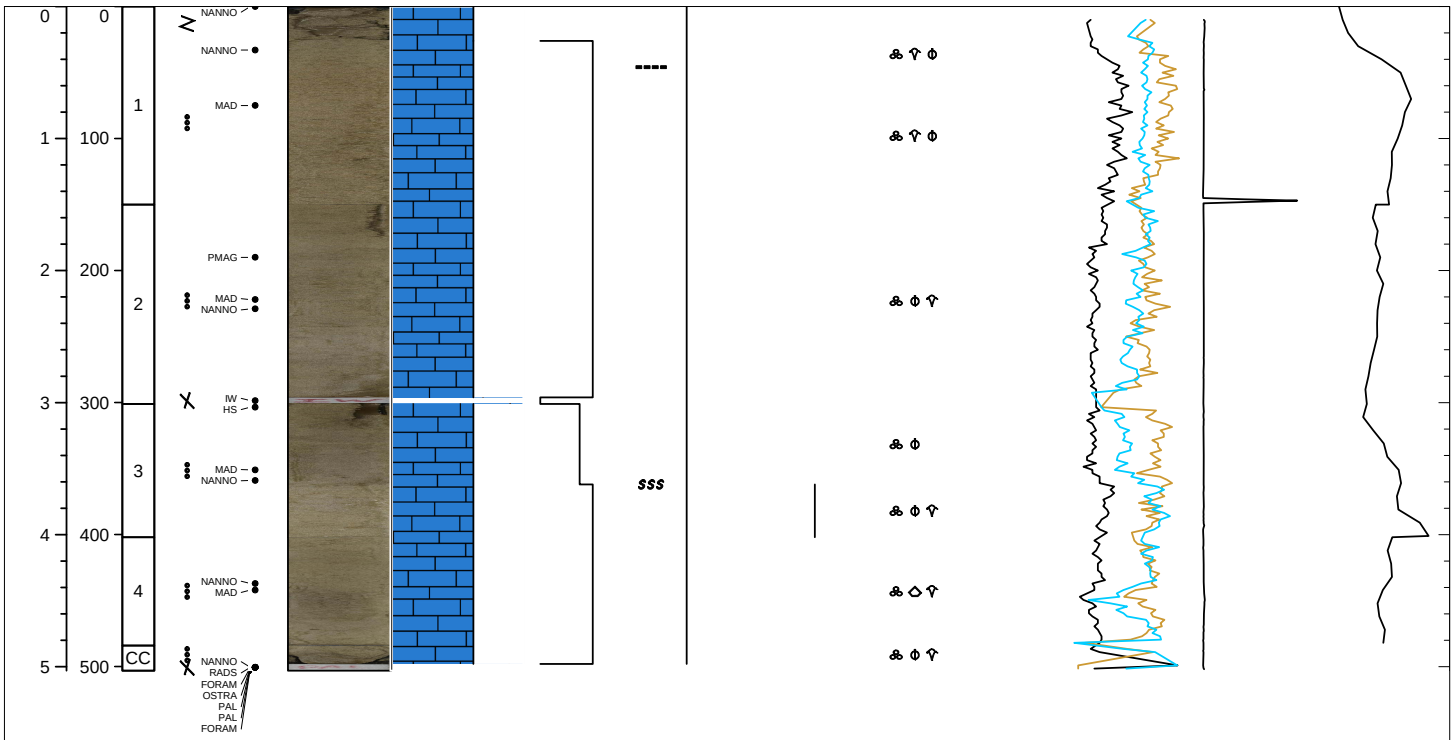
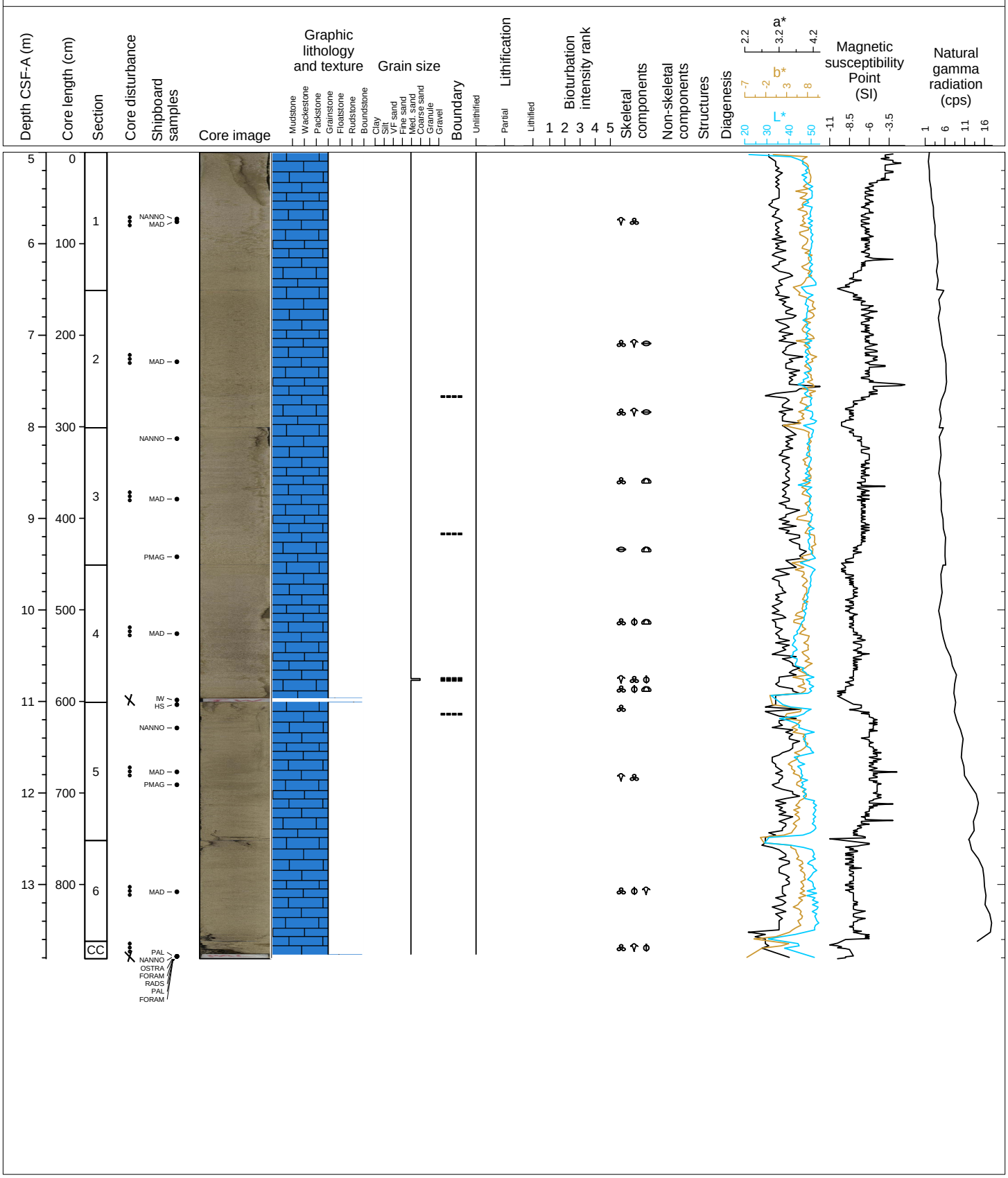
Hole 359-U1466A Core 1H, Interval 0.0-5.03 m (CSF-A)

Unlithified GRAINSTONE. Thick bedded, fine to medium grained, medium to very well-sorted. Grey-brown to pale yellow, one gradual transition and one bioturbated contact. Dominant by foraminifera (planktic), also present foraminifera (benthic), pteropod, otoliths, halimeda, bivalves, fragments of echinoid (spines) and bryozoan. Stained grains occurrences are common.



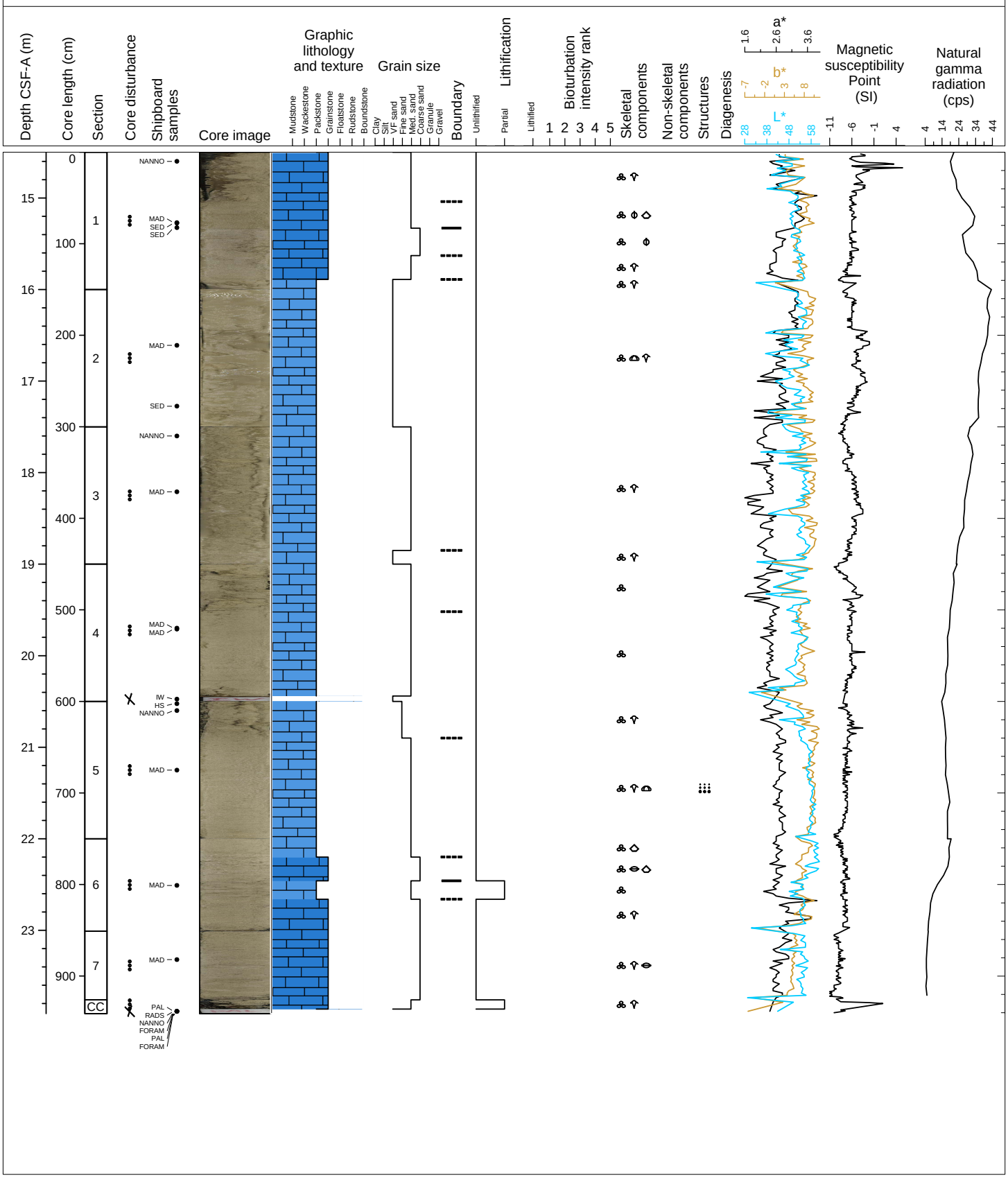
Hole 359-U1466A Core 2H, Interval 5.0-13.81 m (CSF-A)

Unlithified GRAINSTONE. Thick bedded, medium to coarse grained, poor to well-sorted. Grey to pale yellow, gradational transitions. Dominant by foraminifera (planktic) and pteropod, also present foraminifera (benthic), otoliths, halimeda, bivalves, fragments of echinoid (spines) and bryozoan; one occurrence of solitary coral (section 3, 64 cm). Stained grains occur, black grains (glauconite?) in sections 2 and 3.



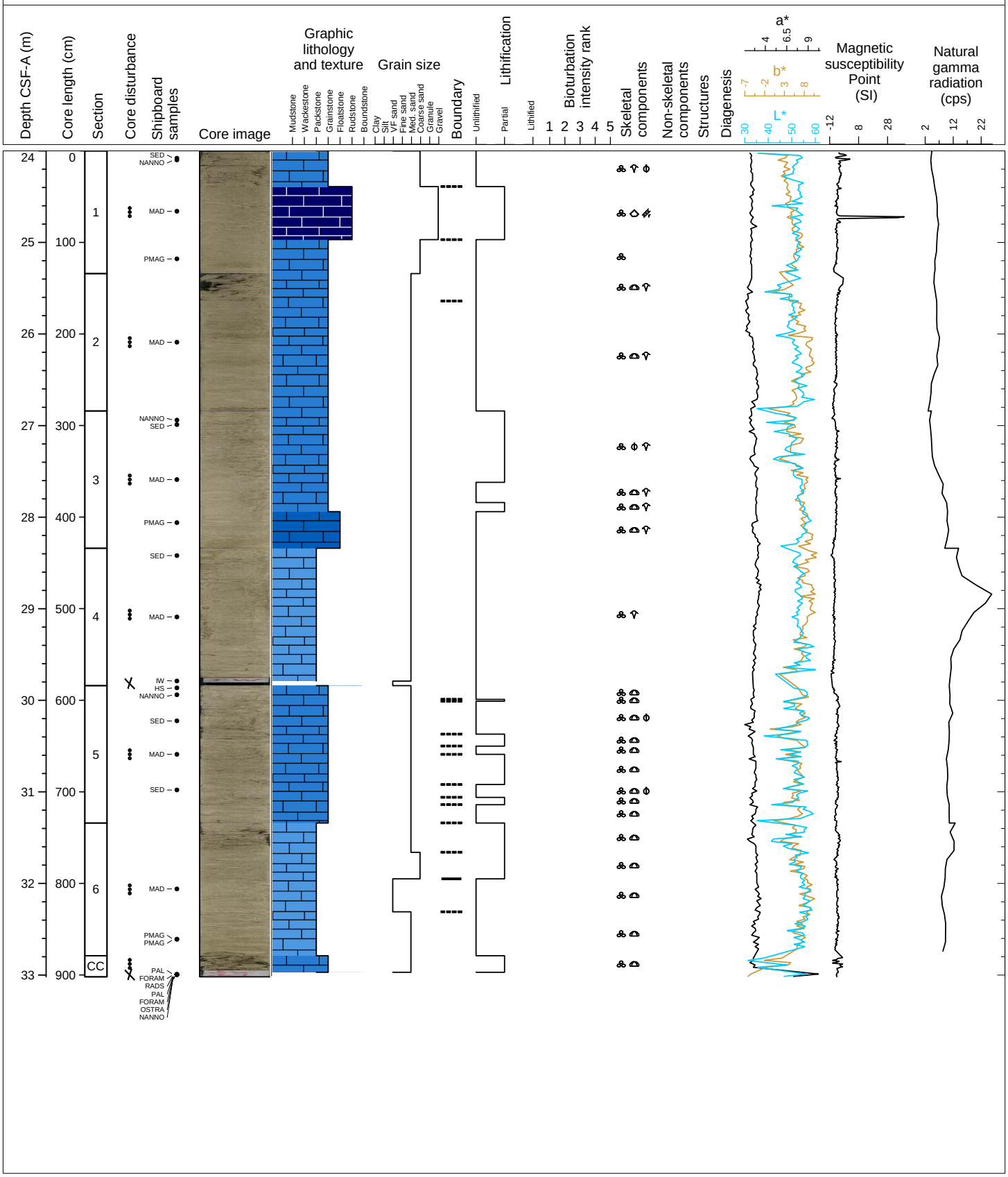
Hole 359-U1466A Core 3H, Interval 14.5-23.91 m (CSF-A)

Unlithified PACKSTONE to GRAINSTONE. Thick bedded, very fine to coarse grained (fine and then coarsening down core), medium to well sorted. Gray, brownish gray to pale yellow, transition to pale yellow down core. Contacts are gradational with a few sharp boundaries. Dominant by foraminifera (planktic). Foraminifera (benthic), pteropod, otoliths, Halimeda, bivalves and fragments of echinoid (spines) present. Stained grains and black grains (glauconite?) occur in sections 1 and 5.



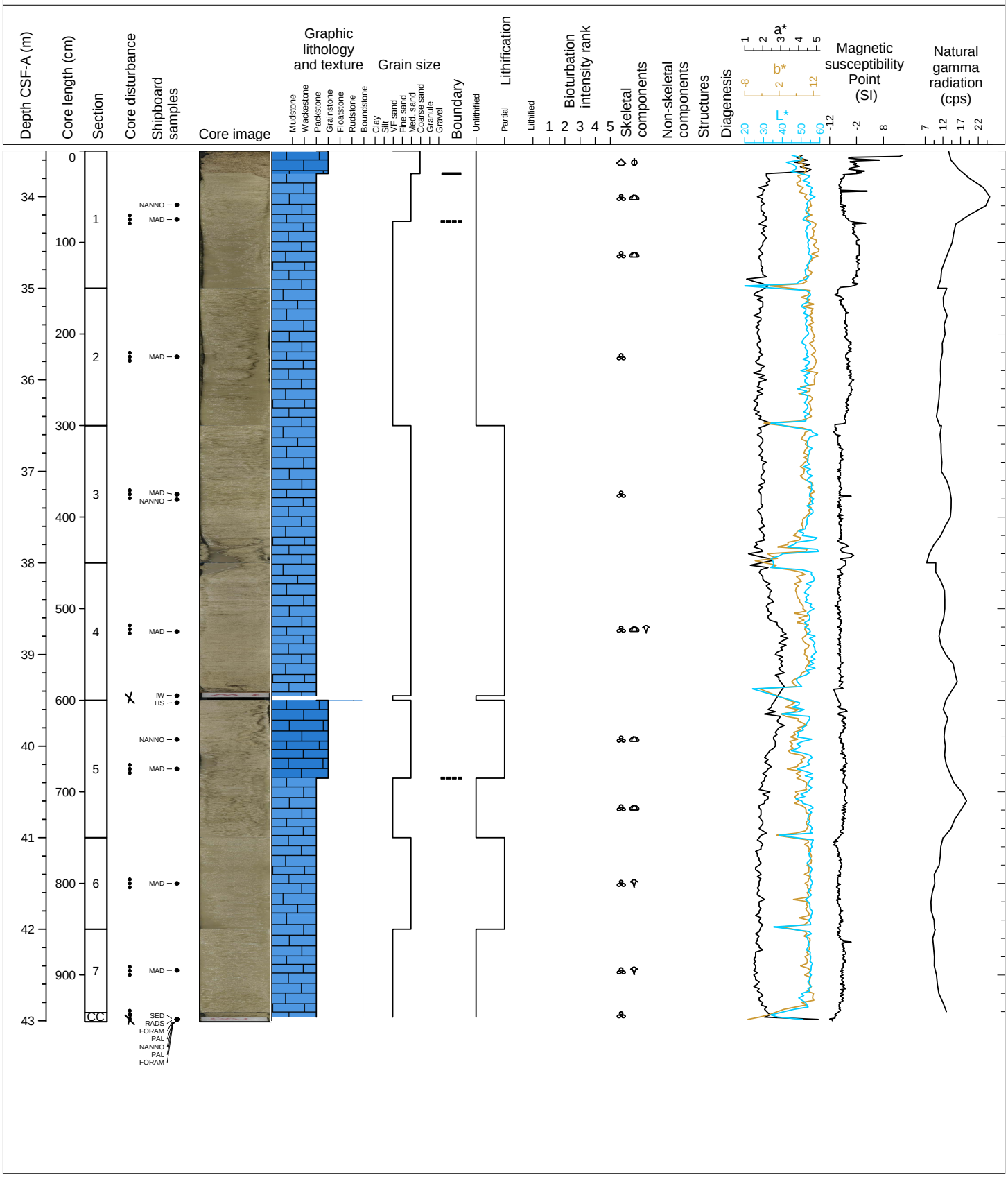
Hole 359-U1466A Core 4H, Interval 24.0-33.02 m (CSF-A)

Unlithified to partially lithified PACKSTONE to GRAINSTONE. Thick bedded, very fine to coarse grained, medium to very well sorted. Grey, brownish grey to yellow. Transitions are gradational with a few sharp boundaries. Dominant by foraminifera (planktic), also present foraminifera (benthic), pteropod, otoliths, halimeda, bivalves, fish debris and fragments of echinoid (spines). Black grains (glauconite?) occur in sections 3, 4 and CC; cemented grains are present in unlithified horizons.



