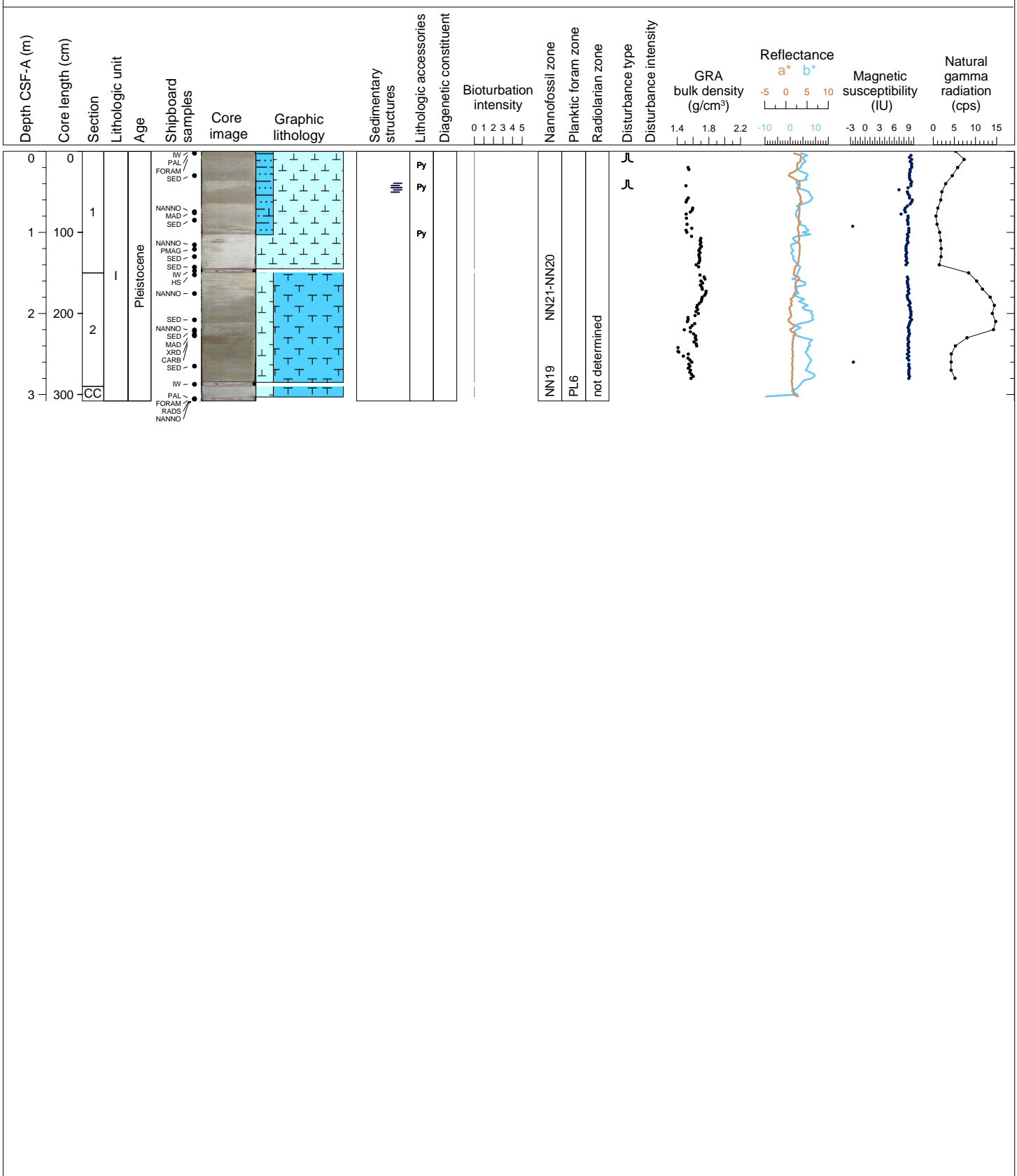


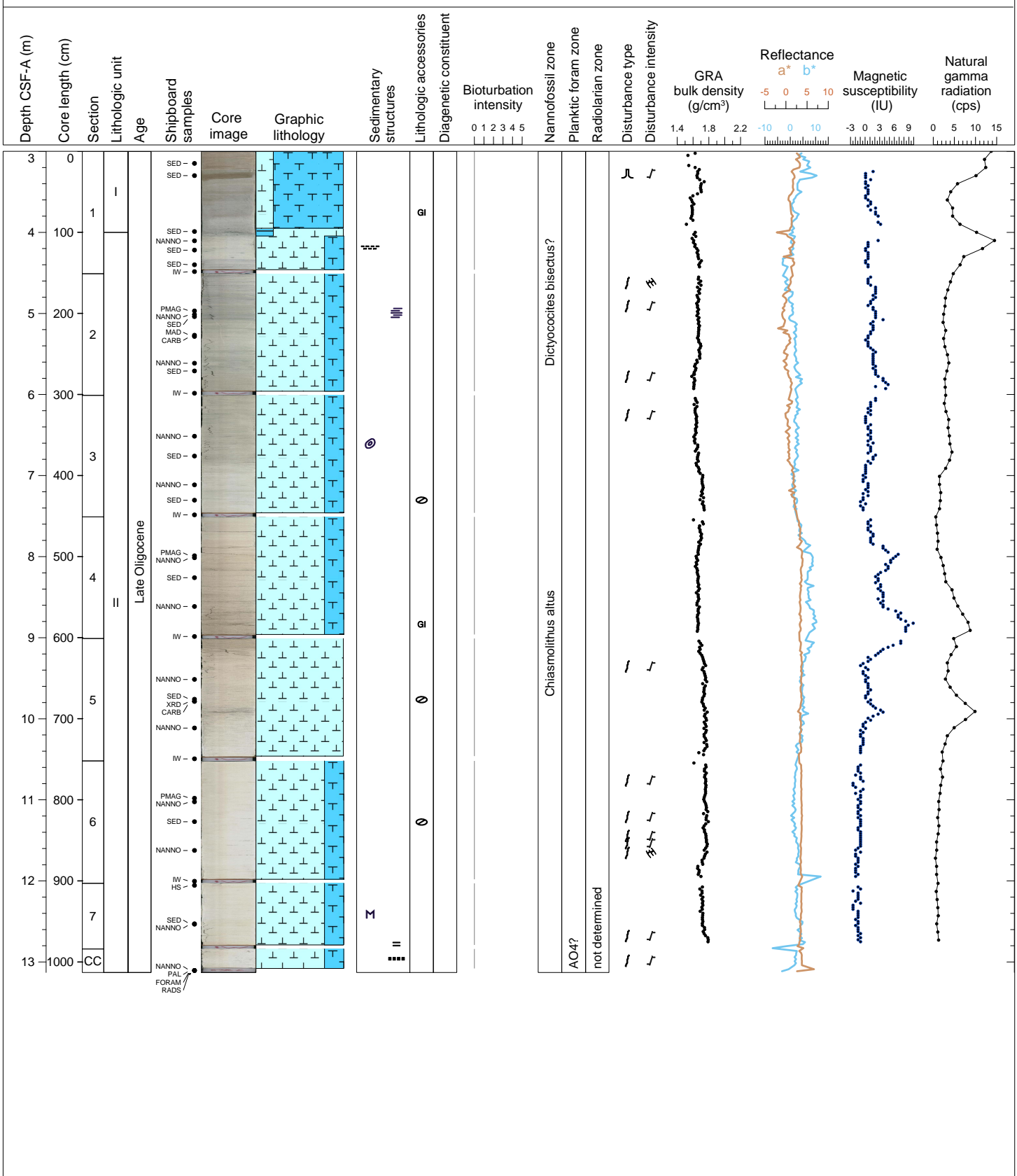
Hole 378-U1553A Core 1H, Interval 0.0-3.08 m (CSF-A)

Core U1553A-1H consists of foraminifer-rich nannofossil ooze in Section 1 and nannofossil-rich foraminiferal ooze. The colors in Section 1 vary from white (5Y 8/1, N 9) to light greenish gray (10Y 7/1), to light gray (5YR 7/1, 2.5Y 7/2, 5Y 7/1), and very pale brown (10YR 7/4). There is obvious color banding in Section 1, with a particularly white section near its base which contains less foraminifers. The colors in Sections 2 and CC are white (2.5Y 8.5/1, N 8.5) with pale greenish yellow (10Y 8/2), grayish olive (10Y 5/2), light grayish olive (10Y 8/2), light olive gray (5Y 6/2) and light gray (5Y 7/2). The contacts are mostly irregular or gradational.



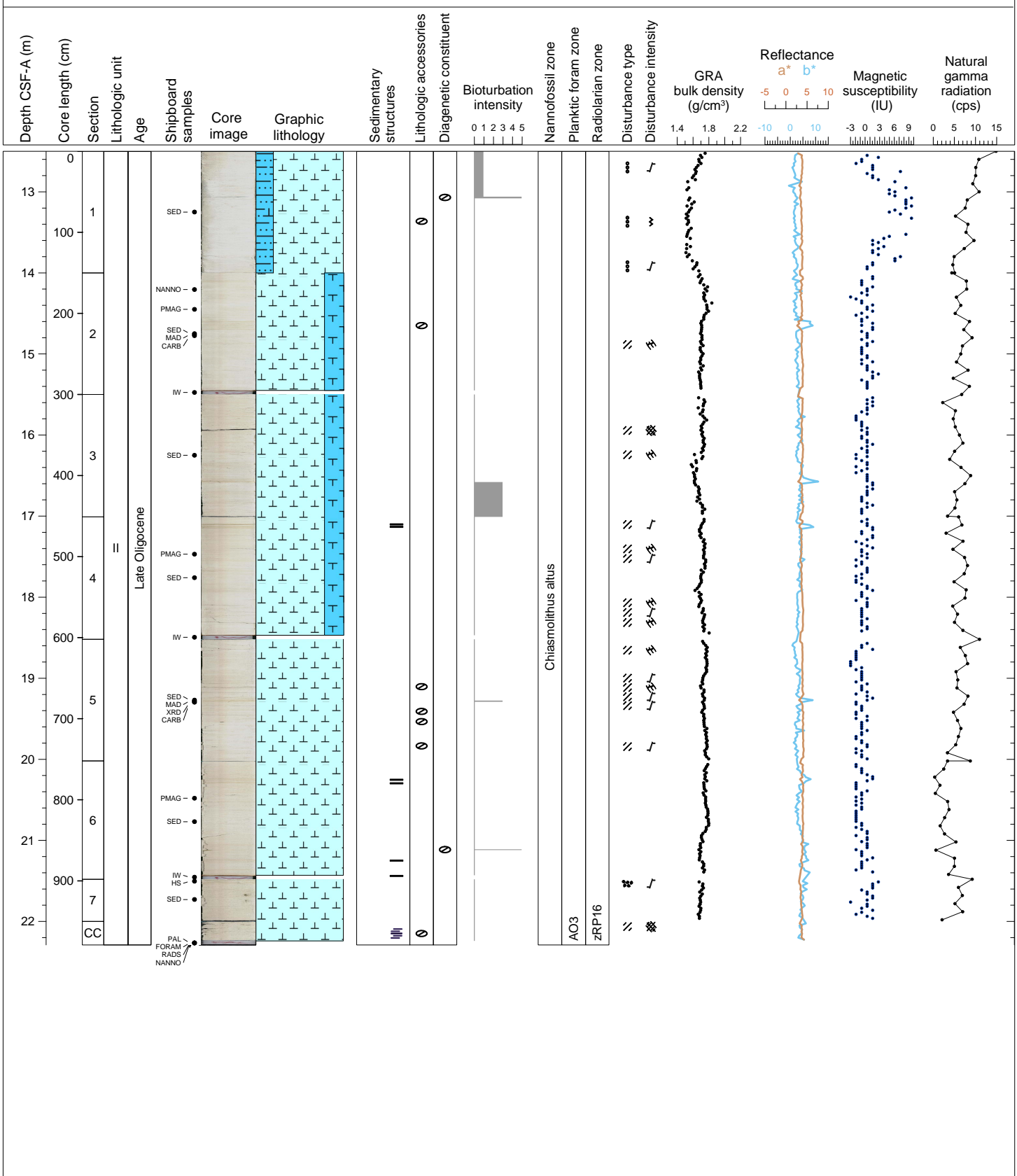
Hole 378-U1553A Core 2H, Interval 3.0-13.13 m (CSF-A)

Core U1553A-2H consists of nannofossil-rich foraminiferal ooze in Section 1 and nannofossil ooze with foraminifers in Sections 2 to 6, interlayered with nannofossil ooze in Section 5. The colors in Section 1 are white (2.5Y 8/1, 2.5YR 8/1 and N 8) with light gray (5Y 7/1, N 7) and light olive gray (5Y 6/2). The colors in Section 2 to 7 are white (N 8, N 8.5, 2.5Y 9/1 and 2.5Y 8.5/1) with light gray (N 7, 2.5Y 7/1), light greenish gray (5GY 8/1) and pale yellow (2.5 8.5/2), which is paler in the deeper sections. Section 3 contains a black, hard mineral approximately 2 mm long. Similar minerals are dispersed throughout Sections 3 and 4.



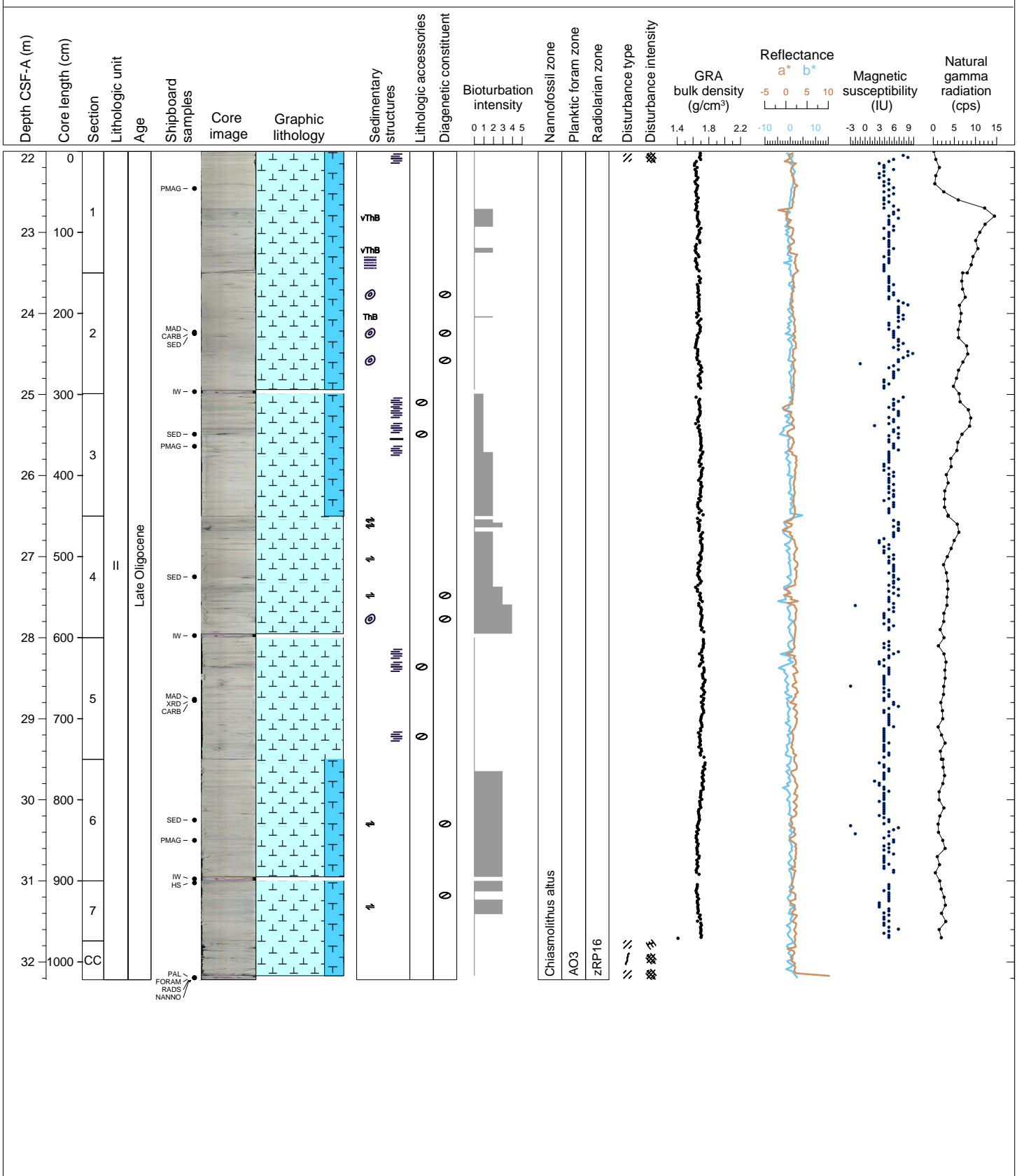
Hole 378-U1553A Core 3H, Interval 12.5-22.29 m (CSF-A)

Core U1553A-3H consists of foraminifer-rich nannofossil ooze in Section 1, nannofossil ooze with foraminifers in Sections 2 to 4, and nannofossil oozes in Sections 5 to CC. The core is white (10YR 9/1, 10YR 9.5/1, 5Y 8/1, N 9.5, 2.5Y 9/1) with moderate yellowish green (10GY 6/4), light greenish gray (10Y 8/1), light gray (5Y 7/2) and pale yellow (5Y 7/4, 5Y 8/2, 5Y 8/3). In Sections 4 to 7, laminations can be observed with pale yellow (5Y 8/2), pale orange yellow (10YR 9/2), pale greenish yellow (10Y 8/2) and light grayish olive (10YR 6/2) color.



Hole 378-U1553A Core 4H, Interval 22.0-32.22 m (CSF-A)

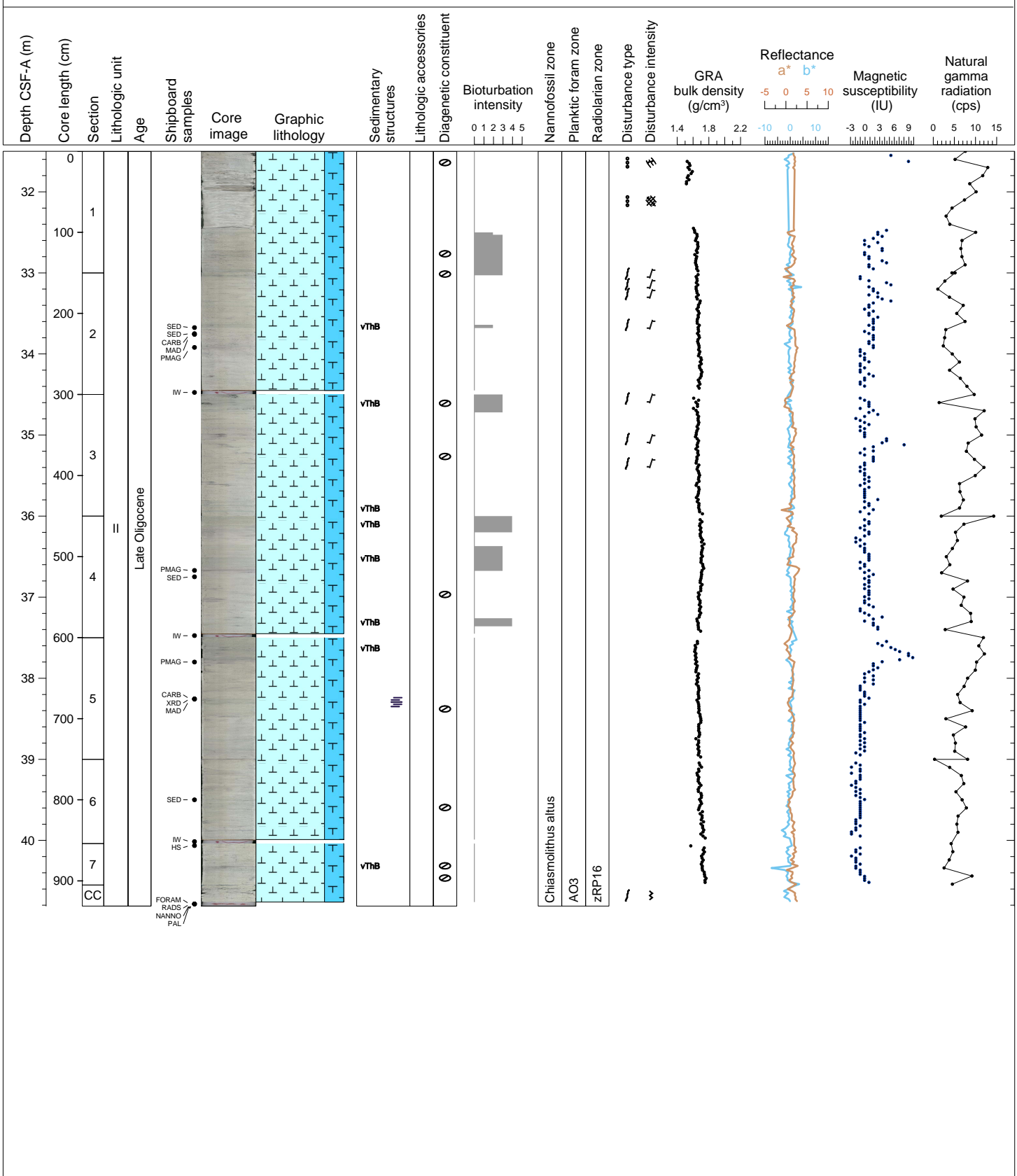
Core U1553A-4H consists of nannofossil ooze with foraminifers, interlayered with nannofossil ooze in Sections 4 and 5. The core has a white (N 8.5, 5Y 8/1) to light greenish gray (10G 8/1, 10G 7/1, 10BG 8/1, 10GY 8/1, 5G 8/1) color throughout. Patches of black minerals occur throughout the core. Pale green bands occur throughout in thicknesses ranging from laminations to dispersed multi-centimeter layers.





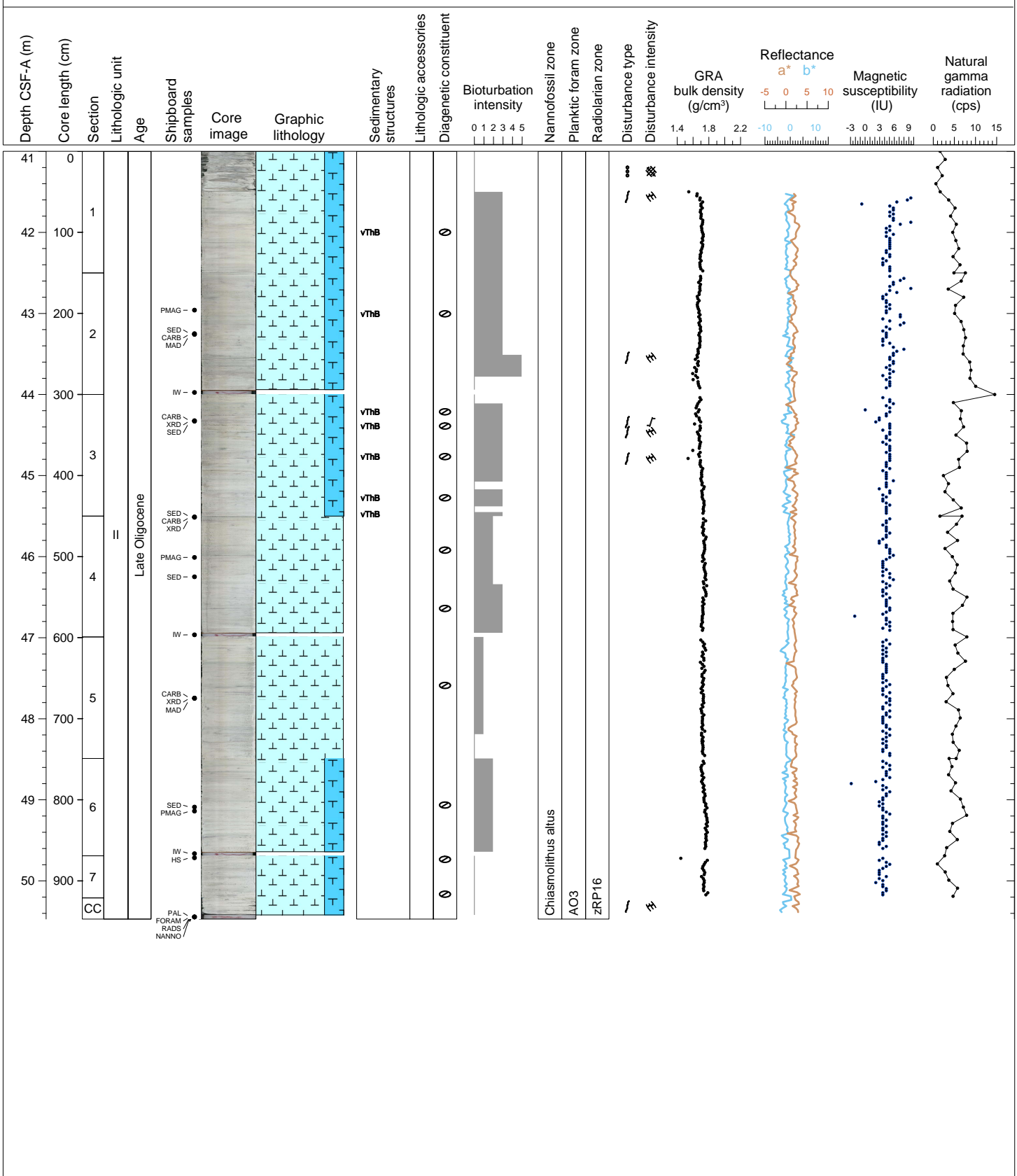
Hole 378-U1553A Core 5H, Interval 31.5-40.81 m (CSF-A)

Core U1553A-5H consists of nannofossil ooze with foraminifers. The core has a white (N 8, N 8.5, 5Y 8/1) to light greenish gray (10G 8/1, 10GY 7/1, 10G 8/1, 10GY 8/1, 5GY 8/1, 10Y 8/1, 5G 8/1) color throughout. Diffuse to thin green layers occur throughout. Black patches of likely diagenetic minerals occur throughout. This core has a slightly stiff lithology.



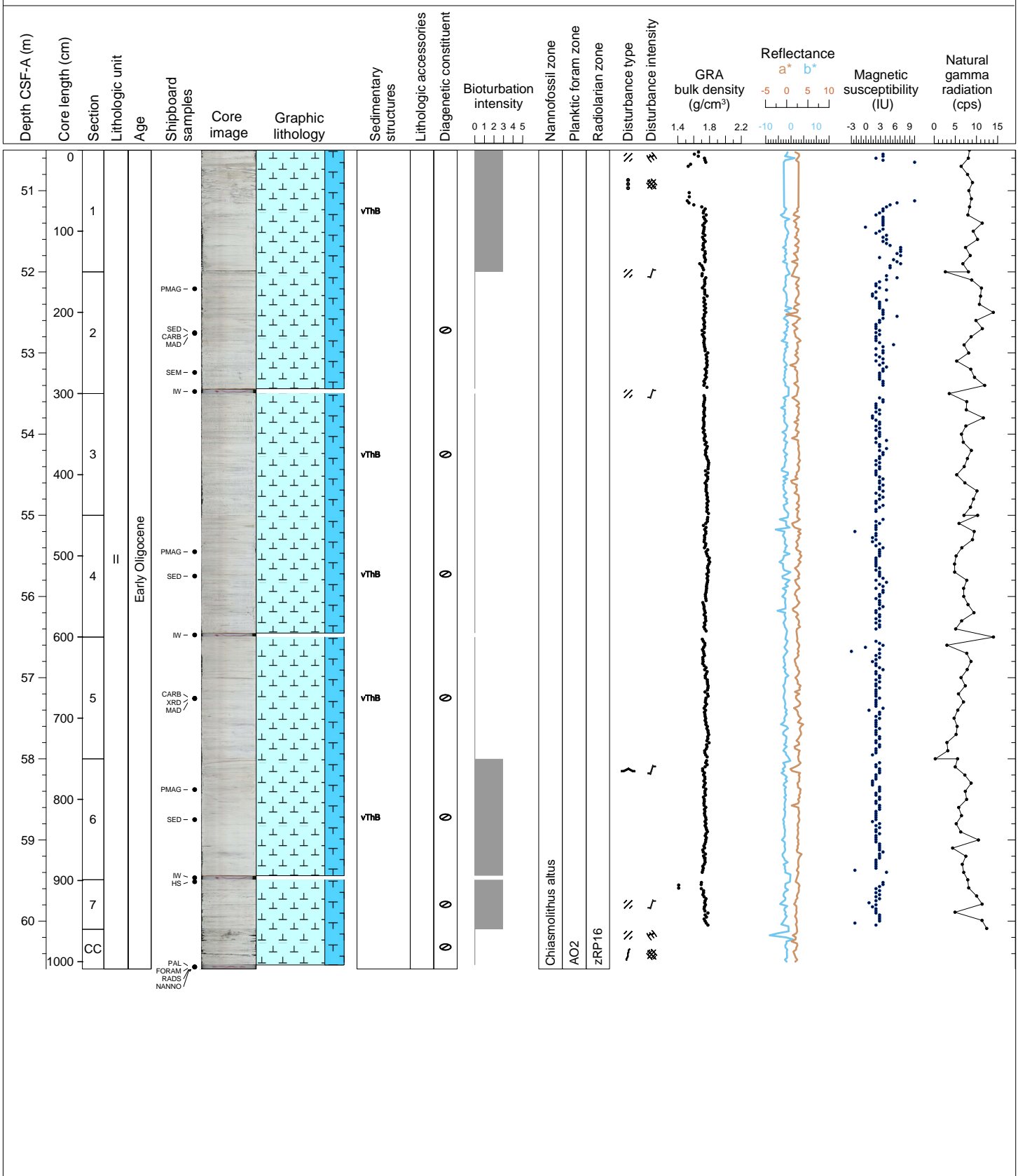
Hole 378-U1553A Core 6H, Interval 41.0-50.47 m (CSF-A)

Core U1553A-6H consists of white nannofossil ooze with foraminifers (N 8.5, N 8, 5Y 8/1), interlayered with nannofossil ooze in Sections 4 and 5. The core has light greenish gray (10GY 8/1, 5G 7/1) to greenish gray (10Y 6/1) to light gray (5Y 7/2) layers. Black patches of likely diagenetic minerals occur throughout. A circular diagenetic mineral bleb occurs at the bottom of Section 7.



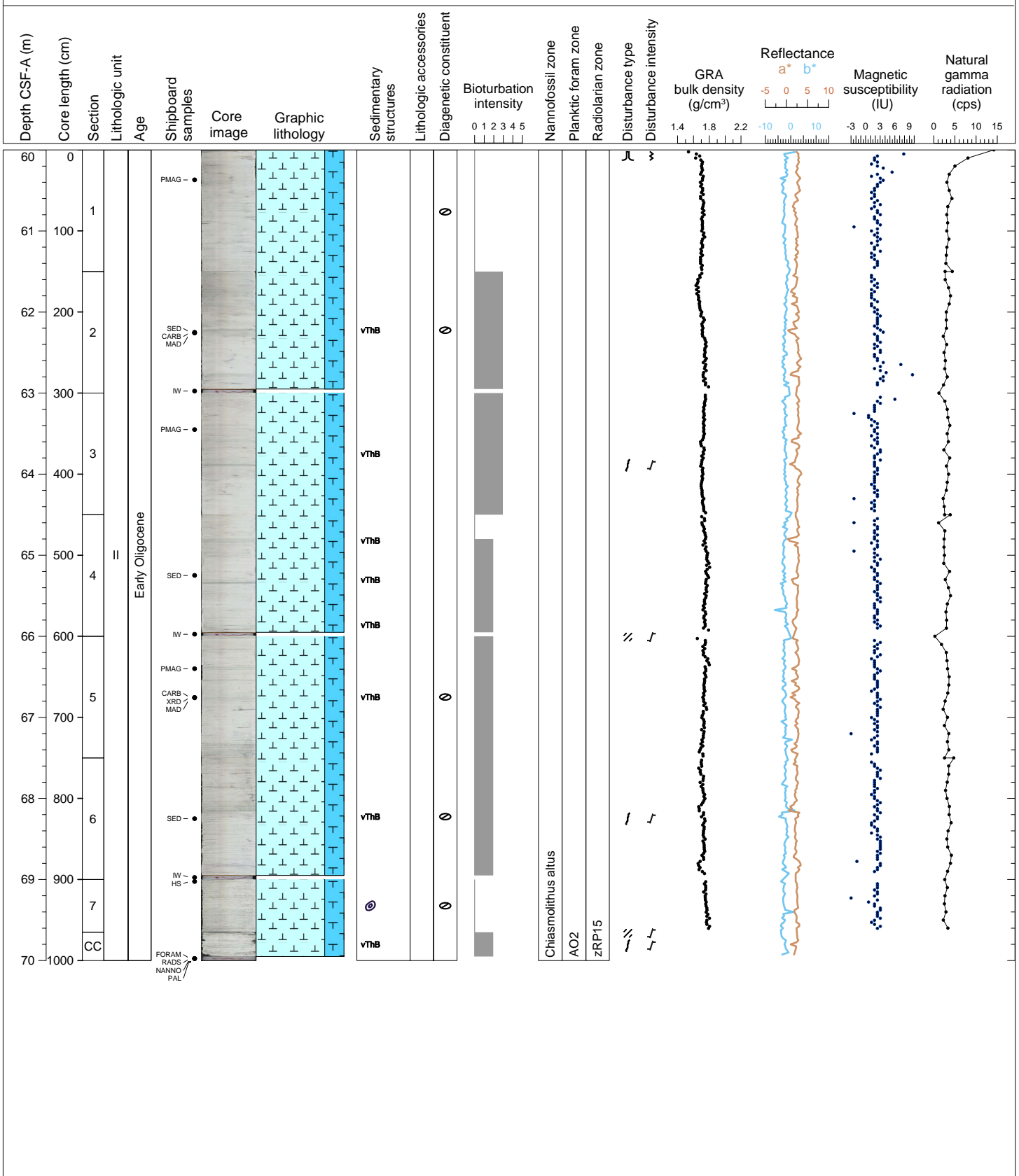
Hole 378-U1553A Core 7H, Interval 50.5-60.59 m (CSF-A)

Core U1553A-7H consists of white nannofossil ooze with foraminifers (N 9, N 8.5, 5Y 8.5). The core has diffuse light greenish gray thin layers (10G 8/1, 5GY 8/1) throughout. Black patches of likely diagenetic minerals occur throughout.



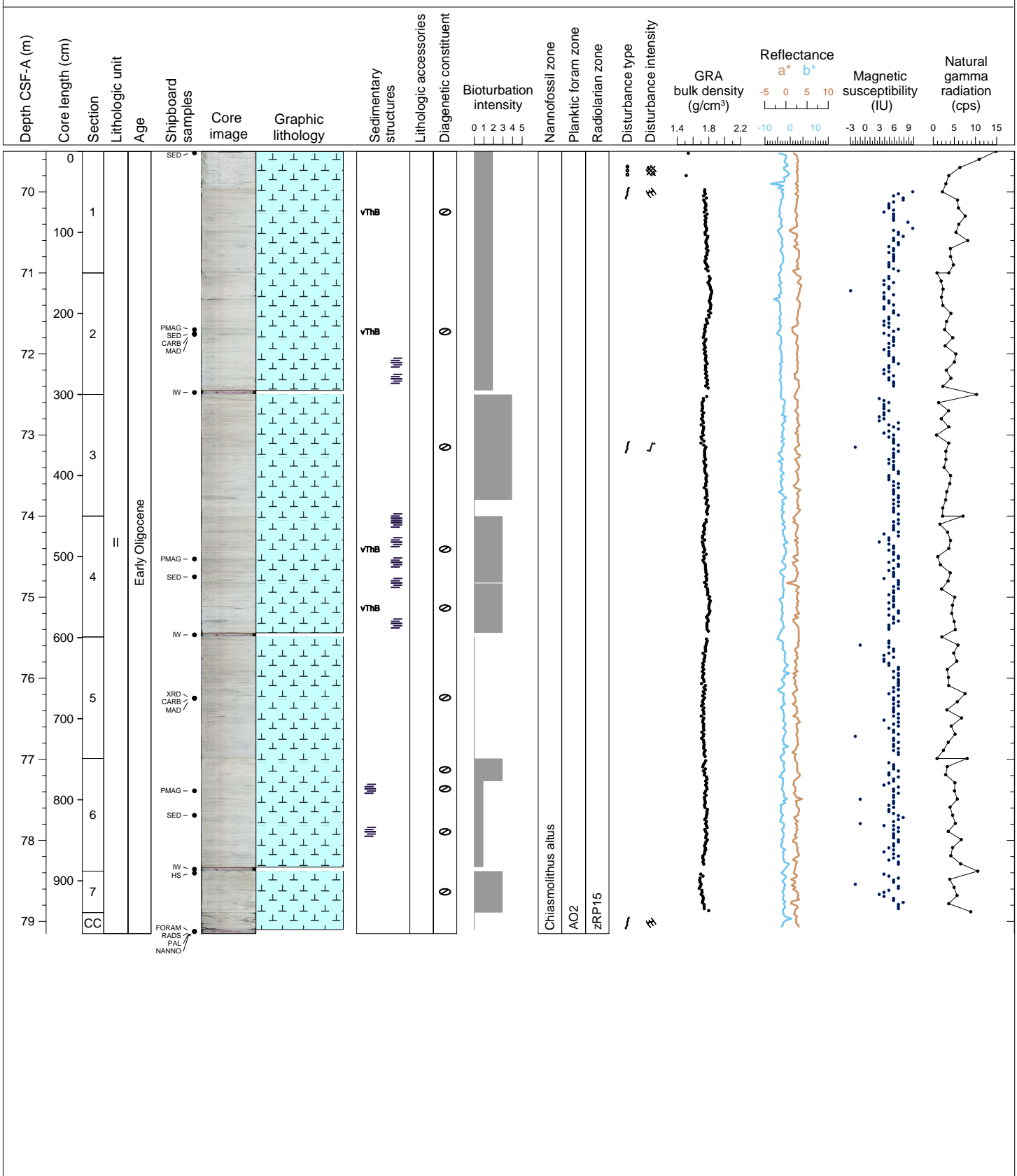
Hole 378-U1553A Core 8H, Interval 60.0-70.0 m (CSF-A)

Core U1553A-8H consists of white nannofossil ooze with foraminifers (N 8, N 8.5). The core has thin light bluish gray (5B 8/1) and light greenish gray (10BG 8/1) layers that occur throughout. Black patches of likely diagenetic minerals occur throughout.



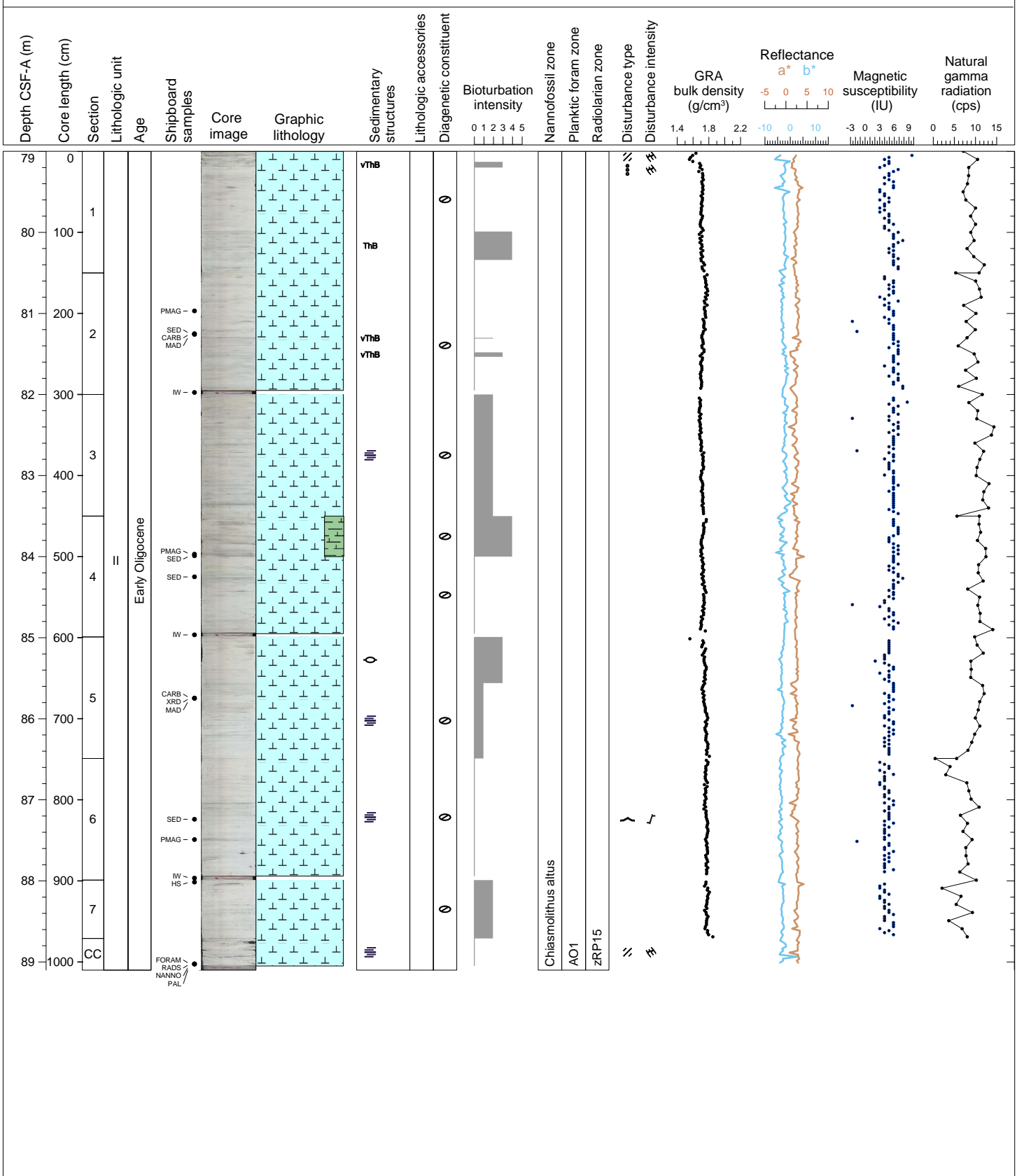
Hole 378-U1553A Core 9H, Interval 69.5-79.15 m (CSF-A)

Core U1553A-9H consists of white nannofossil ooze (N 8, N 8.5, N 9). The core has thin light greenish gray (10GY 8/1, 10BG 8/1) and pale greenish yellow (10Y 8/2) layers throughout. Black patches of likely diagenetic minerals occur throughout. Dark brown particles are present in Sections 1 and 2.



Hole 378-U1553A Core 10H, Interval 79.0-89.1 m (CSF-A)

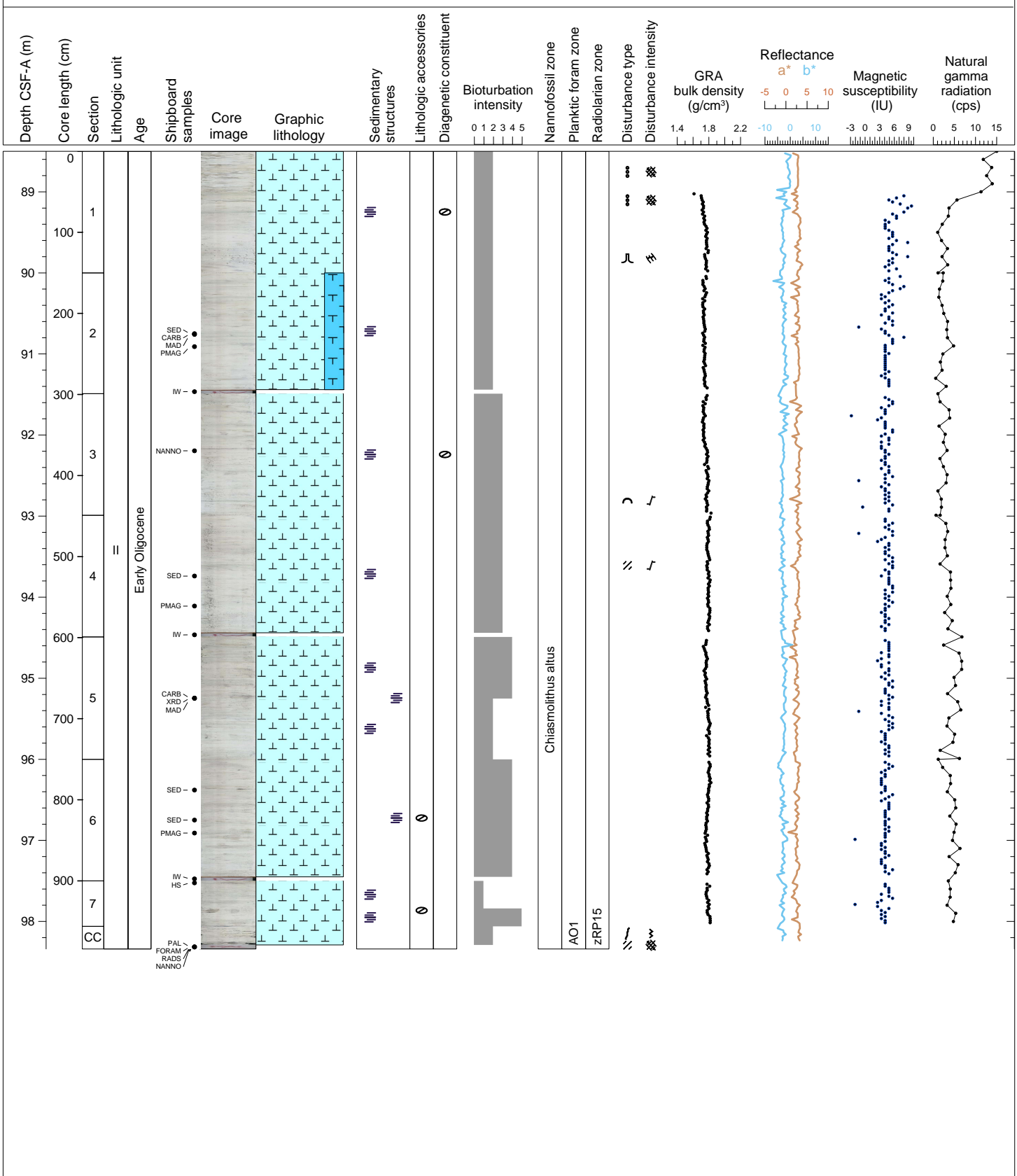
Core U1553A-10H consists of nannofossil ooze, interlayered with nannofossil ooze and biosilica in Section 4. Few radiolarians, diatoms and siliceous sponge spicules can be observed in smear slides. The colors are white (N 8, N 8.5, N9) and light greenish gray (10GY 7/1, 5BG 8/1, 10Y 8/1, 5G 8/1) throughout. There are occasional black splotches, and pyritized worm burrows.





Hole 378-U1553A Core 11H, Interval 88.5-98.34 m (CSF-A)

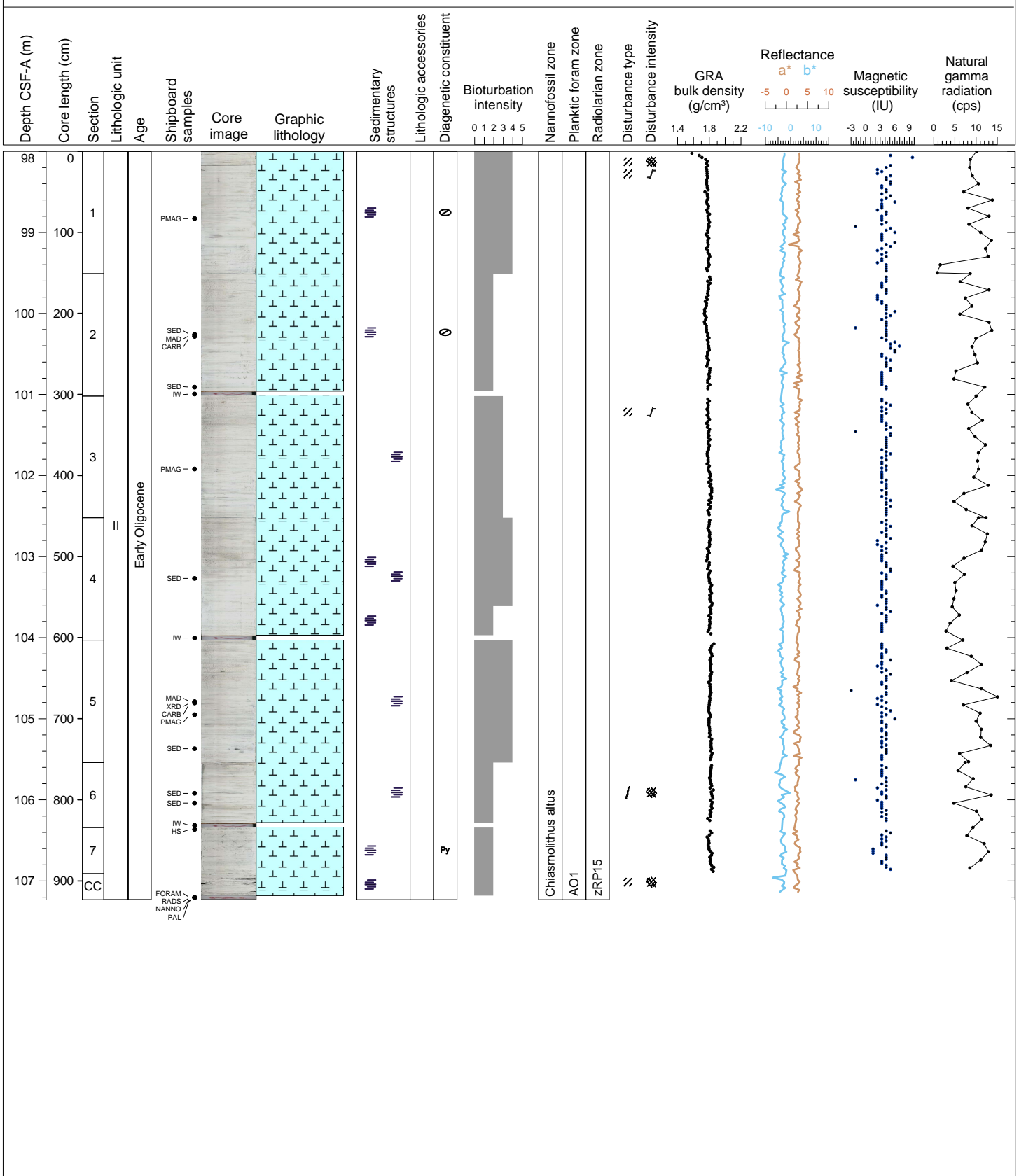
Core U1553A-11H consists of white nannofossil ooze in Sections 1 and 3 to CC, and nannofossil ooze with foraminifers in Section 2 (N 8.5, N 9). Trace diatoms, siliceous sponge spicules and fish remains are observed in smear slides. The core has occasional light greenish grey layering and bands (5G 8/1). There are some occurrences of a shiny black mineral through Sections 6 and 7.





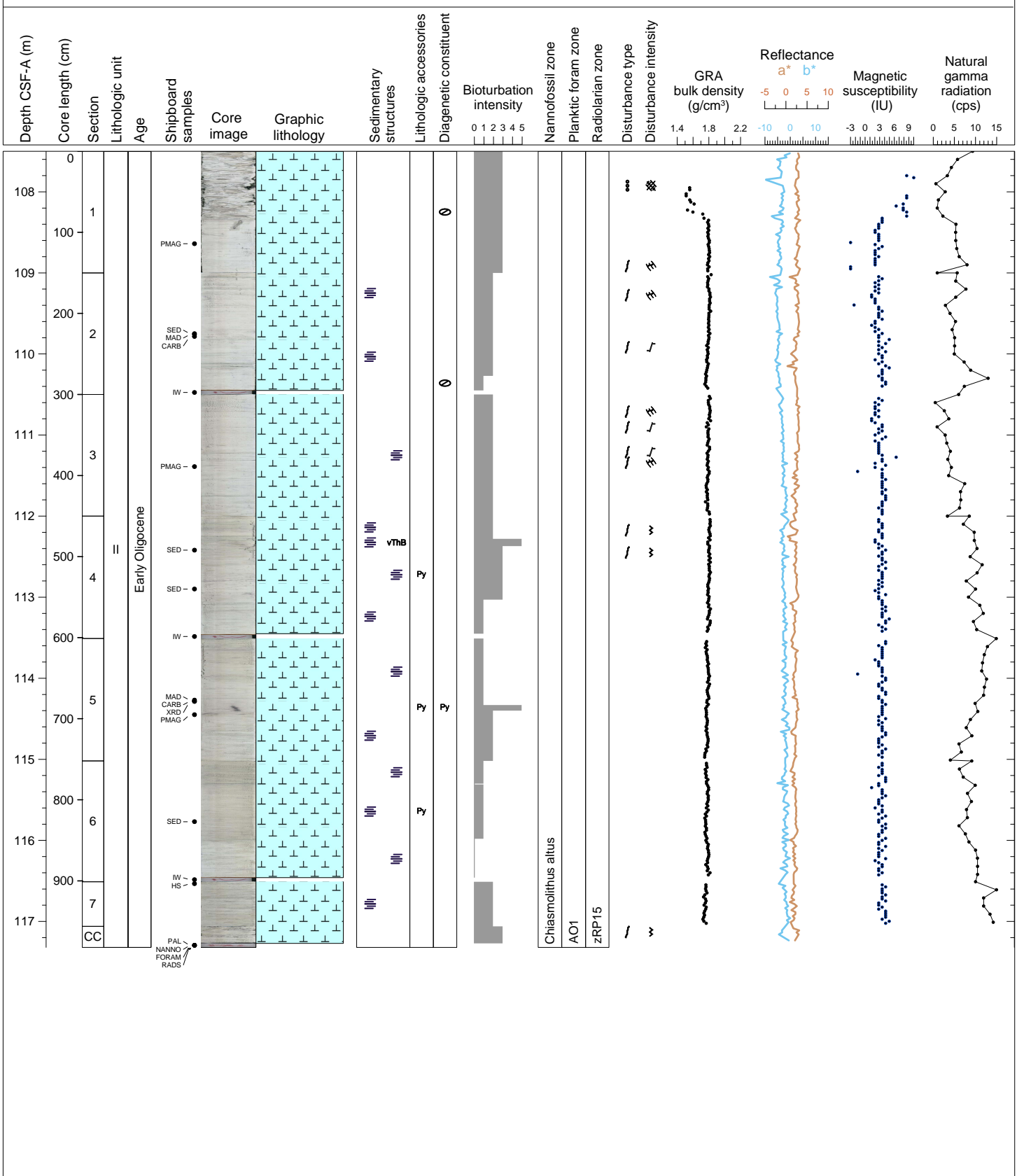
Hole 378-U1553A Core 12H, Interval 98.0-107.23 m (CSF-A)

Core U1553A-12H consists of white nanofossil ooze (N 8.5). The core exhibits abundant light greenish grey layering and bands (5G 8/1). There is bioturbation in Sections 1 to 5, which becomes extensive in Sections 3 and 5. The burrows are filled with a black mineral that was identified in a smear slide as pyrite in Section 5. There is extensive drilling disturbance in Sections 1, 6 and CC.



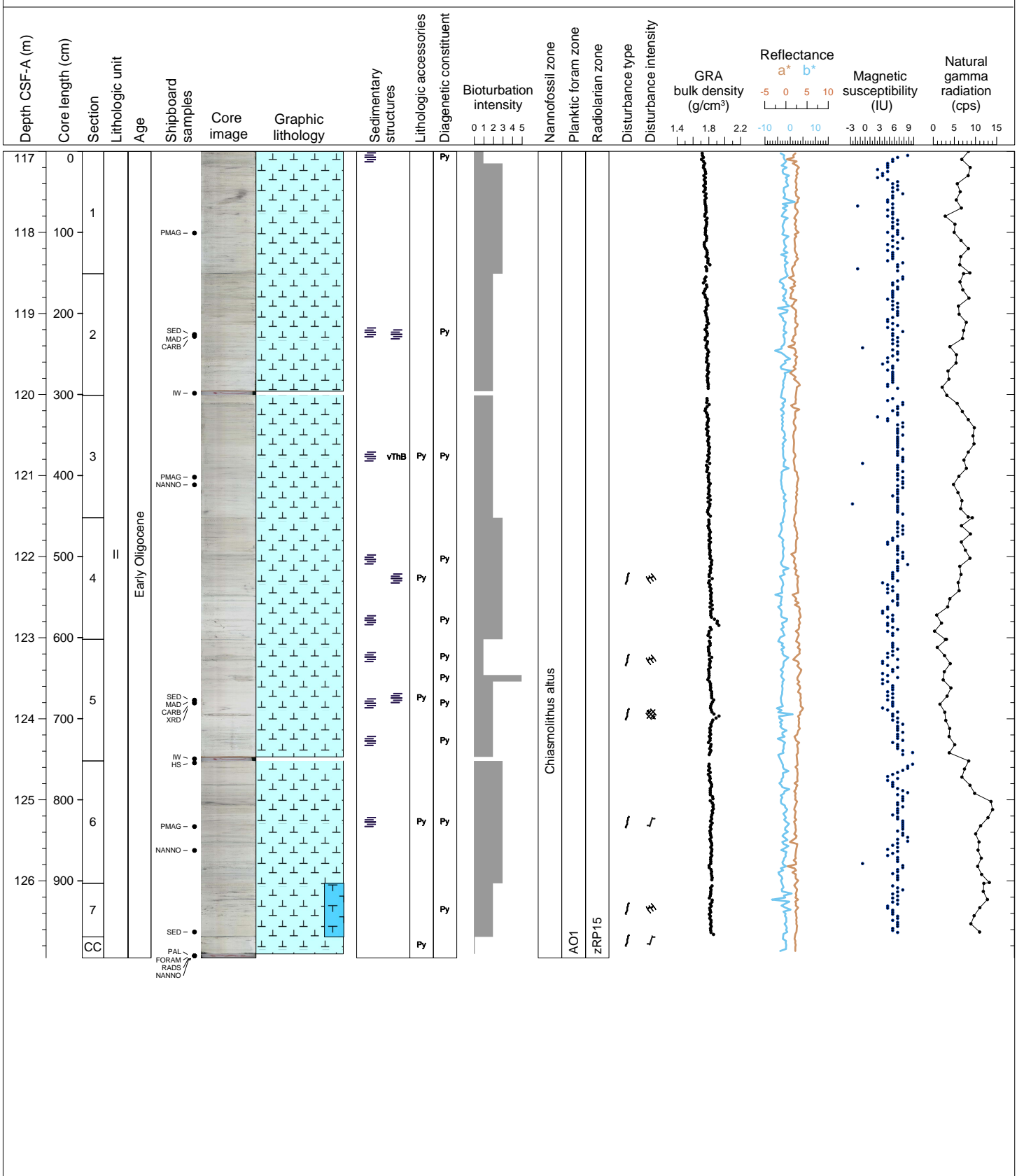
Hole 378-U1553A Core 13H, Interval 107.5-117.32 m (CSF-A)

Core U1553A-13H consists of white nannofossil ooze (N 8.5, N 9). Few foraminifers and siliceous sponge spicules can be observed in smear slides. The core has sporadic light greenish grey (5G 8/1) and pale blue (5PB 7/2) layering and bands. A pyritized burrow was identified in Section 5. There is extensive drilling disturbance in Sections 1, 4 and CC.



Hole 378-U1553A Core 14H, Interval 117.0-126.95 m (CSF-A)

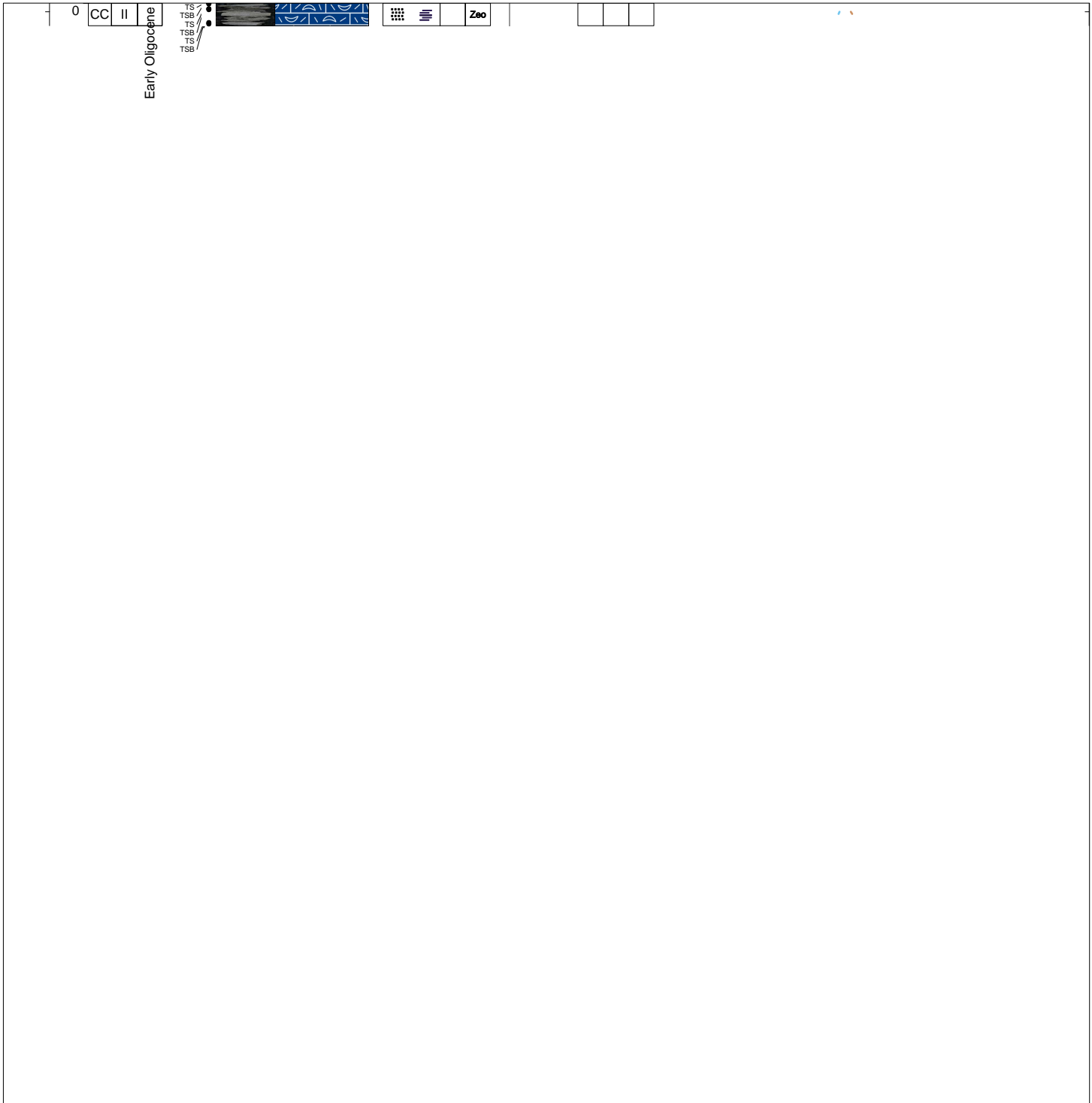
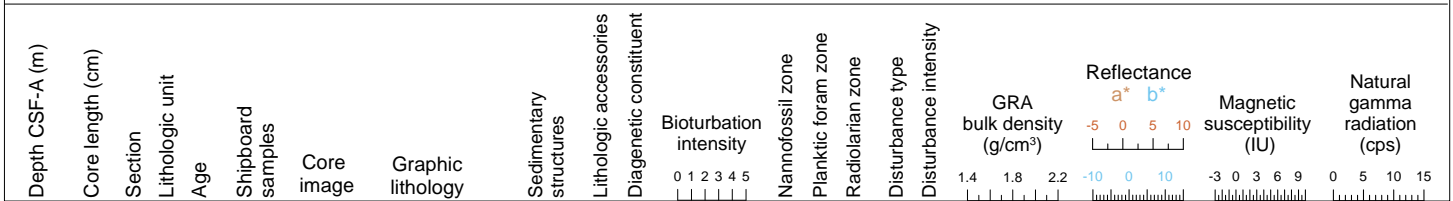
Core U1553A-14H consists of white nannofossil ooze (N 8.5, N 9). Few foraminifers and siliceous sponge spicules can be observed in smear slides. The core has sporadic light greenish grey (5G 8/1) and light gray (5Y 7/1) layers. There are a few long pyritized burrows in Section 4. There are dark areas of pyrite throughout. There is extensive drilling disturbance in Section 5.





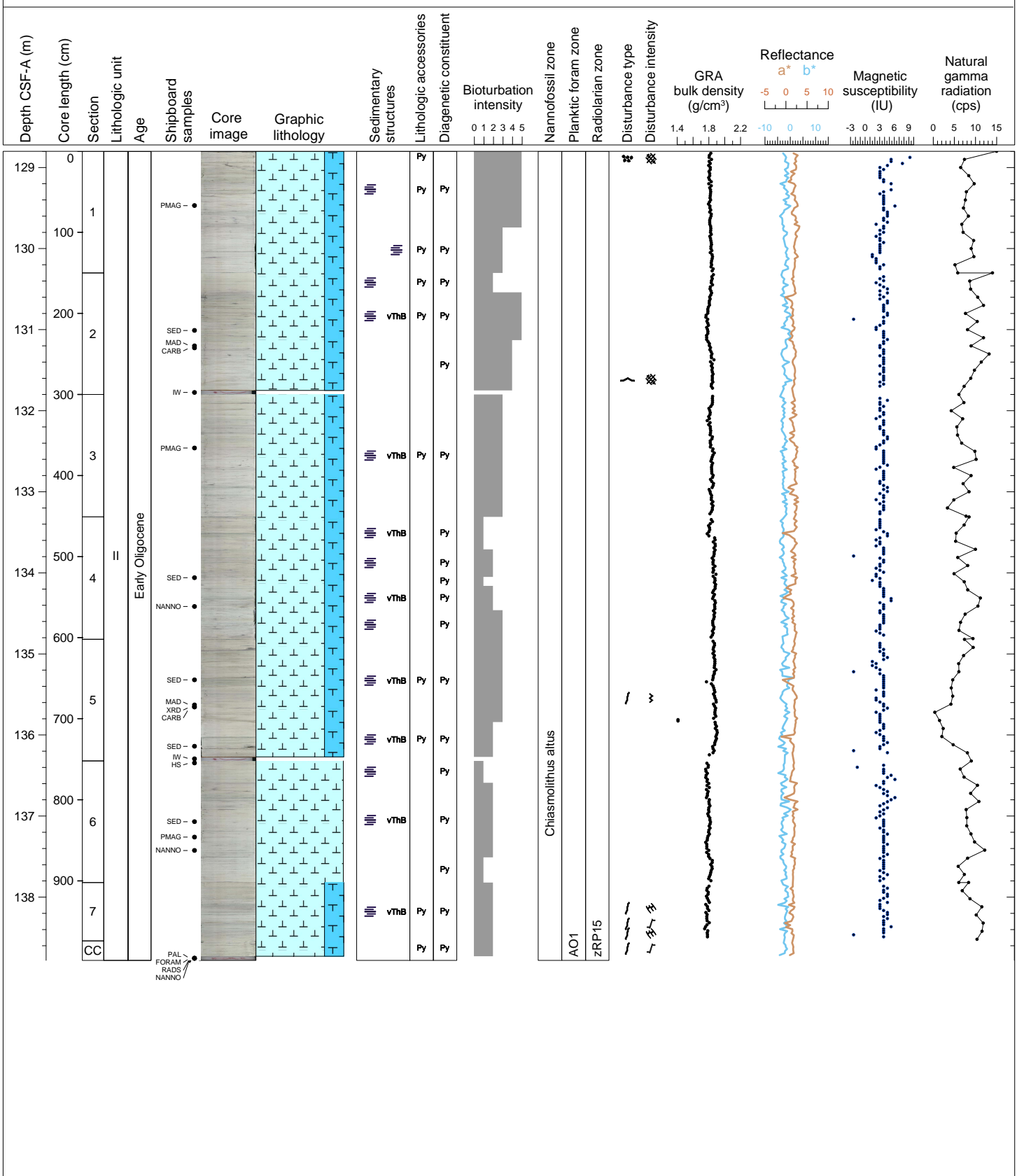
Hole 378-U1553A Core 16X, Interval 127.5-127.76 m (CSF-A)

Core U1553A-16X consists of 2 components. One clast, about 4 x 3 x 1.5 cm, rounded, green detrital rock appears cemented by surrounding black domain. Thin section confirms this is an allochthonous metamorphic rock pebble. The rest of the short interval (24 cm long) consists of pieces of a packstone, containing carbonate grains (chalky to light green color, variable biogenic origin), with 5% chert-like grains, cemented by grey-green carbonate, probably a recrystallized micritic mud. Coarse to very coarse grained, mostly angular grains, little rounding. Grain size may vary over the interval: medium sand over 3–6 cm, then very coarse-granule for 6–10 cm, very coarse from 10–21 cm, then fine-coarse for 21–26 cm. However, the loose pieces in the core may well be out of order. The chert tends to be well rounded and more spherical than the bioclastic debris. Bioclastic debris includes sponges, bryozoan, and possibly corals. Faint bedding surfaces are visible. From 22-26 cm, a fragment of the packstone contains a 6 mm wide darker band, continuous across the piece, with a darker center.



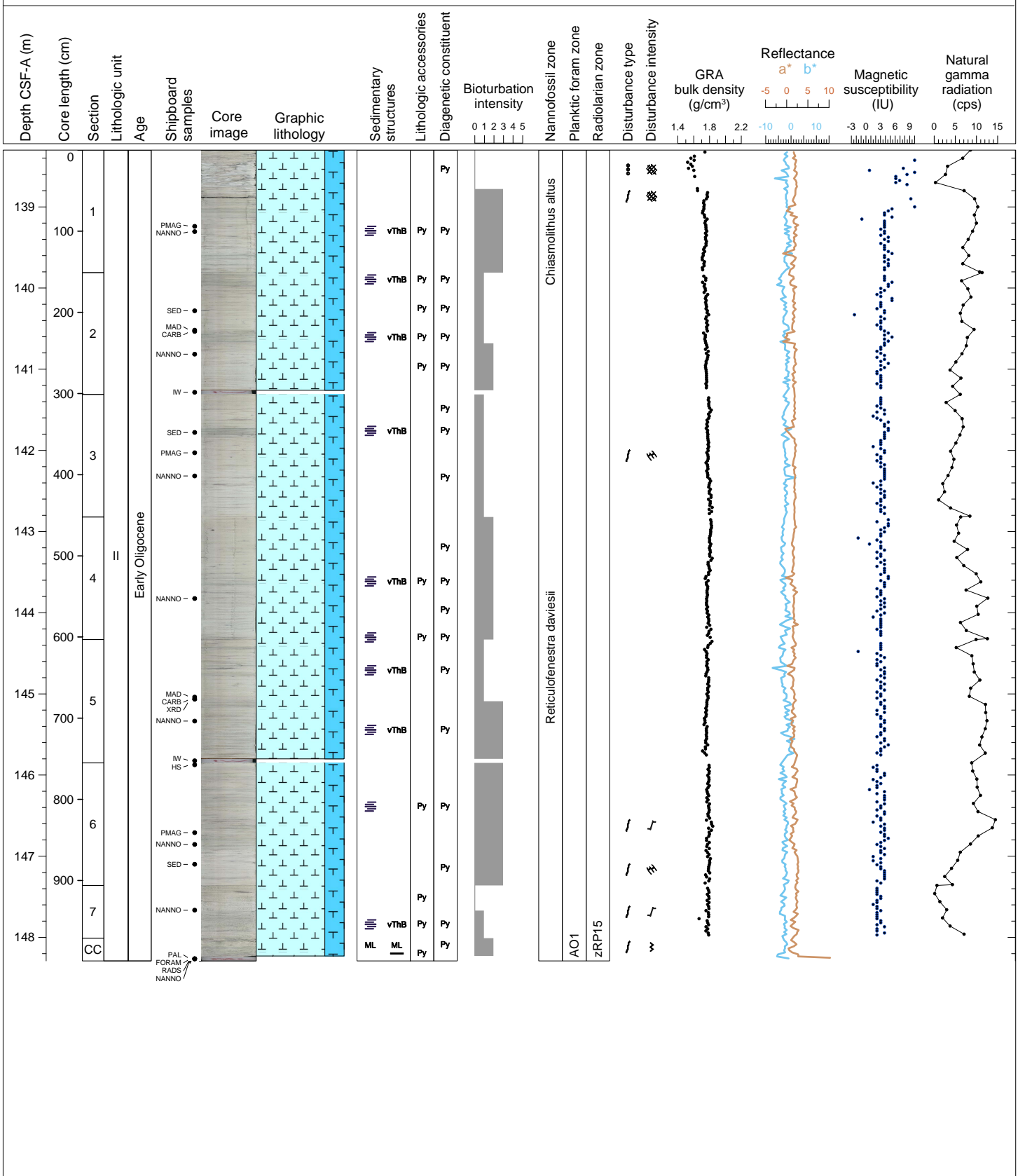
Hole 378-U1553A Core 17H, Interval 128.8-138.78 m (CSF-A)

Core U1553A-17H consists of white (N 8, N 8.5) nannofossil ooze with foraminifers interlayered with nannofossil ooze in Section 6. Few siliceous sponge spicules can be observed in smear slides. The core has light greenish gray (5G 8/1, 5G 7/1) and very pale brown layers (10YR 8/2). There are dark areas of pyrite that form indistinct bands. There are several dark burrows in Sections 1, 2, 3, 5, 7 and CC. There is extensive drilling disturbance in Sections 1, 2 and 5.



Hole 378-U1553A Core 18H, Interval 138.3-148.29 m (CSF-A)

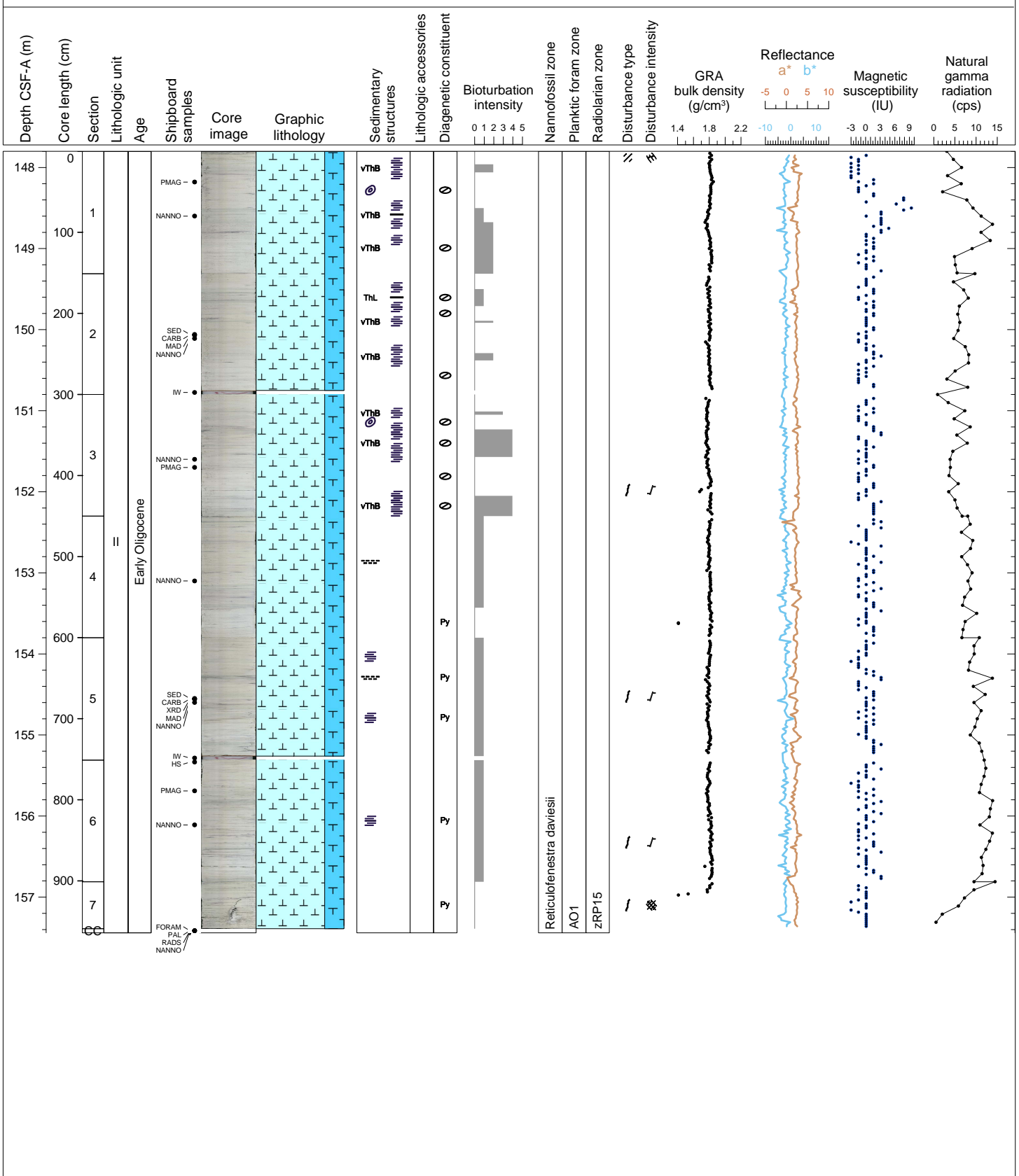
Core U1553A-18H consists of white (N 8.5) nannofossil ooze with foraminifers. Few siliceous sponge spicules can be observed in smear slides. The core has light greenish gray layers (5G 8/1). There is extensive drilling disturbance in Section 1.





