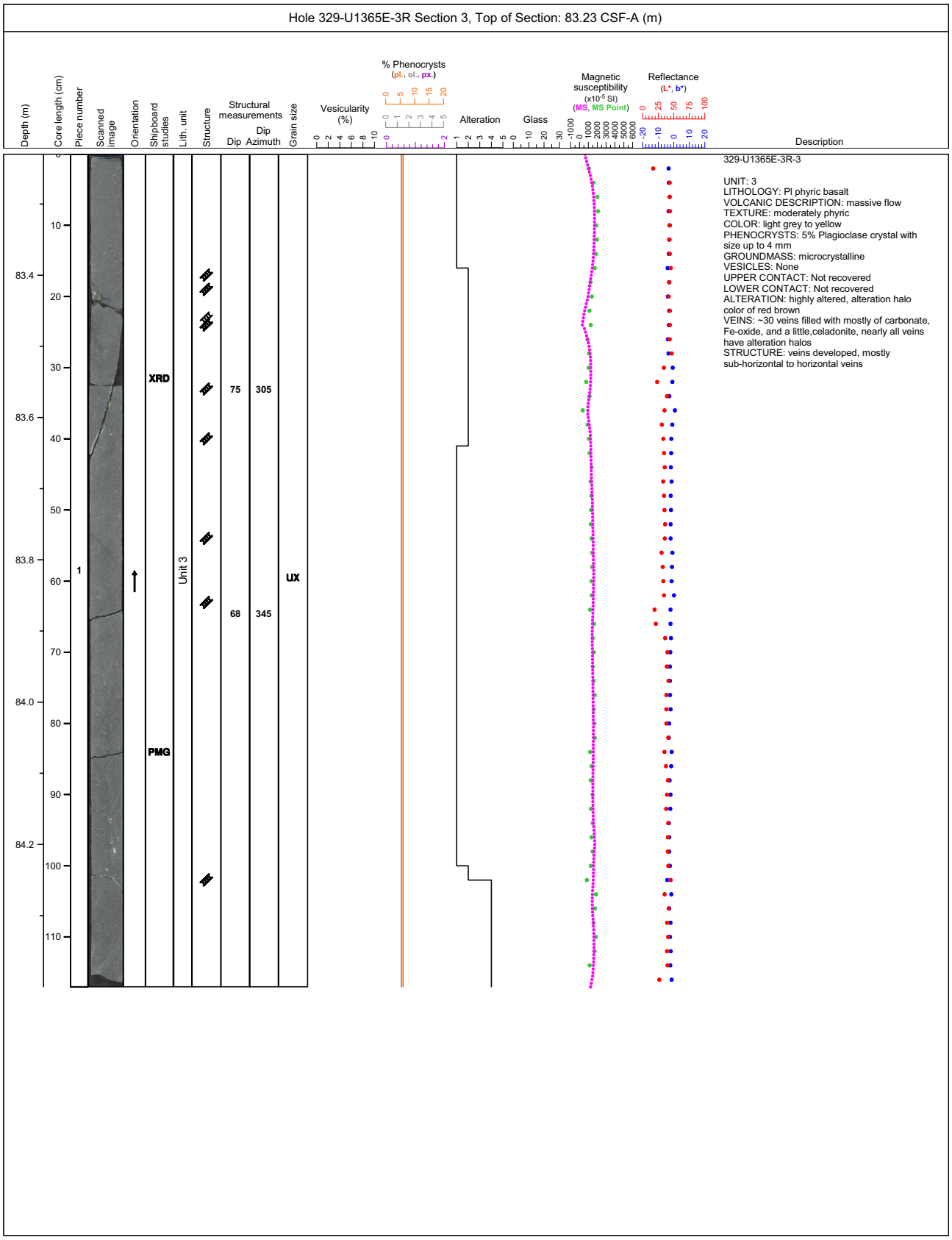
Core Photo


Hole 329-U1365E-3R Section 1, Top of Section: 80.8 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
80.8
81.0
81.2
81.4
81.6
81.8
82.0
Unit 2
UX
80
35
PMG
329-U1365E-3R-1 to
329-U1365E-3R-2, 24 cm
UNIT: 2
LITHOLOGY: Microcrystalline basalt
VOLCANIC DESCRIPTION: massive flow
TEXTURE: Aphyric
COLOR: dark grey
PHENOCRYSTS: None
GROUNDMASS: microcrystalline
VESICLES: total aboundance of ~1%, filled with carbonate and saponite
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: fresh or only slight alteration
VEINS: 1 vein filled with mostly celadonite and a little carbonate
STRUCTURE: 1 sub-horizontal vein

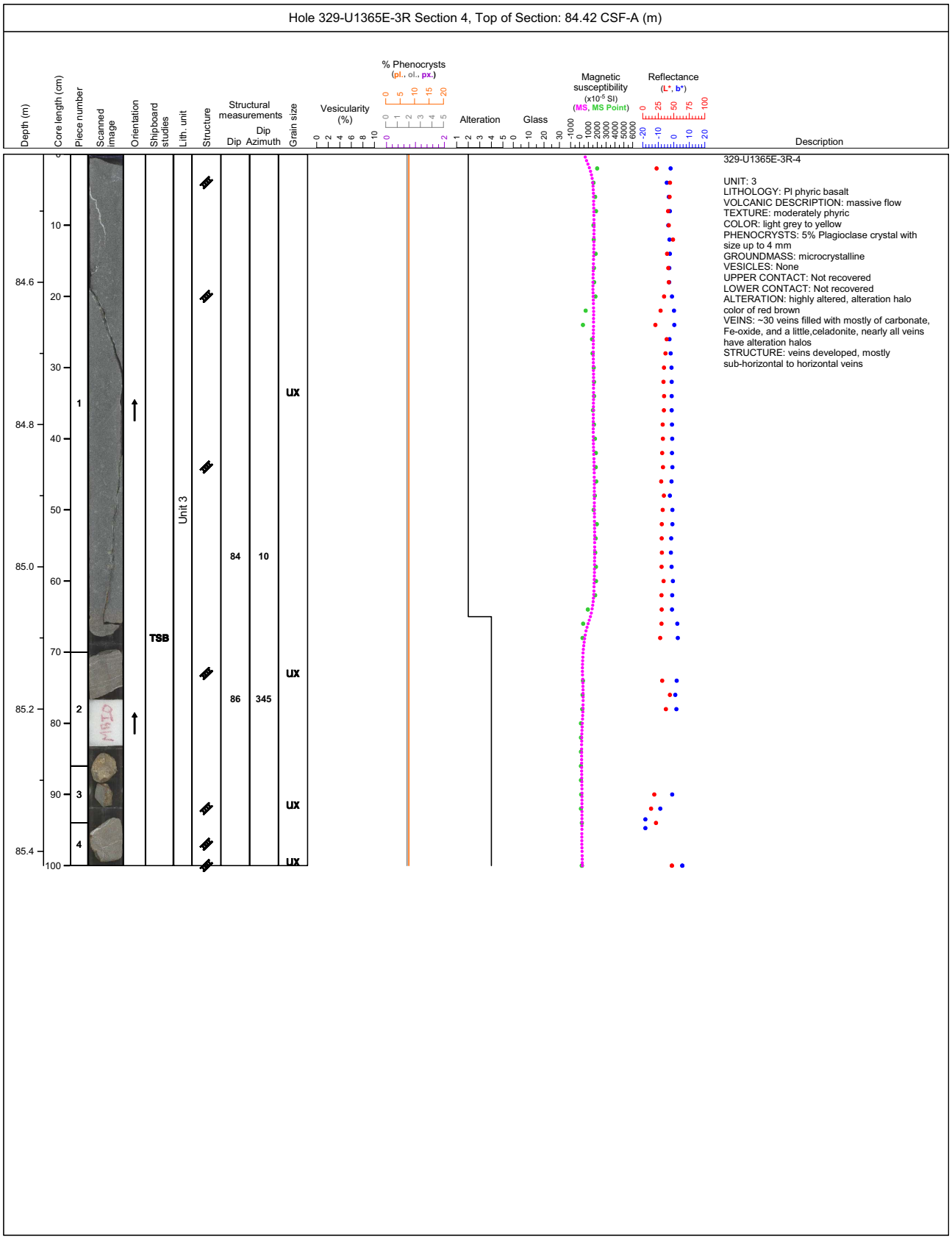
Core Photo


Hole 329-U1365E-3R Section 2, Top of Section: 82.19 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
Unit 2
Unit 3
TSB
UX
75 175
82 102
85 177
329-U1365E-3R-2
UNIT: 2
LITHOLOGY: Microcrystalline basalt
VOLCANIC DESCRIPTION: massive flow
TEXTURE: Aphyric
COLOR: dark grey
PHENOCRYSTS: None
GROUNDMASS: microcrystalline
VESICLES: total aboundance of ~1%, filled with carbonate and saponite
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: fresh or only slight alteration
VEINS: 1 vein filled with mostly celadonite and a little carbonate
STRUCTURE: 1 sub-horizontal vein
329-U1365E-3R-2, 29 cm to 329-U1365E-3R-4
UNIT: 3
LITHOLOGY: Pl phyric basalt
VOLCANIC DESCRIPTION: massive flow
TEXTURE: moderately phyric
COLOR: light grey to yellow
PHENOCRYSTS: 5% Plagioclase crystal with size up to 4 mm
GROUNDMASS: microcrystalline
VESICLES: None
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: highly altered, alteration halo color of red brown
VEINS: ~30 veins filled with mostly of carbonate, Fe-oxide, and a little,celadonite, nearly all veins have alteration halos
STRUCTURE: veins developed, mostly sub-horizontal to horiz

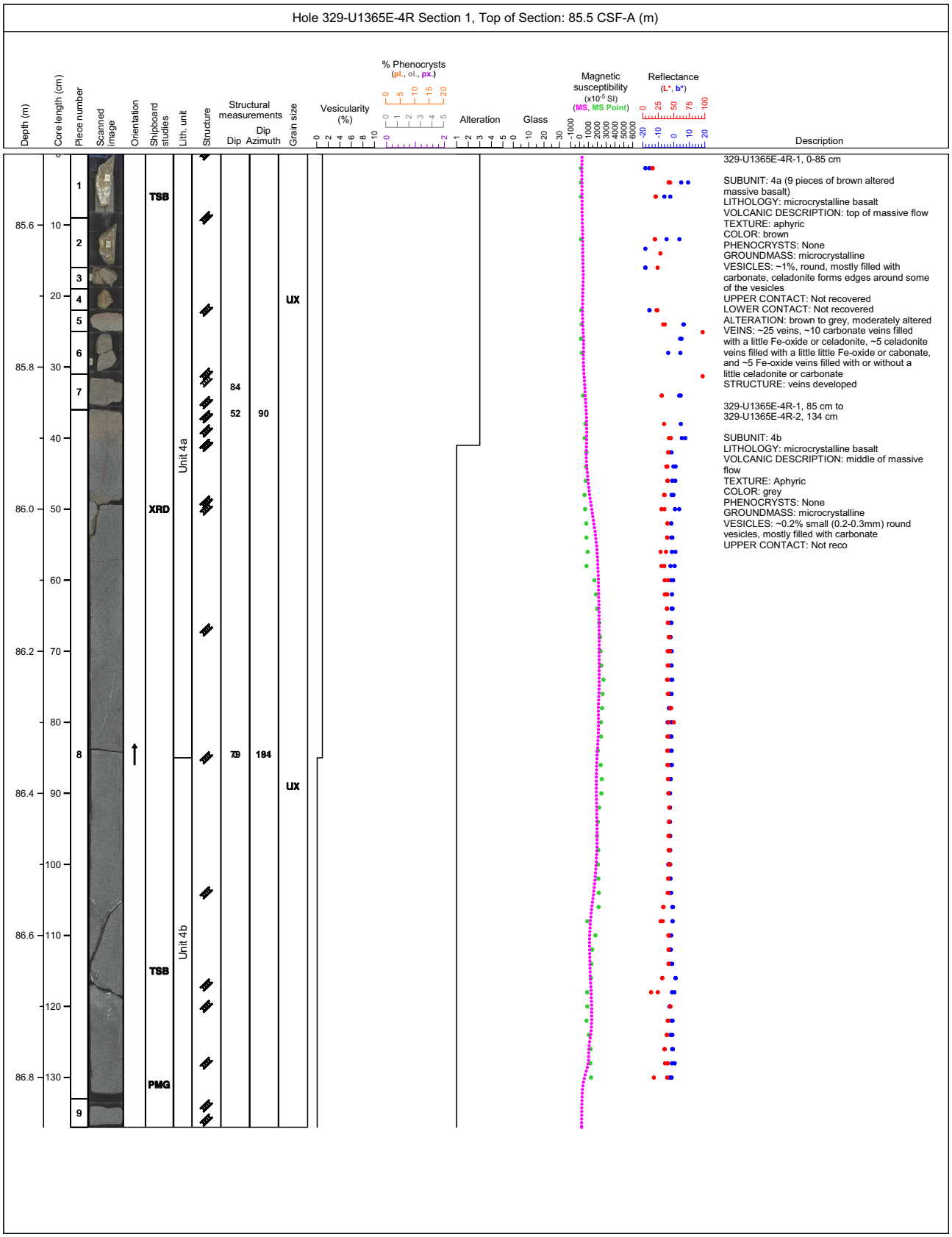
Core Photo


Hole 329-U1365E-3R Section 3, Top of Section: 83.23 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
83.4
83.6
83.8
84.0
84.2
XRD
PMG
Unit 3
1
75
305
68
345
UX
329-U1365E-3R-3
UNIT: 3
LITHOLOGY: Pl phyric basalt
VOLCANIC DESCRIPTION: massive flow
TEXTURE: moderately phyric
COLOR: light grey to yellow
PHENOCRYSTS: 5% Plagioclase crystal with size up to 4 mm
GROUNDMASS: microcrystalline
VESICLES: None
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: highly altered, alteration halo color of red brown
VEINS: ~30 veins filled with mostly of carbonate, Fe-oxide, and a little,celadonite, nearly all veins have alteration halos
STRUCTURE: veins developed, mostly sub-horizontal to horizontal veins

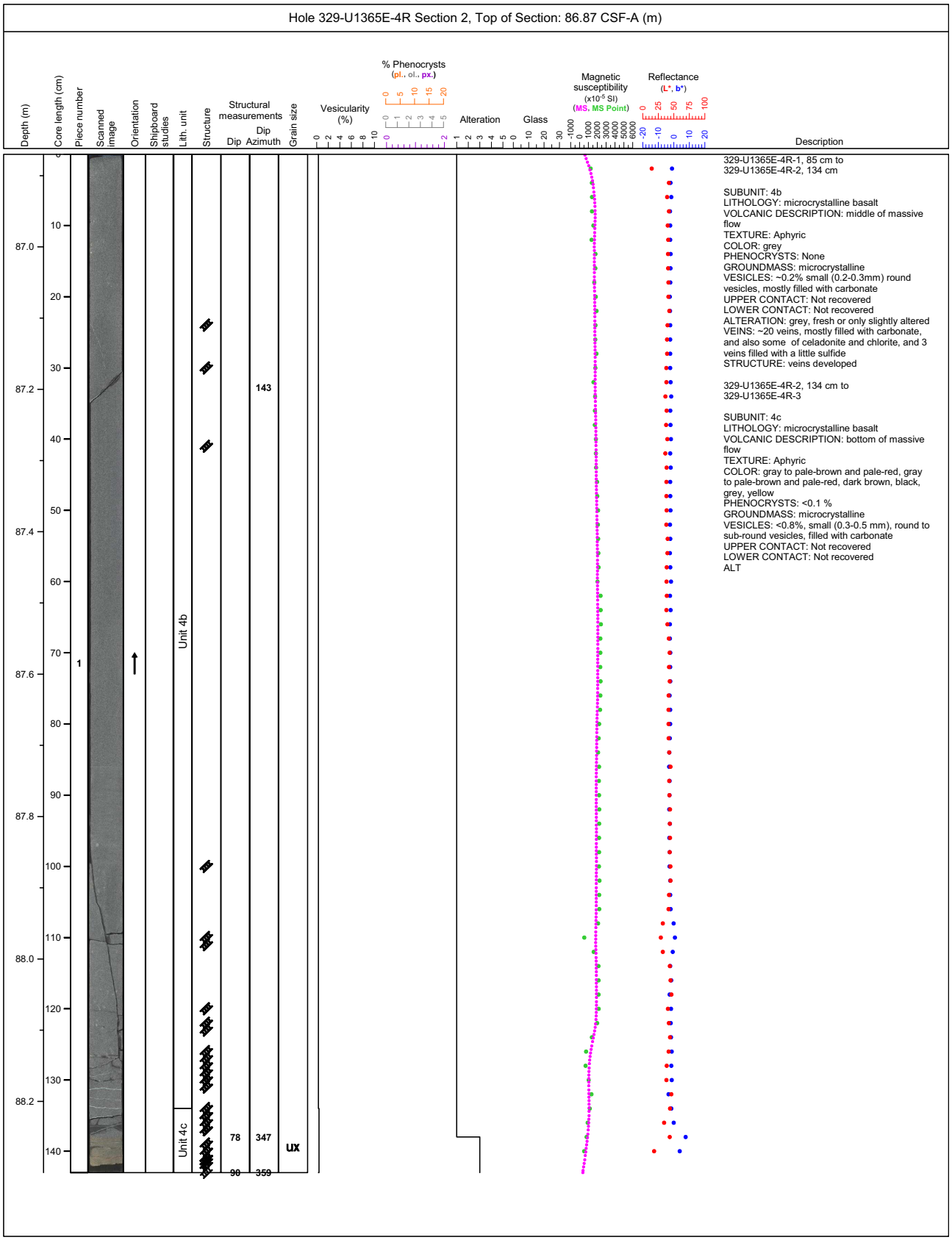
Core Photo


Hole 329-U1365E-3R Section 4, Top of Section: 84.42 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
84.6
84.8
85.0
85.2
85.4
Unit 3
TSB
UX
84
10
86
345
329-U1365E-3R-4
UNIT: 3
LITHOLOGY: Pl phyric basalt
VOLCANIC DESCRIPTION: massive flow
TEXTURE: moderately phyric
COLOR: light grey to yellow
PHENOCRYSTS: 5% Plagioclase crystal with size up to 4 mm
GROUNDMASS: microcrystalline
VESICLES: None
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: highly altered, alteration halo color of red brown
VEINS: ~30 veins filled with mostly of carbonate, Fe-oxide, and a little,celadonite, nearly all veins have alteration halos
STRUCTURE: veins developed, mostly sub-horizontal to horizontal veins

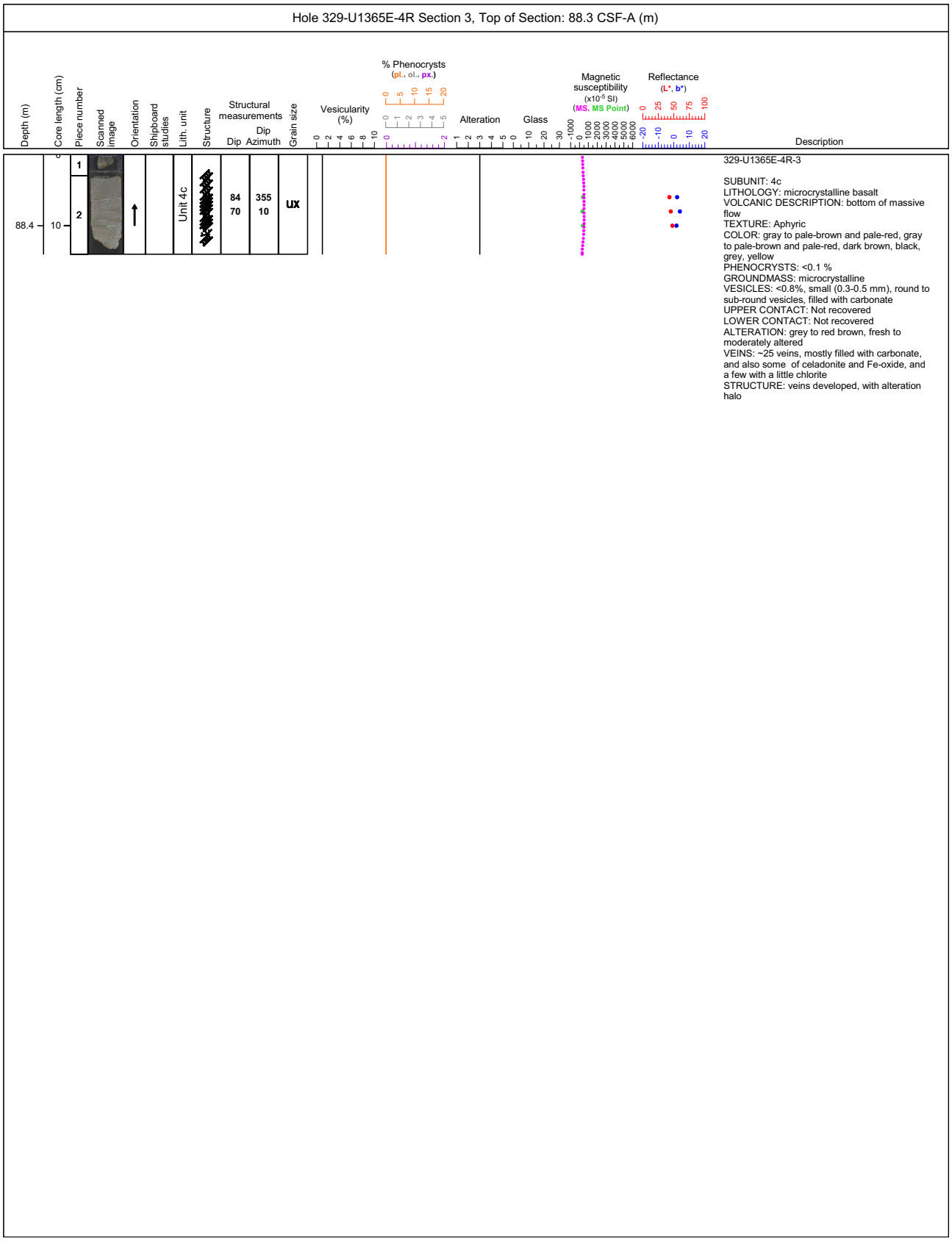
Core Photo


Hole 329-U1365E-4R Section 1, Top of Section: 85.5 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
TSB
XRD
TSB
PMG
Unit 4a
Unit 4b
UX
UX
84
52
90
79
184
329-U1365E-4R-1, 0-85 cm
SUBUNIT: 4a (9 pieces of brown altered massive basalt)
LITHOLOGY: microcrystalline basalt
VOLCANIC DESCRIPTION: top of massive flow
TEXTURE: aphyric
COLOR: brown
PHENOCRYSTS: None
GROUNDMASS: microcrystalline
VESICLES: ~1%, round, mostly filled with carbonate, celadonite forms edges around some of the vesicles
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: brown to grey, moderately altered
VEINS: ~25 veins, ~10 carbonate veins filled with a little Fe-oxide or celadonite, ~5 celadonite veins filled with a little little Fe-oxide or cabonate, and ~5 Fe-oxide veins filled with or without a little celadonite or carbonate
STRUCTURE: veins developed
329-U1365E-4R-1, 85 cm to
329-U1365E-4R-2, 134 cm
SUBUNIT: 4b
LITHOLOGY: microcrystalline basalt
VOLCANIC DESCRIPTION: middle of massive flow
TEXTURE: Aphyric
COLOR: grey
PHENOCRYSTS: None
GROUNDMASS: microcrystalline
VESICLES: ~0.2% small (0.2-0.3mm) round vesicles, mostly filled with carbonate
UPPER CONTACT: Not reco

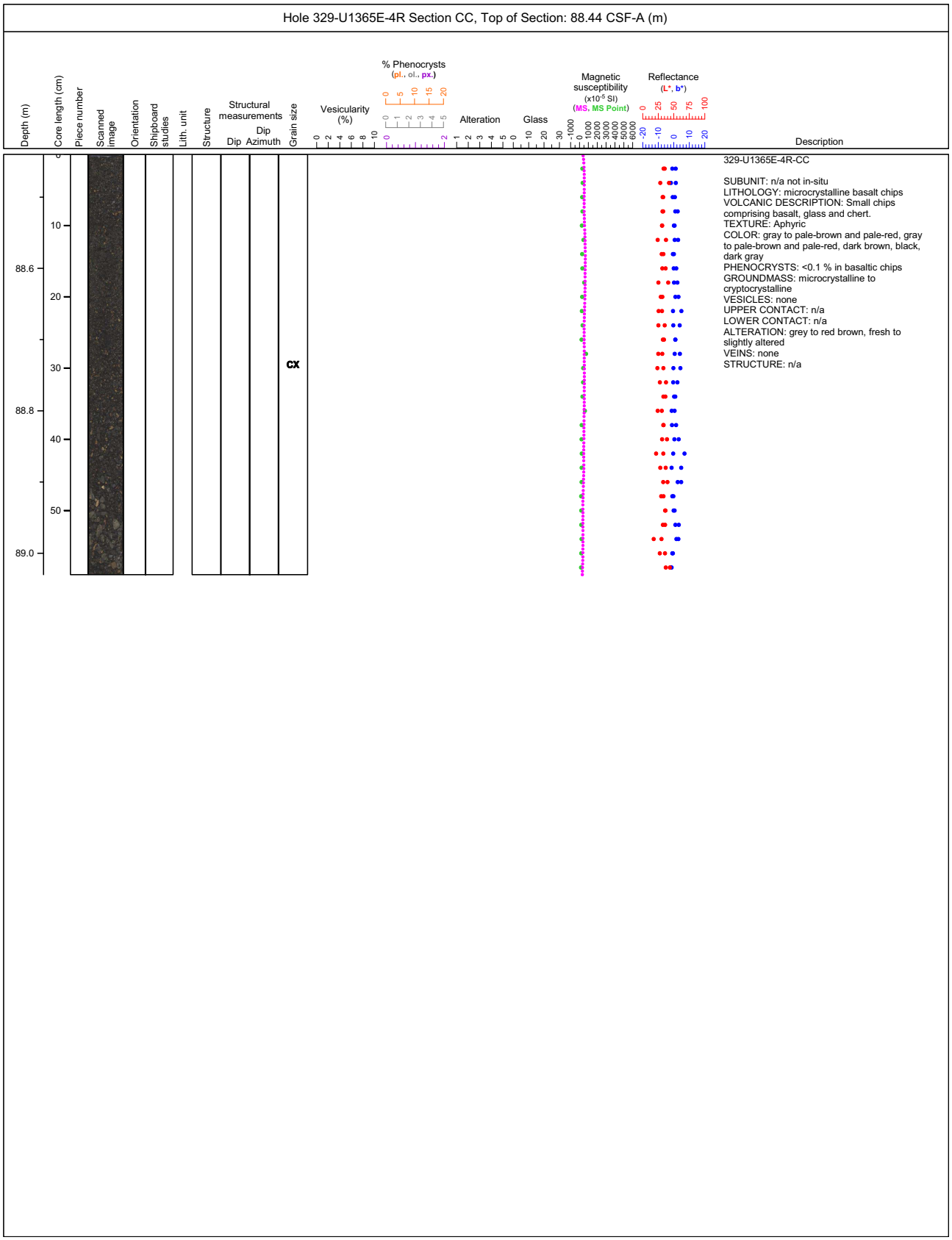
Core Photo


Hole 329-U1365E-4R Section 2, Top of Section: 86.87 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
87.0
87.2
87.4
87.6
87.8
88.0
88.2
Unit 4b
Unit 4c
143
78
90
347
359
UX
329-U1365E-4R-1, 85 cm to
329-U1365E-4R-2, 134 cm
SUBUNIT: 4b
LITHOLOGY: microcrystalline basalt
VOLCANIC DESCRIPTION: middle of massive flow
TEXTURE: Aphyric
COLOR: grey
PHENOCRYSTS: None
GROUNDMASS: microcrystalline
VESICLES: ~0.2% small (0.2-0.3mm) round vesicles, mostly filled with carbonate
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: grey, fresh or only slightly altered
VEINS: ~20 veins, mostly filled with carbonate, and also some of celadonite and chlorite, and 3 veins filled with a little sulfide
STRUCTURE: veins developed
329-U1365E-4R-2, 134 cm to
329-U1365E-4R-3
SUBUNIT: 4c
LITHOLOGY: microcrystalline basalt
VOLCANIC DESCRIPTION: bottom of massive flow
TEXTURE: Aphyric
COLOR: gray to pale-brown and pale-red, gray to pale-brown and pale-red, dark brown, black, grey, yellow
PHENOCRYSTS: <0.1 %
GROUNDMASS: microcrystalline
VESICLES: <0.8%, small (0.3-0.5 mm), round to sub-round vesicles, filled with carbonate
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALT