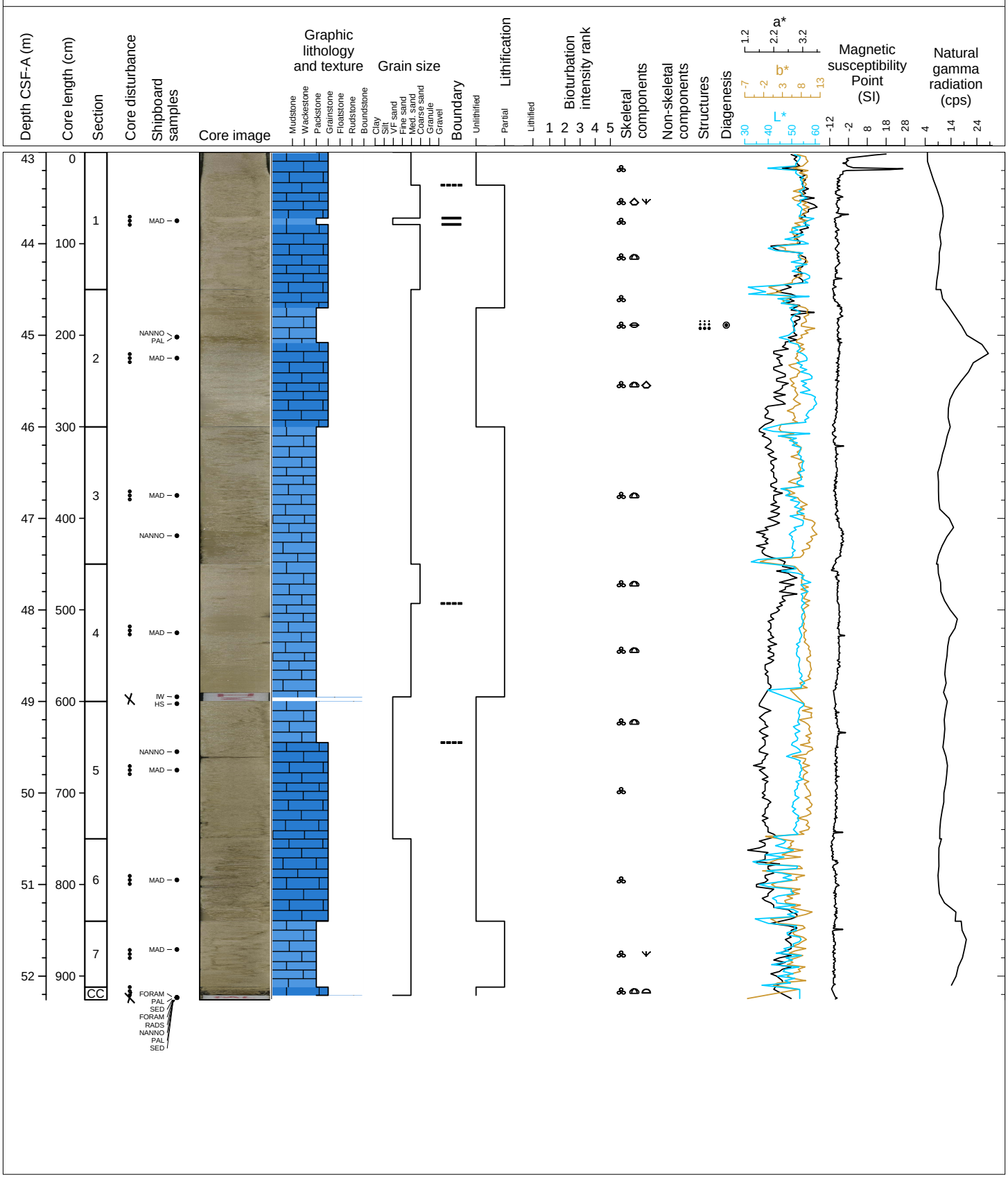
Hole 359-U1466A Core 5H, Interval 33.5-43.01 m (CSF-A)

Unlithified PACKSTONE. Thick bedded, very fine- to coarse-grained, poorly- to very well-sorted. Light grey, contacts are gradation and represent changes in color and/or sorting. Planktic foraminifera are the dominant skeletal grain. Echinoid spines, petropod, and otoliths are rare to present. Black grains (glauconite/pyrite?) are also present. The top 25 cm of Core 5 consisted of caving.



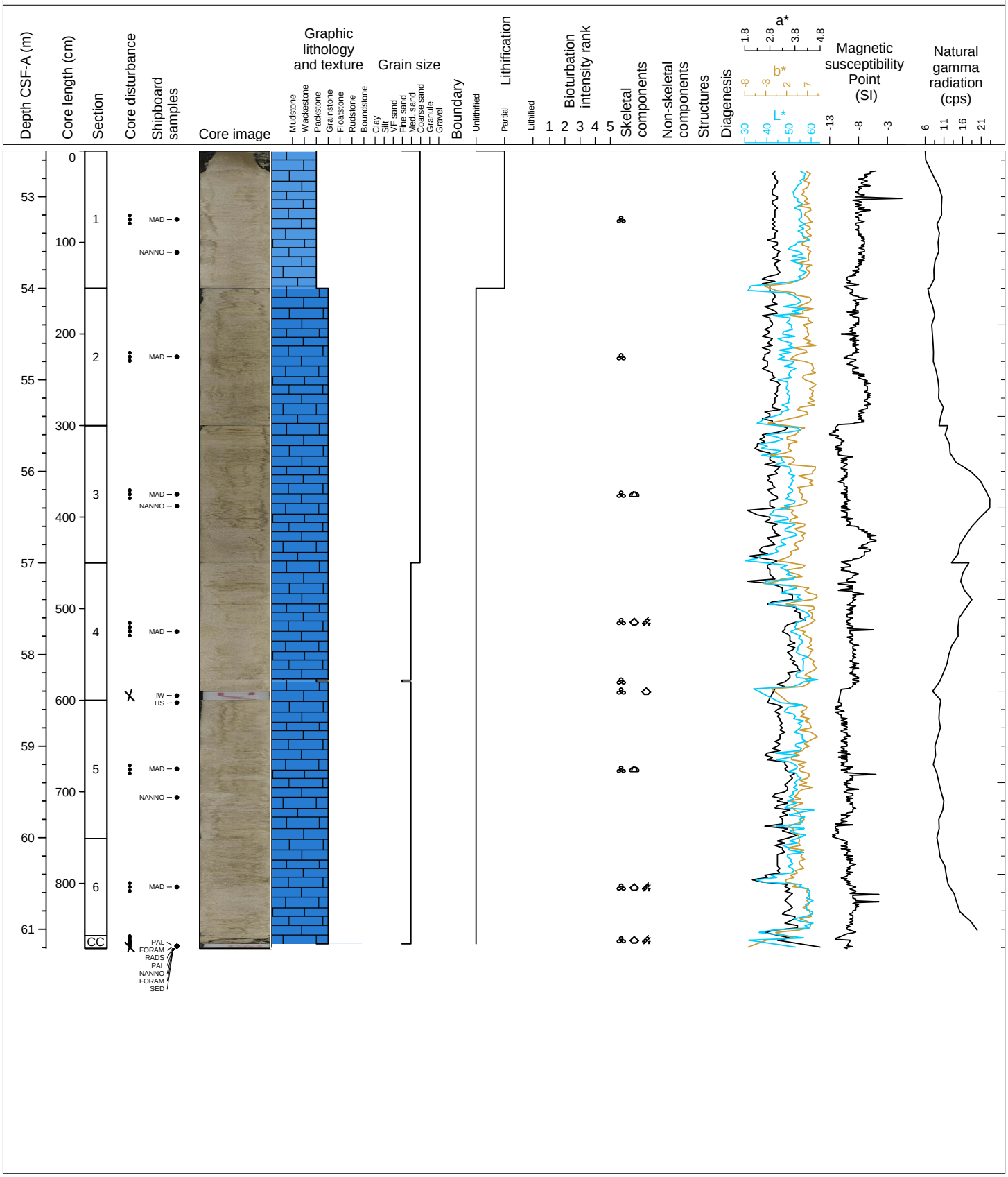
Hole 359-U1466A Core 6H, Interval 43.0-52.26 m (CSF-A)

Interbedded unlithified PACKSTONE and GRAINSTONE. Thin to thick bedded, very fine- to medium-grained in the GRAINSTONE and medium- to coarse-grained in the PACKSTONE, poorly- to very well-sorted. Light gray to pale yellow, contacts are mainly gradation and represent changes in colour and/or sorting. Sharp contacts associated with coarser fraction at the top of the section are sharp. Based on core descriptions and a smear slide (Smear slide U1466A-6H-CC-PAL-SED, 52.21 and 52.26 mbsf) planktic foraminifera (about 50?m) are the dominant skeletal grain. Benthic foraminifera, bioclasts (spines/needles and sponge spicule fragments) are common and echinoid spines, petropod, bryozoan fragments, otoliths, tunicates and calcareous nannofossils are rare to present (rich calcareous ooze). Black grains (glauconite/pyrite?) are also present.



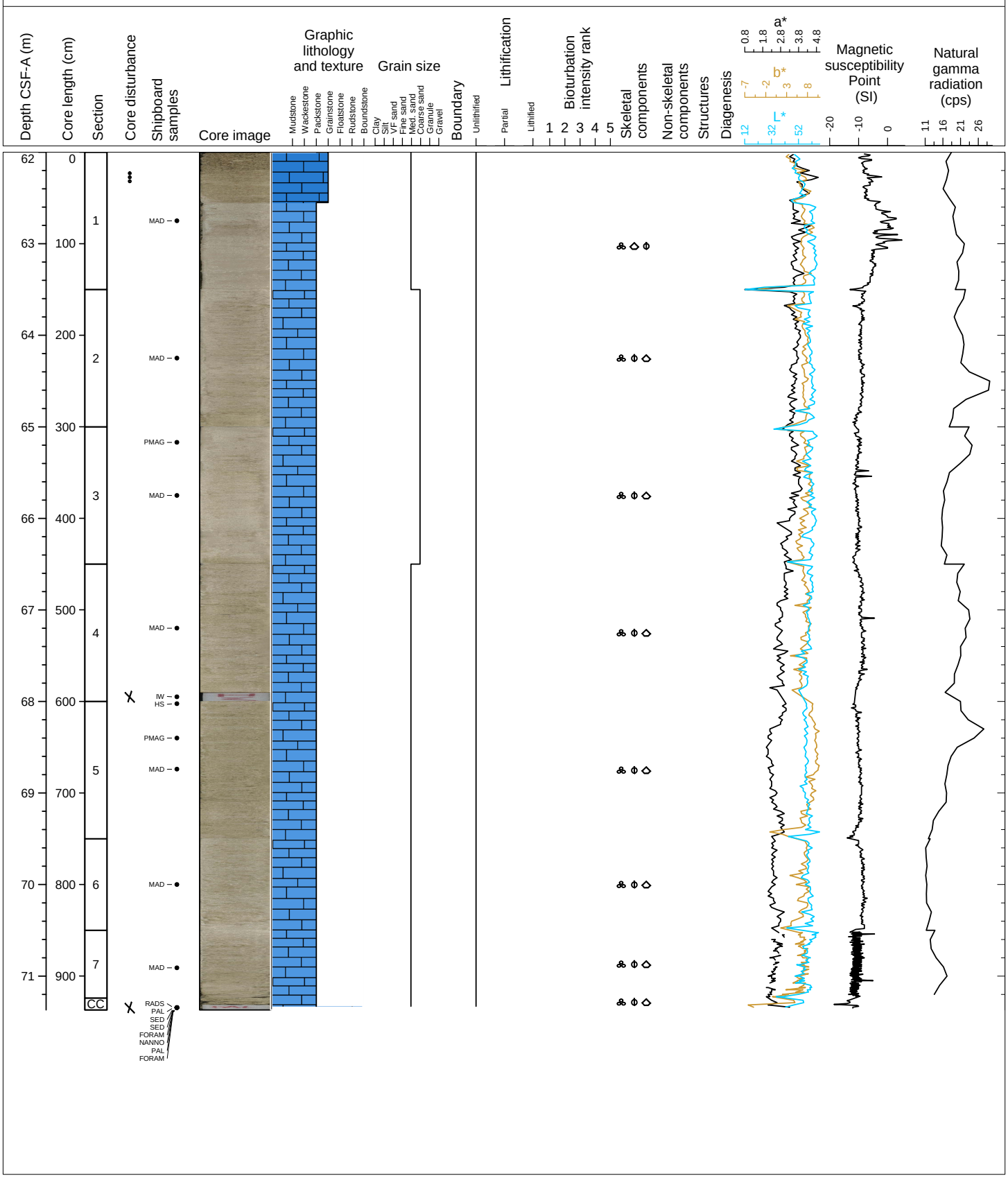
Hole 359-U1466A Core 7H, Interval 52.5-61.21 m (CSF-A)

Interbedded unlithified PACKSTONE. Thick to very thick bedded, medium- to coarse-grained, poorly- to moderately-sorted. Light grey to white, contacts are mainly gradation and represent changes in color and/or sorting. Planktic foraminifera are the dominant skeletal grain. Echinoid spines, red algae and otoliths are rare to present. Aggregates and black grains (glauconite/pyrite?) are abundant. Top 18 cm with significant flow disturbance.



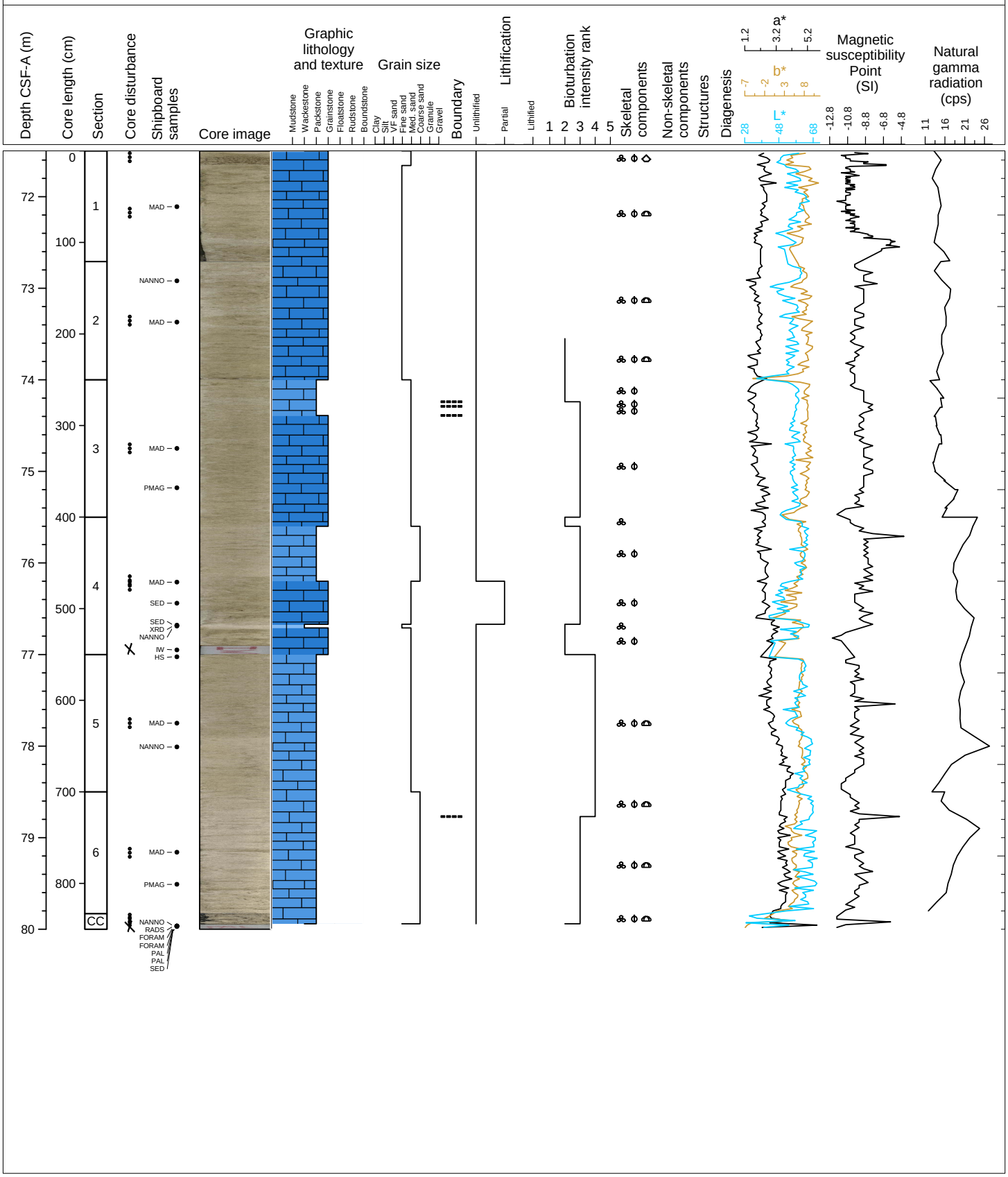
Hole 359-U1466A Core 8H, Interval 62.0-71.37 m (CSF-A)

Unlithified PACKSTONE. Thin to thick bedded, medium- to coarse-grained. Poorly- to moderately-sorted. Light grey to very pale brown, contacts are mainly gradation and represent changes in color and/or sorting. Planktic foraminifera are the dominant skeletal grain. Echinoid fragments and spines, halimeda and bivalve fragments are present to common. Aggregates and black grains (glauconite/pyrite?) are abundant. Top 55 cm with significant flow-in and cave-in disturbance.



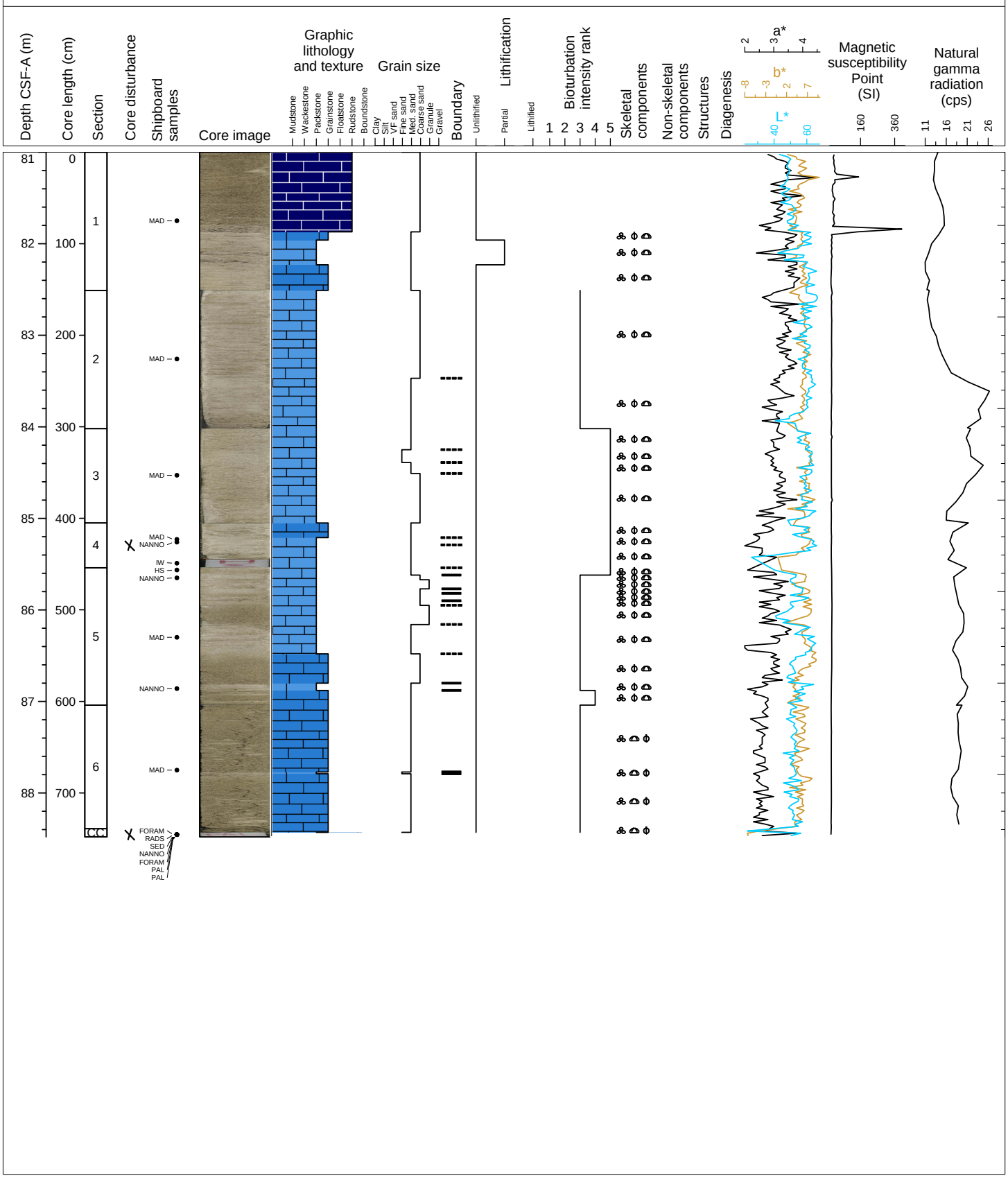
Hole 359-U1466A Core 9H, Interval 71.5-80.0 m (CSF-A)

Interbedded unlithified PACKSTONE and GRAINSTONE. Thin to thick bedded, fine- to medium-grained in the GRAINSTONE and medium- to coarse-grained in the PACKSTONE. Poorly- to moderately-sorted. Light gray to very pale brown. Contacts are gradation and represent changes in colour and/or sorting. A fine-grained WACKESTONE occurs in H9-4, 117-121 cm in. A smear slide from the WACKESTON (U1466A-9H-4-A 118/118-SED; 76.68m depth) shows an abundance of aragonite needles (between 5?m to 15?m) and calcitic crystals (<5?m). Sponge spicules, planktic foraminifera and bryozoan fragments are present (calcareous chalk). Planktic foraminifera are also abundant with echinoid fragments and spines, Halimeda and bivalve fragments present to common. Aggregates and black grains (glauconite/pyrite?) are abundant. Top 16 cm with significant flow-in and cave-in disturbance.



