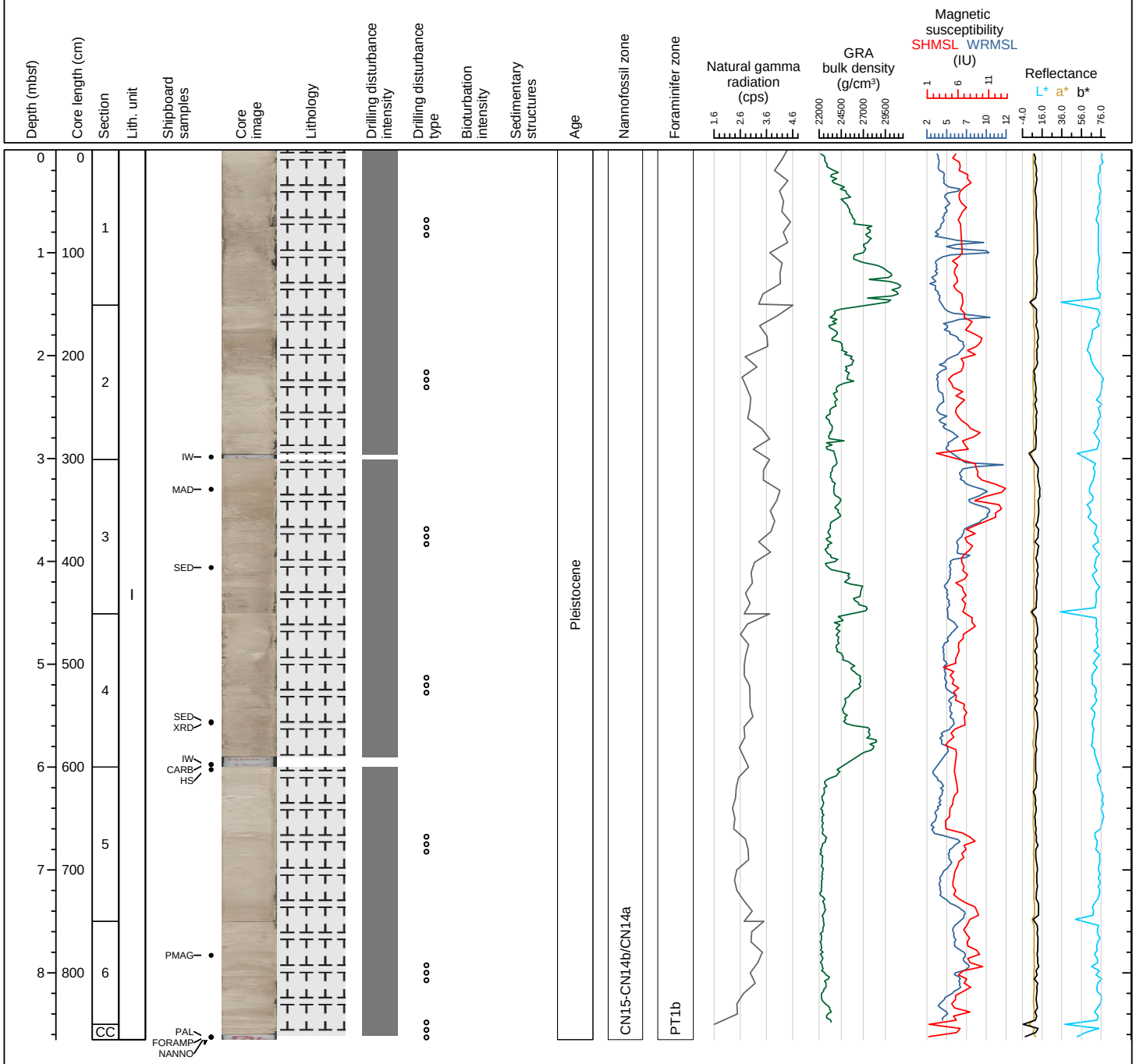
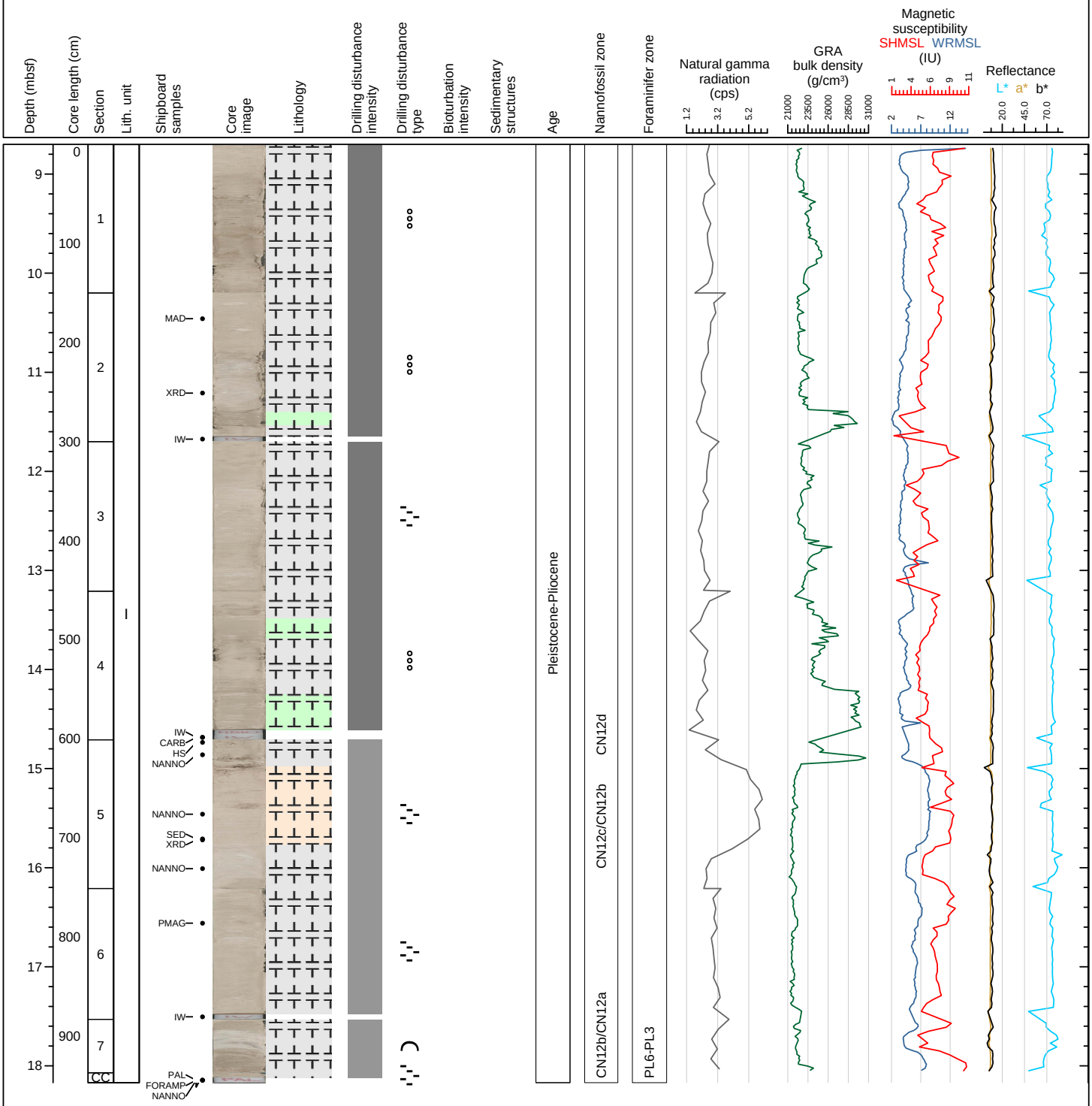
Hole 391-U1578A Core 1R, Interval 0.0-8.65 m (CSF-A)

Very pale brown foraminifera-nannofossil ooze with clay. The soupy to slurry texture of the ooze has led to significant drilling disturbance.



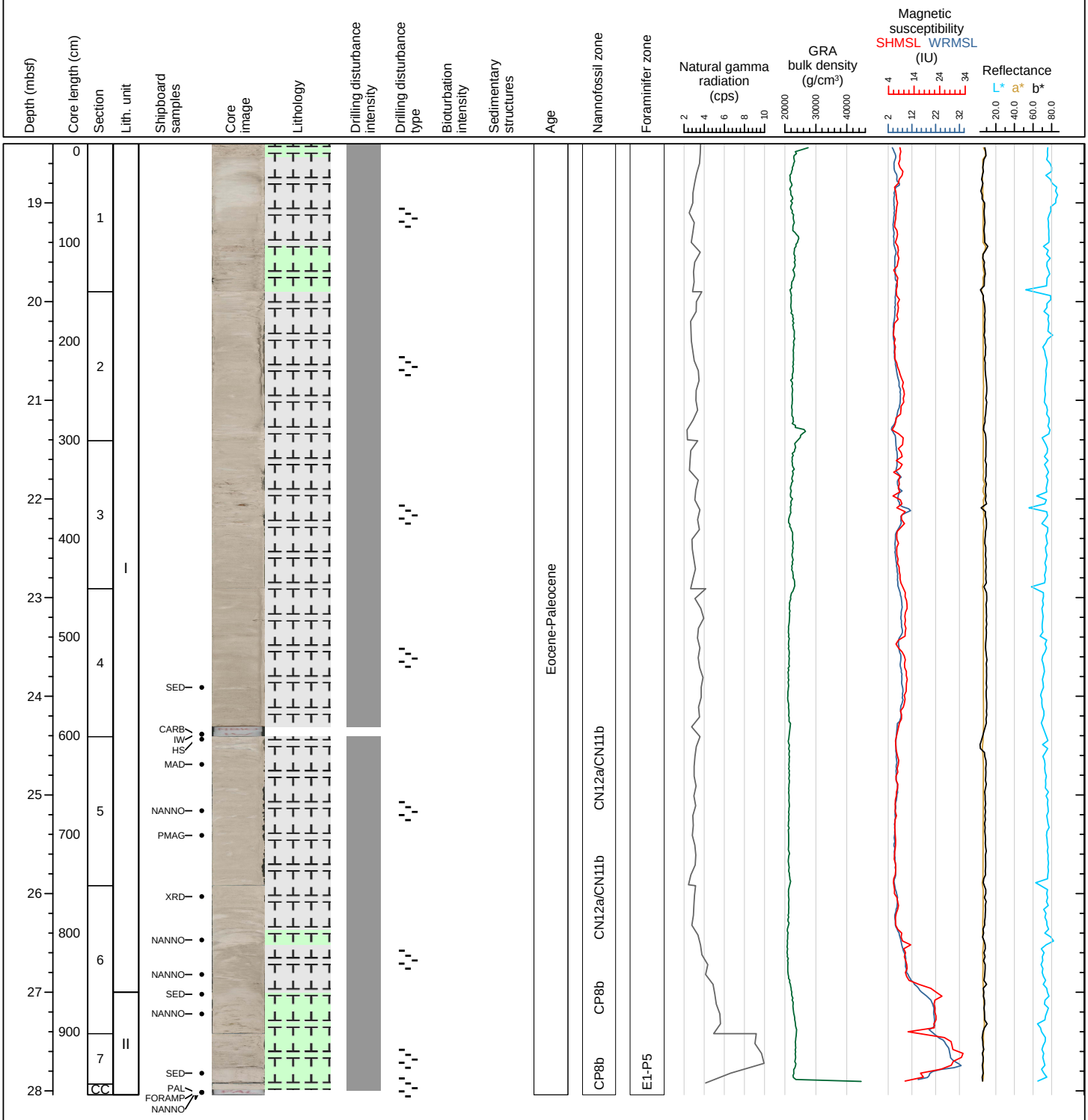
Hole 391-U1578A Core 2R, Interval 8.7-18.17 m (CSF-A)

Very pale brown foraminifera-nannofossil ooze with clay and nannofossil ooze with clay and foraminifera. Section 391-U1578A-2R-5 includes an interval of older pink nannofossil-clayey ooze interpreted as mass transport deposit. The soupy to slurry texture of the ooze has led to significant drilling disturbance.



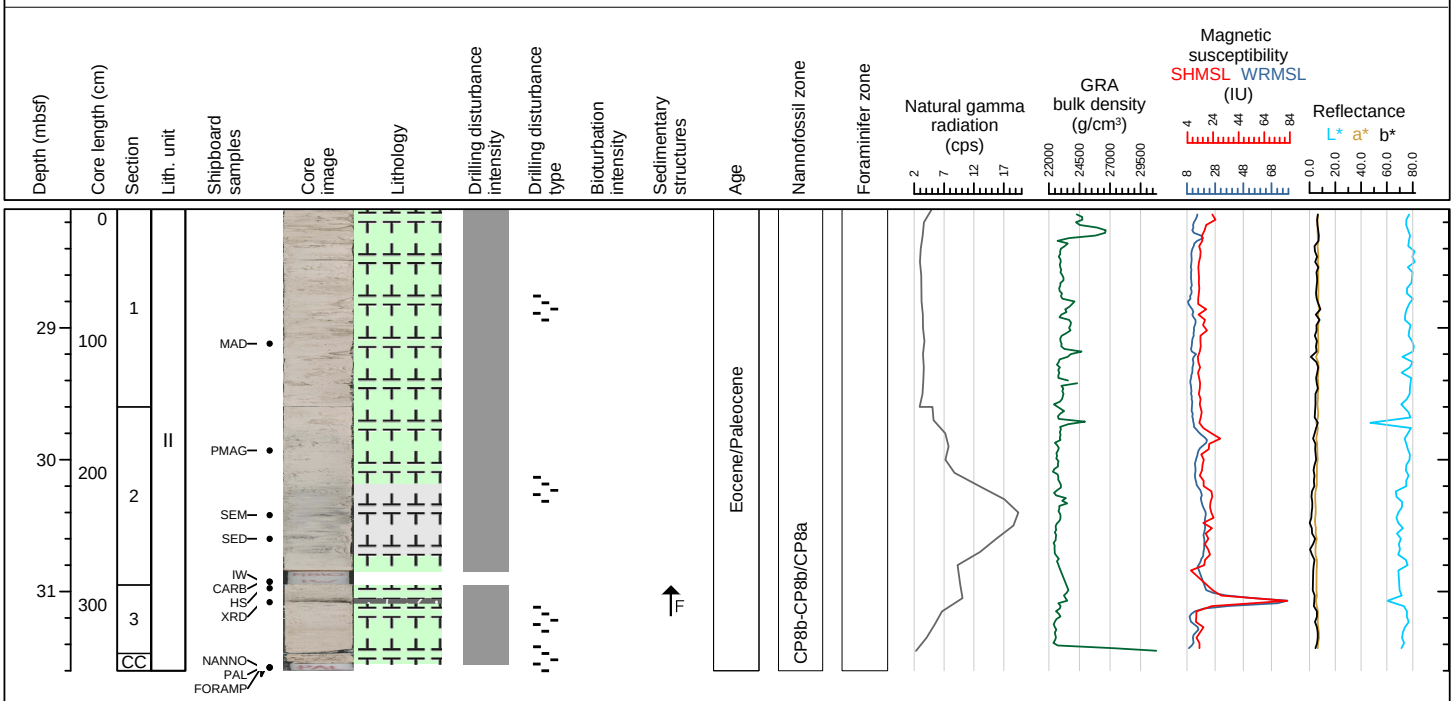
Hole 391-U1578A Core 3R, Interval 18.4-28.04 m (CSF-A)

Above 391-U1578A-3R-6, 108cm: White to pink nannofossil ooze with clay and foraminifera-nannofossil ooze with clay. The soupy to slurry texture of the ooze has led to significant drilling disturbance. Below 391-U1578A-3R-6, 108cm: White to pale brown nannofossil ooze and nannofossil ooze with volcaniclasts and clay. Poor consolidation is accompanied by significant drilling disturbance and loss of the original stratigraphy of tephra layer(s).



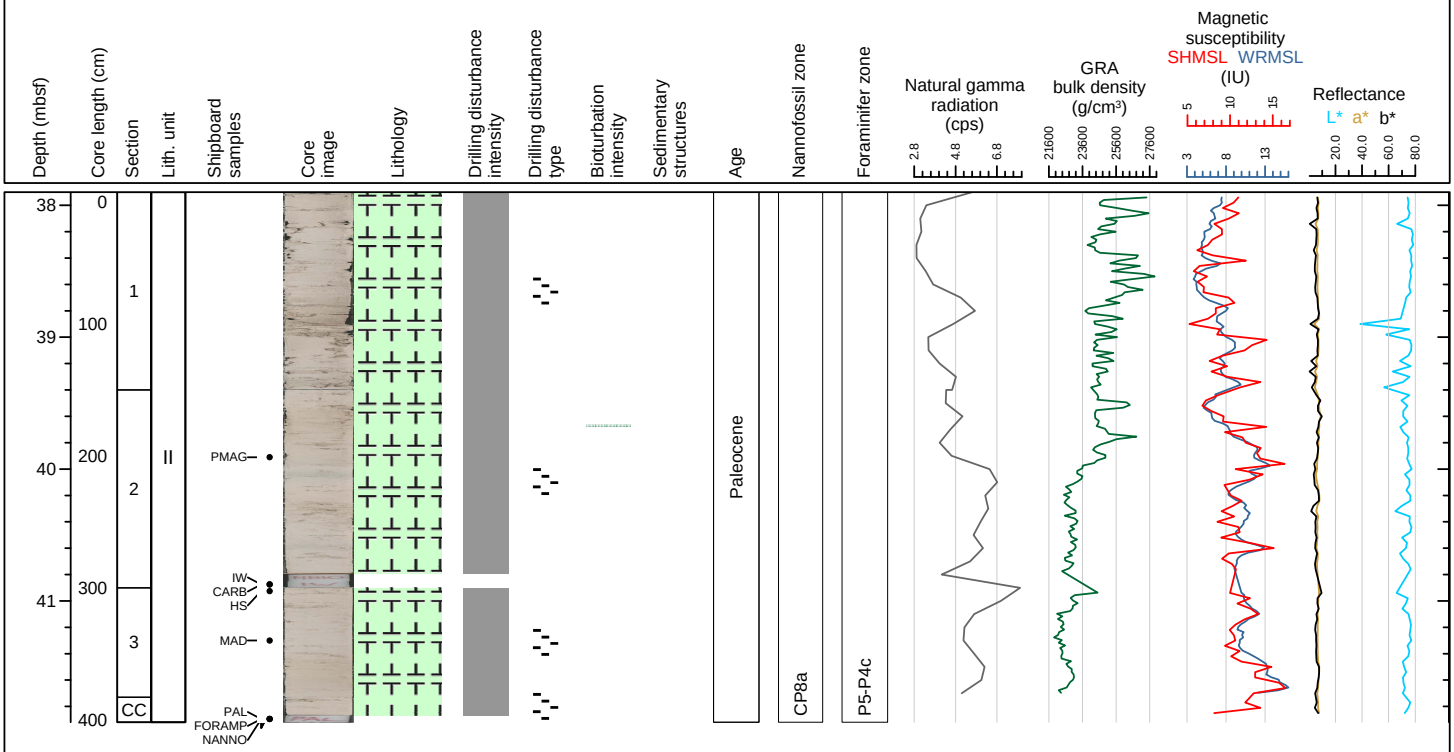
Hole 391-U1578A Core 4R, Interval 28.1-31.6 m (CSF-A)

White nannofossil ooze and nannofossil ooze with dark gray ash and one dark gray tephra layer partly disturbed by drilling. Poor consolidation is accompanied by significant drilling disturbance and limited recovery.



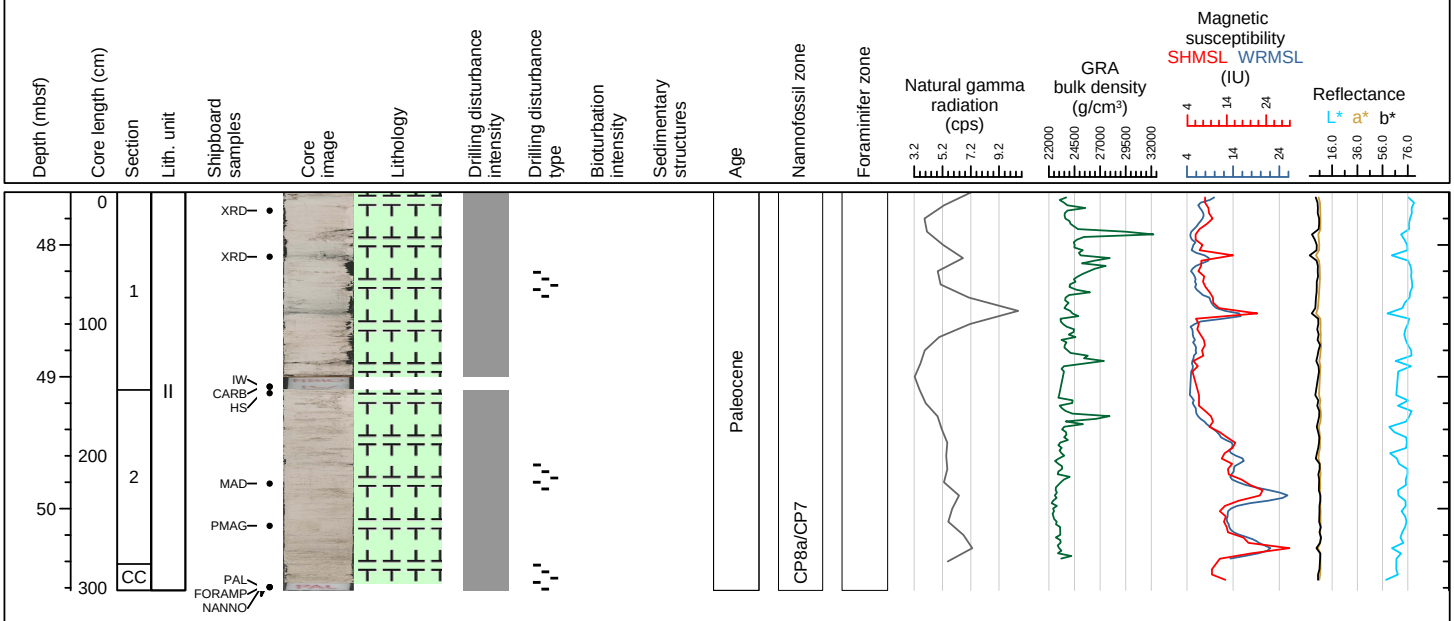
Hole 391-U1578A Core 5R, Interval 37.9-41.92 m (CSF-A)

White to pink nannofossil ooze with clay and ooze with ash. The ash represents gray tephra layers disturbed by drilling and/or bioturbation. Poor consolidation is accompanied by significant drilling disturbance and limited recovery.



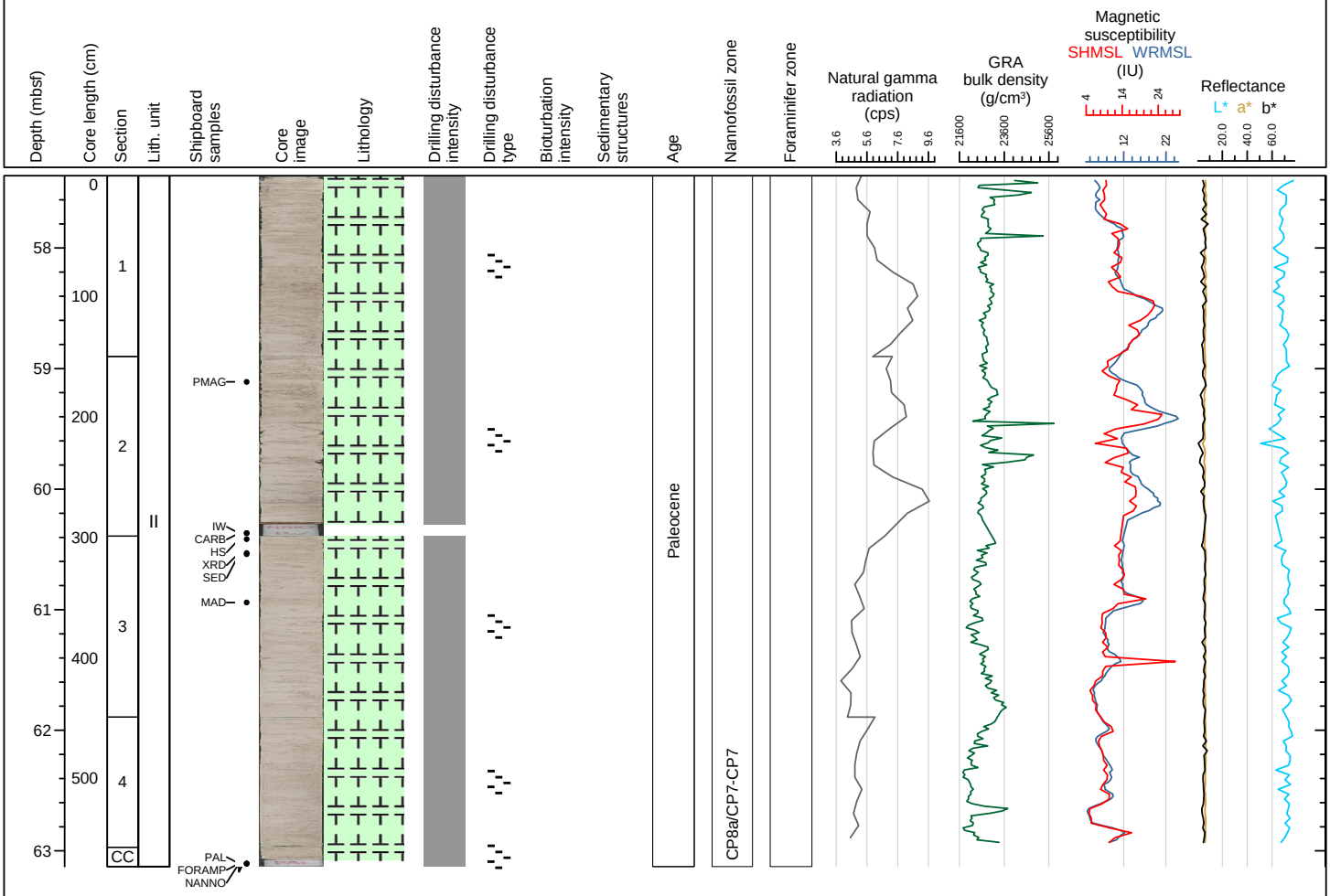
Hole 391-U1578A Core 6R, Interval 47.6-50.62 m (CSF-A)

White to very pale brown nannofossil ooze with clay and gray ooze with ash. The ash represents tephra layers disturbed by drilling and/or bioturbation. Poor consolidation is accompanied by significant drilling disturbance and limited recovery. There are possible remnants of bioturbation in the ooze.



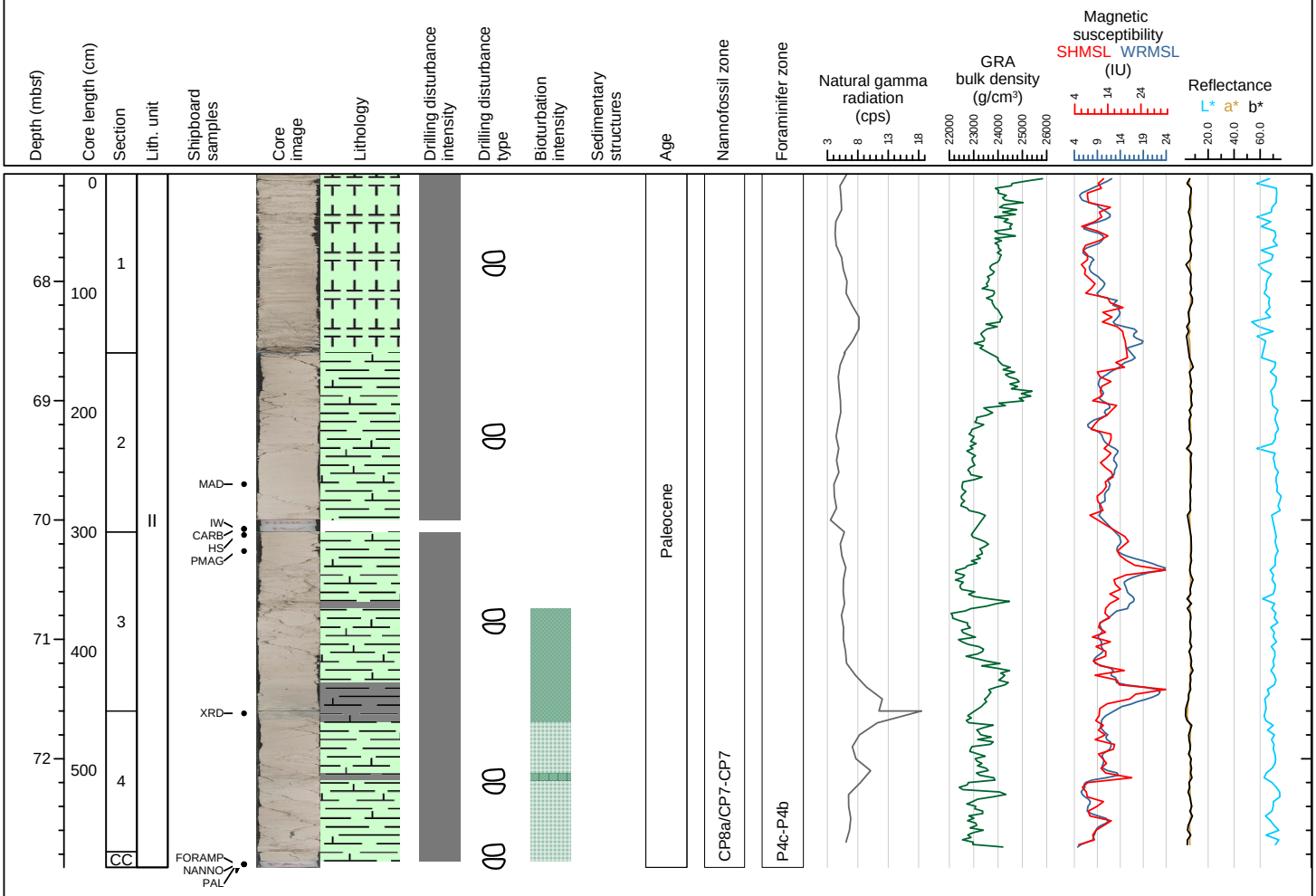
Hole 391-U1578A Core 7R, Interval 57.4-63.13 m (CSF-A)

White to very pale brown nannofossil ooze with clay. Minor dark ash patches likely represent tephra layers disturbed by drilling and/or bioturbation. Poor consolidation is accompanied by significant drilling disturbance and limited recovery. There are possible remnants of bioturbation in the ooze.



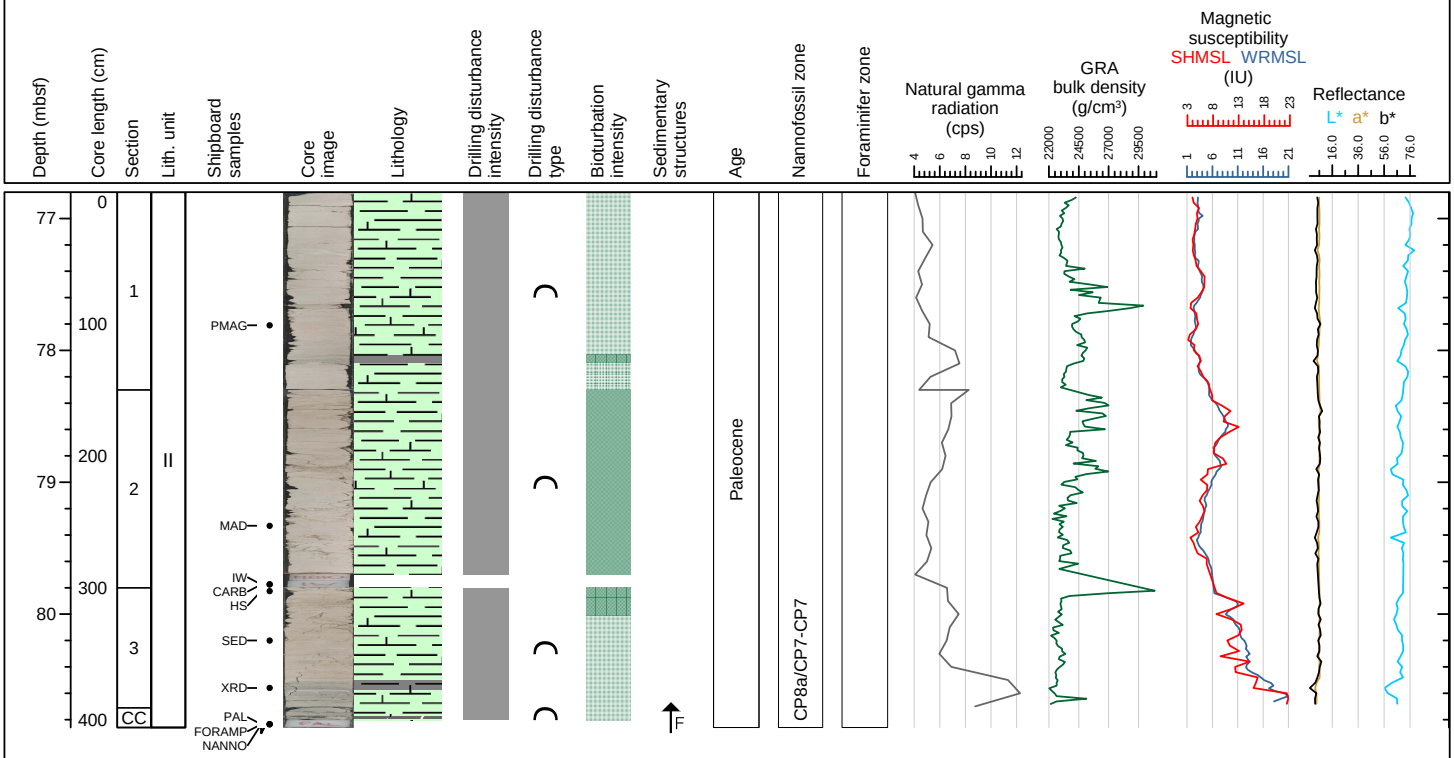
Hole 391-U1578A Core 8R, Interval 67.1-72.91 m (CSF-A)

White nannofossil ooze with clay and light gray nannofossil ooze with ash. The sediment becomes more consolidated in the lower part of the core, to form nannofossil chalk with clay and tuffaceous chalk with clay. Poor consolidation is accompanied by significant drilling disturbance and limited recovery. There are possible remnants of bioturbation in the ooze and chalk.



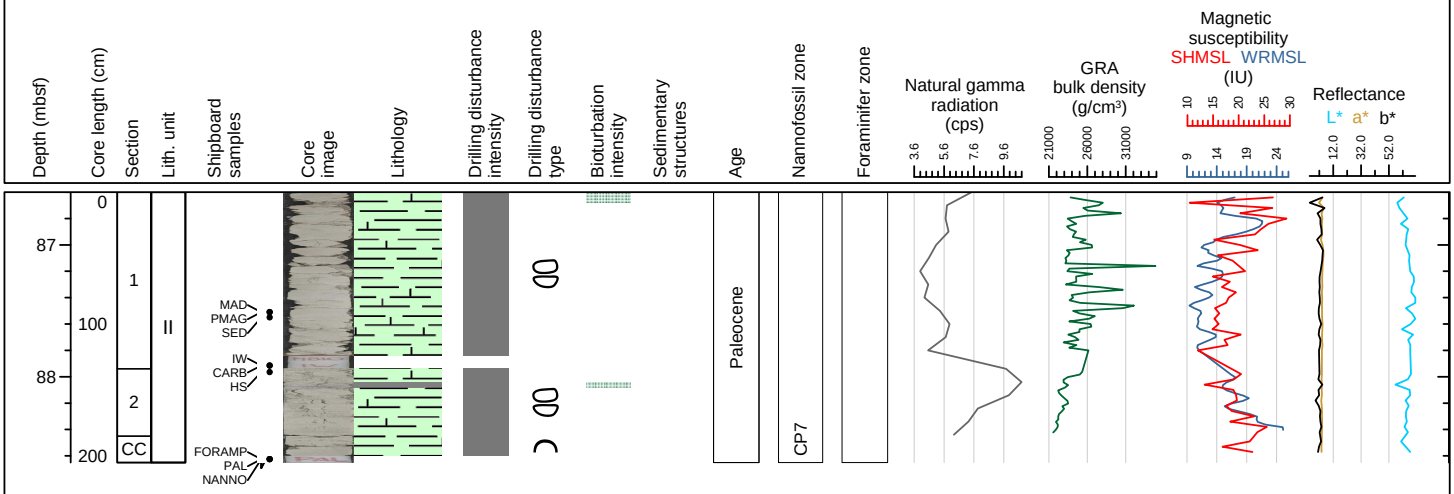
Hole 391-U1578A Core 9R, Interval 76.8-80.86 m (CSF-A)

White nannofossil chalk, light gray and pinkish gray nannofossil chalk with clay, and tuffaceous chalk with clay. Rare tuff layers disturbed by drilling occur. Bedding and bioturbation are only partly preserved due to significant drilling disturbance in this poorly consolidated sediment.



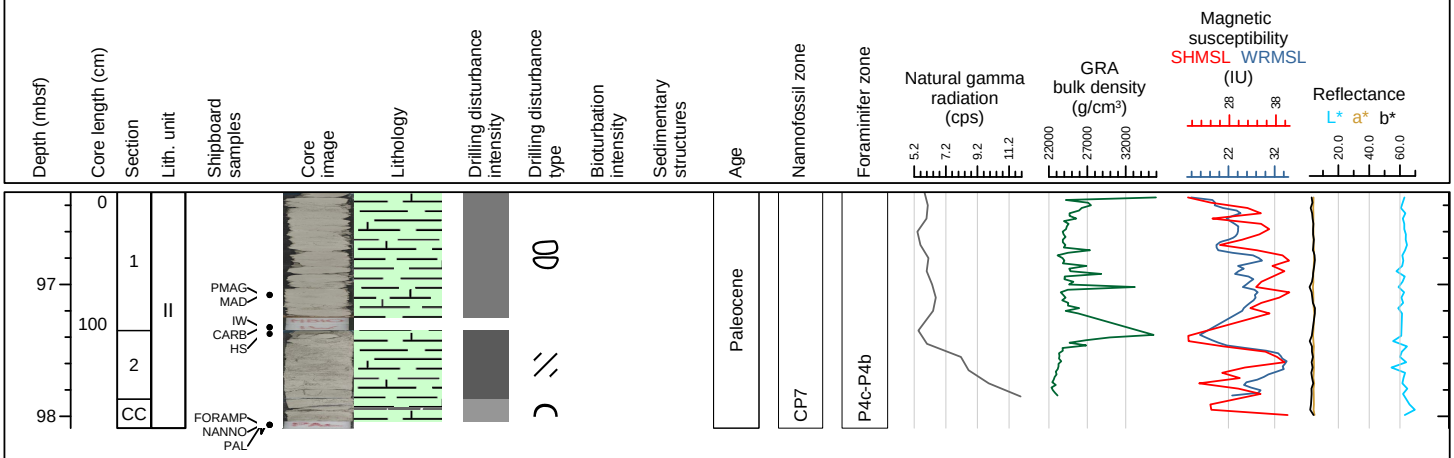
Hole 391-U1578A Core 10R, Interval 86.6-88.65 m (CSF-A)

Light gray bioturbated nannofossil chalk with clay and gray tuffaceous chalk. Bedding and bioturbation are only partly preserved due to significant drilling disturbance.



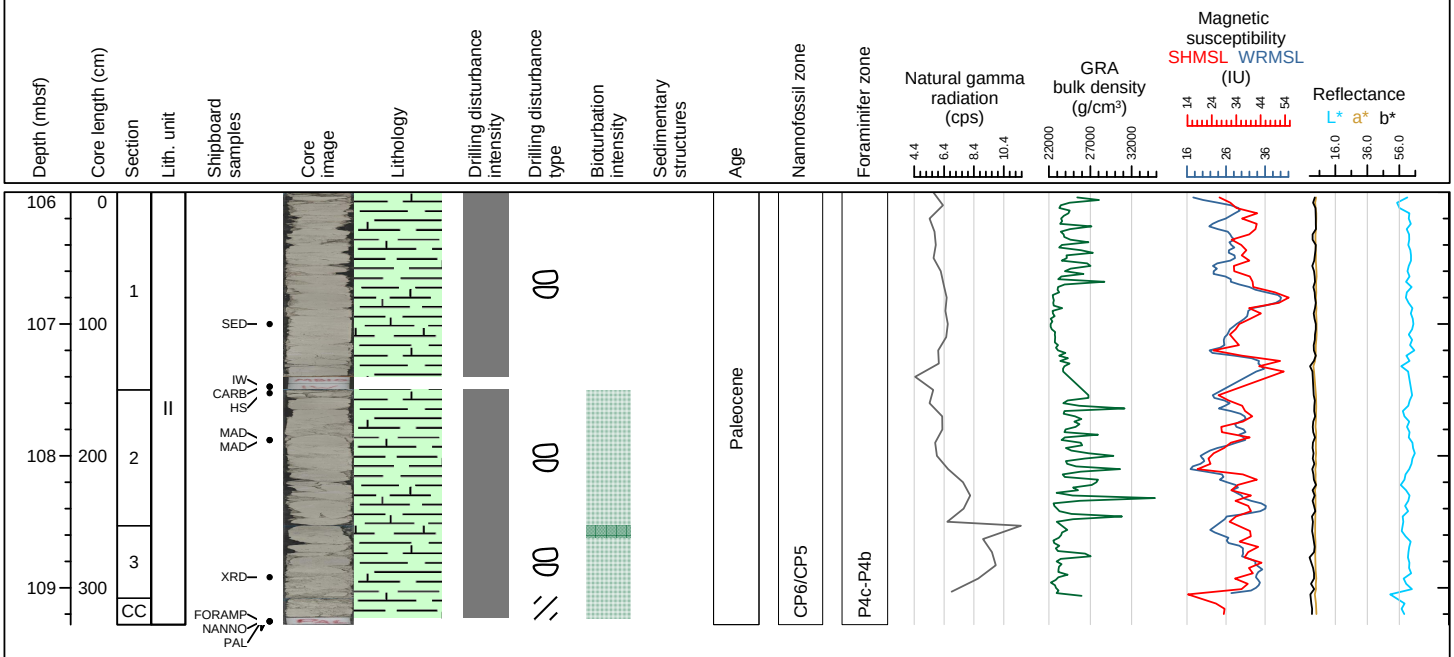
Hole 391-U1578A Core 11R, Interval 96.3-98.09 m (CSF-A)

Light gray bioturbated nannofossil chalk with a disturbed layer of dark gray tuff. Bedding and bioturbation are only partly preserved due to significant drilling disturbance.



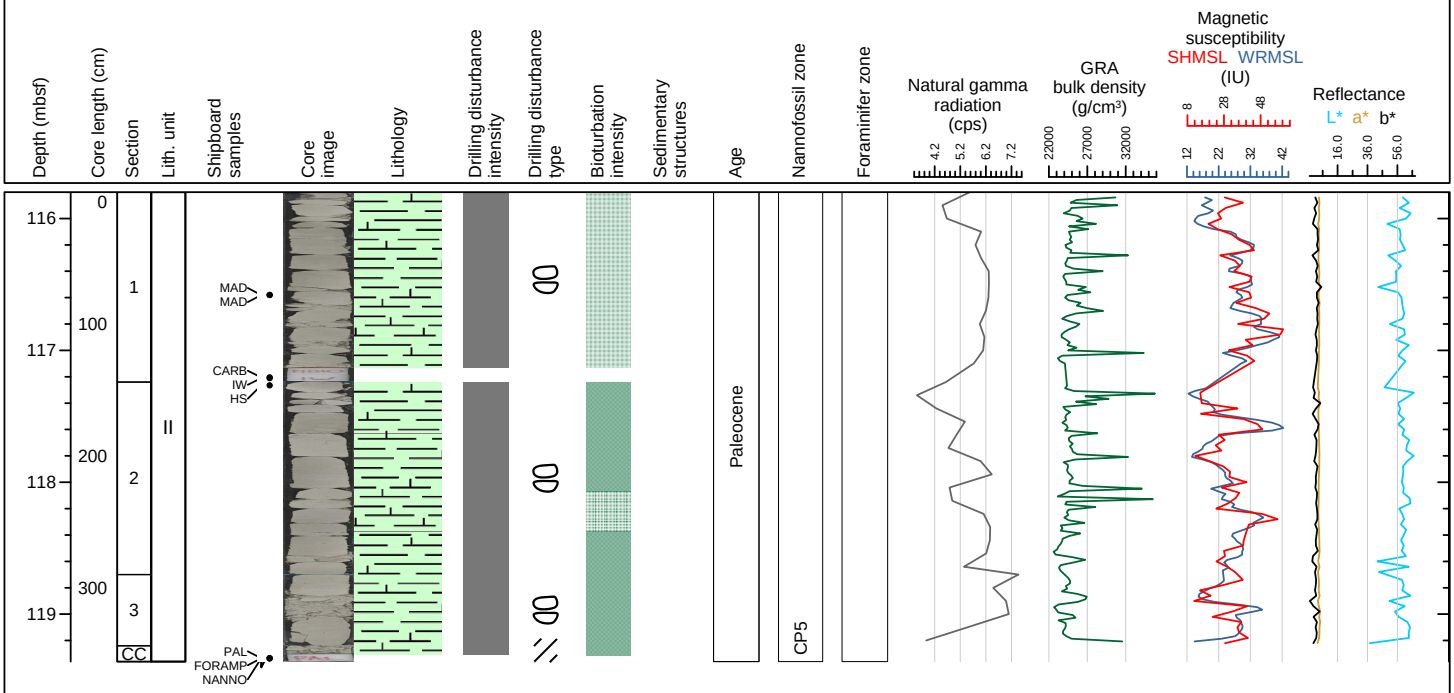
Hole 391-U1578A Core 12R, Interval 106.0-109.28 m (CSF-A)

Light gray to gray bioturbated nannofossil chalk with clay and nannofossil chalk with volcaniclasts. Bedding and bioturbation are only partly preserved due to significant drilling disturbance. The volcaniclasts were likely dispersed from tephra deposits by bioturbation.



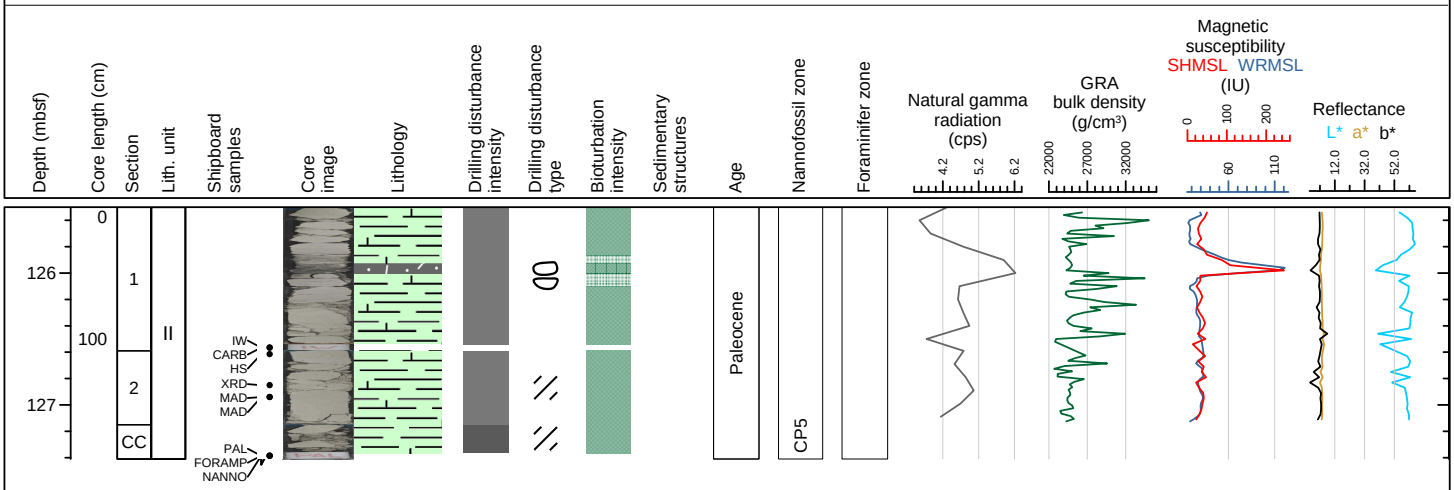
Hole 391-U1578A Core 13R, Interval 115.8-119.36 m (CSF-A)

Light gray to gray bioturbated nannofossil chalk with clay and disturbed layer of dark gray tuff. Bedding and bioturbation are only partly preserved due to significant drilling disturbance.



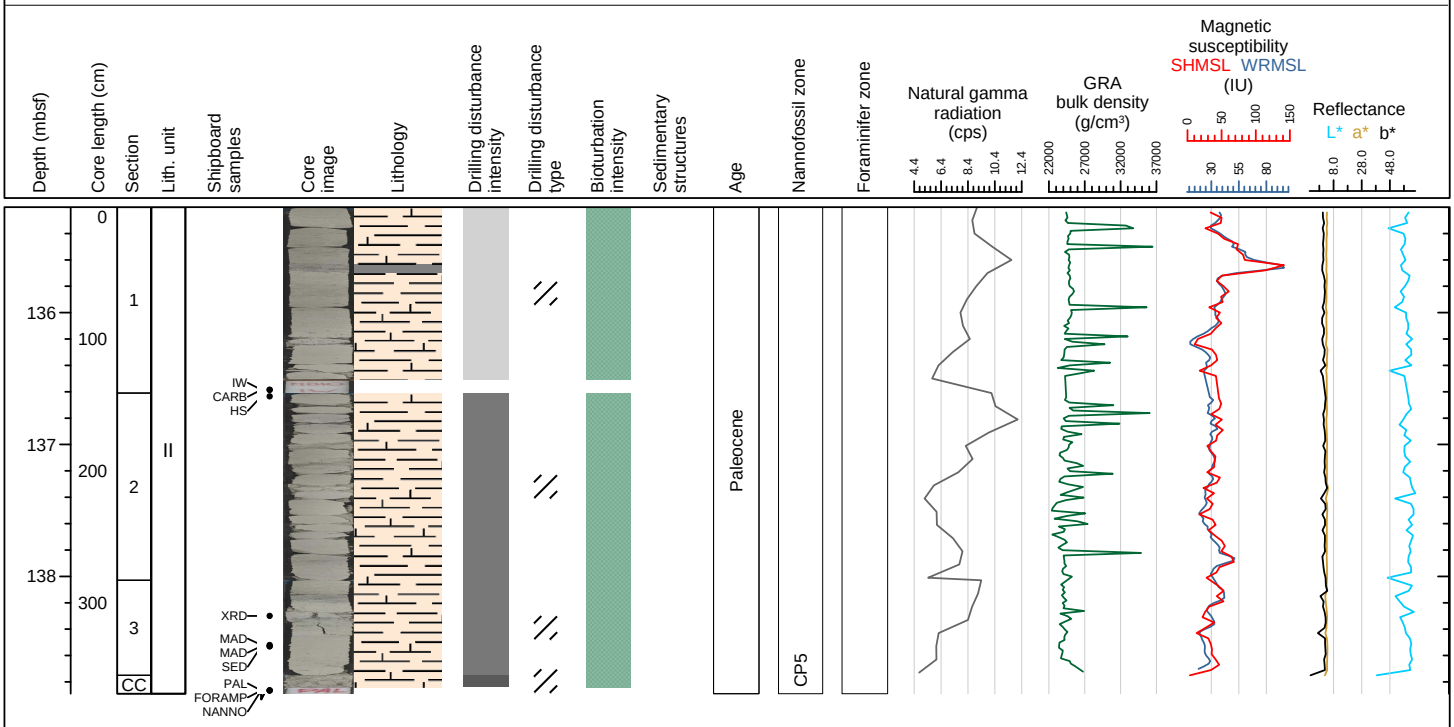
Hole 391-U1578A Core 14R, Interval 125.5-127.41 m (CSF-A)

Light gray to dark gray bioturbated nannofossil chalk with clay and/or ash. One disturbed layer of dark gray tuff. There is significant drilling disturbance associated with limited recovery.



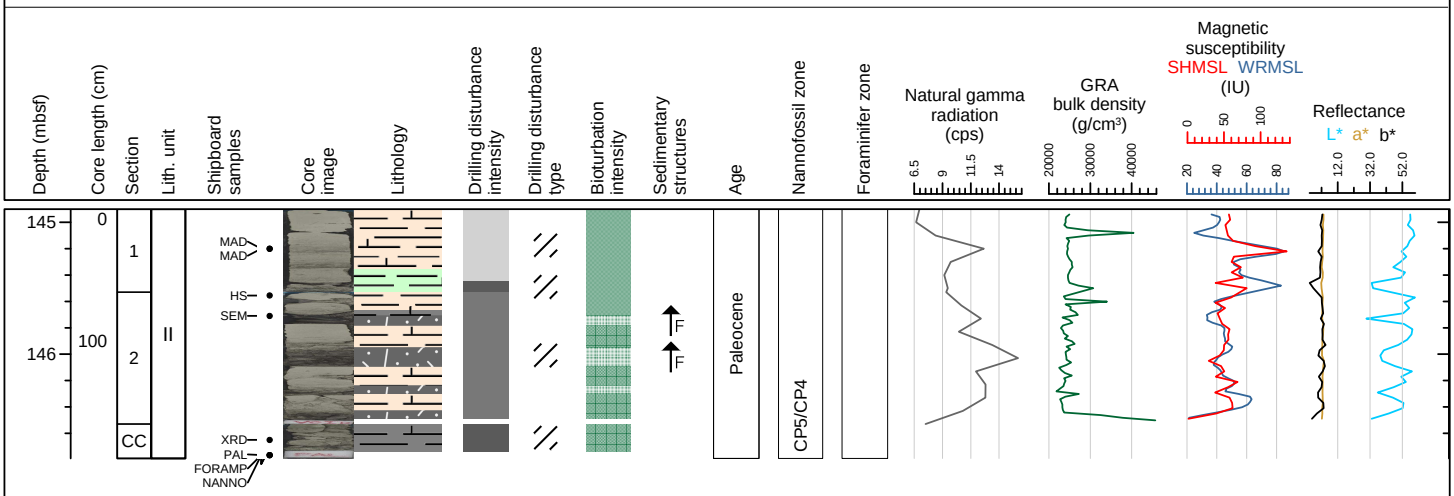
Hole 391-U1578A Core 15R, Interval 135.2-138.89 m (CSF-A)

Light gray bioturbated clayey-nannofossil chalk with volcaniclasts and tuffaceous chalk. The volcaniclasts were likely dispersed from tephra deposits by bioturbation. There is significant drilling disturbance associated with limited recovery.



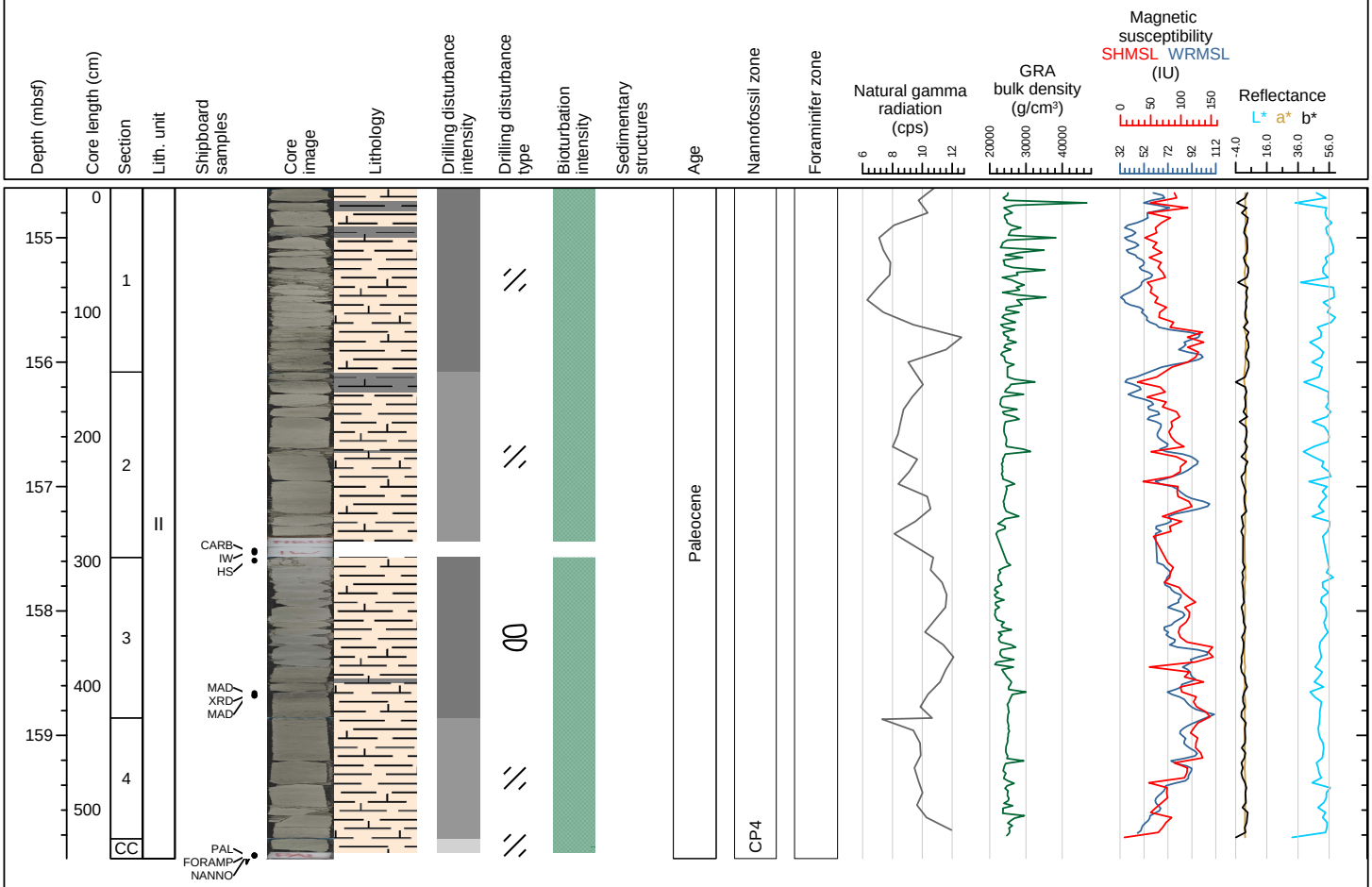
Hole 391-U1578A Core 16R, Interval 144.9-146.79 m (CSF-A)

Light gray bioturbated clayey-nannofossil chalk, locally with volcaniclasts. Four layers of black graded tuff occur. The volcaniclasts in the chalk were likely dispersed from tephra deposits by bioturbation. There is significant drilling disturbance associated with limited recovery.



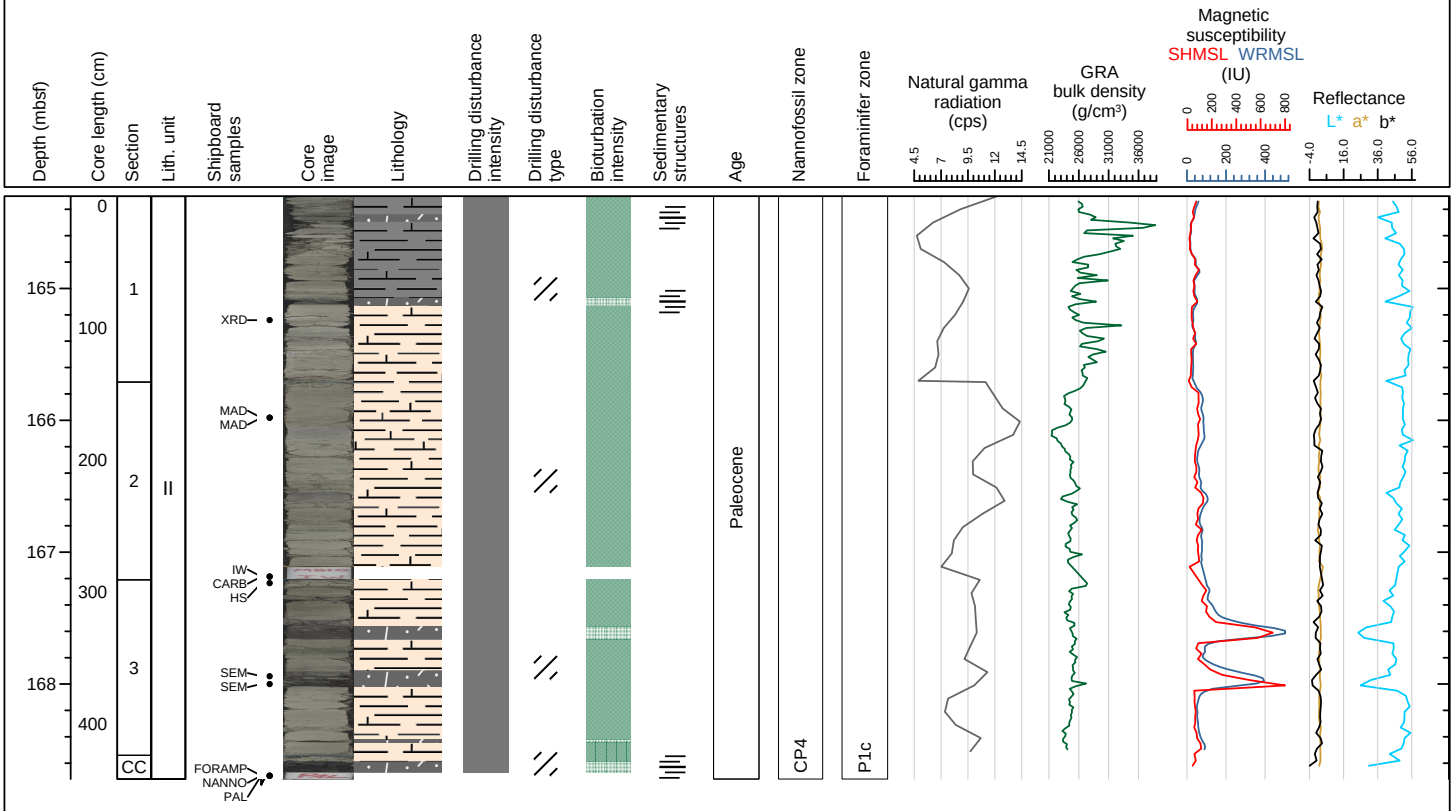
Hole 391-U1578A Core 17R, Interval 154.6-159.99 m (CSF-A)

Light gray to greenish gray bioturbated tuffaceous chalk and clayey-nannofossil chalk, locally with volcaniclasts. The volcaniclasts were likely dispersed from tephra deposits by bioturbation. There is significant drilling disturbance associated with moderate recovery.



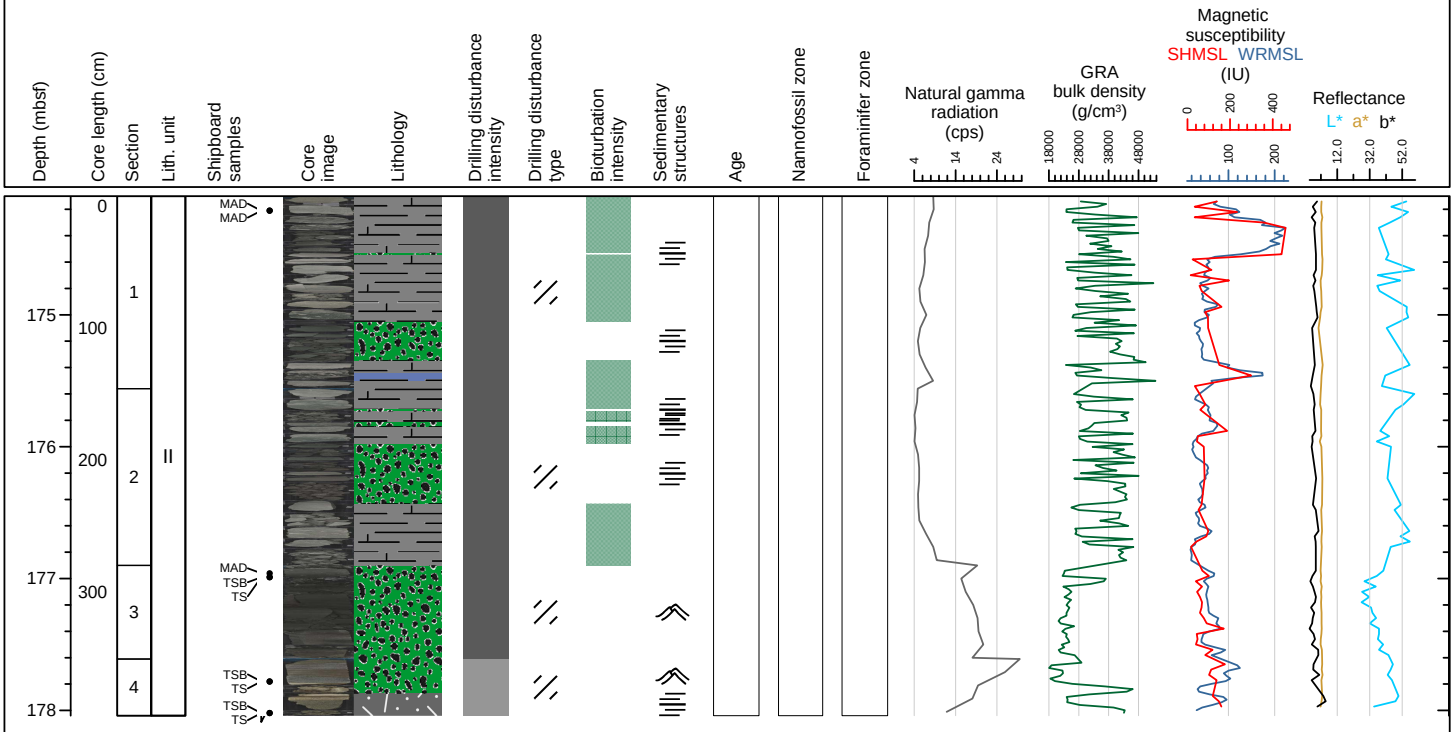
Hole 391-U1578A Core 18R, Interval 164.3-168.72 m (CSF-A)

Light gray to greenish gray bioturbated tuffaceous chalk and clayey-nannofossil chalk, locally with volcaniclasts. Six layers of gray to black graded tuff occur, which are variously disturbed by drilling. The volcaniclasts were likely dispersed from tephra deposits by bioturbation. There is significant 'biscuiting' associated with moderate recovery.



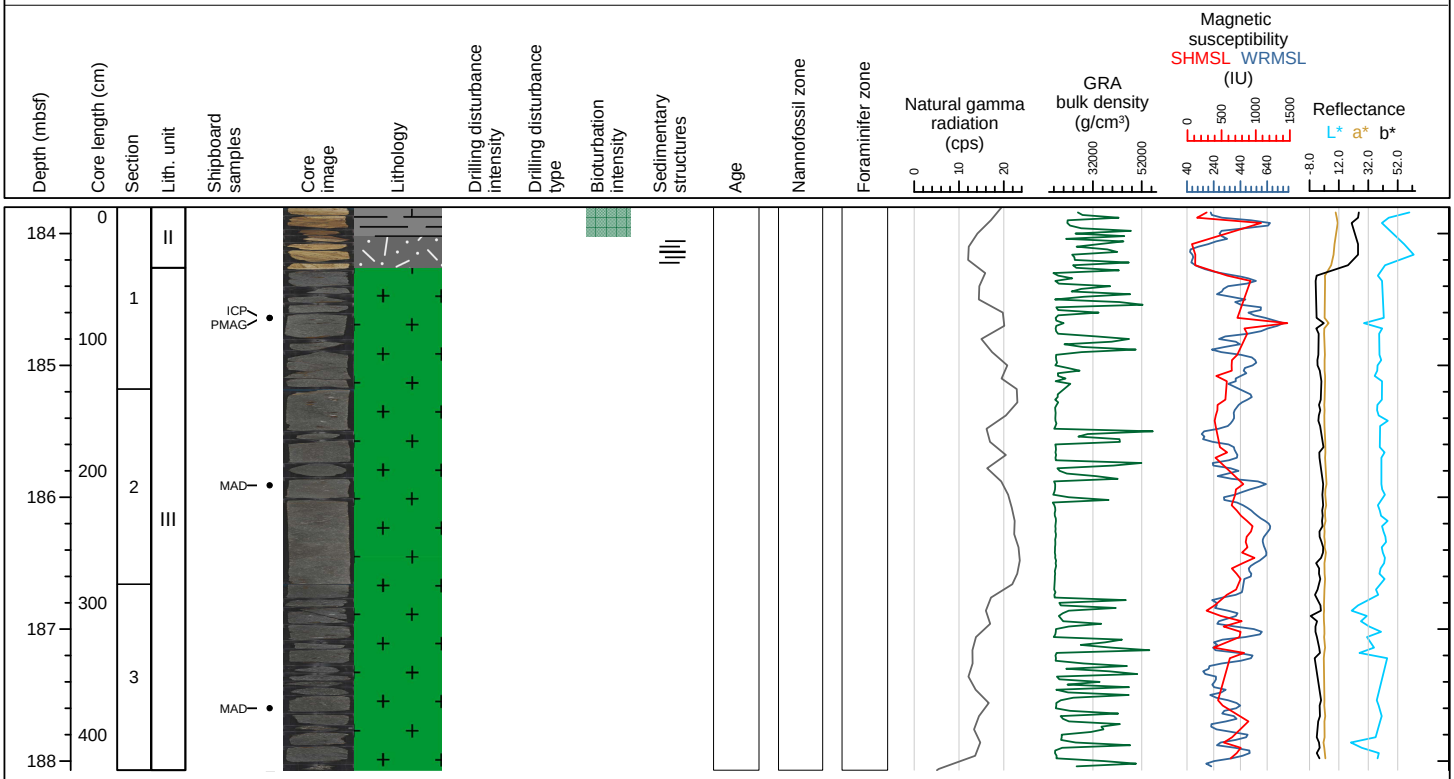
Hole 391-U1578A Core 19R, Interval 174.1-178.04 m (CSF-A)

Gray to greenish gray and very dark gray bioturbated tuffaceous chalk, tuff and volcanic sand. Fining upward and current structures occur in the sand. Volcaniclastic deposits include brown vesicular glass and colorless pumices. There is significant drilling fracturing associated with moderate recovery.

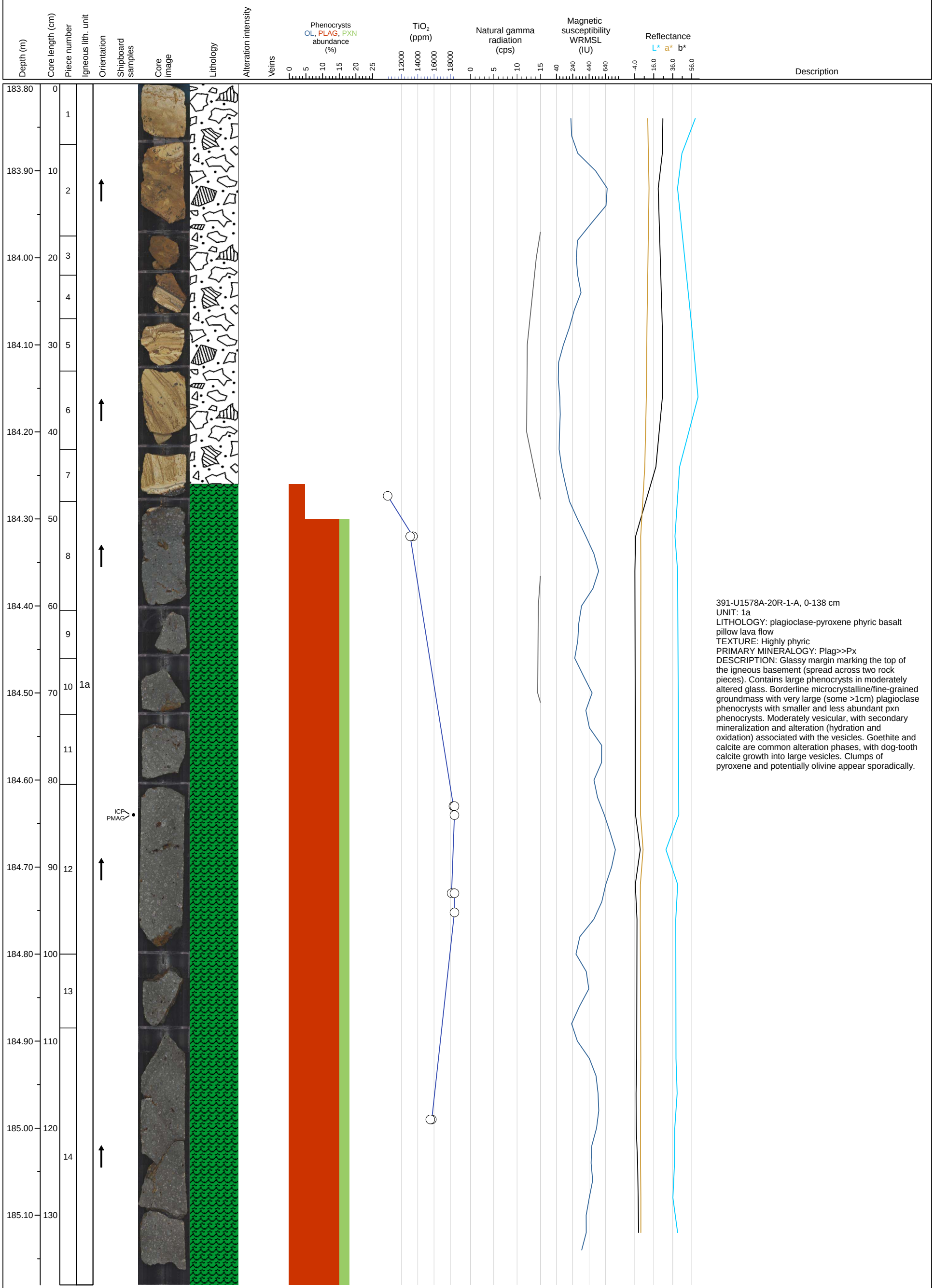


Hole 391-U1578A Core 20R, Interval 183.8-188.07 m (CSF-A)

Yellowish brown bioturbated tuffaceous chalk and tuff/volcanic sand, both signs of oxidative alteration. The contact with the volcanic basement occurs in this core. There is significant drilling fracturing associated with moderate recovery.

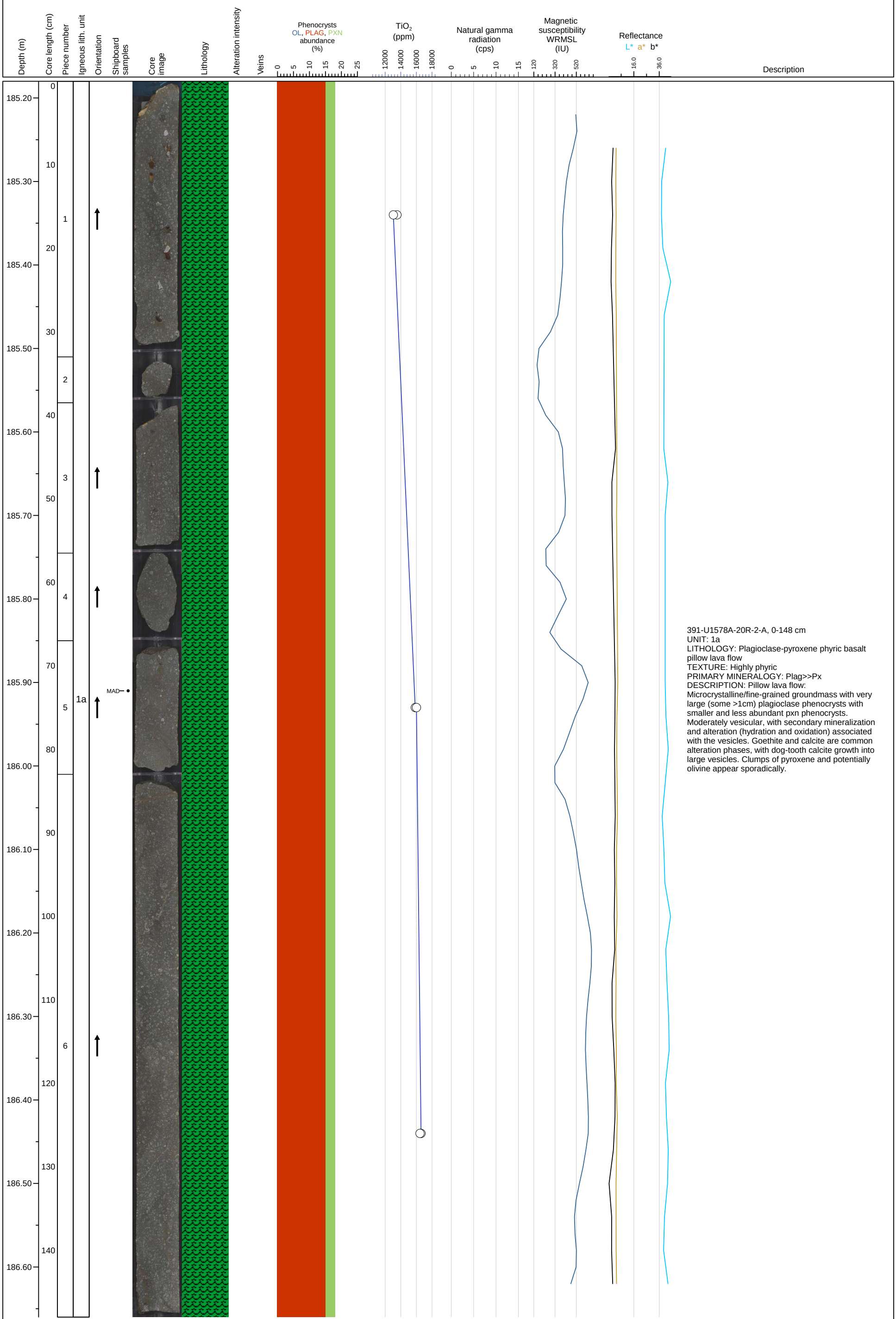


Hole 391-U1578A-20R Section 1, Top of Section: 183.8 m (CSF-A)



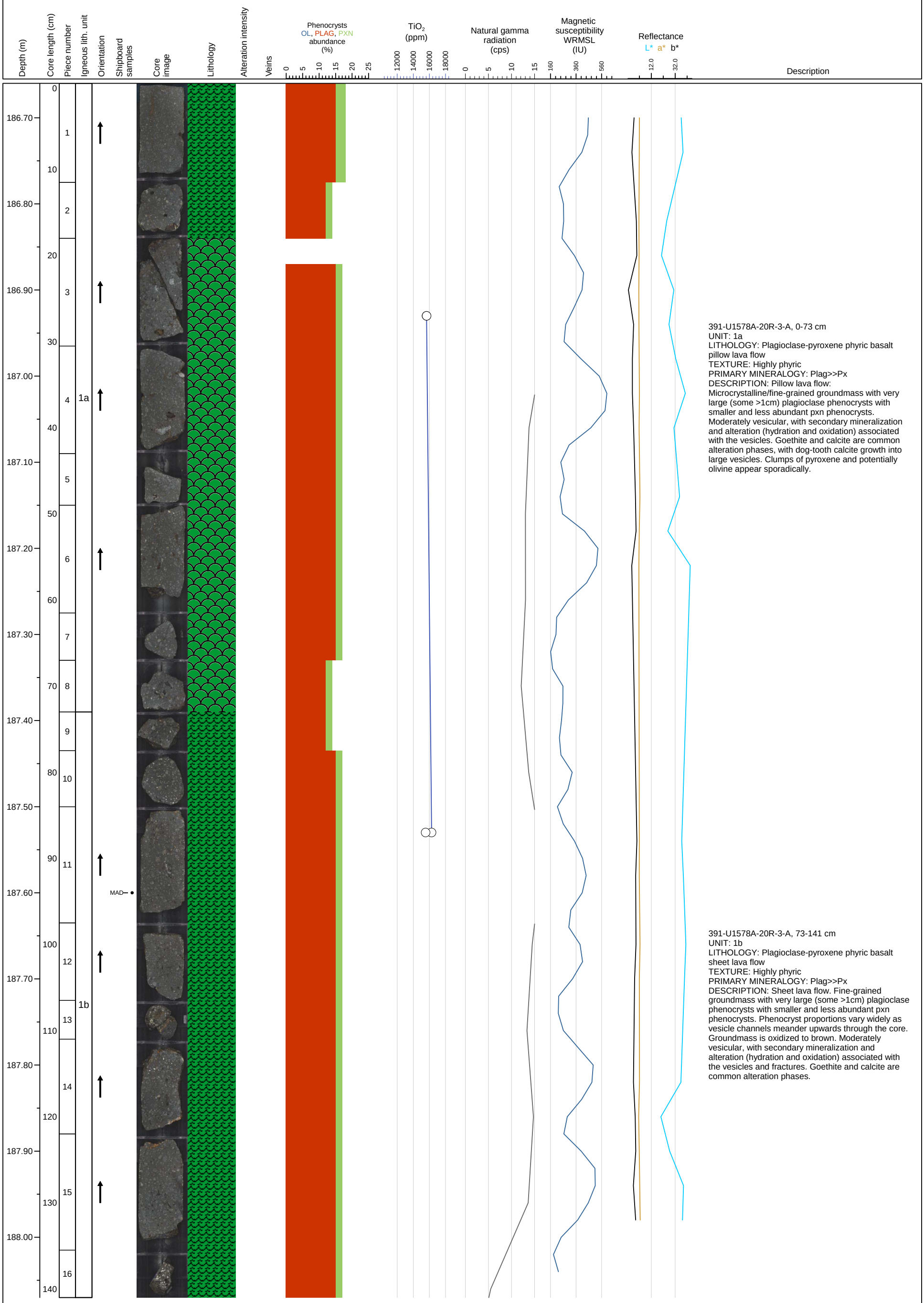
391-U1578A-20R-1-A, 0-138 cm
UNIT: 1a
LITHOLOGY: plagioclase-pyroxene phyric basalt pillow lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Px
DESCRIPTION: Glassy margin marking the top of the igneous basement (spread across two rock pieces). Contains large phenocrysts in moderately altered glass. Borderline microcrystalline/fine-grained groundmass with very large (some >1cm) plagioclase phenocrysts with smaller and less abundant pxn phenocrysts. Moderately vesicular, with secondary mineralization and alteration (hydration and oxidation) associated with the vesicles. Goethite and calcite are common alteration phases, with dog-tooth calcite growth into large vesicles. Clumps of pyroxene and potentially olivine appear sporadically.

Hole 391-U1578A-20R Section 2, Top of Section: 185.18 m (CSF-A)



391-U1578A-20R-2-A, 0-148 cm
UNIT: 1a
LITHOLOGY: Plagioclase-pyroxene phyric basalt pillow lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Px
DESCRIPTION: Pillow lava flow: Microcrystalline/fine-grained groundmass with very large (some >1cm) plagioclase phenocrysts with smaller and less abundant pxn phenocrysts. Moderately vesicular, with secondary mineralization and alteration (hydration and oxidation) associated with the vesicles. Goethite and calcite are common alteration phases, with dog-tooth calcite growth into large vesicles. Clumps of pyroxene and potentially olivine appear sporadically.

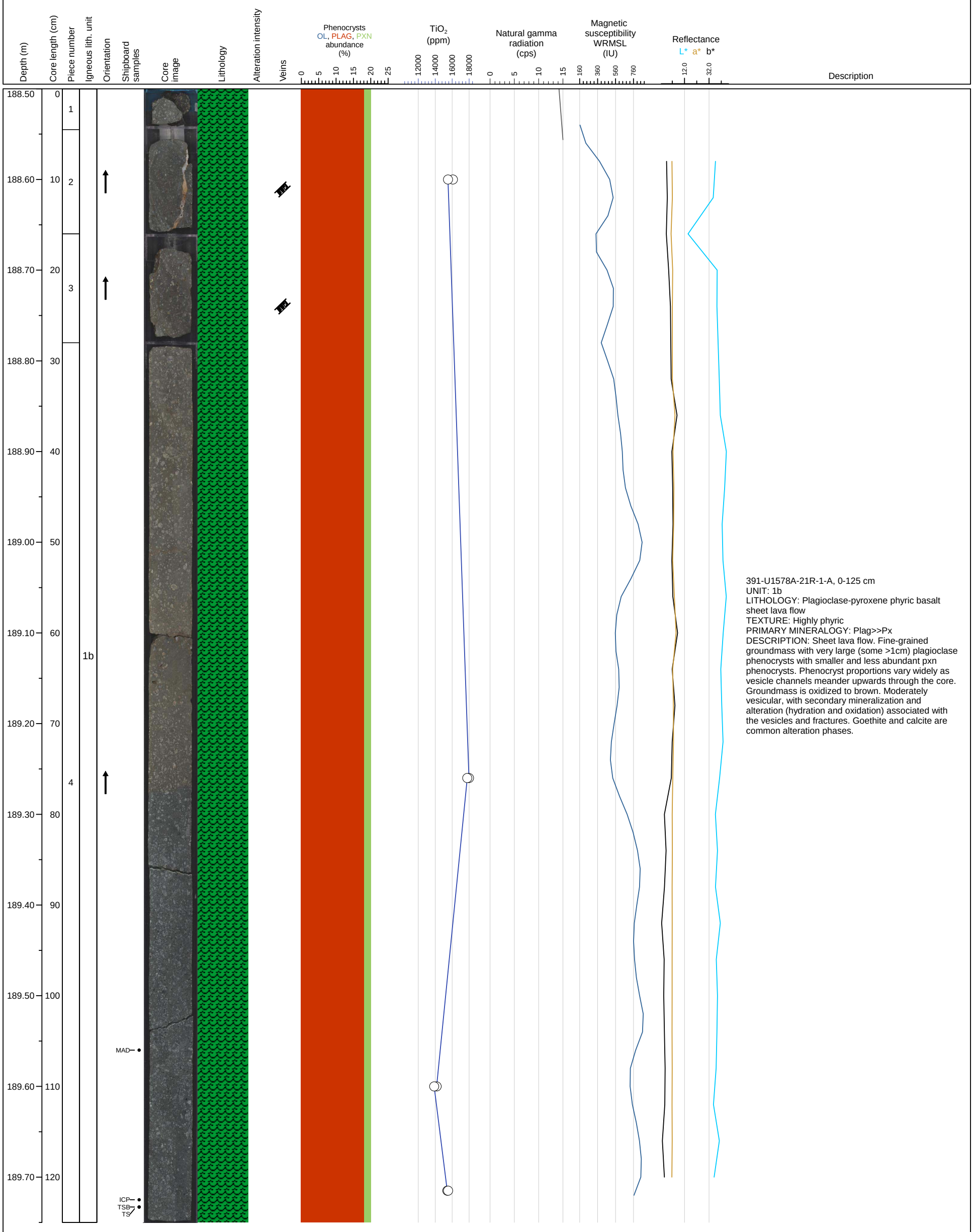
Hole 391-U1578A-20R Section 3, Top of Section: 186.66 m (CSF-A)



391-U1578A-20R-3-A, 0-73 cm
UNIT: 1a
LITHOLOGY: Plagioclase-pyroxene phyric basalt pillow lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Px
DESCRIPTION: Pillow lava flow: Microcrystalline/fine-grained groundmass with very large (some >1cm) plagioclase phenocrysts with smaller and less abundant pxn phenocrysts. Moderately vesicular, with secondary mineralization and alteration (hydration and oxidation) associated with the vesicles. Goethite and calcite are common alteration phases, with dog-tooth calcite growth into large vesicles. Clumps of pyroxene and potentially olivine appear sporadically.

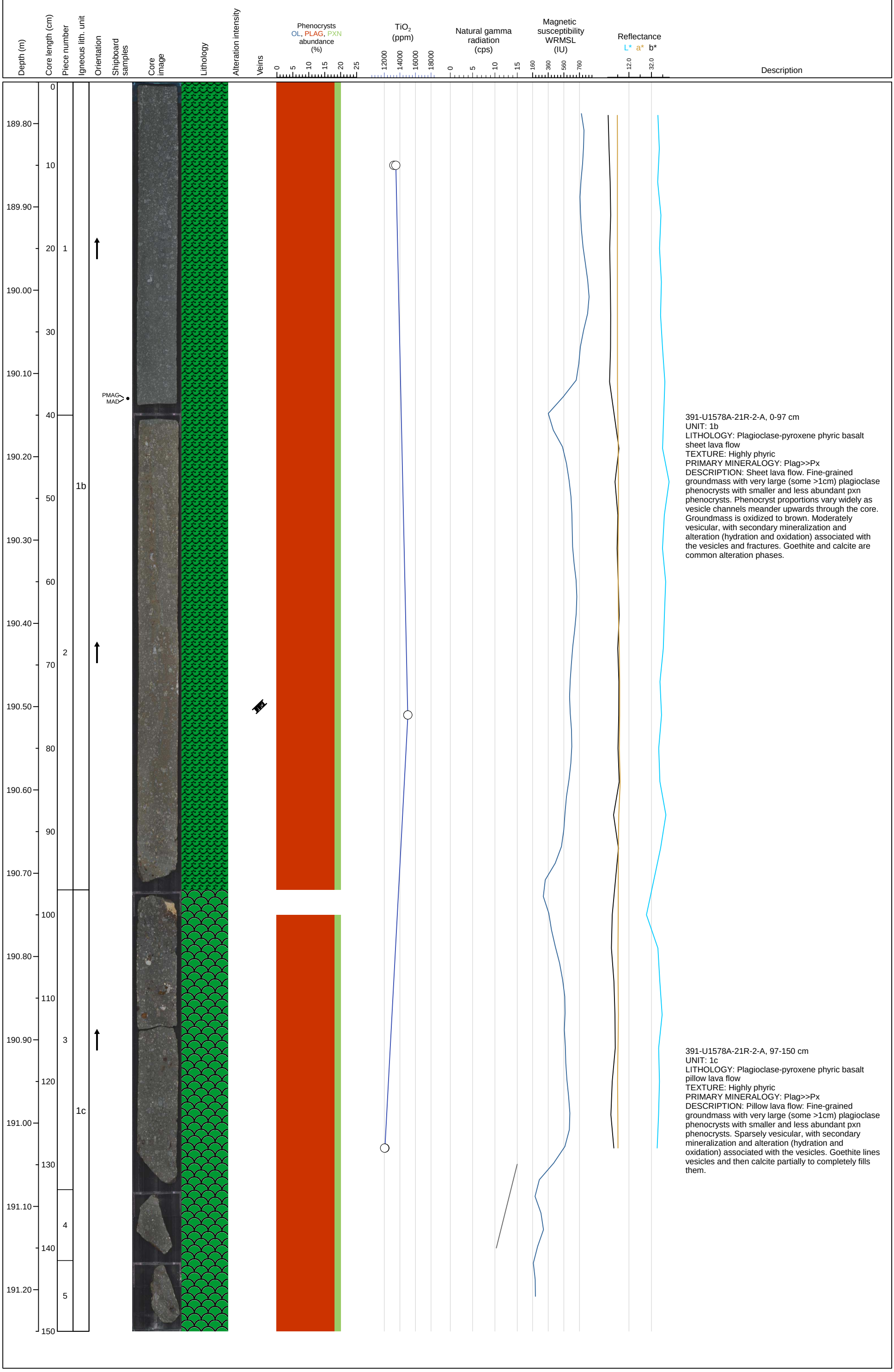
391-U1578A-20R-3-A, 73-141 cm
UNIT: 1b
LITHOLOGY: Plagioclase-pyroxene phyric basalt sheet lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Px
DESCRIPTION: Sheet lava flow. Fine-grained groundmass with very large (some >1cm) plagioclase phenocrysts with smaller and less abundant pxn phenocrysts. Phenocryst proportions vary widely as vesicle channels meander upwards through the core. Groundmass is oxidized to brown. Moderately vesicular, with secondary mineralization and alteration (hydration and oxidation) associated with the vesicles and fractures. Goethite and calcite are common alteration phases.