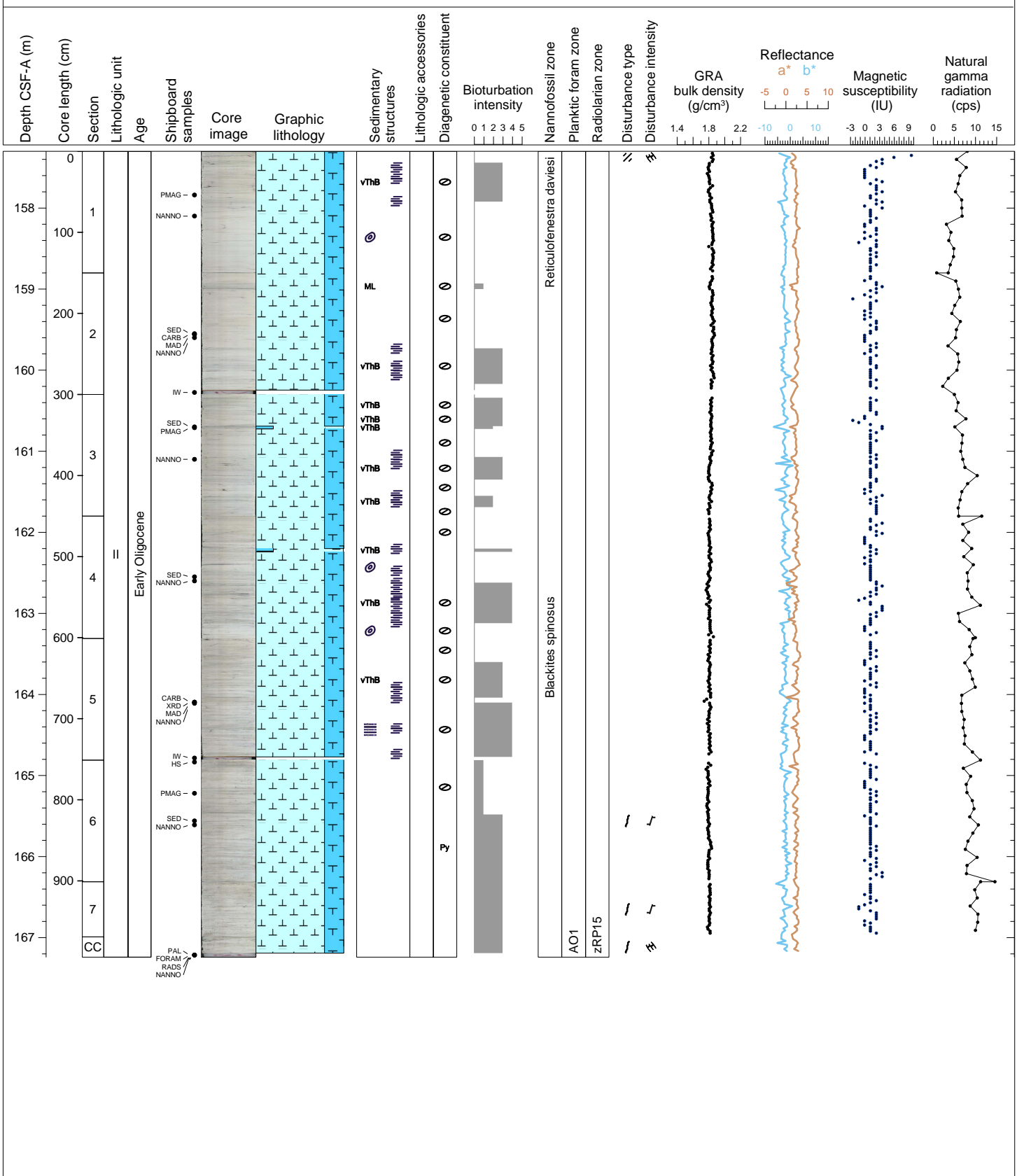
Hole 378-U1553A Core 19H, Interval 147.8-157.44 m (CSF-A)

Core U1553A-19H consists of nannofossil ooze with foraminifers. Few siliceous sponge spicules can be observed in smear slides. Fine (mm-scale) green laminations are visible in Sections 3 to 5. The core has light greenish gray layers (5G 7/1). Pyrite is visible in mm to cm-scale patches throughout the core. There is moderate drilling disturbance in the top 5 cm of Section 1.



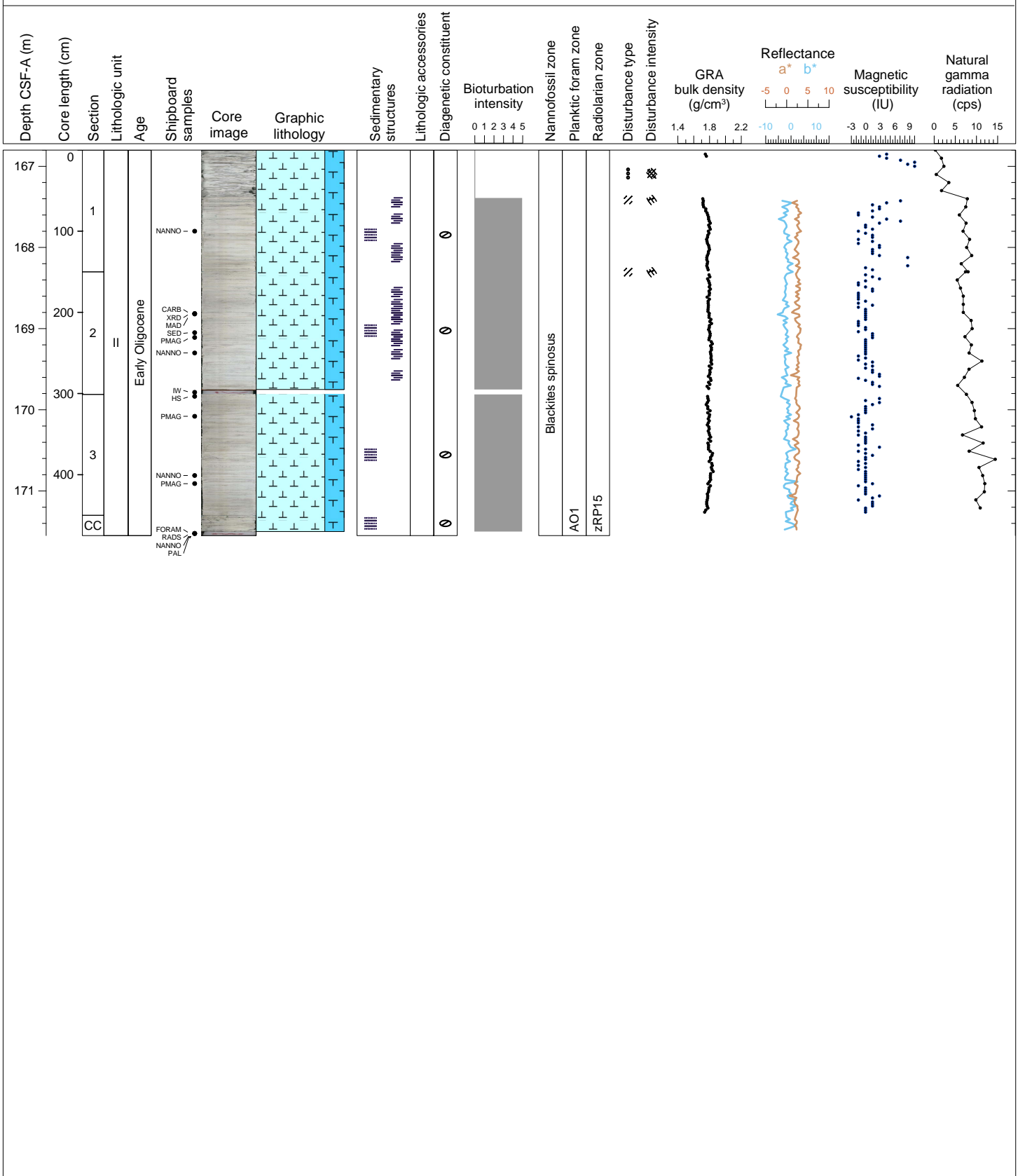
Hole 378-U1553A Core 20H, Interval 157.3-167.24 m (CSF-A)

Core U1553A-20H consists of nannofossil ooze with foraminifers, interlayered with foraminifer-rich nannofossil ooze in a part of Sections 3 and 4. Siliceous sponge spicules, diatoms, radiolarian, and silicoflagellates can be observed in smear slides in small abundances (1-10%). The core is mainly white throughout (N 8.5, 2.5Y 8/1), with light greenish gray (5G 7/1, 5BG 8/1) and pale blue green (5BG 7/2) layers. Fine (mm-scale) green laminations are visible in Sections 3 and 4. Green layers have a harder texture and appear mineralized. Pyrite is visible in mm to cm-scale patches throughout the core and is also observed in smear slides. There is moderate drilling disturbance (fractures) in the top 7cm of Section 1 and slight cracks in Sections 6 and 7.



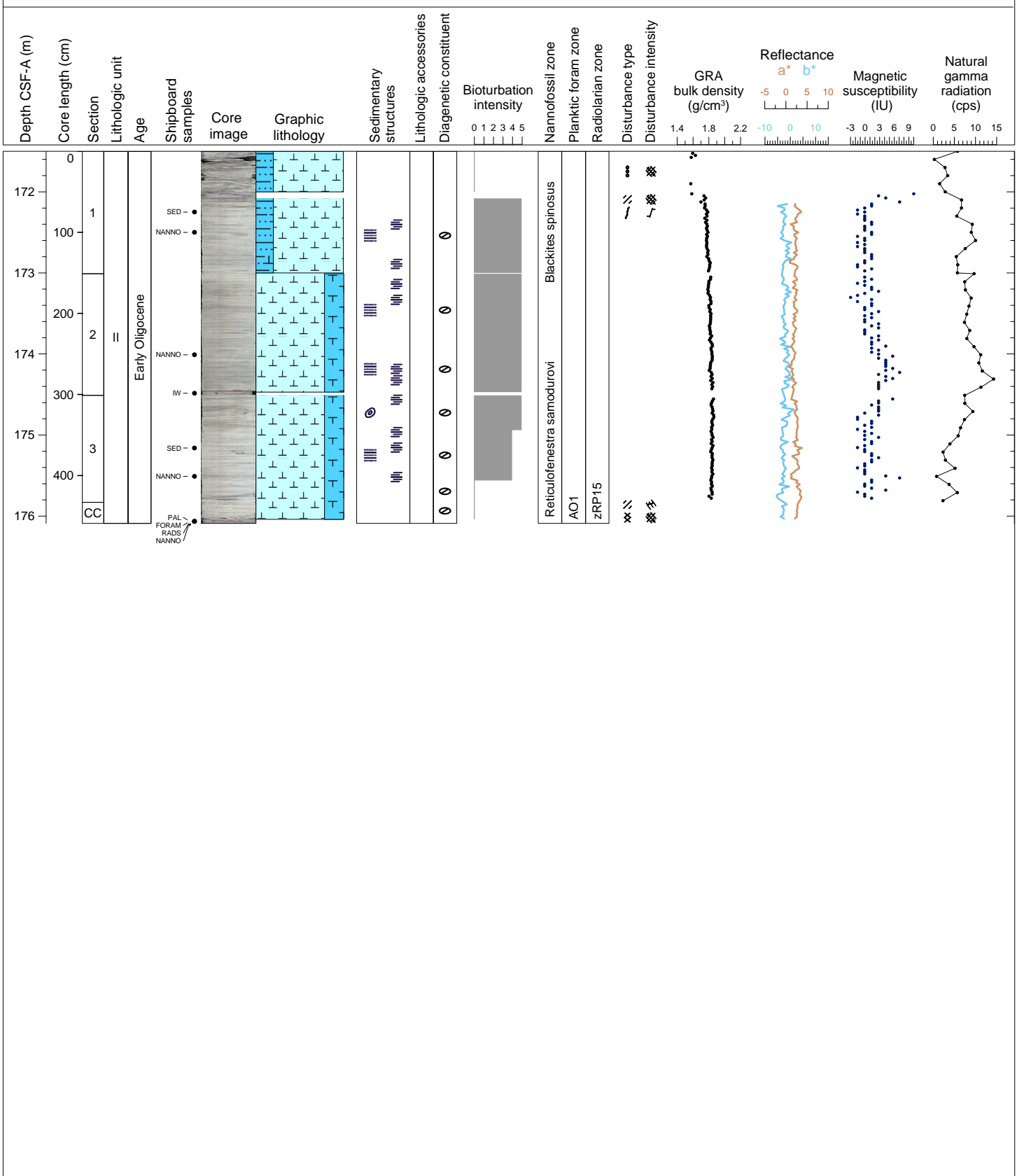
Hole 378-U1553A Core 21F, Interval 166.8-171.55 m (CSF-A)

Core U1553A-21F consists of white nannofossil ooze with foraminifers (N 8.5). Siliceous sponge spicules and diatoms were noted in smear slides in small abundances (<1%). The core has light greenish gray layers (5G 8/1). Green layers have a harder texture and appear mineralized Pyrite is visible in mm to cm-scale patches throughout the core and is also observed in smear slides. There is severe drilling disturbance in 0-58 cm of Section 1 and moderate fractures in Sections 1 and 2.



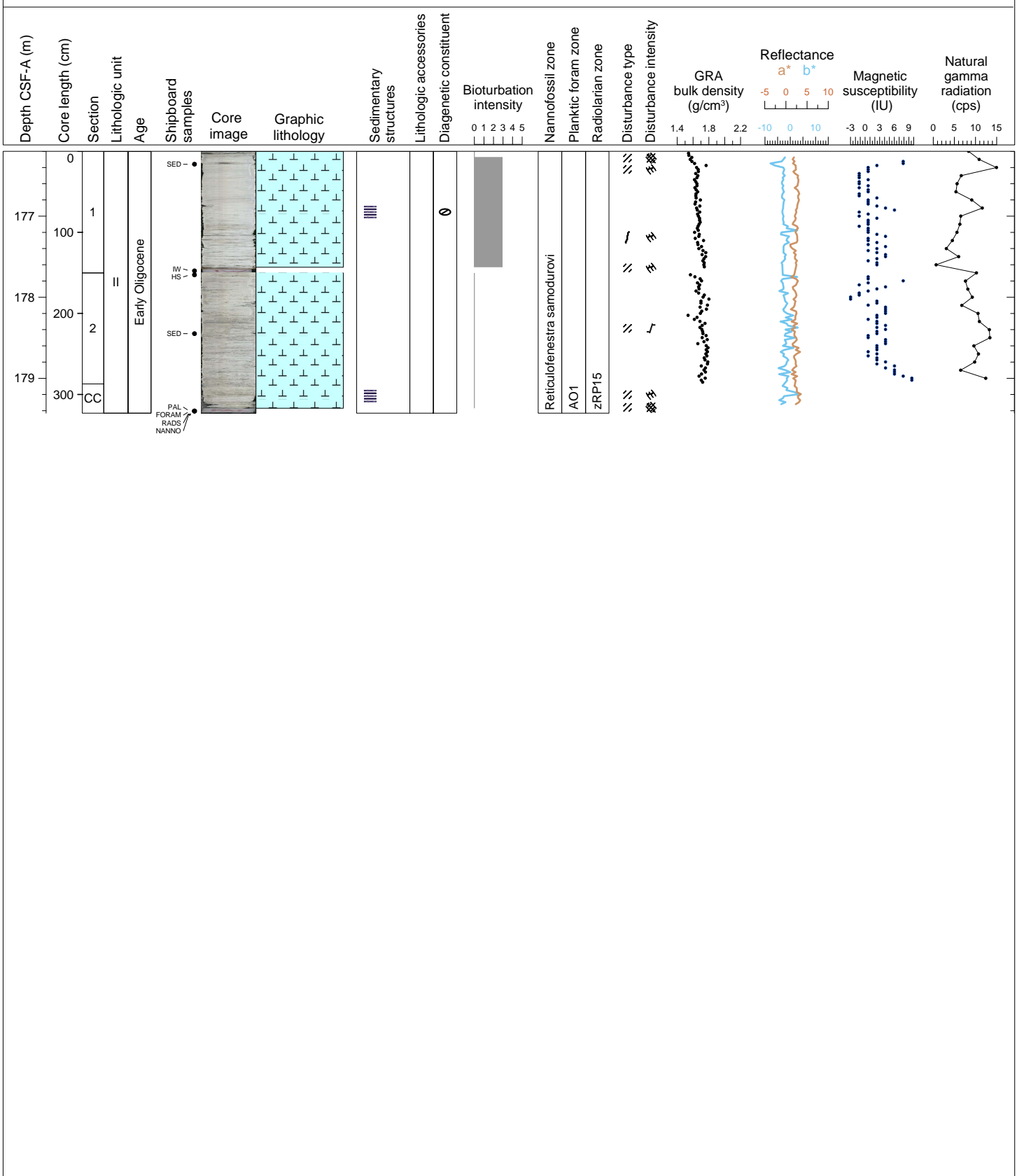
Hole 378-U1553A Core 22F, Interval 171.5-176.09 m (CSF-A)

Core U1553A-22F consists of foraminifer-rich nannofossil ooze in Section 1, and nannofossil ooze with foraminifers in Sections 2 to CC. Siliceous sponge spicules and radiolarians can be observed in smear slides in small abundances. The core has light greenish gray (5G 8/1, 5G 7/1) and brown layers. Green layers have a harder texture and appear mineralized. Pyrite is observed in smear slides. There is severe drilling disturbance in 0-50 cm of Section 1.



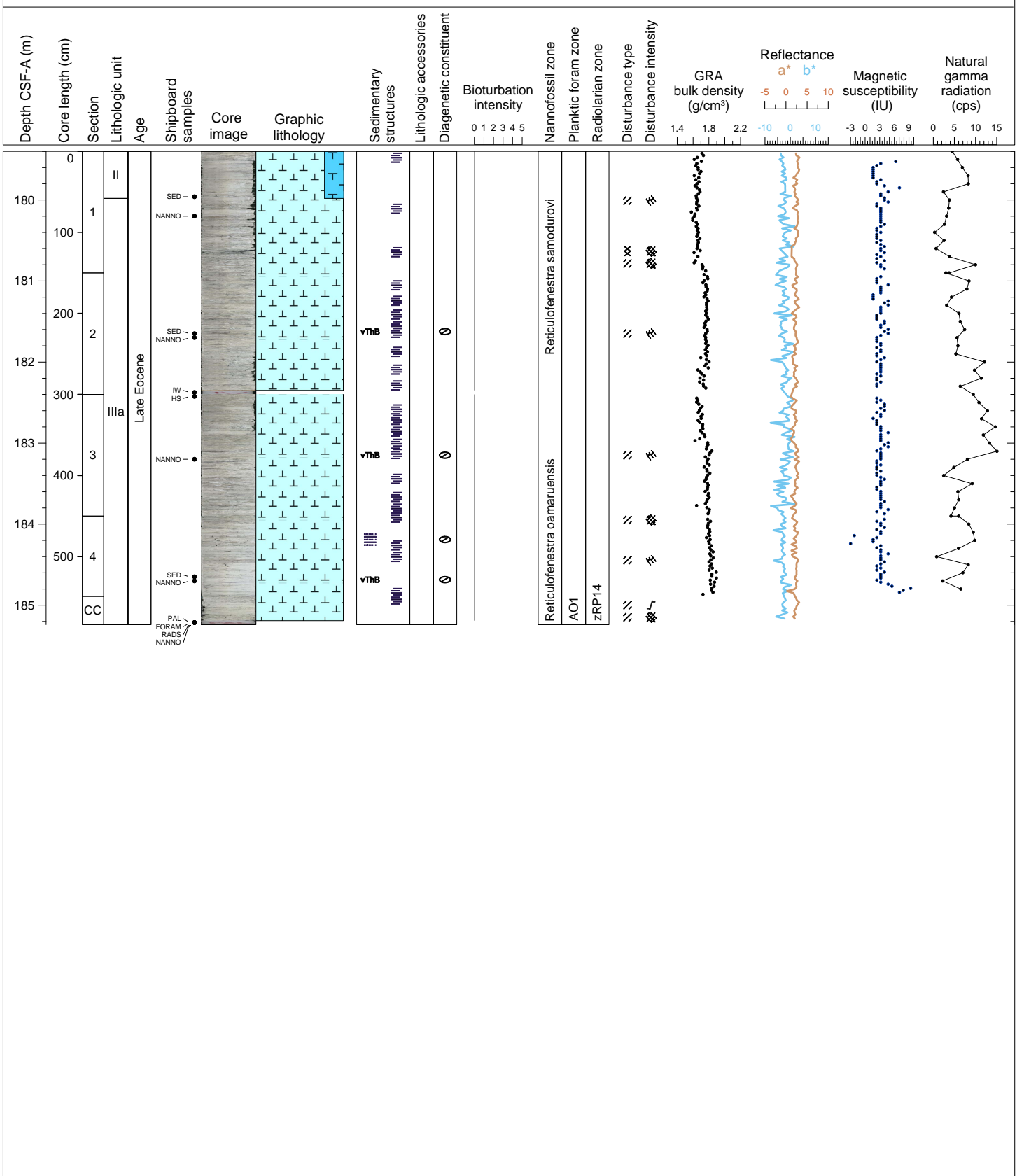
Hole 378-U1553A Core 23X, Interval 176.2-179.43 m (CSF-A)

Core U1553A-23X consists of white nannofossil ooze (N 8, N 8.5). Few foraminifers, siliceous sponge spicules and radiolarians were noted in smear slides in small abundances (1-10%). The core is mainly white throughout, with some diffuse light greenish grey (10G 8/1) and brown layers. Pyrite is observed in small patches to blebs. There is severe drilling disturbance in 0-7 cm of Section 1 and slight to moderate fracturing throughout the core.



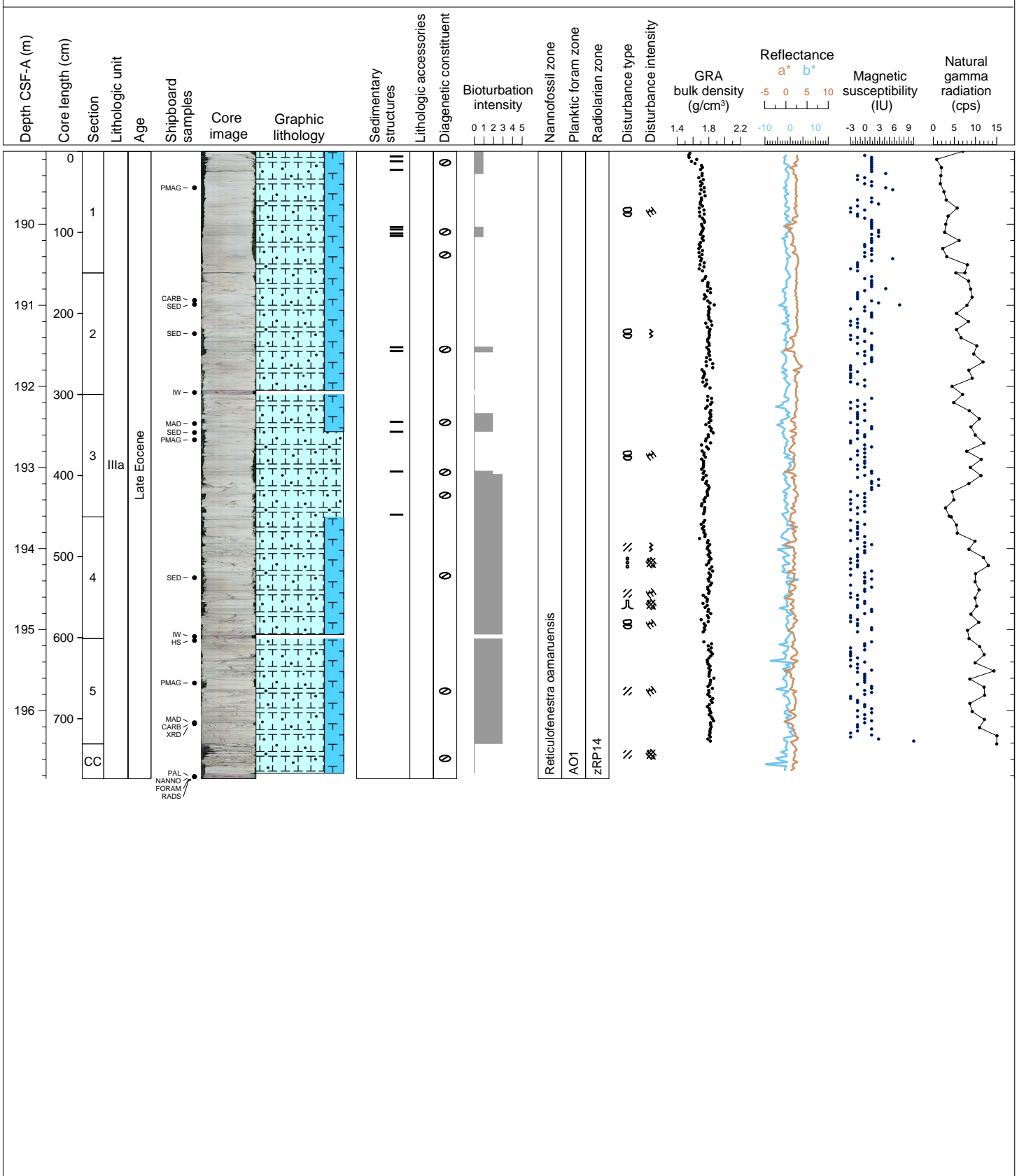
Hole 378-U1553A Core 24X, Interval 179.4-185.24 m (CSF-A)

Core U1553A-24X consists of white (N 8, N 8.5) nannofossil ooze. Foraminifers, siliceous sponge spicules, diatoms, silicoflagellates, and radiolarians were noted in smear slides in small abundances (1-10%). Some diffuse light greenish grey (10G 8/1) and brown layers are observed throughout. Green layers have a harder texture and appear mineralized. Pyrite is observed in small patches to blebs. There is severe fracturing and brecciation in 122-150 cm of Section 1 and moderate to severe fracturing throughout the rest of the core.



Hole 378-U1553A Core 25X, Interval 189.1-196.84 m (CSF-A)

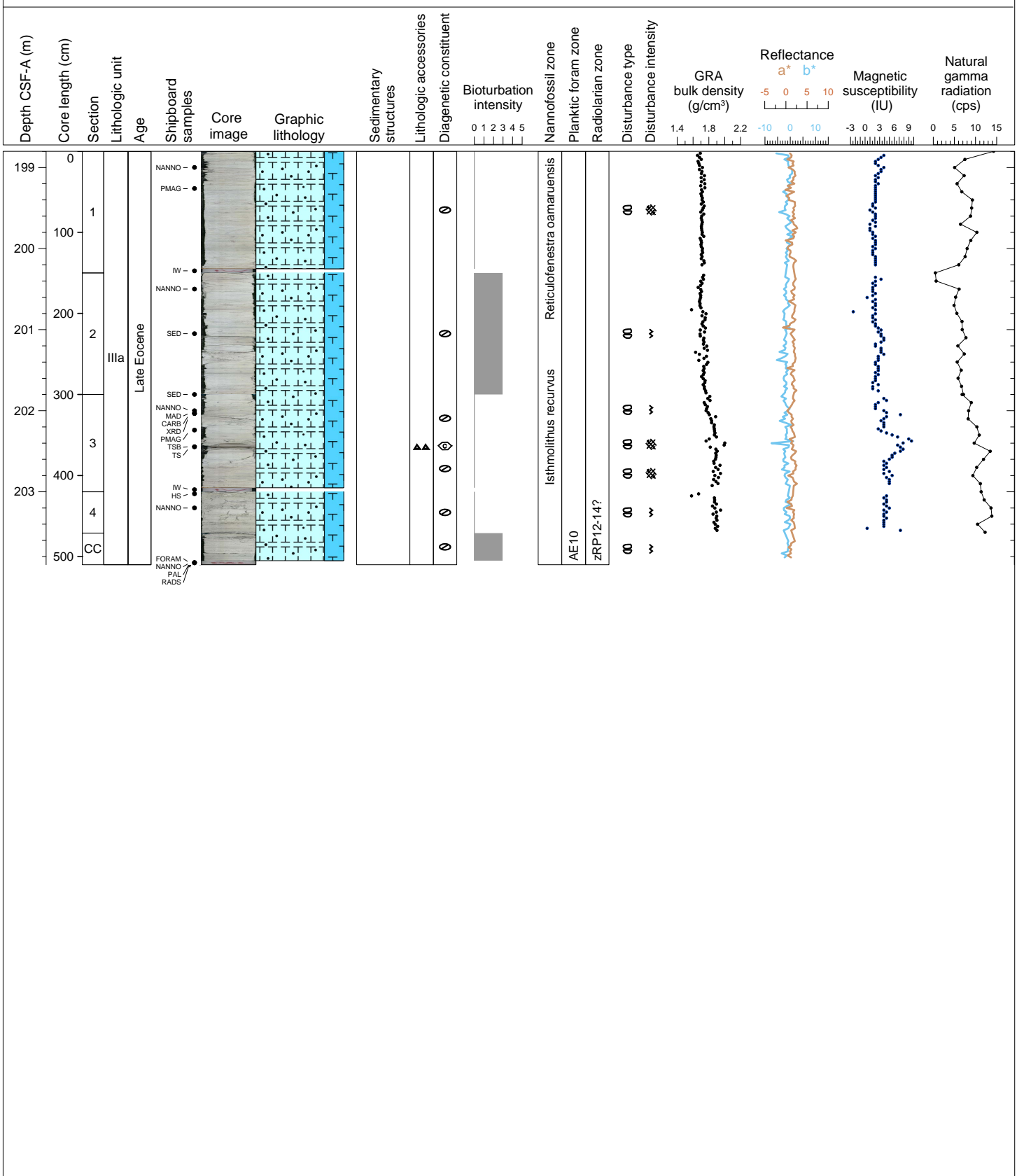
Core U1553A-25X consists of white (N 8.5, N 9) nannofossil chalk to ooze with foraminifers. Siliceous sponge spicules, diatoms, and silicoflagellates were noted in smear slides in small abundances (1-10%). This core shows intermediate lithification. Soft, unlithified material separates biscuits that are interbedded. In the lithified sections, ichnofossil burrows (Teichichnus) cross-cut fine mm-scale greenish grey (5G 6/1) to pale blue green (5GB 7/2) laminations, which are interpreted to be diagenetic. The core shows variable amounts of brecciation.





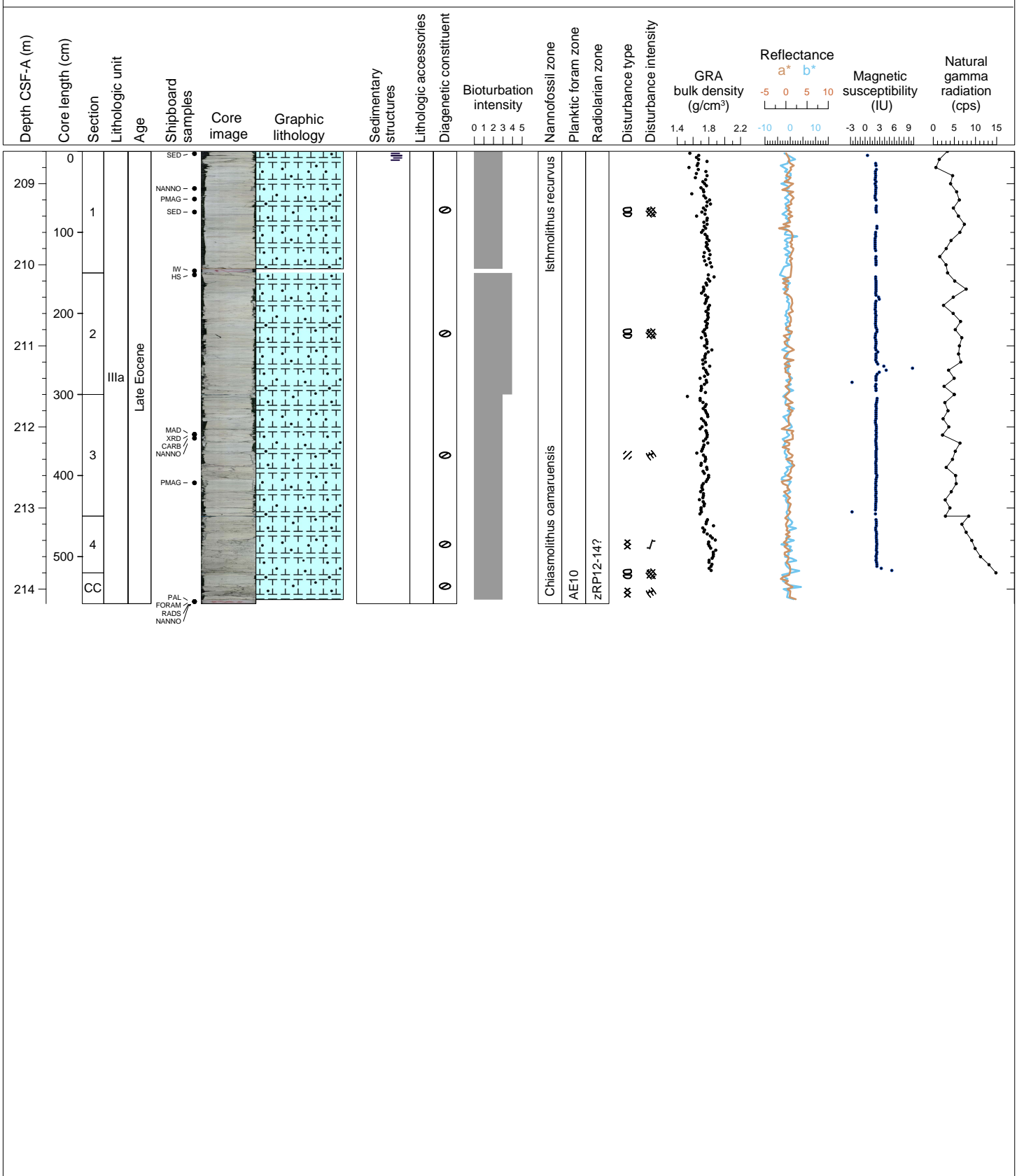
Hole 378-U1553A Core 26X, Interval 198.8-203.9 m (CSF-A)

Core U1553A-26X consists of white (N 8.5) nannofossil chalk with foraminifers. In Section 3 (59-68 cm), a light grayish olive (10Y 6/2) chert layer is observed. Siliceous sponge spicules were noted in smear slides in small abundances (1-10%). This core shows intermediate lithification. Soft, unlithified material separates biscuits that are interbedded. In the lithified sections, ichnofossil burrows (*Teichichnus*) cross-cut fine, pale blue green (5GB 7/2) mm-scale green laminations, which are interpreted to be diagenetic. The core shows high to severe brecciation and fracturing.



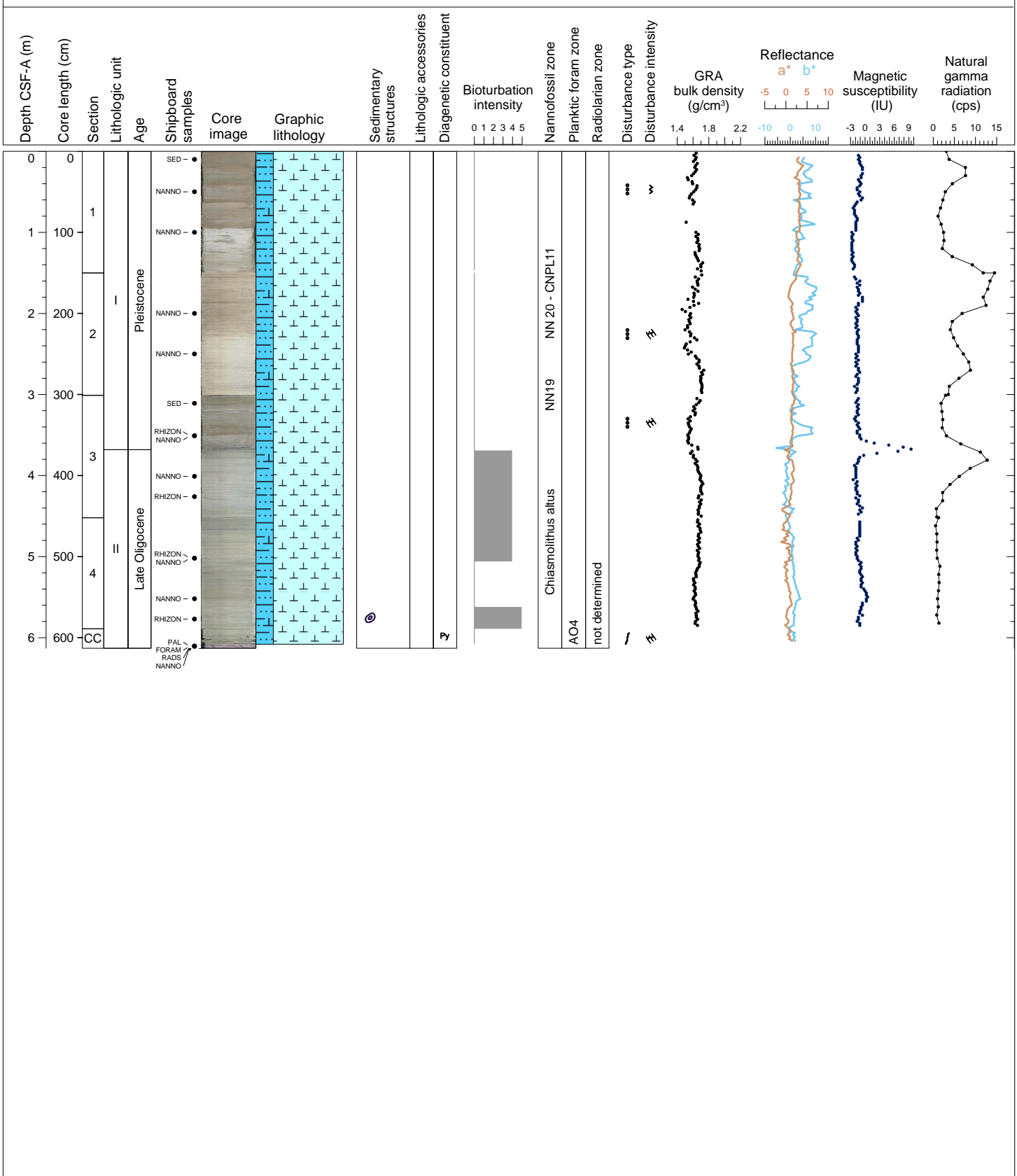
Hole 378-U1553A Core 27X, Interval 208.6-214.18 m (CSF-A)

Core U1553-27X consists of light greenish gray (5GY 8/1, 10GY 8/1) nannofossil chalk. Pyrite, foraminifers and siliceous sponge spicules were noted in smear slides. This core shows intermediate lithification. Soft, unlithified material separates biscuits that are interbedded in Sections 1 and 2. Sections 3 and 4 are fractured and brecciated. In the lithified sections, ichnofossil burrows (Teichichnus) cross-cut fine mm-scale light greenish gray (10G 7/1, 5G 7/1) laminations, which are interpreted to be diagenetic.



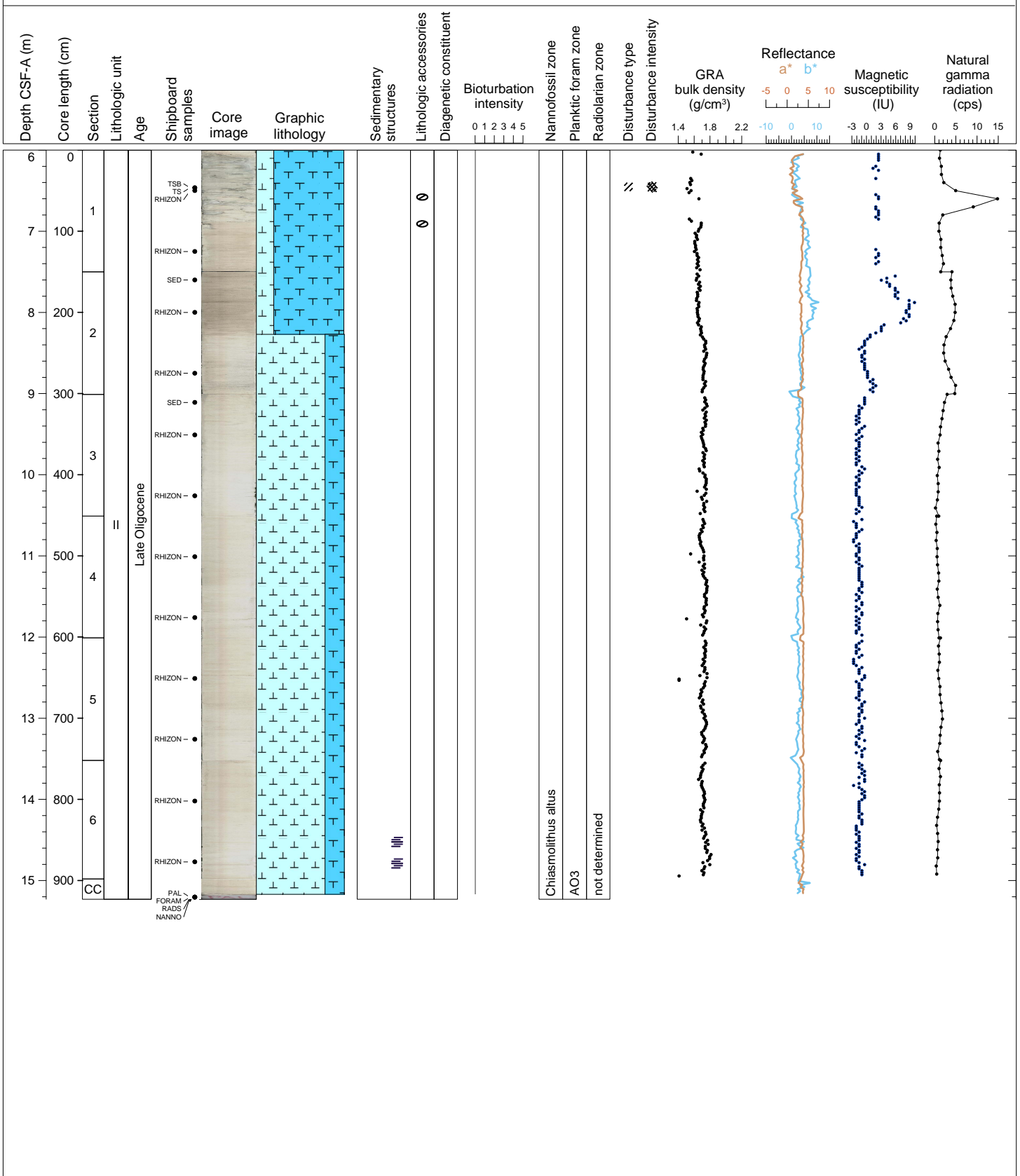
Hole 378-U1553B Core 1H, Interval 0.0-6.13 m (CSF-A)

Core U1553B-1H consists of foraminifer-rich nannofossil ooze. Sections 1 and 2 are soupy, as is Section 3 from 0-68 cm. Soupy sections are characterized by light gray (5Y 7/2 and 5Y 7/1) colors and a sandy grain size. Alternating sections are bright white (10YR 8/1, 2.5Y 8/1, 2.5Y 9.5/1, 5Y 8/1, and N 8.5) and contain dispersed green layers. Sections 4 (54 cm) through CC are light greenish gray (10GY 8/1, 5GY 8/1, and 10Y 8/1). Mm-sized black pyrite specks are abundant throughout the core.



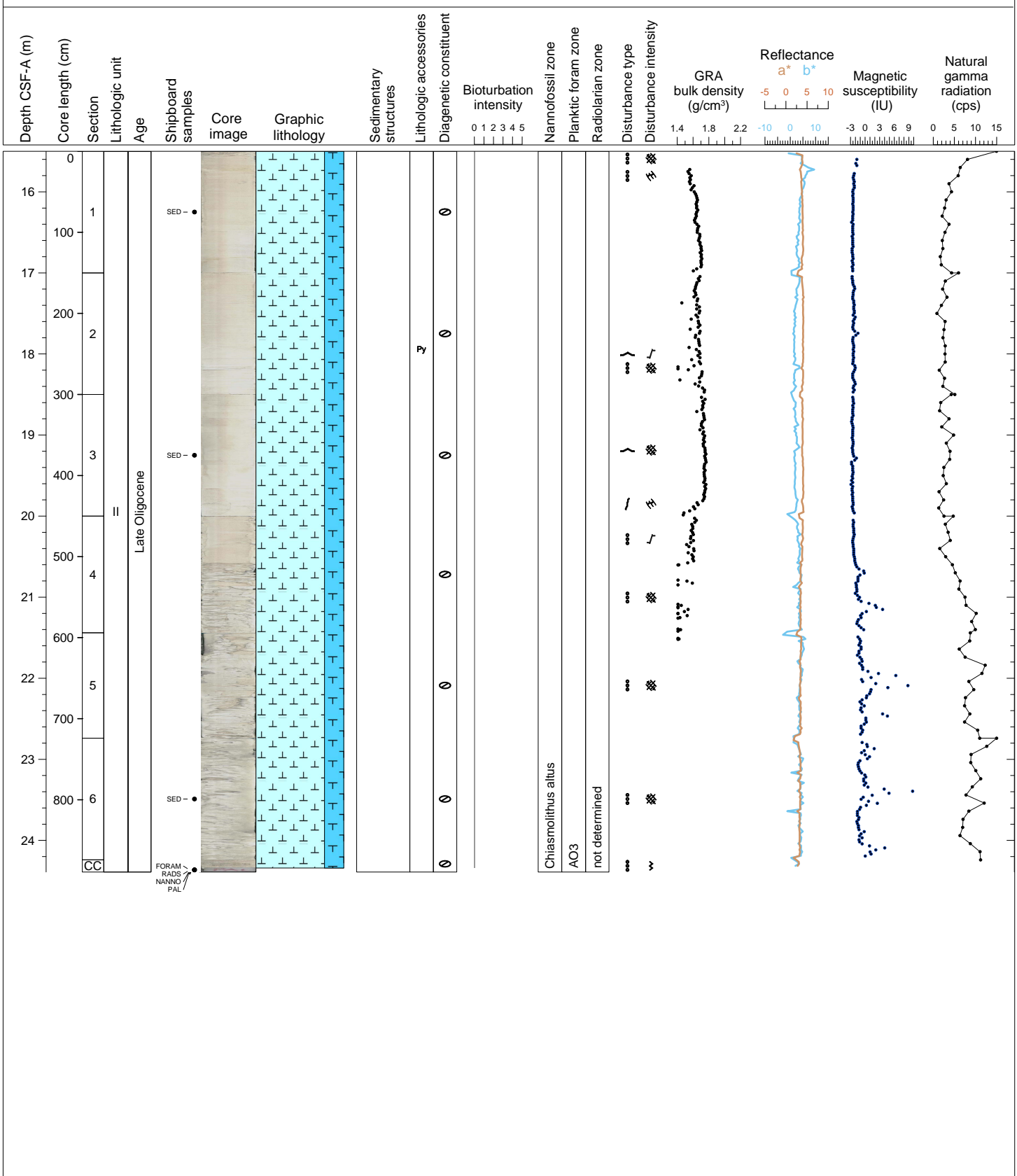
Hole 378-U1553B Core 2H, Interval 6.0-15.23 m (CSF-A)

Core U1553B-2H consists of nannofossil-rich foraminiferal ooze from 6.00 to 8.27 mbsf and nannofossil ooze with foraminifers from 8.27 to 15.17 mbsf. Section 1 is white (2.5Y 8.5/1) and light greenish gray (5GY 8/1) nannofossil-rich foraminiferal ooze. Section 1 contains a black, pebble-sized hard mineral, and similar minerals are dispersed throughout Sections 1 and 2, but decrease in abundance in the deeper sections. Thin section analysis shows that this pebble is predominantly composed of quartz grains of varying size. In Section 2, 0-77 cm is pale yellow/pale brown (2.5Y 8/2) nannofossil-rich foraminiferal ooze, whereas 77-151 cm is white (2.5Y 9.5/1) nannofossil ooze with foraminifers. Sections 3 through 6 are white (2.5Y 9.5/1 and 2.5Y 9/1) nannofossil ooze with foraminifers. Sections 3 through 6 are white (2.5Y 9.5/1 and 2.5Y 9/1) nannofossil ooze with foraminifers.



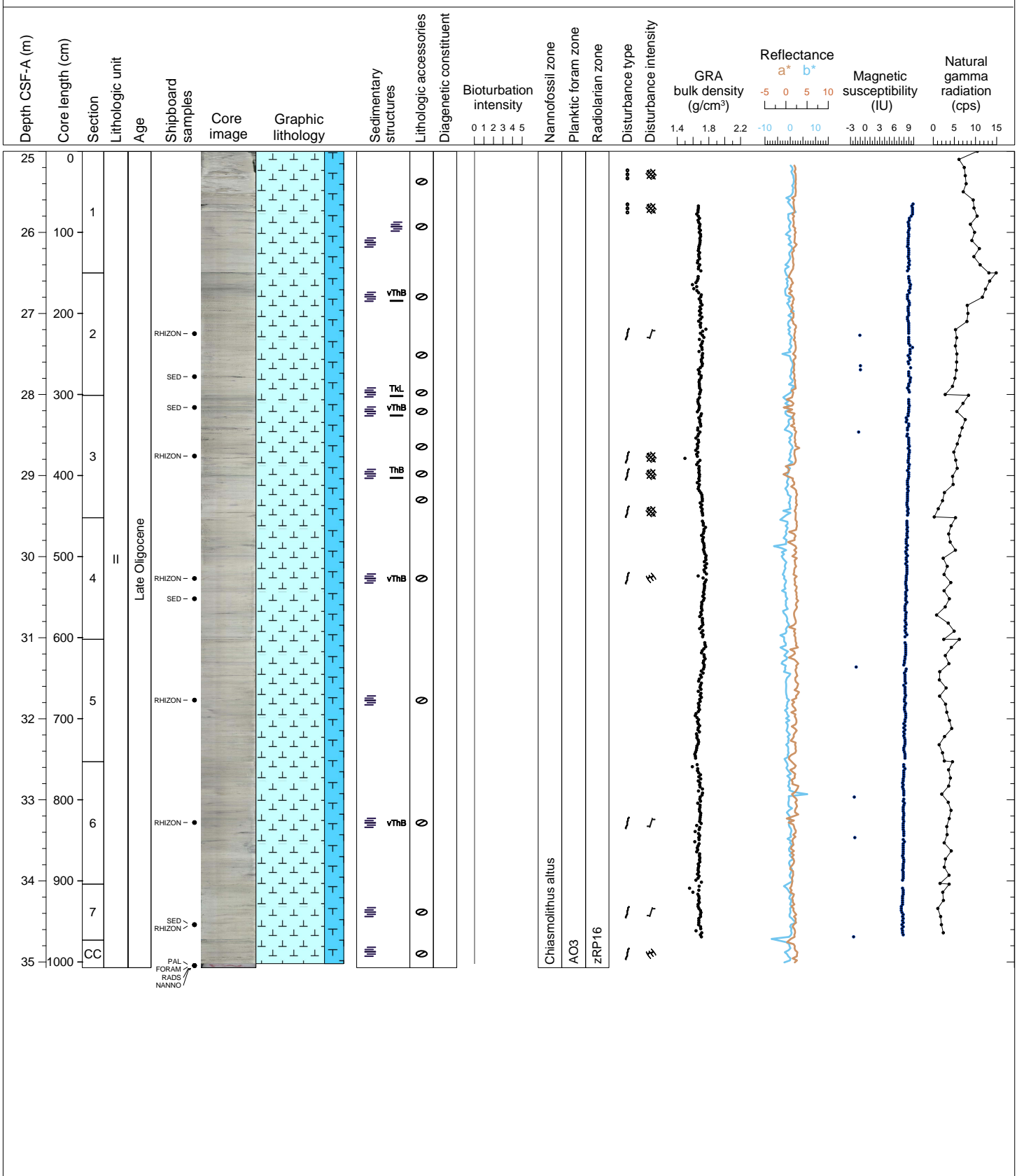
Hole 378-U1553B Core 3H, Interval 15.5-24.39 m (CSF-A)

Core U1553B-3H consists of nannofossil ooze with foraminifers. Siliceous sponge spicules were noted in a smear slides in low abundance (1-10%). The core is white (10YR 9.5/1 and 5Y 8/1) with some very faint coloration in bands. There are sporadic black shiny minerals (<0.1 to 10s of mm) through most sections. There is extensive drilling disturbance in Sections 2, 5, and 6, parts of Sections 1, 3, and 4, and the CC.



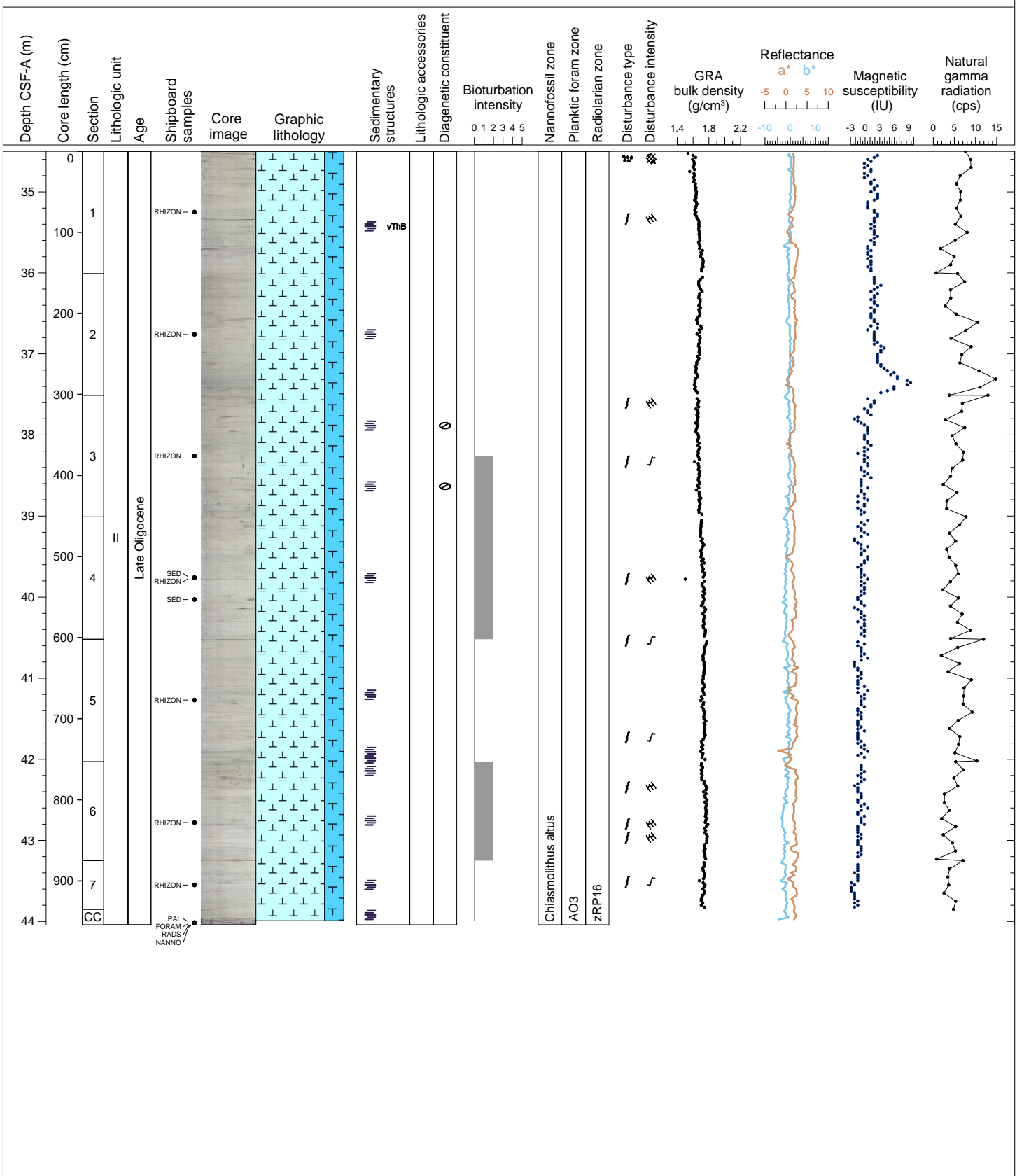
Hole 378-U1553B Core 4H, Interval 25.0-35.07 m (CSF-A)

Core U1553B-4H is characterized by white (N 8.5) nanofossil ooze with foraminifers. Very thin to thin beds as well as thick lamination (Section 2, 87-107 cm) of light greenish gray (10GY 8/1 and 5G 7/1) color occur in Sections 2, 3, 4 and 6. Smear slide analysis of these light greenish gray layers indicates the presence of glauconite bearing nanofossil ooze with foraminifers. Siliceous sponge spicules and fish remains were identified in smear slides. Pyrite is present throughout the core appearing in black patches (mm to cm scale) as well as solitary grains. Severe drilling disturbance observed in Section 1 (soupy) and slight to moderate cracks from Section 2 to CC.



Hole 378-U1553B Core 5H, Interval 34.5-44.04 m (CSF-A)

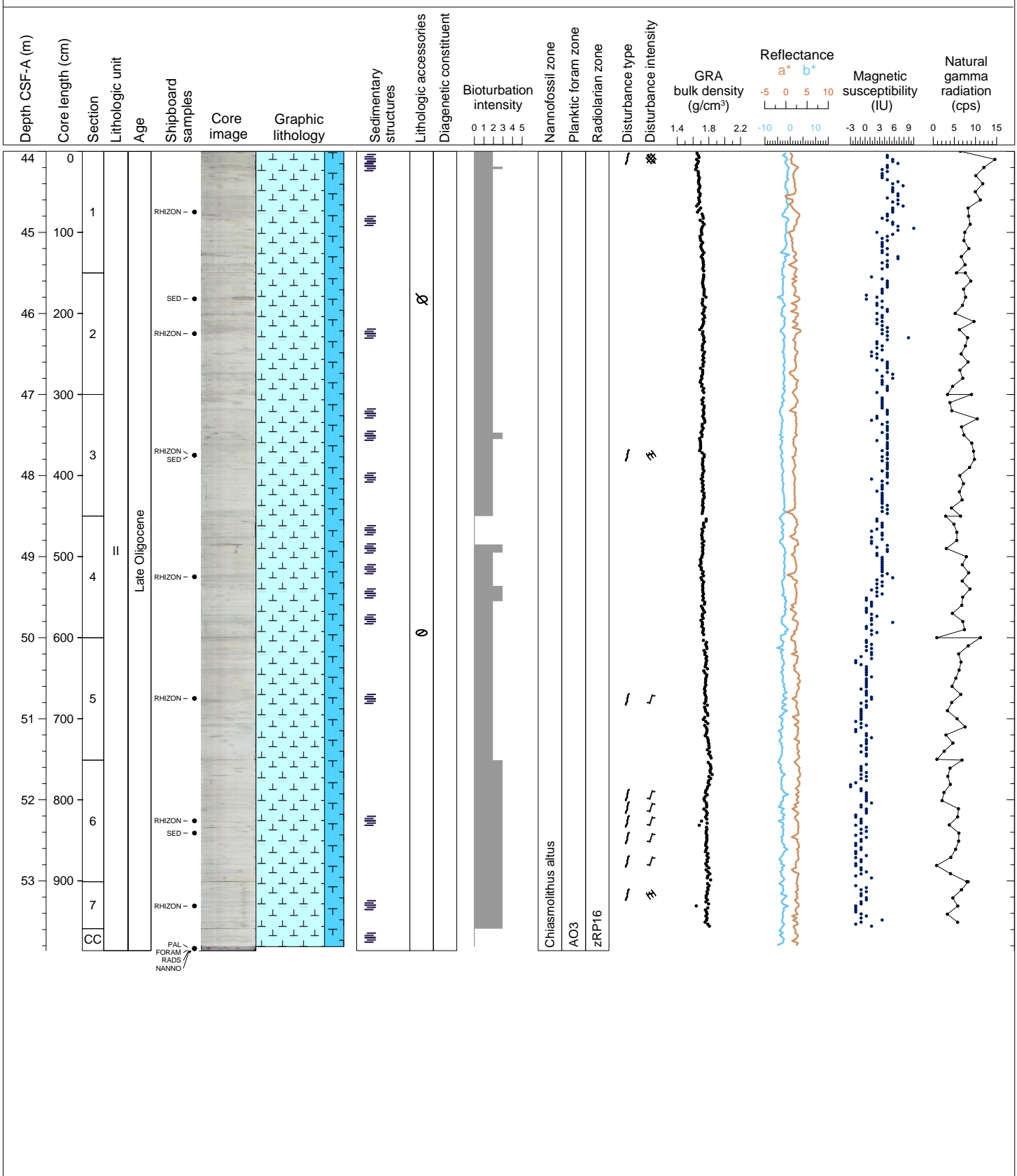
Core U1553B-5H is characterized by white (N 8.5) nannofossil ooze with foraminifers. Occasional layers of light greenish gray (10GY 8/1) color occur throughout the core. Smear slide analysis of these indicates the presence of glauconite bearing nannofossil ooze with foraminifers. Sporadic pyritized worm burrows are present in Section 4 (6-15 cm, 42-45 cm, 96-98 cm). Black patches (mm to cm scale) containing pyrite occur throughout. Severe fall-in drilling disturbance is observed in Section 1, as well as slight to moderate cracks throughout the core. Severe drilling disturbance occurs in the upper 3 cm in Section 1 (crack).





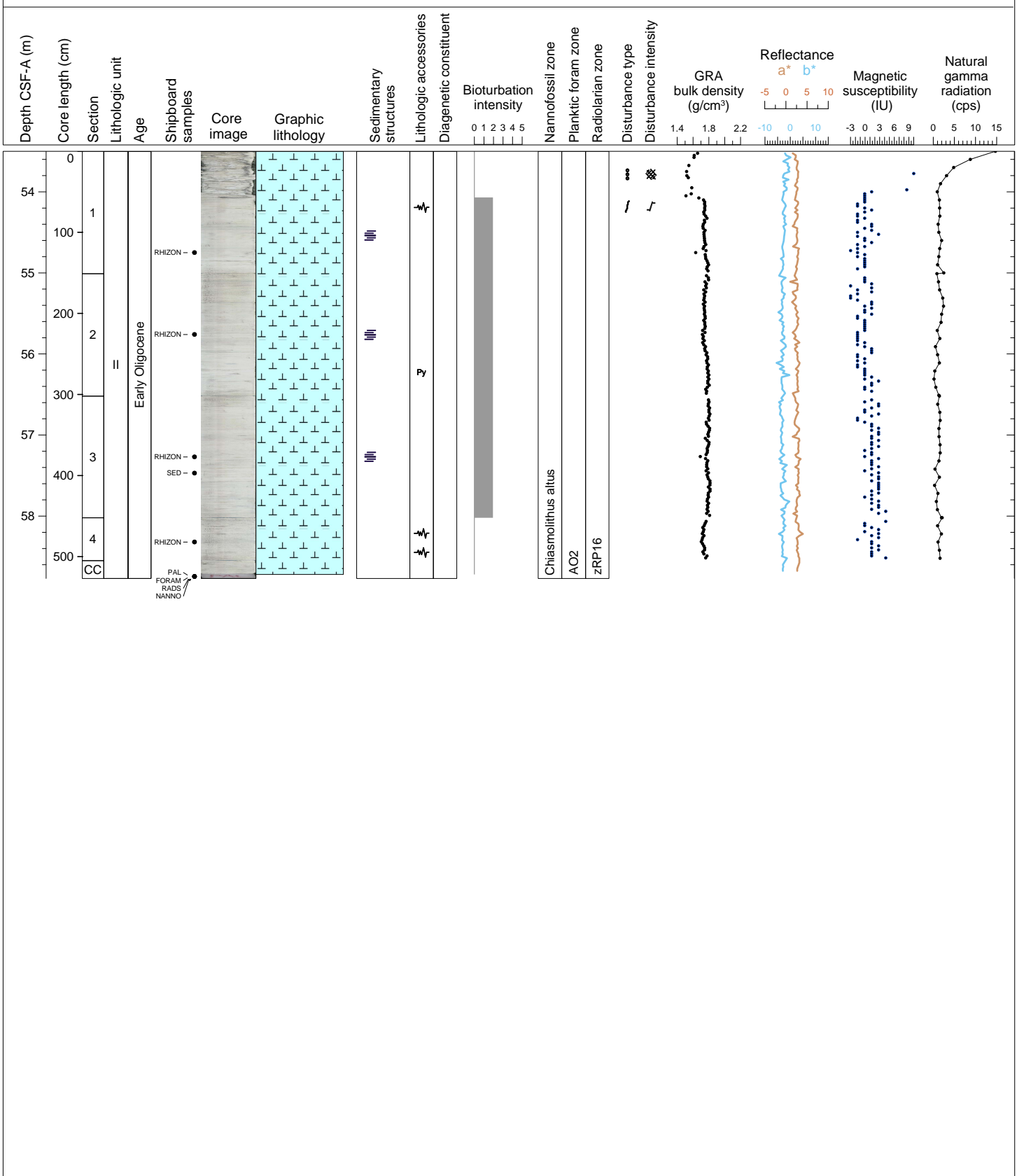
Hole 378-U1553B Core 6H, Interval 44.0-53.86 m (CSF-A)

Core U1553B-6H is characterized by white (N 8.5) nannofossil ooze with foraminifers. Occasional layers of light greenish gray (10GY 8/1) color occur throughout the core. Smear slide analysis of the green layers indicates the presence of glauconite. Siliceous sponge spicules and fish remains were identified in smear slides. Pyritized worm burrows are present in all sections. Section 2 shows a pale brown 4 x 2.5 cm patch (2.5Y 8/1) with a light pale purple (5PB 7/1) reaction rim on the outside. Drilling disturbance is observed in top of Section 1, and small cracks appear throughout the core. Another slightly smaller pale brown patch (1x1 cm; 2.5Y 7/2) present in Section 4. Severe drilling disturbance is observed in the upper 3 cm in Section 1 (crack).



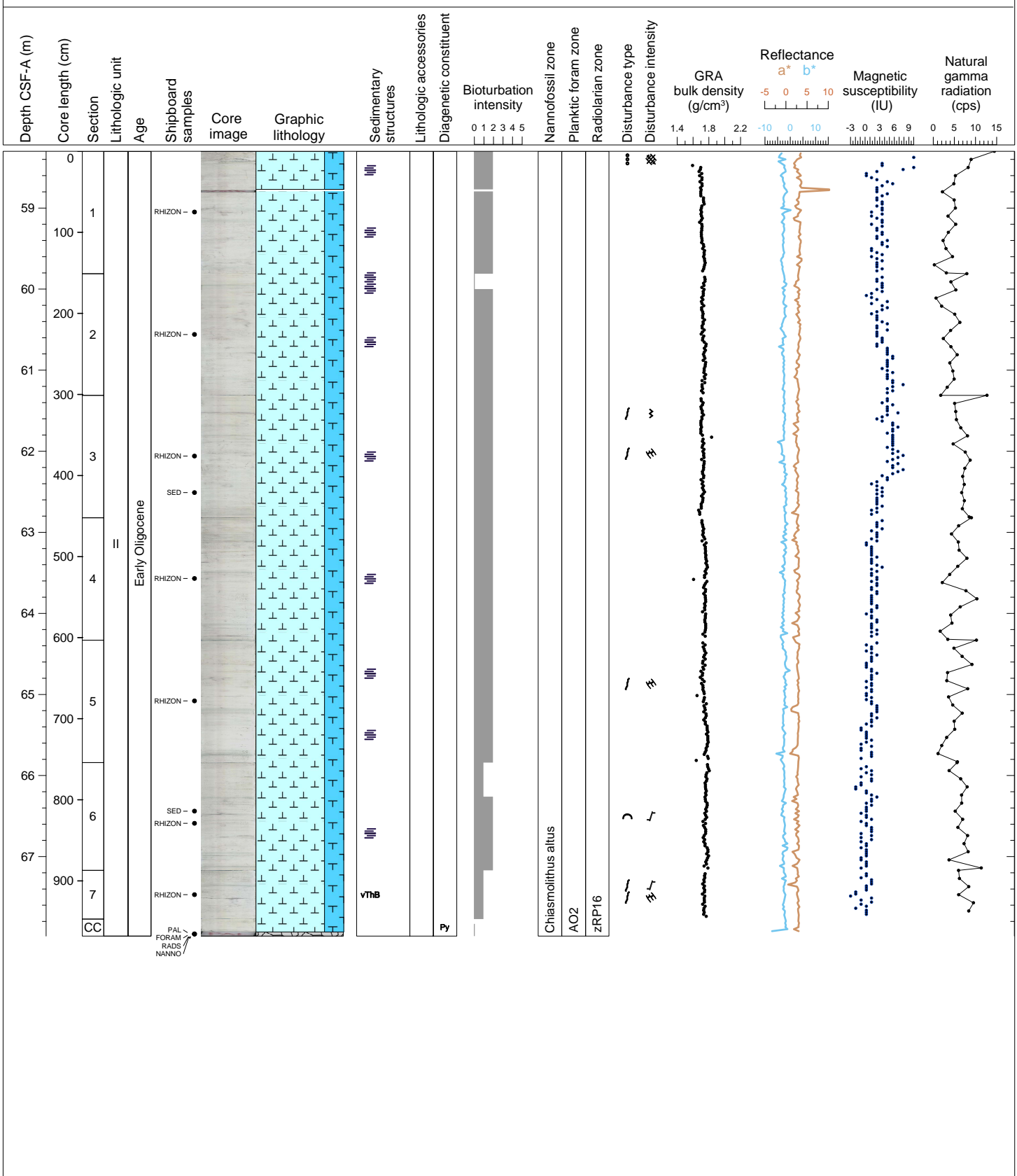
Hole 378-U1553B Core 7H, Interval 53.5-58.77 m (CSF-A)

Core U1553B-7H is characterized by white (N 8.5) nannofossil ooze. Faint layering of glauconite-bearing light greenish gray (5G 8/1) occurs throughout, and is sometimes concentrated in sequential layers. Siliceous sponge spicules and fish remains were identified in smear slides. Section 1 is severely disturbed (soupy), contains small (5 mm and less) pebbles and granules, some rounded, mainly black and brown (5Y 6/8) in color. Sporadic vertical features (light gray in color) are present throughout Section 7, that may be diagenetic effects associated with vertical burrows.



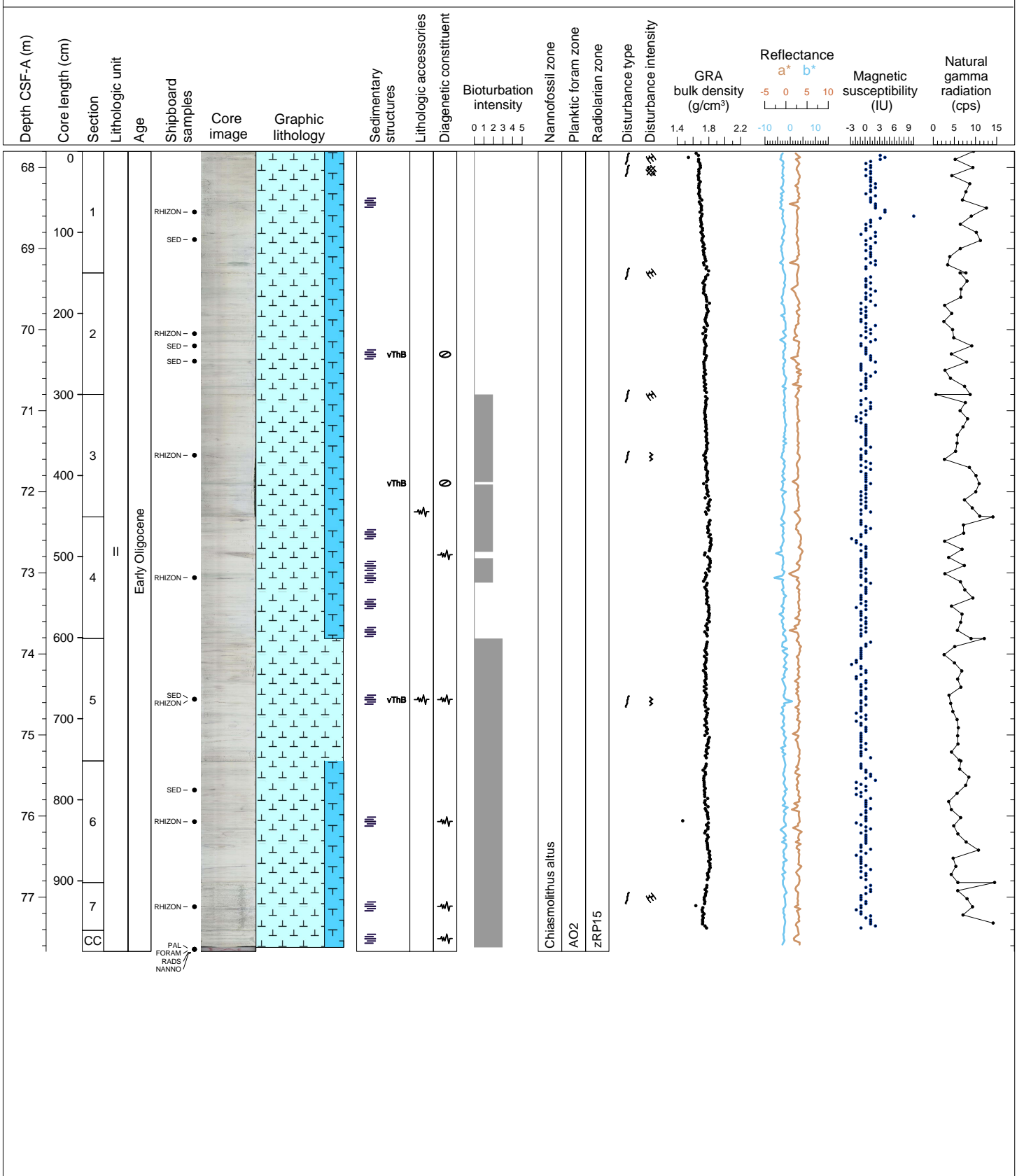
Hole 378-U1553B Core 8H, Interval 58.3-67.98 m (CSF-A)

Core U1553B-8H is characterized by white (N 8.5) nannofossil ooze with foraminifers. Layers of light greenish gray (5G 8/1) occur throughout, and sometimes are concentrated in sequential layers (Sections 2, CC). Siliceous sponge spicules were identified in smear slides. Section 1 is severely disturbed (soupy) and shows a 35 x 5 mm white vertical feature (N 8); Section 6 is characterized by multiple light grey colored (5Y 7/2) borrows (<1 cm long).



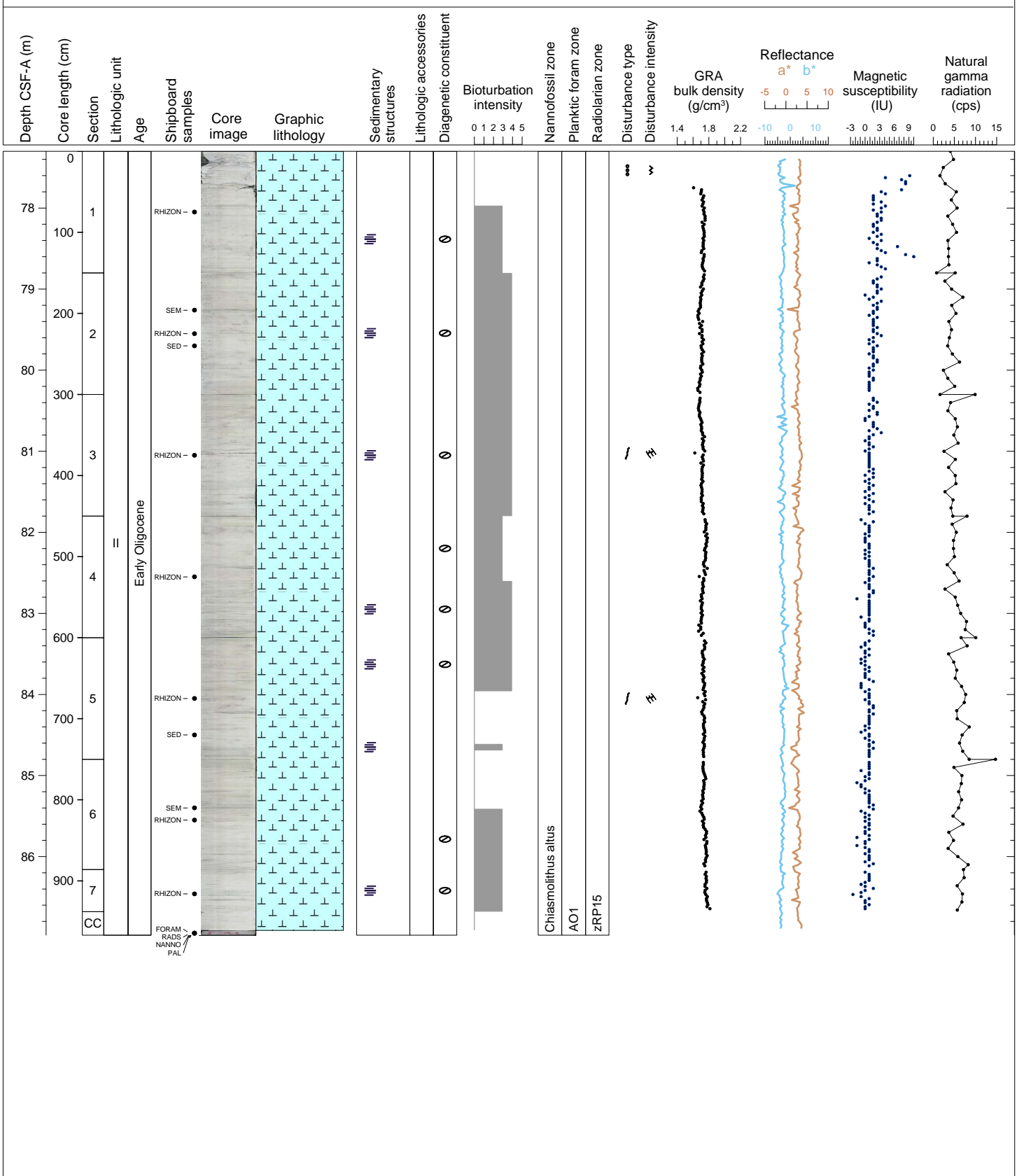
Hole 378-U1553B Core 9H, Interval 67.8-77.67 m (CSF-A)

Core U1553B-9H is characterized by white (N 8.5) nannofossil ooze with foraminiferas. Siliceous sponge spicules and fish remains were identified in smear slides. The core is mainly white (N 8.5) throughout, with sporadic light greenish grey layering and bands (5GY 8/1, 5GY 7/1 and N 7) that are diffuse and sometimes concentrated in sequential layers. Mm to cm-scale pyrite patches are visible throughout. A possible diagenetic halo/burrow is observed in Section 6. Drilling disturbance includes moderate to severe cracks.



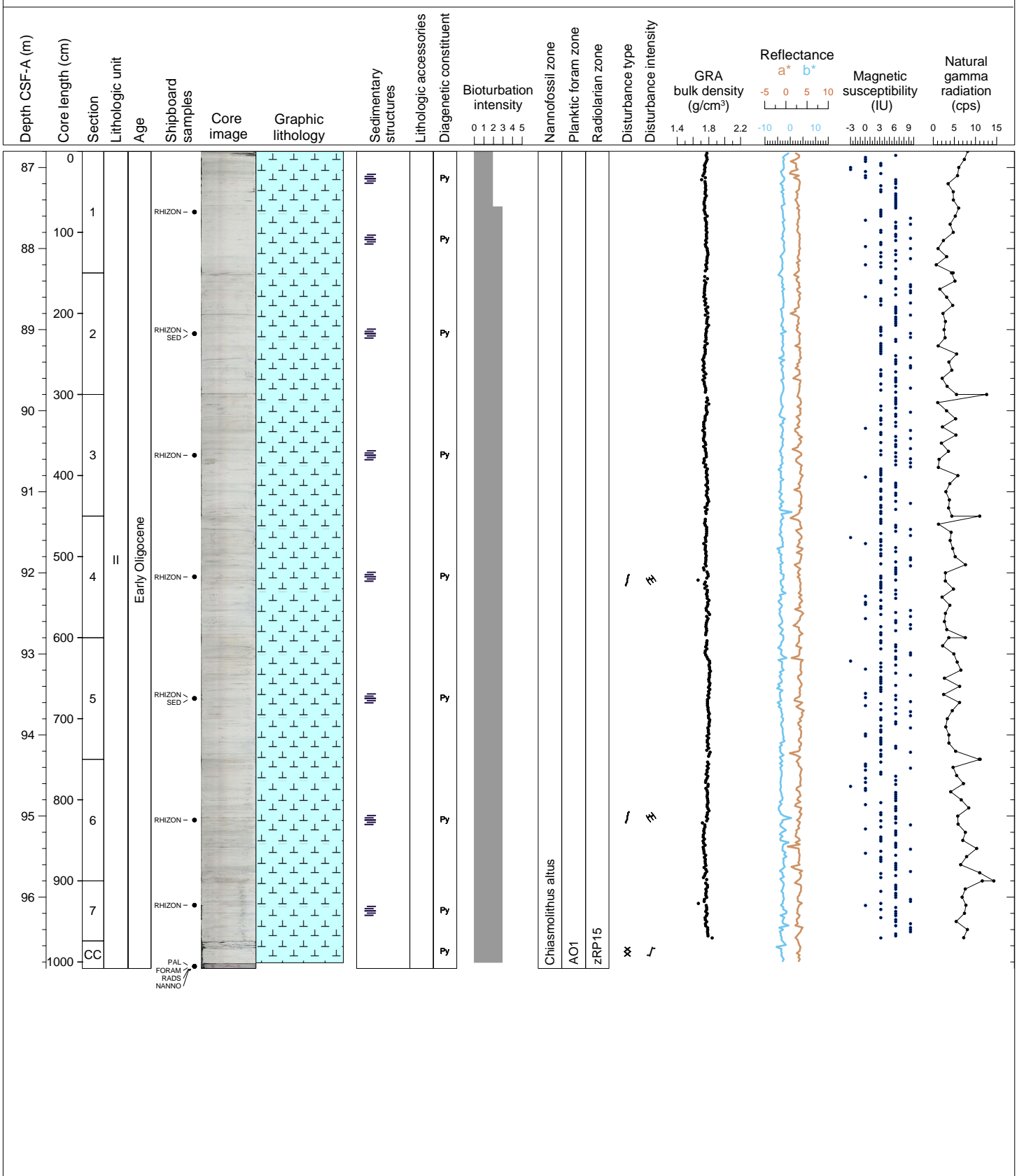
Hole 378-U1553B Core 10H, Interval 77.3-86.97 m (CSF-A)

Core U1553B-10H is characterized by white (N 8.5) nanofossil ooze. Few foraminifers (1-10%), siliceous sponge spicules and fish remains were identified in smear slides. The core contains sporadic light greenish grey layering and bands (10GY 8/1) that are diffuse and sometimes concentrated in sequential layers. Mm to cm-scale pyrite patches are visible throughout. Drilling disturbance includes moderate to severe cracks.