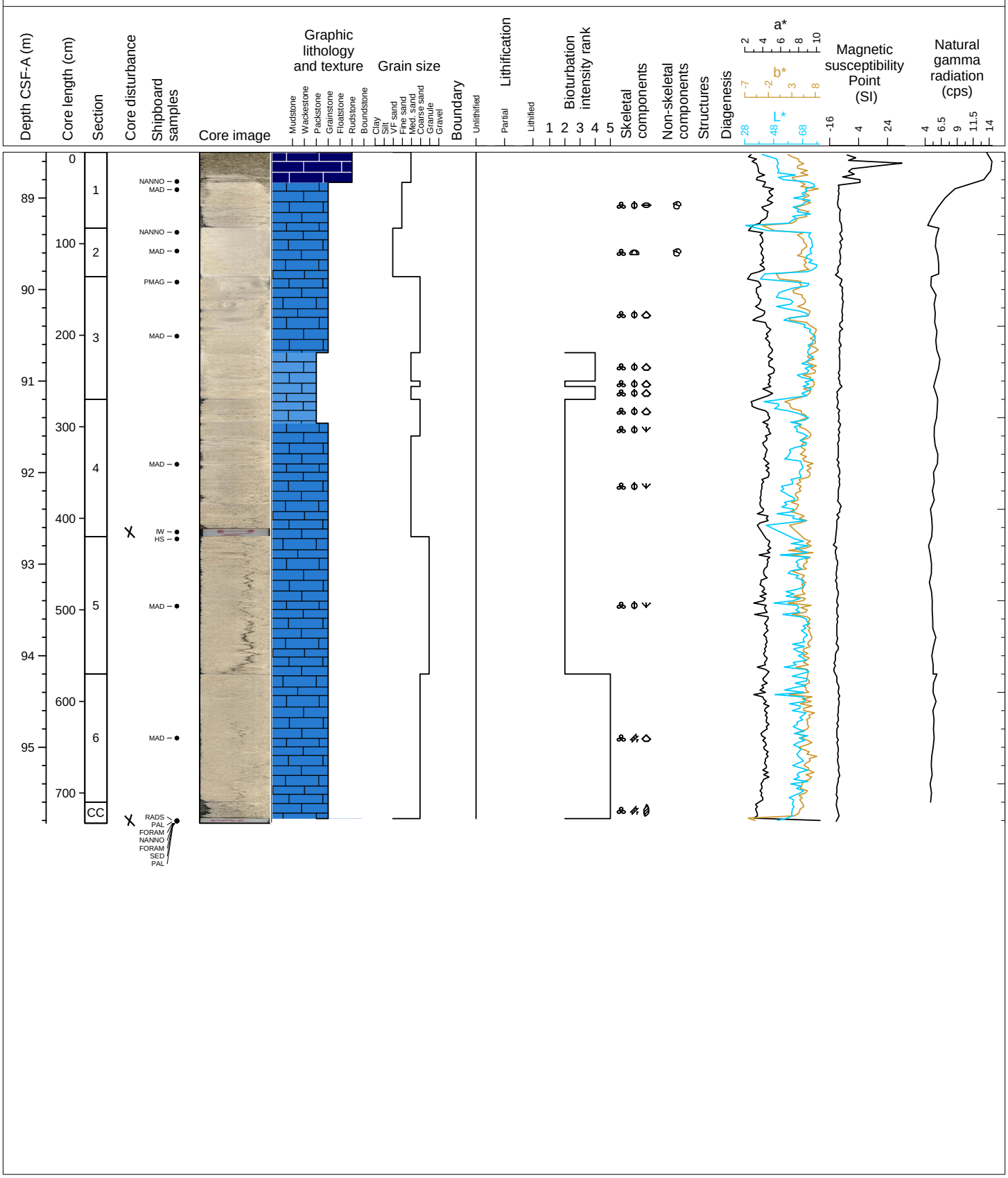
Hole 359-U1466A Core 10H, Interval 81.0-88.48 m (CSF-A)

Interbedded unlithified PACKSTONE and GRAINSTONE. Thin to thick bedded, fine- to medium-grained in the GRAINSTONE and medium- to granular-grained in the PACKSTONE. Poorly- to moderately-sorted. Light grey to very pale brown. Contacts are gradation and represent changes in color and/or sorting. Sharp contacts as common. Distinct alteration between fining-up and coarsening up units are a distinct feature of this core, many defined by thin bedded very coarse- to granular-grained units (10-H5, 13 cm to 10-H5, CC). Planktic foraminifera are the dominant skeletal grain. Echinoid fragments and spines, halimeda and bivalve fragments are present to common. Aggregates and black grains (glauconite/pyrite?) are present.



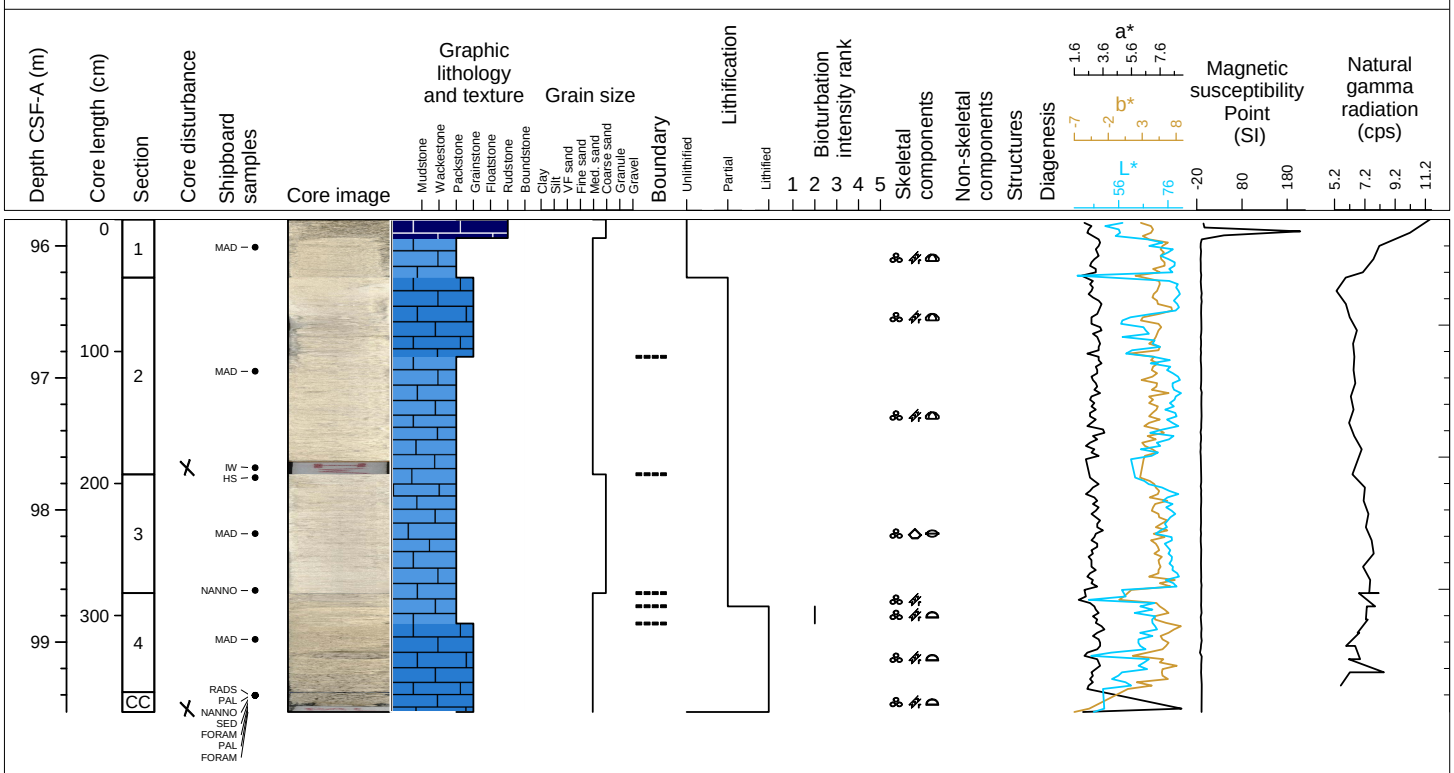
Hole 359-U1466A Core 11H, Interval 88.5-95.83 m (CSF-A)

Interbedded unlithified GRAINSTONE and PACKSTONE. Thin to thick bedded, medium- to coarse-grained with a thick granular-grained unit in 11H-5, 0-150 cm. Moderately- to poorly-sorted. Very pale brown. Contacts are gradation and represent changes in color and/or sorting. Planktic foraminifera are the dominant skeletal grain. Benthic forams, encrusting red algae, halimeda and bryozoan fragments are common to present. Aggregates and black grains (glauconite/pyrite?) are present.



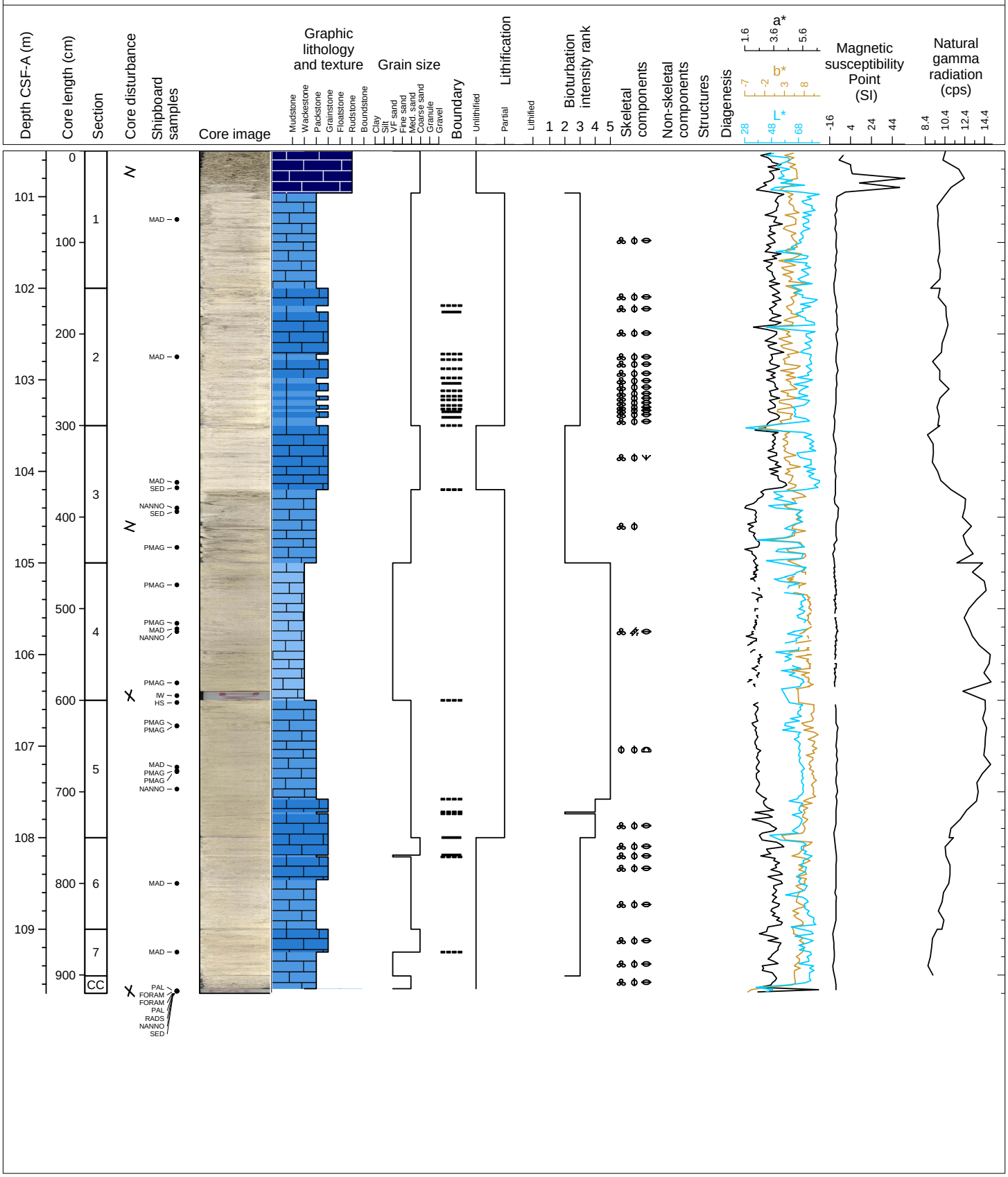
Hole 359-U1466A Core 12F, Interval 95.8-99.53 m (CSF-A)

Interbedded unlithified to lithified PACKSTONE and GRAINSTONE. Thin to thick bedded, medium-grained with a thick coarse-grained unit in 12F-3, 0-90 cm. Lithification increases down core from unlithified (12F-1, 14 cm to 12F-2, 44 cm) to partially lithified (12F-2, 44 cm to 12F-4, 10cm), and then to lithified (12F-4, CC). Moderately- to poorly-sorted. Very pale brown. Contacts are gradation and represent changes in color and/or sorting. Planktic foraminifera are the dominant skeletal grain. Benthic forams, encrusting red algae, halimeda and bryozoan fragments are common to present. Dolomite observed in smear slides. Extensive fall-in at the top of the core (12F-1, 0-14 cm).



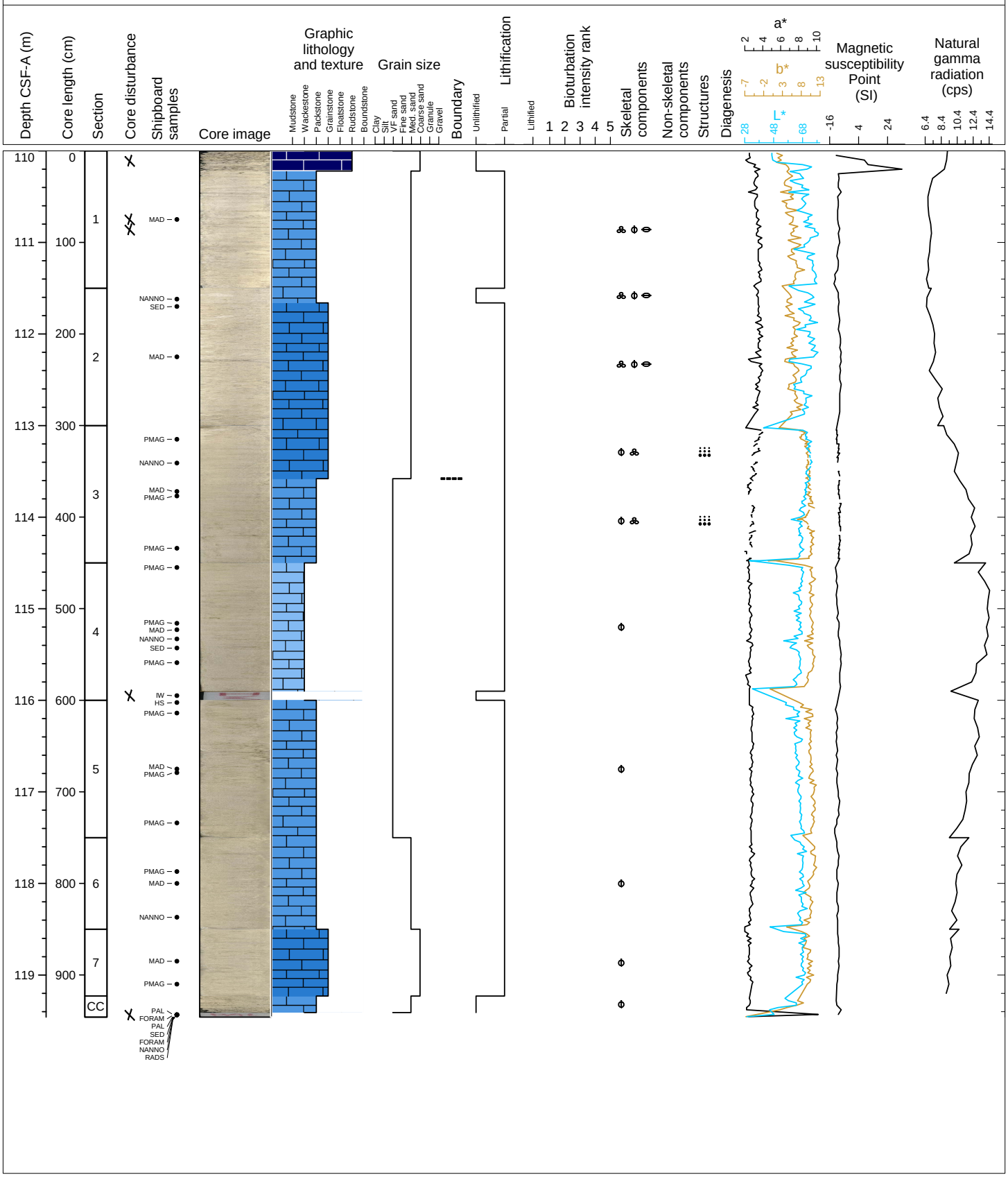
Hole 359-U1466A Core 13H, Interval 100.5-109.7 m (CSF-A)

Interbedded unlithified to partially lithified GRAINSTONE and PACKSTONE, WACKESTONE present in lower half of the core. Thin to thick bedded, very fine- to coarse-grained. Poorly- to well-sorted. White to pale brown. Contact are gradational and sharp. Two smear slides (U1466A-13H-3-A 68/68-SED, 104.18 mbsf and U1466A-13H-3-A 94/94-SED, 104.44 mbsf) show an abundance of aragonite needles <5?m, common micritic calcite (clotted brown specks) and rare dolomite rhombs (5?m) (dolomitic limestone). From core descriptions planktic foraminifera are the dominant skeletal grain and foraminifera (benthic), echinoid spines, bryozoan fragments and bivalve fragments present. Bioturbation varied. Extensive cave-in at the top of the core (13H-1, 0-46).