Hole 391-U1578A-21R Section 1, Top of Section: 188.5 m (CSF-A)

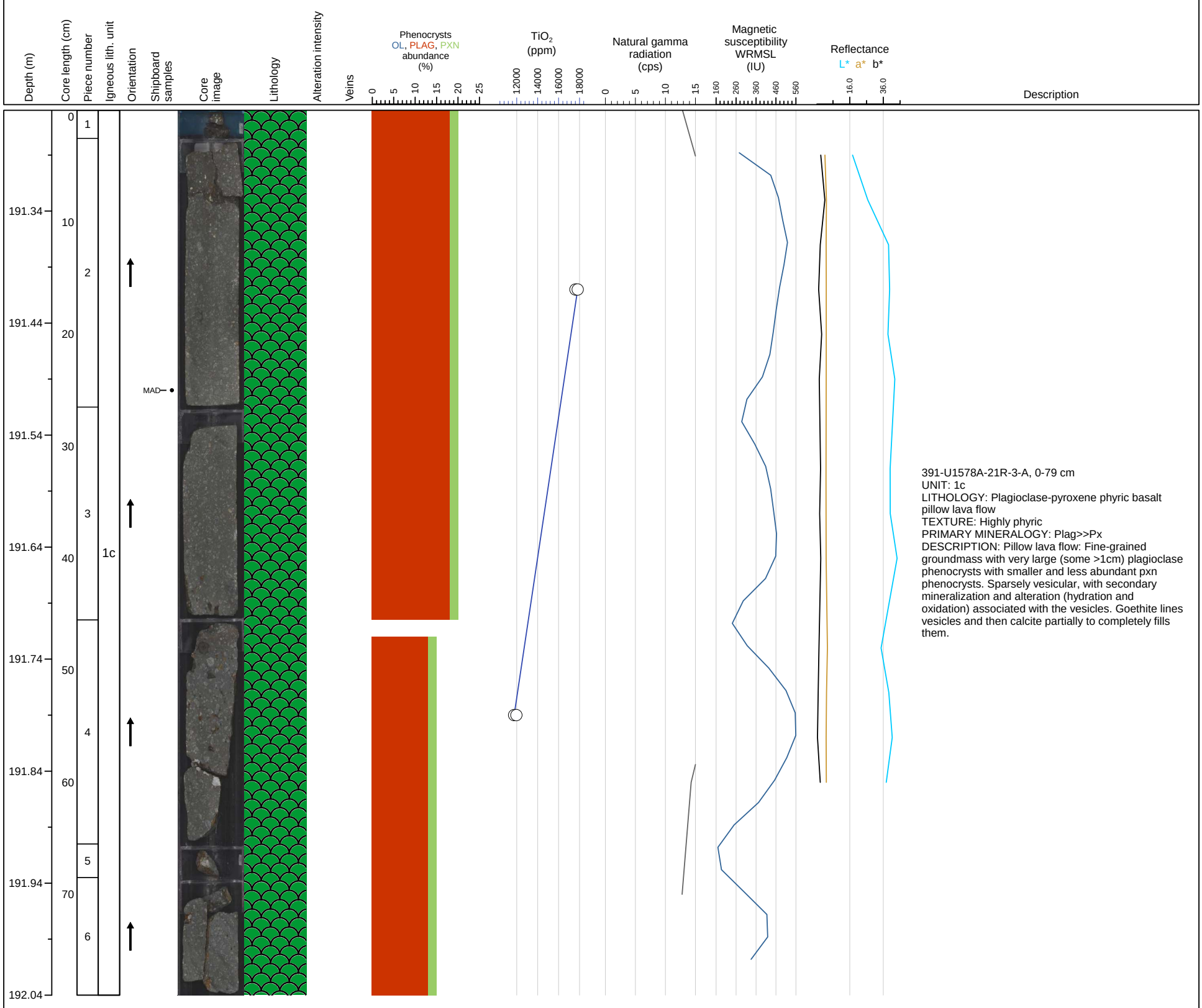


391-U1578A-21R-1-A, 0-125 cm
UNIT: 1b
LITHOLOGY: Plagioclase-pyroxene phyric basalt sheet lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Px
DESCRIPTION: Sheet lava flow. Fine-grained groundmass with very large (some >1cm) plagioclase phenocrysts with smaller and less abundant pxn phenocrysts. Phenocryst proportions vary widely as vesicle channels meander upwards through the core. Groundmass is oxidized to brown. Moderately vesicular, with secondary mineralization and alteration (hydration and oxidation) associated with the vesicles and fractures. Goethite and calcite are common alteration phases.

Hole 391-U1578A-21R Section 2, Top of Section: 189.75 m (CSF-A)



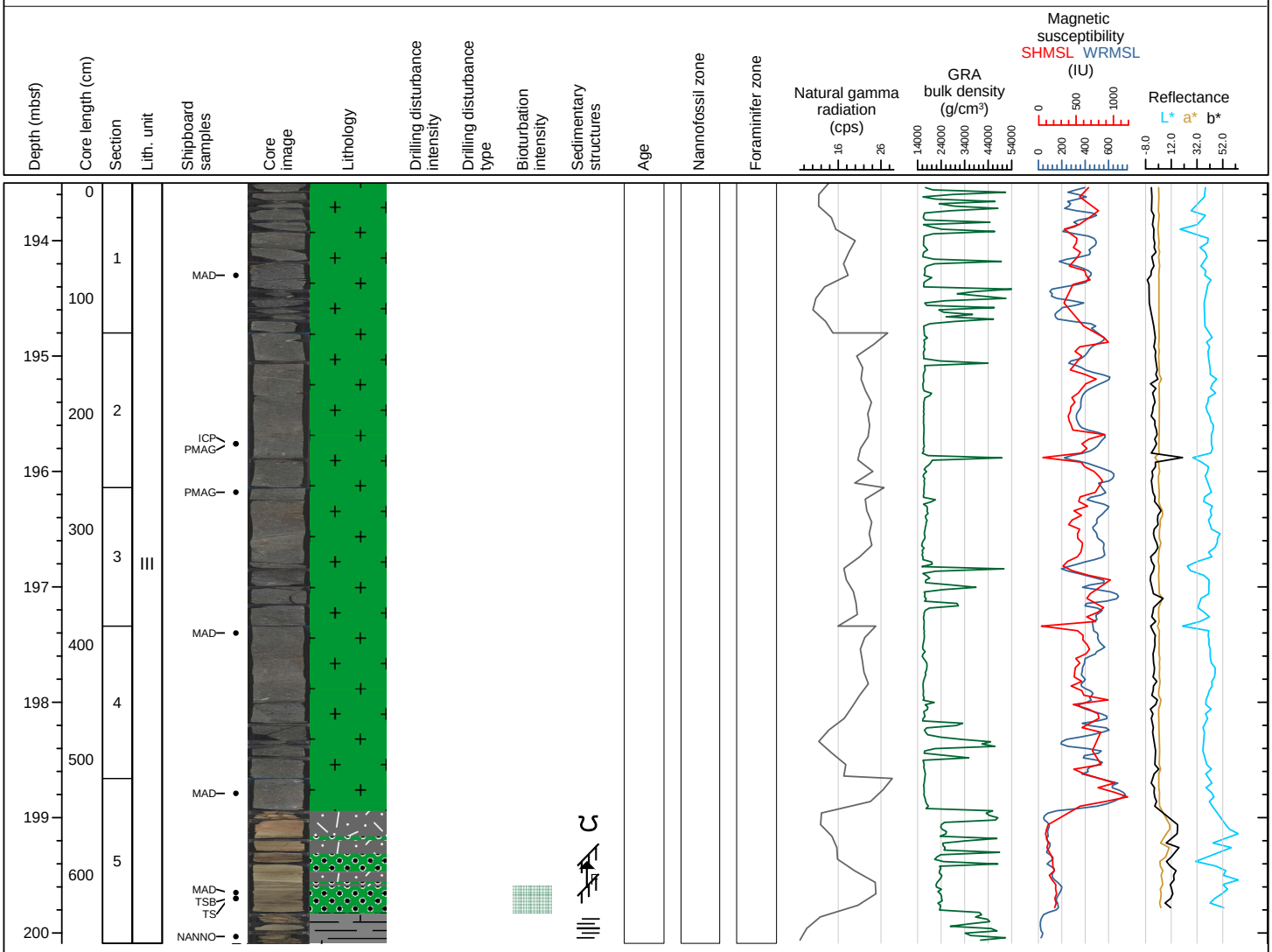
Hole 391-U1578A-21R Section 3, Top of Section: 191.25 m (CSF-A)



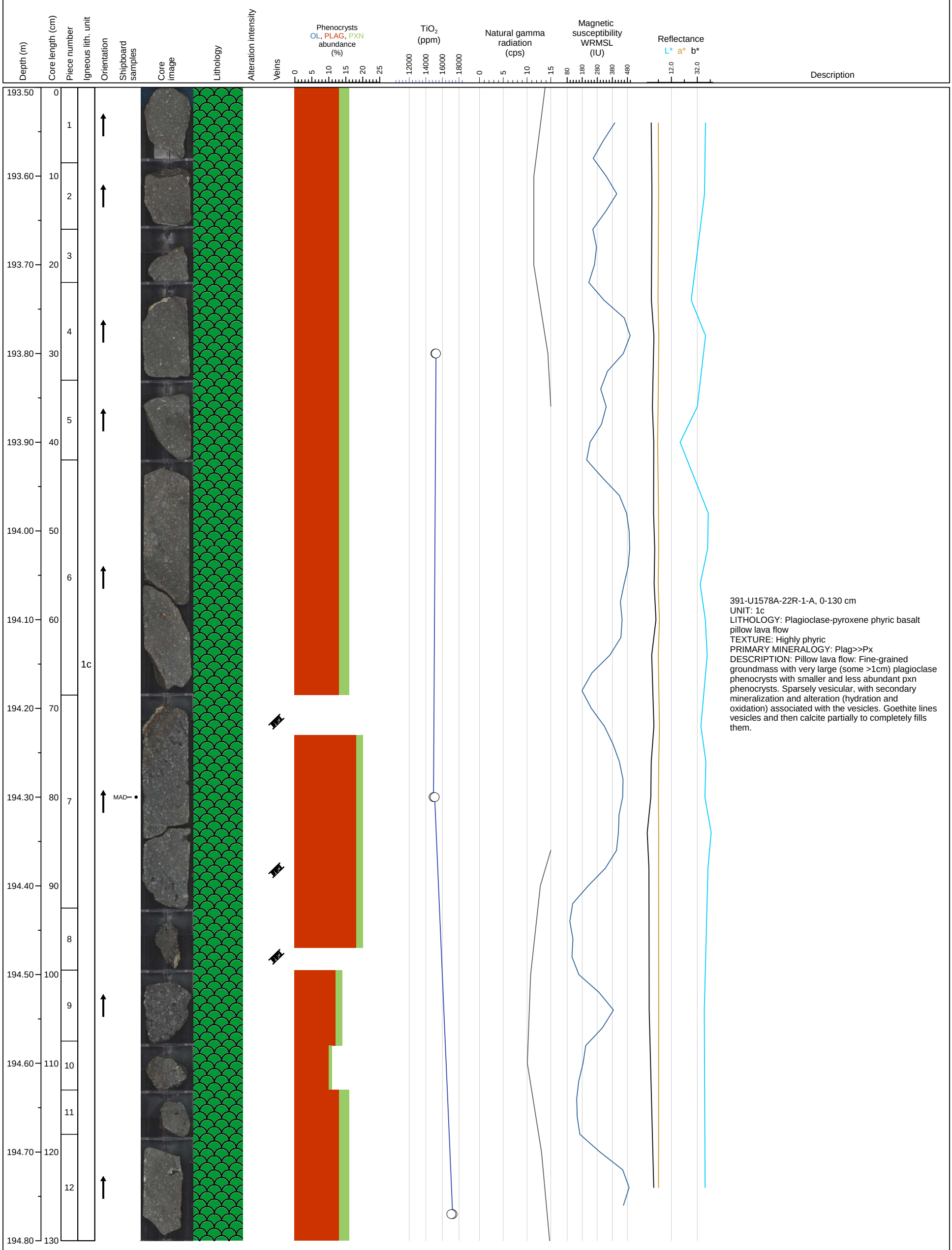
391-U1578A-21R-3-A, 0-79 cm
UNIT: 1c
LITHOLOGY: Plagioclase-pyroxene phyric basalt pillow lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Px
DESCRIPTION: Pillow lava flow: Fine-grained groundmass with very large (some >1cm) plagioclase phenocrysts with smaller and less abundant pxn phenocrysts. Sparsely vesicular, with secondary mineralization and alteration (hydration and oxidation) associated with the vesicles. Goethite lines vesicles and then calcite partially to completely fills them.

Hole 391-U1578A Core 22R, Interval 193.5-200.09 m (CSF-A)

Sediment interbed in the volcanic basement, including very pale brown to gray bioturbated tuffaceous chalk interbedded with vitric sandstone/tuff. The volcaniclastic deposits includes load cast, cross-lamination and fining upward structures. The volcaniclasts are composed of highly vesicular angular glass shards (commonly altered).

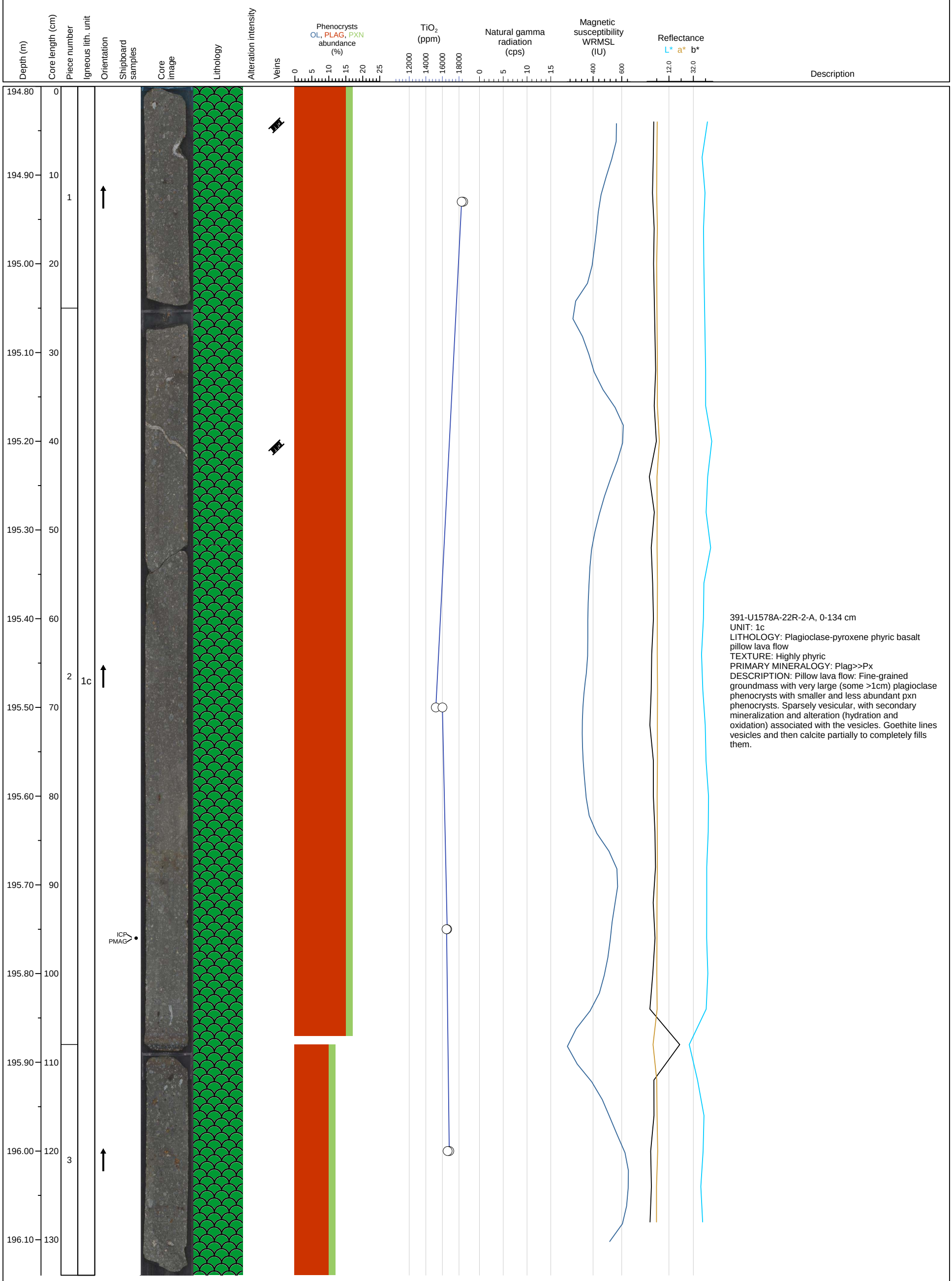


Hole 391-U1578A-22R Section 1, Top of Section: 193.5 m (CSF-A)



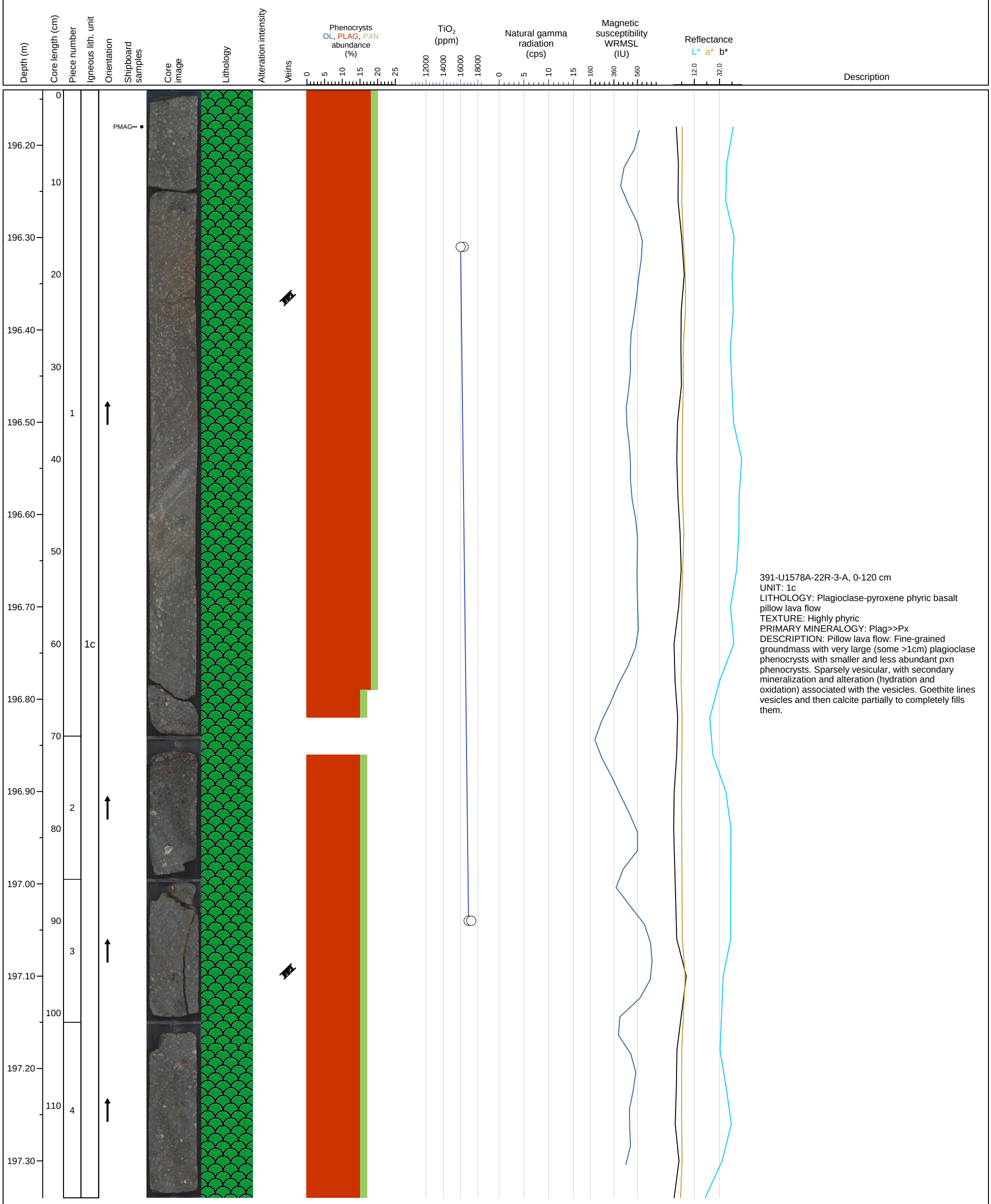
391-U1578A-22R-1-A, 0-130 cm
UNIT: 1c
LITHOLOGY: Plagioclase-pyroxene phyric basalt pillow lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Px
DESCRIPTION: Pillow lava flow: Fine-grained groundmass with very large (some >1cm) plagioclase phenocrysts with smaller and less abundant pxn phenocrysts. Sparsely vesicular, with secondary mineralization and alteration (hydration and oxidation) associated with the vesicles. Goethite lines vesicles and then calcite partially to completely fills them.

Hole 391-U1578A-22R Section 2, Top of Section: 194.8 m (CSF-A)



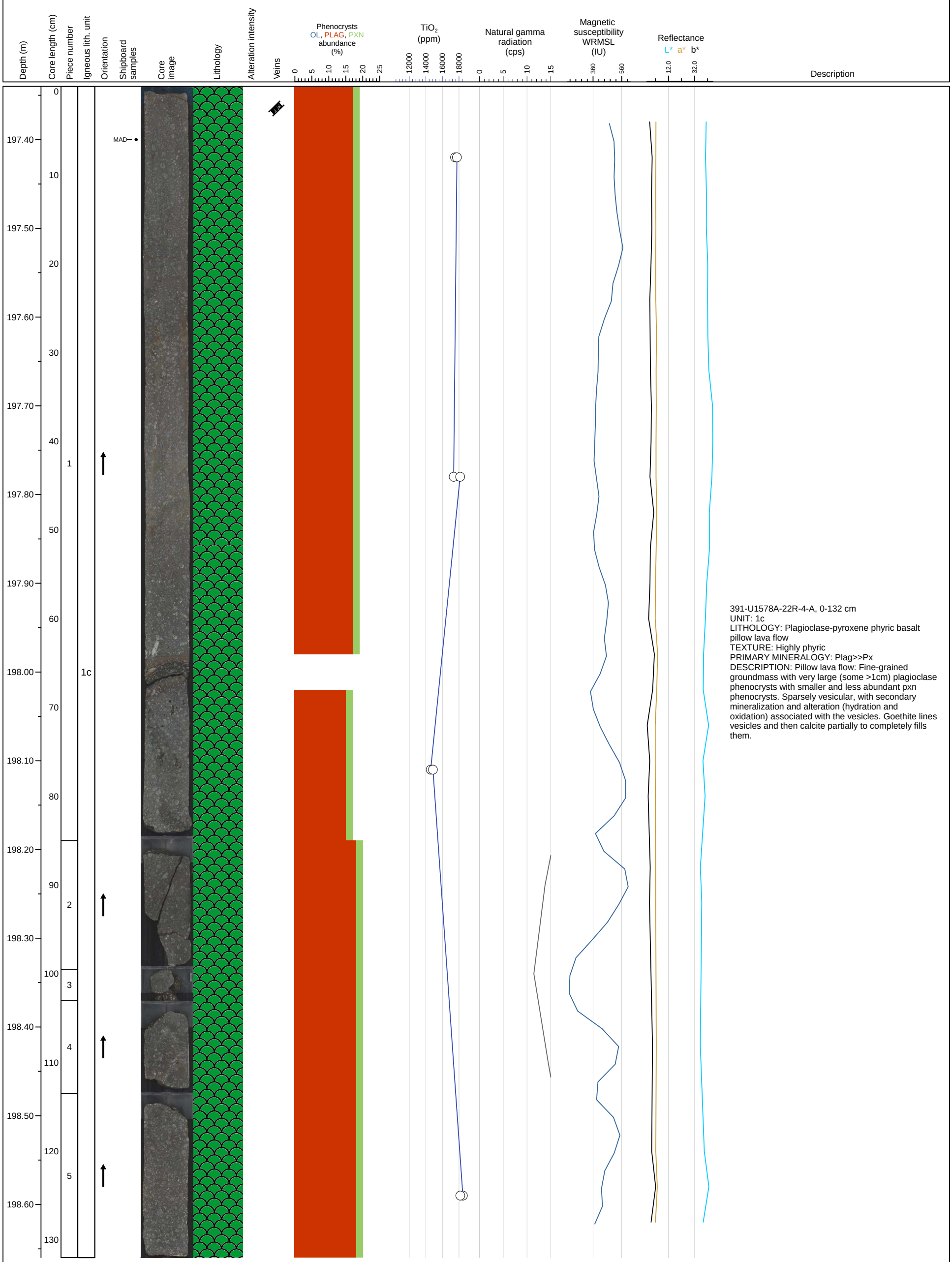
391-U1578A-22R-2-A, 0-134 cm
UNIT: 1c
LITHOLOGY: Plagioclase-pyroxene phyric basalt pillow lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Px
DESCRIPTION: Pillow lava flow: Fine-grained groundmass with very large (some >1cm) plagioclase phenocrysts with smaller and less abundant pxn phenocrysts. Sparsely vesicular, with secondary mineralization and alteration (hydration and oxidation) associated with the vesicles. Goethite lines vesicles and then calcite partially to completely fills them.

Hole 391-U1578A-22R Section 3, Top of Section: 196.14 m (CSF-A)



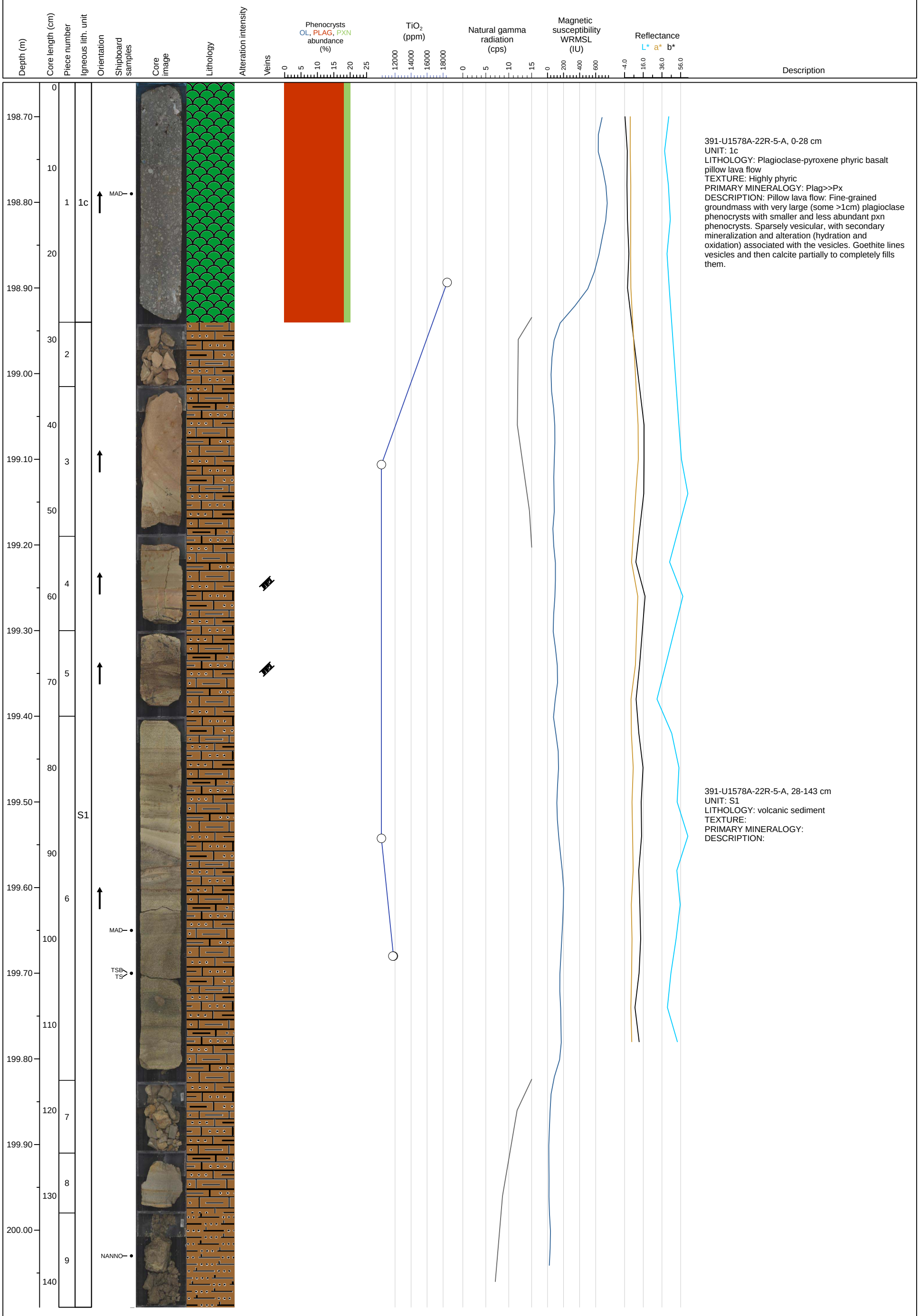
391-U1578A-22R-3-A, 0-120 cm
UNIT: 1c
LITHOLOGY: Plagioclase-pyroxene phyric basalt pillow lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Px
DESCRIPTION: Pillow lava flow: Fine-grained groundmass with very large (some >1cm) plagioclase phenocrysts with smaller and less abundant pxn phenocrysts. Sparsely vesicular, with secondary mineralization and alteration (hydration and oxidation) associated with the vesicles. Goethite lines vesicles and then calcite partially to completely fills them.

Hole 391-U1578A-22R Section 4, Top of Section: 197.34 m (CSF-A)



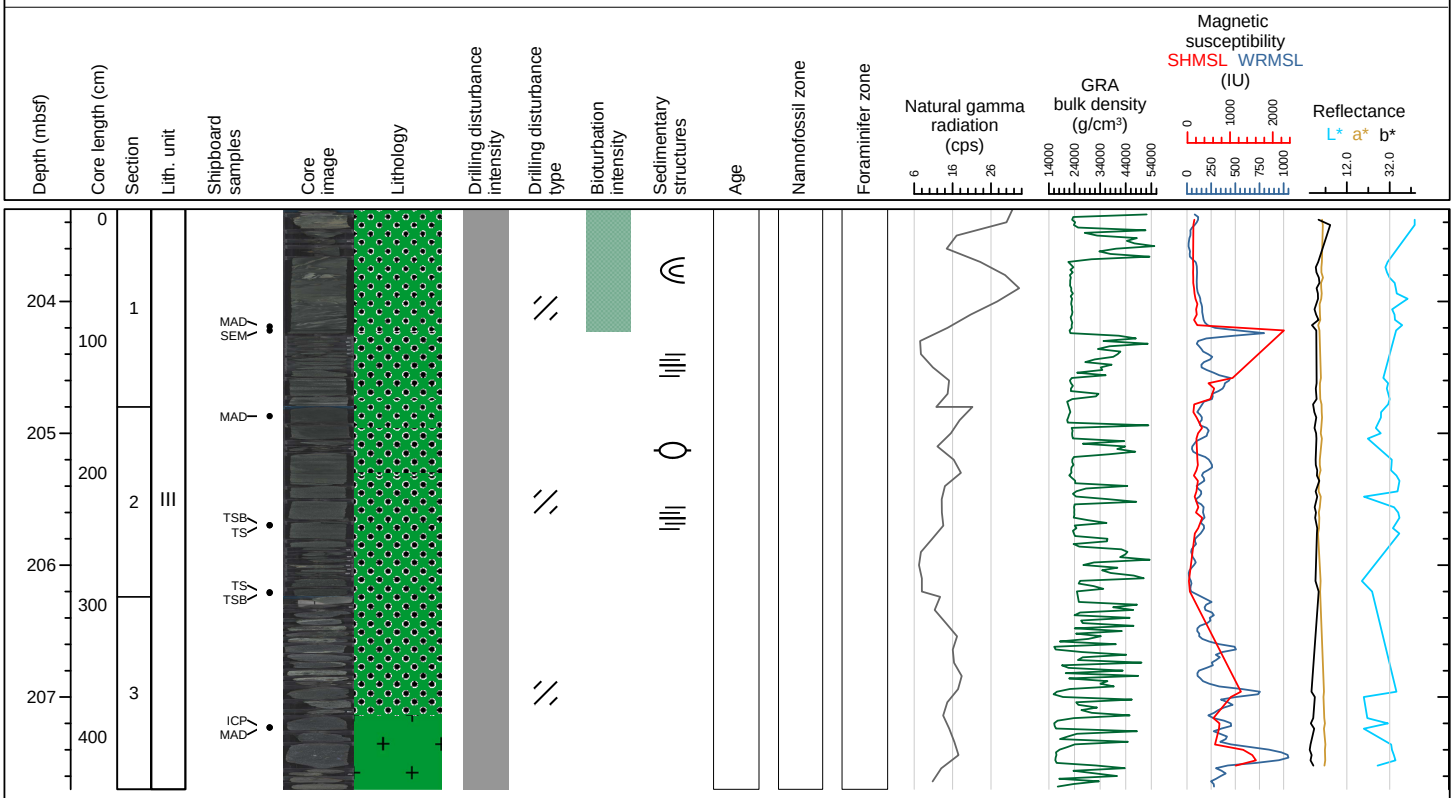
391-U1578A-22R-4-A, 0-132 cm
UNIT: 1c
LITHOLOGY: Plagioclase-pyroxene phyric basalt pillow lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Px
DESCRIPTION: Pillow lava flow: Fine-grained groundmass with very large (some >1cm) plagioclase phenocrysts with smaller and less abundant pxn phenocrysts. Sparsely vesicular, with secondary mineralization and alteration (hydration and oxidation) associated with the vesicles. Goethite lines vesicles and then calcite partially to completely fills them.

Hole 391-U1578A-22R Section 5, Top of Section: 198.66 m (CSF-A)

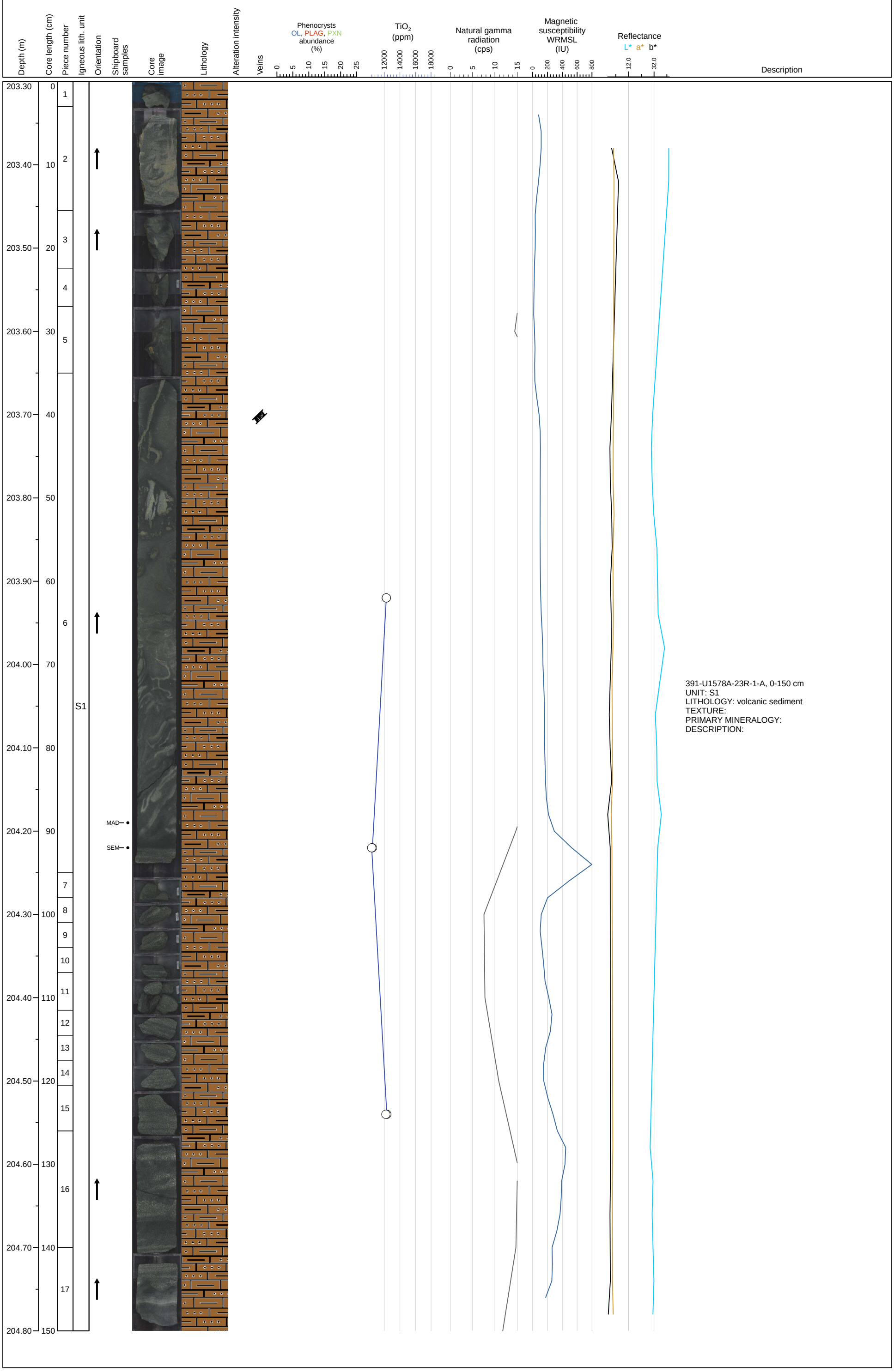


Hole 391-U1578A Core 23R, Interval 203.3-207.7 m (CSF-A)

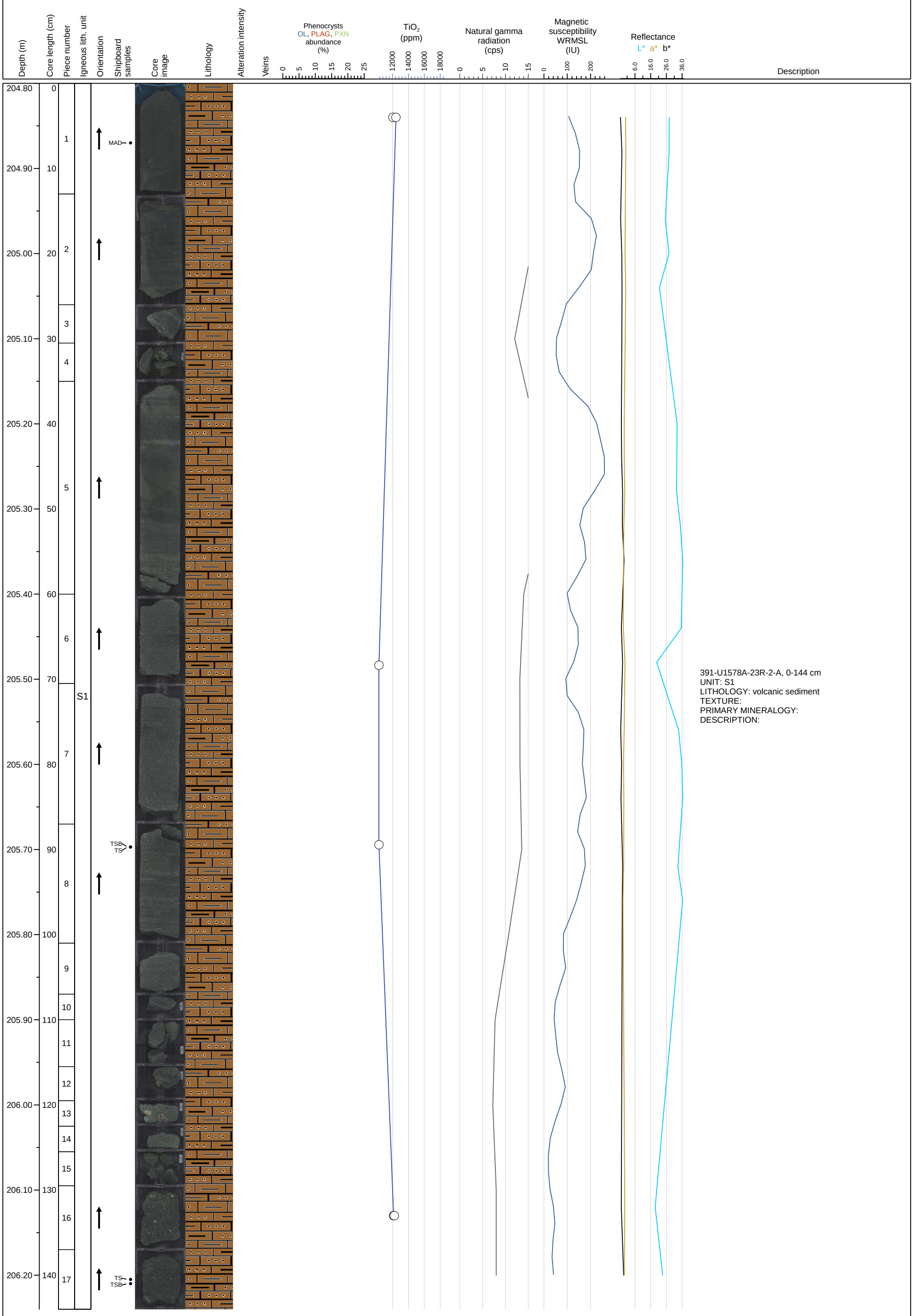
Sediment interbed in the volcanic basement, including very dark greenish gray volcanic sandstone and siltstone with load cast, cross-lamination and fining upward structures. The volcaniclasts are composed of highly vesicular angular glass shards (commonly altered).



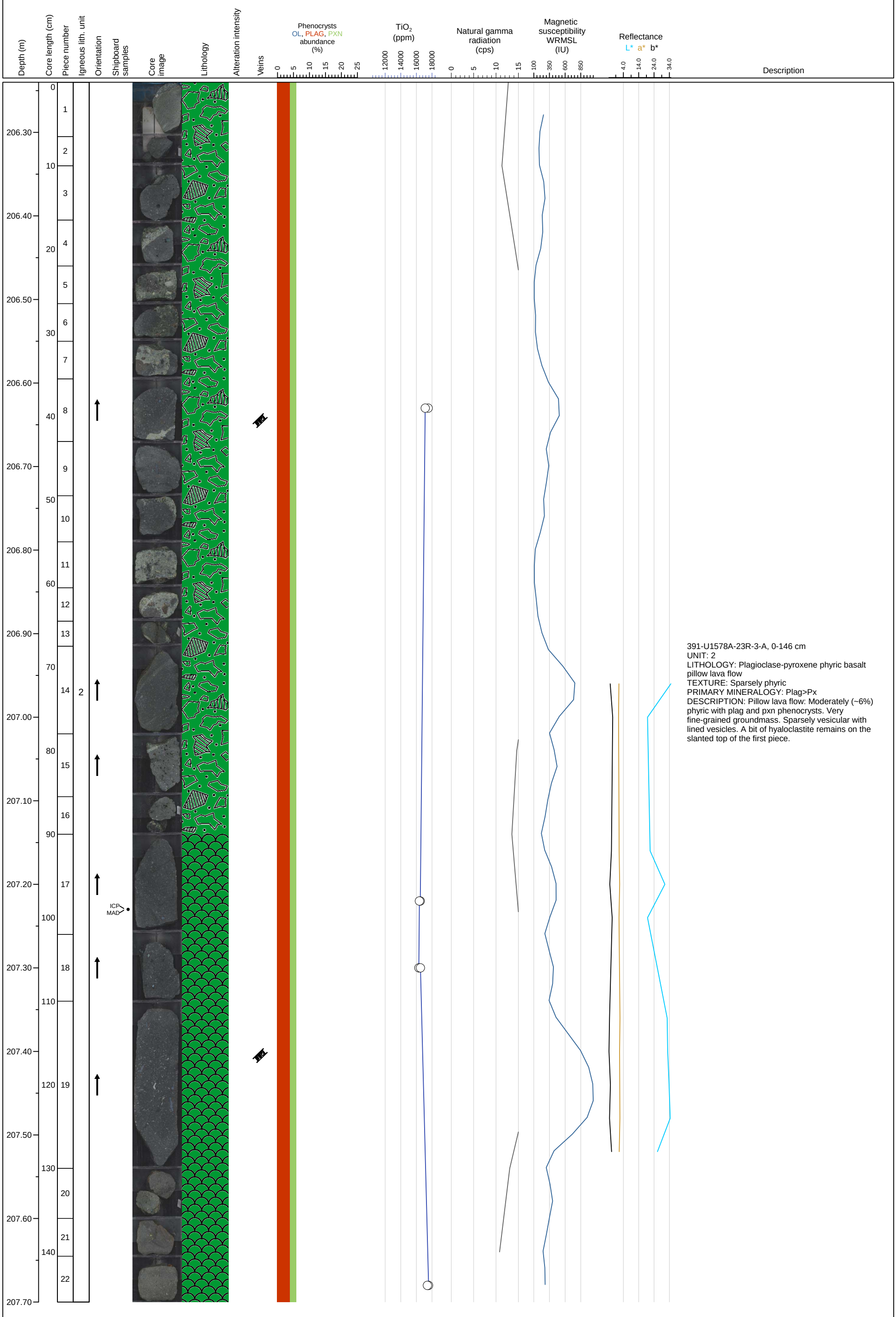
Hole 391-U1578A-23R Section 1, Top of Section: 203.3 m (CSF-A)



Hole 391-U1578A-23R Section 2, Top of Section: 204.8 m (CSF-A)



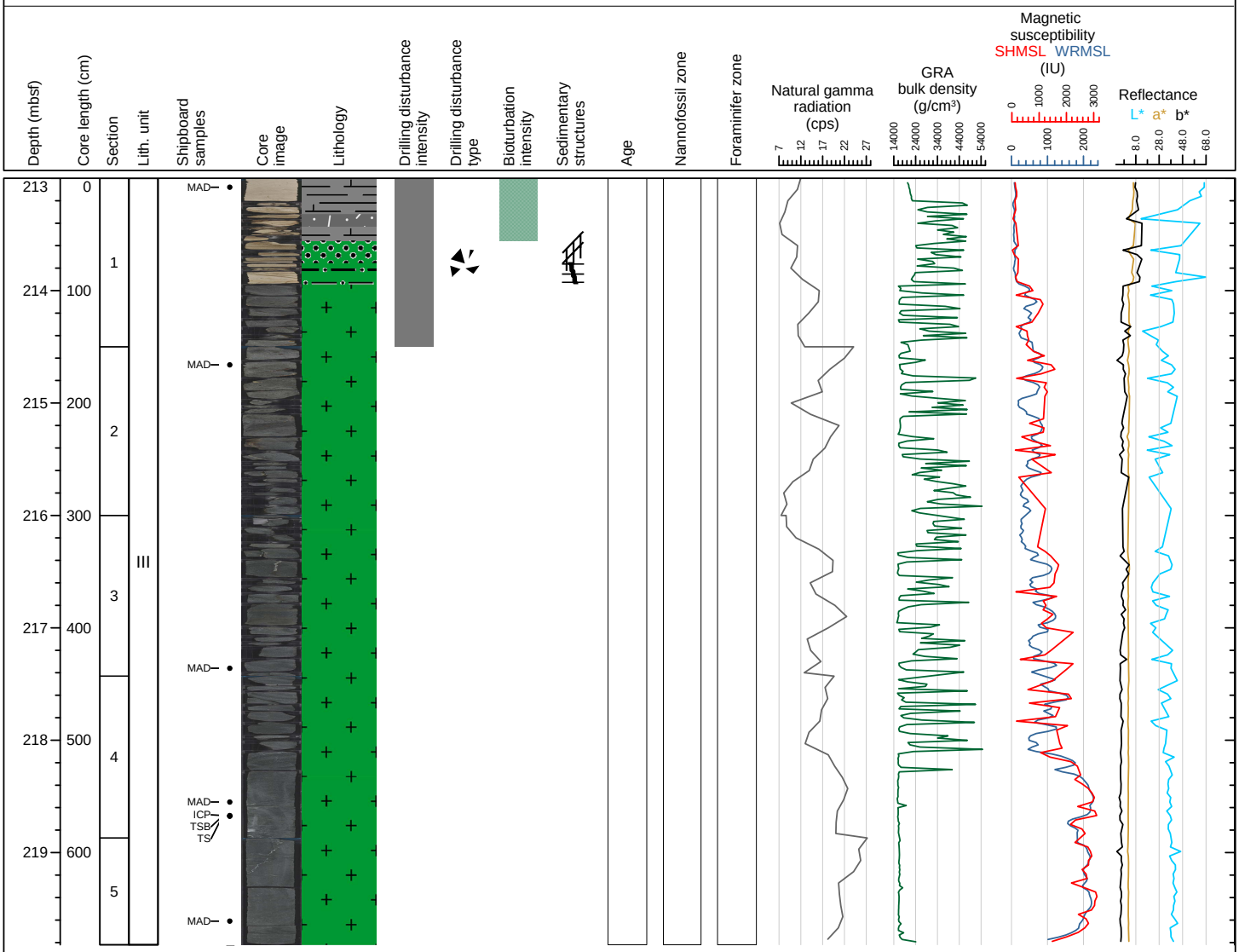
Hole 391-U1578A-23R Section 3, Top of Section: 206.24 m (CSF-A)



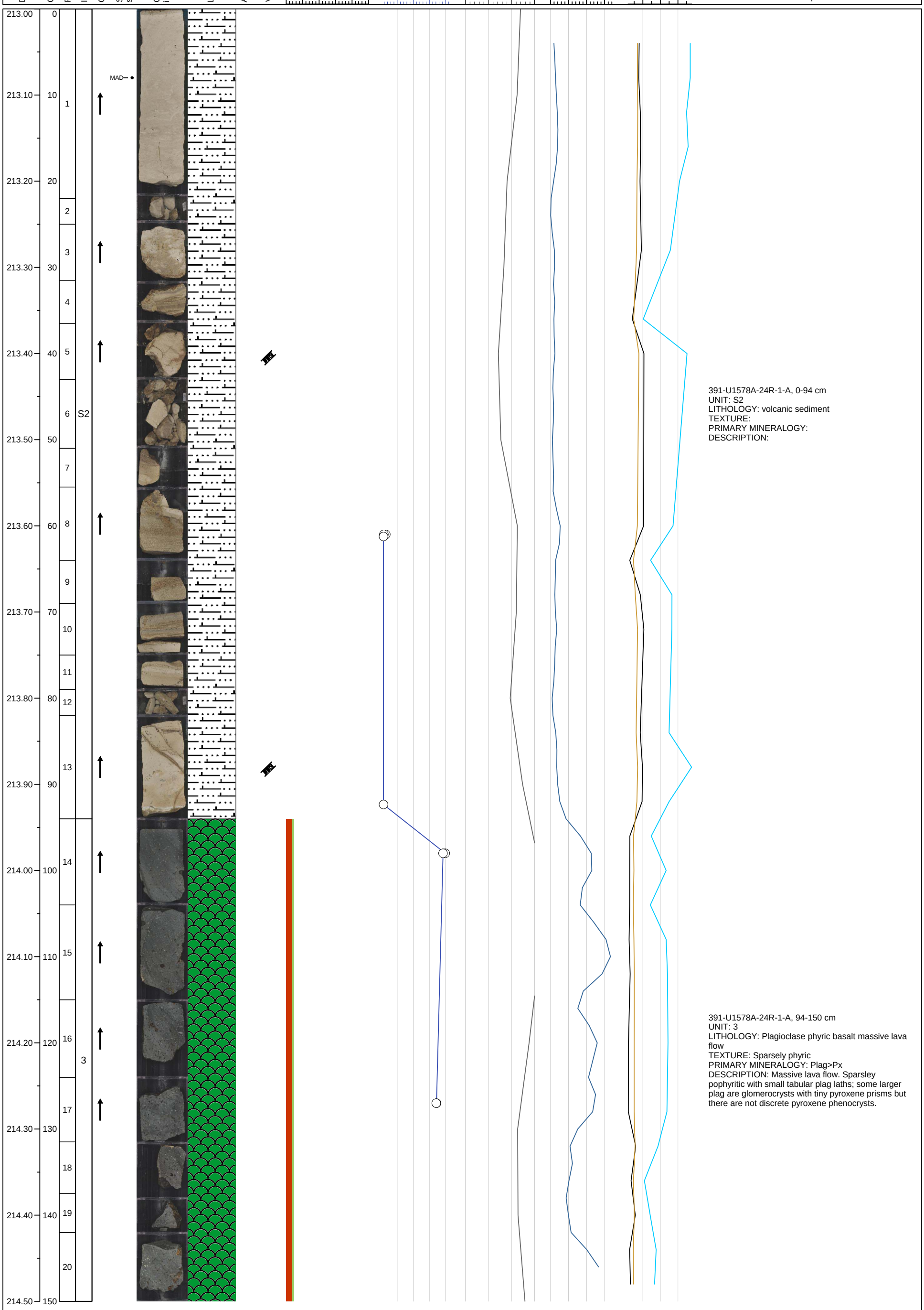
391-U1578A-23R-3-A, 0-146 cm
UNIT: 2
LITHOLOGY: Plagioclase-pyroxene phyric basalt pillow lava flow
TEXTURE: Sparsely phyric
PRIMARY MINERALOGY: Plag>Px
DESCRIPTION: Pillow lava flow: Moderately (~6%) phyric with plag and pxn phenocrysts. Very fine-grained groundmass. Sparsely vesicular with lined vesicles. A bit of hyaloclastite remains on the slanted top of the first piece.

Hole 391-U1578A Core 24R, Interval 213.0-219.82 m (CSF-A)

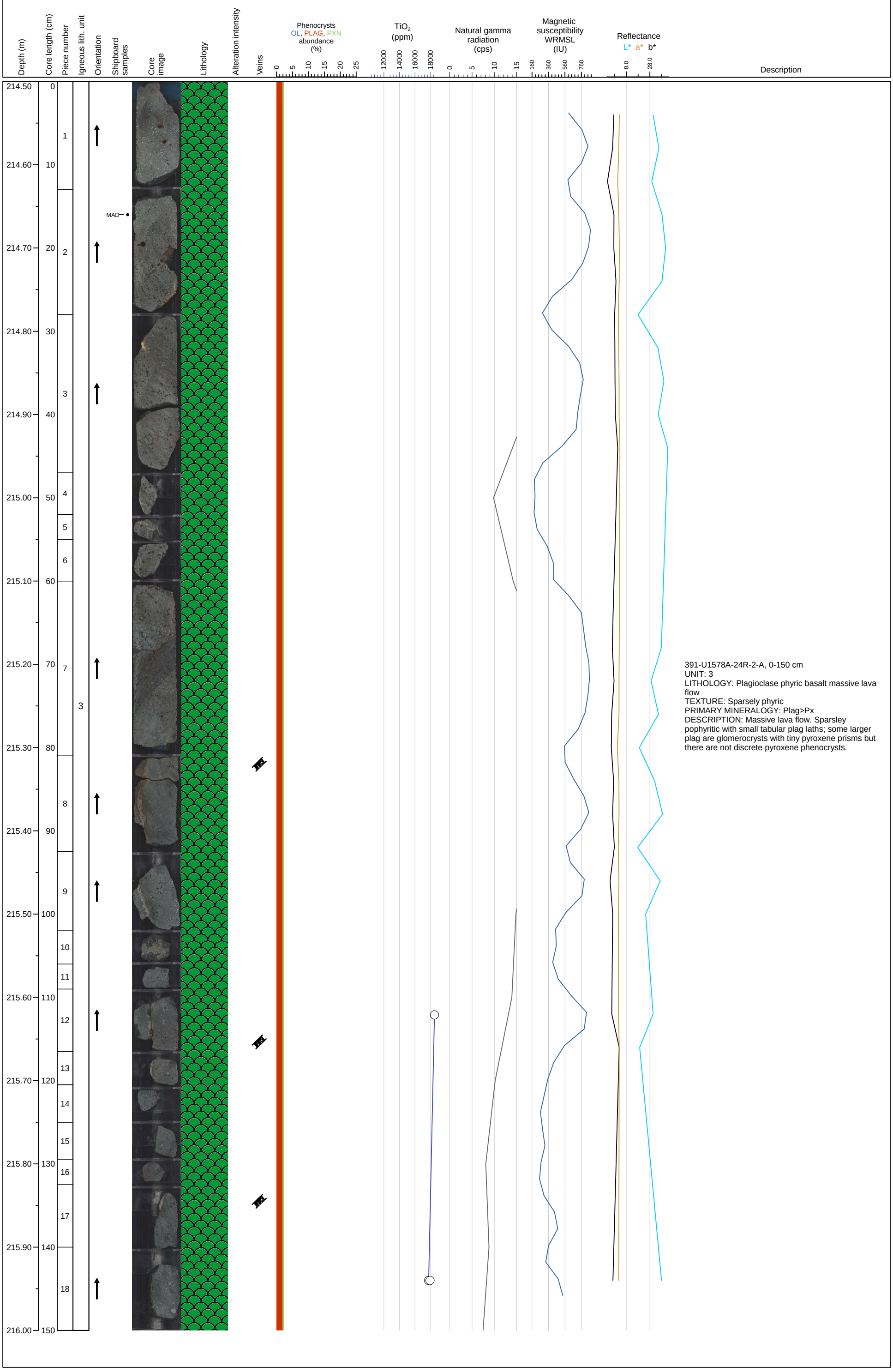
Sediment interbed in the volcanic basement, including pale brown tuffaceous chalk (locally with volcaniclasts), possible tuff and laminated volcanic sandstone. The sequence includes several compaction structures with a small dyke of sandstone. The volcaniclasts are composed of highly vesicular angular glass shards (commonly altered).



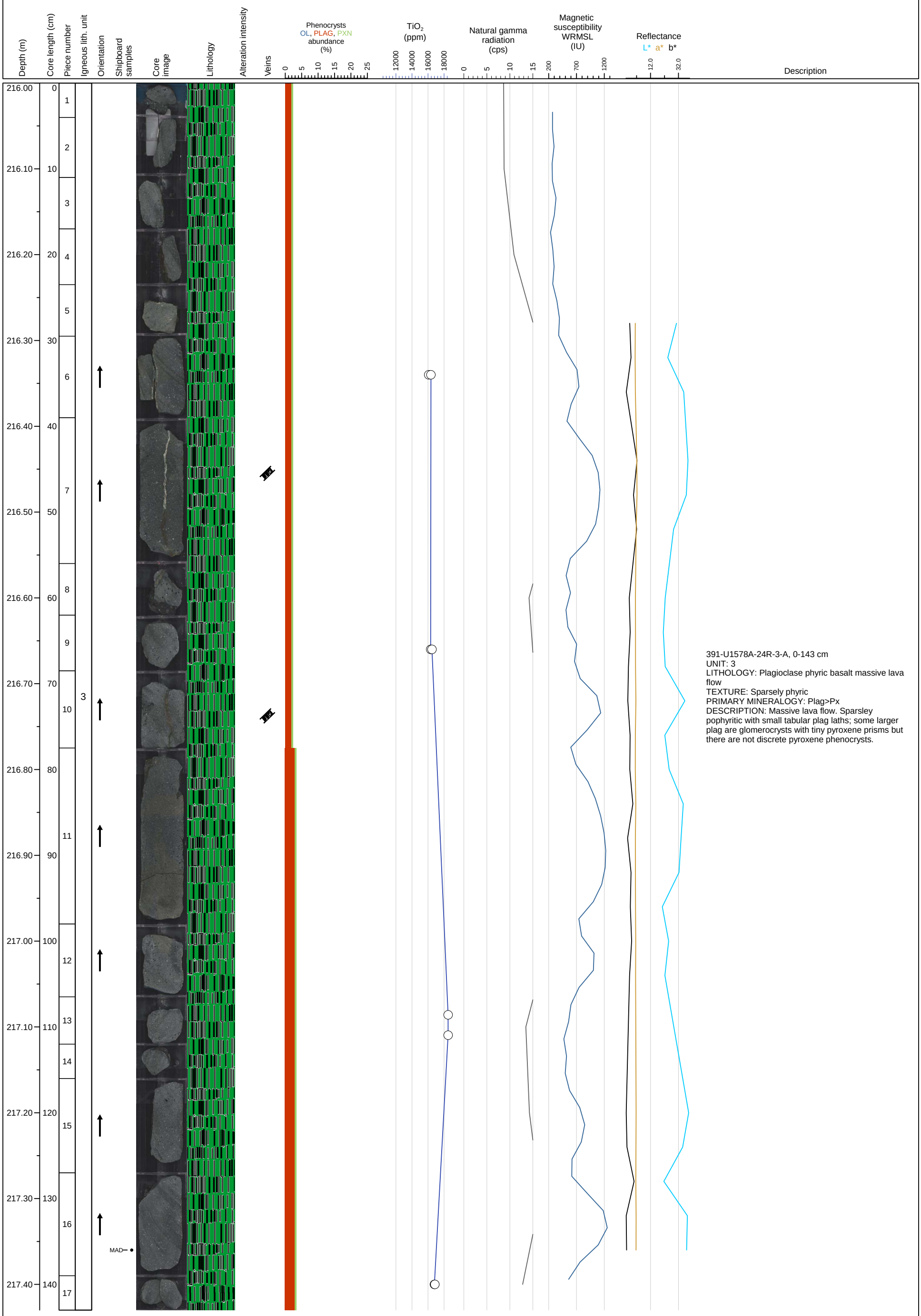
Hole 391-U1578A-24R Section 1, Top of Section: 213.0 m (CSF-A)



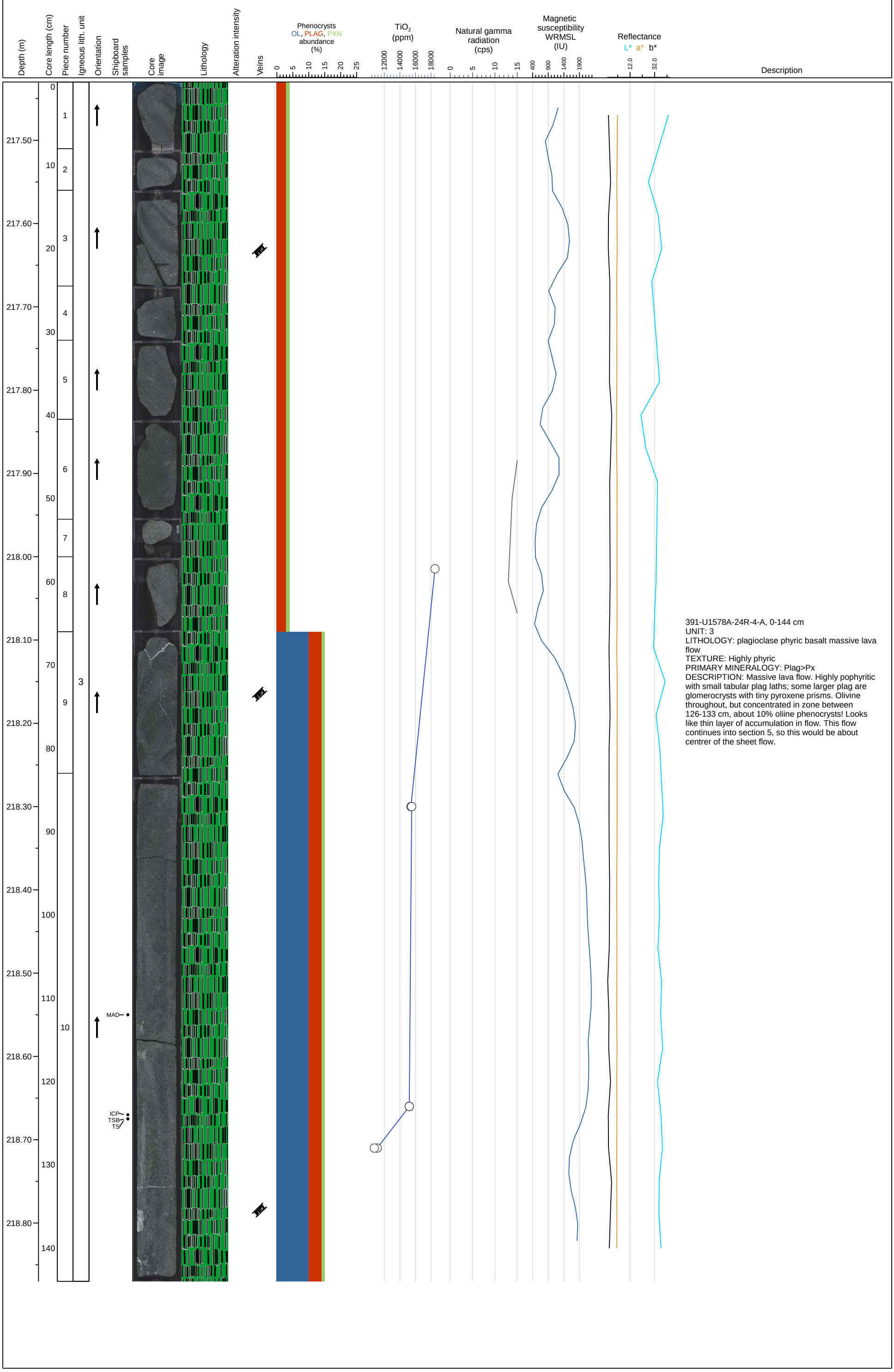
Hole 391-U1578A-24R Section 2, Top of Section: 214.5 m (CSF-A)



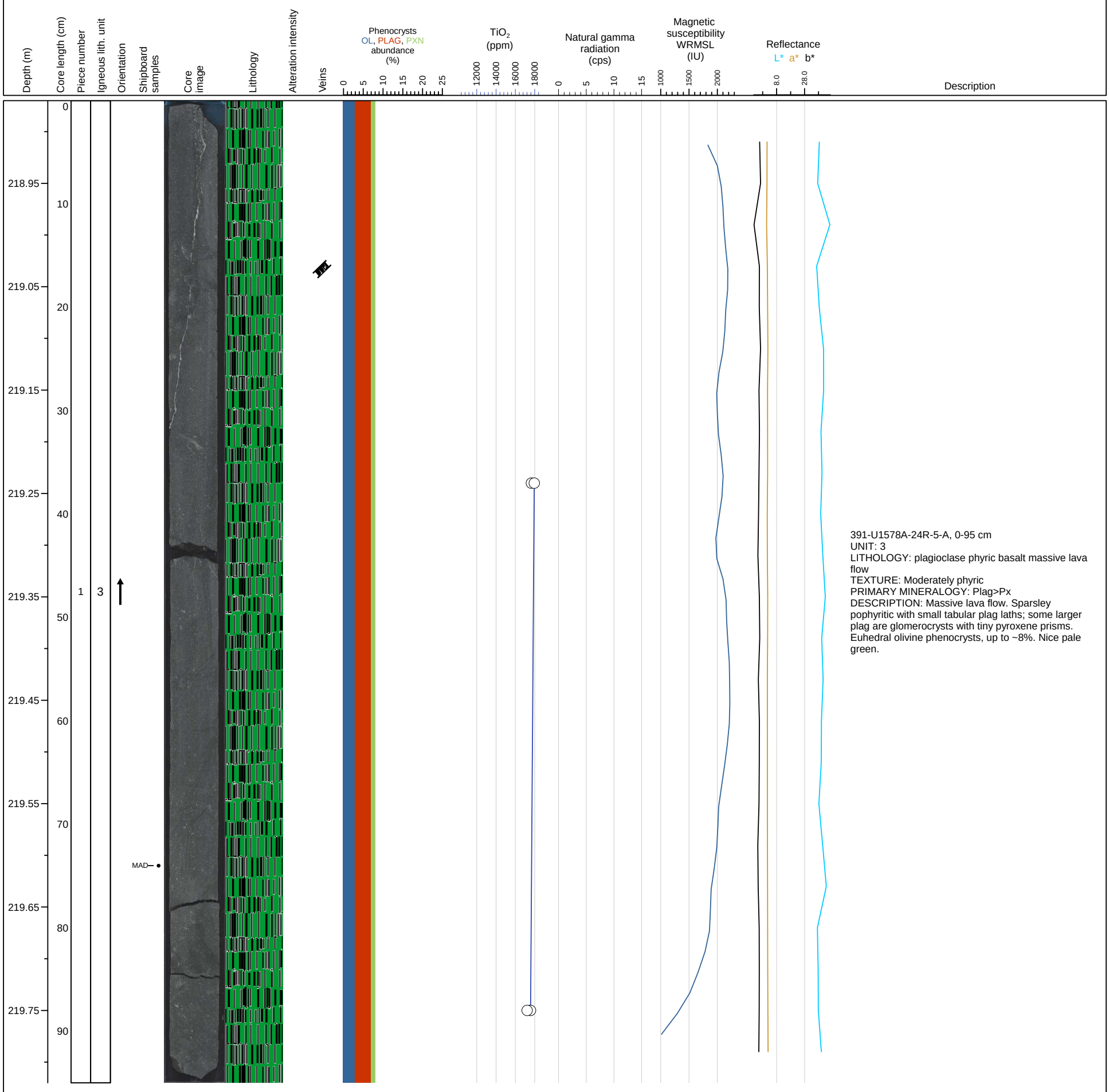
Hole 391-U1578A-24R Section 3, Top of Section: 216.0 m (CSF-A)



Hole 391-U1578A-24R Section 4, Top of Section: 217.43 m (CSF-A)



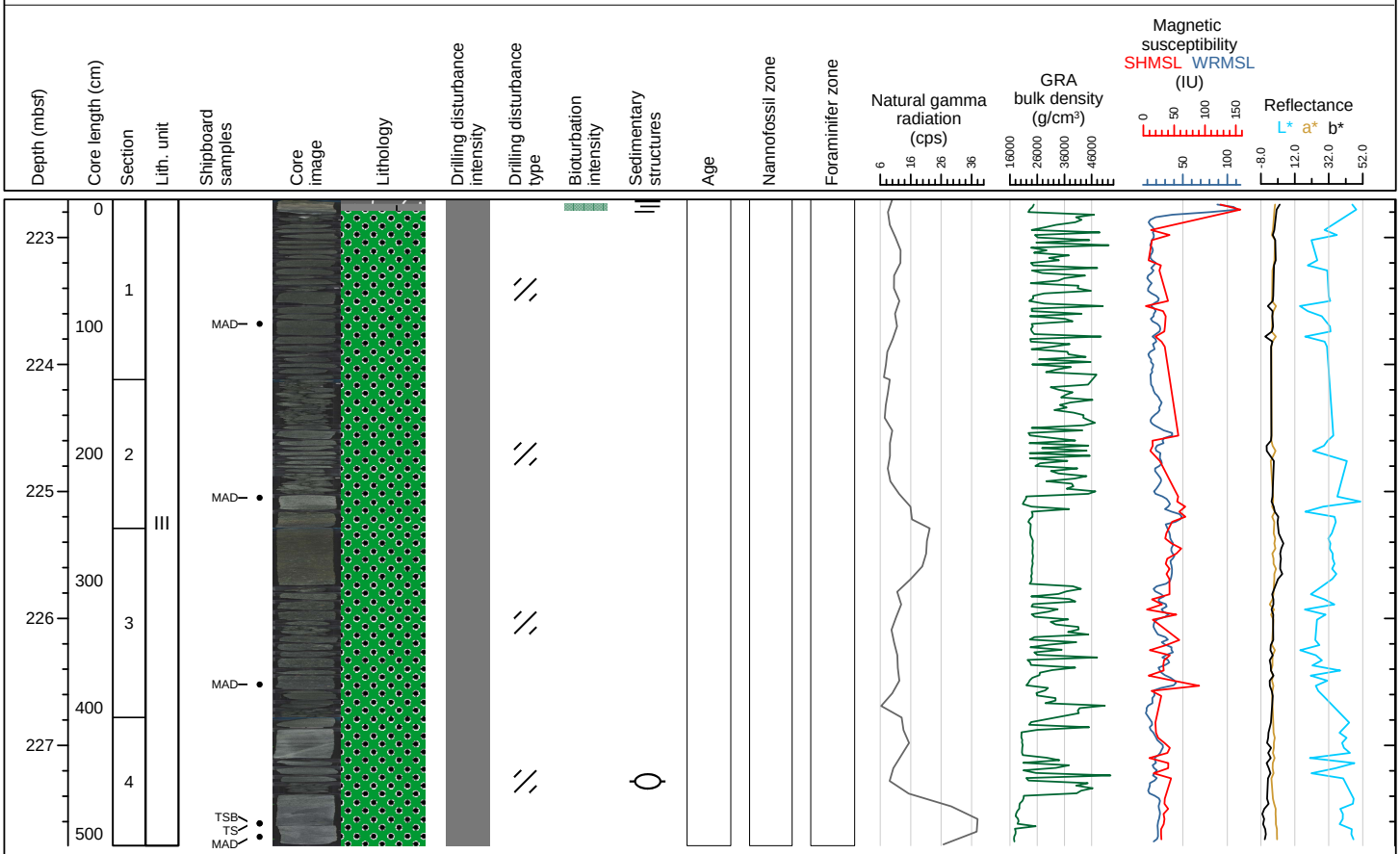
Hole 391-U1578A-24R Section 5, Top of Section: 218.87 m (CSF-A)



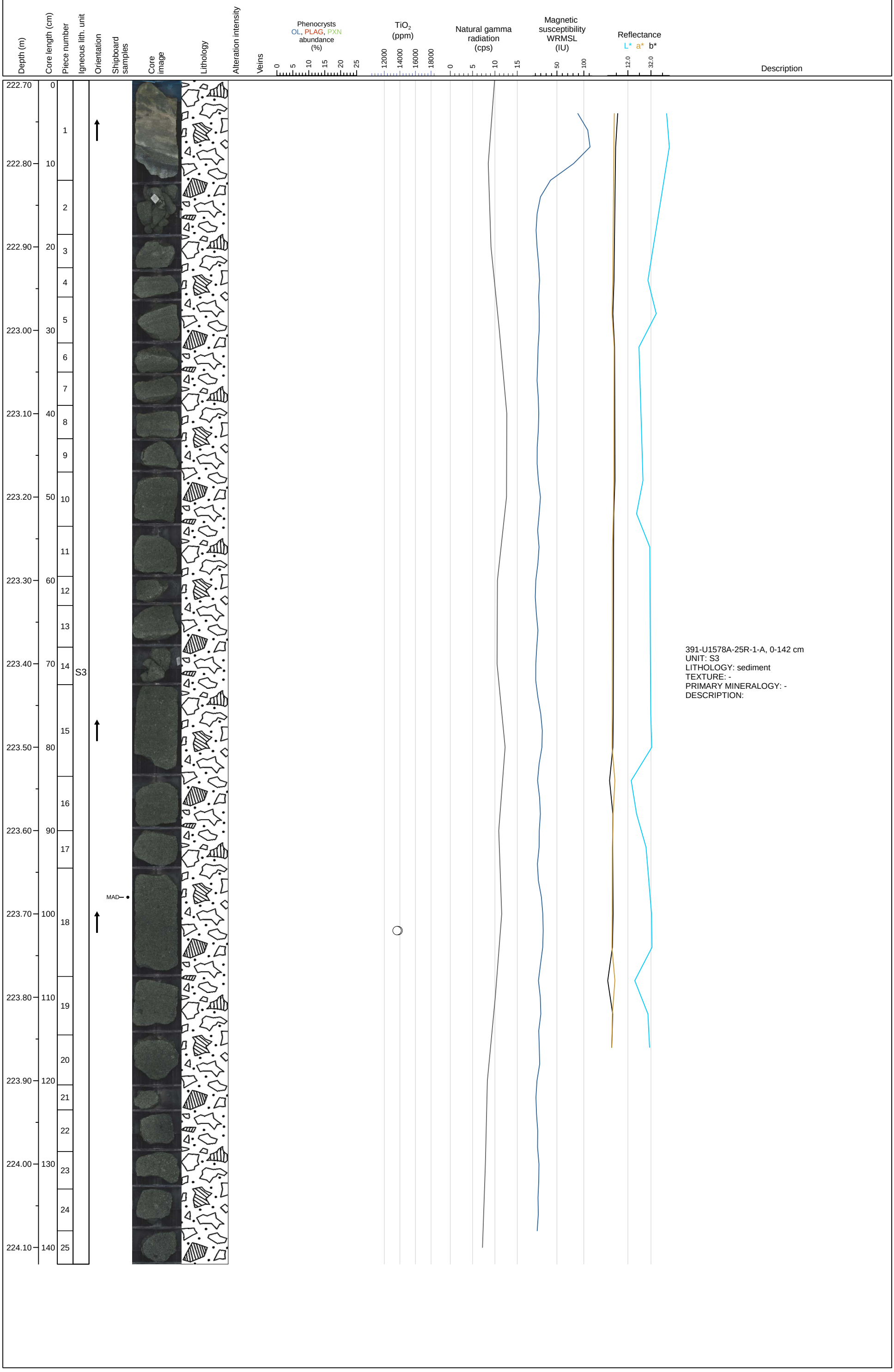
391-U1578A-24R-5-A, 0-95 cm
UNIT: 3
LITHOLOGY: plagioclase phyric basalt massive lava flow
TEXTURE: Moderately phyric
PRIMARY MINERALOGY: Plag>Px
DESCRIPTION: Massive lava flow. Sparsley pophyritic with small tabular plag laths; some larger plag are glomerocrysts with tiny pyroxene prisms. Euhedral olivine phenocrysts, up to ~8%. Nice pale green.

Hole 391-U1578A Core 25R, Interval 222.7-227.79 m (CSF-A)

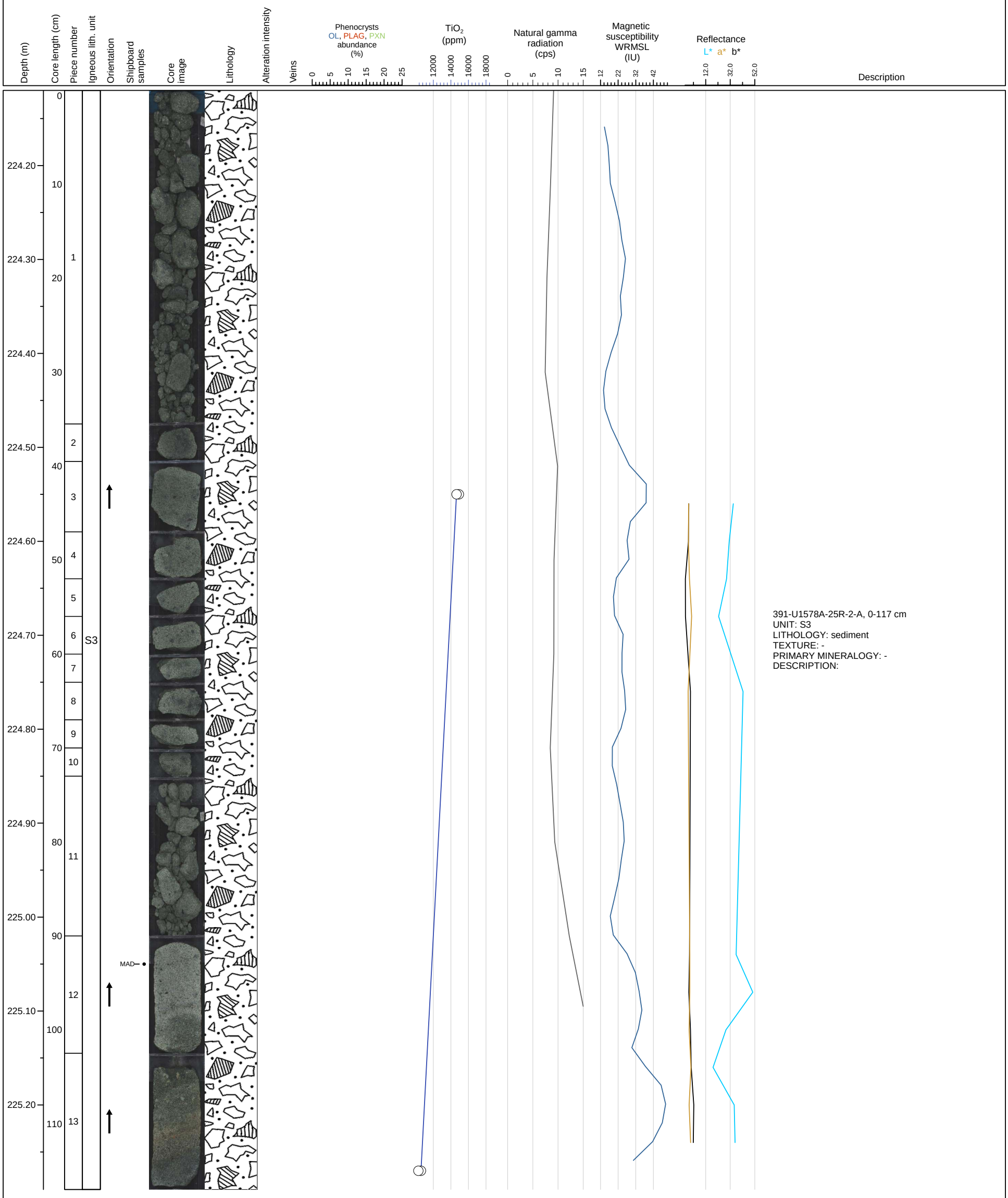
Sediment interbed in the volcanic basement, including gray to dark greenish gray volcanic sandstone to microbreccia with subordinate bioturbated tuffaceous chalk and possible tuff. The sandstone beds are thick and massive to poorly layered. The volcaniclasts are composed of highly vesicular angular glass shards (commonly altered).



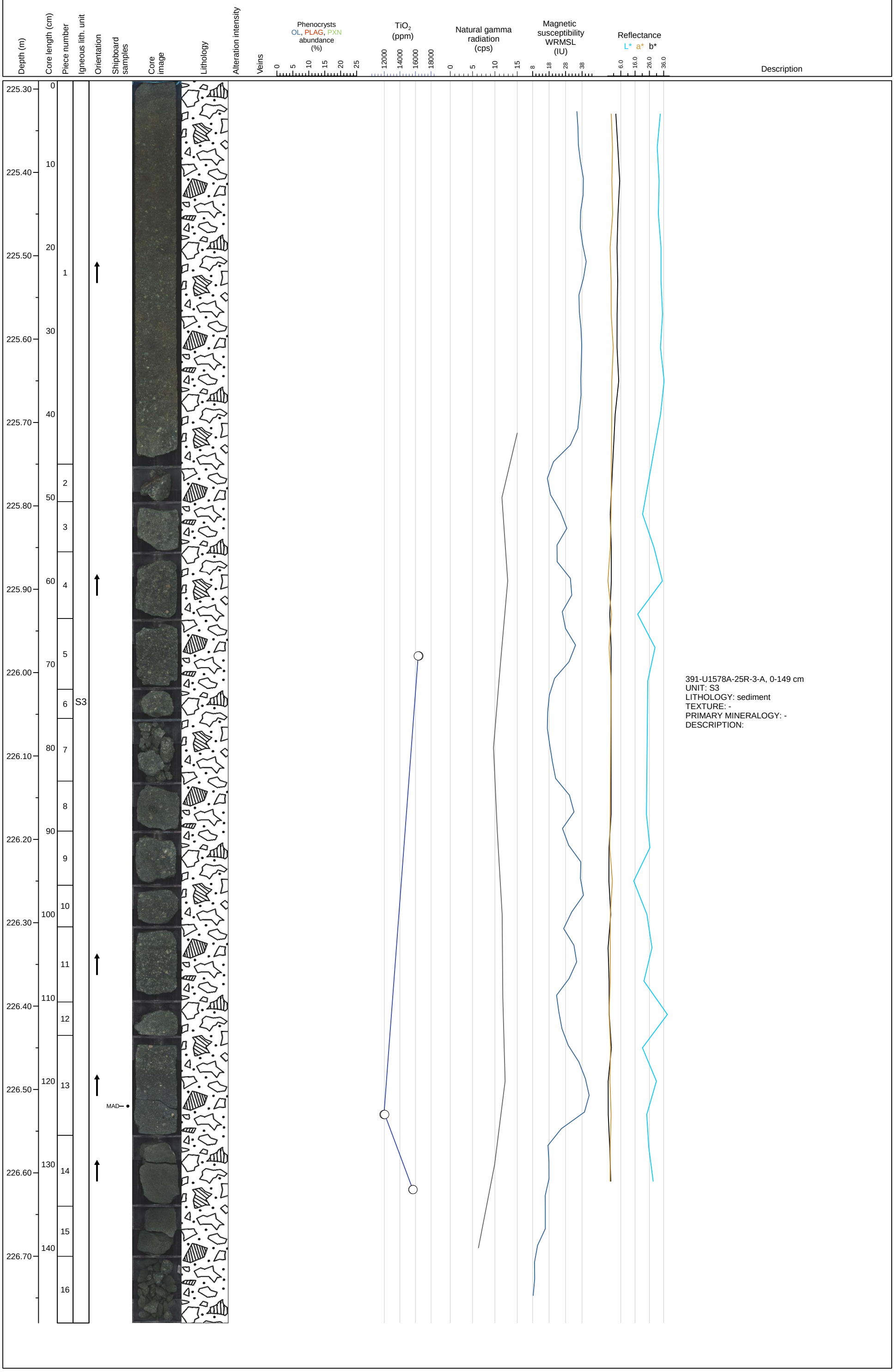
Hole 391-U1578A-25R Section 1, Top of Section: 222.7 m (CSF-A)



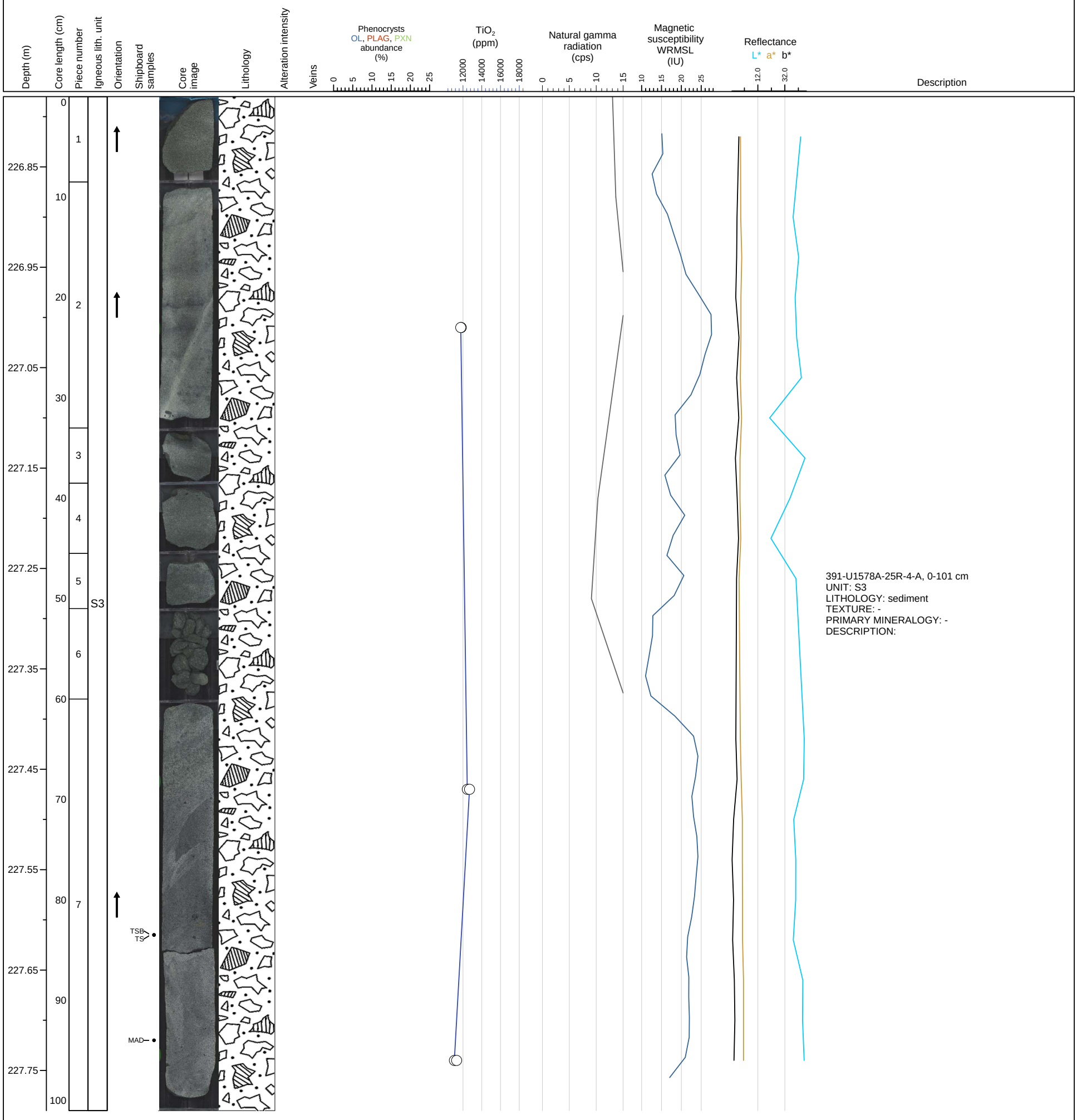
Hole 391-U1578A-25R Section 2, Top of Section: 224.12 m (CSF-A)



Hole 391-U1578A-25R Section 3, Top of Section: 225.29 m (CSF-A)

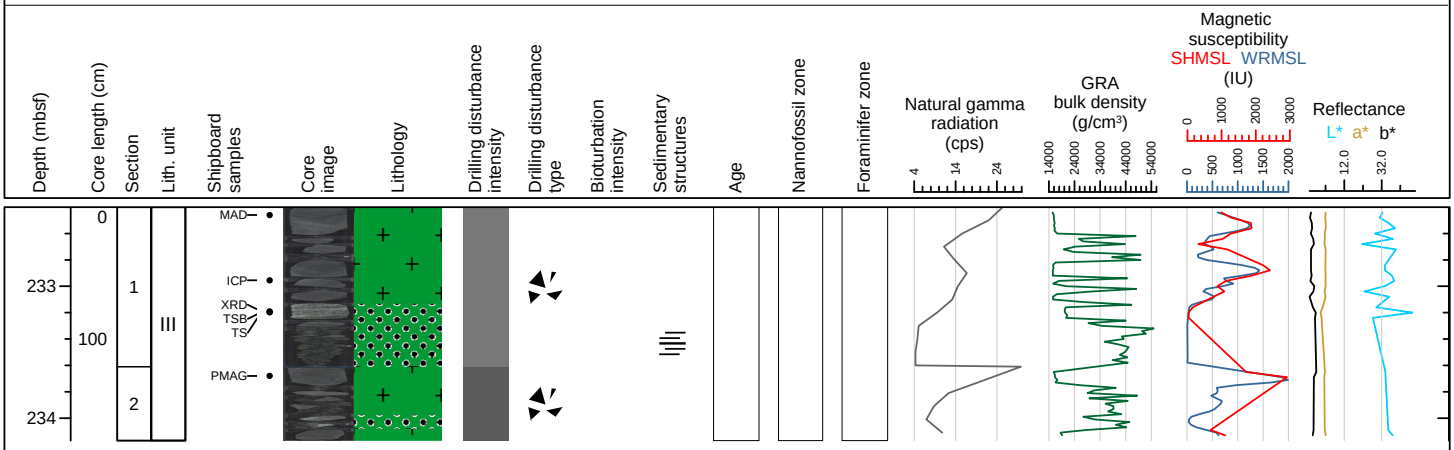


Hole 391-U1578A-25R Section 4, Top of Section: 226.78 m (CSF-A)

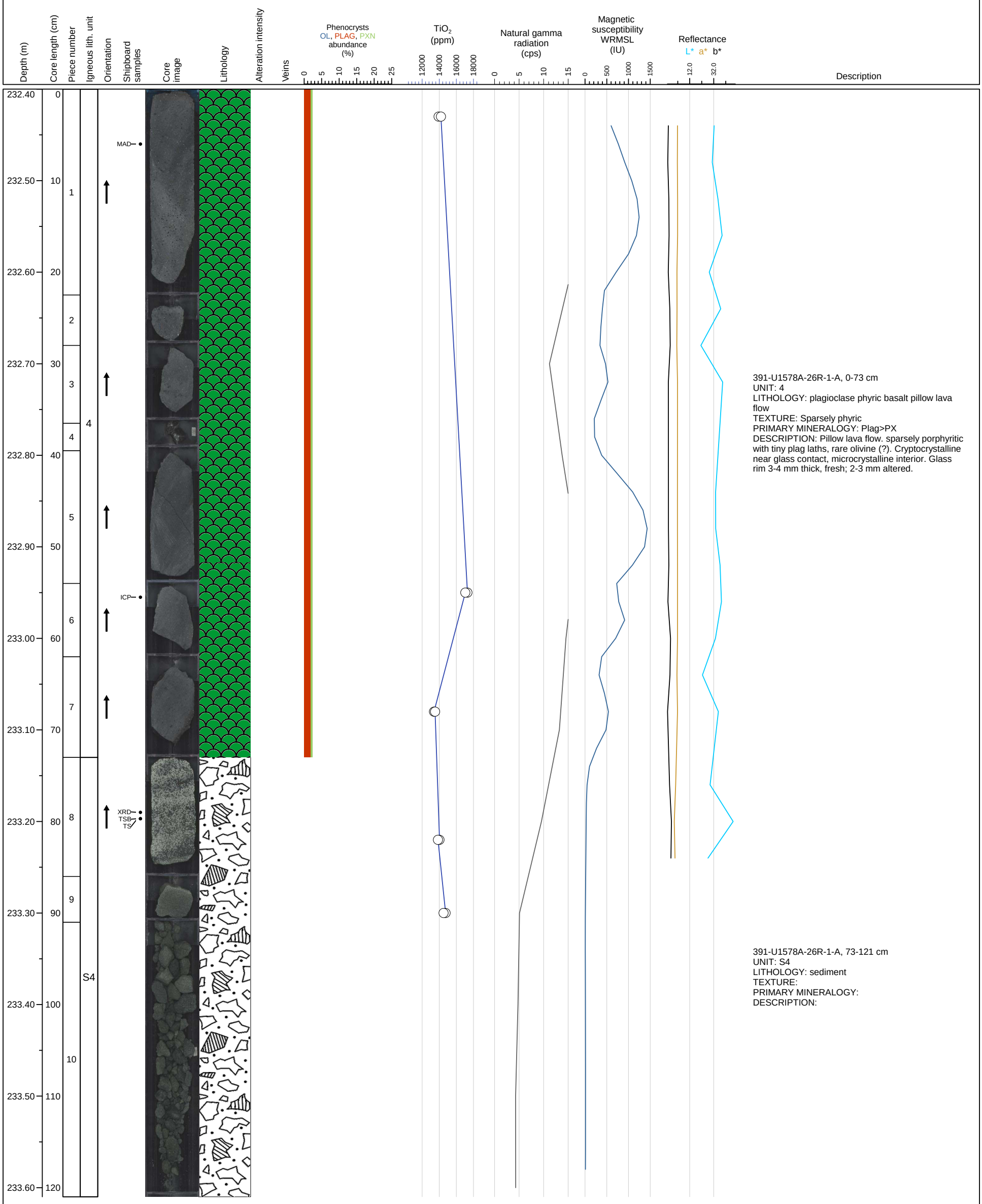


Hole 391-U1578A Core 26R, Interval 232.4-234.17 m (CSF-A)

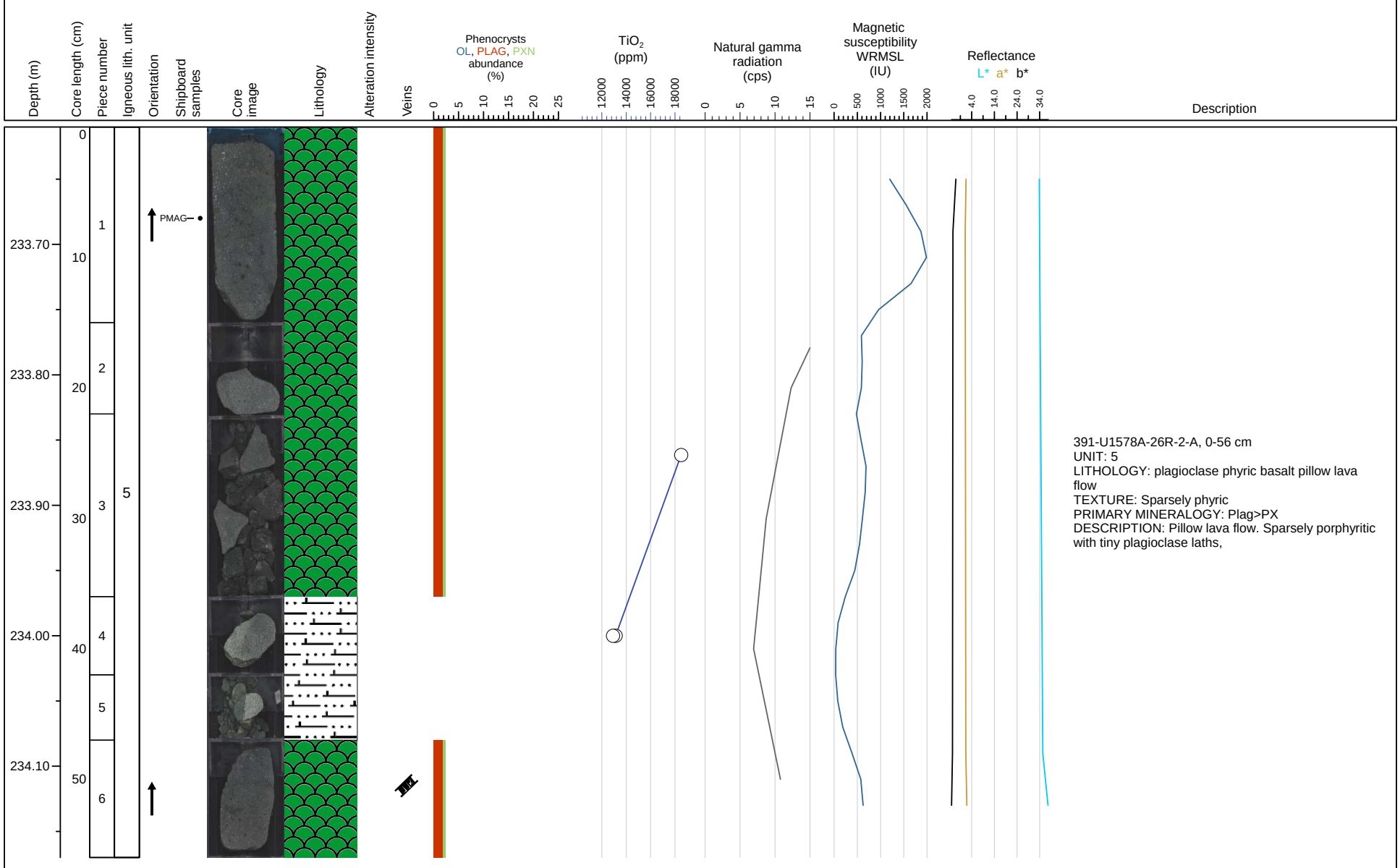
The core includes two sediment interbeds in the volcanic basement. The interbeds are composed of light gray to greenish gray massive volcanic sandstone. The upper sedimentary interval has a patchy fabric due to differential cementation by zeolite and calcite. The volcaniclasts are composed of highly vesicular angular glass shards (commonly altered).