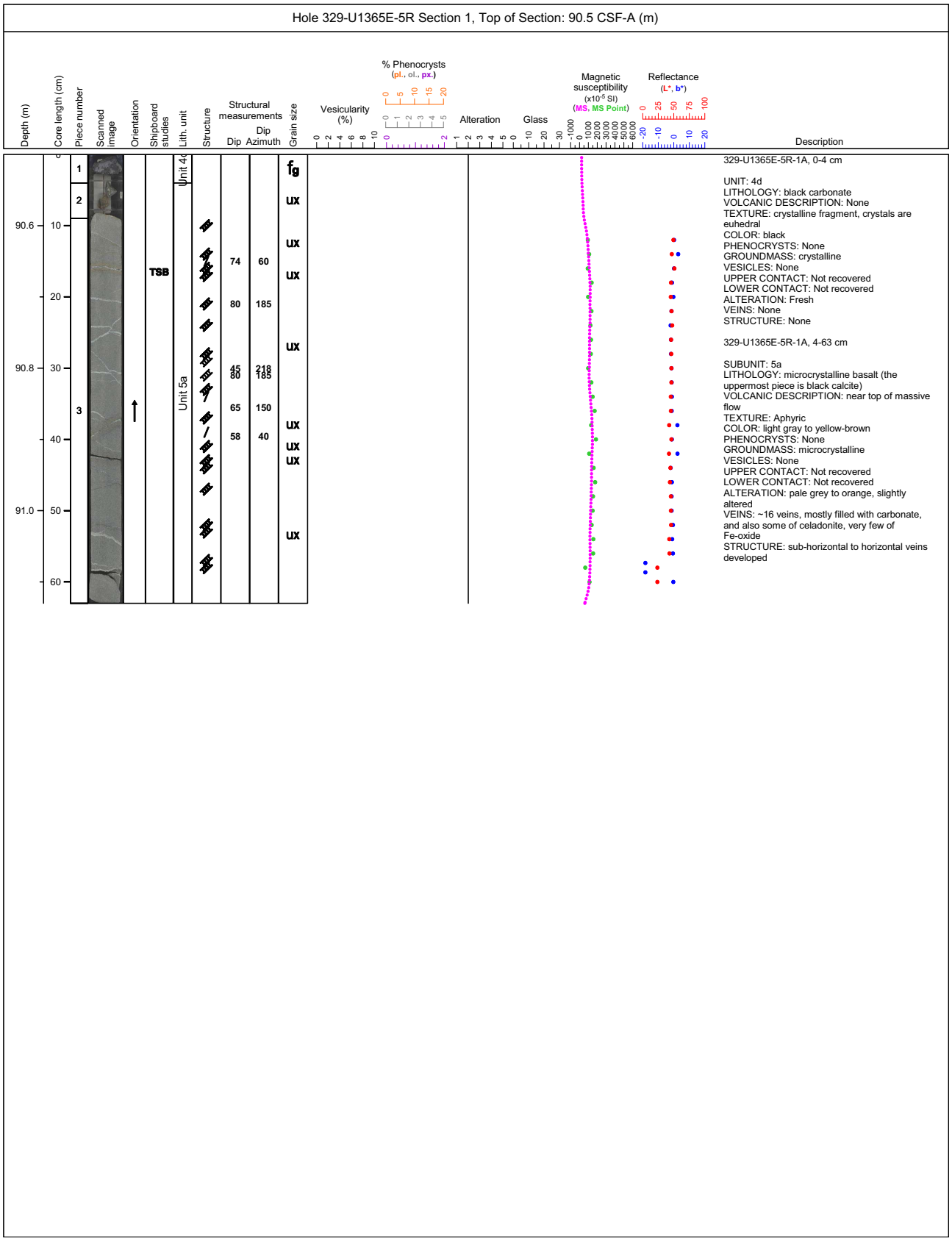
Core Photo


Hole 329-U1365E-4R Section 3, Top of Section: 88.3 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
88.4
10
1
2
Unit 4c
84
70
355
10
UX
329-U1365E-4R-3
SUBUNIT: 4c
LITHOLOGY: microcrystalline basalt
VOLCANIC DESCRIPTION: bottom of massive flow
TEXTURE: Aphyric
COLOR: gray to pale-brown and pale-red, gray to pale-brown and pale-red, dark brown, black, grey, yellow
PHENOCRYSTS: <0.1 %
GROUNDMASS: microcrystalline
VESICLES: <0.8%, small (0.3-0.5 mm), round to sub-round vesicles, filled with carbonate
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: grey to red brown, fresh to moderately altered
VEINS: ~25 veins, mostly filled with carbonate, and also some of celadonite and Fe-oxide, and a few with a little chlorite
STRUCTURE: veins developed, with alteration halo

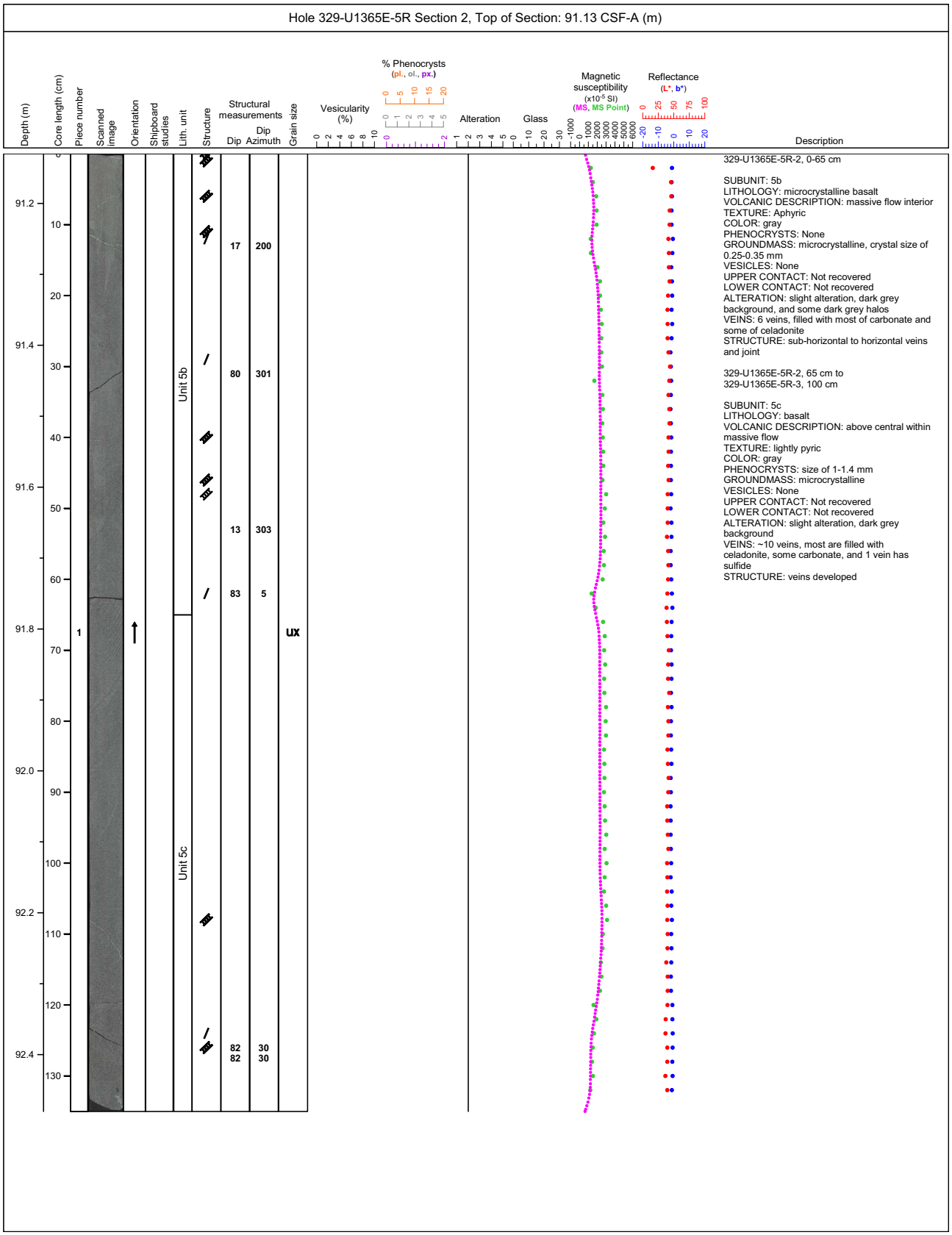
Core Photo


Hole 329-U1365E-4R Section CC, Top of Section: 88.44 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
88.6
88.8
89.0
cx
329-U1365E-4R-CC
SUBUNIT: n/a not in-situ
LITHOLOGY: microcrystalline basalt chips
VOLCANIC DESCRIPTION: Small chips comprising basalt, glass and chert.
TEXTURE: Aphyric
COLOR: gray to pale-brown and pale-red, gray to pale-brown and pale-red, dark brown, black, dark gray
PHENOCRYSTS: <0.1 % in basaltic chips
GROUNDMASS: microcrystalline to cryptocrystalline
VESICLES: none
UPPER CONTACT: n/a
LOWER CONTACT: n/a
ALTERATION: grey to red brown, fresh to slightly altered
VEINS: none
STRUCTURE: n/a

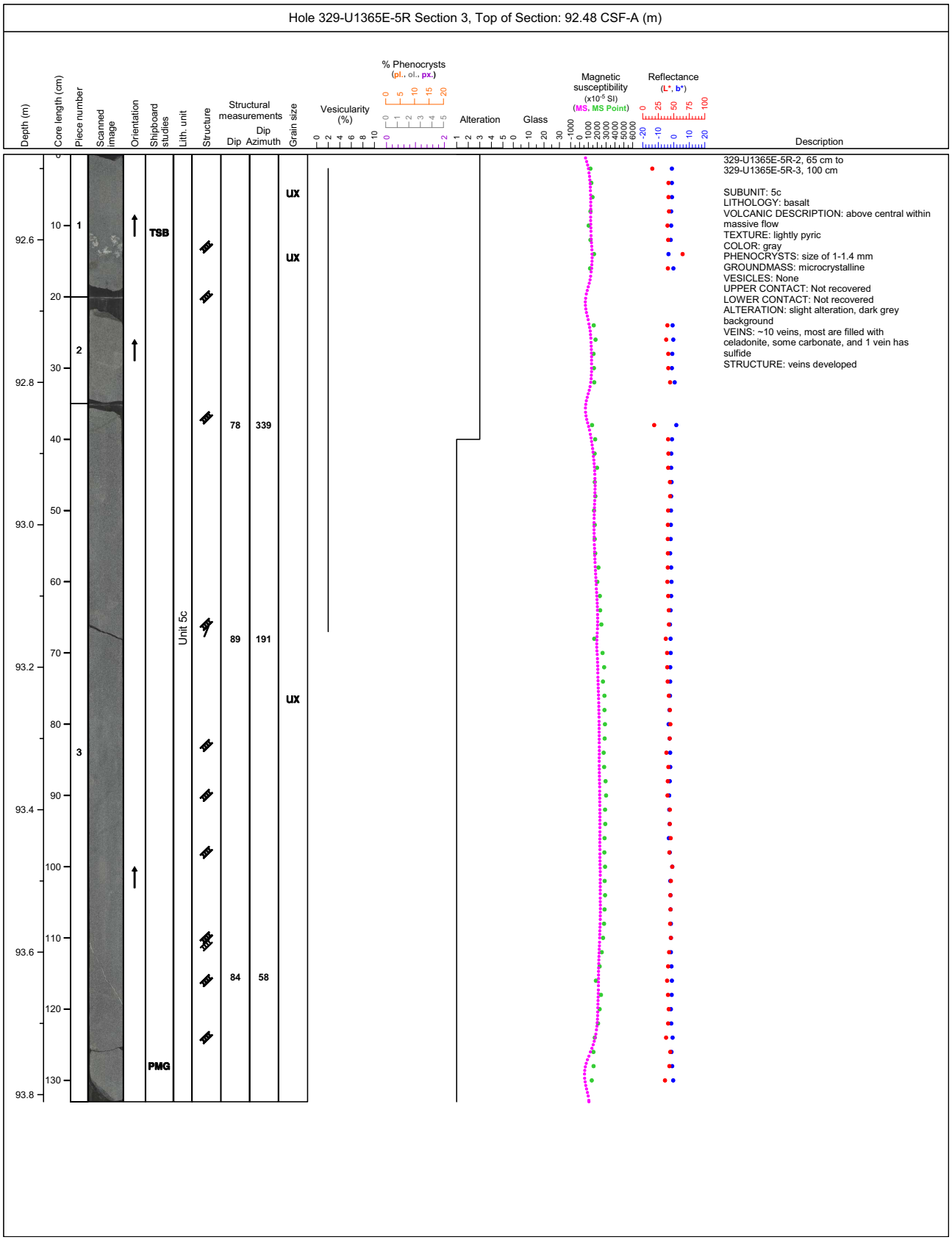
Core Photo


Hole 329-U1365E-5R Section 1, Top of Section: 90.5 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
Unit 4d
Unit 5a
TSB
fg
UX
329-U1365E-5R-1A, 0-4 cm
UNIT: 4d
LITHOLOGY: black carbonate
VOLCANIC DESCRIPTION: None
TEXTURE: crystalline fragment, crystals are euhedral
COLOR: black
PHENOCRYSTS: None
GROUNDMASS: crystalline
VESICLES: None
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: Fresh
VEINS: None
STRUCTURE: None
329-U1365E-5R-1A, 4-63 cm
SUBUNIT: 5a
LITHOLOGY: microcrystalline basalt (the uppermost piece is black calcite)
VOLCANIC DESCRIPTION: near top of massive flow
TEXTURE: Aphyric
COLOR: light gray to yellow-brown
PHENOCRYSTS: None
GROUNDMASS: microcrystalline
VESICLES: None
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: pale grey to orange, slightly altered
VEINS: ~16 veins, mostly filled with carbonate, and also some of celadonite, very few of Fe-oxide
STRUCTURE: sub-horizontal to horizontal veins developed

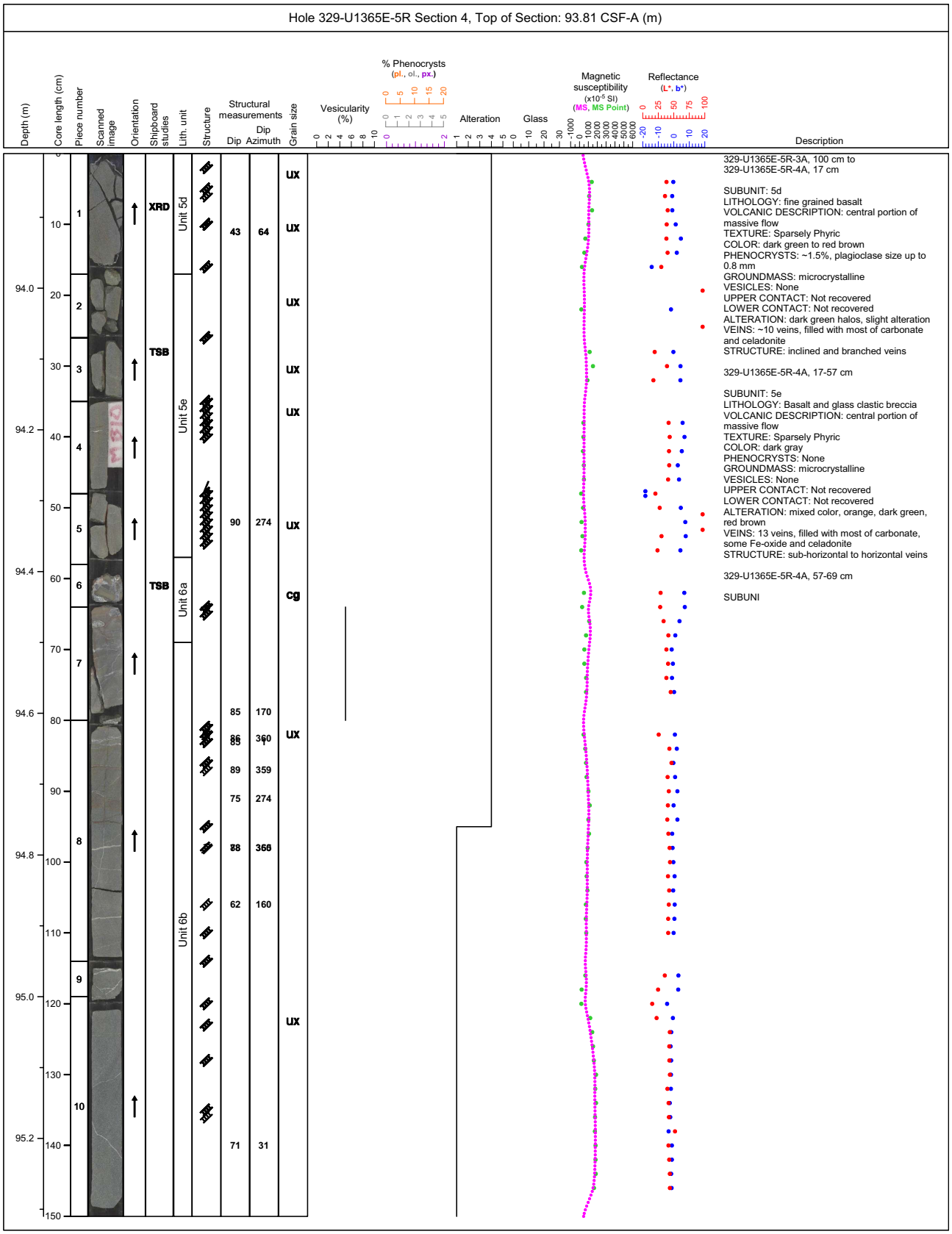
Core Photo


Hole 329-U1365E-5R Section 2, Top of Section: 91.13 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
Unit 5b
Unit 5c
17 200
80 301
13 303
83 5
82 30
82 30
UX
329-U1365E-5R-2, 0-65 cm
SUBUNIT: 5b
LITHOLOGY: microcrystalline basalt
VOLCANIC DESCRIPTION: massive flow interior
TEXTURE: Aphyric
COLOR: gray
PHENOCRYSTS: None
GROUNDMASS: microcrystalline, crystal size of 0.25-0.35 mm
VESICLES: None
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: slight alteration, dark grey background, and some dark grey halos
VEINS: 6 veins, filled with most of carbonate and some of celadonite
STRUCTURE: sub-horizontal to horizontal veins and joint
329-U1365E-5R-2, 65 cm to 329-U1365E-5R-3, 100 cm
SUBUNIT: 5c
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: above central within massive flow
TEXTURE: lightly pyric
COLOR: gray
PHENOCRYSTS: size of 1-1.4 mm
GROUNDMASS: microcrystalline
VESICLES: None
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: slight alteration, dark grey background
VEINS: ~10 veins, most are filled with celadonite, some carbonate, and 1 vein has sulfide
STRUCTURE: veins developed

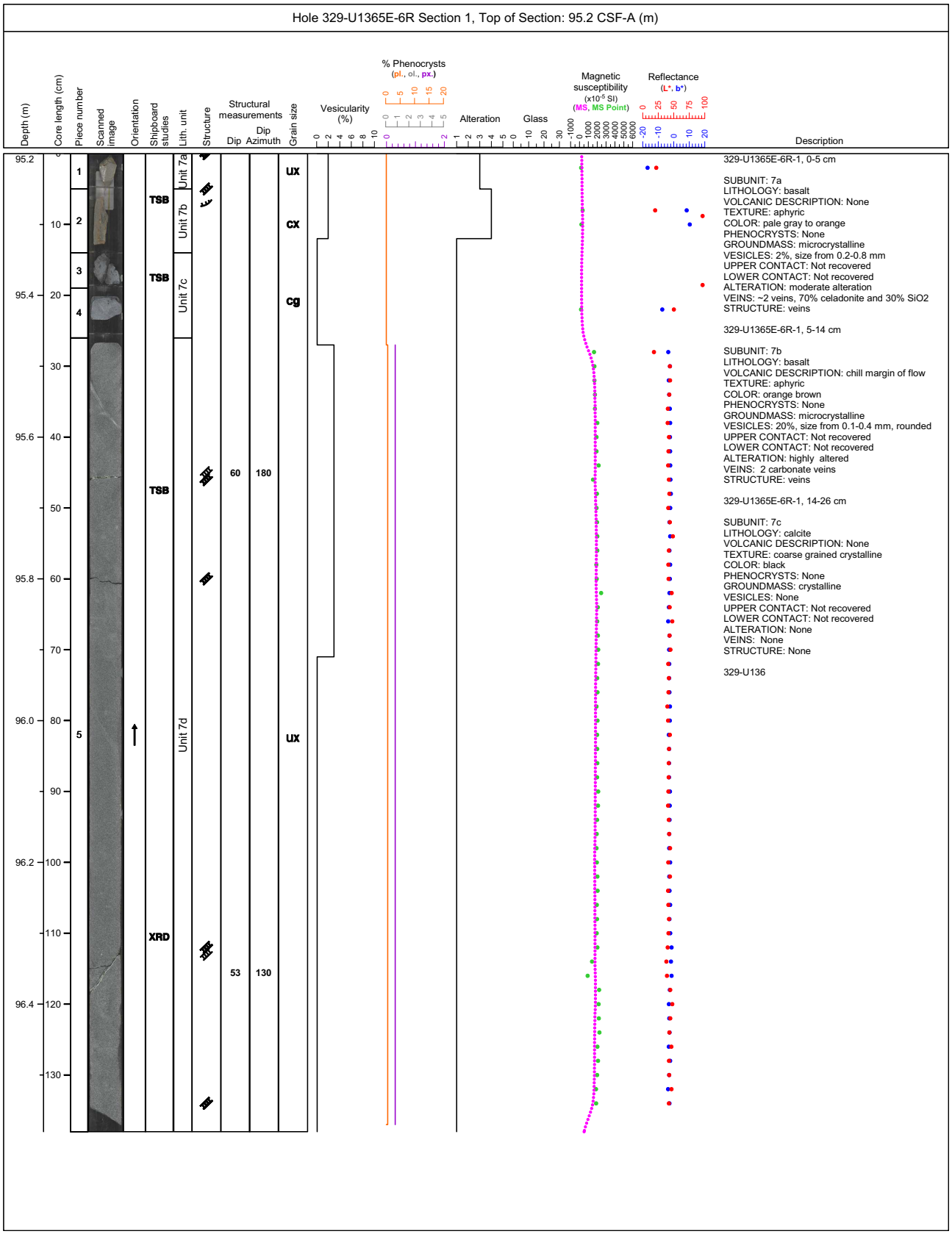
Core Photo


Hole 329-U1365E-5R Section 3, Top of Section: 92.48 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
TSB
PMG
Unit 5c
UX
78 339
89 191
84 58
329-U1365E-5R-2, 65 cm to
329-U1365E-5R-3, 100 cm
SUBUNIT: 5c
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: above central within massive flow
TEXTURE: lightly pyric
COLOR: gray
PHENOCRYSTS: size of 1-1.4 mm
GROUNDMASS: microcrystalline
VESICLES: None
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: slight alteration, dark grey background
VEINS: ~10 veins, most are filled with celadonite, some carbonate, and 1 vein has sulfide
STRUCTURE: veins developed