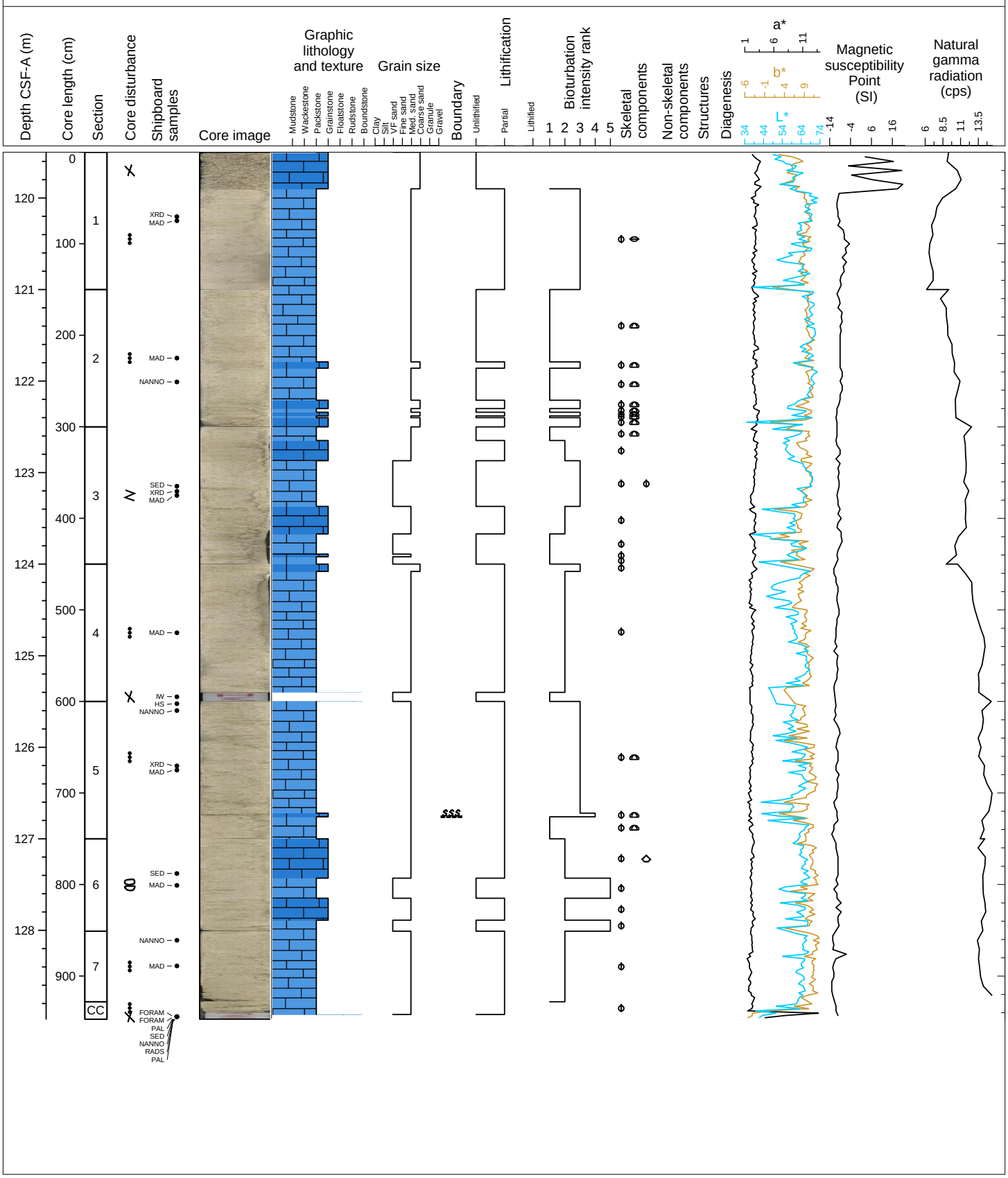
Hole 359-U1466A Core 14H, Interval 110.0-119.46 m (CSF-A)

Interbedded unlithified to partially lithified GRAINSTONE, PACKSTONE and WACKESTONE. Very thick to thick bedded, very fine- to coarse-grained. Poorly- to well-sorted. White to pale brown. Gradational transitions. Planktic foraminifera are the dominant skeletal grain transition to foraminifera (benthic) dominance in section 4, also present are, echinoid spines, bryozoan fragments and bivalve fragments. Two smear slides (U1466A-14H-2-A 20/20-SED, 111.7 mbsf and U1466A-14H-4-A 93/93-SED 111.7 mbsf) have an abundance of aragonite needles <10?m and common dolomite rhombs between 5?m to 15?m, micritic calcite observed (dolomitic limestone). Aggregates are present, suspected dolomite. Bioturbation varied. Extensive cave-in at the top of the core (13H-1, 0-22).



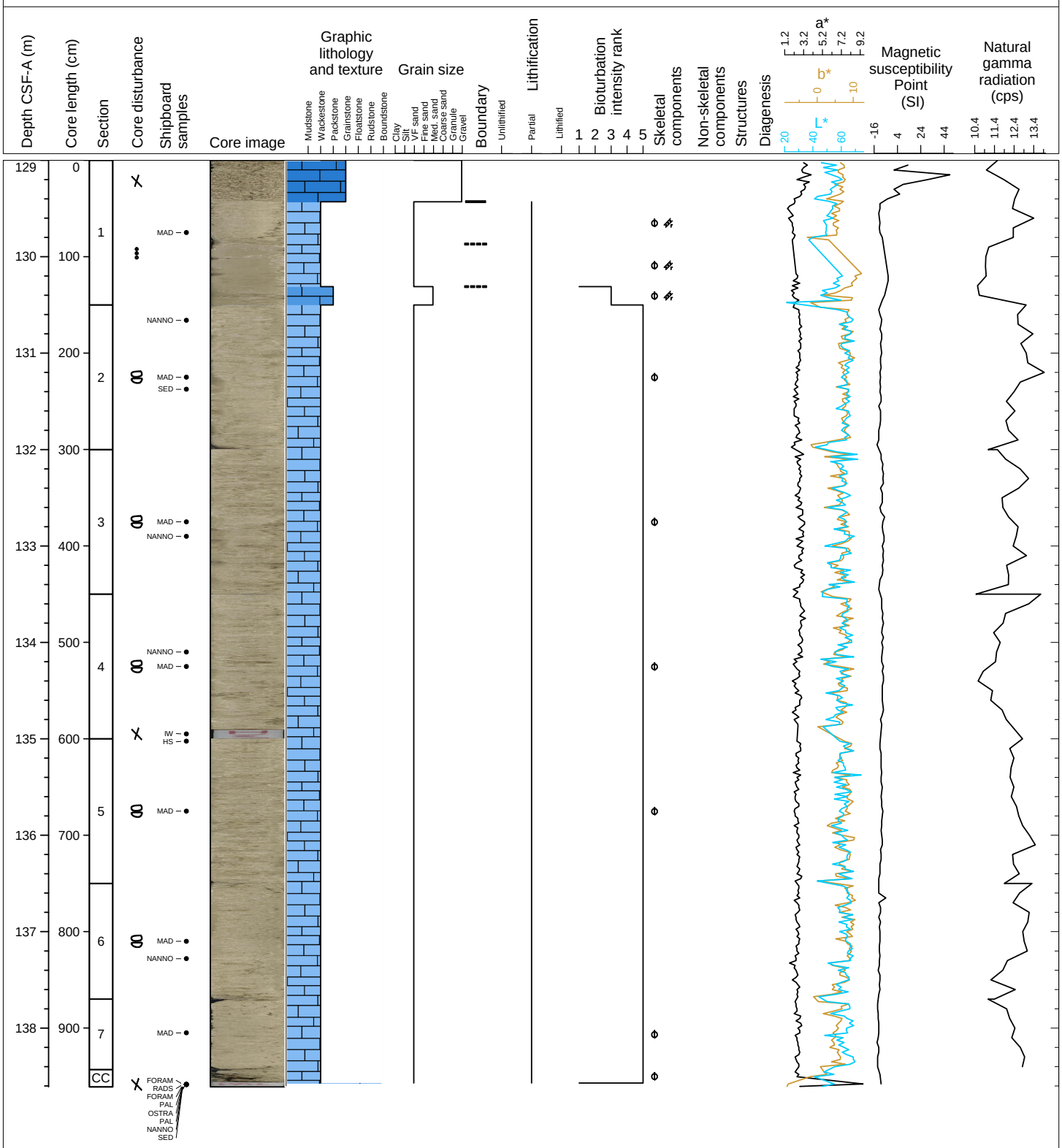
Hole 359-U1466A Core 15H, Interval 119.5-128.97 m (CSF-A)

Interbedded unlithified to partially lithified GRAINSTONE and PACKSTONE. Thick to fine bedded, m- to coarse-grained. Poorly- to well-sorted. White to pale yellow. Gradational transitions, in one case bioturbated. Benthic foraminifera are the dominant skeletal grain identifiable, also present are bivalve fragments and echinoid spines. Aggregates are present, suspected dolomite. Bioturbation varied. Extensive cave-in at the top of the core (13H-1, 0-40).



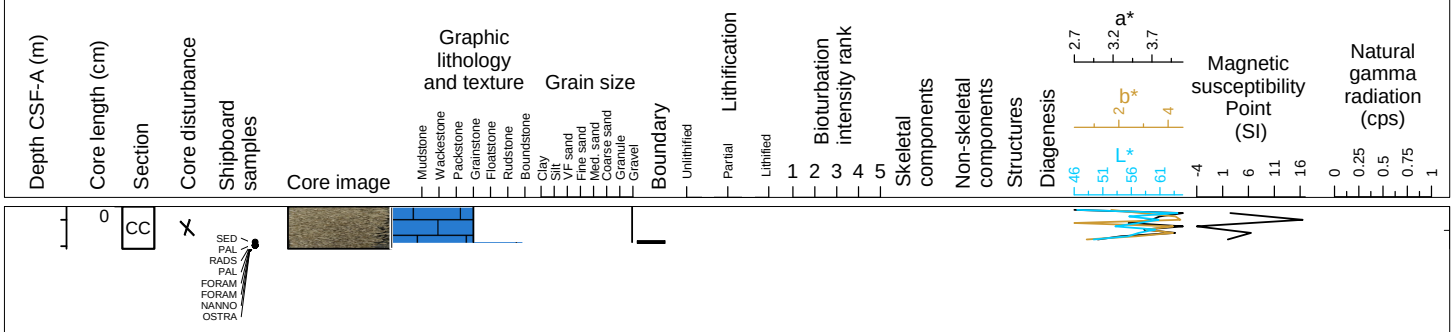
Hole 359-U1466A Core 16H, Interval 129.0-138.61 m (CSF-A)

Interbedded unlithified to partially lithified WACKESTONE. Very thick bedded, very fine-grained. Poorly- to well-sorted. White to pale yellow. No clear transitions. Benthic foraminifera are the dominant skeletal grain identifiable, also present are unidentifiable bioclastic fragments, highly recrystallized, possible dolomitized. Aggregates are present, suspected dolomite. Bioturbation varied. Extensive cave-in at the top of the core (13H-1, 0-43).



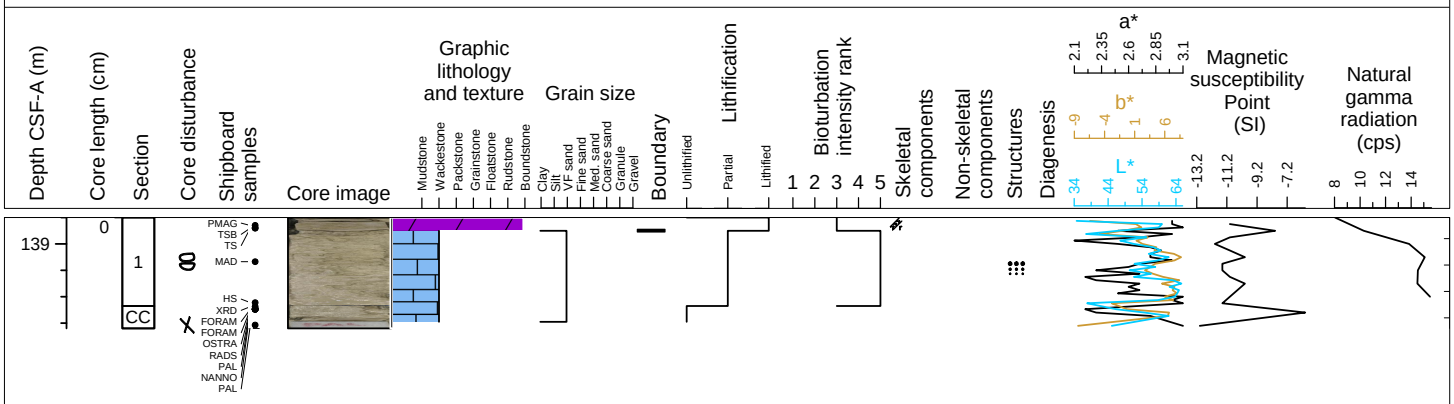
Hole 359-U1466A Core 17H, Interval 138.5-138.82 m (CSF-A)

Cave-in and flow-in



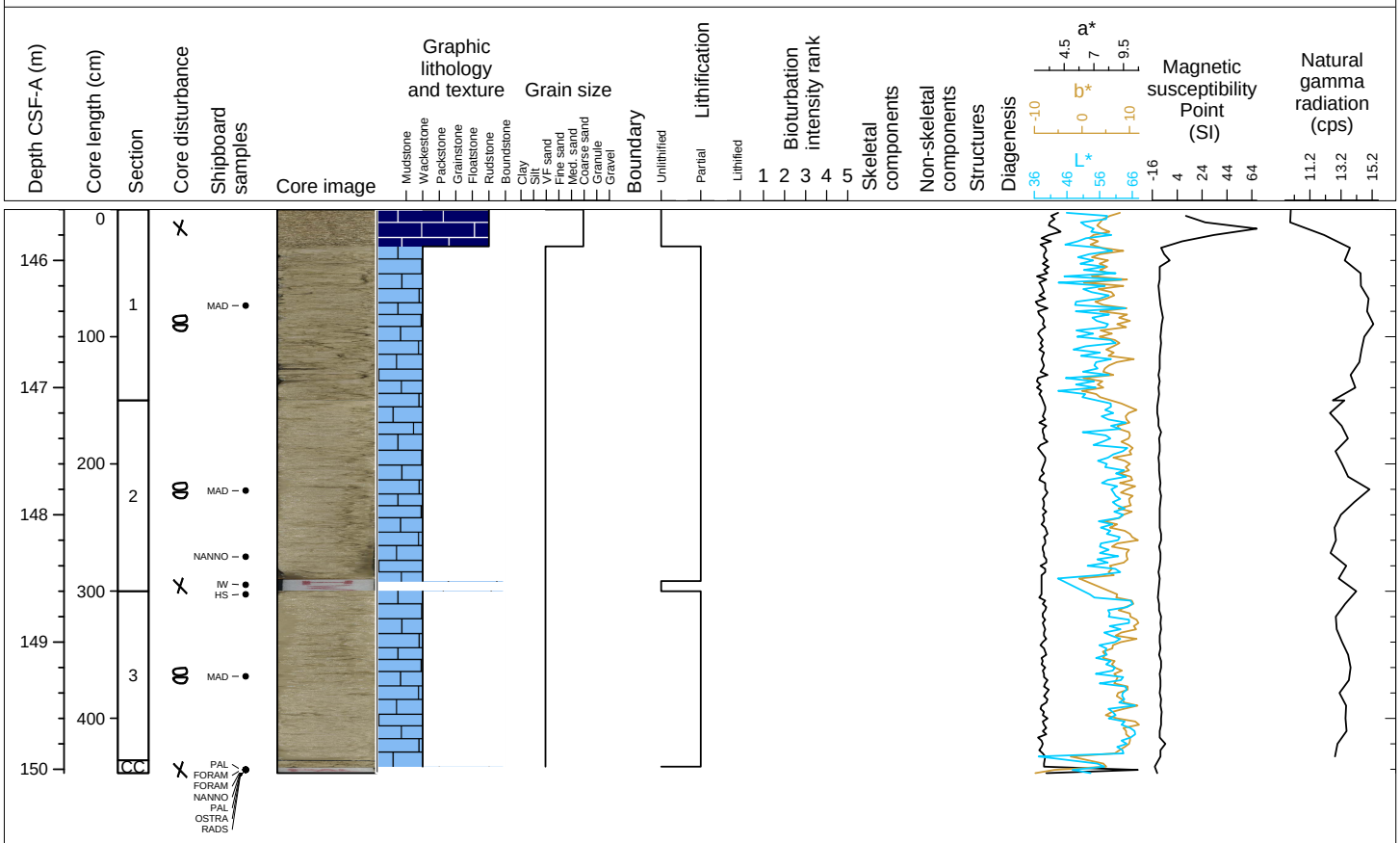
Hole 359-U1466A Core 18X, Interval 138.8-139.64 m (CSF-A)

Unlithified to partially lithified WACKESTONE, top lithified DOLOSTONE. Single coursing upward unit, highly recrystallized. Top is brownish gray, rest of the core is white to light gray. Thin section analysis (U1466A-18X-1-W 7/9-TSB; 138.87 to 138.89 mbsf) consists of fine-grained wackestone with abundant bioclasts, common benthic foraminifera (miliolids), and planktic foraminifera in a micritic matrix. Moldic porosities contributes 5% - 7% total porosity. Silica cements dominants with minor micro-granular calcite cement. Organic matter are also present.



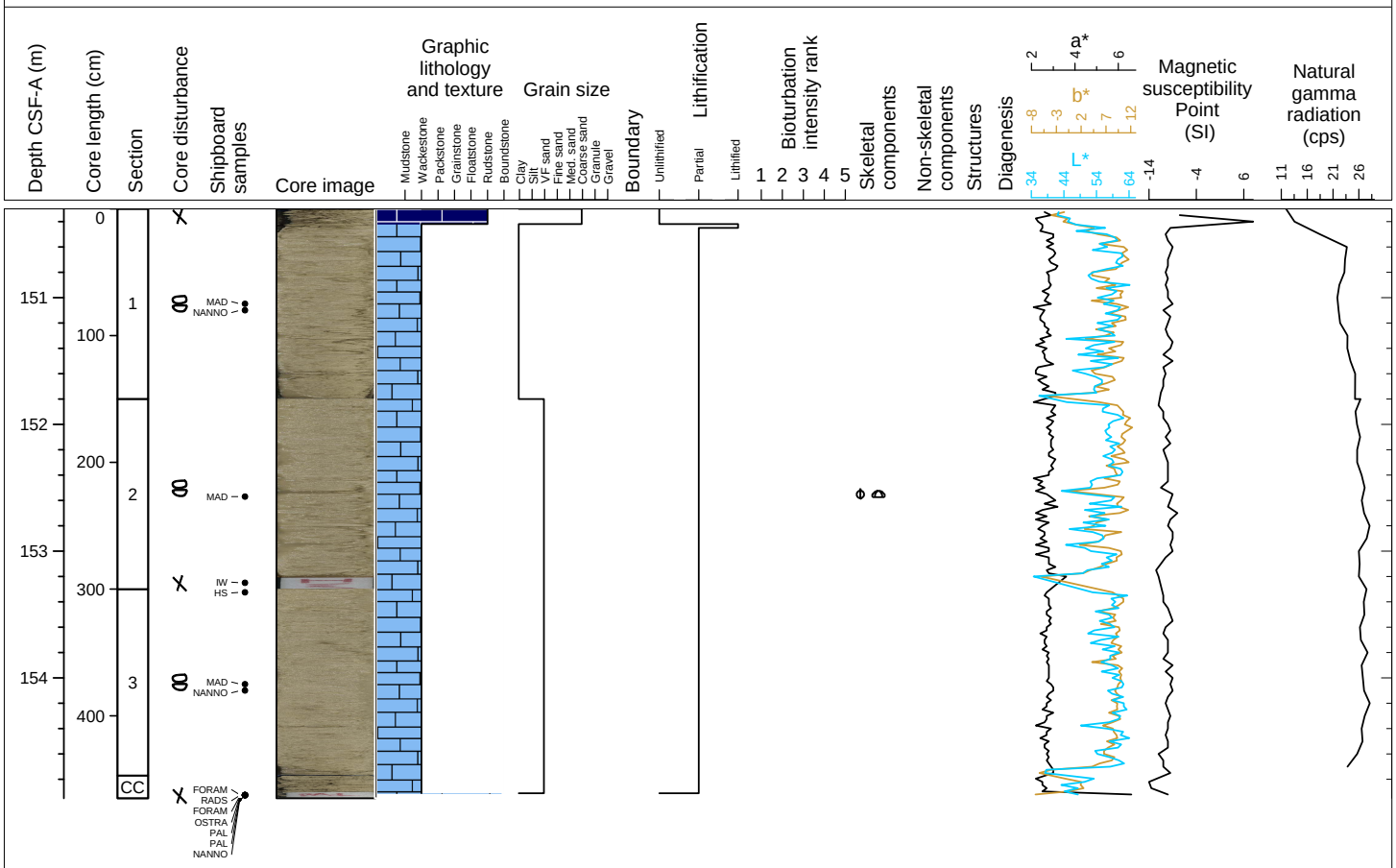
Hole 359-U1466A Core 19F, Interval 145.6-150.03 m (CSF-A)

Partially lithified dolomitic (?) WACKESTONE. Very fine-grained, well-sorted, highly recrystallized. Light grey. No transitions, no clear biota.