Hole 391-U1578A-26R Section 1, Top of Section: 232.4 m (CSF-A)

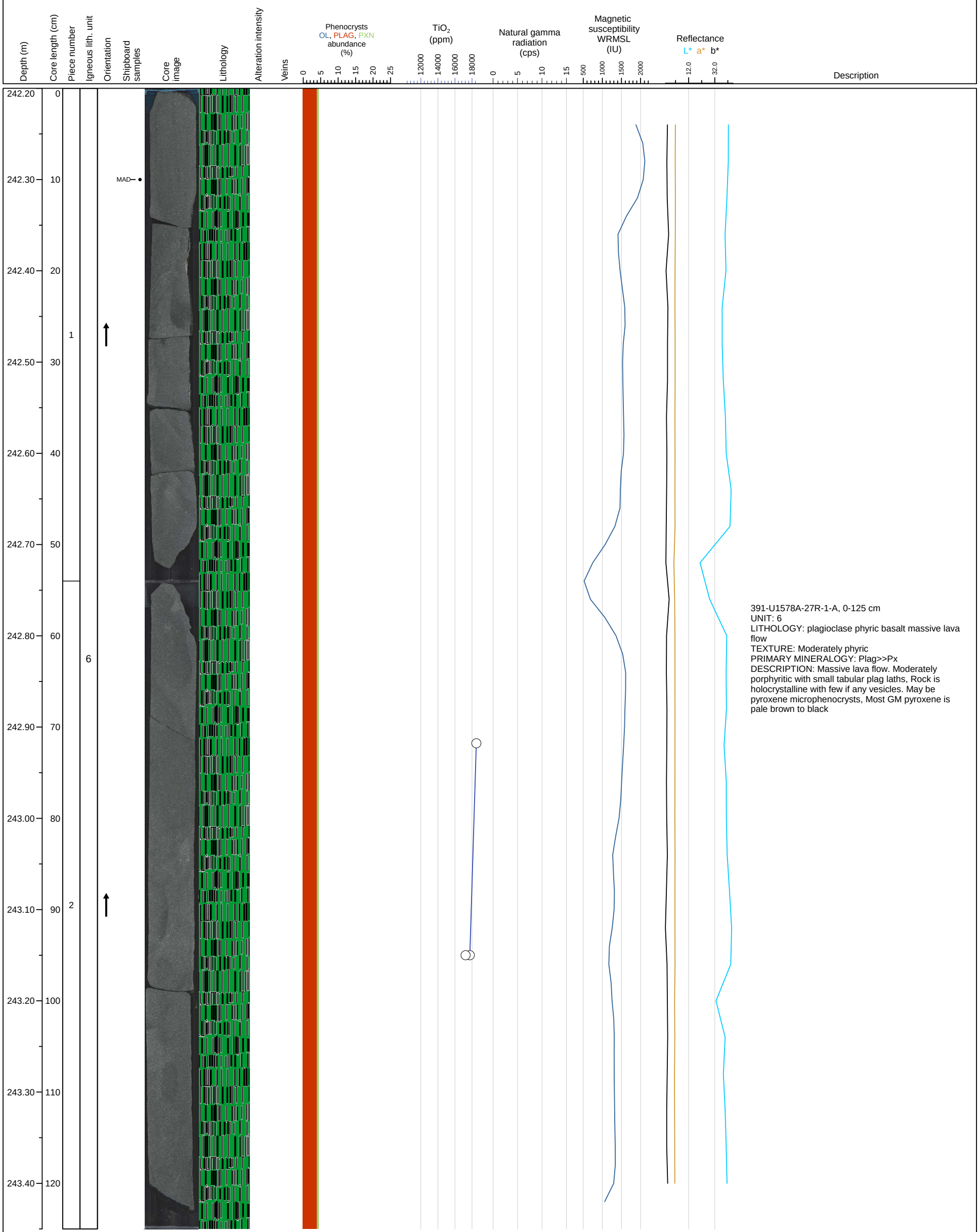


Hole 391-U1578A-26R Section 2, Top of Section: 233.61 m (CSF-A)



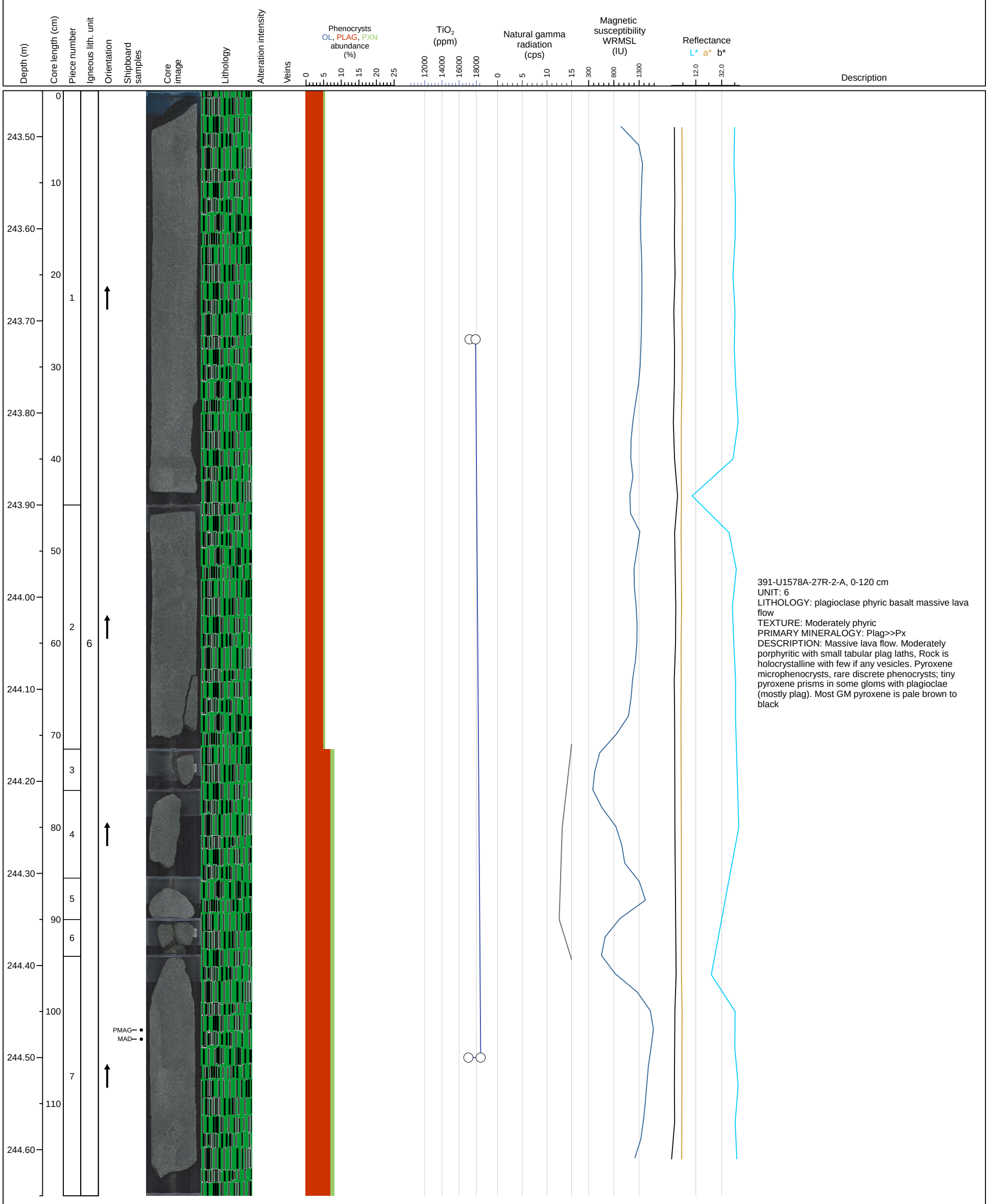
391-U1578A-26R-2-A, 0-56 cm
UNIT: 5
LITHOLOGY: plagioclase phyric basalt pillow lava flow
TEXTURE: Sparsely phyric
PRIMARY MINERALOGY: Plag>PX
DESCRIPTION: Pillow lava flow. Sparsely porphyritic with tiny plagioclase laths,

Hole 391-U1578A-27R Section 1, Top of Section: 242.2 m (CSF-A)



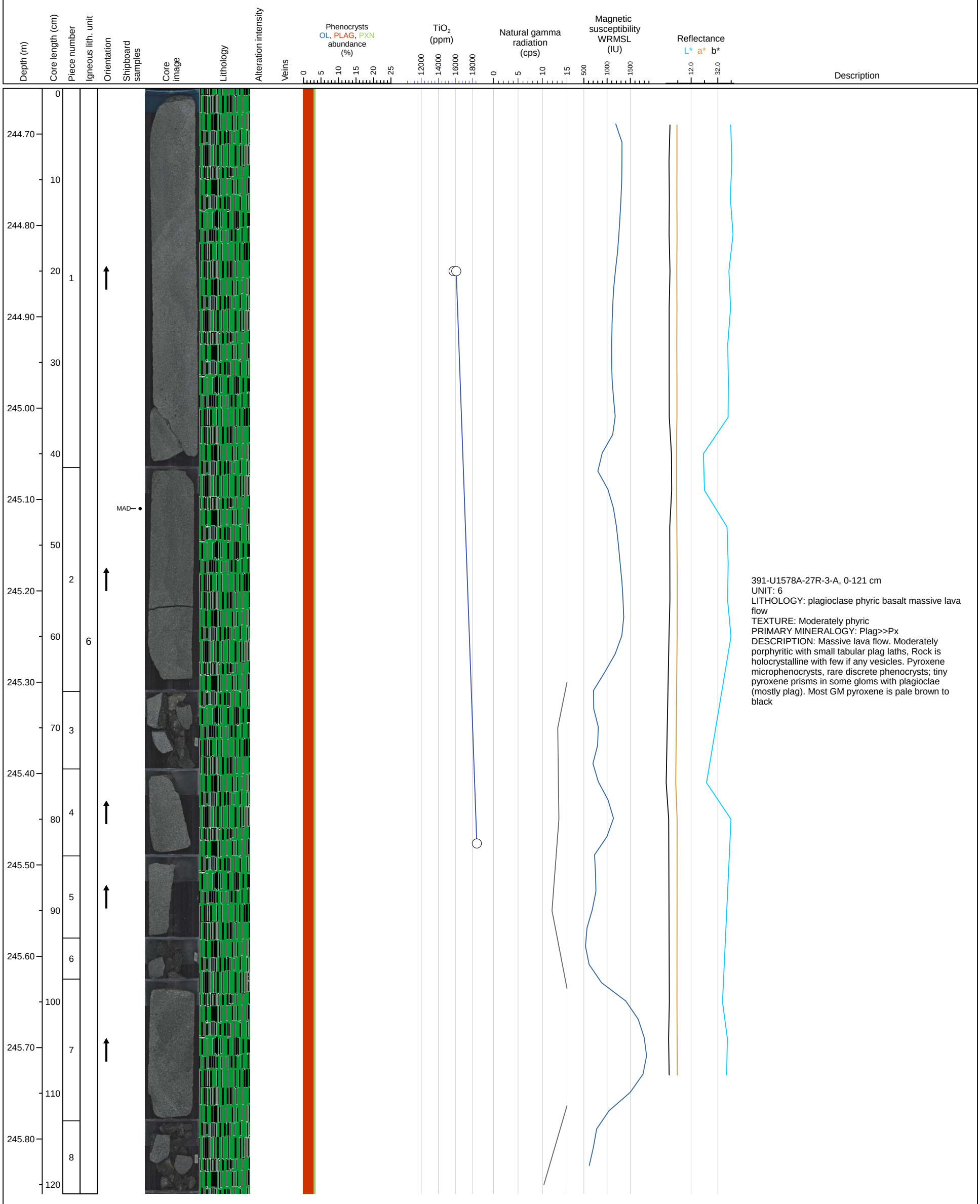
391-U1578A-27R-1-A, 0-125 cm
UNIT: 6
LITHOLOGY: plagioclase phyric basalt massive lava flow
TEXTURE: Moderately phyric
PRIMARY MINERALOGY: Plag>>Px
DESCRIPTION: Massive lava flow. Moderately porphyritic with small tabular plag laths, Rock is holocrystalline with few if any vesicles. May be pyroxene microphenocrysts, Most GM pyroxene is pale brown to black

Hole 391-U1578A-27R Section 2, Top of Section: 243.45 m (CSF-A)



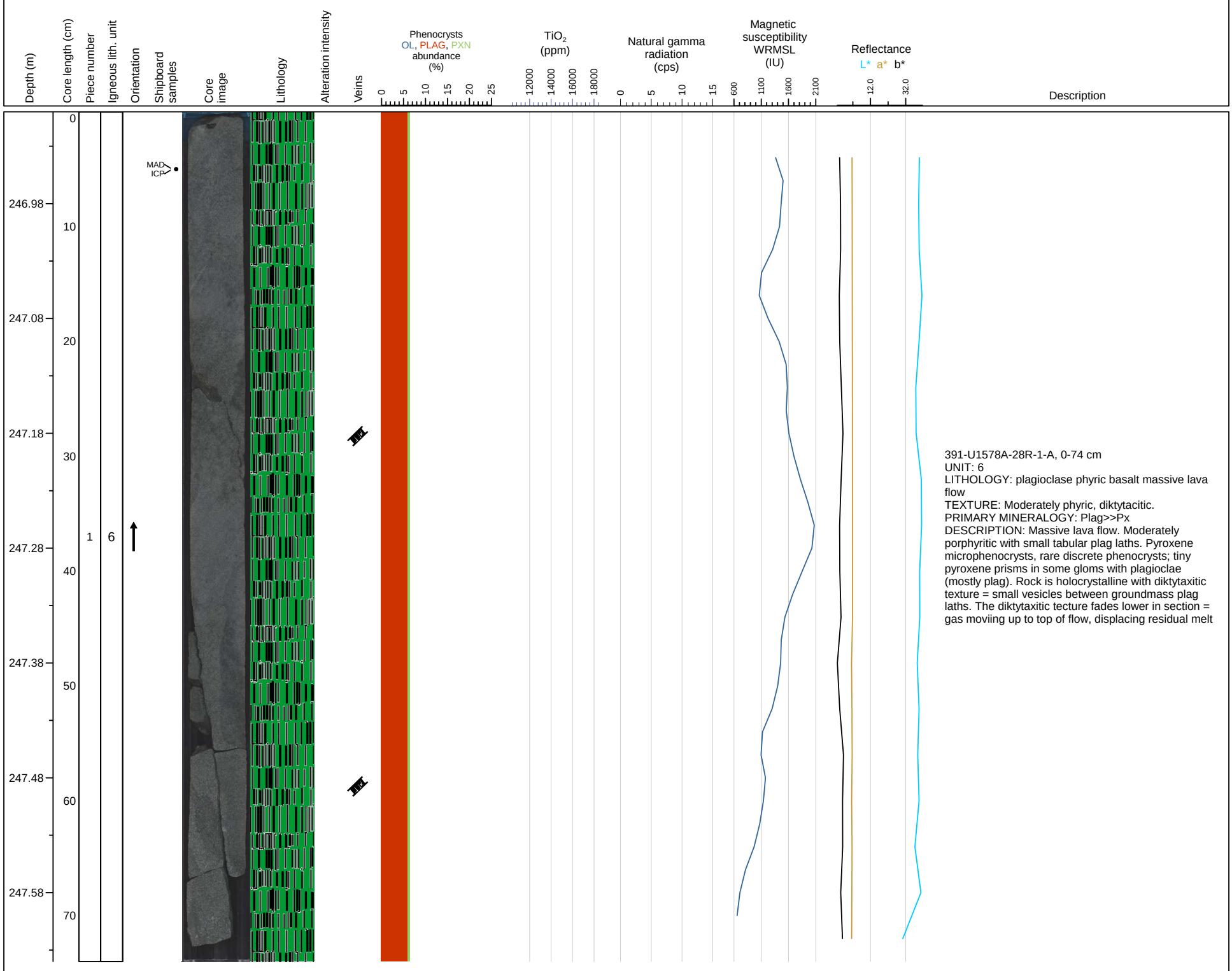
391-U1578A-27R-2-A, 0-120 cm
UNIT: 6
LITHOLOGY: plagioclase phyric basalt massive lava flow
TEXTURE: Moderately phyric
PRIMARY MINERALOGY: Plag>>Px
DESCRIPTION: Massive lava flow. Moderately porphyritic with small tabular plag laths, Rock is holocrystalline with few if any vesicles. Pyroxene microphenocrysts, rare discrete phenocrysts; tiny pyroxene prisms in some gloms with plagioclae (mostly plag). Most GM pyroxene is pale brown to black

Hole 391-U1578A-27R Section 3, Top of Section: 244.65 m (CSF-A)



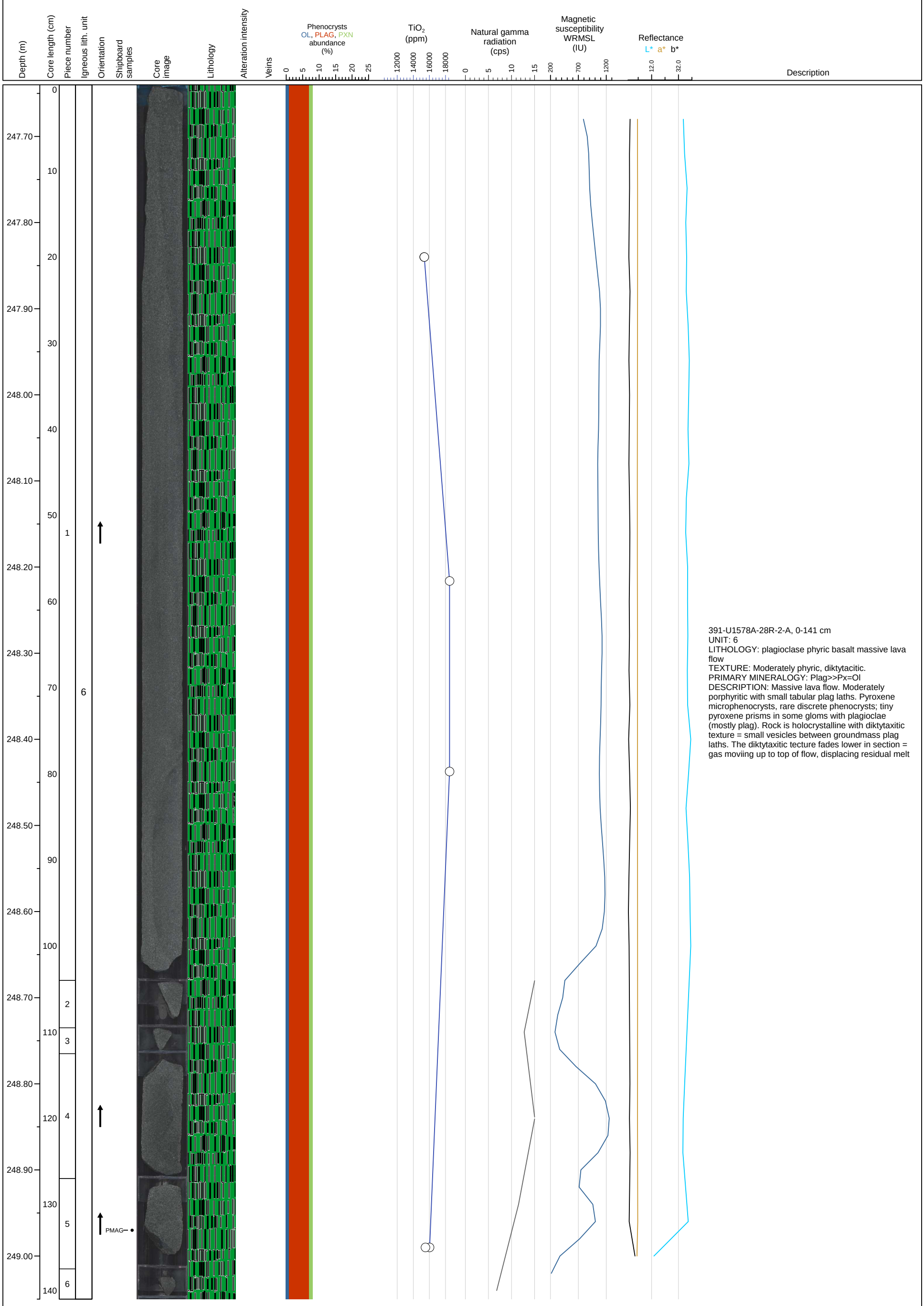
391-U1578A-27R-3-A, 0-121 cm
UNIT: 6
LITHOLOGY: plagioclase phyric basalt massive lava flow
TEXTURE: Moderately phyric
PRIMARY MINERALOGY: Plag>>Px
DESCRIPTION: Massive lava flow. Moderately porphyritic with small tabular plag laths, Rock is holocrystalline with few if any vesicles. Pyroxene microphenocrysts, rare discrete phenocrysts; tiny pyroxene prisms in some gloms with plagioclae (mostly plag). Most GM pyroxene is pale brown to black

Hole 391-U1578A-28R Section 1, Top of Section: 246.9 m (CSF-A)



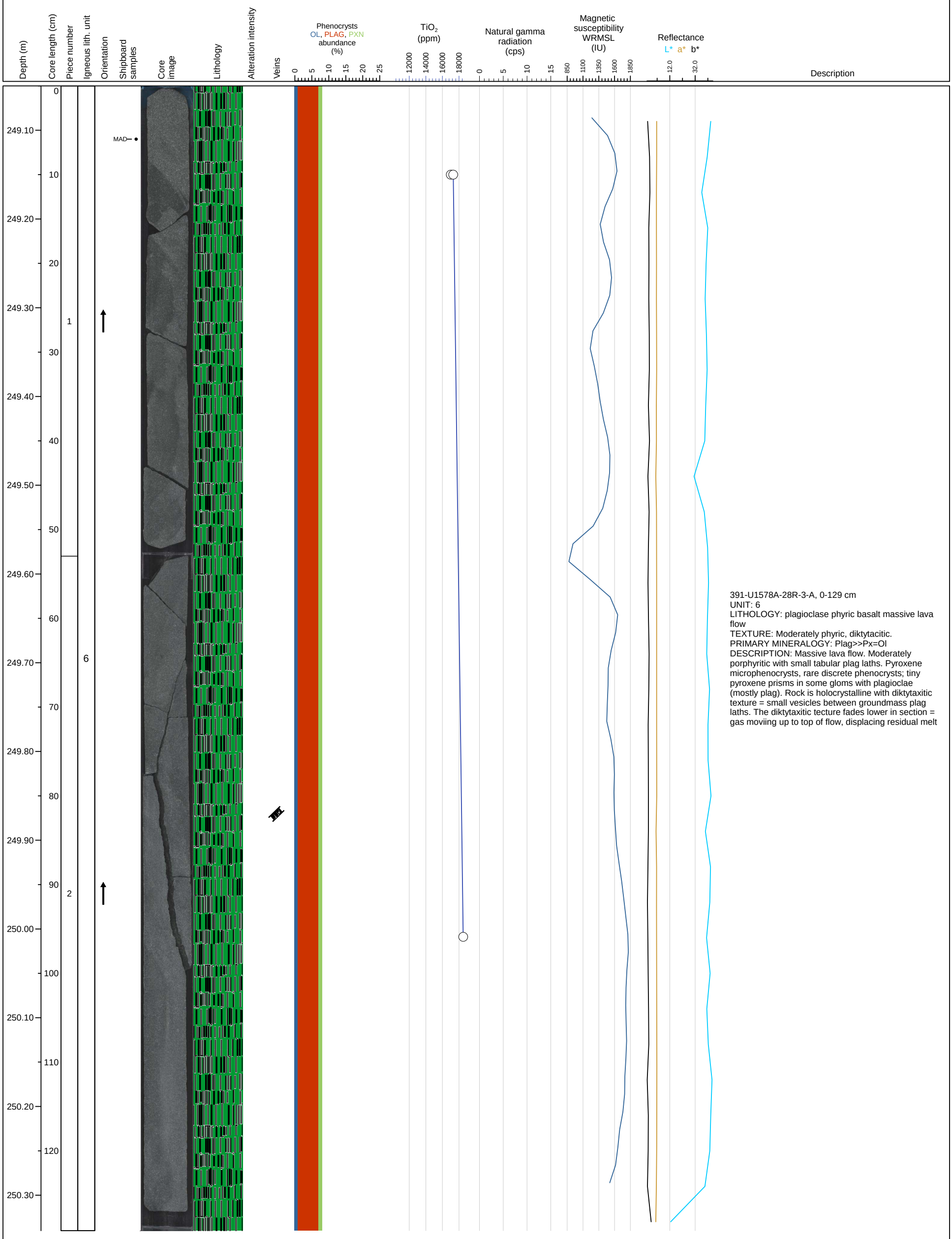
391-U1578A-28R-1-A, 0-74 cm
UNIT: 6
LITHOLOGY: plagioclase phyric basalt massive lava flow
TEXTURE: Moderately phyric, diktytacitic.
PRIMARY MINERALOGY: Plag>>Px
DESCRIPTION: Massive lava flow. Moderately porphyritic with small tabular plag laths. Pyroxene microphenocrysts, rare discrete phenocrysts; tiny pyroxene prisms in some gloms with plagioclae (mostly plag). Rock is holocrystalline with diktytaxitic texture = small vesicles between groundmass plag laths. The diktytaxitic tecture fades lower in section = gas moviing up to top of flow, displacing residual melt

Hole 391-U1578A-28R Section 2, Top of Section: 247.64 m (CSF-A)



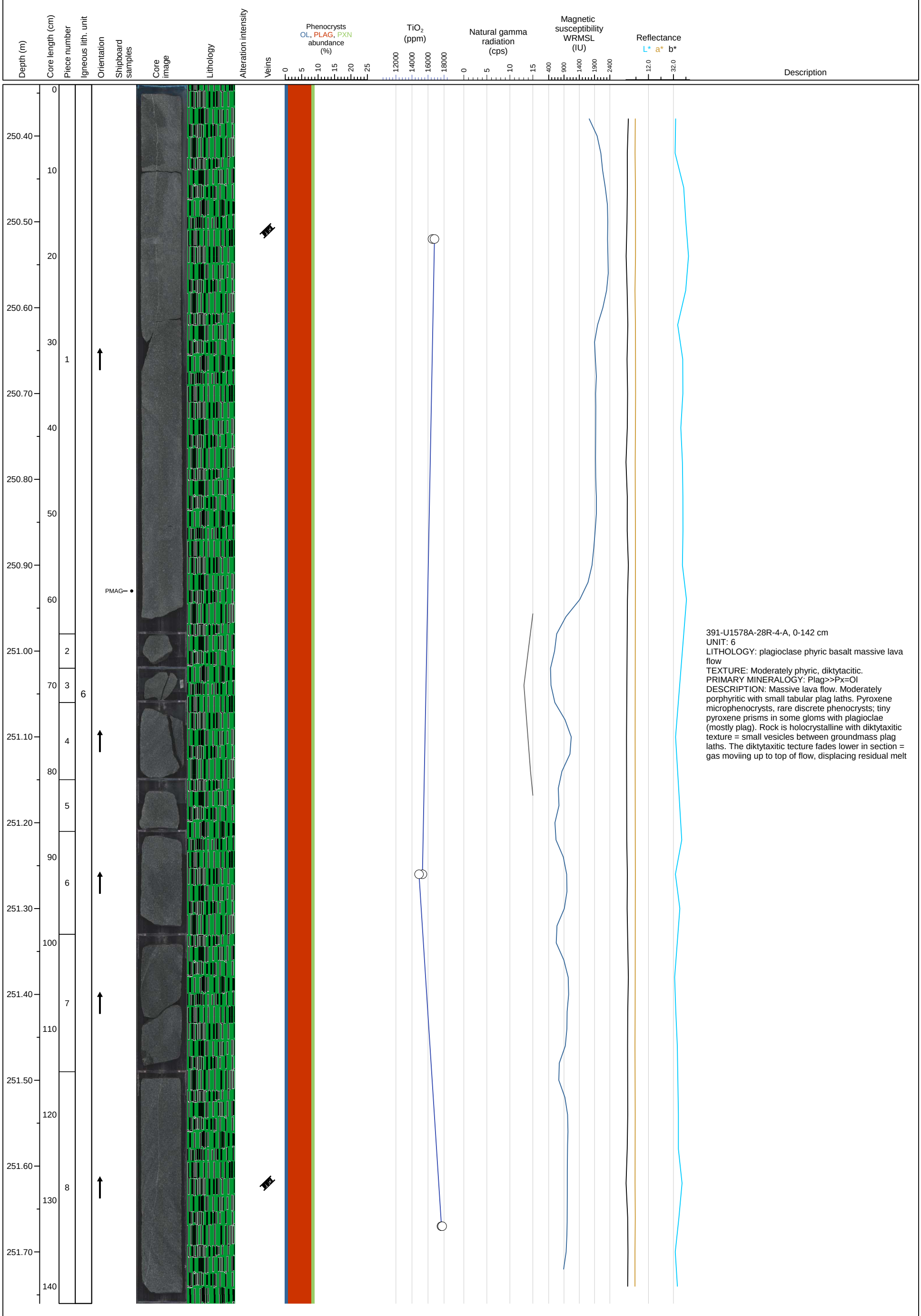
391-U1578A-28R-2-A, 0-141 cm
UNIT: 6
LITHOLOGY: plagioclase phyric basalt massive lava flow
TEXTURE: Moderately phyric, diktytacitic.
PRIMARY MINERALOGY: Plag>>Px=Ol
DESCRIPTION: Massive lava flow. Moderately porphyritic with small tabular plag laths. Pyroxene microphenocrysts, rare discrete phenocrysts; tiny pyroxene prisms in some gloms with plagioclae (mostly plag). Rock is holocrystalline with diktytaxitic texture = small vesicles between groundmass plag laths. The diktytaxitic tecture fades lower in section = gas moviing up to top of flow, displacing residual melt

Hole 391-U1578A-28R Section 3, Top of Section: 249.05 m (CSF-A)



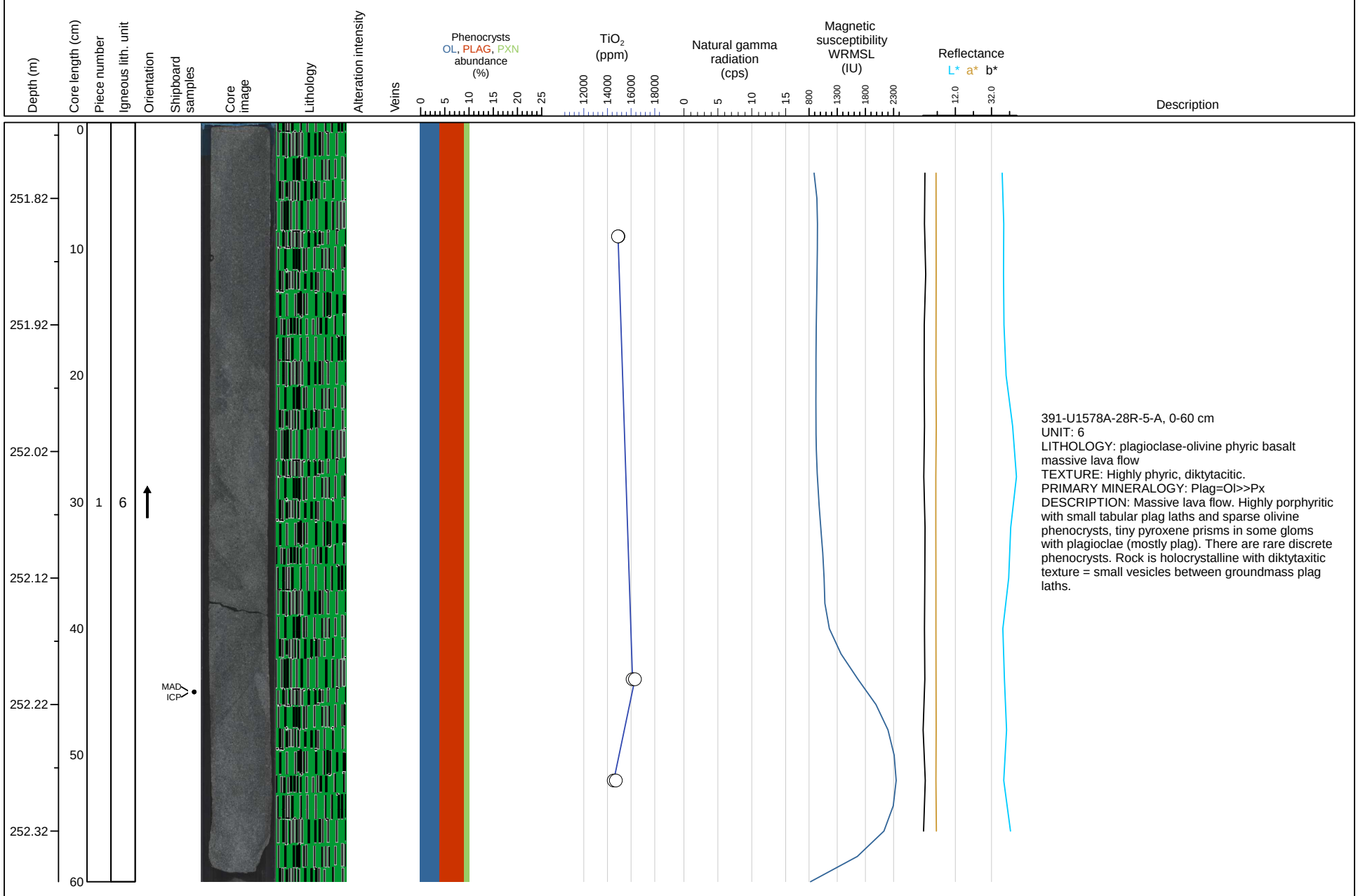
391-U1578A-28R-3-A, 0-129 cm
UNIT: 6
LITHOLOGY: plagioclase phyric basalt massive lava flow
TEXTURE: Moderately phyric, diktytacitic.
PRIMARY MINERALOGY: Plag>>Px=Ol
DESCRIPTION: Massive lava flow. Moderately porphyritic with small tabular plag laths. Pyroxene microphenocrysts, rare discrete phenocrysts; tiny pyroxene prisms in some gloms with plagioclae (mostly plag). Rock is holocrystalline with diktytaxitic texture = small vesicles between groundmass plag laths. The diktytaxitic tecture fades lower in section = gas moviing up to top of flow, displacing residual melt

Hole 391-U1578A-28R Section 4, Top of Section: 250.34 m (CSF-A)



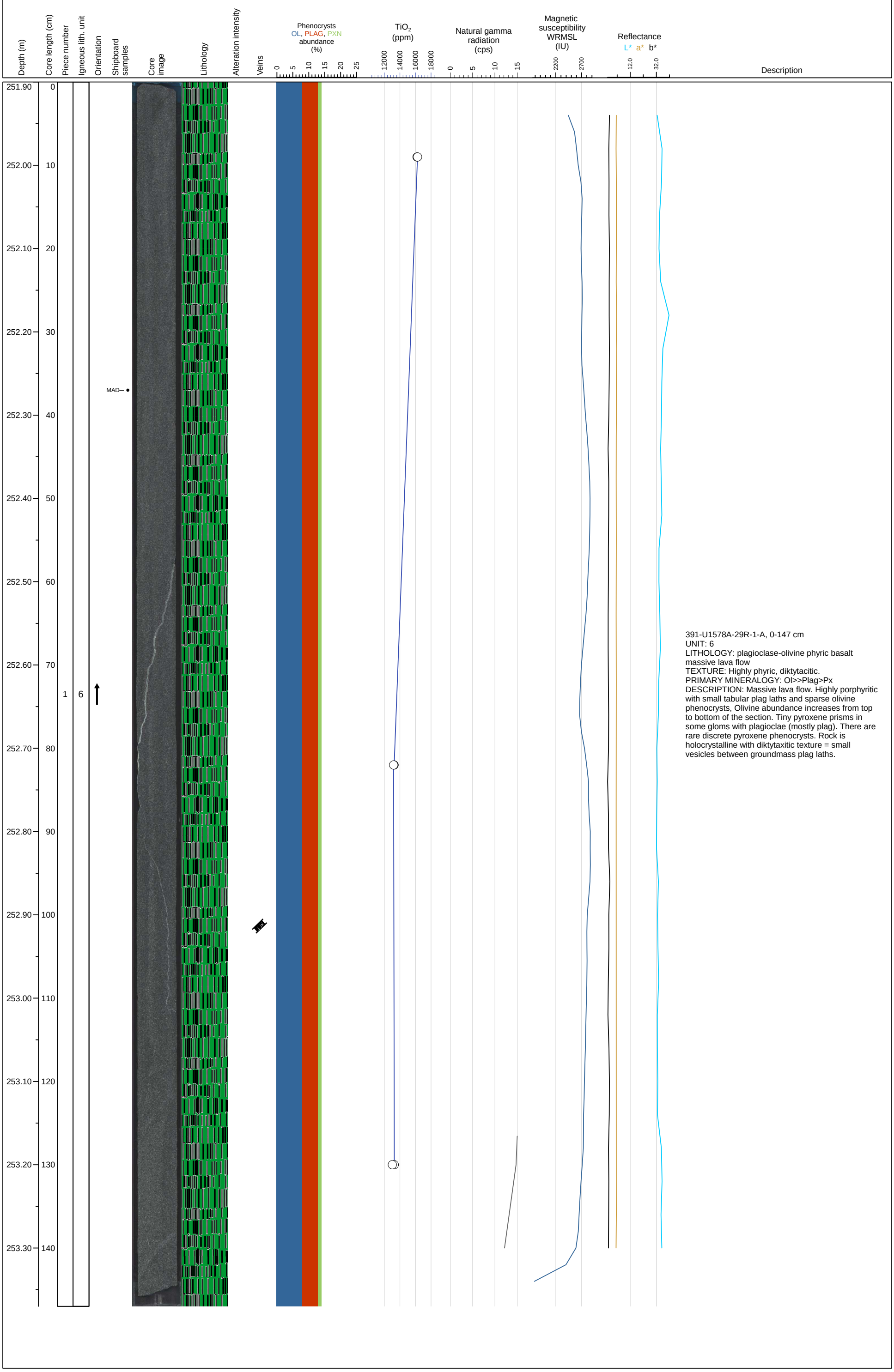
391-U1578A-28R-4-A, 0-142 cm
UNIT: 6
LITHOLOGY: plagioclase phyric basalt massive lava flow
TEXTURE: Moderately phyric, diktytacitic.
PRIMARY MINERALOGY: Plag>>Px=Ol
DESCRIPTION: Massive lava flow. Moderately porphyritic with small tabular plag laths. Pyroxene microphenocrysts, rare discrete phenocrysts; tiny pyroxene prisms in some gloms with plagioclae (mostly plag). Rock is holocrystalline with diktytaxitic texture = small vesicles between groundmass plag laths. The diktytaxitic tecture fades lower in section = gas moviing up to top of flow, displacing residual melt

Hole 391-U1578A-28R Section 5, Top of Section: 251.76 m (CSF-A)



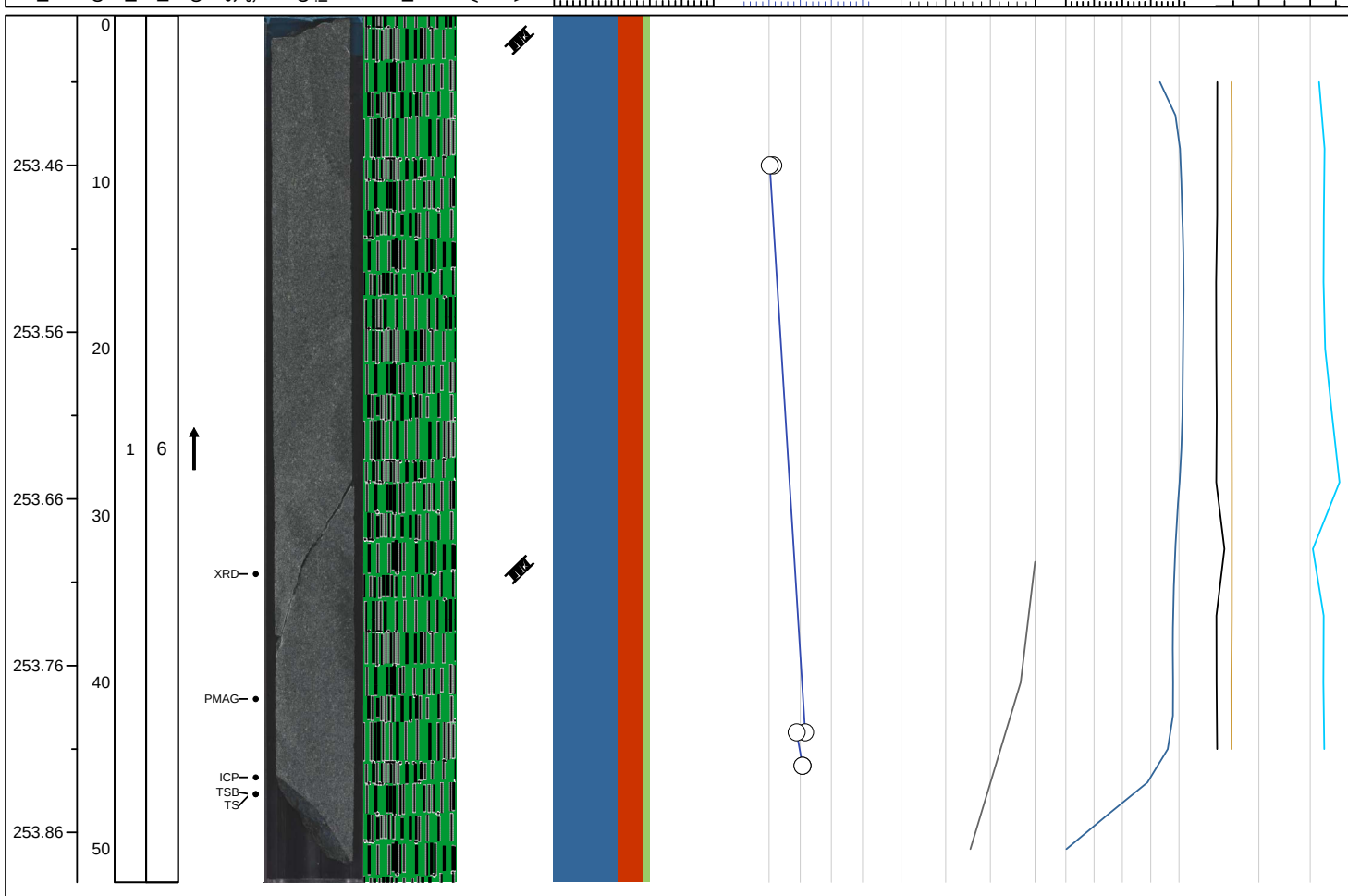
391-U1578A-28R-5-A, 0-60 cm
UNIT: 6
LITHOLOGY: plagioclase-olivine phyric basalt massive lava flow
TEXTURE: Highly phyric, diktytacitic.
PRIMARY MINERALOGY: Plag=Ol>>Px
DESCRIPTION: Massive lava flow. Highly porphyritic with small tabular plag laths and sparse olivine phenocrysts, tiny pyroxene prisms in some gloms with plagioclae (mostly plag). There are rare discrete phenocrysts. Rock is holocrystalline with diktytaxitic texture = small vesicles between groundmass plag laths.

Hole 391-U1578A-29R Section 1, Top of Section: 251.9 m (CSF-A)



391-U1578A-29R-1-A, 0-147 cm
UNIT: 6
LITHOLOGY: plagioclase-olivine phyric basalt massive lava flow
TEXTURE: Highly phyric, diktytacitic.
PRIMARY MINERALOGY: Ol>>Plag>Px
DESCRIPTION: Massive lava flow. Highly porphyritic with small tabular plag laths and sparse olivine phenocrysts, Olivine abundance increases from top to bottom of the section. Tiny pyroxene prisms in some gloms with plagioclae (mostly plag). There are rare discrete pyroxene phenocrysts. Rock is holocrystalline with diktytaxitic texture = small vesicles between groundmass plag laths.

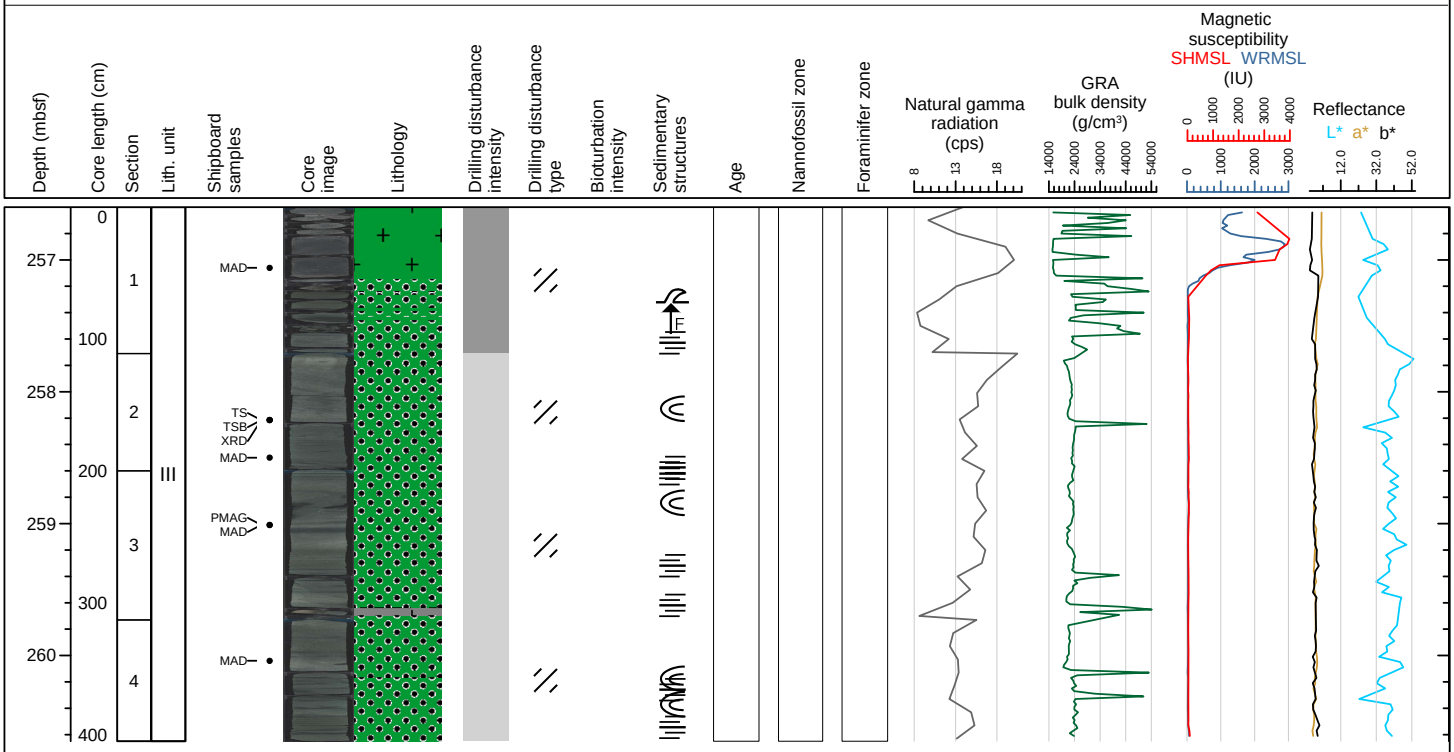
Hole 391-U1578A-29R Section 2, Top of Section: 253.37 m (CSF-A)



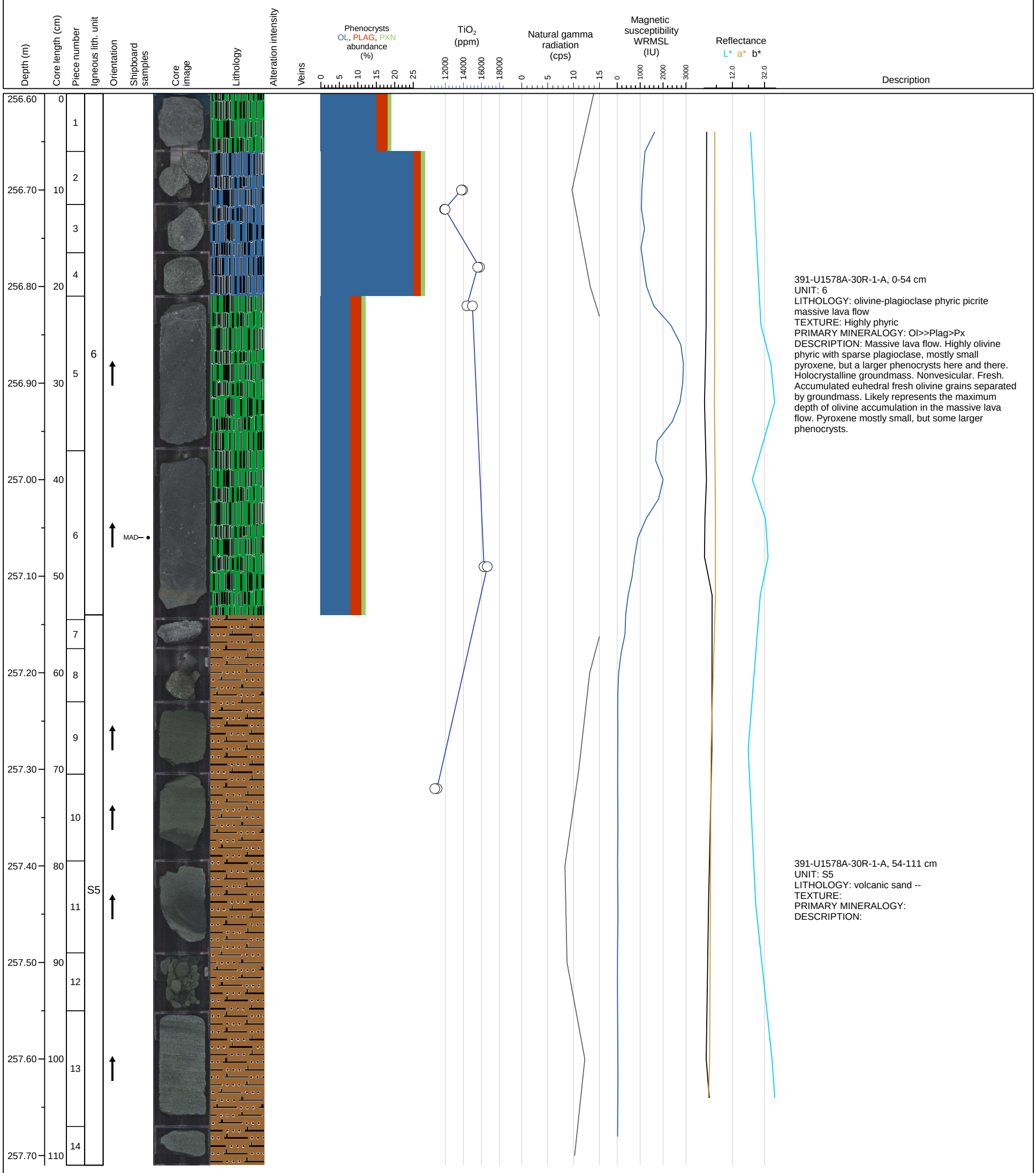
391-U1578A-29R-2-A, 0-52 cm
UNIT: 6
LITHOLOGY: plagioclase-olivine phyric basalt massive lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Ol>>Plag>Px
DESCRIPTION: Massive lava flow. Highly porphyritic with small tabular plag laths and sparse olivine phenocrysts, Olivine abundance increases from top to bottom of the section. Tiny pyroxene prisms in some gloms with plagioclae (mostly plag). There are rare discrete pyroxene phenocrysts. Rock is holocrystalline with diktytaxitic texture = small vesicles between groundmass plag laths.

Hole 391-U1578A Core 30R, Interval 256.6-260.65 m (CSF-A)

Sediment interbed in the volcanic basement, including greenish gray to greenish black volcanic siltstone to sandstone with minor bioturbated tuffaceous chalk. The sedimentary structures include erosive bases, normal grading, parallel and cross-laminae, contorted bedding/dishes, and rip-up clasts of siltstone. The volcaniclasts are composed of highly vesicular angular glass shards (commonly altered). Significant 'biscuiting'.



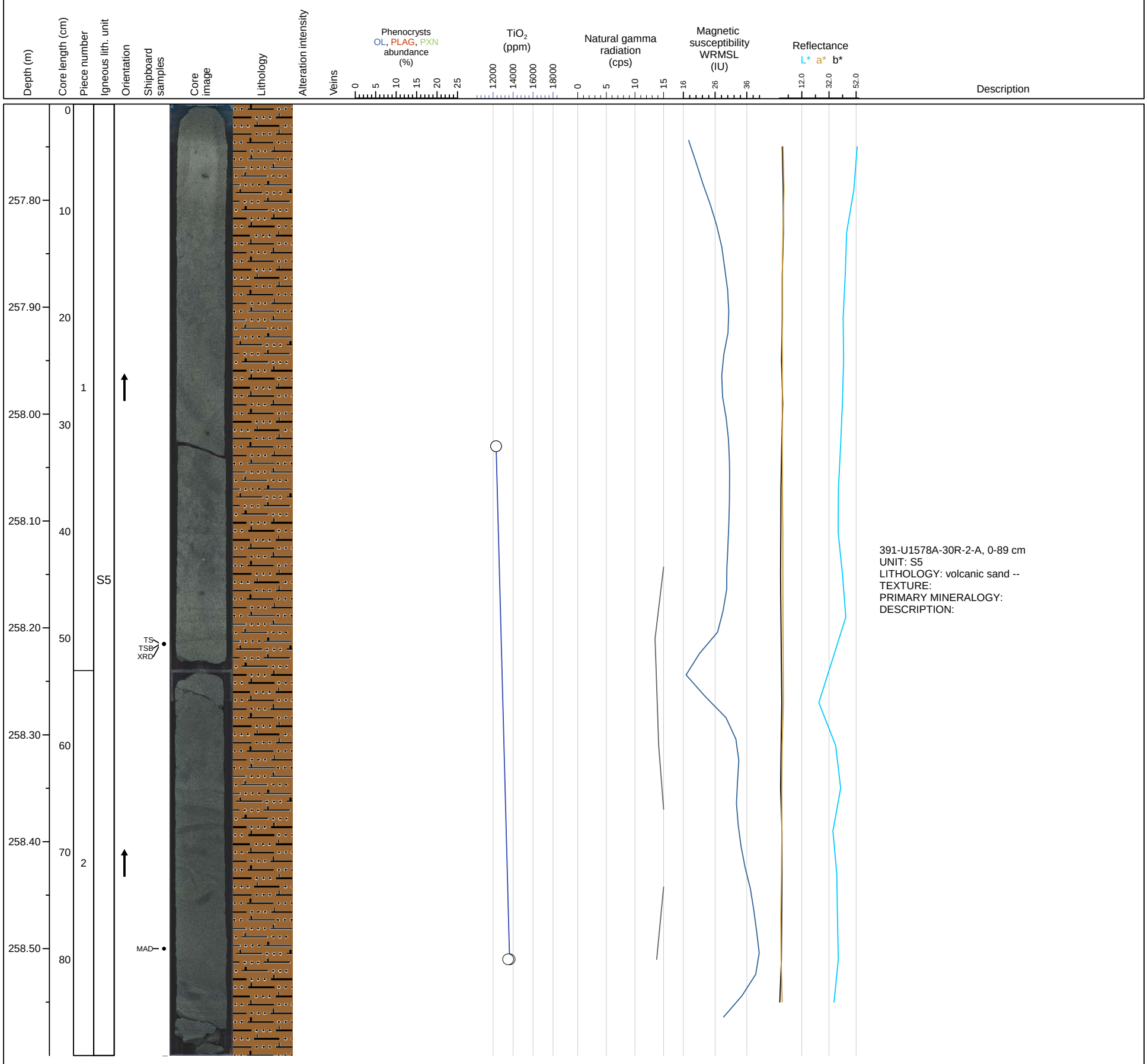
Hole 391-U1578A-30R Section 1, Top of Section: 256.6 m (CSF-A)



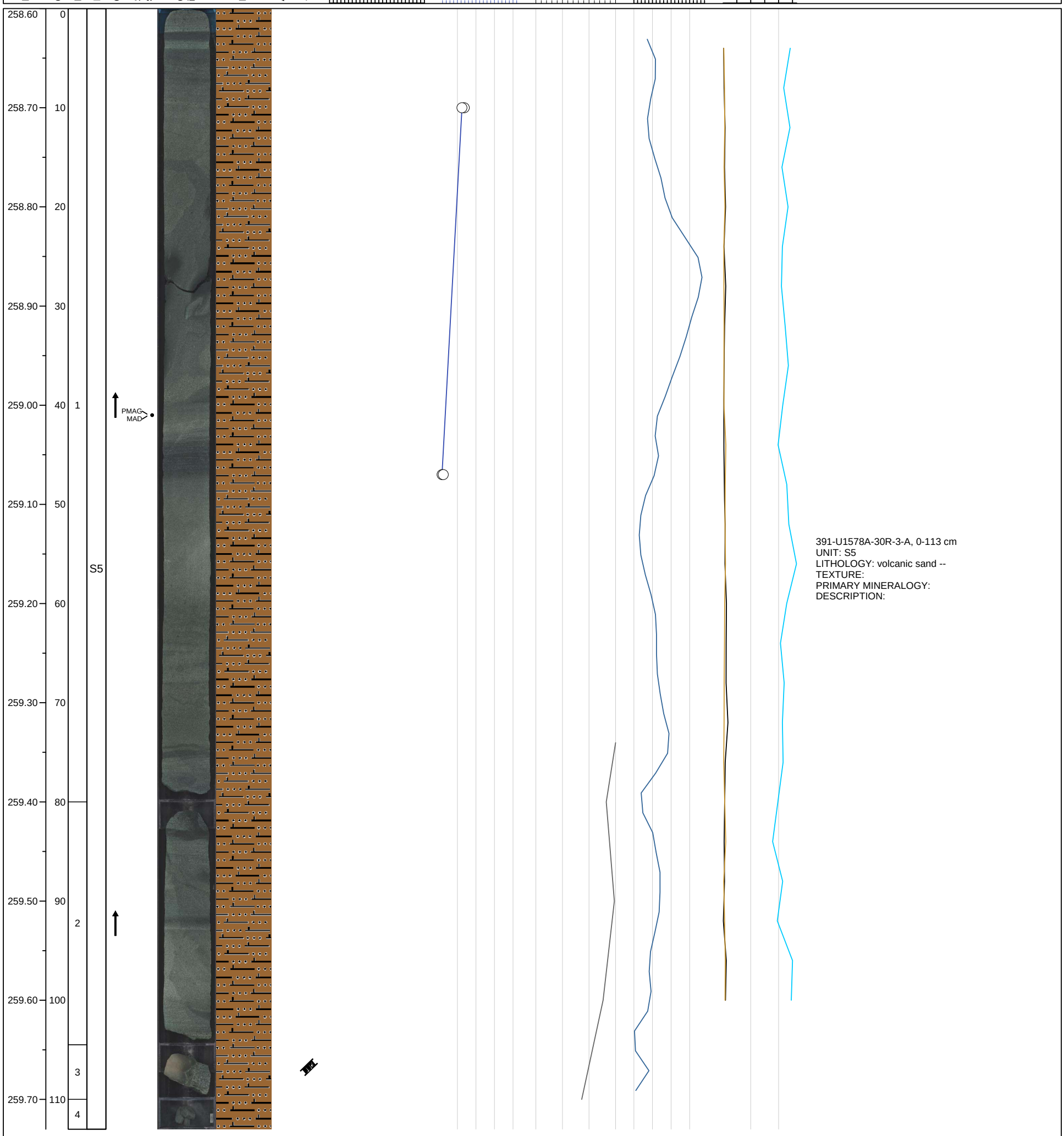
391-U1578A-30R-1-A, 0-54 cm
UNIT: 6
LITHOLOGY: olivine-plagioclase phyric picrite massive lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Ol>>Plag>Px
DESCRIPTION: Massive lava flow. Highly olivine phyric with sparse plagioclase, mostly small pyroxene, but a larger phenocrysts here and there. Holocrystalline groundmass. Nonvesicular. Fresh. Accumulated euhedral fresh olivine grains separated by groundmass. Likely represents the maximum depth of olivine accumulation in the massive lava flow. Pyroxene mostly small, but some larger phenocrysts.

391-U1578A-30R-1-A, 54-111 cm
UNIT: S5
LITHOLOGY: volcanic sand --
TEXTURE:
PRIMARY MINERALOGY:
DESCRIPTION:

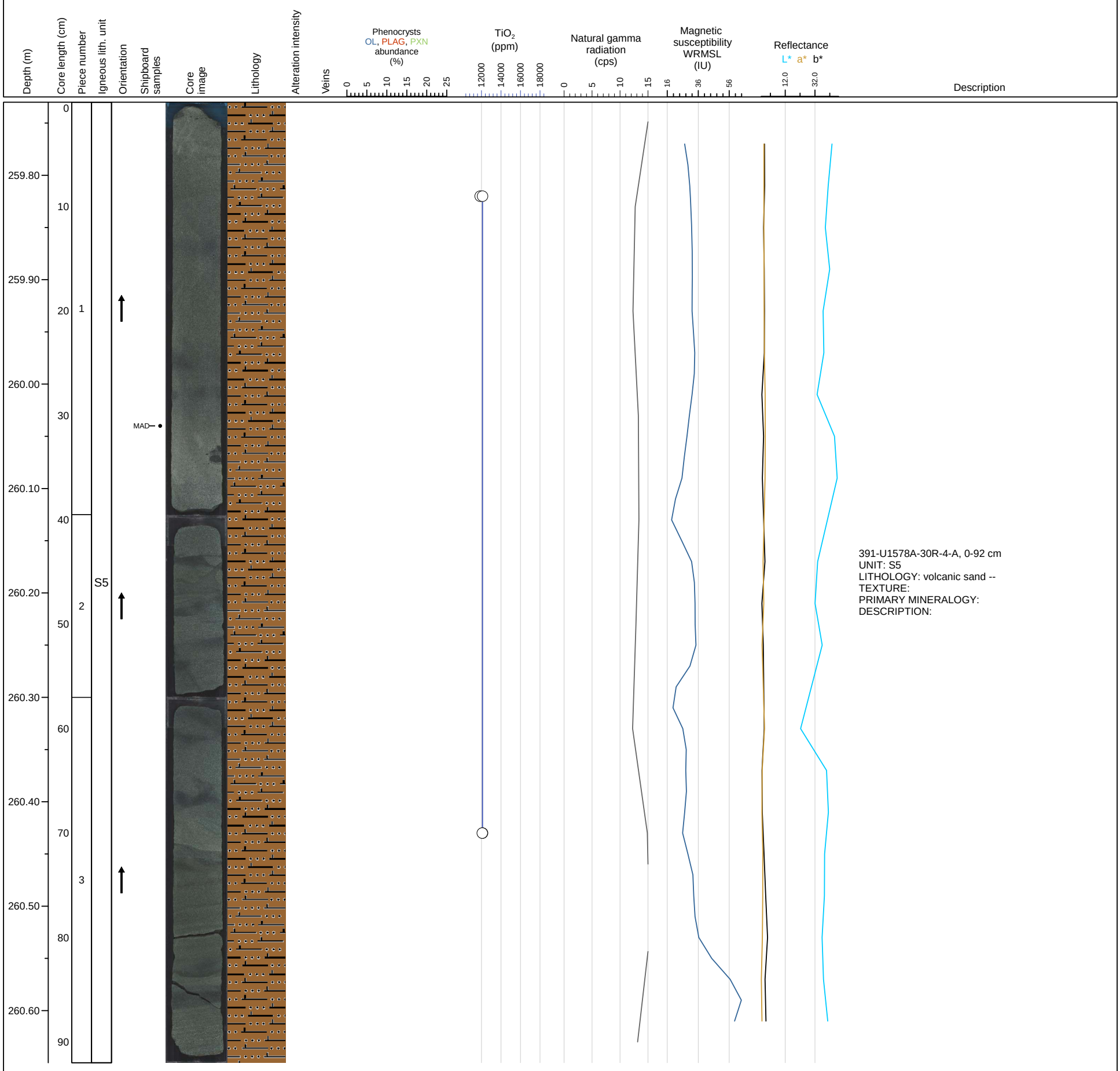
Hole 391-U1578A-30R Section 2, Top of Section: 257.71 m (CSF-A)



Hole 391-U1578A-30R Section 3, Top of Section: 258.6 m (CSF-A)

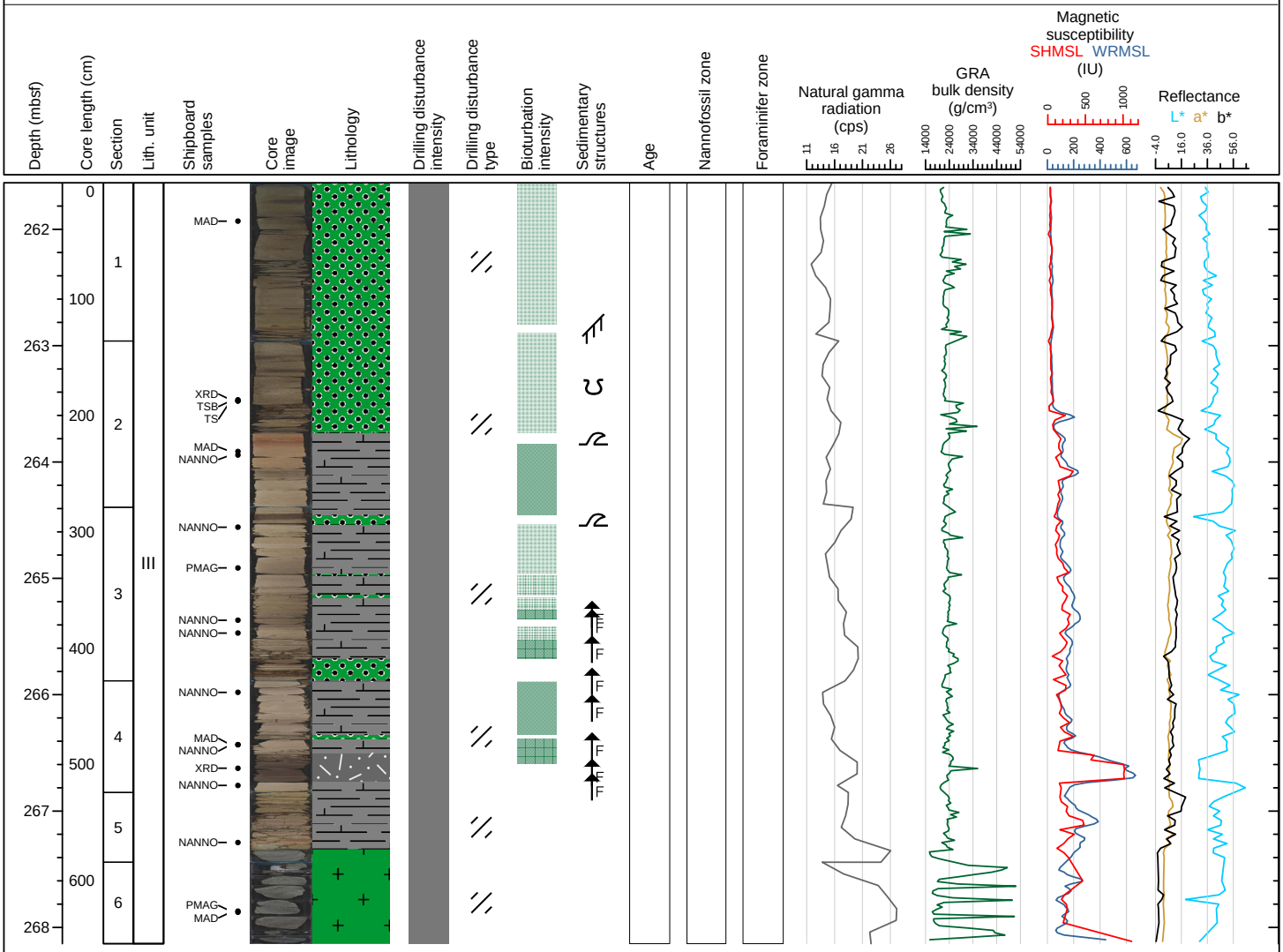


Hole 391-U1578A-30R Section 4, Top of Section: 259.73 m (CSF-A)

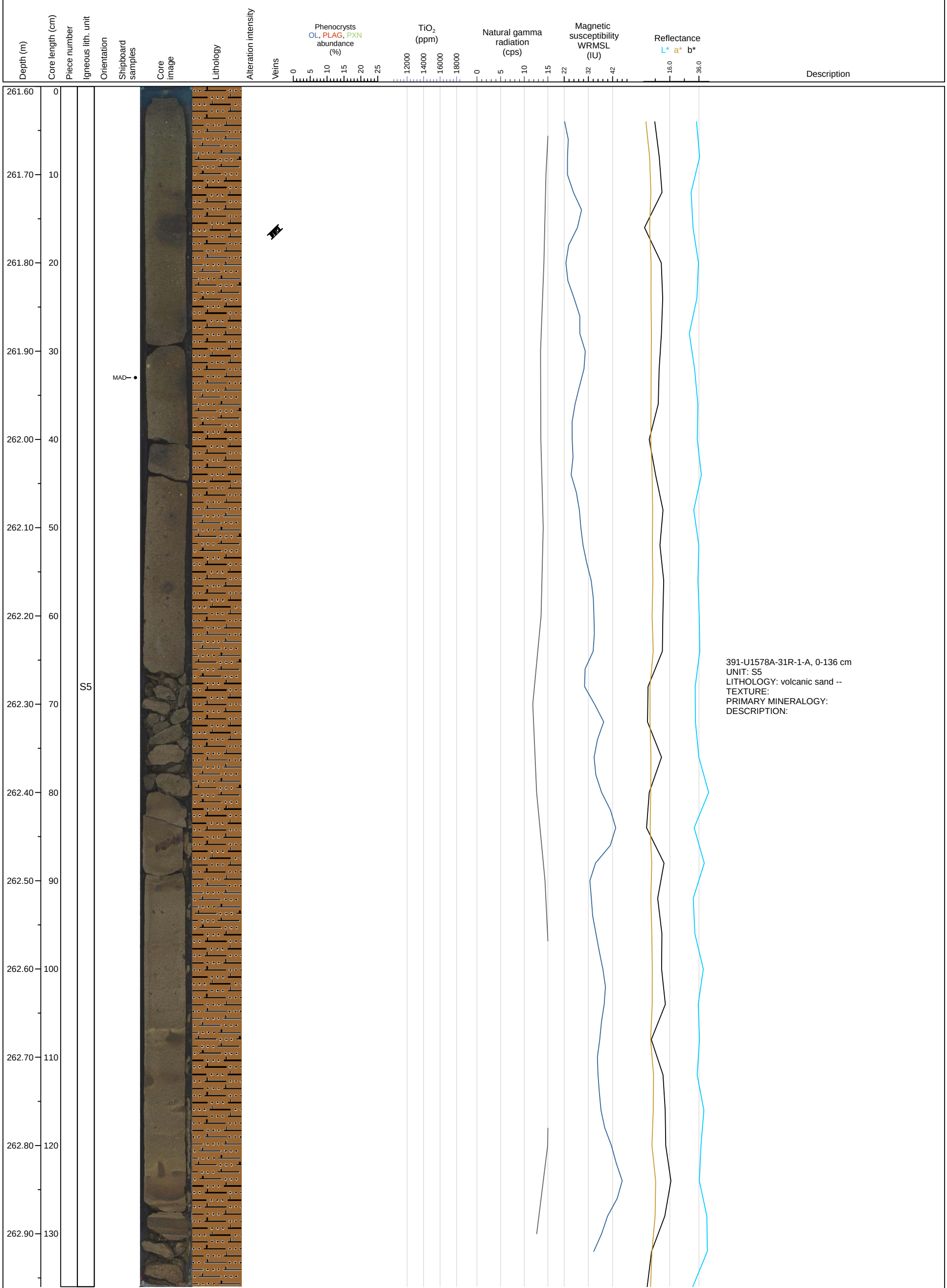


Hole 391-U1578A Core 31R, Interval 261.6-268.14 m (CSF-A)

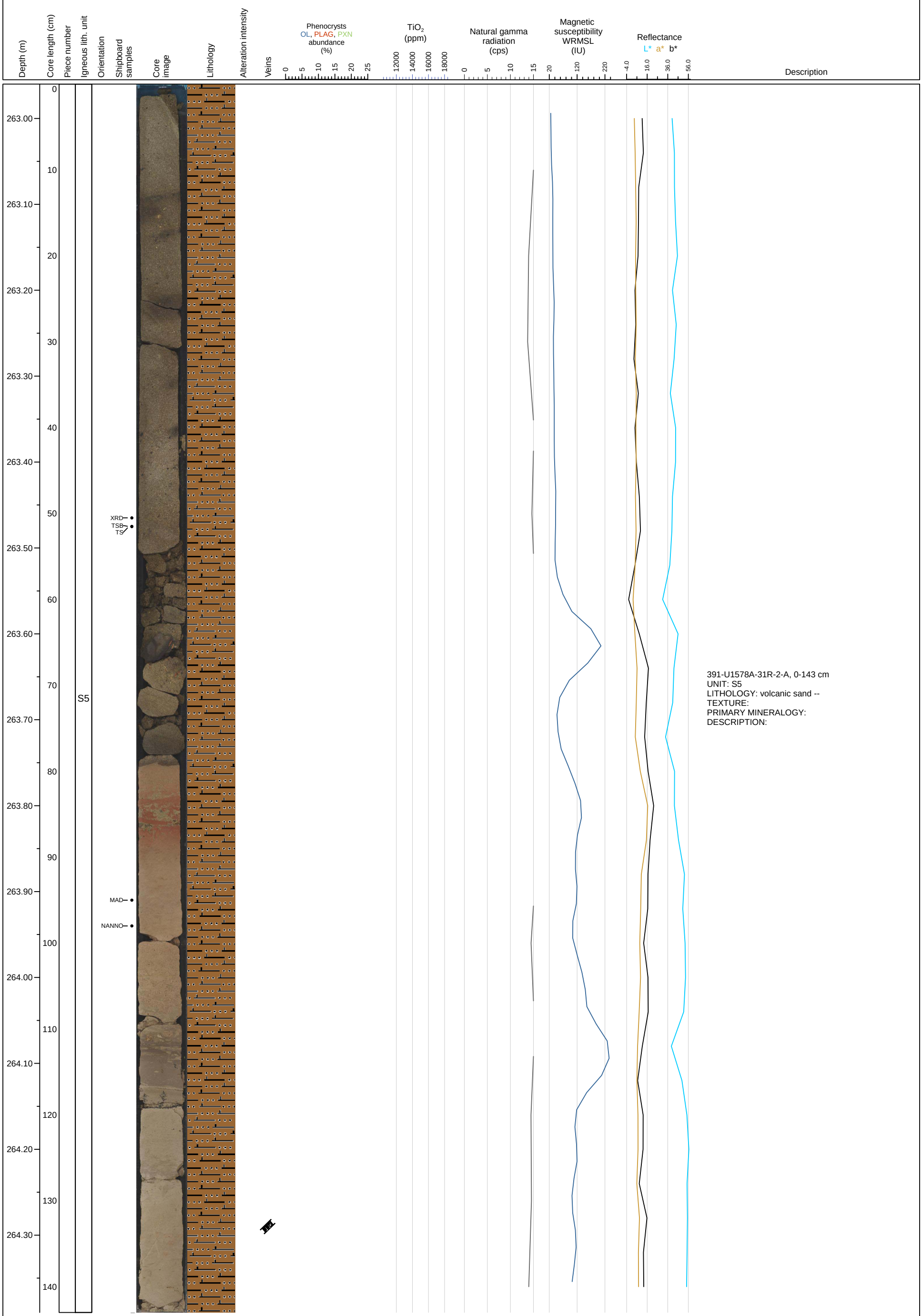
Sediment interbed in the volcanic basement, including light brown to brown and dark gray volcanic siltstone to sandstone with minor bioturbated tuffaceous chalk and possible tuff. The sedimentary structures include erosive bases, normal grading, parallel and cross-laminae, compaction structures, and rip-up clasts of siltstone. The volcaniclasts are typically composed of highly vesicular angular glass shards (commonly altered). Significant 'biscuiting'.