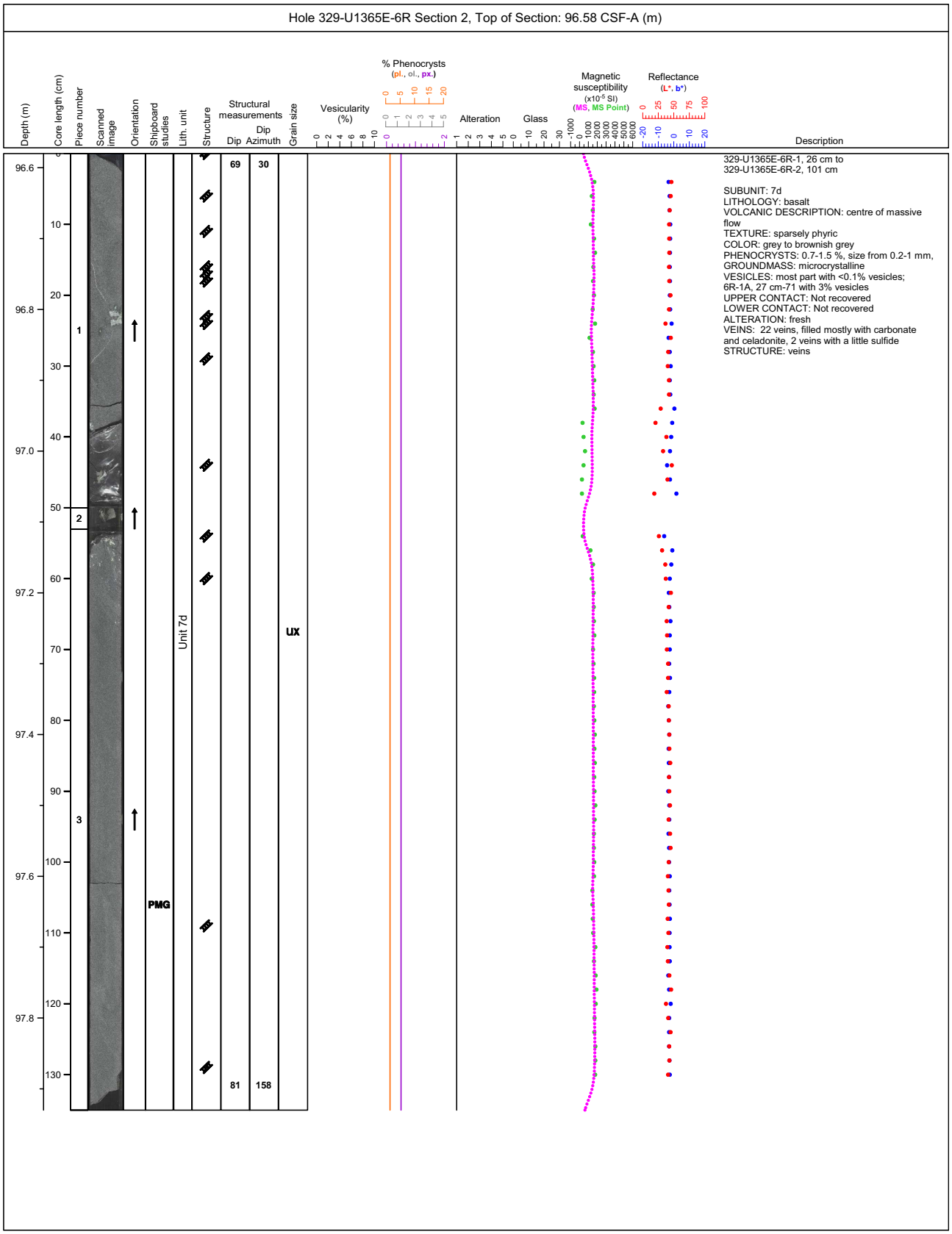
Core Photo


Hole 329-U1365E-5R Section 4, Top of Section: 93.81 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
XRD
TSB
TSB
Unit 5d
Unit 5e
Unit 6a
Unit 6b
UX
UX
UX
UX
cg
UX
UX
329-U1365E-5R-3A, 100 cm to 329-U1365E-5R-4A, 17 cm
SUBUNIT: 5d
LITHOLOGY: fine grained basalt
VOLCANIC DESCRIPTION: central portion of massive flow
TEXTURE: Sparsely Phyric
COLOR: dark green to red brown
PHENOCRYSTS: ~1.5%, plagioclase size up to 0.8 mm
GROUNDMASS: microcrystalline
VESICLES: None
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: dark green halos, slight alteration
VEINS: ~10 veins, filled with most of carbonate and celadonite
STRUCTURE: inclined and branched veins
329-U1365E-5R-4A, 17-57 cm
SUBUNIT: 5e
LITHOLOGY: Basalt and glass clastic breccia
VOLCANIC DESCRIPTION: central portion of massive flow
TEXTURE: Sparsely Phyric
COLOR: dark gray
PHENOCRYSTS: None
GROUNDMASS: microcrystalline
VESICLES: None
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: mixed color, orange, dark green, red brown
VEINS: 13 veins, filled with most of carbonate, some Fe-oxide and celadonite
STRUCTURE: sub-horizontal to horizontal veins
329-U1365E-5R-4A, 57-69 cm
SUBUNI

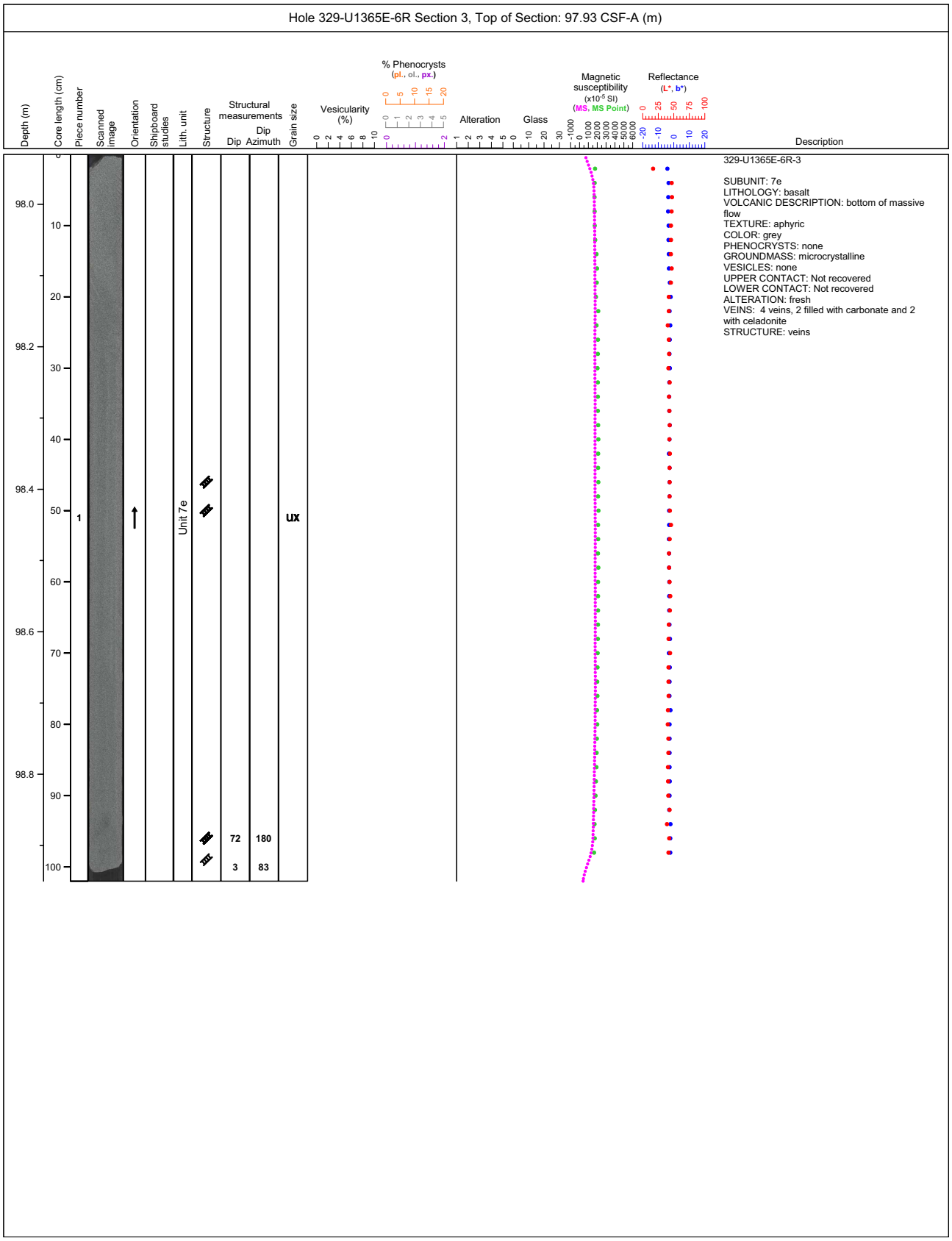
Core Photo


Hole 329-U1365E-6R Section 1, Top of Section: 95.2 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
Unit 7a
Unit 7b
Unit 7c
Unit 7d
TSB
XRD
UX
CX
cg
60
180
53
130
329-U1365E-6R-1, 0-5 cm
SUBUNIT: 7a
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: None
TEXTURE: aphyric
COLOR: pale gray to orange
PHENOCRYSTS: None
GROUNDMASS: microcrystalline
VESICLES: 2%, size from 0.2-0.8 mm
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: moderate alteration
VEINS: ~2 veins, 70% celadonite and 30% SiO2
STRUCTURE: veins
329-U1365E-6R-1, 5-14 cm
SUBUNIT: 7b
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: chill margin of flow
TEXTURE: aphyric
COLOR: orange brown
PHENOCRYSTS: None
GROUNDMASS: microcrystalline
VESICLES: 20%, size from 0.1-0.4 mm, rounded
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: highly altered
VEINS: 2 carbonate veins
STRUCTURE: veins
329-U1365E-6R-1, 14-26 cm
SUBUNIT: 7c
LITHOLOGY: calcite
VOLCANIC DESCRIPTION: None
TEXTURE: coarse grained crystalline
COLOR: black
PHENOCRYSTS: None
GROUNDMASS: crystalline
VESICLES: None
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: None
VEINS: None
STRUCTURE: None
329-U136

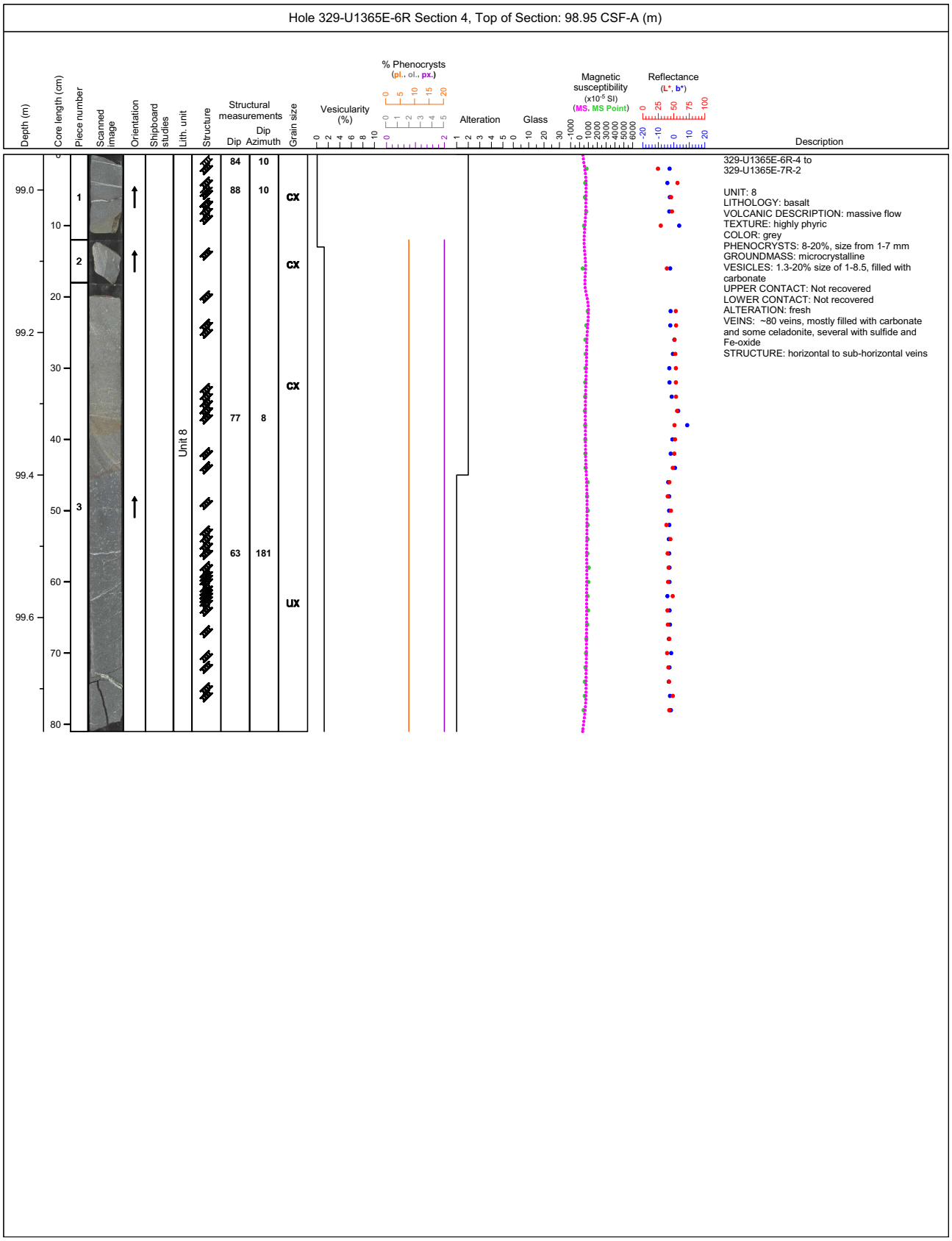
Core Photo


Hole 329-U1365E-6R Section 2, Top of Section: 96.58 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip
Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
96.6
96.8
97.0
97.2
97.4
97.6
97.8
10
20
30
40
50
60
70
80
90
100
110
120
130
1
2
3
Unit 7d
PMG
69
30
81
158
UX
329-U1365E-6R-1, 26 cm to
329-U1365E-6R-2, 101 cm
SUBUNIT: 7d
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: centre of massive flow
TEXTURE: sparsely phyric
COLOR: grey to brownish grey
PHENOCRYSTS: 0.7-1.5 %, size from 0.2-1 mm,
GROUNDMASS: microcrystalline
VESICLES: most part with <0.1% vesicles;
6R-1A, 27 cm-71 with 3% vesicles
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: fresh
VEINS: 22 veins, filled mostly with carbonate and celadonite, 2 veins with a little sulfide
STRUCTURE: veins

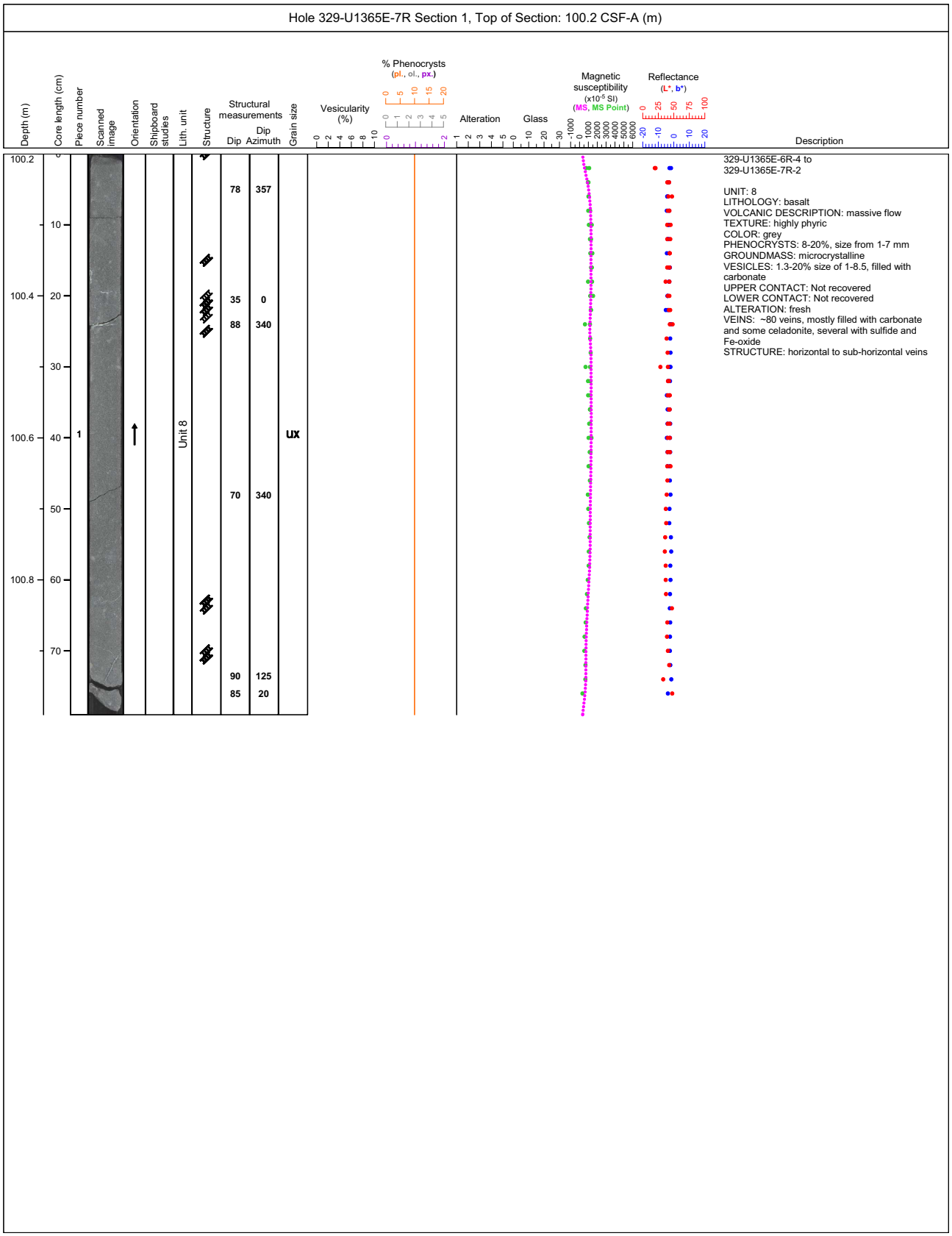
Core Photo


Hole 329-U1365E-6R Section 3, Top of Section: 97.93 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
98.0
98.2
98.4
98.6
98.8
Unit 7e
1
UX
72
3
180
83
329-U1365E-6R-3
SUBUNIT: 7e
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: bottom of massive flow
TEXTURE: aphyric
COLOR: grey
PHENOCRYSTS: none
GROUNDMASS: microcrystalline
VESICLES: none
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: fresh
VEINS: 4 veins, 2 filled with carbonate and 2 with celadonite
STRUCTURE: veins

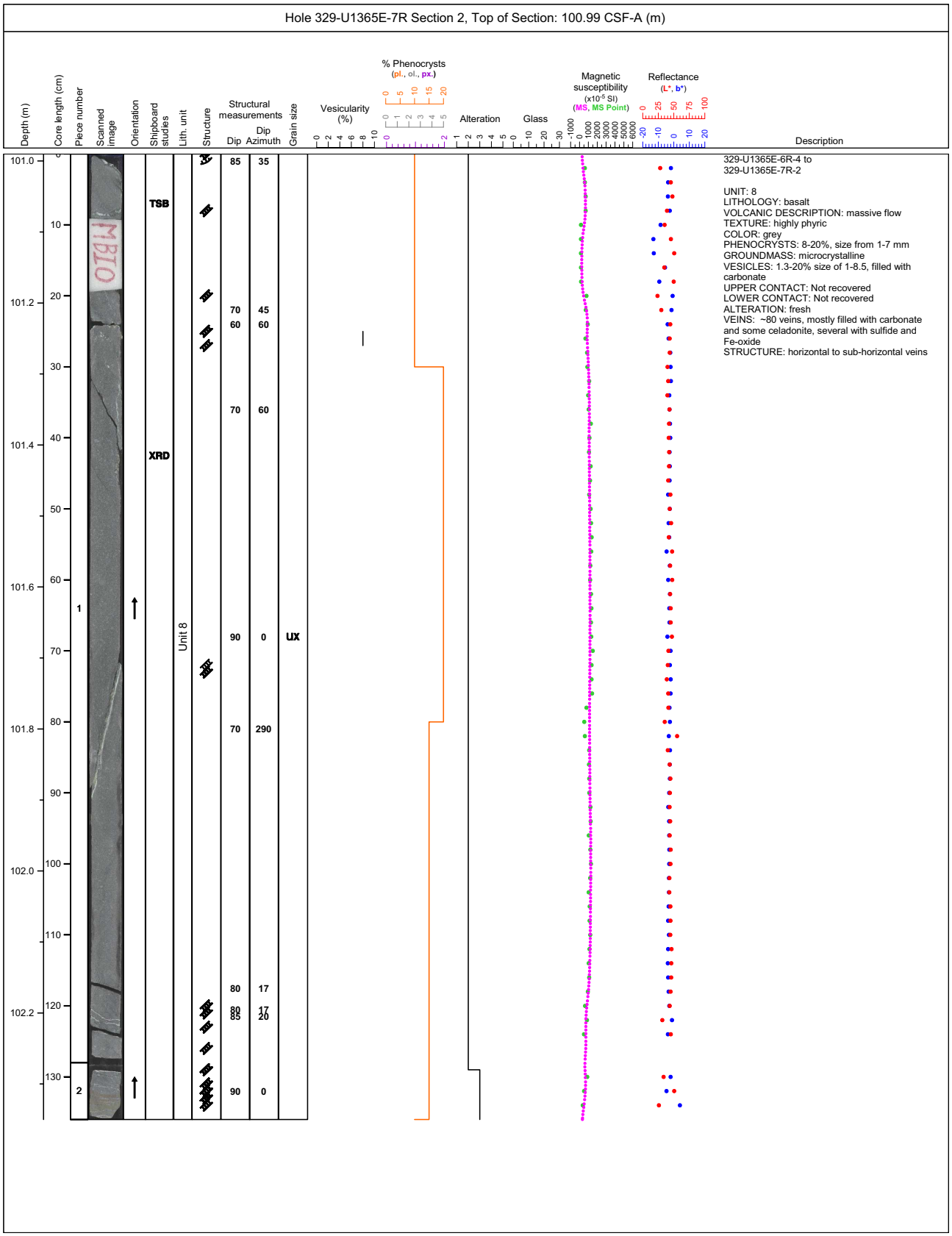
Core Photo


Hole 329-U1365E-6R Section 4, Top of Section: 98.95 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
99.0
99.2
99.4
99.6
Unit 8
84 10
88 10
77 8
63 181
CX
CX
CX
UX
329-U1365E-6R-4 to
329-U1365E-7R-2
UNIT: 8
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: massive flow
TEXTURE: highly phyric
COLOR: grey
PHENOCRYSTS: 8-20%, size from 1-7 mm
GROUNDMASS: microcrystalline
VESICLES: 1.3-20% size of 1-8.5, filled with carbonate
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: fresh
VEINS: ~80 veins, mostly filled with carbonate and some celadonite, several with sulfide and Fe-oxide
STRUCTURE: horizontal to sub-horizontal veins

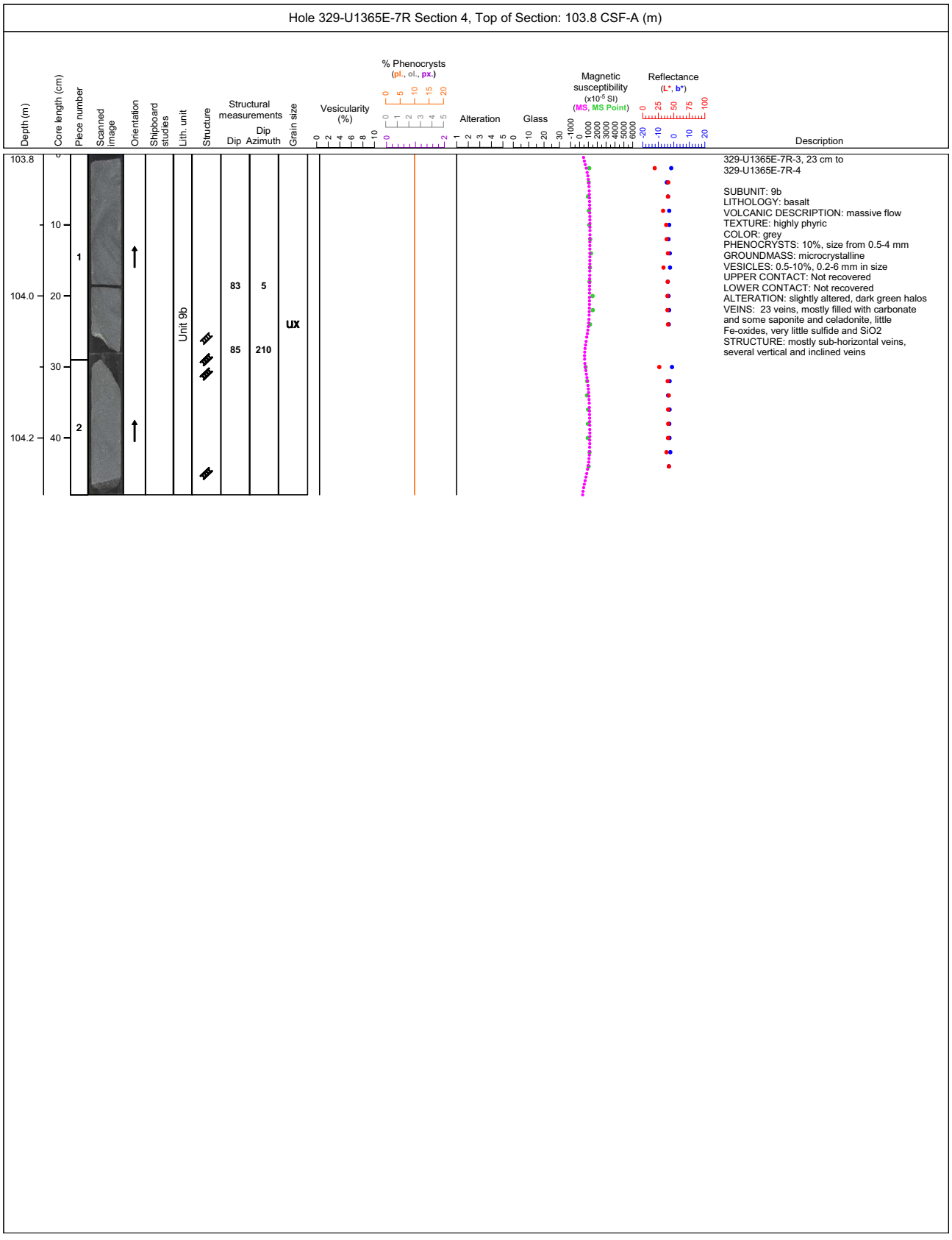
Core Photo


Hole 329-U1365E-7R Section 1, Top of Section: 100.2 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
100.2
100.4
100.6
100.8
Unit 8
UX
78 357
35 0
88 340
70 340
90 125
85 20
329-U1365E-6R-4 to
329-U1365E-7R-2
UNIT: 8
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: massive flow
TEXTURE: highly phyric
COLOR: grey
PHENOCRYSTS: 8-20%, size from 1-7 mm
GROUNDMASS: microcrystalline
VESICLES: 1.3-20% size of 1-8.5, filled with carbonate
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: fresh
VEINS: ~80 veins, mostly filled with carbonate and some celadonite, several with sulfide and Fe-oxide
STRUCTURE: horizontal to sub-horizontal veins