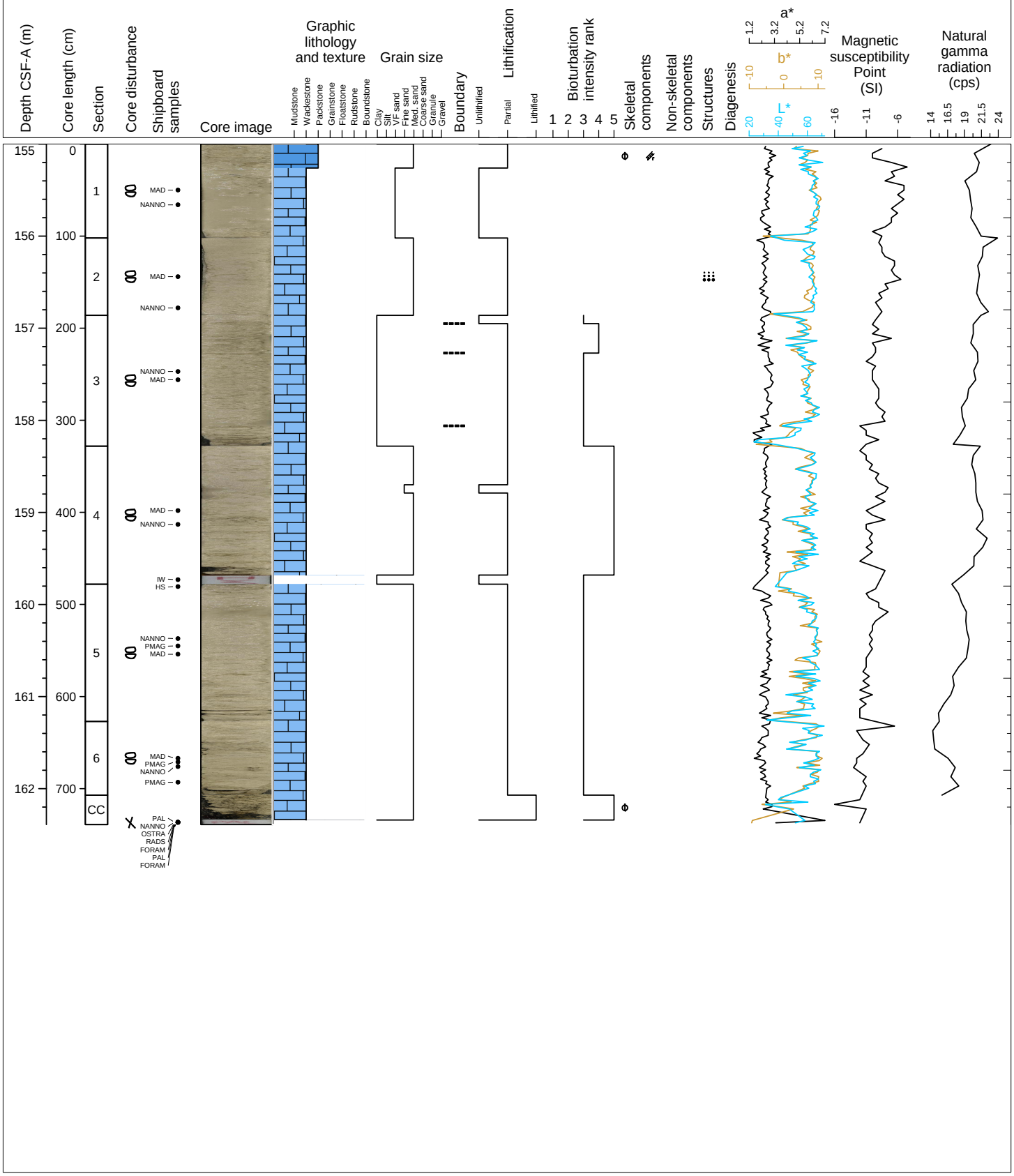
Hole 359-U1466A Core 20F, Interval 150.3-154.95 m (CSF-A)

Partially lithified dolomitic (?) WACKESTONE. Very fine-grained, well-sorted, highly recrystallized. Light grey. No transitions, no clear biota. Recrystallization state appears to less extensive then core 19F.



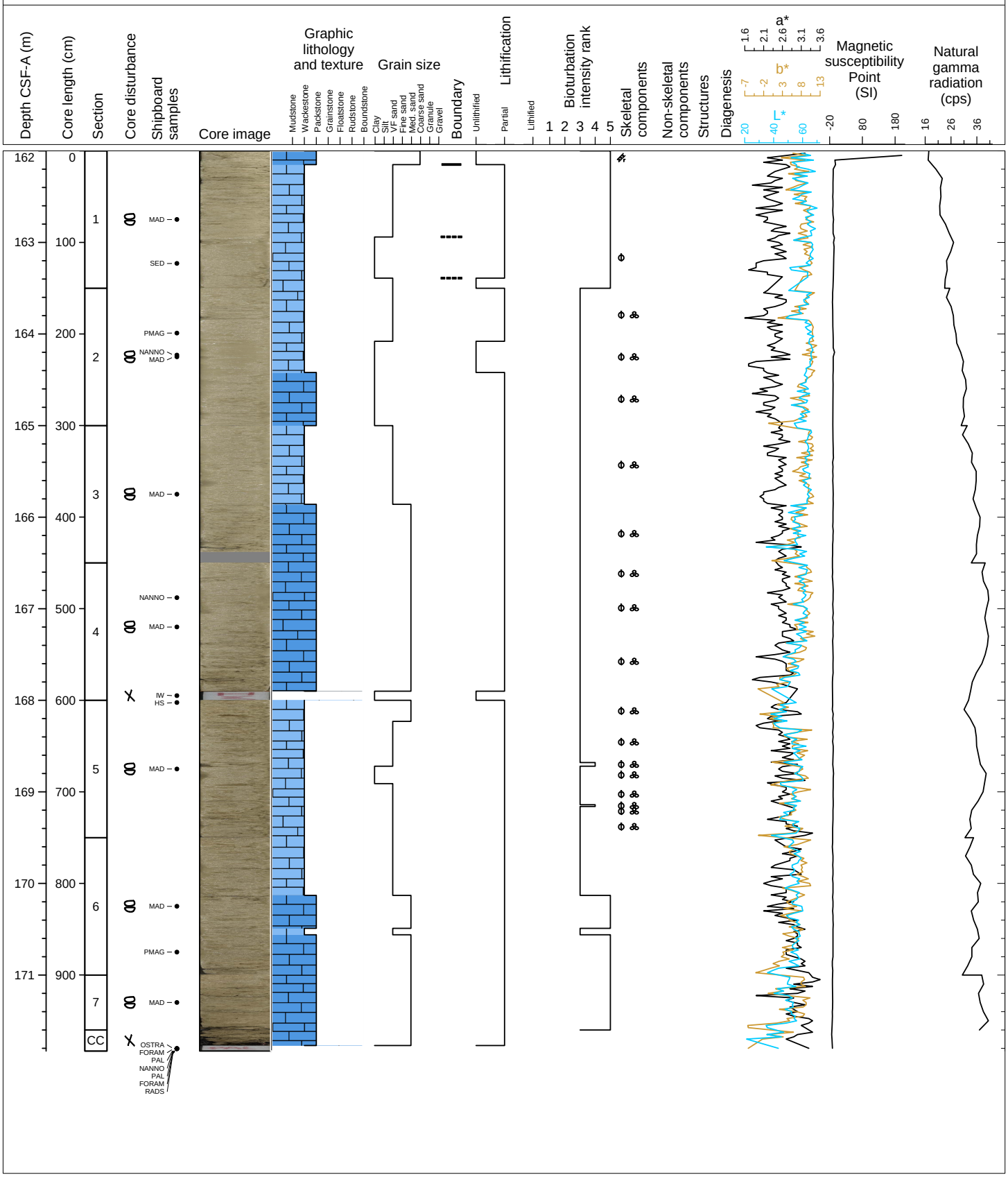
Hole 359-U1466A Core 21H, Interval 155.0-162.39 m (CSF-A)

Unlithified to unlithified dolomitic (?) WACKESTONE. Very fine-grained to very coarse-grained, highly recrystallized. White to pale yellow. Gradual transitions, no clear biota, foraminifera relicts.



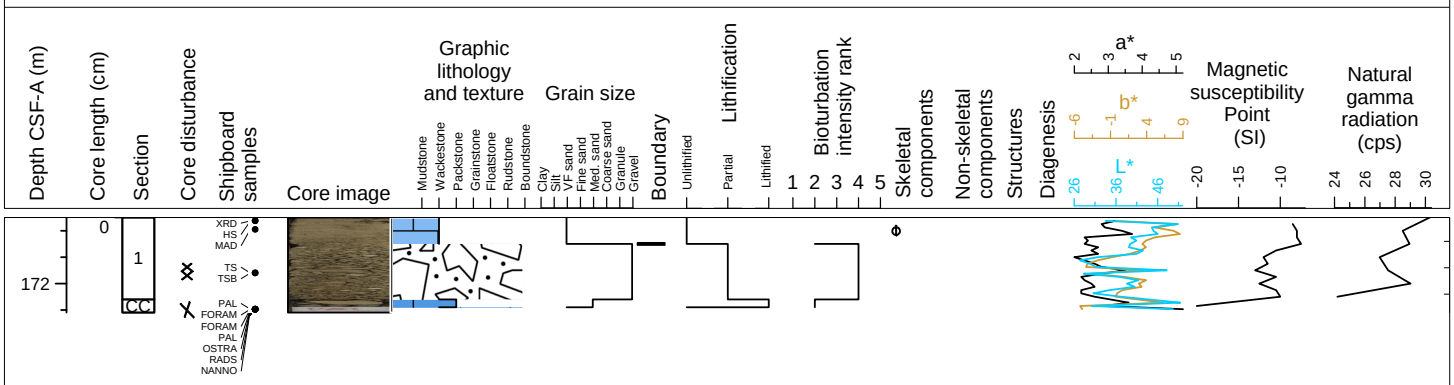
Hole 359-U1466A Core 22H, Interval 162.0-171.83 m (CSF-A)

Unlithified to unlithified dolomitic (?) WACKESTONE. Clay to very coarse-grained, highly recrystallized. White to dark gray. Gradual and lithological transitions. Benthic foraminifera are the dominant skeletal grain identifiable, also present are foraminifera (planktic, recrystallized) and coccoliths. A smear slide (U1466A-22H-1-A 123/123-SED, 163.23 mbsf) show an abundance of benthic foraminifera (with a calcite rims) and biosiliceous fragments. Planktic foraminifera (with calcitic rims) and dolomite rhombs <5?m are common (dolomitic limestone with foraminifera).



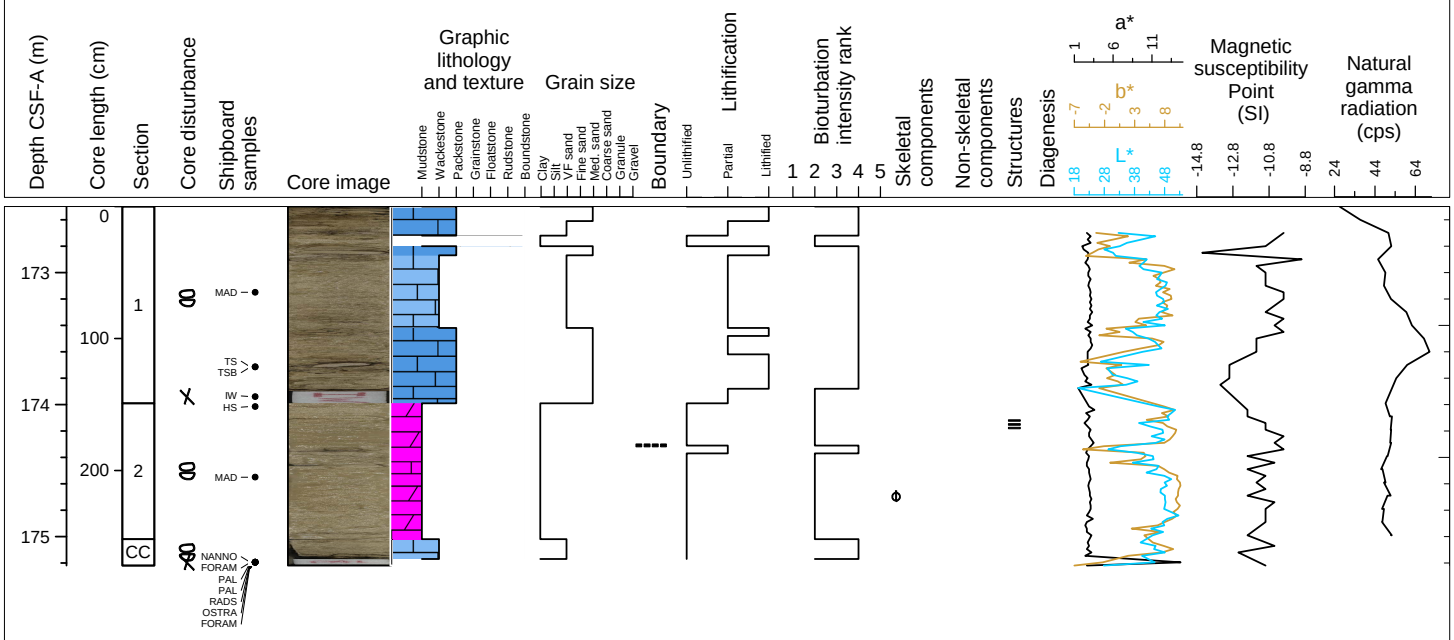
Hole 359-U1466A Core 23H, Interval 171.5-172.22 m (CSF-A)

Unlithified to partially lithified dolomitic WACKESTONE. Disturbed layer represented by a breccia containing chert and dolomite fragments. Bioclasts unidentifiable.



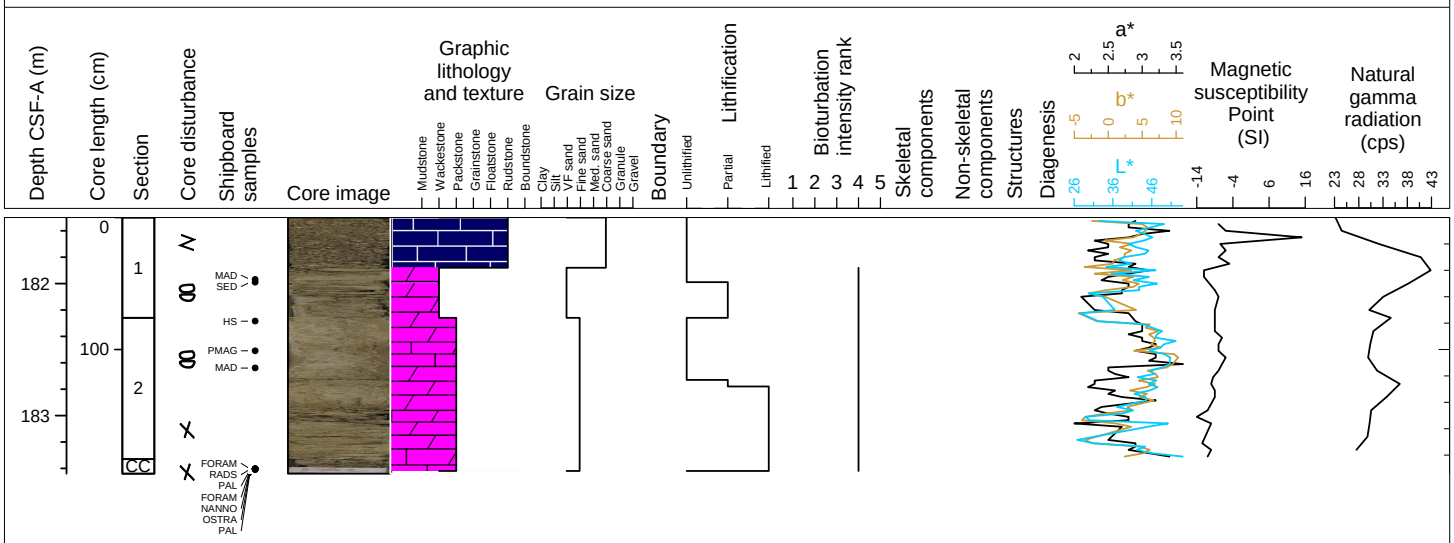
Hole 359-U1466A Core 24X, Interval 172.5-175.22 m (CSF-A)

Lithified to partially lithified bioturbated dolomitic PACKSTONE and WACKESTONE. Thick to thin bedded, very fine (clay) to medium-grained. Poorly- to well-sorted. Light brownish gray. Unlithified to partially lithified gray MUDSTONE unit with black organic layers between 24X-2, 00 cm to 24X-2, 103 cm. Gradational contacts representing changes in colour and/or sorting. Bioclasts often unidentifiable due to recrystallization. Thin section analysis (U1466A-24X-1-W 120/123-TSB, 173.7 to 173.73 mbsf) shows that the fine-grained wackestone to packstone contains common bioclasts and planktic and benthic foraminifera in a recrystallized micritic matrix. Most of the components are dissolved and partially infilled by microgranular calcitic cements and rarely by dolomite. Some areas are ocher colored, probably by presence of organic matter. Largest moldic pores up to 1mm show precipitates of a black mineral. Porosity in this sample is up to 3%.