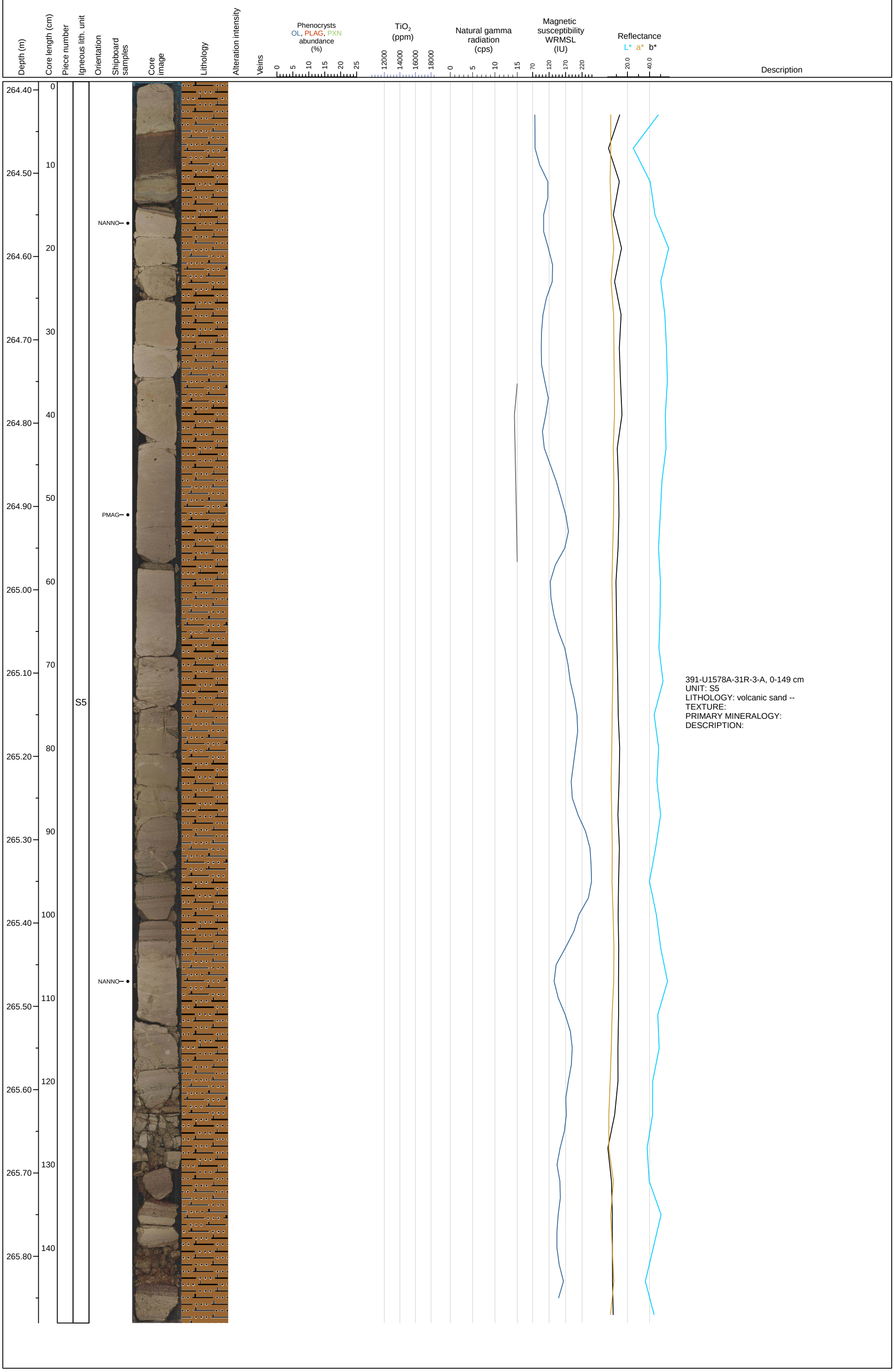
Hole 391-U1578A-31R Section 1, Top of Section: 261.6 m (CSF-A)



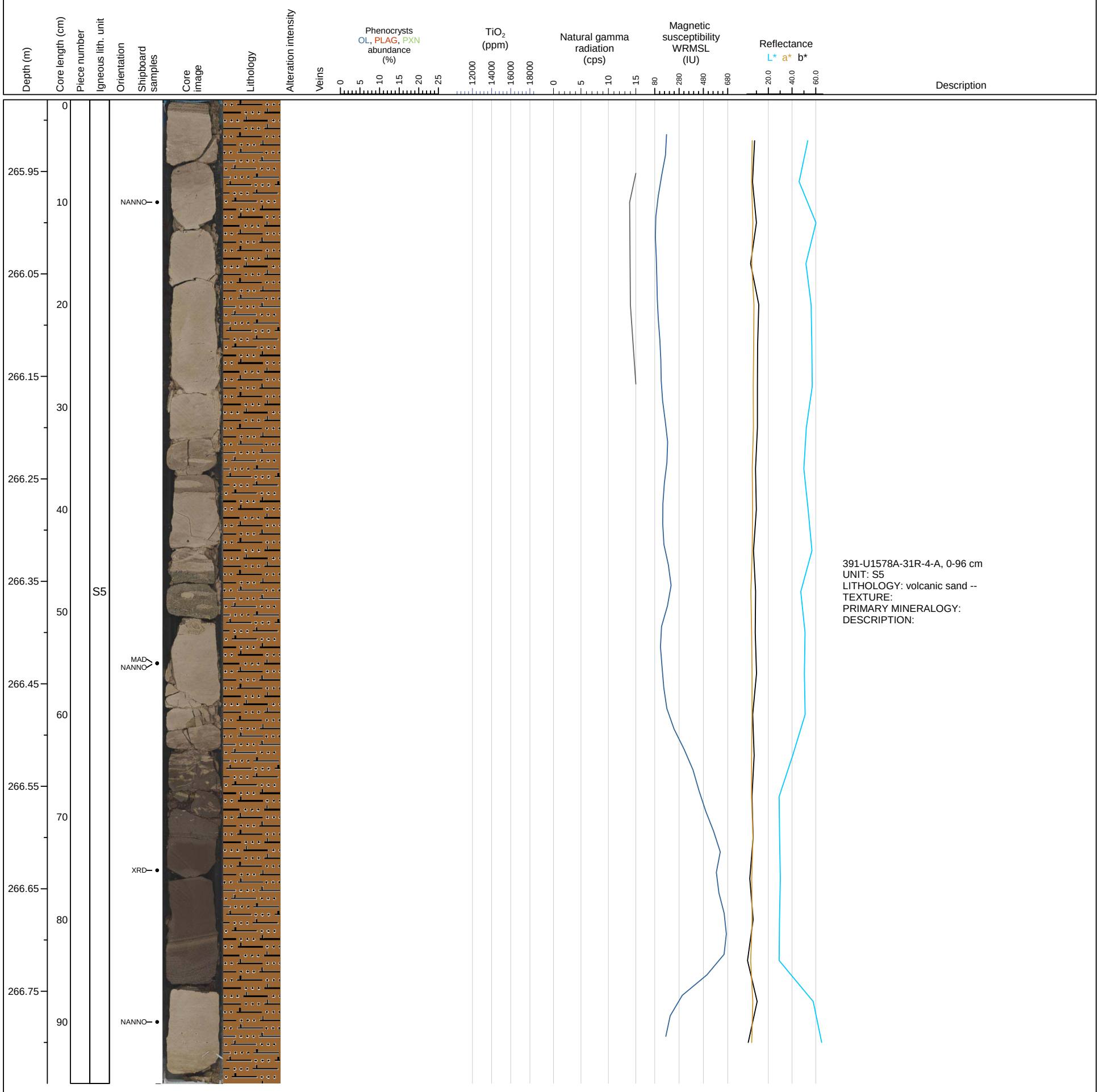
Hole 391-U1578A-31R Section 2, Top of Section: 262.96 m (CSF-A)



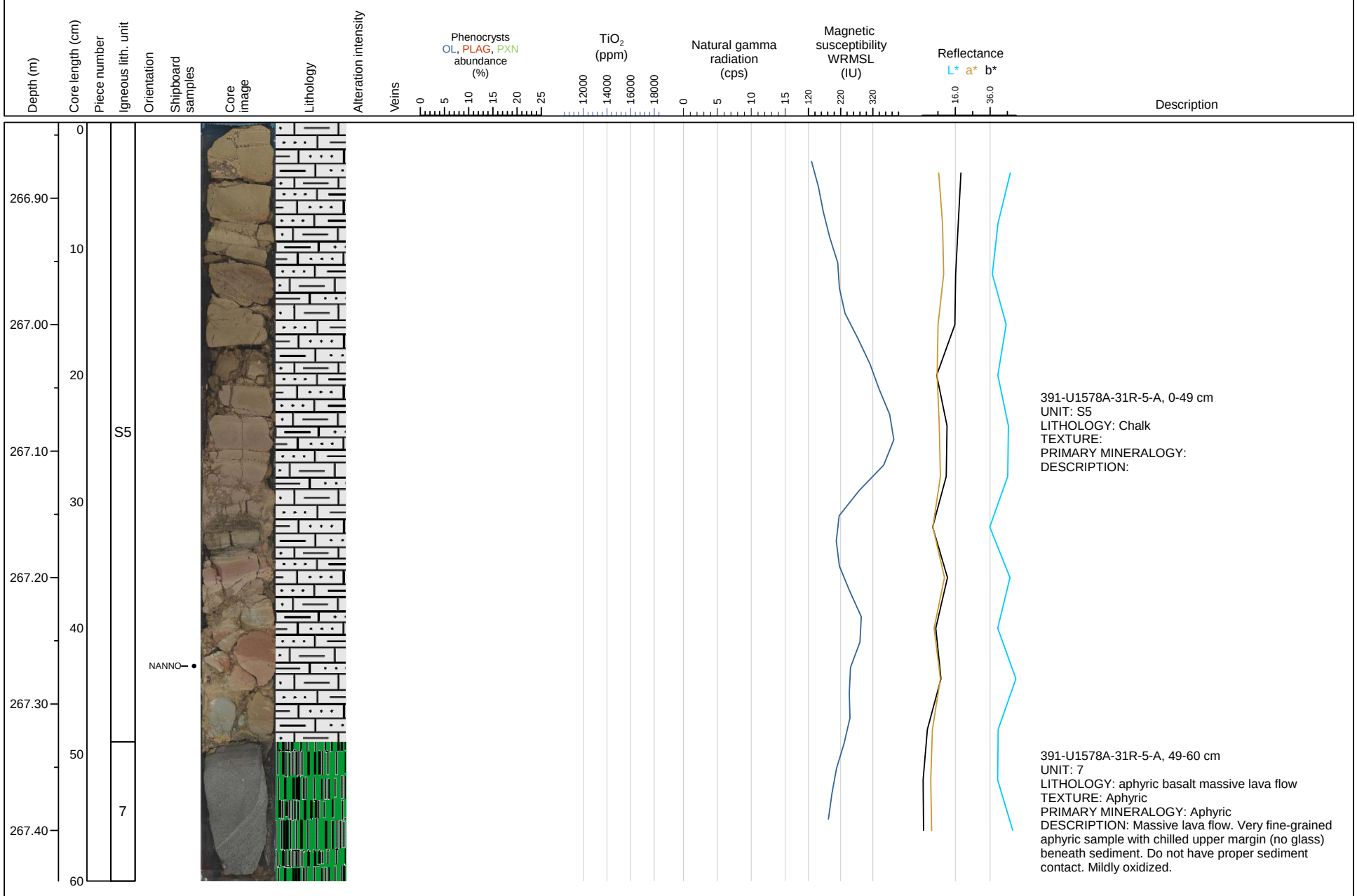
Hole 391-U1578A-31R Section 3, Top of Section: 264.39 m (CSF-A)



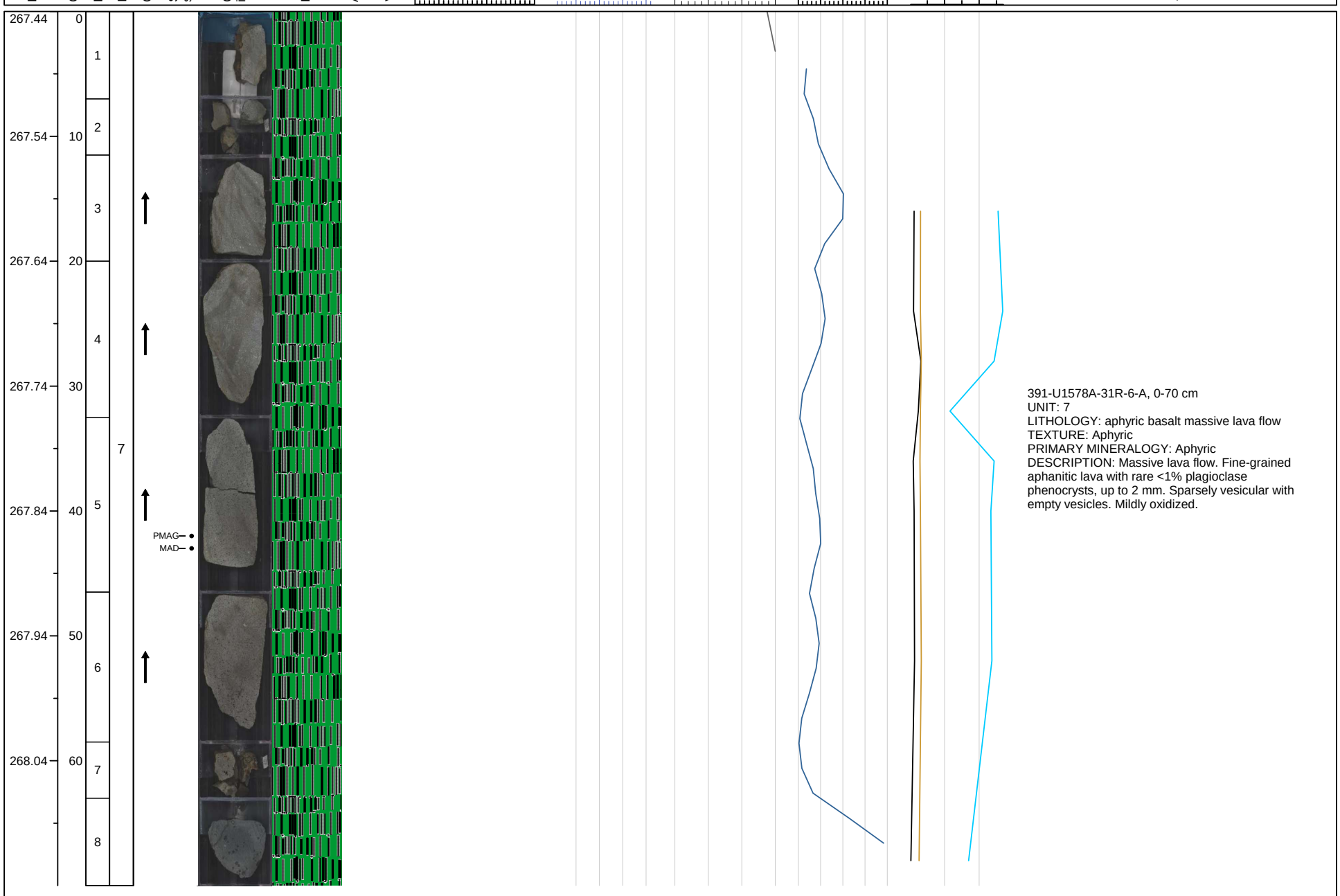
Hole 391-U1578A-31R Section 4, Top of Section: 265.88 m (CSF-A)



Hole 391-U1578A-31R Section 5, Top of Section: 266.84 m (CSF-A)



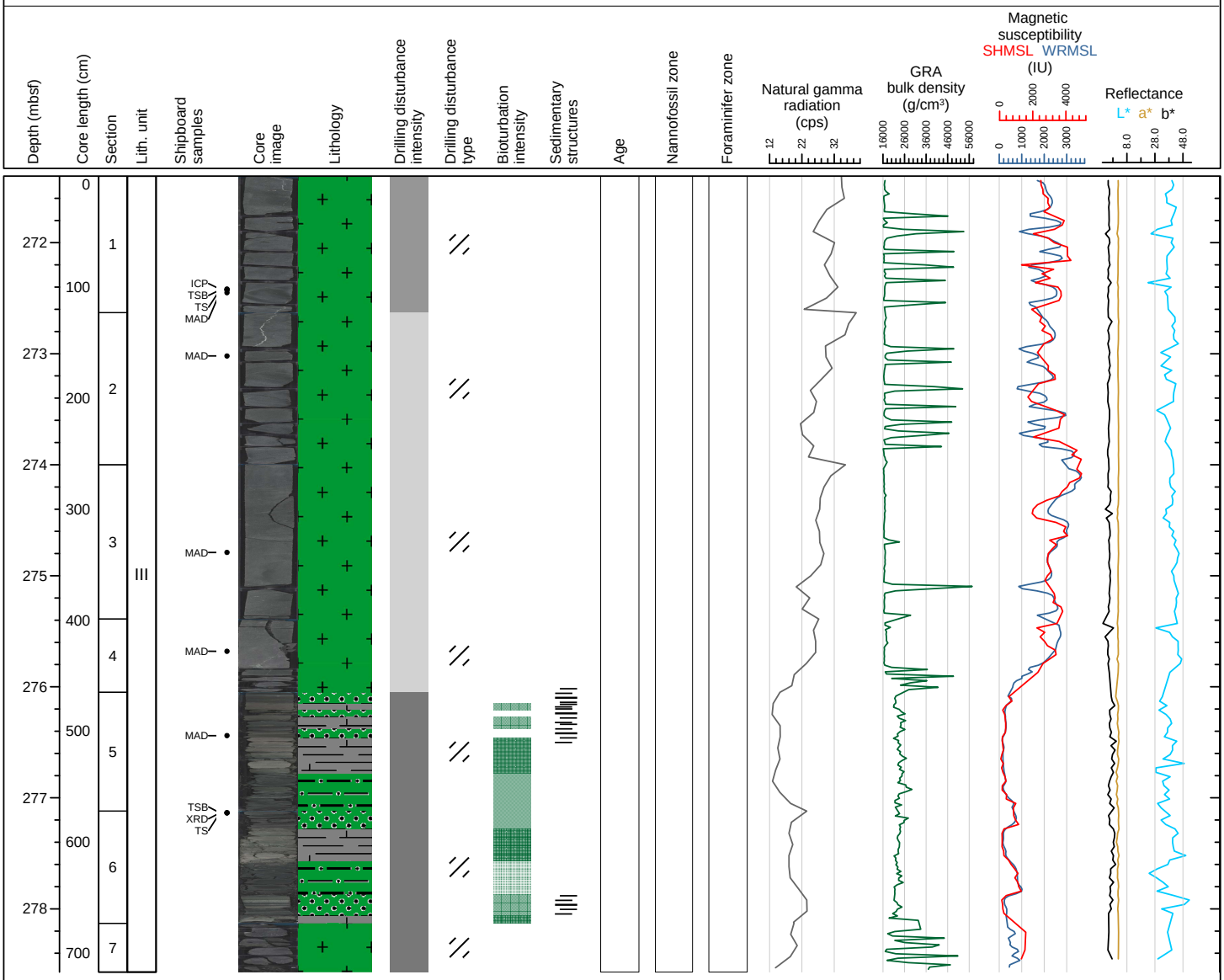
Hole 391-U1578A-31R Section 6, Top of Section: 267.44 m (CSF-A)



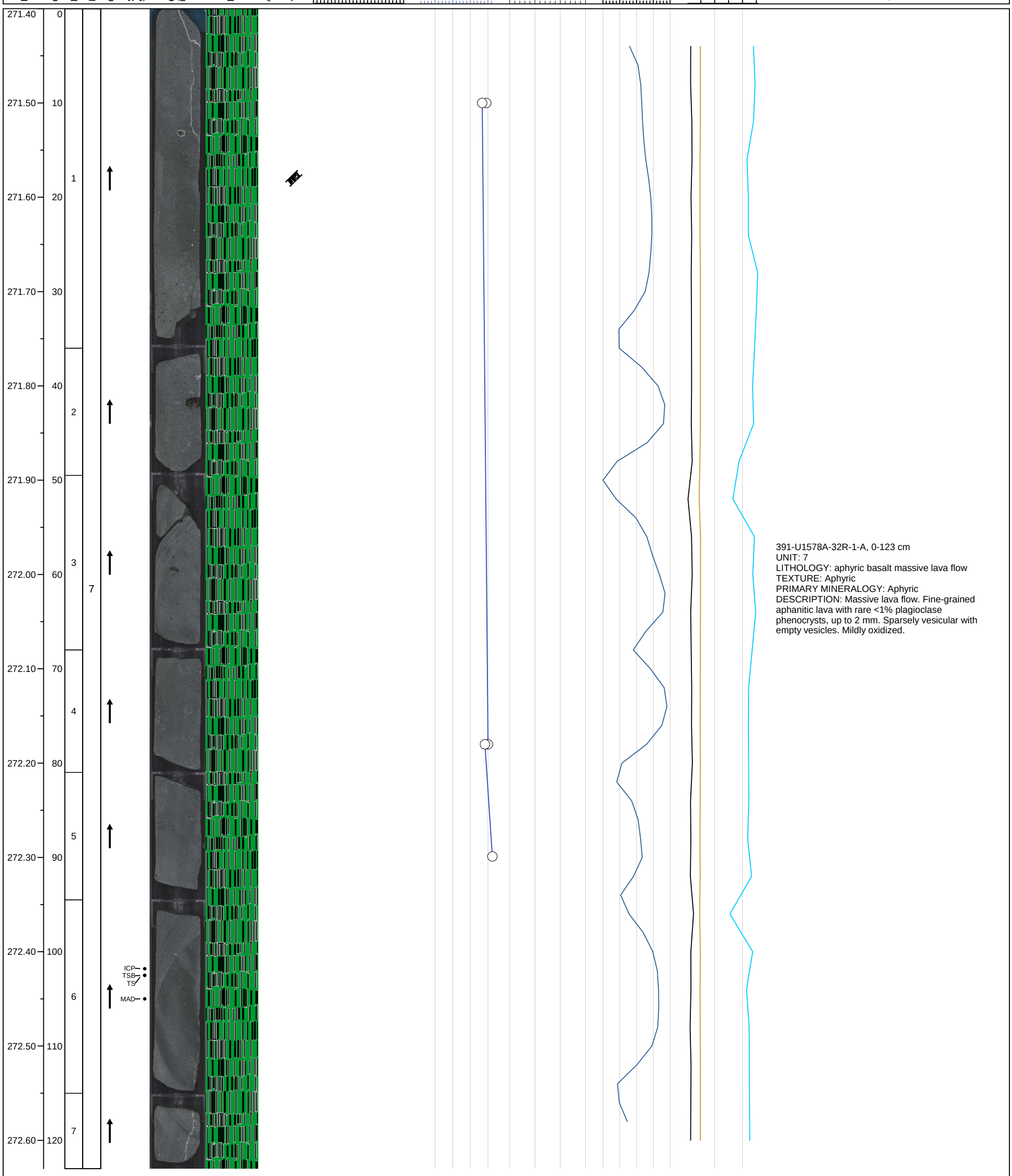
391-U1578A-31R-6-A, 0-70 cm
UNIT: 7
LITHOLOGY: aphyric basalt massive lava flow
TEXTURE: Aphyric
PRIMARY MINERALOGY: Aphyric
DESCRIPTION: Massive lava flow. Fine-grained aphanitic lava with rare <1% plagioclase phenocrysts, up to 2 mm. Sparsely vesicular with empty vesicles. Mildly oxidized.

Hole 391-U1578A Core 32R, Interval 271.4-278.57 m (CSF-A)

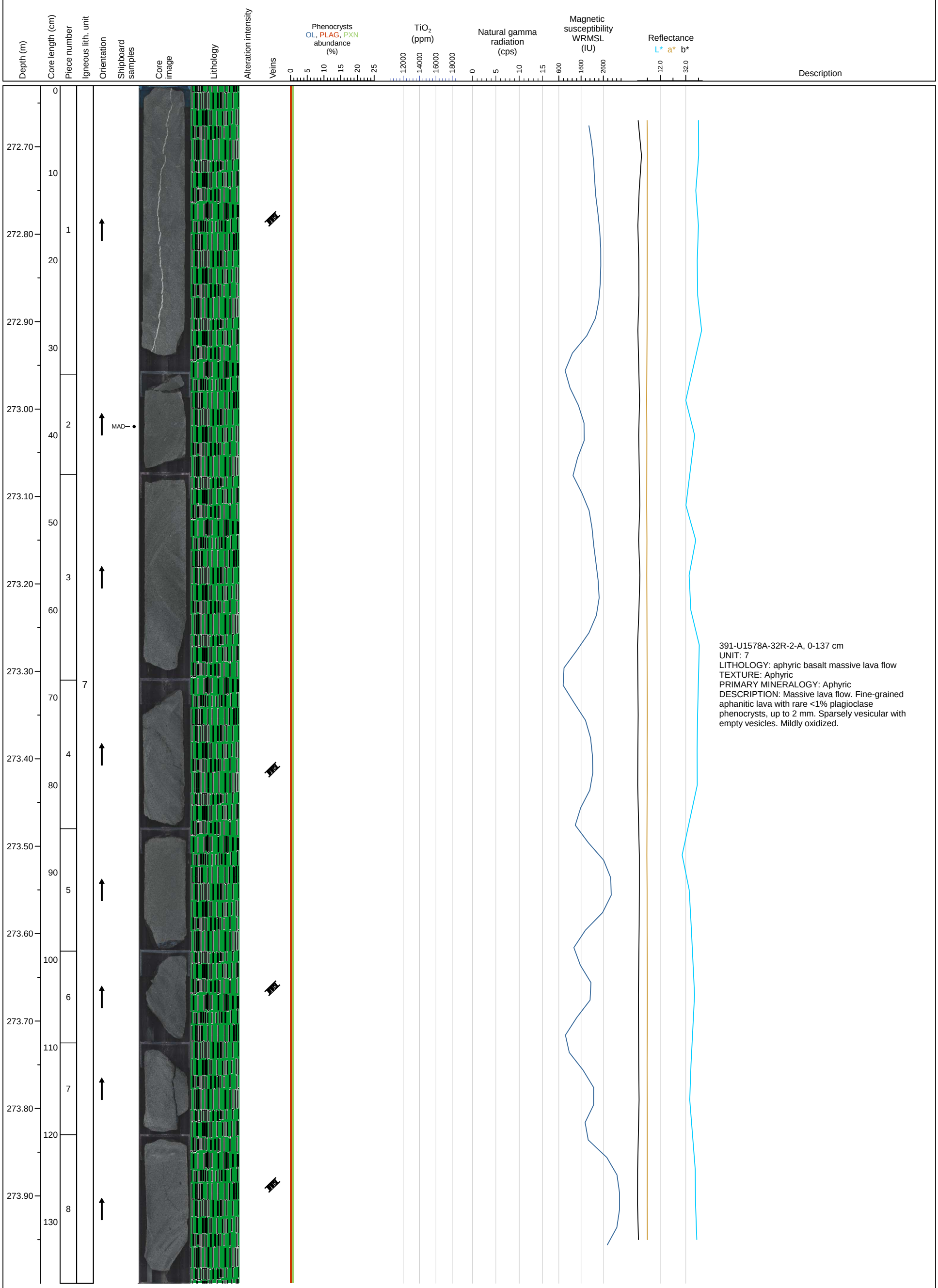
Sediment interbed in the volcanic basement, including gray to very dark gray bioturbated tuffaceous chalk with volcaniclasts and volcanic siltstone to sandstone. The volcaniclastic deposits are typically laminated and normally graded. The volcaniclasts are composed of highly vesicular angular glass shards (commonly altered). Significant 'biscuiting'.



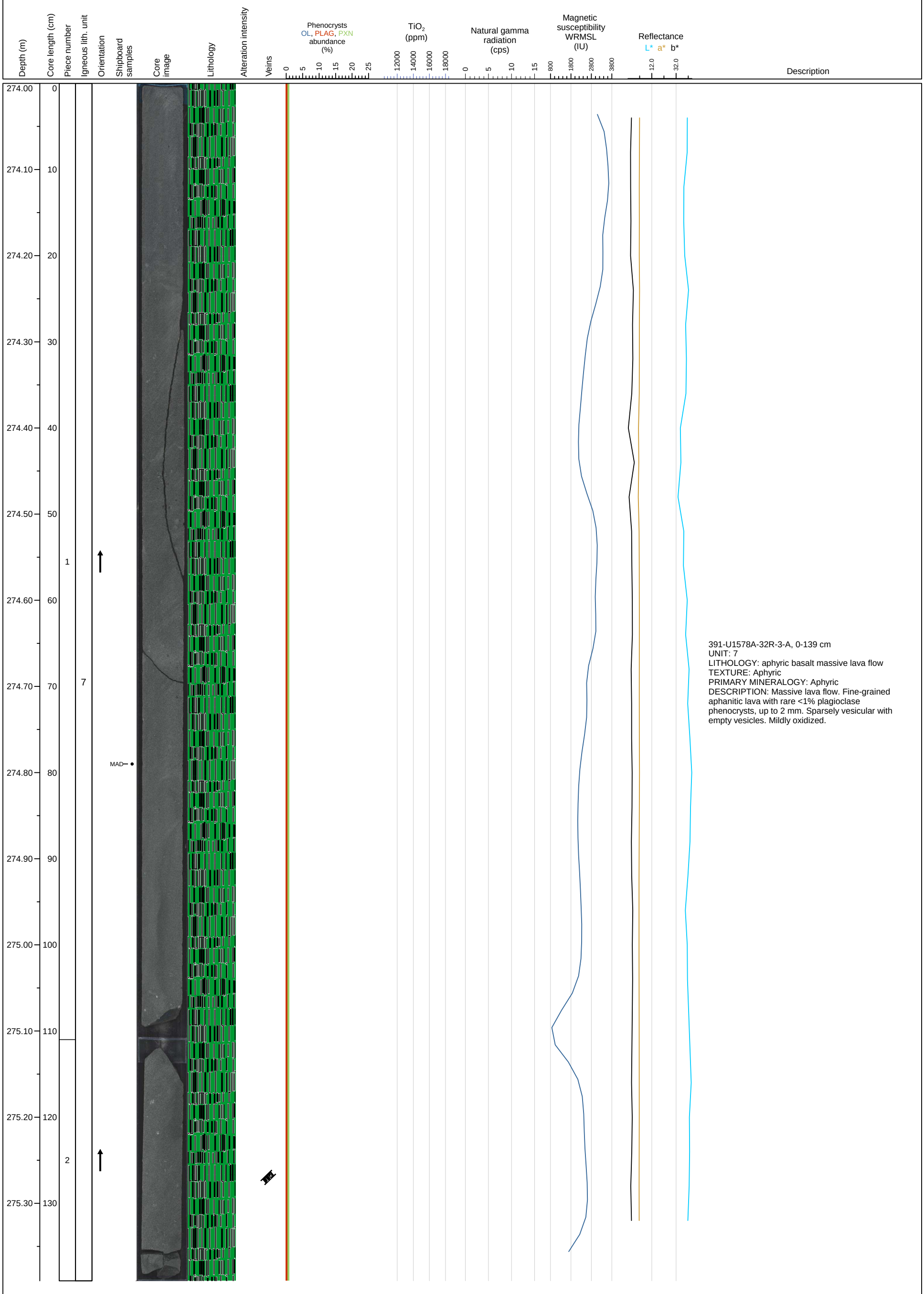
Hole 391-U1578A-32R Section 1, Top of Section: 271.4 m (CSF-A)



Hole 391-U1578A-32R Section 2, Top of Section: 272.63 m (CSF-A)

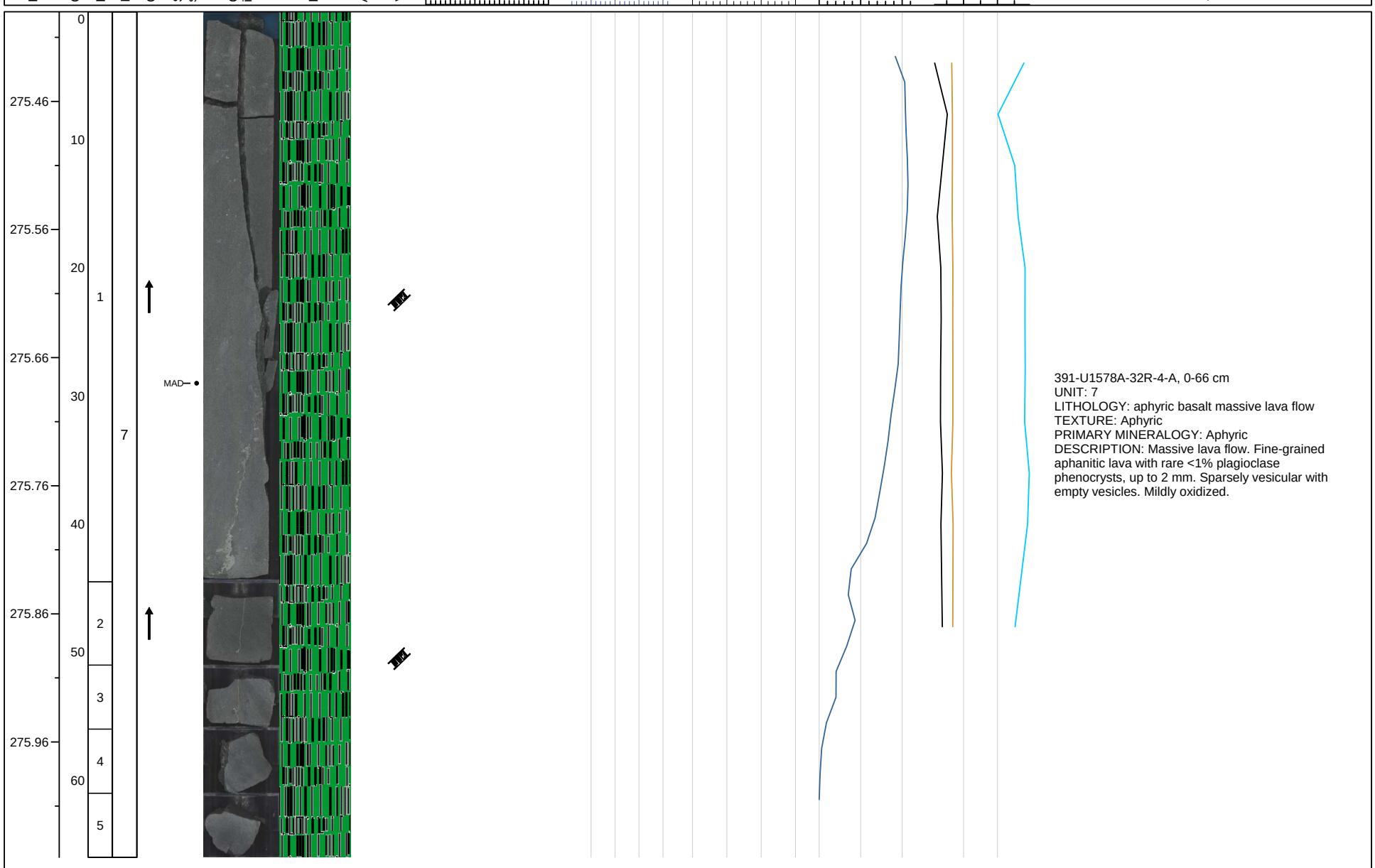


Hole 391-U1578A-32R Section 3, Top of Section: 274.0 m (CSF-A)

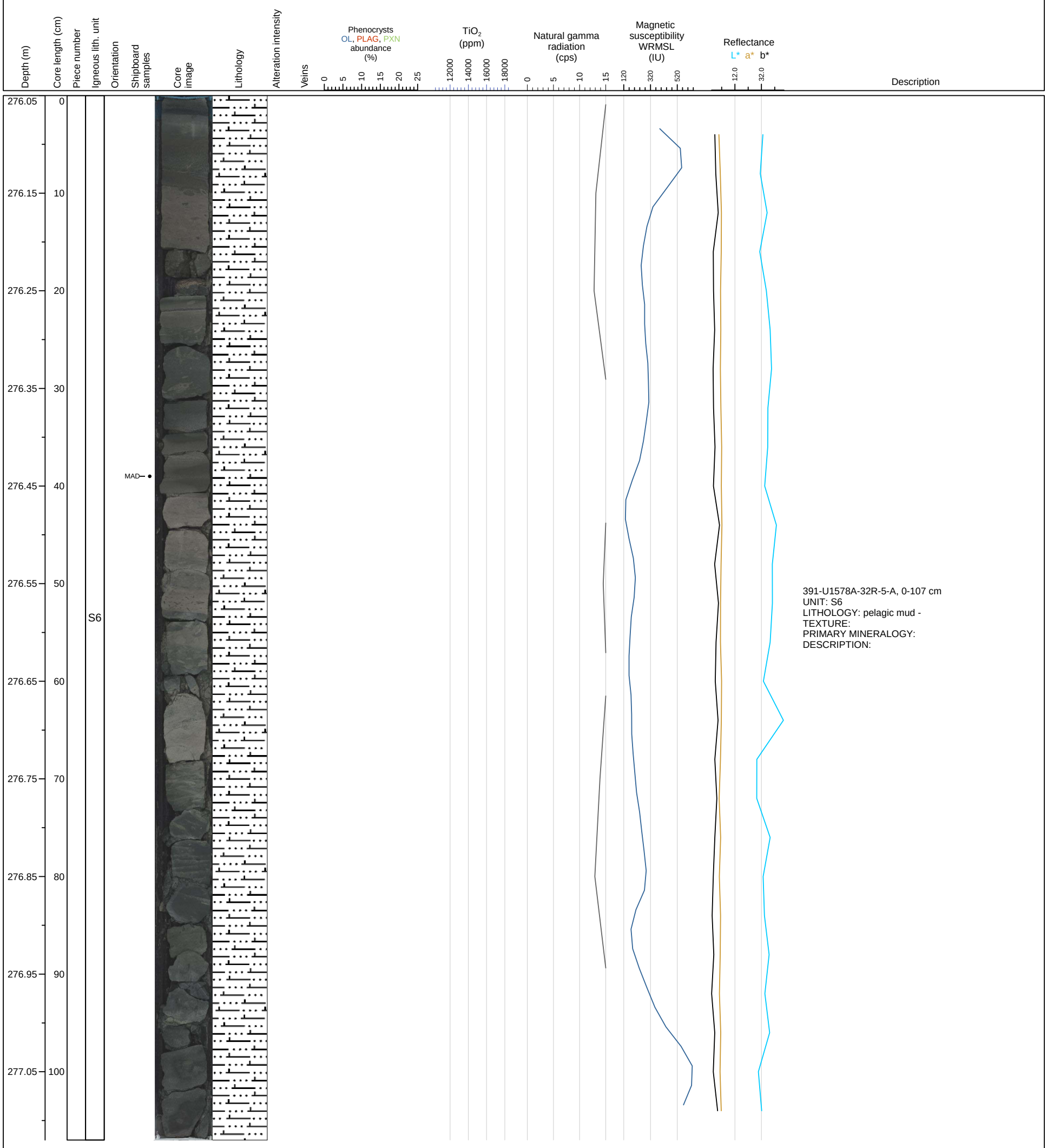


391-U1578A-32R-3-A, 0-139 cm
UNIT: 7
LITHOLOGY: aphyric basalt massive lava flow
TEXTURE: Aphyric
PRIMARY MINERALOGY: Aphyric
DESCRIPTION: Massive lava flow. Fine-grained aphanitic lava with rare <1% plagioclase phenocrysts, up to 2 mm. Sparsely vesicular with empty vesicles. Mildly oxidized.

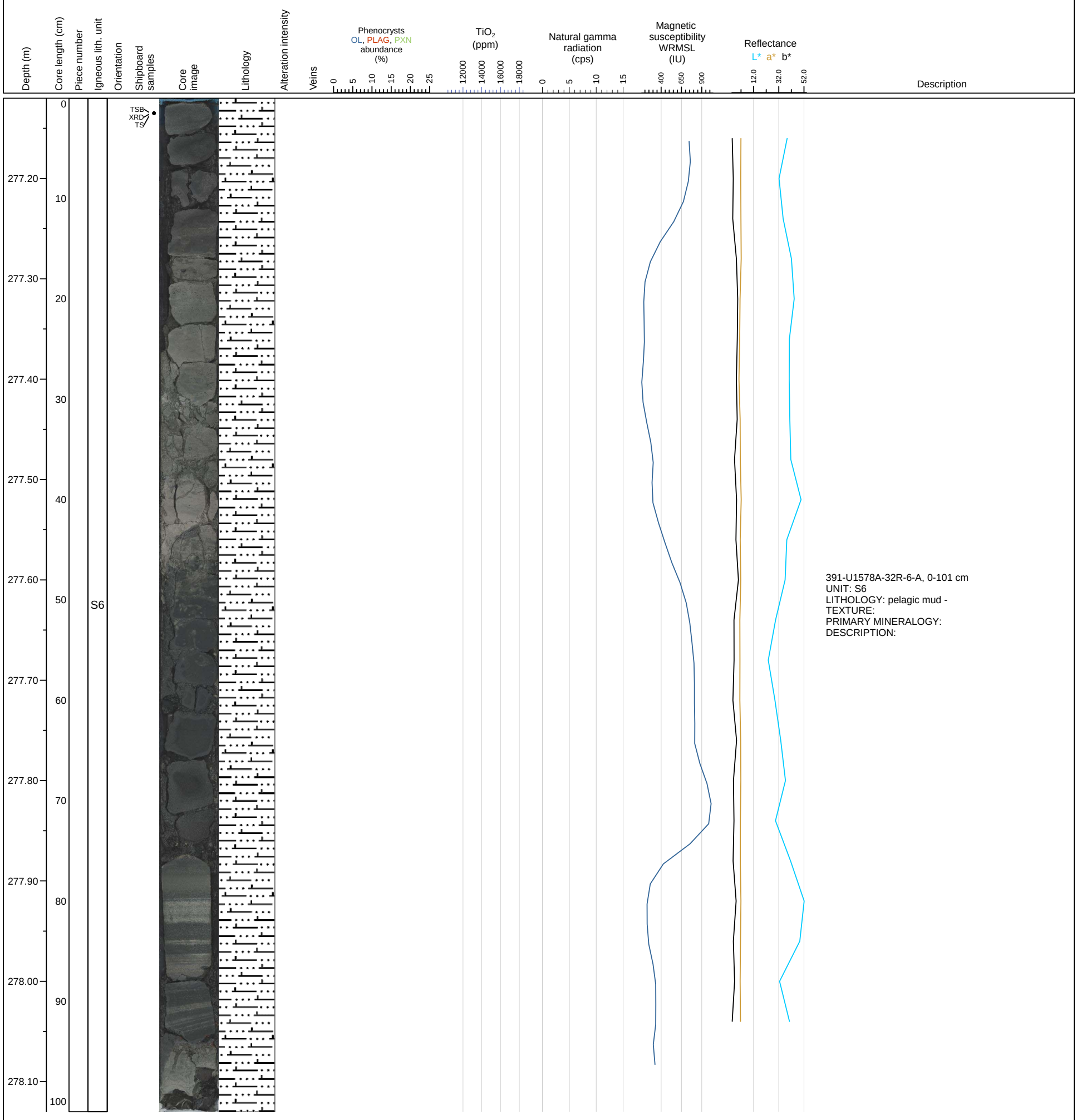
Hole 391-U1578A-32R Section 4, Top of Section: 275.39 m (CSF-A)



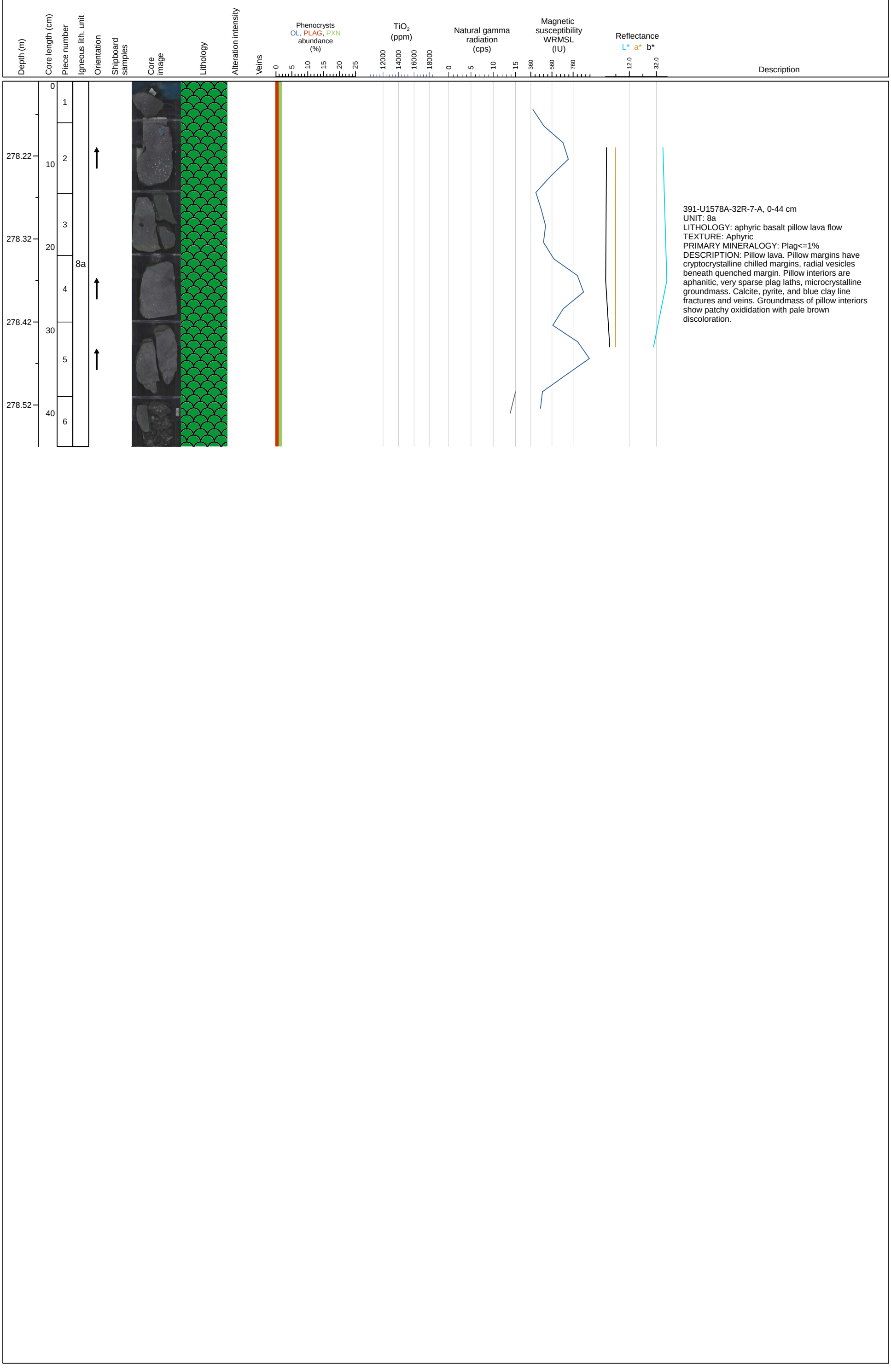
Hole 391-U1578A-32R Section 5, Top of Section: 276.05 m (CSF-A)



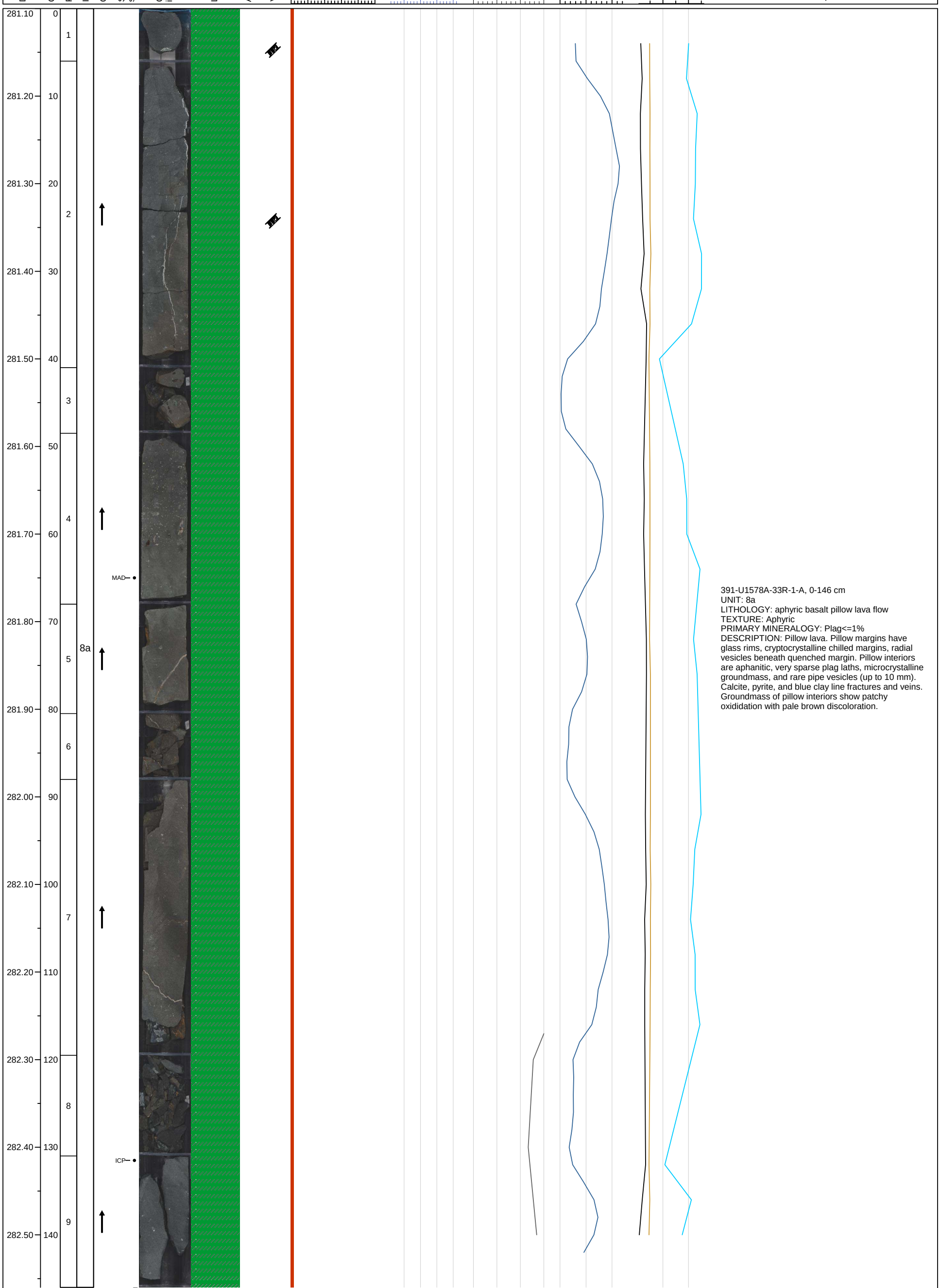
Hole 391-U1578A-32R Section 6, Top of Section: 277.12 m (CSF-A)



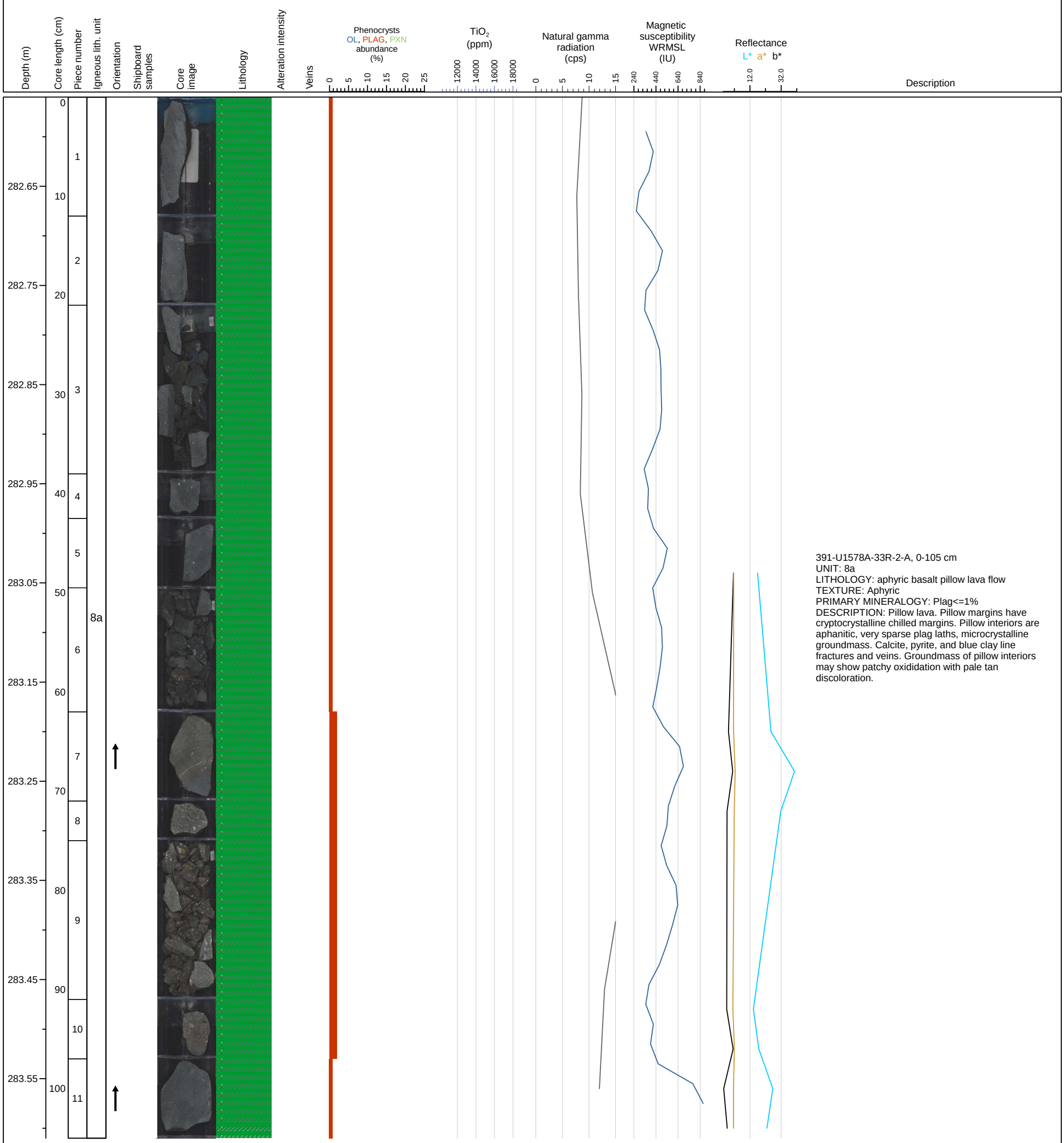
Hole 391-U1578A-32R Section 7, Top of Section: 278.13 m (CSF-A)



Hole 391-U1578A-33R Section 1, Top of Section: 281.1 m (CSF-A)

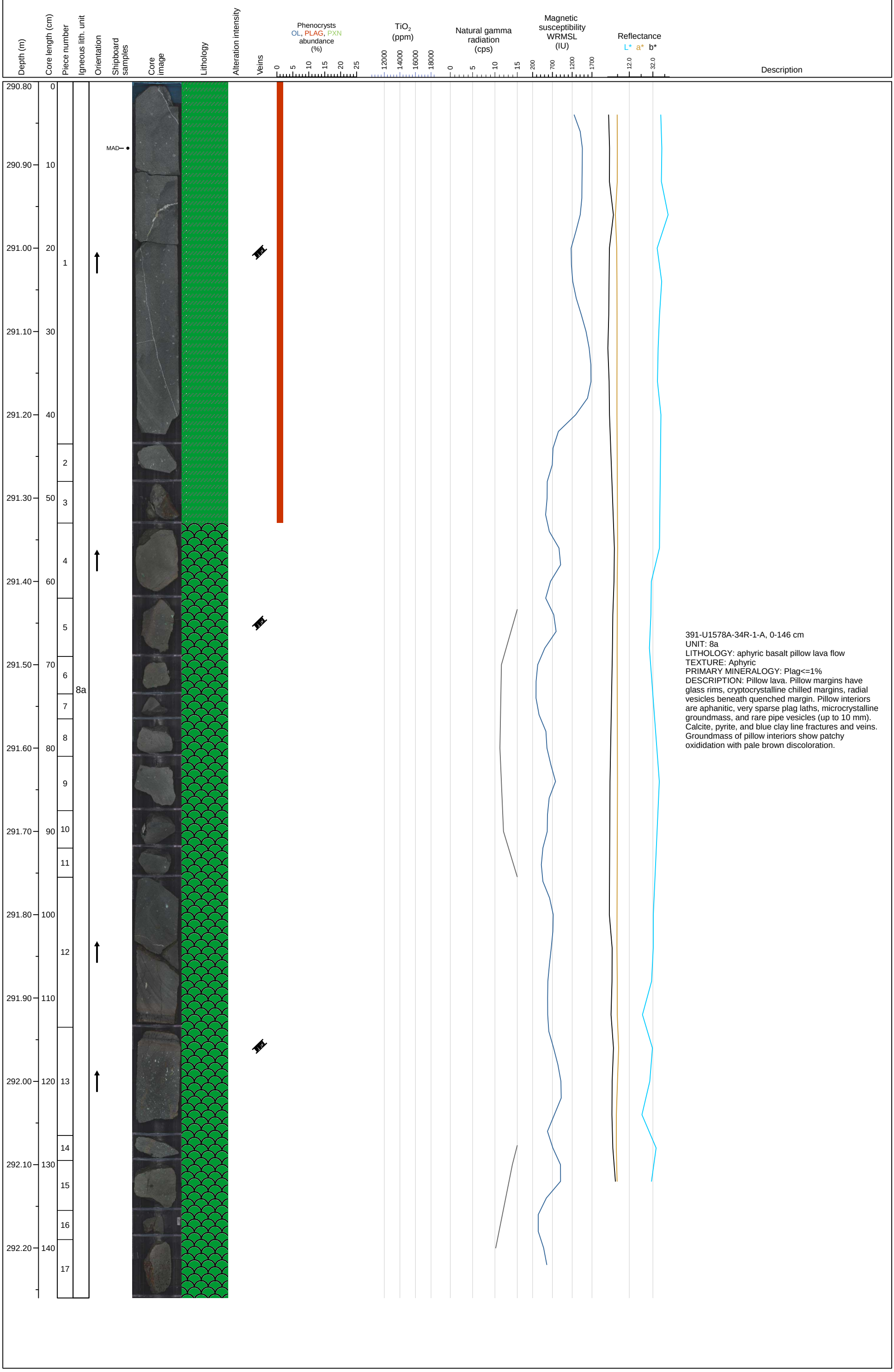


Hole 391-U1578A-33R Section 2, Top of Section: 282.56 m (CSF-A)



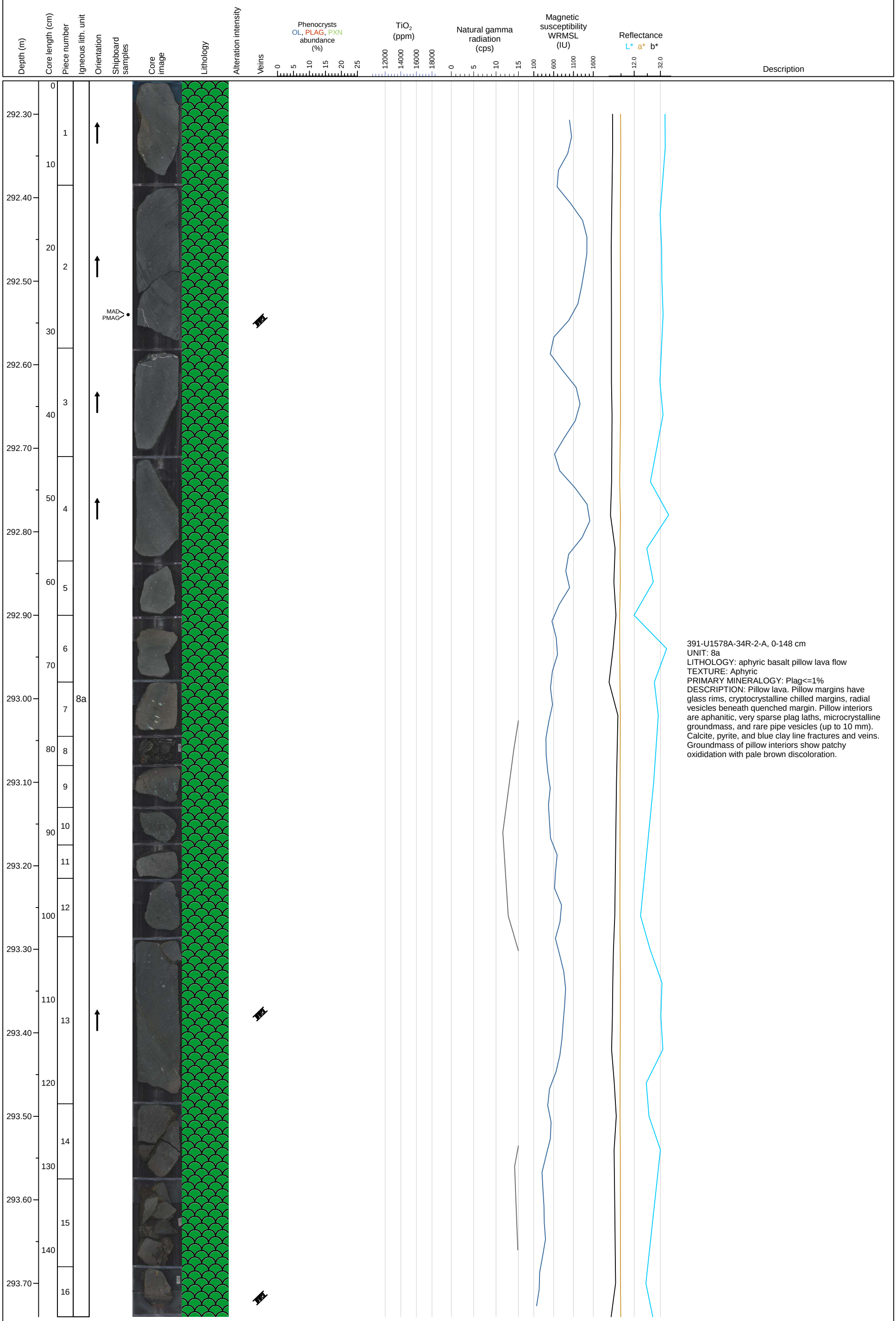
391-U1578A-33R-2-A, 0-105 cm
UNIT: 8a
LITHOLOGY: aphyric basalt pillow lava flow
TEXTURE: Aphyric
PRIMARY MINERALOGY: Plag<=1%
DESCRIPTION: Pillow lava. Pillow margins have cryptocrystalline chilled margins. Pillow interiors are aphanitic, very sparse plag laths, microcrystalline groundmass. Calcite, pyrite, and blue clay line fractures and veins. Groundmass of pillow interiors may show patchy oxididation with pale tan discoloration.

Hole 391-U1578A-34R Section 1, Top of Section: 290.8 m (CSF-A)



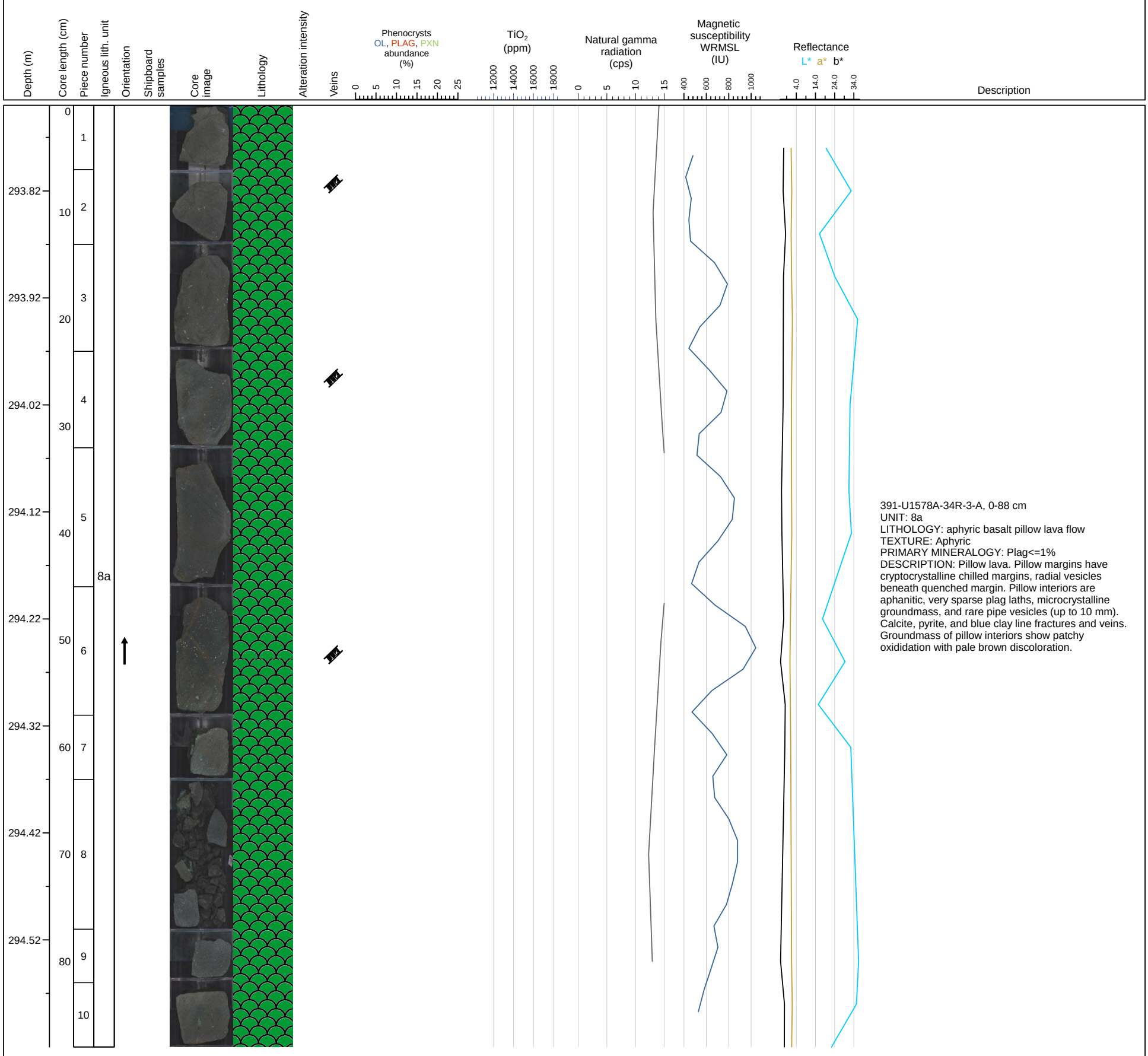
391-U1578A-34R-1-A, 0-146 cm
UNIT: 8a
LITHOLOGY: aphyric basalt pillow lava flow
TEXTURE: Aphyric
PRIMARY MINERALOGY: Plag<=1%
DESCRIPTION: Pillow lava. Pillow margins have glass rims, cryptocrystalline chilled margins, radial vesicles beneath quenched margin. Pillow interiors are aphanitic, very sparse plag laths, microcrystalline groundmass, and rare pipe vesicles (up to 10 mm). Calcite, pyrite, and blue clay line fractures and veins. Groundmass of pillow interiors show patchy oxididation with pale brown discoloration.

Hole 391-U1578A-34R Section 2, Top of Section: 292.26 m (CSF-A)



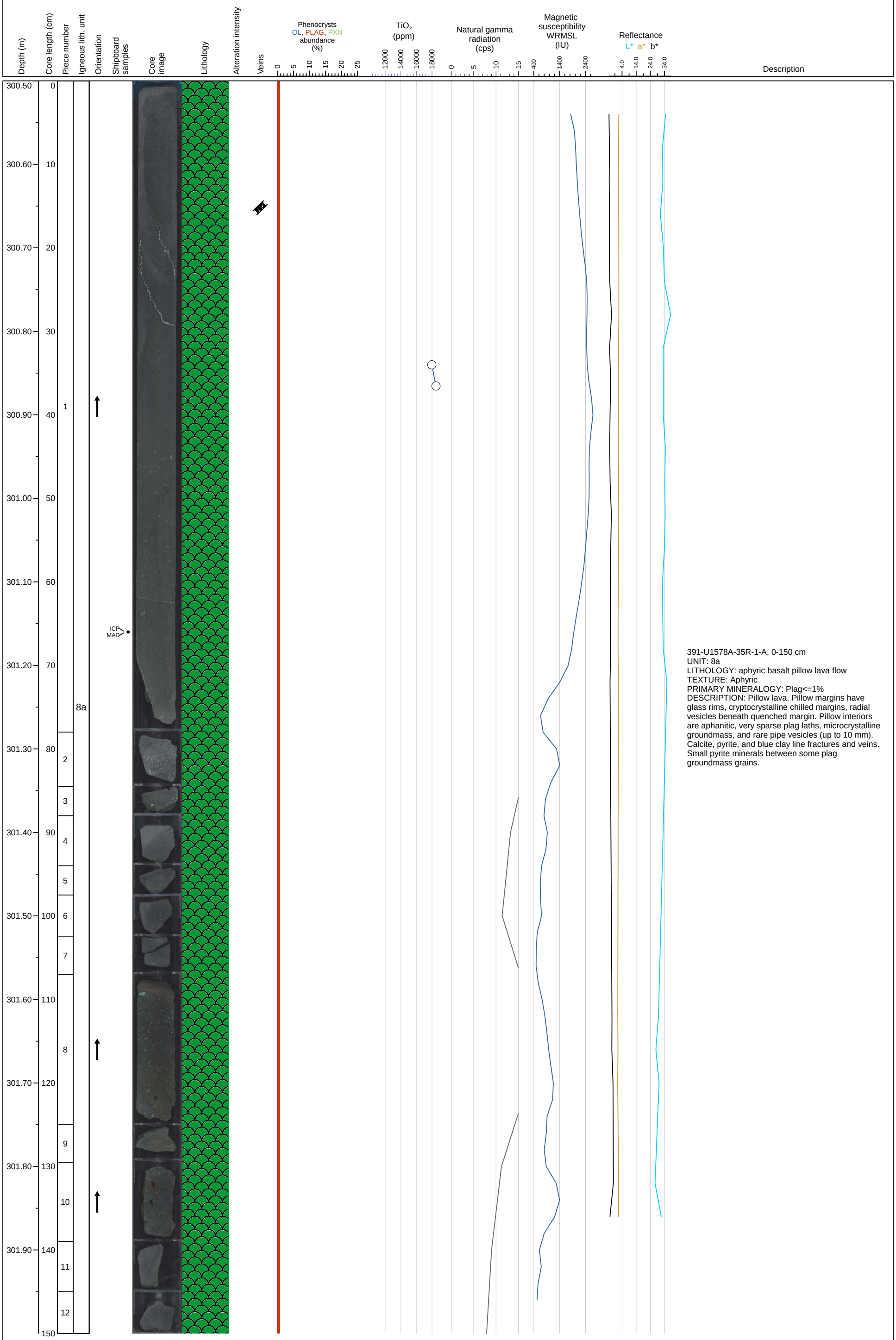
391-U1578A-34R-2-A, 0-148 cm
UNIT: 8a
LITHOLOGY: aphyric basalt pillow lava flow
TEXTURE: Aphyric
PRIMARY MINERALOGY: Plag<=1%
DESCRIPTION: Pillow lava. Pillow margins have glass rims, cryptocrystalline chilled margins, radial vesicles beneath quenched margin. Pillow interiors are aphanitic, very sparse plag laths, microcrystalline groundmass, and rare pipe vesicles (up to 10 mm). Calcite, pyrite, and blue clay line fractures and veins. Groundmass of pillow interiors show patchy oxididation with pale brown discoloration.

Hole 391-U1578A-34R Section 3, Top of Section: 293.74 m (CSF-A)



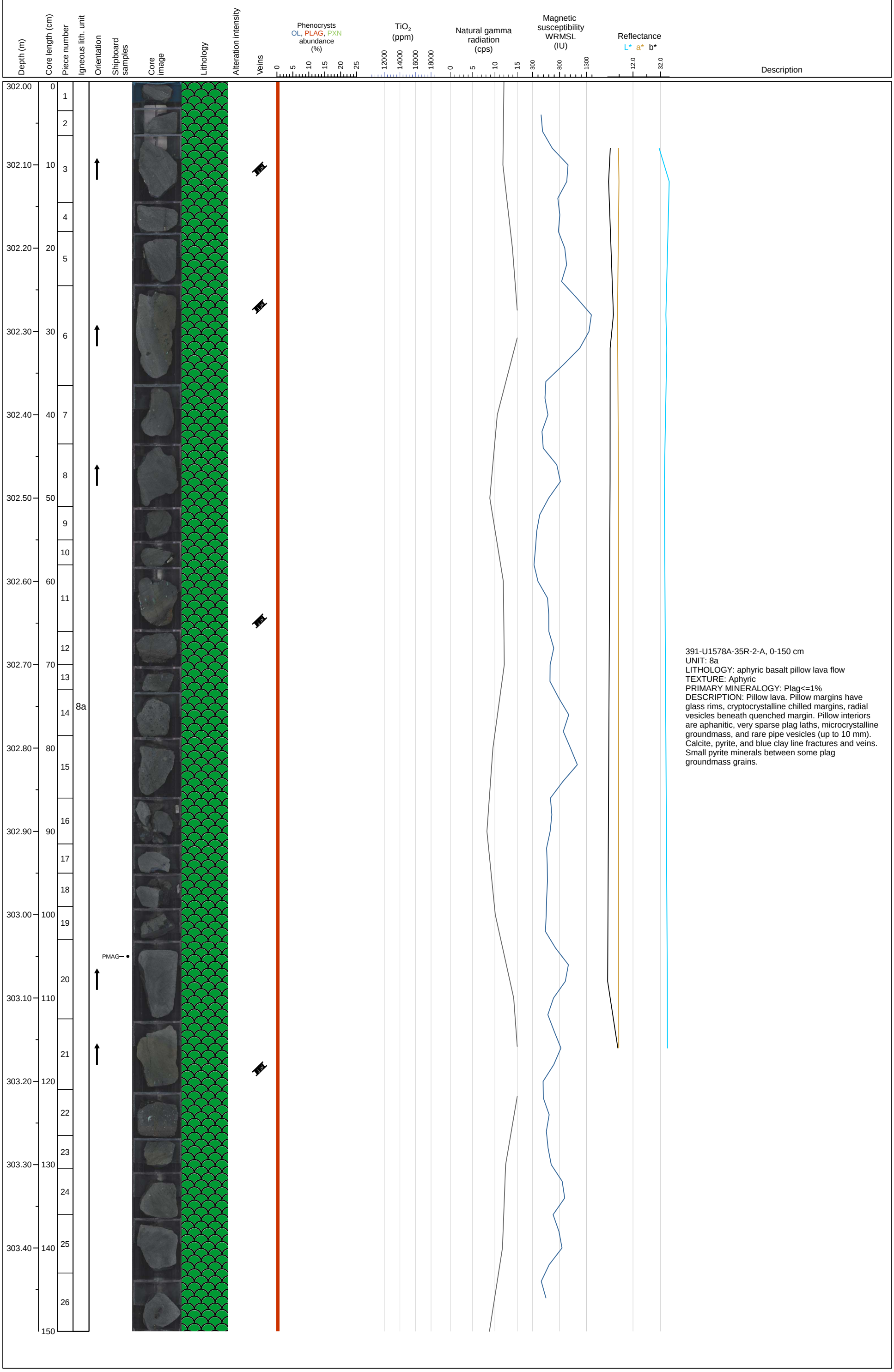
391-U1578A-34R-3-A, 0-88 cm
UNIT: 8a
LITHOLOGY: aphyric basalt pillow lava flow
TEXTURE: Aphyric
PRIMARY MINERALOGY: Plag<=1%
DESCRIPTION: Pillow lava. Pillow margins have cryptocrystalline chilled margins, radial vesicles beneath quenched margin. Pillow interiors are aphanitic, very sparse plag laths, microcrystalline groundmass, and rare pipe vesicles (up to 10 mm). Calcite, pyrite, and blue clay line fractures and veins. Groundmass of pillow interiors show patchy oxididation with pale brown discoloration.

Hole 391-U1578A-35R Section 1, Top of Section: 300.5 m (CSF-A)



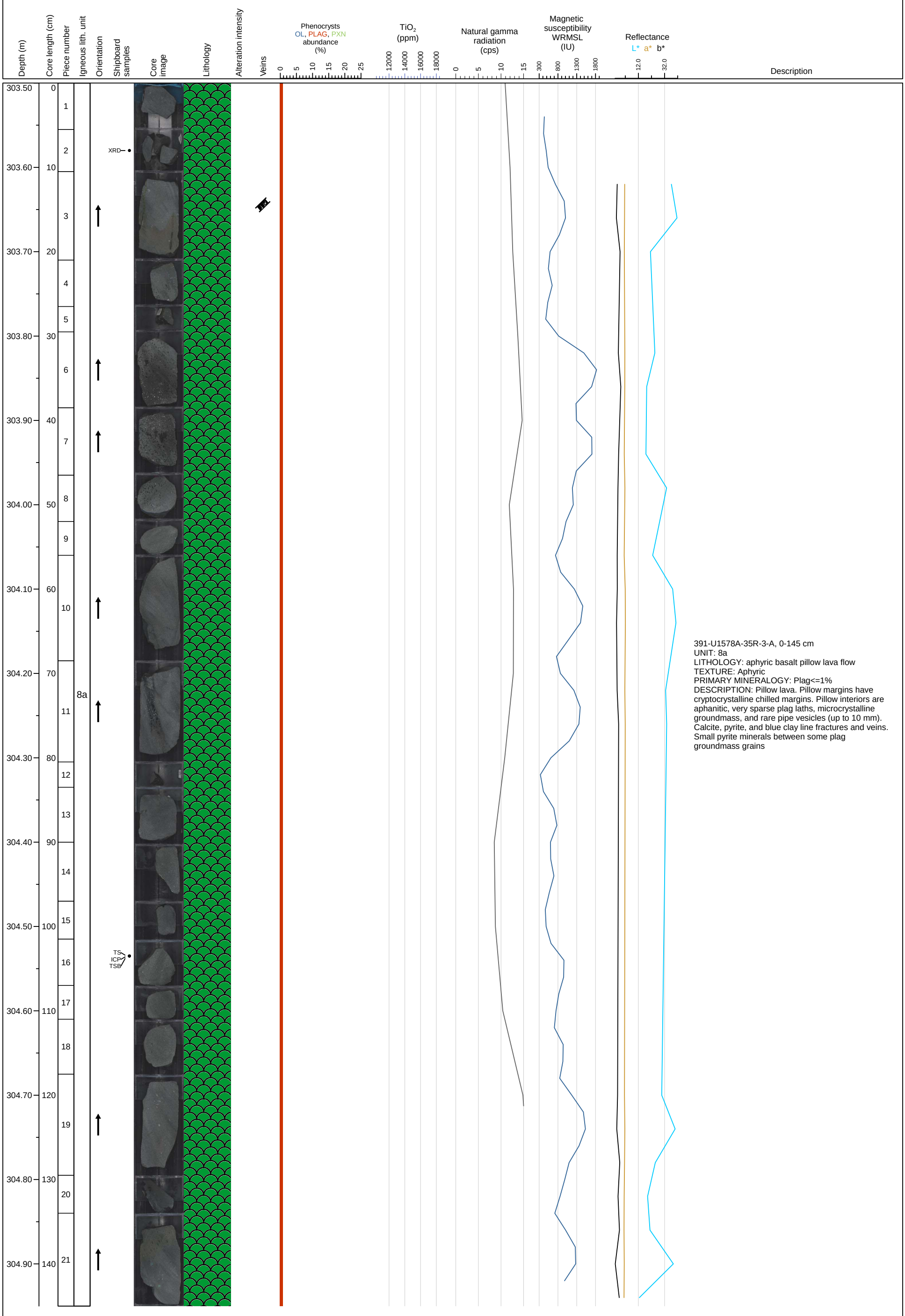
391-U1578A-35R-1-A, 0-150 cm
UNIT: 8a
LITHOLOGY: aphyric basalt pillow lava flow
TEXTURE: Aphyric
PRIMARY MINERALOGY: Plag<=1%
DESCRIPTION: Pillow lava. Pillow margins have glass rims, cryptocrystalline chilled margins, radial vesicles beneath quenched margin. Pillow interiors are aphanitic, very sparse plag laths, microcrystalline groundmass, and rare pipe vesicles (up to 10 mm). Calcite, pyrite, and blue clay line fractures and veins. Small pyrite minerals between some plag groundmass grains.

Hole 391-U1578A-35R Section 2, Top of Section: 302.0 m (CSF-A)

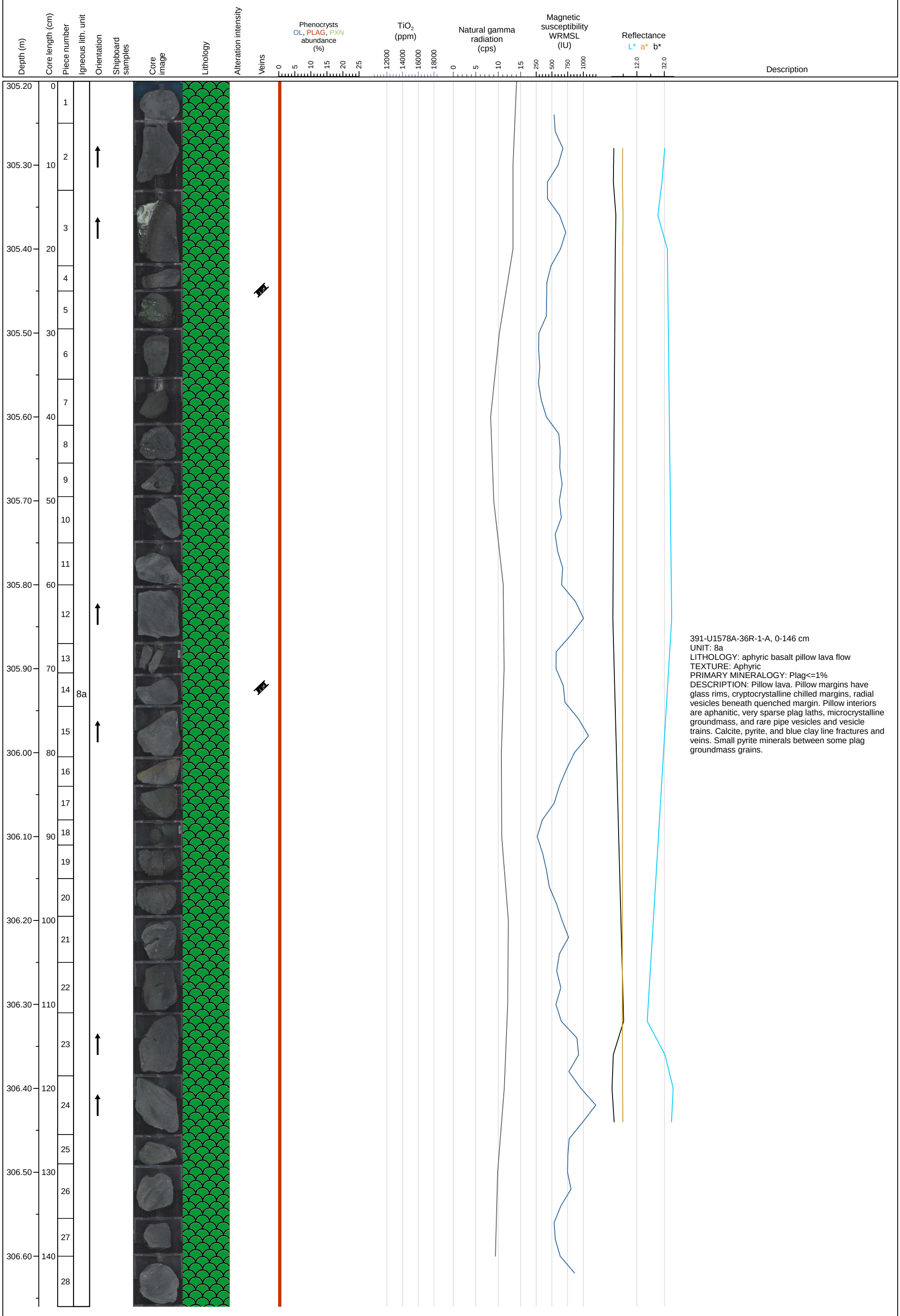


391-U1578A-35R-2-A, 0-150 cm
UNIT: 8a
LITHOLOGY: aphyric basalt pillow lava flow
TEXTURE: Aphyric
PRIMARY MINERALOGY: Plag<=1%
DESCRIPTION: Pillow lava. Pillow margins have glass rims, cryptocrystalline chilled margins, radial vesicles beneath quenched margin. Pillow interiors are aphanitic, very sparse plag laths, microcrystalline groundmass, and rare pipe vesicles (up to 10 mm). Calcite, pyrite, and blue clay line fractures and veins. Small pyrite minerals between some plag groundmass grains.

Hole 391-U1578A-35R Section 3, Top of Section: 303.5 m (CSF-A)

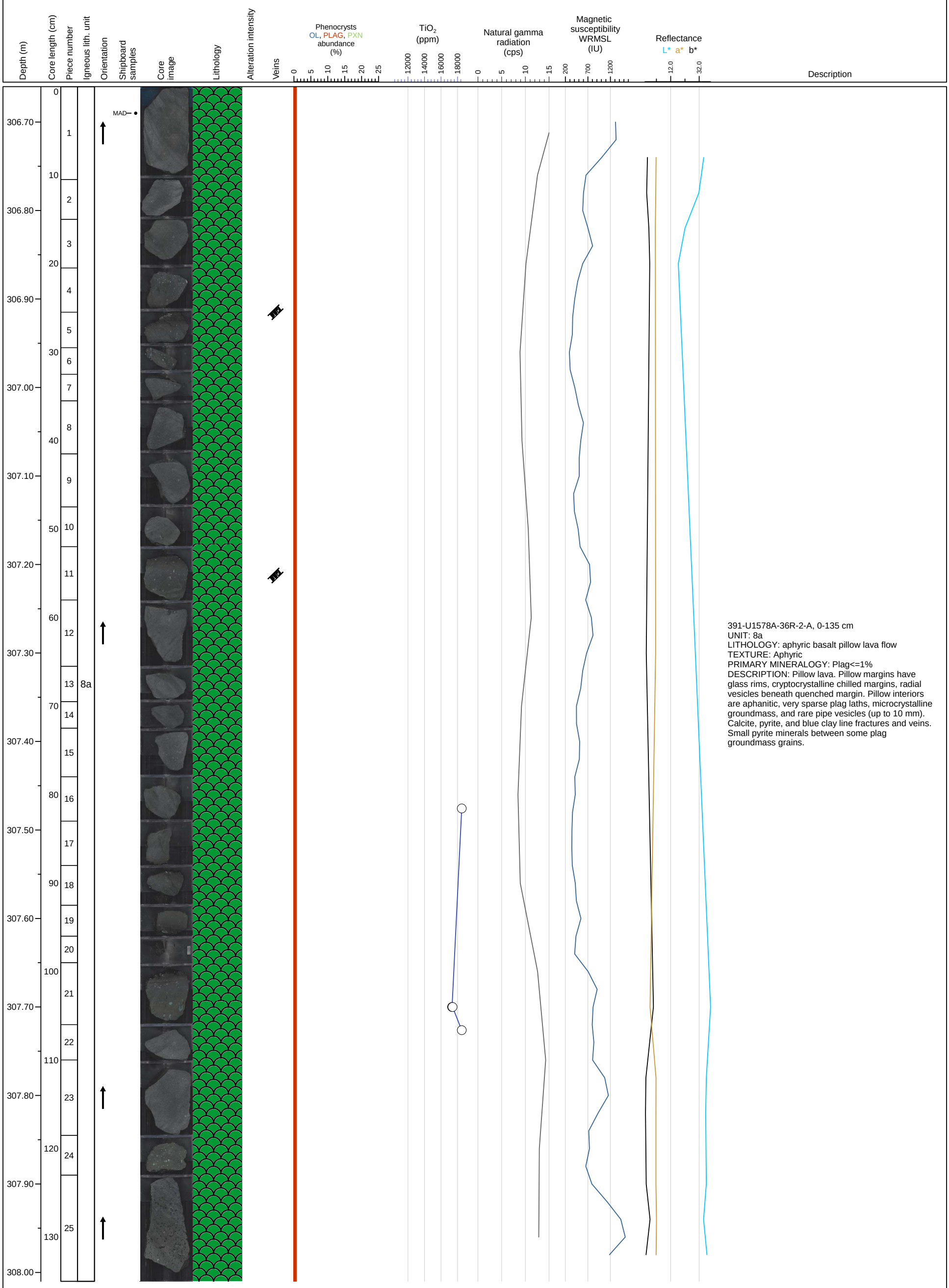


Hole 391-U1578A-36R Section 1, Top of Section: 305.2 m (CSF-A)

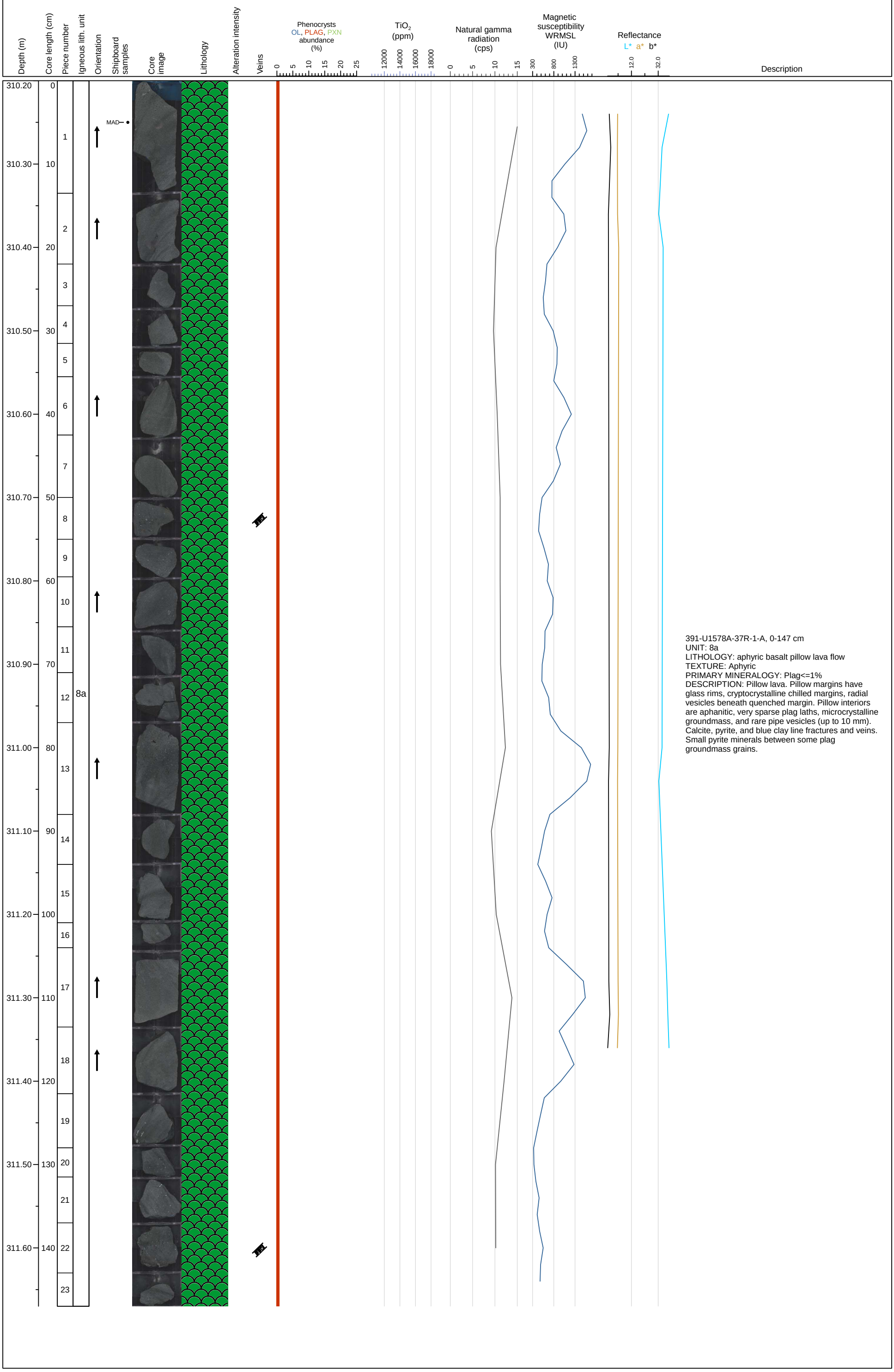


391-U1578A-36R-1-A, 0-146 cm
UNIT: 8a
LITHOLOGY: aphyric basalt pillow lava flow
TEXTURE: Aphyric
PRIMARY MINERALOGY: Plag<=1%
DESCRIPTION: Pillow lava. Pillow margins have glass rims, cryptocrystalline chilled margins, radial vesicles beneath quenched margin. Pillow interiors are aphanitic, very sparse plag laths, microcrystalline groundmass, and rare pipe vesicles and vesicle trains. Calcite, pyrite, and blue clay line fractures and veins. Small pyrite minerals between some plag groundmass grains.

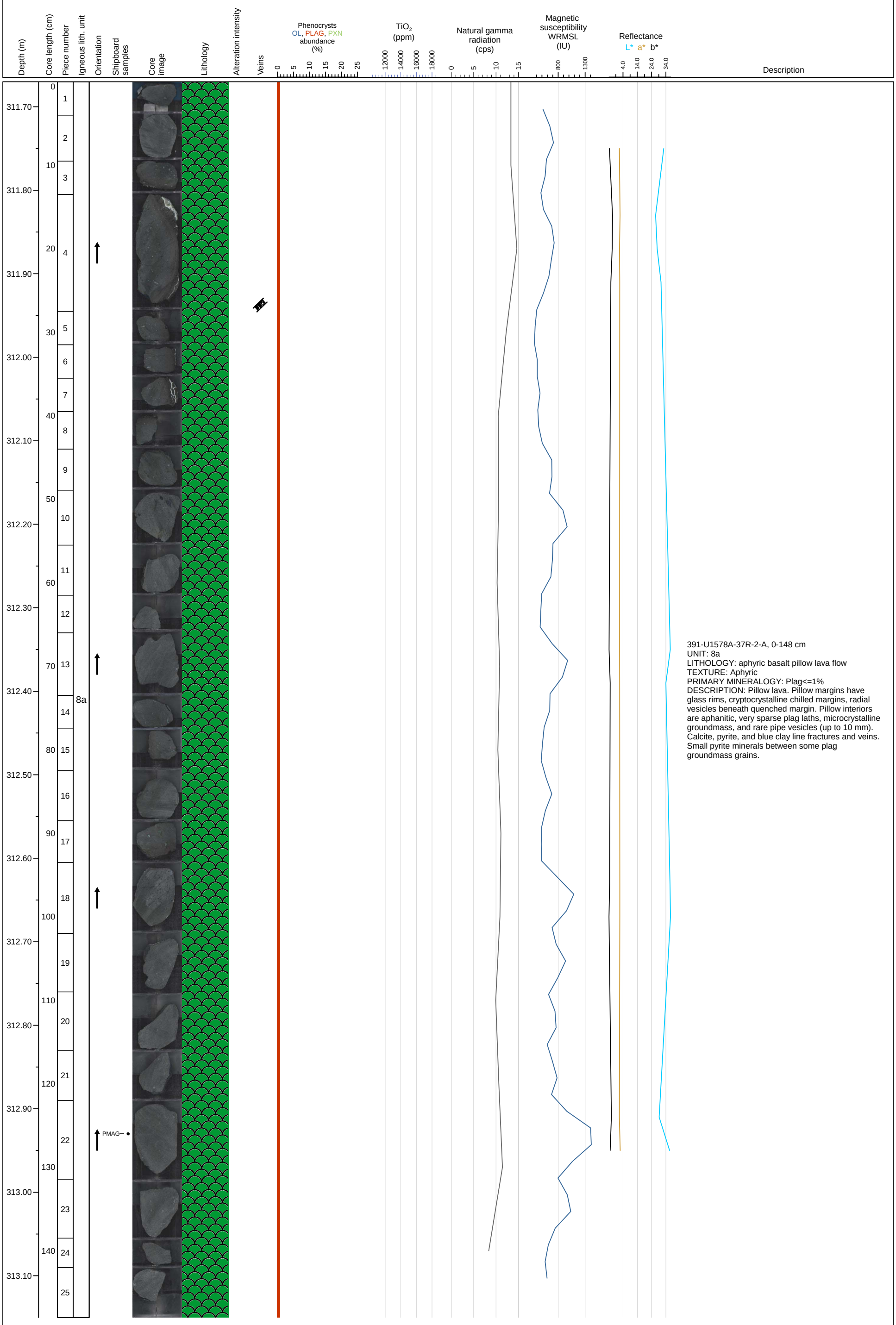
Hole 391-U1578A-36R Section 2, Top of Section: 306.66 m (CSF-A)



Hole 391-U1578A-37R Section 1, Top of Section: 310.2 m (CSF-A)

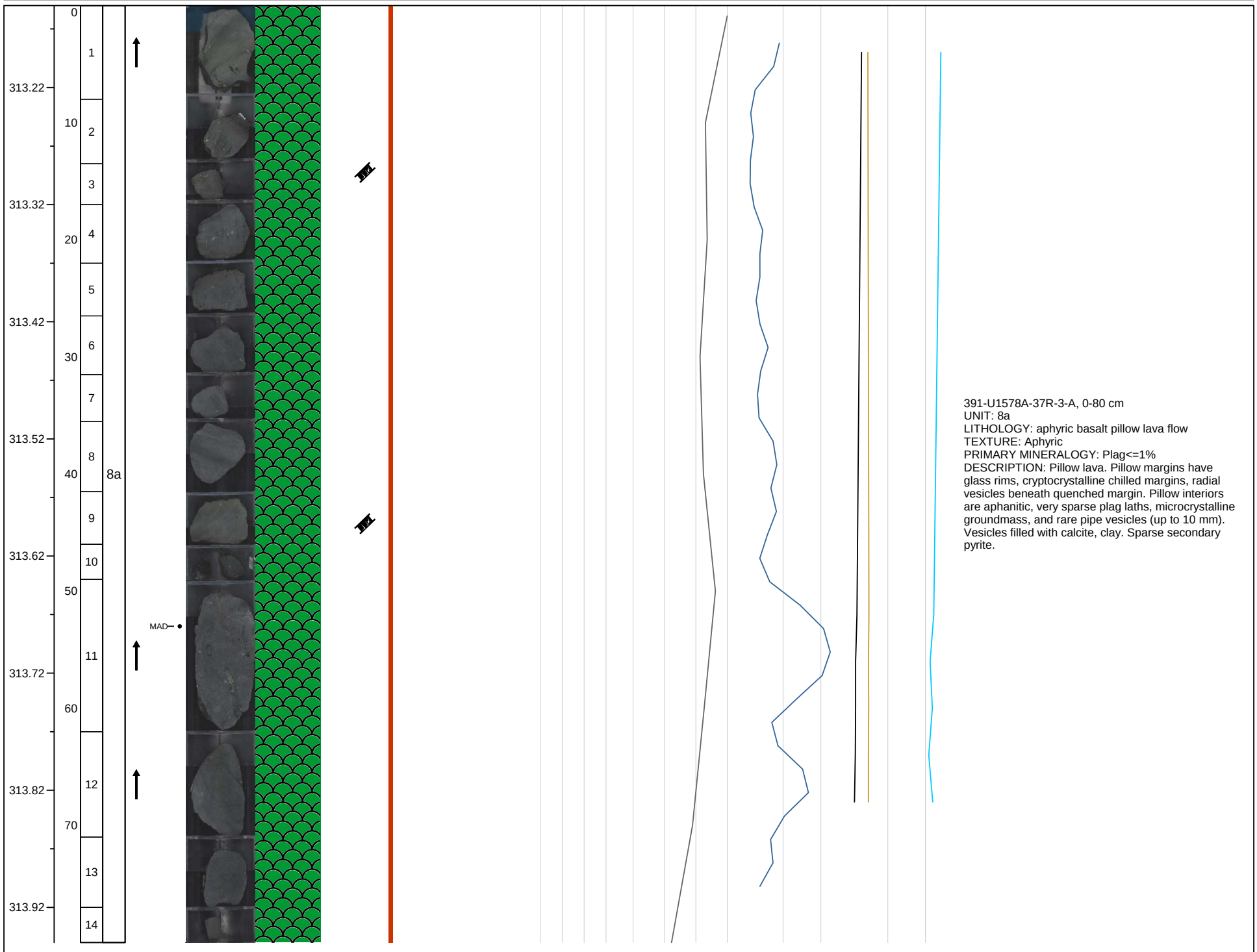


Hole 391-U1578A-37R Section 2, Top of Section: 311.67 m (CSF-A)



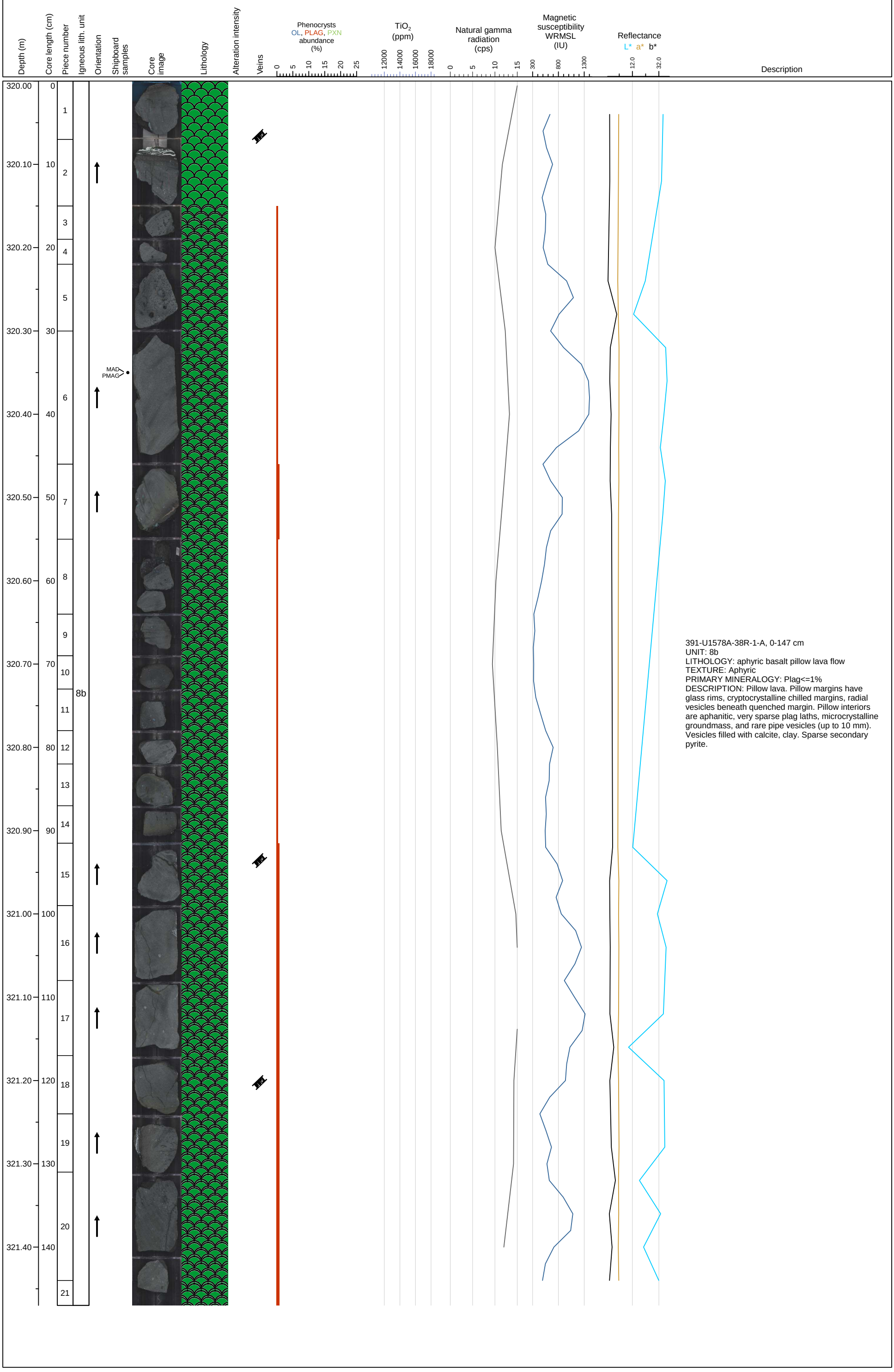
391-U1578A-37R-2-A, 0-148 cm
UNIT: 8a
LITHOLOGY: aphyric basalt pillow lava flow
TEXTURE: Aphyric
PRIMARY MINERALOGY: Plag<=1%
DESCRIPTION: Pillow lava. Pillow margins have glass rims, cryptocrystalline chilled margins, radial vesicles beneath quenched margin. Pillow interiors are aphanitic, very sparse plag laths, microcrystalline groundmass, and rare pipe vesicles (up to 10 mm). Calcite, pyrite, and blue clay line fractures and veins. Small pyrite minerals between some plag groundmass grains.