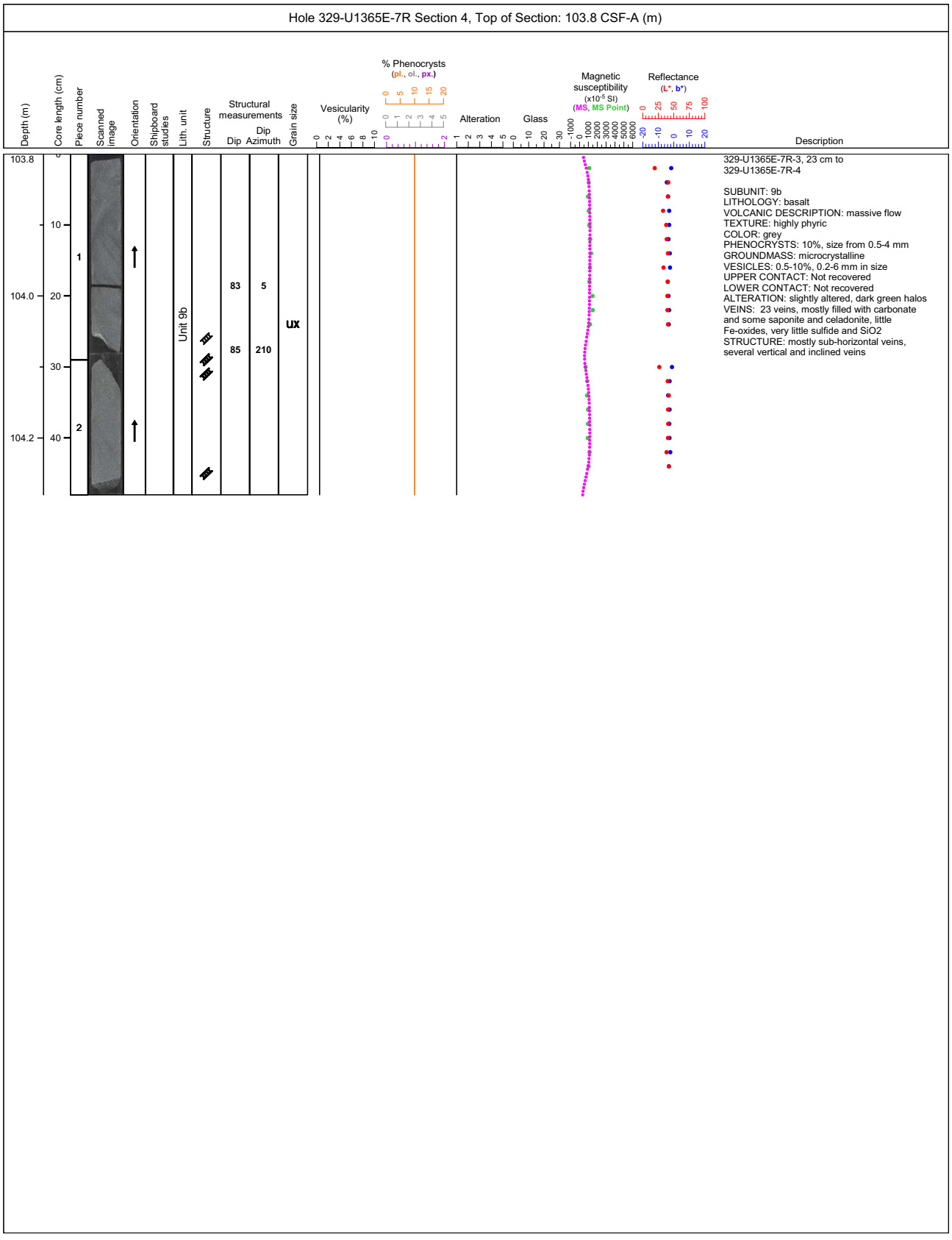
Core Photo


Hole 329-U1365E-7R Section 2, Top of Section: 100.99 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
TSB
XRD
Unit 8
UX
329-U1365E-6R-4 to
329-U1365E-7R-2
UNIT: 8
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: massive flow
TEXTURE: highly phyric
COLOR: grey
PHENOCRYSTS: 8-20%, size from 1-7 mm
GROUNDMASS: microcrystalline
VESICLES: 1.3-20% size of 1-8.5, filled with carbonate
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: fresh
VEINS: ~80 veins, mostly filled with carbonate and some celadonite, several with sulfide and Fe-oxide
STRUCTURE: horizontal to sub-horizontal veins

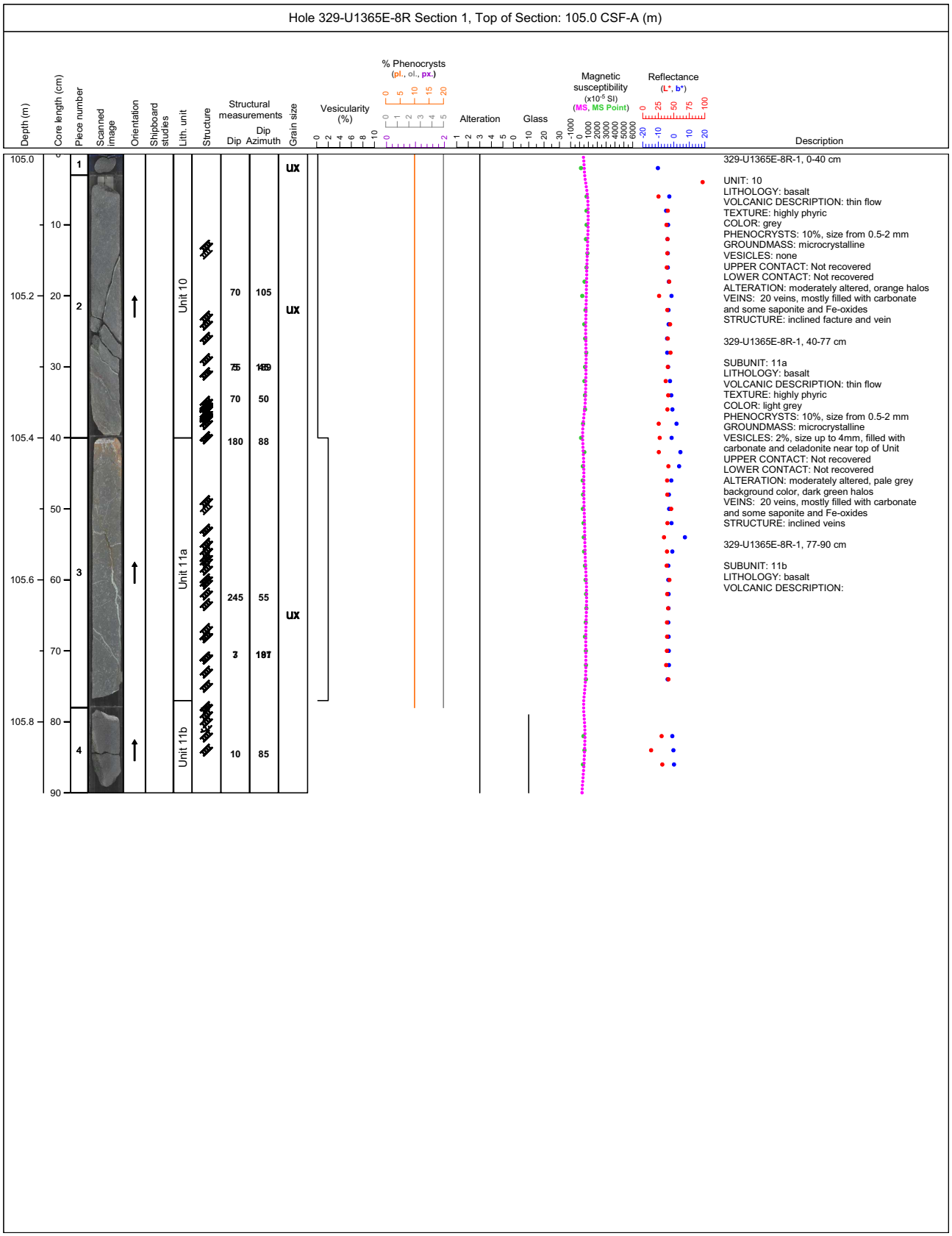
Core Photo


Hole 329-U1365E-7R Section 4, Top of Section: 103.8 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
103.8
104.0
104.2
Unit 9b
83
85
5
210
UX
329-U1365E-7R-3, 23 cm to
329-U1365E-7R-4
SUBUNIT: 9b
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: massive flow
TEXTURE: highly phyric
COLOR: grey
PHENOCRYSTS: 10%, size from 0.5-4 mm
GROUNDMASS: microcrystalline
VESICLES: 0.5-10%, 0.2-6 mm in size
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: slightly altered, dark green halos
VEINS: 23 veins, mostly filled with carbonate and some saponite and celadonite, little Fe-oxides, very little sulfide and SiO2
STRUCTURE: mostly sub-horizontal veins, several vertical and inclined veins

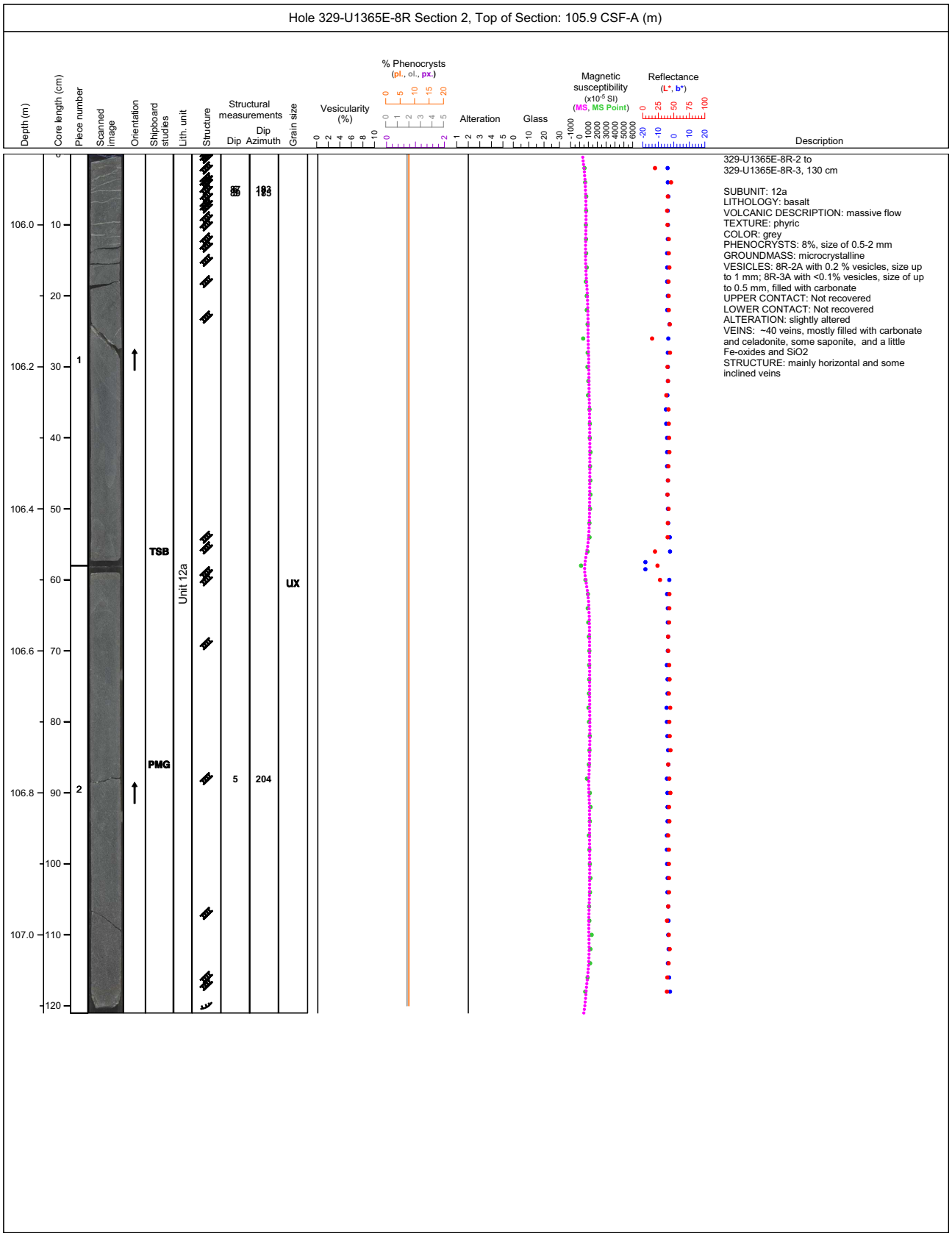
Core Photo


Hole 329-U1365E-7R Section 4, Top of Section: 103.8 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
103.8
104.0
104.2
Unit 9b
83
85
5
210
UX
329-U1365E-7R-3, 23 cm to
329-U1365E-7R-4
SUBUNIT: 9b
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: massive flow
TEXTURE: highly phyric
COLOR: grey
PHENOCRYSTS: 10%, size from 0.5-4 mm
GROUNDMASS: microcrystalline
VESICLES: 0.5-10%, 0.2-6 mm in size
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: slightly altered, dark green halos
VEINS: 23 veins, mostly filled with carbonate and some saponite and celadonite, little Fe-oxides, very little sulfide and SiO2
STRUCTURE: mostly sub-horizontal veins, several vertical and inclined veins

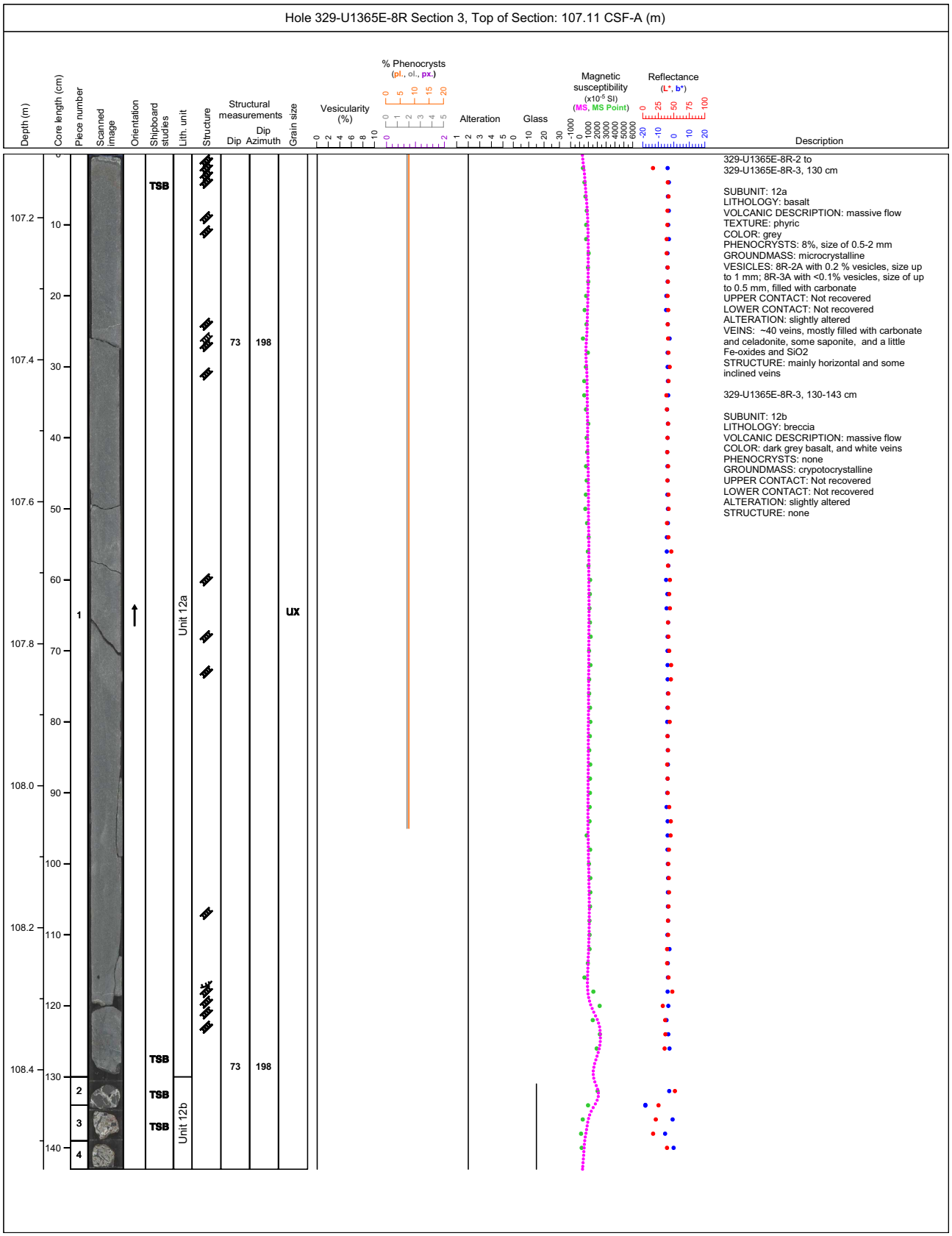
Core Photo


Hole 329-U1365E-8R Section 1, Top of Section: 105.0 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
105.0
105.2
105.4
105.6
105.8
Unit 10
Unit 11a
Unit 11b
70 105
70 50
180 88
245 55
10 85
UX
329-U1365E-8R-1, 0-40 cm
UNIT: 10
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: thin flow
TEXTURE: highly phyric
COLOR: grey
PHENOCRYSTS: 10%, size from 0.5-2 mm
GROUNDMASS: microcrystalline
VESICLES: none
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: moderately altered, orange halos
VEINS: 20 veins, mostly filled with carbonate and some saponite and Fe-oxides
STRUCTURE: inclined facture and vein
329-U1365E-8R-1, 40-77 cm
SUBUNIT: 11a
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: thin flow
TEXTURE: highly phyric
COLOR: light grey
PHENOCRYSTS: 10%, size from 0.5-2 mm
GROUNDMASS: microcrystalline
VESICLES: 2%, size up to 4mm, filled with carbonate and celadonite near top of Unit
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: moderately altered, pale grey background color, dark green halos
VEINS: 20 veins, mostly filled with carbonate and some saponite and Fe-oxides
STRUCTURE: inclined veins
329-U1365E-8R-1, 77-90 cm
SUBUNIT: 11b
LITHOLOGY: basalt
VOLCANIC DESCRIPTION:

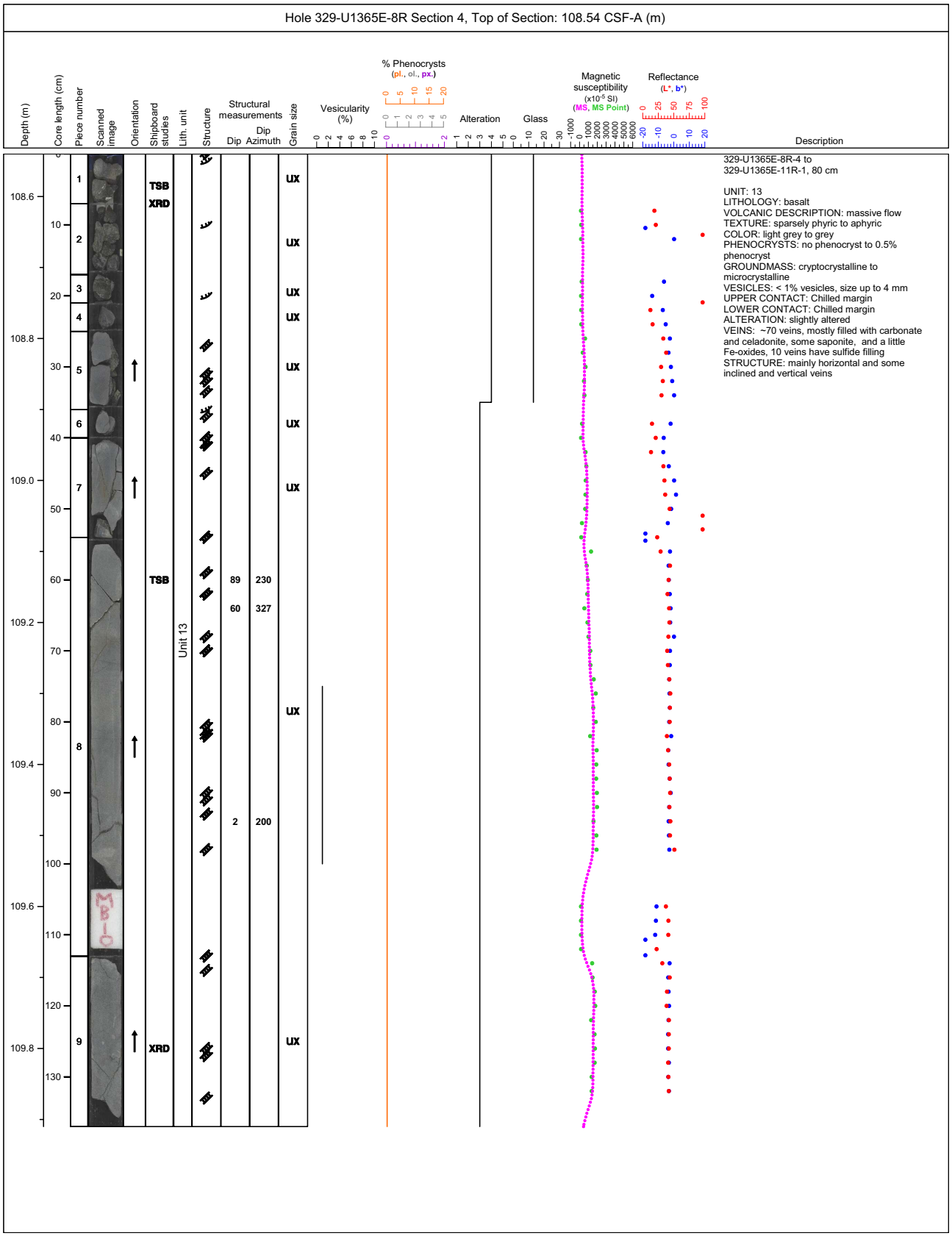
Core Photo


Hole 329-U1365E-8R Section 2, Top of Section: 105.9 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
106.0
106.2
106.4
106.6
106.8
107.0
TSB
PMG
Unit 12a
UX
329-U1365E-8R-2 to
329-U1365E-8R-3, 130 cm
SUBUNIT: 12a
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: massive flow
TEXTURE: phyric
COLOR: grey
PHENOCRYSTS: 8%, size of 0.5-2 mm
GROUNDMASS: microcrystalline
VESICLES: 8R-2A with 0.2 % vesicles, size up to 1 mm; 8R-3A with <0.1% vesicles, size of up to 0.5 mm, filled with carbonate
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: slightly altered
VEINS: ~40 veins, mostly filled with carbonate and celadonite, some saponite, and a little Fe-oxides and SiO2
STRUCTURE: mainly horizontal and some inclined veins

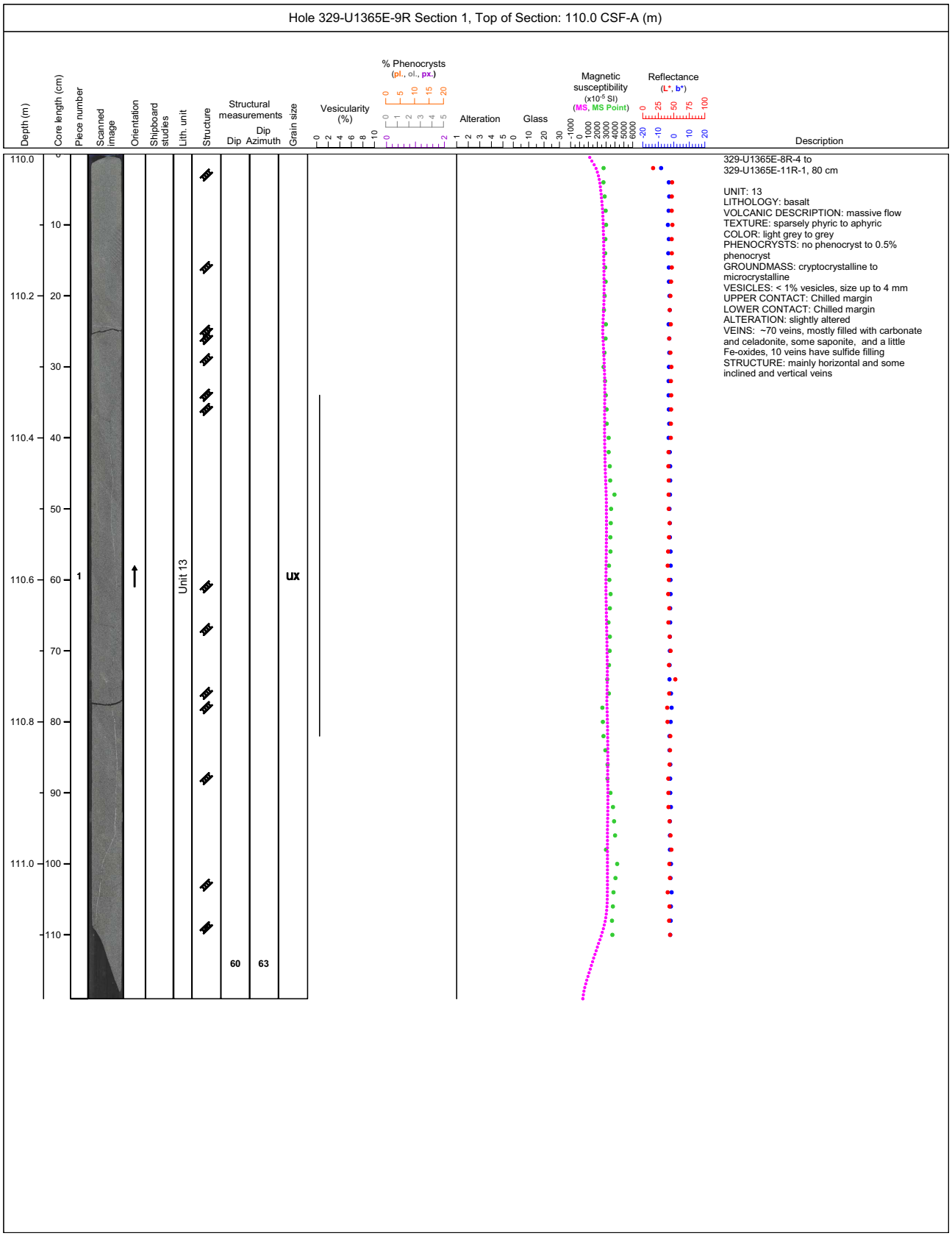
Core Photo


Hole 329-U1365E-8R Section 3, Top of Section: 107.11 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
TSB
Unit 12a
Unit 12b
UX
73
198
329-U1365E-8R-2 to
329-U1365E-8R-3, 130 cm
SUBUNIT: 12a
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: massive flow
TEXTURE: phyric
COLOR: grey
PHENOCRYSTS: 8%, size of 0.5-2 mm
GROUNDMASS: microcrystalline
VESICLES: 8R-2A with 0.2 % vesicles, size up to 1 mm; 8R-3A with <0.1% vesicles, size of up to 0.5 mm, filled with carbonate
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: slightly altered
VEINS: ~40 veins, mostly filled with carbonate and celadonite, some saponite, and a little Fe-oxides and SiO2
STRUCTURE: mainly horizontal and some inclined veins
329-U1365E-8R-3, 130-143 cm
SUBUNIT: 12b
LITHOLOGY: breccia
VOLCANIC DESCRIPTION: massive flow
COLOR: dark grey basalt, and white veins
PHENOCRYSTS: none
GROUNDMASS: crypotocrystalline
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: slightly altered
STRUCTURE: none