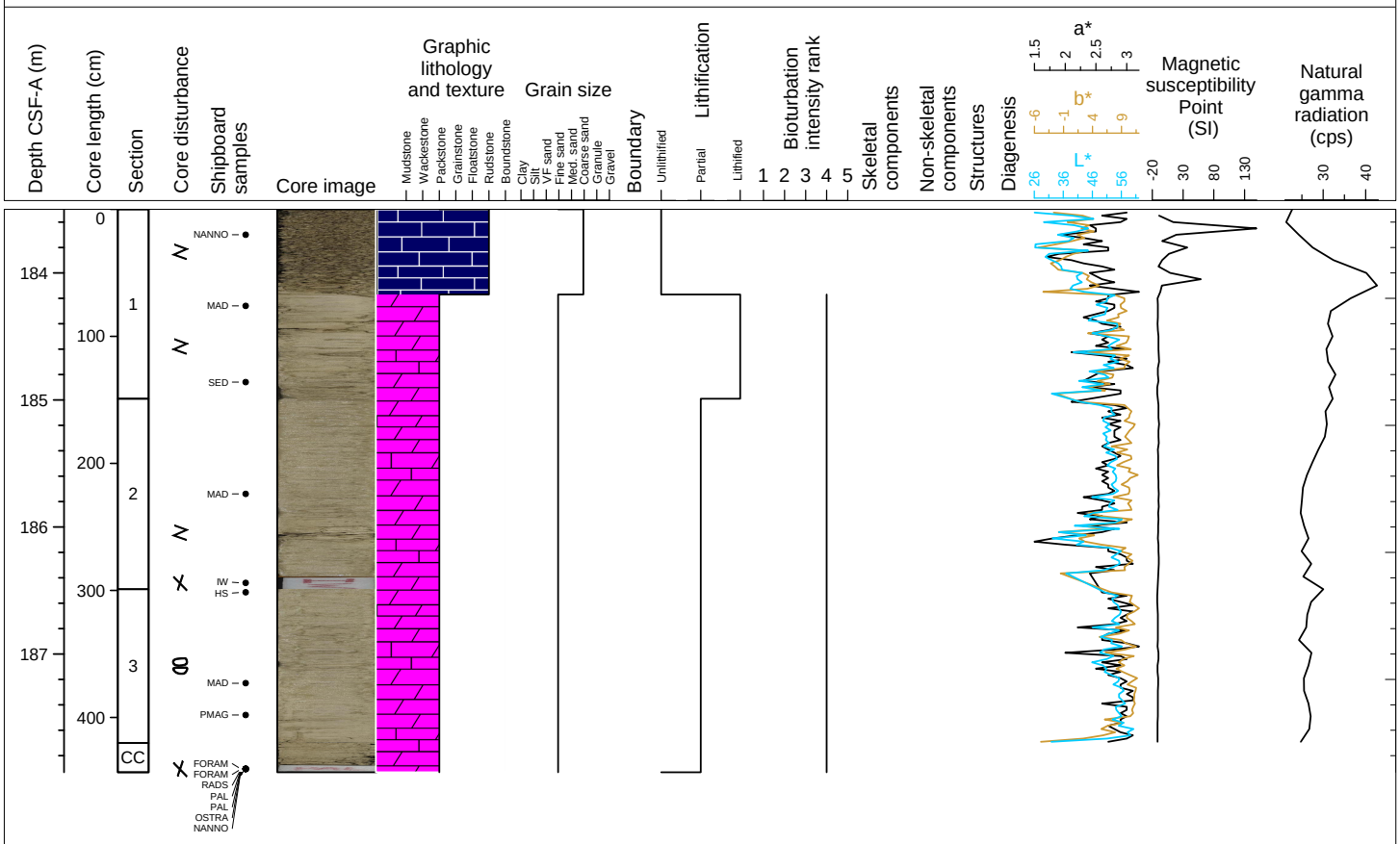
Hole 359-U1466A Core 25H, Interval 181.5-183.44 m (CSF-A)

Unlithified to partially lithified bioturbated dolomitic PACKSTONE and WACKESTONE. Very fine-to fine-grained, light brownish gray. WACKSTONE thin to medium bedded from 25H-1, 38 cm to 25H-1, 76cm. Laminated black layer at 25H-1, 49 cm to 25H, 50 cm. Smear slide (U1466A-25H-1-A 49/49-SED, 181.99 mbsf) shows that calcite crystals and organic matter are common. Aragonite, dolomite crystals and benthic foraminifera, echinoid fragments and black grains are present (dolomitic limestone). Re-crystallized PACKSTONE for the remainder of the core. Gradational contacts representing changes in colour. Bioclasts often unidentifiable due to recrystallization. Significant cave-in 25H-1, 00-38 cm.



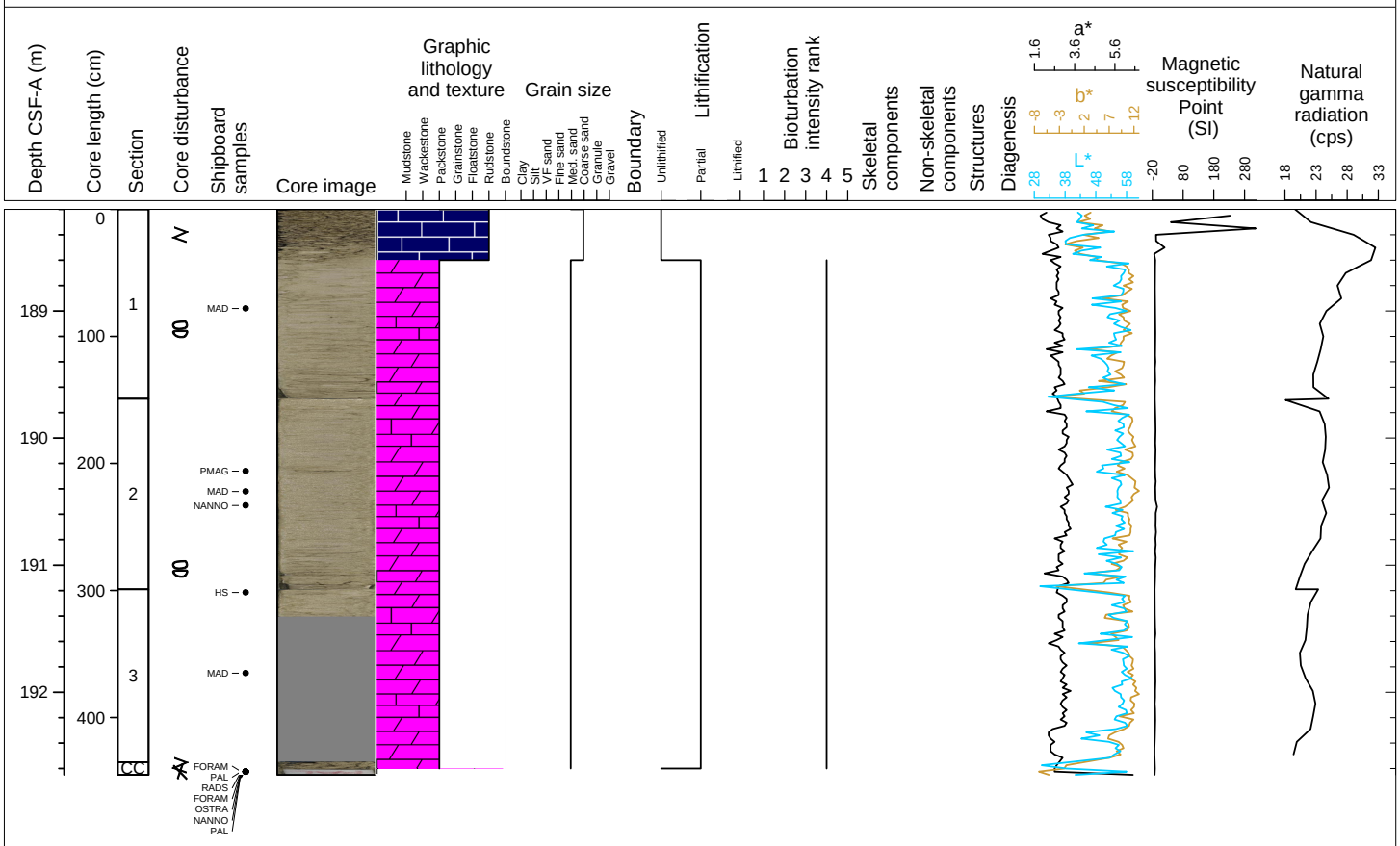
Hole 359-U1466A Core 26F, Interval 183.5-187.93 m (CSF-A)

Partially lithified dolomitic PACKSTONE. Re-crystallized, fine-grained, thick to medium bedded, moderately- to well-sorted, light brownish gray. Gradational contacts representing changes in colour and/or sorting. Smear slide analysis (U1466A-26F-1-A 136/136-SED, 184.86 mbsf) shows that aragonite crystals <5?m are abundant. Calcitic crystals and dolomite crystals < 5?m are common and benthic foraminifera, brown specks and black grains (Mn?) are present (dolomitic limestone). Significant cave-in 26F-1, 00-68 cm.



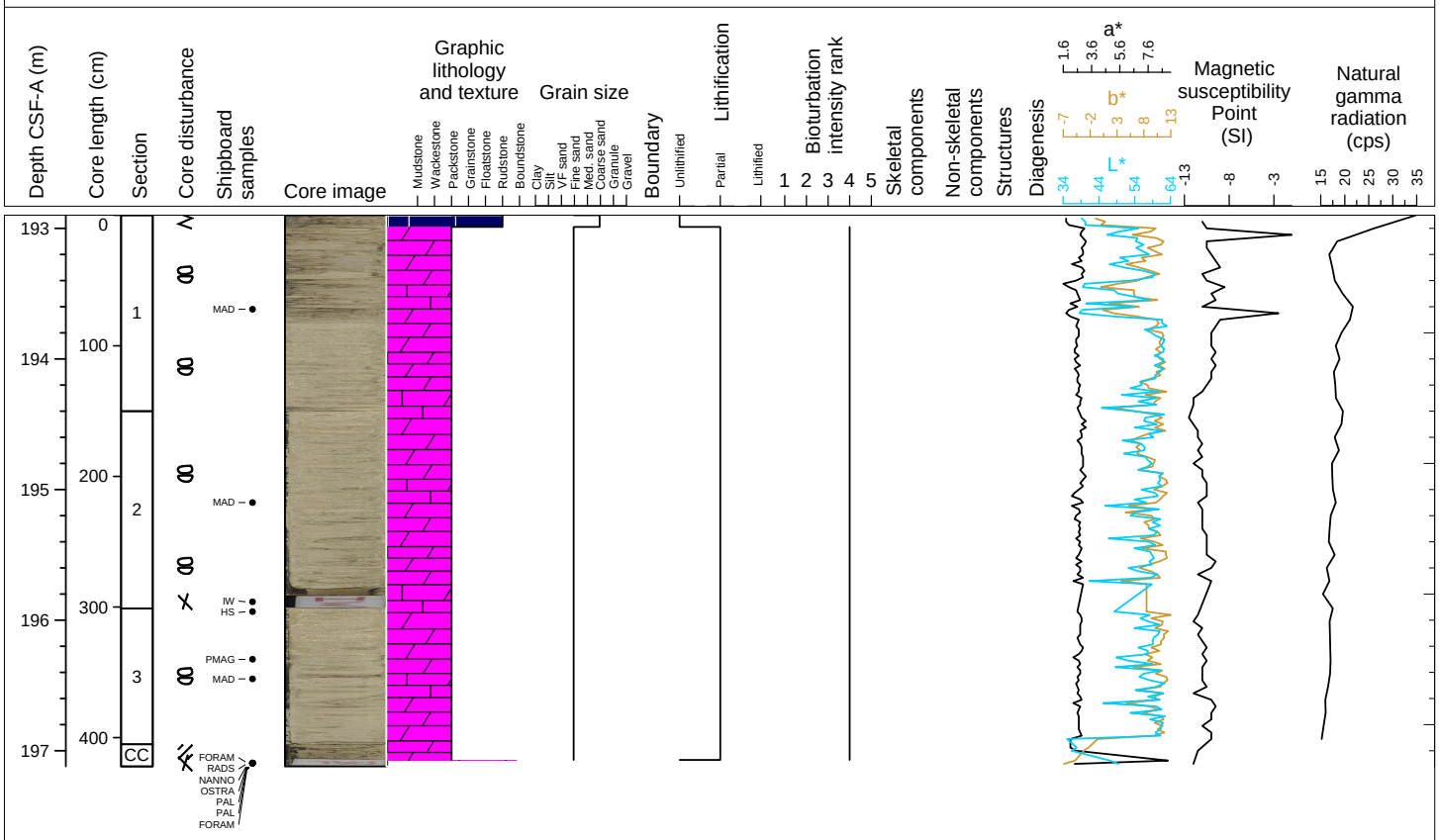
Hole 359-U1466A Core 27F, Interval 188.2-192.65 m (CSF-A)

Partially lithified dolomitic PACKSTONE. Re-crystalized, medium-grained, thick to medium bedded, moderately- to well-sorted, light brownish gray. Gradational contacts representing changes in color and/or sorting. Bioclasts unidentifiable, black clasts present through core with a concentration between 27F-2, 56-57 cm. Significant cave-in 28F-1, 00-40 cm.



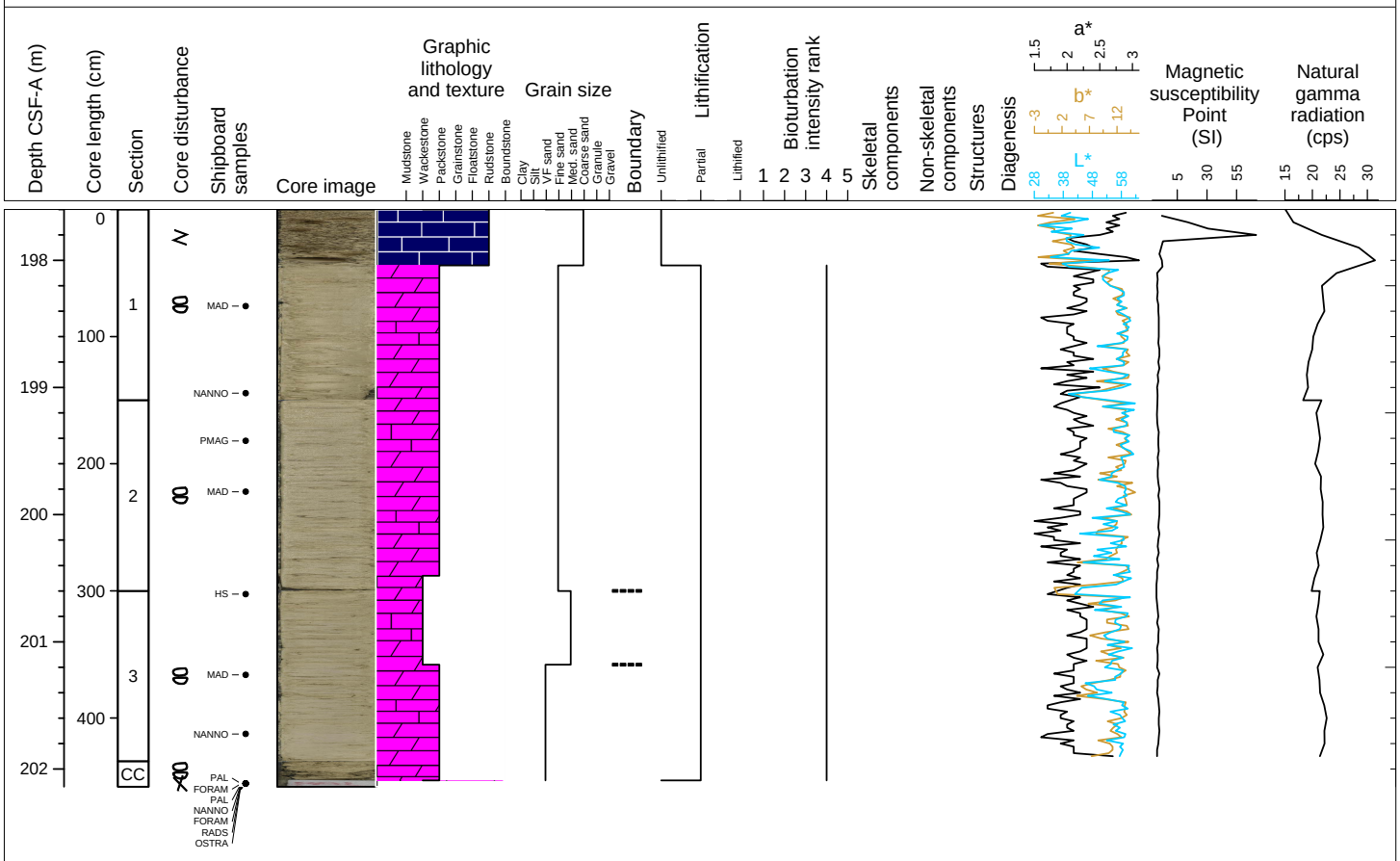
Hole 359-U1466A Core 28F, Interval 192.9-197.12 m (CSF-A)

Partially lithified dolomitic PACKSTONE. Re-crystalized, fine-grained, thick to medium bedded, moderately- to well-sorted, light brownish gray. Gradational contacts representing changes sorting. Bioclasts unidentifiable, black clasts and aggregates present through core. Significant cave-in 28F-1, 0-9 cm.



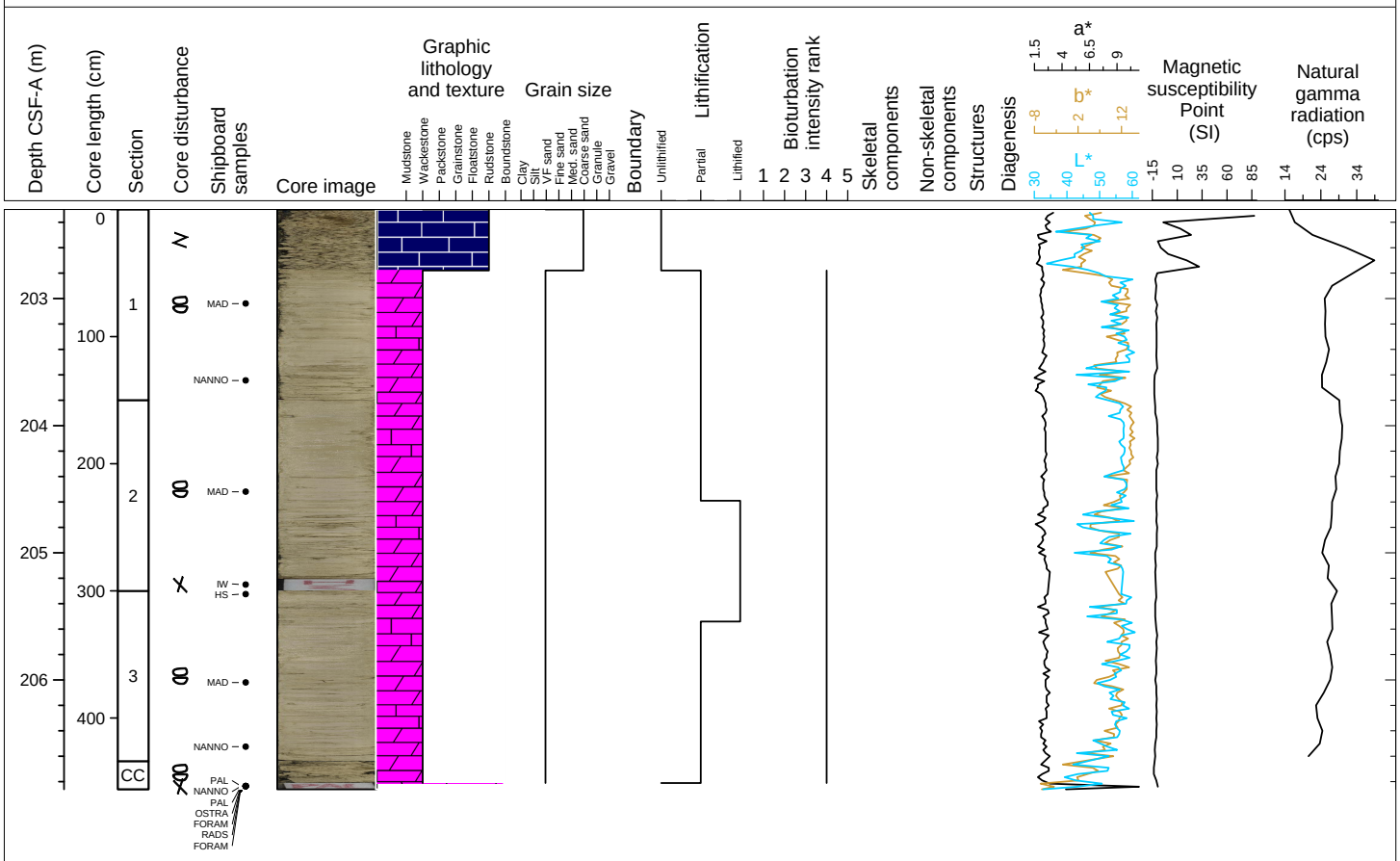
Hole 359-U1466A Core 29F, Interval 197.6-202.14 m (CSF-A)

Partially lithified dolomitic PACKSTONE and WAKESTONE. Re-crystalized, fine-grained, thick to medium bedded, moderately- to well-sorted, light brownish gray. Gradational contacts representing changes sorting. Bioclasts unidentifiable. Burrows have a higher degree of lithification. Significant cave-in 29F-1, 0-44 cm.