Hole 378-U1553B Core 11H, Interval 86.8-96.88 m (CSF-A)

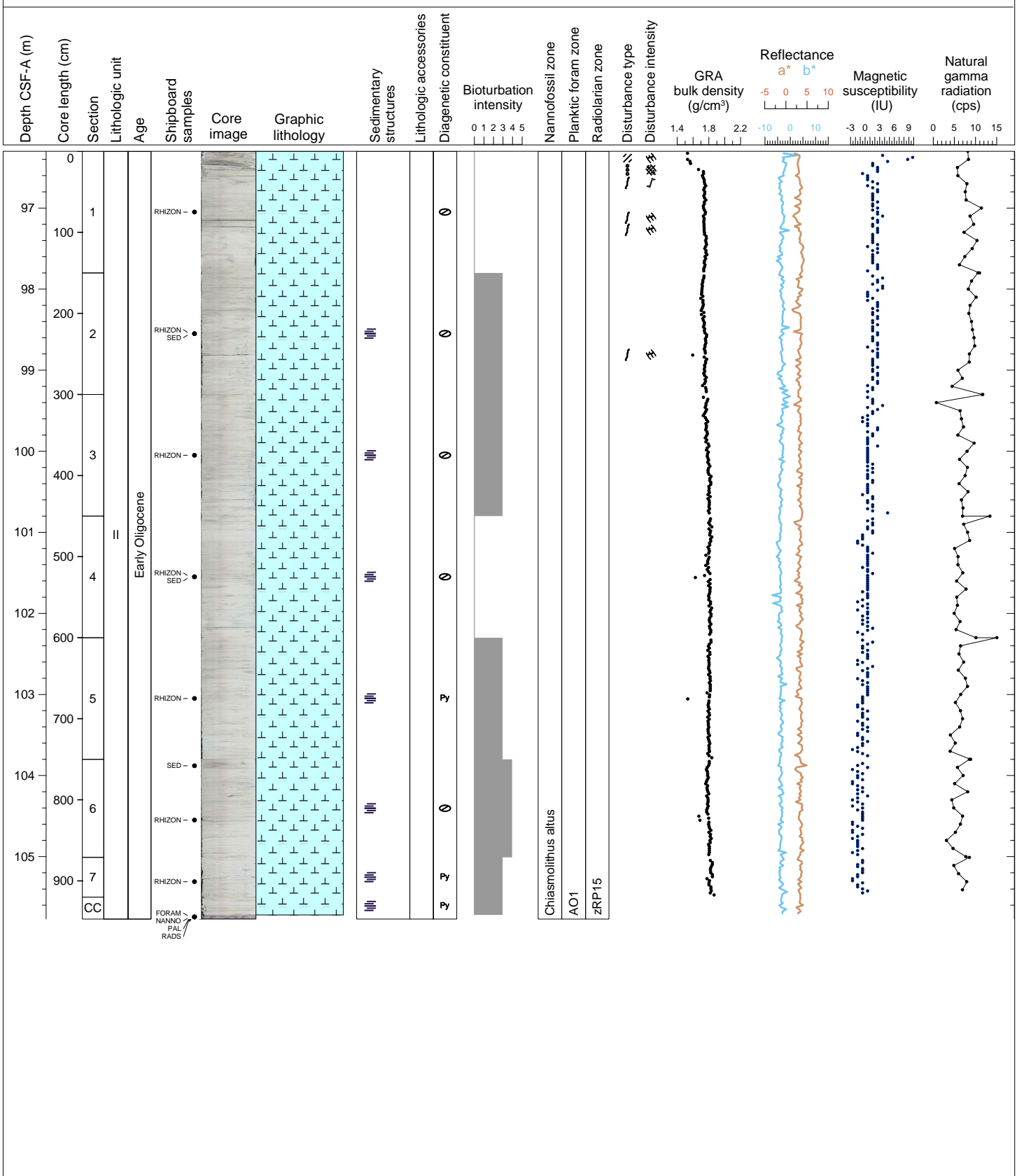
Core U1553B-11H is characterized by white (N 8.5) nanofossil ooze. Few foraminifers (0-10%), volcanic glass and mica were identified in smear slides. The core contains sporadic light greenish grey layering and bands (5G 8/1) that are diffuse and sometimes concentrated in sequential layers. Mm to cm-scale pyrite patches are visible throughout and linked to moderate bioturbation. A solid pyritized burrow is observed in the top of Section 1.





Hole 378-U1553B Core 12H, Interval 96.3-105.77 m (CSF-A)

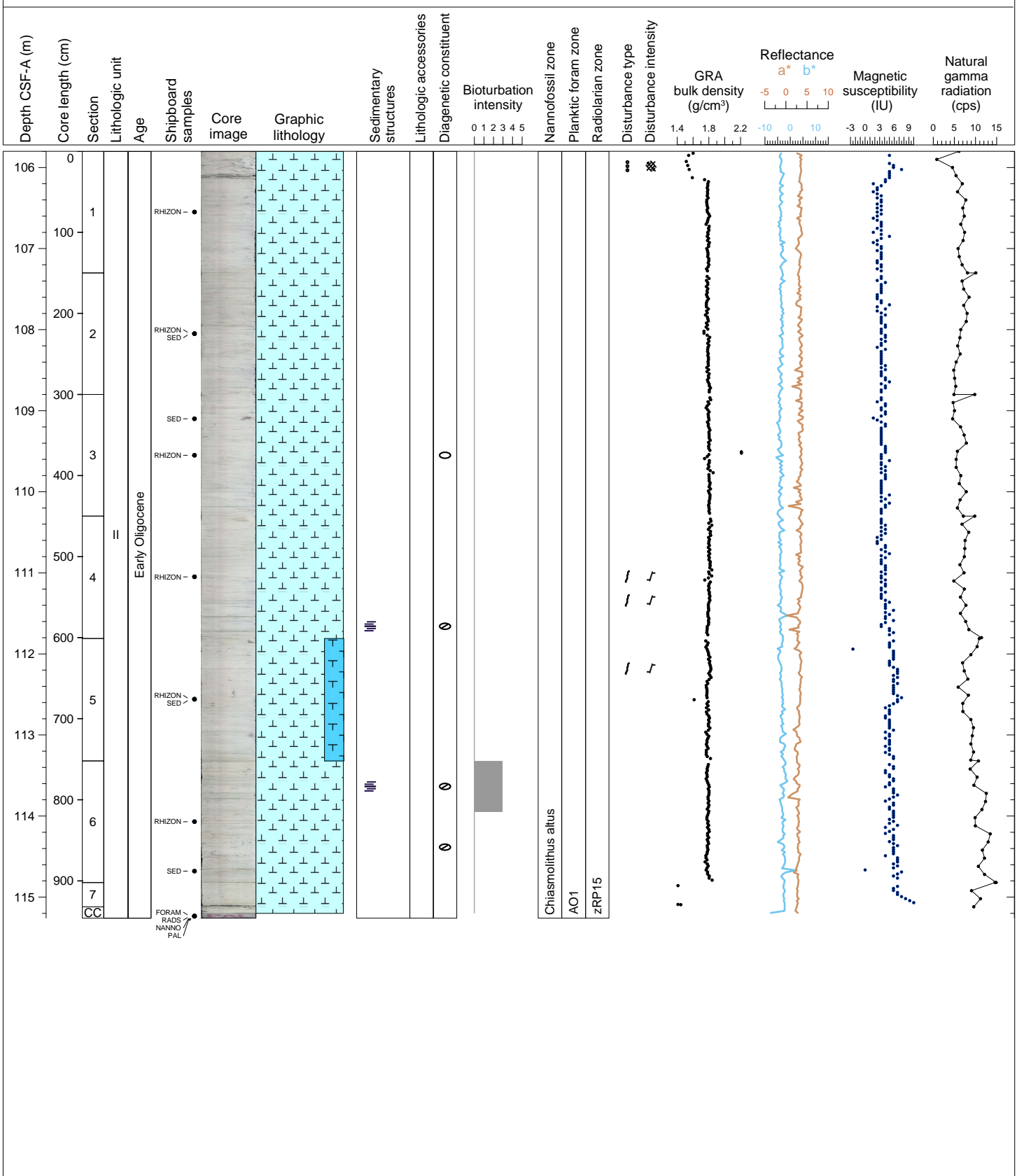
Core U1553B-12H is characterized by white (N 8.5) nannofossil ooze. Few foraminifers (0-10%), volcanic glass, mica and quartz were identified in smear slides. The core contains sporadic light greenish grey layering and bands (5G 8/1 and 10GY 8/1) that are diffuse and sometimes concentrated in sequential layers. Some green layers begin to increase in hardness relative to shallower cores. Mm to cm-scale pyrite patches are visible throughout and linked to moderate bioturbation. A diagenetic halo appears in Section 3.





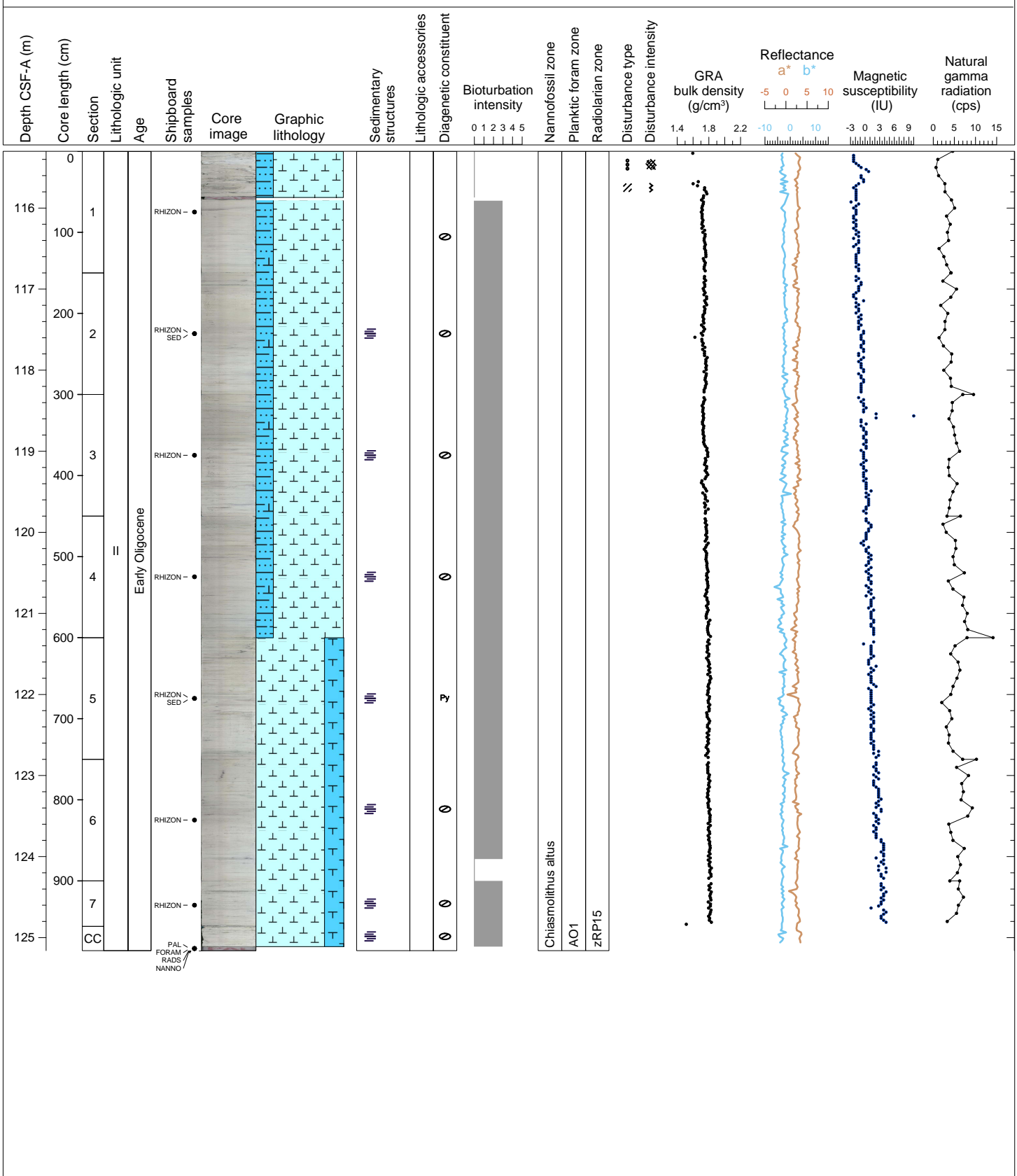
Hole 378-U1553B Core 13H, Interval 105.8-115.26 m (CSF-A)

Core U1553B-13H is characterized by white (N 8.5) nanofossil ooze in Sections 1 to 4 and 6 to CC, and nanofossil ooze with foraminifers in Section 5. Mica, quartz, and siliceous sponge spicules were identified in smear slides. The core contains sporadic light greenish grey layering and bands (5G 8/1 and 10GY 8/1) that are diffuse and sometimes concentrated in sequential layers. Green layers have a harder texture than the surrounding core material. Mm to cm-scale pyrite patches are visible throughout and linked to moderate bioturbation.



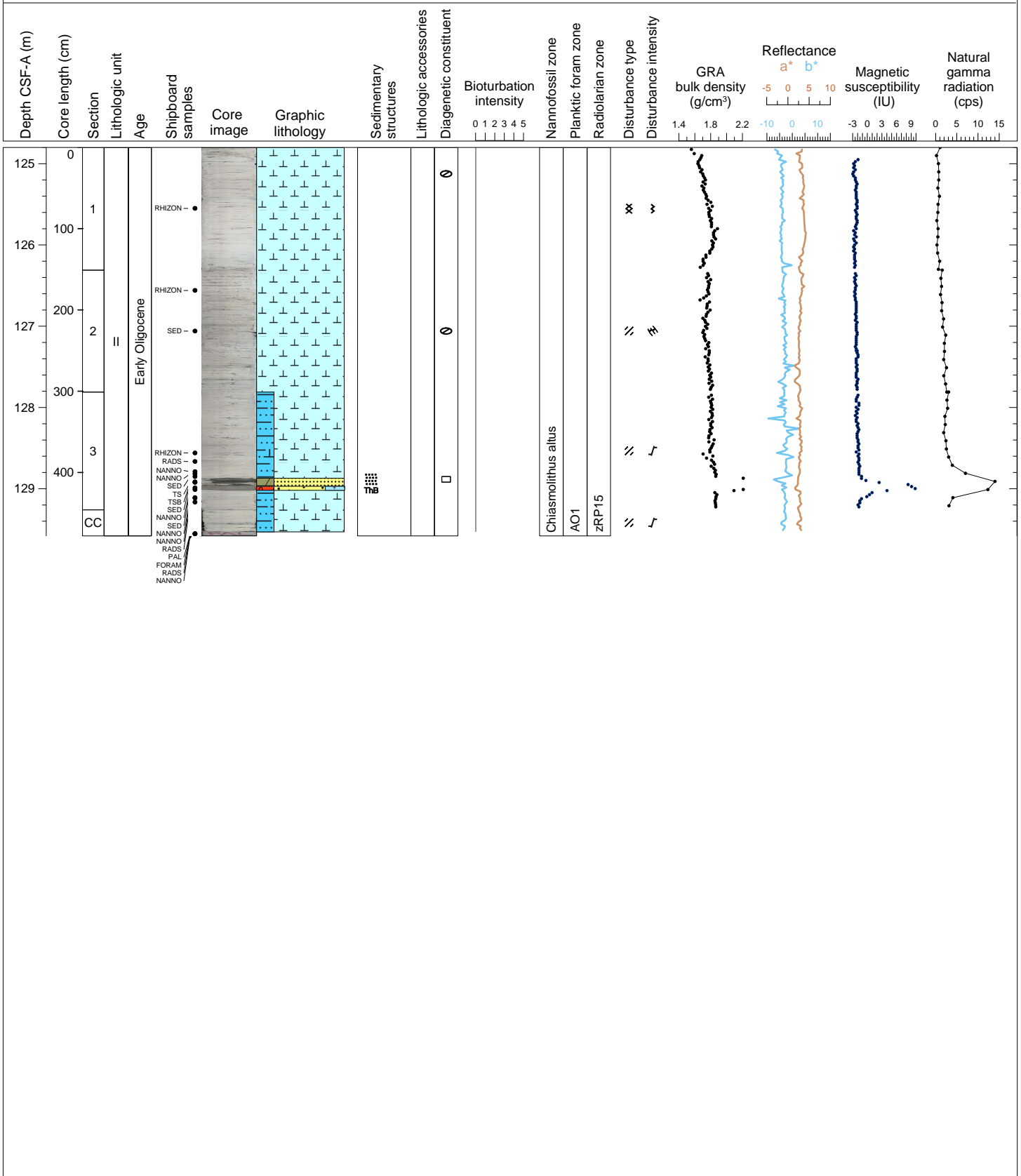
Hole 378-U1553B Core 14H, Interval 115.3-125.16 m (CSF-A)

Core U1553B-14H is characterized by white (N 8.5) foraminifer-rich nannofossil ooze in Sections 1 to 4, and nannofossil ooze with foraminifers in Sections 5 to CC. Diatoms, siliceous sponge spicules, quartz, and mica were identified in smear slides. The core contains sporadic light greenish grey layering and bands (5G 8/1) that are diffuse and sometimes concentrated in sequential layers. Green layers have a harder texture than the surrounding core material. Mm to cm-scale pyrite patches, and one diagenetic halo in Section 5, are visible throughout and linked to moderate bioturbation.



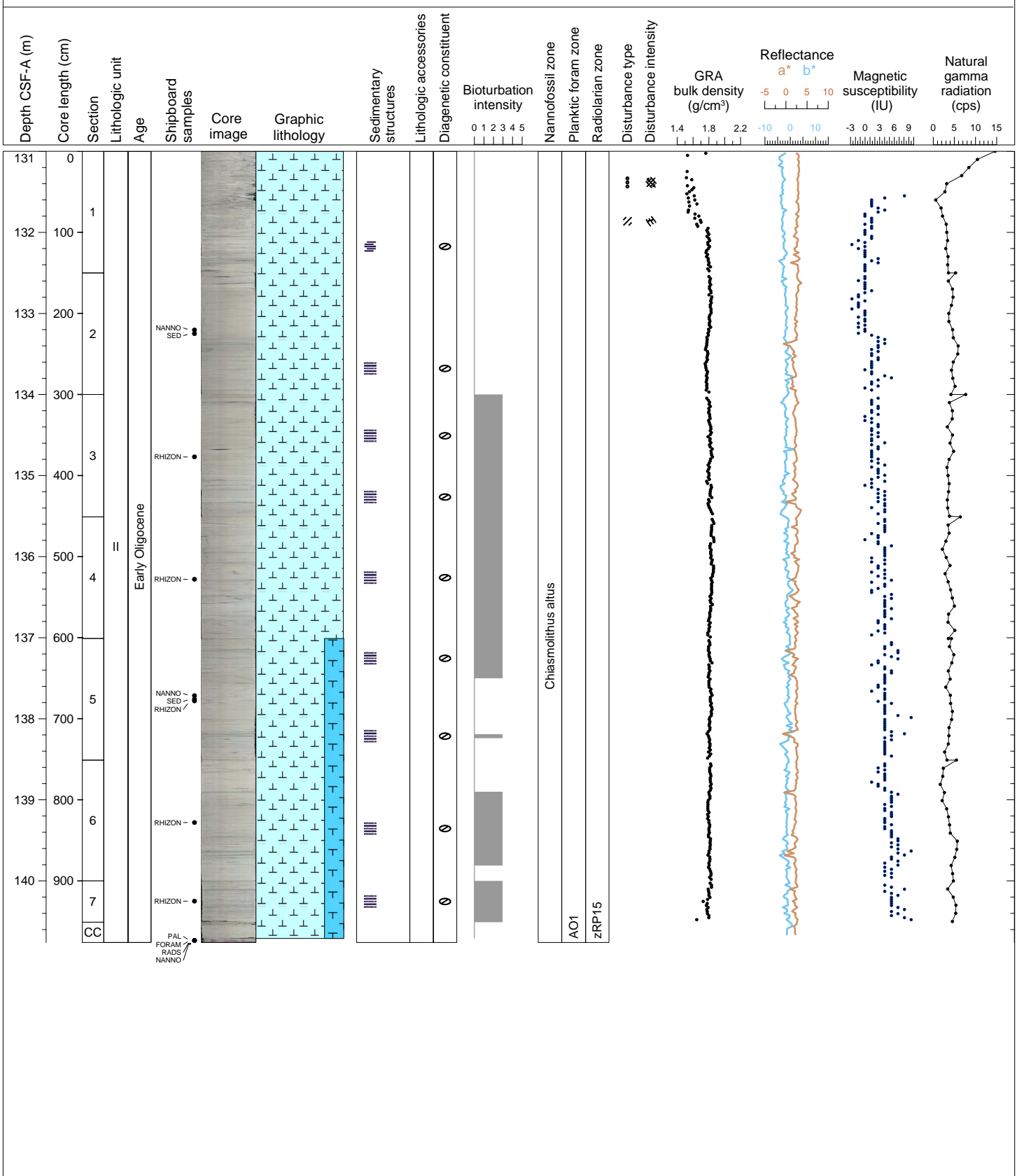
Hole 378-U1553B Core 15X, Interval 124.8-129.58 m (CSF-A)

Core U1553B-15X is characterized by white (N 8.5 to N 9.5) nannofossil ooze in Sections 1 and 2, and foraminifer-rich nannofossil ooze in Sections 3 and CC. Section 2 grades towards darker white near its base (N 9.5 to N 8.5). Quartz and mica were identified in smear slides. The core contains sporadic light greenish gray layering and bands (5G 7/1 and 5GY 8/1) that are diffuse and sometimes concentrated in sequential layers. Green layers have a harder texture than the surrounding material. Section 3 contains a 5 cm interval of a bluish gray medium sand (10B 6/1) that contains detrital quartz and a calcareous ooze matrix with quartz, feldspar, rock fragments, and pyroxene, tentatively interpreted as an ash layer. The downwards basal contact with the nannofossil ooze is sharp to convex. This section (Section 3, 110-112 cm) analysis from right above the sand layer yields an indurated rock (bluish gray; 5PB 6/1), that is coarse grained and cemented by a carbonate cement that fizzes on contact with dilute HCl. The rocks exhibit grain packing layering and are carbonate-rich sandstones. Section 1 is highly brecciated.



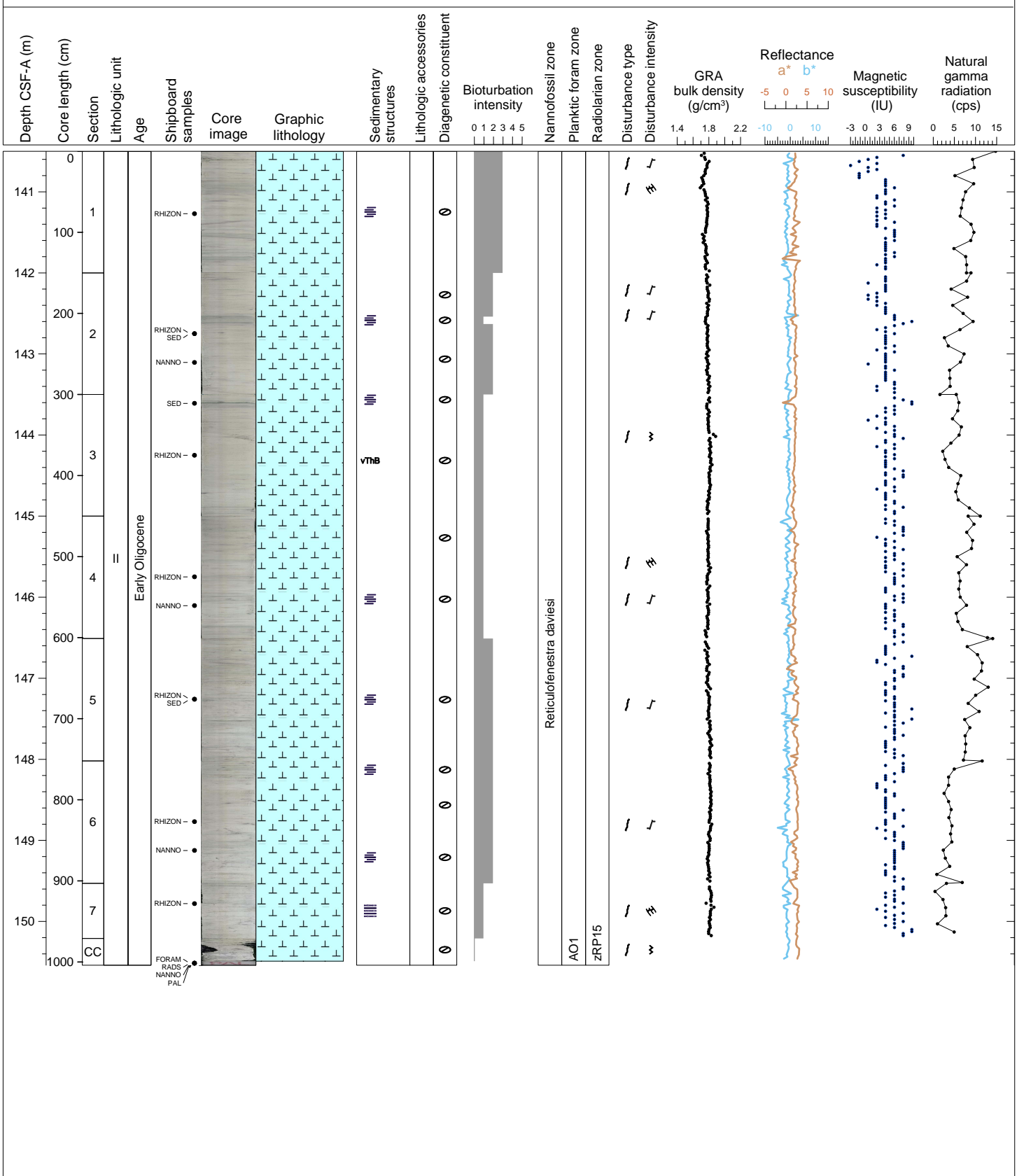
Hole 378-U1553B Core 16H, Interval 131.0-140.76 m (CSF-A)

Core U1553B-16H is characterized by white (N 8.5) nannofossil ooze from Sections 1 to 4, and with foraminifers from Sections 5 to CC. Siliceous sponge spicules and mica were identified in smear slides. The core contains sporadic light greenish grey (5GY 8/1), brown and black layering and bands that are diffuse and sometimes concentrated in sequential layers. The top of Section 1 is highly soupy due to drilling disturbance.



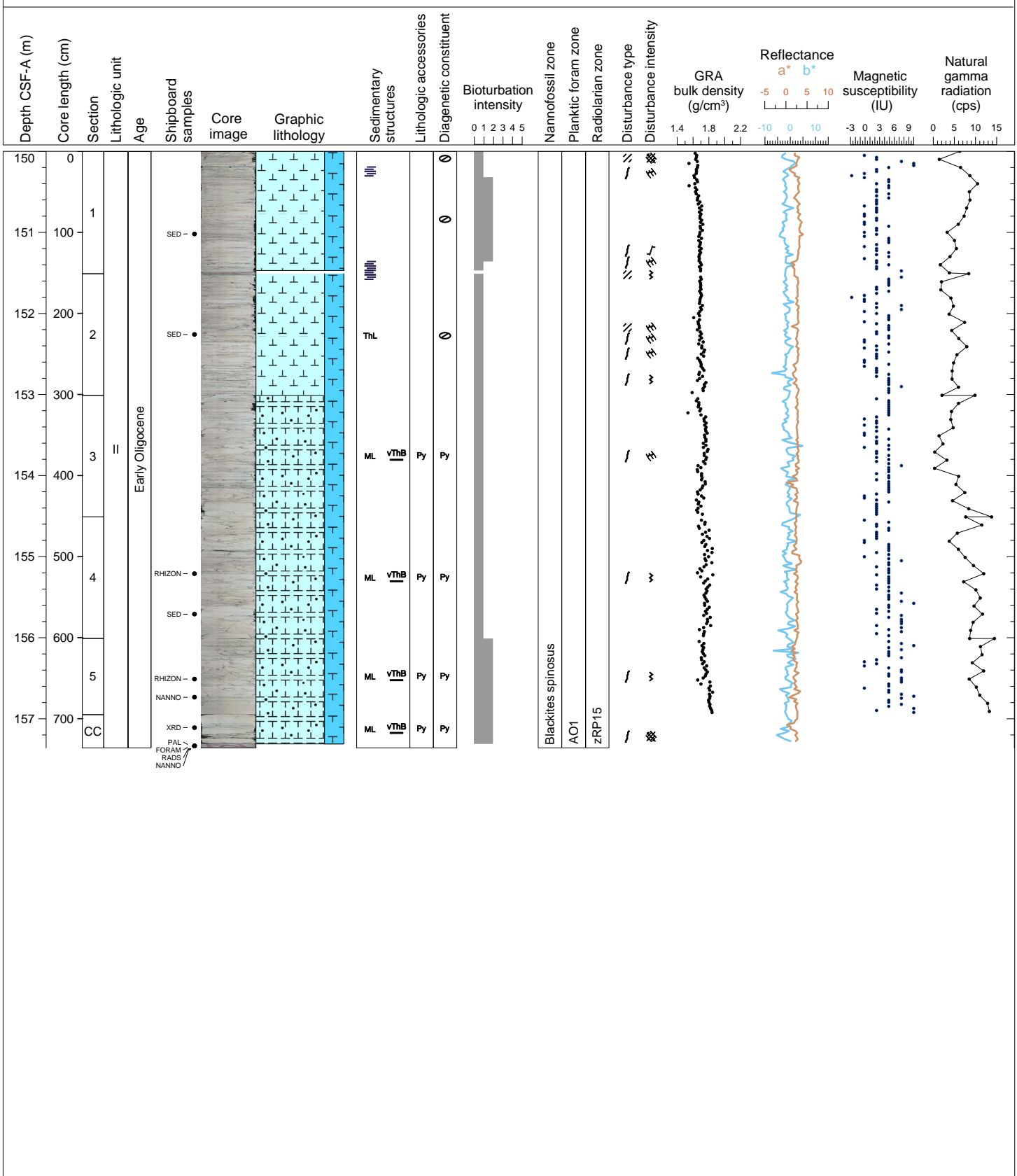
Hole 378-U1553B Core 17H, Interval 140.5-150.54 m (CSF-A)

Core U1553B-17H is characterized by white (N 8.5) nannofossil ooze. Few foraminifers, siliceous sponge spicules, diatoms, quartz, and mica were identified in smear slides. The core contains sporadic light greenish gray (5G 8/1), brown and black layering and bands that are diffuse and sometimes concentrated in sequential layers. One green layer that was analyzed by a smear slide contains glauconite. Bioturbation varies from very slight to moderate.



Hole 378-U1553B Core 18X, Interval 150.0-157.36 m (CSF-A)

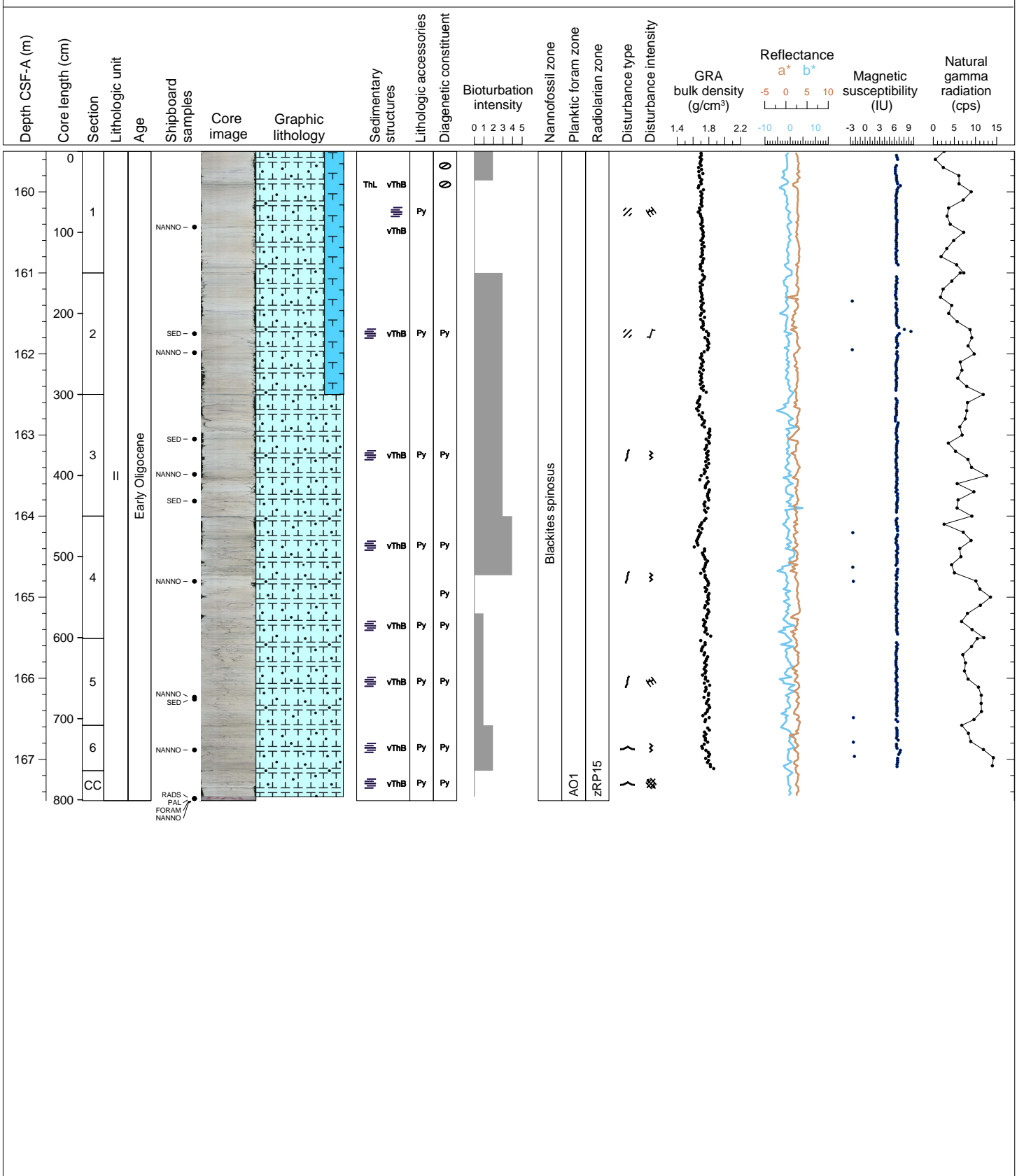
Sections 1 and 2 of Core U1553B-18X are characterized by white (N 8.5) nannofossil ooze with foraminifers; Sections 3 through CC are nannofossil chalk with foraminifers. Both the ooze and the chalk contain siliceous sponge spicules, diatoms, radiolarians, fish remains, and quartz, as identified in smear slides. Both lithologies contain sporadic light greenish gray layers and bands (5G 6/1 to 5G 8/1) that are diffuse and sometimes concentrated in sequential layers. Bioturbation varies from slight to very slight. The transition from Section 1 to 2 shows a change in lithification from ooze to chalk. This was manifest in the need to start using the saw to split the core from Section 3 onwards.





Hole 378-U1553B Core 19X, Interval 159.5-167.51 m (CSF-A)

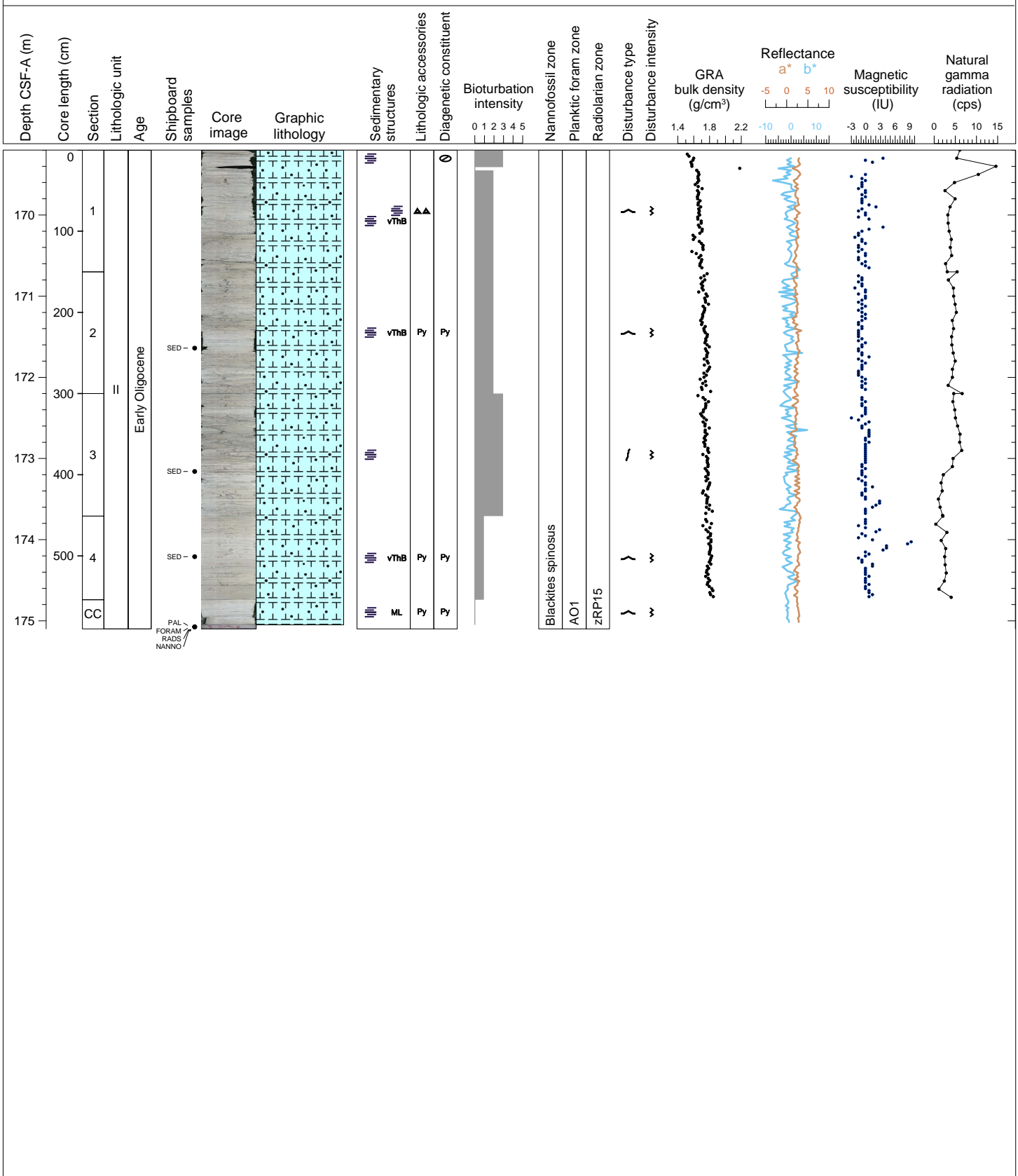
Sections 1 and 2 of Core U1553B-19X are characterized by white (N 8.5) nannofossil ooze with foraminifers; Sections 3 through CC are characterized by nannofossil chalk with few foraminifers. Both the ooze and the chalk contain calcareous and siliceous sponge spicules, diatoms, pyrite and quartz, as identified in smear slides. Light greenish gray layers (5G 5/1, 5G 7/1 and 5G 8/1) can be observed throughout the core. Many burrows of trace fossils, possibly Zoophycus, can be observed in Sections 2 to 4.





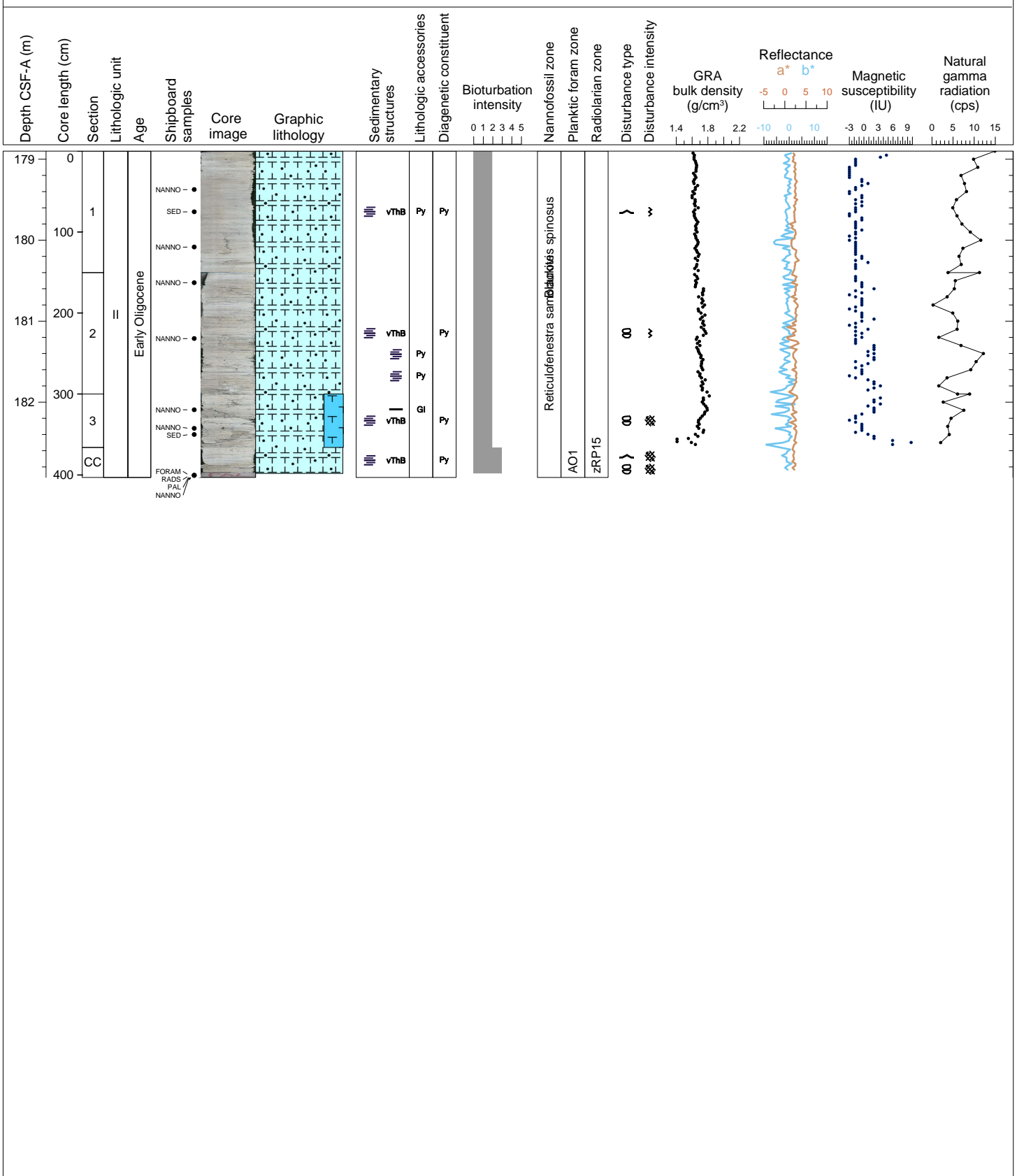
Hole 378-U1553B Core 20X, Interval 169.2-175.1 m (CSF-A)

Core U1553B-20X is characterized by white (N 8.5) nanofossil chalk. All sections are highly bowed and broken into biscuits. Cracks are observed in Section 3. There is a fall-in chert pebble in Section 1. Light greenish gray layers (5G 7/1) as well as pyrite-bearing rims of burrows are notable features are observed in Sections 2 to 4 and the CC.



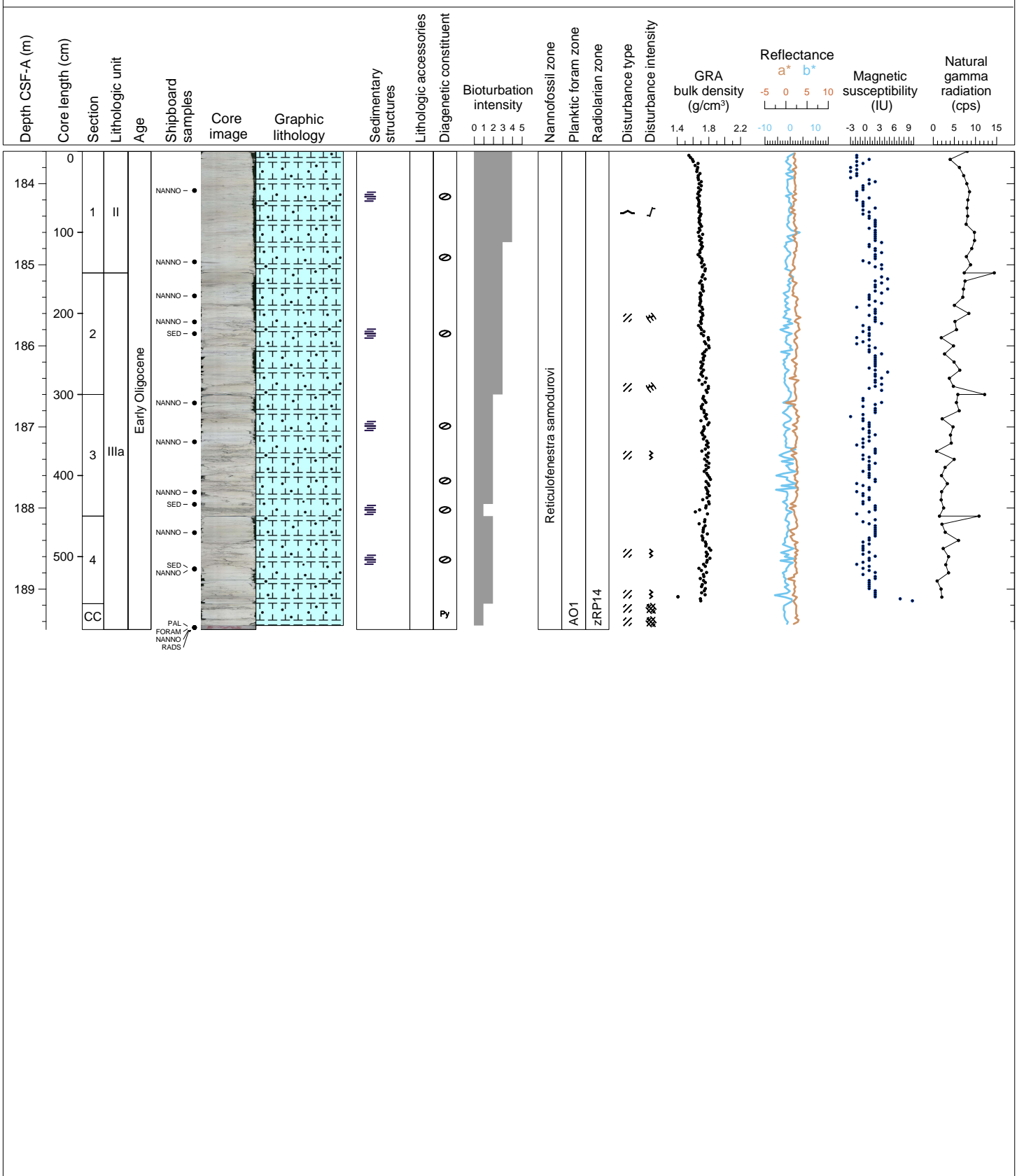
Hole 378-U1553B Core 21X, Interval 178.9-182.93 m (CSF-A)

Sections 1 and 2 of Core U1553B-21X are characterized by white (N 8.5) nannofossil chalk, while Section 3 is white (N 8.5) nannofossil chalk with foraminifers. There are <1% radiolarians and 1-10% siliceous sponge spicules and diatoms in Sections 1 and 2, whereas in Section 3, there are <1% diatoms. All sections contain light greenish gray (5G 7/1), pale brown layers and light gray features in various shapes, some of which are associated with alteration halos in Sections 2 through CC. All sections are highly bowed and broken into biscuits.



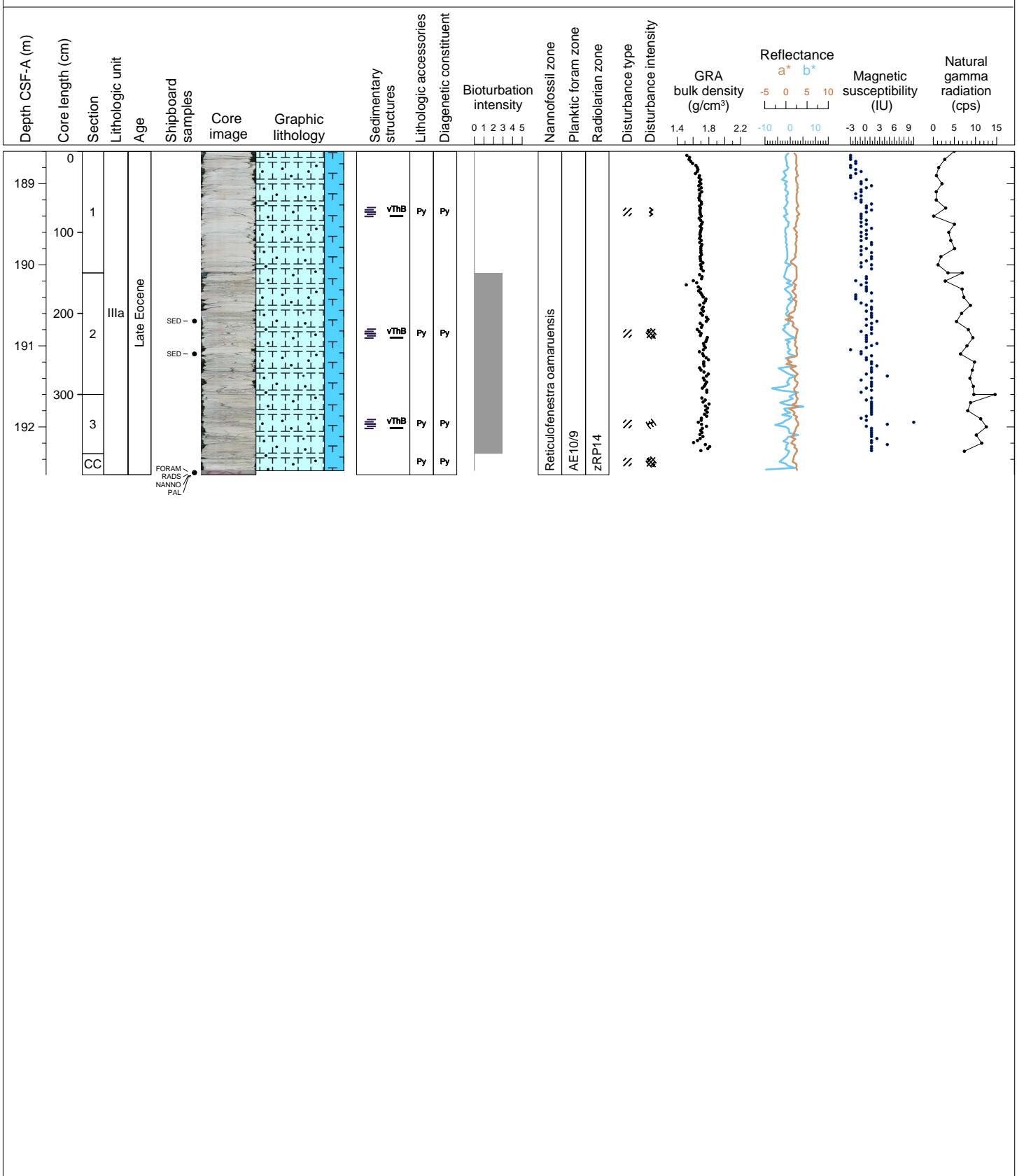
Hole 378-U1553B Core 22X, Interval 183.6-189.5 m (CSF-A)

Core U1553B-22X is characterized by white (N 8.5) nannofossil chalk. Traces of radiolarian and diatoms were seen in a smear slide from Section 4, whereas there are foraminifers and siliceous sponge spicules throughout. Sections 3 and 4 contain some volcanic glass. All sections contain light greenish gray (5G 8/1 and 5GY 8/1) and pale brown layers in various shapes, some related to bioturbation. Some burrows crosscut pyrite patches. All sections are fractured and broken into biscuits.



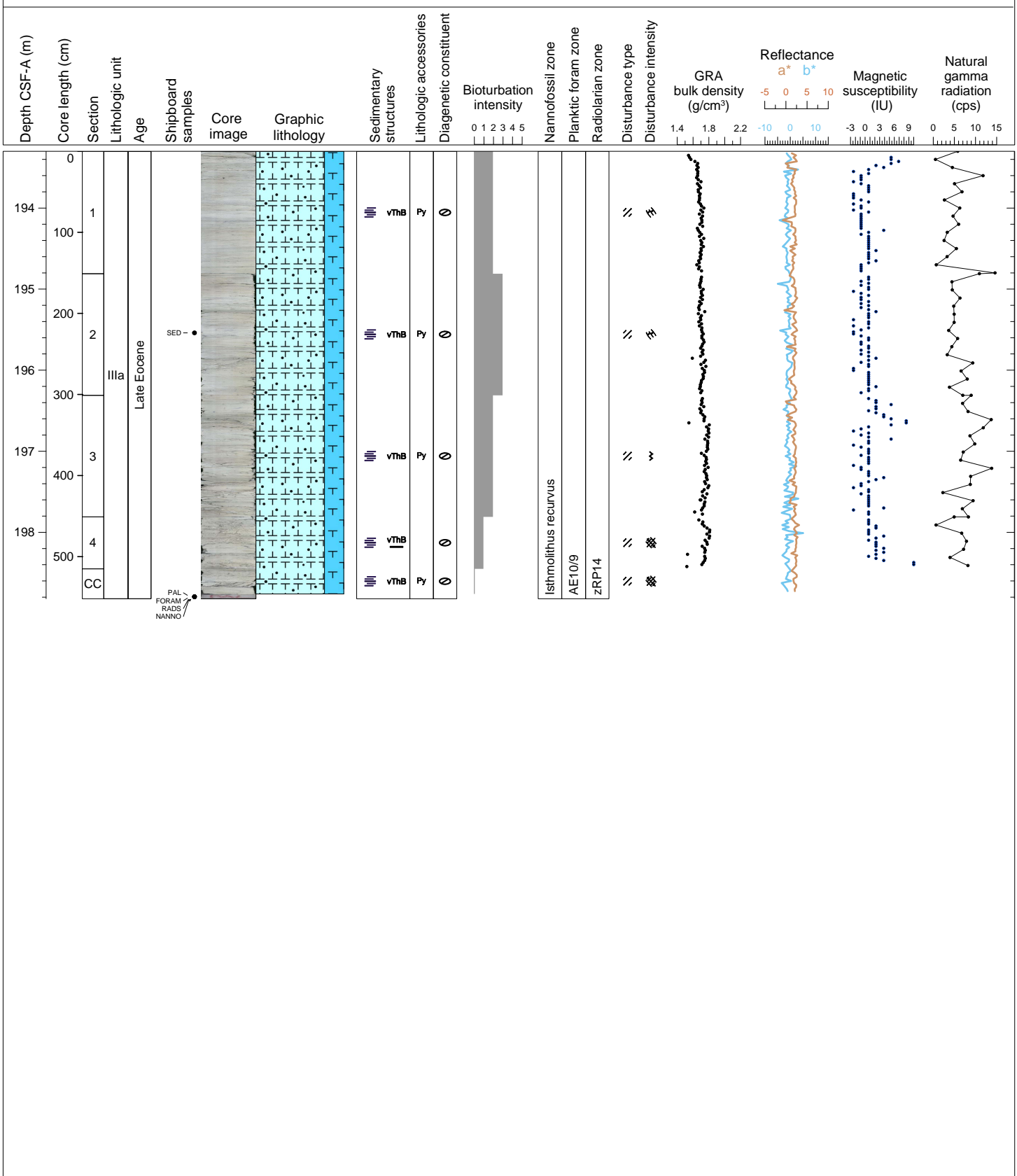
Hole 378-U1553B Core 23X, Interval 188.6-192.59 m (CSF-A)

Core U1553B-23X is characterized by white (N 8.5) nanofossil chalk with common foraminifers. Traces of radiolarian, diatoms, siliceous sponge spicules, and pyrite were seen in smear slides. All sections contain light greenish gray (5G 8/1) and pale brown layers in various shapes, and some of the brown layers are related to bioturbation. All sections are highly fractured and broken into biscuits.



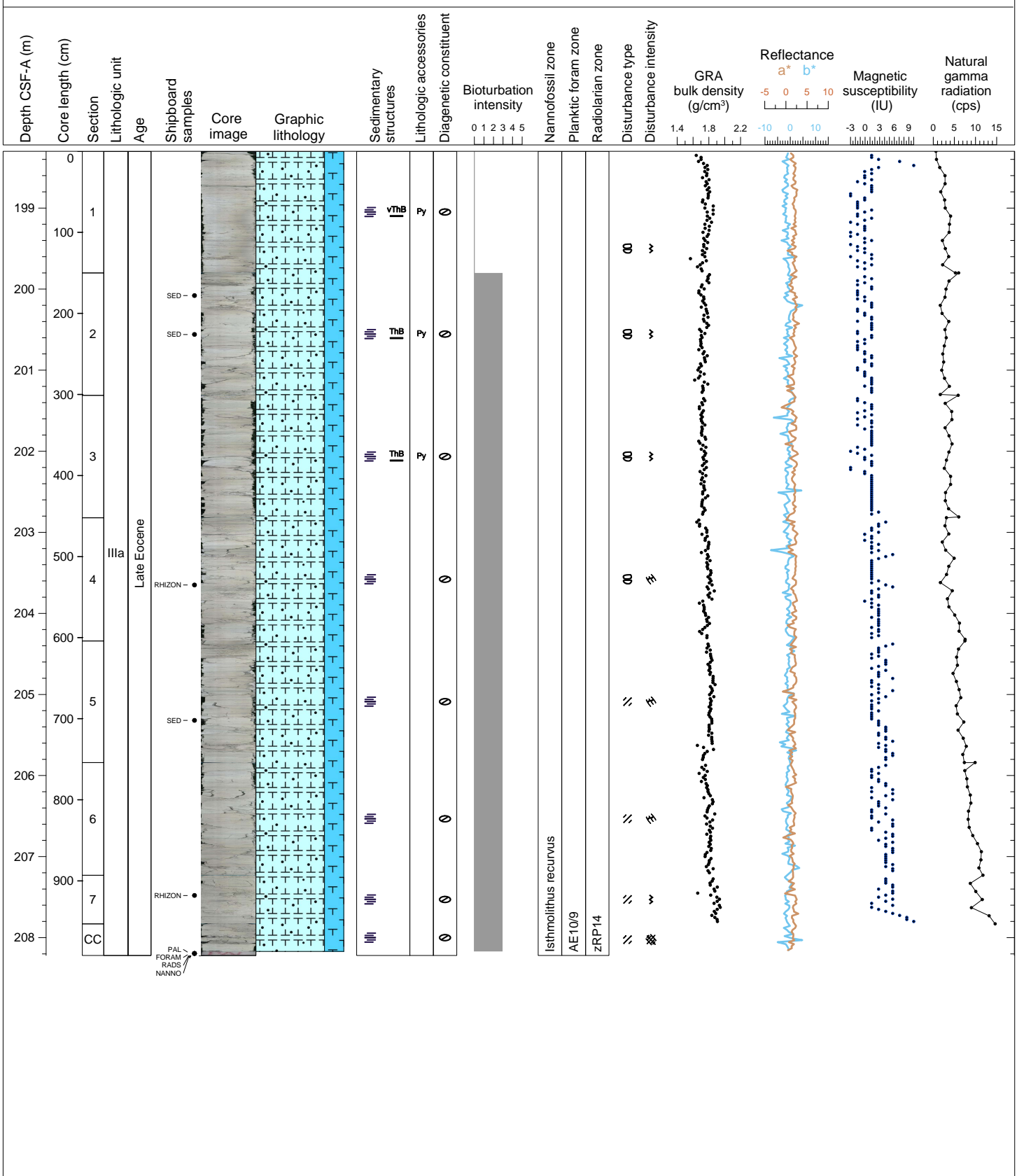
Hole 378-U1553B Core 24X, Interval 193.3-198.82 m (CSF-A)

Core U1553B-24X is characterized by white (N 8.5) nannofossil chalk with foraminifers. Traces of siliceous sponge spicules and pyrite were seen in a smear slide. All sections contain greenish gray to light greenish gray (5G 6/1 and 5G 8/1) and pale brown layers in various shapes, and some of the brown layers are related to bioturbation. Specks of pyrite are also visible to the naked eye throughout the core. All sections are highly fractured and broken into biscuits.



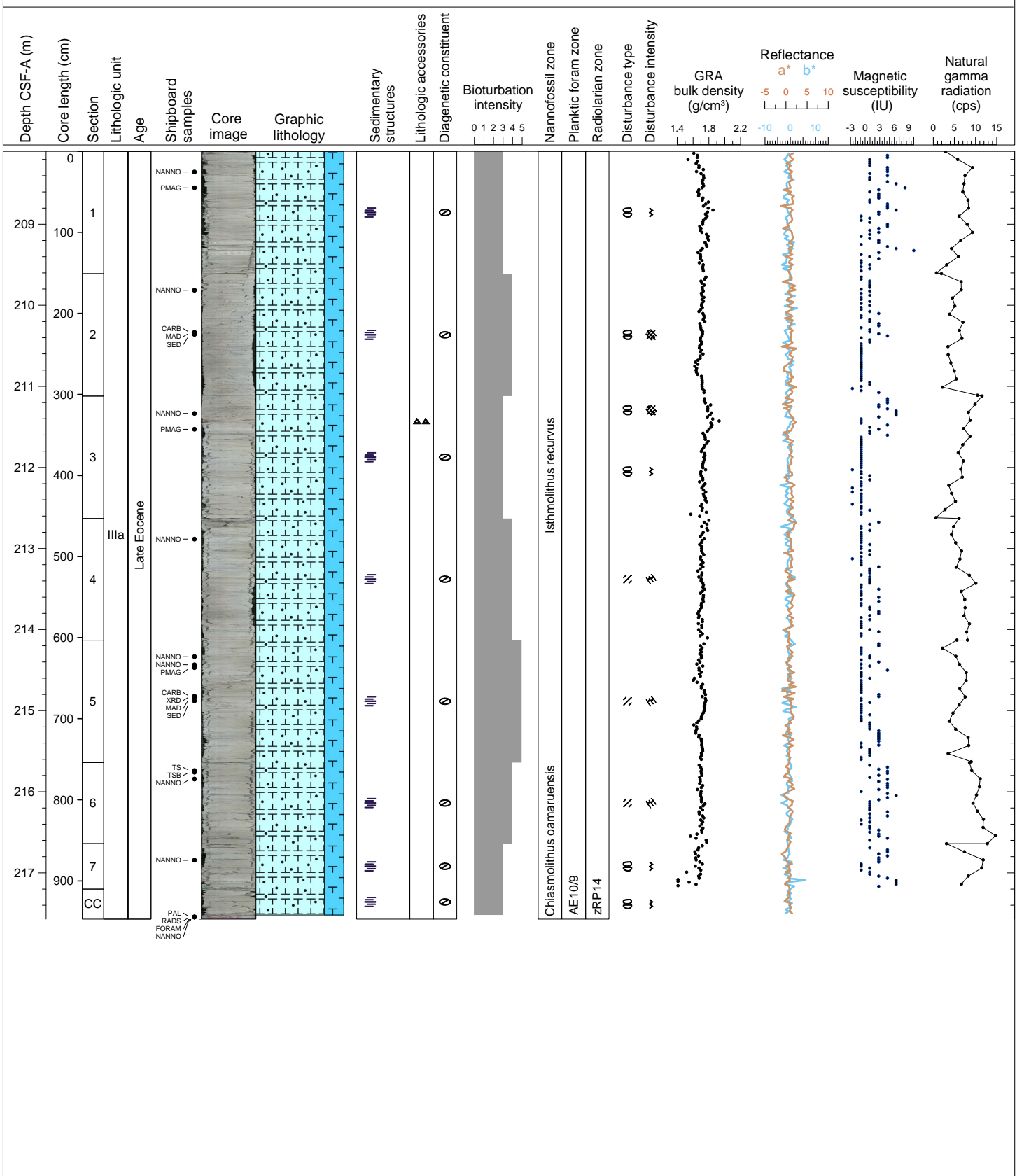
Hole 378-U1553B Core 25X, Interval 198.3-208.22 m (CSF-A)

Core U1553B-25X is characterized by white (N 8.5) nanofossil chalk with foraminifers. Traces of siliceous sponge spicules were seen in smear slides. All sections contain very pale green and pale brown layers in various shapes, and some of the brown layers are related to bioturbation. Green layers are dark and dispersed through the sediment (5G 6/1). Specks of pyrite are visible to the naked eye throughout the core. All sections are highly fractured and some are broken into biscuits.



Hole 378-U1553B Core 26X, Interval 208.1-217.57 m (CSF-A)

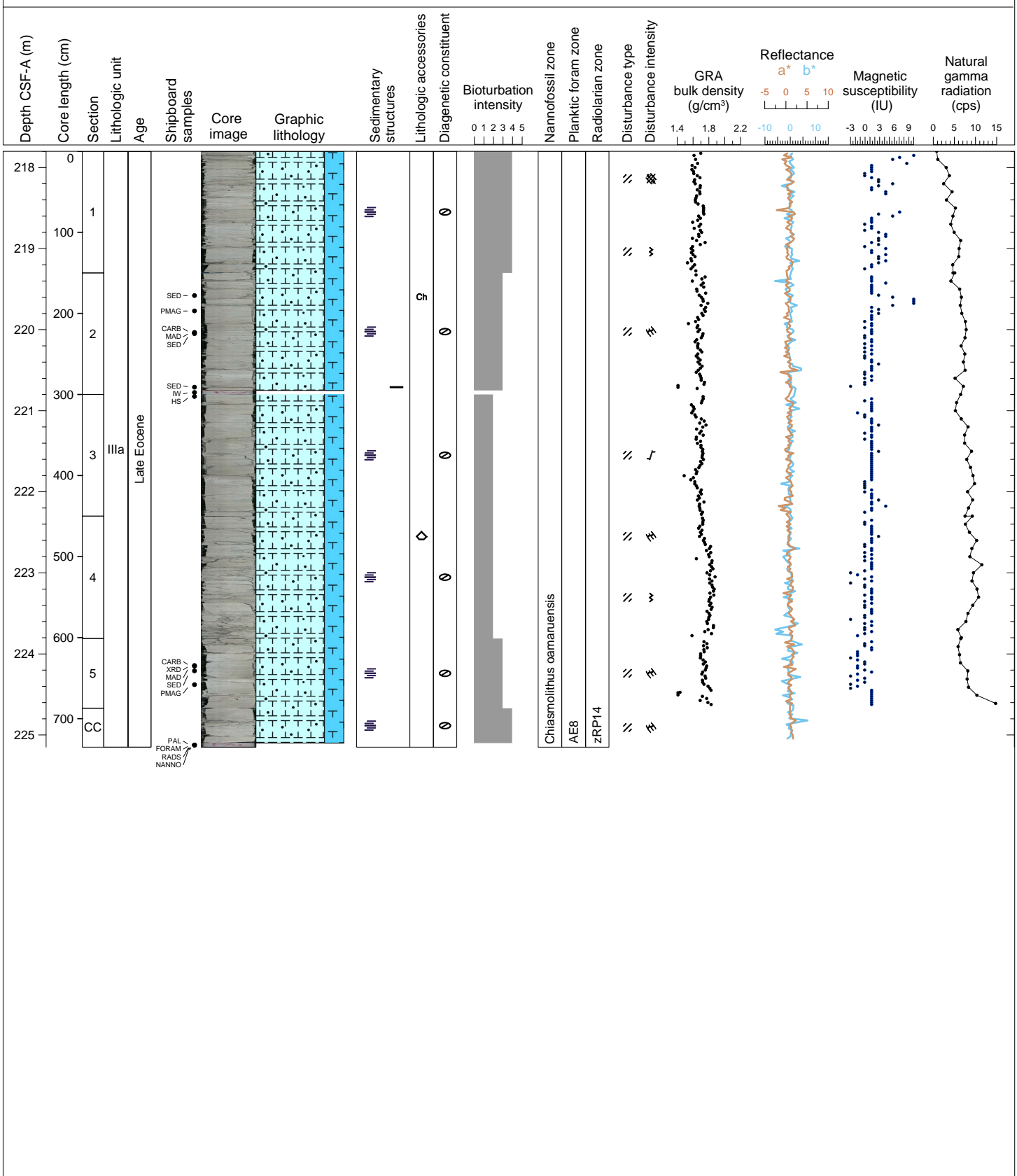
Core U1553B-26X is characterized by white (N 8.5) nannofossil chalk with foraminifers. Traces of siliceous sponge spicules and pyrite were seen in smear slides. All sections contain very pale green and pale brown layers in various shapes, some with brown layers related to bioturbation. Greenish gray layers are dark and dispersed through the sediment (5G 6/1). Specks of pyrite are visible to the naked eye throughout the core. A chert layer is present in Section 3. All sections are highly fractured





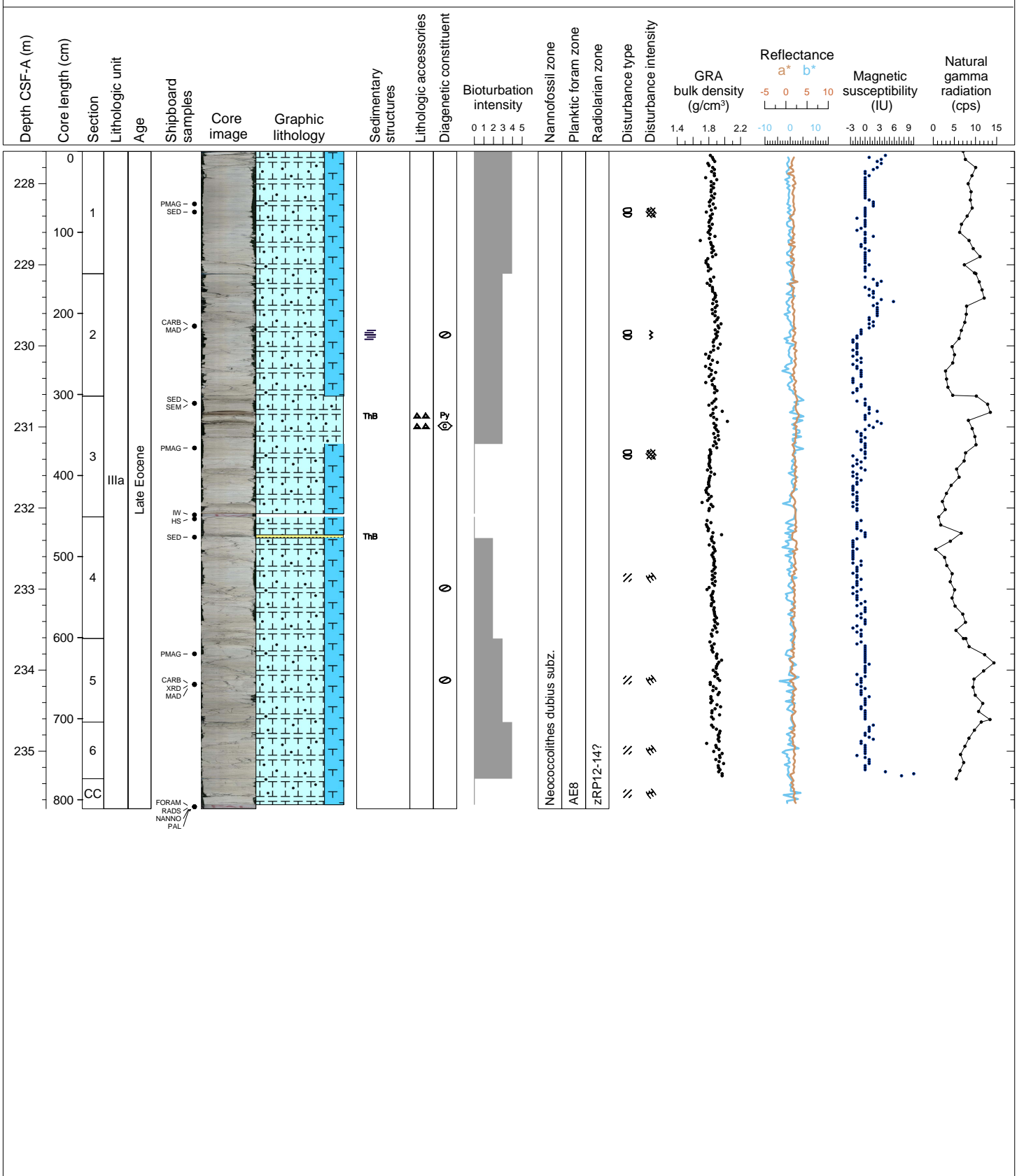
Hole 378-U1553B Core 27X, Interval 217.8-225.15 m (CSF-A)

Core U1553B-27X is characterized by light greenish gray (5GY 8/1) nannofossil chalk with foraminifers. Traces of siliceous sponge spicules, diatoms, and pyrite were seen in smear slides. All sections contain pale green layers (5G 6/2) and pale brown layers in various shapes, some brown layers related to bioturbation. Large burrows and diagenetic halos are observed throughout. Specks of pyrite are visible to the naked eye throughout the core. All sections are highly fractured and some are broken into biscuits.



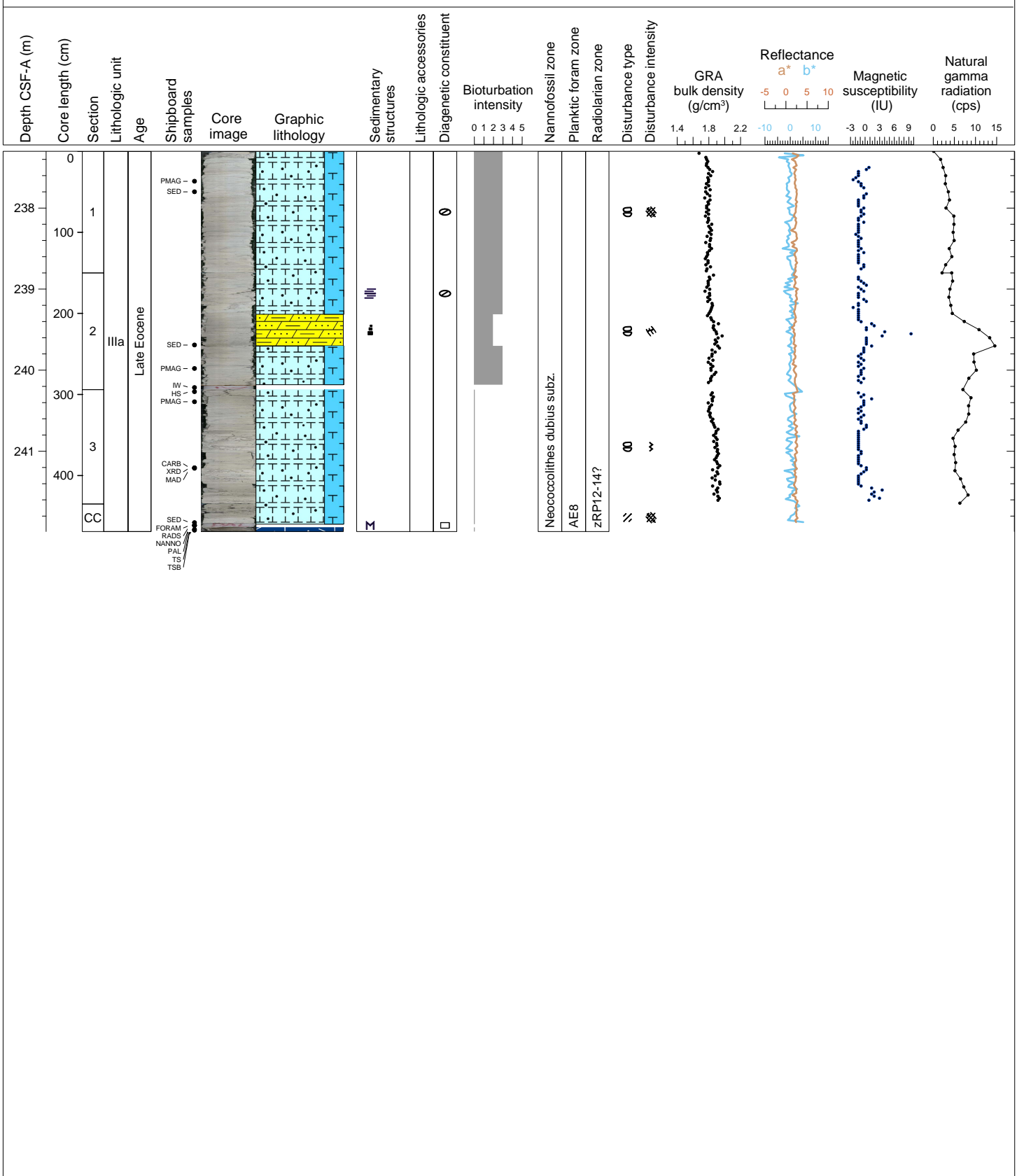
Hole 378-U1553B Core 28X, Interval 227.6-235.71 m (CSF-A)

Core U1553B-28X is characterized by white (N 8.5) nanofossil chalk with foraminifers. Traces of siliceous sponge spicules and pyrite were seen in smear slides. All sections contain light greenish gray layers (10GY 8/1) and pale brown layers in various shapes, some with brown layers related to bioturbation. Large burrows and diagenetic halos are observed throughout. Specks of pyrite are visible to the naked eye throughout the core. In Section 3, a large chert layer occurs within a browner and laminated sequence of sediment (0-56 cm). A layer of course-grained siliciclastics (possibly related to volcanic ash) occurs in Section 4. All sections are highly fractured and some are broken into biscuits.