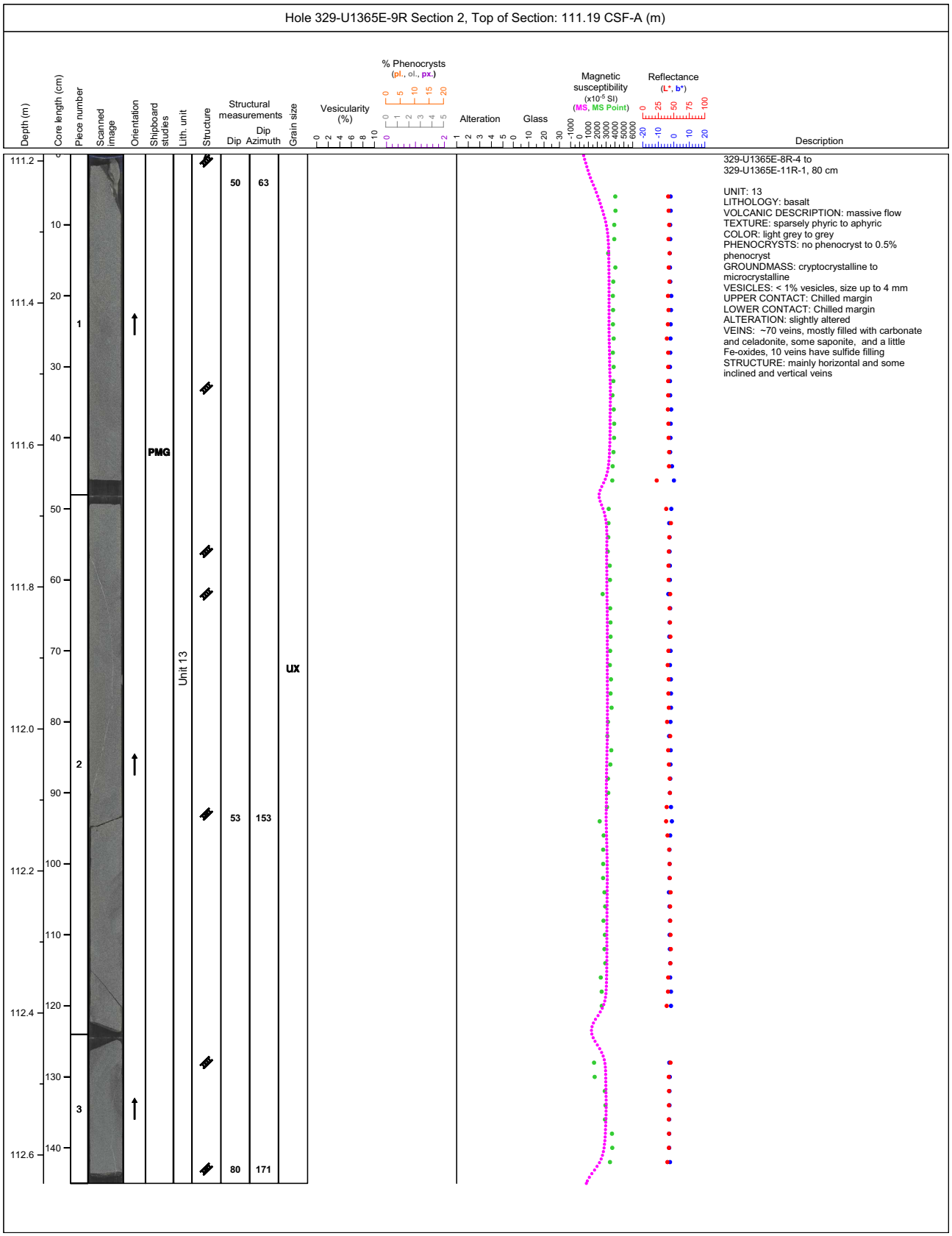
Core Photo


Hole 329-U1365E-8R Section 4, Top of Section: 108.54 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
TSB
XRD
UX
Unit 13
89
230
60
327
2
200
329-U1365E-8R-4 to
329-U1365E-11R-1, 80 cm
UNIT: 13
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: massive flow
TEXTURE: sparsely phyric to aphyric
COLOR: light grey to grey
PHENOCRYSTS: no phenocryst to 0.5% phenocryst
GROUNDMASS: cryptocrystalline to microcrystalline
VESICLES: < 1% vesicles, size up to 4 mm
UPPER CONTACT: Chilled margin
LOWER CONTACT: Chilled margin
ALTERATION: slightly altered
VEINS: ~70 veins, mostly filled with carbonate and celadonite, some saponite, and a little Fe-oxides, 10 veins have sulfide filling
STRUCTURE: mainly horizontal and some inclined and vertical veins

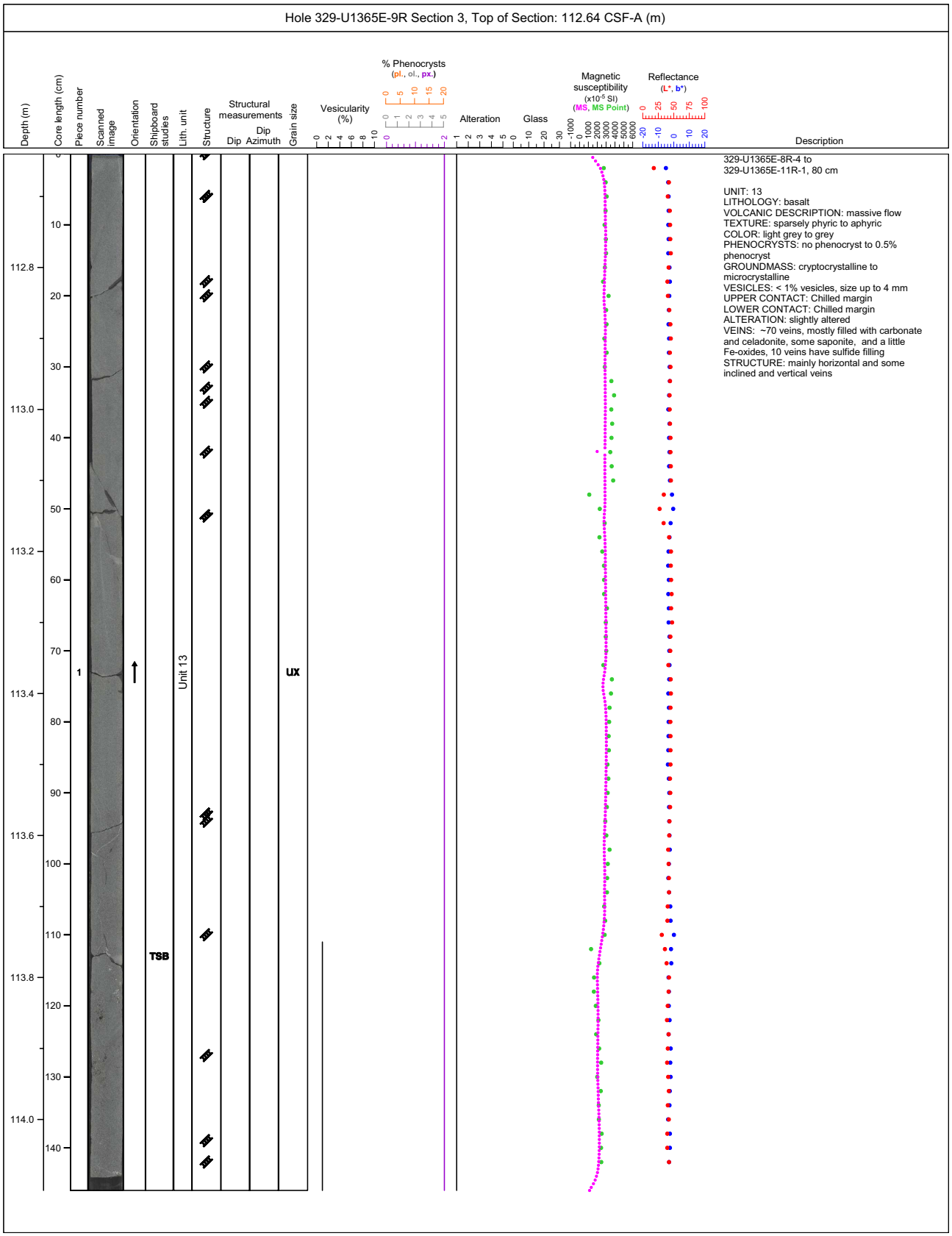
Core Photo


Hole 329-U1365E-9R Section 1, Top of Section: 110.0 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
110.0
110.2
110.4
110.6
110.8
111.0
1
Unit 13
ux
60
63
329-U1365E-8R-4 to
329-U1365E-11R-1, 80 cm
UNIT: 13
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: massive flow
TEXTURE: sparsely phyric to aphyric
COLOR: light grey to grey
PHENOCRYSTS: no phenocryst to 0.5% phenocryst
GROUNDMASS: cryptocrystalline to microcrystalline
VESICLES: < 1% vesicles, size up to 4 mm
UPPER CONTACT: Chilled margin
LOWER CONTACT: Chilled margin
ALTERATION: slightly altered
VEINS: ~70 veins, mostly filled with carbonate and celadonite, some saponite, and a little Fe-oxides, 10 veins have sulfide filling
STRUCTURE: mainly horizontal and some inclined and vertical veins

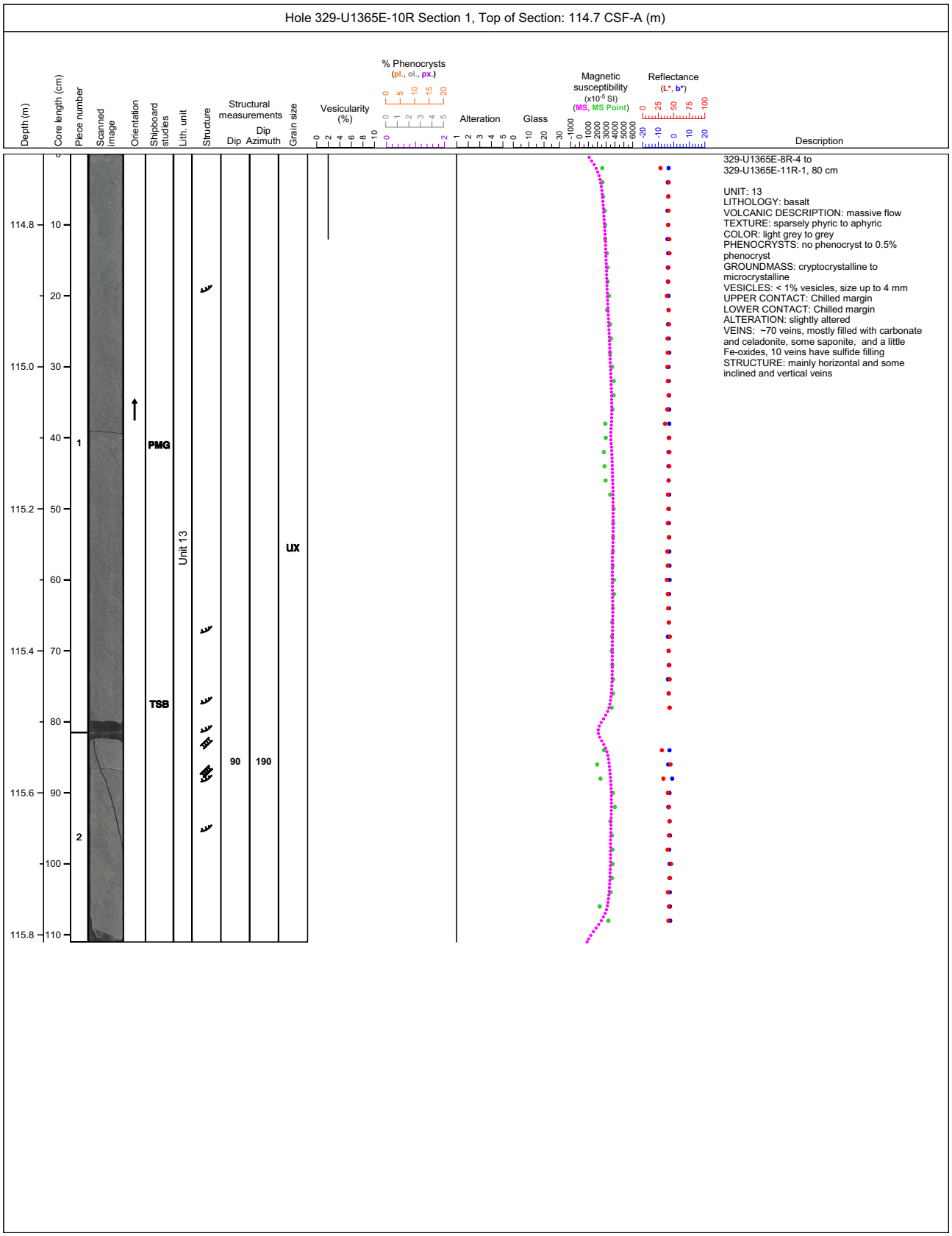
Core Photo


Hole 329-U1365E-9R Section 2, Top of Section: 111.19 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
111.2
111.4
111.6
111.8
112.0
112.2
112.4
112.6
PMG
Unit 13
UX
50
63
53
153
80
171
329-U1365E-8R-4 to
329-U1365E-11R-1, 80 cm
UNIT: 13
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: massive flow
TEXTURE: sparsely phyric to aphyric
COLOR: light grey to grey
PHENOCRYSTS: no phenocryst to 0.5% phenocryst
GROUNDMASS: cryptocrystalline to microcrystalline
VESICLES: < 1% vesicles, size up to 4 mm
UPPER CONTACT: Chilled margin
LOWER CONTACT: Chilled margin
ALTERATION: slightly altered
VEINS: ~70 veins, mostly filled with carbonate and celadonite, some saponite, and a little Fe-oxides, 10 veins have sulfide filling
STRUCTURE: mainly horizontal and some inclined and vertical veins

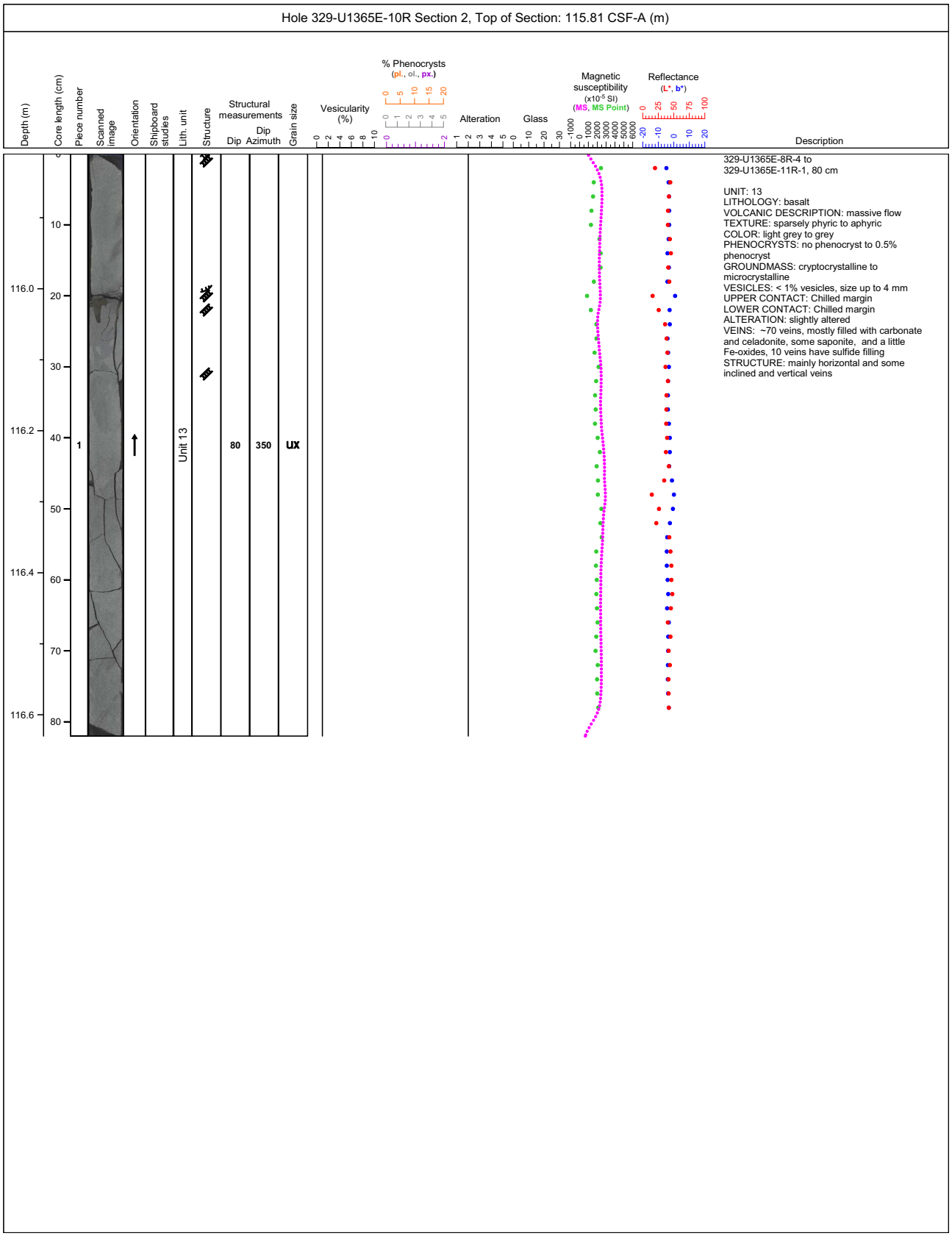
Core Photo


Hole 329-U1365E-9R Section 3, Top of Section: 112.64 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
112.8
113.0
113.2
113.4
113.6
113.8
114.0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
1
Unit 13
TSB
UX
329-U1365E-8R-4 to
329-U1365E-11R-1, 80 cm
UNIT: 13
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: massive flow
TEXTURE: sparsely phyric to aphyric
COLOR: light grey to grey
PHENOCRYSTS: no phenocryst to 0.5% phenocryst
GROUNDMASS: cryptocrystalline to microcrystalline
VESICLES: < 1% vesicles, size up to 4 mm
UPPER CONTACT: Chilled margin
LOWER CONTACT: Chilled margin
ALTERATION: slightly altered
VEINS: ~70 veins, mostly filled with carbonate and celadonite, some saponite, and a little Fe-oxides, 10 veins have sulfide filling
STRUCTURE: mainly horizontal and some inclined and vertical veins

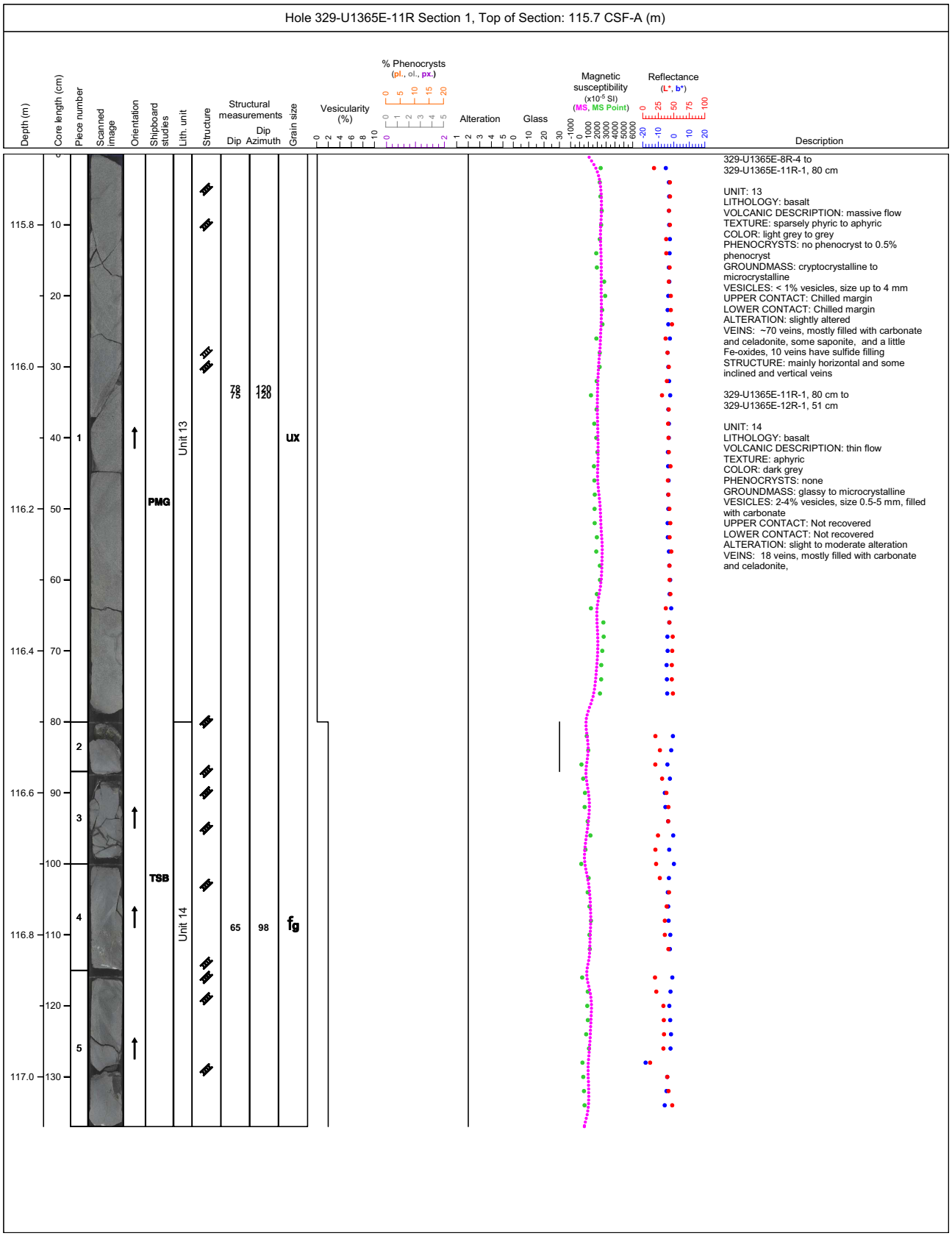
Core Photo


Hole 329-U1365E-10R Section 1, Top of Section: 114.7 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
114.8
115.0
115.2
115.4
115.6
115.8
PMG
TSB
Unit 13
UX
90
190
329-U1365E-8R-4 to
329-U1365E-11R-1, 80 cm
UNIT: 13
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: massive flow
TEXTURE: sparsely phyric to aphyric
COLOR: light grey to grey
PHENOCRYSTS: no phenocryst to 0.5% phenocryst
GROUNDMASS: cryptocrystalline to microcrystalline
VESICLES: < 1% vesicles, size up to 4 mm
UPPER CONTACT: Chilled margin
LOWER CONTACT: Chilled margin
ALTERATION: slightly altered
VEINS: ~70 veins, mostly filled with carbonate and celadonite, some saponite, and a little Fe-oxides, 10 veins have sulfide filling
STRUCTURE: mainly horizontal and some inclined and vertical veins

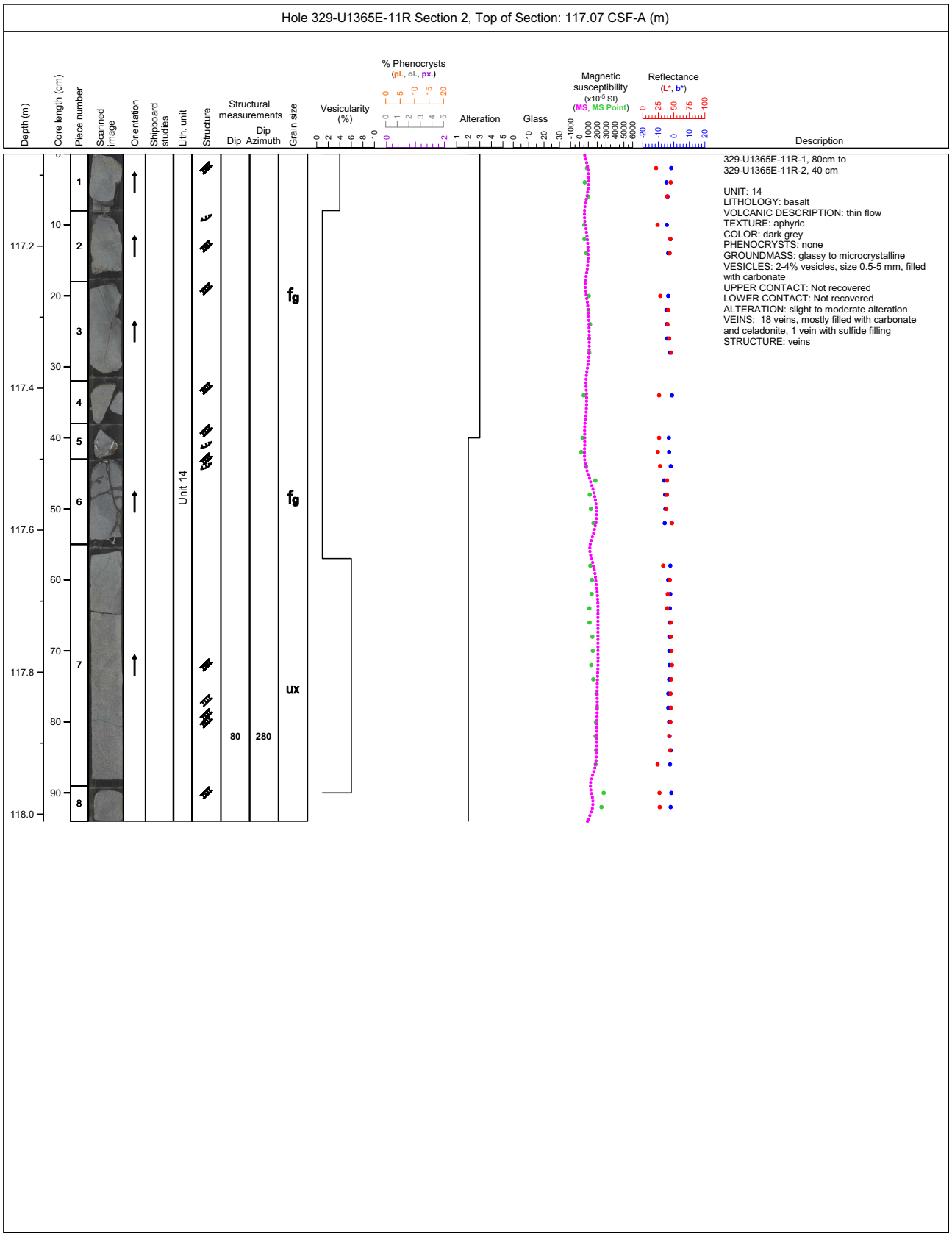
Core Photo


Hole 329-U1365E-10R Section 2, Top of Section: 115.81 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
116.0
116.2
116.4
116.6
1
Unit 13
80
350
UX
329-U1365E-8R-4 to
329-U1365E-11R-1, 80 cm
UNIT: 13
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: massive flow
TEXTURE: sparsely phyric to aphyric
COLOR: light grey to grey
PHENOCRYSTS: no phenocryst to 0.5% phenocryst
GROUNDMASS: cryptocrystalline to microcrystalline
VESICLES: < 1% vesicles, size up to 4 mm
UPPER CONTACT: Chilled margin
LOWER CONTACT: Chilled margin
ALTERATION: slightly altered
VEINS: ~70 veins, mostly filled with carbonate and celadonite, some saponite, and a little Fe-oxides, 10 veins have sulfide filling
STRUCTURE: mainly horizontal and some inclined and vertical veins