Hole 391-U1578A-37R Section 3, Top of Section: 313.15 m (CSF-A)

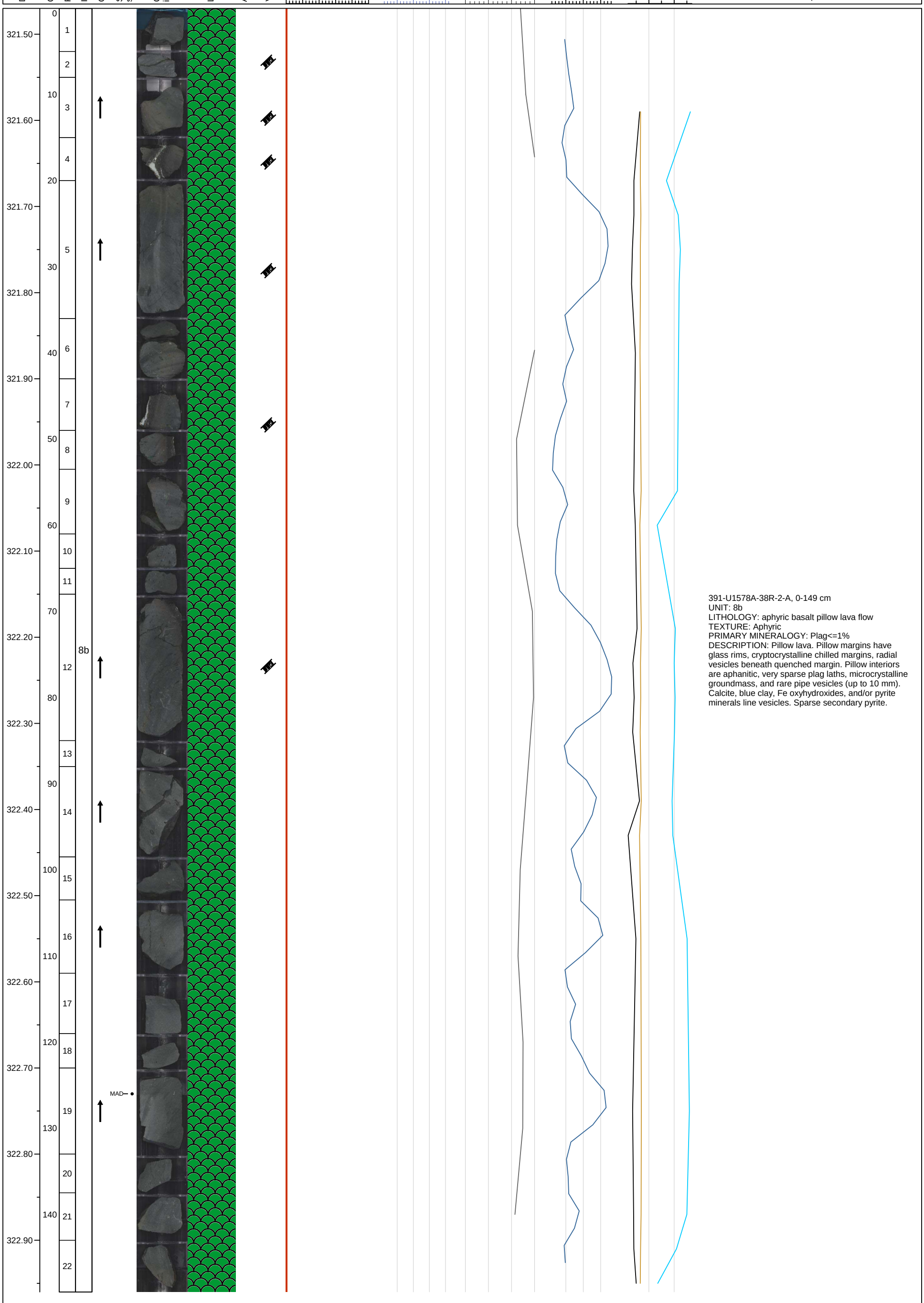


391-U1578A-37R-3-A, 0-80 cm
UNIT: 8a
LITHOLOGY: aphyric basalt pillow lava flow
TEXTURE: Aphyric
PRIMARY MINERALOGY: Plag<=1%
DESCRIPTION: Pillow lava. Pillow margins have glass rims, cryptocrystalline chilled margins, radial vesicles beneath quenched margin. Pillow interiors are aphanitic, very sparse plag laths, microcrystalline groundmass, and rare pipe vesicles (up to 10 mm). Vesicles filled with calcite, clay. Sparse secondary pyrite.

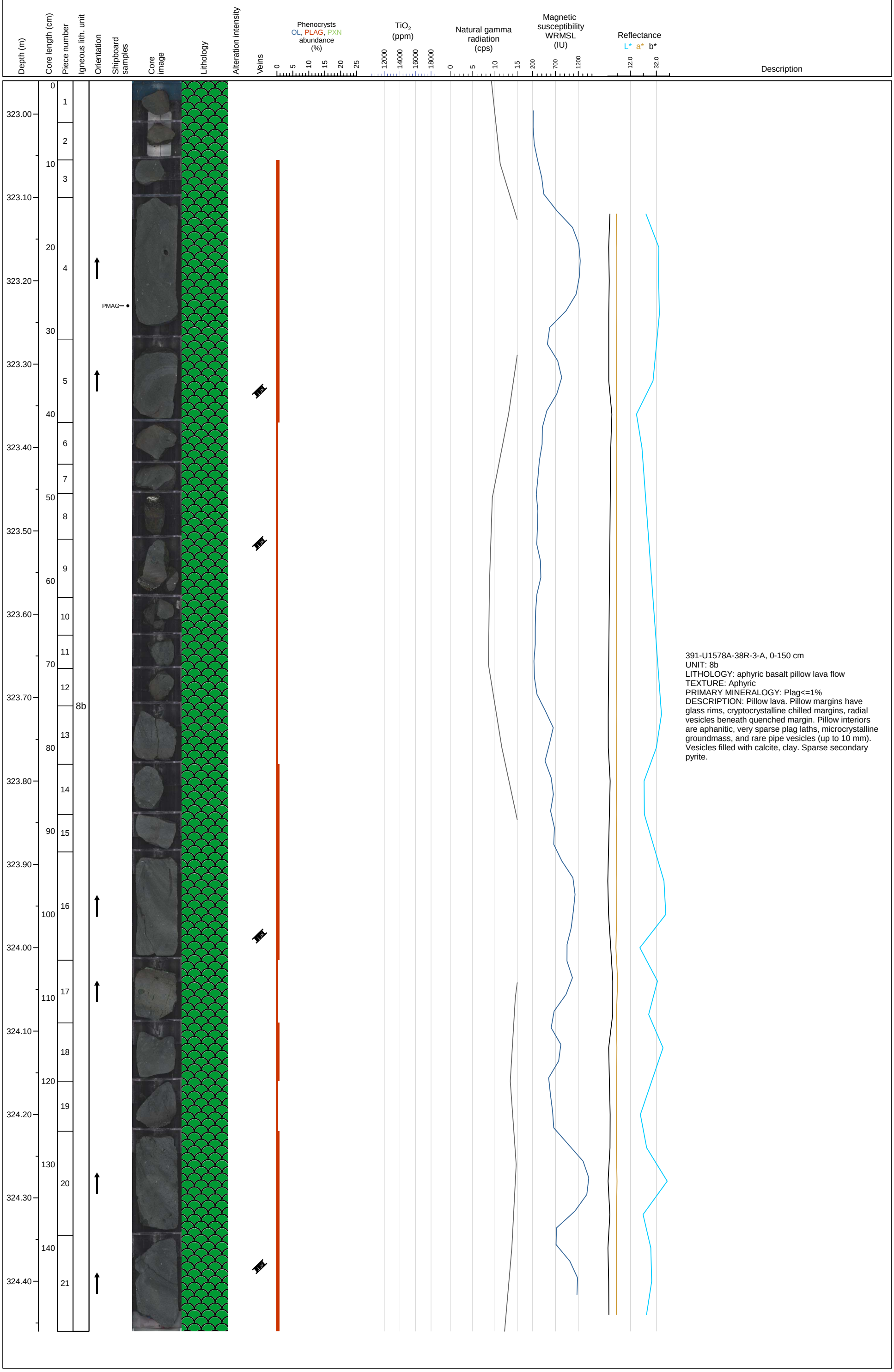
Hole 391-U1578A-38R Section 1, Top of Section: 320.0 m (CSF-A)



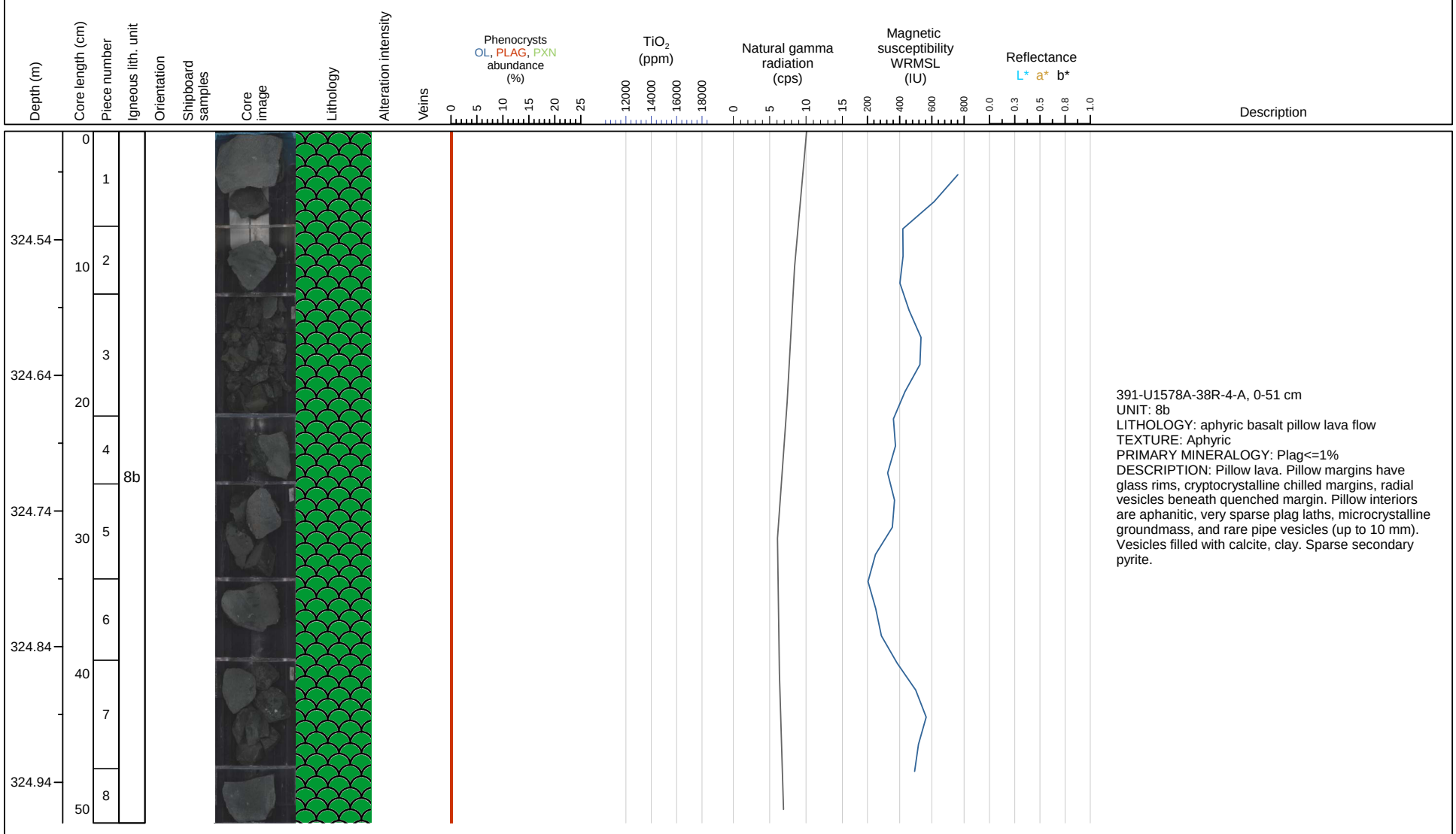
Hole 391-U1578A-38R Section 2, Top of Section: 321.47 m (CSF-A)



Hole 391-U1578A-38R Section 3, Top of Section: 322.96 m (CSF-A)

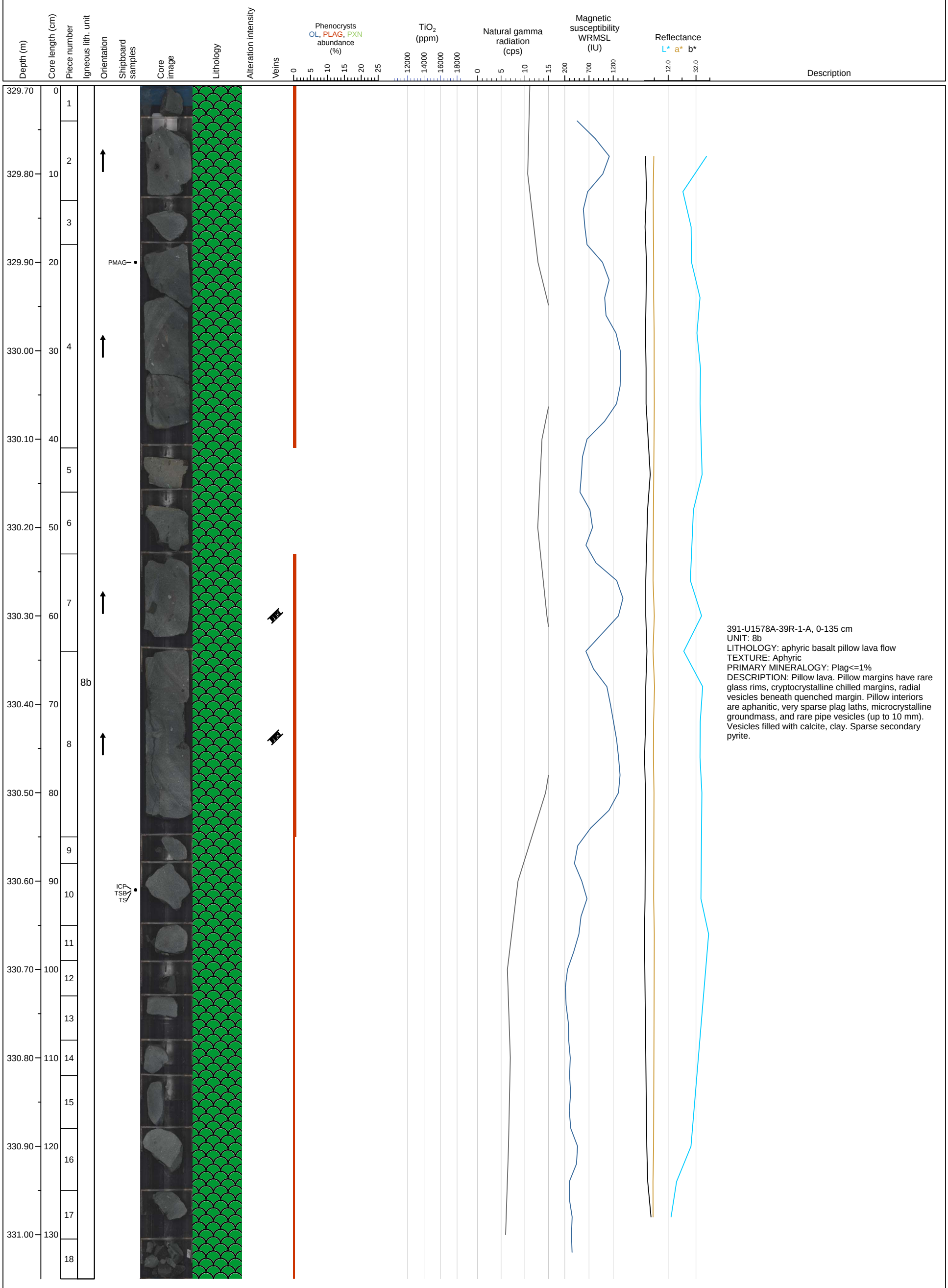


Hole 391-U1578A-38R Section 4, Top of Section: 324.46 m (CSF-A)



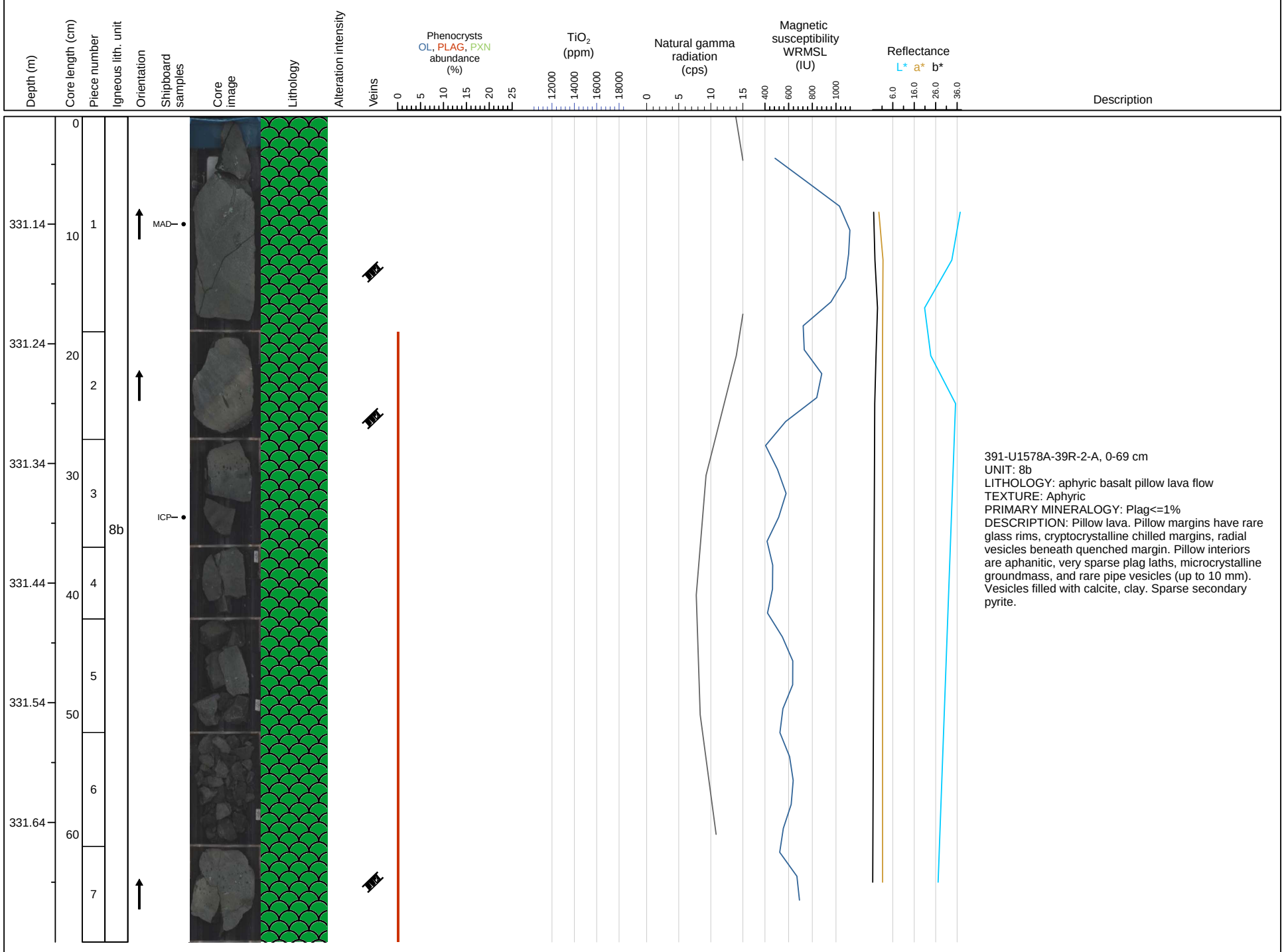
391-U1578A-38R-4-A, 0-51 cm
UNIT: 8b
LITHOLOGY: aphyric basalt pillow lava flow
TEXTURE: Aphyric
PRIMARY MINERALOGY: Plag<=1%
DESCRIPTION: Pillow lava. Pillow margins have glass rims, cryptocrystalline chilled margins, radial vesicles beneath quenched margin. Pillow interiors are aphanitic, very sparse plag laths, microcrystalline groundmass, and rare pipe vesicles (up to 10 mm). Vesicles filled with calcite, clay. Sparse secondary pyrite.

Hole 391-U1578A-39R Section 1, Top of Section: 329.7 m (CSF-A)



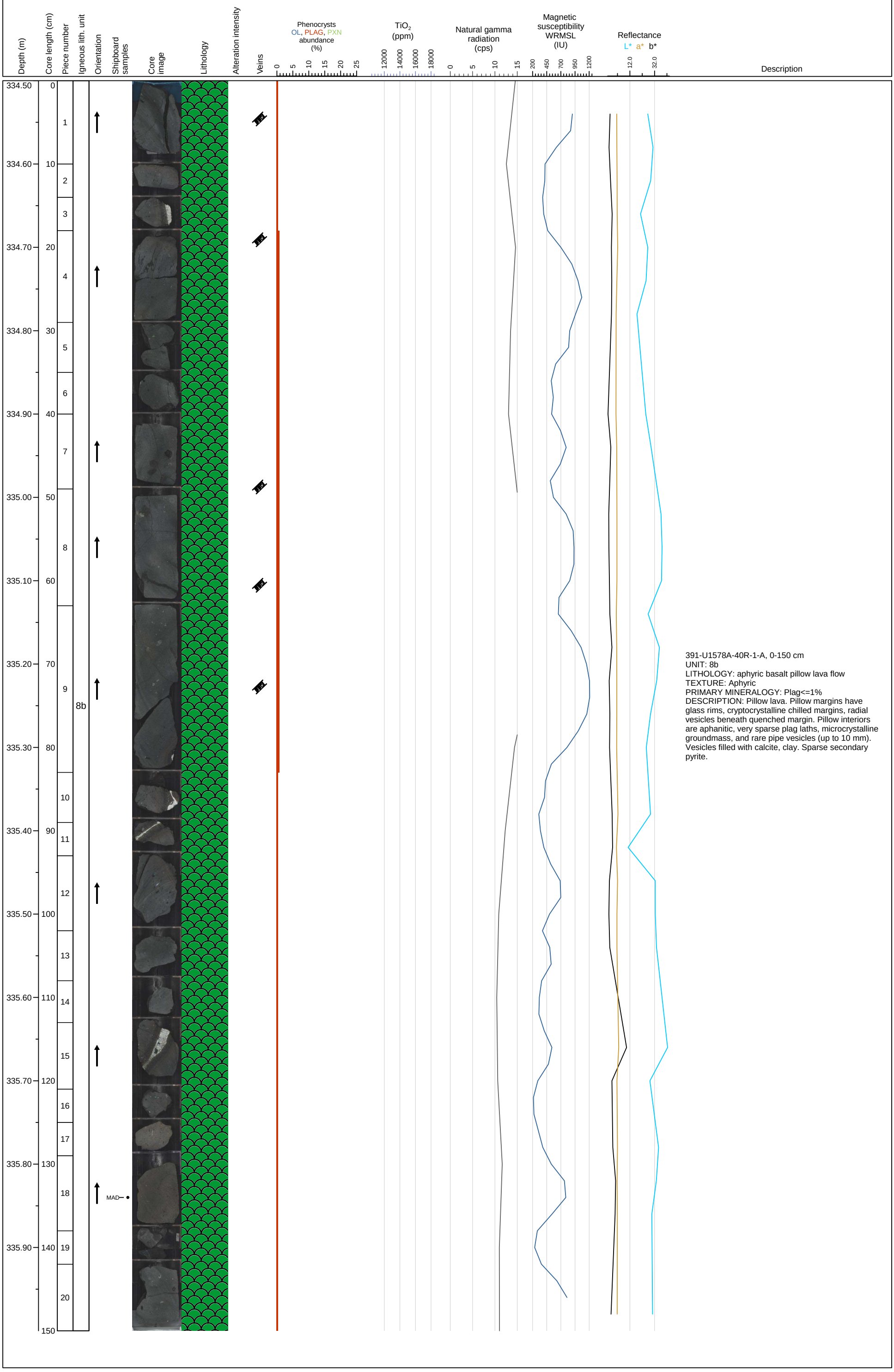
391-U1578A-39R-1-A, 0-135 cm
UNIT: 8b
LITHOLOGY: aphyric basalt pillow lava flow
TEXTURE: Aphyric
PRIMARY MINERALOGY: Plag<=1%
DESCRIPTION: Pillow lava. Pillow margins have rare glass rims, cryptocrystalline chilled margins, radial vesicles beneath quenched margin. Pillow interiors are aphanitic, very sparse plag laths, microcrystalline groundmass, and rare pipe vesicles (up to 10 mm). Vesicles filled with calcite, clay. Sparse secondary pyrite.

Hole 391-U1578A-39R Section 2, Top of Section: 331.05 m (CSF-A)

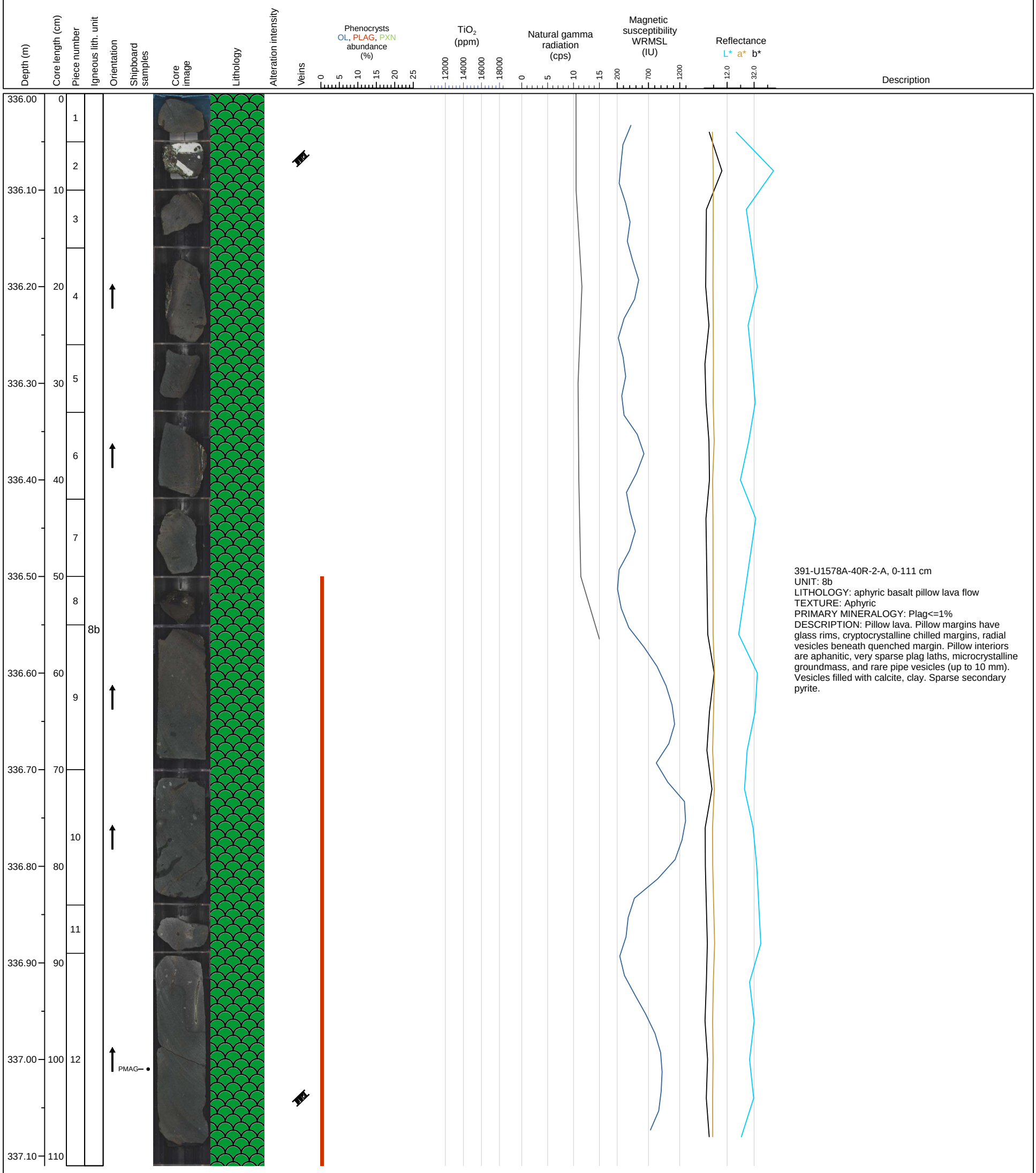


391-U1578A-39R-2-A, 0-69 cm
UNIT: 8b
LITHOLOGY: aphyric basalt pillow lava flow
TEXTURE: Aphyric
PRIMARY MINERALOGY: Plag<=1%
DESCRIPTION: Pillow lava. Pillow margins have rare glass rims, cryptocrystalline chilled margins, radial vesicles beneath quenched margin. Pillow interiors are aphanitic, very sparse plag laths, microcrystalline groundmass, and rare pipe vesicles (up to 10 mm). Vesicles filled with calcite, clay. Sparse secondary pyrite.

Hole 391-U1578A-40R Section 1, Top of Section: 334.5 m (CSF-A)

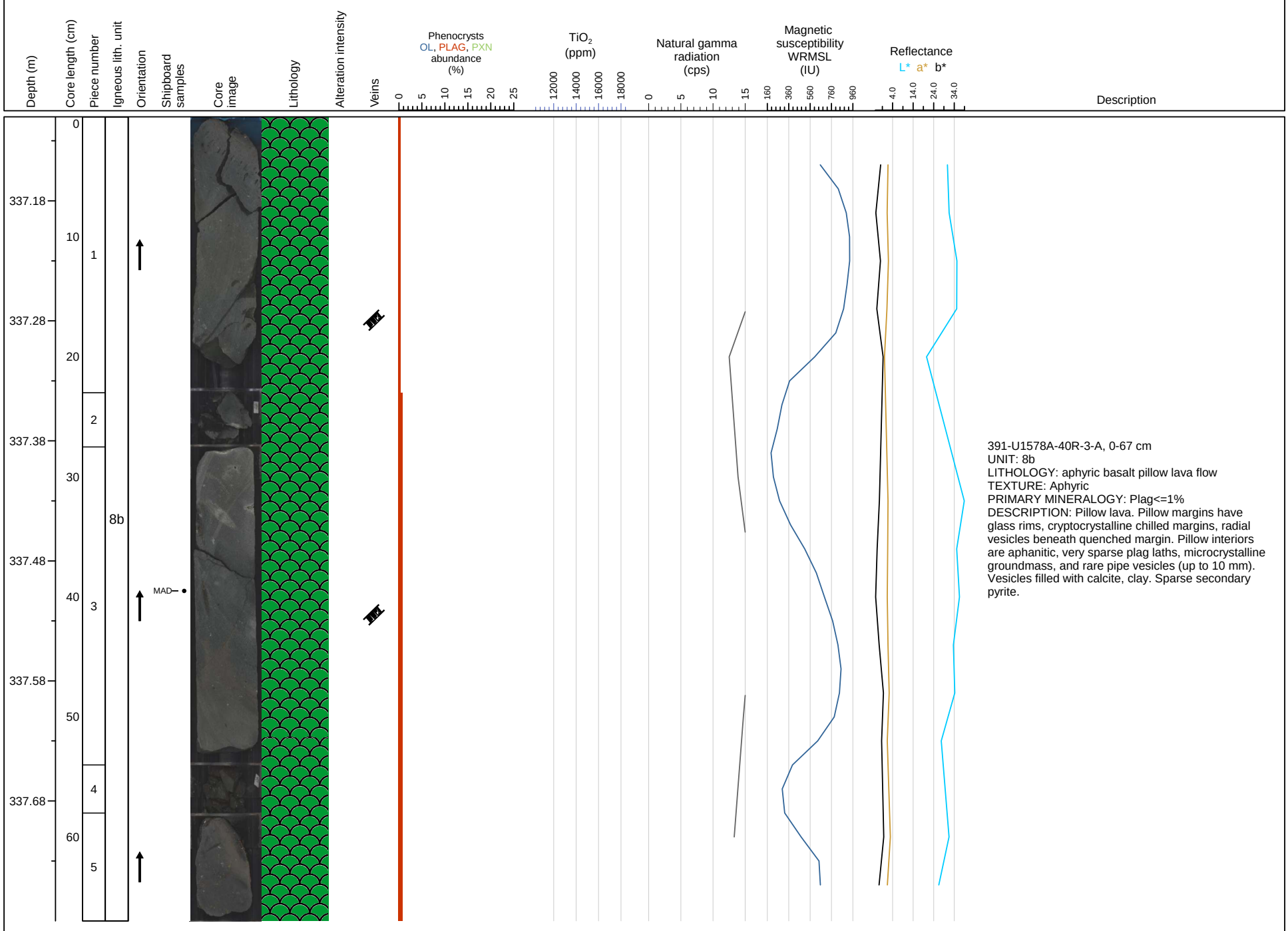


Hole 391-U1578A-40R Section 2, Top of Section: 336.0 m (CSF-A)



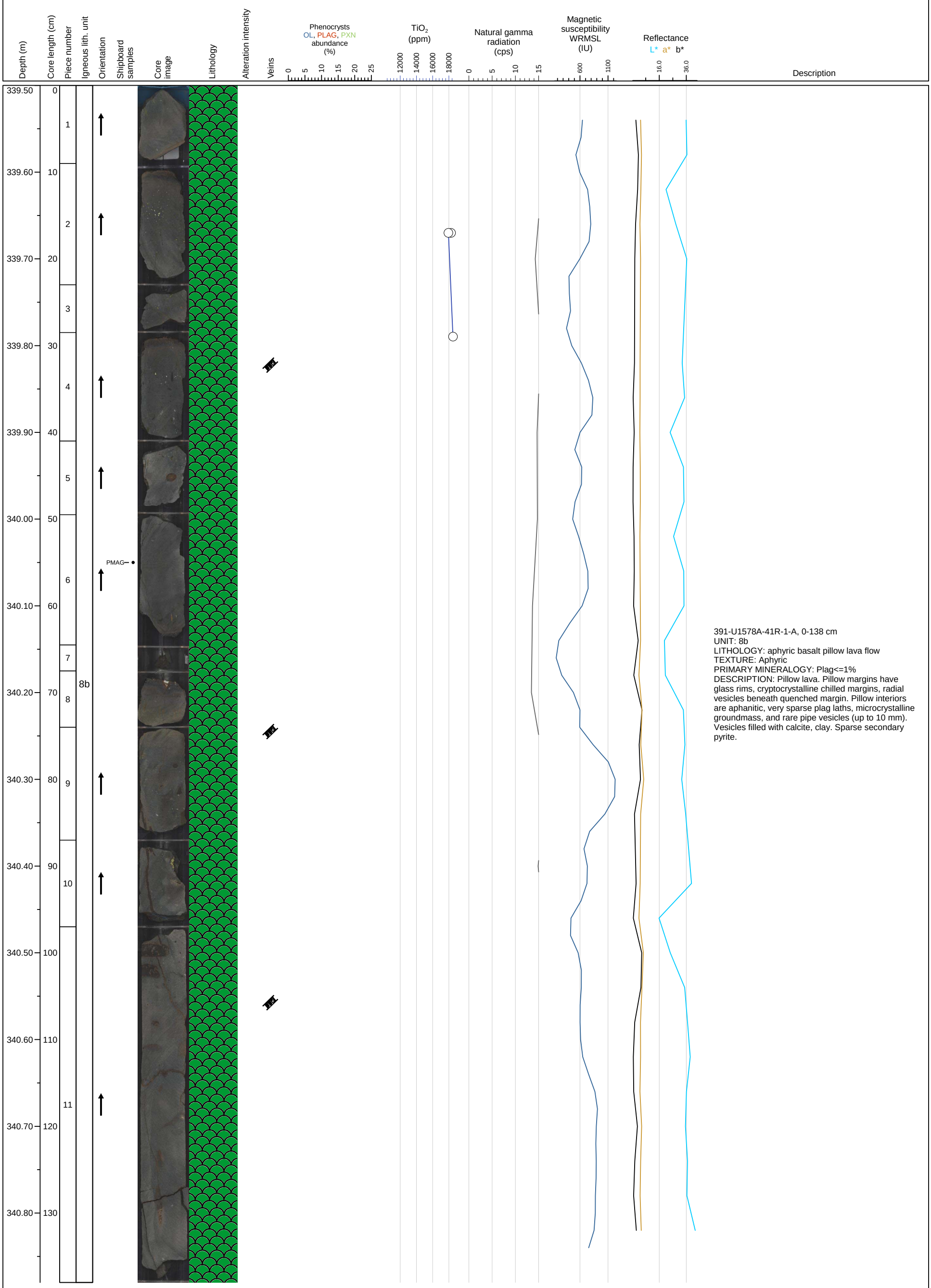
391-U1578A-40R-2-A, 0-111 cm
UNIT: 8b
LITHOLOGY: aphyric basalt pillow lava flow
TEXTURE: Aphyric
PRIMARY MINERALOGY: Plag<=1%
DESCRIPTION: Pillow lava. Pillow margins have glass rims, cryptocrystalline chilled margins, radial vesicles beneath quenched margin. Pillow interiors are aphanitic, very sparse plag laths, microcrystalline groundmass, and rare pipe vesicles (up to 10 mm). Vesicles filled with calcite, clay. Sparse secondary pyrite.

Hole 391-U1578A-40R Section 3, Top of Section: 337.11 m (CSF-A)

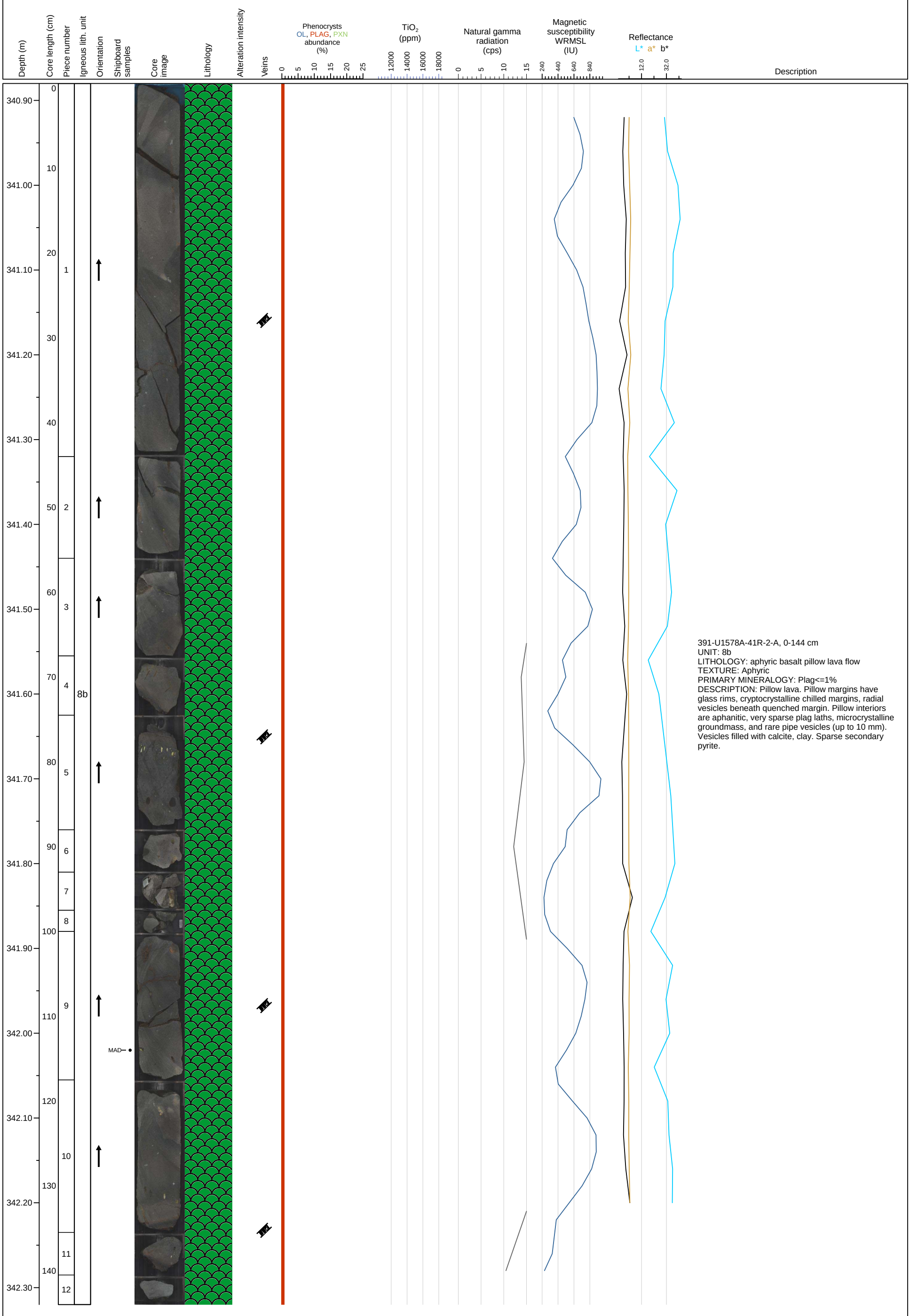


391-U1578A-40R-3-A, 0-67 cm
UNIT: 8b
LITHOLOGY: aphyric basalt pillow lava flow
TEXTURE: Aphyric
PRIMARY MINERALOGY: Plag<=1%
DESCRIPTION: Pillow lava. Pillow margins have glass rims, cryptocrystalline chilled margins, radial vesicles beneath quenched margin. Pillow interiors are aphanitic, very sparse plag laths, microcrystalline groundmass, and rare pipe vesicles (up to 10 mm). Vesicles filled with calcite, clay. Sparse secondary pyrite.

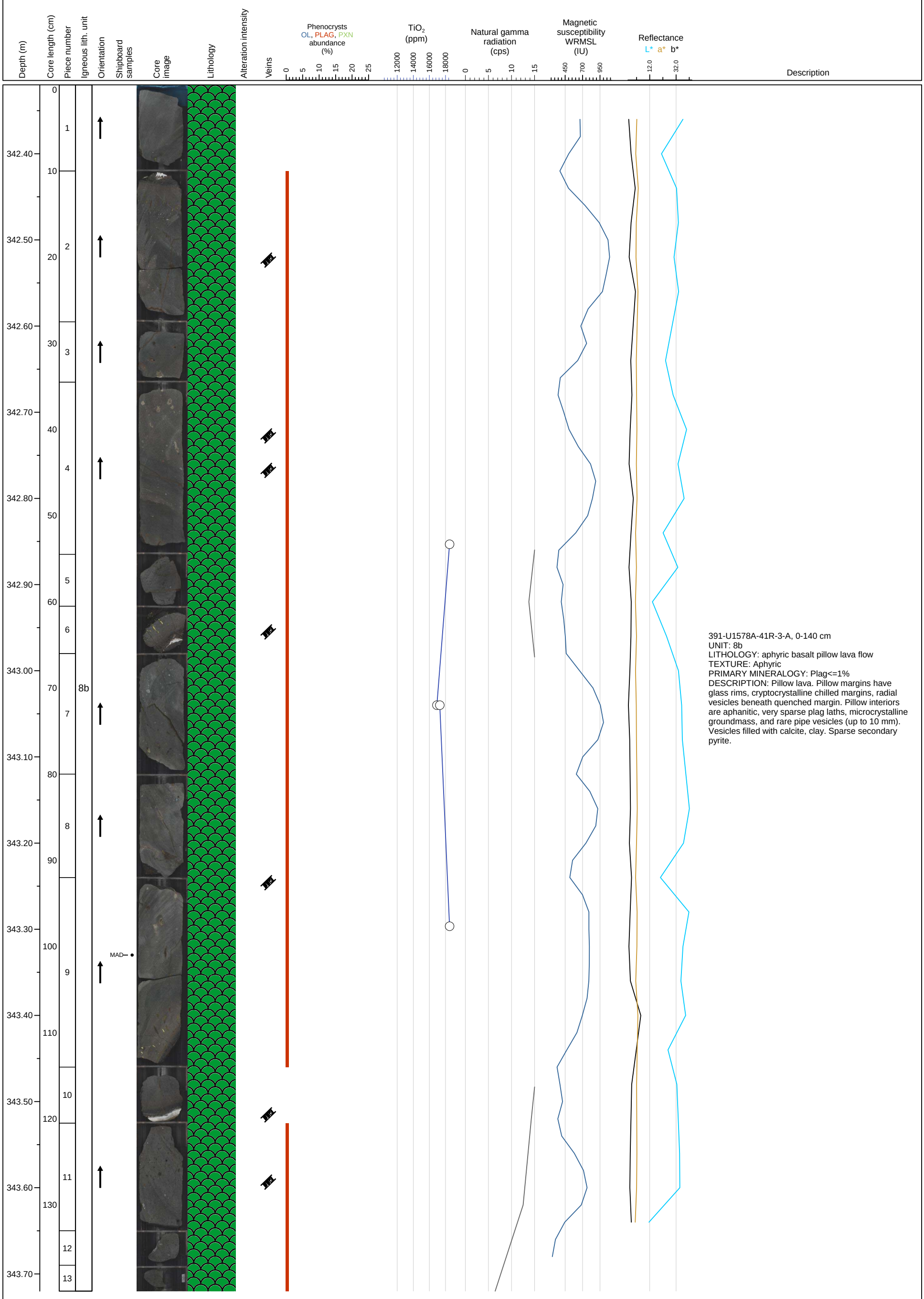
Hole 391-U1578A-41R Section 1, Top of Section: 339.5 m (CSF-A)



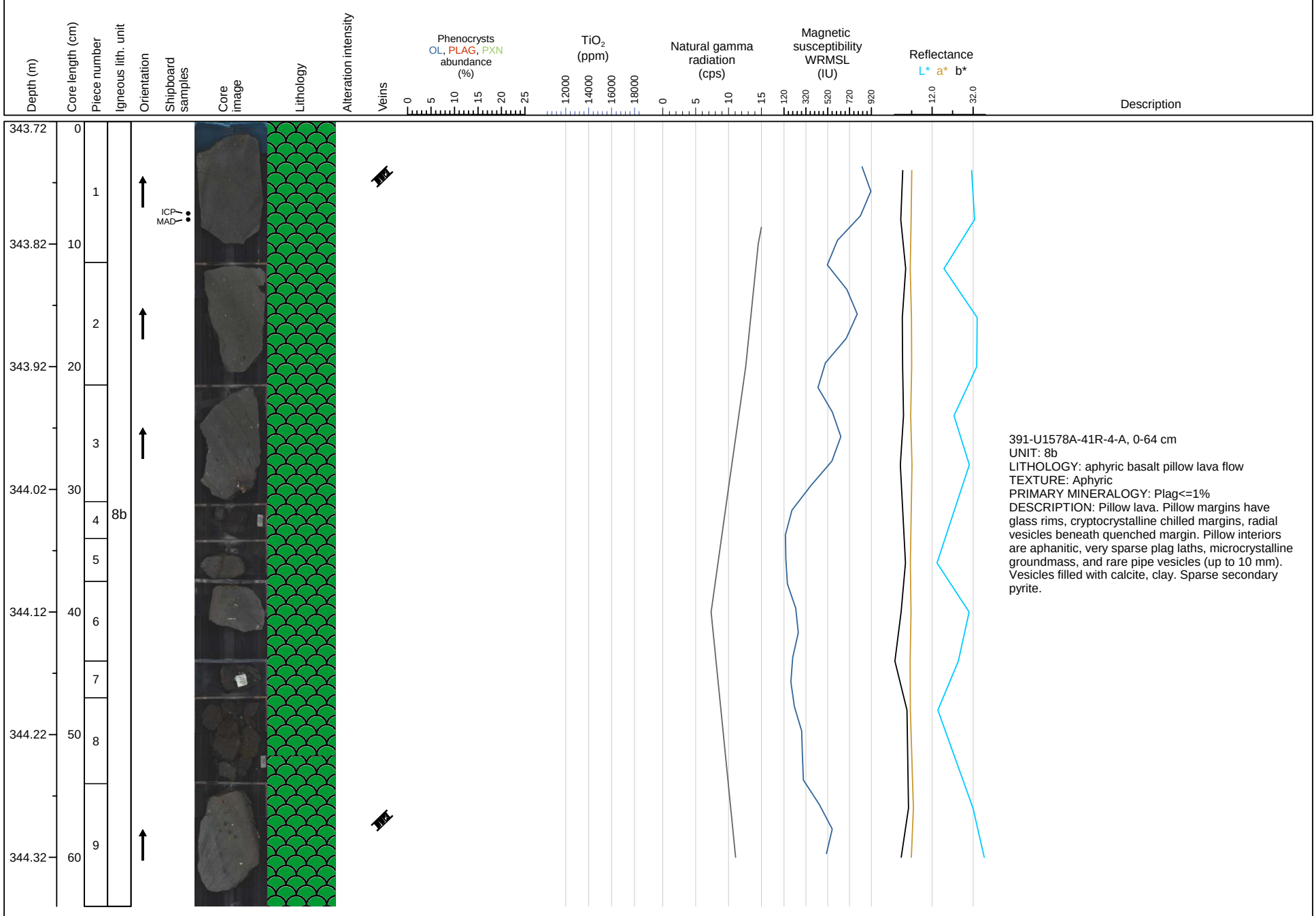
Hole 391-U1578A-41R Section 2, Top of Section: 340.88 m (CSF-A)



Hole 391-U1578A-41R Section 3, Top of Section: 342.32 m (CSF-A)

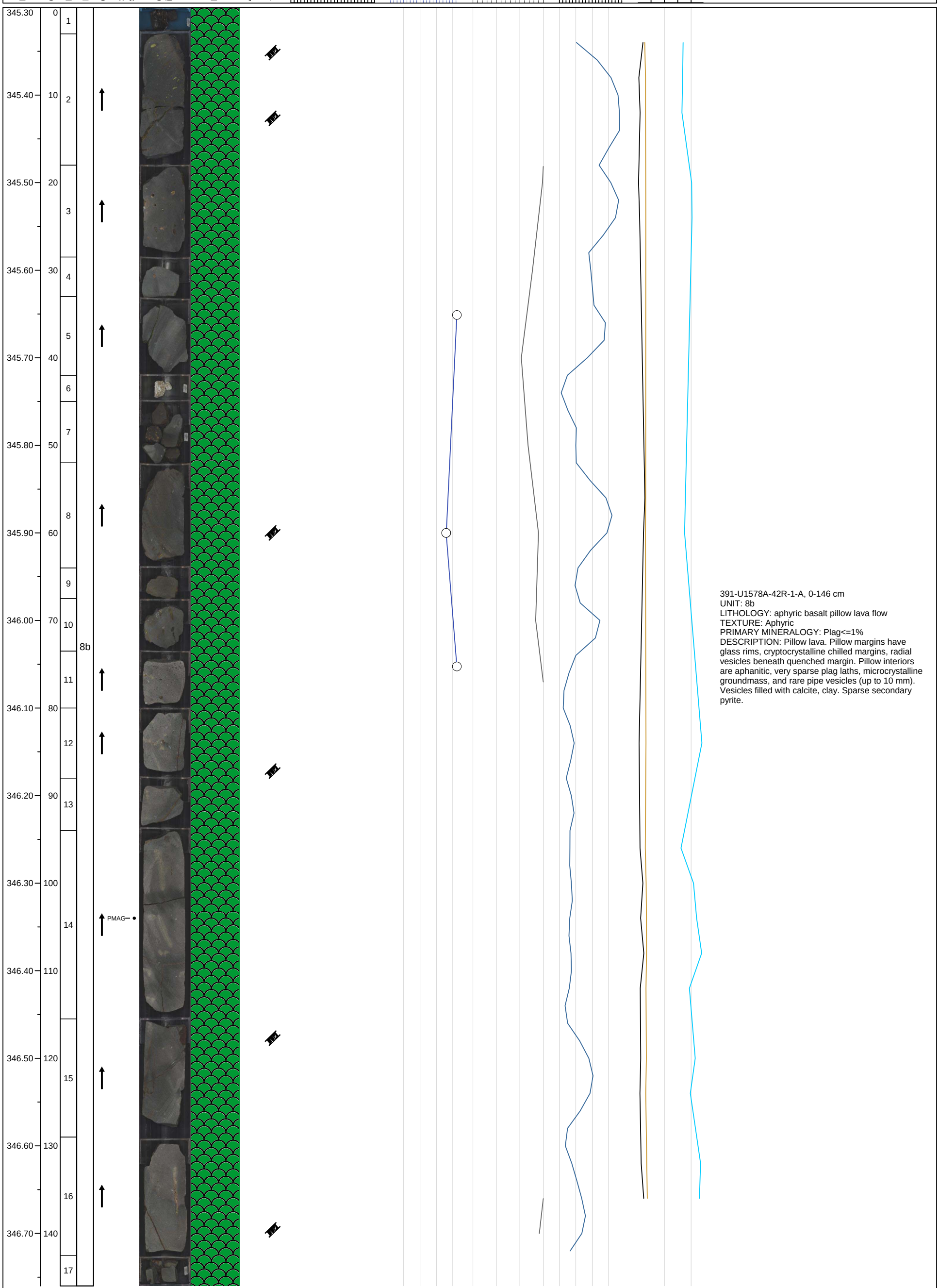


Hole 391-U1578A-41R Section 4, Top of Section: 343.72 m (CSF-A)

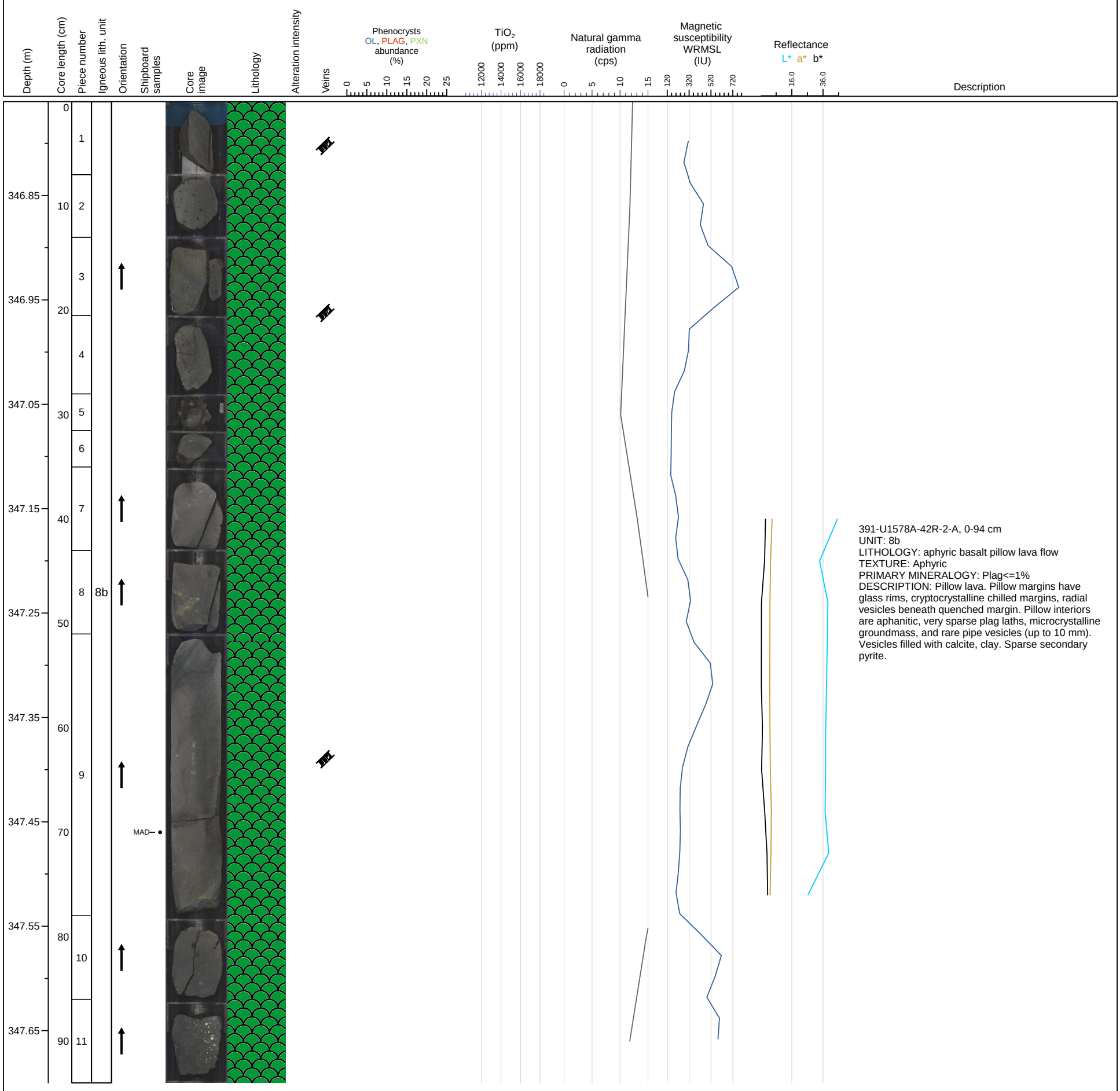


391-U1578A-41R-4-A, 0-64 cm
UNIT: 8b
LITHOLOGY: aphyric basalt pillow lava flow
TEXTURE: Aphyric
PRIMARY MINERALOGY: Plag<=1%
DESCRIPTION: Pillow lava. Pillow margins have glass rims, cryptocrystalline chilled margins, radial vesicles beneath quenched margin. Pillow interiors are aphanitic, very sparse plag laths, microcrystalline groundmass, and rare pipe vesicles (up to 10 mm). Vesicles filled with calcite, clay. Sparse secondary pyrite.

Hole 391-U1578A-42R Section 1, Top of Section: 345.3 m (CSF-A)

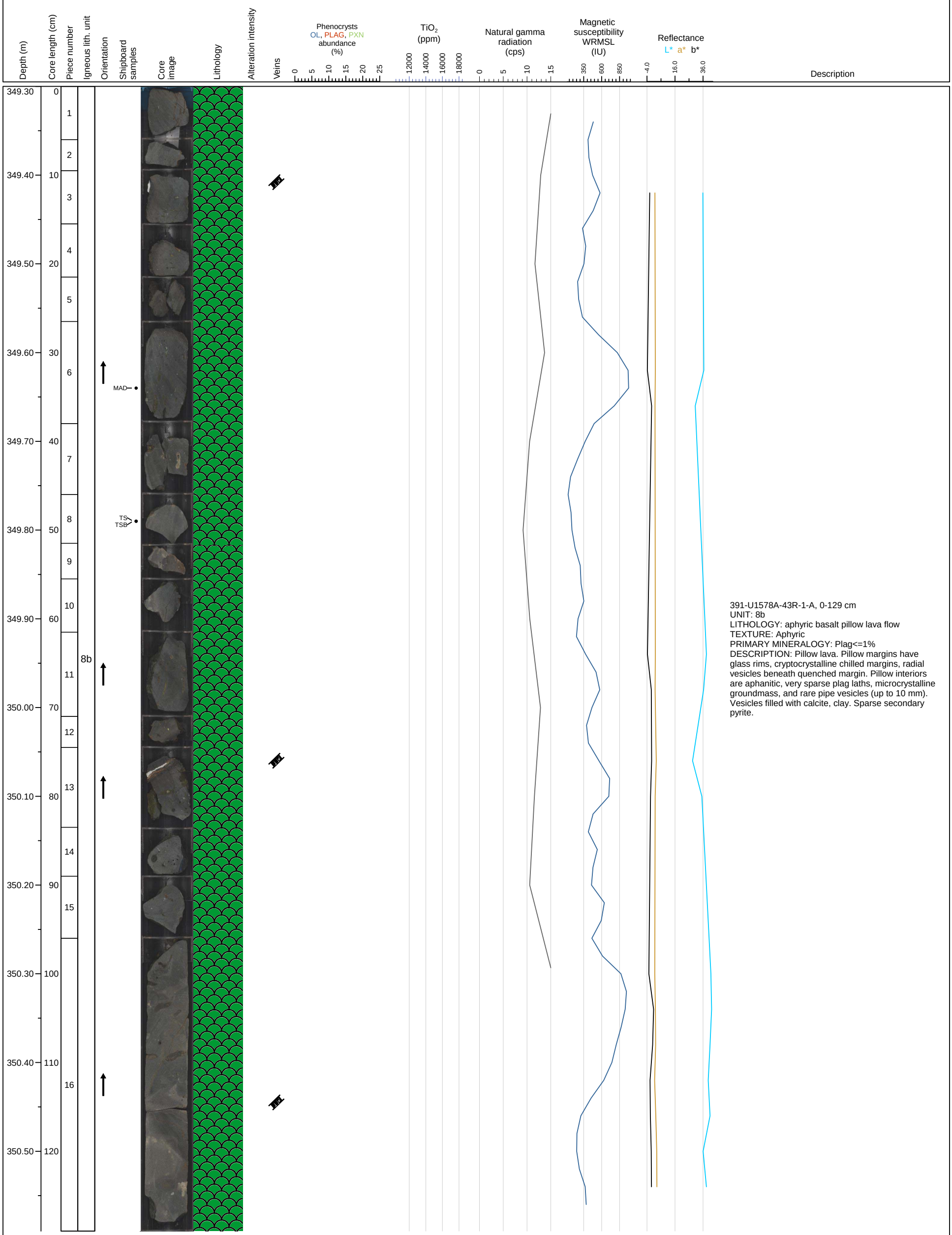


Hole 391-U1578A-42R Section 2, Top of Section: 346.76 m (CSF-A)



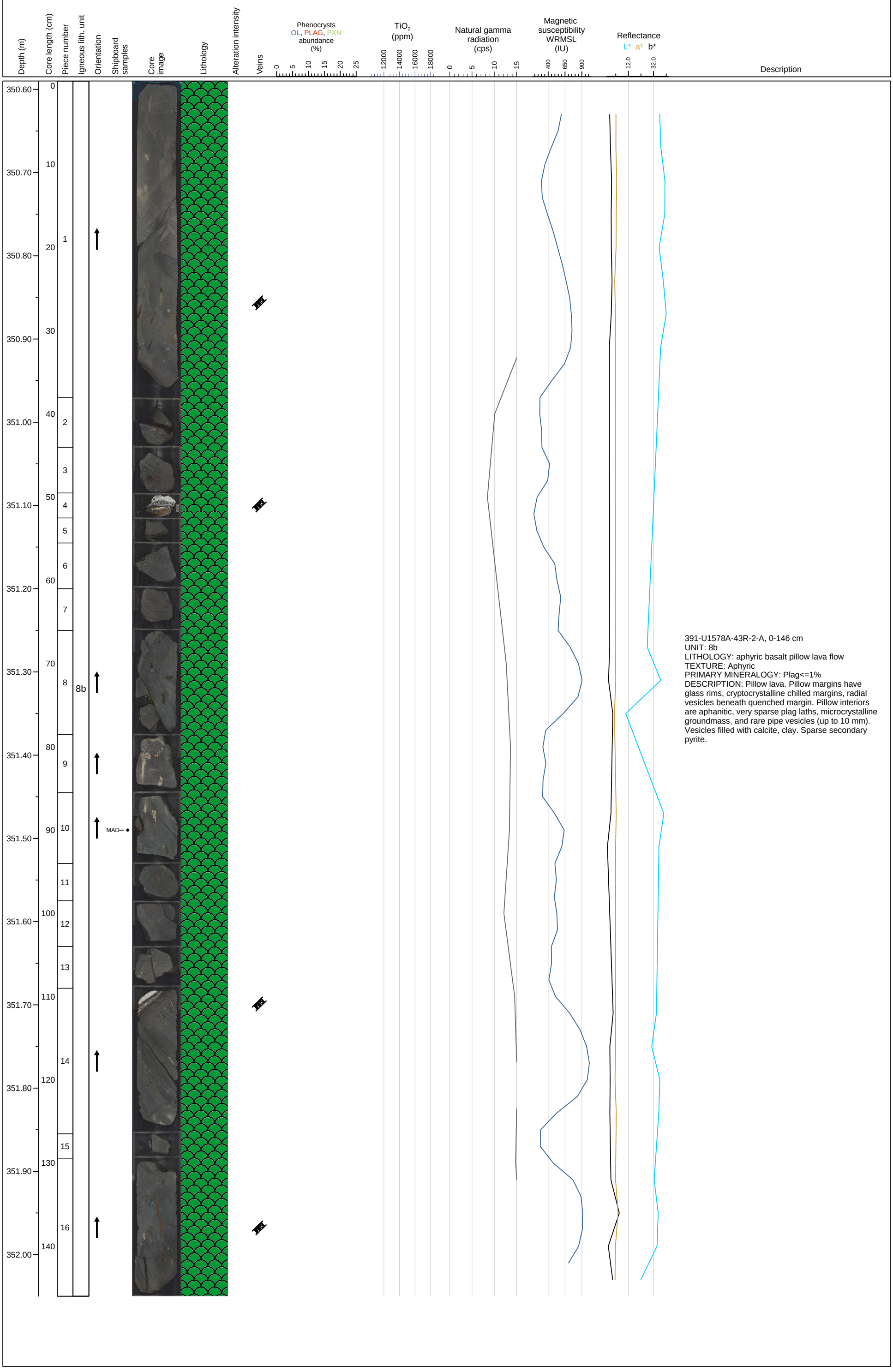
391-U1578A-42R-2-A, 0-94 cm
UNIT: 8b
LITHOLOGY: aphyric basalt pillow lava flow
TEXTURE: Aphyric
PRIMARY MINERALOGY: Plag<=1%
DESCRIPTION: Pillow lava. Pillow margins have glass rims, cryptocrystalline chilled margins, radial vesicles beneath quenched margin. Pillow interiors are aphanitic, very sparse plag laths, microcrystalline groundmass, and rare pipe vesicles (up to 10 mm). Vesicles filled with calcite, clay. Sparse secondary pyrite.

Hole 391-U1578A-43R Section 1, Top of Section: 349.3 m (CSF-A)

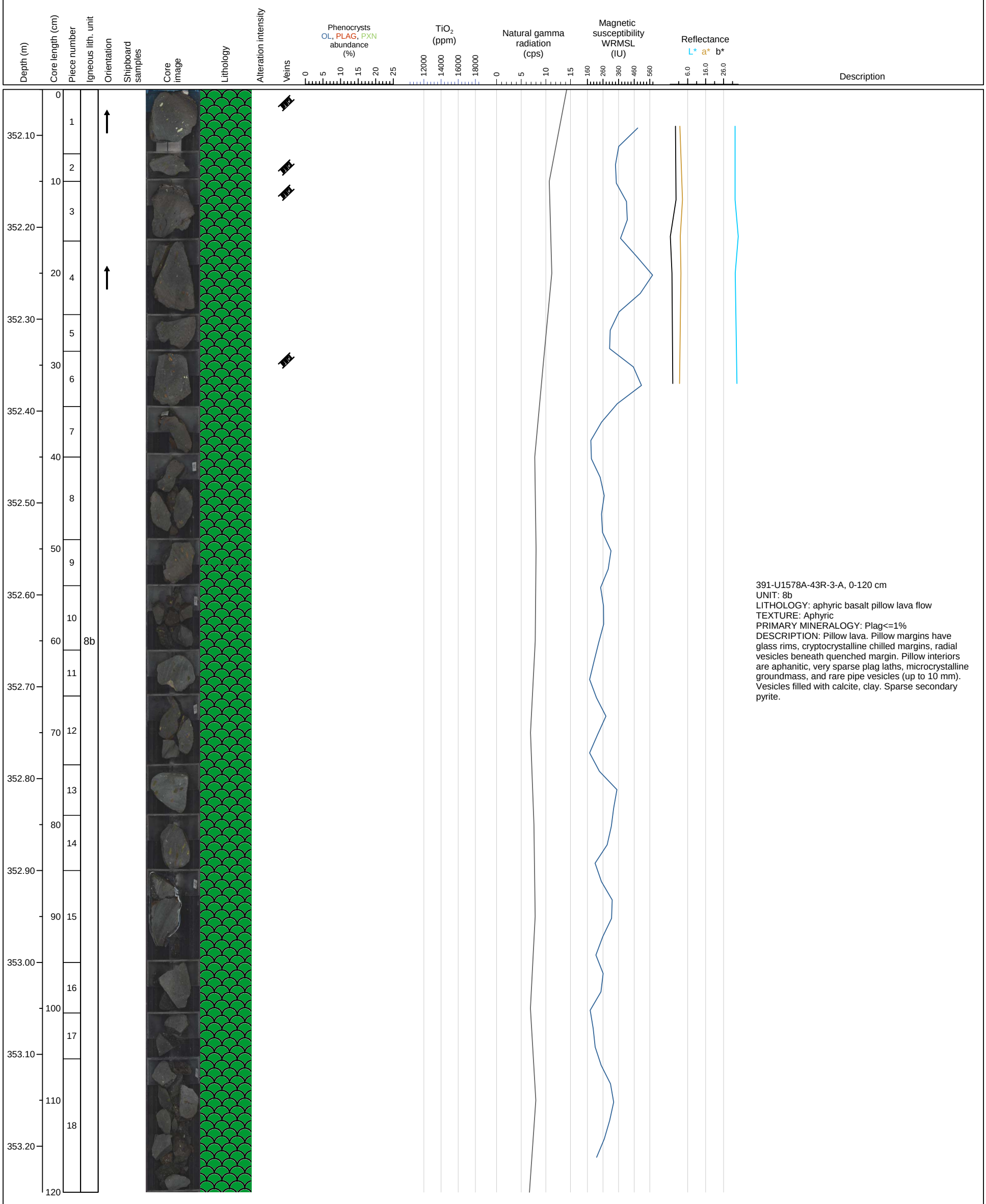


391-U1578A-43R-1-A, 0-129 cm
UNIT: 8b
LITHOLOGY: aphyric basalt pillow lava flow
TEXTURE: Aphyric
PRIMARY MINERALOGY: Plag<=1%
DESCRIPTION: Pillow lava. Pillow margins have glass rims, cryptocrystalline chilled margins, radial vesicles beneath quenched margin. Pillow interiors are aphanitic, very sparse plag laths, microcrystalline groundmass, and rare pipe vesicles (up to 10 mm). Vesicles filled with calcite, clay. Sparse secondary pyrite.

Hole 391-U1578A-43R Section 2, Top of Section: 350.59 m (CSF-A)

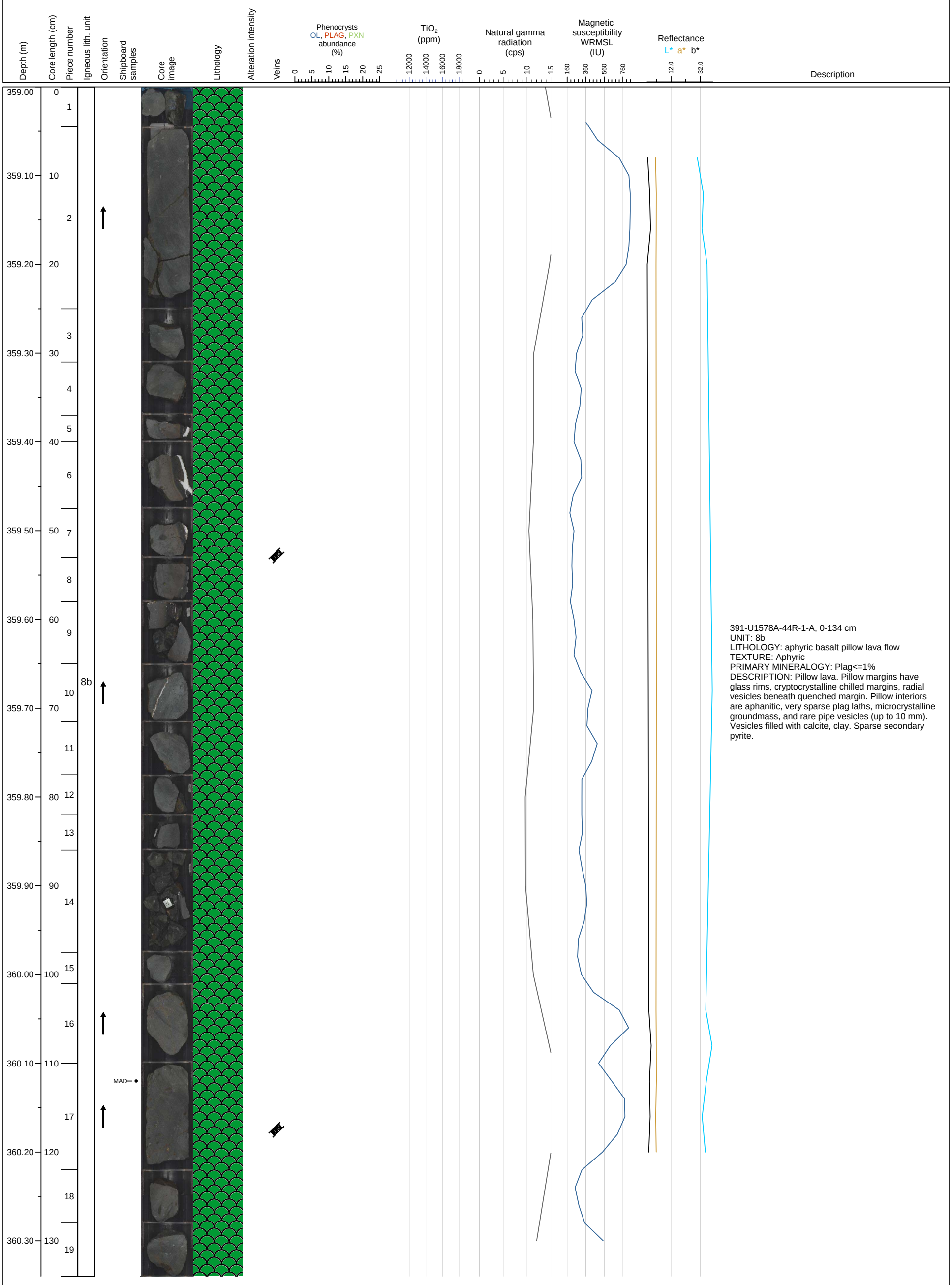


Hole 391-U1578A-43R Section 3, Top of Section: 352.05 m (CSF-A)



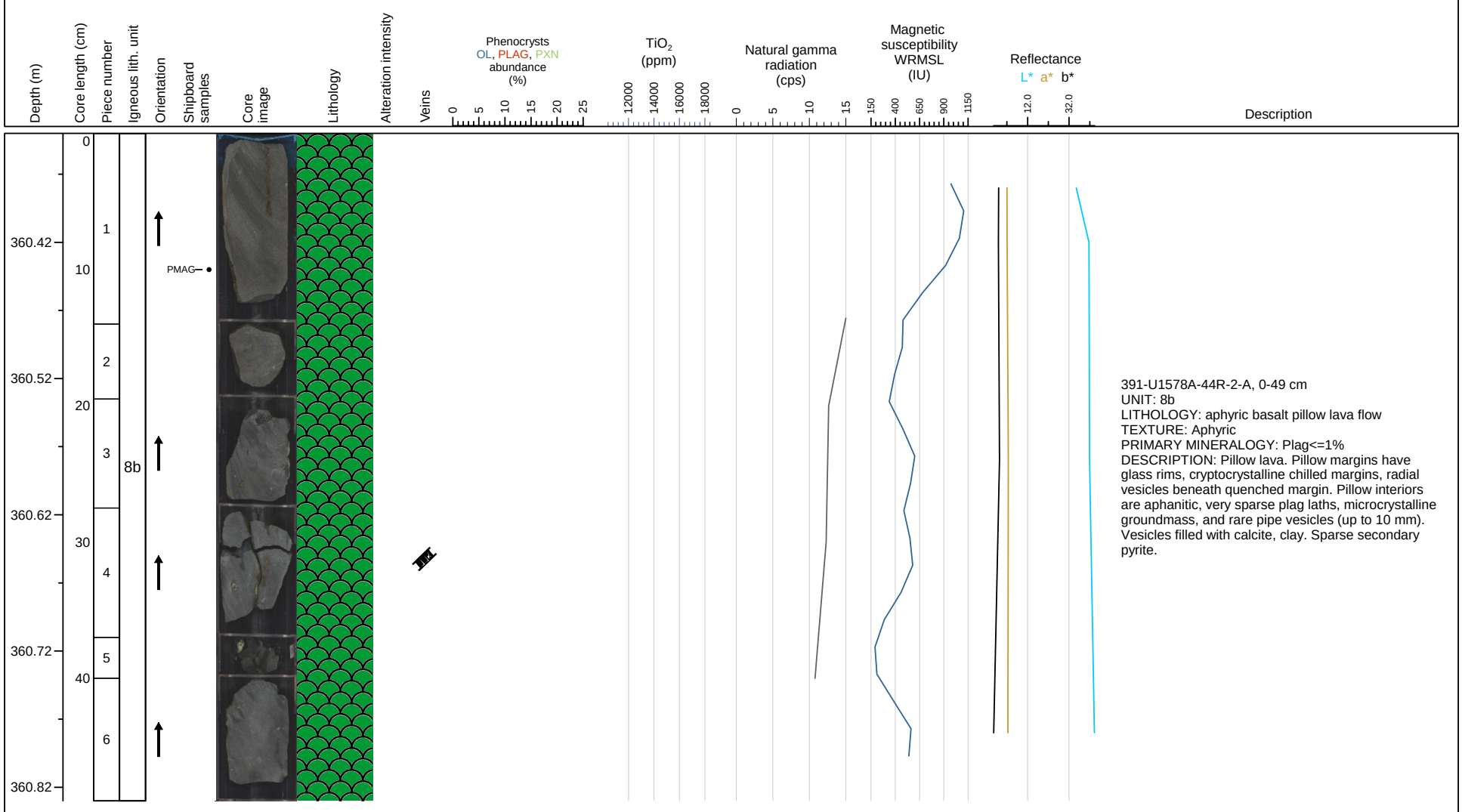
391-U1578A-43R-3-A, 0-120 cm
UNIT: 8b
LITHOLOGY: aphyric basalt pillow lava flow
TEXTURE: Aphyric
PRIMARY MINERALOGY: Plag<=1%
DESCRIPTION: Pillow lava. Pillow margins have glass rims, cryptocrystalline chilled margins, radial vesicles beneath quenched margin. Pillow interiors are aphanitic, very sparse plag laths, microcrystalline groundmass, and rare pipe vesicles (up to 10 mm). Vesicles filled with calcite, clay. Sparse secondary pyrite.

Hole 391-U1578A-44R Section 1, Top of Section: 359.0 m (CSF-A)



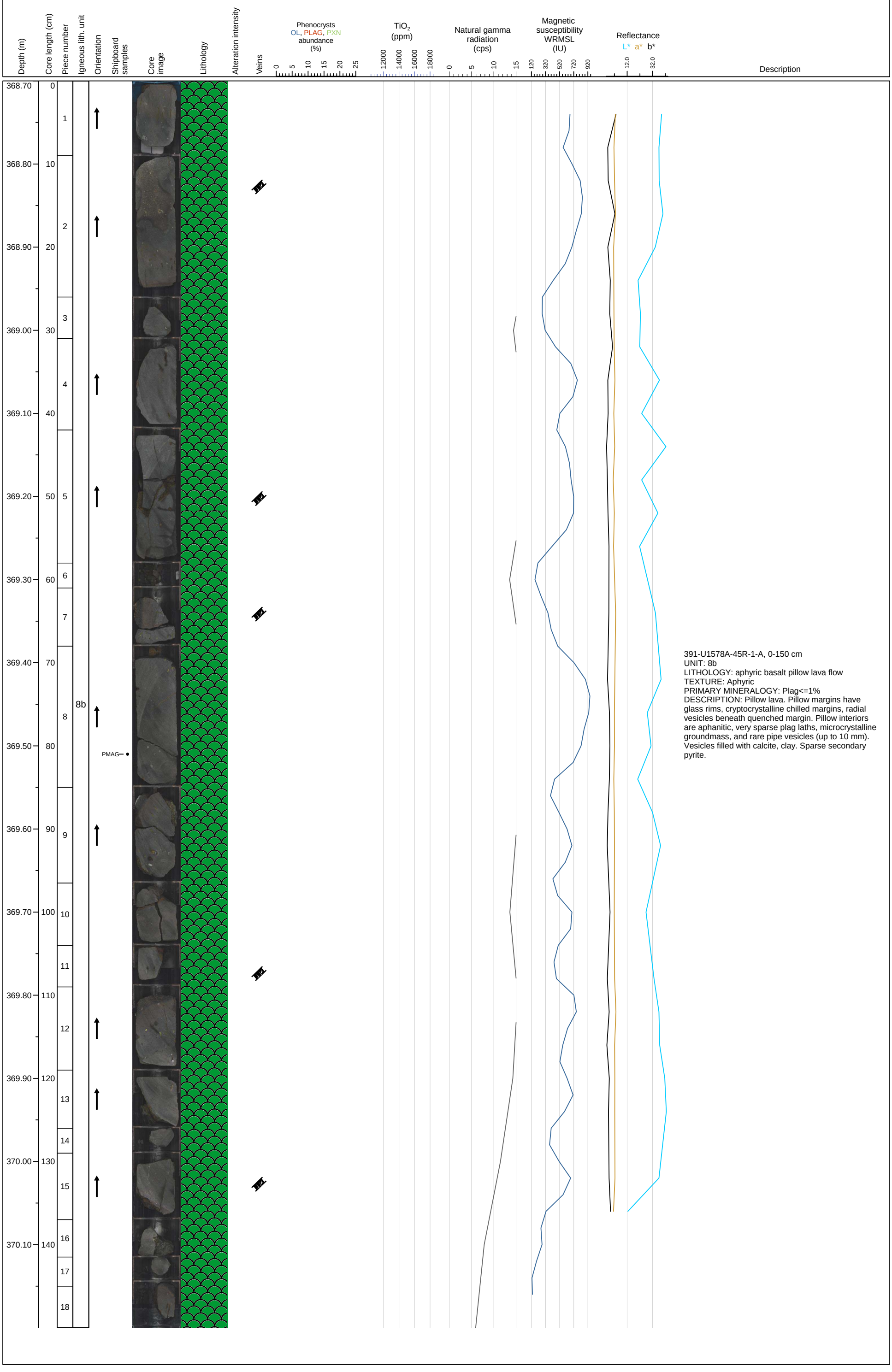
391-U1578A-44R-1-A, 0-134 cm
UNIT: 8b
LITHOLOGY: aphyric basalt pillow lava flow
TEXTURE: Aphyric
PRIMARY MINERALOGY: Plag<=1%
DESCRIPTION: Pillow lava. Pillow margins have glass rims, cryptocrystalline chilled margins, radial vesicles beneath quenched margin. Pillow interiors are aphanitic, very sparse plag laths, microcrystalline groundmass, and rare pipe vesicles (up to 10 mm). Vesicles filled with calcite, clay. Sparse secondary pyrite.

Hole 391-U1578A-44R Section 2, Top of Section: 360.34 m (CSF-A)

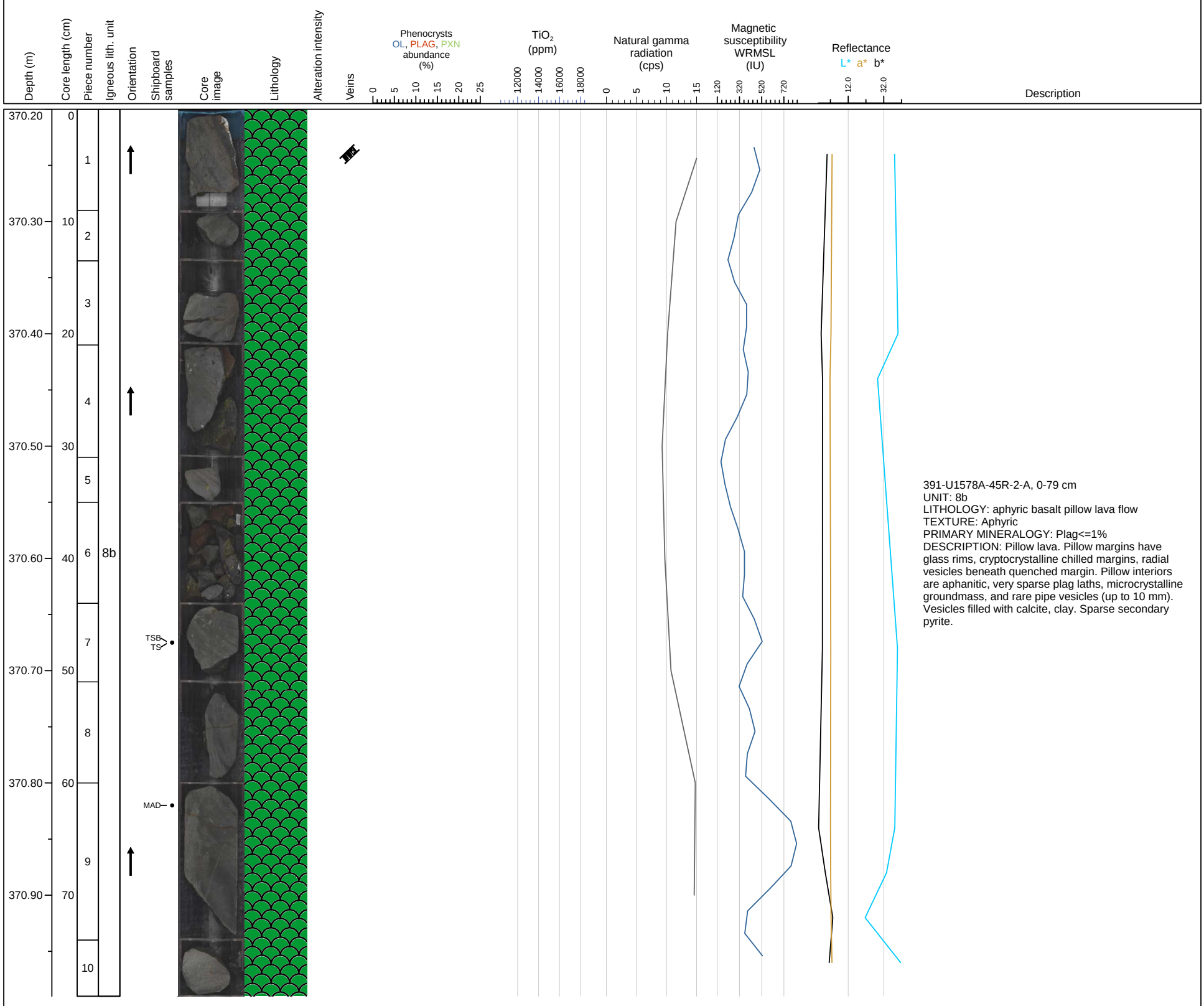


391-U1578A-44R-2-A, 0-49 cm
UNIT: 8b
LITHOLOGY: aphyric basalt pillow lava flow
TEXTURE: Aphyric
PRIMARY MINERALOGY: Plag<=1%
DESCRIPTION: Pillow lava. Pillow margins have glass rims, cryptocrystalline chilled margins, radial vesicles beneath quenched margin. Pillow interiors are aphanitic, very sparse plag laths, microcrystalline groundmass, and rare pipe vesicles (up to 10 mm). Vesicles filled with calcite, clay. Sparse secondary pyrite.