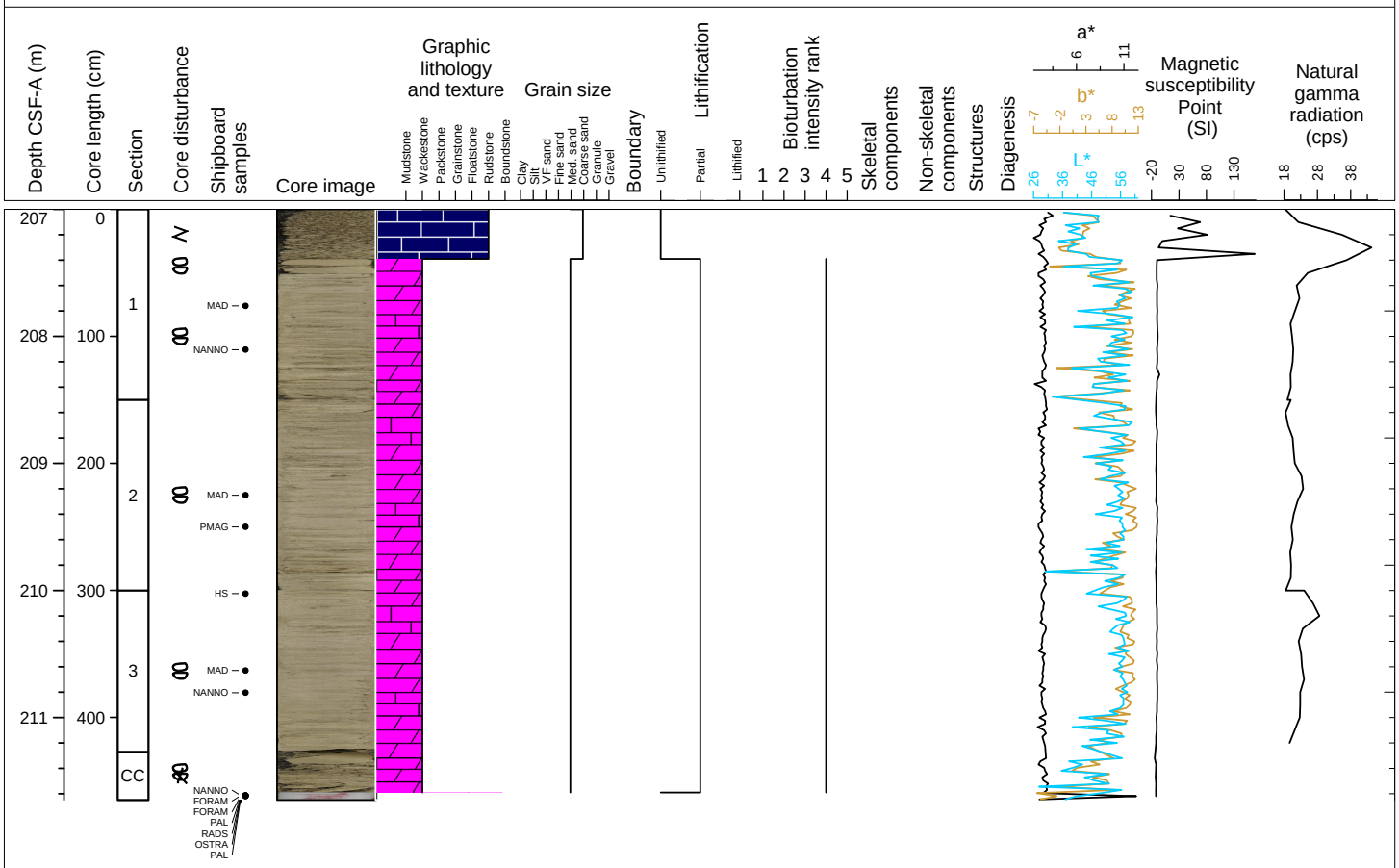
Hole 359-U1466A Core 30F, Interval 202.3-206.86 m (CSF-A)

Partially lithified to lithified dolomitic WAKESTONE. Re-crystalized, fine-grained, thick to medium bedded, moderately- to well-sorted, light gray. Gradational contacts representing changes sorting or degree of lithification. A slight increase in lithification down core. Bioclasts unidentifiable. Burrows have a higher degree of lithification. Significant cave-in 30F-1, 0-48 cm.



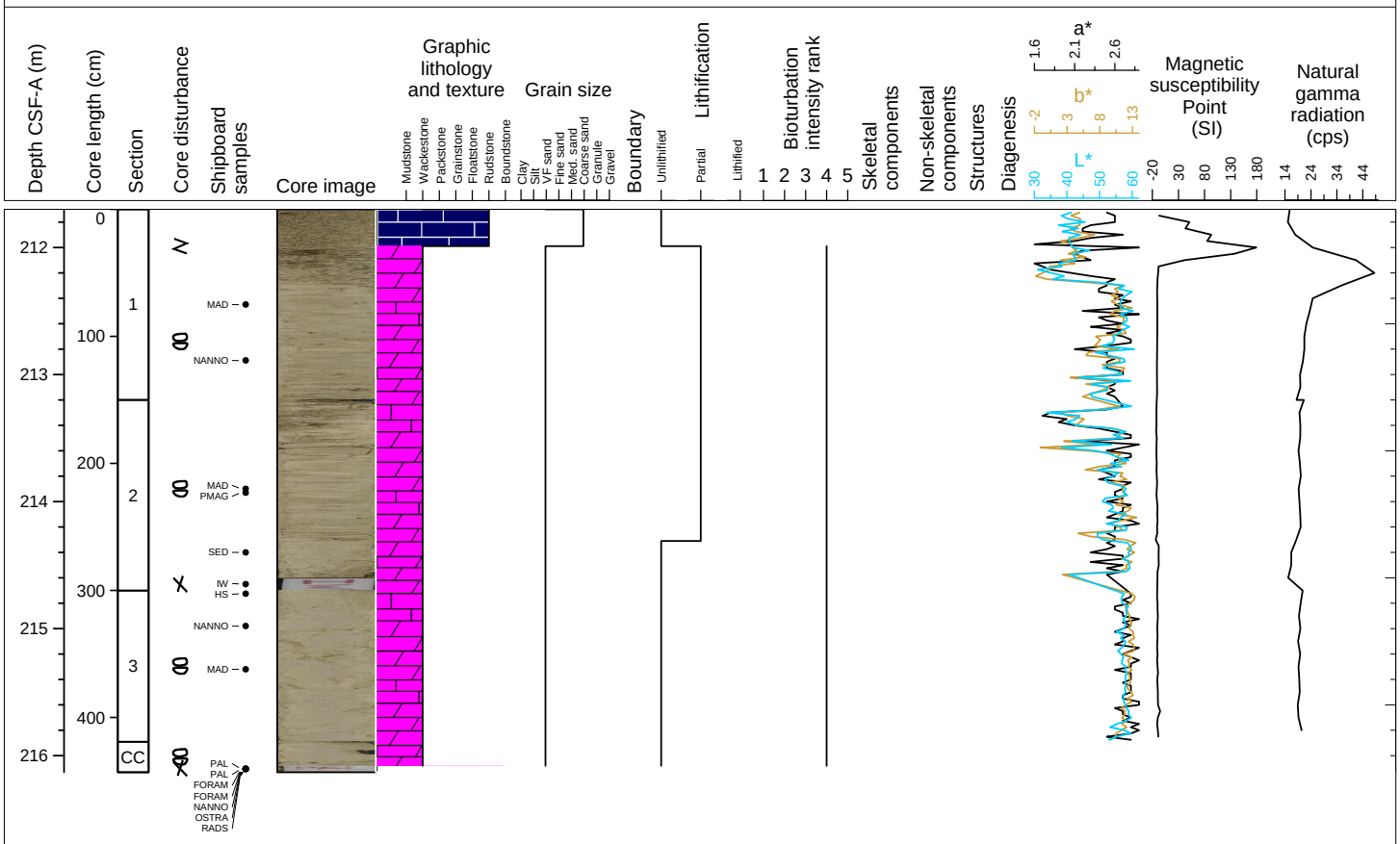
Hole 359-U1466A Core 31F, Interval 207.0-211.65 m (CSF-A)

Partially lithified dolomitic WAKESTONE. Re-crystalized, medium-grained, thick bedded, moderately-sorted, gray. Gradational contacts representing changes sorting or degree of lithification. A slight increase in lithification down core. Bioclasts unidentifiable. Significant cave-in 31F-1, 0-39 cm.



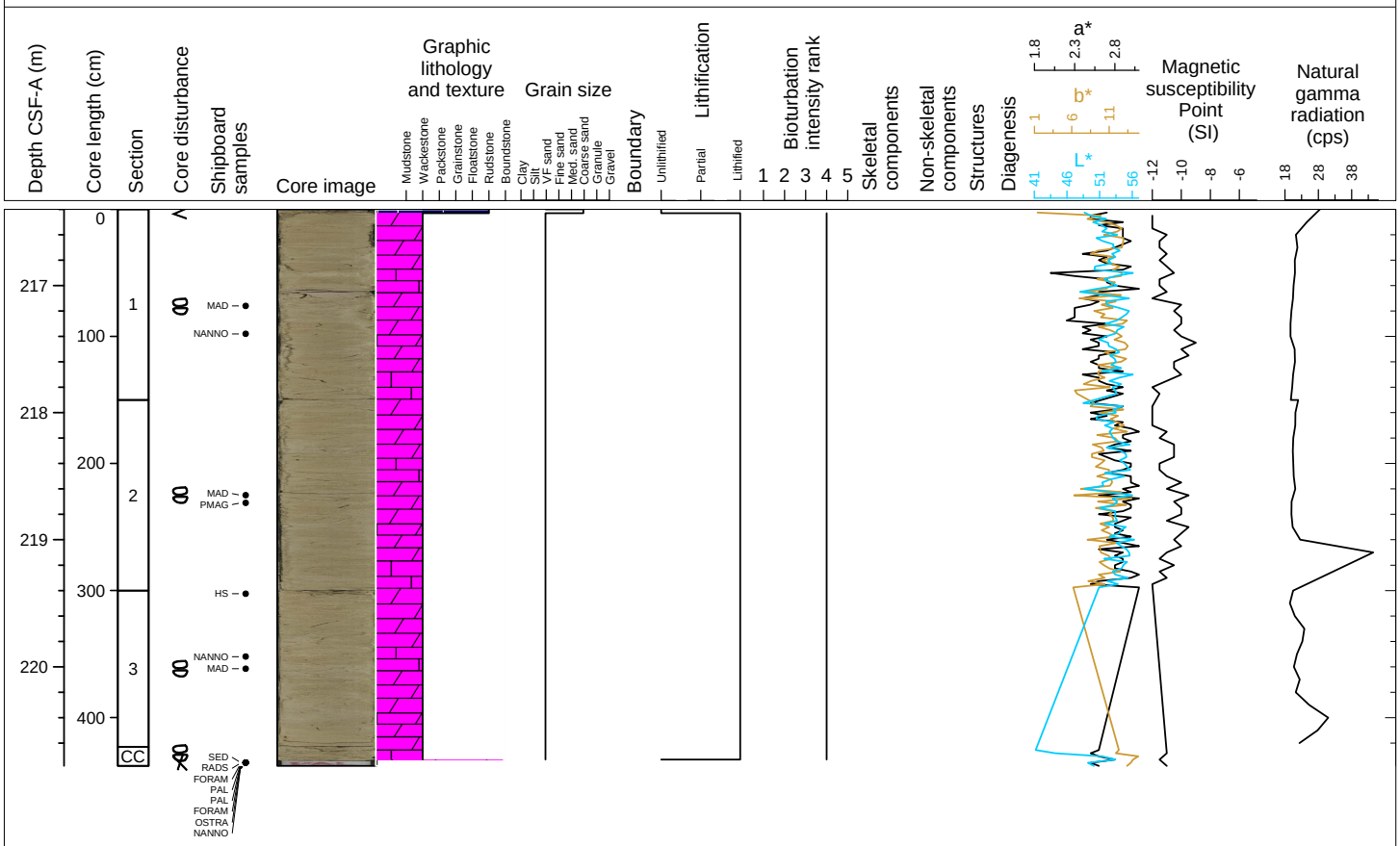
Hole 359-U1466A Core 32F, Interval 211.7-216.13 m (CSF-A)

Partially lithified dolomitic WAKESTONE. Re-crystalized, very fine-grained, medium to thick bedded, moderately-sorted, gray. Gradational contacts representing changes sorting or degree of lithification. A decrease in lithification down core (possibly due to flow in). Bioclasts unidentifiable. Significant cave-in 31F-1, 0-39 cm.



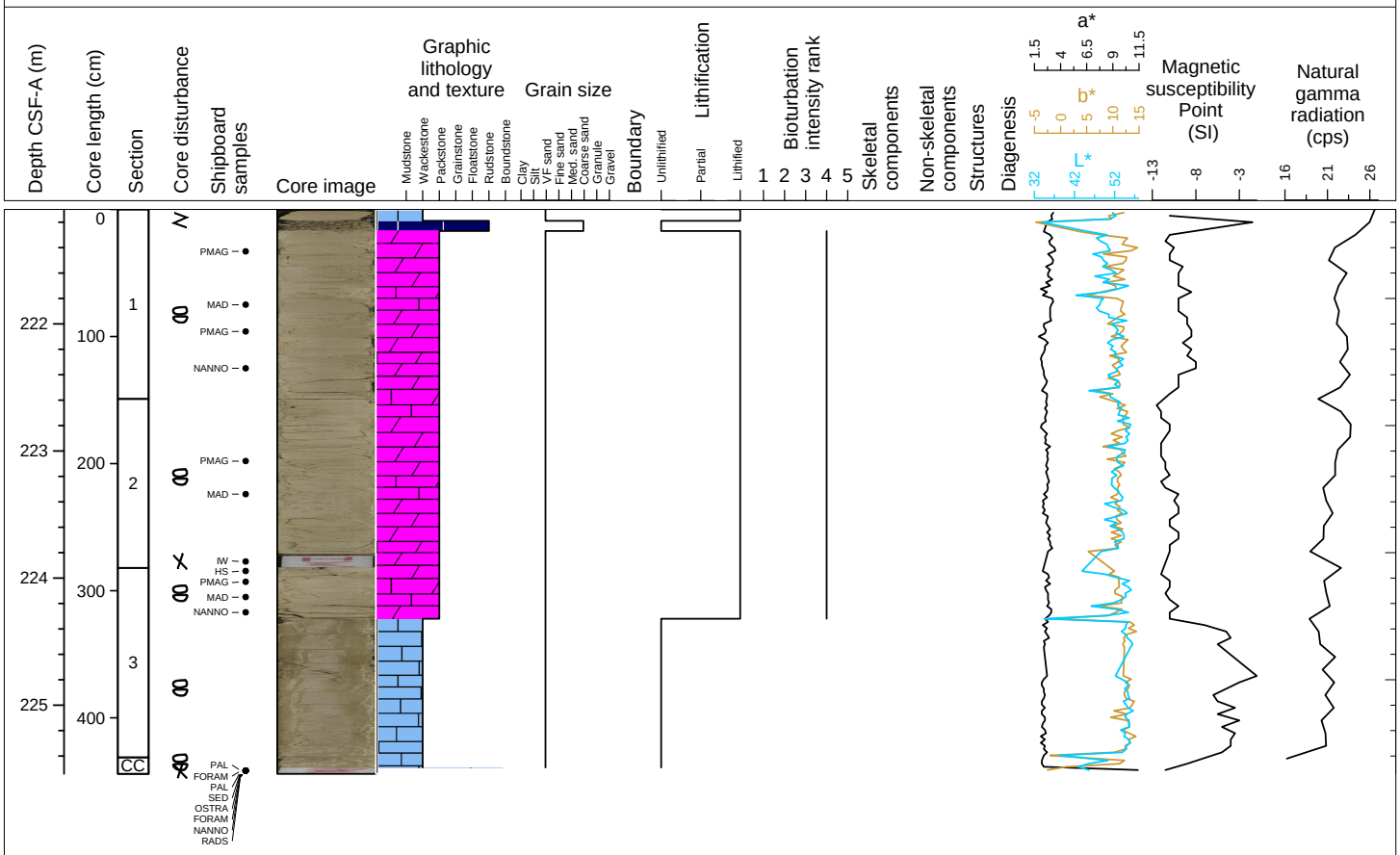
Hole 359-U1466A Core 33F, Interval 216.4-220.78 m (CSF-A)

Lithified dolomitic WAKESTONE. Re-crystalized, very fine-grained, thick bedded, well-sorted, light gray. Gradational contacts representing changes sorting or degree of lithification. One individual silicified benthic foram (33F-3, 100 cm). Significant cave-in 33F-1, 0-3 cm.



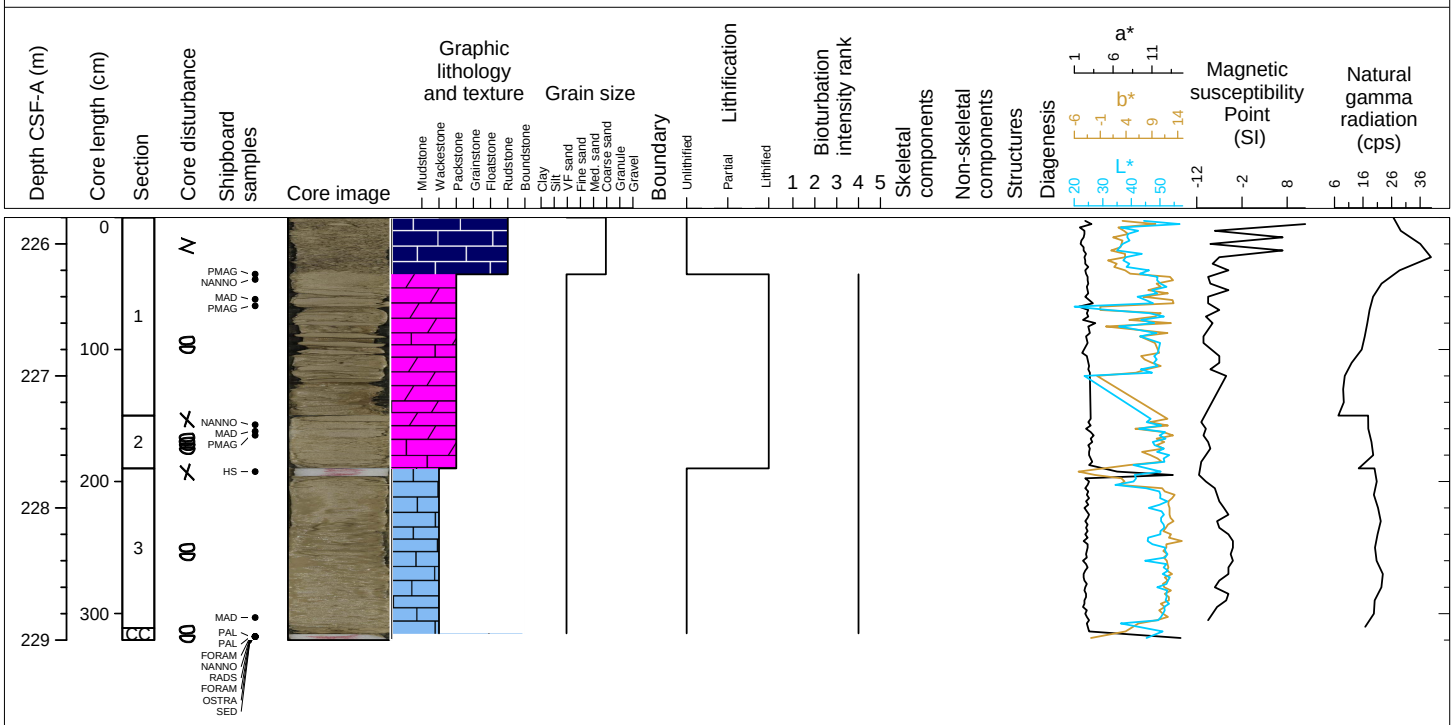
Hole 359-U1466A Core 34F, Interval 221.1-225.54 m (CSF-A)

Lithified dolomitic PACKSTONE. Re-crystalized, very fine-grained, thick bedded, well-sorted, light gray. Gradational contacts representing changes sorting or degree of lithification. One individual silicified benthic foram (33F-3, 100 cm). Significant cave-in 34F-1, 0-17 cm.