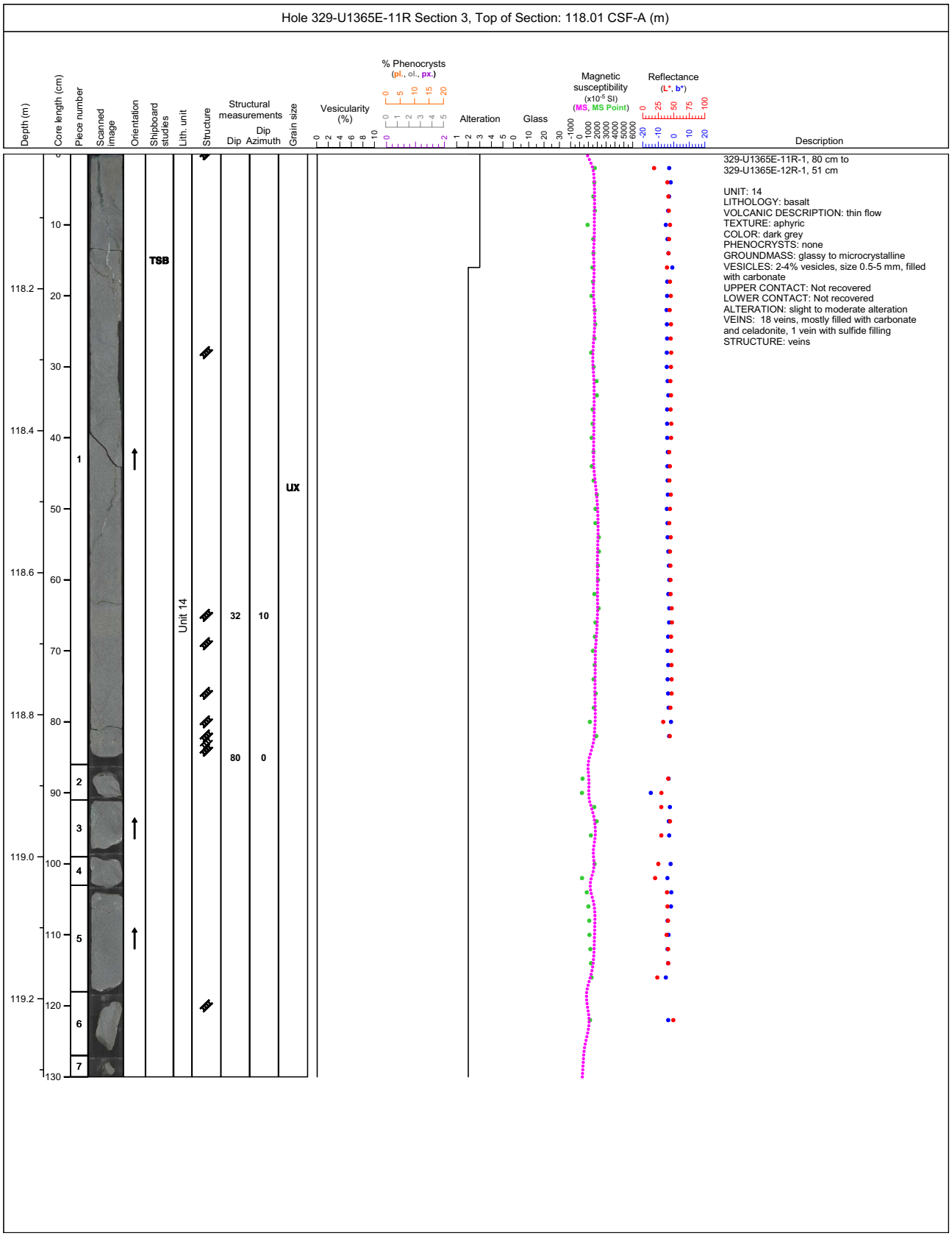
Core Photo


Hole 329-U1365E-11R Section 1, Top of Section: 115.7 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
115.8
116.0
116.2
116.4
116.6
116.8
117.0
Unit 13
Unit 14
PMG
TSB
78
75
120
120
65
98
UX
fg
329-U1365E-8R-4 to
329-U1365E-11R-1, 80 cm
UNIT: 13
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: massive flow
TEXTURE: sparsely phyric to aphyric
COLOR: light grey to grey
PHENOCRYSTS: no phenocryst to 0.5% phenocryst
GROUNDMASS: cryptocrystalline to microcrystalline
VESICLES: < 1% vesicles, size up to 4 mm
UPPER CONTACT: Chilled margin
LOWER CONTACT: Chilled margin
ALTERATION: slightly altered
VEINS: ~70 veins, mostly filled with carbonate and celadonite, some saponite, and a little Fe-oxides, 10 veins have sulfide filling
STRUCTURE: mainly horizontal and some inclined and vertical veins
329-U1365E-11R-1, 80 cm to
329-U1365E-12R-1, 51 cm
UNIT: 14
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: thin flow
TEXTURE: aphyric
COLOR: dark grey
PHENOCRYSTS: none
GROUNDMASS: glassy to microcrystalline
VESICLES: 2-4% vesicles, size 0.5-5 mm, filled with carbonate
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: slight to moderate alteration
VEINS: 18 veins, mostly filled with carbonate and celadonite,

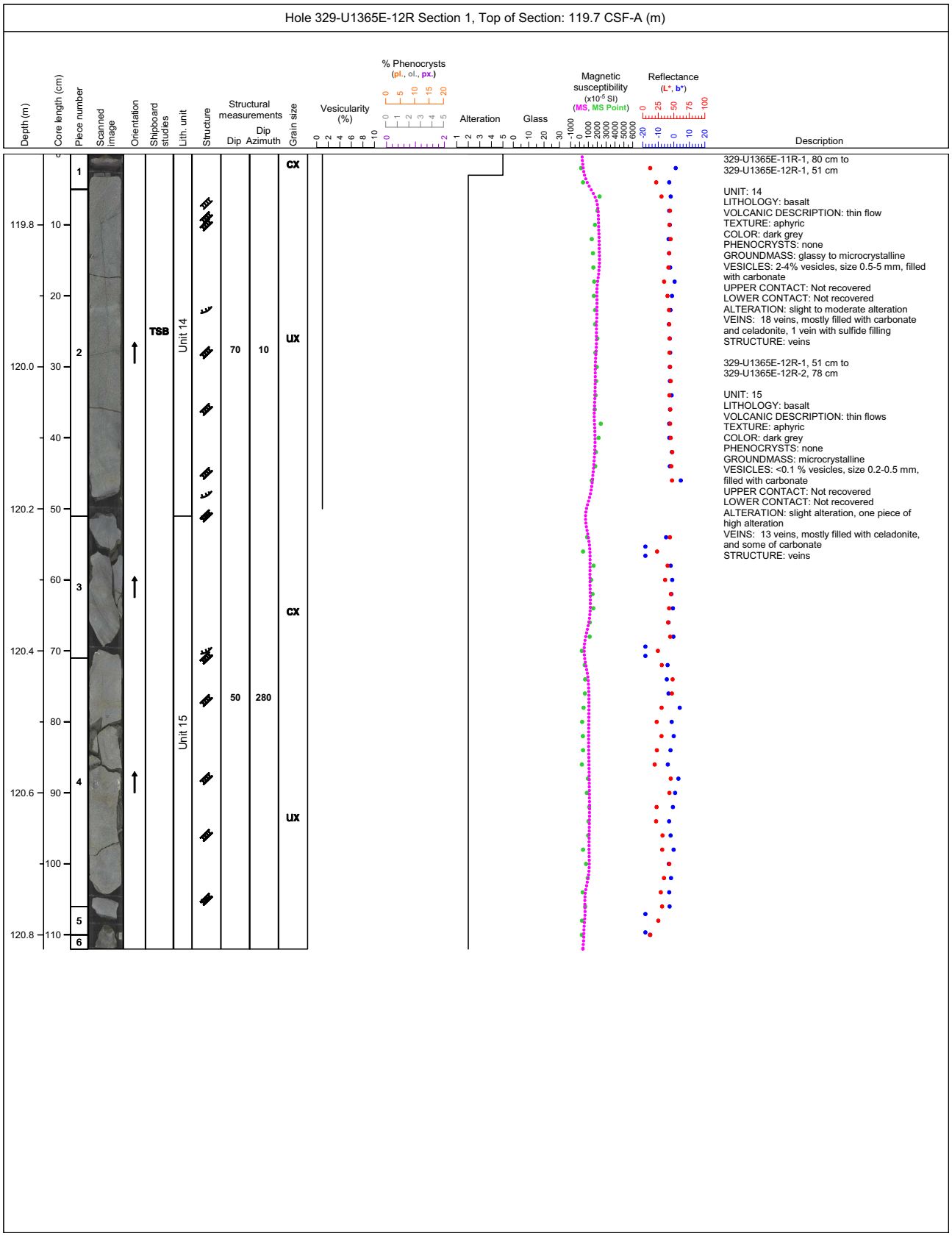
Core Photo


Hole 329-U1365E-11R Section 2, Top of Section: 117.07 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
117.2
117.4
117.6
117.8
118.0
Unit 14
fg
fg
ux
80
280
329-U1365E-11R-1, 80cm to
329-U1365E-11R-2, 40 cm
UNIT: 14
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: thin flow
TEXTURE: aphyric
COLOR: dark grey
PHENOCRYSTS: none
GROUNDMASS: glassy to microcrystalline
VESICLES: 2-4% vesicles, size 0.5-5 mm, filled with carbonate
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: slight to moderate alteration
VEINS: 18 veins, mostly filled with carbonate and celadonite, 1 vein with sulfide filling
STRUCTURE: veins

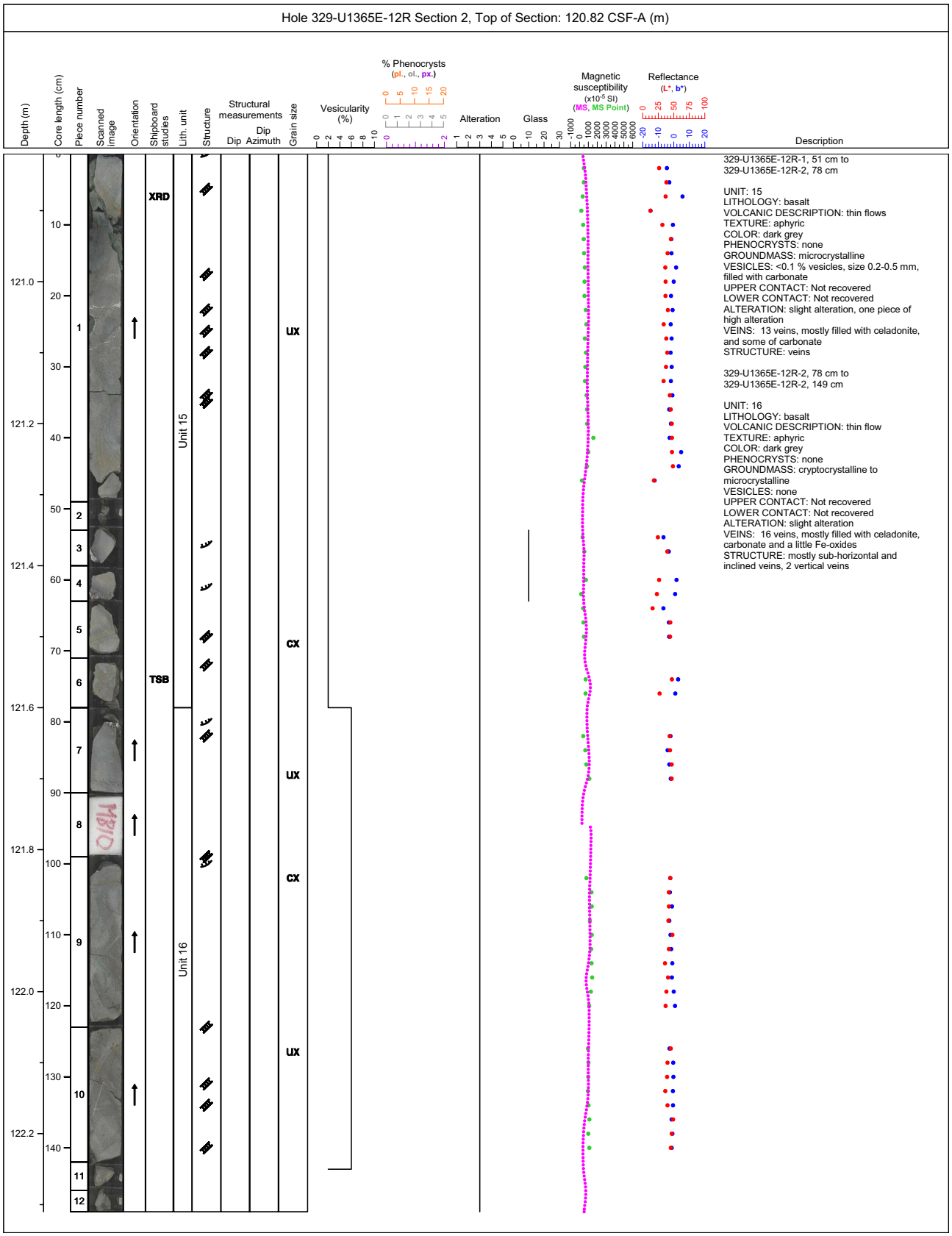
Core Photo


Hole 329-U1365E-11R Section 3, Top of Section: 118.01 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
TSB
Unit 14
32
10
80
0
UX
329-U1365E-11R-1, 80 cm to
329-U1365E-12R-1, 51 cm
UNIT: 14
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: thin flow
TEXTURE: aphyric
COLOR: dark grey
PHENOCRYSTS: none
GROUNDMASS: glassy to microcrystalline
VESICLES: 2-4% vesicles, size 0.5-5 mm, filled with carbonate
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: slight to moderate alteration
VEINS: 18 veins, mostly filled with carbonate and celadonite, 1 vein with sulfide filling
STRUCTURE: veins

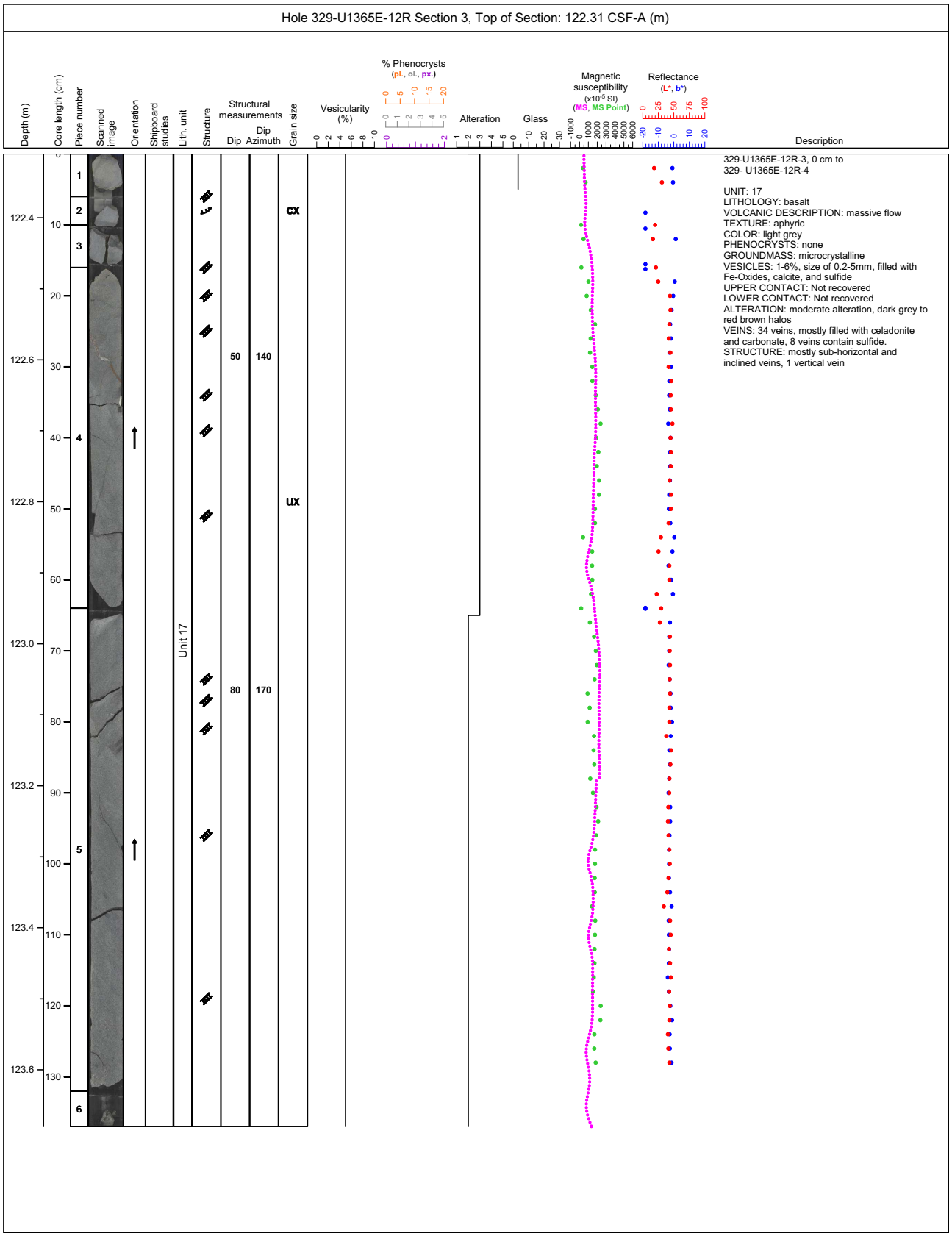
Core Photo


Hole 329-U1365E-12R Section 1, Top of Section: 119.7 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
TSB
Unit 14
Unit 15
70
10
50
280
CX
UX
329-U1365E-11R-1, 80 cm to 329-U1365E-12R-1, 51 cm
UNIT: 14
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: thin flow
TEXTURE: aphyric
COLOR: dark grey
PHENOCRYSTS: none
GROUNDMASS: glassy to microcrystalline
VESICLES: 2-4% vesicles, size 0.5-5 mm, filled with carbonate
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: slight to moderate alteration
VEINS: 18 veins, mostly filled with carbonate and celadonite, 1 vein with sulfide filling
STRUCTURE: veins
329-U1365E-12R-1, 51 cm to 329-U1365E-12R-2, 78 cm
UNIT: 15
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: thin flows
TEXTURE: aphyric
COLOR: dark grey
PHENOCRYSTS: none
GROUNDMASS: microcrystalline
VESICLES: <0.1 % vesicles, size 0.2-0.5 mm, filled with carbonate
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: slight alteration, one piece of high alteration
VEINS: 13 veins, mostly filled with celadonite, and some of carbonate
STRUCTURE: veins

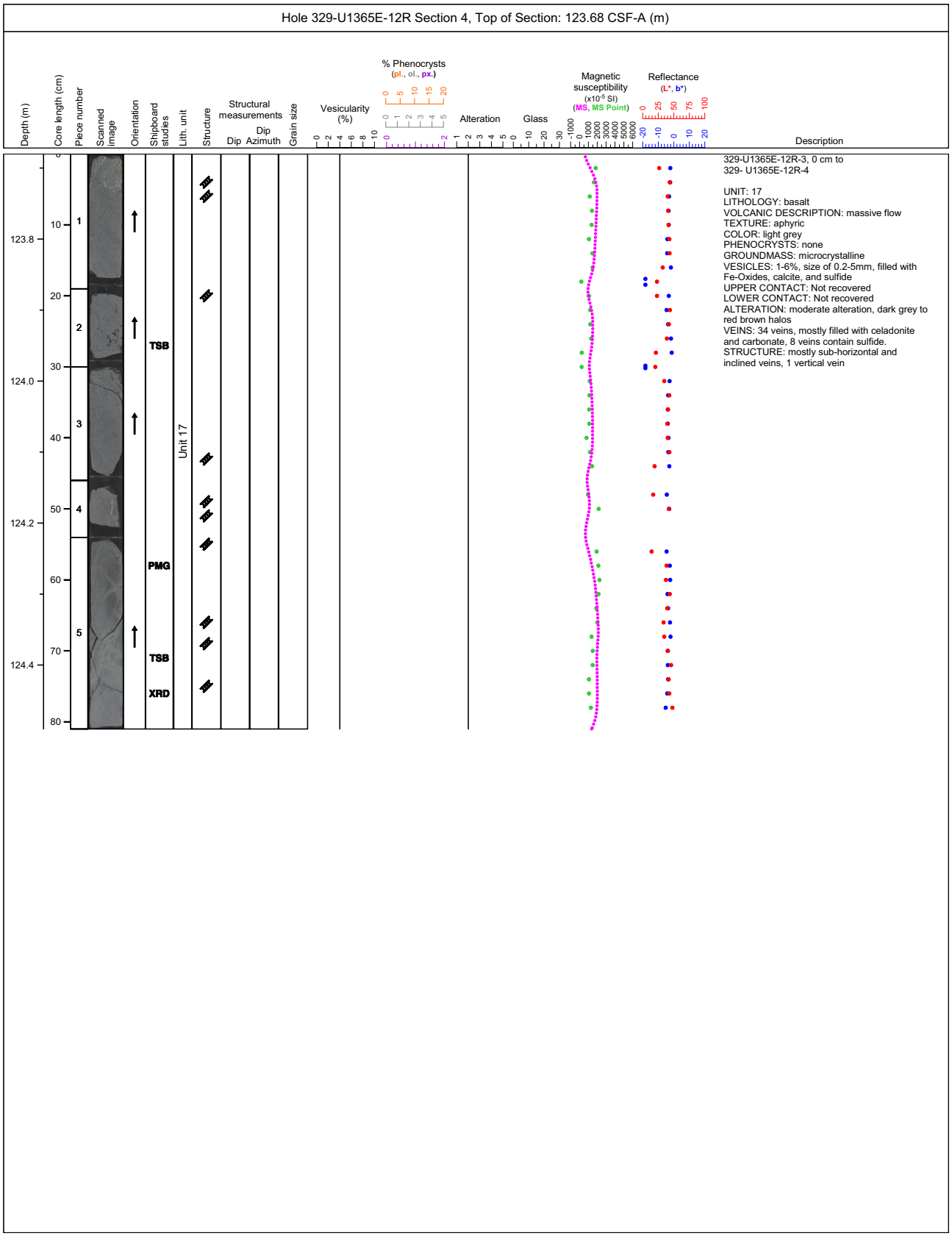
Core Photo


Hole 329-U1365E-12R Section 2, Top of Section: 120.82 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
XRD
TSB
Unit 15
Unit 16
UX
CX
329-U1365E-12R-1, 51 cm to 329-U1365E-12R-2, 78 cm
UNIT: 15
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: thin flows
TEXTURE: aphyric
COLOR: dark grey
PHENOCRYSTS: none
GROUNDMASS: microcrystalline
VESICLES: <0.1 % vesicles, size 0.2-0.5 mm, filled with carbonate
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: slight alteration, one piece of high alteration
VEINS: 13 veins, mostly filled with celadonite, and some of carbonate
STRUCTURE: veins
329-U1365E-12R-2, 78 cm to 329-U1365E-12R-2, 149 cm
UNIT: 16
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: thin flow
TEXTURE: aphyric
COLOR: dark grey
PHENOCRYSTS: none
GROUNDMASS: cryptocrystalline to microcrystalline
VESICLES: none
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: slight alteration
VEINS: 16 veins, mostly filled with celadonite, carbonate and a little Fe-oxides
STRUCTURE: mostly sub-horizontal and inclined veins, 2 vertical veins

Core Photo


Hole 329-U1365E-12R Section 3, Top of Section: 122.31 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
Unit 17
CX
UX
50
140
80
170
329-U1365E-12R-3, 0 cm to
329- U1365E-12R-4
UNIT: 17
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: massive flow
TEXTURE: aphyric
COLOR: light grey
PHENOCRYSTS: none
GROUNDMASS: microcrystalline
VESICLES: 1-6%, size of 0.2-5mm, filled with Fe-Oxides, calcite, and sulfide
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: moderate alteration, dark grey to red brown halos
VEINS: 34 veins, mostly filled with celadonite and carbonate, 8 veins contain sulfide.
STRUCTURE: mostly sub-horizontal and inclined veins, 1 vertical vein