Hole 391-U1578A-45R Section 1, Top of Section: 368.7 m (CSF-A)



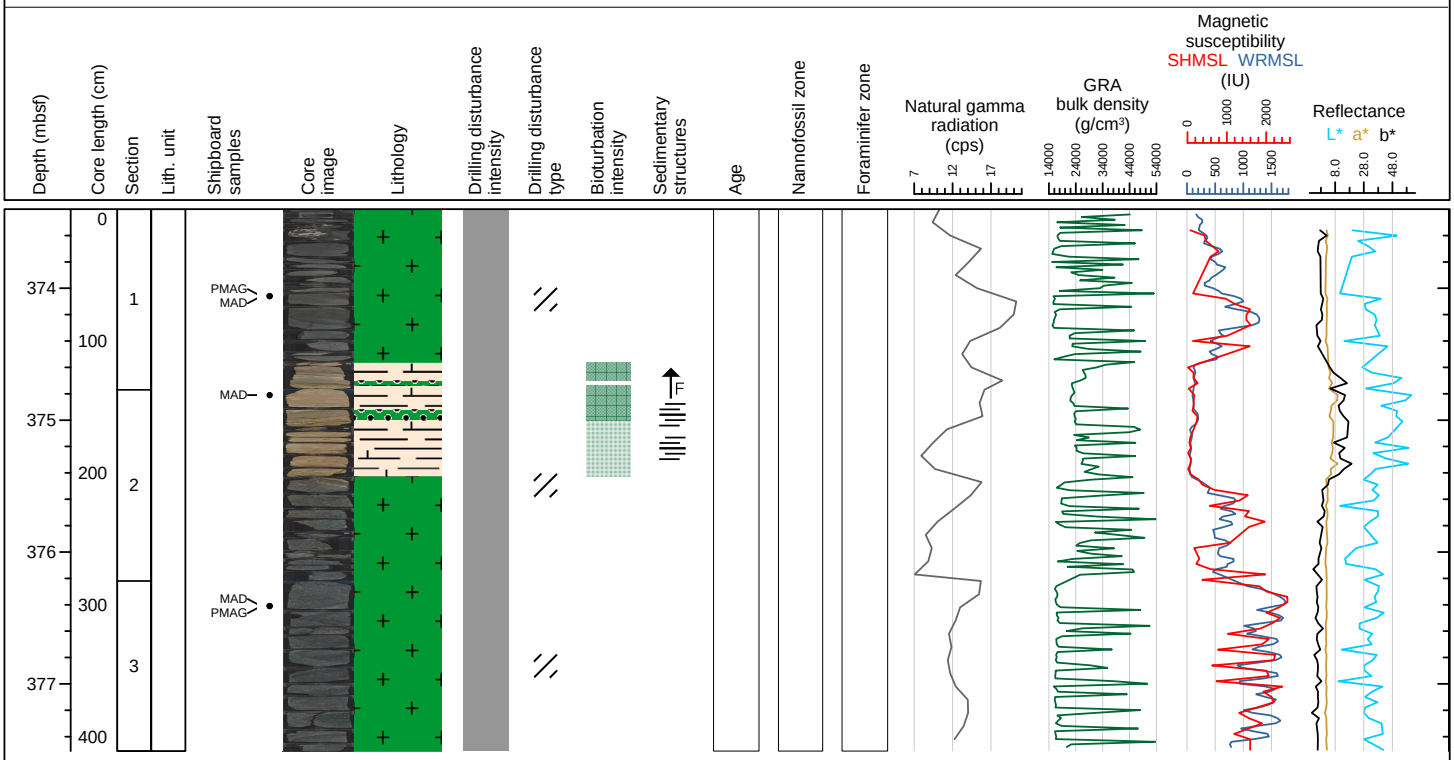
Hole 391-U1578A-45R Section 2, Top of Section: 370.2 m (CSF-A)



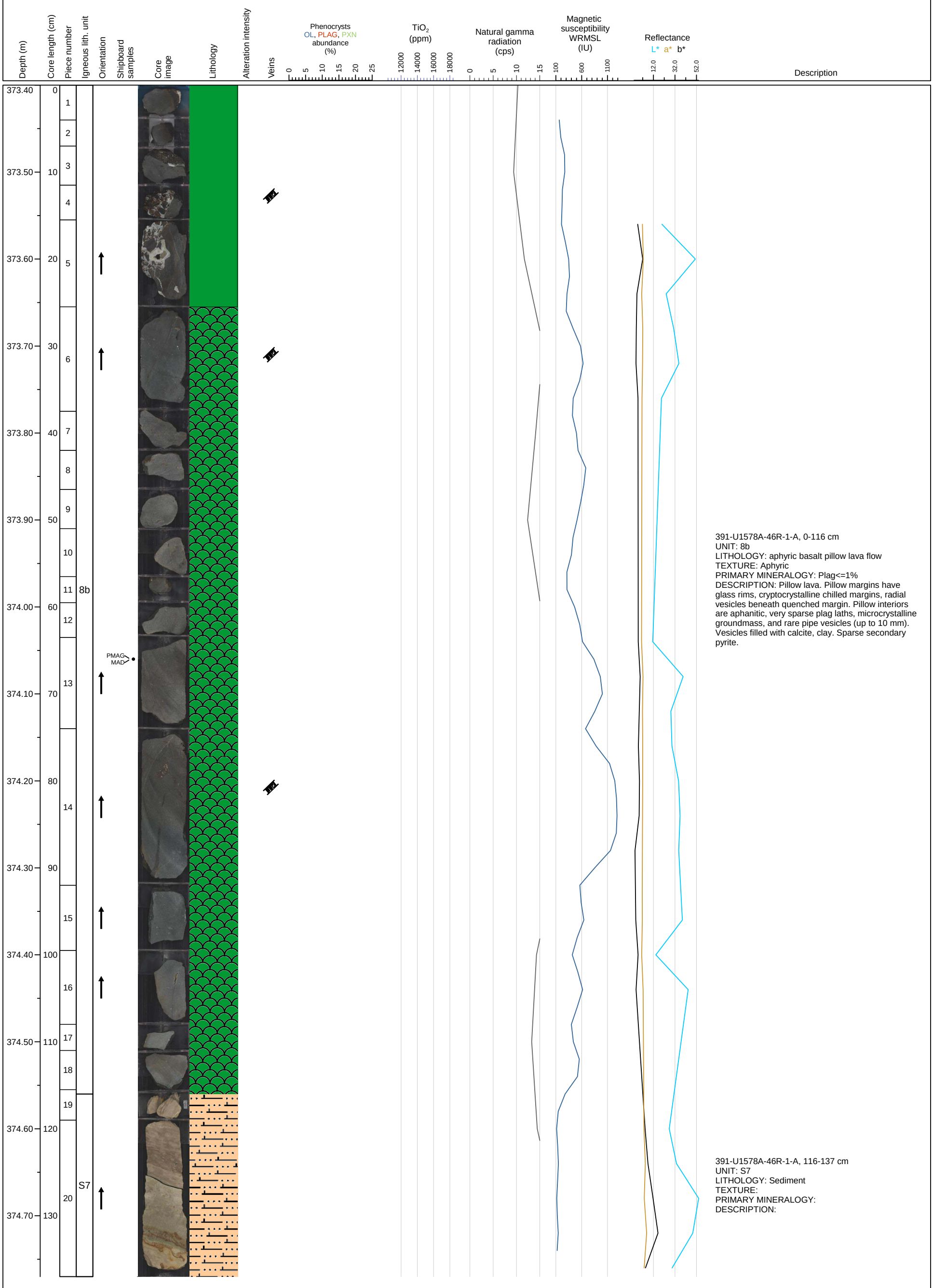
391-U1578A-45R-2-A, 0-79 cm
UNIT: 8b
LITHOLOGY: aphyric basalt pillow lava flow
TEXTURE: Aphyric
PRIMARY MINERALOGY: Plag<=1%
DESCRIPTION: Pillow lava. Pillow margins have glass rims, cryptocrystalline chilled margins, radial vesicles beneath quenched margin. Pillow interiors are aphanitic, very sparse plag laths, microcrystalline groundmass, and rare pipe vesicles (up to 10 mm). Vesicles filled with calcite, clay. Sparse secondary pyrite.

Hole 391-U1578A Core 46R, Interval 373.4-377.51 m (CSF-A)

Sediment interbed in the volcanic basement, including very pale brown to brown bioturbated nannofossil-clayey chalk with volcaniclasts and volcanic sandstone. The sandstone includes poorly to non-vesicular angular glass fragments. Fe-Mn dentrites and yellowish to orangy coloration suggest low temperature oxidative alteration. Minor drilling disturbance.



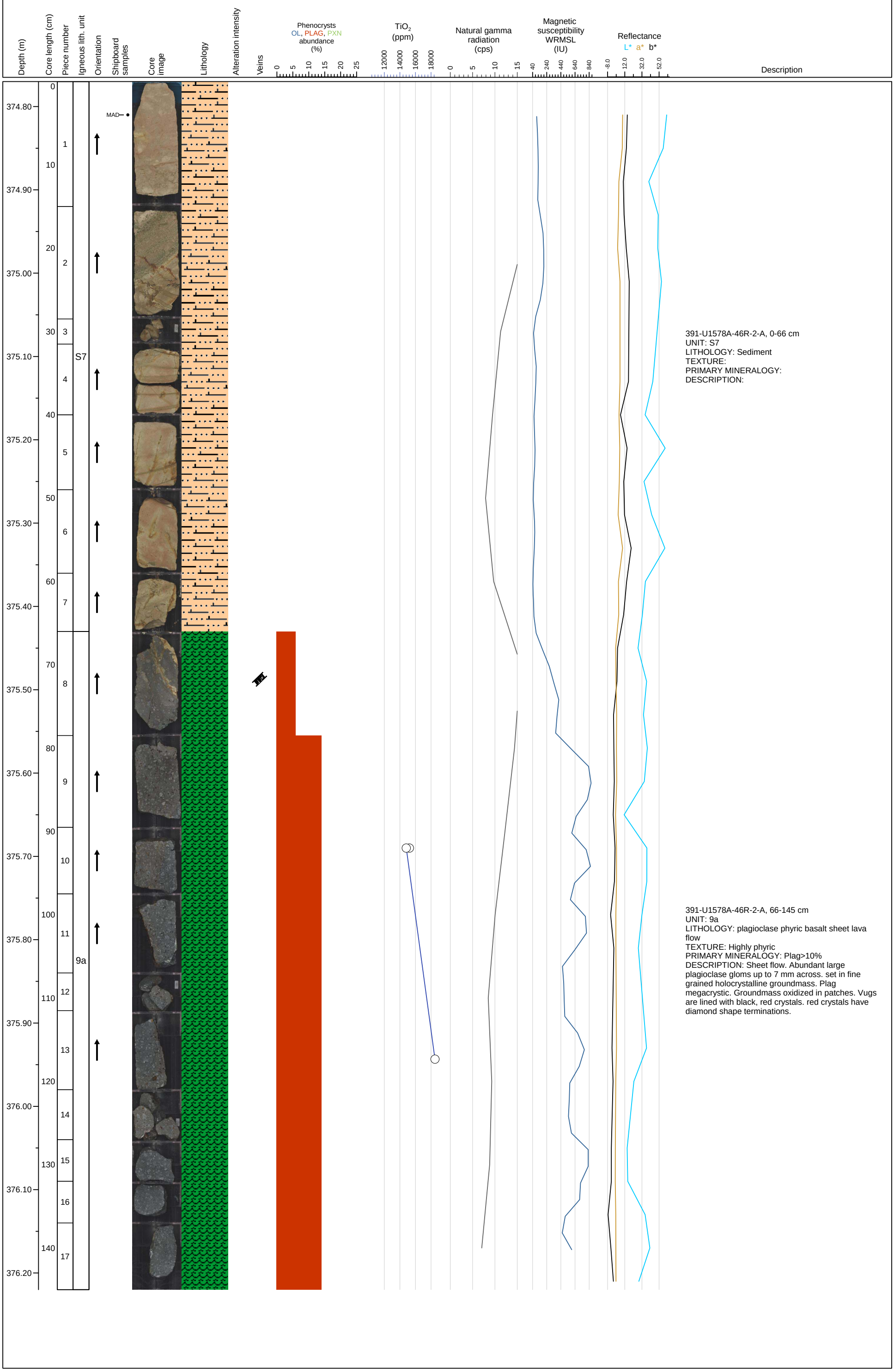
Hole 391-U1578A-46R Section 1, Top of Section: 373.4 m (CSF-A)



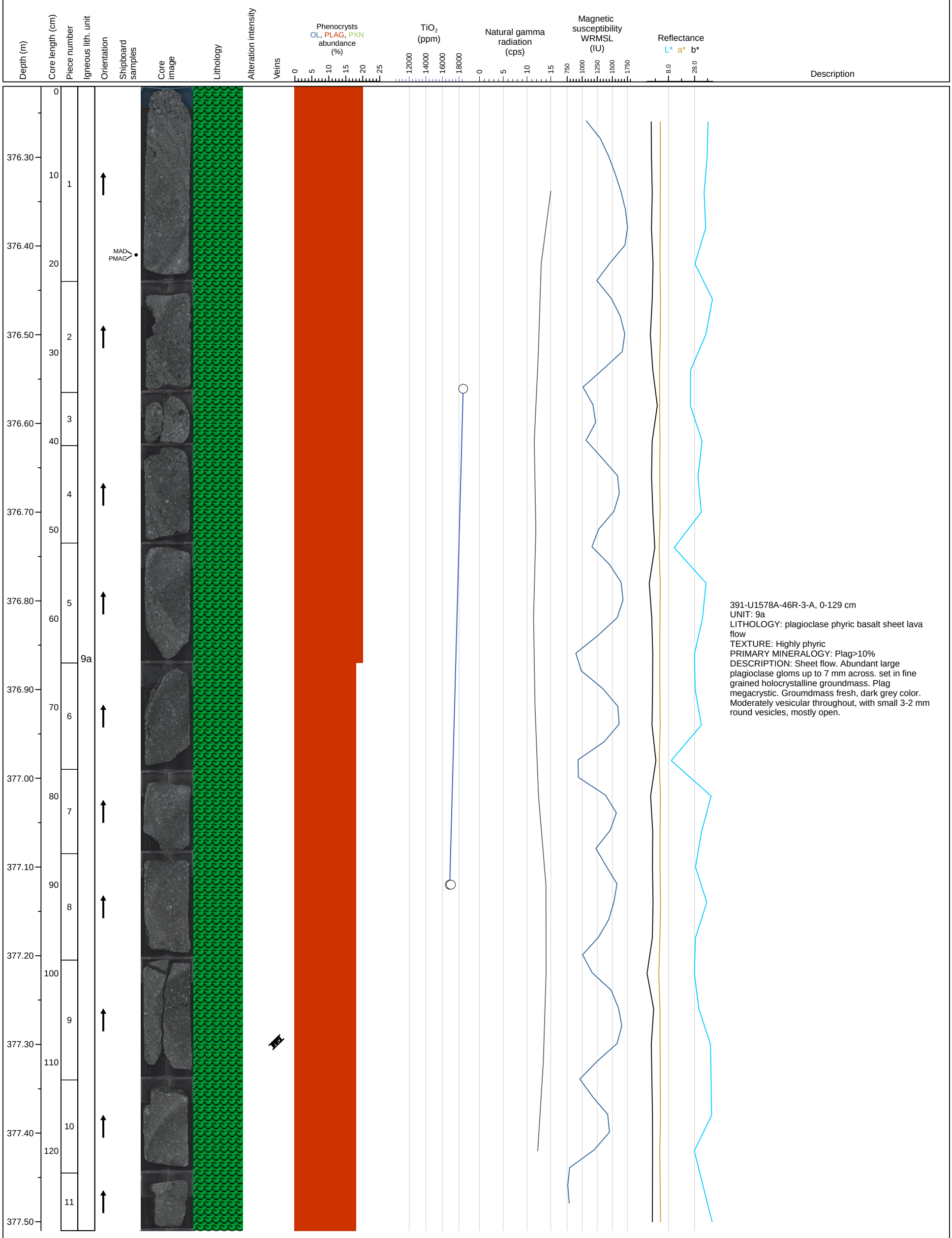
391-U1578A-46R-1-A, 0-116 cm
UNIT: 8b
LITHOLOGY: aphyric basalt pillow lava flow
TEXTURE: Aphyric
PRIMARY MINERALOGY: Plag<=1%
DESCRIPTION: Pillow lava. Pillow margins have glass rims, cryptocrystalline chilled margins, radial vesicles beneath quenched margin. Pillow interiors are aphanitic, very sparse plag laths, microcrystalline groundmass, and rare pipe vesicles (up to 10 mm). Vesicles filled with calcite, clay. Sparse secondary pyrite.

391-U1578A-46R-1-A, 116-137 cm
UNIT: S7
LITHOLOGY: Sediment
TEXTURE:
PRIMARY MINERALOGY:
DESCRIPTION:

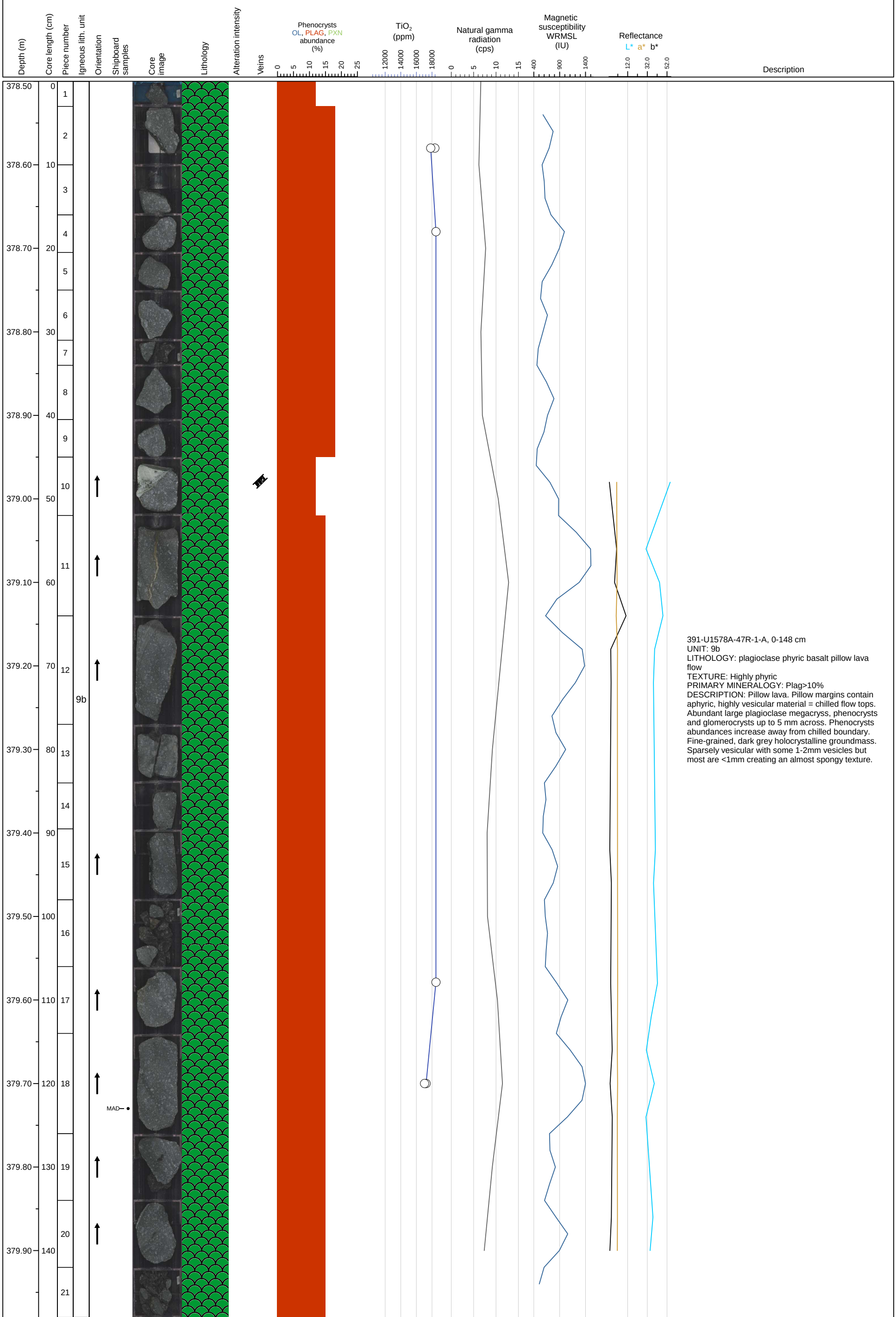
Hole 391-U1578A-46R Section 2, Top of Section: 374.77 m (CSF-A)



Hole 391-U1578A-46R Section 3, Top of Section: 376.22 m (CSF-A)

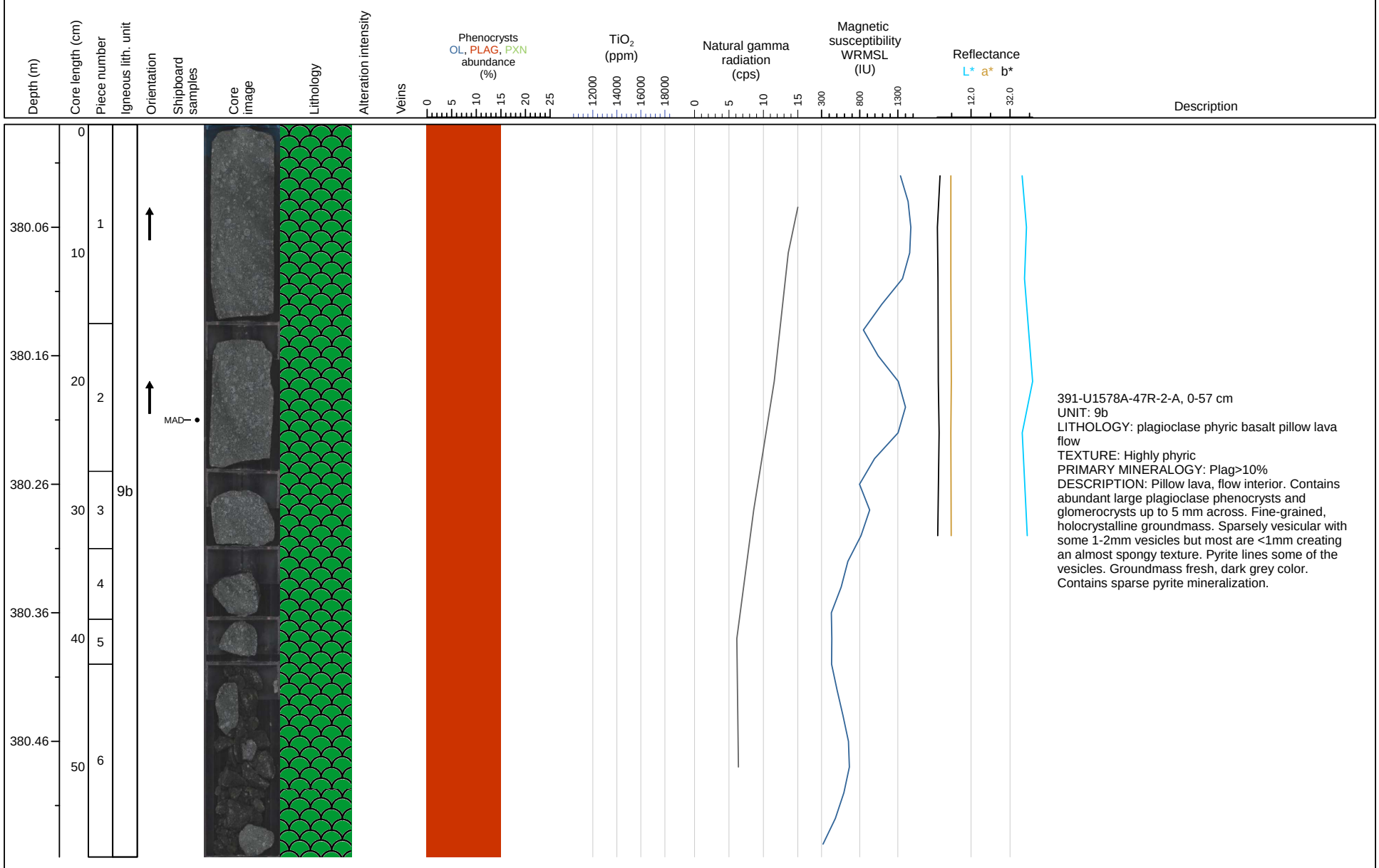


Hole 391-U1578A-47R Section 1, Top of Section: 378.5 m (CSF-A)



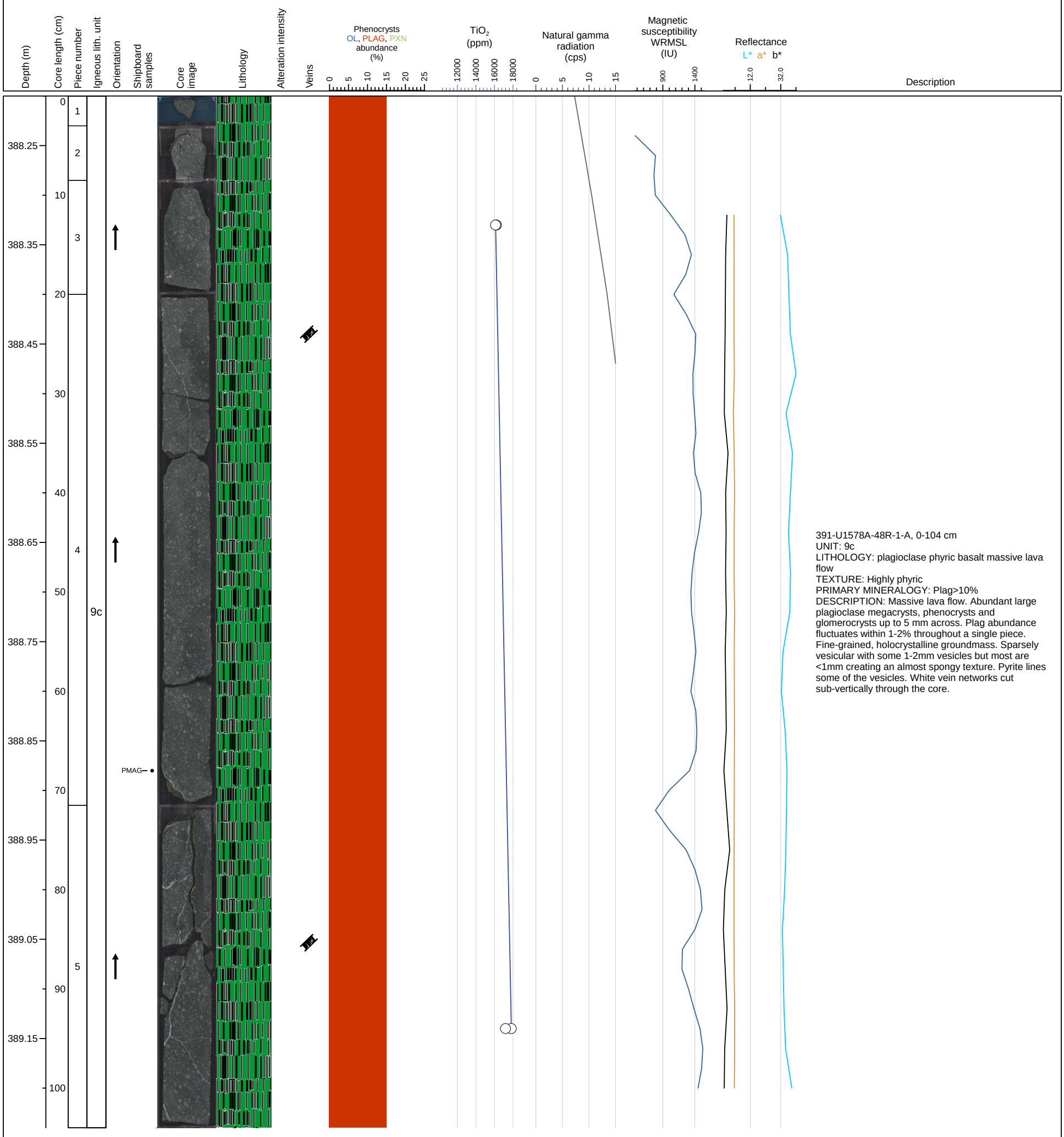
391-U1578A-47R-1-A, 0-148 cm
UNIT: 9b
LITHOLOGY: plagioclase phyric basalt pillow lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>10%
DESCRIPTION: Pillow lava. Pillow margins contain aphyric, highly vesicular material = chilled flow tops. Abundant large plagioclase megacryss, phenocrysts and glomerocrysts up to 5 mm across. Phenocrysts abundances increase away from chilled boundary. Fine-grained, dark grey holocrystalline groundmass. Sparsely vesicular with some 1-2mm vesicles but most are <1mm creating an almost spongy texture.

Hole 391-U1578A-47R Section 2, Top of Section: 379.98 m (CSF-A)



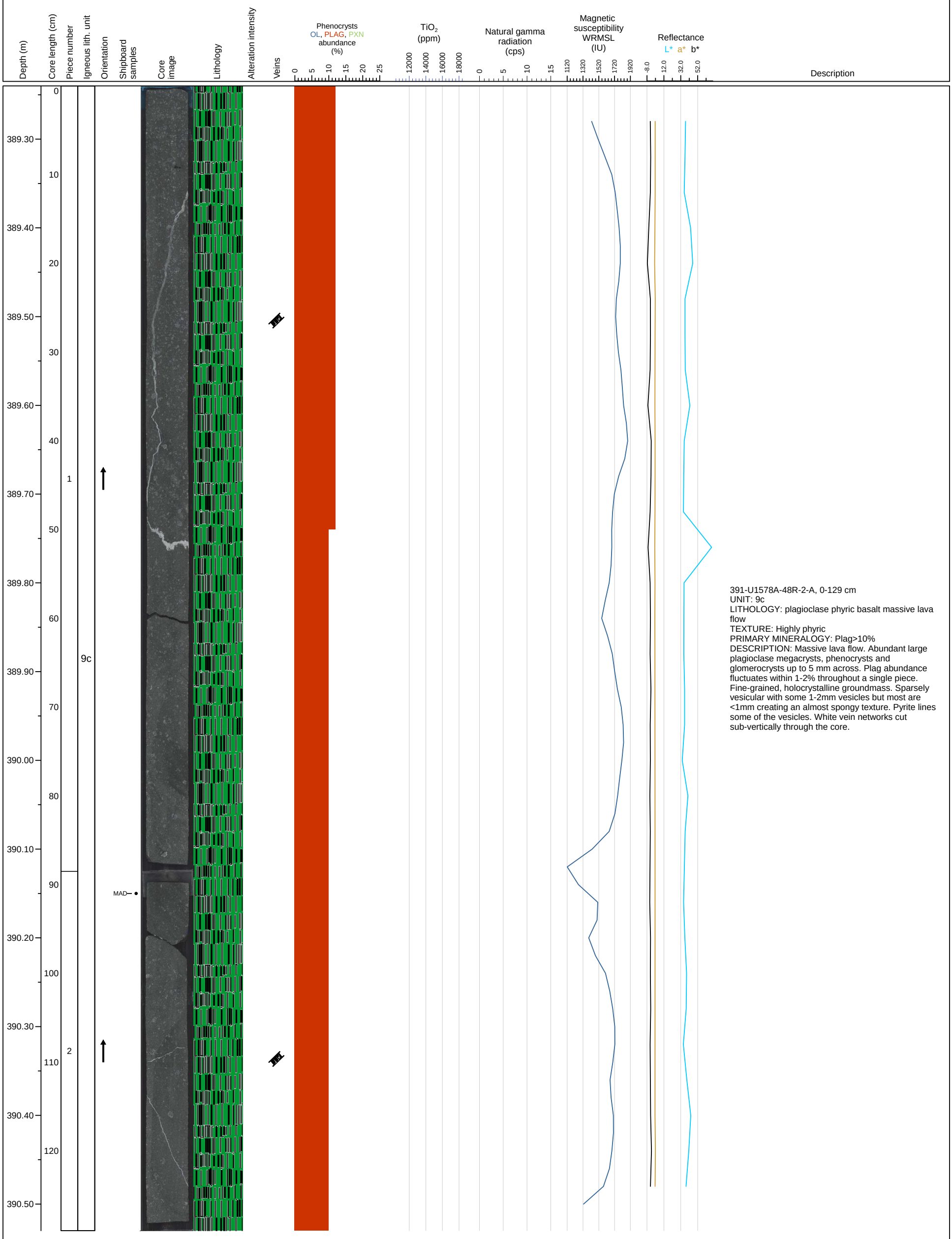
391-U1578A-47R-2-A, 0-57 cm
UNIT: 9b
LITHOLOGY: plagioclase phyric basalt pillow lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>10%
DESCRIPTION: Pillow lava, flow interior. Contains abundant large plagioclase phenocrysts and glomerocrysts up to 5 mm across. Fine-grained, holocrystalline groundmass. Sparsely vesicular with some 1-2mm vesicles but most are <1mm creating an almost spongy texture. Pyrite lines some of the vesicles. Groundmass fresh, dark grey color. Contains sparse pyrite mineralization.

Hole 391-U1578A-48R Section 1, Top of Section: 388.2 m (CSF-A)



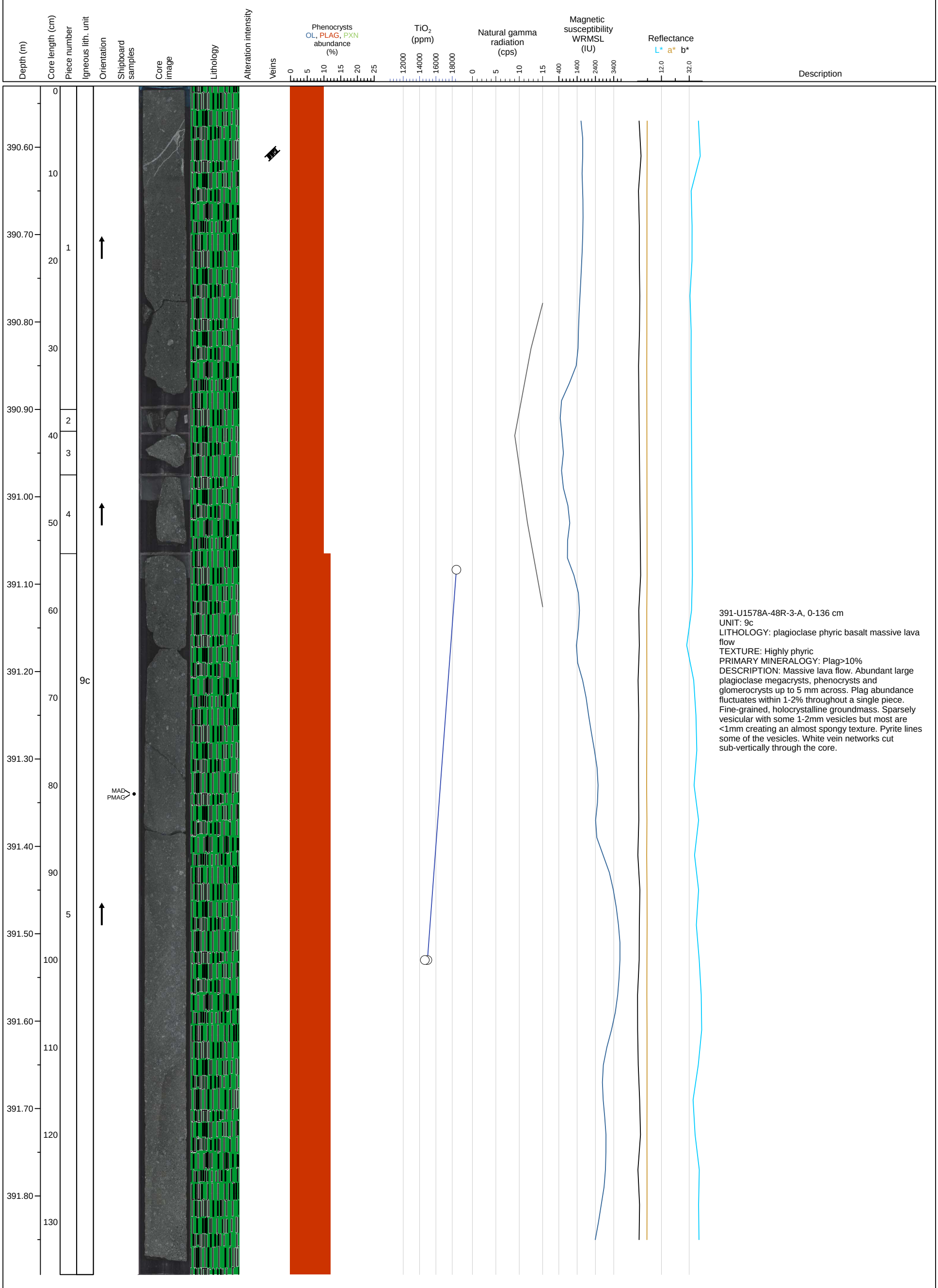
391-U1578A-48R-1-A, 0-104 cm
UNIT: 9c
LITHOLOGY: plagioclase phyric basalt massive lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>10%
DESCRIPTION: Massive lava flow. Abundant large plagioclase megacrysts, phenocrysts and glomerocrysts up to 5 mm across. Plag abundance fluctuates within 1-2% throughout a single piece. Fine-grained, holocrystalline groundmass. Sparsely vesicular with some 1-2mm vesicles but most are <1mm creating an almost spongy texture. Pyrite lines some of the vesicles. White vein networks cut sub-vertically through the core.

Hole 391-U1578A-48R Section 2, Top of Section: 389.24 m (CSF-A)



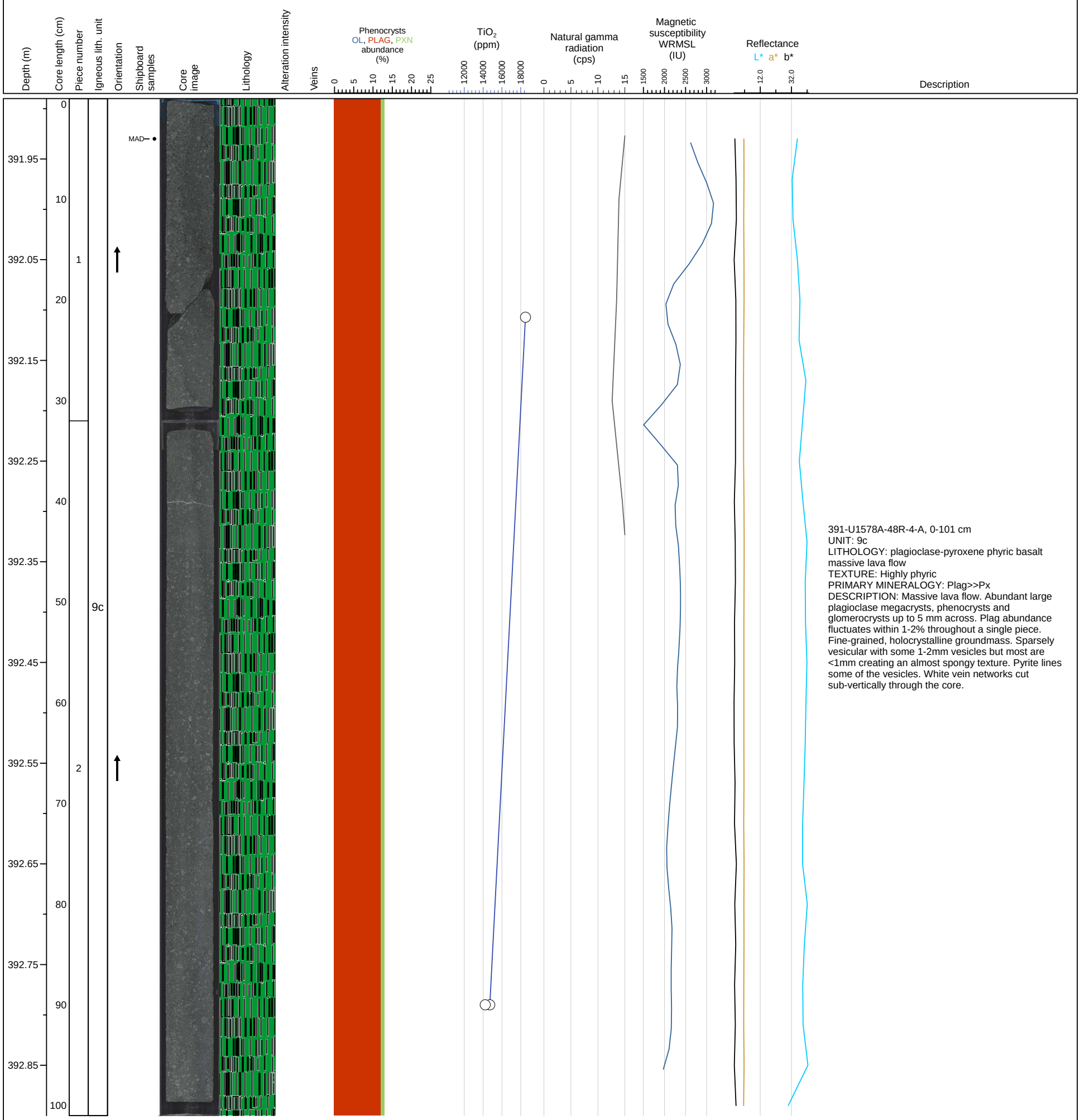
391-U1578A-48R-2-A, 0-129 cm
UNIT: 9c
LITHOLOGY: plagioclase phyric basalt massive lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>10%
DESCRIPTION: Massive lava flow. Abundant large plagioclase megacrysts, phenocrysts and glomerocrysts up to 5 mm across. Plag abundance fluctuates within 1-2% throughout a single piece. Fine-grained, holocrystalline groundmass. Sparsely vesicular with some 1-2mm vesicles but most are <1mm creating an almost spongy texture. Pyrite lines some of the vesicles. White vein networks cut sub-vertically through the core.

Hole 391-U1578A-48R Section 3, Top of Section: 390.53 m (CSF-A)

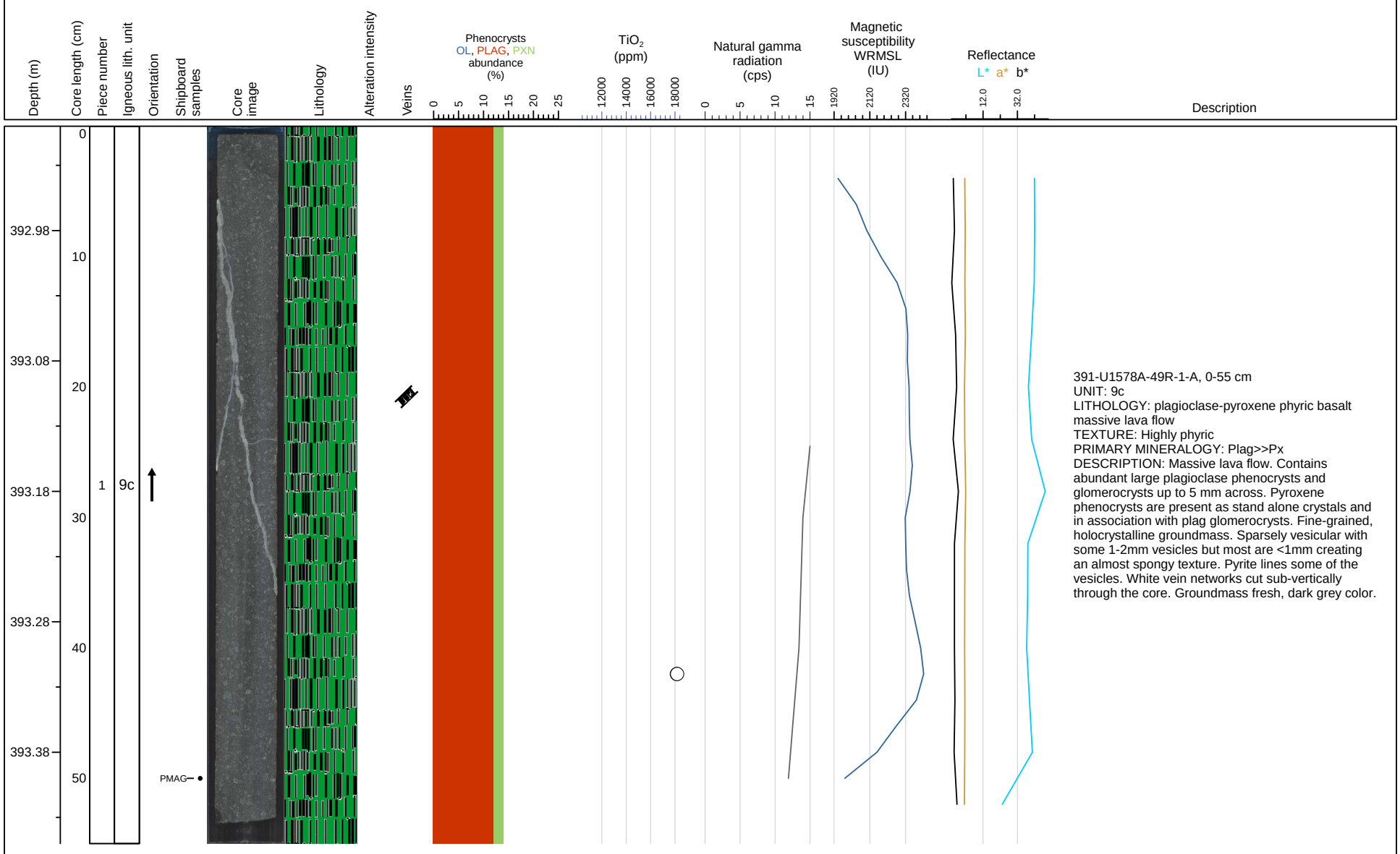


391-U1578A-48R-3-A, 0-136 cm
UNIT: 9c
LITHOLOGY: plagioclase phyric basalt massive lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>10%
DESCRIPTION: Massive lava flow. Abundant large plagioclase megacrysts, phenocrysts and glomerocrysts up to 5 mm across. Plag abundance fluctuates within 1-2% throughout a single piece. Fine-grained, holocrystalline groundmass. Sparsely vesicular with some 1-2mm vesicles but most are <1mm creating an almost spongy texture. Pyrite lines some of the vesicles. White vein networks cut sub-vertically through the core.

Hole 391-U1578A-48R Section 4, Top of Section: 391.89 m (CSF-A)

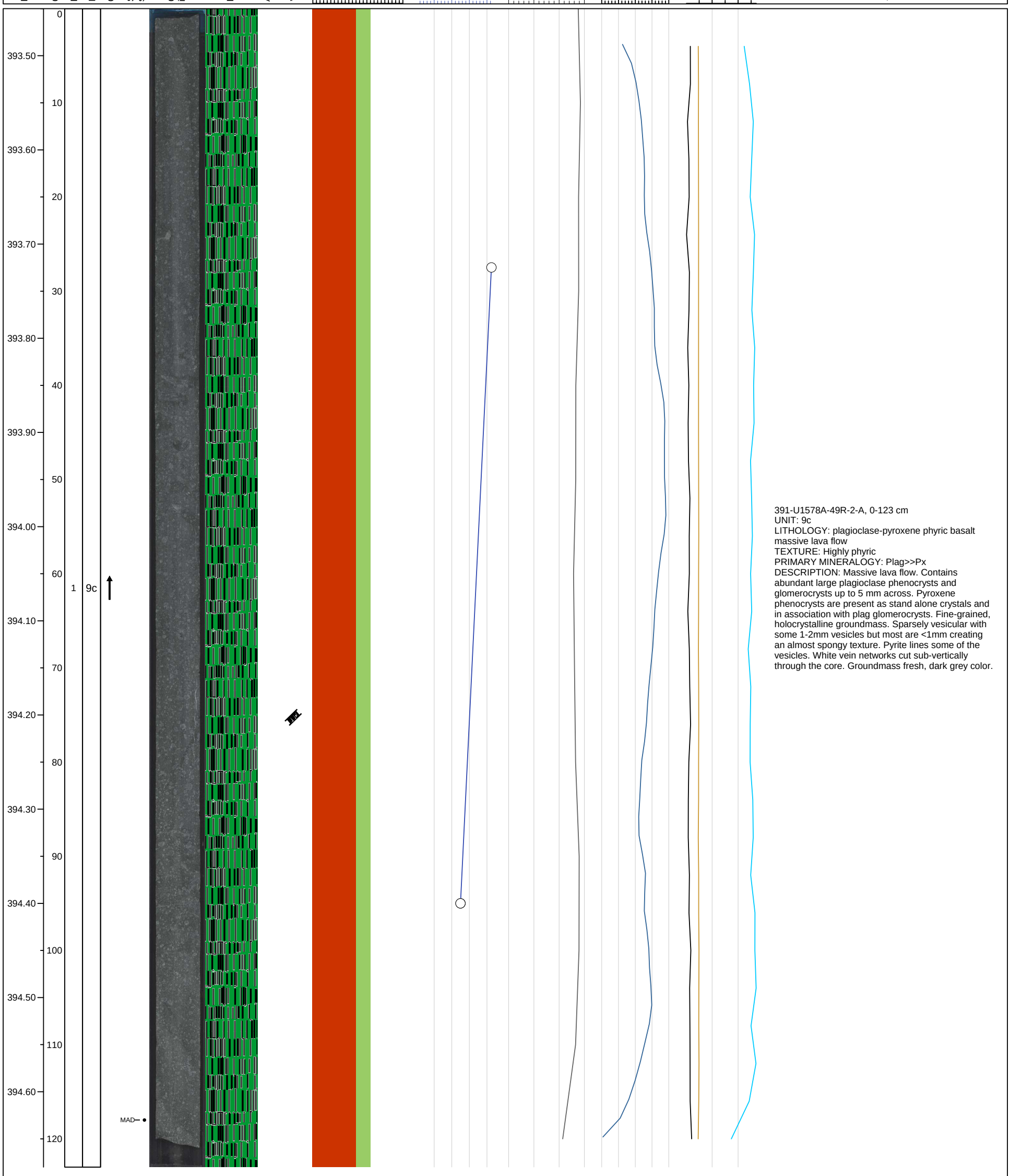


Hole 391-U1578A-49R Section 1, Top of Section: 392.9 m (CSF-A)



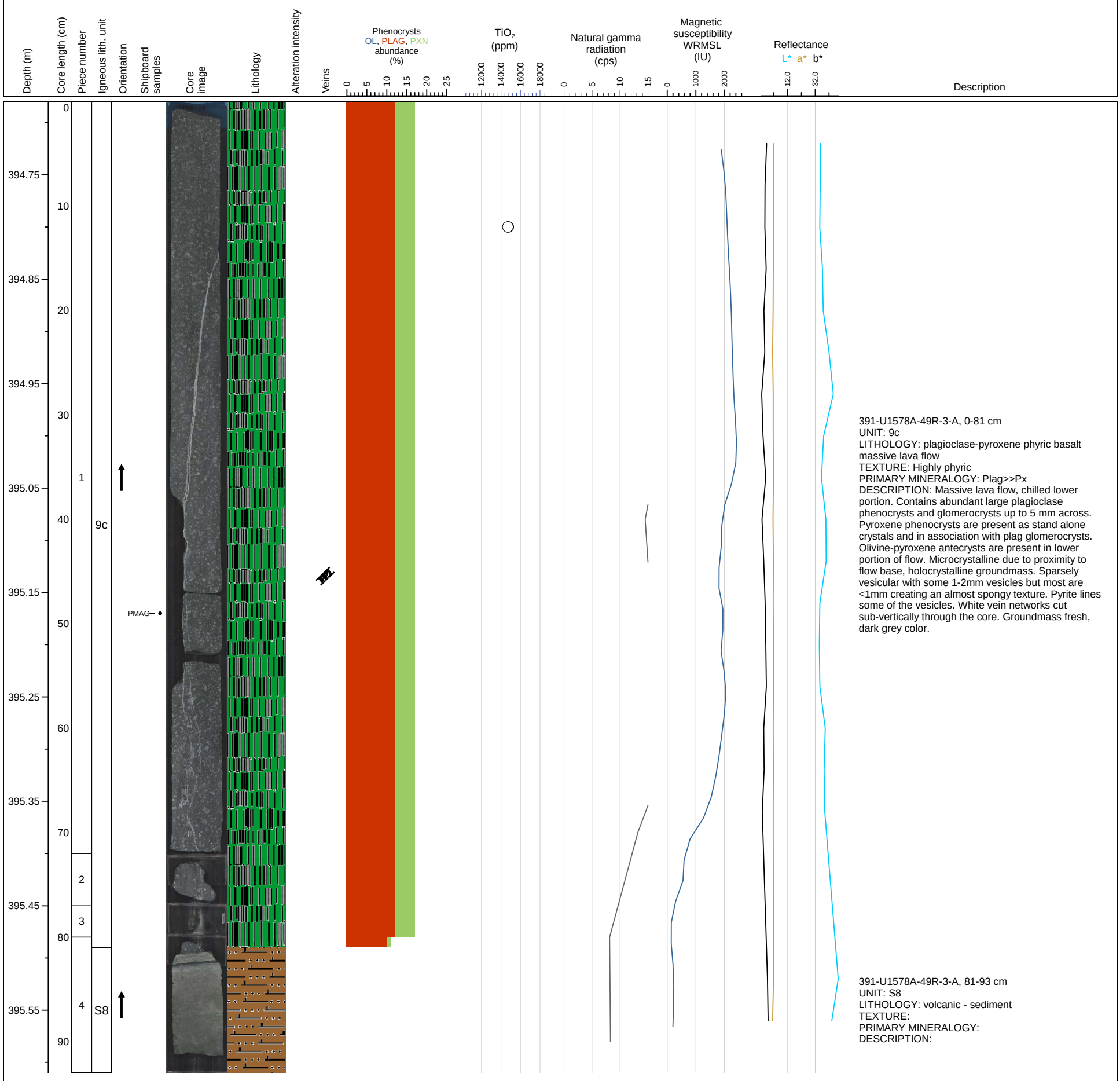
391-U1578A-49R-1-A, 0-55 cm
UNIT: 9c
LITHOLOGY: plagioclase-pyroxene phyric basalt massive lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Px
DESCRIPTION: Massive lava flow. Contains abundant large plagioclase phenocrysts and glomerocrysts up to 5 mm across. Pyroxene phenocrysts are present as stand alone crystals and in association with plag glomerocrysts. Fine-grained, holocrystalline groundmass. Sparsely vesicular with some 1-2mm vesicles but most are <1mm creating an almost spongy texture. Pyrite lines some of the vesicles. White vein networks cut sub-vertically through the core. Groundmass fresh, dark grey color.

Hole 391-U1578A-49R Section 2, Top of Section: 393.45 m (CSF-A)



391-U1578A-49R-2-A, 0-123 cm
UNIT: 9c
LITHOLOGY: plagioclase-pyroxene phyric basalt massive lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Px
DESCRIPTION: Massive lava flow. Contains abundant large plagioclase phenocrysts and glomerocrysts up to 5 mm across. Pyroxene phenocrysts are present as stand alone crystals and in association with plag glomerocrysts. Fine-grained, holocrystalline groundmass. Sparsely vesicular with some 1-2mm vesicles but most are <1mm creating an almost spongy texture. Pyrite lines some of the vesicles. White vein networks cut sub-vertically through the core. Groundmass fresh, dark grey color.

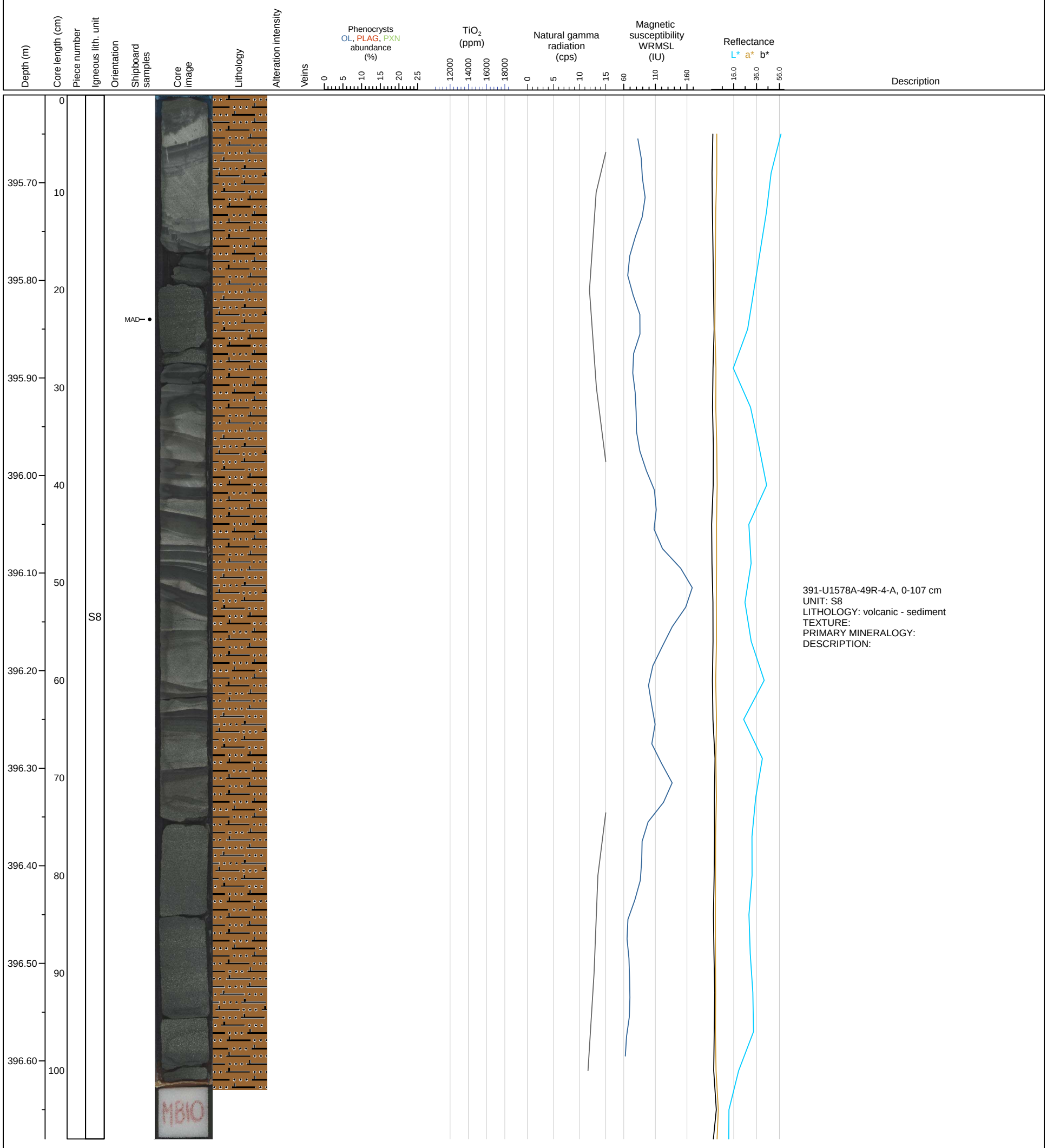
Hole 391-U1578A-49R Section 3, Top of Section: 394.68 m (CSF-A)



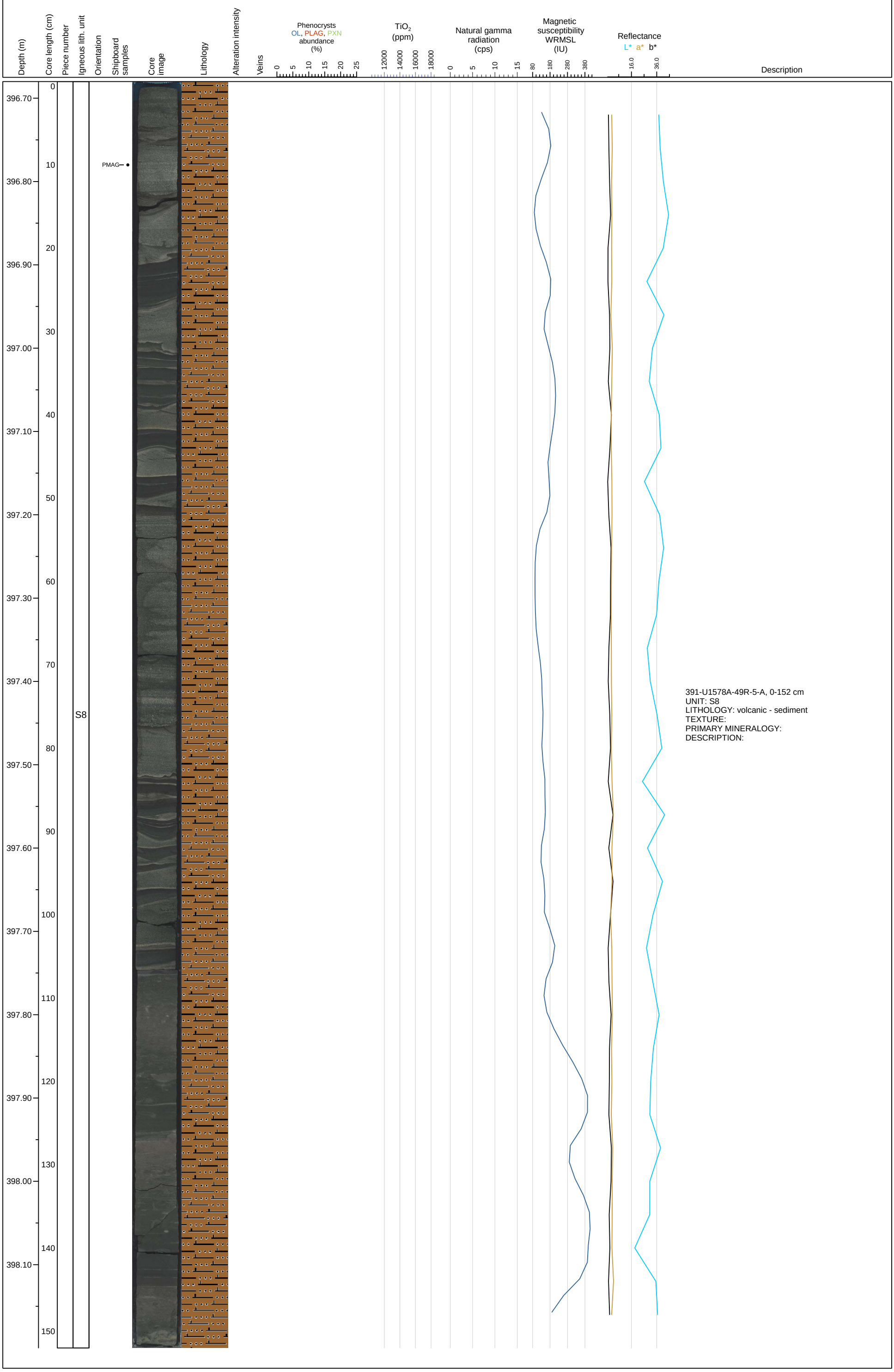
391-U1578A-49R-3-A, 0-81 cm
UNIT: 9c
LITHOLOGY: plagioclase-pyroxene phyric basalt massive lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Px
DESCRIPTION: Massive lava flow, chilled lower portion. Contains abundant large plagioclase phenocrysts and glomerocrysts up to 5 mm across. Pyroxene phenocrysts are present as stand alone crystals and in association with plag glomerocrysts. Olivine-pyroxene antecrysts are present in lower portion of flow. Microcrystalline due to proximity to flow base, holocrystalline groundmass. Sparsely vesicular with some 1-2mm vesicles but most are <1mm creating an almost spongy texture. Pyrite lines some of the vesicles. White vein networks cut sub-vertically through the core. Groundmass fresh, dark grey color.

391-U1578A-49R-3-A, 81-93 cm
UNIT: S8
LITHOLOGY: volcanic - sediment
TEXTURE:
PRIMARY MINERALOGY:
DESCRIPTION:

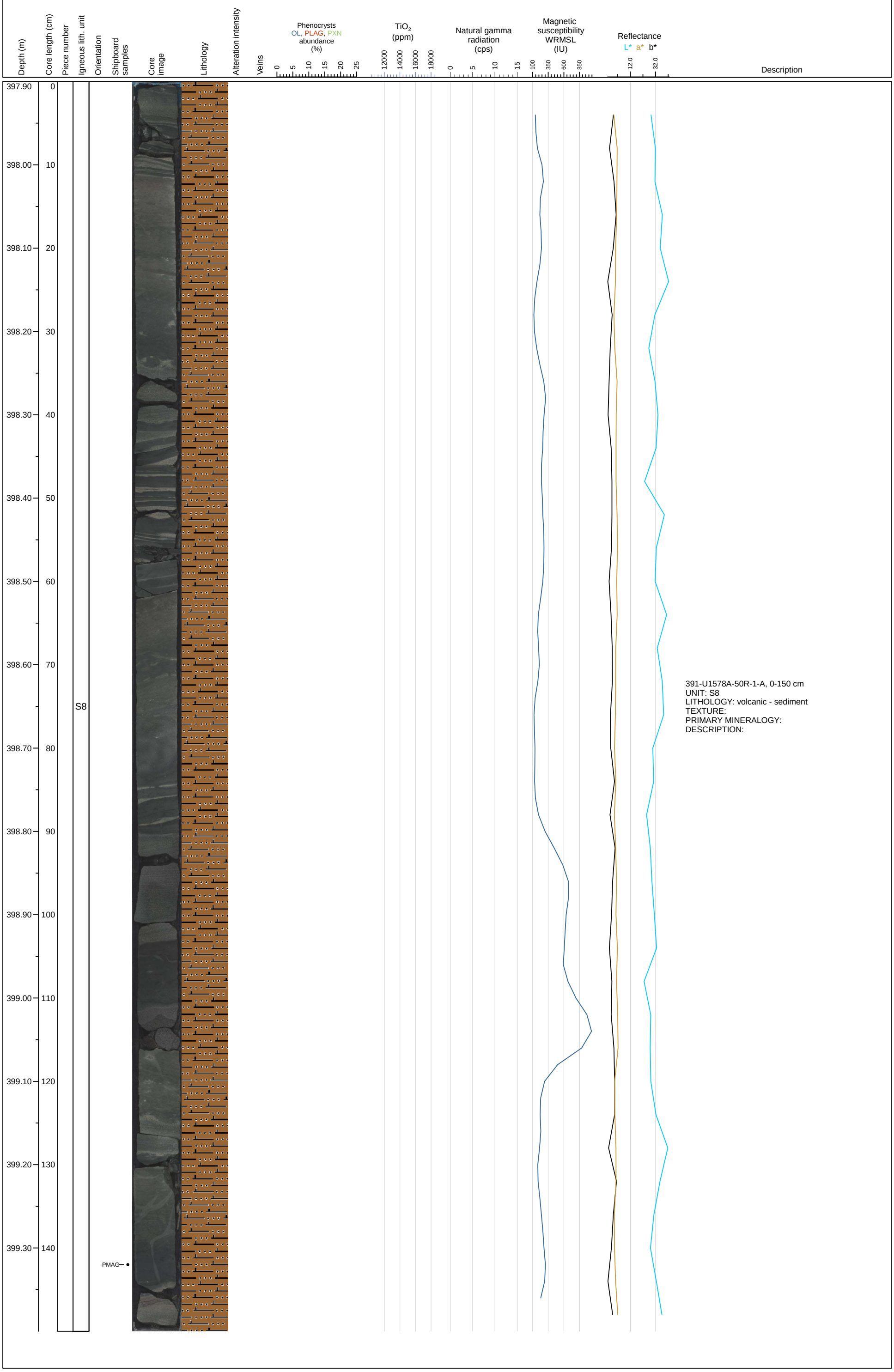
Hole 391-U1578A-49R Section 4, Top of Section: 395.61 m (CSF-A)



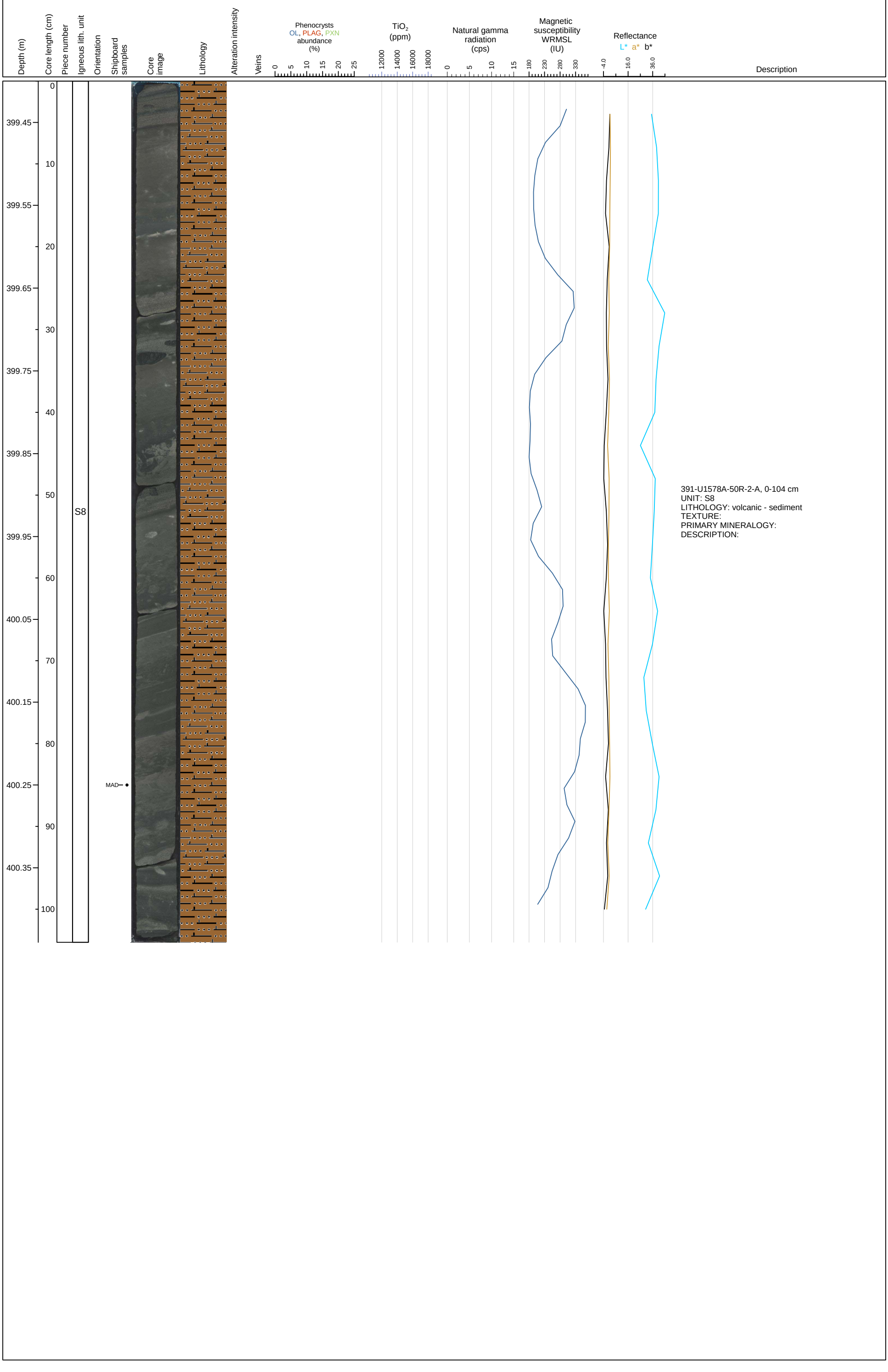
Hole 391-U1578A-49R Section 5, Top of Section: 396.68 m (CSF-A)



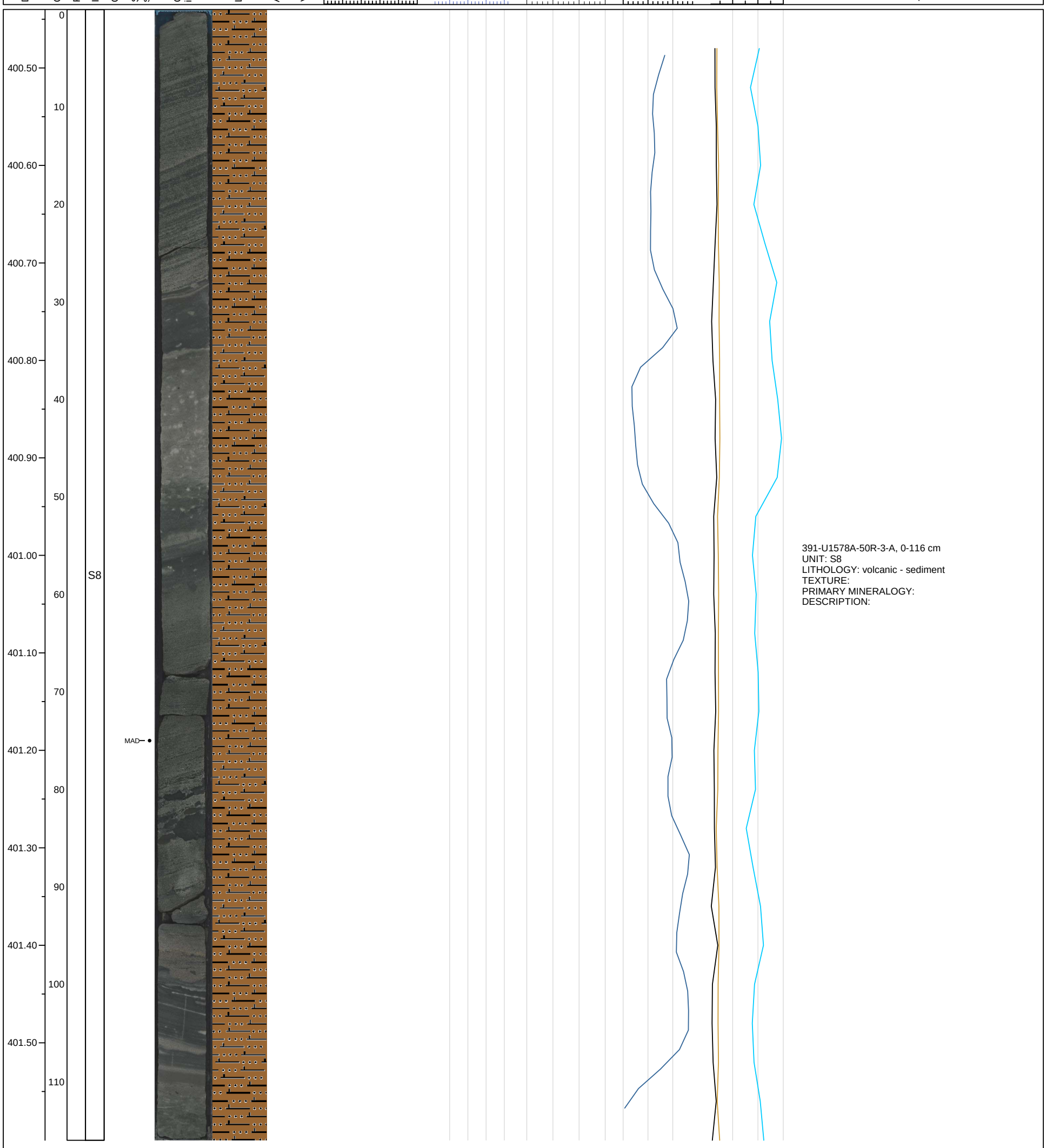
Hole 391-U1578A-50R Section 1, Top of Section: 397.9 m (CSF-A)



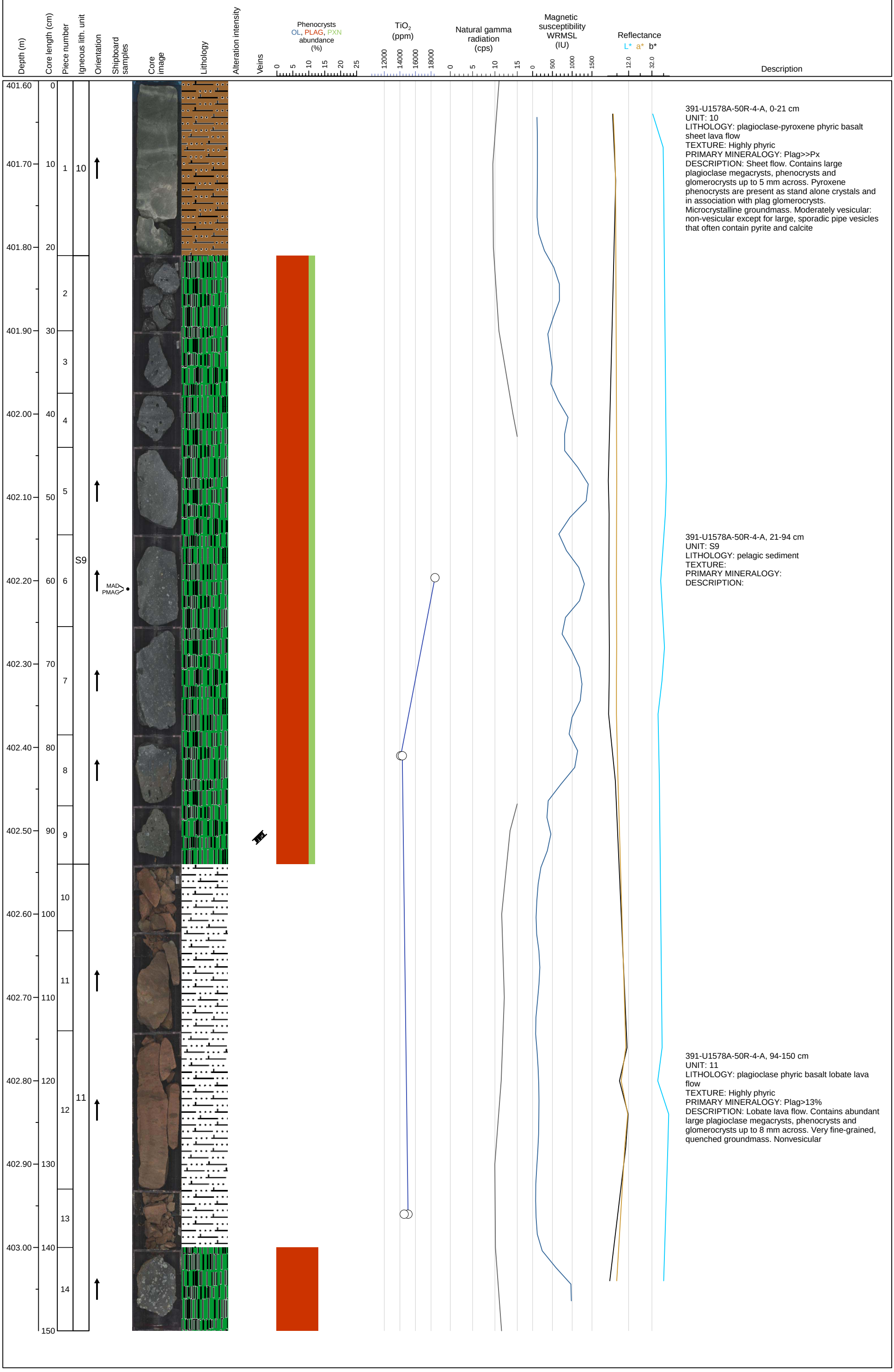
Hole 391-U1578A-50R Section 2, Top of Section: 399.4 m (CSF-A)



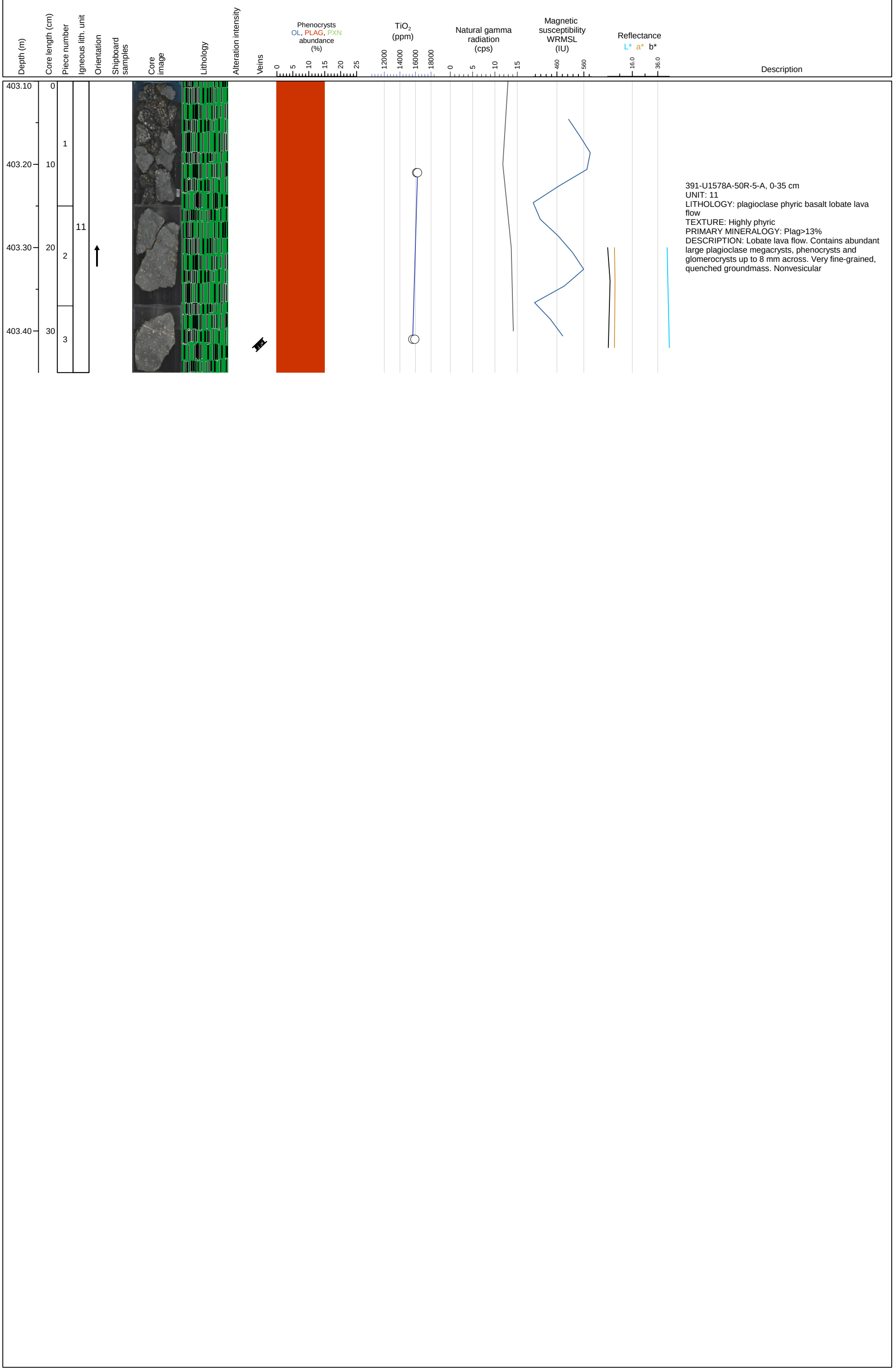
Hole 391-U1578A-50R Section 3, Top of Section: 400.44 m (CSF-A)



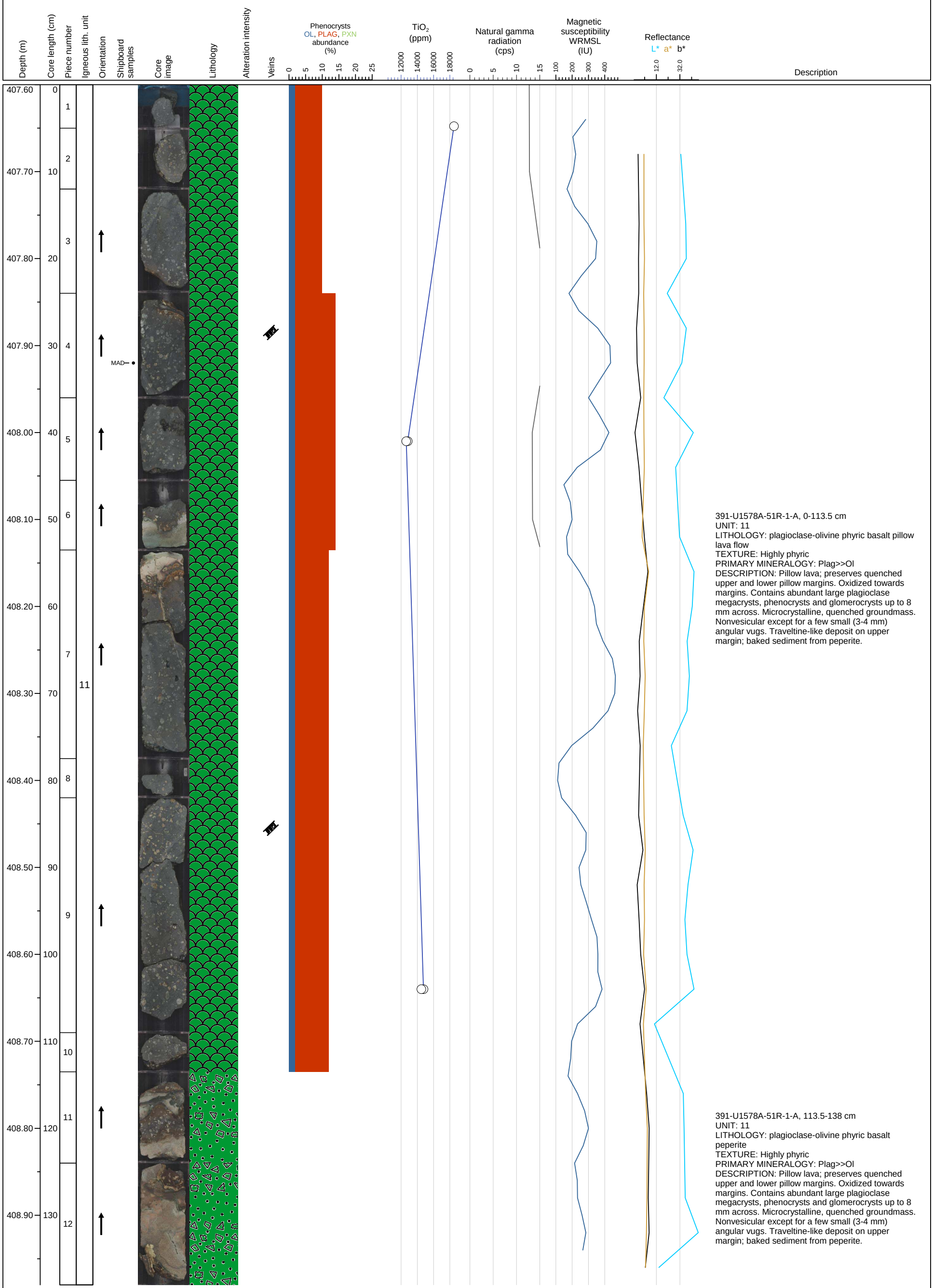
Hole 391-U1578A-50R Section 4, Top of Section: 401.6 m (CSF-A)



Hole 391-U1578A-50R Section 5, Top of Section: 403.1 m (CSF-A)



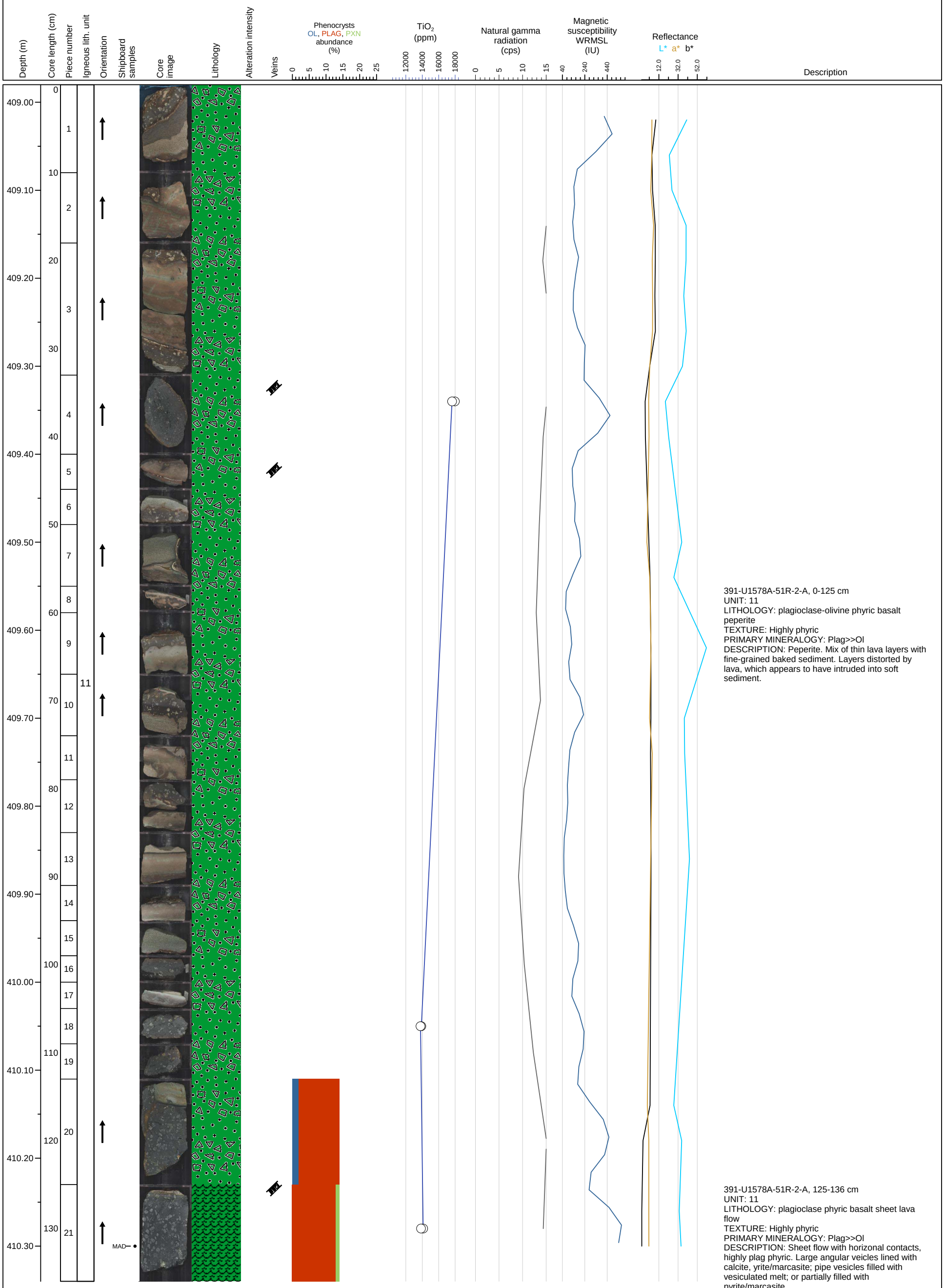
Hole 391-U1578A-51R Section 1, Top of Section: 407.6 m (CSF-A)



391-U1578A-51R-1-A, 0-113.5 cm
UNIT: 11
LITHOLOGY: plagioclase-olivine phyric basalt pillow lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Ol
DESCRIPTION: Pillow lava; preserves quenched upper and lower pillow margins. Oxidized towards margins. Contains abundant large plagioclase megacrysts, phenocrysts and glomerocrysts up to 8 mm across. Microcrystalline, quenched groundmass. Nonvesicular except for a few small (3-4 mm) angular vugs. Traveltine-like deposit on upper margin; baked sediment from peperite.

391-U1578A-51R-1-A, 113.5-138 cm
UNIT: 11
LITHOLOGY: plagioclase-olivine phyric basalt peperite
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Ol
DESCRIPTION: Pillow lava; preserves quenched upper and lower pillow margins. Oxidized towards margins. Contains abundant large plagioclase megacrysts, phenocrysts and glomerocrysts up to 8 mm across. Microcrystalline, quenched groundmass. Nonvesicular except for a few small (3-4 mm) angular vugs. Traveltine-like deposit on upper margin; baked sediment from peperite.