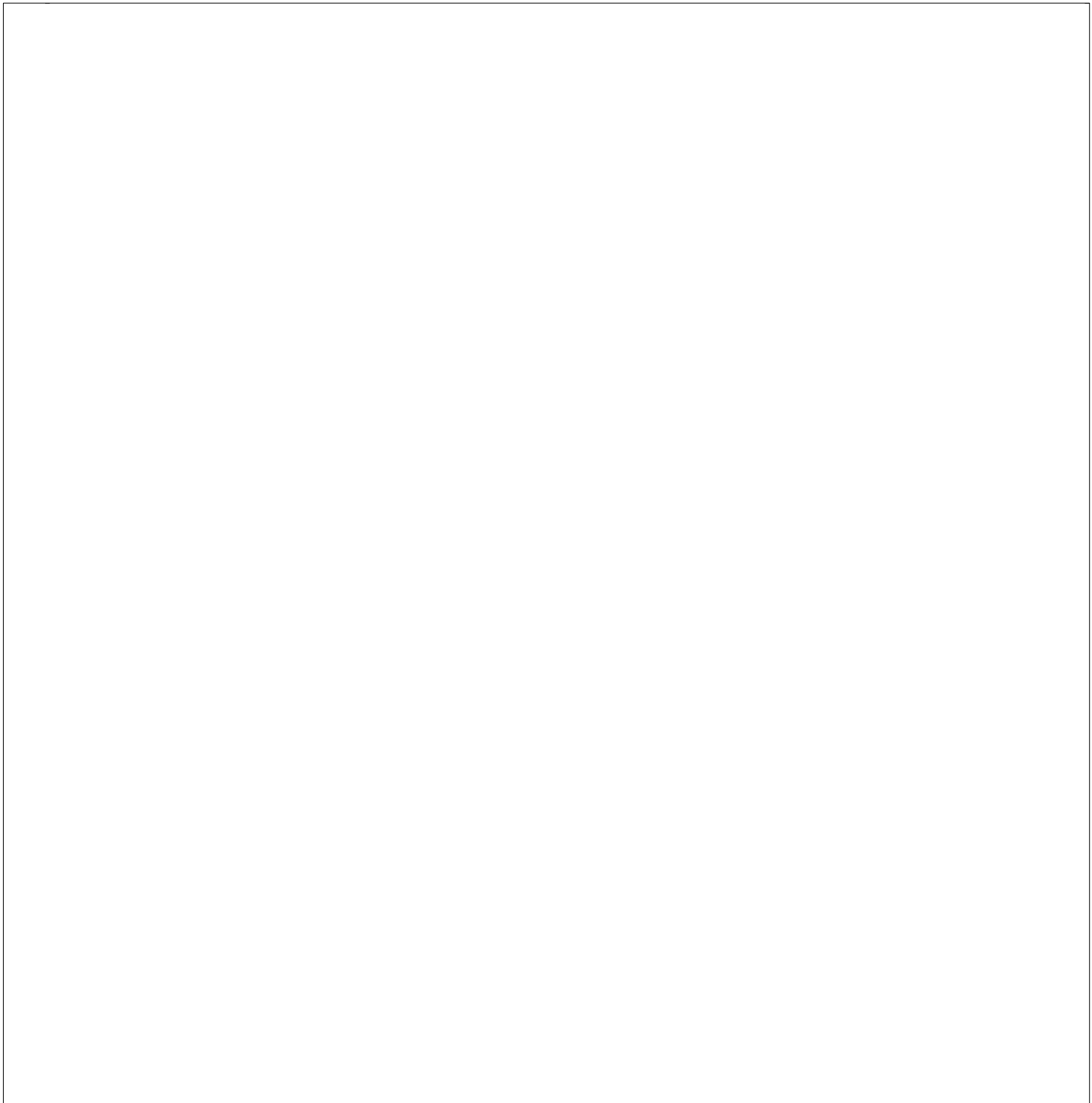
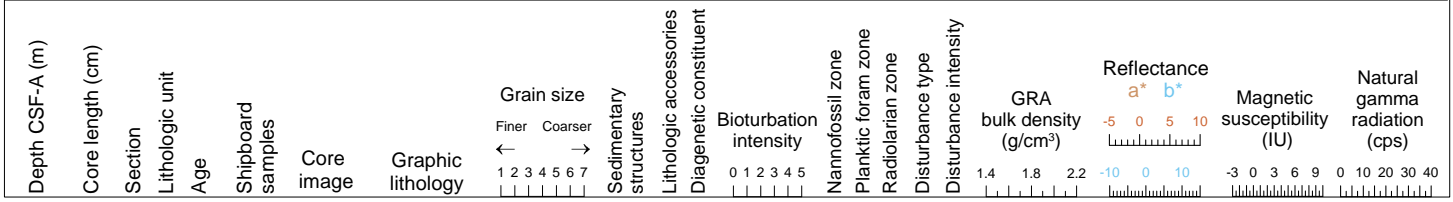
Hole 378-U1553B Core 29X, Interval 237.3-241.99 m (CSF-A)

Core U1553B-29X is characterized by white (N 8 to 8.5) nannofossil chalk with foraminifers, with an interbedded calcareous ooze (normal graded coarse and fine sand) of light greenish gray color (10Y 8/1) at 51-90 cm in Section 2, and indurated, massive sediment composed of gray-colored fine sand (2.5 Y 6/1) in Section CC. All sections contain light greenish gray layers (5G 7/1 and 10Y 8/1). From the bottom of Section 2 through Section 3, faint brown and black blebs are present.



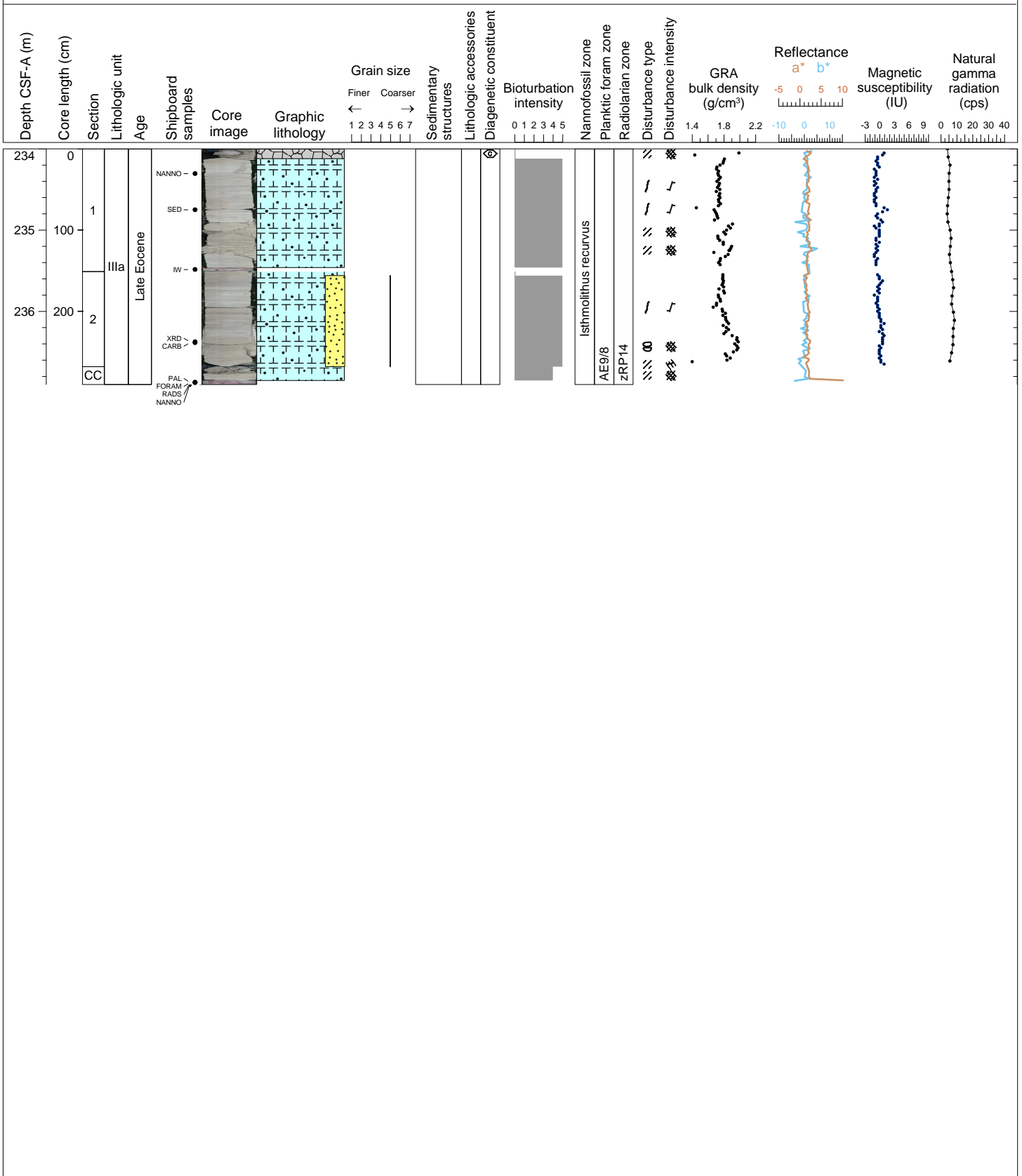
Hole 378-U1553C Core 11, Interval 0.0-0.0 m (CSF-A)

DRILLED INTERVAL



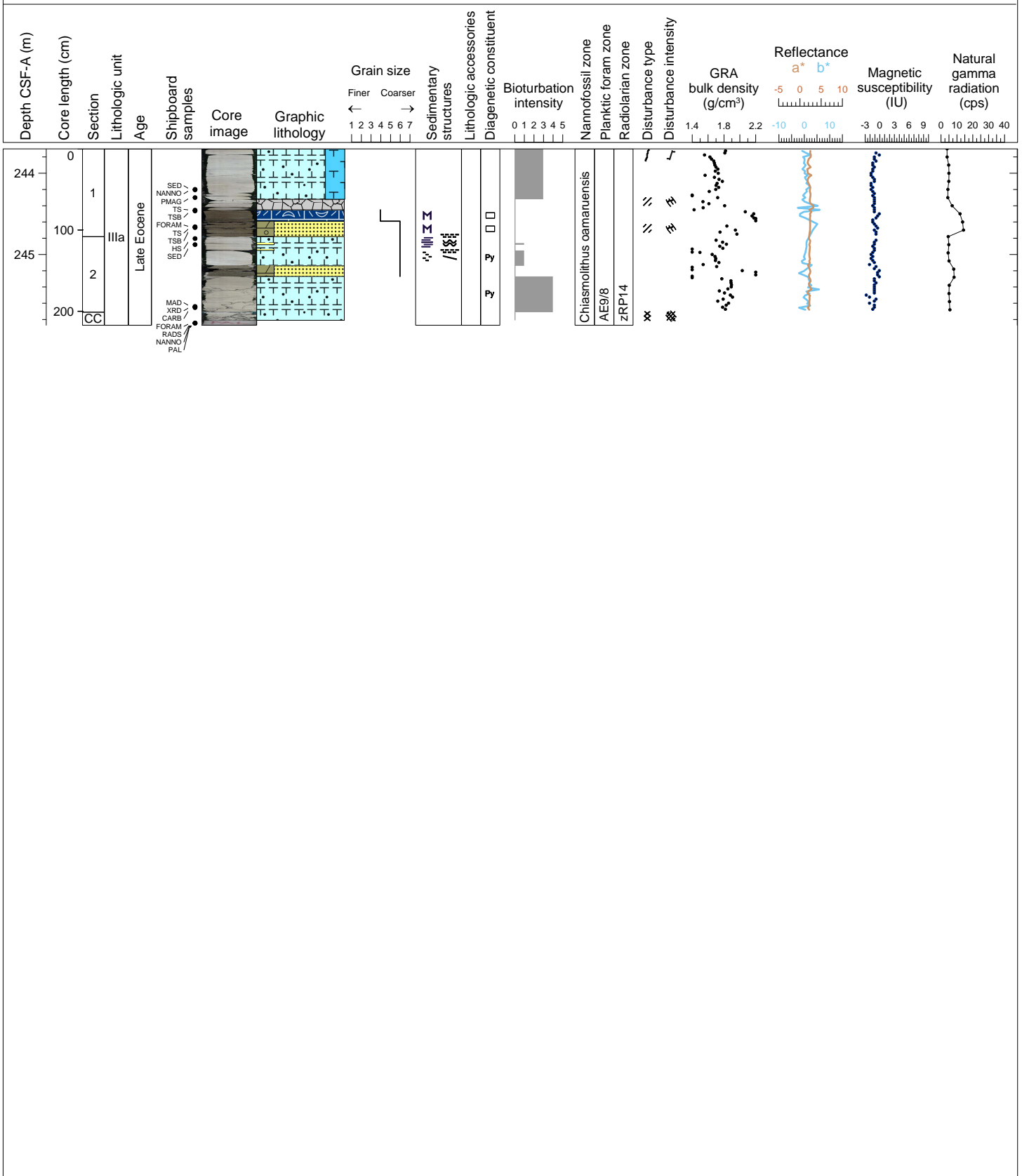
Hole 378-U1553C Core 2R, Interval 234.0-236.9 m (CSF-A)

Section 1 of Core U1553C-2R, 0-12 cm is composed of chert, while the remainder of this core consists of nannofossil chalk with few (1–10%) foraminifers and volcanic glass. Calcareous and siliceous sponge spicule fragments, mica and quartz particles are present in low abundance (< 1%). The color is predominantly white (N 8 or N 8.5) with a light greenish grey interval (10Y 7/1) in Section 2 from 5–89 cm that is composed of fine sand size material. Core U1553C-2R is heavily (60–90%) to completely (> 90%) bioturbated, with well-preserved burrows. This core is severely fractured.



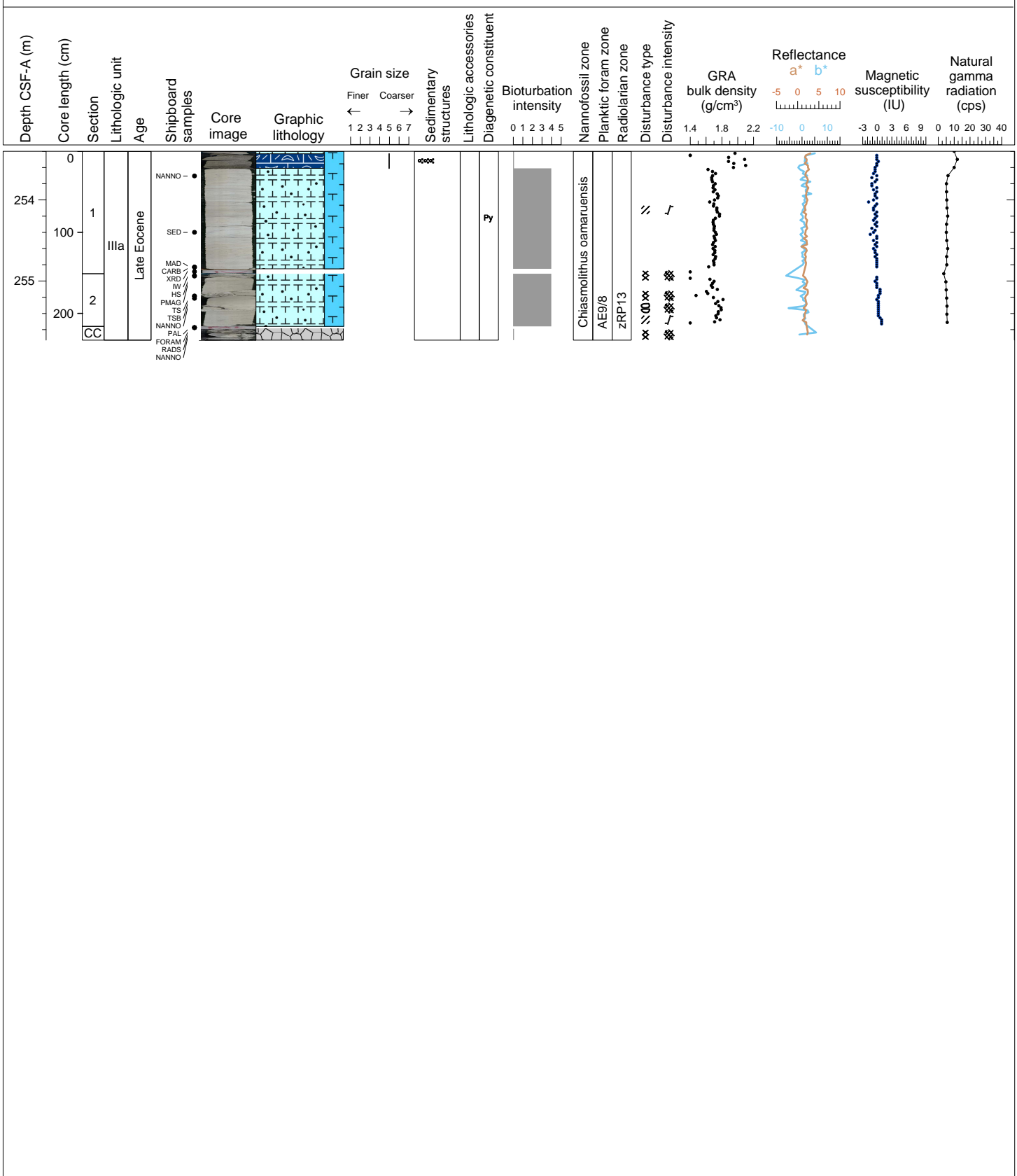
Hole 378-U1553C Core 3R, Interval 243.7-245.87 m (CSF-A)

Core U1553C-3R is mainly composed of nannofossil chalk with foraminifers (common). Quartz, volcanic glass, ferromagnesian minerals, and pyrite are present (< 1%) in Section 1. In Section 2, quartz and rock fragments are common (>10–25 %) and there are a few foraminifers, feldspars, and mica. The major lithology color is white (N 8 or N 8.5), whereas fine (Section 1, 75–89 cm), medium (Section 2, 8–10 cm; 16–17 cm; 36–49 cm) and coarse grained sand layers (Section 1, 89–108 cm) are light gray (2.5Y 7/1), light brownish gray (2.5Y 6/2) and gray (2.5Y 6/1). Sand layers appear as massive, cemented layers (Section 1, 75–108 cm) or in layers (Section 2, 8–10 cm) with occasional parallel stratification (Section 2, 16–17 cm). A 20-cm long interval of Section 2 shows tilted bedding with small patches of pyrite. This core is severely fractured.



Hole 378-U1553C Core 4R, Interval 253.4-255.73 m (CSF-A)

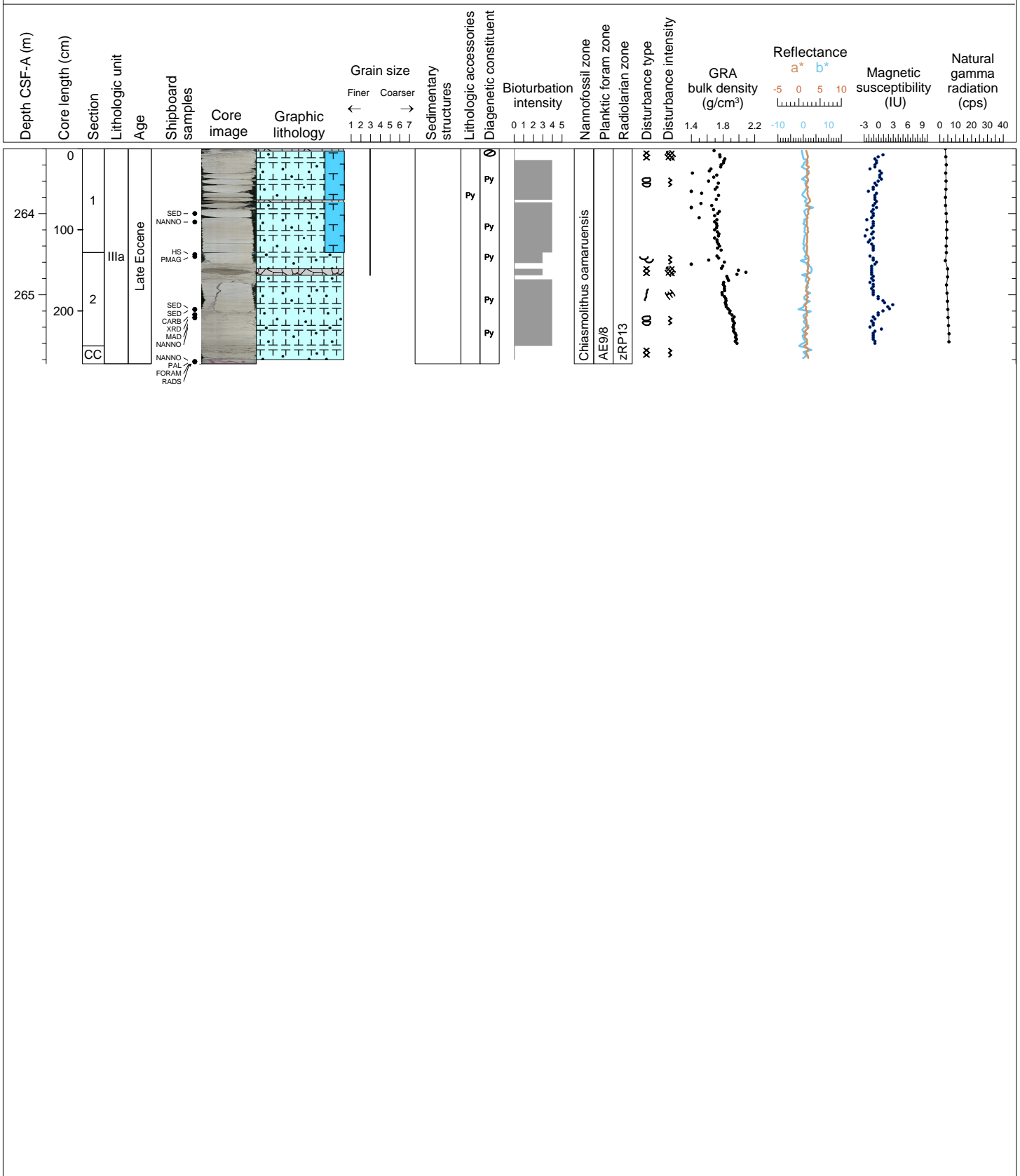
Core U1553C-4R is composed of nannofossil chalk with foraminifers (common). Mica and fish remains are present (< 1%). The upper part (0-3 cm) of Section 1 is light gray (N 7), followed by an 18 cm thick gray (2.5Y 6/1) fine sand layer with possible chert inception at 17-20 cm. From 21-145 cm in Section 2, the color changes into a light greenish grey (10Y 8/1); this part of the core also shows high bioturbation with pyrite and diagenetic halos. The major lithology of Section CC is characterized by brecciated, light gray (N 7) chert, while the minor lithology is a white (N 9) nannofossil chalk with foraminifers. The upper 16 cm of Section 2 are characterized by wavy ripples. This core is severely fractured.





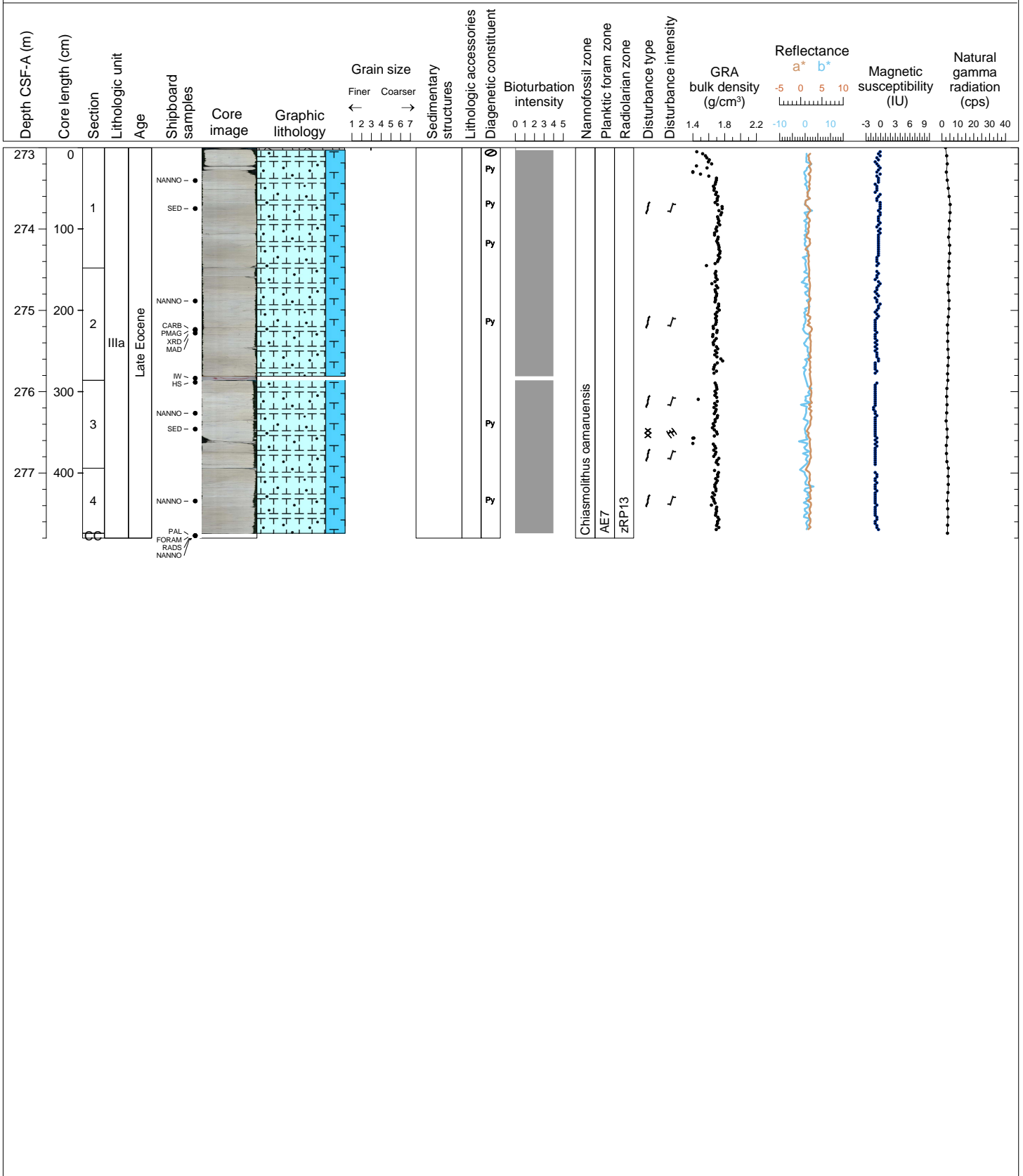
Hole 378-U1553C Core 5R, Interval 263.2-265.85 m (CSF-A)

Core U1553C-5R is composed of nannofossil chalk interbedded with three chert layers. The white (N 8.5) nannofossil chalk contains foraminifers, which are common in Section 1 and present in Section 2. Quartz, feldspar, mica, glauconite, dolomite, calcareous sponge spicules, and fish remains were identified in smear slides. The chert layers (about 3-8 cm thick) are light gray, hard, silt size, and in all 3 occurrences, the contact with the adjacent chalk is preserved in the core. The chalk is brecciated due to drilling disturbance near the chert layers, and elsewhere is biscuitied. The chalk contains extensive pale brown burrows and a large variety of trace fossil, including Zoophycos, pyrite blebs, and replacement of trace fossils. In Section 2 there is a zone where orthogonal sets of microfractures (2 directions, 120° offset) disturb the fabric of trace fossils, with an apparent displacement of 2-5 mm.



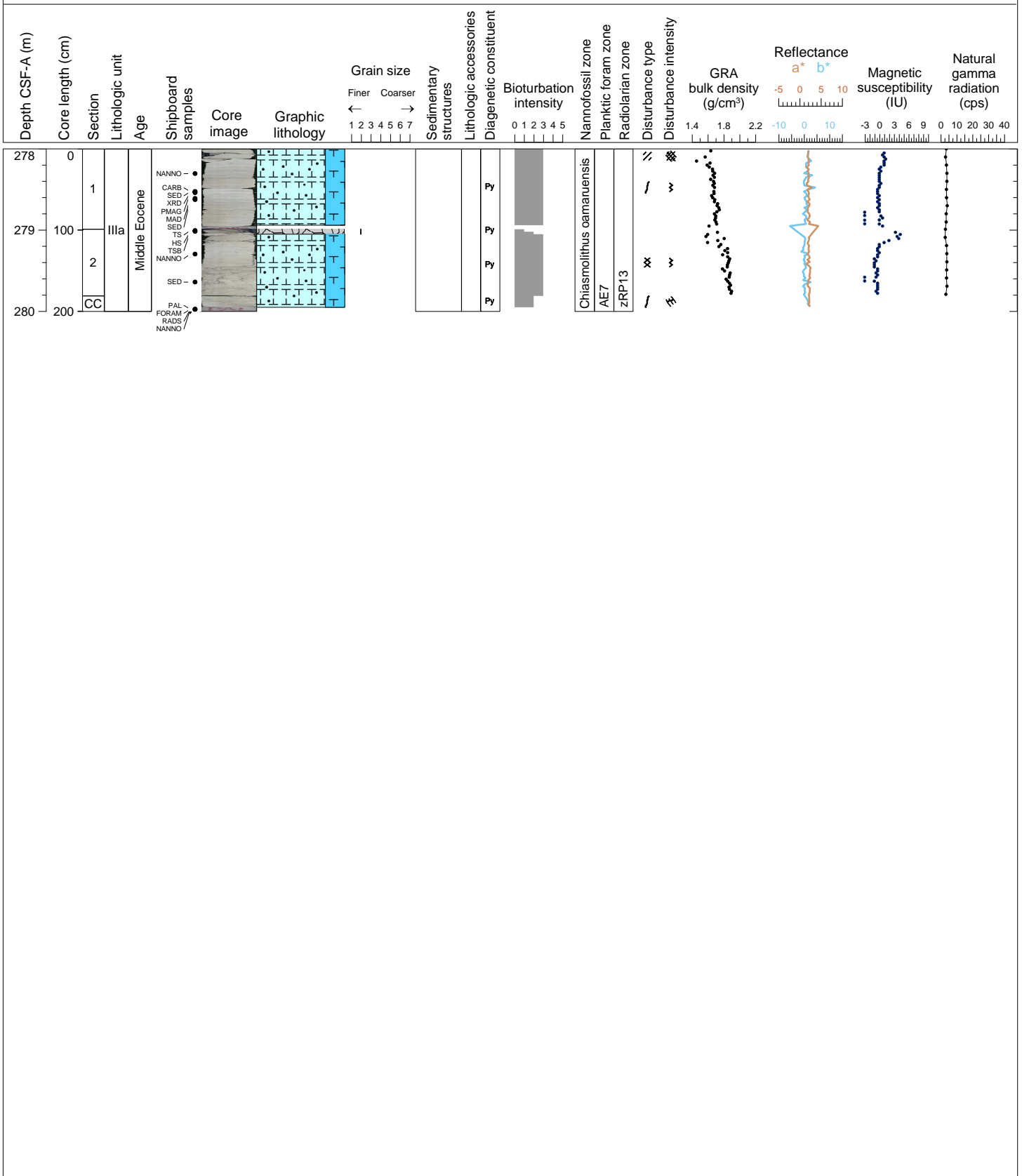
Hole 378-U1553C Core 6R, Interval 273.0-277.8 m (CSF-A)

Core U1553C-6R is composed of white (N 8.5) nanofossil chalk with foraminifers, and a 3 cm thick light greenish grey (5GY 8/1) chert layer at the very top. Quartz, volcanic glass, glauconite, mica, and calcareous sponge spicules were identified in the chalk by smear slides. The chert layer is light gray, hard, silt size, and contains brown and black patches. The chalk contains extensive pale brown burrows, a large variety of trace fossils (including Zoophycos), pyrite blebs, and replacement of trace fossils. In Section 1, an interval (51-89 cm) was distinguished by a pale green-gray color, interspersed with parts that are white. This interval could be distinguished by careful observation by human eye, but two similar intervals from 29-42 cm and 112-138 cm on the core photo could not be discerned by human eye as the color shift is too subtle.



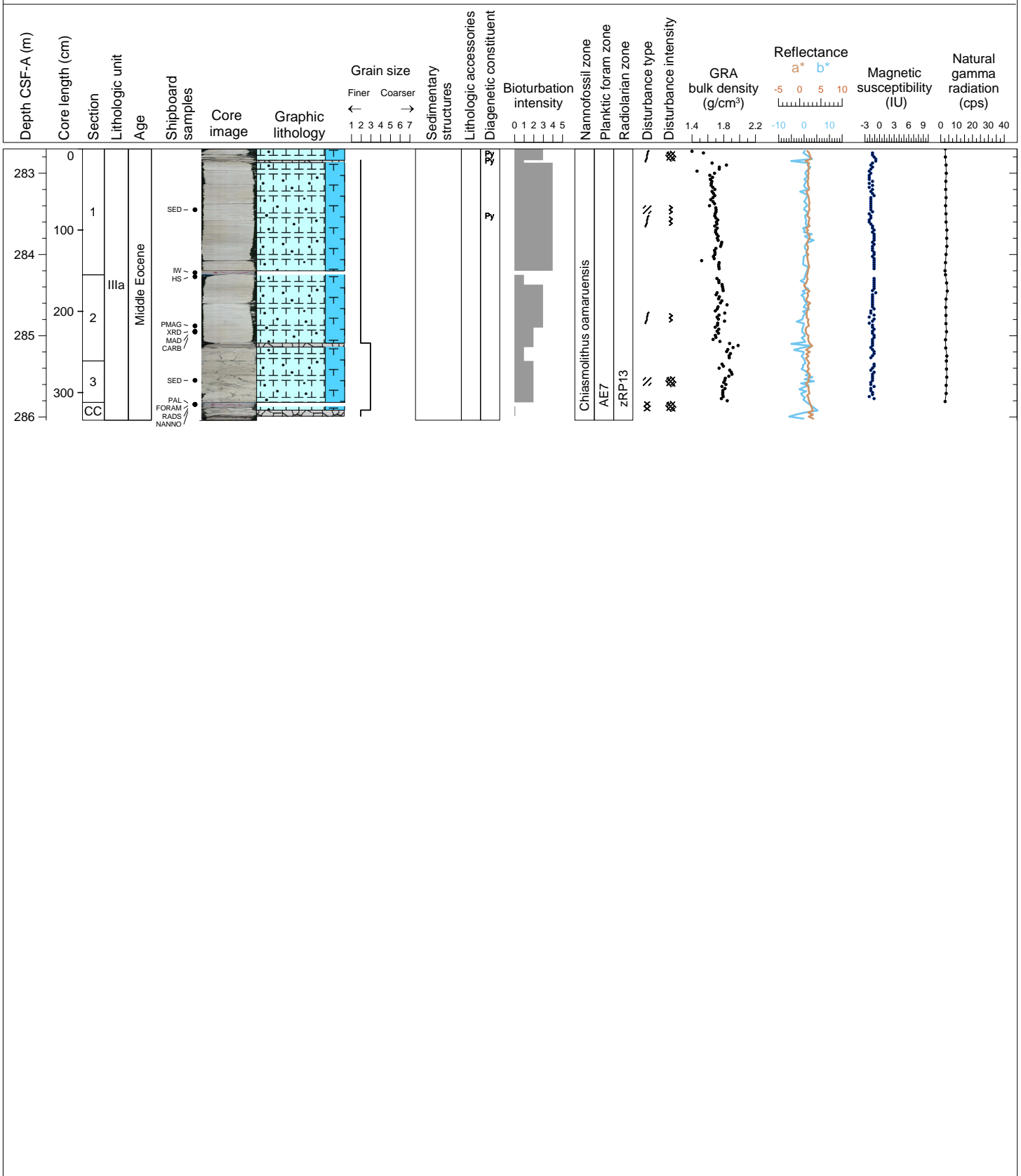
Hole 378-U1553C Core 7R, Interval 278.0-280.0 m (CSF-A)

Core U1553C-7R is composed of white (N 8.5) nannofossil chalk with foraminifers, and a 6 cm thick chert layer (light grey, N 7) at the top of Section 2, associated with severe drilling disturbance just below in the chalk. Quartz, volcanic glass, pyrite, and calcareous sponge spicules were identified in the chalk by smear slides. The chert layer is white, with a light gray band cutting through it, hard, and of silt size. It contains carbonate, as shown by reaction with HCl. The chalk is slightly to moderately bioturbated, with pale brown burrows, a variety of trace fossils, and pyrite blebs. There are faint pale green-gray colored layers (10G 8/1), interspersed with parts that are white and cut through by trace fossils. The chalk is fractured due to drilling disturbance near the chert layer, and elsewhere is brecciated.



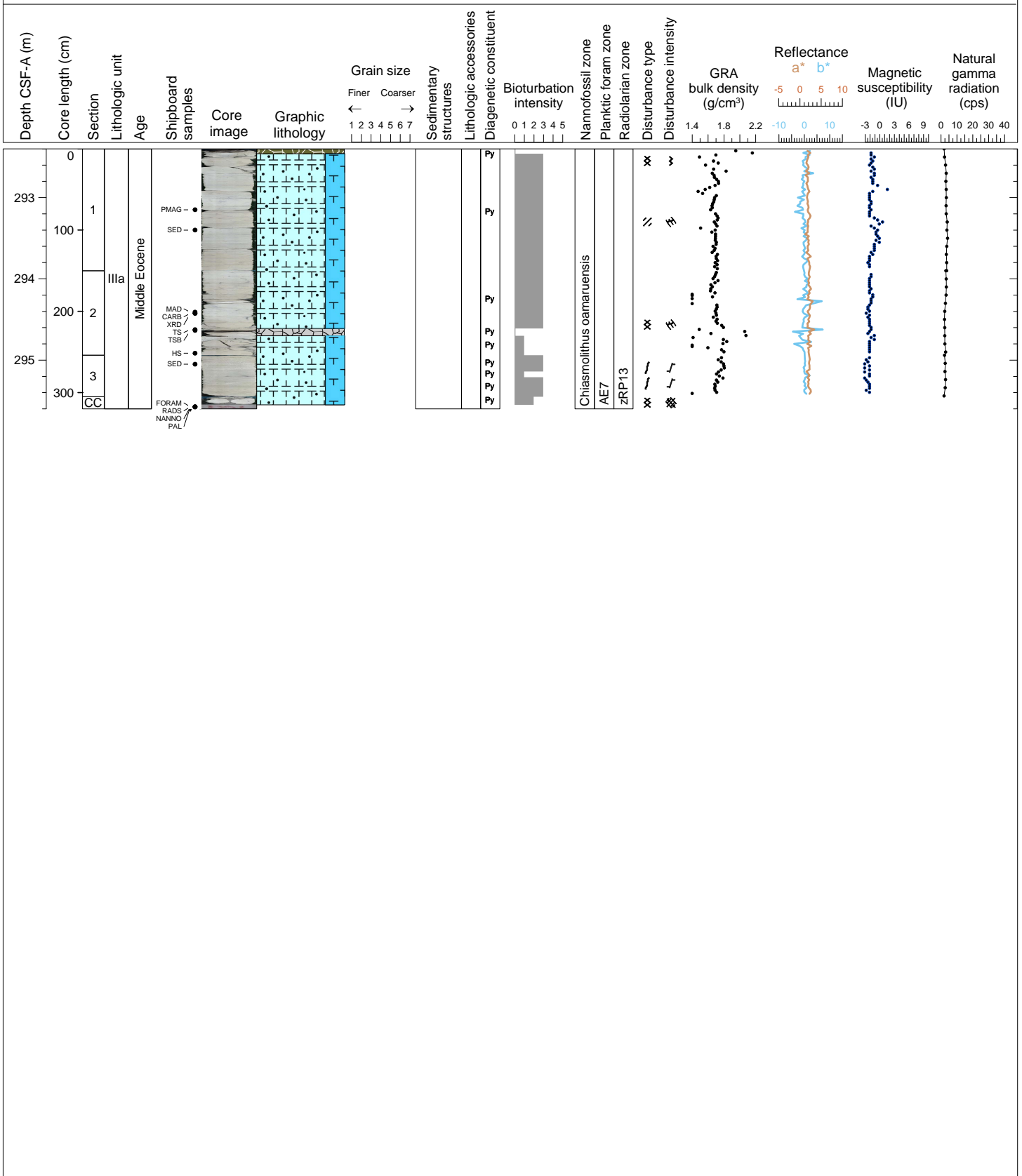
Hole 378-U1553C Core 8R, Interval 282.7-286.04 m (CSF-A)

Core U1553C-8R is composed of white (N 8.5) nanofossil chalk with foraminifers, and three 3-10 cm thick chert layers, associated with severe drilling disturbance in the chalk. Quartz, feldspar, and calcareous sponge spicules were identified in the chalk by smear slides. The chert layers are gray (2.5Y 5/1), hard and silt size. The deepest chert layer in Section CC has a dark olive part that may be due to incipient flint formation. The chalk is slightly to heavily bioturbated, with pale brown burrows and a variety of trace fossils, and pyrite blebs. There are light brown to purple-gray diagenetic halos (which in places cut through sporadic pale green layers), pale brown burrows, lenses, and patches. There are faint pale green-gray colored layers, interspersed with parts that are white, and cut through by trace fossils. There are pyrite blebs and lenticular features, which often replace fossils.



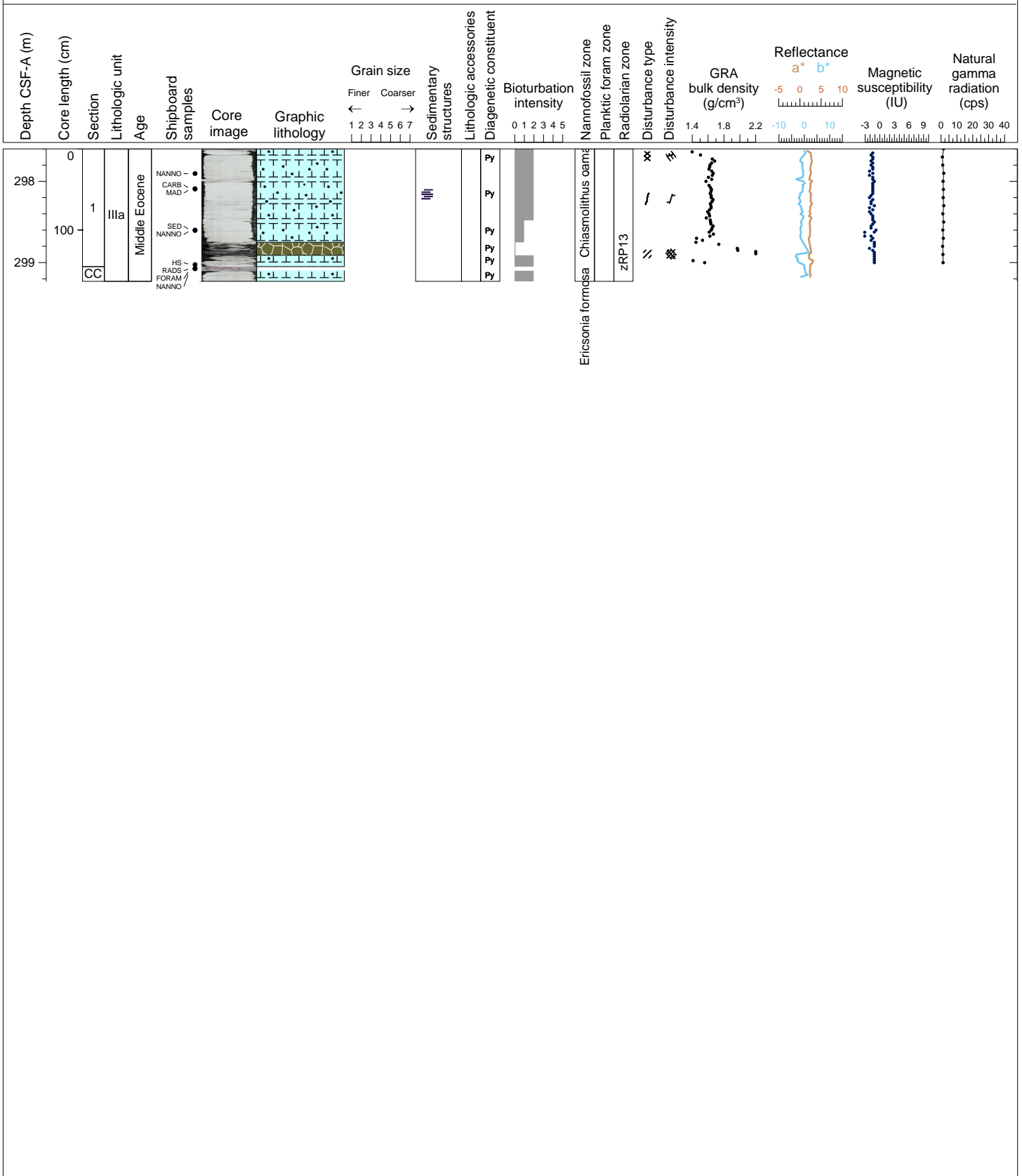
Hole 378-U1553C Core 9R, Interval 292.4-295.6 m (CSF-A)

Core U1553C-9R is composed of white (N 8.5) nanofossil chalk with foraminifers, a 6 cm layer of flint at the top of Section 1, and a 9 cm thick chert/flint layer in Section 2. These layers are associated with severe drilling disturbance in the chalk. The chert is white (N 8.5). The flint is very dark grayish olive (10Y 3/2) and contains inclusions of white chert (or silicified calcareous chalk). The chert/flint layer in Section 2 has well preserved contact features between the flint, chert and chalk. Quartz, chert, volcanic glass, glauconite and pyrite were identified in the chalk by smear slides. There are faint pale green-gray colored layers (5GY 6/2) and pyrite blebs, which partially replace trace fossils.



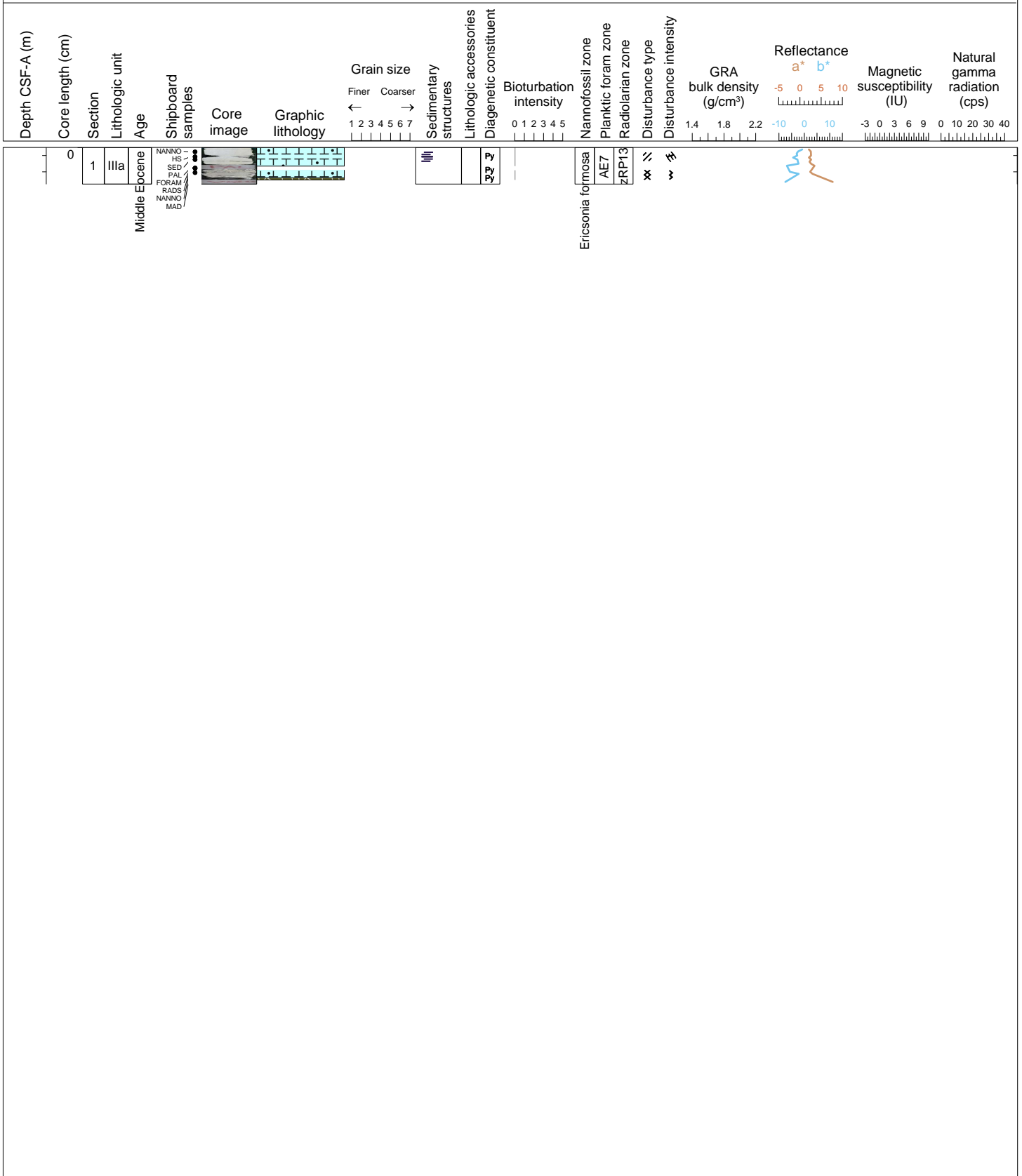
Hole 378-U1553C Core 10R, Interval 297.6-299.23 m (CSF-A)

Core U1553C-10R is composed of white (N 9) nannofossil chalk with foraminifers, and a 66 cm layer of flint at the bottom of Section 1. This layer is associated with severe drilling disturbance. The flint is very dark grayish olive (10Y 3/2) and contains inclusions of white chert (or silicified calcareous chalk) with gray chert rims. Feldspar, diatoms, and radiolarians were identified in the chalk by smear slides. There are diagenetic halos, faint pale green-gray colored layers (5G 8/1), and pyrite blebs, which partially replace trace fossils.



Hole 378-U1553C Core 11R, Interval 302.1-302.55 m (CSF-A)

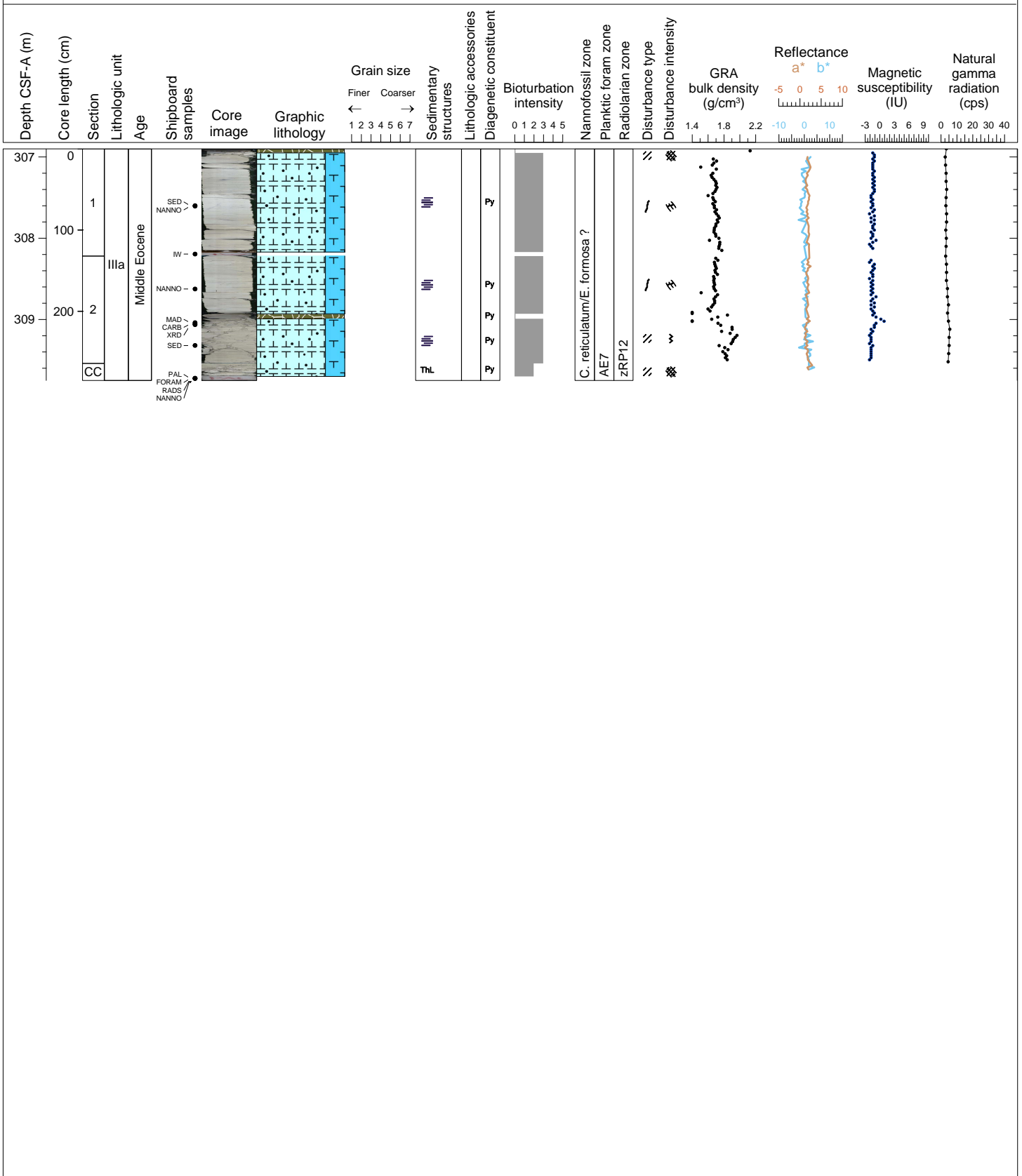
Core U1553C-11R is composed of white (N 9) nannofossil chalk with foraminifers. Only a small section (45 cm) was recovered. There are diagenetic halos, faint pale green-gray colored layers, and pyrite blebs. Chert is present in the lower part of the core and is very dark grayish olive (10Y 3/2).





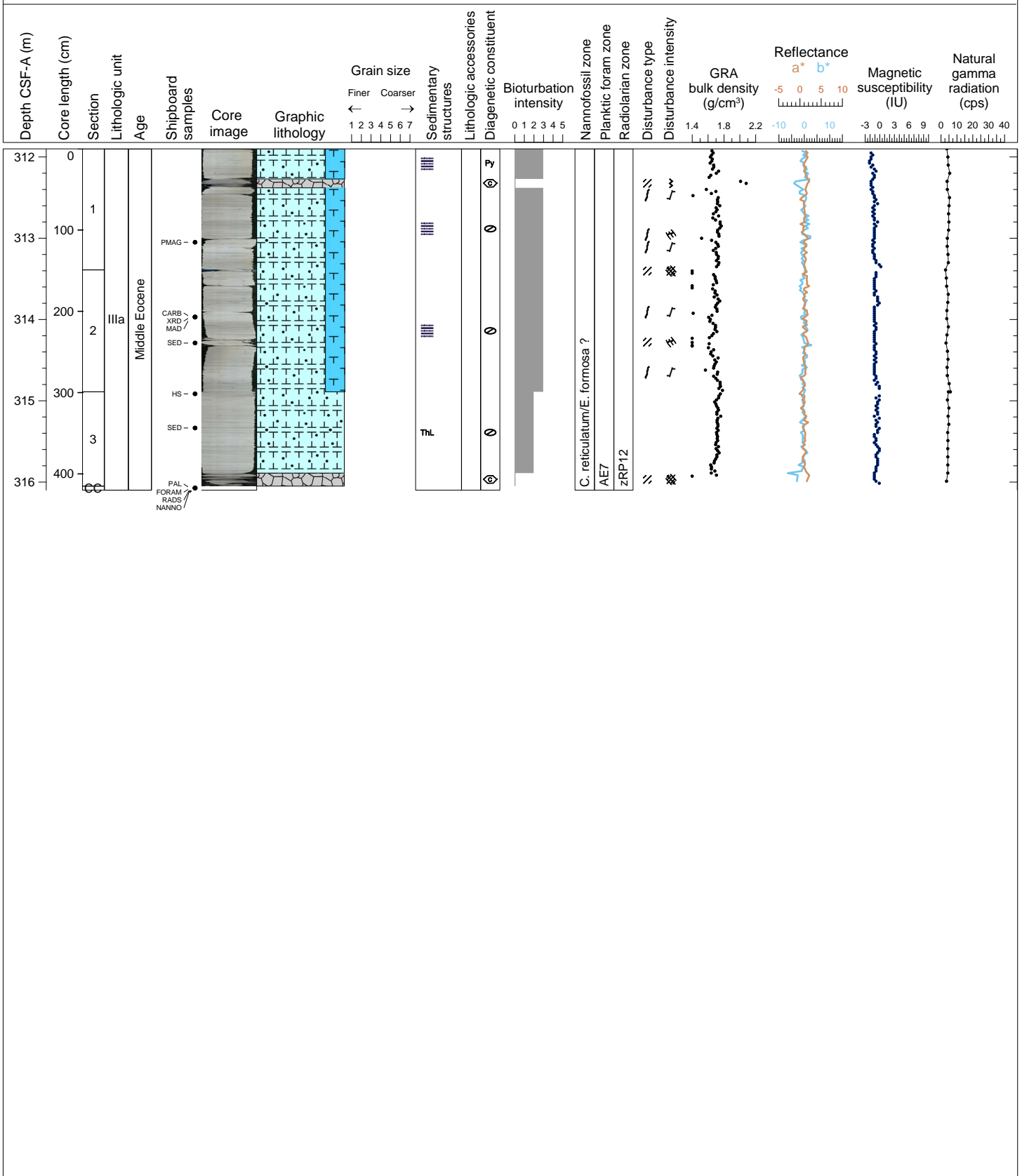
Hole 378-U1553C Core 12R, Interval 306.9-309.75 m (CSF-A)

Core U1553C-12R is composed of white (N 8.5) nannofossil chalk with foraminifers, a 5 cm layer of flint (very dark grayish olive; 10Y 3/2) at the top of Section 1, and a 6 cm white (N 7) chert layer in Section 2. These layers are associated with severe drilling disturbance in the chalk. Quartz and mica were identified in the chalk by smear slides. Burrow structures are visible throughout. There are faint pale green-gray colored layers and pyrite blebs, which partially replace trace fossils.



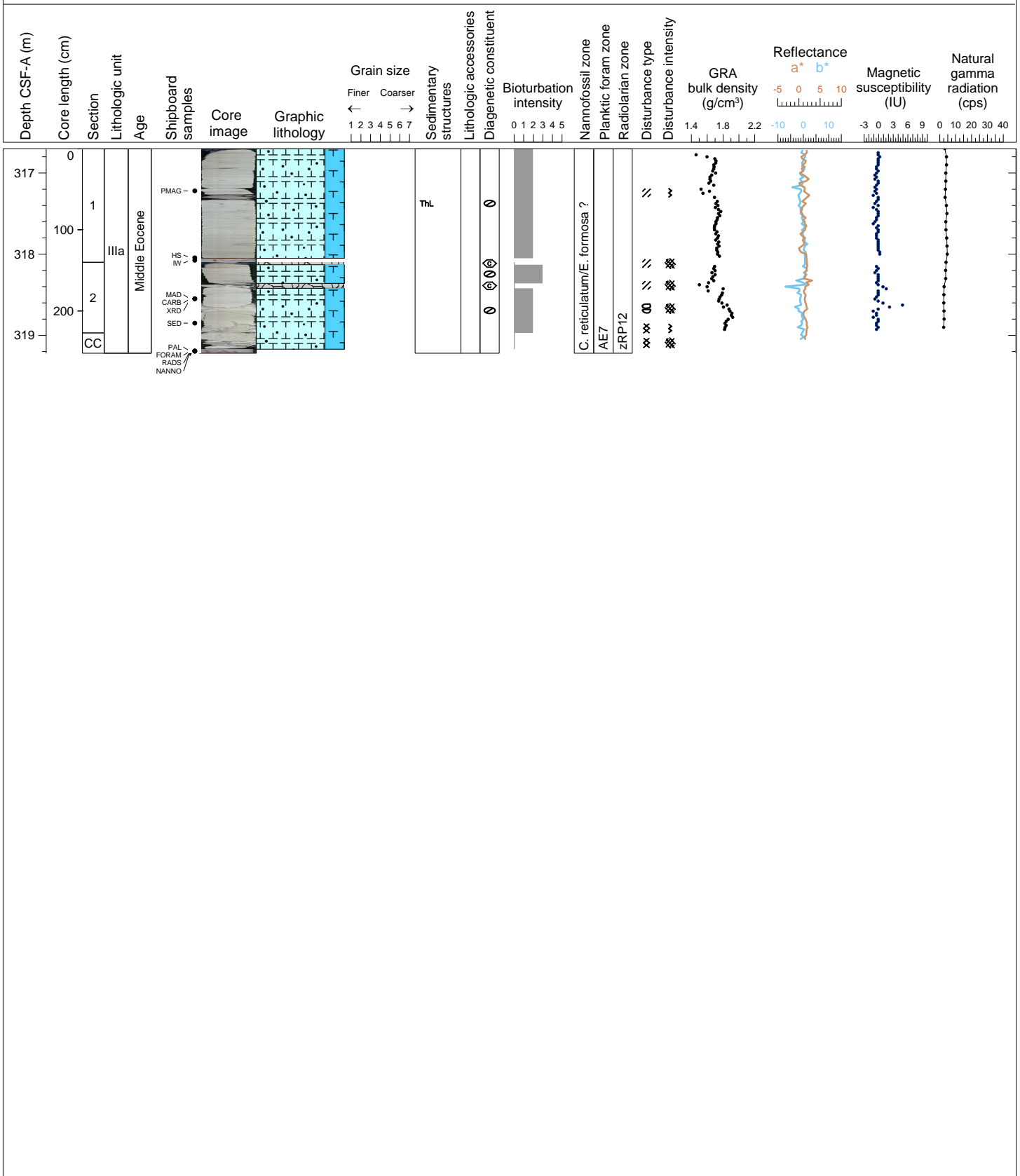
Hole 378-U1553C Core 13R, Interval 311.9-316.1 m (CSF-A)

Core U1553C-13R is composed of white (N 8.5) nannofossil chalk with few to common foraminifers. Chert layers are visible in Sections 1 and 3. The chert is a mottled grey (N 7) with lighter patches. Ferrromagnesian minerals, mica, and pyrite were identified in the chalk by smear slides. Burrow structures are visible throughout. There are faint pale green-gray (5G 7/1) colored layers and pyrite blebs, which partially replace trace fossils. Green layers are mm-sized and finely laminated.



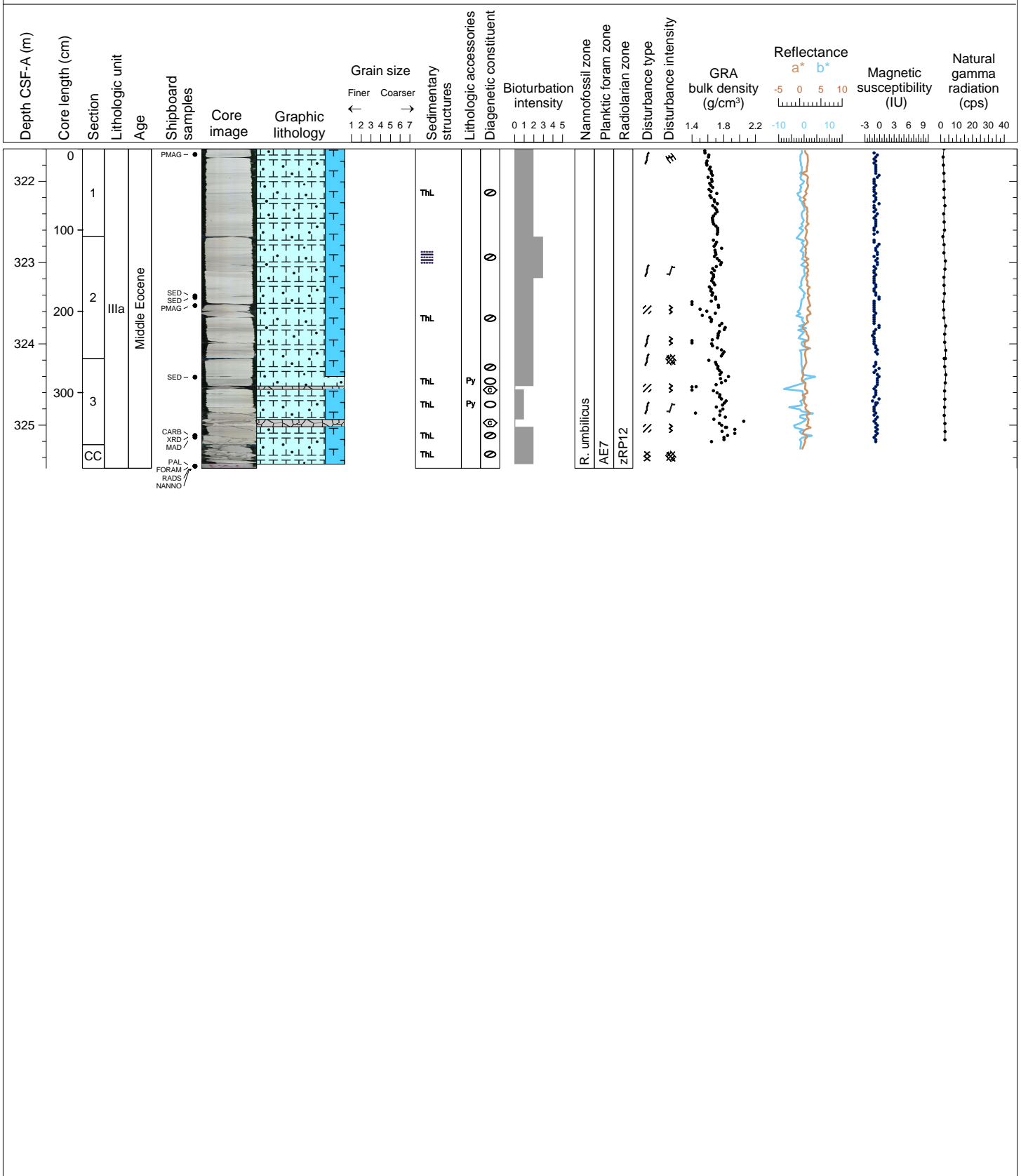
Hole 378-U1553C Core 14R, Interval 316.7-319.22 m (CSF-A)

Core U1553C-14R is composed of white (N 8.5) nannofossil chalk with foraminifers. Chert layers are visible in Section 2. The chert is a mottled grey (N 7) with lighter patches (possibly of chalk). Quartz, mica, and pyrite were identified in the chalk by smear slides. Burrow structures are visible throughout. There are faint pale green-gray colored layers and pyrite blebs, which partially replace trace fossils. Green layers are mm-sized and finely laminated.



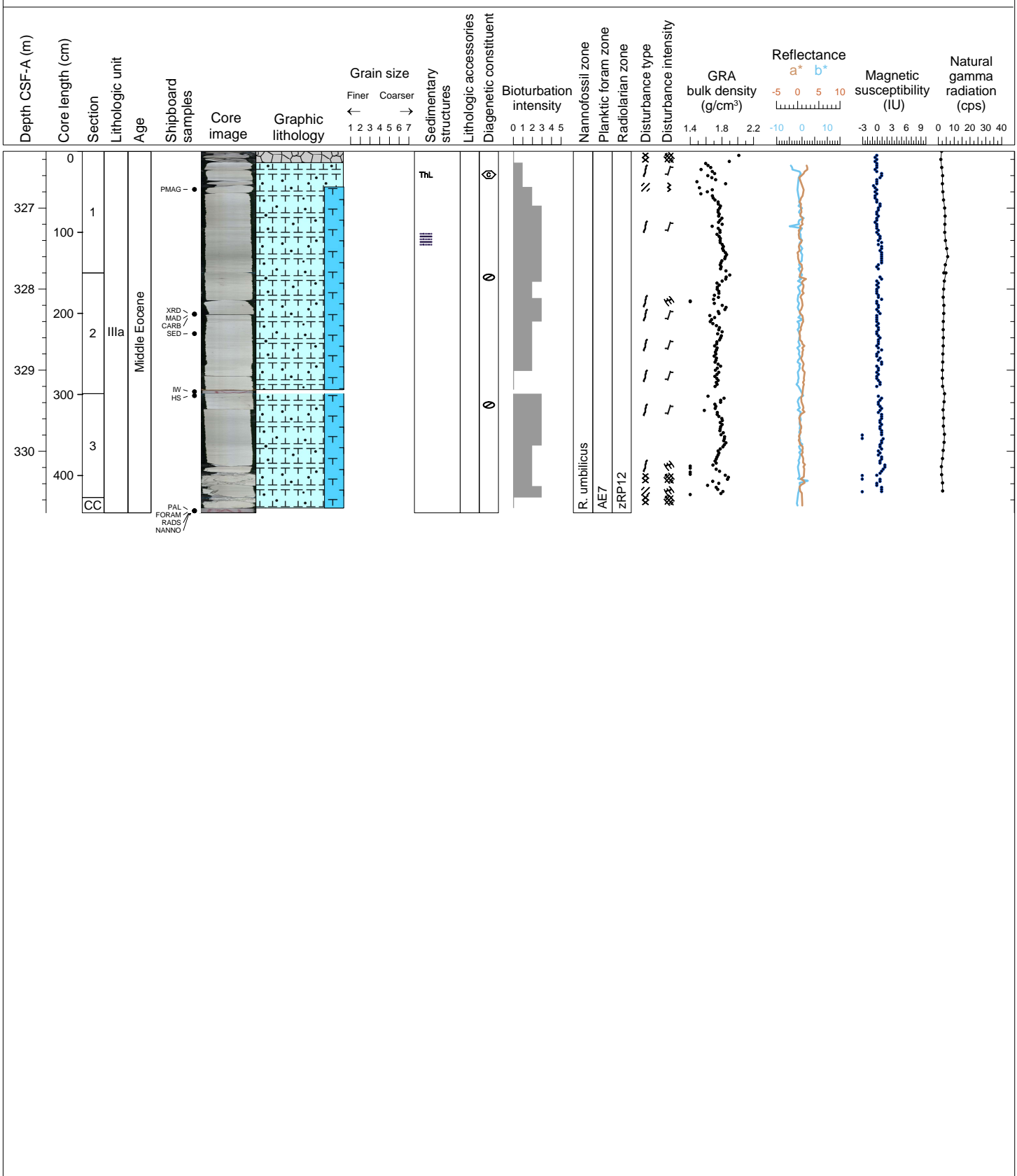
Hole 378-U1553C Core 15R, Interval 321.6-325.53 m (CSF-A)

Core U1553C-15R is composed of white nannofossil chalk (N 8.5) with foraminifers. Chert layers are visible in Section 3. The chert is a mottled grey (5GY 7/1) with lighter patches (possibly of chalk). Quartz, chert, feldspar, Fe-Mn oxyhydroxides, and glauconite were identified in the chalk by smear slides. Burrow structures are visible throughout. Green and gray layers are well-defined and tend to cluster in darker segments (e.g. Section 2). Dark pyrite blebs including crystalline forms are also visible, most notably in Section 3. Bioturbated intervals tend to be darker and browner in color.



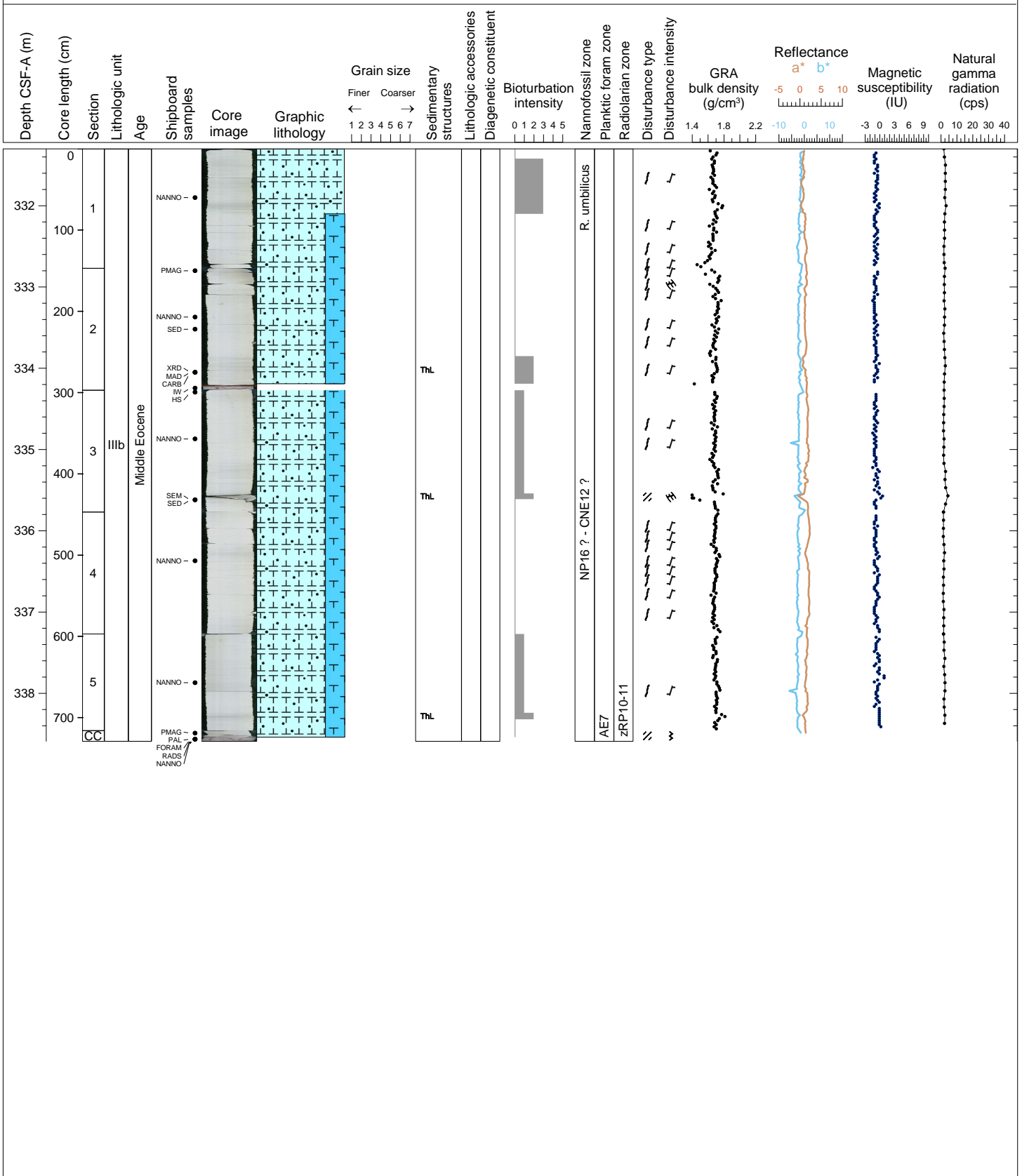
Hole 378-U1553C Core 16R, Interval 326.3-330.76 m (CSF-A)

Core U1553C-16R is composed of white (N 8.5) nannofossil chalk with foraminifers. A chert layer is visible at the top of Section 1. The chert is a mottled grey (N 7) with lighter patches (possibly of chalk). Feldspar and mica were identified in the chalk by smear slides. Burrow structures are visible throughout. Bioturbated intervals tend to be darker and browner in color and have sharp contacts with whiter, not obviously bioturbated segments. Green (10Y 8/1) and gray layers are well-defined and tend to cluster in darker segments. Dark pyrite blebs are visible.



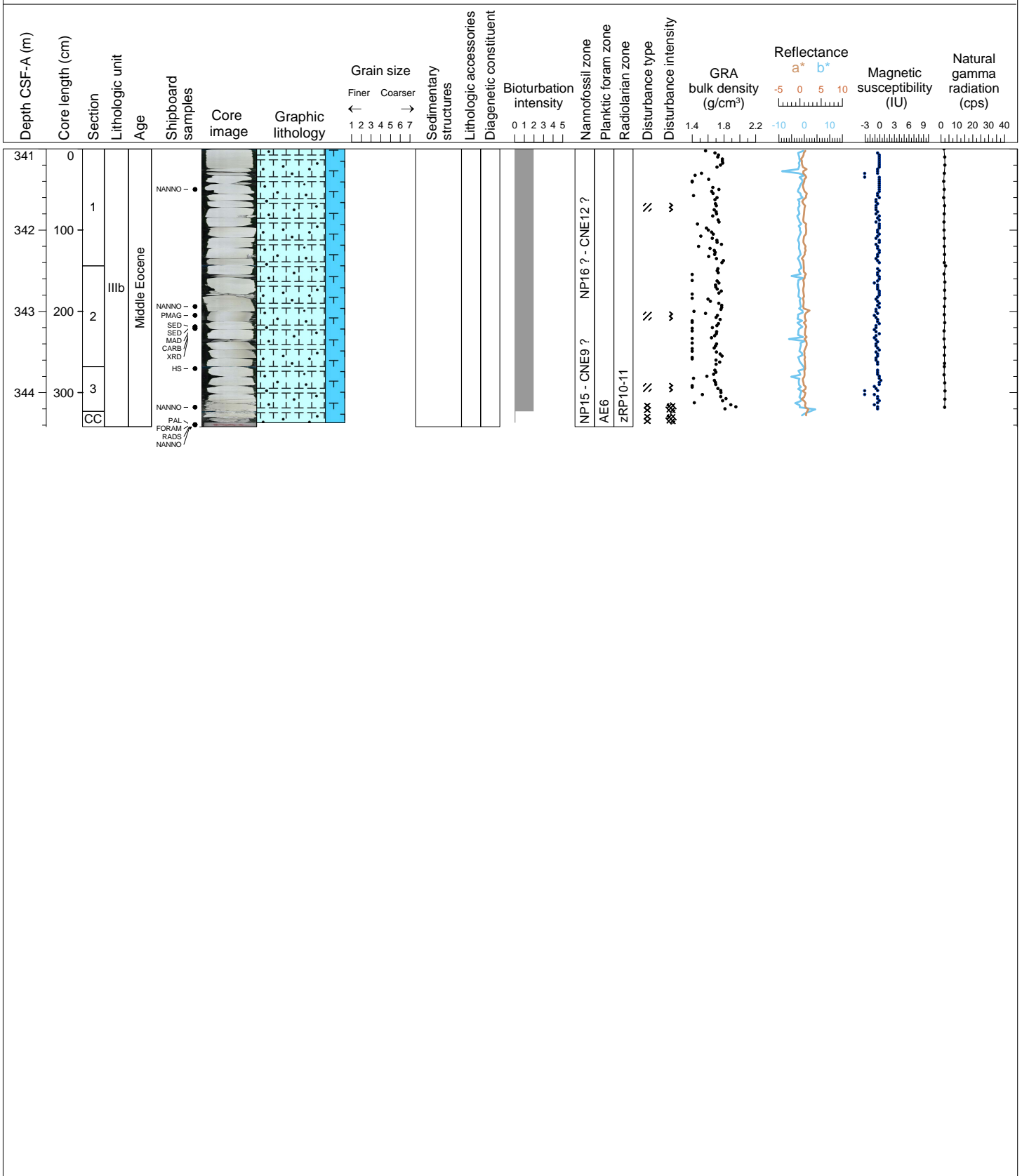
Hole 378-U1553C Core 17R, Interval 331.3-338.59 m (CSF-A)

Core U1553C-17R is composed of white (N 8.5) nannofossil chalk with foraminifers. Quartz and pyrite were identified in the chalk by smear slides. Burrow structures are visible throughout. This core is bright white in color and fairly homogeneous with few green (10G 8/1) and gray layers present. Small pyrite grains are visible at macroscopic level.