Core Photo


Hole 329-U1365E-12R Section 4, Top of Section: 123.68 CSF-A (m)
Depth (m)
Core length (cm)
Piece number
Scanned image
Orientation
Shipboard studies
Lith. unit
Structure
Structural measurements
Dip
Dip Azimuth
Grain size
Vesicularity (%)
% Phenocrysts (pl., ol., px.)
Alteration
Glass
Magnetic susceptibility (x10-5 SI) (MS, MS Point)
Reflectance (L*, b*)
Description
123.8
124.0
124.2
124.4
Unit 17
TSB
PMG
TSB
XRD
329-U1365E-12R-3, 0 cm to
329- U1365E-12R-4
UNIT: 17
LITHOLOGY: basalt
VOLCANIC DESCRIPTION: massive flow
TEXTURE: aphyric
COLOR: light grey
PHENOCRYSTS: none
GROUNDMASS: microcrystalline
VESICLES: 1-6%, size of 0.2-5mm, filled with Fe-Oxides, calcite, and sulfide
UPPER CONTACT: Not recovered
LOWER CONTACT: Not recovered
ALTERATION: moderate alteration, dark grey to red brown halos
VEINS: 34 veins, mostly filled with celadonite and carbonate, 8 veins contain sulfide.
STRUCTURE: mostly sub-horizontal and inclined veins, 1 vertical vein

Exp	Site	Hole	Core	Type	Section	Name	TopDepth	BotDepth	Clay	RSO	Zeolite	Volcanic glass	Pyrite	Feldspar	Quartz	Ichthyoliths	Radiolaria
329	U1365	A	1	H	1	A	-0.15	0.25	45	28	27	0	0	0	0	0	0
329	U1365	A	1	H	1	A	0.8	1.2	39	38	23	0.1	0	0	0	0	0
329	U1365	A	1	H	3	A	2.85	3.25	39	38	23	0.1	0	0	0	0	0
329	U1365	A	1	H	3	A	3.73	4.13	39	15	23	0.1	23	0	0	0	0
329	U1365	A	1	H	4	A	5	5.4	42	25	33	0.1	0	0	0	0	0
329	U1365	A	2	H	1	A	6.7	7.1	20	33	47	0.1	0	0	0	0	0
329	U1365	A	2	H	1	A	6.98	7.38	20	33	47	0	0	0	0	0	0
329	U1365	A	2	H	1	A	7.04	7.44	23	23	54	0.1	0	0.1	0	0	0
329	U1365	A	2	H	2	A	8.68	9.08	25	42	17	16	0	0	0	0	0
329	U1365	A	2	H	5	A	12.5	12.9	50	50	0	0	0	0	0	0	0
329	U1365	A	3	H	1	A	15.6	16	27	27	46	0	0	0	0	0	0
329	U1365	A	3	H	1	A	16.43	16.83	43	43	14	0	0	0	0	0	0
329	U1365	A	3	H	2	A	17.32	17.72	43	43	0	14	0	0	0	0	0
329	U1365	A	3	H	4	A	20.32	20.72	33	56	11	0	0	0	0	0	0
329	U1365	A	3	H	5	A	21.82	22.22	30	50	20	0	0	0	0	0	0
329	U1365	A	3	H	6	A	23.32	23.72	30	50	20	0	0	0	0	0	0
329	U1365	A	4	H	1	A	25	25.4	23	38	39	0	0	0	0	0	0
329	U1365	A	4	H	2	A	27.44	27.84	37	25	38	0	0	0	0	0	0
329	U1365	A	4	H	3	A	28.25	28.65	34	33	33	0	0	0	0	0	0
329	U1365	A	4	H	4	A	29.75	30.15	38	37	25	0	0	0	0	0	0
329	U1365	A	4	H	5	A	31.25	31.65	46	27	27	0	0	0	0	0	0
329	U1365	A	4	H	6	A	33.25	33.65	42	16	42	0.1	0	0	0	0	0
329	U1365	A	4	H	7	A	33.71	34.11	27	46	27	0	0	0	0	0.1	0
329	U1365	A	4	H	7	A	33.91	33.91	–	–	–	–	–	–	–	0.1	0
329	U1365	A	5	H	1	A	34.7	35.1	33	34	33	0.1	0	0	0	0	0
329	U1365	A	5	H	2	A	36.2	36.6	33	34	33	0.1	0	0	0	0	0
329	U1365	A	5	H	3	A	37.4	37.8	23	38	39	0	0	0	0	0	0
329	U1365	A	5	H	3	A	37.69	38.09	30	0	0	70	0	0	0	0	0
329	U1365	A	5	H	3	A	38.24	38.64	9	0	4	0	0	0	87	0	0
329	U1365	A	5	H	4	A	39.15	39.55	34	33	11	0.1	0	0	0	0	22
329	U1365	A	5	H	4	A	39.35	39.35	–	–	–	–	–	–	–	0	22
329	U1365	A	5	H	4	A	39.8	40.2	50	0	50	0	0	0	0	0	0
329	U1365	A	5	H	5	A	41	41.4	24	38	38	0	0	0	0	0	0
329	U1365	A	5	H	7	A	43.3	43.7	23	38	39	0	0	0	0	0	0
329	U1365	A	12	H	CC	A	51.54	51.94	46	9	46	0	0	0	0.1	0	0
329	U1365	A	12	H	CC	A	51.55	51.95	27	27	46	0	0	0	0.1	0	0
329	U1365	A	14	H	1	A	54	54.4	22	78	0	0	0	0	0.1	0	0
329	U1365	A	15	H	1	A	55.05	55.45	27	64	9	0	0	0.1	0.1	0	0
329	U1365	A	19	H	1	A	59.71	60.11	27	64	9	0	0	0	0.1	0	0
329	U1365	A	22	H	1	A	62.5	62.9	33	56	11	0.1	0	0	0	0	0
329	U1365	A	23	H	1	A	64.3	64.7	23	77	0.1	0.1	0	0	0	0	0
329	U1365	A	23	H	2	A	64.73	65.13	0	23	23	0	0	0	54	0	0
329	U1365	A	23	H	2	A	66	66.4	8	8,84	0	0	0	0	0	0	0
329	U1365	A	24	H	1	A	68.4	68.8	17	83	0	0	0	0	0	0	0
329	U1365	A	24	H	3	A	70.72	71.12	9	91	0	0	0	0	0	0	0
329	U1365	A	24	H	3	A	71.4	71.8	0	100	0	0	0	0	0	0	0
329	U1365	A	24	H	4	A	71.57	71.97	0	100	0	0	0	0	0	0	0
329	U1365	A	24	H	4	A	71.6	72	0	0	0	100	0	0	0	0	0
329	U1365	A	24	H	4	A	71.82	72.22	9	91	0	0	0	0	0	0	0
329	U1365	A	24	H	CC	A	72.12	72.52	0	0	0	100	0	0	0	0	0
329	U1365	A	25	H	2	A	74.1	74.5	12	88	0	0	0	0	0	0	0

Exp	Site	Hole	Core	Type	Section	Name	TopDepth	BotDepth	Clay	RSO	Zeolite	Feldspar	Volcanic glass	Ichthyoliths
329	U1365	B	1	H	3	SED	3.15	3.15	38	39	23	0	0	-
329	U1365	B	3	H	1	SED	14.5	14.5	70	30	0	0.1	0	-
329	U1365	B	3	H	3	SED	17.5	17.5	81	12	3	0	3	-
329	U1365	B	3	H	5	SED	20.5	20.5	67	20	13	0	0	-
329	U1365	B	3	H	5	SED	20.5	20.5	-	-	-	-	-	0.1
329	U1365	B	3	H	7	SED	23.11	23.11	57	33	10	0	0.1	-
329	U1365	B	3	H	7	SED	23.11	23.11	-	-	-	-	-	0.1
329	U1365	B	5	H	2	SED	35.1	35.1	27	0	27	0	46	-
329	U1365	B	8	H	1	SED	64.98	64.98	13	88	0	0	0	-
329	U1365	B	8	H	2	SED	65.48	65.48	17	83	0	0	0	-
329	U1365	B	9	H	4	SED	72.15	72.15	17	83	0	0	0	-

Exp	Site	Hole	Core	Type	Section	Name	TopDepth	BotDepth	Clay	RSO	Zeolite
329	U1365	C	1	H	3	SED	3.87	3.87	42	53	5
329	U1365	C	2	H	1	SED	6.2	6.2	38	38	23
329	U1365	C	4	H	2	SED	27.6	27.6	27	27	46
329	U1365	C	4	H	4	SED	30.4	30.4	23	38	39
329	U1365	C	8	H	2	SED	69.85	69.85	11	89	0

Thin section: 329-U1365A-25H-1-W 103/105-TS_04
Depth CSF-A (m): 73.43-73.45
Rock name: phyric basalt
Grain size: cryptocrystalline
Texture:
Where sampled: within sediment

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Plagioclase	12	8	0.1	1	0.2	bladed	only remaining primary mineralogy is the plagioclase phenocrysts
Pyroxene	2	0	0.05	0.4	0.2	anhedral	relict pseudomorphs within clusters of plagioclase remain
Groundmass/matrix							
Plagioclase	65	3	<0.01	0.2	0.06	bladed	bladed partial structure remains on edge of thin section
Pyroxene	30	1	<0.01	0.1	0.1	subhedral	completely altered, groundmass is visible in small edges around the edge of

		Size				
Secondary mineralogy	**Percent**	**min**	**max**	**mode**	**Replacing/ filling**	**Comments**
Saponite	60					Total replacement of the groundmass. only skeletal plagioclase in the
FeOx	35					
Oxides	1					

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**
V1	1	rounded	0.6	0.05	0.1	5	vesicles are not entirely filled, Fe-ox phase may occur alone or secondary to
V2	1	rounded	0.6	0.05	0.1	30	vesicles are not entirely filled

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**
VN1	planar	1	0.1	Fe-ox	first evident phase, vein is flanked by an Fe-ox halo
VN2	planar			saponite	
VN3	planar	2	0.1	saponite	saponite fills discrete portions of the vein, timing is unclear
VN4	planar	2	0.1	phyllosilicate	unknown very fine phyllosilicate

Comments: Intensively altered basalt from the sediment basement interface. Groundmass is almost totally obscured by alteration, however it appears to be plagioclase phyric and the groundmass is cryptocrystalline. Secondary minerals include an unknown phyllosilicate, saponite and iron oxyhydroxides. Vesicles are filled with iron oxyhydroxides followed by saponite. One polymineralic vein (Saponite, iron oxyhydroxide,unknown phyllosilicate) with a iron oxyhydroxide/saponite halo is present.

Thin section: 329-U1365A-25H-CC-TS_01
Depth CSF-A (m): 75.27 - 75.32
Rock name: sparsely phyric basalt
Grain size: microcrystalline
Texture: spinifex
Where sampled: sampled from cc

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Plagioclase	7	8	0.2				pl crystals are lightly altered
Groundmass/matrix							
Plagioclase	5	15	0.01	0.07	0.05	bladed	mostly altered
Pyroxene							no pyroxene exist

		Size				
Secondary mineralogy	**Percent**	**min**	**max**	**mode**	**Replacing/ filling**	**Comments**
Saponite	8					
Oxides	5					

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**
V1	8	irregular	2	0.2	0.5	70	

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**
VN1	linear		0.05	Fe-ox	

Comments: very thin small vein, crystals except for pl are totally altered

Thin section: 329-U1365A-25H-CC-TS_02
Depth CSF-A (m): 75.27 - 75.32
Rock name: sparsely phyric basalt
Grain size: cryptocrystalline
Texture: spherulitic
Where sampled: from the sediment hole bottom

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Plagioclase	5	6	<0.1	1	0.2	lath	only remaining primary mineralogy is the plagioclase phenocrysts
Pyroxene	<0.1	<0.1					only one pyroxene exists
Groundmass/matrix							
Pyroxene							no pyroxene exists

			Size			
Secondary mineralogy	**Percent**	**min**	**max**	**mode**	**Replacing/ filling**	**Comments**
Saponite	3					groundmass was replaced by saponite

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**
V1	1	rounded	0.9	0.4	0.6	70	

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**
VN1	planar	1	0.3	Saponite	

Comments: moderately altered basalt

Thin section: 329-U1365E-2R-1-W 30/34-TS_05
Depth CSF-A (m): 71.3-71.34
Rock name: aphyric basalt
Grain size: microcrystalline
Texture: subophitic
Where sampled: massive basaltic flow with alteration halo flanking a vein

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Plagioclase	0.5	0.5	0.3	2	0.6	blocky	only remaining primary mineralogy is the plagioclase phenocrysts
Pyroxene	10	9	0.3	1	0.6	anhedral	sub-ophitic texture. Phenocryst grows round plagioclase
Olivine	1.5	0	0.3	0.6	0.4	subhedral	tentative determination based on rough 6 sided pseudomorphs. blastic textures with primary plagioclase and secondary opaques formed within the pseudomorphs
Groundmass/matrix							
Plagioclase	58	56	0.04	0.5	0.3	bladed	bladed partial structure remains on edge of thin section
Pyroxene	26.5	26	0.03	0.2	0.2	anhedral	completely altered, groundmass is visible in small edges around the edge of
Olivine	5	0	0.02	0.2	0.1	subhedral	entirely altered, only pseudomorphs remain
Opaques	3	3		0.02	0.09	euhedral	

		Size				
Secondary mineralogy	**Percent**	**min**	**max**	**mode**	**Replacing/ filling**	**Comments**
Saponite1	1					Background, replacing interstitial and olivine (iddingsite)
Saponite2	4					
Fe-ox	10					Brown halo. Fe-ox repalces interstital areas and forms blocky red/brown crystals Saponite is present as an accessory.

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**
VN1	irregular	1	0.7	Celadonite	First phase, nearly all overpinted. Remnants of celadonitie halo are present within the brown halo
VN2	Planar	2	0.2	Saponite	Saponite and other not identified (phyllosilicate?)
VN3	irregular	4	0.7	Carbonates	Final major phase, filling the most of the central portion of the vein
VN4	Planar	3	0.2	Carbonates	Final phase in centre of vein. Crystals are aligned with direction of reopening. Some Iron-oxyhydroxide may be syn tectonic forming small piched out crystals in between the calcite
VN5	irregular	3	0.7	Saponite	grown partially sychronus with iron oxyhydroxide phase (stained) and partly grown in between calcite crystals during further extension and carbonate fill. Saponite is present within the brown halo
VN6	Planar	1	0.2	Iron-oxyhydroxides	Earliest phase present. Saponite grows around and in centre
VN7	irregular	2	0.7	Iron-oxyhydroxides	overprints celadonite and forms red/brown oxidation halo, partially forms in direction of extension and has grown partially synchronous with the saponite phase

Comments: Slightly altered fine grained, massive, olivine/clinopyroxene phyric basalt. (Sub-ophitic in texture). Olivine is identified as pseudomorphs. Veins are polyminerallic with between 3-4 generations of vein growth. Halo is brown with traces of and celadonite that indicate overprinting by the iron-oxyhydroxides.
Vein mineral growth appears syn tectonic with crystals aligned to direction of strain (Vertical 90 degrees)
Order of vein filling appears as Celadonite, Iron-oxyhydroxides, saponite, carbonate.
Background alteration replaces intersitials and partially replaces plagioclase and clinopyroxene.

Thin section: 329-U1365E-2R-1-W 51/53-TS_06
Depth CSF-A (m): 71.51-71.53
Rock name: aphyric basalt
Grain size: microcrystalline
Texture: aphyric
Where sampled: Massive fresh basalt with vesicles and vein

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Plagioclase	0.5	0.5	0.2	2	0.4	lath	rare agglomerations (locally would be glomeroporphyritic, Hr glass twinning present. Very fresh
Pyroxene	<0.1	<0.1	0.2	0.5	0.4	subhedral	rare partially altered and not associated with the plagioclase
Groundmass/matrix							
Plagioclase	64	62	0.05	0.7	0.3	bladed	relatively fresh, a few are partially altered to saponite
Pyroxene	30	28	0.02	1	1	anhedral	slightly altered, grows around plagioclase in a sub-ophitic manor
Opaques	3	3		0.5	0.01	subhedral	intersitial and often formed within plagioclase

		Size				
Secondary mineralogy	**Percent**	**min**	**max**	**mode**	**Replacing/ filling**	**Comments**
Saponite	12					Alteration is slight but pervasive, replacing mesostasis, some climnopyroxene and plagioclase. descreete celadonite is present near the vein.
Celadonite	<0.1					

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**
V1	6	rounded	0.9	0.1	0.3	80	filled from the edges by saponite

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**
VN1	planar	2	0.2	Iron-oxyhydroxide	later fill and probable partial replacement of celadonite
VN2	planar	1	0.2	Celadonite	forms outer wall and is first generation

Comments: slightly altered microcrystalline, aphyric basalt with a iron-oxyhydroxide/celadonite vein. Baslt is vesicular, with many saponite filled vesicles. The few phenocryts that are present are euhedral and fresh, some showing very clear zoning.

Thin section: 329-U1365E-3R-2-W 93/96-TS_07
Depth CSF-A (m): 83.12-83.15
Rock name: sparsely phyric basalt
Grain size: very fine grained
Texture: glomeroporphyritic
Where sampled: Carboante vein and halos

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Plagioclase	3	3	1	5	3	blocky	Very large almost blastic phenocrysts with zoning. Plagioclase anorthite content is labradorite. Many contain inclusions and blebs
Pyroxene	0.5	0.5	0.3	2	3	anhedral	sub ophitic
Groundmass/matrix							
Plagioclase					0.3		
Pyroxene	25	24	0.02	0.3	0.3	anhedral	ophitic texture, most pyroxenes have enveloped plagiocalse as it has grown
Opaques	2	2		0.2	0.01	irregular	fill intersitial zones

		Size				
Secondary mineralogy	**Percent**	**min**	**max**	**mode**	**Replacing/ filling**	**Comments**
Saponite1	0.5					Background has only intersitial replacement of mesostasis and
Saponite2	5					partial replacement of clinopyroxene.
Celadonite	0.5					Within halo: replaces intersitial, clinopyroxene and olivine?
						trace celadonite is present, vesicles are filled with carbonate and saponite.

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**
V1	0.5	rounded	0.3	0.1	0.2	80	Carbonate forms in the centre
V2	0.5	rounded	0.3	0.1	0.2	20	Saponite forms around edge

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**
VN1	planar	3	1	Silica	silica forms amorphus crystals that trend in direction of strain
VN2	planar	0	1	Calcite	ascicular tufts of calcite crystals that apperar to follow the same strain direction
VN3	planar	1	1	Celadonite	discreete patches of celadonite around the iron
VN4	planar		1	Fe-ox	fe-ox forms rim

Comments:

Thin section: 329-U1365E-3R-4-W 67/69-TS_08
Depth CSF-A (m): 85.07-85.09
Rock name: phyric basalt
Grain size: 0.25
Texture: ophitic
Where sampled: phyric basalt

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Plagioclase	10	12	1			lath	
Groundmass/matrix							
Plagioclase	24	26	0.02	0.5	0.3	lath	
Pyroxene	15	20	0.05	0.3	0.3	irregular	

		Size				
Secondary mineralogy	**Percent**	**min**	**max**	**mode**	**Replacing/ filling**	**Comments**
Saponite	3					
Oxides	10					

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**
V1	2	spherical	0.3	0.05	0.1		

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**
VN1	linear		0.02	saponite	
VN2	linear		0.02	saponite	
VN3	linear		0.02	saponite	
VN4	linear		0.03	Fe-ox	
VN5	linear		0.02	saponite	
VN6	linear		0.02	saponite	
VN7	linear		0.03	Fe-ox	

Comments: small tiny veins developed, moderately altered

Thin section: 329-U1365E-4R-1-W 5/7-TS_09
Depth CSF-A (m): 85.55-85.57
Rock name: aphyric basalt
Grain size: microcrystalline [324]
Texture: aphyric
Where sampled: mixed vein and halos

Primary mineralogy	Percent present	Percent original	Size min	Size max	Size mode	Shape	Comments
Phenocrysts							
Plagioclase							
Groundmass/matrix							
Plagioclase	57	56	0.05	1	0.3	bladed	partial corrosion and alteration to saponite within halo
Pyroxene	39	38	0.02	1	1	anhedral	sub-ophitic
Olivine	1?	0	0.1	0.3	0.2	subhedral	uncertain of presence, apparent pseudomorphs are present (rough 6-sided)
Opaque	2	2		0.2	0.1	irregular	titanomagnetite?

Secondary mineralogy	Percent	Size min	Size max	Size mode	Replacing/ filling	Comments
Saponite1	10					Within the brown halo iron-variable saponite replaces intersitial
Saponite2	2					areas, cinopyroxene and some plagioclase. The halo boundary is well defined.
Oxides	0.5					Within groundmass alteration is restircted to intersitial areas and some clinopyroxenes.

Vesicles	Modal	Shape	max	min	mode	Fill percent	Comments
V1	0.5	rounded	0.7	0.1	0.3	40	fills edge of vesicle
V2	0.5	rounded	0.7	0.1	0.3	60	fills centre of vesicle

Veins	Shape	Generation	Avg. thickness (mm)	Infilling	Comments
VN1	Planar	2	0.7	Calcite	Blocky calcite crystals, largly overprints Fe-ox.
VN2	Planar	2	7	saponite	Saponite forms fiborous crystals aligned in the direction of strain
VN3	Planar	3	7	Calcite	infilling phases are visible due to discinct growth boundaries.
VN4	Planar	1	7	Fe-ox	remnant slivers remain
VN5	Planar	3	1	Calcite	large block calcite
VN6	Planar	1	1	Fe-ox	Remnant Fe-ox present as a thin line within the vein
VN7	Planar	1	3	Celadonite	Remnant celadonite, partially eveloped by iron oxyhydroxides
VN8	Planar	1	0.7	Fe-ox	Remnant Fe-ox, partially enveloped by calcite
VN9	Planar	2	3	Fe-ox	in same fragement as the celadonite the Fe-ox partially evelops the celadonite. The piece appears to float within a calcite vein, raising the possibility that the peice was dislodged from the vein margin
VN10	Planar	2	1	saponite	Remnant saponite present along the vein edge
VN11	Planar	3	3	Calcite	large blocky (1.5mm) crystals fill majority of the vein

Comments: a clear grandual alteration changes from the alteration zone to relatively fresh zone

Thin section: 329-U1365E-4R-1-W 113/117-TS_10
Depth CSF-A (m): 86.63-86.67
Rock name: aphyric basalt
Grain size: fine grained
Texture: ophitic/spinfex
Where sampled: middle of massive flow

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Plagioclase	0.1	0.1					
Groundmass/matrix							
Plagioclase	15	17	0.2	1.4	0.8	lath to ascicular	
Pyroxene	8	10	0.1	0.6	0.6		

		Size				
Secondary mineralogy	**Percent**	**min**	**max**	**mode**	**Replacing/ filling**	**Comments**
Saponite1	10				Mesostatis/g roundmass	within alteration patch
Carbonate	2					

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**
V1	5	rounded	0.4	0.05	0.2	95	

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**
VN1			0.2	Carbonate	cross cuts alteration patch

Comments: Background alteration exhibits gradual changes in intensity from slight to fresh. Patch exhibits intense alteration. Basalt is fine grained to microcrystalline, aphyric and olivine free.

Thin section: 329-U1365E-5R-1-W 15/18-TS_11
Depth CSF-A (m): 90.65-90.68
Rock name: aphyric basalt
Grain size: microcrystalline
Texture: ophitic
Where sampled: top of massive flow

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Groundmass/matrix							
Plagioclase	25	30	0.2	0.6	0.4	bladed to ascicular	
Pyroxene	8	15	0.1	0.4	0.4	anhedral	

			Size				
Secondary mineralogy	**Percent**		**min**	**max**	**mode**	**Replacing/ filling**	**Comments**
Saponite	5						Total replacement of the groundmass. only skeletal plagioclase in the
Celadonite	2						

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**
V1	2	rounded	0.3	0.1	0.2	95	
V2	1	irregular	0.28	0.1	0.2	100	

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**
VN1	planar		0.8	celadonite	
VN2	planar		2.1	carbonates, celadonite	
VN3	planar		0.5	carbonates	

Comments: Microcrystalline aphyric basalt with three thick celadonite/carbonate veins flanked by dark grey alteration halos.

Thin section: 329-U1365E-5R-3-W 9/13-TS_12
Depth CSF-A (m): 92.57-92.61
Rock name: phyric basalt
Grain size: microcrystalline
Texture: glomeroporphyritic
Where sampled: Alteration patches

			Size				
Primary mineralogy	Percent present	Percent original	min	max	mode	Shape	Comments
Phenocrysts							
Plagioclase	0.3	0.5	0.6		0.5	lath	phenocrysts are not abundant
Pyroxene	3	2.5	0.2	2	0.5	subhedral	grows around plagioclase (sub-ophitic). Altered near to the patches. Large bladed phenocrysts are located in the top right of the thin section.
Groundmass/matrix							
Plagioclase	53	49	0.2	2	0.8	prismatic	subhedral and slightly altered along cleavage lines and fractures
Pyroxene	41	38	0.01	0.6	0.6	irregular	shapre ranges from irregular to subhedral, slightly altered
Olivine	0.5	0	0.01	0.1	0.05	subhedral	totally replaced by fe-saponite (smectite?)
Opaques	3	2		0.2	0.1	irregular	primary opaques are identified in the freshest portion of the groundmass. Fe-Ti oxides? Late stage blastic magnetite occurs around the edges of the plagioclase laths

		Size				
Secondary mineralogy	Percent	min	max	mode	Replacing/ filling	Comments
Saponite1	5					Background alteration is slight to moderate. Celadonite replaces interstitial areas and fills vesicles. Saponite overprints celadonite in areas and partially fills cracks in groundmass plagioclase. Iron oxides are less common. Alteration patches exhibit very high alteration. The original groundmass has been up to 80% replaced. Plagioclase is highly corroded and only remnents of clinopyroxene phenocrysts remain. The patches are disributed around the coarser grained groundmass.
Saponite2	30					
Carbonate	35					
FeOx1	1					
FeOx2	4					
Celadonite1	13					
Celadonite2	10					
Oxides	2					

Vesicles	Modal	Shape	max	min	mode	Fill percent	Comments
V1	0.2	rounded	0.2	0.05	0.1	40	Primary fill
V2	0.2	rounded	0.2	0.05	0.1	60	Later, secondary fill (Center)

Veins	Shape	Generation	Avg. thickness (mm)	Infilling	Comments
VN1	irregular	1	0.1	Celadonite	trace celadonite in the iron oxide vein
VN2	irregular	2	0.1	Fe-ox	Vein branches into numerous veinlets wrapping and partially altering several crystal grains

Comments: slight to highly altered, sparsely phyric, microcrytalline to fine grained basalt with variable textures. Textures observed include sub-ophtitic, and glomeroporphyritic. Alteration consits of saponite and celadonite replacing clinopyroxene, plagioclase and interestitial material in the groundmass. More intense alteration in coarser grain sized portions of the rock include patches in which alteration is near complete. Patches have cores of carbonate. Veins include one iron-oxyhydroxide and celadonite bearing vein that branches into veinlets. Celadonite is nearly 100%overprinted by iron-oxyhydroxides.