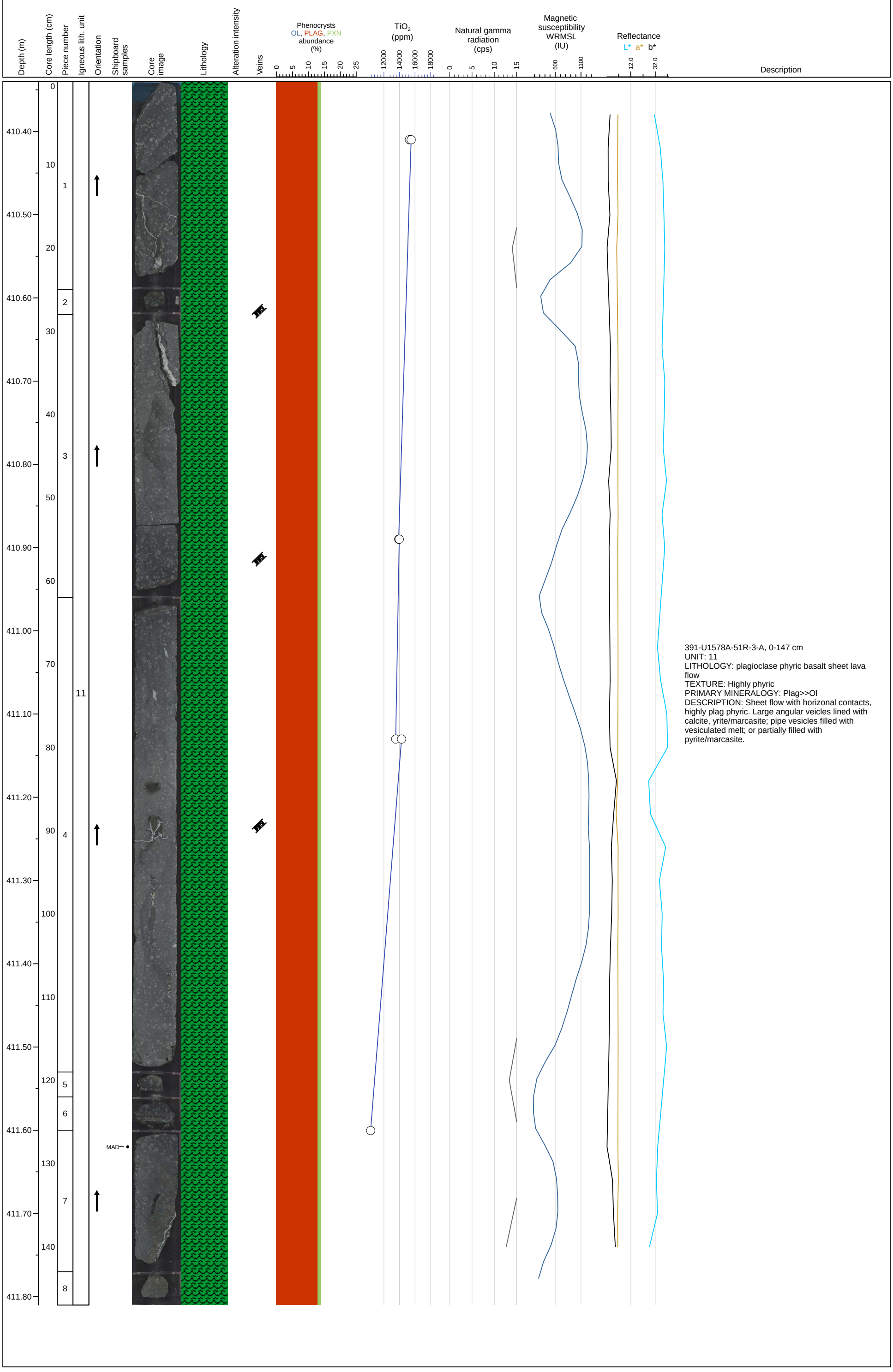
Hole 391-U1578A-51R Section 2, Top of Section: 408.98 m (CSF-A)



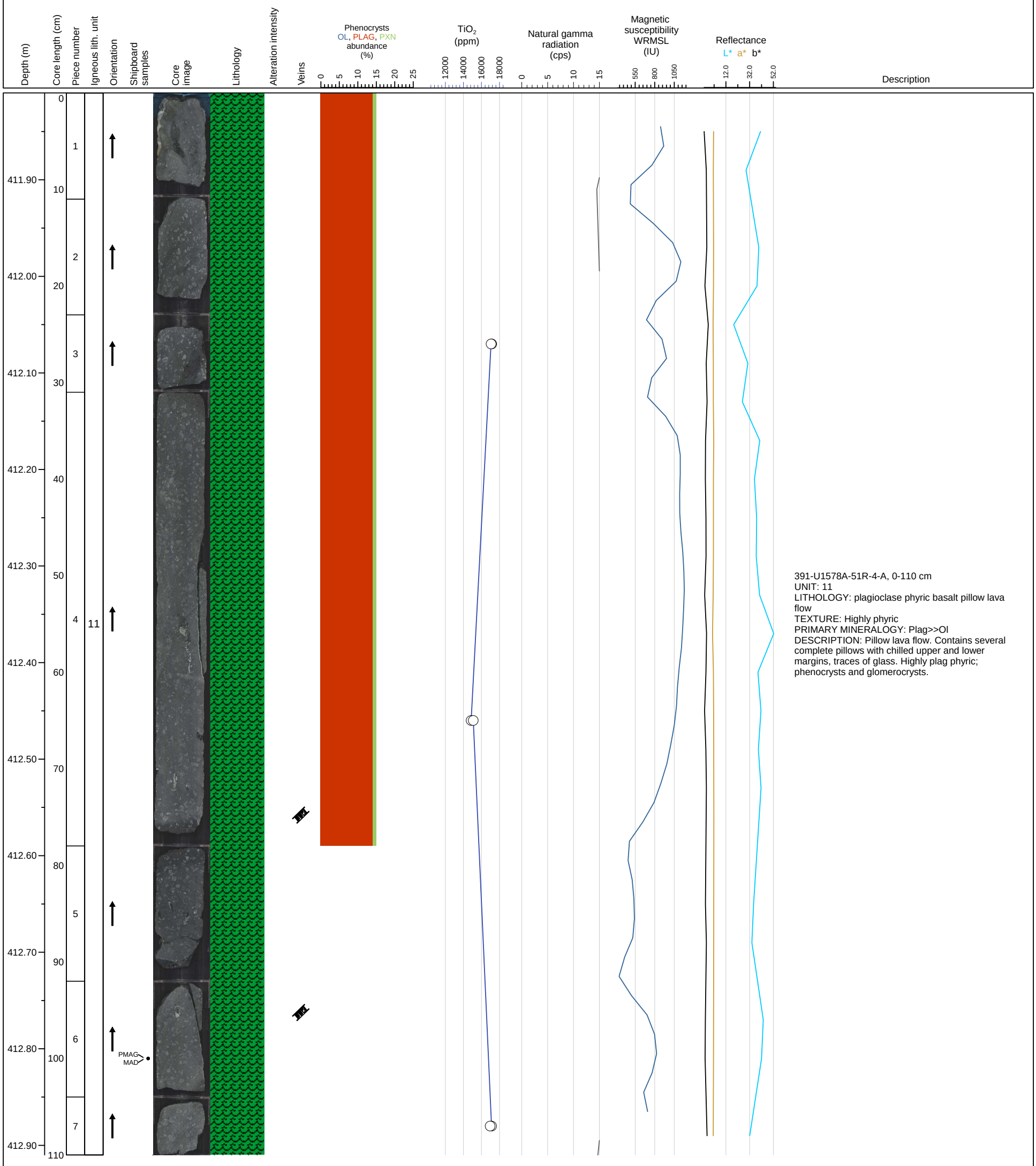
391-U1578A-51R-2-A, 0-125 cm
UNIT: 11
LITHOLOGY: plagioclase-olivine phyric basalt peperite
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Ol
DESCRIPTION: Peperite. Mix of thin lava layers with fine-grained baked sediment. Layers distorted by lava, which appears to have intruded into soft sediment.

391-U1578A-51R-2-A, 125-136 cm
UNIT: 11
LITHOLOGY: plagioclase phyric basalt sheet lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Ol
DESCRIPTION: Sheet flow with horizonal contacts, highly plag phyric. Large angular veicles lined with calcite, yrite/marcasite; pipe vesicles filled with vesiculated melt; or partially filled with pyrite/marcasite.

Hole 391-U1578A-51R Section 3, Top of Section: 410.34 m (CSF-A)

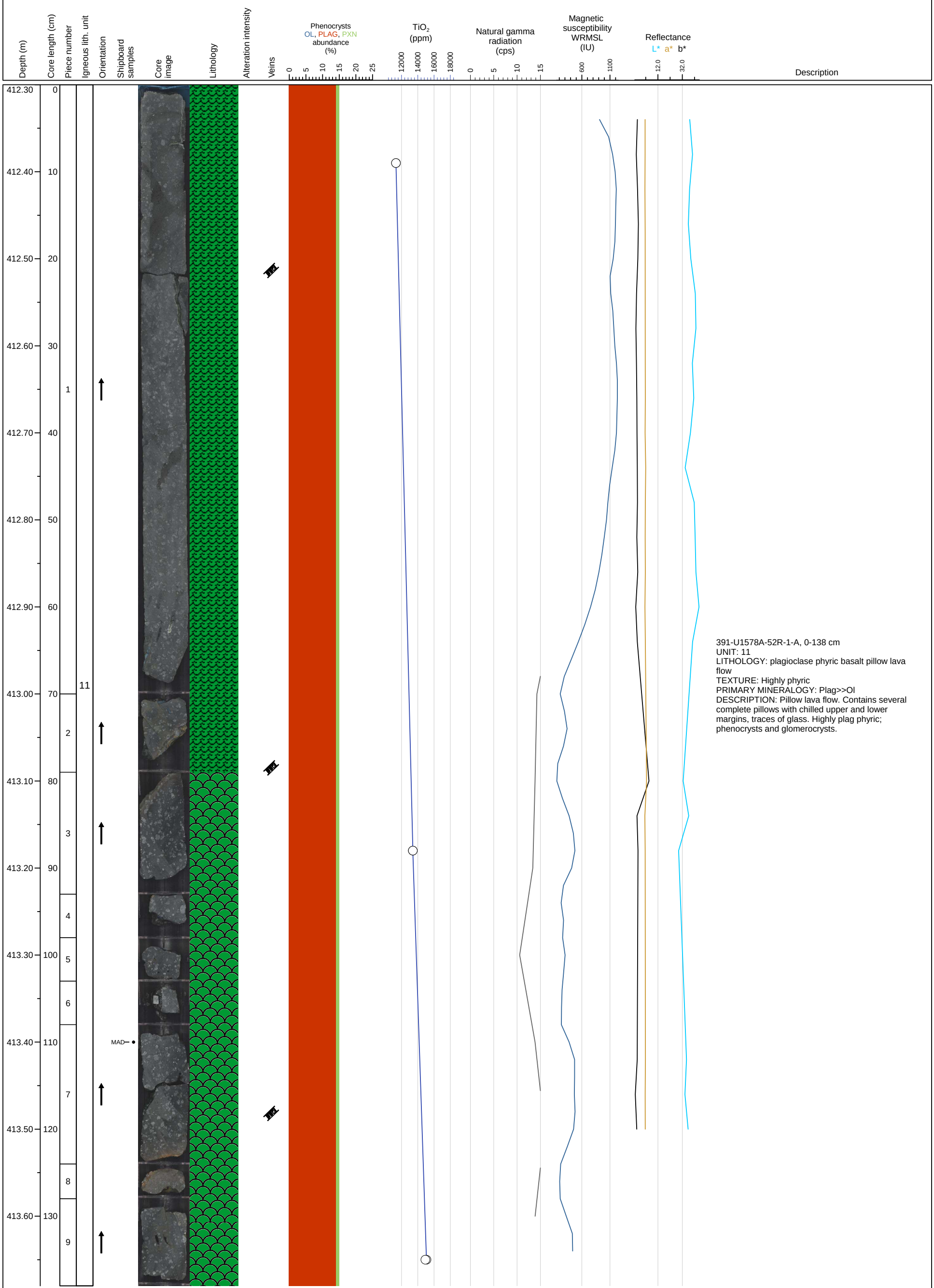


Hole 391-U1578A-51R Section 4, Top of Section: 411.81 m (CSF-A)

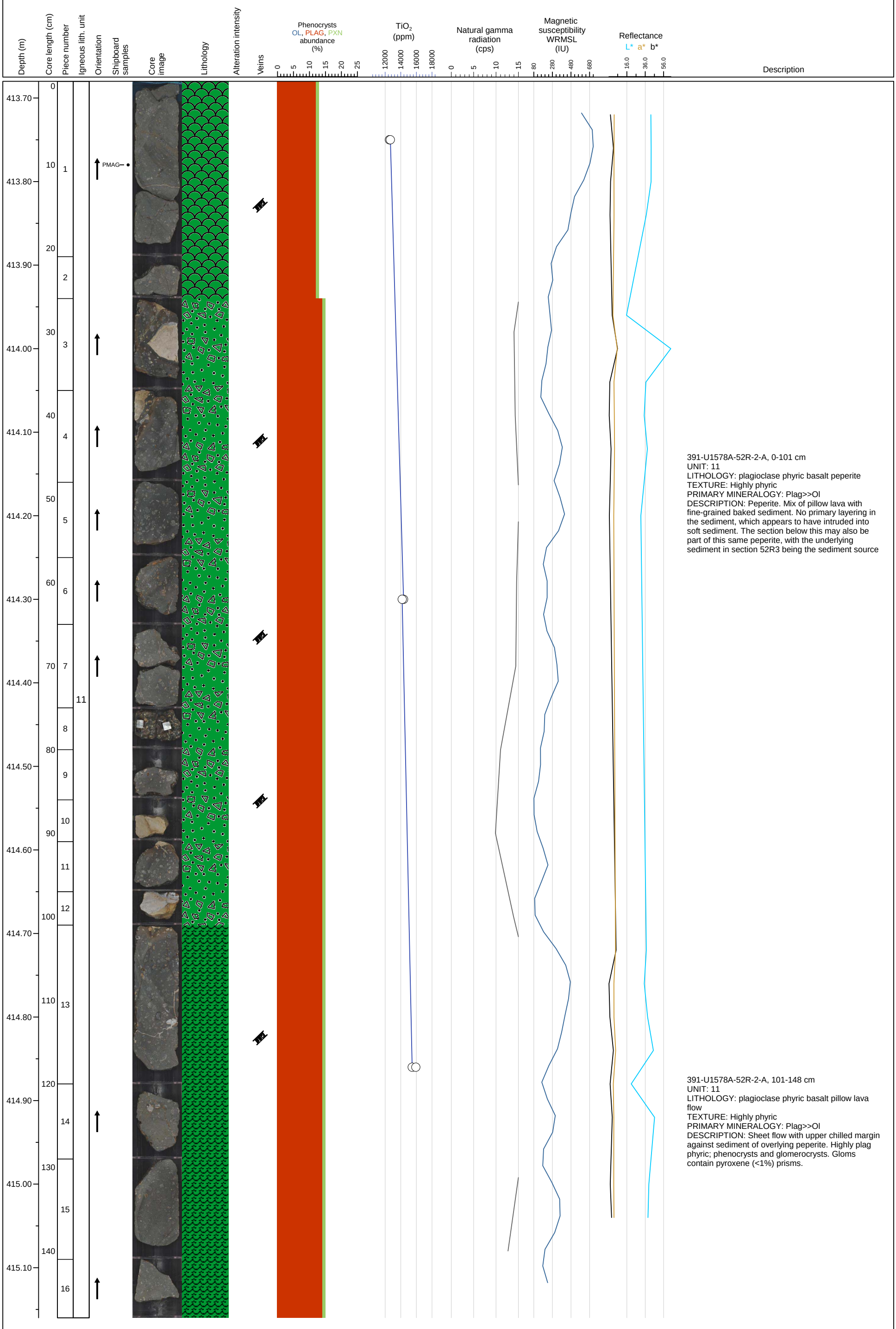


391-U1578A-51R-4-A, 0-110 cm
UNIT: 11
LITHOLOGY: plagioclase phyric basalt pillow lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Ol
DESCRIPTION: Pillow lava flow. Contains several complete pillows with chilled upper and lower margins, traces of glass. Highly plag phyric; phenocrysts and glomerocrysts.

Hole 391-U1578A-52R Section 1, Top of Section: 412.3 m (CSF-A)



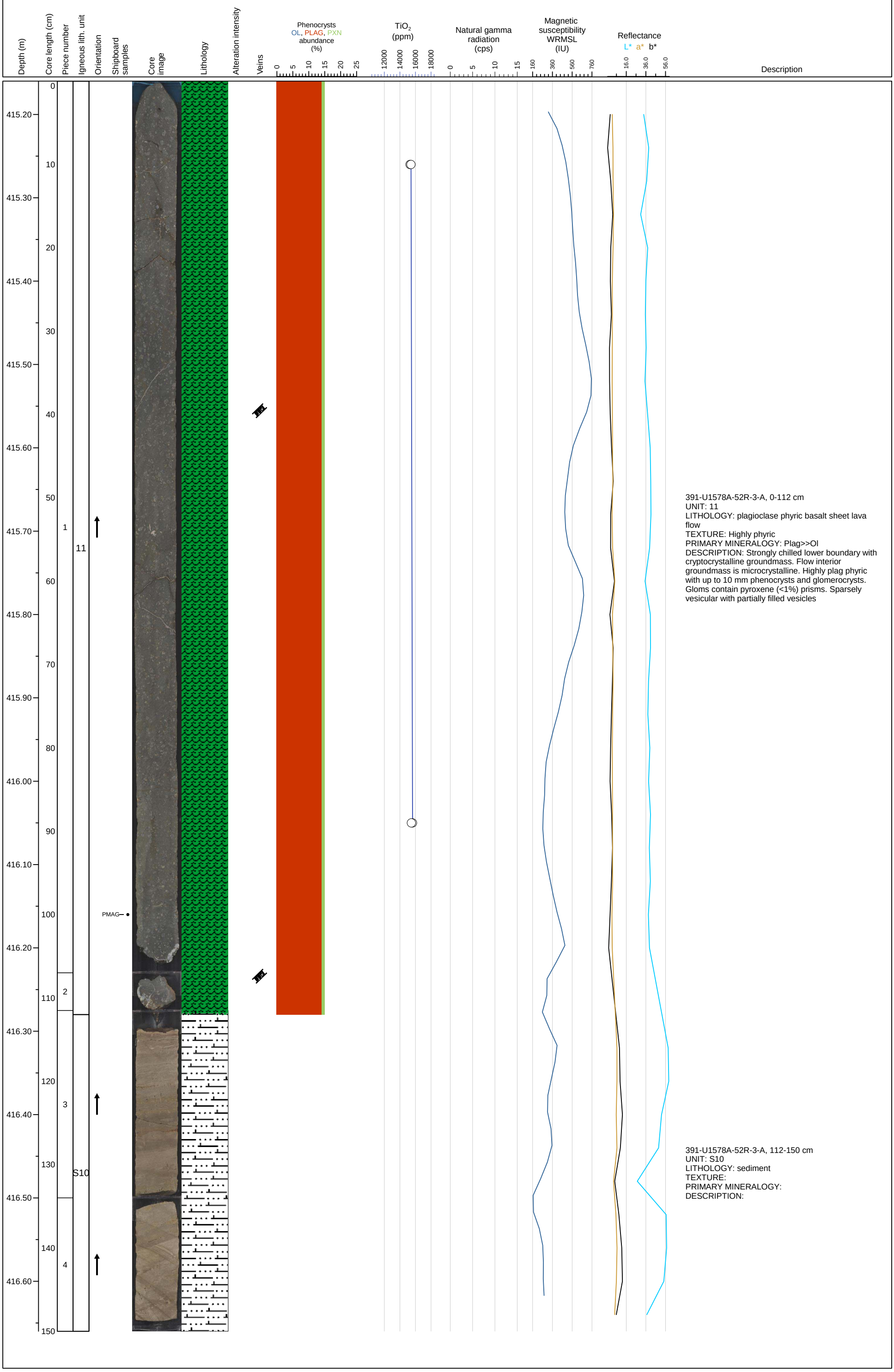
Hole 391-U1578A-52R Section 2, Top of Section: 413.68 m (CSF-A)



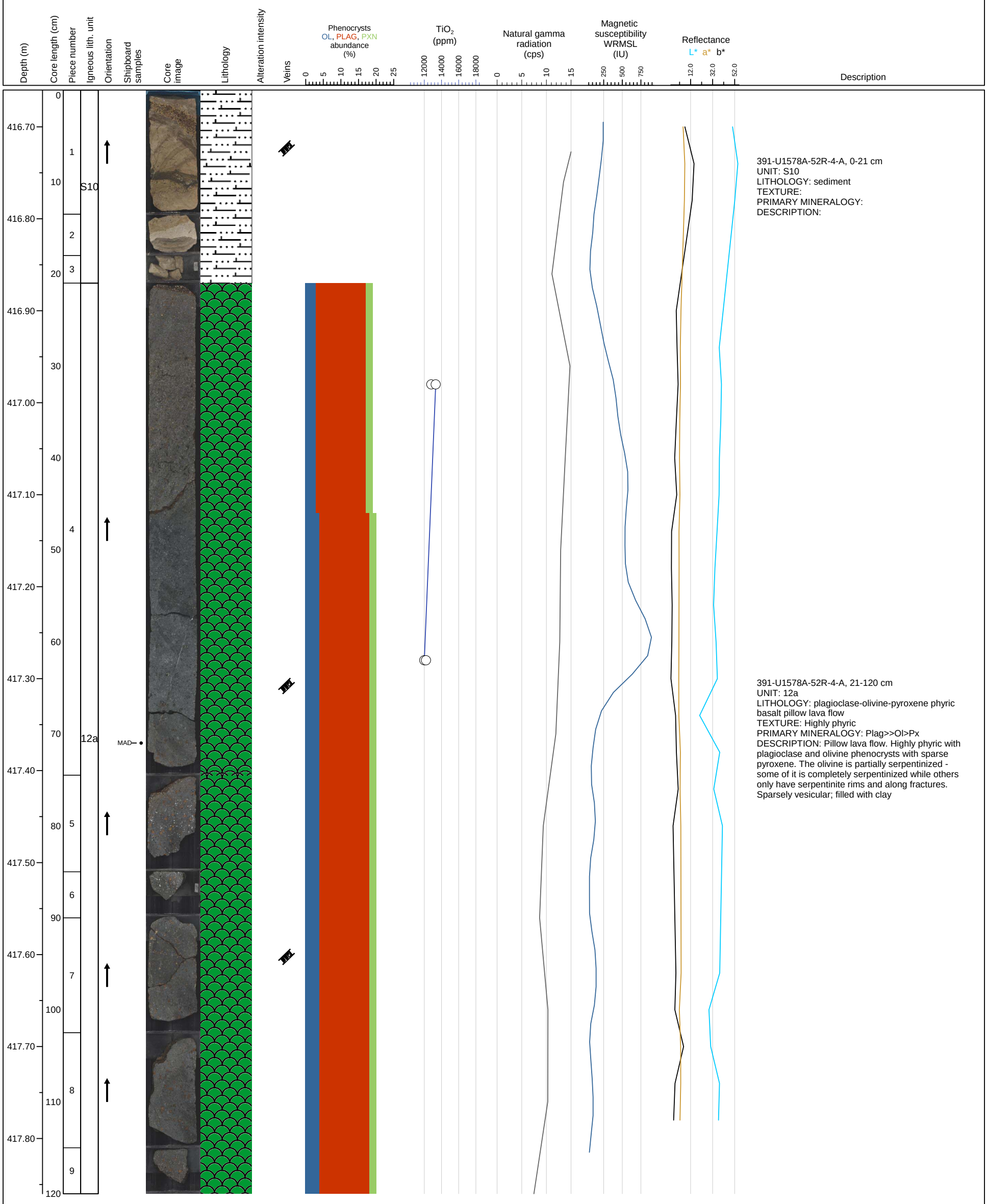
391-U1578A-52R-2-A, 0-101 cm
UNIT: 11
LITHOLOGY: plagioclase phyric basalt peperite
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Ol
DESCRIPTION: Peperite. Mix of pillow lava with fine-grained baked sediment. No primary layering in the sediment, which appears to have intruded into soft sediment. The section below this may also be part of this same peperite, with the underlying sediment in section 52R3 being the sediment source

391-U1578A-52R-2-A, 101-148 cm
UNIT: 11
LITHOLOGY: plagioclase phyric basalt pillow lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Ol
DESCRIPTION: Sheet flow with upper chilled margin against sediment of overlying peperite. Highly plag phyric; phenocrysts and glomerocrysts. Gloms contain pyroxene (<1%) prisms.

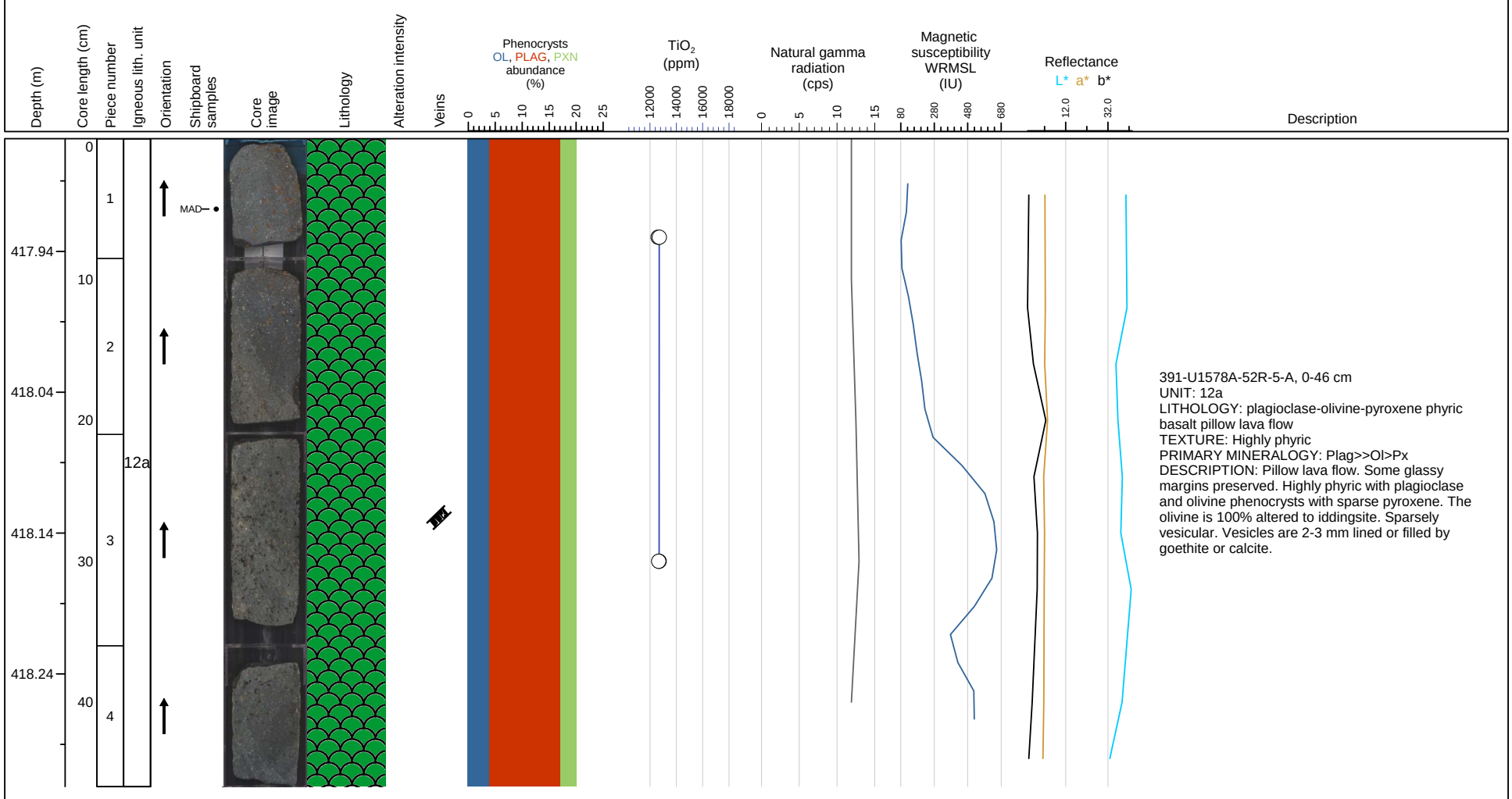
Hole 391-U1578A-52R Section 3, Top of Section: 415.16 m (CSF-A)



Hole 391-U1578A-52R Section 4, Top of Section: 416.66 m (CSF-A)

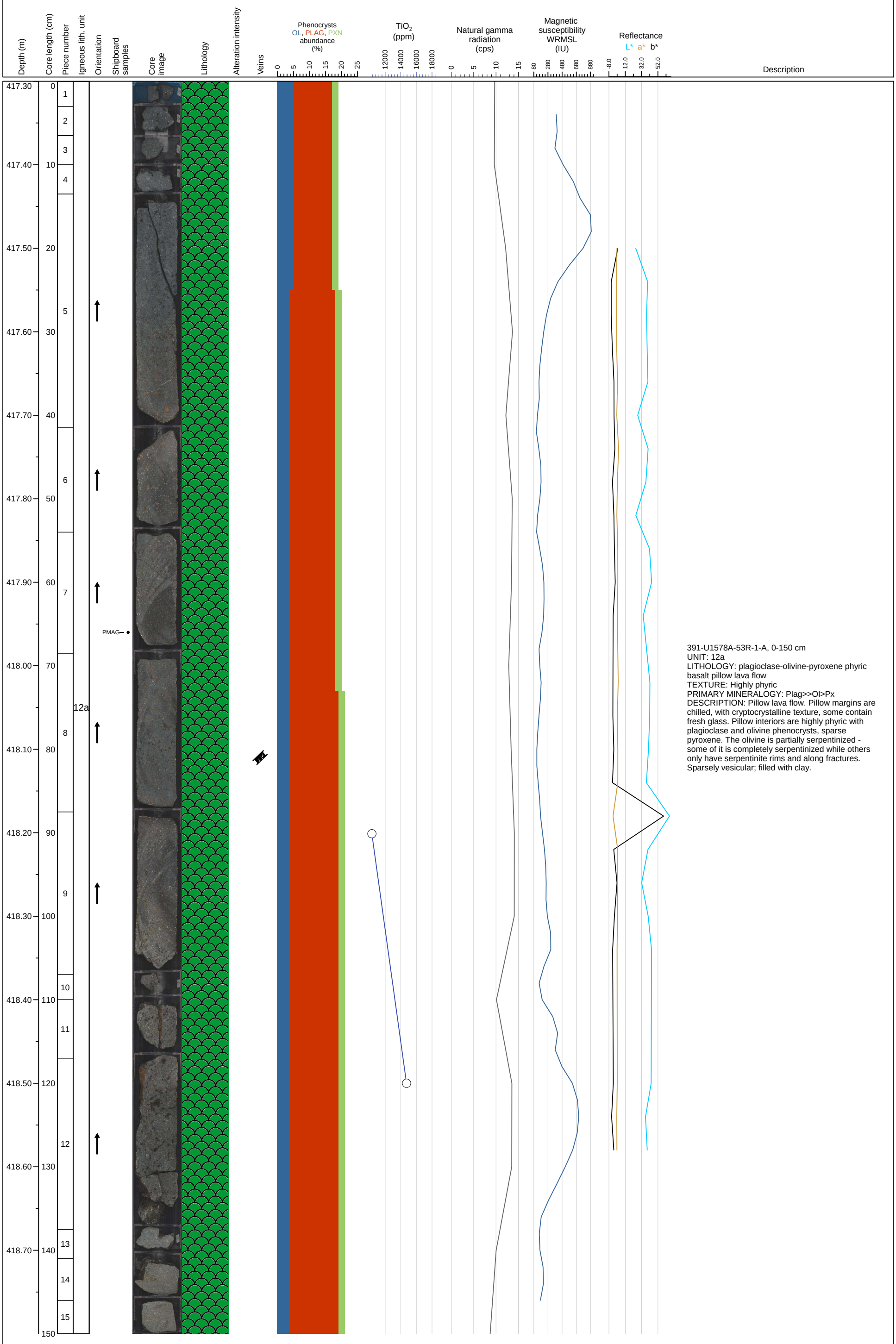


Hole 391-U1578A-52R Section 5, Top of Section: 417.86 m (CSF-A)

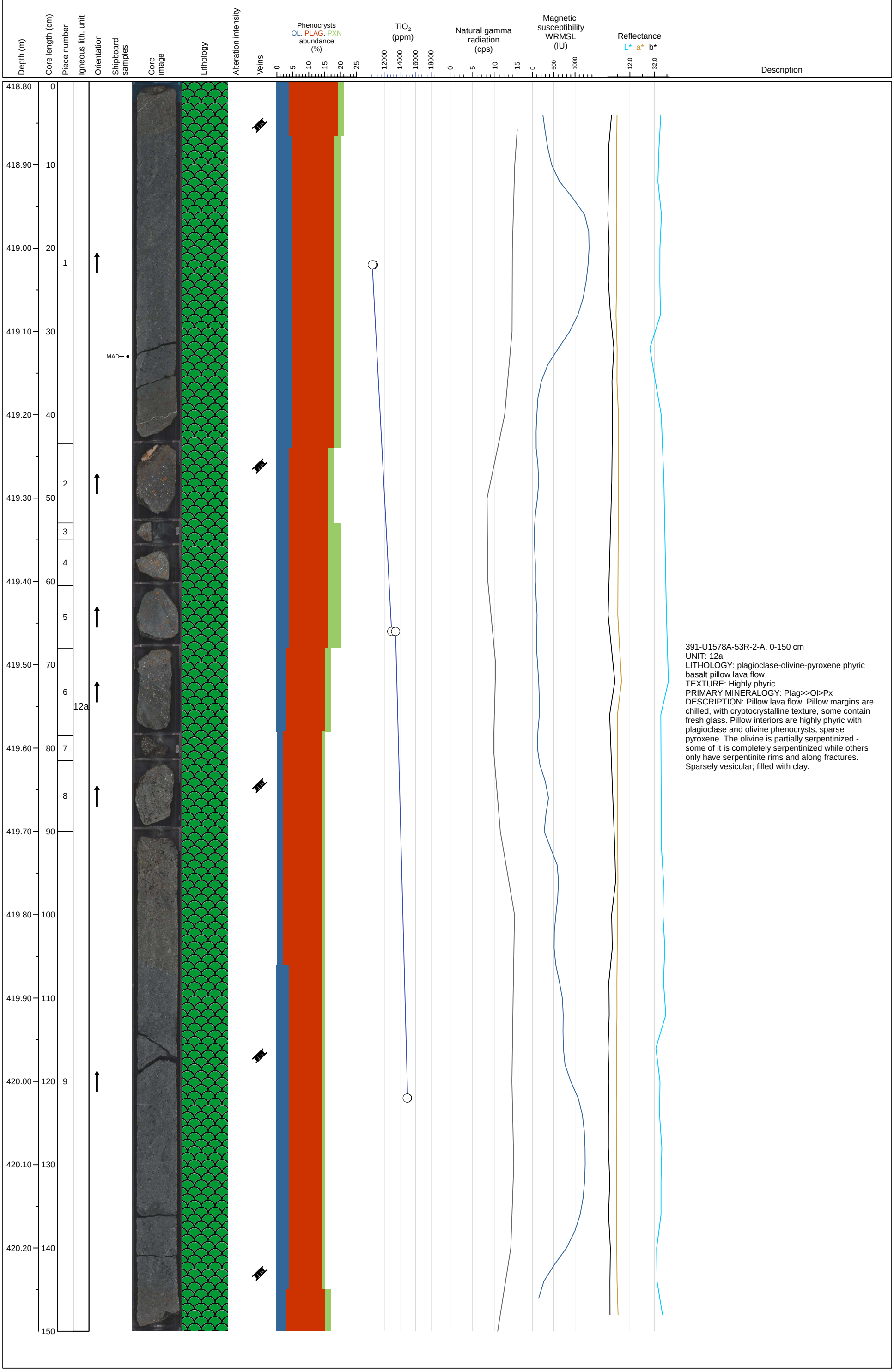


391-U1578A-52R-5-A, 0-46 cm
UNIT: 12a
LITHOLOGY: plagioclase-olivine-pyroxene phyric basalt pillow lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Ol>Px
DESCRIPTION: Pillow lava flow. Some glassy margins preserved. Highly phyric with plagioclase and olivine phenocrysts with sparse pyroxene. The olivine is 100% altered to iddingsite. Sparsely vesicular. Vesicles are 2-3 mm lined or filled by goethite or calcite.

Hole 391-U1578A-53R Section 1, Top of Section: 417.3 m (CSF-A)

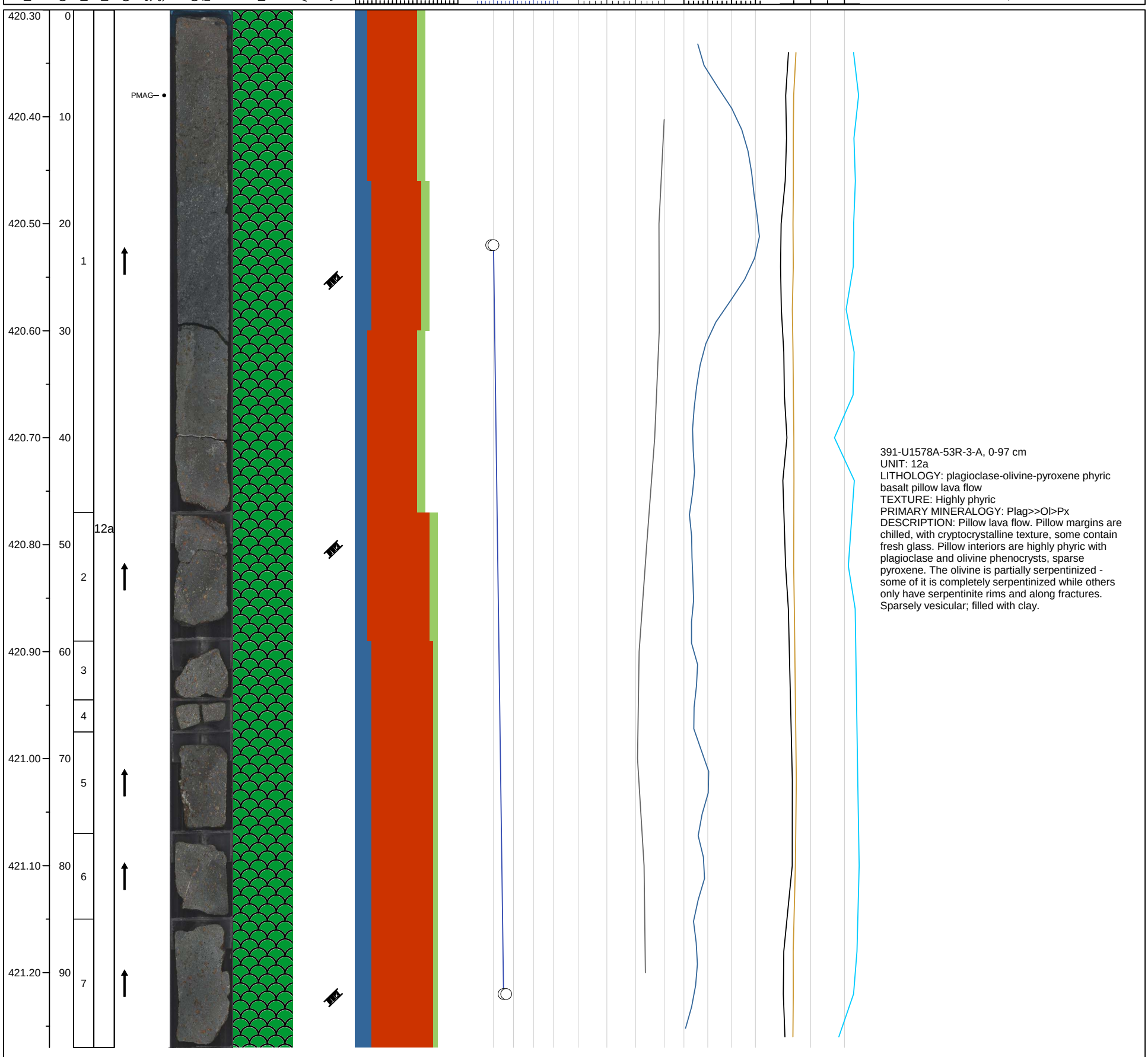


Hole 391-U1578A-53R Section 2, Top of Section: 418.8 m (CSF-A)



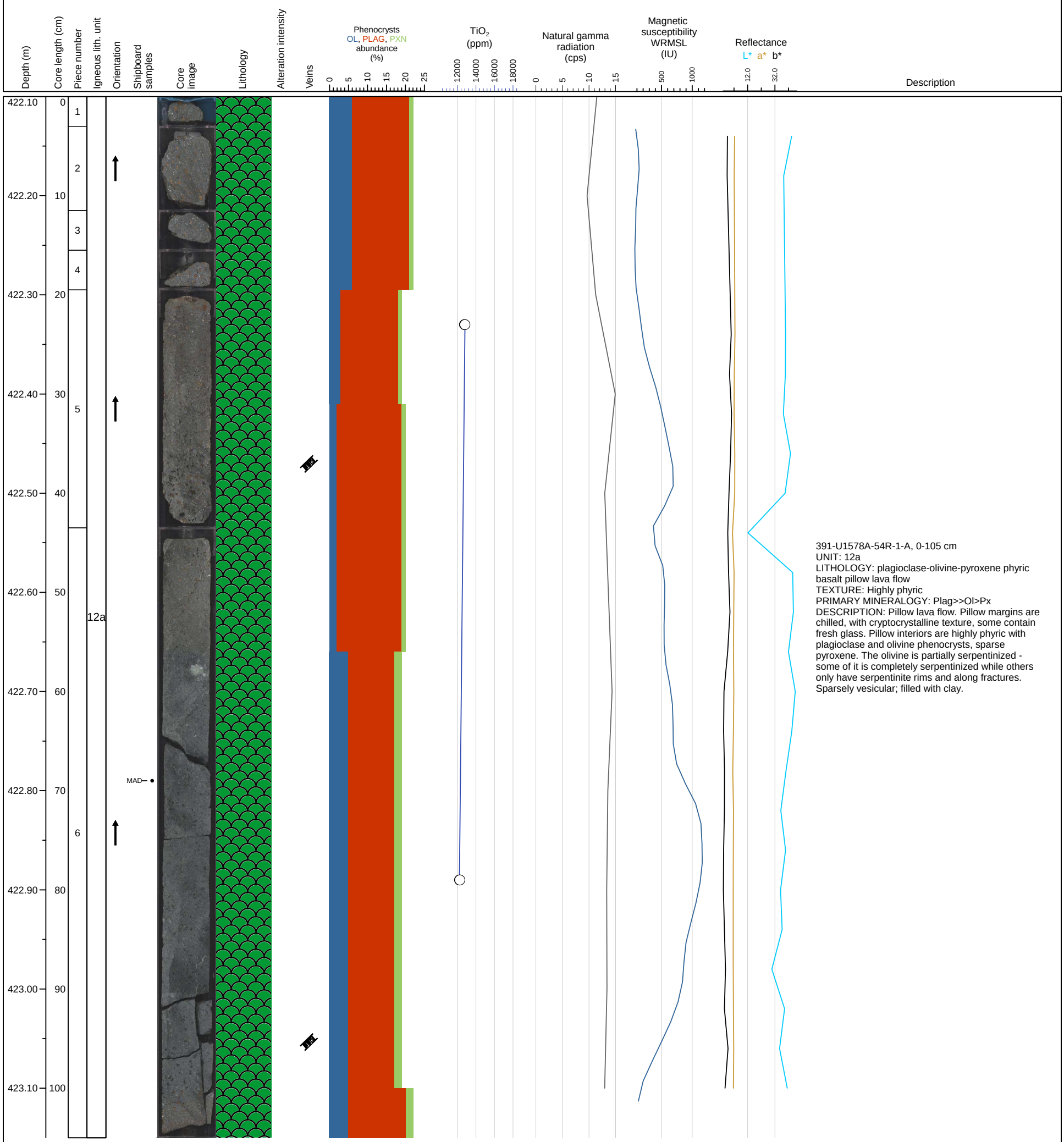
391-U1578A-53R-2-A, 0-150 cm
UNIT: 12a
LITHOLOGY: plagioclase-olivine-pyroxene phyric basalt pillow lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Ol>Px
DESCRIPTION: Pillow lava flow. Pillow margins are chilled, with cryptocrystalline texture, some contain fresh glass. Pillow interiors are highly phyric with plagioclase and olivine phenocrysts, sparse pyroxene. The olivine is partially serpentinized - some of it is completely serpentinized while others only have serpentinite rims and along fractures. Sparsely vesicular; filled with clay.

Hole 391-U1578A-53R Section 3, Top of Section: 420.3 m (CSF-A)

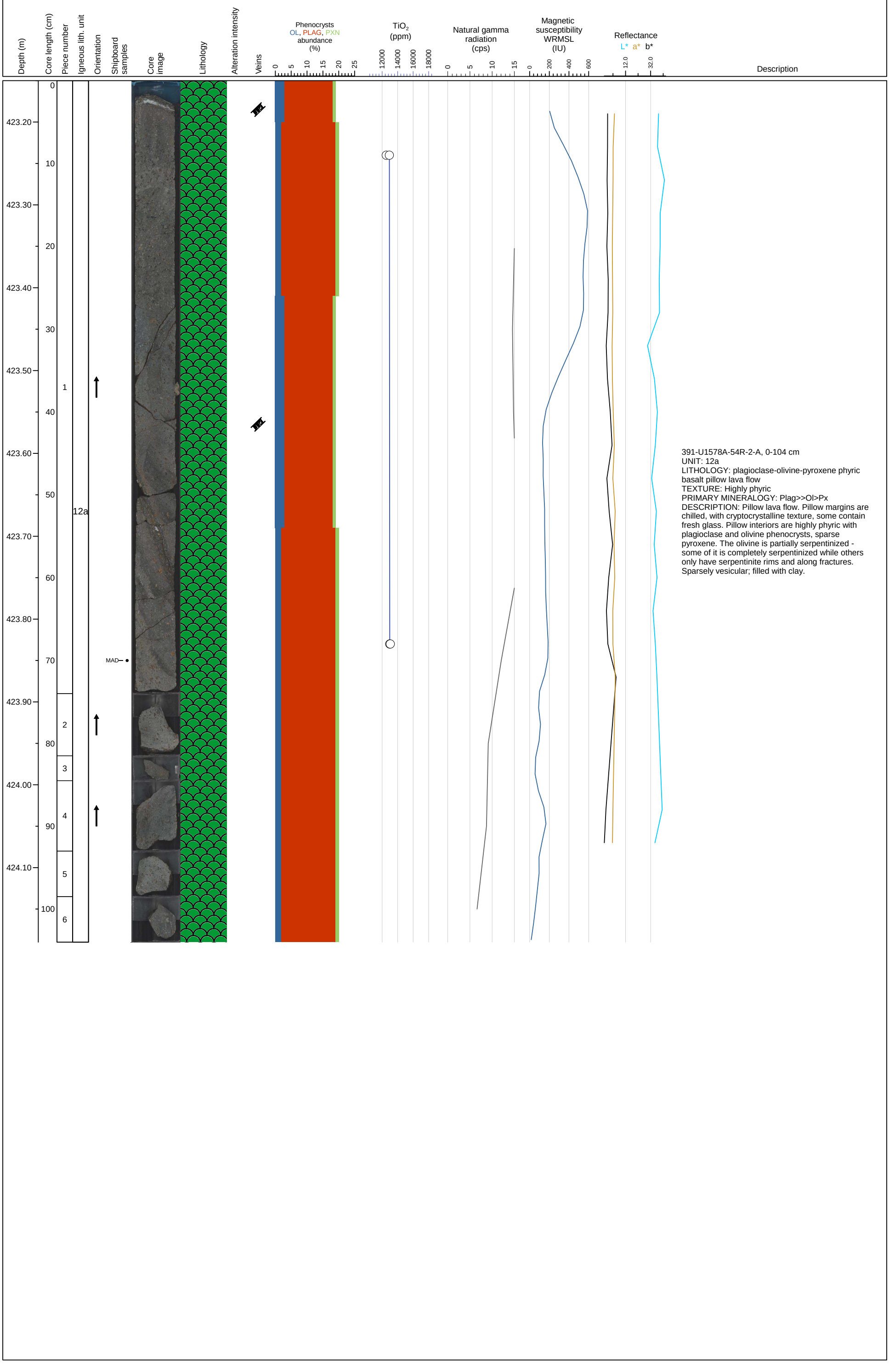


391-U1578A-53R-3-A, 0-97 cm
UNIT: 12a
LITHOLOGY: plagioclase-olivine-pyroxene phyric basalt pillow lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Ol>Px
DESCRIPTION: Pillow lava flow. Pillow margins are chilled, with cryptocrystalline texture, some contain fresh glass. Pillow interiors are highly phyric with plagioclase and olivine phenocrysts, sparse pyroxene. The olivine is partially serpentinized - some of it is completely serpentinized while others only have serpentinite rims and along fractures. Sparsely vesicular; filled with clay.

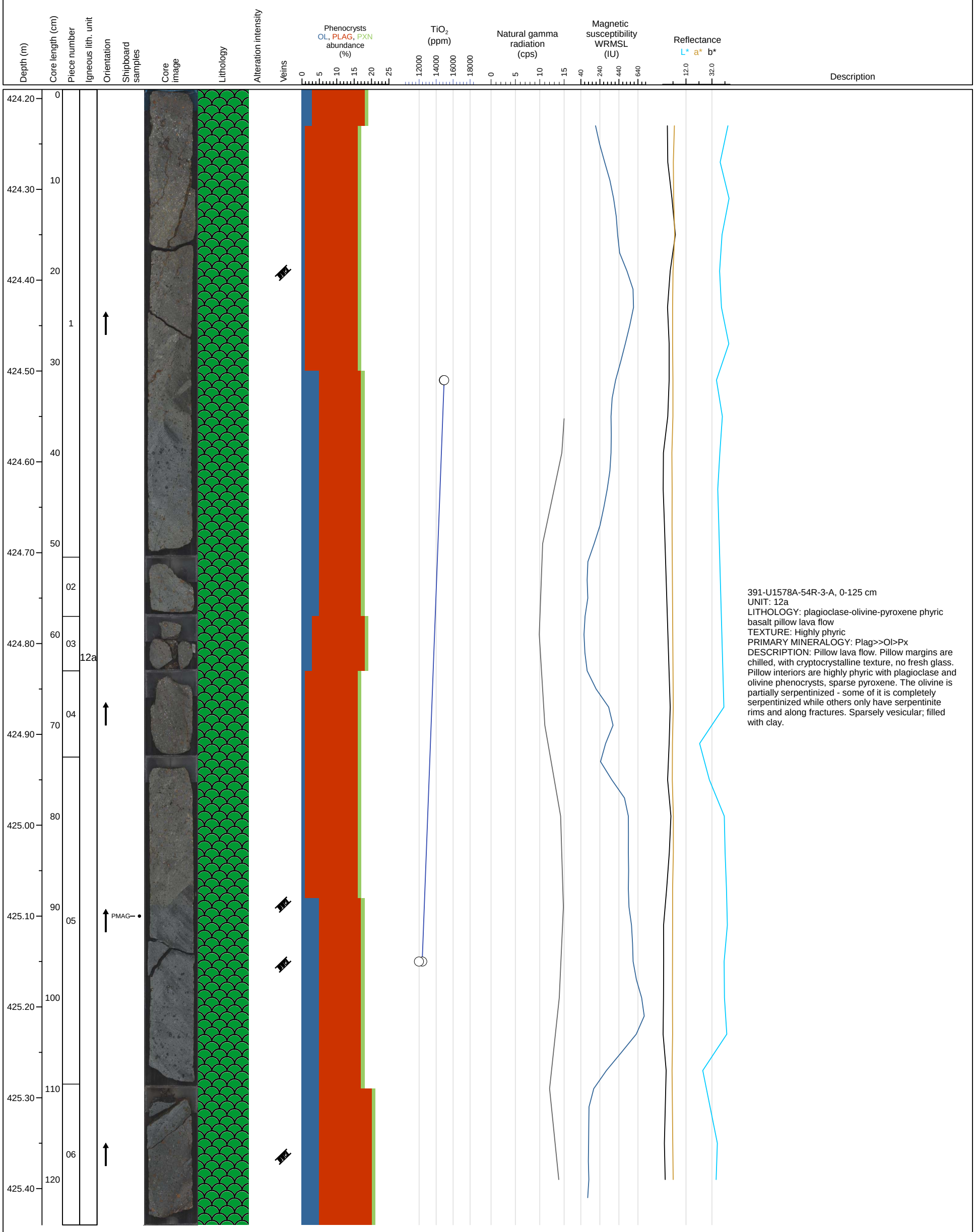
Hole 391-U1578A-54R Section 1, Top of Section: 422.1 m (CSF-A)



Hole 391-U1578A-54R Section 2, Top of Section: 423.15 m (CSF-A)

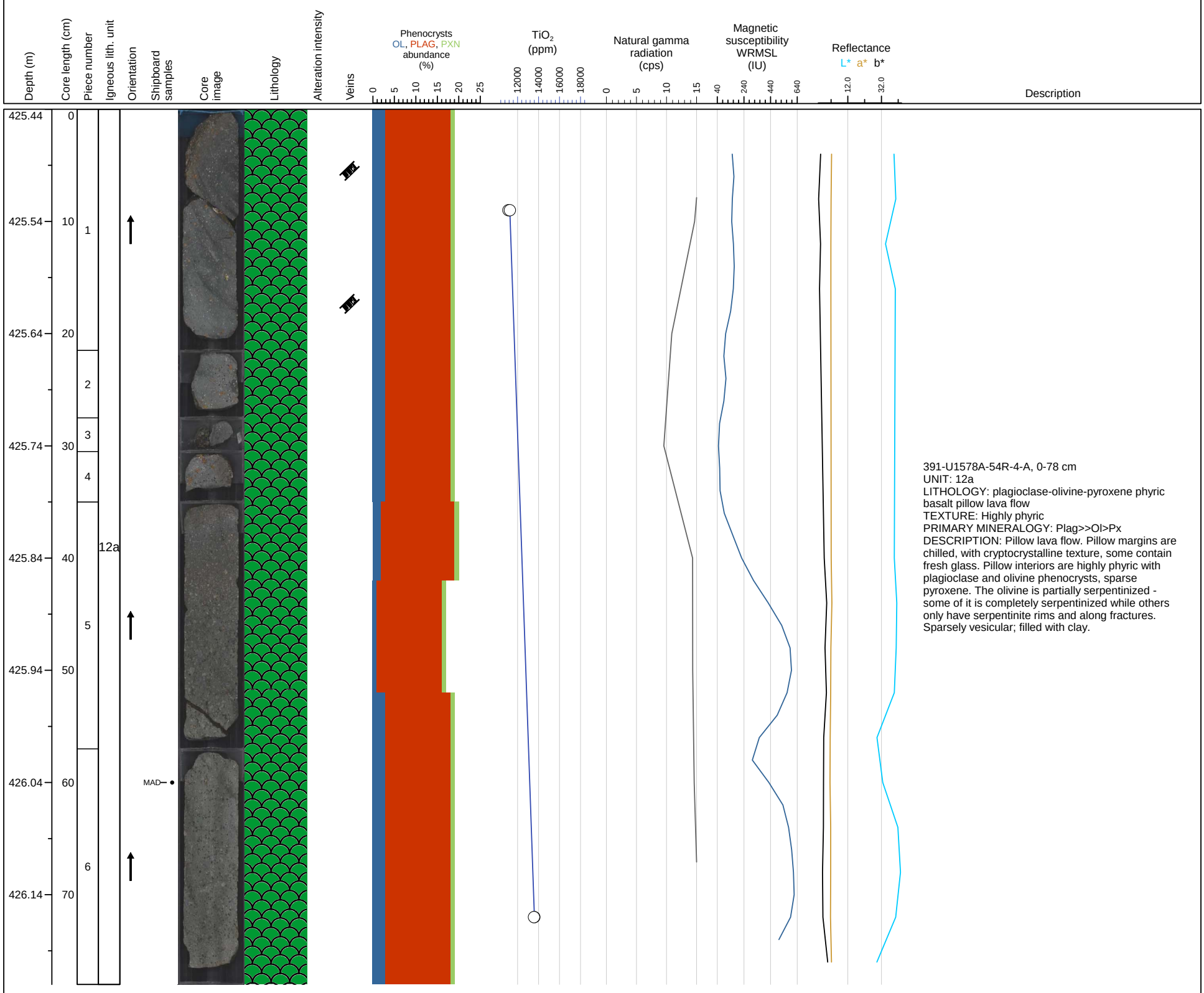


Hole 391-U1578A-54R Section 3, Top of Section: 424.19 m (CSF-A)



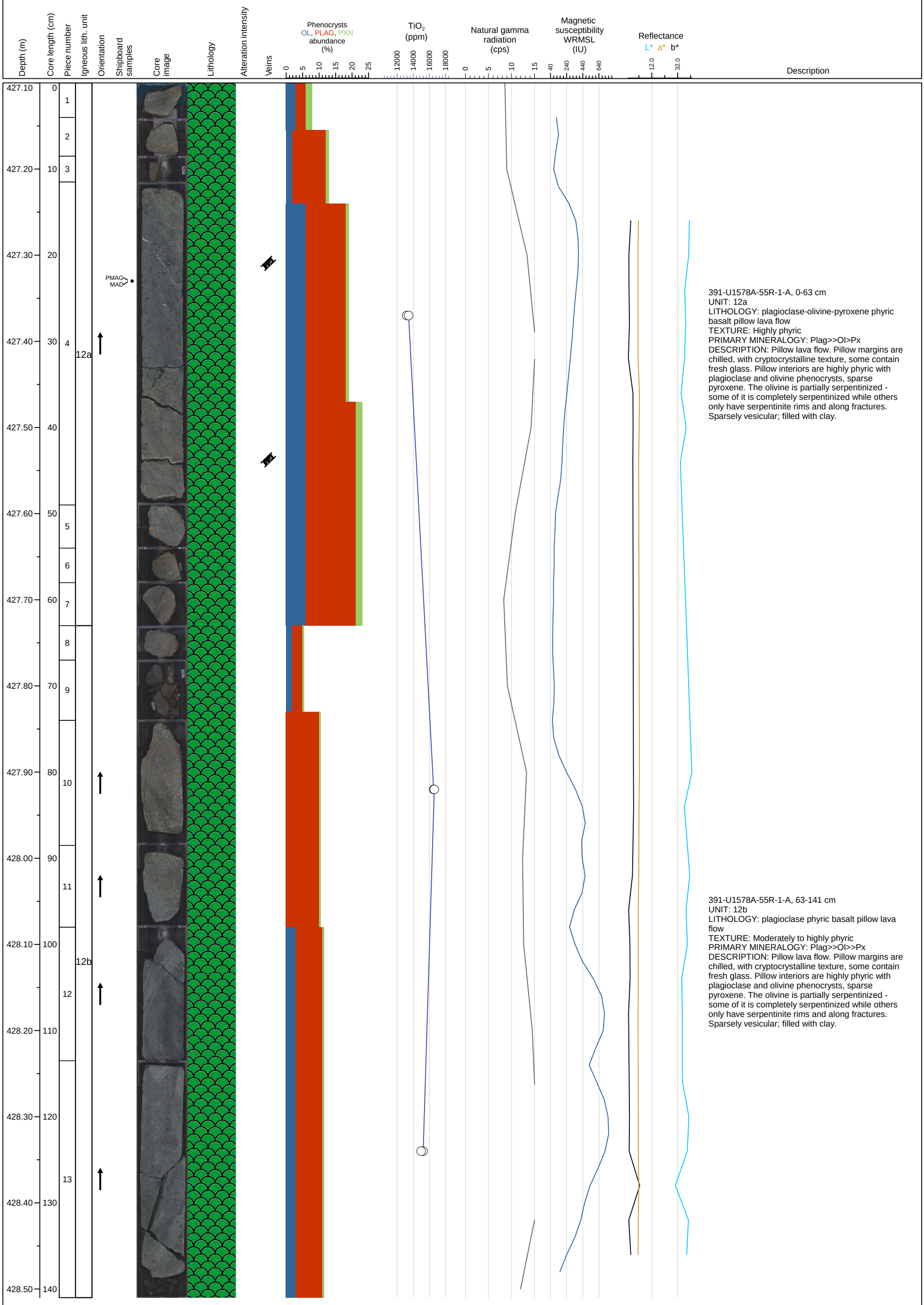
391-U1578A-54R-3-A, 0-125 cm
UNIT: 12a
LITHOLOGY: plagioclase-olivine-pyroxene phyric basalt pillow lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Ol>Px
DESCRIPTION: Pillow lava flow. Pillow margins are chilled, with cryptocrystalline texture, no fresh glass. Pillow interiors are highly phyric with plagioclase and olivine phenocrysts, sparse pyroxene. The olivine is partially serpentinized - some of it is completely serpentinized while others only have serpentinite rims and along fractures. Sparsely vesicular; filled with clay.

Hole 391-U1578A-54R Section 4, Top of Section: 425.44 m (CSF-A)



391-U1578A-54R-4-A, 0-78 cm
UNIT: 12a
LITHOLOGY: plagioclase-olivine-pyroxene phyric basalt pillow lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Ol>Px
DESCRIPTION: Pillow lava flow. Pillow margins are chilled, with cryptocrystalline texture, some contain fresh glass. Pillow interiors are highly phyric with plagioclase and olivine phenocrysts, sparse pyroxene. The olivine is partially serpentinized - some of it is completely serpentinized while others only have serpentinite rims and along fractures. Sparsely vesicular; filled with clay.

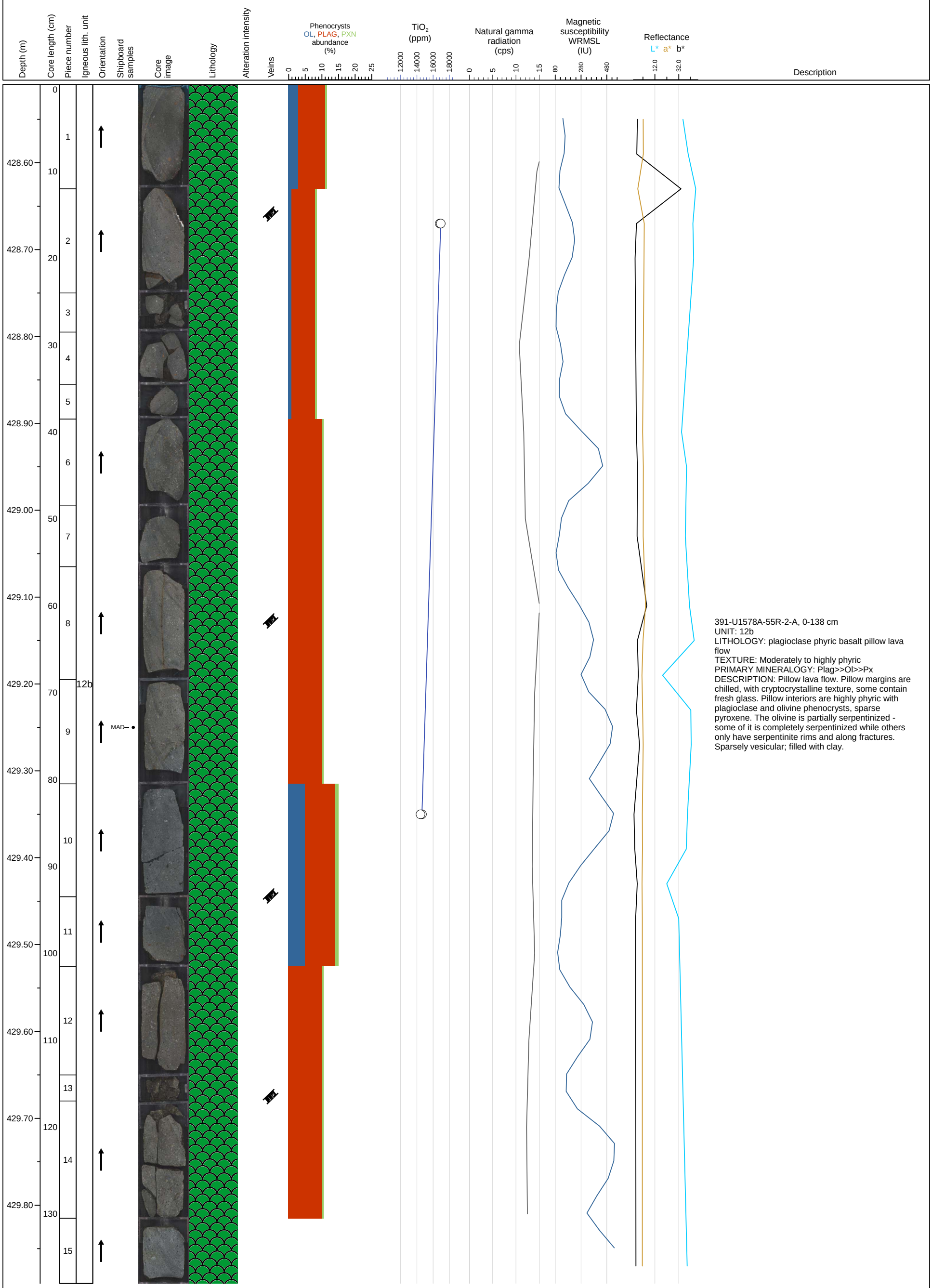
Hole 391-U1578A-55R Section 1, Top of Section: 427.1 m (CSF-A)



391-U1578A-55R-1-A, 0-63 cm
UNIT: 12a
LITHOLOGY: plagioclase-olivine-pyroxene phyric basalt pillow lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Ol>Px
DESCRIPTION: Pillow lava flow. Pillow margins are chilled, with cryptocrystalline texture, some contain fresh glass. Pillow interiors are highly phyric with plagioclase and olivine phenocrysts, sparse pyroxene. The olivine is partially serpentinized - some of it is completely serpentinized while others only have serpentinite rims and along fractures. Sparsely vesicular; filled with clay.

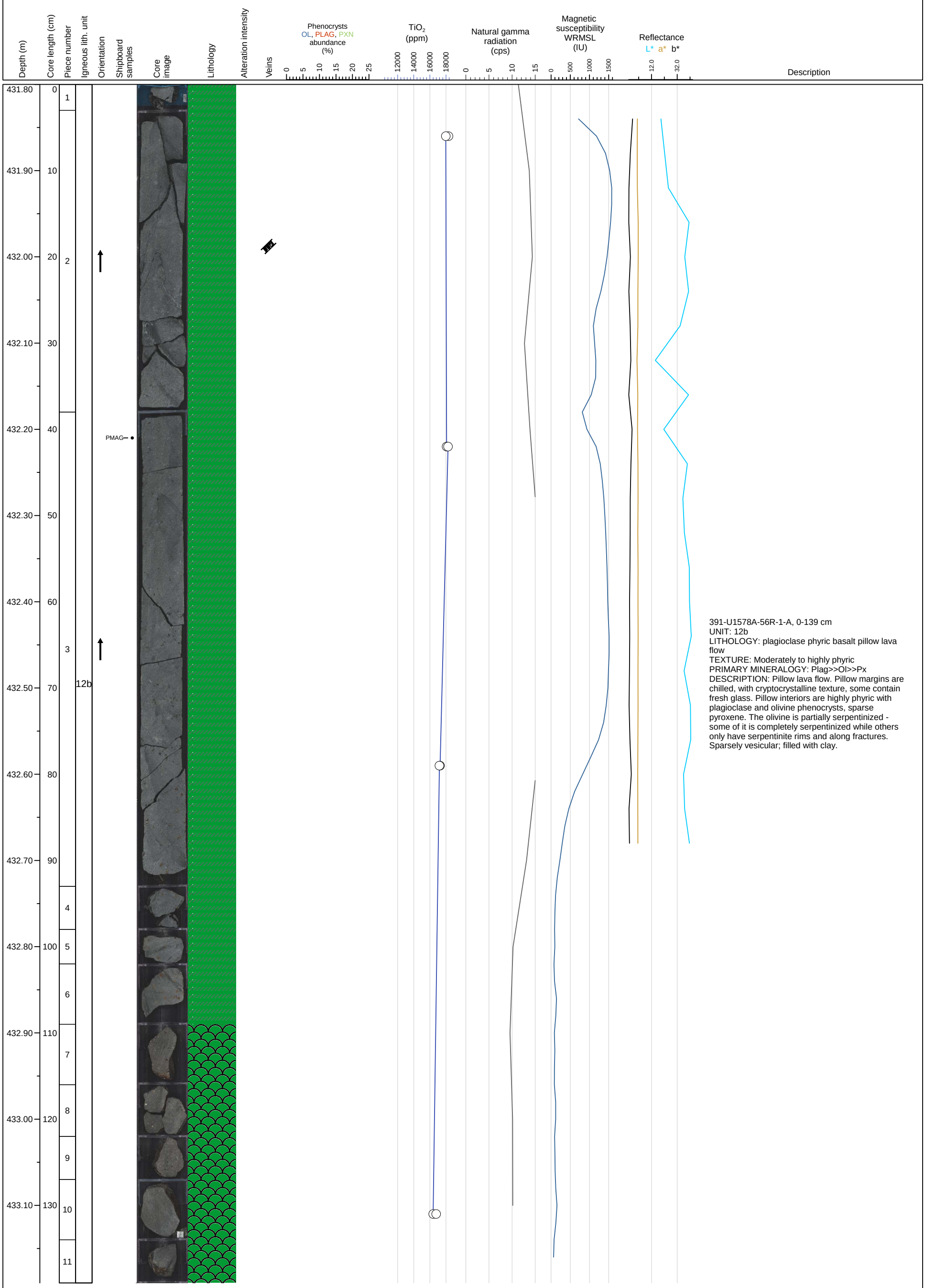
391-U1578A-55R-1-A, 63-141 cm
UNIT: 12b
LITHOLOGY: plagioclase phyric basalt pillow lava flow
TEXTURE: Moderately to highly phyric
PRIMARY MINERALOGY: Plag>>Ol>>Px
DESCRIPTION: Pillow lava flow. Pillow margins are chilled, with cryptocrystalline texture, some contain fresh glass. Pillow interiors are highly phyric with plagioclase and olivine phenocrysts, sparse pyroxene. The olivine is partially serpentinized - some of it is completely serpentinized while others only have serpentinite rims and along fractures. Sparsely vesicular; filled with clay.

Hole 391-U1578A-55R Section 2, Top of Section: 428.51 m (CSF-A)

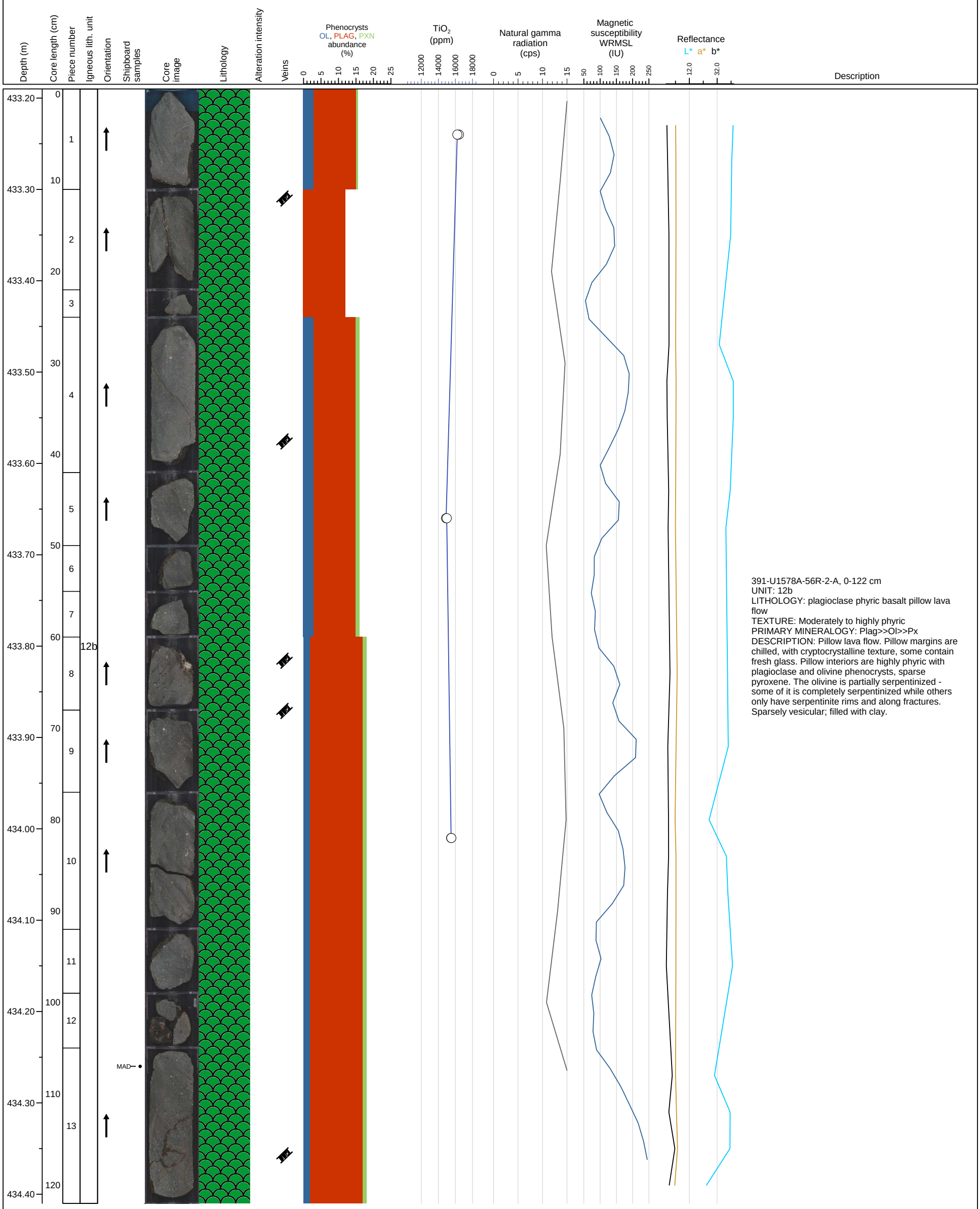


391-U1578A-55R-2-A, 0-138 cm
UNIT: 12b
LITHOLOGY: plagioclase phyric basalt pillow lava flow
TEXTURE: Moderately to highly phyric
PRIMARY MINERALOGY: Plag>>Ol>>Px
DESCRIPTION: Pillow lava flow. Pillow margins are chilled, with cryptocrystalline texture, some contain fresh glass. Pillow interiors are highly phyric with plagioclase and olivine phenocrysts, sparse pyroxene. The olivine is partially serpentinized - some of it is completely serpentinized while others only have serpentinite rims and along fractures. Sparsely vesicular; filled with clay.

Hole 391-U1578A-56R Section 1, Top of Section: 431.8 m (CSF-A)

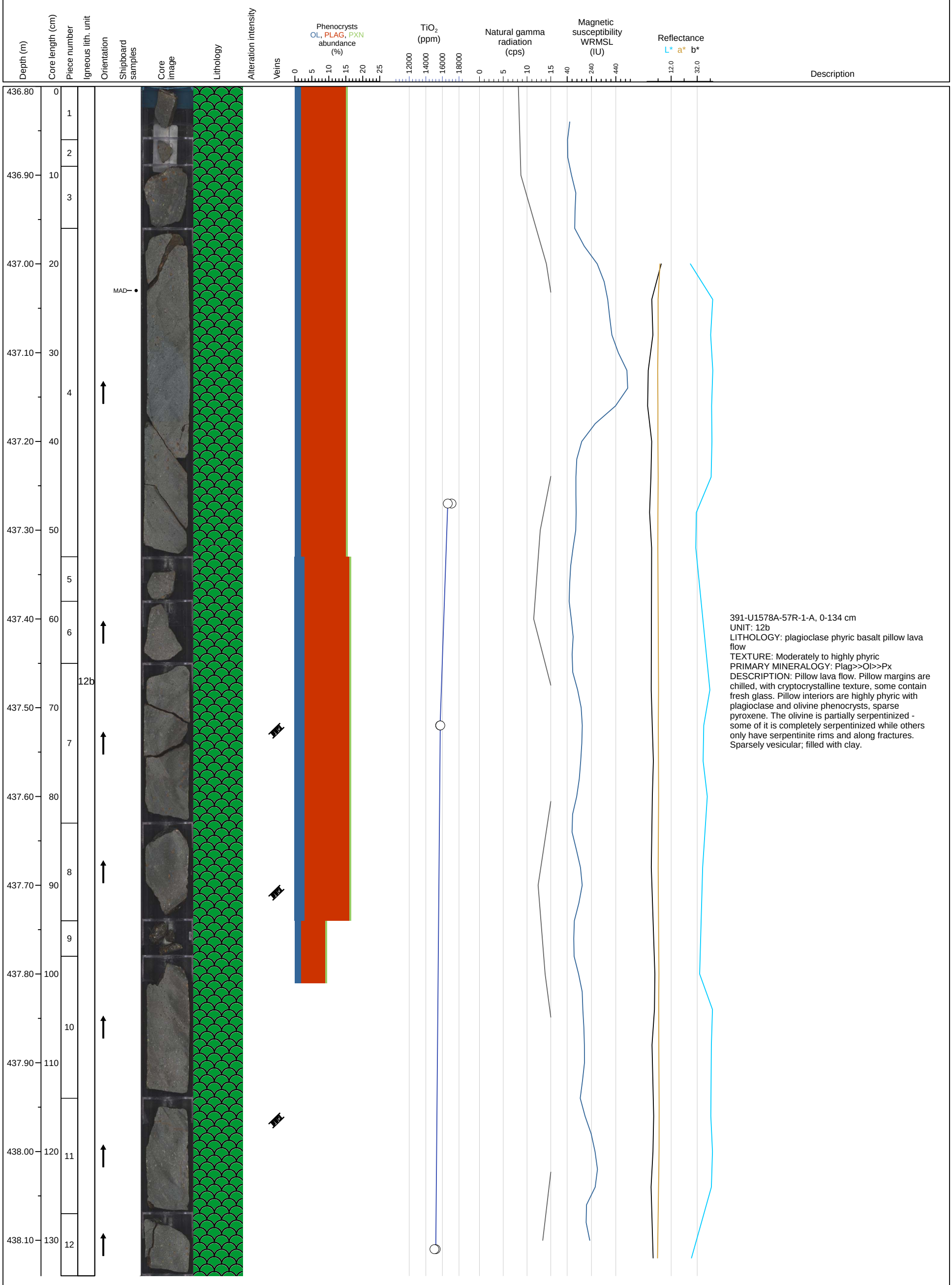


Hole 391-U1578A-56R Section 2, Top of Section: 433.19 m (CSF-A)



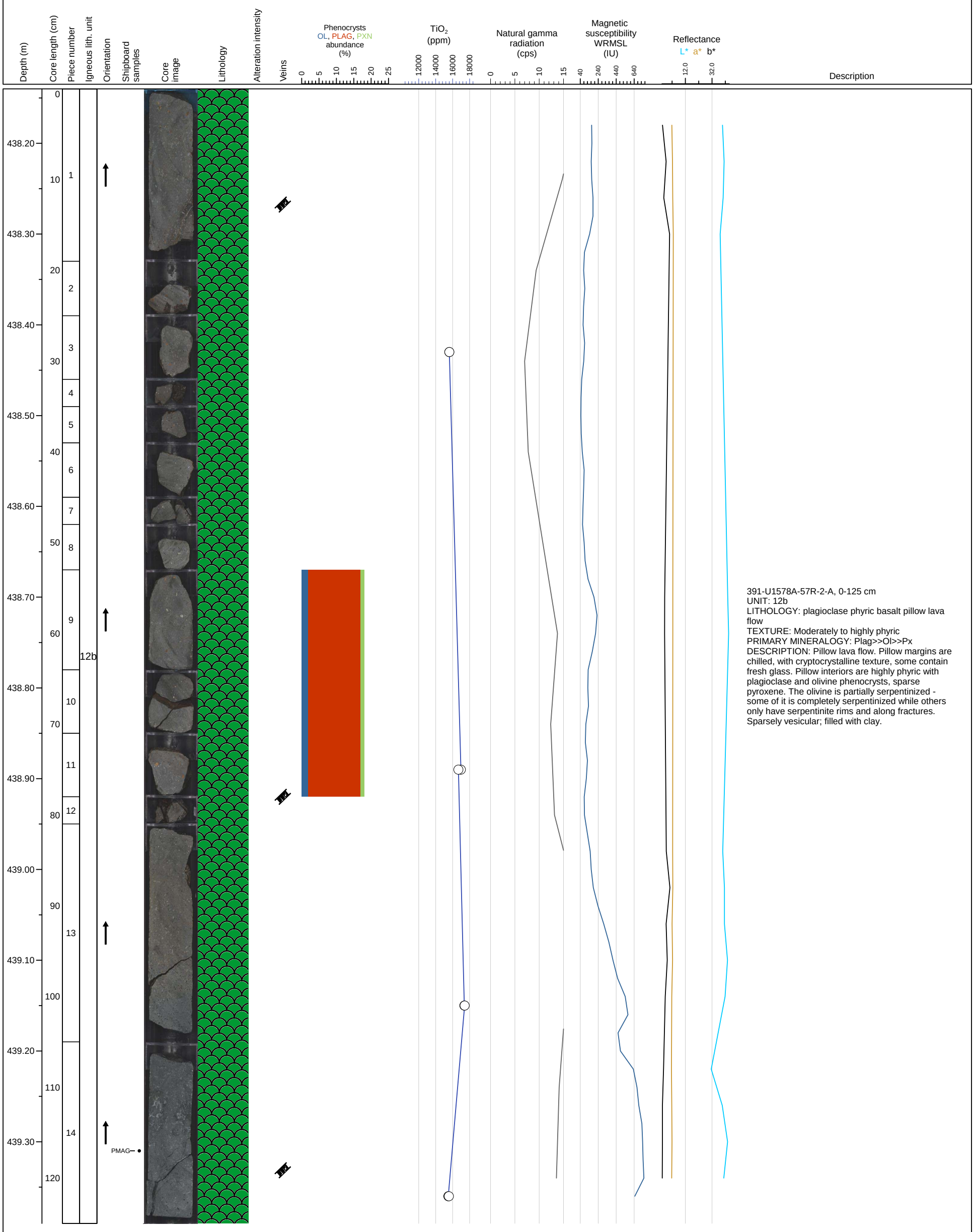
391-U1578A-56R-2-A, 0-122 cm
UNIT: 12b
LITHOLOGY: plagioclase phyric basalt pillow lava flow
TEXTURE: Moderately to highly phyric
PRIMARY MINERALOGY: Plag>>Ol>>Px
DESCRIPTION: Pillow lava flow. Pillow margins are chilled, with cryptocrystalline texture, some contain fresh glass. Pillow interiors are highly phyric with plagioclase and olivine phenocrysts, sparse pyroxene. The olivine is partially serpentinized - some of it is completely serpentinized while others only have serpentinite rims and along fractures. Sparsely vesicular; filled with clay.

Hole 391-U1578A-57R Section 1, Top of Section: 436.8 m (CSF-A)

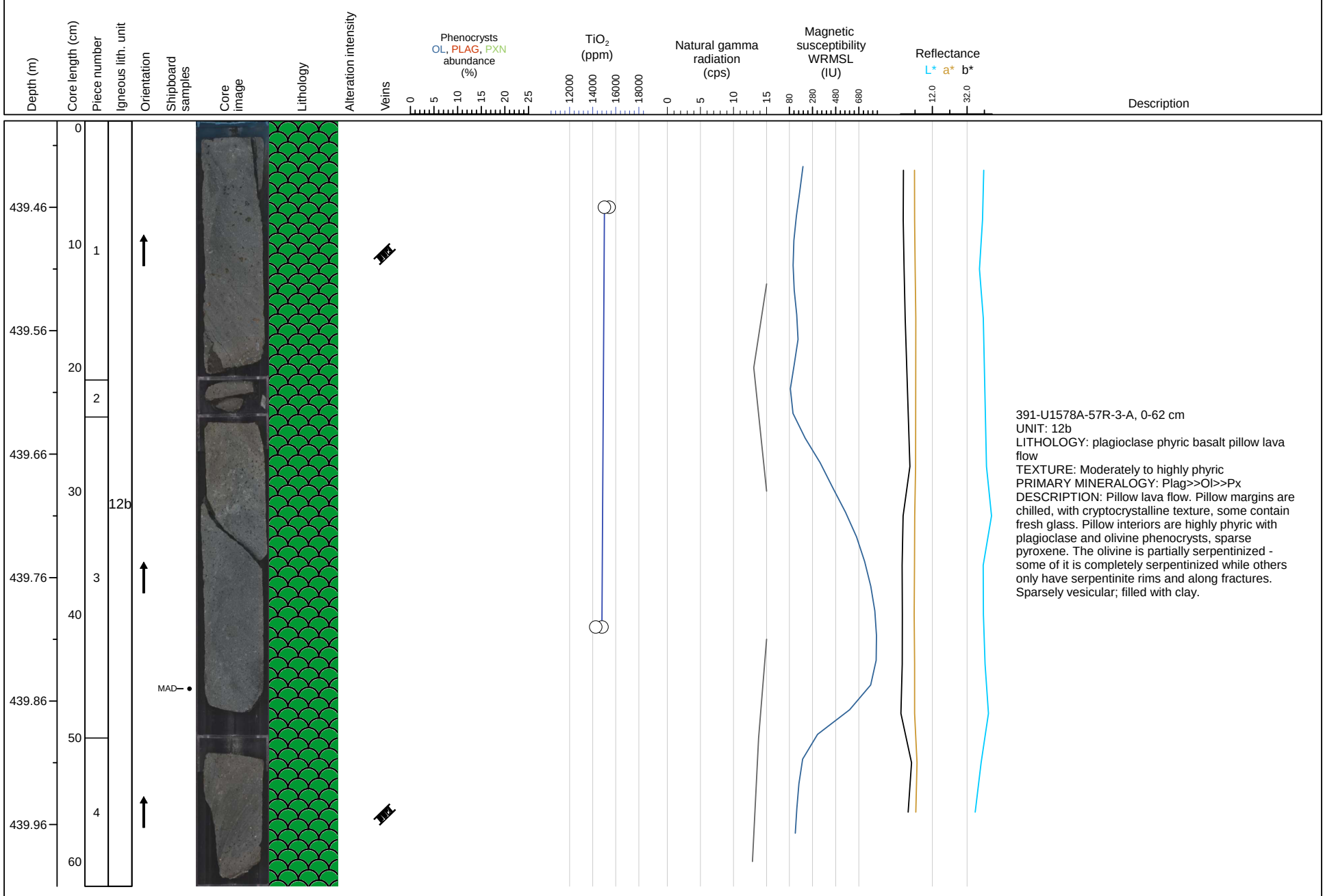


391-U1578A-57R-1-A, 0-134 cm
UNIT: 12b
LITHOLOGY: plagioclase phyric basalt pillow lava flow
TEXTURE: Moderately to highly phyric
PRIMARY MINERALOGY: Plag>>Ol>>Px
DESCRIPTION: Pillow lava flow. Pillow margins are chilled, with cryptocrystalline texture, some contain fresh glass. Pillow interiors are highly phyric with plagioclase and olivine phenocrysts, sparse pyroxene. The olivine is partially serpentinized - some of it is completely serpentinized while others only have serpentinite rims and along fractures. Sparsely vesicular; filled with clay.

Hole 391-U1578A-57R Section 2, Top of Section: 438.14 m (CSF-A)

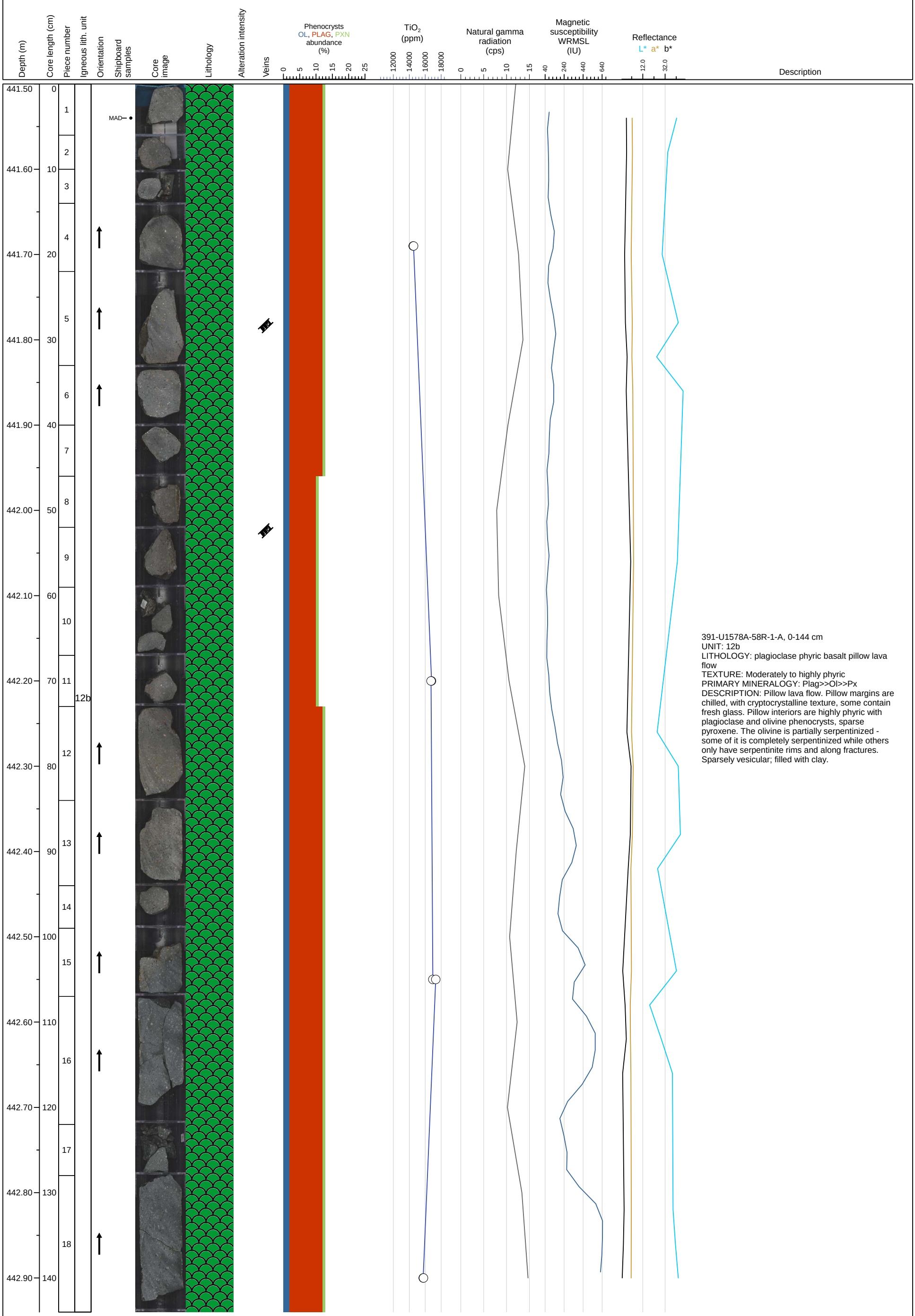


Hole 391-U1578A-57R Section 3, Top of Section: 439.39 m (CSF-A)

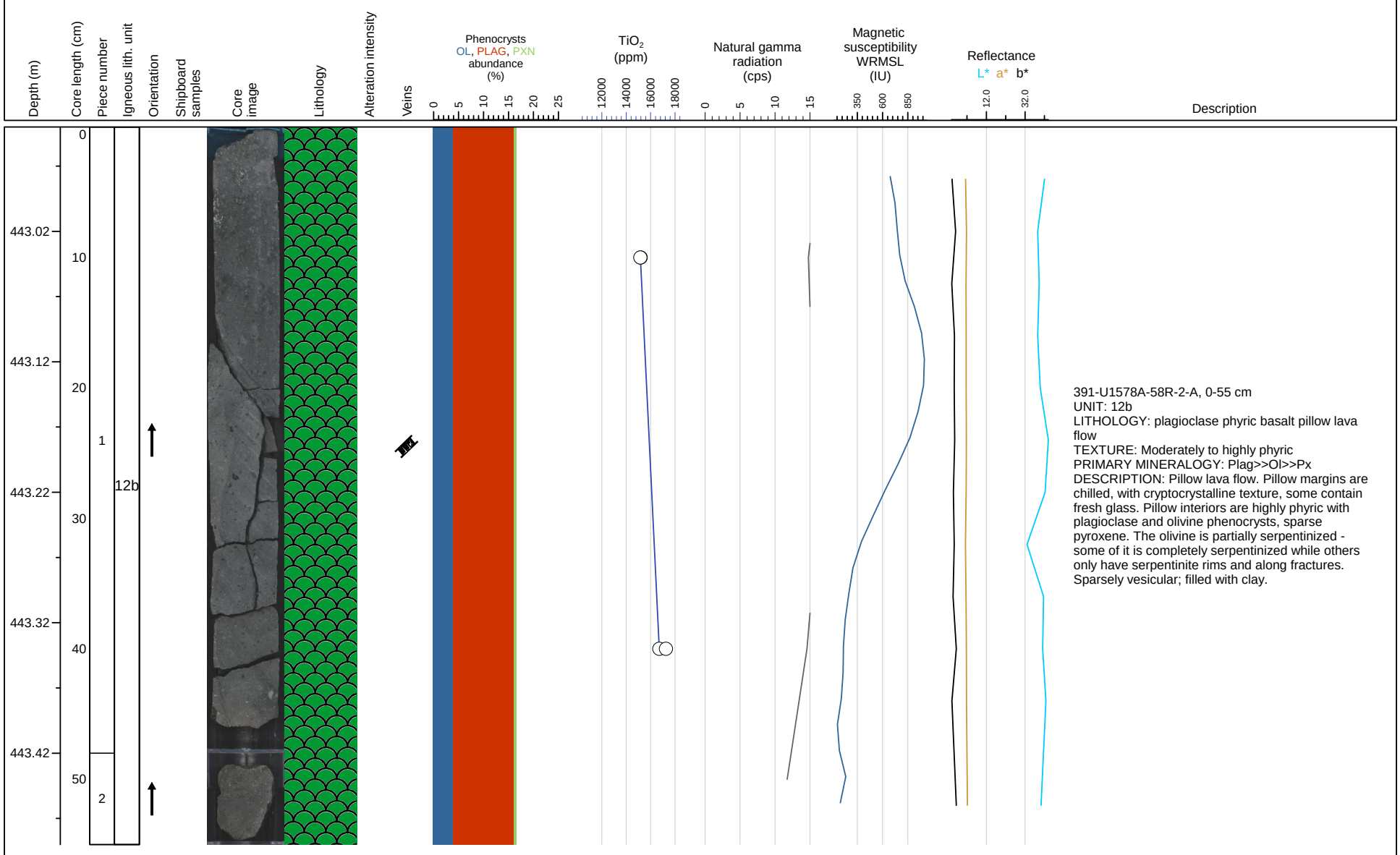


391-U1578A-57R-3-A, 0-62 cm
UNIT: 12b
LITHOLOGY: plagioclase phyric basalt pillow lava flow
TEXTURE: Moderately to highly phyric
PRIMARY MINERALOGY: Plag>>Ol>>Px
DESCRIPTION: Pillow lava flow. Pillow margins are chilled, with cryptocrystalline texture, some contain fresh glass. Pillow interiors are highly phyric with plagioclase and olivine phenocrysts, sparse pyroxene. The olivine is partially serpentinized - some of it is completely serpentinized while others only have serpentinite rims and along fractures. Sparsely vesicular; filled with clay.