Hole 378-U1553C Core 18R, Interval 341.0-344.42 m (CSF-A)

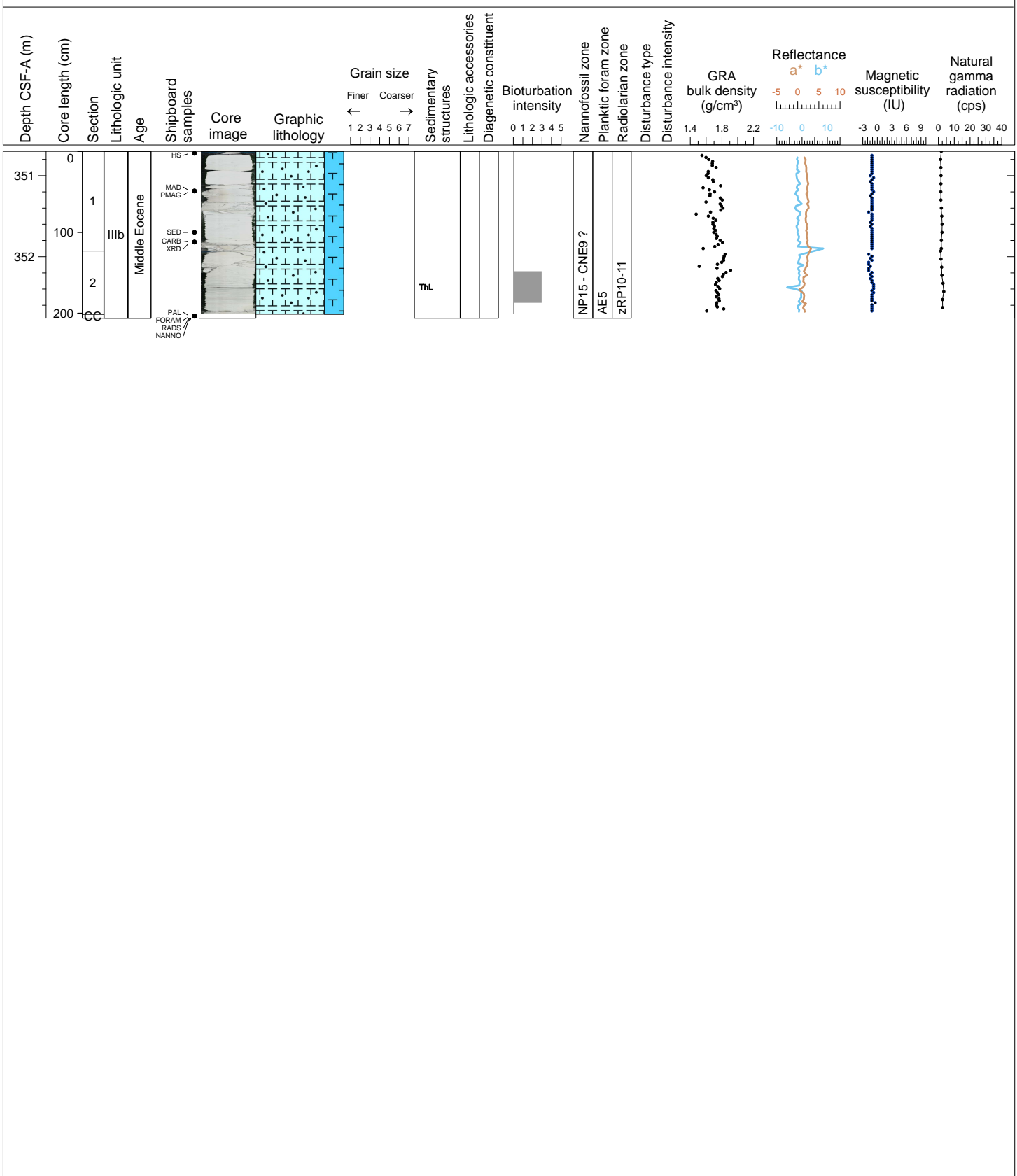
Core U1553C-18R is composed of white (N 9) nannofossil chalk with foraminifers. Pyrite was identified in the chalk by smear slides. Burrow structures are visible in low abundances. This core is bright white in color and fairly homogeneous with few green (10G 8/1) and gray layers present. Small pyrite grains are visible at macroscopic level.





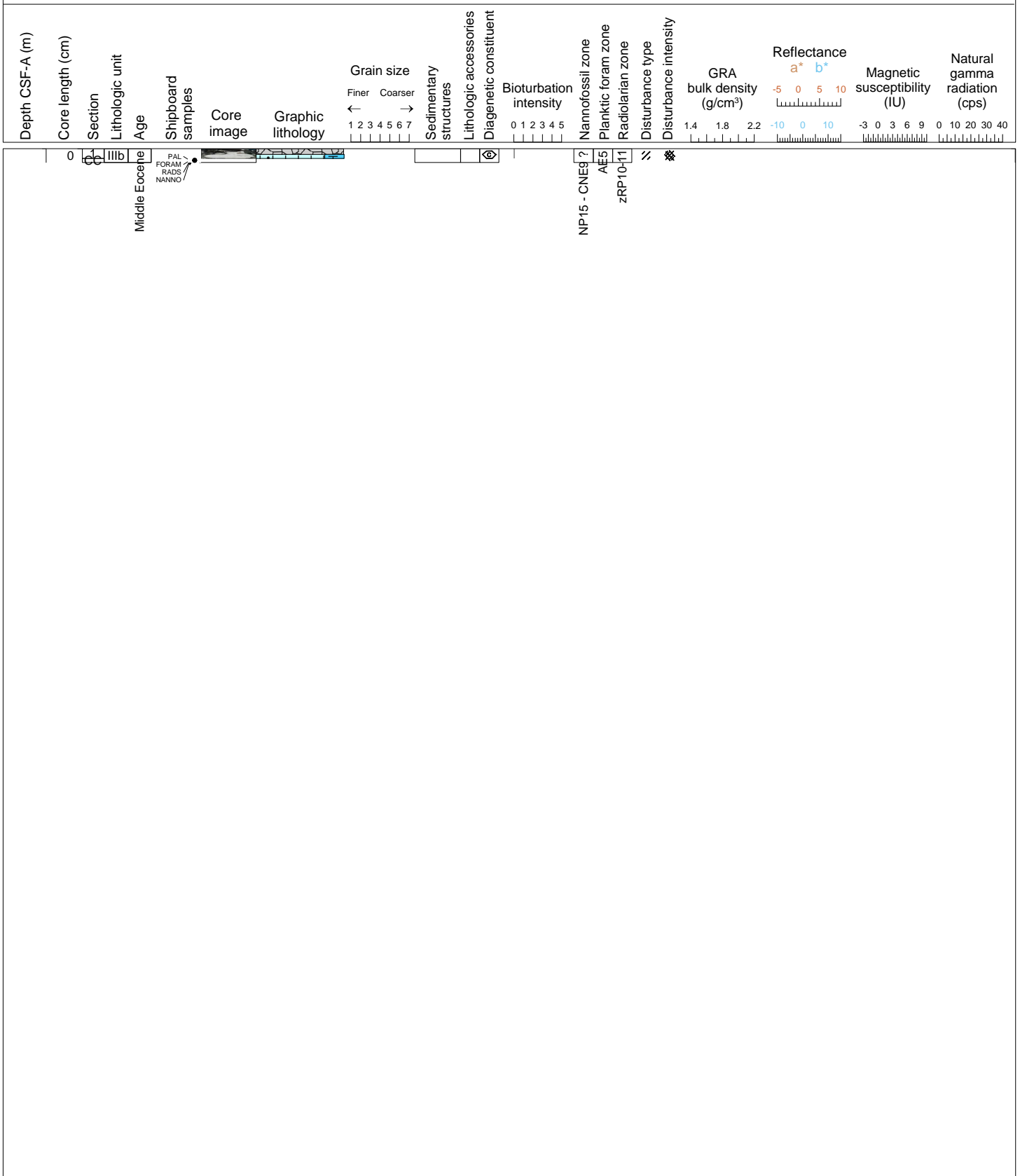
Hole 378-U1553C Core 19R, Interval 350.7-352.76 m (CSF-A)

Core U1553C-19R is composed of white (N 9, N 9.5) nannofossil chalk with foraminifers. Section 1 is mainly white and homogeneous, while Section 2 contains fine green (10G 8/1) and brown layers that are bioturbated. Mica and radiolarians were identified in the chalk by smear slides. Small pyrite grains are visible at the macroscopic level.



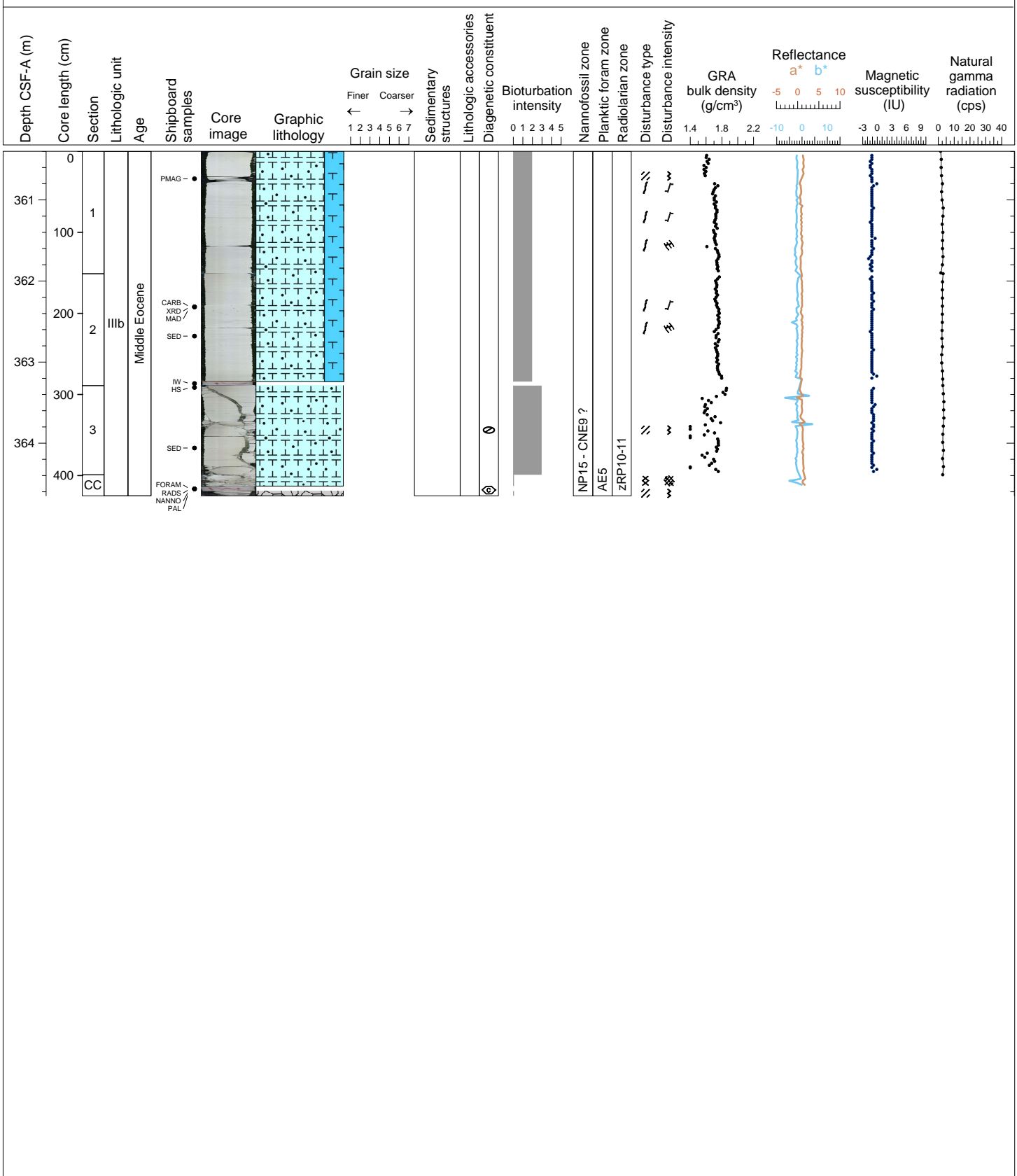
Hole 378-U1553C Core 20R, Interval 355.4-355.57 m (CSF-A)

Core U1553C-20R is composed of white (N 9) nannofossil chalk with foraminifers and flint (10YR 5/1). A small section was recovered that shows severe brecciation (Section 1, 0-12 cm).



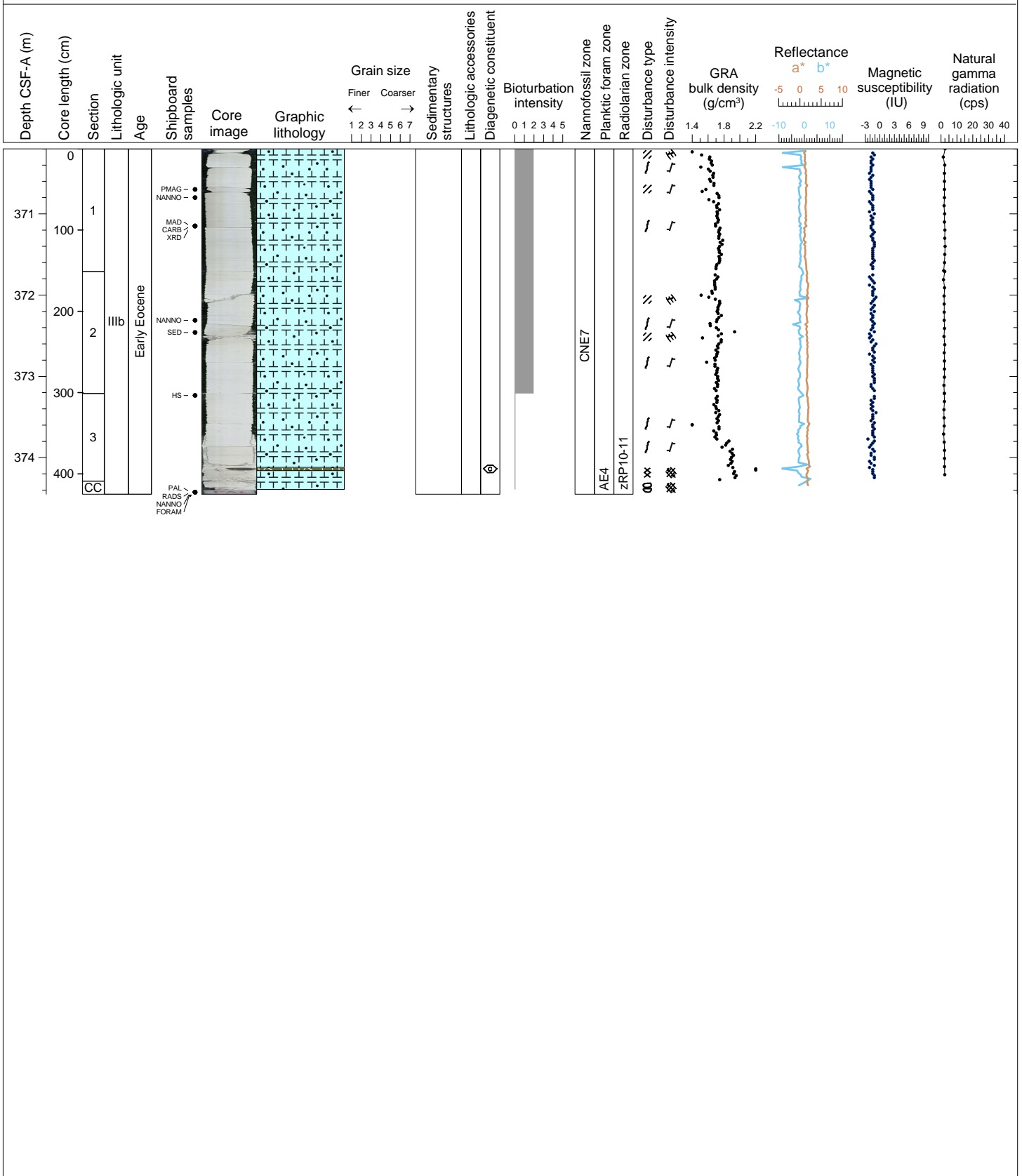
Hole 378-U1553C Core 21R, Interval 360.4-364.65 m (CSF-A)

Sections 1 and 2 of Core U1553C-21R are composed of nannofossil chalk with foraminifers. Sections 3 and CC are nannofossil chalk. In Section 3, a large vertical fracture runs down the length of the section. This fracture appears to be a fault surface, as it is characterized by a green mineral veneer and slickenslides. Quartz, volcanic glass, mica, and ferromanganese minerals were identified in the chalk by smear slides. Burrow structures are visible in low abundances. This core is bright white (N 8.5, N 9) in color and fairly homogeneous with few green (10G 8/1) and gray layers present. Small pyrite grains are visible at macroscopic level.



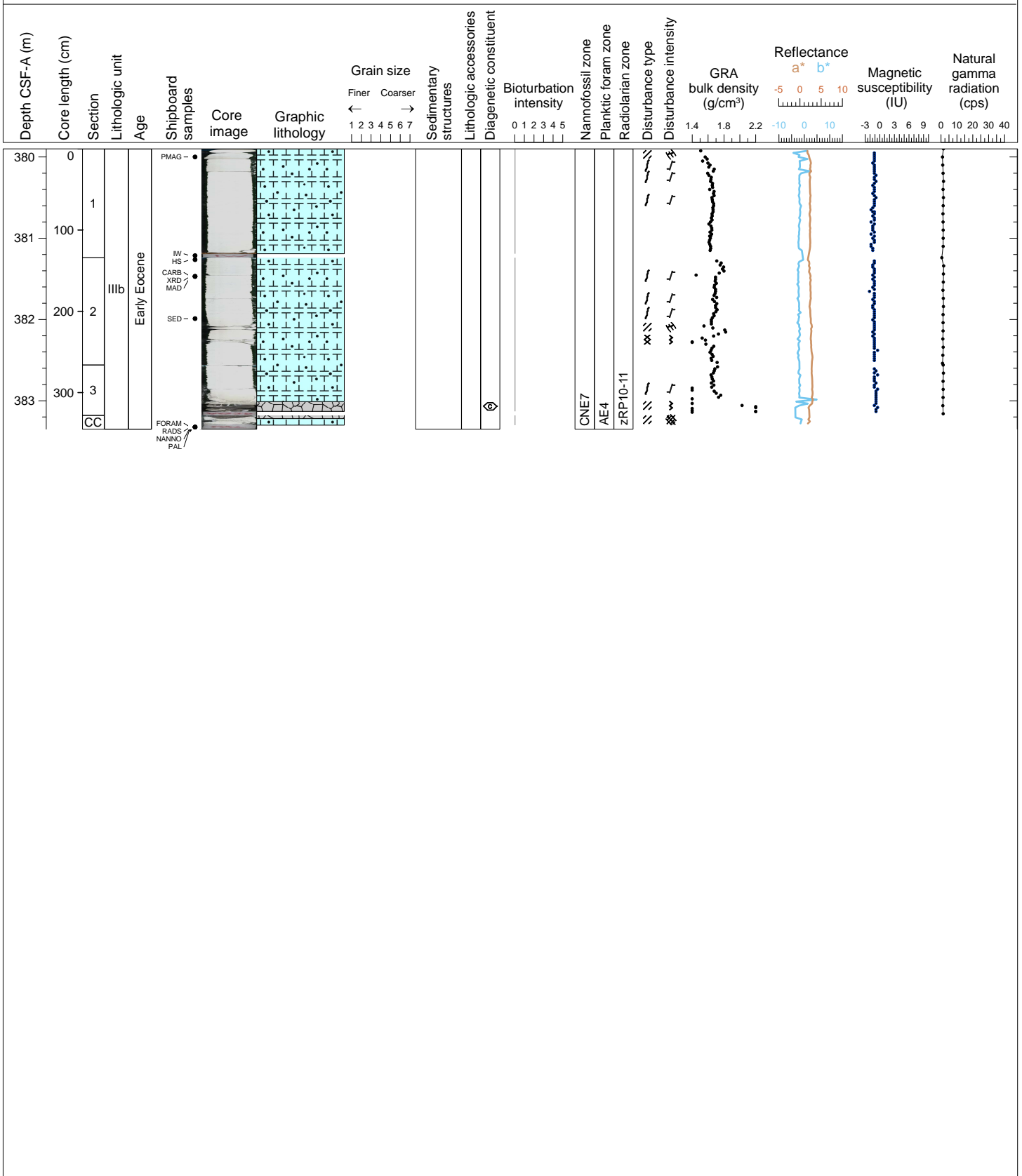
Hole 378-U1553C Core 22R, Interval 370.2-374.45 m (CSF-A)

Core U1553C-22R is composed of nannofossil chalk with foraminifers. A dark gray (N 4) circular chert nodule is visible in Section 3. The material around this concretion is brecciated/bisculted. Mica and siliceous sponge spicules were identified in the chalk by smear slides. Burrow structures are visible in low abundances and diagenetic halos are also visible. This core is bright white (N 8.5) in color and fairly homogeneous with few green and gray layers present. Small pyrite grains are visible.



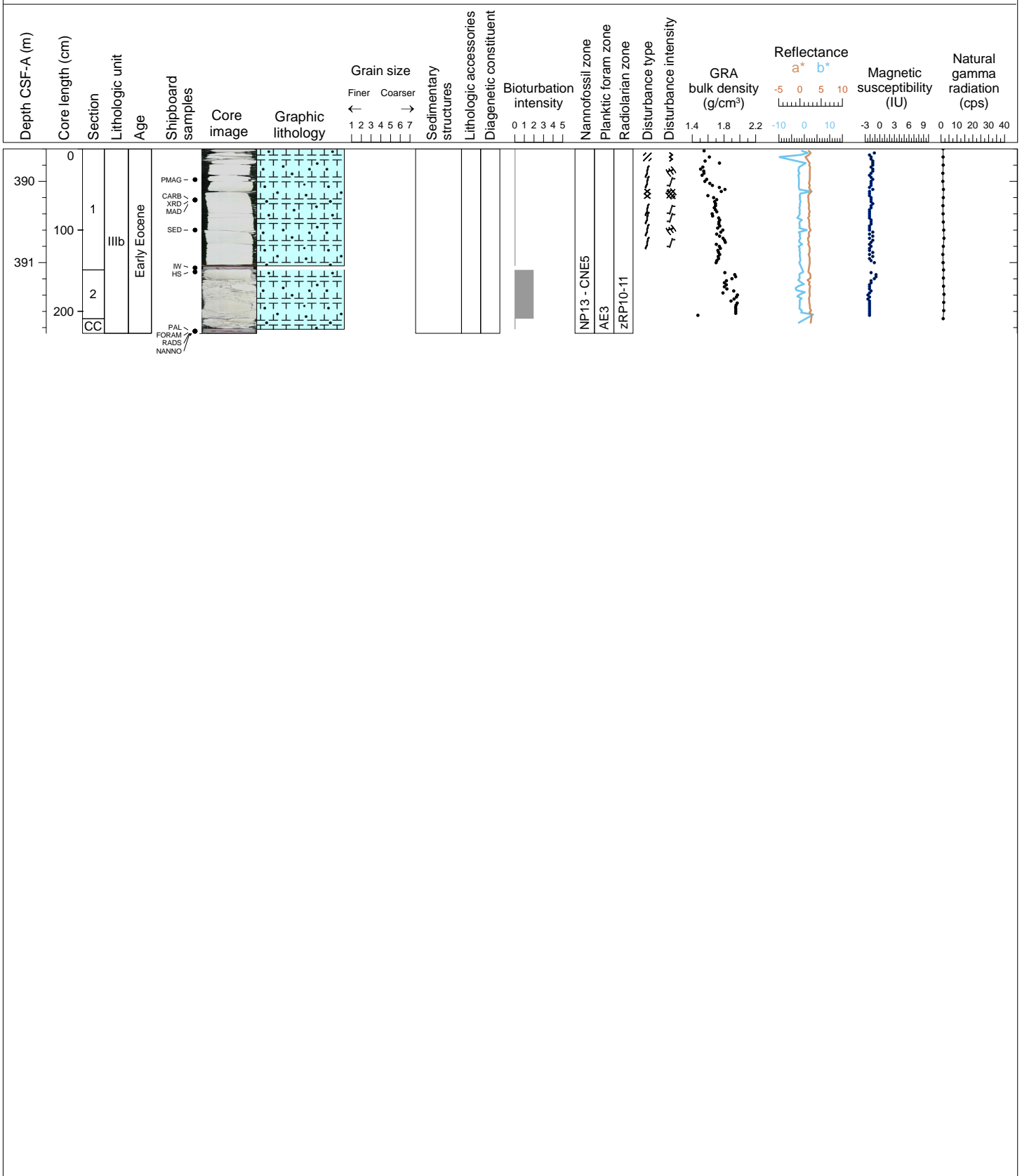
Hole 378-U1553C Core 23R, Interval 379.9-383.35 m (CSF-A)

Core U1553C-23R is composed of white nannofossil chalk with foraminifers. A chert nodule with chalk inclusions is visible in Section 3. This core is notable for its homogeneous, bright white (N 9.5) color. Few burrows or diagenetic features are visible. Small pyrite grains are visible and mica was present as observed via smear slides.



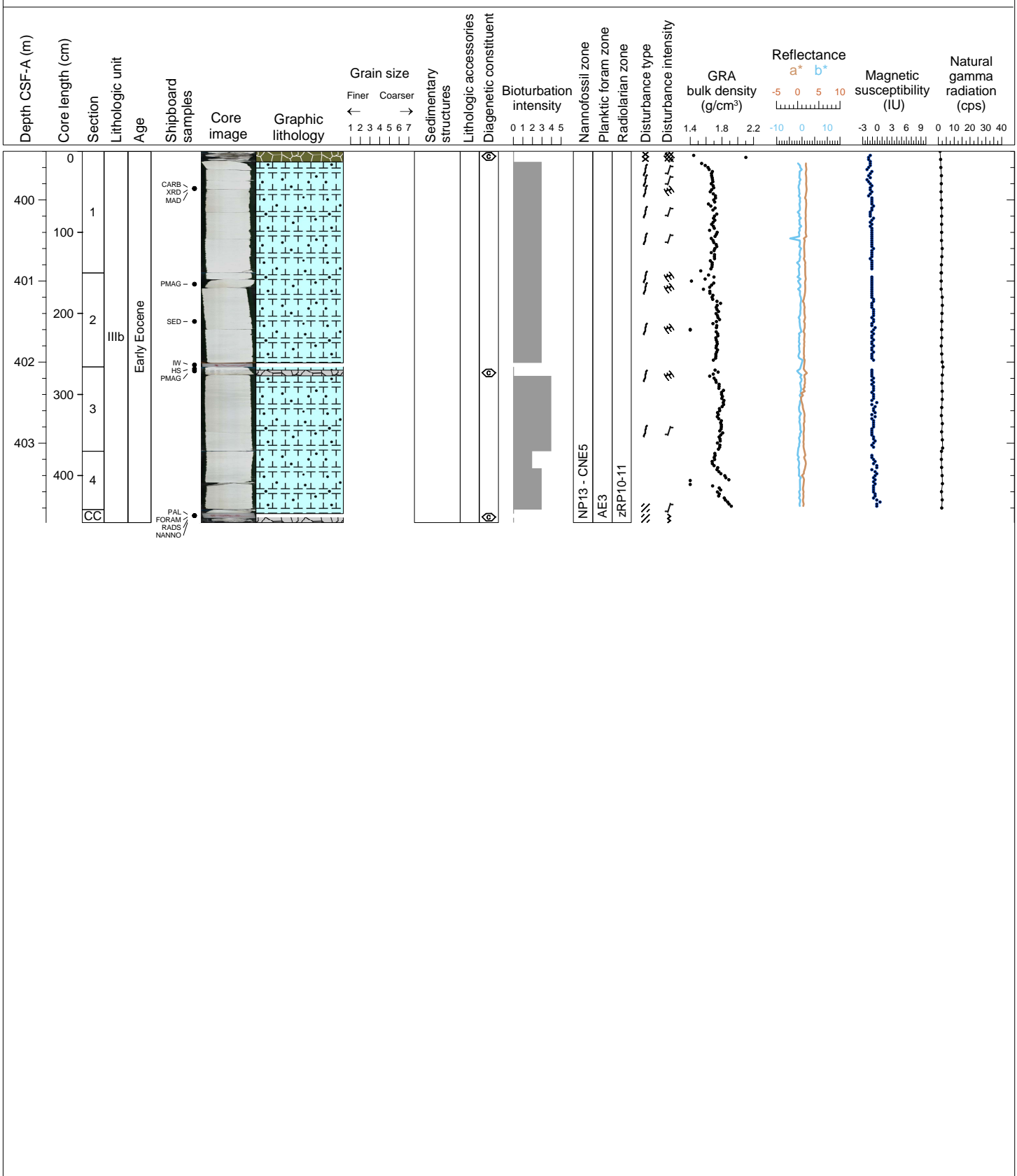
Hole 378-U1553C Core 24R, Interval 389.6-391.87 m (CSF-A)

Core U1553C-24R is composed of white nannofossil chalk with foraminifers. This core is notable for its homogeneous, bright white (N 9.5) color. Few burrows or diagenetic features are visible. Small pyrite grains are visible to the naked eye and were observed in smear slides.



Hole 378-U1553C Core 25R, Interval 399.4-403.98 m (CSF-A)

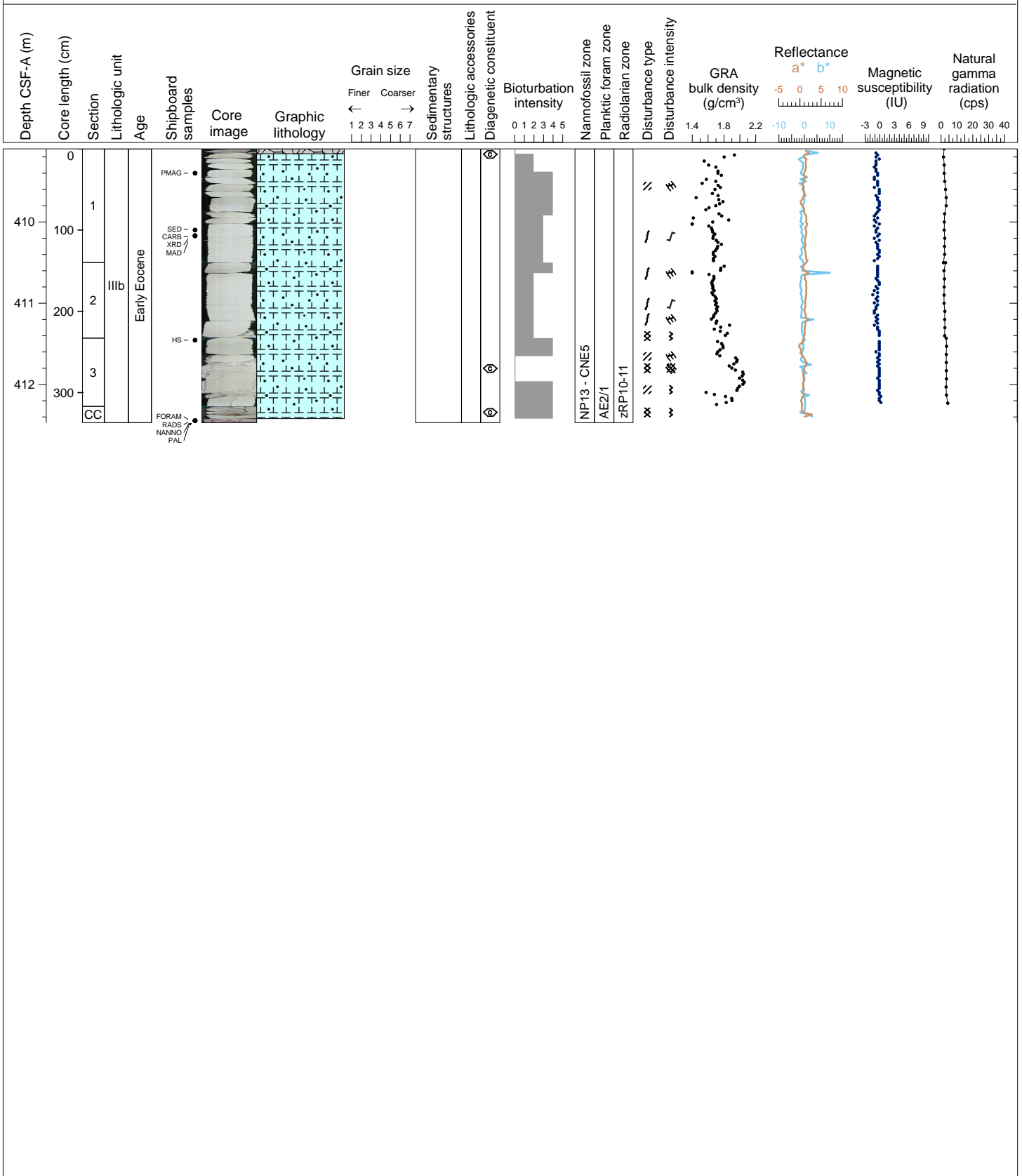
Core U1553C-25R is composed of white nannofossil chalk with foraminifers and three chert layers. This core is bright white (N 8.5 to N 9) with minor green (5GY 8/1) and gray layers that are disturbed by bioturbation that varies from slight to heavy. In Section 1 there is a large flint/chert layer at the top that varies in color from white to gray (10YR 5/1, N 8) with chalk inclusions. The chalk is severely brecciated around this concretion. The chert concretions in Sections 3 and the CC are white. Mica and few foraminifers were identified in smear slide analysis. Generally, the core shows slight to moderate cracks.





Hole 378-U1553C Core 26R, Interval 409.1-412.47 m (CSF-A)

Core U1553C-26R is composed of nannofossil chalk and chert concretions (top of Section 1, in Section 3 and CC). The core is bright white (N 8.5 to N 9) with some greenish-gray layers (5 GY 8/1) that are disturbed by bioturbation that varies from slight to heavy. Complex systems of burrows are present in some intervals. The chert concretions at the top of Section 1 and in Section 3 are white, and in Section CC is pale gray. The core is cracked, and in parts is severely fractured and brecciated.



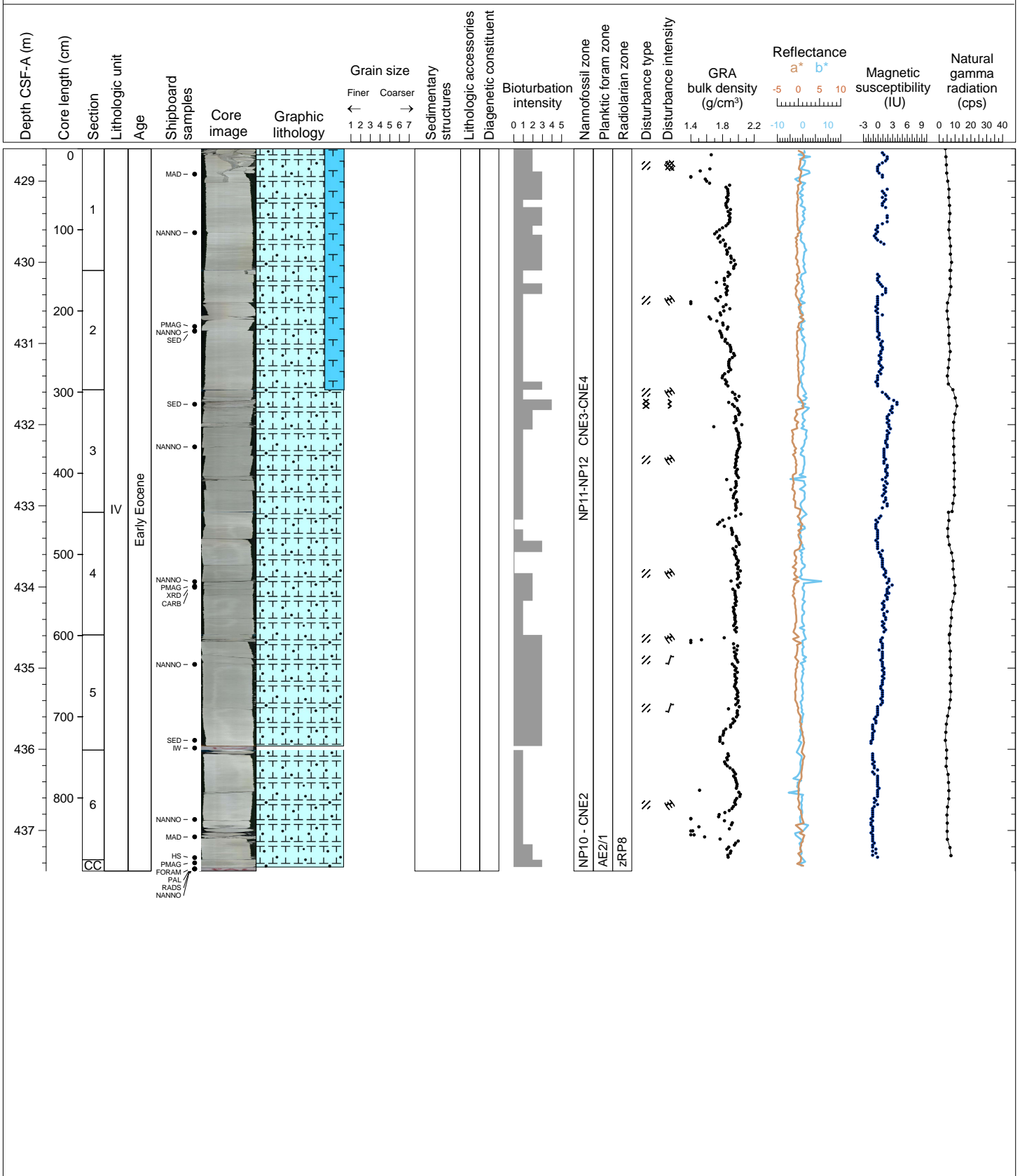
Hole 378-U1553C Core 27R, Interval 418.8-421.75 m (CSF-A)

Core U1553C-27R is composed of nannofossil chalk. Few foraminifers and micrite are observed in smear slides. A layer of dark yellowish brown (10YR 4/6) jasper (mixed with white chert) occurs at the top of Section 1, and a 6 cm thick interval with a light gray (10 YR 7/1) chert concretion occurs in Section 2. The chalk is variable in color, ranging from light greenish gray (5GY 8/1, 5GY 7/1, N 7) to white (N 8.5). A ~30 cm long mm-scale dark green layering characterizes part of Section 1 (46-75 cm; especially 59-61 cm). In Section 2 there is an interval (102-110 cm) that has mm-scale alternation between grey and white laminations. These intervals are enigmatic, as they have the appearance of ripples disrupting the bedding, similar in some characteristics to flaser bedding, or could possibly be due to incipient stylolite formation. The fabric of the core is disturbed by bioturbation that varies from very slight to heavy. Complex systems of burrows are present in some intervals. The core is moderately to severely fractured and brecciated in parts, especially around the chert in Sections 2 and CC.



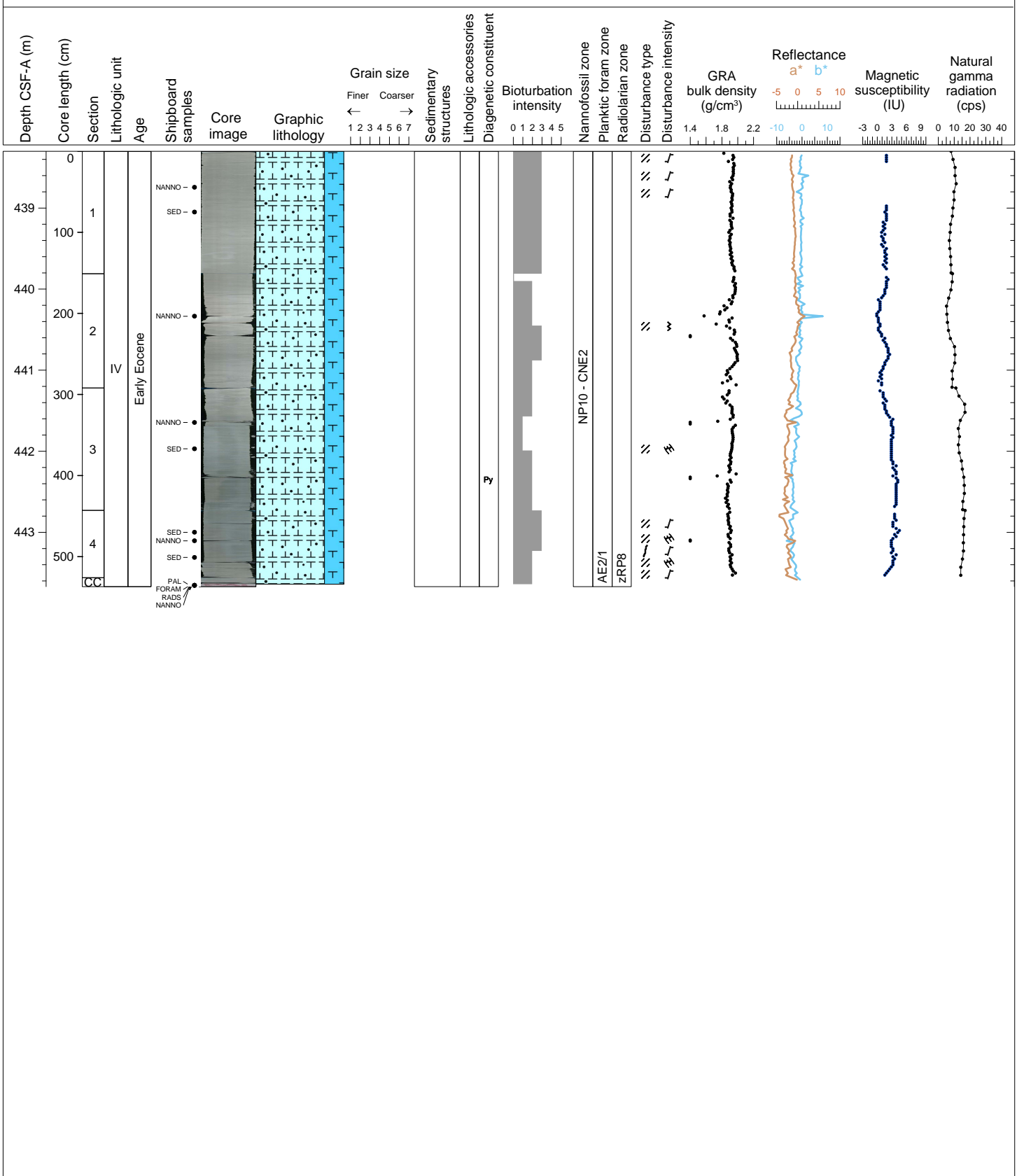
Hole 378-U1553C Core 28R, Interval 428.6-437.5 m (CSF-A)

Sections 1 and 2 are composed of nannofossil chalk with foraminifers, dominated by a light greenish gray (5GY 7/1 and 5GY 8/1) color. From Sections 3 through CC the lithology changes into a micrite-rich nannofossil chalk of the same color. Generally, this core is characterized by changing occurrence and type of bioturbation. A ~20 cm long interval in Section 3 stands out due to a light brownish gray color (10 YR 6/2) and heavy bioturbation (60 to 90 %). In Section 6 at 0-7 cm and 92-104 cm there are chert formations with an irregular to lobate contact with the surrounding sediment. The chert at 92 cm in Section 6 is further characterized by a green lens (glauconite) in its center. The core is slightly to severely fractured and brecciated in parts.



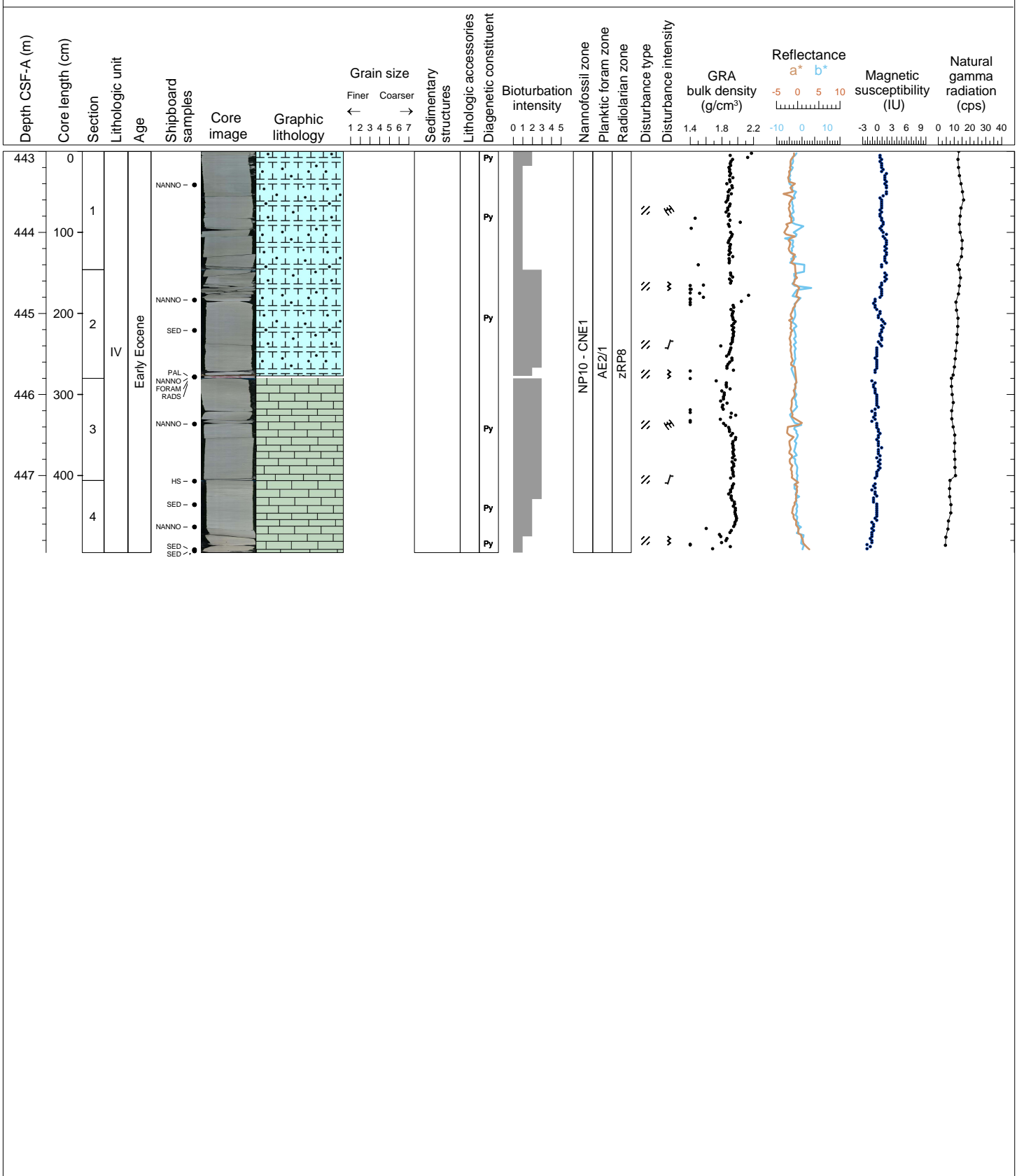
Hole 378-U1553C Core 29R, Interval 438.3-443.67 m (CSF-A)

Section 1, 0 cm to Section 3, 77 cm is composed of a light greenish gray (5GY 7/1, 8/1; 10GY 7/1) nannofossil chalk with foraminifers. From Section 3, 77 cm to Section 4, 50 cm, there is a greenish gray nannofossil chalk with micrite, below which the lithology changes back into a nannofossil chalk with foraminifers and micrite of light greenish gray color (5G 7/1). The lower half of Section 4 through CC is characterized by a persistent shimmer of small fine pyrite minerals. The filling of some burrows is a fine sand-sized material of white color appearing from Section 3, 77cm through Section 4, 83 cm.



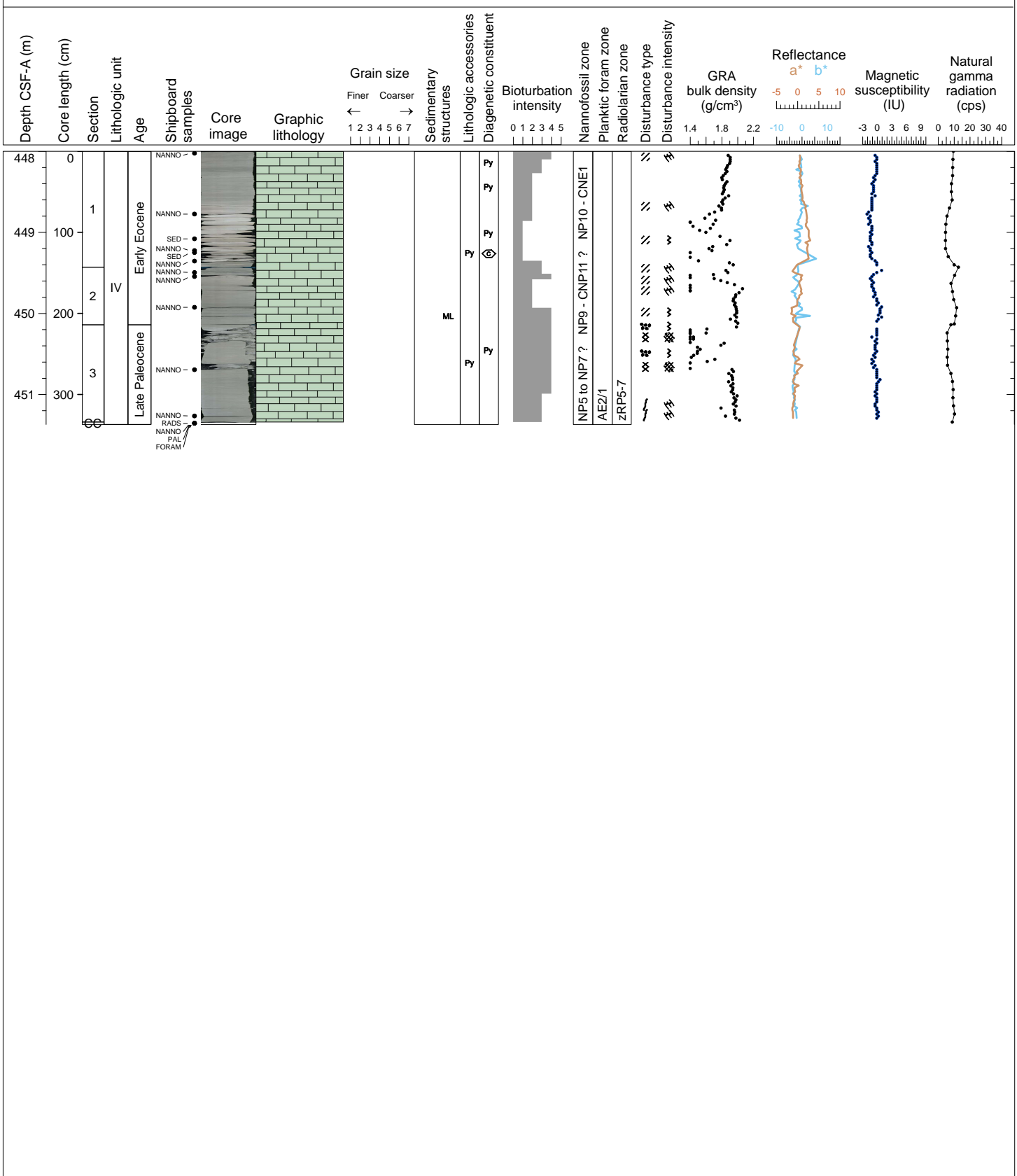
Hole 378-U1553C Core 30R, Interval 443.0-447.95 m (CSF-A)

Section 3 contains the transition from nannofossil chalk to limestone. This transition was determined by the need to use a metal tool to collect a smear slide sample. The sediments are a light greenish gray color (10GY 7/1 to 5GY 8/1) with mottled bioturbation visible throughout. Bioturbated sections often appear to show a slightly dipping geometry. Increasingly hardened sediments contain grains of crystalline pyrite. Smear slide analysis from the nannofossil chalk shows feldspar, micrite and dolomite, as well as foraminifers. In smear slides of the limestone sections, pyrite and micrite are present to common in abundance.



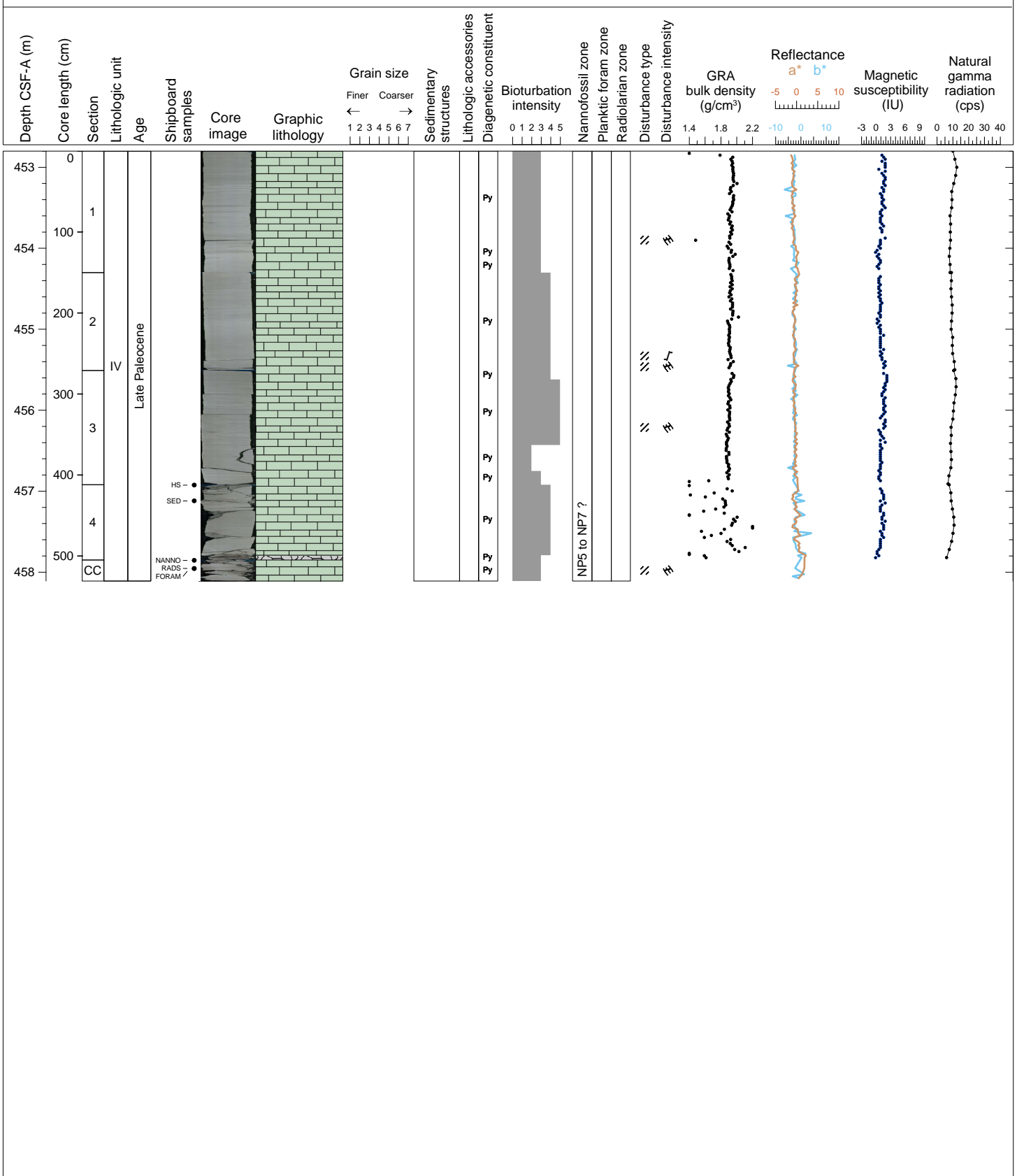
Hole 378-U1553C Core 31R, Interval 448.0-451.37 m (CSF-A)

Core U1553C-31R is limestone primarily composed of nannofossils. Pyrite is observable at the macroscopic level but not seen in smear slides. Sections grade from bioturbated, greenish gray intervals (10GY 6/1) to whiter, less bioturbated intervals (N 8.5). In Section 1, a transition from bioturbated to a non-bioturbated, whiter interval is preliminarily interpreted as the Paleocene-Eocene boundary. The limestone is characterized by a porosity on the cut core surface. Core U1553C-31R is moderately to highly fractured and severely brecciated in Sections 2 and 3.



Hole 378-U1553C Core 32R, Interval 452.8-458.11 m (CSF-A)

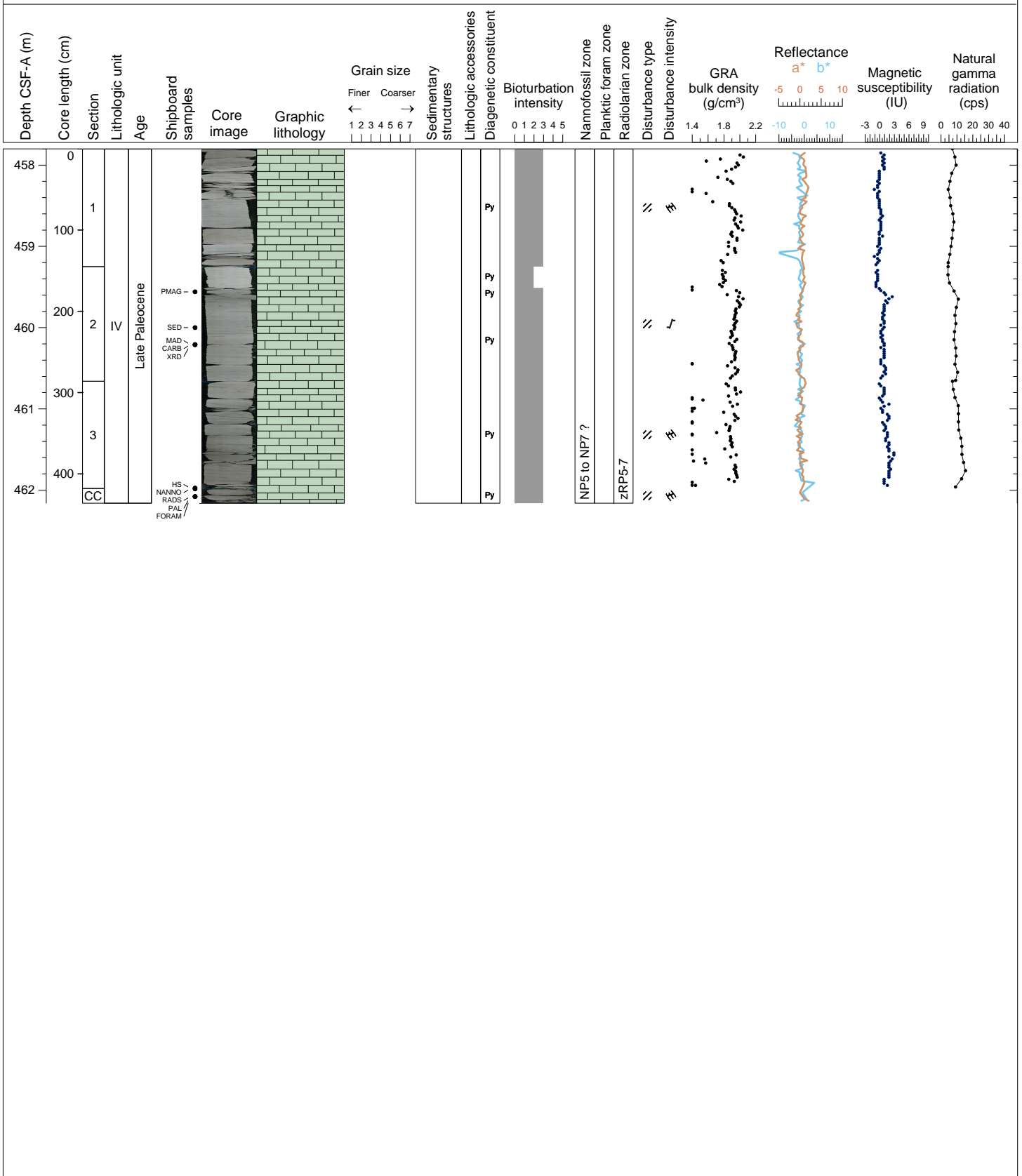
Core U1553C-32R is limestone primarily composed of nannofossils, with few foraminifers. Pyrite nodules are observable but not seen in smear slides. Sections are typically bioturbated and light greenish-gray in color (5G 7/1; 10GY 7/1) with darker burrows. A white (N 8) chert layer is visible in Section 4. In Section 4, slickensides are visible in fracture surfaces, which are also mineralized. Core U1553C-32R is slightly to moderately fractured.





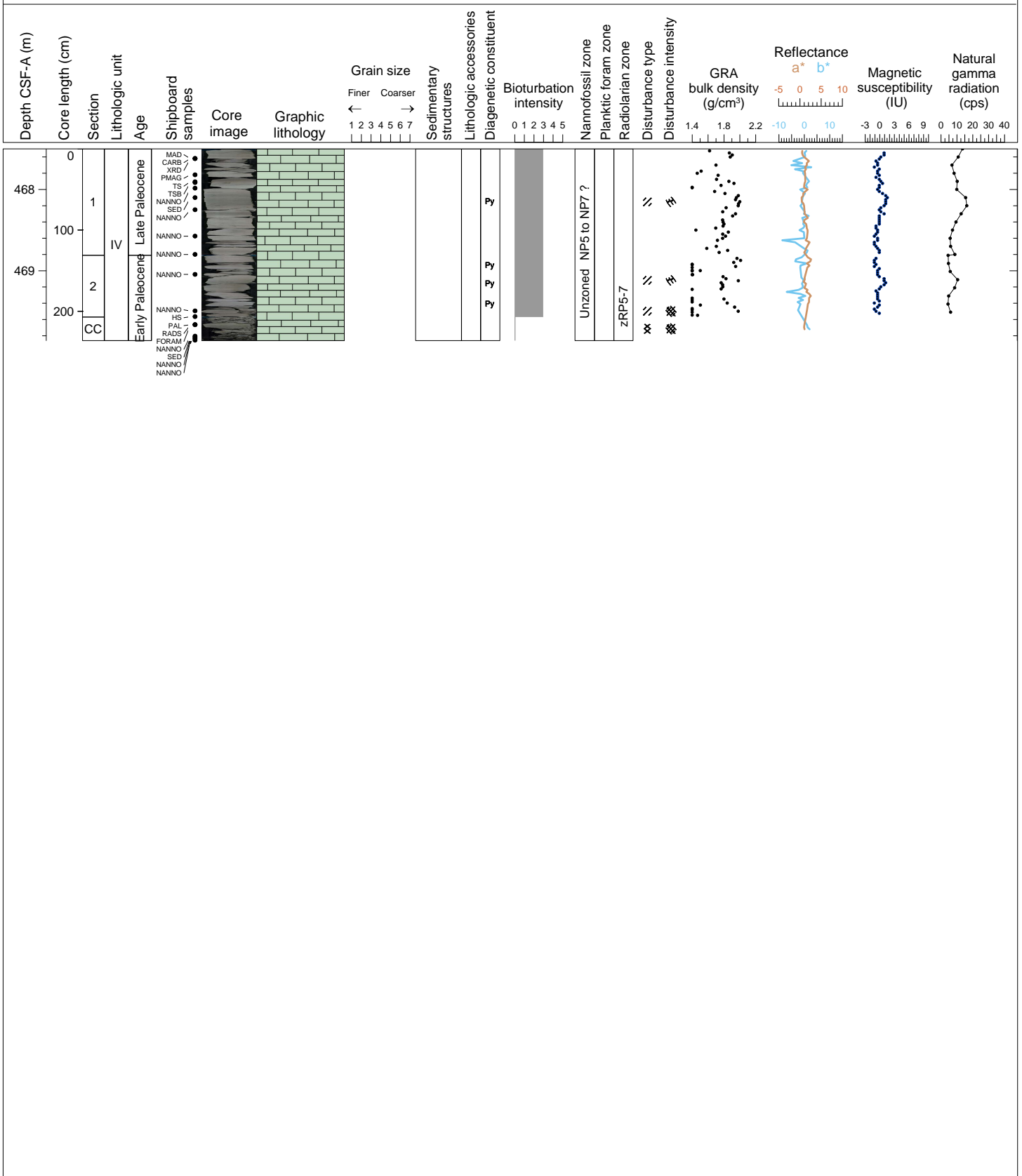
Hole 378-U1553C Core 33R, Interval 457.8-462.16 m (CSF-A)

Core U1553C-33R is limestone primarily composed of nannofossils, with few foraminifers. Pyrite nodules are observable macroscopically and seen in smear slides. Sections are typically bioturbated and greenish-gray in color (10GY 6/1 to 8/1) with darker burrows. Bioturbation structures range from large horizontal burrow networks to small likely chondrites trace fossils. Core U1553C-33R is slightly to moderately fractured.



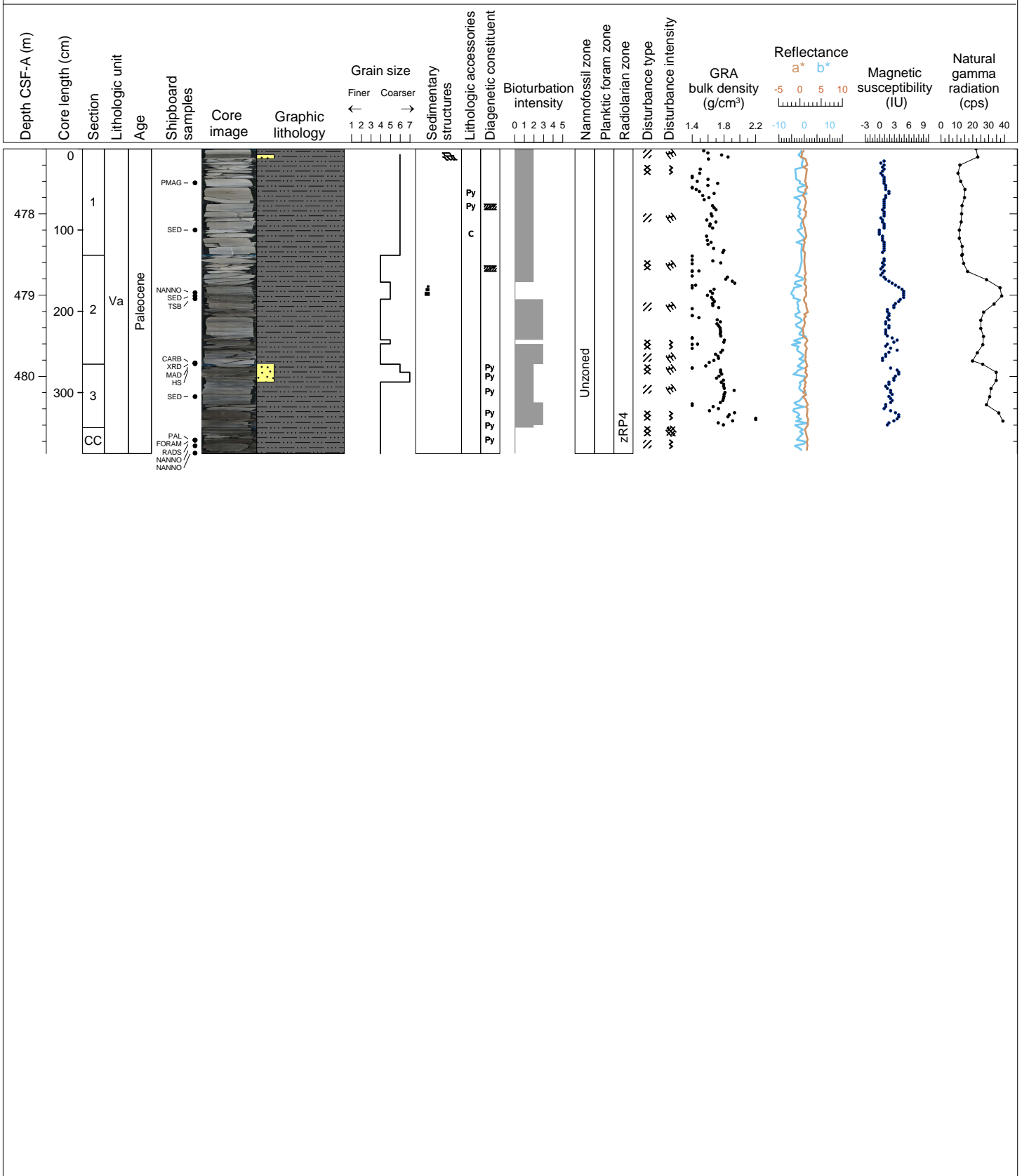
Hole 378-U1553C Core 34R, Interval 467.5-469.86 m (CSF-A)

Core U1553C-34R is limestone primarily composed of nannofossils, with few foraminifers. Pyrite nodules are observable at the macroscopic level and seen in smear slides in Section CC. Quartz, mica and micrite are present in smear slide analysis of the limestone facies. The core is typically bioturbated and greenish-gray in color (10GY 6/1 to 7/1) with darker burrows. These darker sections grade in between lighter ones (N 7). In Section CC, a gradual transition to mudstone is apparent.



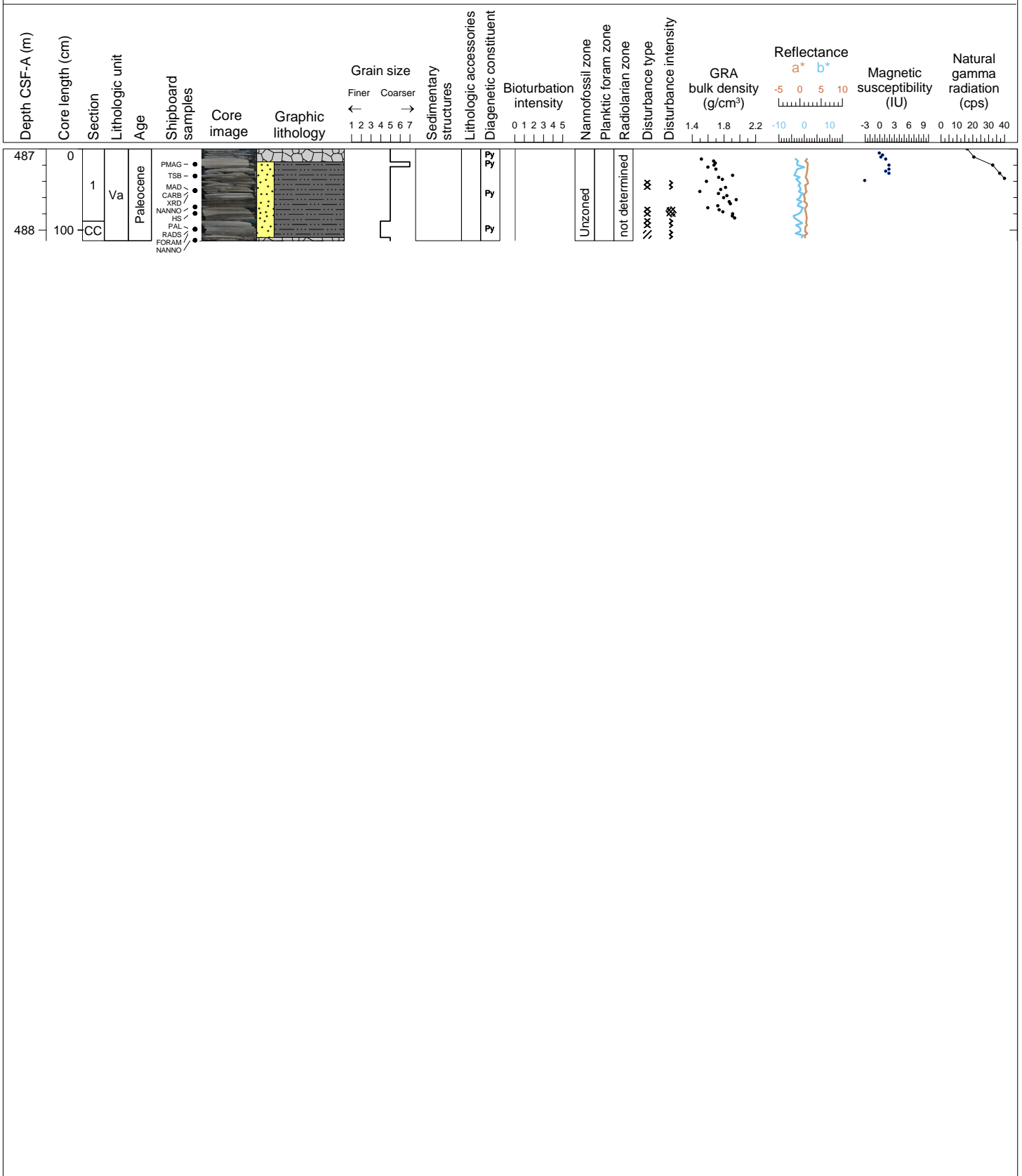
Hole 378-U1553C Core 35R, Interval 477.2-480.95 m (CSF-A)

Core U1553C-35R is composed of gray mudstone (Sections 1) with short interval of sandstone (Section 1, 7-12 cm) and very fine grained sandstone (Sections 2 through CC) with one coarse sand interval. The color of this core is very dark gray/dark gray (N 3) to gray/medium light gray (N 6). Smear slides show clay-sized particles, likely organic fragments, micrite, clay minerals, and angular lithic grains. Pyrite veins and blebs are visible throughout. Fine to medium sand layers occur throughout the mudstone (e.g. Section 1, 7-12 cm, which in this case shows normal grading). Veins interpreted to be carbonate are also visible in Sections 1 and 2. Large benthic foraminifera (0.3-2 mm) can be seen under hand lens.



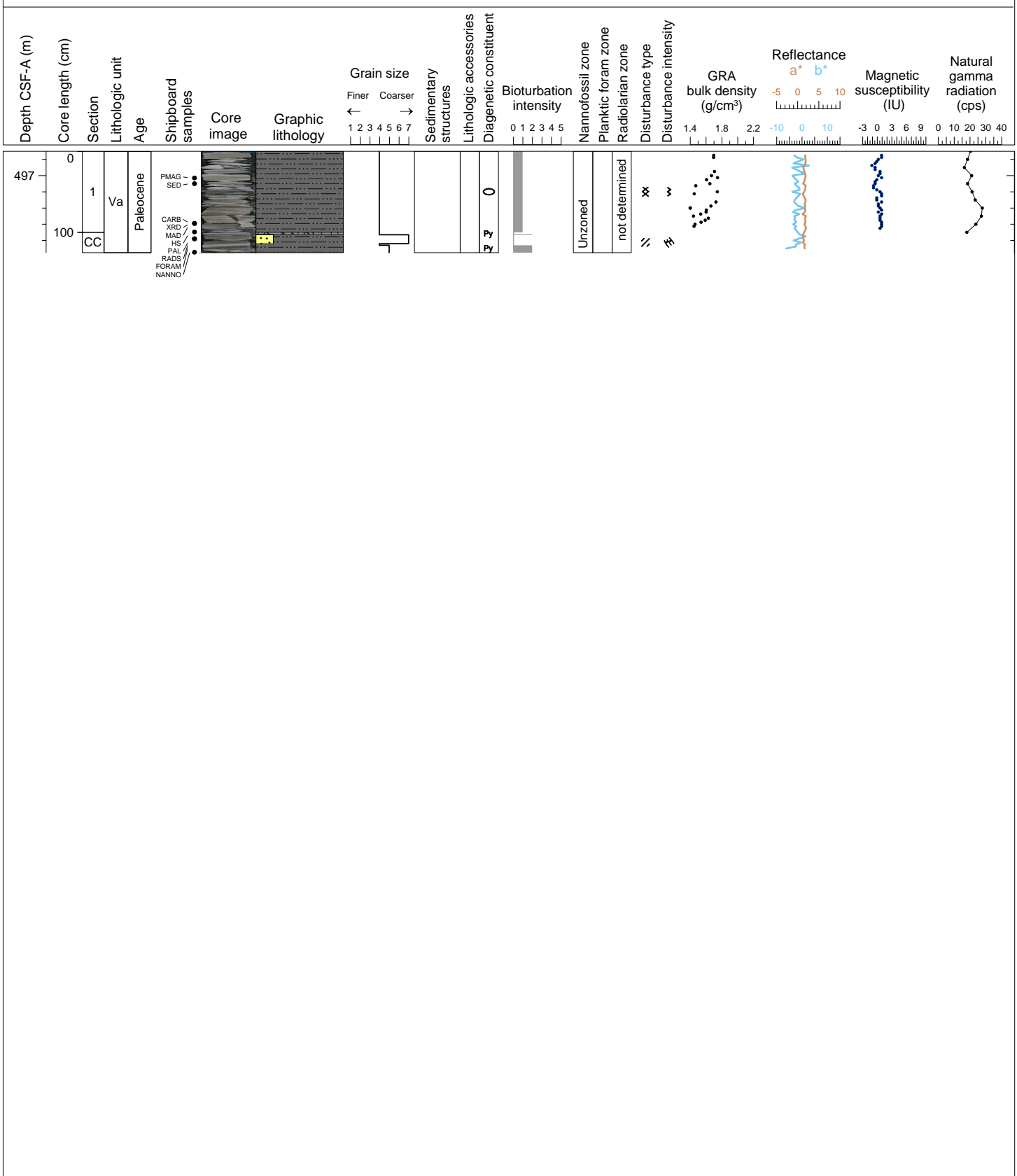
Hole 378-U1553C Core 36R, Interval 487.0-488.13 m (CSF-A)

Core U1553C-36R is composed of dark to medium gray sandstone that has been partly converted to chert. The color of this core is dark gray (N 4 to 5PB 4/1). Smear slides show clay-sized particles, likely organic fragments, micrite, clay minerals, and angular lithic grains. Pyrite veins and blebs are visible throughout. Grain size ranges from fine to coarse sand. Large benthic foraminifers (0.3-2 mm) can be seen under hand lens in Section 1.