Thin section: 329-U1365E-5R-4-W 27/29-TS_14
Depth CSF-A (m): 73.43-73.45
Rock name: aphyric basalt
Grain size: microcrystalline
Texture: massive
Where sampled: massive basalt with multiminerallic vein

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Groundmass/matrix							
Plagioclase	64	64	0.02	0.7	0.3	prismatic	partially altered along cleavage plains
Pyroxene	33	31	0.1	0.3	0.3	blocky	subhedral to anhedral, slight alteration and usually grown around the
Olivine	<0.1						altered to clay minerals
Opaques	3	3		0.1	0.02	euhedral	titanomagnetite, some secondary opaques in altered areas of mesostasis

		Size				
Secondary mineralogy	**Percent**	**min**	**max**	**mode**	**Replacing/ filling**	**Comments**
Saponite1	5					Total replacement of the groundmass. only skeletal plagioclase in the
Saponite2	7					
Saponite3	0.5					
Celadonite1	4					
Celadonite2	1					
FeOx	12					
Oxides	1					

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**
V1	0.5	rounded	0.5	0.1	0.3	80	In background. Celadonite and saponite (second fill generation).
V2	0.5	rounded	0.5	0.1	0.3	100	In green halo. Celadonite.
V3	0.5	rounded	0.5	0.1	0.3	100	in red halo. Fe-ox. Saponite and carbonate. (In this order of fill).

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**
VN1	Irregular	1	0.1	Celadonite	the vein replaing interstitial areas
VN2	irregular	1	0.01	Pyrite	cross cuts groundmass
VN3	Planar	1	0.05	Celadonite	earliest phase, overprinted by other phases. forms green halo
VN4	Planar	3	0.07	Saponite	yellow green to brown depending on iron content
VN5	Planar	2	0.3	Fe-ox	overprints celadonite, forms brown halo
VN6	Planar	4	0.02	Calcite	final stage, fills re-opened vein in center
VN7	irregular	1	0.01	Fe-ox	Numerous veins within the Fe-ox halo, veins take advantage of interstitial zones

Comments: Slightly altered microcrystalline massive basalt. Aphyric, with only few plagioclase phenocrysts. Only two occurences of olivine in the groundmass. One mixed vein is present with 4 phases of repoening and infill (Celadonite, Fe-ox, saponite, and calcite). This vein has two halos, one celadonitic and one with Fe-ox and saponite. The same order of fill is observed here.

Thin section: 329-U1365E-5R-4-W 59/63-TS_13
Depth CSF-A (m): 94.4-94.44
Rock name: Basaltic breccia
Grain size:
Texture:
Where sampled: central portion of massive flow

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Groundmass/matrix							
Carbonate	50	50					matrix is composed of carbonate

		Size				
Secondary mineralogy	**Percent**	**min**	**max**	**mode**	**Replacing/ filling**	**Comments**
Saponite	20					Total replacement of the groundmass. only skeletal plagioclase in the
FeOx	35					
Oxides	1					
Carbonate	50					

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**
VN1	branched		0.2	Saponite	

Comments: Basaltic breccia composed of blocky carbonate matrix and altered basaltic clasts. The clasts are basalt glass, which is highly altered from margin to center

Thin section: 329-U1365E-6R-1-W 5/8-TS_15
Depth CSF-A (m): 95.25-95.28
Rock name: Black calcite
Grain size: microcrystalline
Texture: massive
Where sampled: massive basalt with multiminerallic vein

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Groundmass/matrix							

			Size				
Secondary mineralogy	**Percent**		**min**	**max**	**mode**	**Replacing/ filling**	**Comments**

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**

Comments: crystalline carbonate, many tiny sulfide crystals, and many opaque black inclusions

Thin section: 329-U1365E-6R-1-W 16/19-TS_16
Depth CSF-A (m): 95.36-95.39
Rock name: aphyric basalt
Grain size: cryptocrystalline
Texture:
Where sampled: aphyric cryptocrystalline basalt

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Plagioclase	5	10	0.2			lath	half of the plagioclase are altered to some extent, plagioclase fractures often altered
Groundmass/matrix							
Plagioclase	7	15	0.02	0.1	0.07	narrow lath	bladed partial structure remains on edge of thin section

		Size				
Secondary mineralogy	**Percent**	**min**	**max**	**mode**	**Replacing/ filling**	**Comments**
Saponite	3					phenocryst except for plagioclase have totally been altered
Carbonate	5					
Oxides	50					

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**
V1	1	spherical	0.15	0.03	0.08		

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**
VN1	branched		0.06	Carbonates	
VN2	planar		0.02	Carbonates	
VN3	planar		0.02	Carbonates	

Comments: basalt is alterred to brown color, all crystalls except for pl are altered, several veins developed across the sample, highly altered.

Thin section: 329-U1365E-6R-1-W 46/49-TS_17
Depth CSF-A (m): 95.66-95.69
Rock name: aphyric basalt
Grain size: 0.5
Texture: ophitic
Where sampled: vesicular basalt

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Groundmass/matrix							
Plagioclase	20	25	0.2	2	0.8	lath	
Pyroxene	15	20	0.15	0.9	0.9	irregular	

		Size				
Secondary mineralogy	**Percent**	**min**	**max**	**mode**	**Replacing/ filling**	**Comments**
Saponite	6					
Carbonate	2					pyroxene is replaced by saponite
Oxides	5					

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**
V1	0.1	spherical	0.8	0.2	0.4		

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**

Comments: basalt is slightly altered, most phenocrysts exist, and plagioclase looks fresh.

Thin section: 329-U1365E-7R-2-W 5/9-TS_18
Depth CSF-A (m): 101.04-101.08
Rock name: phyric basalt
Grain size: microcrystalline
Texture: ophitic
Where sampled: massive flow

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Plagioclase	10	12	0.2			laminar, lath	
Groundmass/matrix							
Plagioclase	10	25	0.1	0.3	0.2	needle	most plagioclase are altered
Pyroxene	2	5	0.1	0.2	0.2	irregular	nearly all are altered

		Size				
Secondary mineralogy	**Percent**	**min**	**max**	**mode**	**Replacing/ filling**	**Comments**
Saponite	5					saponite partially replaces the groundmass
Carbonate	3					

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**
V1	2	rounded	0.3	0.1	0.2	95	

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**
VN1	planar		4	saponite, carbonate	
VN2	planar		0.2	saponite	

Comments: Microcrystalline plagioclase phyric basalt that is slightly altered. A thick vein filled by saponite and carbonate is present.

Thin section: 329-U1365E-7R-3-W 1/6-TS_20
Depth CSF-A (m): 102.36-102.41
Rock name: aphyric basalt
Grain size: microcrystalline
Texture: aphyrics
Where sampled: flow top

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Groundmass/matrix							
Plagioclase	5	15	0.1	0.5	0.3	lath	mostly altered
Pyroxene	1	5	0.02	0.05	0.05	irregular	all altered

		Size				
Secondary mineralogy	**Percent**	**min**	**max**	**mode**	**Replacing/ filling**	**Comments**
Saponite	5					
Carbonate	20					

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**
VN1	vein net		4	carbonates and saponite	

Comments: totally altered basalt, nearly no fresh Pl

Thin section: 329-U1365E-7R-3-W 22/25-TS_19
Depth CSF-A (m): 102.57-102.6
Rock name: phyric basalt
Grain size: microcrystalline
Texture: spinifex
Where sampled: massive flow

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Plagioclase	10	20	0.6		0.5	irregular	nearly half are altered
Pyroxene	2	4	0.2	1	0.5	irregular	all are altered to large extent
Groundmass/matrix							
Plagioclase	15	25	0.02	0.3	0.1	needle	nearly all are altered to different degrees
Pyroxene	1	10					nearly no pyroxene exists

			Size				
Secondary mineralogy	**Percent**		**min**	**max**	**mode**	**Replacing/ filling**	**Comments**
Saponite	20						
Carbonate	5						
Celadonite	3						
Oxides	5						

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**
V1	5	rounded	0.6	0.2	0.4	80	

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**
VN1	planar		3		Carbonates, celadonite, Fe-ox
VN2	branched		0.4		Carbonates, celadonite
VN3	planar		0.6		Carbonates, celadonite, saponite
VN4	branched		0.3		Carbonates, celadonite, Fe-ox

Comments: Highly altered microcrystalline phyric basalt with four veins.

Thin section: 329-U1365E-8R-2-W 54/58-TS_21
Depth CSF-A (m): 106.44-106.48
Rock name: phyric basalt
Grain size: microcrystalline
Texture: ophitic
Where sampled: massive flow

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Plagioclase	8	8	4				fresh, most Pl phenocrysts have melt inclusions
Groundmass/matrix							
Plagioclase	30	31	0.02	0.5	0.3	lath	very few altered, most without melt inclusions
Pyroxene	10	12	0.02	0.3	0.3		

		Size				
Secondary mineralogy	**Percent**	**min**	**max**	**mode**	**Replacing/ filling**	**Comments**
Saponite	5					Total replacement of the groundmass. only skeletal plagioclase in the
Carbonate	5					

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**
V1	2	rounded	0.3	0.1	0.1	5	

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**
VN1	planar		0.3	carbonates	
VN2	planar		0.1	carbonates	

Comments: Microcrystalline phyric slightly altered basalt. Plagioclase is fresh, however clinopyroxene is slightly corroded plagioclase phenocrysts contain well developed melt inclusions.

Thin section: 329-U1365E-8R-3-W 3/6-TS_25
Depth CSF-A (m): 107.14-107.17
Rock name: phyric basalt
Grain size: microocrystalline
Texture: ophitic
Where sampled: massive flow

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Plagioclase	15	20	0.5			bladed	mostly fresh, Melt inclusions developed
Groundmass/matrix							
Plagioclase	25	30	0.1	0.5	0.4	lath	mostly fresh, but are altered near veins
Pyroxene	10	15	0.1	0.2	0.2	subhedral	

		Size				
Secondary mineralogy	**Percent**	**min**	**max**	**mode**	**Replacing/ filling**	**Comments**
Saponite	4					
Carbonate	3					
Celadonite	0.5					
Oxides	2					

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**
VN1	planar		0.1	Fe-ox, carbonate	
VN2	branched		0.2	carbonates	
VN3	planar		0.1	carbonates	
VN4	planar		0.1	carbonates, saponite	
VN5	branched		0.2	carbonates, saponite	
VN6	planar		0.15	carbonates	
VN7	branched		0.3	carbonates, Fe-ox, celadonite	

Comments: many small veins, including carbonate vein, celadonite vein, moderately altered

Thin section: 329-U1365E-8R-3-W 126/129-TS_22
Depth CSF-A (m): 108.37-108.4
Rock name: moderately phyric basalt
Grain size: cryptocrystalline
Texture: massive
Where sampled: Within igneous contact

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Plagioclase	3	3	0.5			lath	very fresh, only minor secondary fill
Groundmass/matrix							
Plagioclase1	65	65	0.02	0.6	0.3	bladed	narrow well preserved bladed to ascicular basaltic crystals
Plagioclase2	56	54	<0.02	0.15	0.02	acicular	partially altered basalt
Pyroxene1	30	28	<0.01	0.07	0.07	anhedral	relatively fresh
Pyroxene2	25	23	0.04	0.1	0.1	anhedral	slightly altered, crystals are larger than the unit 'host flow'
Olivine	10	0	0.04	0.5	0.2	subhedral	replaced by iddingsite?

		Size				
Secondary mineralogy	**Percent**	**min**	**max**	**mode**	**Replacing/ filling**	**Comments**
Saponite1	3					Total replacement of the groundmass. only skeletal plagioclase in the
Saponite2	5					
Saponite3	1					
FeOx1	2					
FeOx2	0.5					
Celadonite1	7					
Celadonite2	2					
Carbonate	20					
Oxides	40					

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**
V1							vesicle free

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**
VN1	branched	1	0.2	Fe-ox	discreete vain fill present in margins and at vein tips
VN2	branched	1	0.02	celadonite	present in very narrow 3rd order veinlets from the main branching vein
VN3	branched	3	0.2	Calcite	overprints and fills central portion of vein. Crystal grains have grown syn tectectonically in direction of vein opening.
VN4	branched	2	0.2	Saponite	overprints iron oxyhydroxides and celadonite. In the main vein crystals have grown syn tectectonically in direction of vein opening.

Comments: Massive basaltic lava flow margin with chilled margins. Basalt is microcrystalline to cryptocrystalline (at chilled margins) and only very slightly altered (celadontie and minor saponite). Phenocrysts are common (3%) and they consist entirely of plagioclase. In between the chilled margins is a cryptocrytslline basaltic fill. the basalt has the same phenocryst content, however the groundmass is finer and it contains more clinopyroxene and olivine (altered to iddingsite). Flwo textures - picked out by discontinous and alteration of olivine and interstitial areas imply that this is a flow cavity filling from the next flow. A pertion within the flow cavity contains a very high number of secondary opaques, quartz, plagioclase and clinopyroxene. Celadonite and saponite are present within this fill.

Thin section: 329-U1365E-8R-3-W 131/134-TS_23
Depth CSF-A (m): 108.42-108.45
Rock name: phyric basalt
Grain size: glassy [324]
Texture:
Where sampled: flow margin

			Size				
Primary mineralogy	Percent present	Percent original	min	max	mode	Shape	Comments
Phenocrysts							
Plagioclase	3	8	0.05		0.1		mostly altered

Groundmass/matrix

		Size				
Secondary mineralogy	Percent	min	max	mode	Replacing/ filling	Comments
Saponite	2					Total replacement of the groundmass. only skeletal plagioclase in the groundmass is visible on the thin edges of the thin section. Saponite is stained by Fe-ox.
Carbonate	15					

Vesicles	Modal	Shape	max	min	mode	Fill percent	Comments
V1	1	rounded	0.4	0.1	0.3	80	

Veins	Shape	Generation	Avg. thickness (mm)	Infilling	Comments
VN1	branched		5	Carbonates	
VN2	planar		0.24	saponite	

Comments: Intensively altered basalt from the sediment basement interface. Groundmass is almost totally obscured by alteration, however it appears to be plagioclase phyric and the groundmass is cryptocrystalline. Secondary minerals include an unknown phyllosilicate, saponite and iron oxyhydroxides. Vesicles are filled with Fe-ox followed by saponite. One polymineralic vein (Saponite, Fe-ox, unknown phyllosilicate) with a Fe-ox/saponite halo is present.

Thin section: 329-U1365E-8R-3-W 135/139-TS_24
Depth CSF-A (m): 108.46-108.5
Rock name: breccia
Grain size:
Texture:
Where sampled: breccia, flow margin

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Groundmass/matrix							matrix is carbonate, crystalline

			Size				
Secondary mineralogy	**Percent**		**min**	**max**	**mode**	**Replacing/ filling**	**Comments**

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**
V1	5	rounded	1.2	0.1	0.5	80	saponite replaces carbonate

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**

Comments: Hyaloclastite breccia composed of glassy clasts and carbonate matrix. The clasts are highly altered to saponite and Fe-ox.

Thin section: 329-U1365E-8R-4-W 3/6-TS_27
Depth CSF-A (m): 108.57-108.6
Rock name: Hyaloclastite breccia
Grain size: Glassy[324]/microcrystalline/coarse grained
Texture: holohyaline/glassy/Glomerocrystic
Where sampled: Hyaloclastite breccia at top of massive flow

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Plagioclase	4	3.5	0.1		0.2	prismatic	fresh to partially corroded
Pyroxene	1	0.2	0.1	0.3	0.2	subhedral	found with plagioclase agglomerations
Groundmass/matrix							
Plagioclase	60	2					Near complete alteration to saponite within the basaltic clasts
Pyroxene	35	1	<0.1	0.1	0.1	anhedral	groundmass is entirely replaced
Opaques	3	1		<0.1	0.1	subhedral	replaced by Fe-ox

		Size				
Secondary mineralogy	**Percent**	**min**	**max**	**mode**	**Replacing/ filling**	**Comments**
Saponite1	68					Basaltic clasts
Saponite2	70					Glassy clasts
Saponite3	10					Matrix
Carbonate1	1					
Carbonate2	50					
FeOx1	10					
FeOx2	10					
FeOx3	4					
Celadonite	6					
Oxides1	2					
Oxides2	1					
Oxides3	2					

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**
V1	0.2	rounded	0.1	0.02	0.06	100	Within the basaltic clasts
V2	0.3	rounded	0.1	0.02	0.06	100	Within the basaltic clasts
V3	0.1	rounded	0.1	0.02	0.06	100	Within the basaltic clasts
V4	0.1	rounded	0.1	0.02	0.06	100	Within the basaltic clasts

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**
VN1	irregular	1	<0.1	Fe-ox	numerous cooling fracture veins in the glass with alteration
VN2			<0.1	Quartz	propegating into the glass from them.
VN3	irregular	1	<0.1	saponite	
VN4			<0.1	carbonates	

Comments: Hayloclastite breccia composed of 80% altered glassy clasts and completeley altered basaltic clasts. Matrix is composed of tiny basaltic and glass fragments, calcite and silicates (chalcedony). Some small crystals of Fe-ox and celadonite are also present. The glass clasts are almost completley altered, some of which exhibit alteration zoning that propegates from the cooling fractures. The basaltic clasts are highly altered to Fe-rich saponite and Fe-ox. Phenocrysts within some of the fragments are relativly fresh and contain remnenent groundmass structure (microcrystalline to cryptocrystalline veriolitic texture) which is associated with agglomerations of relatively fresh plagioclase and clinopyroxene phenocrysts.
In localised zones within the altered glass fragments along cooling cracks, numerous tube like structures are present. These are typically 5 to 15 microns wide and 100 microns long. Morphology ranges from irregular, spiraled and branched. Widthe within the tubes is relativley continous to the point of termination.

Thin section: 329-U1365E-8R-4-W 59/61-TS_26
Depth CSF-A (m): 109.13-109.15
Rock name: phyric basalt
Grain size: cryptocrystalline
Texture: spinifex
Where sampled: massive flow basalt

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Plagioclase	5	6	0.3		0.15	lath	
Pyroxene	2	3	0.1	0.2	0.15	irregular	
Groundmass/matrix							
Plagioclase	10	10	0.01	0.05	0.02	needle	
Pyroxene	2	4	0.02	0.1	0.1	regular	

		Size				
Secondary mineralogy	**Percent**	**min**	**max**	**mode**	**Replacing/ filling**	**Comments**
Celadonite	2					Total replacement of the groundmass. only skeletal plagioclase in the groundmass is visible on the thin edges of the thin section. Saponite is stained by Fe-ox.

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**
V1	2	sub-rounded	0.4	0.1	0.3	95	
V2	0.1	rounded	0.3	0.3	0.3	50	

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**

Comments:

Thin section: 329-U1365E-9R-3-W 112/114-TS_28
Depth CSF-A (m): 113.76-113.78
Rock name: aphyric basalt
Grain size: microcrystalline
Texture: ophitic
Where sampled: massive flow

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Groundmass/matrix							
Plagioclase	10	15	0.2	0.6	0.4	lath	
Pyroxene	8	12	0.04	0.3	0.3	irregular	

		Size			
Secondary mineralogy	**Percent**	**min**	**max**	**mode**	**Replacing/ filling**	**Comments**
Saponite	2					
Carbonate	8					
Oxides	5					

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**
V1	5	irregular	3	0.2		100	
V2	2	irregular	3	0.2		95	

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**
VN1	planar		0.4	carbonates	
VN2	planar		0.15	saponite	

Comments: vein with narrow alteration halo, slightly altered

Thin section: 329-U1365E-10R-1-W 76/79-TS_29
Depth CSF-A (m): 115.46-115.49
Rock name: aphyric basalt
Grain size: fine grained
Texture: porphyritic / phyric
Where sampled: Massive basaltic flow near centre

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Groundmass/matrix							
Plagioclase	20	21	0.1	1.4	0.6		
Pyroxene	10	12	0.1	0.2	0.2	irregular	

		Size				
Secondary mineralogy	**Percent**	**min**	**max**	**mode**	**Replacing/ filling**	**Comments**
Saponite	3					Total replacement of the groundmass. only skeletal plagioclase in the groundmass is visible on the thin edges of the thin section. Saponite is stained by Fe-ox.
Carbonate	2					

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**
V1	2	subrounded	0.3	0.05	0.1	5	

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**
VN1	planar		0.2	carbonates,saponite	

Comments: Slightly altered basalt. Fine grained massive aphyric basalt with slight background lateration. Vein is composed of saponite and late stage carbonate.

Thin section: 329-U1365E-11R-1-W 100/104-TS_30
Depth CSF-A (m): 116.7-116.74
Rock name: aphyric basalt
Grain size: glassy to cryptocrystalline
Texture: spinifex
Where sampled: massive flow

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Plagioclase	3	3	0.15		0.2	lath	
Pyroxene	1	1.5	0.1	0.4	0.2		

Groundmass/matrix

			Size				
Secondary mineralogy	**Percent**		**min**	**max**	**mode**	**Replacing/ filling**	**Comments**
Celadonite	5						pyroxene is partially replaced by celadonite.

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**
V1	5	rounded	0.45	0.08	0.2	100	

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**
VN1	cross-cut		0.2	Fe-ox	carbonates and saponite

Comments: the groundmass is glassy to crypotocrystalline, the glass is fresh, several tiny veins developed in the glassy part, all the vesicles are filled by celadonite

Thin section: 329-U1365E-11R-3-W 14/16-TS_31
Depth CSF-A (m): 118.15-118.17
Rock name: aphyric basalt
Grain size: glassy to cryptocrystalline
Texture: spinifex
Where sampled: massive flow

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Groundmass/matrix							
Plagioclase	10	14	0.03	0.2	0.1	needle	
Pyroxene	5	8	0.1	0.15	0.15	irregular	

		Size			
Secondary mineralogy	**Percent**	**min**	**max**	**mode**	**Replacing/ filling**	**Comments**
Saponite	1					
Carbonate	5					
Celadonite	5					
Oxides	1					

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**
V1	5	rounded	0.5	0.2	0.4	40	

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**
VN1	planar		3.5	celadonite, carbonate	

Comments: Cryptocrystalline to glassy, massive basalt with moderate background alteration. One thick vein composed of carbonate and celadonite is present.

Thin section: 329-U1365E-12R-1-W 24/26-TS_32
Depth CSF-A (m): 119.94-119.96
Rock name: aphyric basalt
Grain size: microcrystalline
Texture: spinifex
Where sampled: massive flow

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Plagioclase	0.1	0.1	1.8				
Groundmass/matrix							
Plagioclase	25	26	0.02	0.3	0.1	lath	
Pyroxene	10	15	0.1	0.2	0.2	irregular	

		Size				
Secondary mineralogy	**Percent**	**min**	**max**	**mode**	**Replacing/ filling**	**Comments**
Saponite	0.5					
Carbonate	1					
Celadonite	2					

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**
V1	2	rounded	0.6	0.2	0.4	100	

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**
VN1	linear	1	0.6	celadonite, carbonate	

Comments: Microcrystalline aphyric massive basalt with slight background alteration. Vein of celadonite and carbonate is present. No halo flanks the vein.

Thin section: 329-U1365E-12R-2-W 73/75-TS_33
Depth CSF-A (m): 121.55-121.57
Rock name: aphyric basalt
Grain size: microcrystalline
Texture: spinifex
Where sampled: thin flow

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Plagioclase	2	3	0.4			lath	
Spinel	1						
Groundmass/matrix							
Plagioclase	10	15	0.02	0.35	0.2	needle	most are slightly altered
Pyroxene	1		0.04	0.2	0.2	irregular	

		Size				
Secondary mineralogy	**Percent**	**min**	**max**	**mode**	**Replacing/ filling**	**Comments**
Saponite	2					
Carbonate	4					
Celadonite	1					

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**
V1	4	subrounded	0.6	0.1	0.4		
V2	4	subrounded	0.6	0.1	0.4		

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**
VN1	branched		0.8	carbonate, saponite	

Comments: Thick vein halo, in the halos nearly all the pyroxene are altered, one olivine is altered and replaced by mostly saponite and little celadonite. Microcrystalline aphyric massive basalt with slight background alteration.

Thin section: 329-U1365E-12R-4-W 25/29-TS_34
Depth CSF-A (m): 123.93-123.97
Rock name: aphyric basalt
Grain size: microcrystalline
Texture: ophitic
Where sampled: massive flow

			Size				
Primary mineralogy	**Percent present**	**Percent original**	**min**	**max**	**mode**	**Shape**	**Comments**
Phenocrysts							
Plagioclase	1	1	0.5			lath	
Groundmass/matrix							
Plagioclase	20	25	0.2	0.45	0.3	lath	
Pyroxene	10	15	0.02	0.1	0.1	irregular	

		Size				
Secondary mineralogy	**Percent**	**min**	**max**	**mode**	**Replacing/ filling**	**Comments**
Saponite	8					good crystal of sulfide, the groundmass was replaced by saponite
Oxides	5					

Vesicles	**Modal**	**Shape**	**max**	**min**	**mode**	**Fill percent**	**Comments**
V1	20	subrounded	6	0.2	2	30	

Veins	**Shape**	**Generation**	**Avg. thickness (mm)**	**Infilling**	**Comments**

Comments: Aphyric, microcrystalline, ophitic basalt, pervasive alteration, many vesicles, saponite replaced for groundmass

Thin section: 329-U1365E-12R-4-W 70/72-TS_35
Depth CSF-A (m): 124.38-124.4
Rock name: sparsely phyric basalt
Grain size: cryptocrystalline
Texture: adcumulate
Where sampled: massive flow

			Size				
Primary mineralogy	Percent present	Percent original	min	max	mode	Shape	Comments
Phenocrysts							
Plagioclase	3	4	0.4			lath	
Groundmass/matrix							

		Size				
Secondary mineralogy	Percent	min	max	mode	Replacing/ filling	Comments
Saponite	3					
Carbonate	5					

Vesicles	Modal	Shape	max	min	mode	Fill percent	Comments
V1	10	spherical	0.7	0.1	0.4		
V2	2	spherical	0.6	0.2	0.4		

Veins	Shape	Generation	Avg. thickness (mm)	Infilling	Comments
VN1	planar		1.3	carbonates, sulfide	
VN2	curved		0.04	sulfide	

Comments: pervasive alteration, moderately altered