Hole 391-U1578A-58R Section 1, Top of Section: 441.5 m (CSF-A)

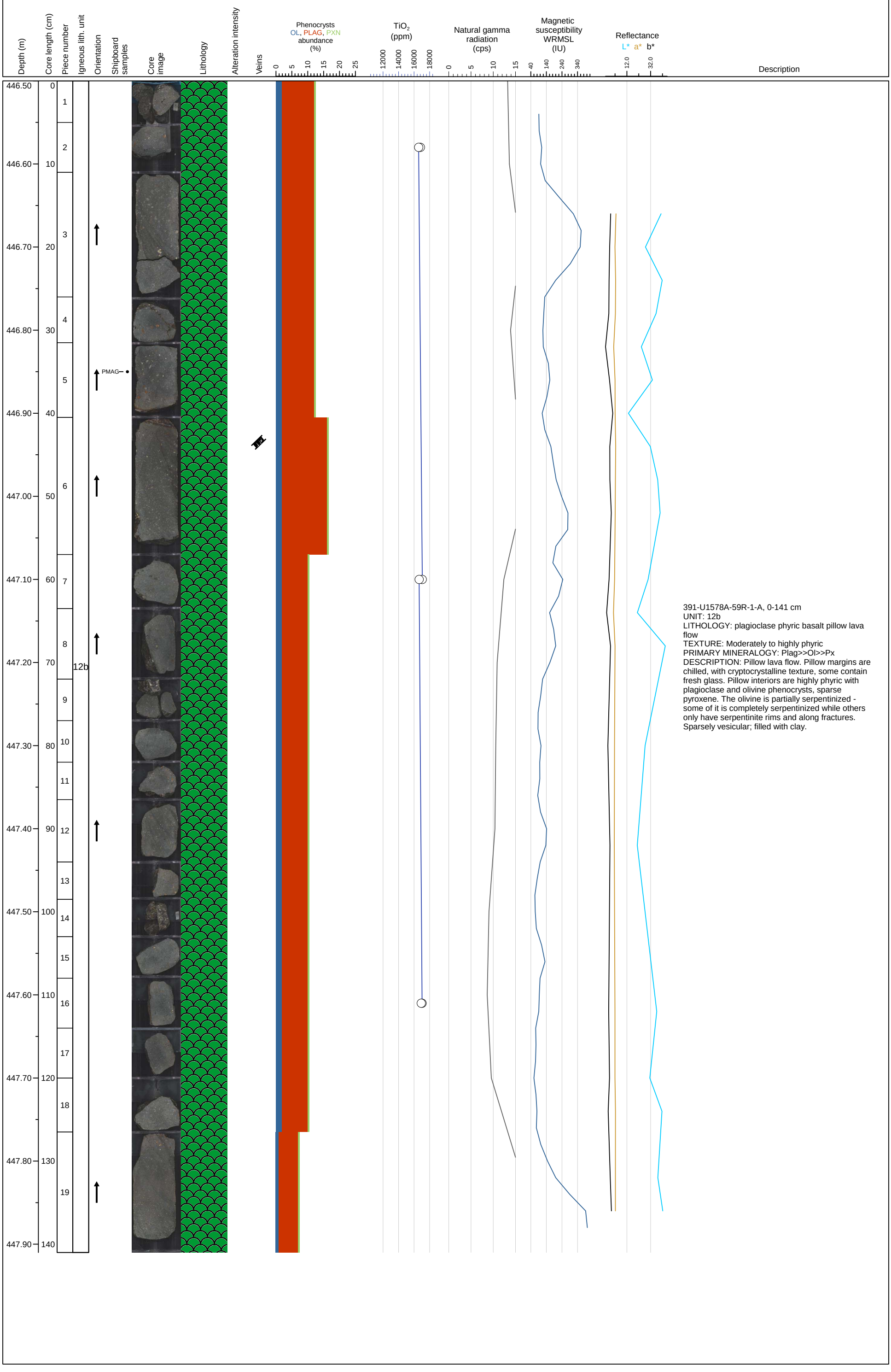


Hole 391-U1578A-58R Section 2, Top of Section: 442.94 m (CSF-A)



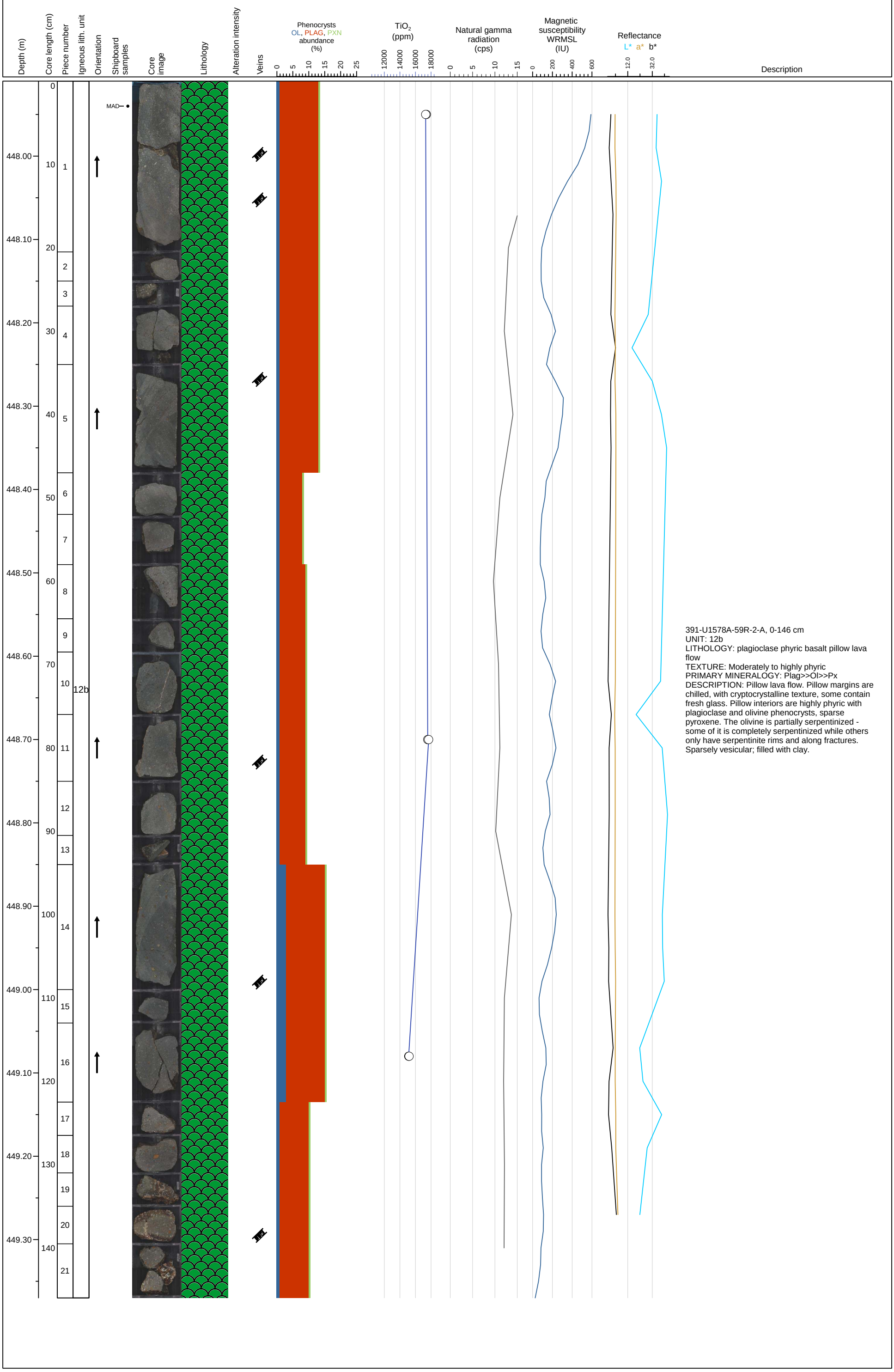
391-U1578A-58R-2-A, 0-55 cm
UNIT: 12b
LITHOLOGY: plagioclase phyric basalt pillow lava flow
TEXTURE: Moderately to highly phyric
PRIMARY MINERALOGY: Plag>>Ol>>Px
DESCRIPTION: Pillow lava flow. Pillow margins are chilled, with cryptocrystalline texture, some contain fresh glass. Pillow interiors are highly phyric with plagioclase and olivine phenocrysts, sparse pyroxene. The olivine is partially serpentinized - some of it is completely serpentinized while others only have serpentinite rims and along fractures. Sparsely vesicular; filled with clay.

Hole 391-U1578A-59R Section 1, Top of Section: 446.5 m (CSF-A)

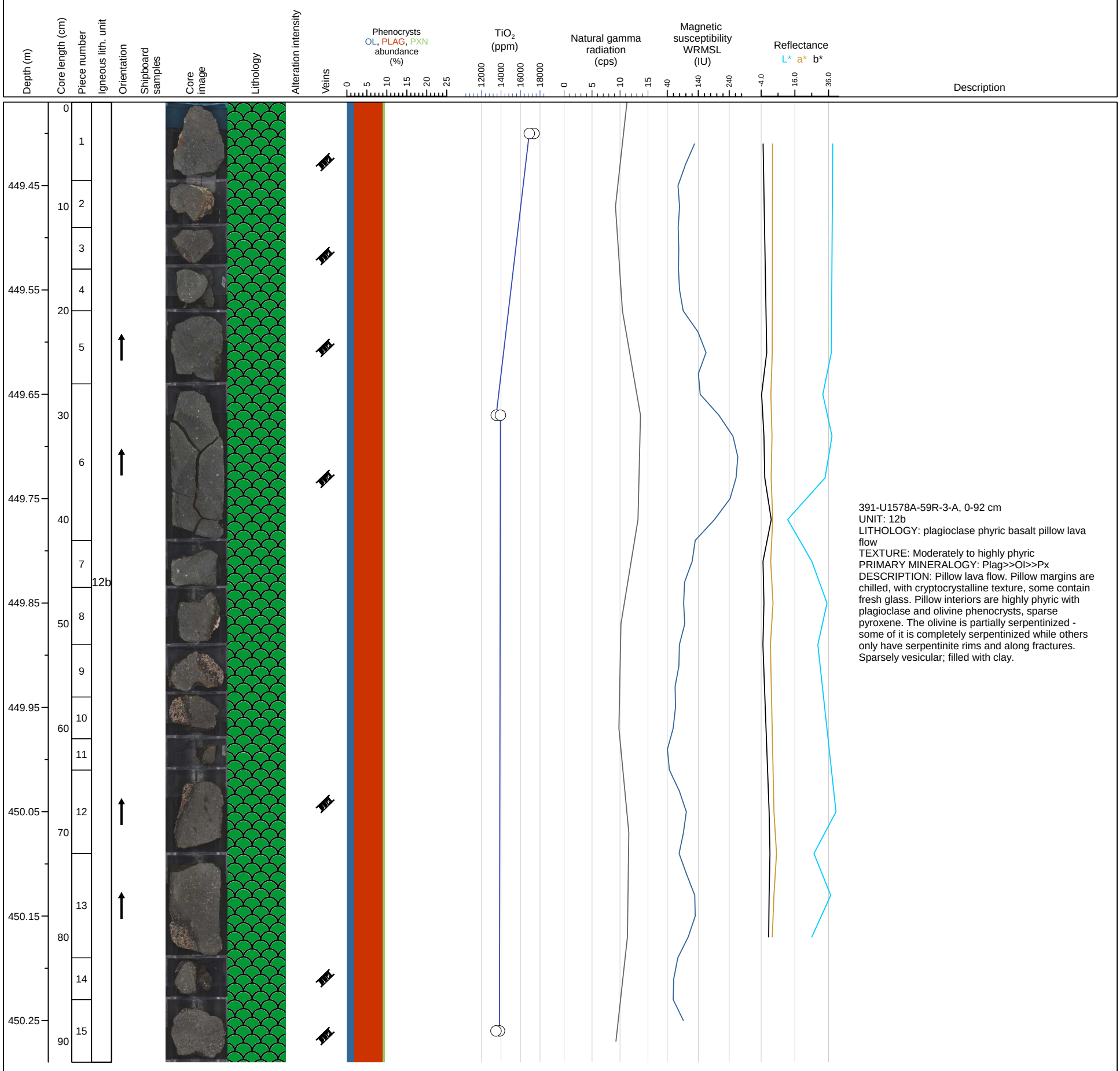


391-U1578A-59R-1-A, 0-141 cm
UNIT: 12b
LITHOLOGY: plagioclase phyric basalt pillow lava flow
TEXTURE: Moderately to highly phyric
PRIMARY MINERALOGY: Plag>>Ol>>Px
DESCRIPTION: Pillow lava flow. Pillow margins are chilled, with cryptocrystalline texture, some contain fresh glass. Pillow interiors are highly phyric with plagioclase and olivine phenocrysts, sparse pyroxene. The olivine is partially serpentinized - some of it is completely serpentinized while others only have serpentinite rims and along fractures. Sparsely vesicular; filled with clay.

Hole 391-U1578A-59R Section 2, Top of Section: 447.91 m (CSF-A)

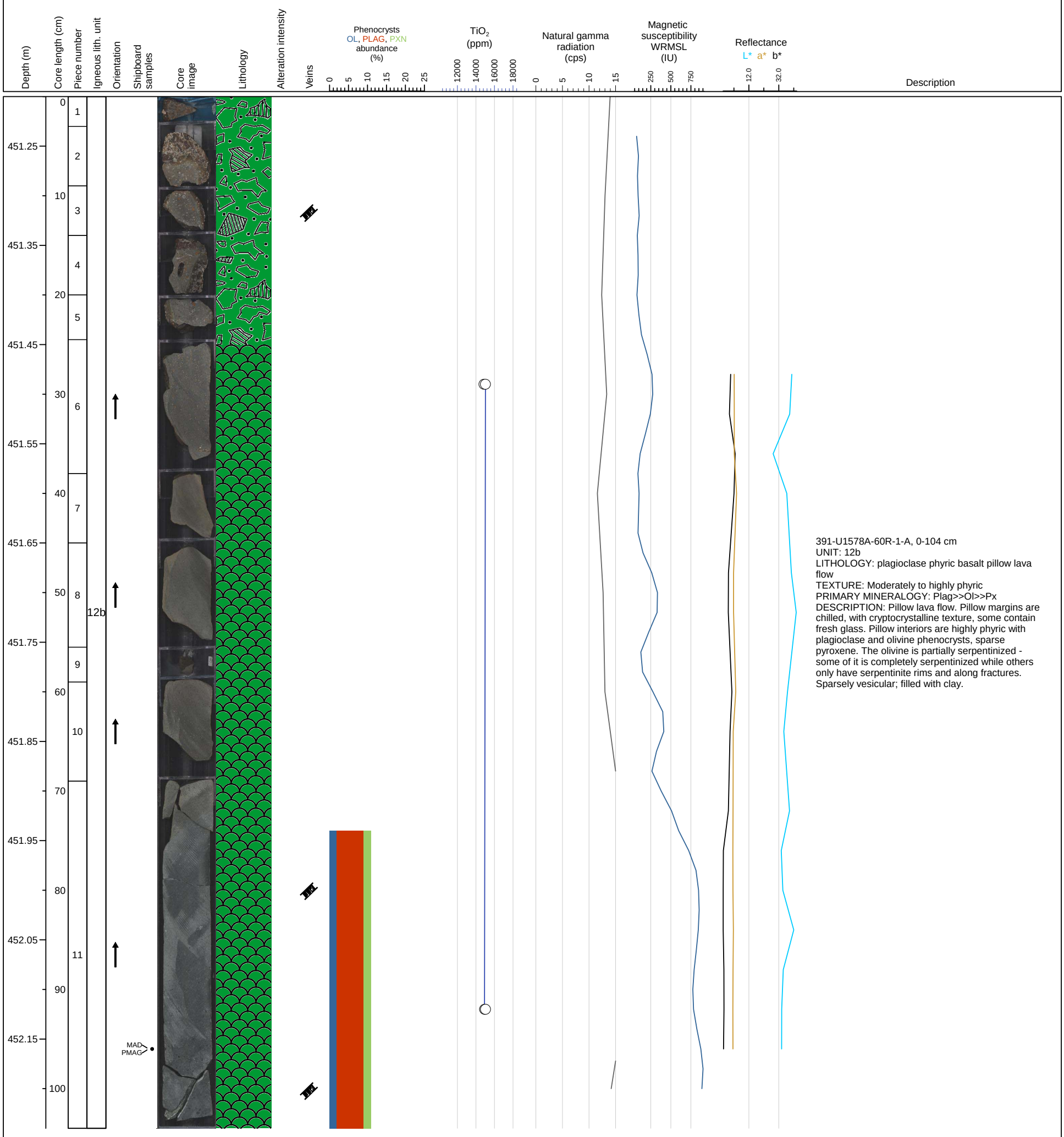


Hole 391-U1578A-59R Section 3, Top of Section: 449.37 m (CSF-A)



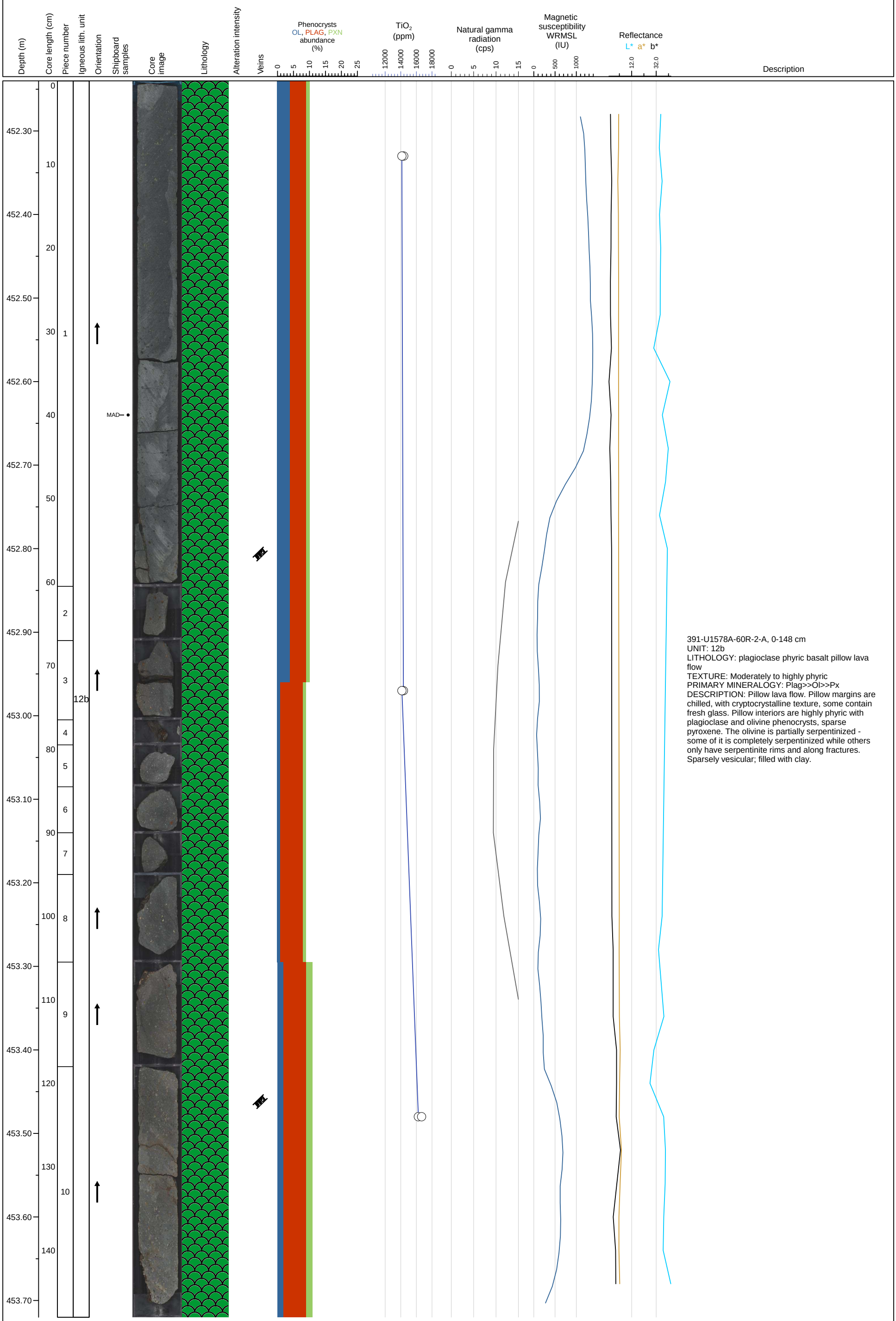
391-U1578A-59R-3-A, 0-92 cm
UNIT: 12b
LITHOLOGY: plagioclase phyric basalt pillow lava flow
TEXTURE: Moderately to highly phyric
PRIMARY MINERALOGY: Plag>>Ol>>Px
DESCRIPTION: Pillow lava flow. Pillow margins are chilled, with cryptocrystalline texture, some contain fresh glass. Pillow interiors are highly phyric with plagioclase and olivine phenocrysts, sparse pyroxene. The olivine is partially serpentinized - some of it is completely serpentinized while others only have serpentinite rims and along fractures. Sparsely vesicular; filled with clay.

Hole 391-U1578A-60R Section 1, Top of Section: 451.2 m (CSF-A)

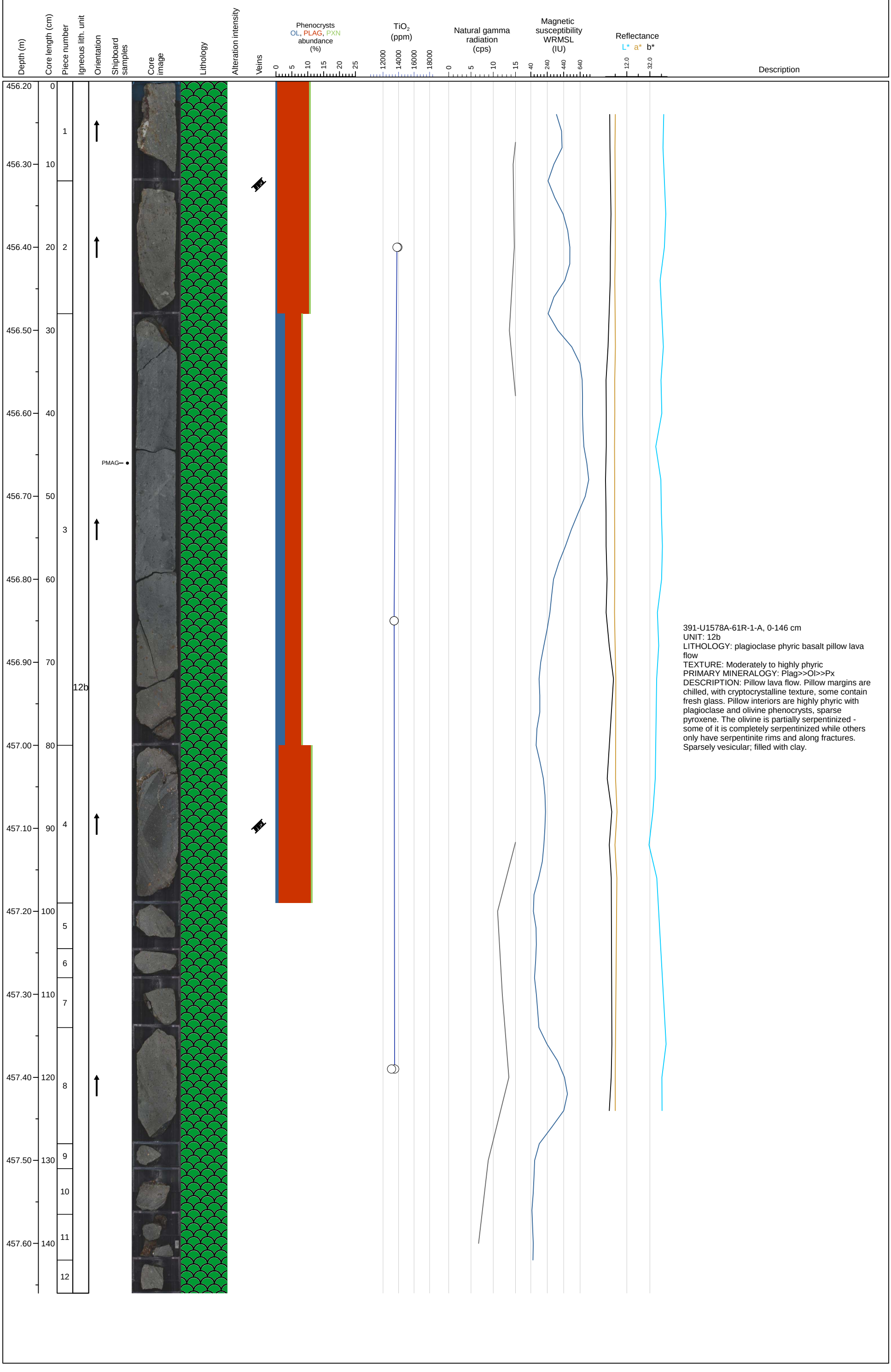


391-U1578A-60R-1-A, 0-104 cm
UNIT: 12b
LITHOLOGY: plagioclase phyric basalt pillow lava flow
TEXTURE: Moderately to highly phyric
PRIMARY MINERALOGY: Plag>>Ol>>Px
DESCRIPTION: Pillow lava flow. Pillow margins are chilled, with cryptocrystalline texture, some contain fresh glass. Pillow interiors are highly phyric with plagioclase and olivine phenocrysts, sparse pyroxene. The olivine is partially serpentinized - some of it is completely serpentinized while others only have serpentinite rims and along fractures. Sparsely vesicular; filled with clay.

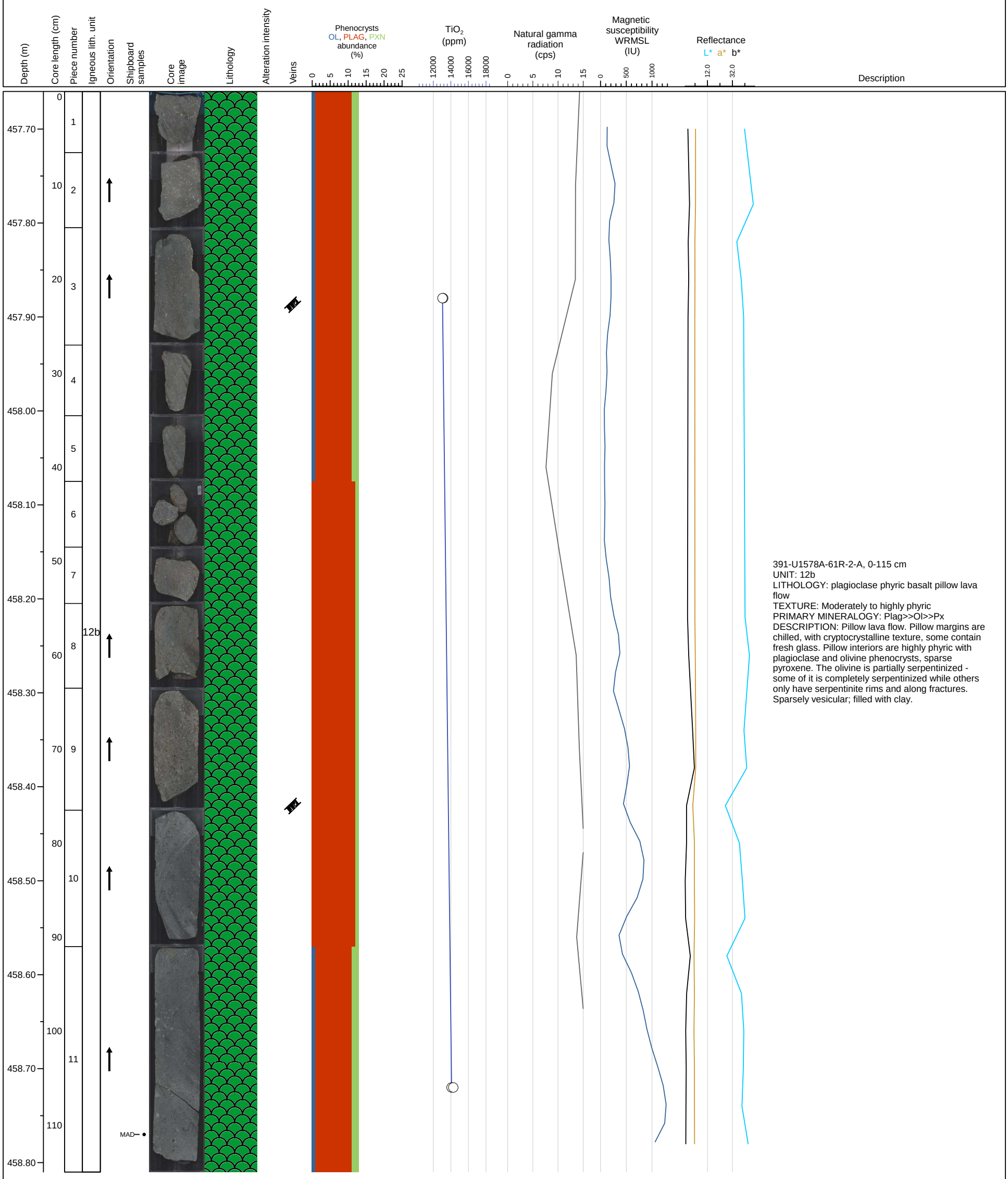
Hole 391-U1578A-60R Section 2, Top of Section: 452.24 m (CSF-A)



Hole 391-U1578A-61R Section 1, Top of Section: 456.2 m (CSF-A)

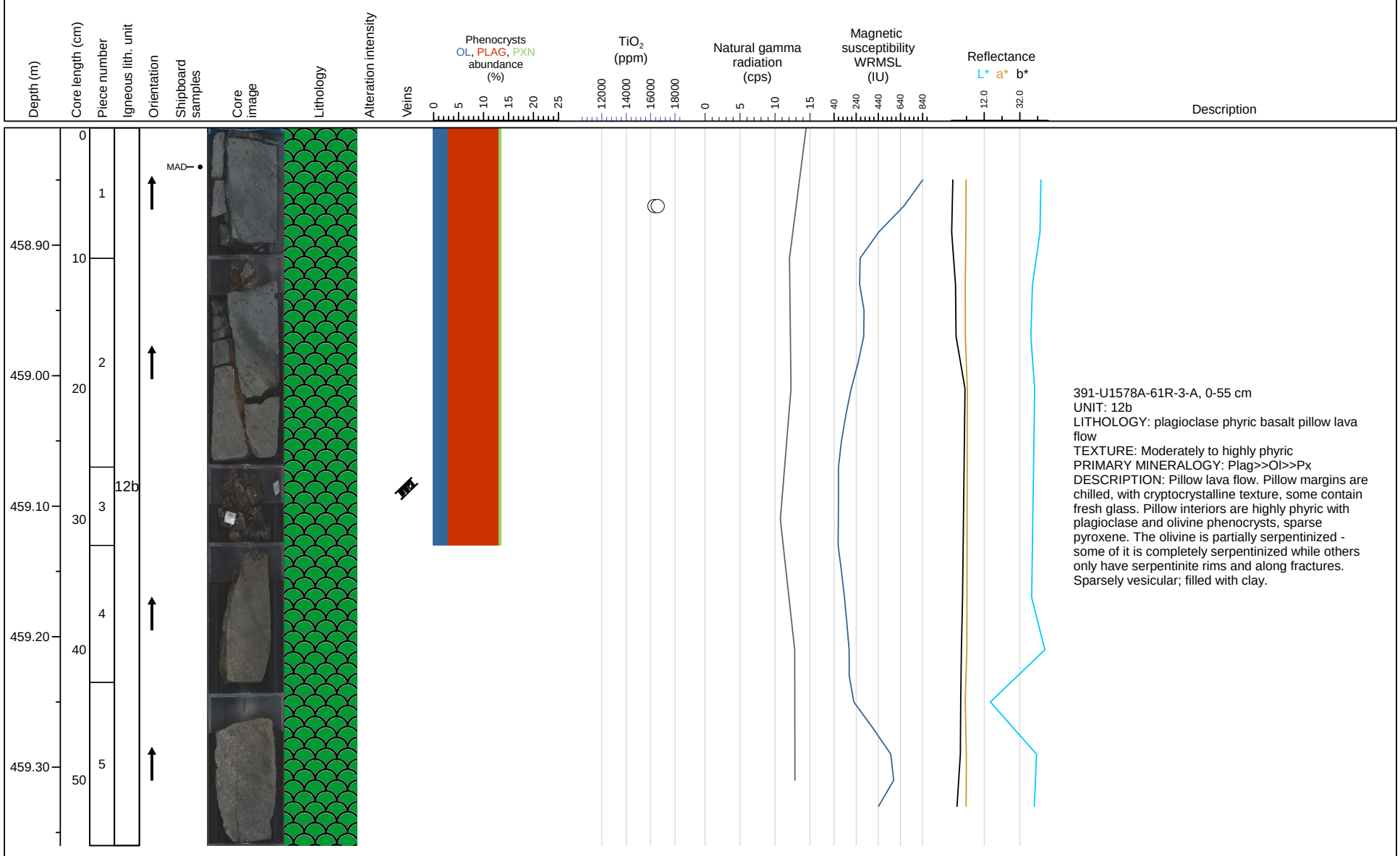


Hole 391-U1578A-61R Section 2, Top of Section: 457.66 m (CSF-A)



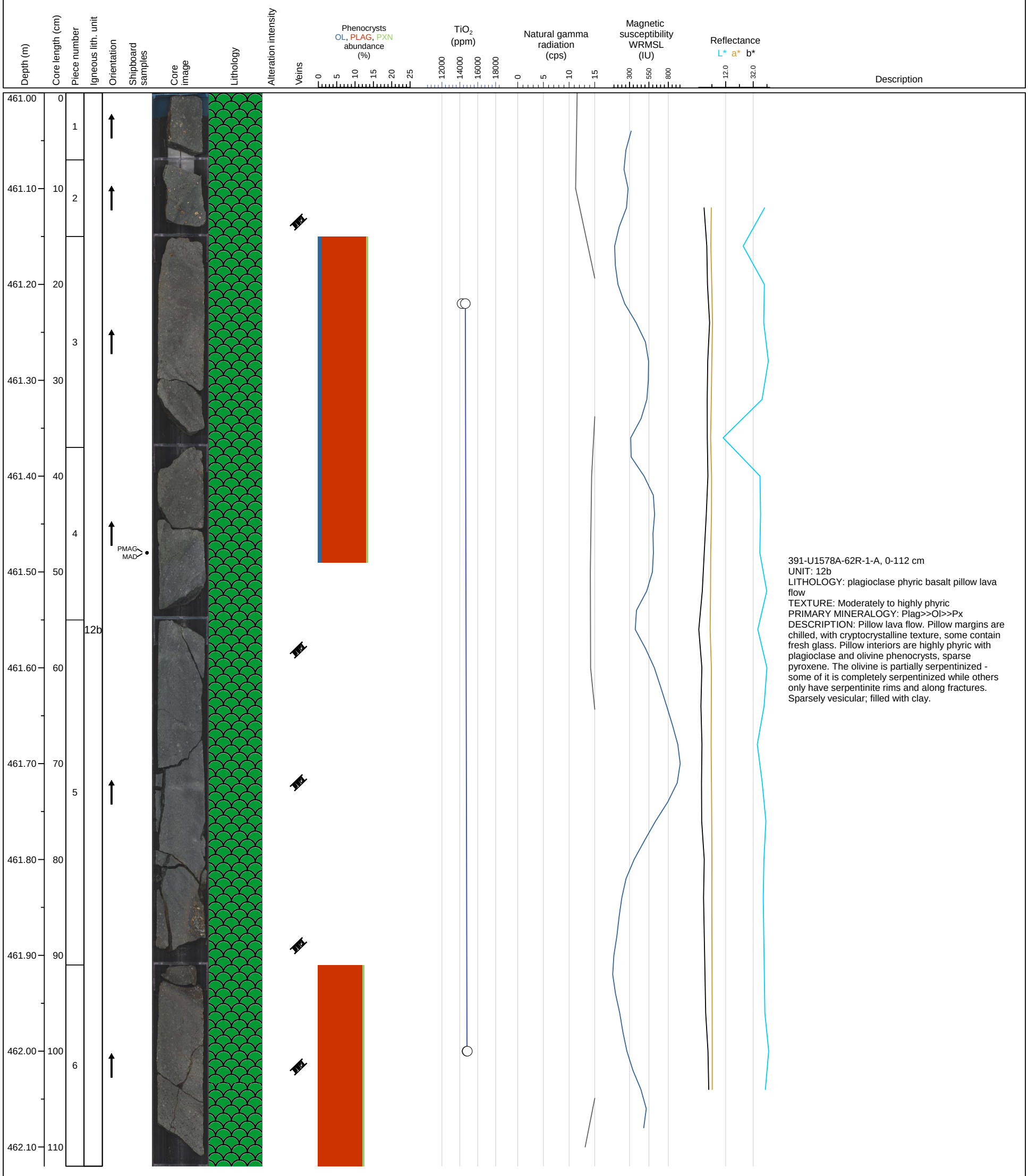
391-U1578A-61R-2-A, 0-115 cm
UNIT: 12b
LITHOLOGY: plagioclase phyric basalt pillow lava flow
TEXTURE: Moderately to highly phyric
PRIMARY MINERALOGY: Plag>>Ol>>Px
DESCRIPTION: Pillow lava flow. Pillow margins are chilled, with cryptocrystalline texture, some contain fresh glass. Pillow interiors are highly phyric with plagioclase and olivine phenocrysts, sparse pyroxene. The olivine is partially serpentinized - some of it is completely serpentinized while others only have serpentinite rims and along fractures. Sparsely vesicular; filled with clay.

Hole 391-U1578A-61R Section 3, Top of Section: 458.81 m (CSF-A)



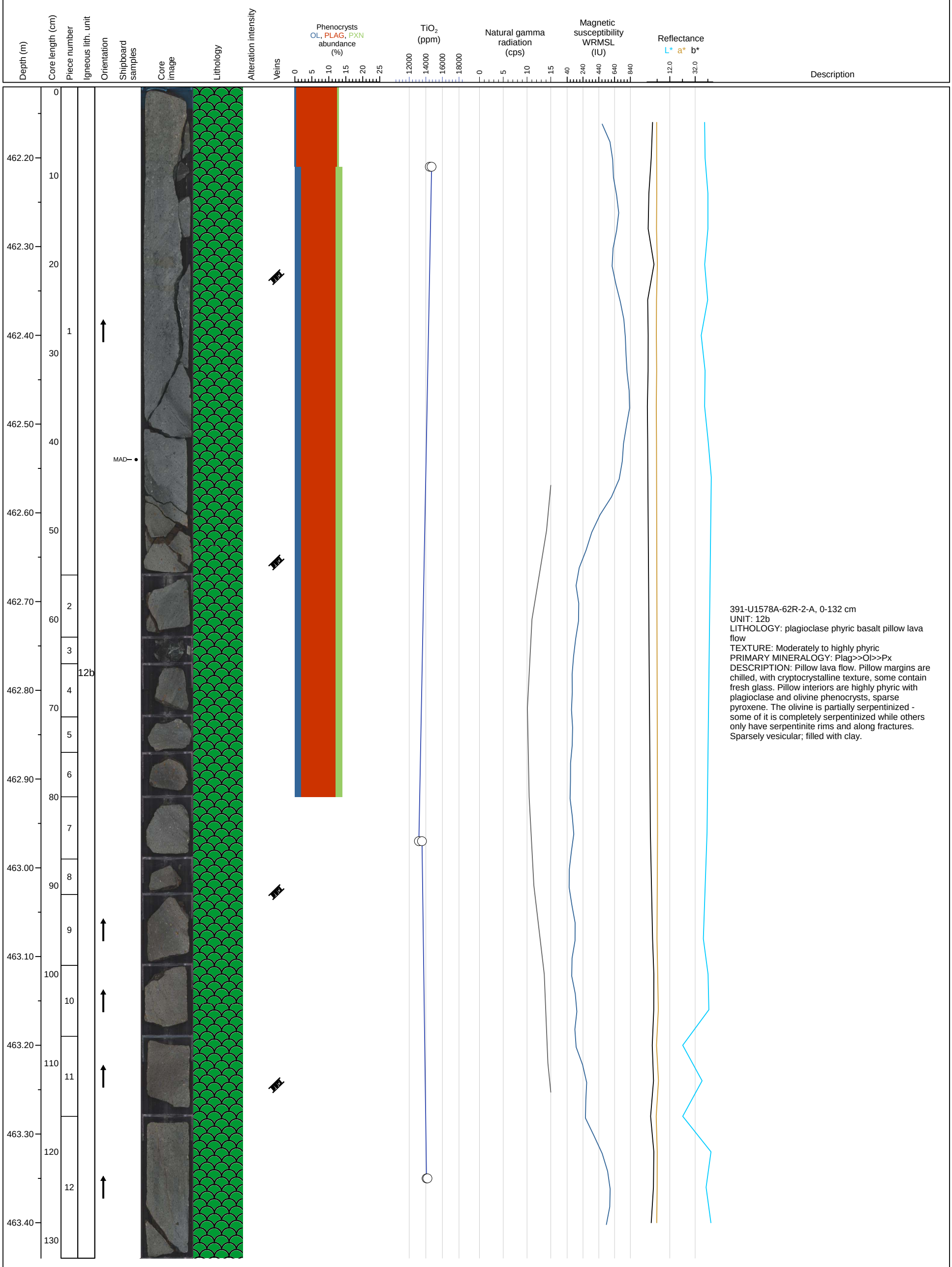
391-U1578A-61R-3-A, 0-55 cm
UNIT: 12b
LITHOLOGY: plagioclase phyric basalt pillow lava flow
TEXTURE: Moderately to highly phyric
PRIMARY MINERALOGY: Plag>>Ol>>Px
DESCRIPTION: Pillow lava flow. Pillow margins are chilled, with cryptocrystalline texture, some contain fresh glass. Pillow interiors are highly phyric with plagioclase and olivine phenocrysts, sparse pyroxene. The olivine is partially serpentinized - some of it is completely serpentinized while others only have serpentinite rims and along fractures. Sparsely vesicular; filled with clay.

Hole 391-U1578A-62R Section 1, Top of Section: 461.0 m (CSF-A)



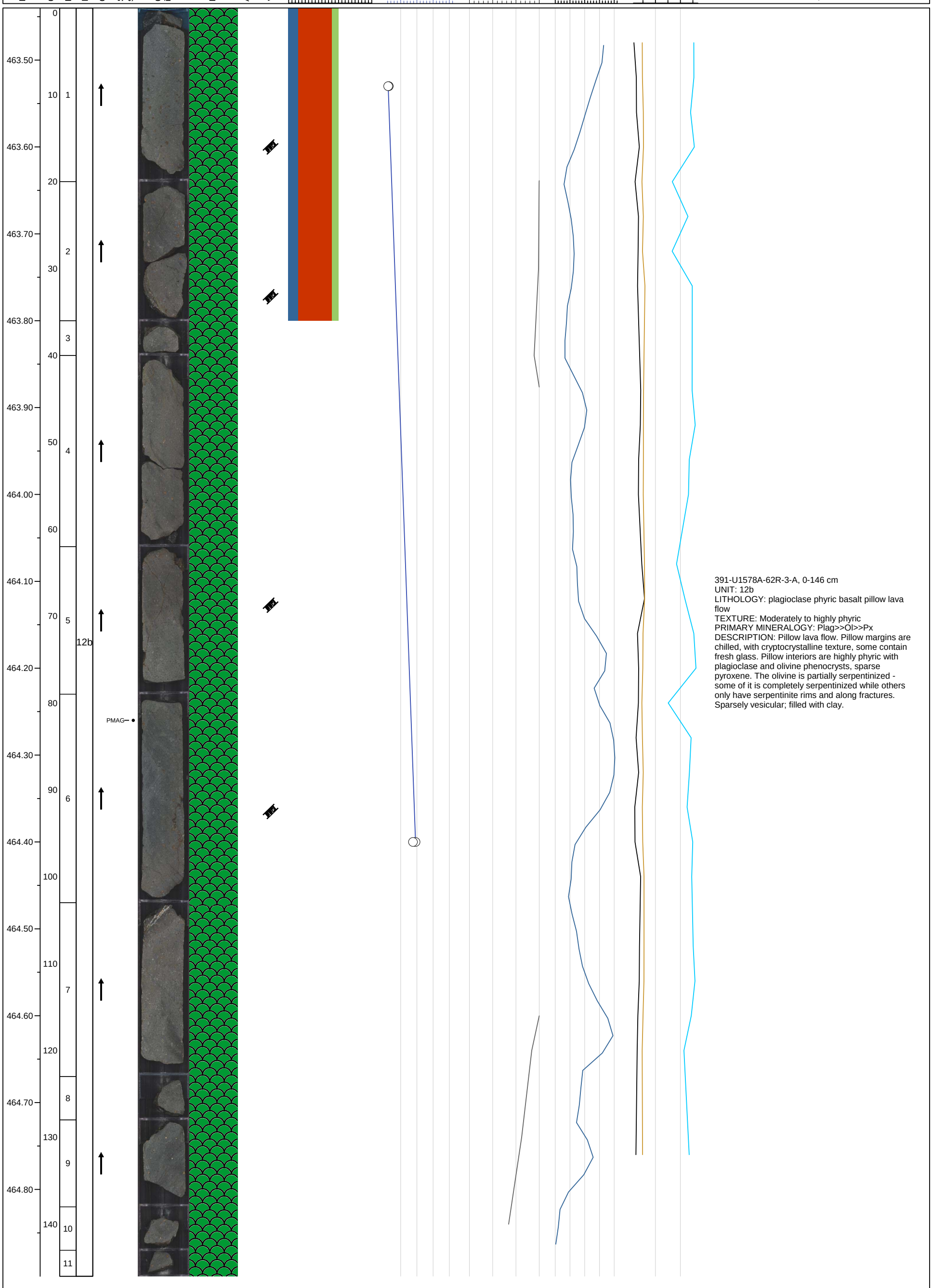
391-U1578A-62R-1-A, 0-112 cm
UNIT: 12b
LITHOLOGY: plagioclase phyric basalt pillow lava flow
TEXTURE: Moderately to highly phyric
PRIMARY MINERALOGY: Plag>>Ol>>Px
DESCRIPTION: Pillow lava flow. Pillow margins are chilled, with cryptocrystalline texture, some contain fresh glass. Pillow interiors are highly phyric with plagioclase and olivine phenocrysts, sparse pyroxene. The olivine is partially serpentinized - some of it is completely serpentinized while others only have serpentinite rims and along fractures. Sparsely vesicular; filled with clay.

Hole 391-U1578A-62R Section 2, Top of Section: 462.12 m (CSF-A)



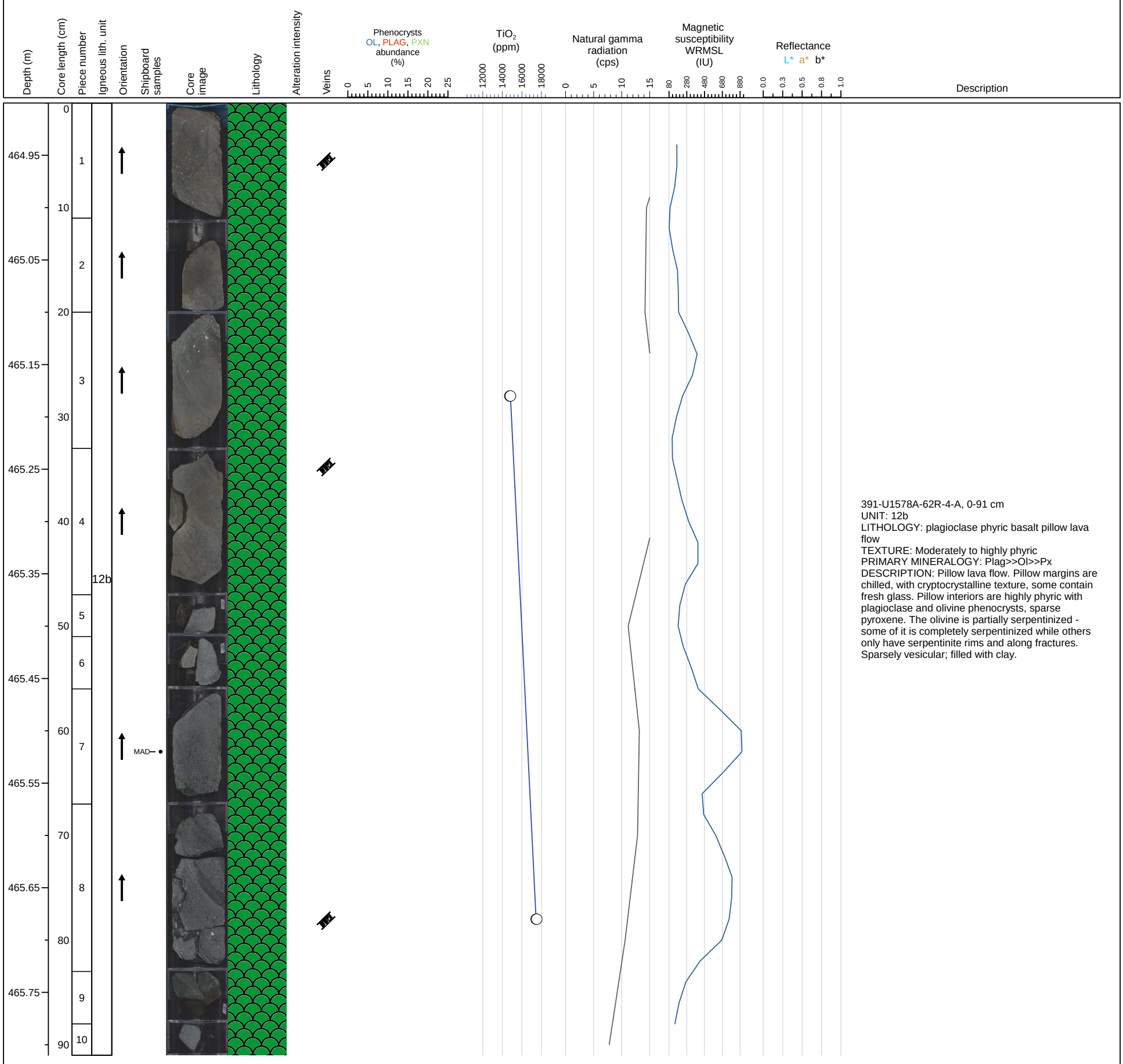
391-U1578A-62R-2-A, 0-132 cm
UNIT: 12b
LITHOLOGY: plagioclase phyric basalt pillow lava flow
TEXTURE: Moderately to highly phyric
PRIMARY MINERALOGY: Plag>>Ol>>Px
DESCRIPTION: Pillow lava flow. Pillow margins are chilled, with cryptocrystalline texture, some contain fresh glass. Pillow interiors are highly phyric with plagioclase and olivine phenocrysts, sparse pyroxene. The olivine is partially serpentinized - some of it is completely serpentinized while others only have serpentinite rims and along fractures. Sparsely vesicular; filled with clay.

Hole 391-U1578A-62R Section 3, Top of Section: 463.44 m (CSF-A)



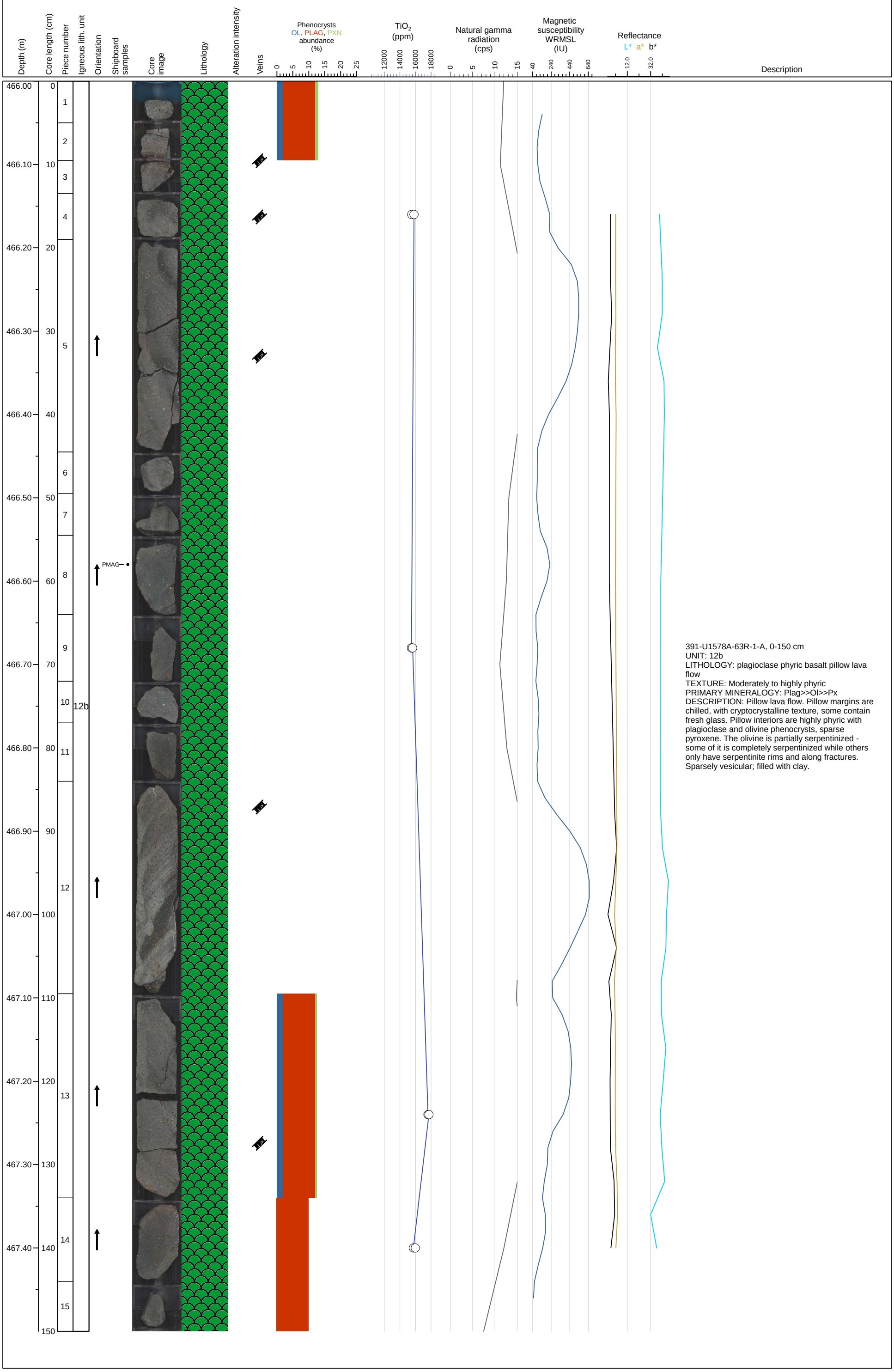
391-U1578A-62R-3-A, 0-146 cm
UNIT: 12b
LITHOLOGY: plagioclase phyric basalt pillow lava flow
TEXTURE: Moderately to highly phyric
PRIMARY MINERALOGY: Plag>>Ol>>Px
DESCRIPTION: Pillow lava flow. Pillow margins are chilled, with cryptocrystalline texture, some contain fresh glass. Pillow interiors are highly phyric with plagioclase and olivine phenocrysts, sparse pyroxene. The olivine is partially serpentinized - some of it is completely serpentinized while others only have serpentinite rims and along fractures. Sparsely vesicular; filled with clay.

Hole 391-U1578A-62R Section 4, Top of Section: 464.9 m (CSF-A)

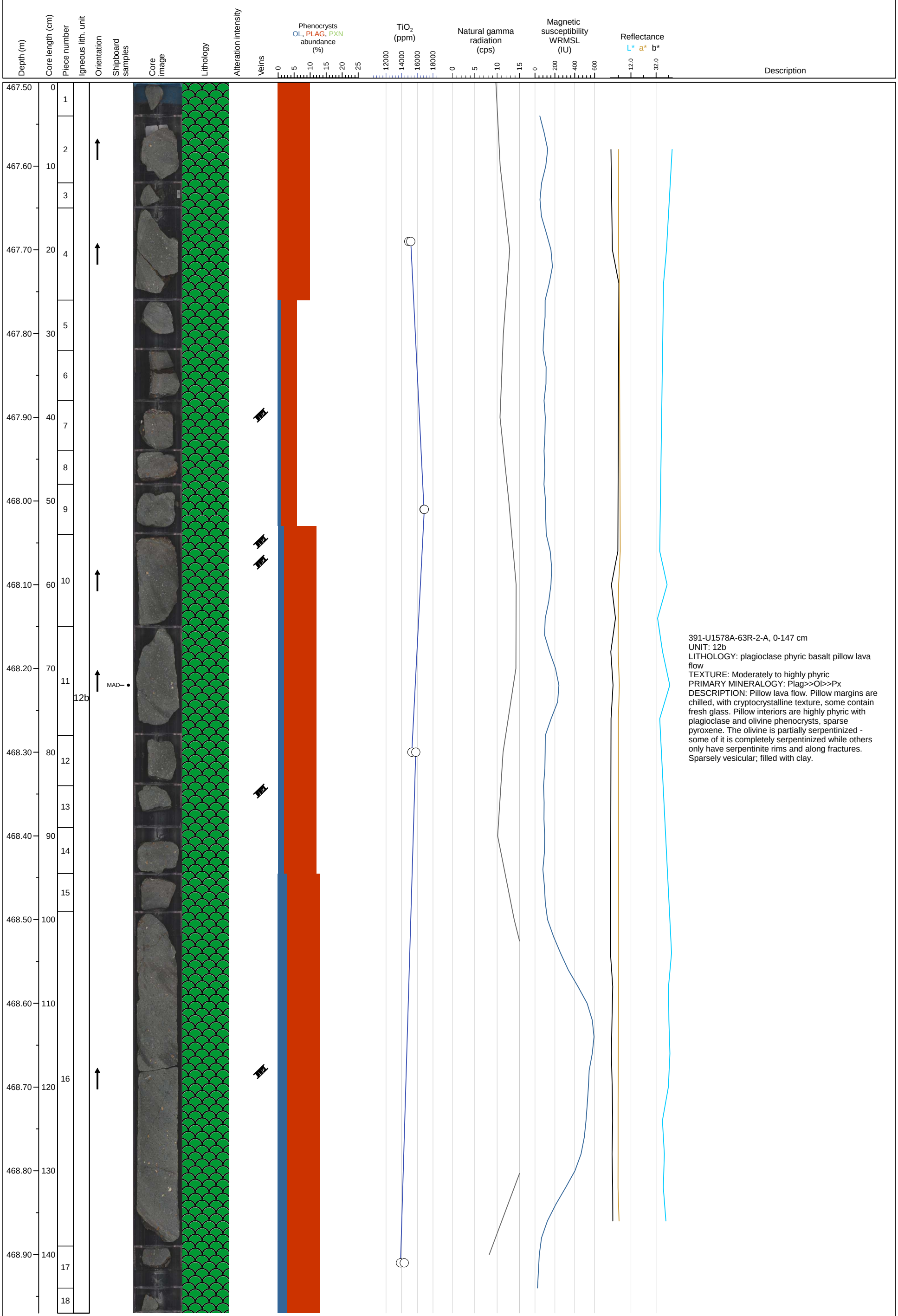


391-U1578A-62R-4-A, 0-91 cm
UNIT: 12b
LITHOLOGY: plagioclase phyric basalt pillow lava flow
TEXTURE: Moderately to highly phyric
PRIMARY MINERALOGY: Plag>>Ol>>Px
DESCRIPTION: Pillow lava flow. Pillow margins are chilled, with cryptocrystalline texture, some contain fresh glass. Pillow interiors are highly phyric with plagioclase and olivine phenocrysts, sparse pyroxene. The olivine is partially serpentinized - some of it is completely serpentinized while others only have serpentinite rims and along fractures. Sparsely vesicular; filled with clay.

Hole 391-U1578A-63R Section 1, Top of Section: 466.0 m (CSF-A)

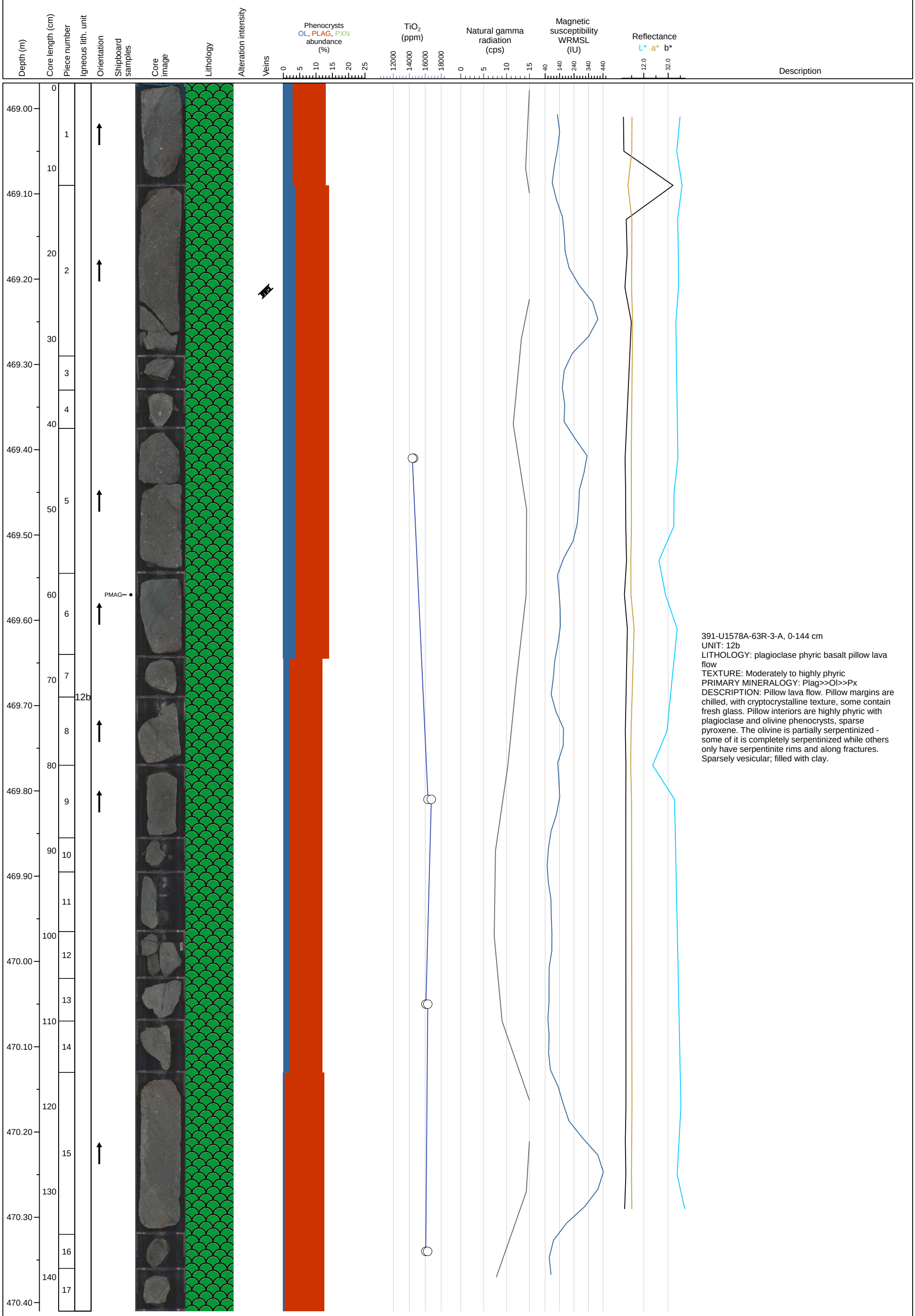


Hole 391-U1578A-63R Section 2, Top of Section: 467.5 m (CSF-A)

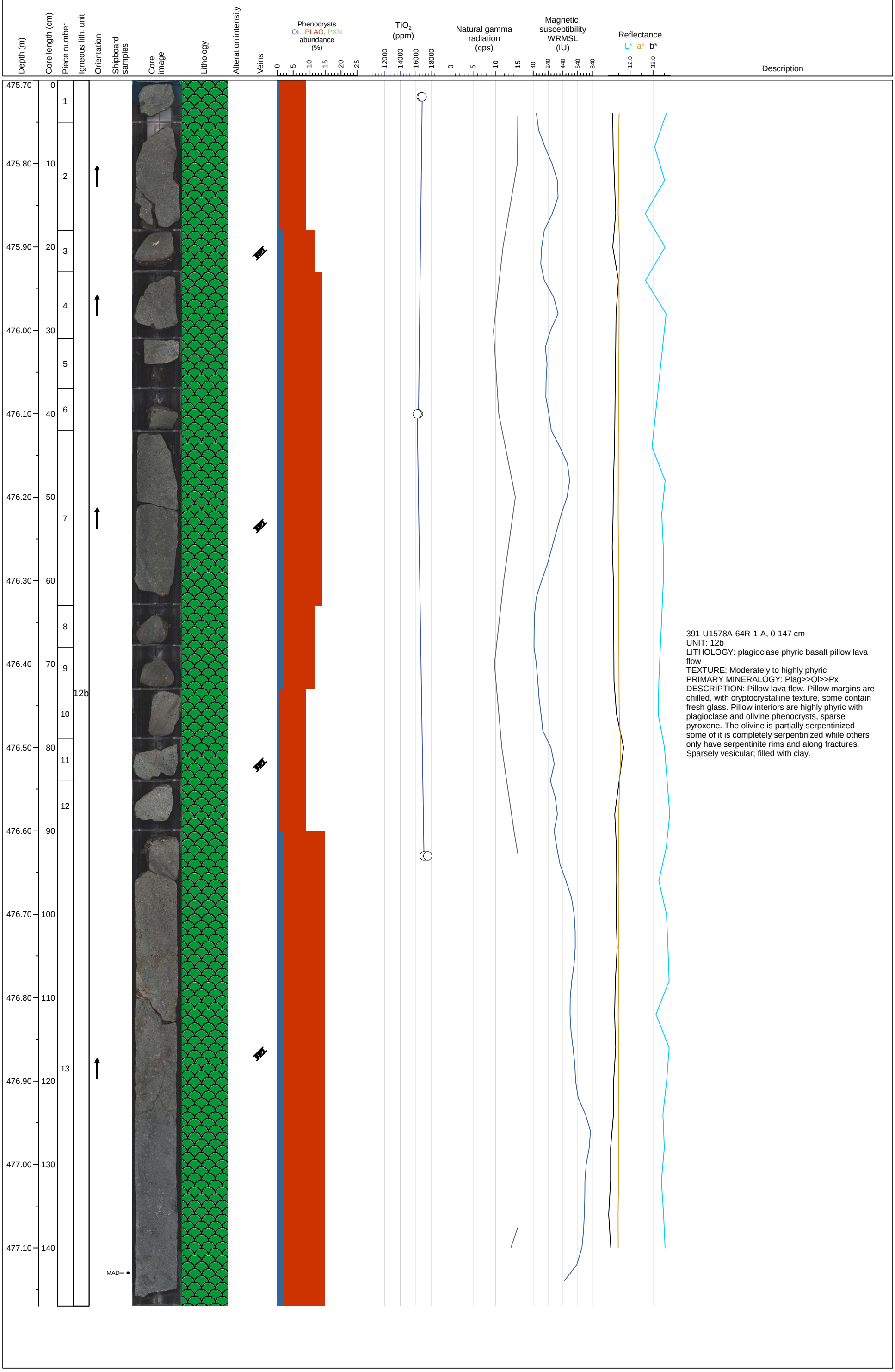


391-U1578A-63R-2-A, 0-147 cm
UNIT: 12b
LITHOLOGY: plagioclase phyric basalt pillow lava flow
TEXTURE: Moderately to highly phyric
PRIMARY MINERALOGY: Plag>>Ol>>Px
DESCRIPTION: Pillow lava flow. Pillow margins are chilled, with cryptocrystalline texture, some contain fresh glass. Pillow interiors are highly phyric with plagioclase and olivine phenocrysts, sparse pyroxene. The olivine is partially serpentinized - some of it is completely serpentinized while others only have serpentinite rims and along fractures. Sparsely vesicular; filled with clay.

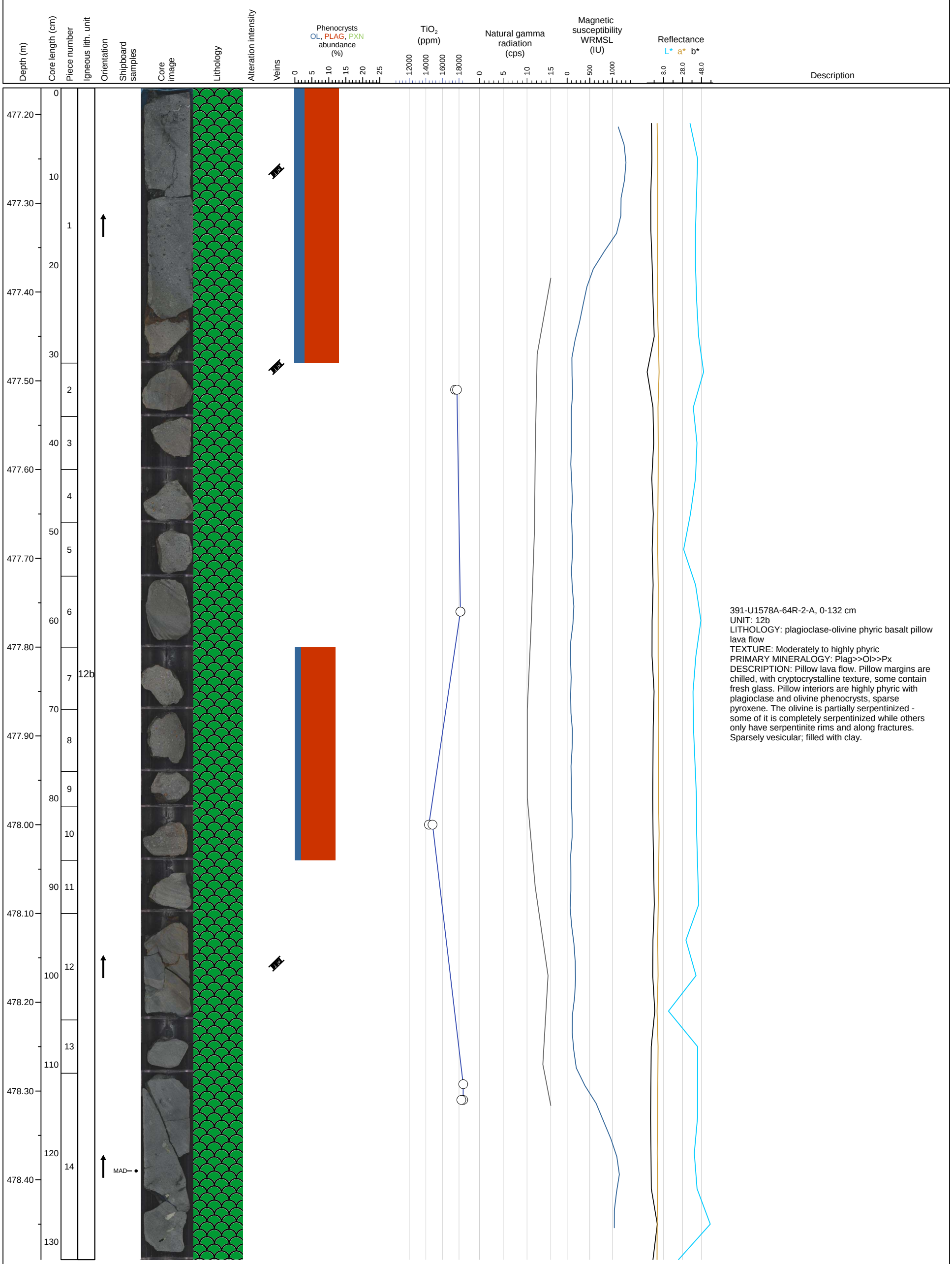
Hole 391-U1578A-63R Section 3, Top of Section: 468.97 m (CSF-A)



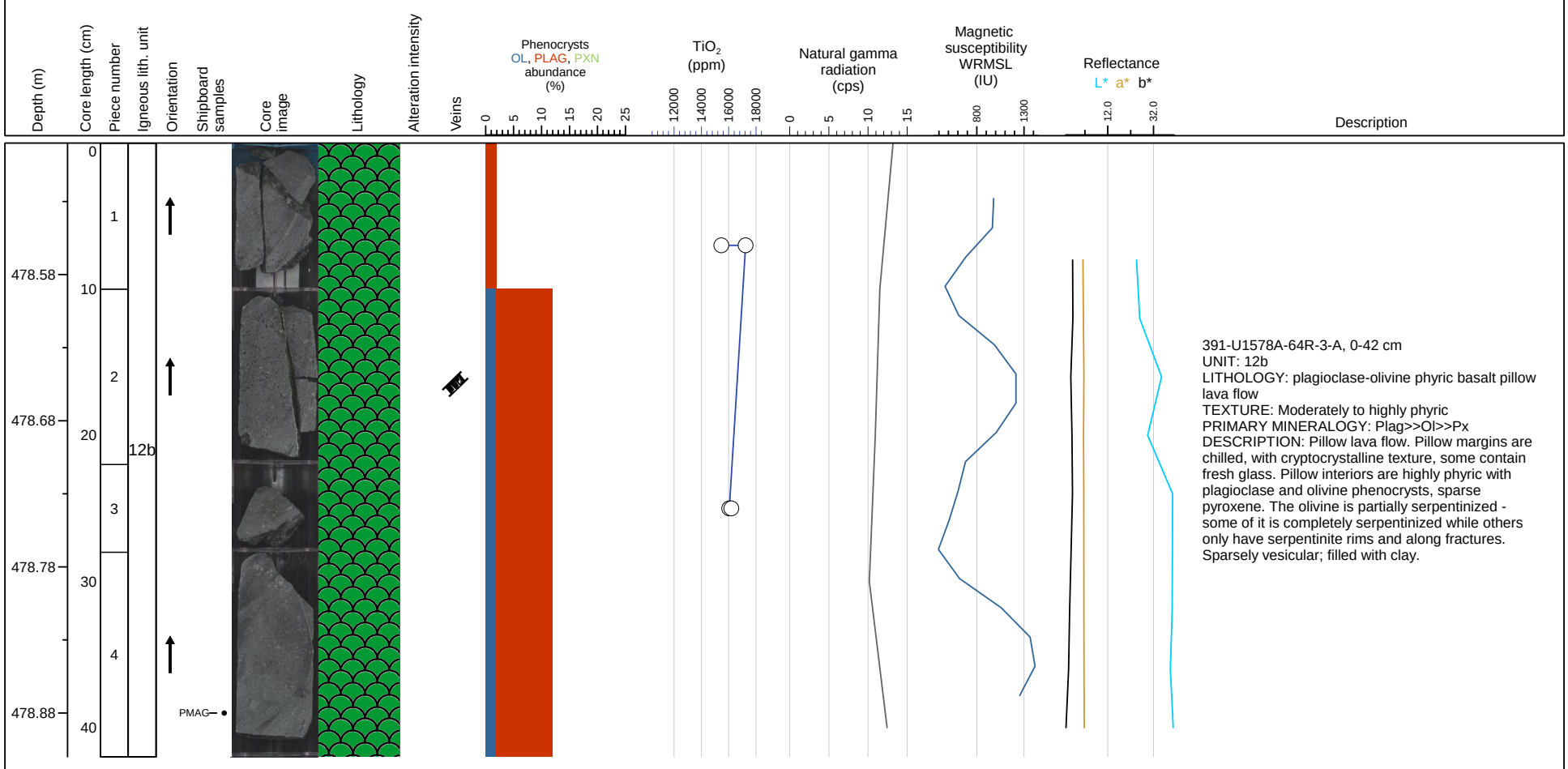
Hole 391-U1578A-64R Section 1, Top of Section: 475.7 m (CSF-A)



Hole 391-U1578A-64R Section 2, Top of Section: 477.17 m (CSF-A)

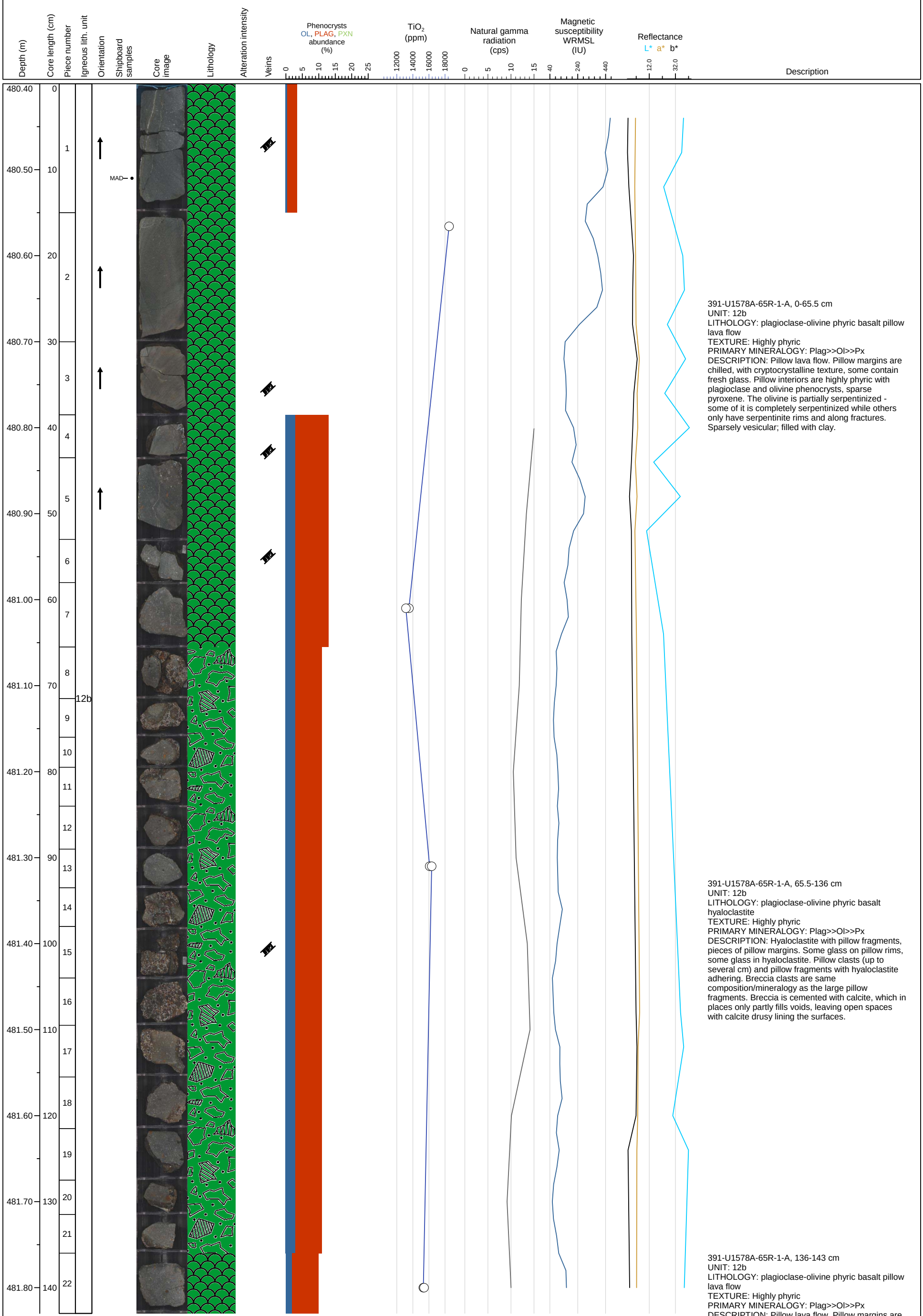


Hole 391-U1578A-64R Section 3, Top of Section: 478.49 m (CSF-A)



391-U1578A-64R-3-A, 0-42 cm
UNIT: 12b
LITHOLOGY: plagioclase-olivine phyric basalt pillow lava flow
TEXTURE: Moderately to highly phyric
PRIMARY MINERALOGY: Plag>>Ol>>Px
DESCRIPTION: Pillow lava flow. Pillow margins are chilled, with cryptocrystalline texture, some contain fresh glass. Pillow interiors are highly phyric with plagioclase and olivine phenocrysts, sparse pyroxene. The olivine is partially serpentinized - some of it is completely serpentinized while others only have serpentinite rims and along fractures. Sparsely vesicular; filled with clay.

Hole 391-U1578A-65R Section 1, Top of Section: 480.4 m (CSF-A)

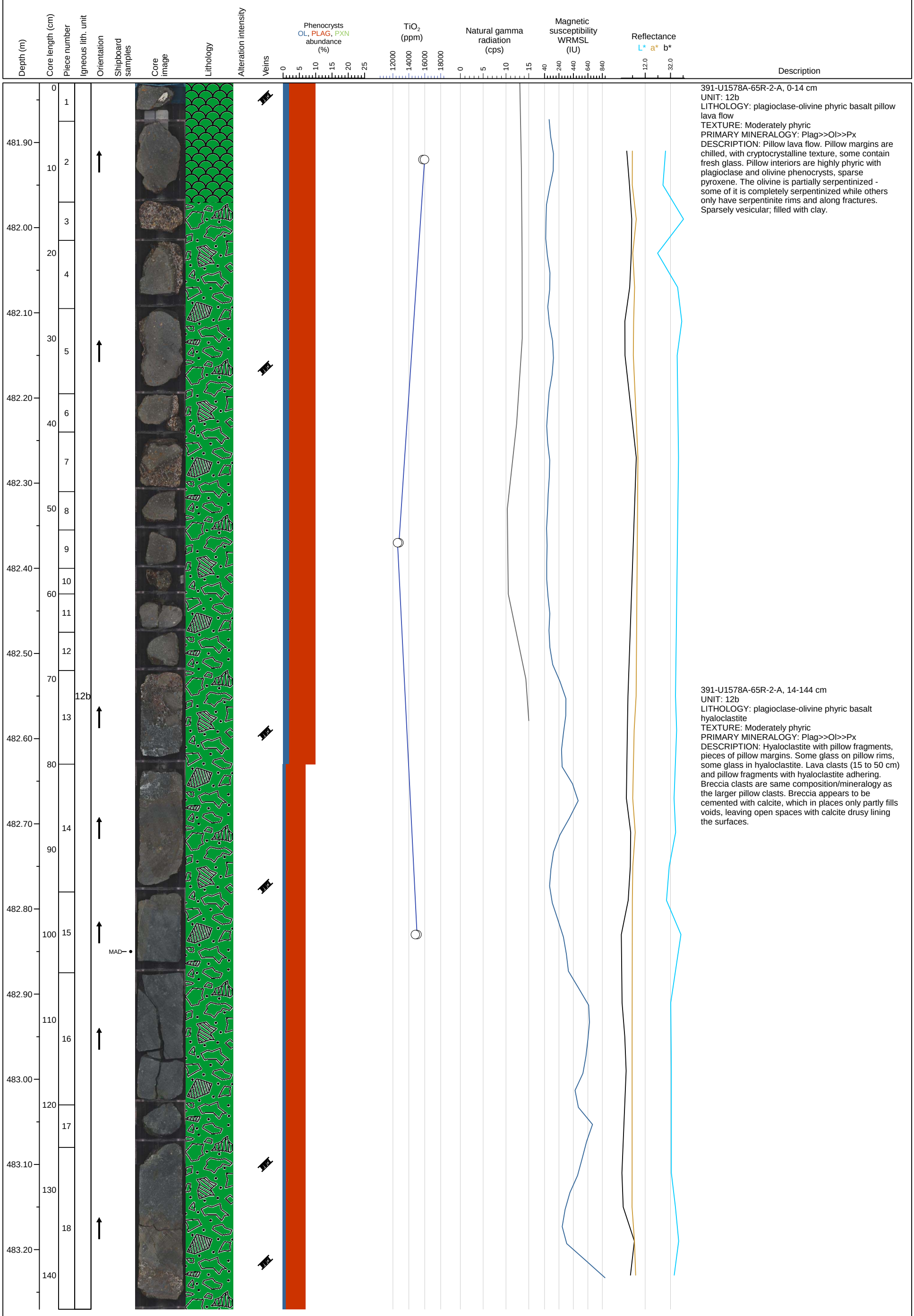


391-U1578A-65R-1-A, 0-65.5 cm
UNIT: 12b
LITHOLOGY: plagioclase-olivine phyric basalt pillow lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Ol>>Px
DESCRIPTION: Pillow lava flow. Pillow margins are chilled, with cryptocrystalline texture, some contain fresh glass. Pillow interiors are highly phyric with plagioclase and olivine phenocrysts, sparse pyroxene. The olivine is partially serpentinized - some of it is completely serpentinized while others only have serpentinite rims and along fractures. Sparsely vesicular; filled with clay.

391-U1578A-65R-1-A, 65.5-136 cm
UNIT: 12b
LITHOLOGY: plagioclase-olivine phyric basalt hyaloclastite
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Ol>>Px
DESCRIPTION: Hyaloclastite with pillow fragments, pieces of pillow margins. Some glass on pillow rims, some glass in hyaloclastite. Pillow clasts (up to several cm) and pillow fragments with hyaloclastite adhering. Breccia clasts are same composition/mineralogy as the large pillow fragments. Breccia is cemented with calcite, which in places only partly fills voids, leaving open spaces with calcite drusy lining the surfaces.

391-U1578A-65R-1-A, 136-143 cm
UNIT: 12b
LITHOLOGY: plagioclase-olivine phyric basalt pillow lava flow
TEXTURE: Highly phyric
PRIMARY MINERALOGY: Plag>>Ol>>Px
DESCRIPTION: Pillow lava flow. Pillow margins are chilled, with cryptocrystalline texture, some contain fresh glass. Pillow interiors are highly phyric with plagioclase and olivine phenocrysts, sparse pyroxene. The olivine is partially serpentinized - some of it is completely serpentinized while others only have serpentinite rims and along fractures. Sparsely vesicular; filled with clay.

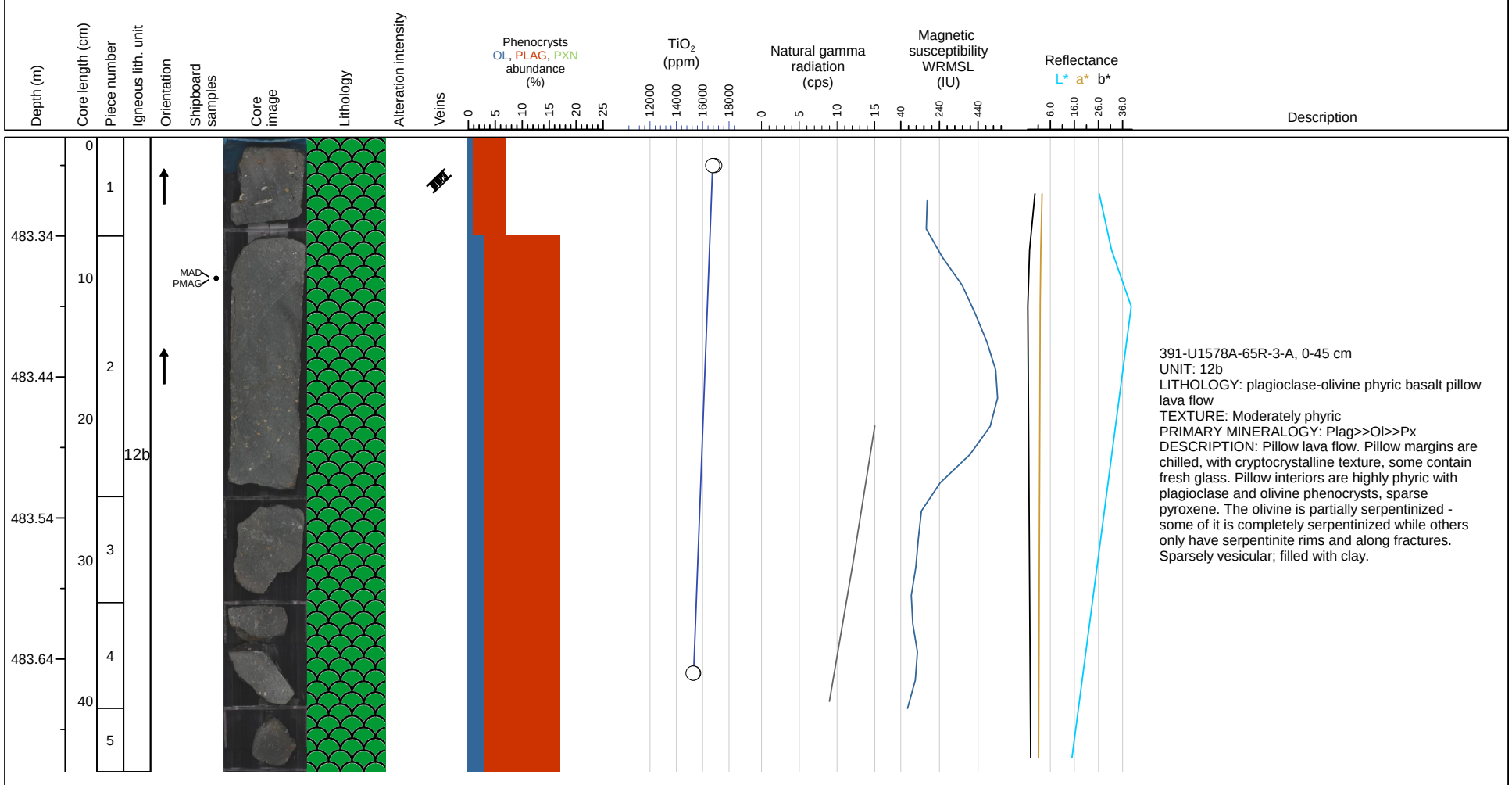
Hole 391-U1578A-65R Section 2, Top of Section: 481.83 m (CSF-A)



391-U1578A-65R-2-A, 0-14 cm
UNIT: 12b
LITHOLOGY: plagioclase-olivine phyric basalt pillow lava flow
TEXTURE: Moderately phyric
PRIMARY MINERALOGY: Plag>>Ol>>Px
DESCRIPTION: Pillow lava flow. Pillow margins are chilled, with cryptocrystalline texture, some contain fresh glass. Pillow interiors are highly phyric with plagioclase and olivine phenocrysts, sparse pyroxene. The olivine is partially serpentinized - some of it is completely serpentinized while others only have serpentinite rims and along fractures. Sparsely vesicular; filled with clay.

391-U1578A-65R-2-A, 14-144 cm
UNIT: 12b
LITHOLOGY: plagioclase-olivine phyric basalt hyaloclastite
TEXTURE: Moderately phyric
PRIMARY MINERALOGY: Plag>>Ol>>Px
DESCRIPTION: Hyaloclastite with pillow fragments, pieces of pillow margins. Some glass on pillow rims, some glass in hyaloclastite. Lava clasts (15 to 50 cm) and pillow fragments with hyaloclastite adhering. Breccia clasts are same composition/mineralogy as the larger pillow clasts. Breccia appears to be cemented with calcite, which in places only partly fills voids, leaving open spaces with calcite drusy lining the surfaces.

Hole 391-U1578A-65R Section 3, Top of Section: 483.27 m (CSF-A)



391-U1578A-65R-3-A, 0-45 cm
UNIT: 12b
LITHOLOGY: plagioclase-olivine phyric basalt pillow lava flow
TEXTURE: Moderately phyric
PRIMARY MINERALOGY: Plag>>Ol>>Px
DESCRIPTION: Pillow lava flow. Pillow margins are chilled, with cryptocrystalline texture, some contain fresh glass. Pillow interiors are highly phyric with plagioclase and olivine phenocrysts, sparse pyroxene. The olivine is partially serpentinized - some of it is completely serpentinized while others only have serpentinite rims and along fractures. Sparsely vesicular; filled with clay.