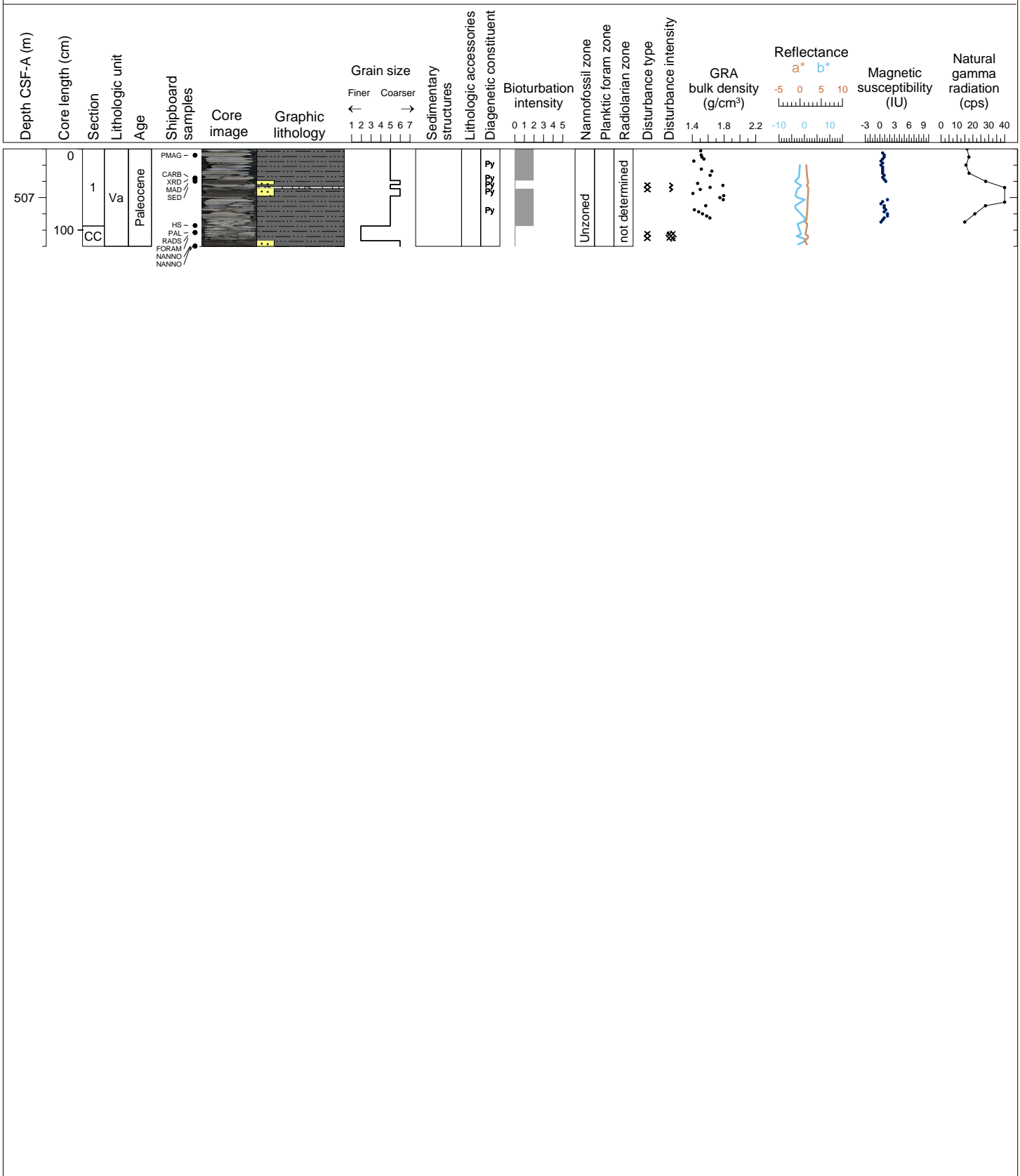
Hole 378-U1553C Core 37R, Interval 496.7-497.95 m (CSF-A)

Core U1553C-37R is composed of sandstone that has been partly converted to chert. The color of this core ranges from dark gray to medium dark gray (N 4) to light gray (2.5Y 7/1). Smear slides show clay-sized particles, likely organic fragments, micrite, and clay minerals, and angular lithic grains. Pyrite veins and blebs are visible throughout. Grain size ranges from fine silt to fine sand. Large benthic foraminifers (0.3-2 mm) can be seen under hand lens.



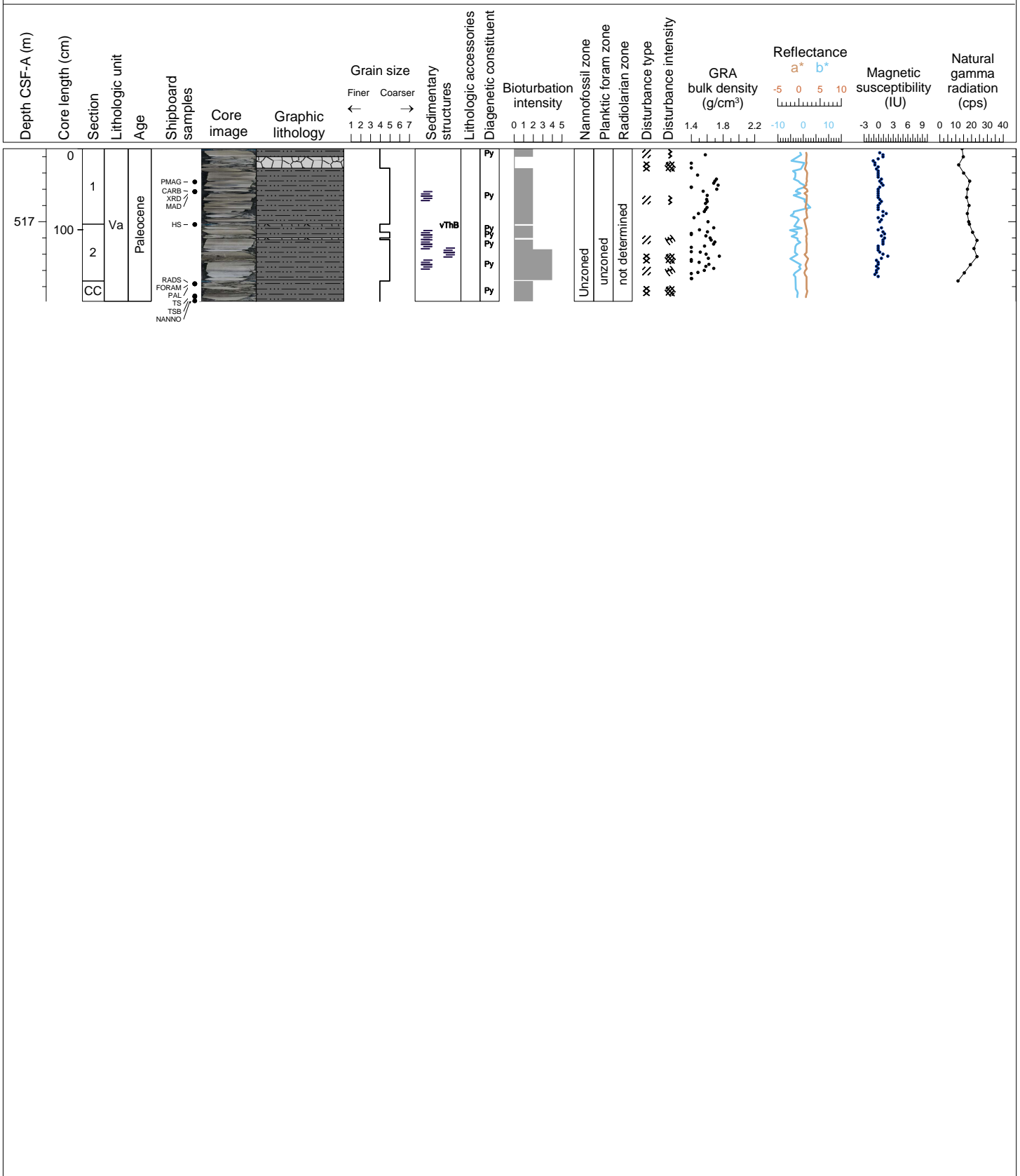
Hole 378-U1553C Core 38R, Interval 506.4-507.6 m (CSF-A)

Core U1553C-38R is composed of sandstone with interbedded chert. The major color of this core is black (N 2.5) to gray (5Y 5/1). Smear slides show clay-sized particles, likely organic fragments, micrite, clay minerals, and angular lithic grains. Pyrite veins and blebs are visible throughout. Grain size ranges from fine silt to very fine sand. Large benthic foraminifers (0.3-2 mm) can be seen under hand lens. This core has pervasive fractures from coring disturbance.



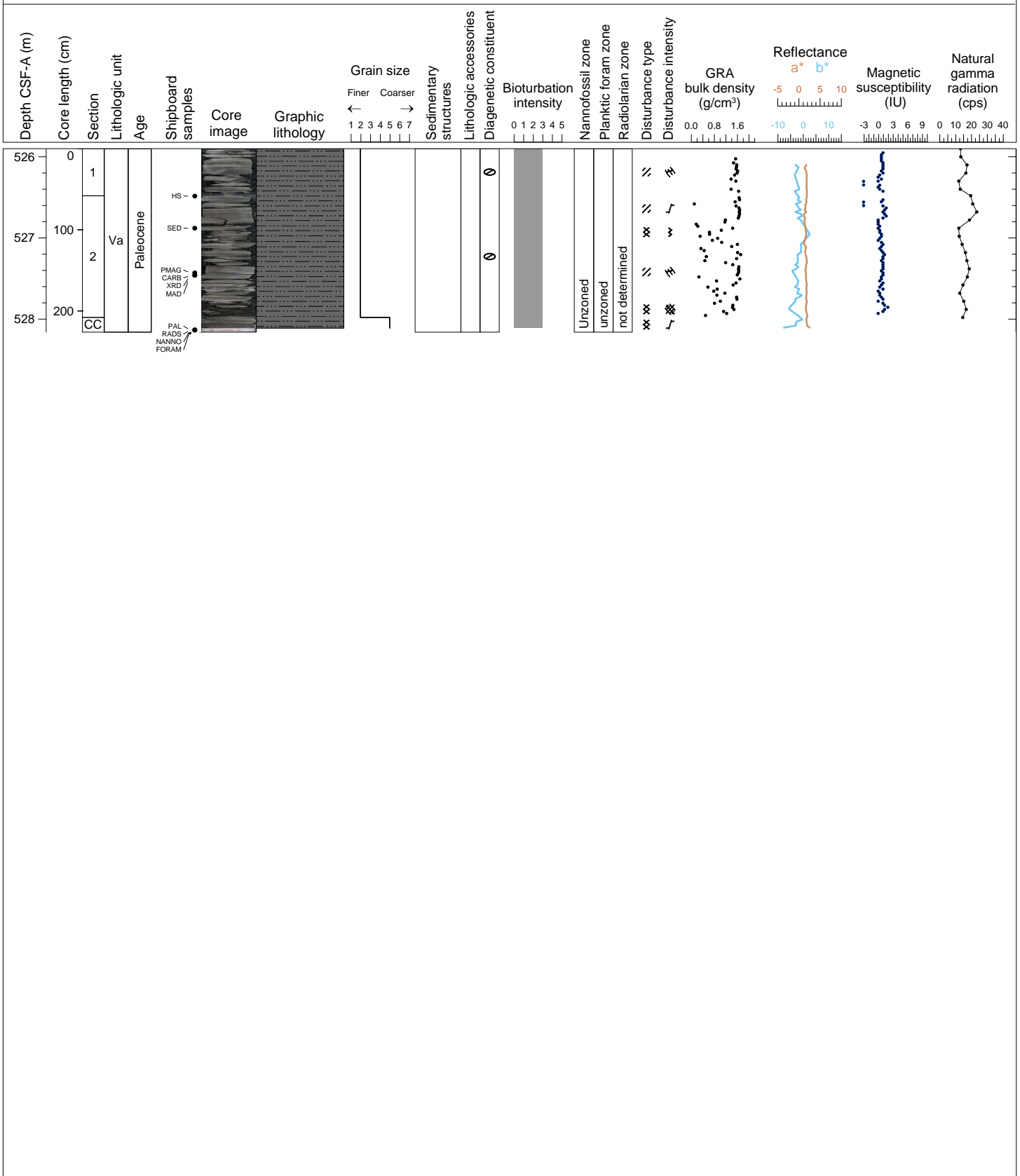
Hole 378-U1553C Core 39R, Interval 516.1-517.98 m (CSF-A)

Core U1553C-39R is composed of very fine to fine grained sandstone that is partially converted to chert. The color of this unit is medium gray (N 5 to N 6). Smear slides show clay-sized particles, likely organic fragments, micrite, clay minerals, and angular lithic grains. Pyrite veins and blebs are visible throughout. Grain size is characterized as fine silt. Large benthic foraminifers (0.3-2 mm) can be seen under hand lens. This core has pervasive fractures from coring disturbance.



Hole 378-U1553C Core 40R, Interval 525.9-528.16 m (CSF-A)

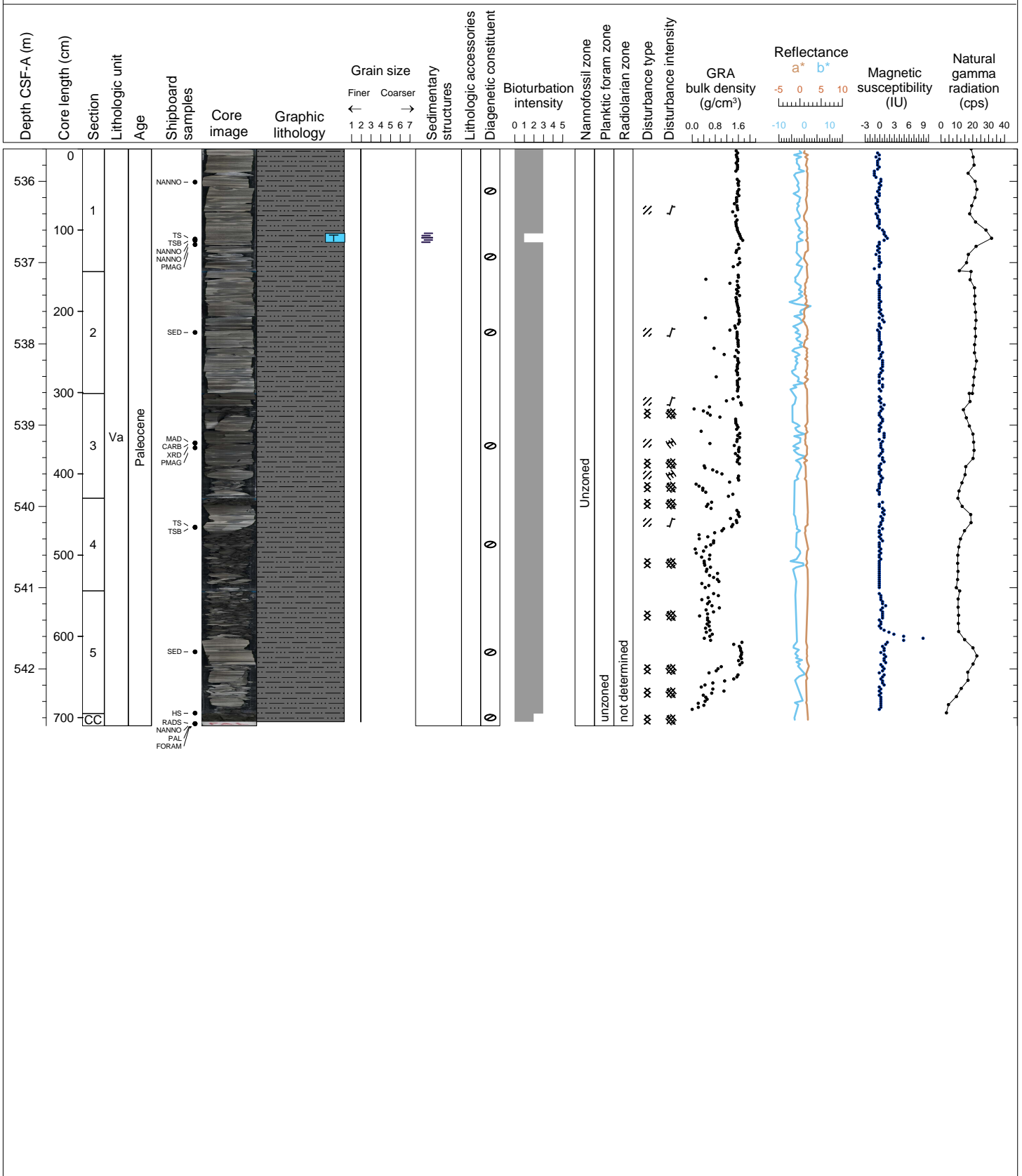
Core U1553C-40R is composed of gray (N 5) mudstone. Smear slides show clay-sized particles, likely organic fragments, micrite, clay minerals, and angular lithic grains. Pyrite veins and blebs are visible throughout. Grain size is characterized as fine silt. Large benthic foraminifers (0.3-2 mm) can be seen under hand lens. Calcite filled pores are visible in Section CC. This core has pervasive fractures from coring disturbance.





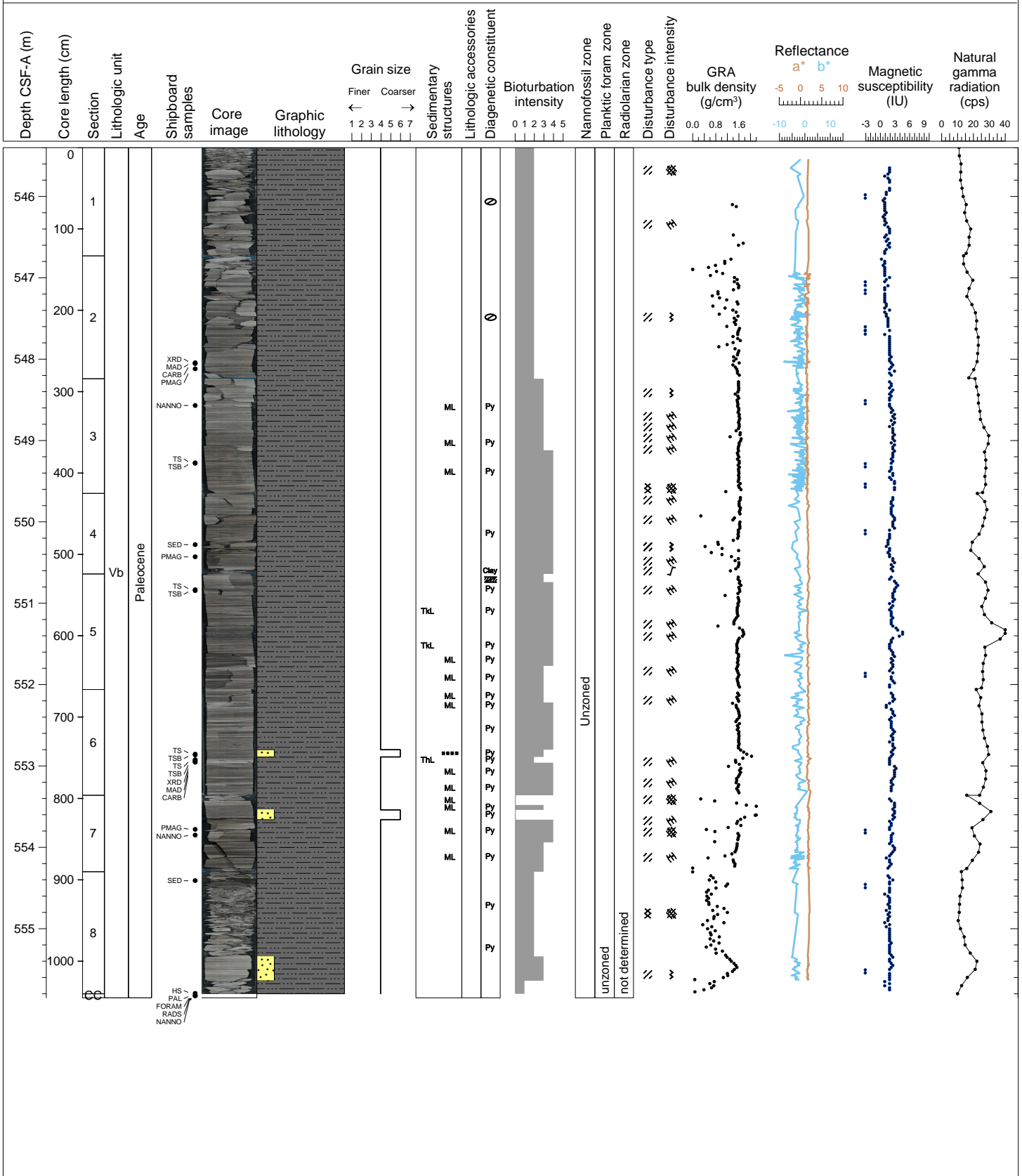
Hole 378-U1553C Core 41R, Interval 535.6-542.7 m (CSF-A)

Core U1553C-41R is composed of mudstone that is color banded, with various tones of gray (N 3 to N 5) and black (5Y 2.5/1). The fabric of the core has been modified by moderate bioturbation in most parts. Smear slides show clay-sized particles, likely organic fragments, micrite, clay minerals, and angular lithic grains. Pyrite veins and blebs are visible throughout. Grain size is characterized as fine silt. Large benthic foraminifers (0.3-2 mm) can be seen under hand lens, and sometimes concentrate in small lenses. In Section 1, mm-scale laminations are composed of foraminifers. Diagenetic halos are visible throughout. Multiple sections are severely brecciated.



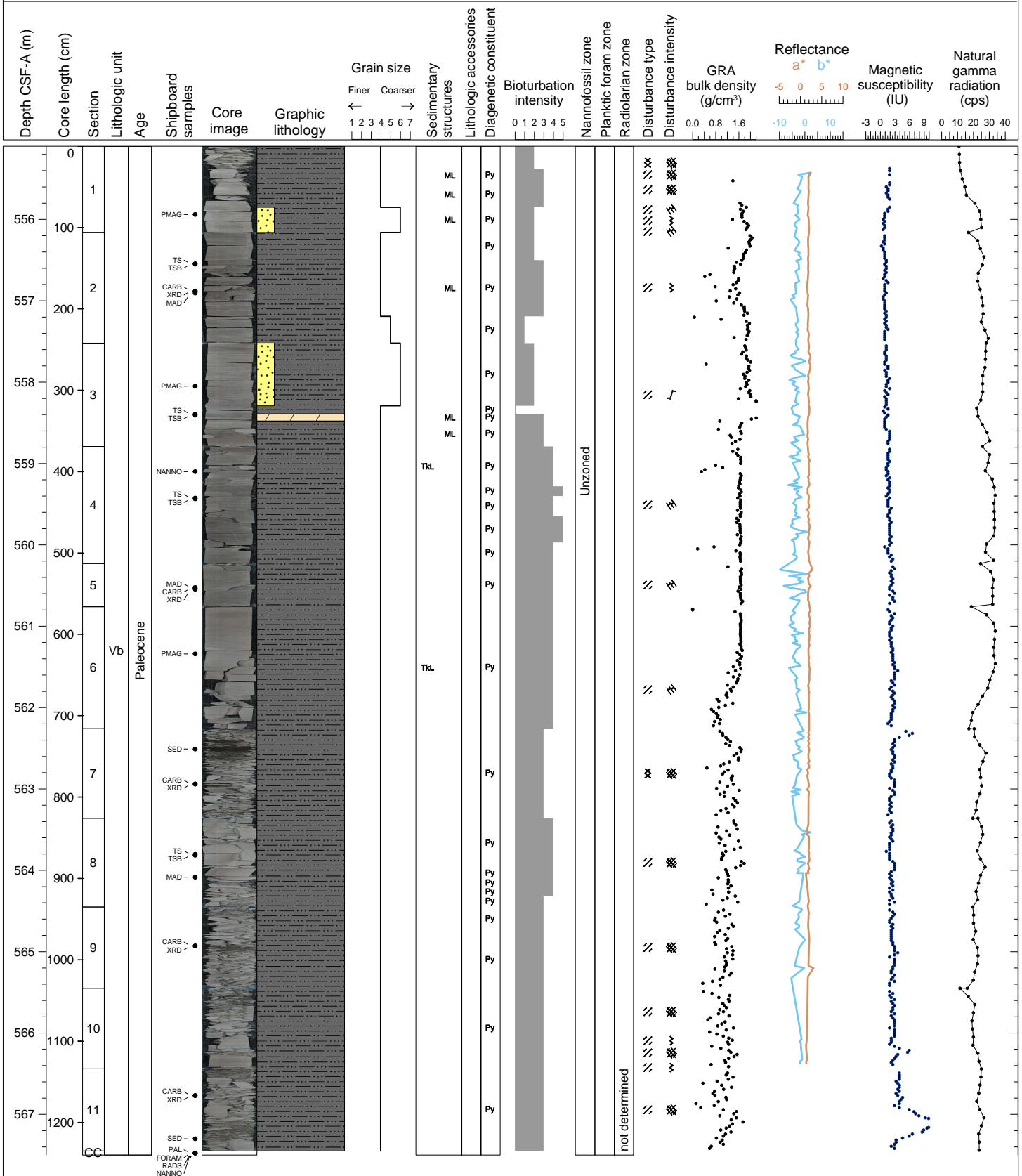
Hole 378-U1553C Core 42R, Interval 545.4-555.85 m (CSF-A)

Core U1553C-42R is composed of very fine sandstone with some mudstone intervals, and medium grained sandstones in Sections 6 and 7. The color of this core is variable, from light gray (N 7) to dark gray/medium dark gray (N 4). There is significant small-scale variation of color, for example between laminations, where the bedding is disrupted by trace fossils, and with grain size. There is a 6 cm thick, well sorted sandy interval in Section 6 at about 80 cm, and another at about 23 cm in Section 7 (11 cm thick). Smear slides show abundant quartz, clay minerals, and organic matter, and the presence of feldspar, pyrite and glauconite. Pyrite is disseminated throughout the core as <100 micron particles, and in occasional veins and blebs. Small lenses and veins are filled with an unidentified white mineral. Diagenetic halos are visible throughout the core. Bioturbation varies from absent to heavy. The core generally has a fabric that is extensively modified by bioturbation, with a wide range of ichnofossils, including possible *Phycosiphon* and *Teichichnus* (*Cruziana* ichnofacies). Some intervals have severe brecciation and fracturing.



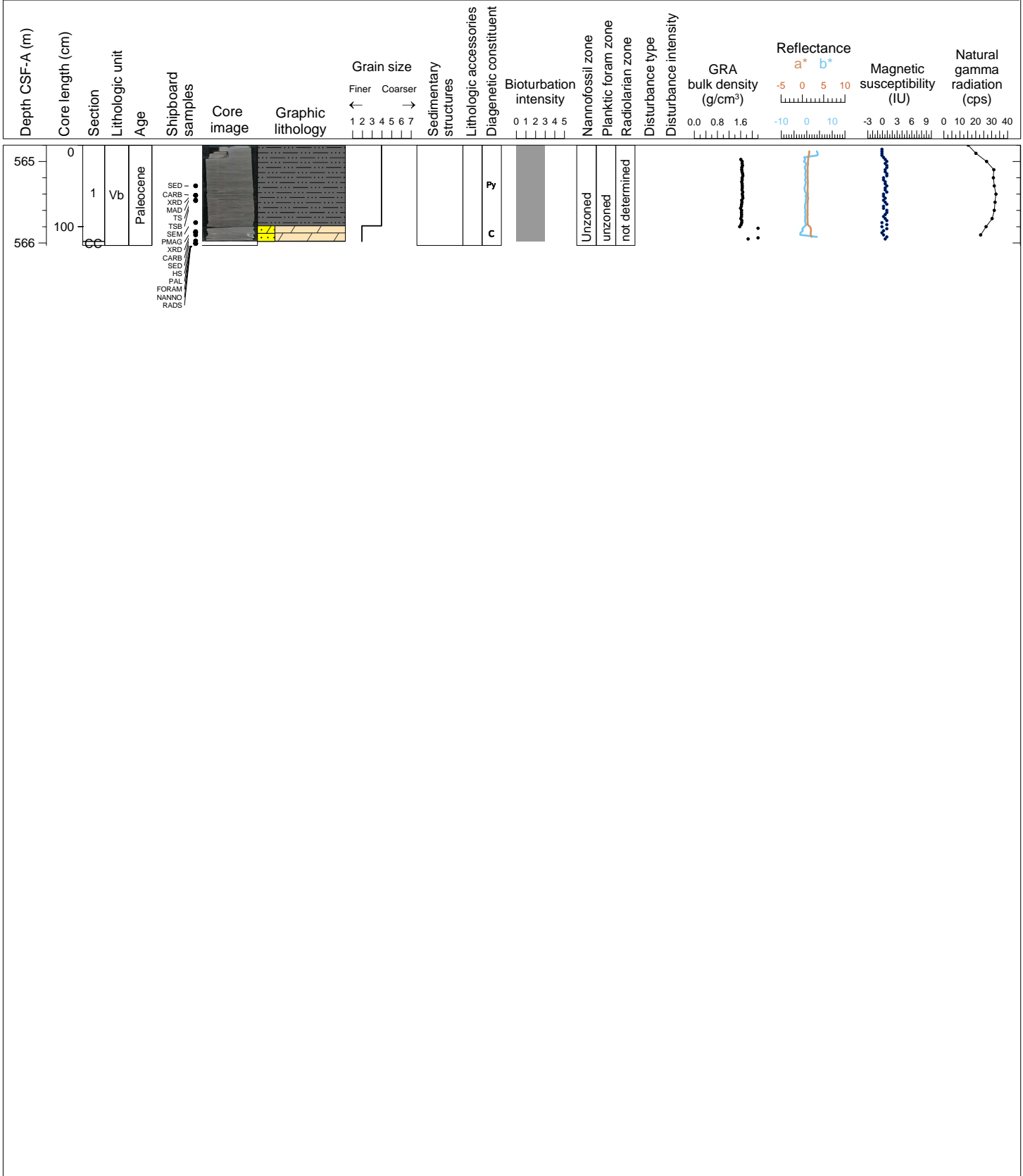
Hole 378-U1553C Core 43R, Interval 555.1-567.5 m (CSF-A)

Core U1553C-43R is unusually long (11 sections), due to the core being drilled without a liner and recovered material then curated into split liners on the catwalk. The core is composed of very fine sandstone and medium grained sandstones in Sections 1 and 3. The color of this core is variable, from gray/medium light gray (N 6) to very dark gray/dark gray (N 3). There is significant small-scale variation of color, for example between laminations, where the bedding is disrupted by trace fossils, and with grain size. Grain size varies from silt to medium sand. There is some correlation between the darker lithologies being finer, but in addition some of the sandstone intervals are a dark gray (e.g. most of Section 3). Smear slides show quartz, clay minerals, and organic matter, and the presence of feldspar, pyrite and glauconite, and fish remains in Section 7. Pyrite is disseminated throughout the core as <100 micron particles, and in occasional veins and blebs. Small lenses and veins are filled with an unidentified white mineral. Diagenetic halos are visible throughout the core. Bioturbation varies from absent to moderate. There is a wide range of ichnofossils, including possible *Phycosiphon* and *Teichichnus* (*Cruziana* ichnofacies) in Section 1. A single foram (*Bathysiphon*) was observed in Section 9 at 82.5 cm. Some intervals have severe brecciation and fracturing, especially in Sections 7 through 11.



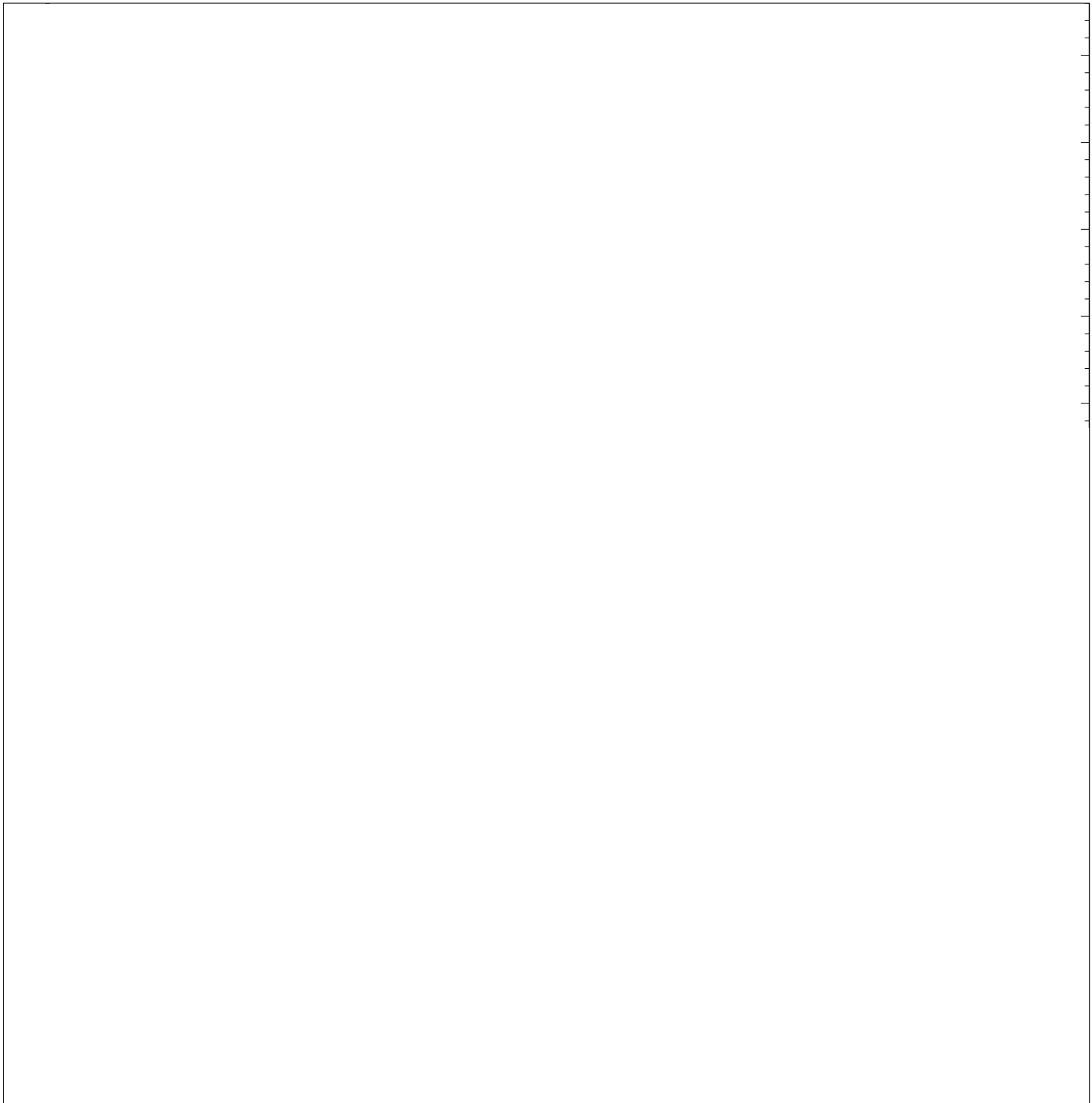
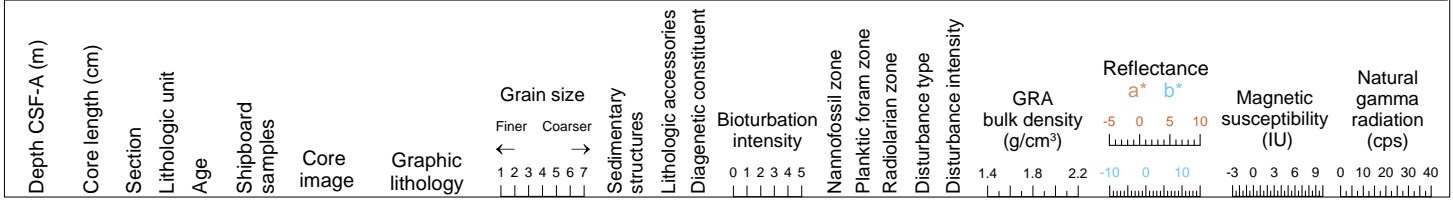
Hole 378-U1553C Core 44R, Interval 564.8-566.03 m (CSF-A)

Section 1 of Core U1553C-44R contains very fine sandstone (0-99 cm) that is gray/medium gray (N 5), and a paler calcareous dolomite (N 6; gray/medium light gray) from 99-118 cm. Grain size of the sandstone is uniform. A smear slide of the sandstone shows abundant quartz, clay minerals, and organic matter, and the presence of feldspar, mica, pyrite, and fish remains. The organic matter is colored yellow to pale brown. Trace fossils occur through both parts of the core. Pyrite occurs in veins and blebs. Diagenetic halos are visible throughout the core. Bioturbation is moderate. The limestone is slightly paler color than the sandstone above, and has a crystalline carbonate vein running through the bottom part (107-112 cm). This vein has an unidentified pale green mineral on its surface. There are vesicles and blebs filled with a white mineral and a very pale green mineral (105-108 cm). The limestone effervesces in dilute HCl acid. A smear slide confirms the presence of carbonate, but does not rule out the possibility that this limestone contains a significant amount of clay.



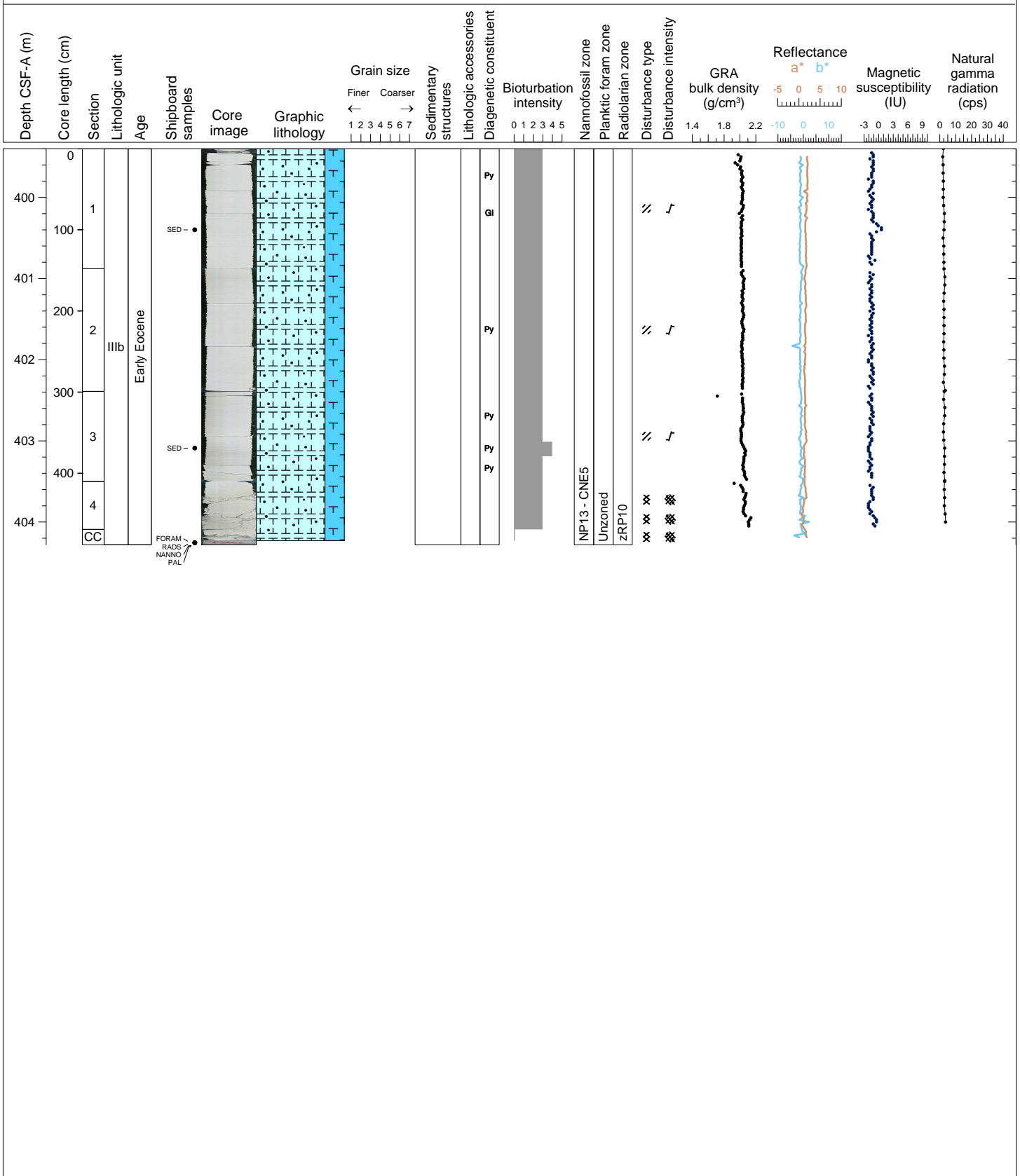
Hole 378-U1553D Core 11, Interval 0.0-0.0 m (CSF-A)

DRILLED INTERVAL



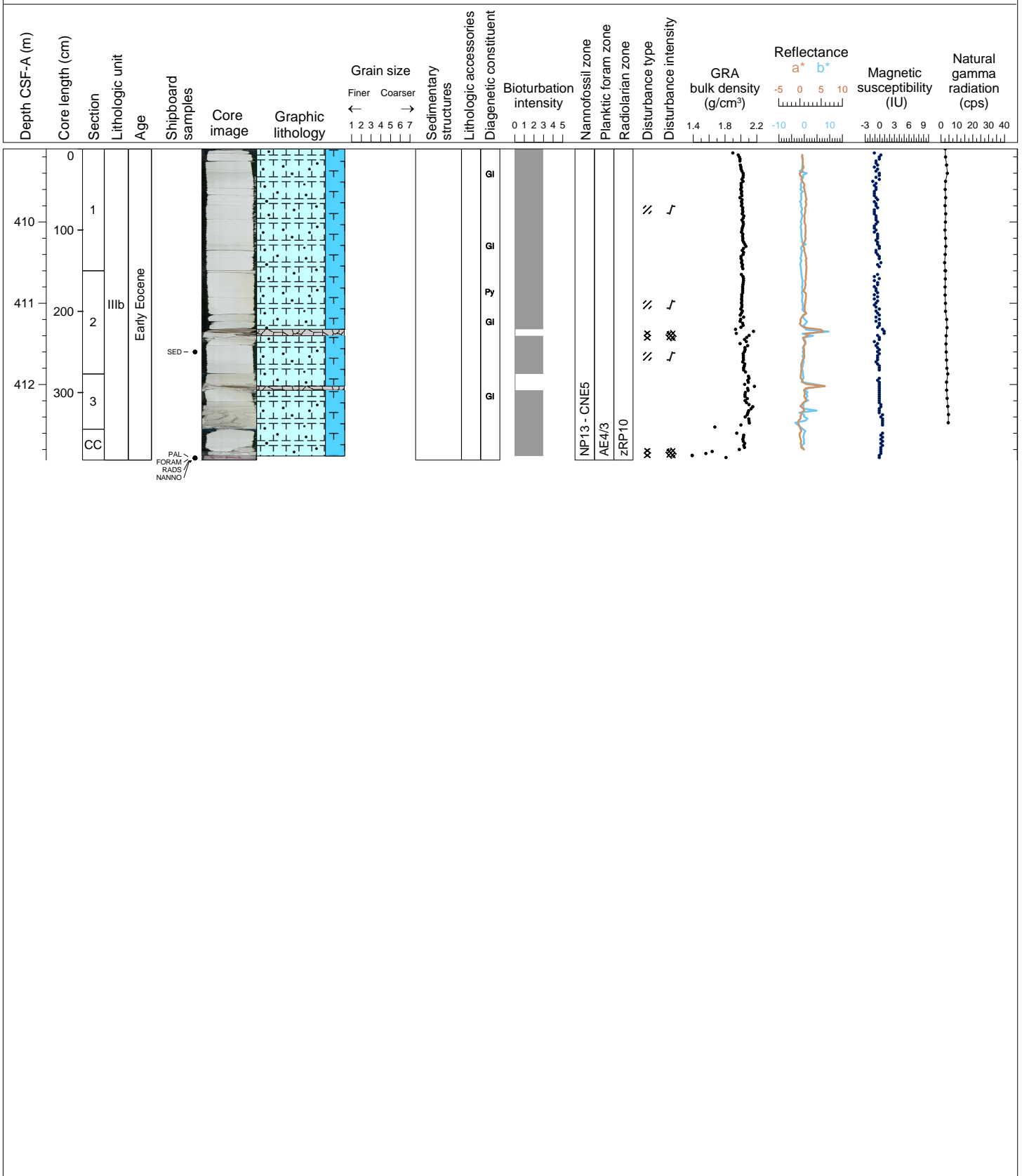
Hole 378-U1553D Core 2R, Interval 399.4-404.28 m (CSF-A)

Core U1553D-2R is composed of nannofossil chalk with foraminifers. The sediments are moderately to heavily bioturbated and white in color (N 8, N 9). One interval of mottled green texture with white oval patches is visible (Section 1, 68-90cm). Very small specks of pyrite are visible, with some larger sections associated with burrow structures. Quartz, fish remains, calcareous bioclasts, and micrite were observed in smear slides. This core is fairly homogeneously bioturbated. A chert layer is observed in Section 4.



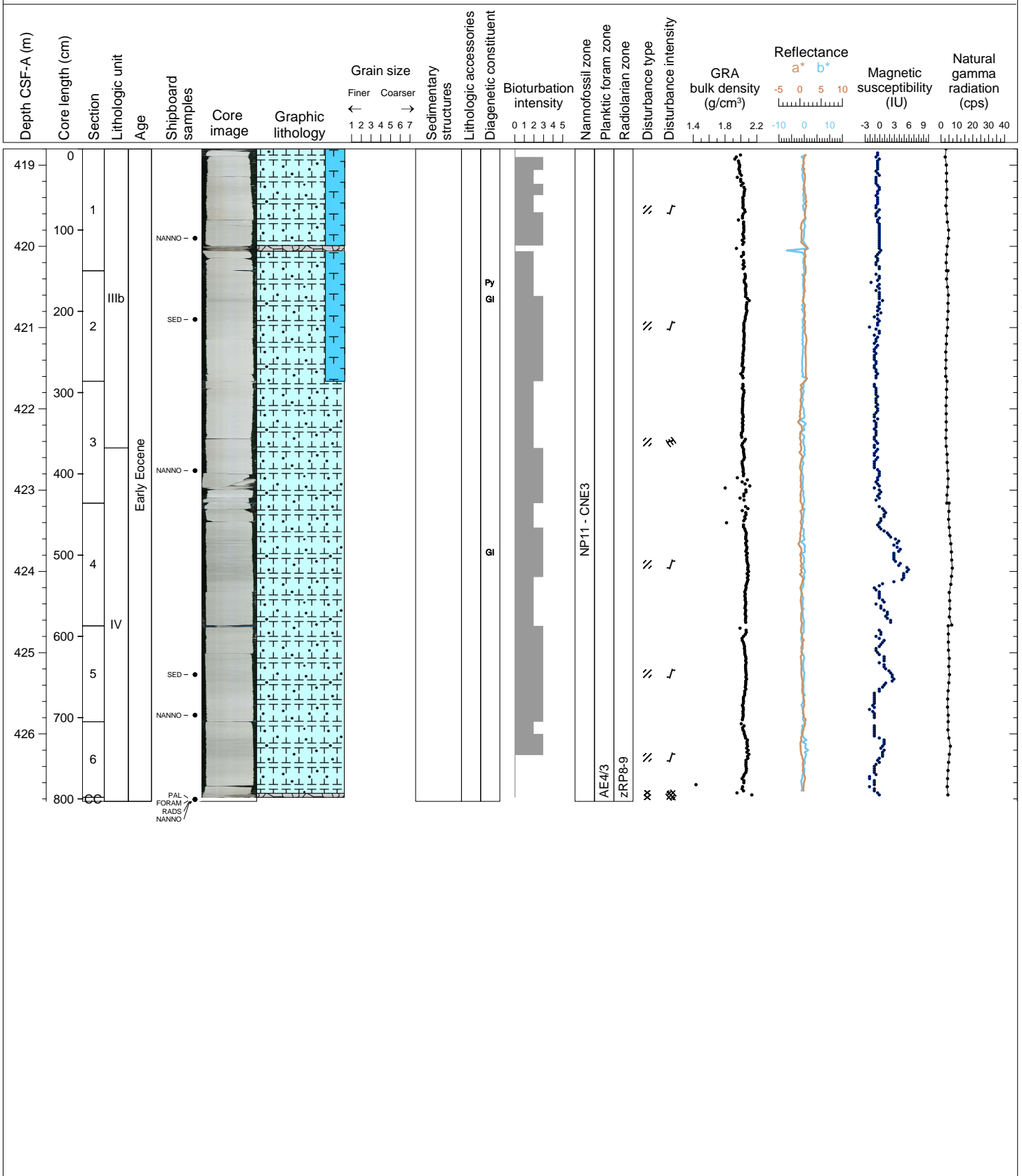
Hole 378-U1553D Core 3R, Interval 409.1-412.93 m (CSF-A)

Core U1553D-3R is composed of nannofossil chalk with foraminifers. The sediments alternate between diffuse greener layers (5GY 6/1, 5GY 8/1, and 10GY 8/1) and whiter ones (N 8, N 9; on the order of 10s of centimeters). The contacts between these layers are bioturbated, with obvious white burrows in green matrix and vice versa. Trace fossils of *Teichichnus* are observed in Sections 1 and 2. There are also intervals of mottled green texture with white oval patches that have sub-mm scale green undulating layers, possibly composed of glauconite (Sections 1 and 3). Very small specks of pyrite are visible, with some larger sections associated with burrow structures. Ferromagnesian minerals and siliceous sponge spicules were observed in smear slides. There are chert layers in Sections 2 and 3.



Hole 378-U1553D Core 4R, Interval 418.8-426.83 m (CSF-A)

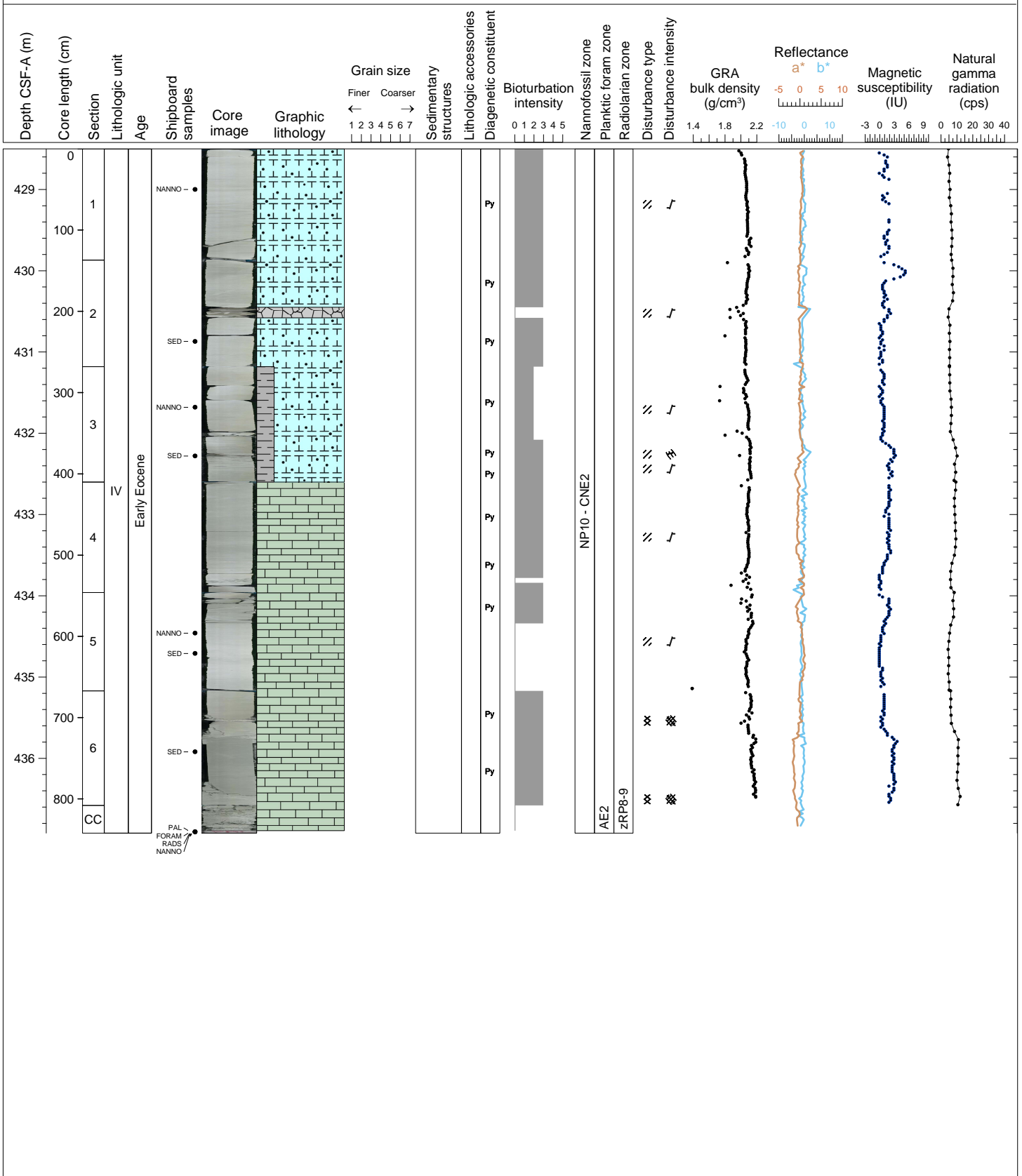
Core U1553D-4R is composed of nannofossil chalk, with foraminifers in Sections 1 and 2. The sediments alternate between diffuse greener layers (10Y 7/1-8/1 and 5GY 7/1-8/1) and whiter ones (N 8; on the order of 10s of centimeters). The contacts between these layers are bioturbated, with obvious white burrows in green matrix and vice versa. Trace fossils of *Teichichnus* are observed in Sections 2 and 3. There are also intervals of mottled green texture with white oval patches that have sub-mm scale green undulating layers, possibly composed of glauconite throughout the core. Very small specks of pyrite are visible, with some larger sections associated with burrow structures. Feldspar, calcareous sponge spicules, and fish remains were observed in smear slides. There are chert layers in Sections 1 and 6.





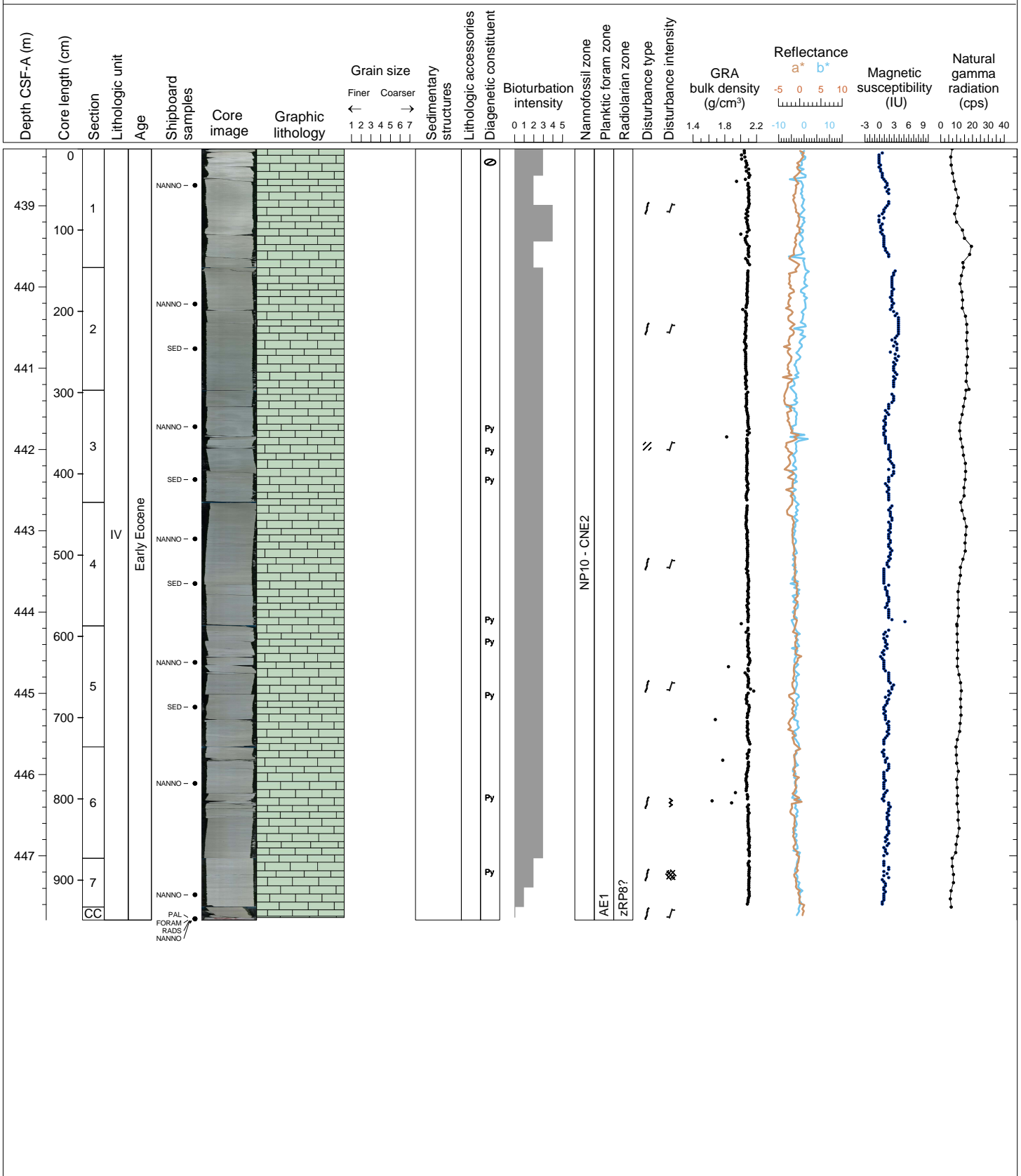
Hole 378-U1553D Core 5R, Interval 428.5-436.92 m (CSF-A)

Core U1553D-5R is composed of nannofossil chalk, clayey nannofossil chalk, and limestone. The transition to limestone occurs in Section 4, where the sediments become too hard to use a toothpick for smear slide sampling. The sediments alternate between diffuse greenish-gray sections (10GY 7/1-8/1, 5G 8/1, and 5GY 7/1-8/1) and whiter ones (N 8; on the order of 0.5-1 m of sediment.). The contacts between these layers are bioturbated, with obvious white burrows in green matrix and vice versa. Trace fossils of *Teichichnus* are observed in Section 2. Very small specks of pyrite are visible, with some larger sections associated with burrow structures. Quartz, feldspar, mica, glauconite, micrite, fish remains, and organic matter were observed in smear slides. There is a chert layer with chalk inclusions in Section 2, and there are slickensides structures visible in a fracture at the top of Section 4.



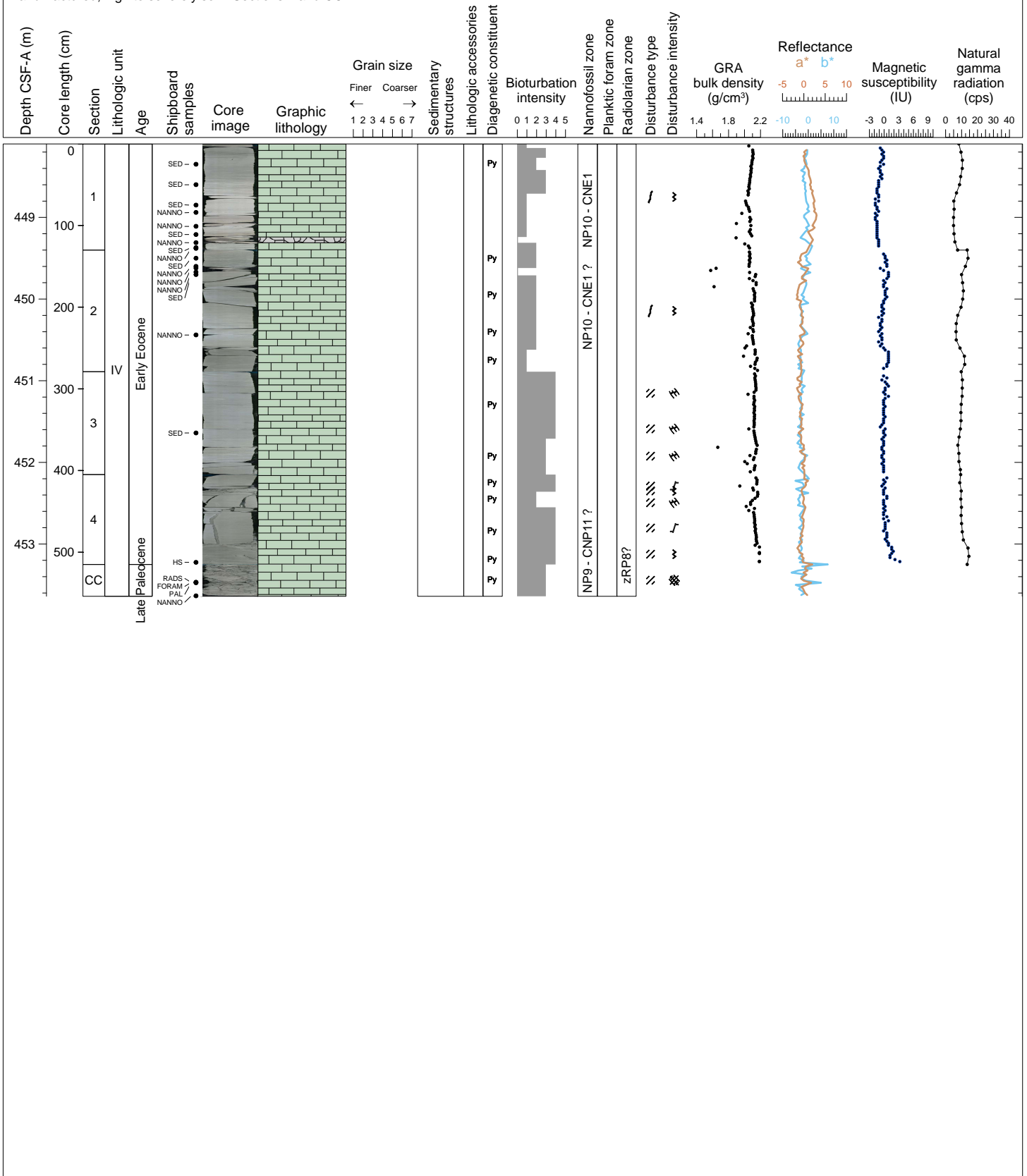
Hole 378-U1553D Core 6R, Interval 438.3-447.79 m (CSF-A)

Core U1553D-6R is composed of limestone that is rich in nannofossils and varies in pale green to gray color tone (10GY 7/1-8/1, 5G 7/1-8/1, 5G 7/2, 10G 7/1-8/1, 5BG 6/1-7/1, and 10BG 7/1). Much of the color variation is associated with bioturbation, which ranges from slight to heavy (mostly moderate). Sometimes burrows are lighter than the surrounding lithology, sometimes darker. Trace fossils of *Teichichnus* are common. The trace fossils often crosscut each other, and sometimes are associated with diagenetic alteration. Very small specks of pyrite are visible, with some larger patches in Sections 3-7. Some burrows are pyritized. Quartz, pyrite, micrite, nannofossils, foraminifers, and fish remains were observed in smear slides. Most of the core is slightly affected by drilling disturbance.



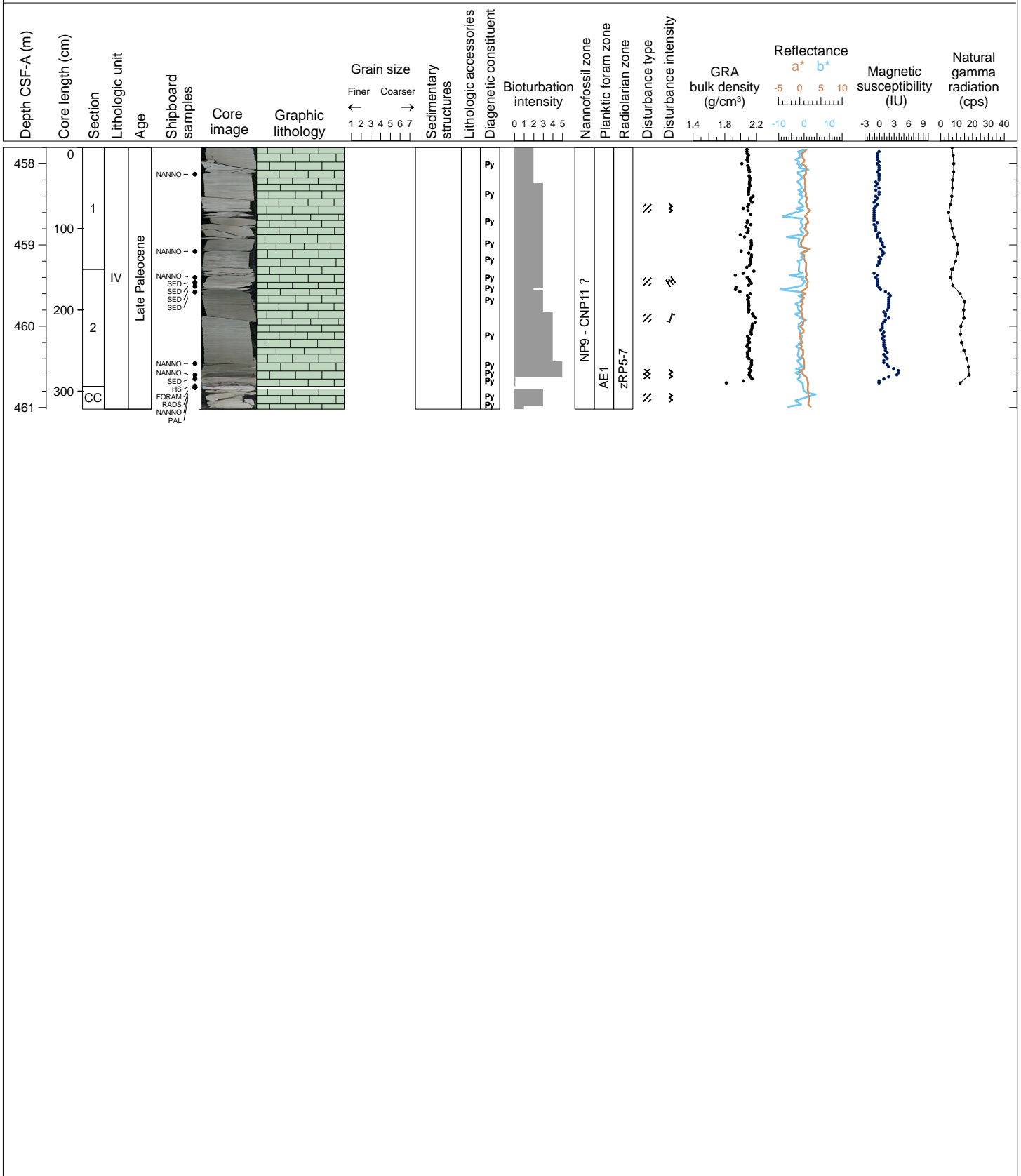
Hole 378-U1553D Core 7R, Interval 448.1-453.64 m (CSF-A)

Core U1553D-7R is composed of limestone that is rich in nannofossils and varies in color from white (2.5Y 8/1) to greenish gray (5G 6/1-7/1, 10GY 7/1, 5GY 7/1-8/1, 10Y 8/1, 10G 7/1-8/1). The sediments alternate between diffuse greenish-gray sections and whiter ones, on the order of 0.5-1 m of sediment. There is a noticeably paler interval in Section 1 (55-121 cm). There is also much color variation associated with bioturbation, which ranges from very slight to heavy. Sometimes burrows are lighter than the surrounding lithology, sometimes darker. The trace fossils often crosscut each other, and sometimes are associated with diagenetic alteration. Pyrite is present as small specks and patches. There is a 7 cm thick chert layer in Section 1, and small spots of chert in Section 2. Quartz, micrite, nannofossils, and foraminifers were observed in smear slides. In Section 1 (97 cm) there is a fossil shell with beautiful internal structures and a preserved aperture. There are small lenses and patches, generally paler compared to the rest of the lithology, composed of microfossils and coarser material, sometimes cemented by a white mineral. The core is partly cracked and fractured, high to severely so in Sections 4 and CC.



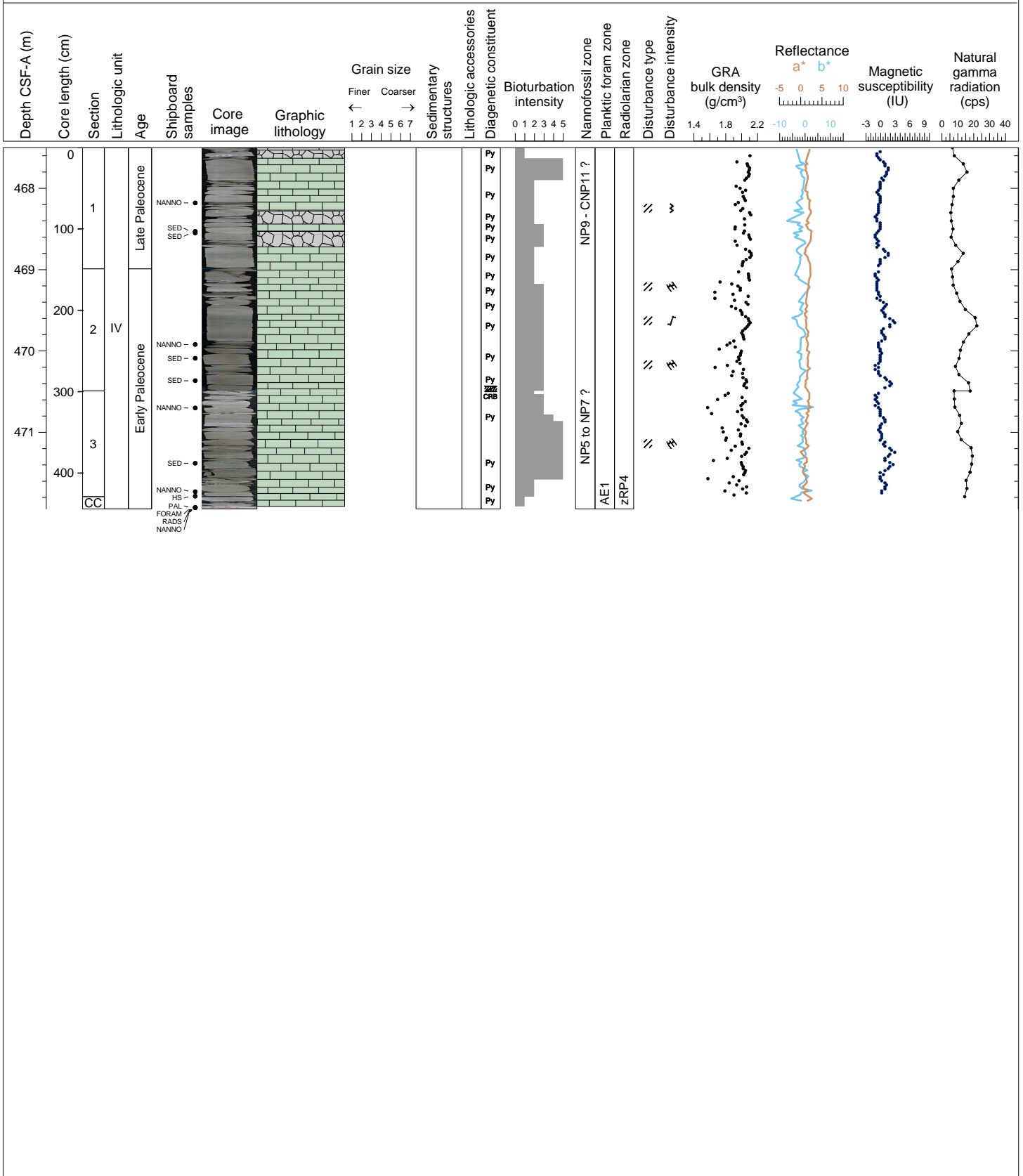
Hole 378-U1553D Core 8R, Interval 457.8-461.02 m (CSF-A)

Core U1553D-8R is composed of limestone that is rich in nannofossils and varies in color from light gray (N 7, 5Y 7/1) to dark gray/medium dark gray (N 4) to light greenish gray (10GY 7/1, 5GY 8/1) and greenish gray (10GY 6/1, 10G 6/1). The sediments alternate between darker sections to paler ones, on the order of 0.5 m of sediment. There are distinctive thin (90 cm) green thin layers in Section 1. There is also much color variation associated with bioturbation, which ranges from very slight to heavy. Sometimes burrows are lighter than the surrounding lithology, sometimes darker. The trace fossils often crosscut each other, and sometimes are associated with diagenetic alteration. Pyrite is present throughout as small specks and patches. Quartz, micrite, ferromagnesian minerals, nannofossils, foraminifers and organic matter were observed in smear slides. There are small lenses and patches, generally paler compared to the rest of the lithology, composed of microfossils and coarser material, sometimes cemented by a white mineral. The core is partly cracked and fractured.



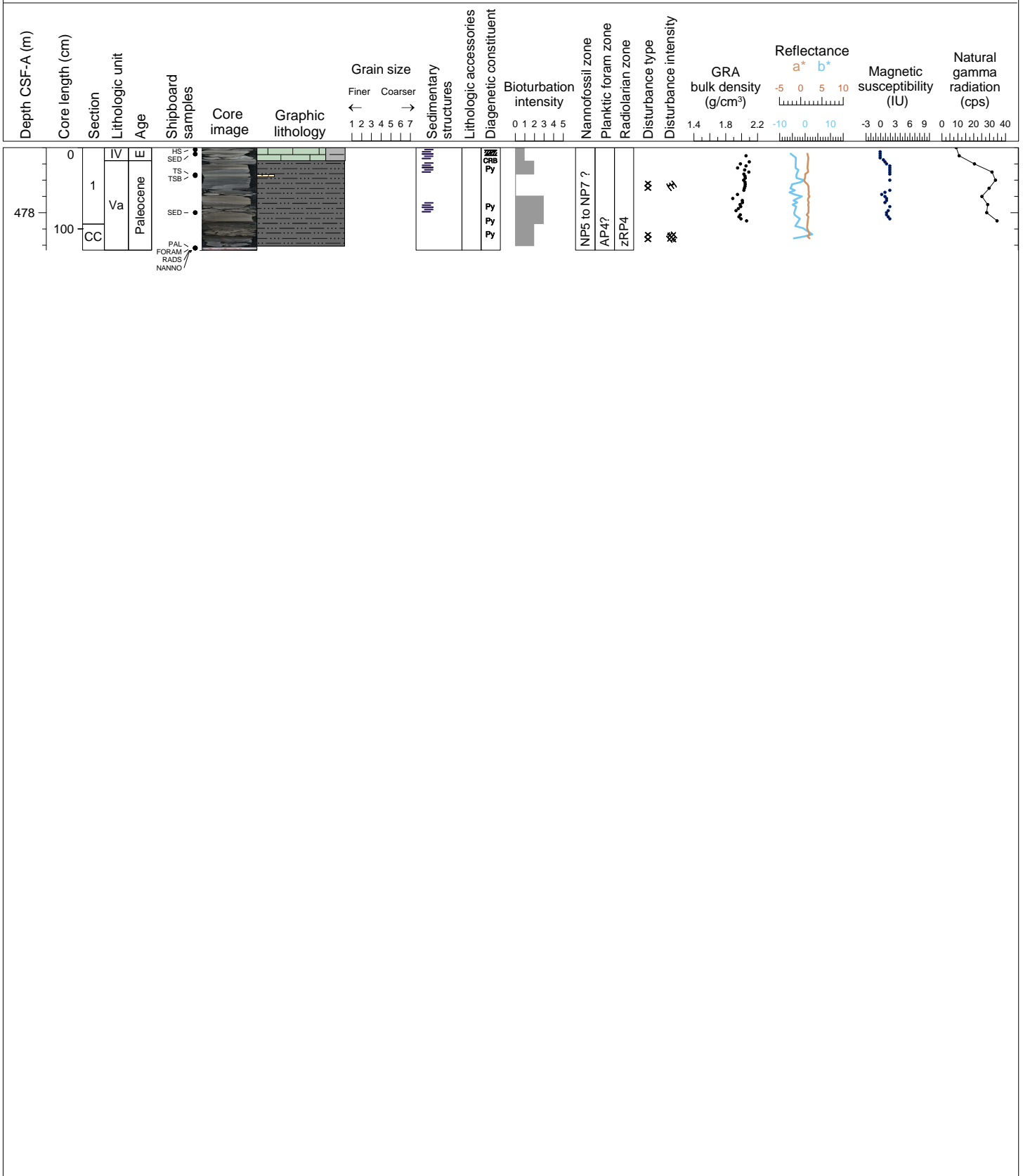
Hole 378-U1553D Core 9R, Interval 467.5-471.94 m (CSF-A)

Core U1553D-9R is composed of limestone that is rich in nannofossils and varies in color from light gray (N 7, 5Y 7/1) to light greenish gray (5GY 7/1-8/1, 10Y 7/1) to greenish gray (5G 6/1, 10GY 6/1, 5GY 5/1-7/1, 10Y 5/1-6/1). There are three white chert lenses in Section 1. The limestone alternates between darker and paler colors, on the order of 0.5 m of sediment. There is also much color variation associated with bioturbation, which ranges from very slight to extensive. Sometimes burrows are lighter than the surrounding lithology, sometimes darker. The trace fossils often crosscut each other, and are sometimes associated with diagenetic alteration. Pyrite is present throughout, including as crack-fill in Section 1. There are carbonate-filled veins at the top of Section 3. In Section 3, sand-sized green grains were noted which might be glauconite. Quartz, mica, ferromagnesian minerals, glauconite, pyrite, nannofossils, foraminifers and micrite were observed in smear slides. There are small lenses and patches, generally paler compared to the rest of the lithology, of coarser material, sometimes cemented by a white mineral, and possibly composed of microfossils. The core is partly cracked and fractured, especially in Section 1.



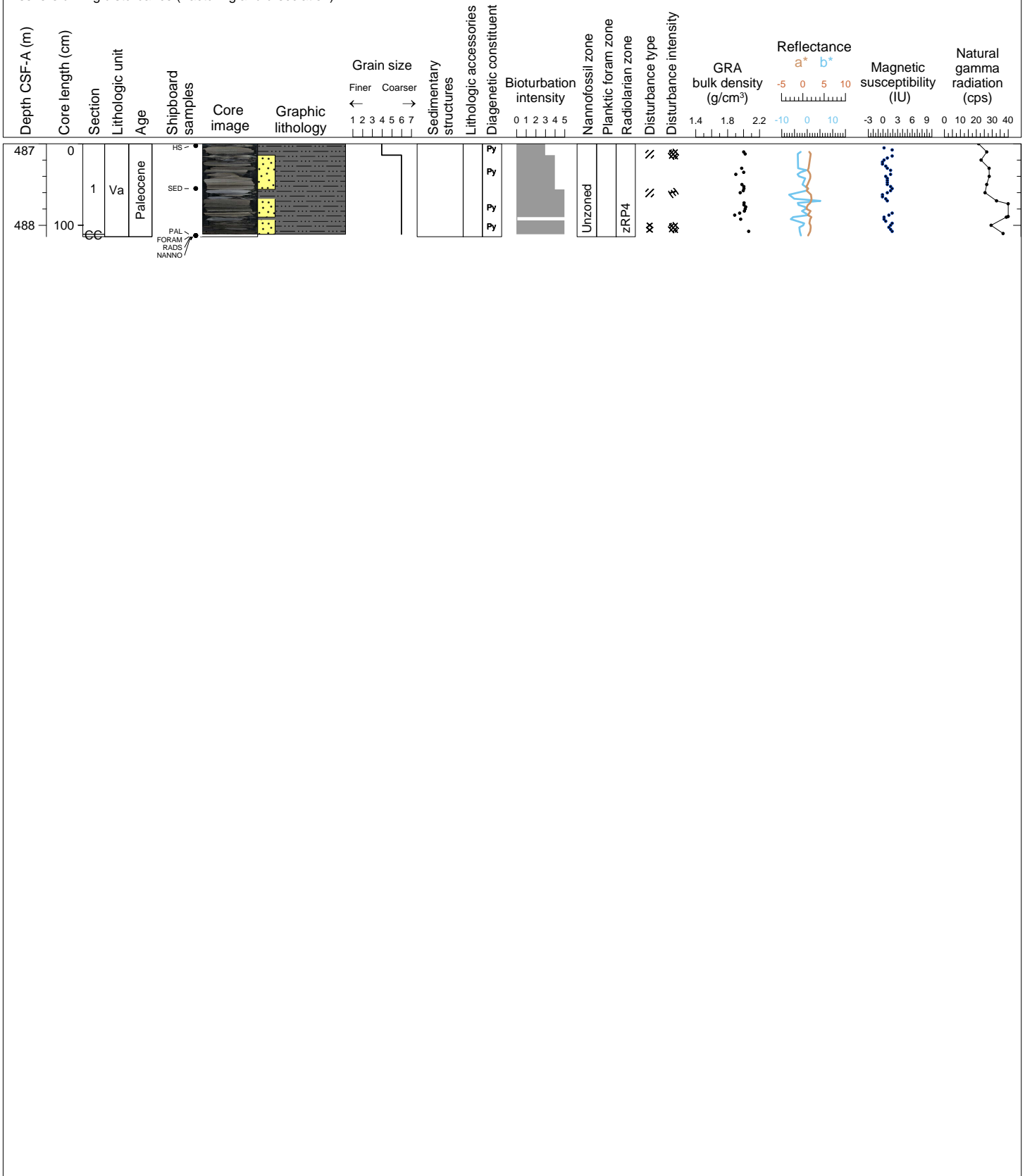
Hole 378-U1553D Core 10R, Interval 477.2-478.46 m (CSF-A)

Core U1553D-10R is composed of limestone with clay at the top of Section 1 (0-16 cm) that is rich in nannofossils, and carbonate-rich sandstone from 16 cm in Section 1 to CC in which nannofossils are common. Color varies from light gray (N 7) in the limestone with clay, to dark gray/medium dark gray (N 4) to black (N 2.5) in the carbonate-rich sandstone, to gray/medium gray (N 5) in Section CC (also, carbonate-rich sandstone). Carbonate content was estimated from the amount of effervescence with HCl, and varies from very strong in the limestone to significant in the carbonate-rich sandstone. Nannofossils, micrite, quartz, clay minerals (glauconite), organic matter and other non-biogenic materials were observed in smear slides. Pyrite grains are visible throughout the core and especially scattered at 74 cm in Section 1. Bioturbation is visible throughout the core and especially scattered at 74 cm in Section 1. Bioturbation is slight in the limestone, and increases to moderate at the bottom of Section 1. The first appearance of burrows regarded as Planolites is at 61 cm in Section 1. Microfossils are common in the carbonate-rich sandstone. The core is moderately to severely fractured and brecciated.



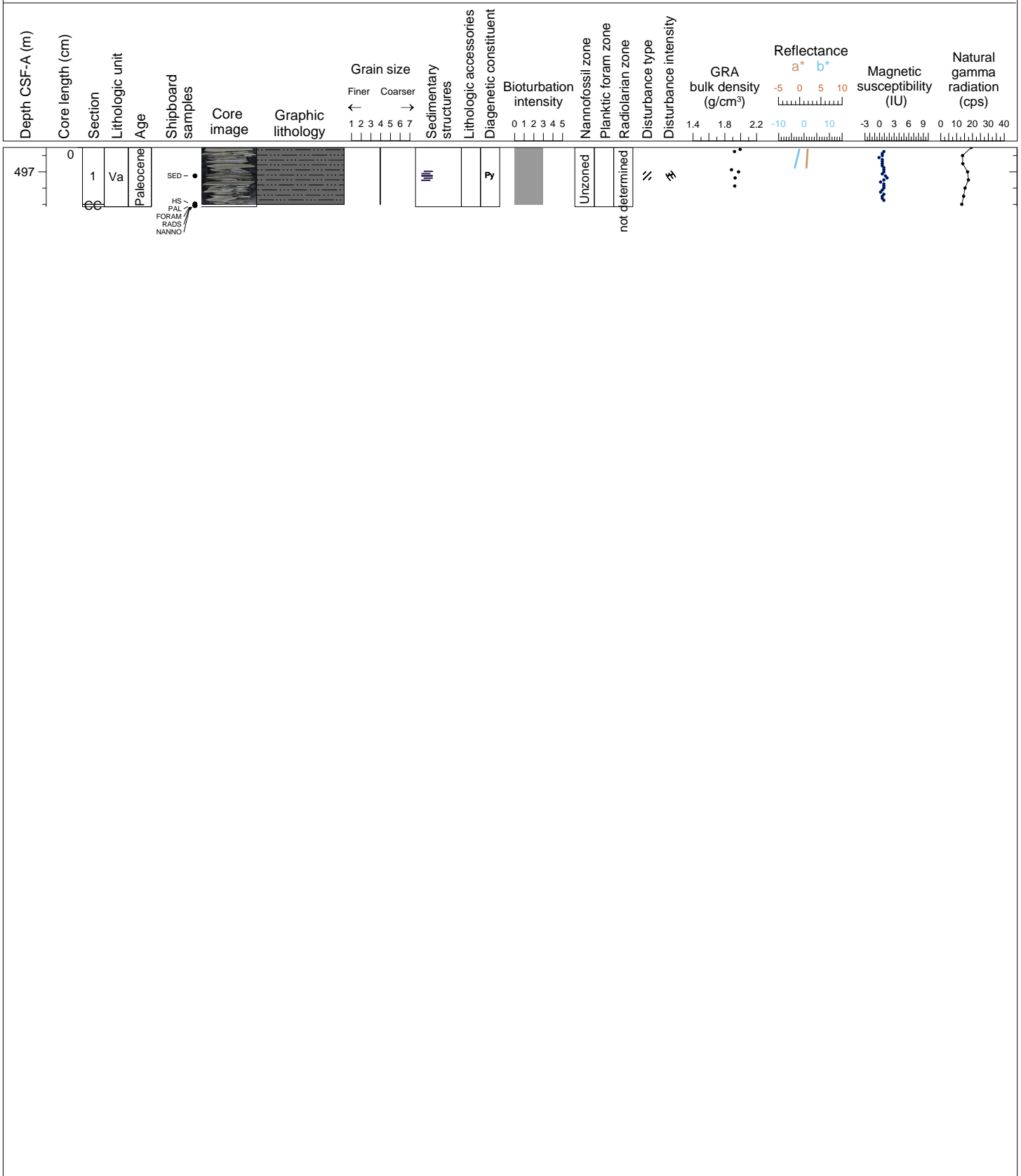
Hole 378-U1553D Core 11R, Interval 487.0-488.14 m (CSF-A)

Core U1553D-11R is composed of carbonate-rich sandstone. The major color of this core is gray/medium light gray (N 6; 0-14 cm in Section 1) to black (N 2.5; 14-111 cm in Section 1). Based on macroscopic observation, the major grain size of this core is very fine sand (0-14 cm in Section 1) to medium sand (14-111 cm in Section 1). Carbonate-rich sandstone effervesces with HCl, whereas the sandstone does not. A smear slide of this core shows abundant silt to clay-sized particles, likely organic fragments, micrite, clay minerals (glauconite), quartz, mica, and other non-biogenic materials. Most of this core shows heavy to extensive bioturbation, whereas the most upper part (0-14 cm in Section 1) show moderate bioturbation. Grains and patches of euhedral pyrite crystals are visible throughout the core. Dark bluish gray color (5PB 4/1) features occur in some intervals (0-5, 14-26, 56-68, 90-94 cm in Section 1) as diagenetic features. Microfossil debris is commonly observed under hand lens, and sometimes concentrated in small lenses. Planolites burrows may be present. A sandy layer also occurs at 85-86 cm in Section 1. All of Section 1 shows moderate to severe drilling disturbance (fracturing and brecciation).



Hole 378-U1553D Core 12R, Interval 496.7-497.43 m (CSF-A)

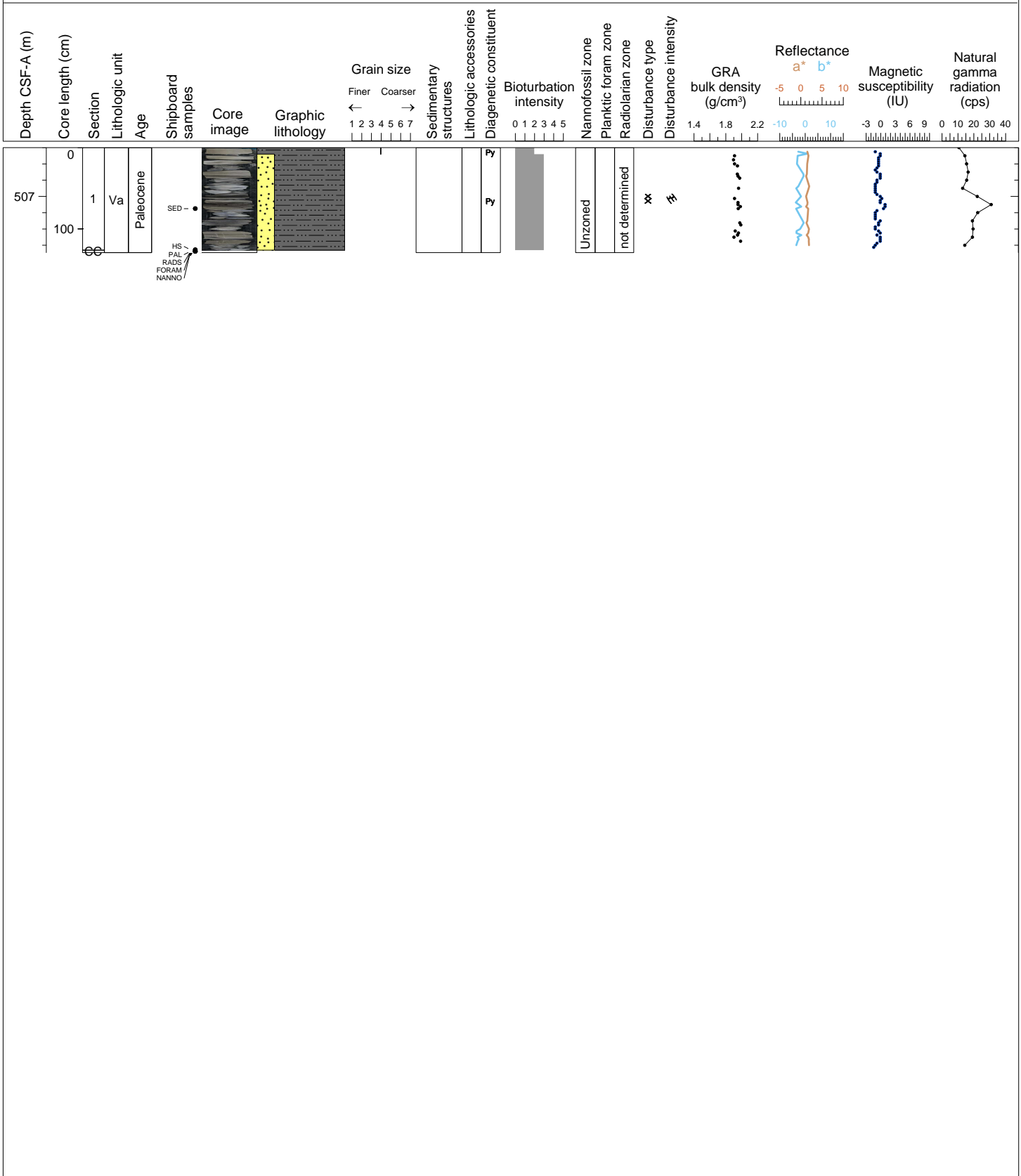
Core U1553D-12R is composed of carbonate-rich sandstone. The major color of this core is gray (5Y 5/1). Based on macroscopic observation, the major grain size is very fine sand. Smear slides show abundant clay-sized particles, likely organic fragments, micrite, clay minerals (glauconite), quartz, mica, and other lithic grains. Patches of euhedral pyrite crystals are visible throughout. There are lighter, rounded gray patches that are possibly diagenetic towards the bottom of Section 1. Benthic foraminifers can be seen under hand lens, and sometimes concentrated benthic foraminifers in small lenses or layers also can be observed. Planolites burrows may be common. All of Section 1 shows moderate drilling disturbance (fracturing).





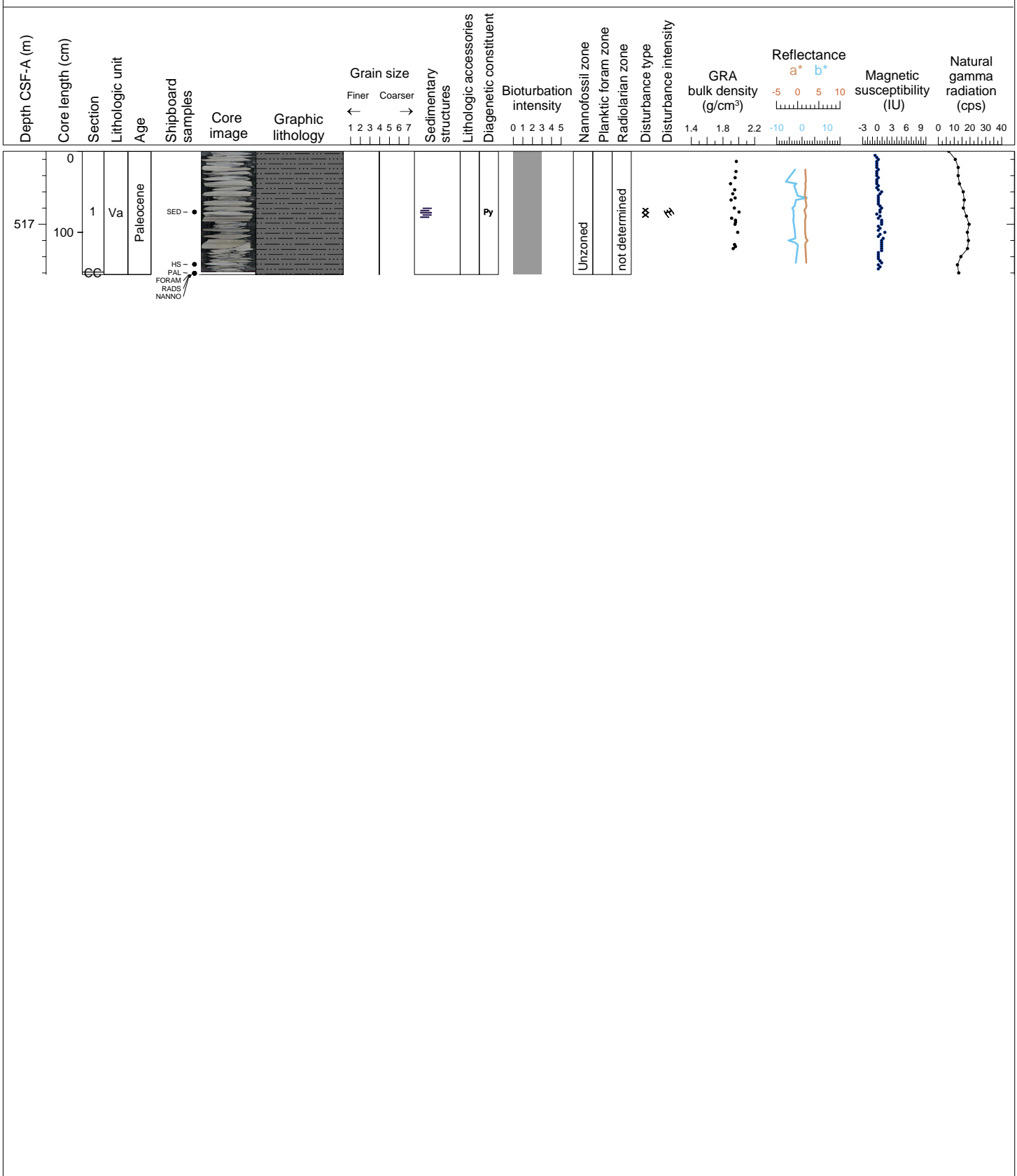
Hole 378-U1553D Core 13R, Interval 506.4-507.69 m (CSF-A)

Core U1553D-13R is composed of sandstone (0 to 8 cm in Section 1) and carbonate-rich sandstone (8 to 126 cm in Section 1). The major color is gray (5Y 6/1). Based on the macroscopic observation, the major grain size of this core is very fine sand. Smear slides show abundant clay-sized particles, likely organic fragments, fish remains, micrite, quartz, mica, feldspar and other lithic grains. Pyrite grains, pyritized burrows, and halos are observed as diagenetic features throughout the core. In carbonate-rich sandstone, microfossil debris can be identified and sometimes is concentrated in small lenses. Burrows (possibly Planolites) are common. Some black colored (N 2.5) intervals are composed of medium size sand grains. The core has moderate drilling disturbance (brecciation).



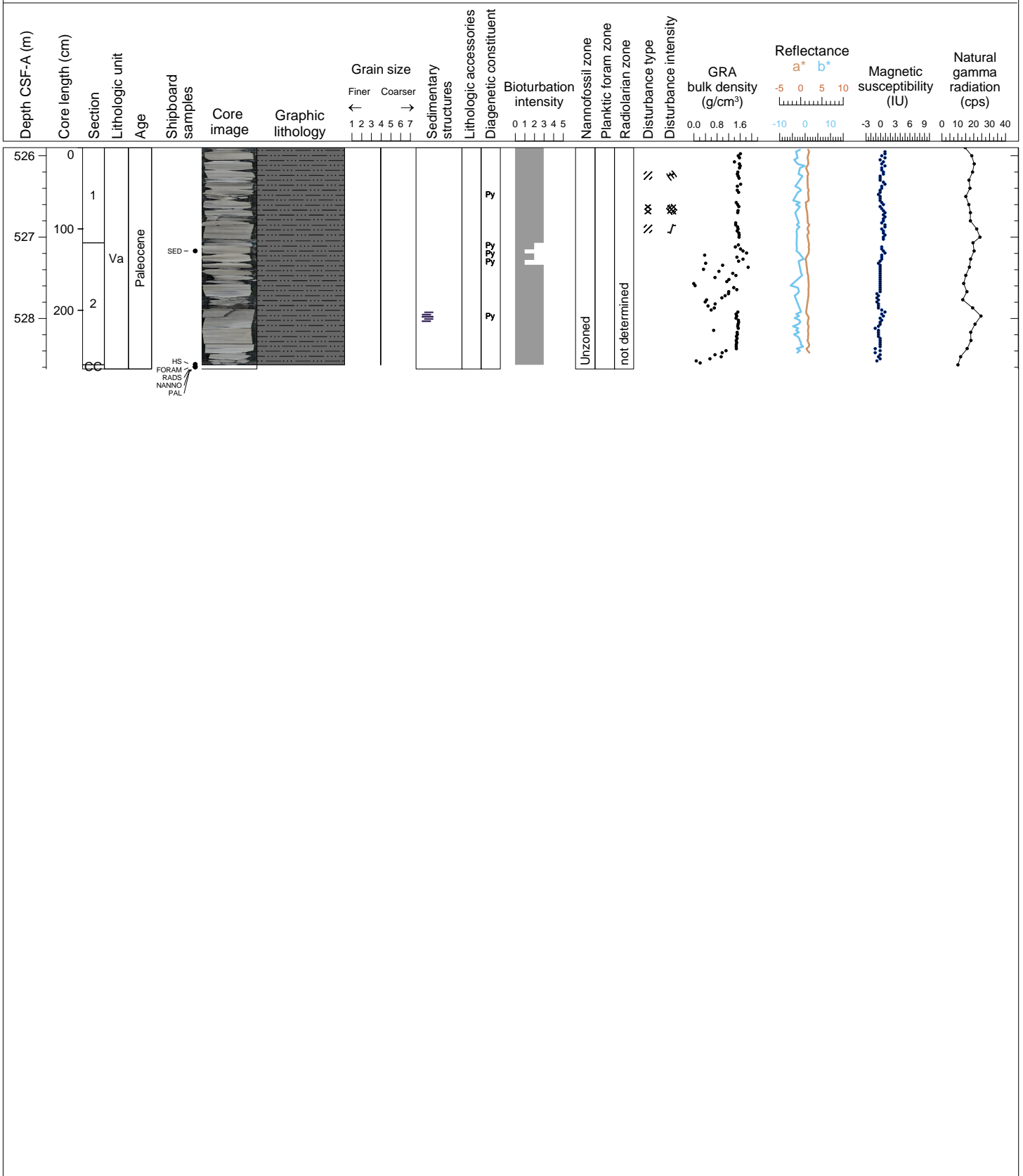
Hole 378-U1553D Core 14R, Interval 516.1-517.62 m (CSF-A)

Core U1553D-14R is composed of carbonate-rich sandstone. The major color of this lithology is gray/medium light gray (N 6). Based on macroscopic observation, the major grain size of this core is very fine sand. Smear slides show abundant clay-sized particles, likely organic fragments, fish remains, micrite, quartz, feldspar, mica, and other lithic grains. Small pyrite grains are distributed throughout. Bluish gray color halos are observed as diagenetic features, occasionally with diagenetic light gray rims. Calcite filled veins are noted. Benthic foraminifers are concentrated within some thin layers throughout. Burrows (possibly Planolites) are also common. The core has moderate drilling disturbance (brecciation).



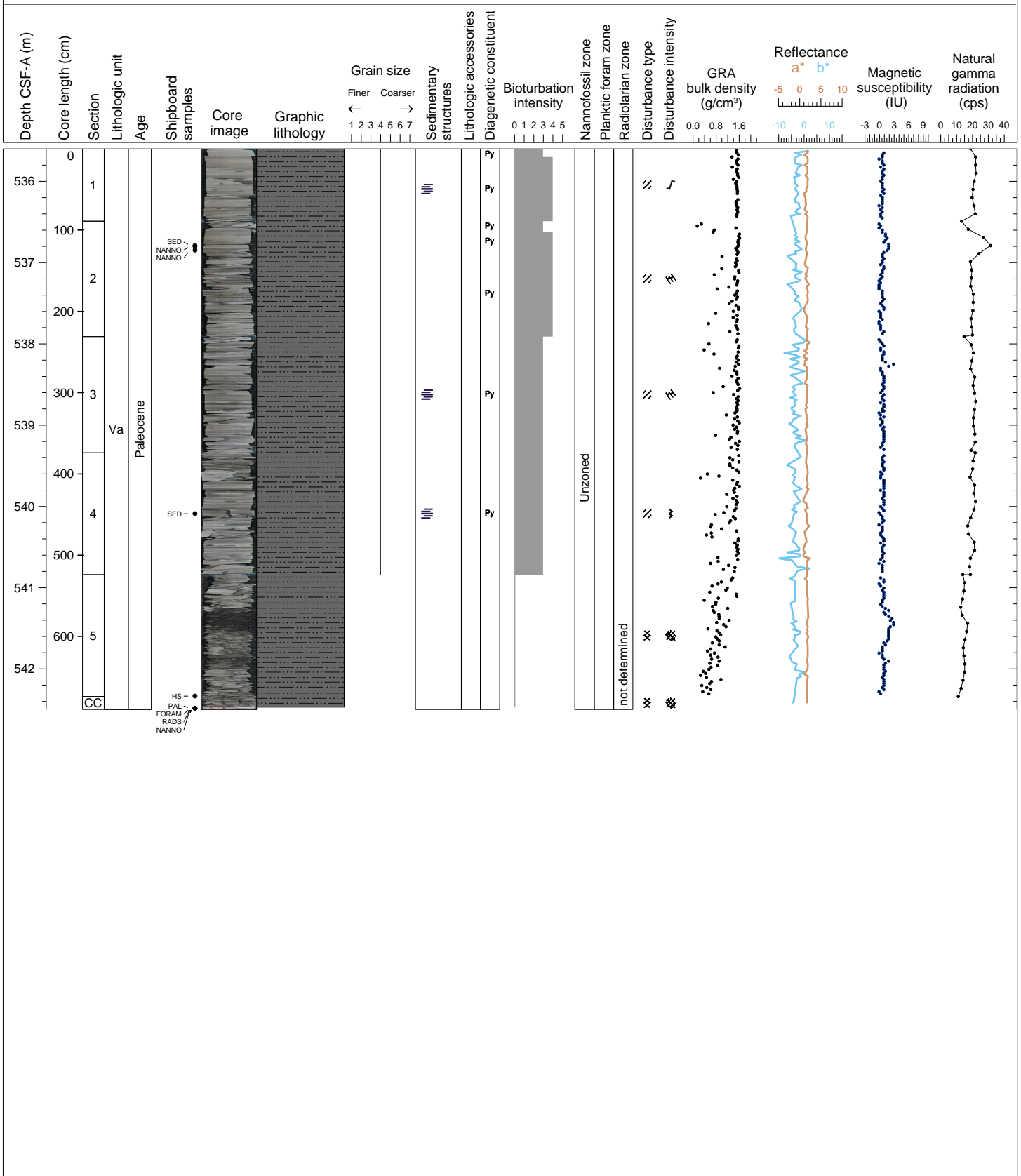
Hole 378-U1553D Core 15R, Interval 525.9-528.62 m (CSF-A)

Core U1553D-15R is composed of gray/medium light gray sandstone. The major color (N 6) of this core is unchanged, even though the minor color shows the somewhat large ranges from black (N 2.5) to gray/medium gray (N 5). Based on macroscopic observation, the major grain size of this core is very fine sand. Smear slides show abundant clay-sized particles, likely organic fragments, plant debris, fish remains, micrite, clay minerals (glauconite), pyrite, quartz, feldspar, mica, and other non-biogenic materials. Small size pyrite grains are distributed throughout and medium to coarse size pyrite grains occur in some intervals of Section 2 (8 to 13, 18 to 21, and 27 to 32 cm). Bluish gray color halos are observed as diagenetic features. Burrows, (possibly Planolites) are also common. Microfossil debris is common in this core and sometimes concentrated in small lenses. Section 1 shows slight to severe drilling disturbance (fracturing and brecciation).



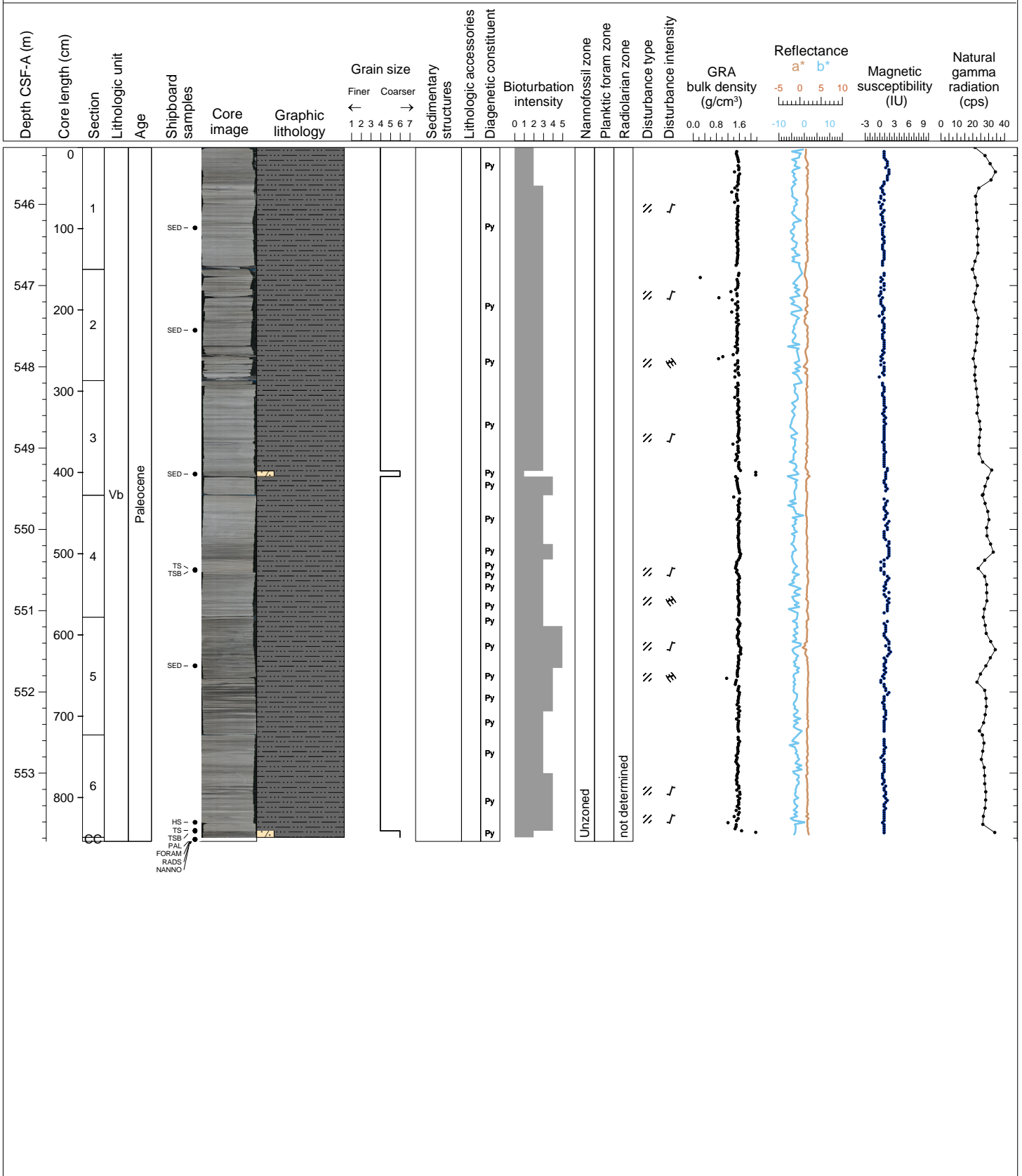
Hole 378-U1553D Core 16R, Interval 535.6-542.5 m (CSF-A)

Core U1553D-16R is composed of light gray (N 7) to gray/medium light gray (N 6) sandstone (Sections 1 to 4) and gray/medium light gray (N 6) mudstone (Sections 5 to CC). Based on macroscopic observation, the major grain size of sandstone is very fine sand. Smear slides show abundant clay-sized particles, likely organic fragments, micrite, clay minerals (glauconite), quartz, mica, feldspar, and other lithic grains. Tiny pyrite grains and halos are distributed throughout the core as diagenetic features. A coarser grain layer with foraminifers occurs in the short interval of 24 cm (13-37 cm) in Section 2. Alternation of lighter and darker colored layers can be identified throughout the core. Burrows (possibly Planolites) are also common. Most of the core shows slight to high drilling disturbance of fracturing, whereas the lowermost portion of the core (Sections 5 and CC) shows severe drilling disturbance of brecciation.



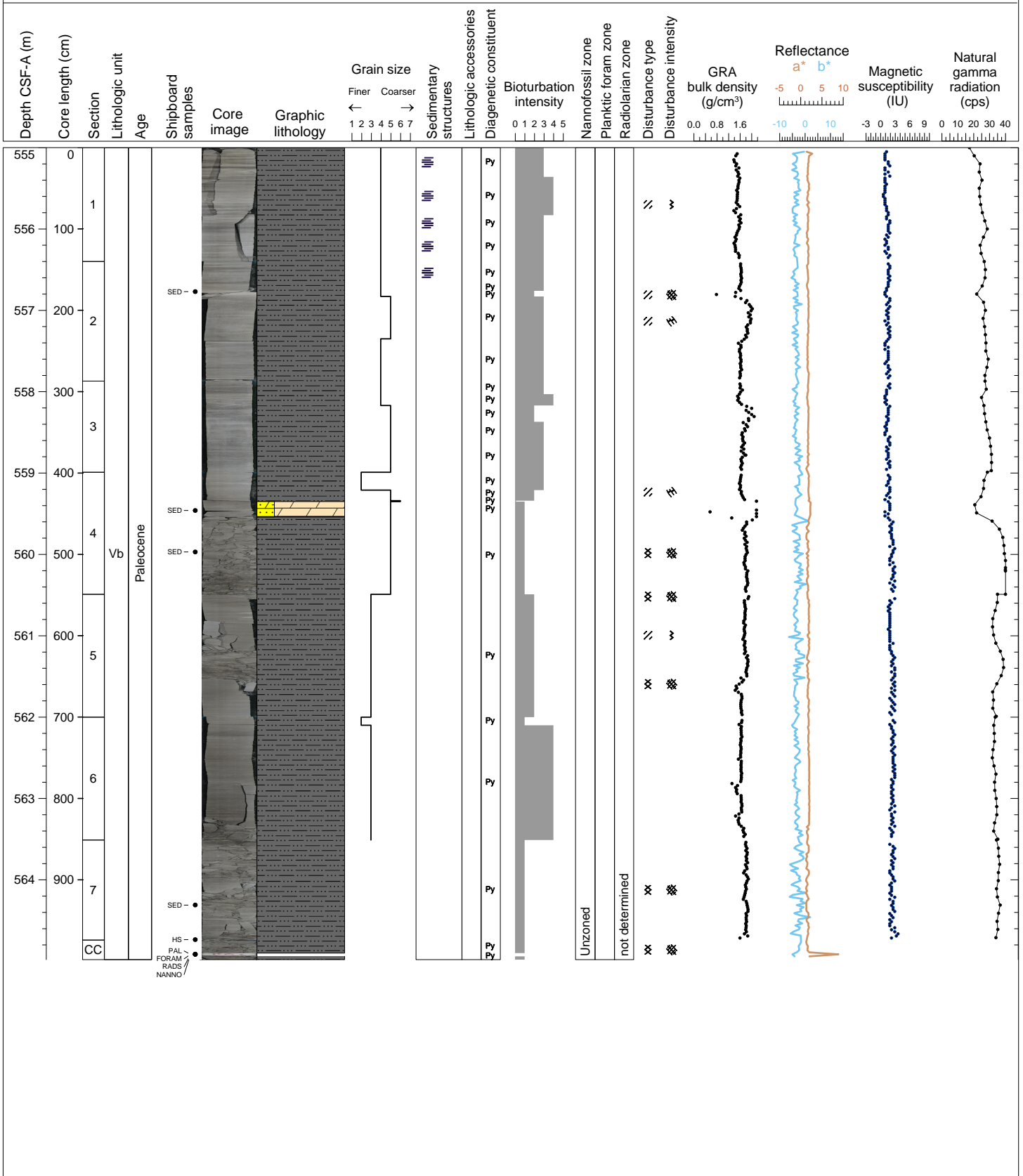
Hole 378-U1553D Core 17R, Interval 545.3-553.84 m (CSF-A)

Core U1553D-17R is composed of gray sandstone. The major color of this core ranges from light gray to very dark gray (N 7 to N 3). Based on macroscopic observation, the major grain size of this core is very fine sand and only two intervals are composed of medium sand (111 to 118 cm in Section 3 and 118 to 126 cm in Section 6). The bottom of Section 6 shows well sorted and rounded medium sand grains. Smear slides show abundant clay to silt-sized particles, likely quartz, organic fragments, fish remains, micrite, mica, and other non-biogenic materials. Small pyrite grains and patches are distributed throughout the core. Some vein-filling pyrite and diagenetic halos can be also observed. Trace fossils (possibly Planolites) are also common. Gray intervals darker than the surrounding major lithology occur in all sections except for Section 5. Most of the sections show moderate to heavy bioturbation. All sections show some degree of drilling disturbance (brecciation and fracturing).



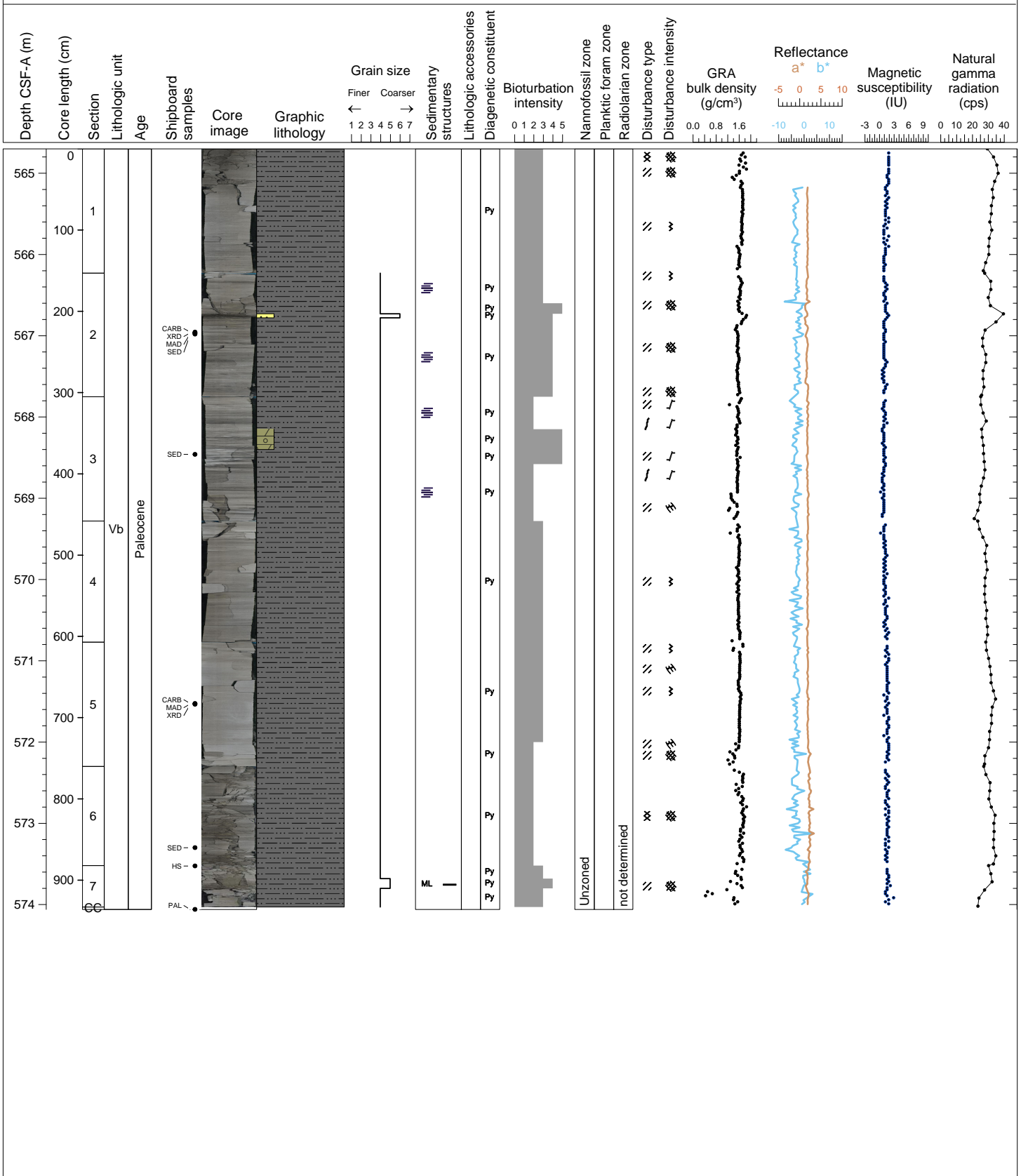
Hole 378-U1553D Core 18R, Interval 555.0-564.98 m (CSF-A)

Core U1553D-18R is composed of sandstone (Sections 1 to 3 and 22-35 cm in Section 4) and mudstone (0-22 and 35-36 cm in Section 4 and 55 cm in Section 4 to CC) with interbedded limestone (36-55 cm in Section 4). Each major lithology shows various color ranges (sandstone - gray of 2.5Y 5/1, light gray of N 7, gray/medium light gray of N 6, and gray/medium gray of N 5; mudstone - gray of 5Y 6/1, dark gray of 5Y 4/1, gray/medium light gray of N 6, and gray/medium gray of N 5; limestone - light gray of N 7). Based on macroscopic observation, the grain size of sandstone and mudstone range from very fine sand to fine sand and fine silt to coarse silt, respectively. Quartz, mica, feldspar, clay minerals (glaucinite), micrite, organic matters, and other lithic grains were observed in smear slides. Pyrite is identified as fine grains and patches throughout the core. Some diagenetic halos are observed. Trace fossils (possibly Planolites) are also common. Darker or lighter gray intervals than the peripheral major lithology occur throughout the core. Most of the core is moderately to severely brecciated and fractured.



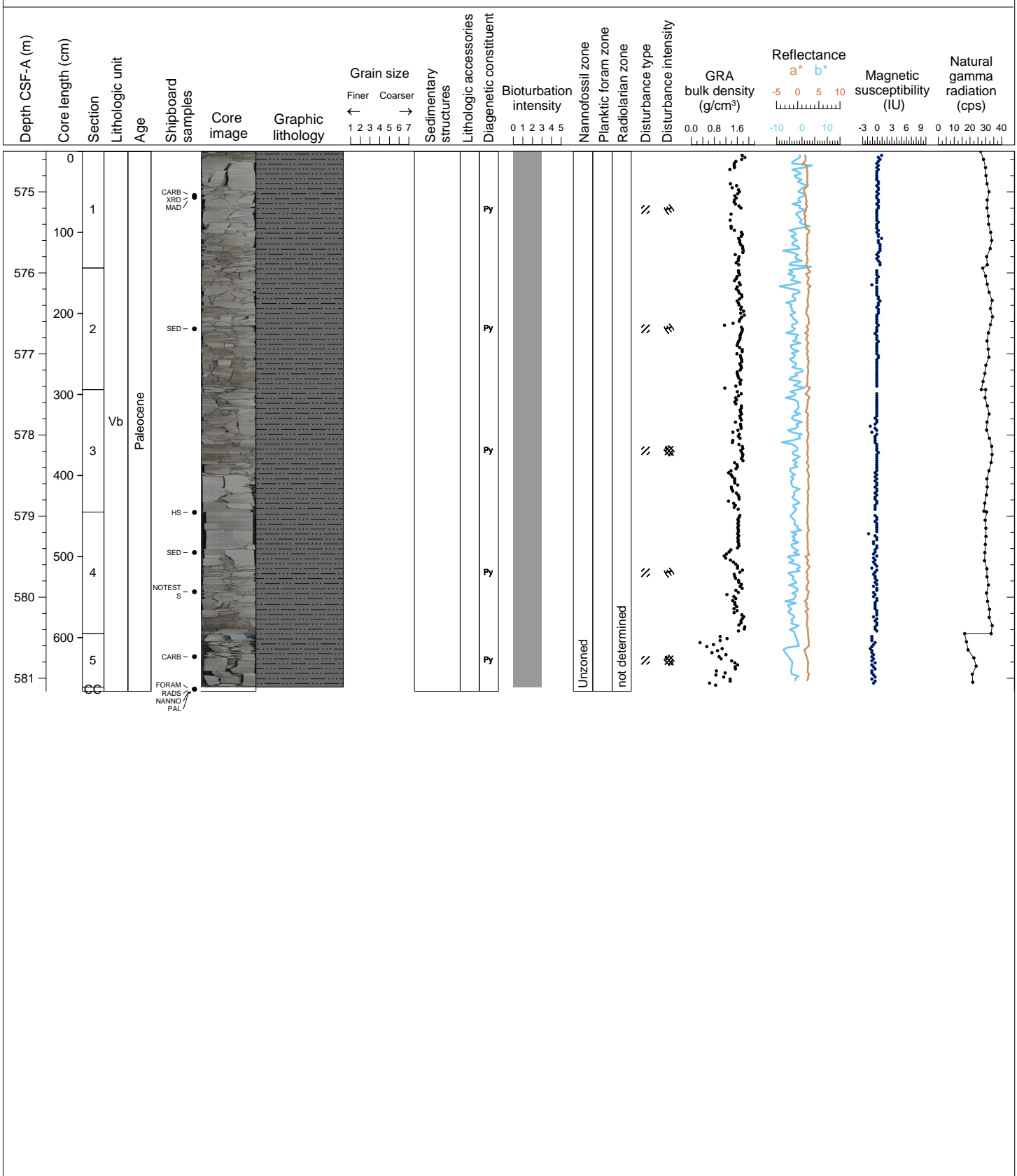
Hole 378-U1553D Core 19R, Interval 564.7-574.06 m (CSF-A)

Core U1553D-19R is composed of mudstone (Section 1) and sandstone (Sections 2 to 7). The major color of sandstone varies from black (N 2.5) to gray/medium light gray (N 6), while the mudstone has one major color of gray/medium gray (N 5). The grain size of sandstone is very fine sand, even though fine sand size and the medium sand size grains can be observed in short intervals (16-28 cm in Section 7 and 50-55 cm in Section 2, respectively). Quartz, feldspar, mica, clay minerals (glauconite), micrite, organic matter, and other lithic grains were observed in smear slides. Pyrite is identified as fine grains and patches throughout the core. Some various sized halos are observed as diagenetic features. Foraminifers, several microfossils, and trace fossils (possibly, Planolites) are also common. Most of the core is moderately to severely fractured and brecciated.



Hole 378-U1553D Core 20R, Interval 574.5-581.16 m (CSF-A)

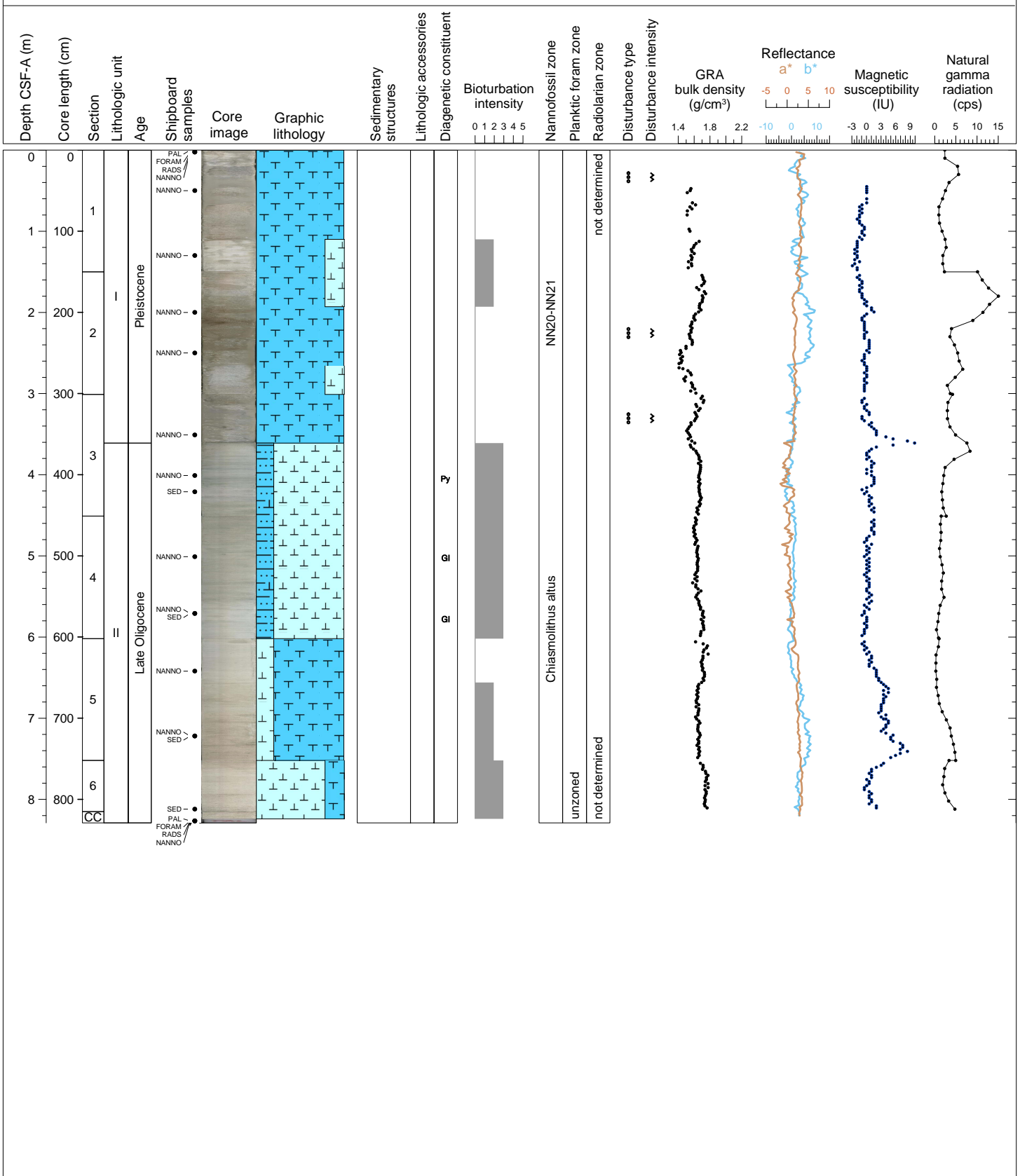
Core U1553D-20R is composed of mudstone. The major color of this core is gray/medium gray (N 5). Smear slides show abundant clay-sized particles, likely quartz, feldspar, mica, clay minerals (glauconite), micrite, organic matter, and other lithic grains. Small pyrite specks are identified throughout the core. All of the sections are moderately bioturbated with burrows. Trace fossils (possibly Planolites) are also observed. At 71-73 cm of Section 1, a darker layer includes foraminifers. Most of the core is moderately to severely fractured.





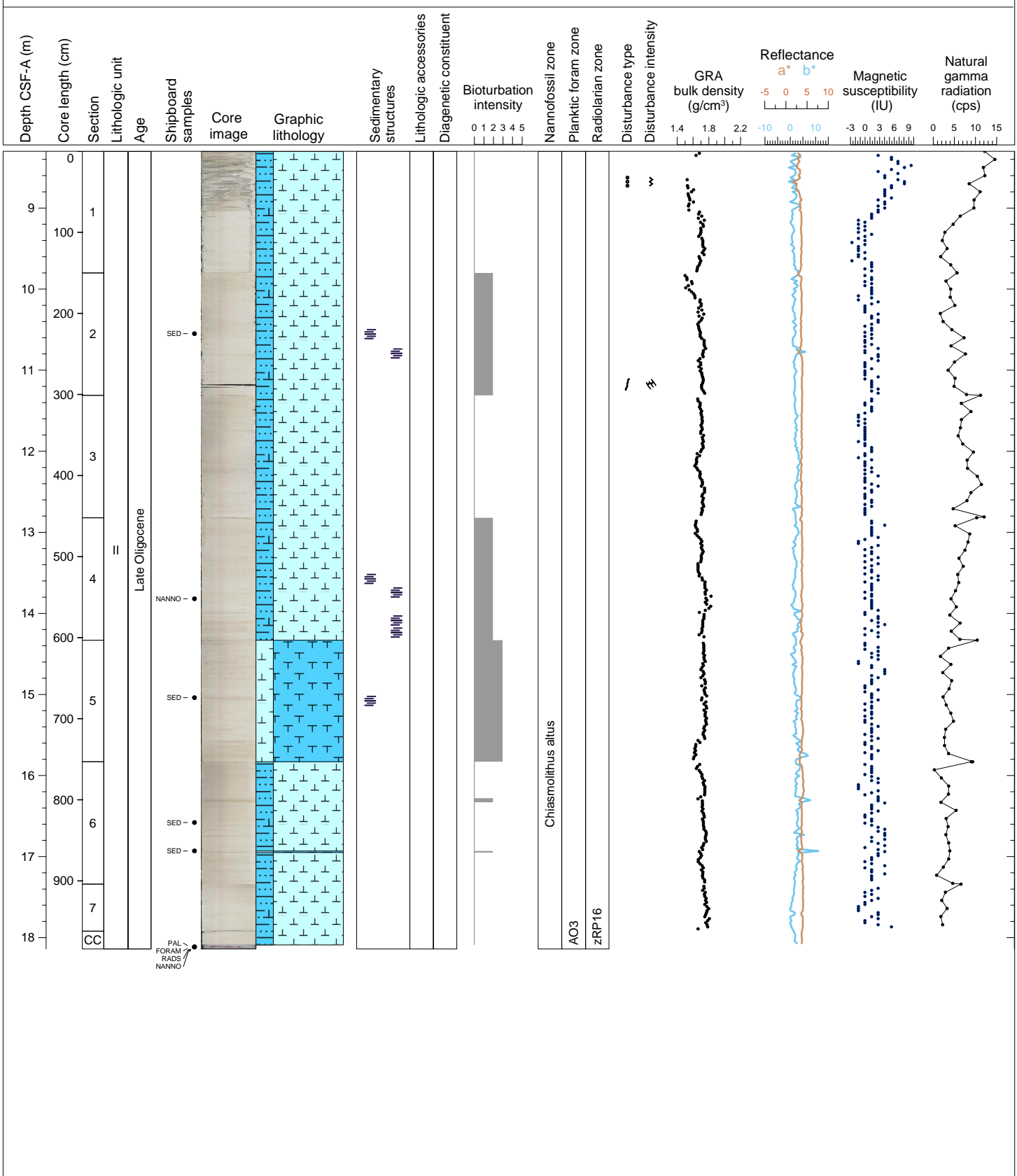
Hole 378-U1553E Core 1H, Interval 0.0-8.29 m (CSF-A)

Core U1553E-1H consists of foraminiferal ooze, foraminiferal ooze with nannofossils, foraminifer-rich nannofossil ooze and nannofossil ooze with foraminifers. Sediments alternate between white (5Y 8/1; Section 1), light olive gray (5Y 6/2; Section 2) and light greenish-gray (5GY 8/1; Sections 3 and 4). The tops of Sections 1 and 3 and all of Section 2 are soupy. Biostratigraphy places the unconformity between the Pleistocene and the Oligocene in Section 3 (~20 cm). Section 4 is slightly green in color (5GY 8/1), Sections 5 and 6 have a yellower hue (2.5Y 9.5/2) and coarser (medium sand-sized) dark mineral grains are visible. Diagenetic halos of glauconite and patches of pyrite are visible throughout the core. Quartz, glauconite, mica, pyrite, and feldspar are observed in smear slides.



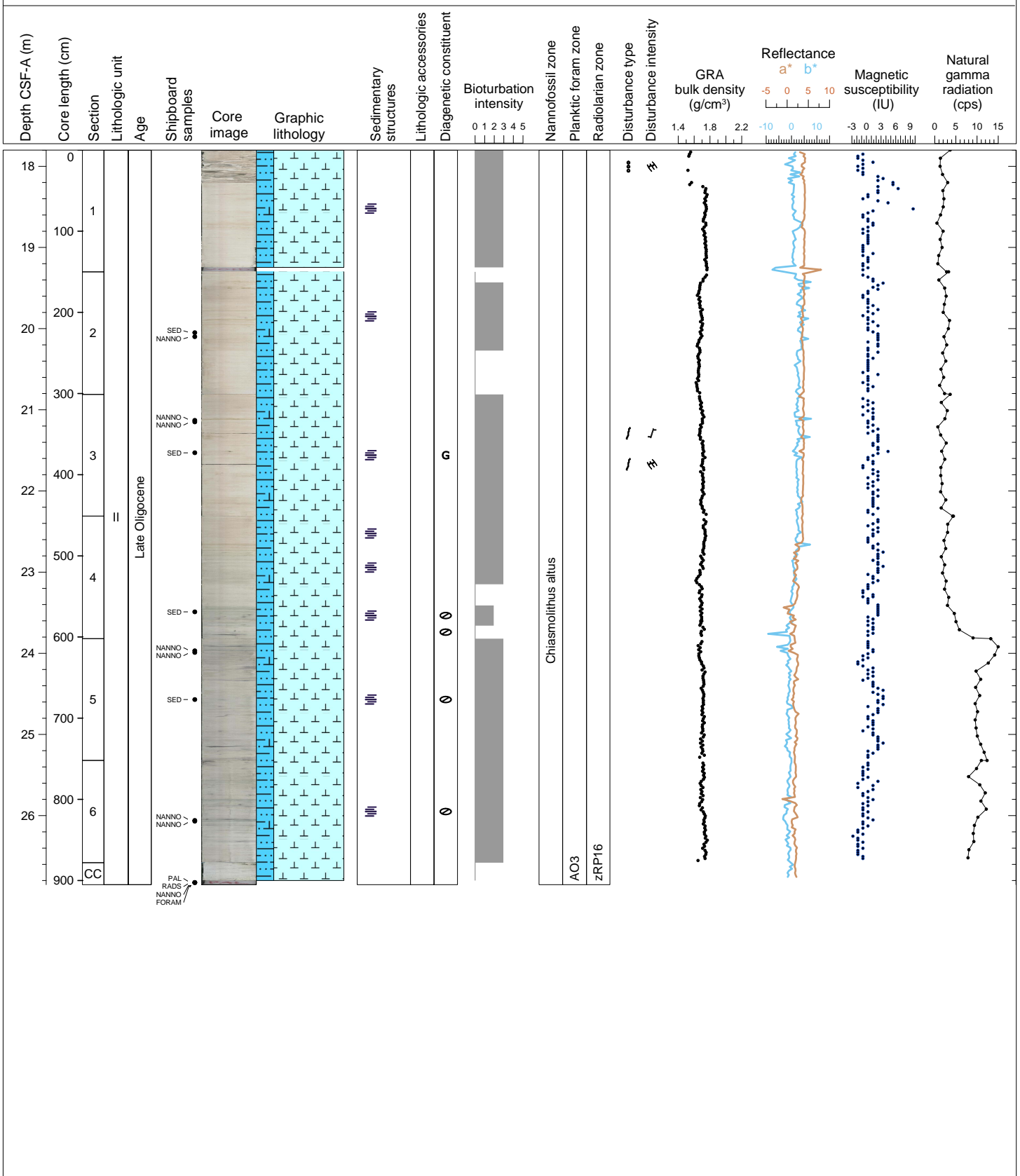
Hole 378-U1553E Core 2H, Interval 8.3-18.14 m (CSF-A)

Core U1553E-2H consists of foraminifer-rich nannofossil ooze and nannofossil-rich foraminiferal ooze. Sediments are white to very pale yellow in color (2.5Y 9/1 to 9/2). The top of Section 1 is soupy. Coarser black detrital grains are abundant in Section 1. Diffuse pale yellow and gray layers are observed throughout the core. Fish remains, quartz, glauconite, mica, ferromagnesian minerals, and feldspar are observed in smear slides.



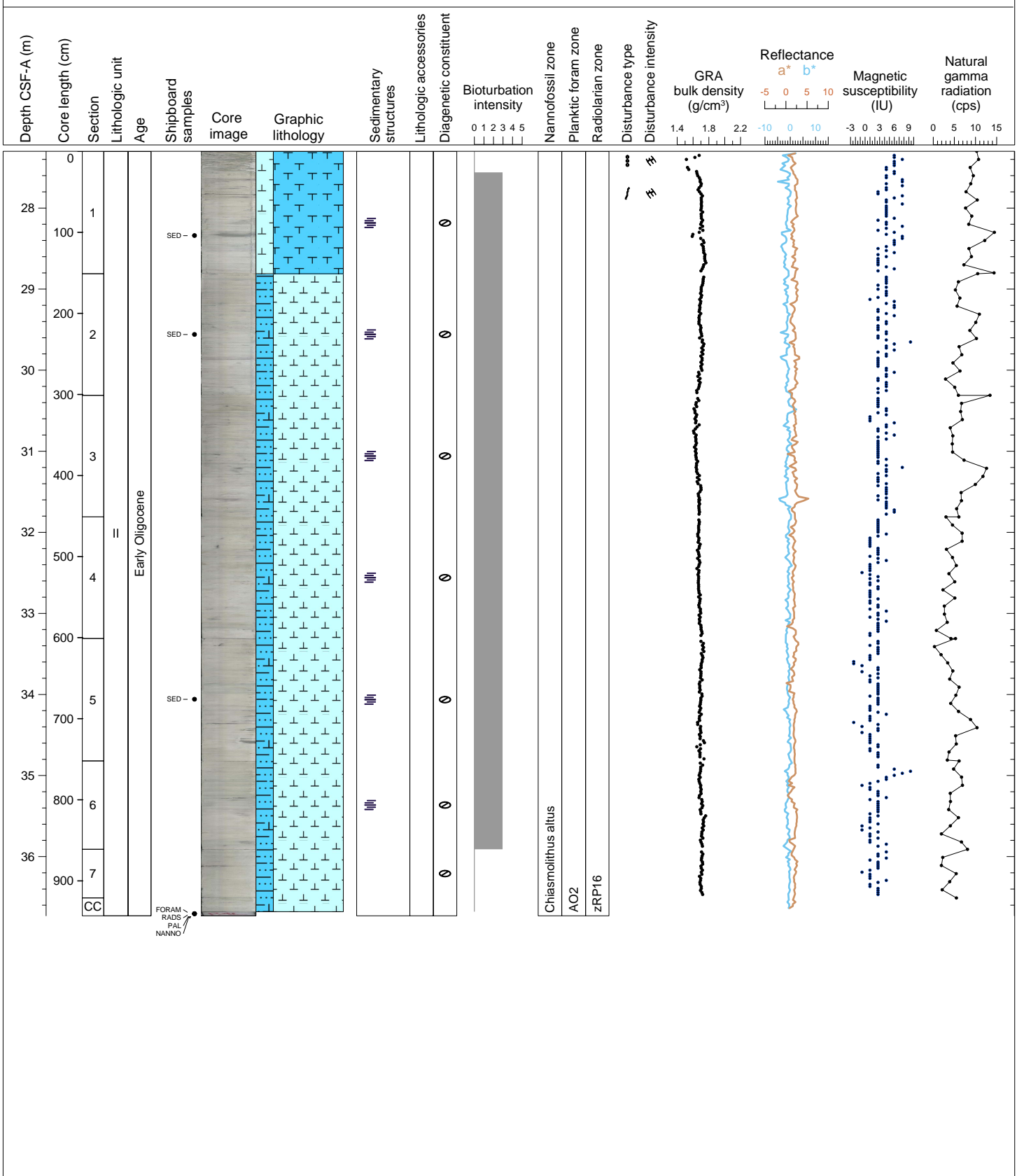
Hole 378-U1553E Core 3H, Interval 17.8-26.85 m (CSF-A)

Core U1553E-3H consists of foraminifer-rich nannofossil ooze. The sediment is white throughout the core but changes from yellow-tinged 2.5Y 9.5/1 to the greenish and neutral 10Y 8/1 and N 8.5 by the bottom of the core. A large goethite bleb is observed in Section 3. There is a clear transition in Section 4 from diffuse to mm-scale yellow layers into green colored layers of the same geometry. The top of Section 1 is soupy. Fish remains, quartz, mica, and siliceous microfossils are observed in smear slides.



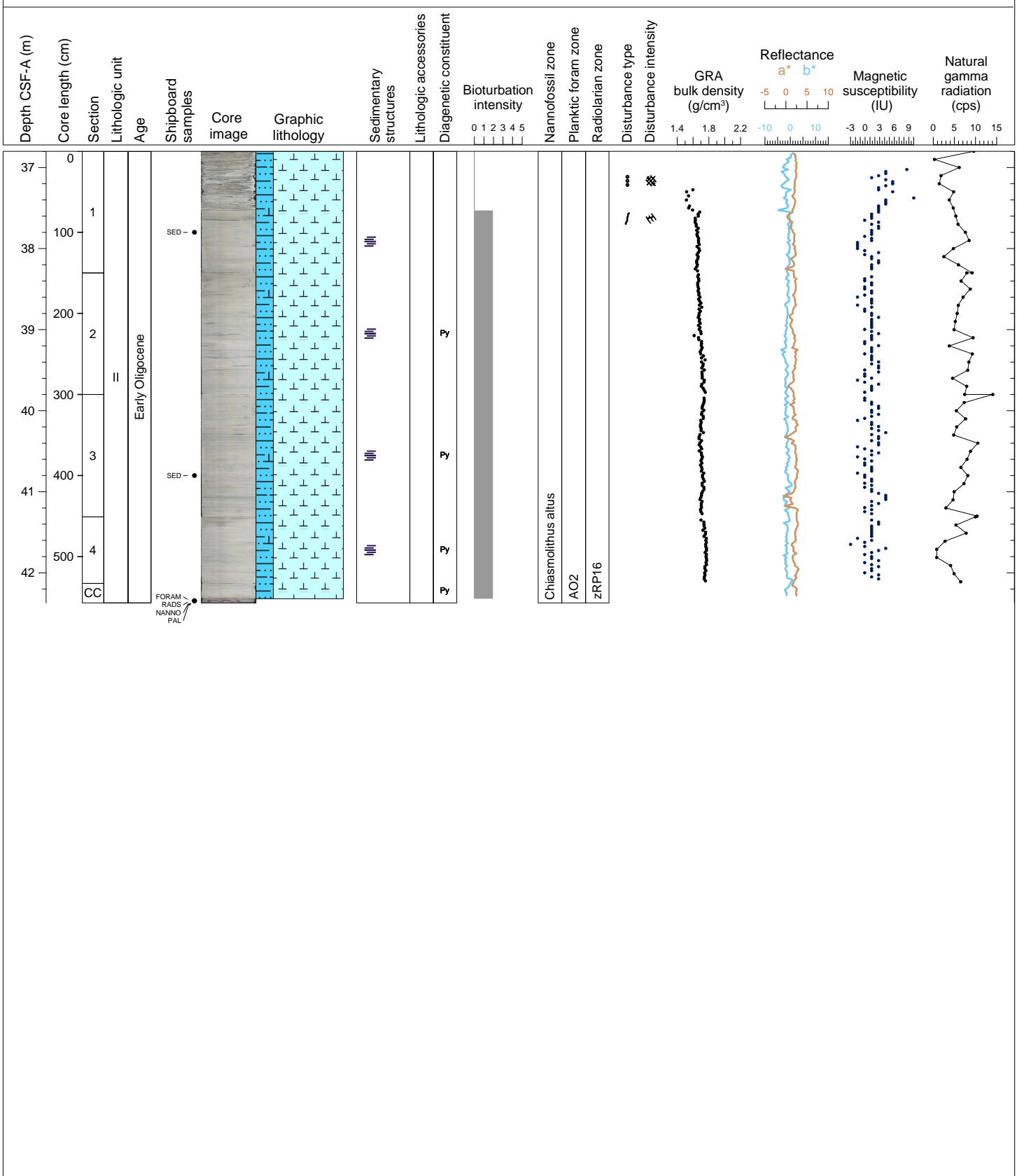
Hole 378-U1553E Core 4H, Interval 27.3-36.73 m (CSF-A)

Core U1553E-4H consists of nannofossil-rich foraminiferal ooze and foraminifer-rich nannofossil ooze. The sediments are white in color (N 8 to N 8.5). Black specks of pyrite are visible throughout as are green and gray layers that are diffuse to mm-scaled. Smear slides indicate the presence of mica, quartz, glauconite, pyrite, fish remains, and siliceous microfossils.



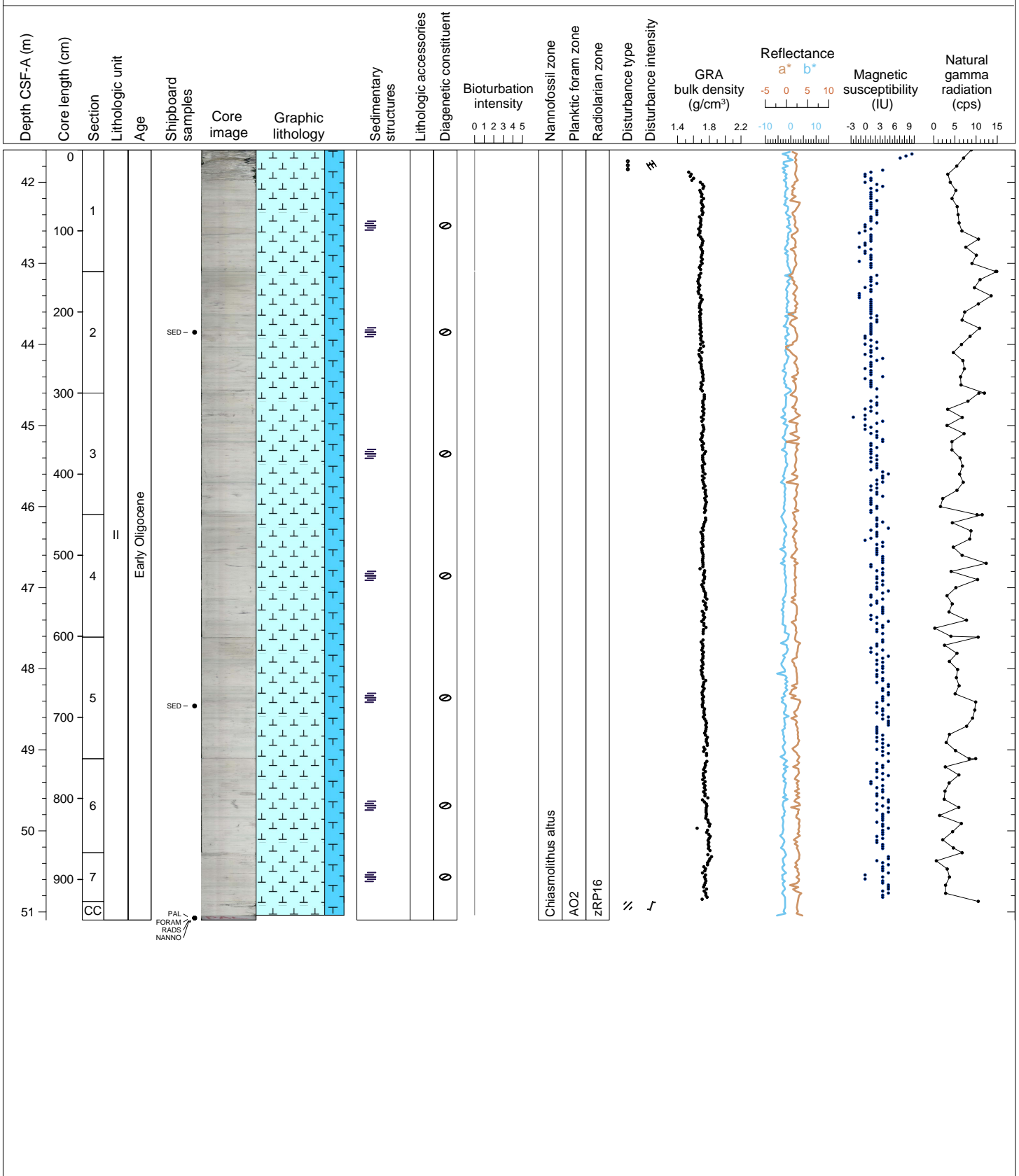
Hole 378-U1553E Core 5H, Interval 36.8-42.37 m (CSF-A)

Core U1553E-5H consists of foraminifer-rich nannofossil ooze. The sediments are white in color (N 8) to light greenish gray (5GY 8/1). Black specks of pyrite are visible throughout, as are green and gray layers that are diffuse to mm-scaled. Fine green layers are clustered in cm-sized segments of Section 3. Smear slides indicate the presence of mica, quartz, fish remains, and siliceous microfossils.



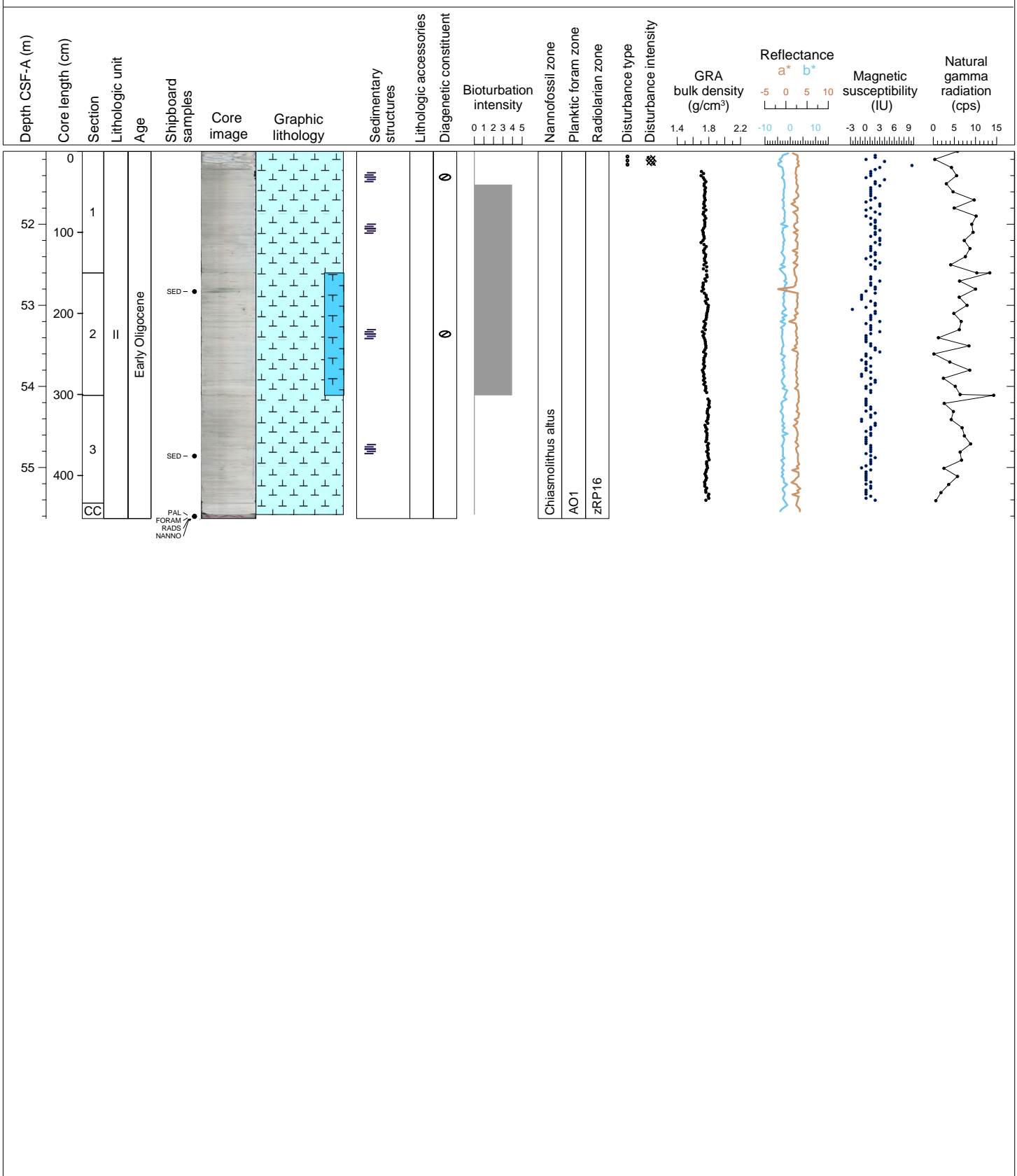
Hole 378-U1553E Core 6H, Interval 41.6-51.1 m (CSF-A)

Core U1553E-6H consists of nannofossil ooze with foraminifers. The sediments are white in color (N 8.5). Black specks and patches of pyrite are visible throughout, as are green and gray layers that are diffuse to mm-scaled. Smear slides indicate the presence of feldspar, mica, quartz, fish remains, and siliceous microfossils.



Hole 378-U1553E Core 7H, Interval 51.1-55.63 m (CSF-A)

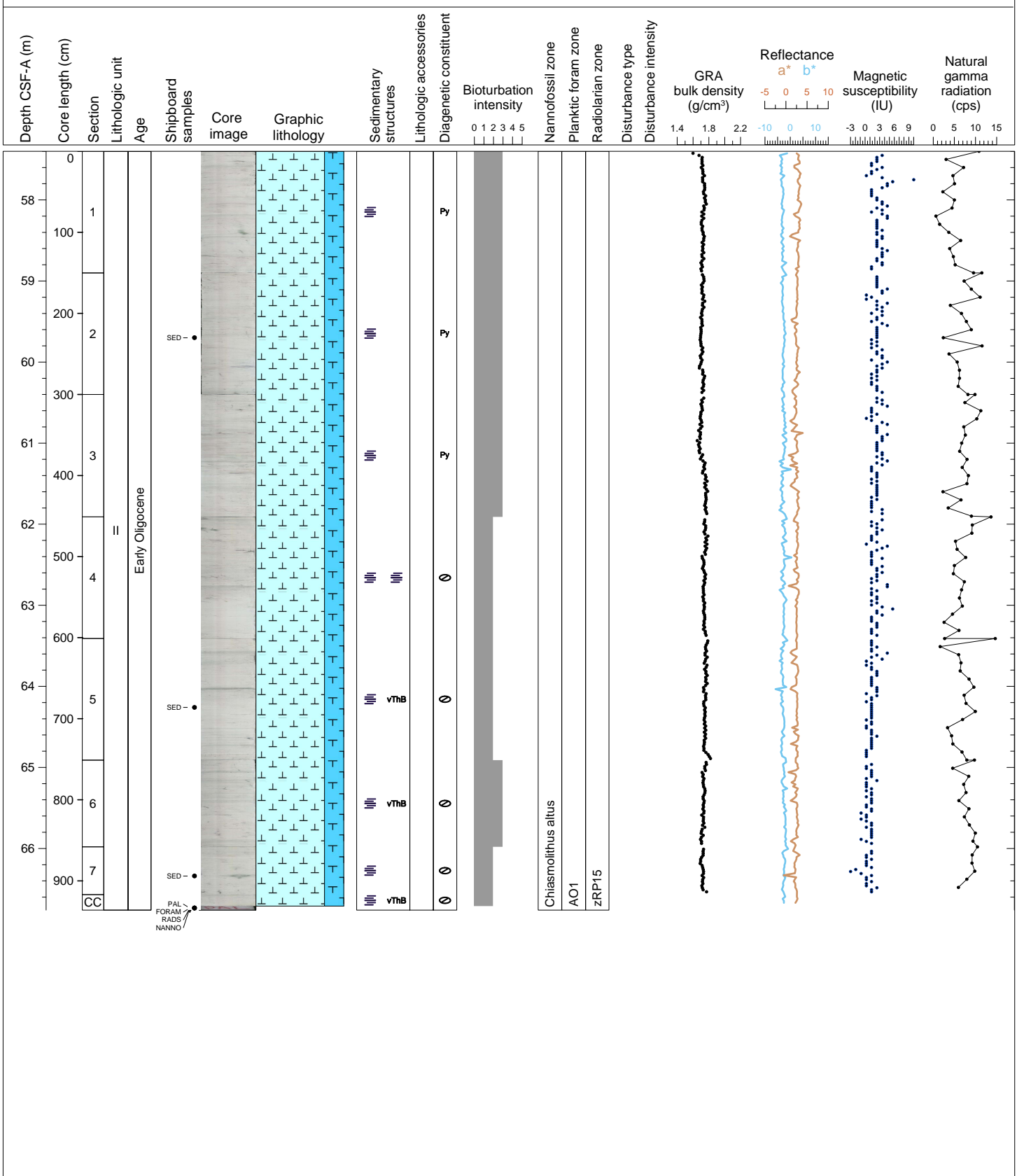
Core U1553E-7H consists of nannofossil ooze and nannofossil ooze with foraminifers. The sediments are white (N 8.5 to N 9), with a small greenish bleb near the top of Section 2. There are light greenish-gray (10GY 7/1) layers throughout that are diffuse to mm-scaled. A faint pale brown burrow is present in Section 1 (101-121 cm). There are black specks of pyrite throughout. Smear slides indicate the presence of mica, pyrite, siliceous sponge spicules, and diatoms. The greenish bleb in Section 2 also contains siliceous microfossils and fish remains. The top of Section 7 is soupy.





Hole 378-U1553E Core 8H, Interval 57.4-66.76 m (CSF-A)

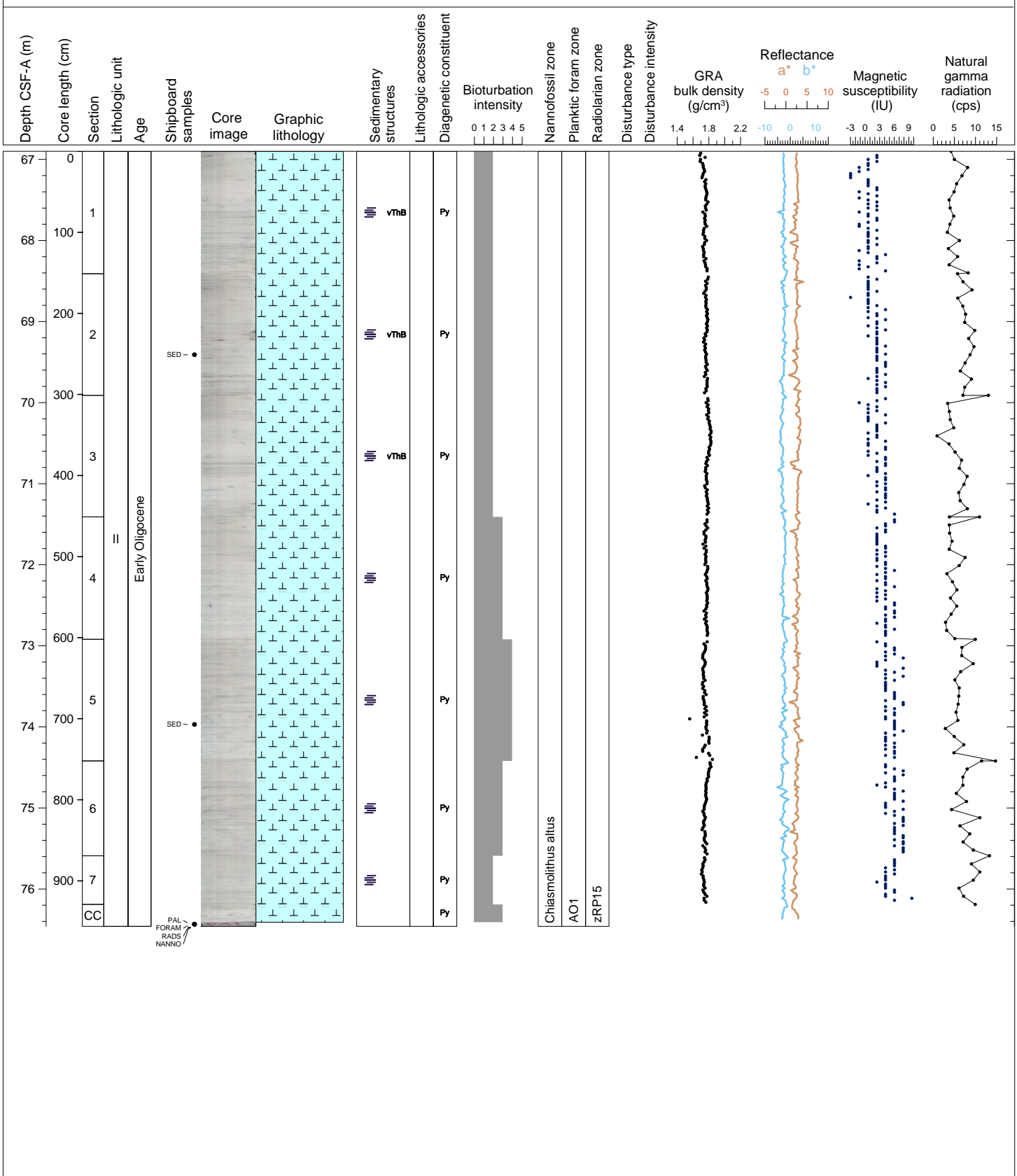
Core U1553E-8H consists of nannofossil ooze with foraminifers. The sediments are white (N 9). There are light greenish-gray (5G 7/1 to 7/2, and 10GY 7/1) layers throughout that are diffuse to mm-scaled. Similarly colored vertical and circular features are present in Sections 1, 2, 3 and 7. There are gray patches and particles throughout, some or all of which may be pyrite. Smear slides indicate the presence of mica, pyrite, siliceous sponge spicules, and fish remains.





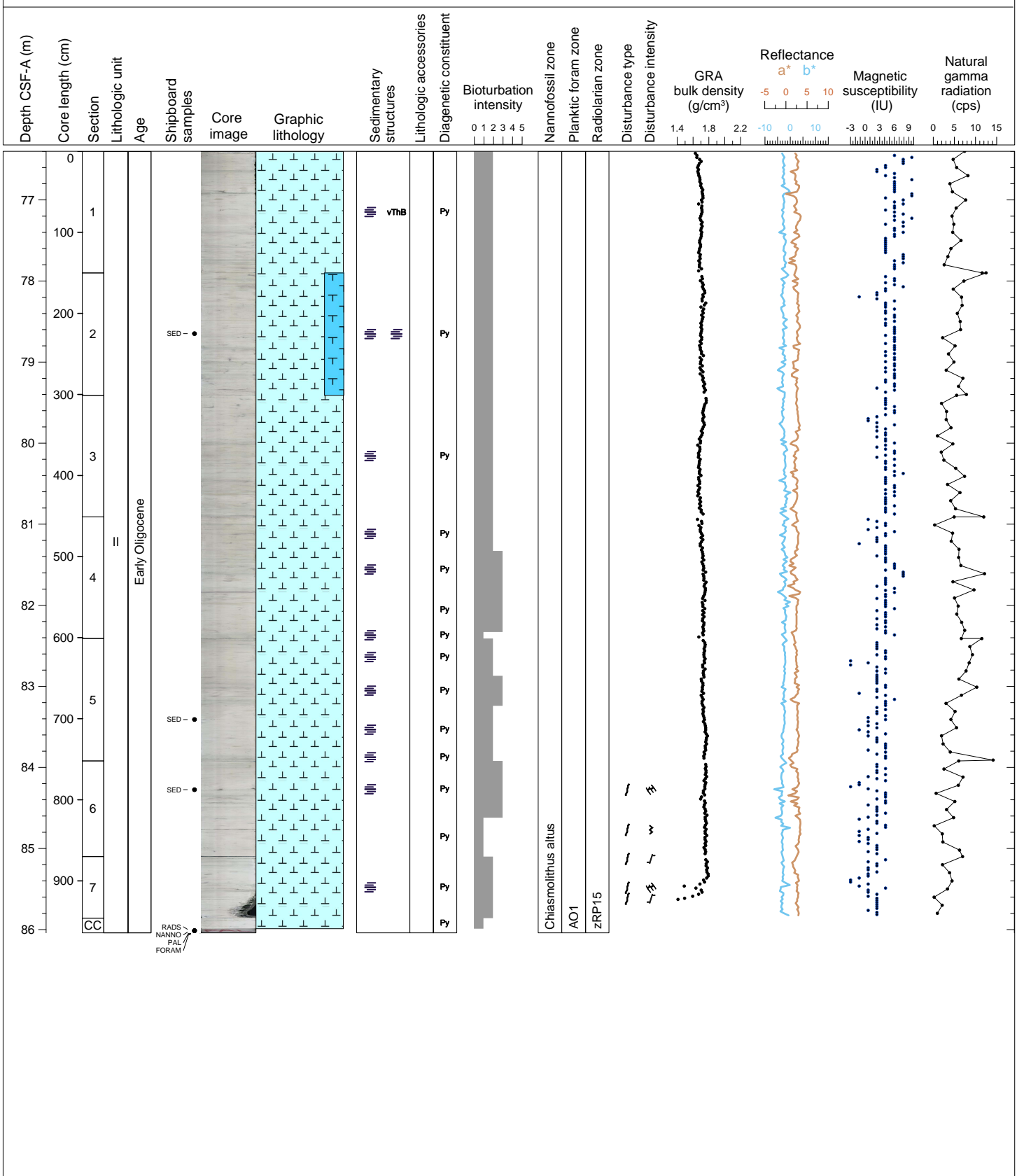
Hole 378-U1553E Core 9H, Interval 66.9-76.46 m (CSF-A)

Core U1553E-9H consists of a white (N 9) nannofossil ooze. There are light greenish-gray (5G 7/1) layers throughout that are diffuse to mm-scaled. There are pale brown patches and inclined layers in Sections 4 to 6. There are gray features throughout, some of which are present as layers. Smear slides indicate the presence of volcanic glass, foraminifers, siliceous sponge spicules, diatoms, radiolarians, silicoflagellates, and fish remains.



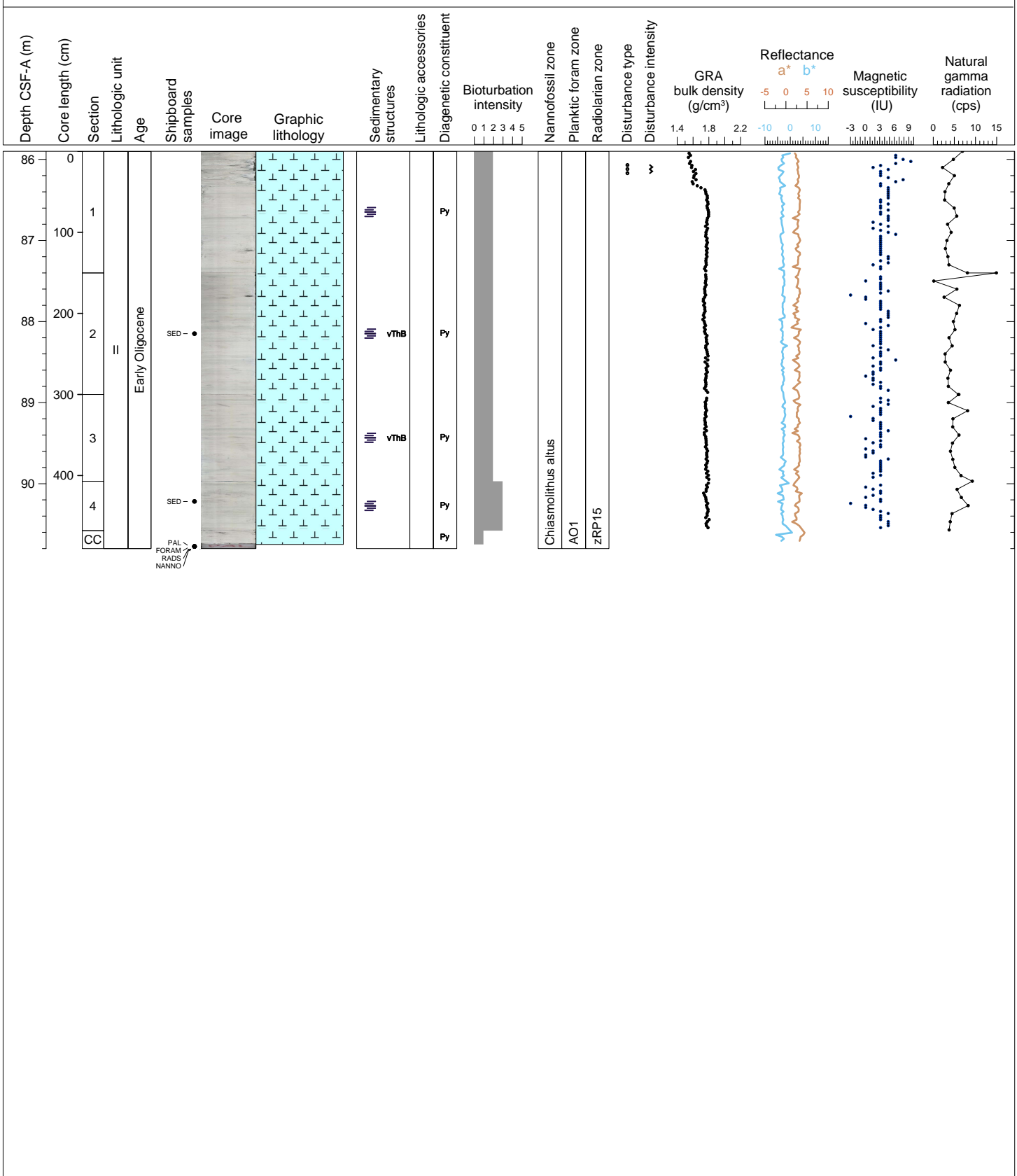
Hole 378-U1553E Core 10H, Interval 76.4-86.04 m (CSF-A)

Core U1553E-10H consists of a white (N 9) nannofossil ooze and nannofossil ooze with foraminifers. There are light greenish-gray (10GY 7/1 and 5G 7/1) layers throughout that are diffuse to mm-scaled. There are pale brown patches and inclined layers in most sections. There are gray to dark-gray features throughout, including some that may represent diffuse pyritized burrows. Smear slides indicate the presence of mica, pyrite, foraminifers, siliceous sponge spicules, diatoms, radiolarians, and fish remains. A smear slide from the dark gray patch in Section 6 (36 cm) indicates pyrite, which is clay-sized (<4 um) and not framboidal. Inferred bioturbation varies from very slight to moderate. Some parts of Sections 6 and 7 are cracked.



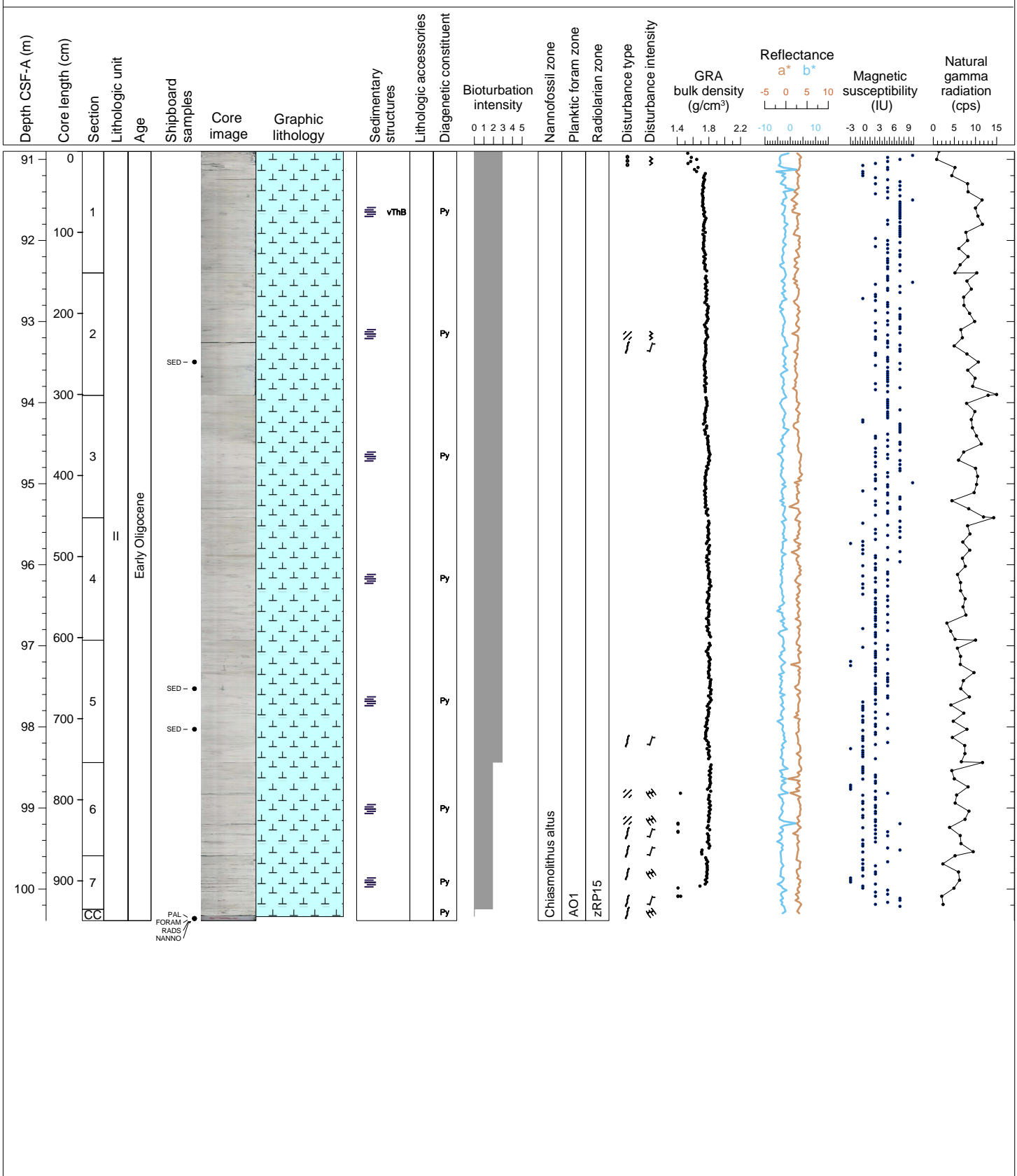
Hole 378-U1553E Core 11H, Interval 85.9-90.8 m (CSF-A)

Core U1553E-11H consists of a white (N 9) nannofossil ooze. There are light greenish-gray (5G 7/1) layers throughout, including within the soupy zone (Section 1, 0 to 44 cm), that are diffuse to mm-scaled. There are pale brown patches which may be related to bioturbation. There are gray to dark-gray features throughout, probably related to pyrite. Smear slides indicate the presence of volcanic glass, ferromagnesian minerals, foraminifers, siliceous sponge spicules, diatoms, radiolarians, and fish remains. Inferred bioturbation varies from very slight to moderate.



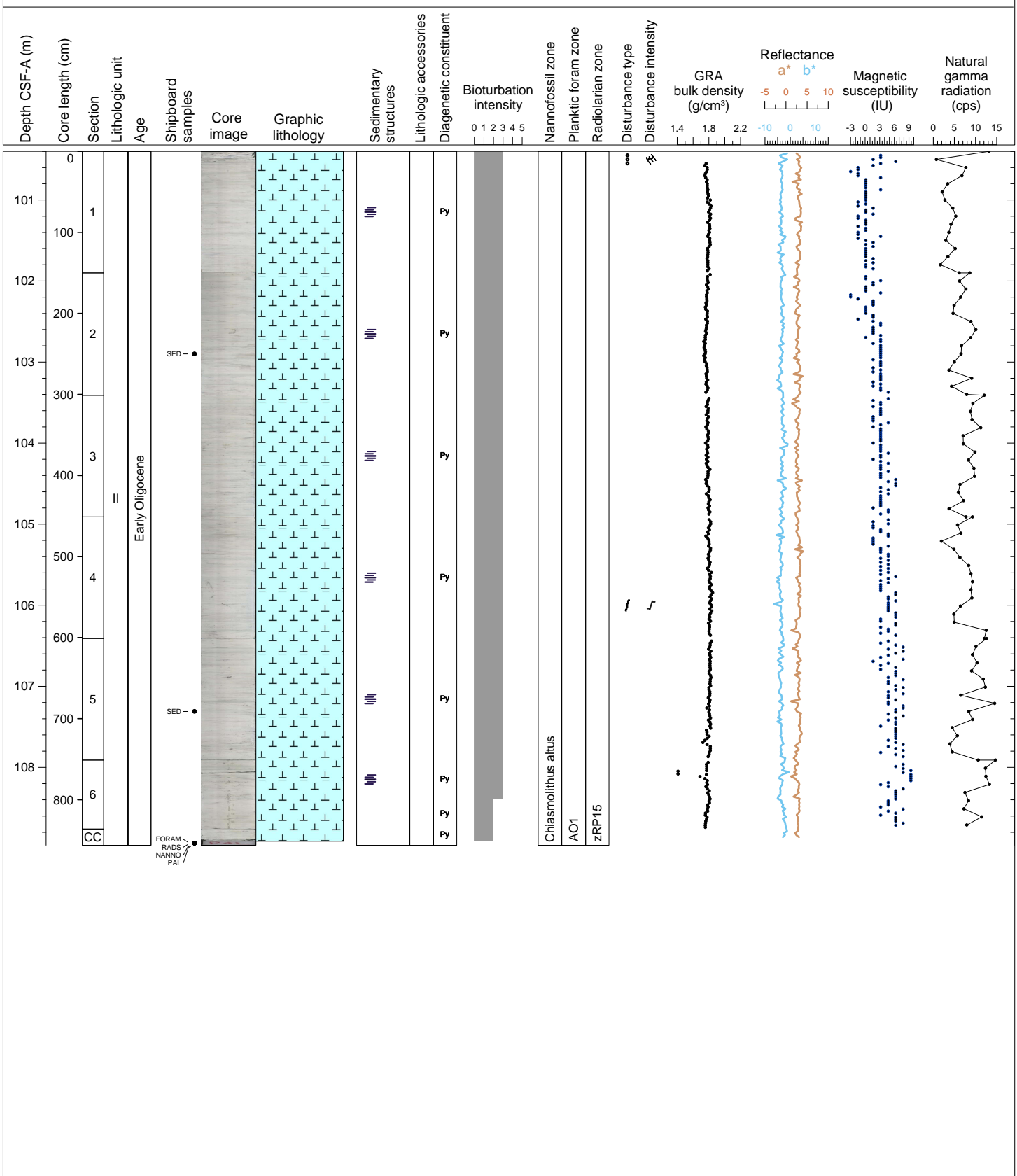
Hole 378-U1553E Core 12H, Interval 90.9-100.39 m (CSF-A)

Core U1553E-12H consists of a white (N 9) nannofossil ooze. There are light greenish-gray (5G 7/1) layers throughout that are diffuse to mm-scaled. There are pale brown patches which may be related to bioturbation. There are gray to dark-gray features throughout, likely related to pyrite. Smear slides indicate the presence of quartz, mica, ferromagnesian minerals, pyrite, foraminifers, siliceous sponge spicules, diatoms, radiolarians, and fish remains. Inferred bioturbation varies from non-observed to moderate. The top 24 cm of Section 1 is soupy.



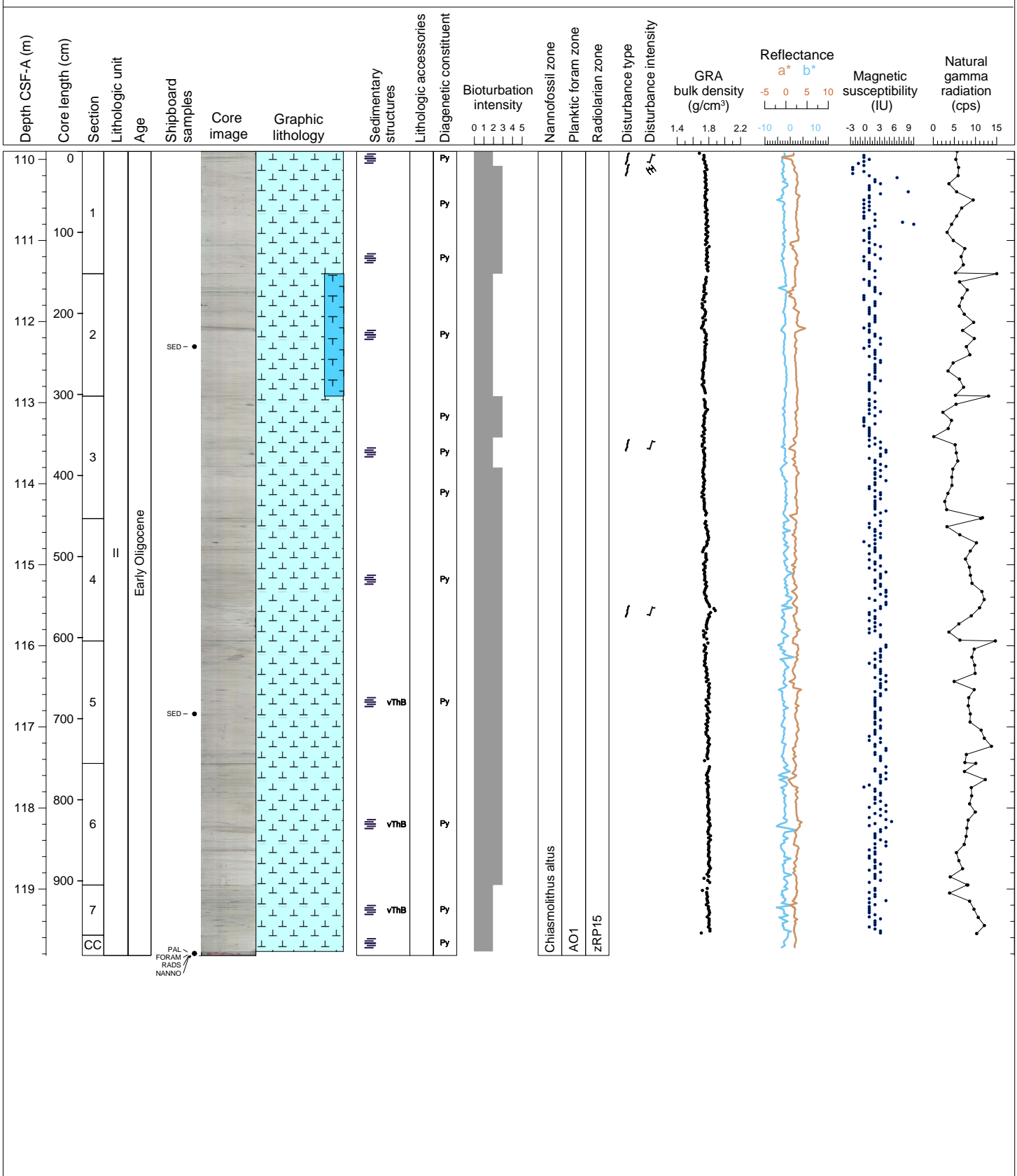
Hole 378-U1553E Core 13H, Interval 100.4-108.96 m (CSF-A)

Core U1553E-13H consists of a white (N 9) nannofossil ooze. There are light greenish-gray (5G 7/1) layers throughout that are diffuse to mm-scaled. There are pale brown patches which may be related to bioturbation. There are gray to dark-gray features throughout, likely related to pyrite. Smear slides indicate the presence of quartz, volcanic glass, mica, foraminifers, siliceous sponge spicules, diatoms, radiolarians, and fish remains. Inferred bioturbation varies from very slight to moderate. The top part (4 to 10 cm) of Section 1 is soupy.



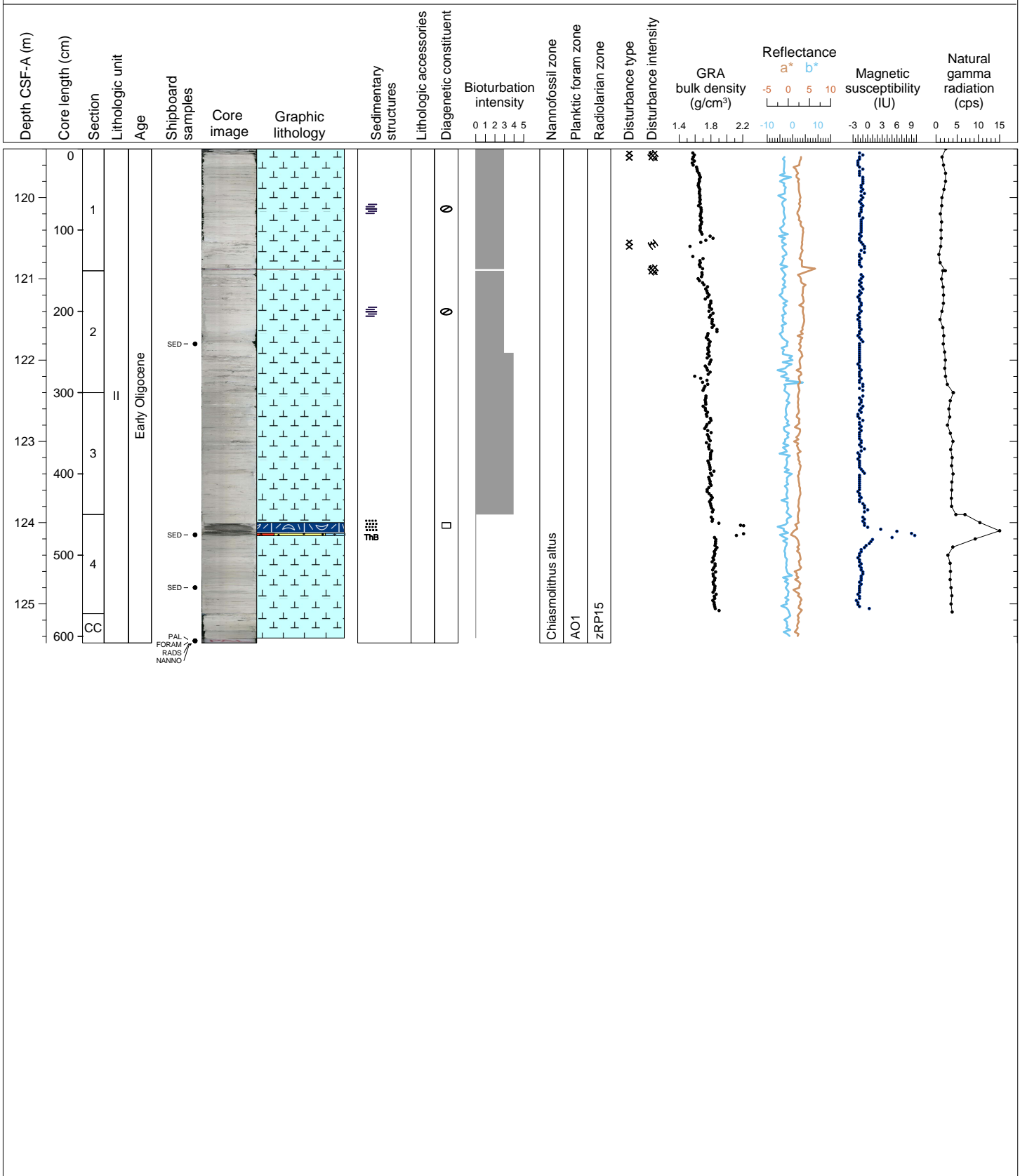
Hole 378-U1553E Core 14H, Interval 109.9-119.82 m (CSF-A)

Core U1553E-14H consists of a white (N 9) nannofossil ooze and nannofossil ooze with foraminifers. There are light greenish-gray (5G 7/1) layers throughout that are diffuse to mm-scaled. There are pale brown patches that may be related to bioturbation. There are gray to dark-gray features throughout, likely related to pyrite. Smear slides indicate the presence of mica, foraminifers, siliceous sponge spicules, diatoms, and fish remains.



Hole 378-U1553E Core 15X, Interval 119.4-125.48 m (CSF-A)

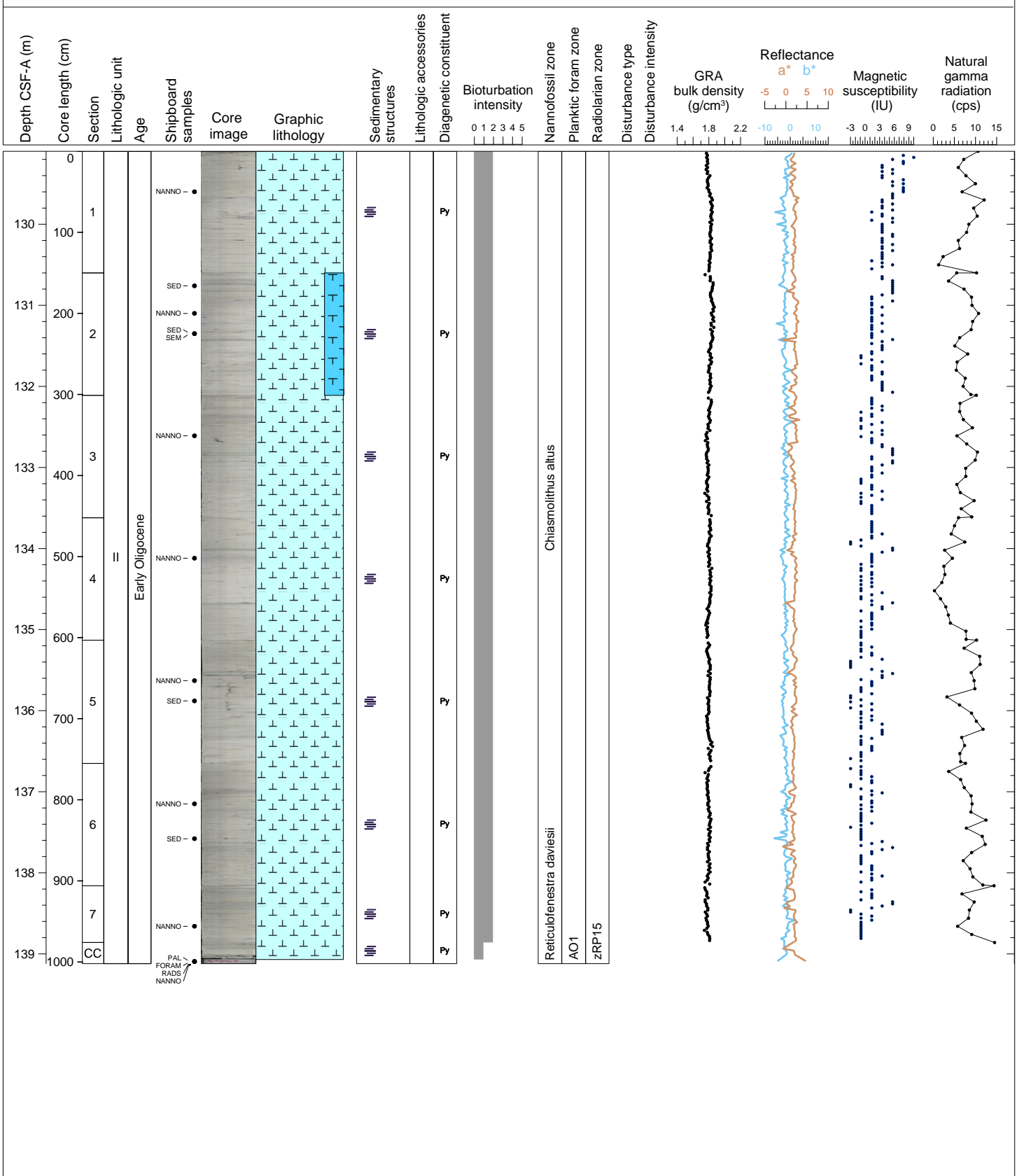
Core U1553E-15X consists of a white (N 8.5 to N 9) nannofossil ooze. A 13 cm thick packstone layer (light gray, N 7) is present in Section 4, overlying a 3 cm thick possible volcanic ash layer (greenish gray, 5G 6/1) that contains medium sand grains and biogenic carbonate material. In the ooze portion, there are light greenish-gray (5GY 7/1) layers throughout that are diffuse to mm-scaled. There are gray to dark-gray features throughout, likely related to pyrite. Smear slides indicate the presence of quartz, mica, volcanic glass, rock fragments, feldspar, ferromagnesian minerals, pyrite, foraminifers, siliceous sponge spicules, diatoms, radiolarians, and fish remains. The top part of Section 1 is severely brecciated due to drilling disturbance.





Hole 378-U1553E Core 16H, Interval 129.1-139.12 m (CSF-A)

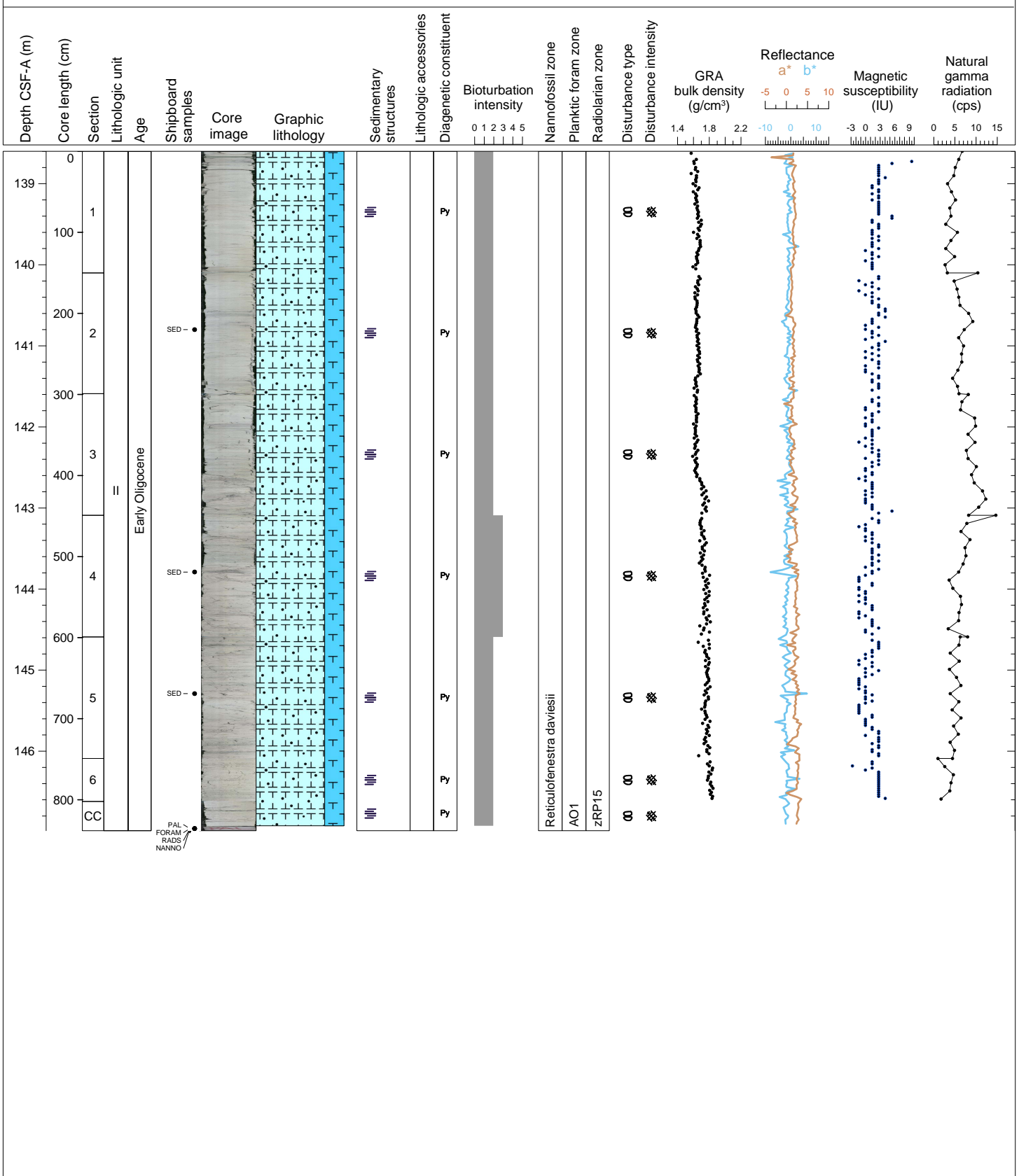
Core U1553E-16H consists of a white (N 8.5) nannofossil ooze and nannofossil ooze with foraminifers. There are light greenish-gray (10GY 7/1) and light gray (5Y 7/1) layers throughout that are diffuse to mm-scaled. There are pale brown patches which may be related to bioturbation. There are gray to black features throughout, including vertical black seams, that in Section 6 were shown by smear slide analysis to be due to pyrite. Smear slides indicate the presence of mica, glauconite, ferromagnesian minerals, pyrite, foraminifers, siliceous sponge spicules, diatoms, and fish remains.





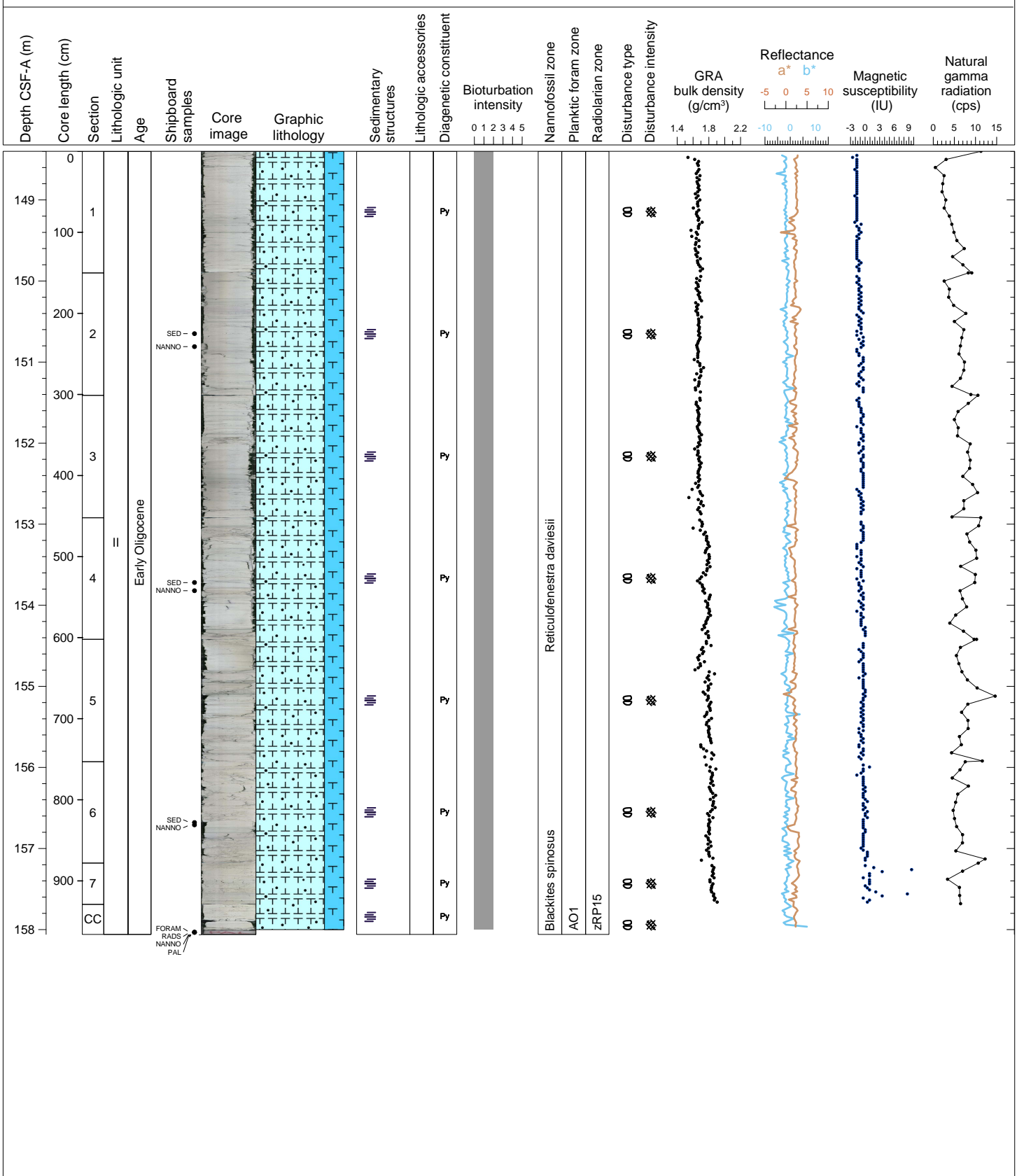
Hole 378-U1553E Core 17X, Interval 138.6-146.98 m (CSF-A)

Core U1553E-17X consists of a white (N 8.5) nannofossil chalk with foraminifers. There are greenish gray (5G 6/1) to pale green (5G 7/2) bands and laminations that are well defined in parts, showing mm-scale variation in color. There are pale brown patches that may be related to bioturbation and some visible Teichichnus burrows. There are gray to black features throughout, including vertical black seams, likely related to pyrite. Smear slides indicate the presence of mica, glauconite, pyrite, calcareous nannofossils, foraminifers, micrite, siliceous sponge spicules and other siliceous fossils, diatoms, radiolarians and fish remains. There is severe biscuiting of the whole core caused by drilling.



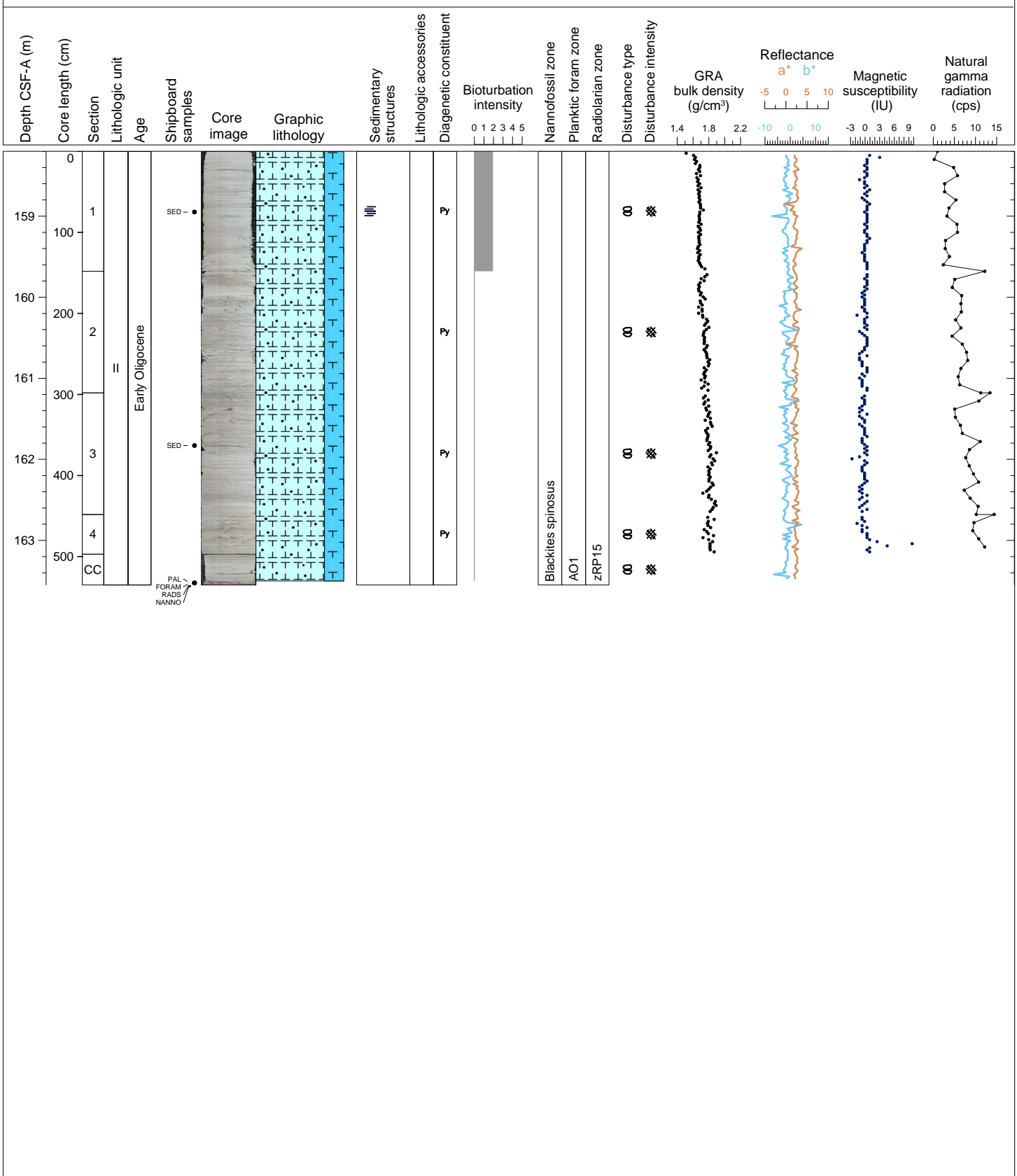
Hole 378-U1553E Core 18X, Interval 148.4-158.06 m (CSF-A)

Core U1553E-18X consists of a white (N 8.5) nannofossil chalk with foraminifers. There are greenish gray (5G 6/1) to pale green (5G 7/2) bands and laminations that are well defined in parts, showing mm-scale variation in color. There are pale brown features related to bioturbation, including *Teichichnus* and *Chondrites* burrows. There are small specks and patches of pyrite through much of the core, and some thin, vertical pyritized burrows. Smear slide analysis of a dark patch in Section 4 was pyrite. Smear slides indicate the presence of mica, pyrite, calcareous nannofossils, foraminifers, siliceous sponge spicules and other siliceous fossils, diatoms, and fish remains. There is severe biscuiting of the whole core caused by drilling.



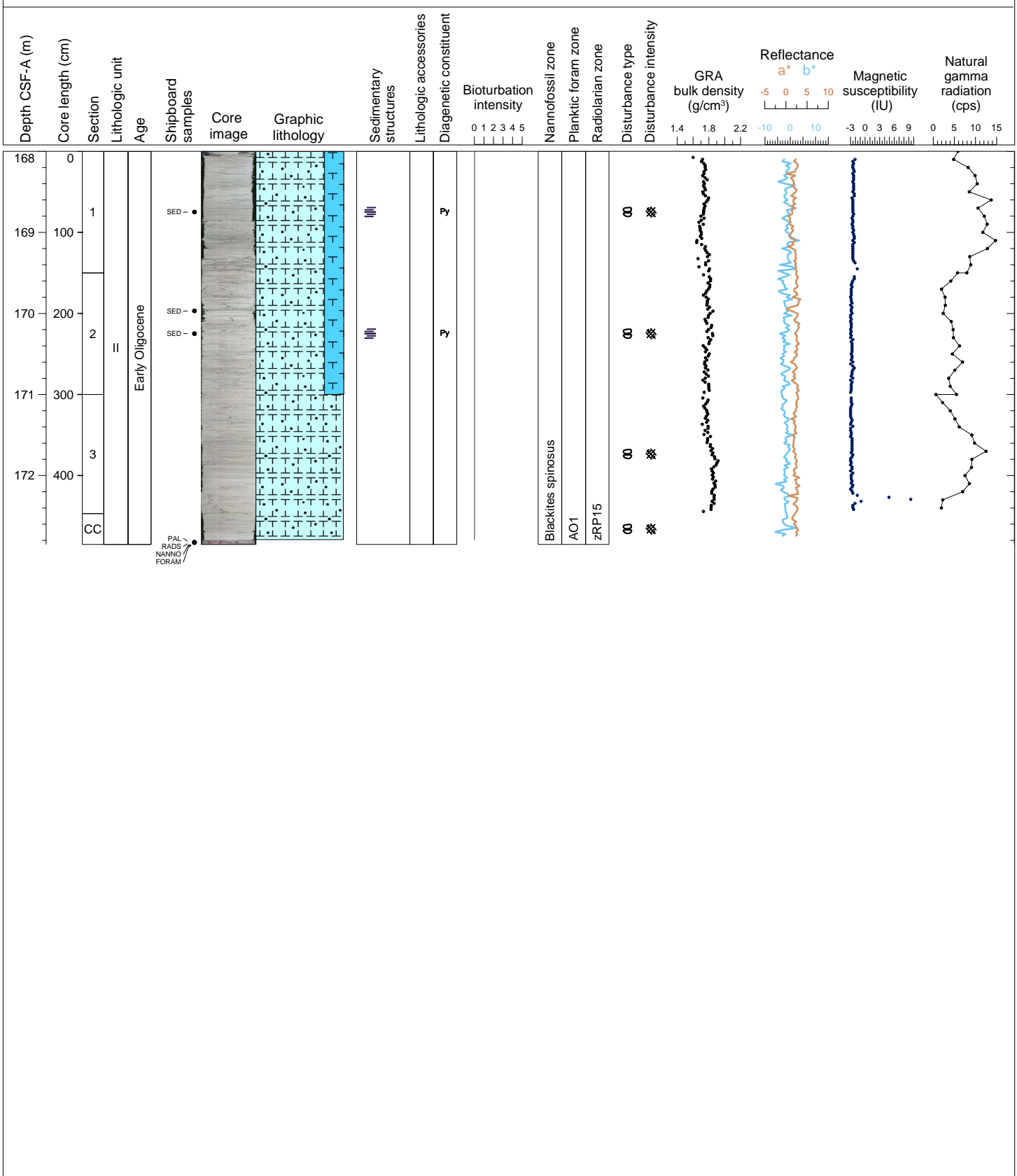
Hole 378-U1553E Core 19X, Interval 158.2-163.55 m (CSF-A)

Core U1553E-19X consists of a white (N 8.5) nannofossil chalk with foraminifers. There are some pale green (5G 7/2) to dark green bands and laminations in Section 1 that are well defined in parts, showing mm-scale variation in color. However, other sections are too disturbed to retain the original structure. There are small specks and patches of pyrite through much of the core. Smear slides indicate the presence of quartz, mica, pyrite, foraminifers, siliceous sponge spicules, diatoms, radiolarians, and fish remains. There is severe biscuiting of the whole core caused by drilling.



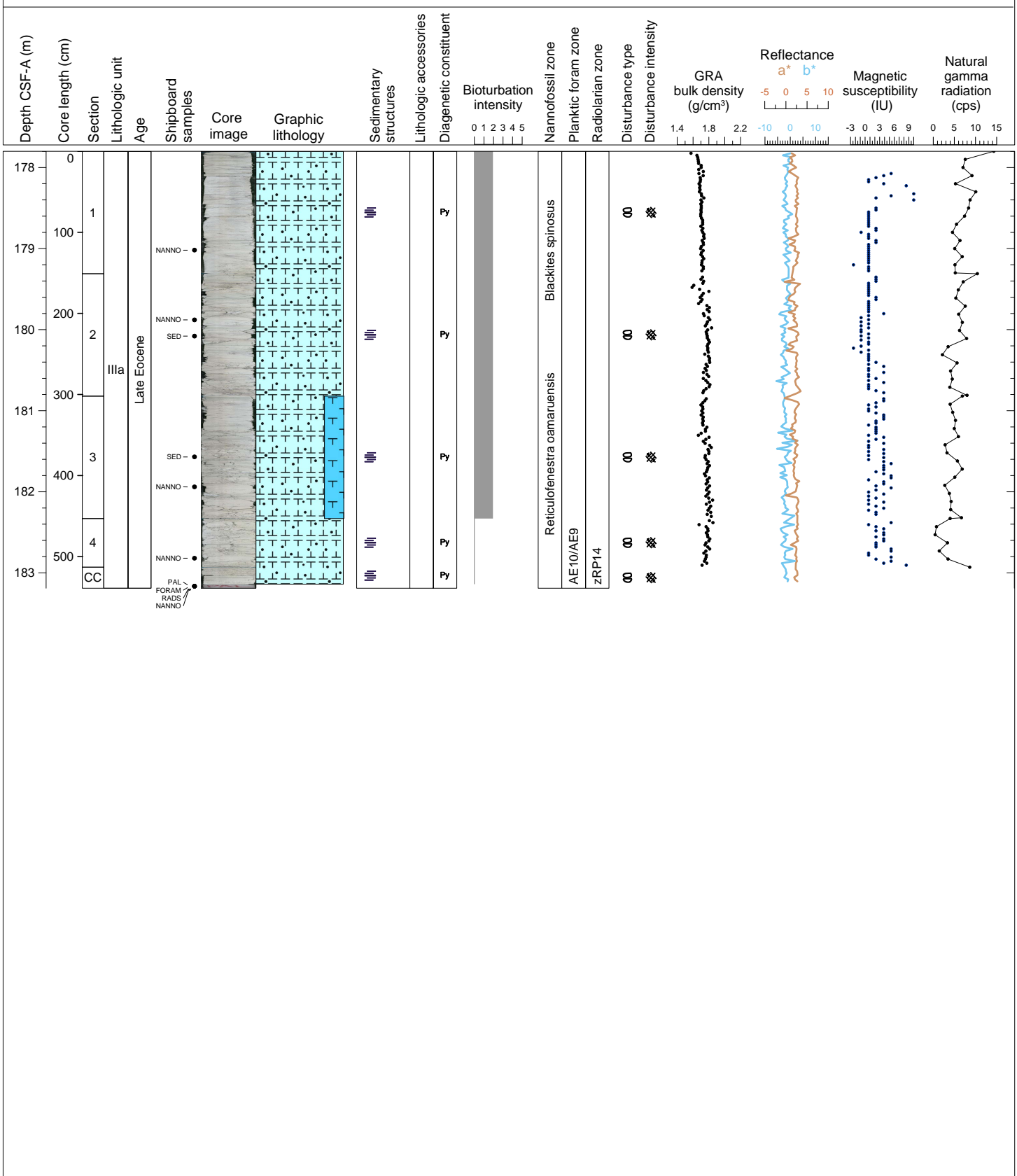
Hole 378-U1553E Core 20X, Interval 168.0-172.85 m (CSF-A)

Core U1553E-20X consists of a white (N 8.5) to light greenish gray (10Y 8/1) nannofossil chalk with varying amounts of foraminifers. There are some blurred faint pale green (5G 7/2) bands in Sections 1 and 2. However, Sections 3 and CC are too disturbed to retain the original structure. There are small specks and patches of pyrite in Sections 1 and 2. Smear slides indicate the presence of quartz, mica, glauconite, pyrite, siliceous sponge spicules and other siliceous fossils, diatoms, radiolarians, and fish remains. There is severe biscuiting of the whole core caused by drilling.



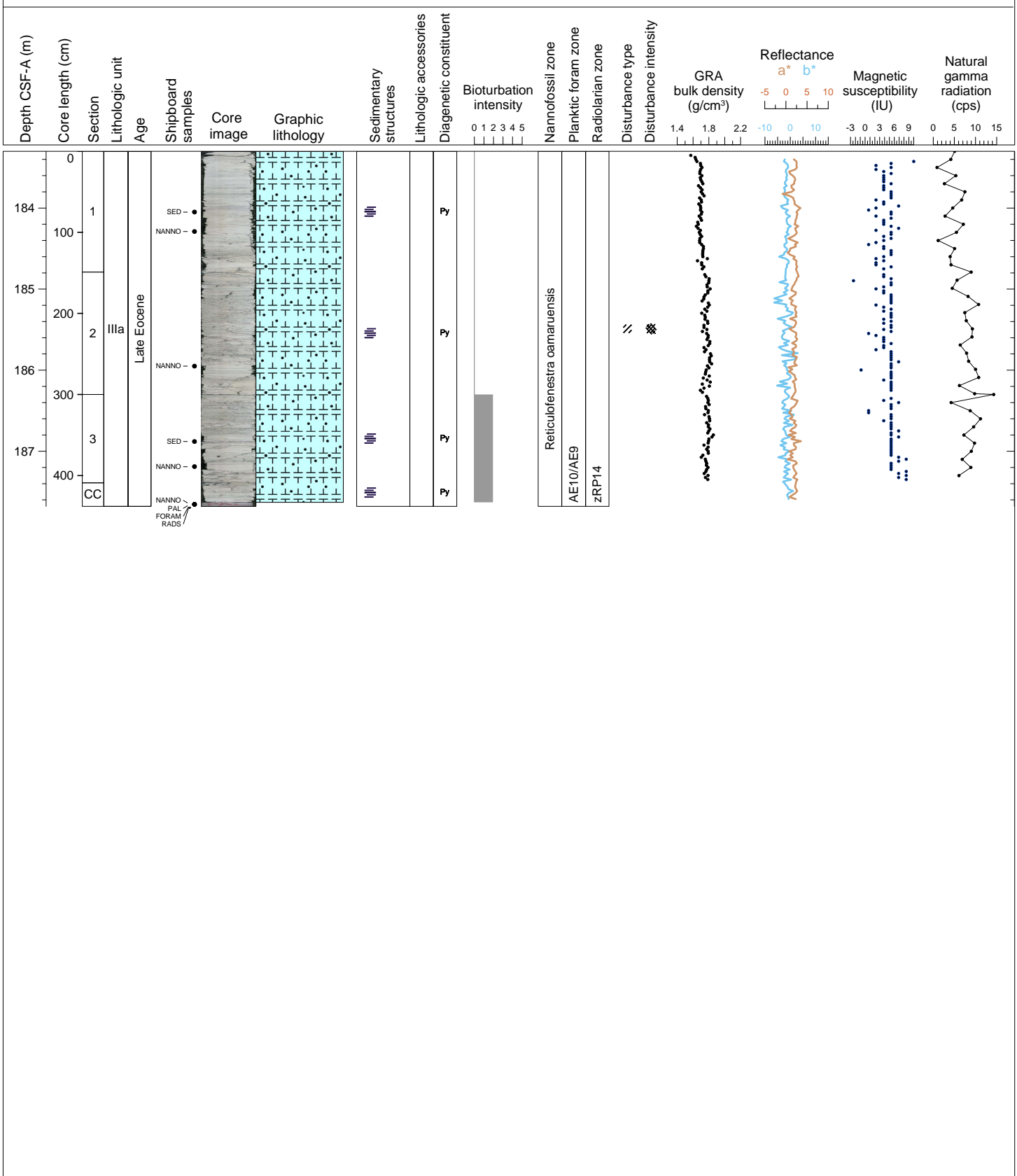
Hole 378-U1553E Core 21X, Interval 177.8-183.19 m (CSF-A)

Core U1553E-21X consists of a white (N 8.5) nannofossil chalk with varying amounts of foraminifers. There are pale green (10GY 7/1) to dark green bands and laminations that are well defined in parts, showing mm-scale variation in color. There are pale brown features related to bioturbation, including *Teichichnus*. There are small specks and patches of pyrite throughout the core, and some thin, pyritized burrows are surrounded by diagenetic halos. Smear slides indicate the presence of quartz, mica, pyrite, siliceous sponge spicules, and diatoms. There is severe biscuiting of the whole core caused by drilling.



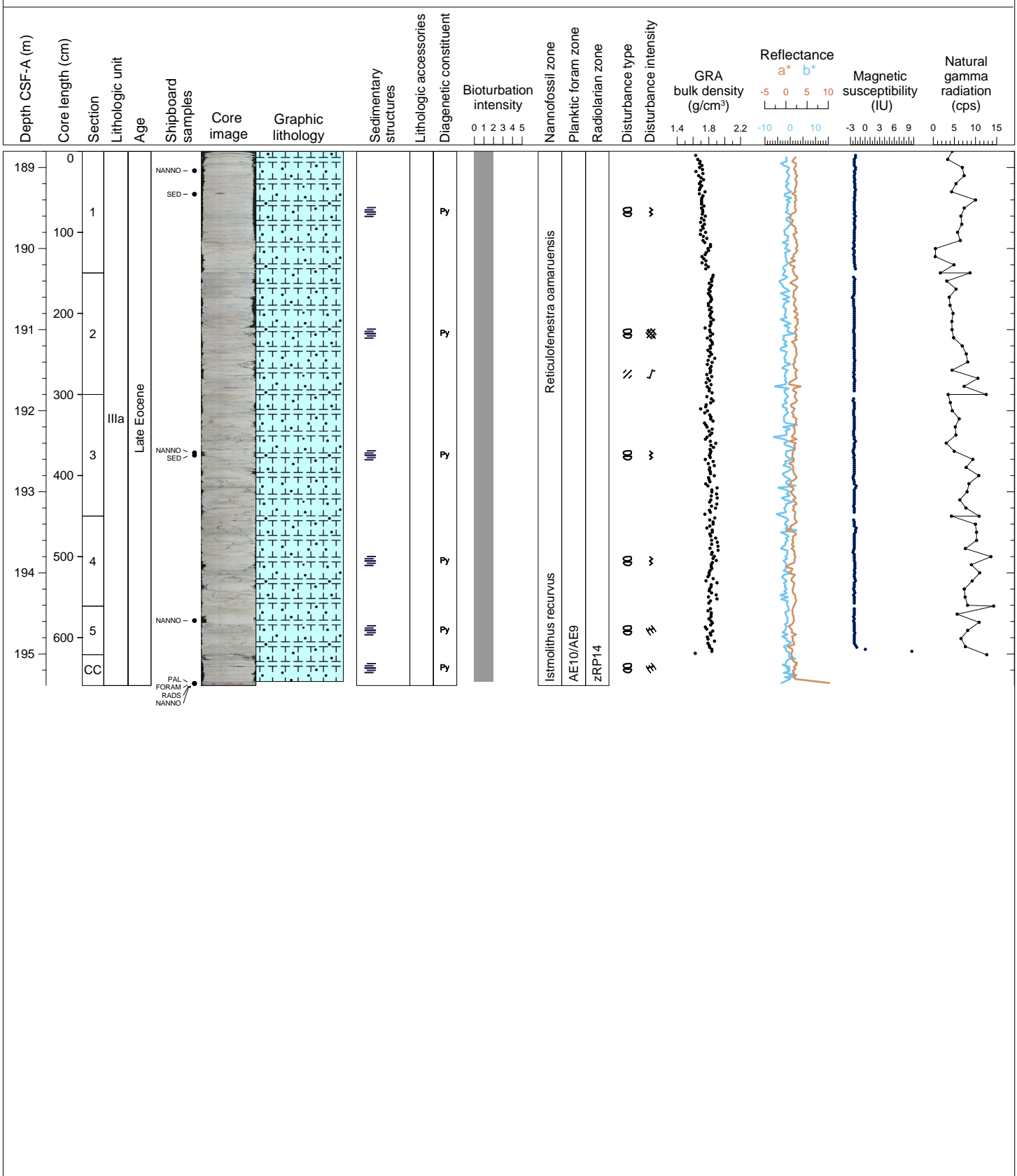
Hole 378-U1553E Core 22X, Interval 183.3-187.68 m (CSF-A)

Core U1553E-22X consists of a white (N 8.5) nannofossil chalk and shows light greenish gray (10GY 7/1) to dark green bands and laminations that are well defined in parts with mm-scale variation in color. There are pale brown features related to slight bioturbation, including *Teichichnus*. Small specks and patches of pyrite are visible throughout the core, and some thin, pyritized burrows are surrounded by diagenetic halos. Smear slides indicate the presence of silicoflagellates, calcareous and siliceous sponge spicules, and ferromagnesian minerals. The core is severely fractured by drilling.



Hole 378-U1553E Core 23X, Interval 188.8-195.39 m (CSF-A)

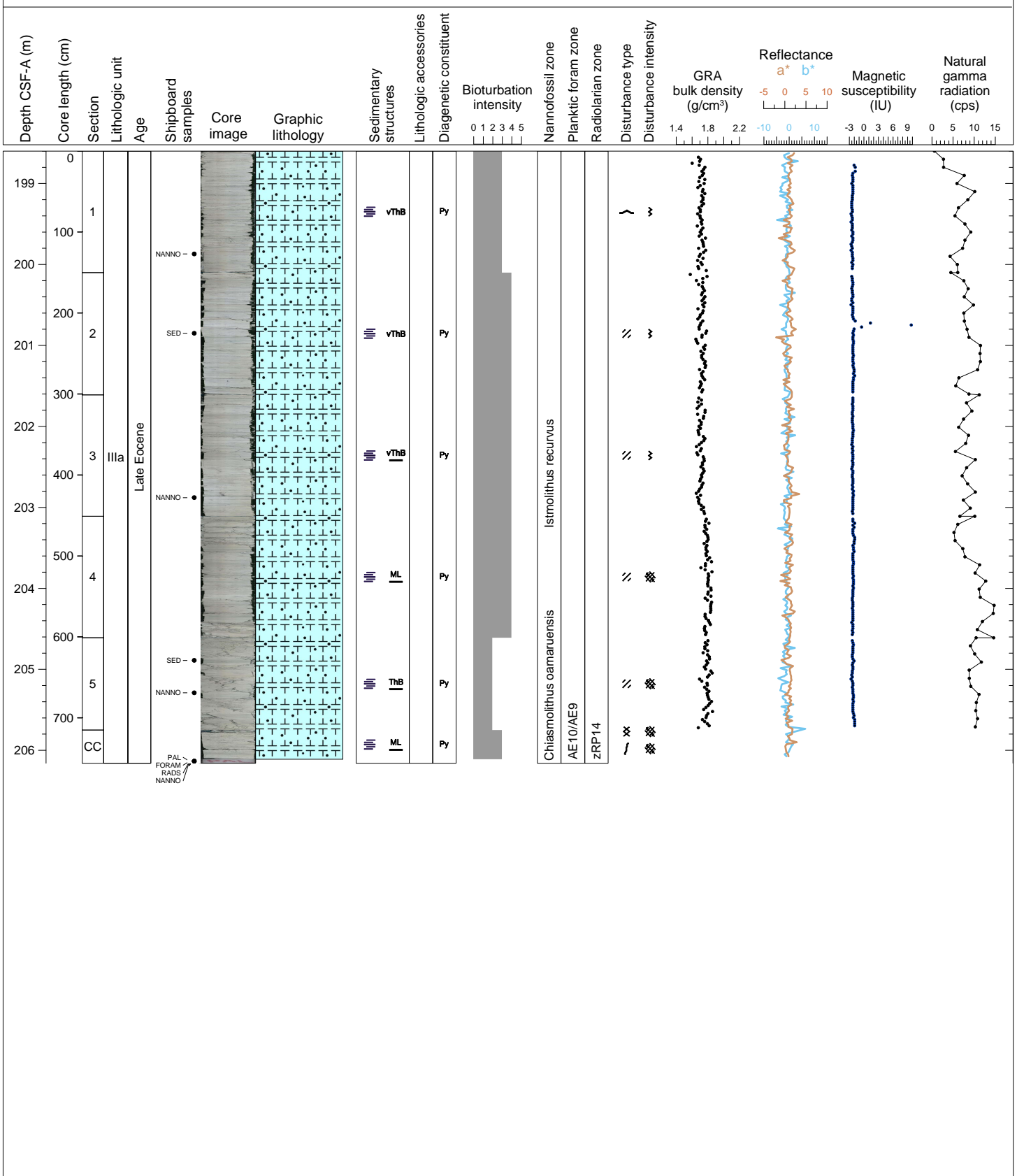
Core U1553E-23X consists of a white (N 8.5) nannofossil chalk and shows light greenish gray (10GY 7/1) to dark green bands and laminations that are well defined in parts with mm-scale variation in color. There are pale brown features related to slight bioturbation, including *Teichichnus*. Small grains and patches of pyrite are visible throughout the core, and some thin, pyritized burrows are surrounded by diagenetic halos. Smear slides indicate the presence of volcanic glass, foraminifers, calcareous and siliceous sponge spicules, radiolarian and silicoflagellates. The core is moderately to severely biscuitted and fractured by drilling.





Hole 378-U1553E Core 24X, Interval 198.6-206.16 m (CSF-A)

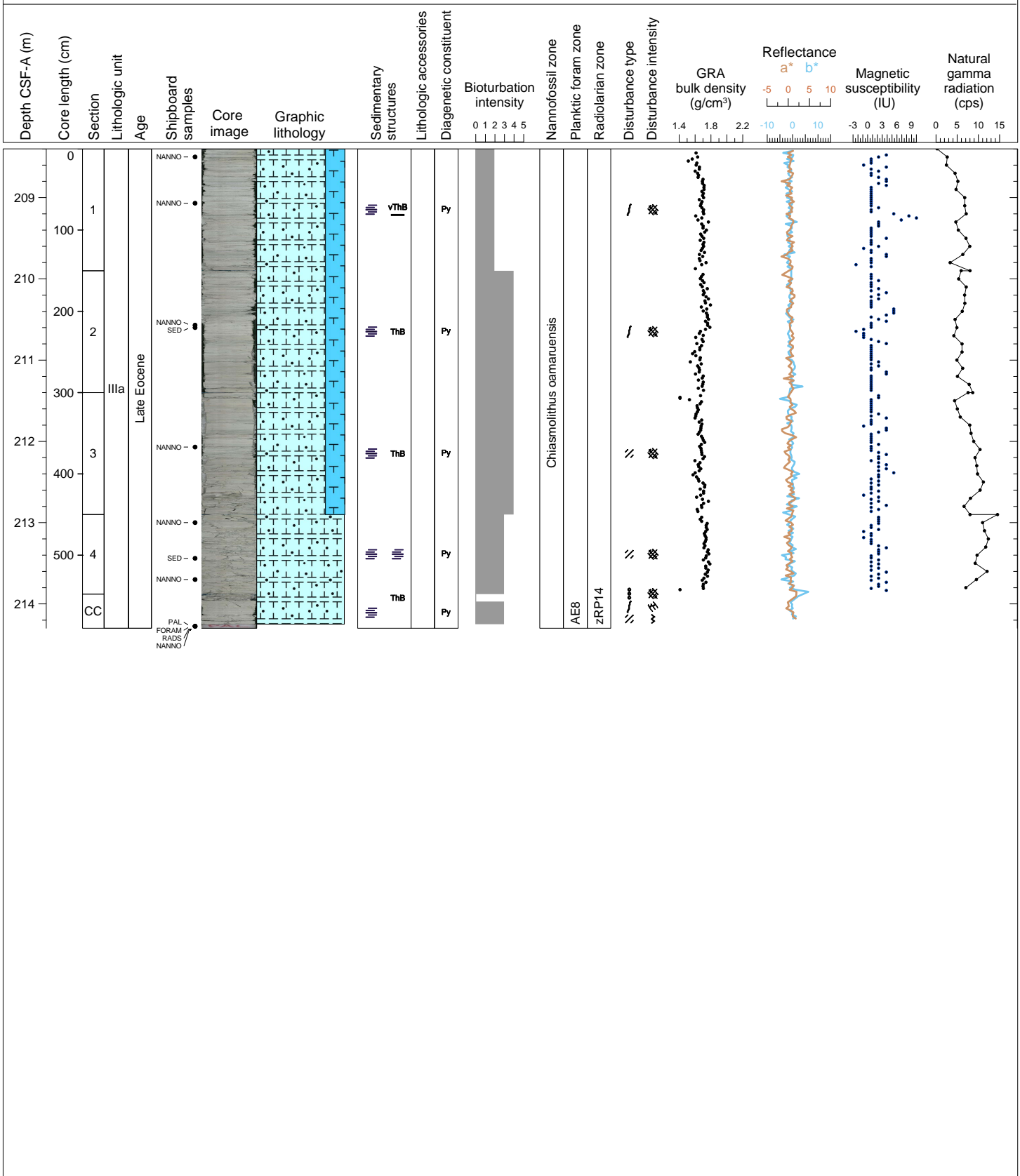
Core U1553E-24X consists of a nannofossil chalk that is white (N 8) in Section 1, transitioning into a light greenish gray (5GY 8/1) from Section 2 to CC. Very thin beds to medium laminations are light greenish gray (10GY 7/1) to greenish gray (5G 6/1) and are well defined in parts with mm-scale variation in color, often crossed by trace fossils (gray to brown colored). Also visible are gray to brown features related to bioturbation. Black spots and patches of pyrite are visible throughout the core, as well as pyritized burrows and halos. Smear slides indicate the presence of mica, foraminifers, calcareous and siliceous sponge spicules, diatoms, and radiolarians. The core is moderately to severely biscuitted and fractured by drilling.





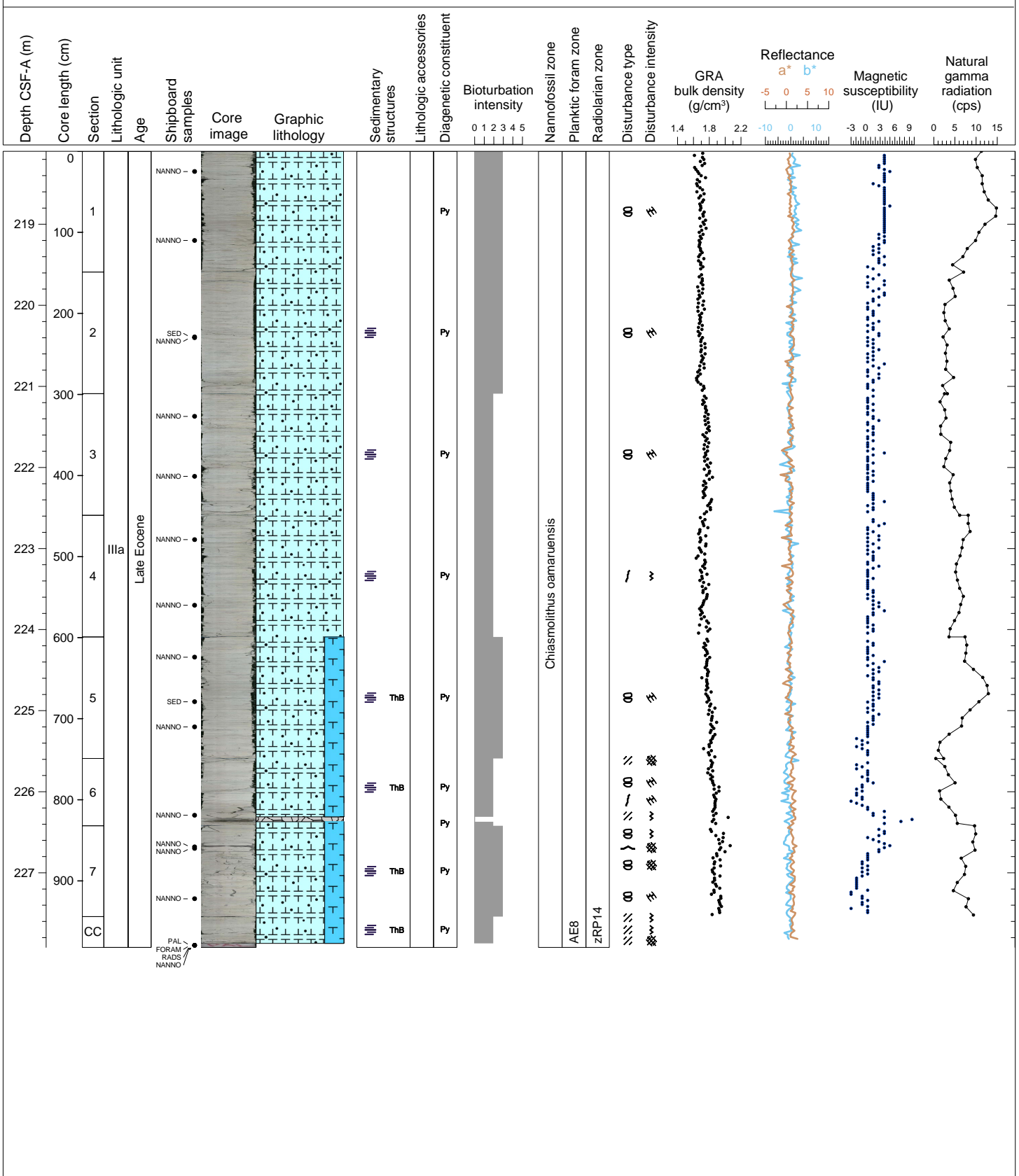
Hole 378-U1553E Core 25X, Interval 208.4-214.3 m (CSF-A)

Core U1553E-25X-1 to 25X-3 consists of a light greenish gray (5GY 8/1) nannofossil chalk with foraminifers, below which the lithology changes into a nannofossil chalk of white (N 8) to light greenish gray (5GY 8/1) color. Very thin beds of pale green (5G 6/2) color are well defined in parts with mm-scale variation in color, often crossed by trace fossils (gray to brown colored). Also visible are gray to brown features related to bioturbation. Black spots and patches of pyrite are present throughout the core, as well as pyritized burrows and halos. Smear slide analysis of the nannofossil chalk (with foraminifers) shows mica, pyrite, siliceous sponge spicules, diatoms, and radiolarians (and fish remains). The core is moderately to severely biscuitted and fractured by drilling.



Hole 378-U1553E Core 26X, Interval 218.1-227.92 m (CSF-A)

Core U1553E-26X consists of nanofossil chalk (Sections 1 to 4) and nanofossil chalk with foraminifers (Sections 5 to CC). The major color is white (N 8, N 8.5). Sediments show light greenish gray (5G 7/1-8/1 and 10GY 8/1) layering as well as spots and patches of black minerals, likely pyrite. Diagenetic halos can be observed. A chert layer of greenish gray (10Y 5/1) is present in Section 6 and shows faint banding that is parallel with the chalk boundary. Bioturbation is moderate and pyritized burrows are visible. Smear slides indicate the presence of quartz, mica, ferromagnesian minerals, feldspar, glauconite, pyrite, and siliceous microfossils. The cores exhibit moderate to severe biscuiting and fracturing due to drilling disturbance.



Hole 378-U1553E Core 27X, Interval 227.9-236.05 m (CSF-A)

Core U1553E-27X consists of nannofossil chalk, nannofossil chalk with foraminifers, and nannofossil chalk with quartz. The major color is white (N 8, N 8.5, 5Y 8/1, 10YR 8/1) to light brownish gray (2.5Y 6/2) and light gray (2.5Y 7/1). Sediments show light greenish gray layering as well as spots and patches of black minerals, likely pyrite. Diagenetic halos are observed. A chert layer of olive gray (5Y 5/2) color is present in Section 1. Carbonate rich sands (gray/medium gray; N 5) and sandstones (gray; 2.5Y 5/1-6/1) are interbedded within the chalk in Sections 4 and CC. Bioturbation is slight to heavy and pyritized burrows are visible. Smear slides indicate the presence of quartz, mica, feldspar, glauconite, pyrite ferromagnesian minerals, and siliceous microfossils. The cores exhibit moderate to severe biscuiting and fracturing due to drilling disturbance.