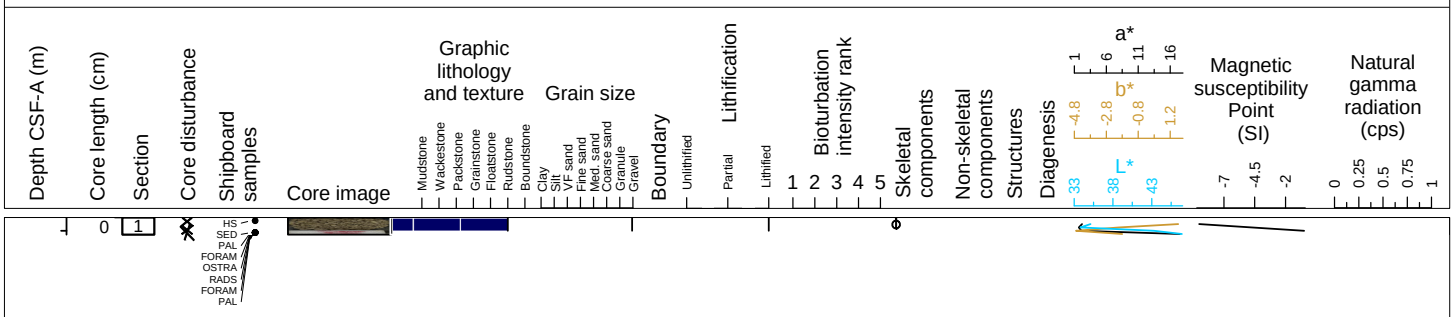
Hole 359-U1466A Core 35F, Interval 225.8-229.0 m (CSF-A)

Lithified dolomitic PACKSTONE. Re-crystalized, very fine-grained, thick bedded, well-sorted, light gray. Gradational contacts representing changes sorting or degree of lithification. One individual silicified benthic foram (33F-3, 100 cm). Significant cave-in 35F-1, 0-43 cm.



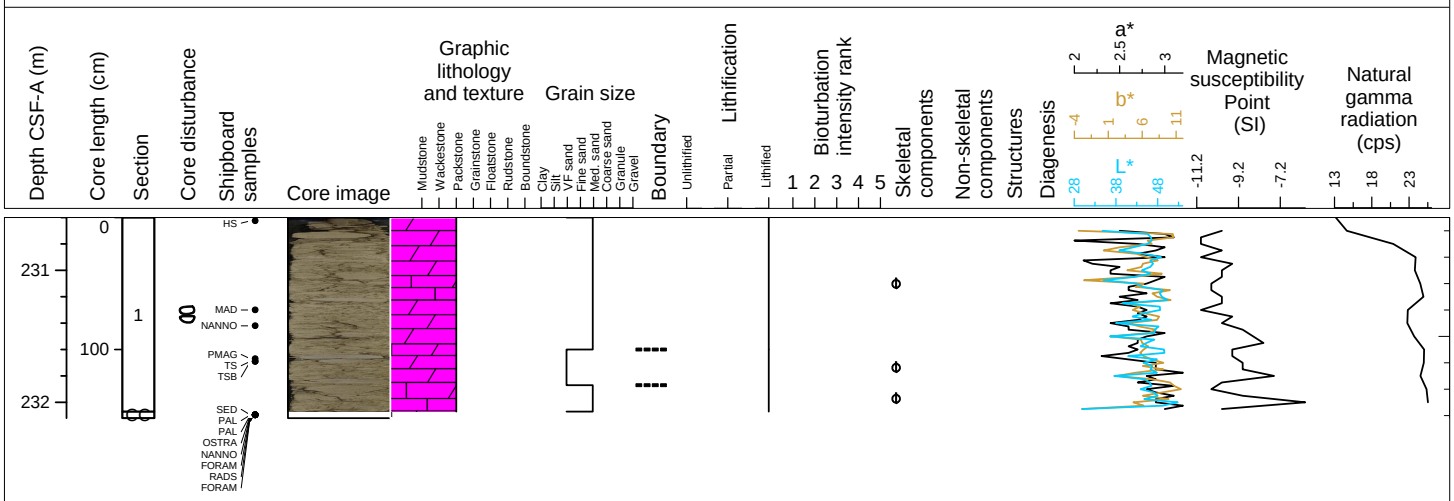
Hole 359-U1466A Core 36F, Interval 230.5-230.63 m (CSF-A)

Caved in material - Lithified dolomitic RUDSTONE. Re-crystalized.



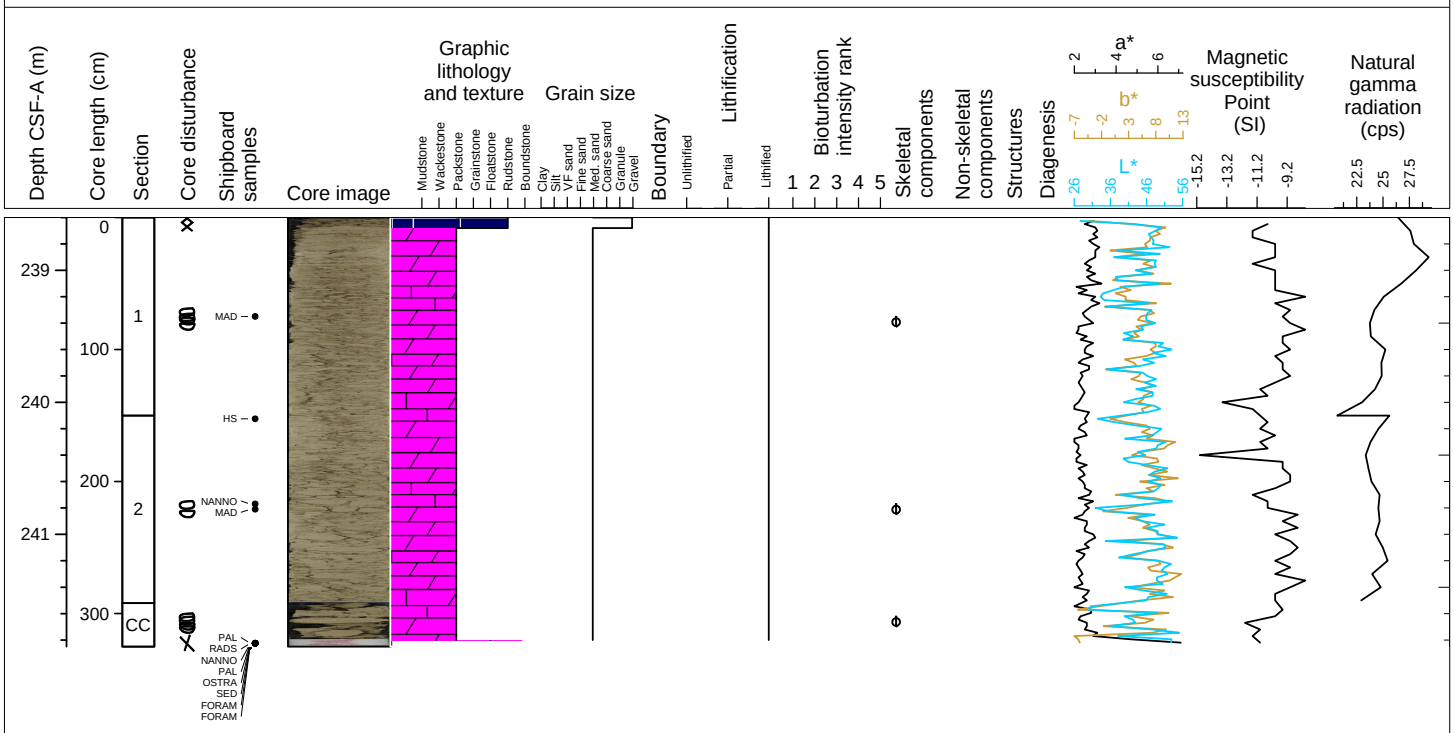
Hole 359-U1466A Core 37X, Interval 230.6-232.12 m (CSF-A)

Lithified dolomitic PACKSTONE. Re-crystallized, very fine- to medium-grained, thick bedded, moderate- to well-sorted, light brownish gray. Gradational contacts. Thin section analysis (U1466A-37X-1-W 108/110-TSB, 231.68 to 231.70 mbsf) shows that very fine-grained packstone to wackestone contains abundant bioclasts and come planktic and benthic foraminifera in a recrystallized micritic matrix. Most of the components are preserved in microgranular calcitie, rarely in acicular calcite. Porosity in this sample is less than 1 %. Significant cave-in 37F-1, 0-10 cm.



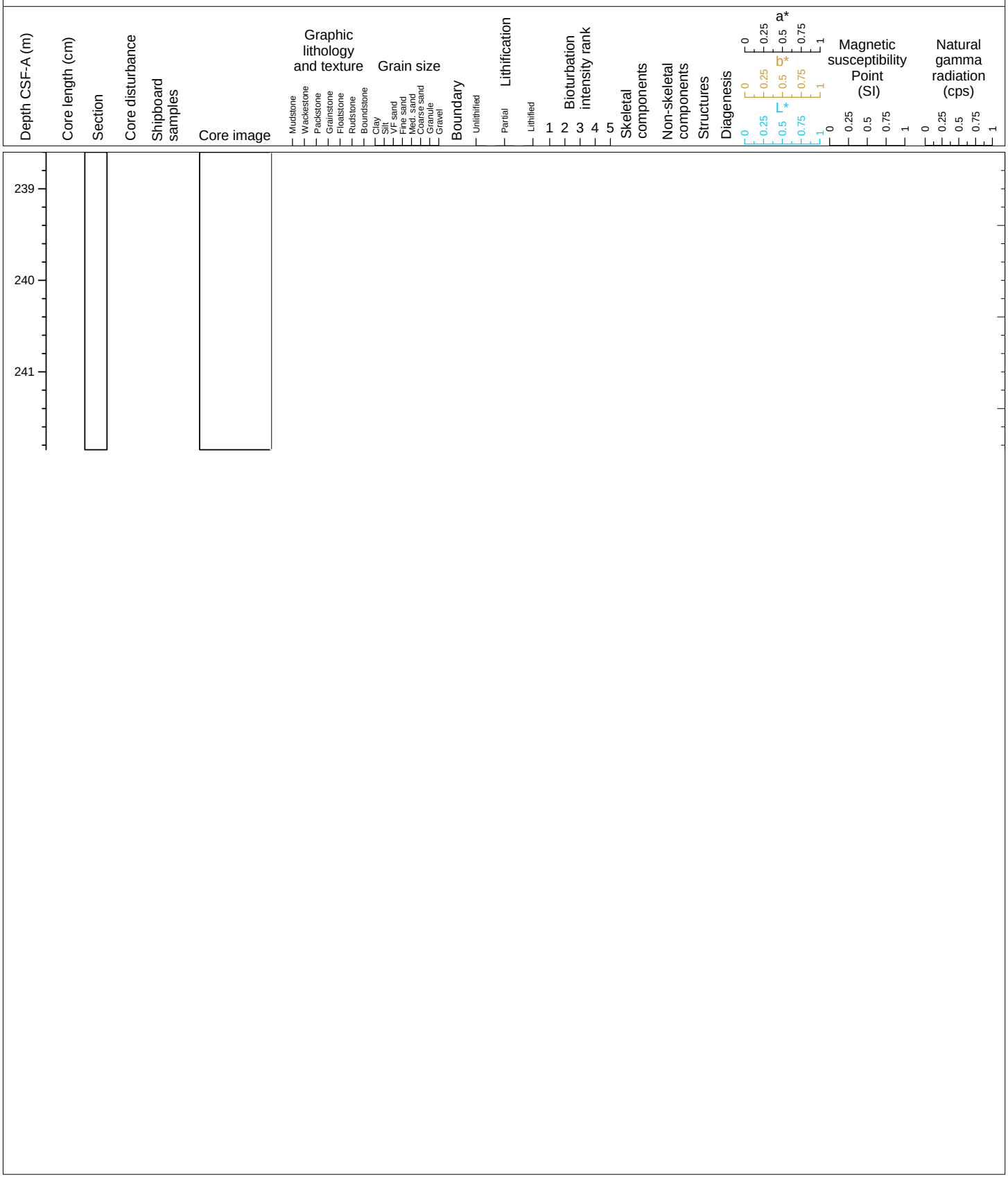
Hole 359-U1466A Core 38X, Interval 238.6-241.85 m (CSF-A)

Lithified dolomitic PACKSTONE. Re-crystalized, medium-grained, thick bedded, moderate- to well-sorted, light gray to pale yellow. No clear transitions. Dark specks suspected as Mn oxides. Significant cave-in 38F-1, 0-8 cm.



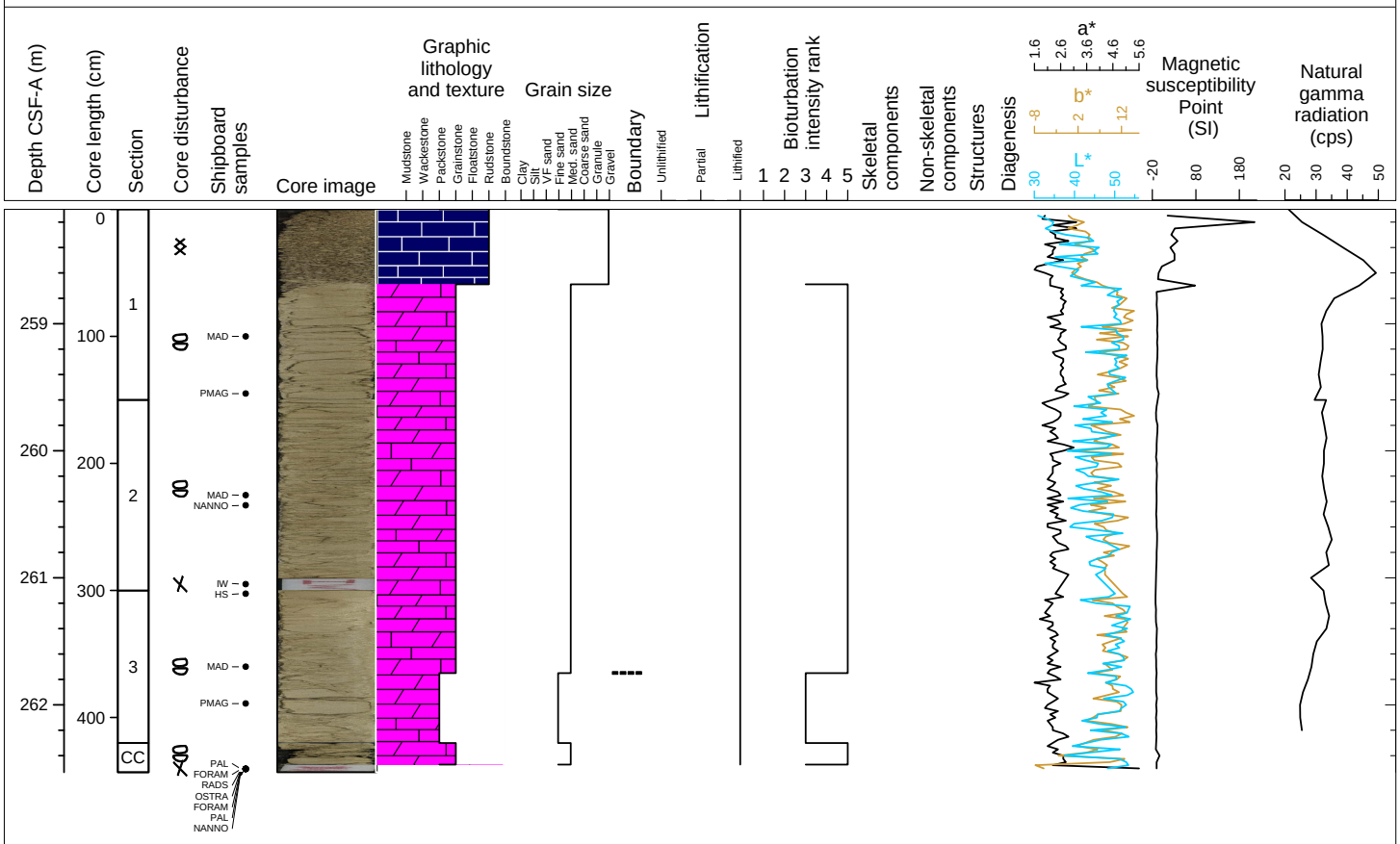
Hole 359-U1466A Core 39X, Interval 248.3-248.3 m (CSF-A)

NO RECOVERY



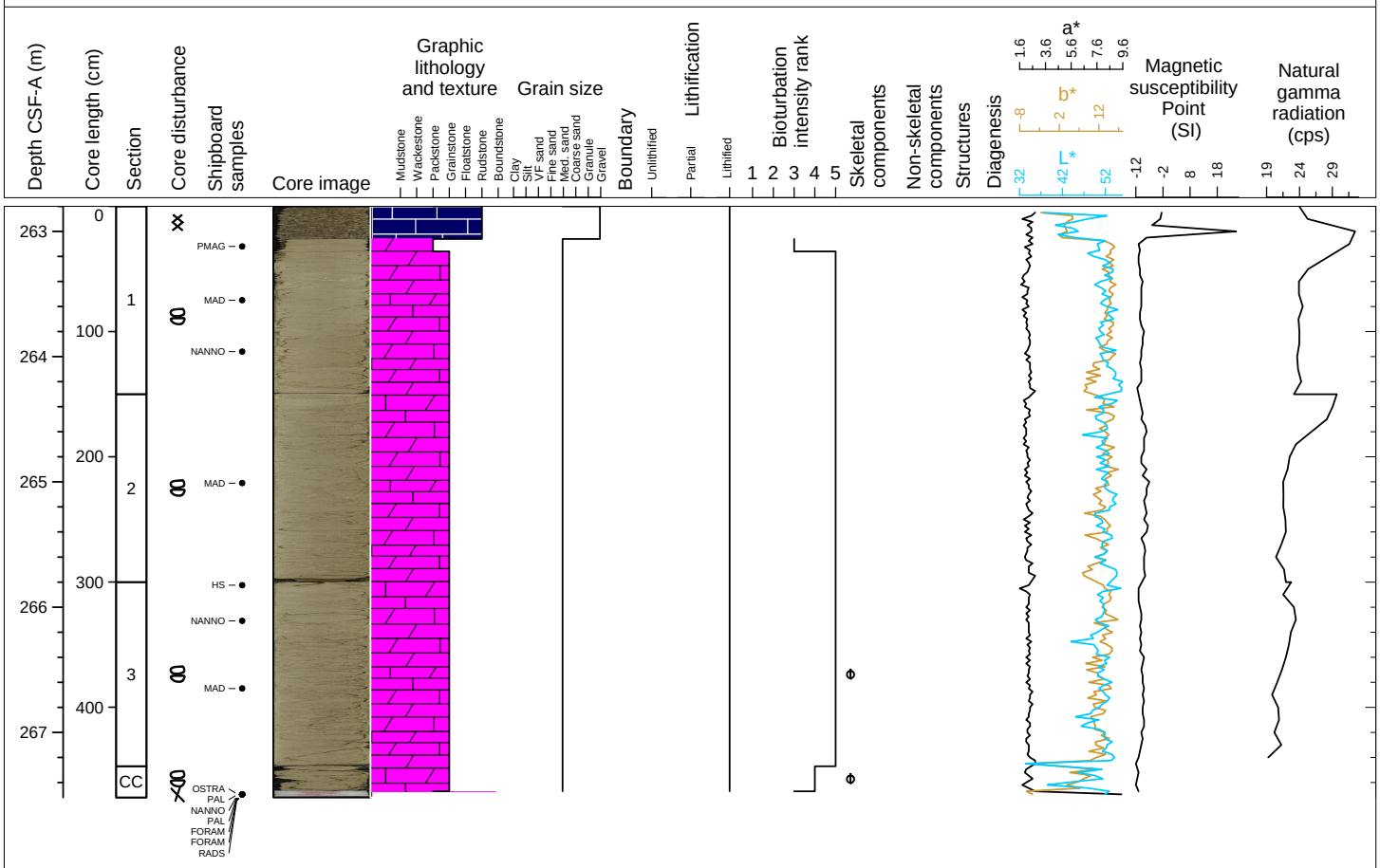
Hole 359-U1466A Core 40F, Interval 258.1-262.53 m (CSF-A)

Lithified dolomitic PACKSTONE and GRAINSTONE. Re-crystalized, medium-grained, thick bedded, moderate- to well-sorted, light gray to pale yellow. Gradational contacts. Significant cave-in 38F-1, 0-59 cm.



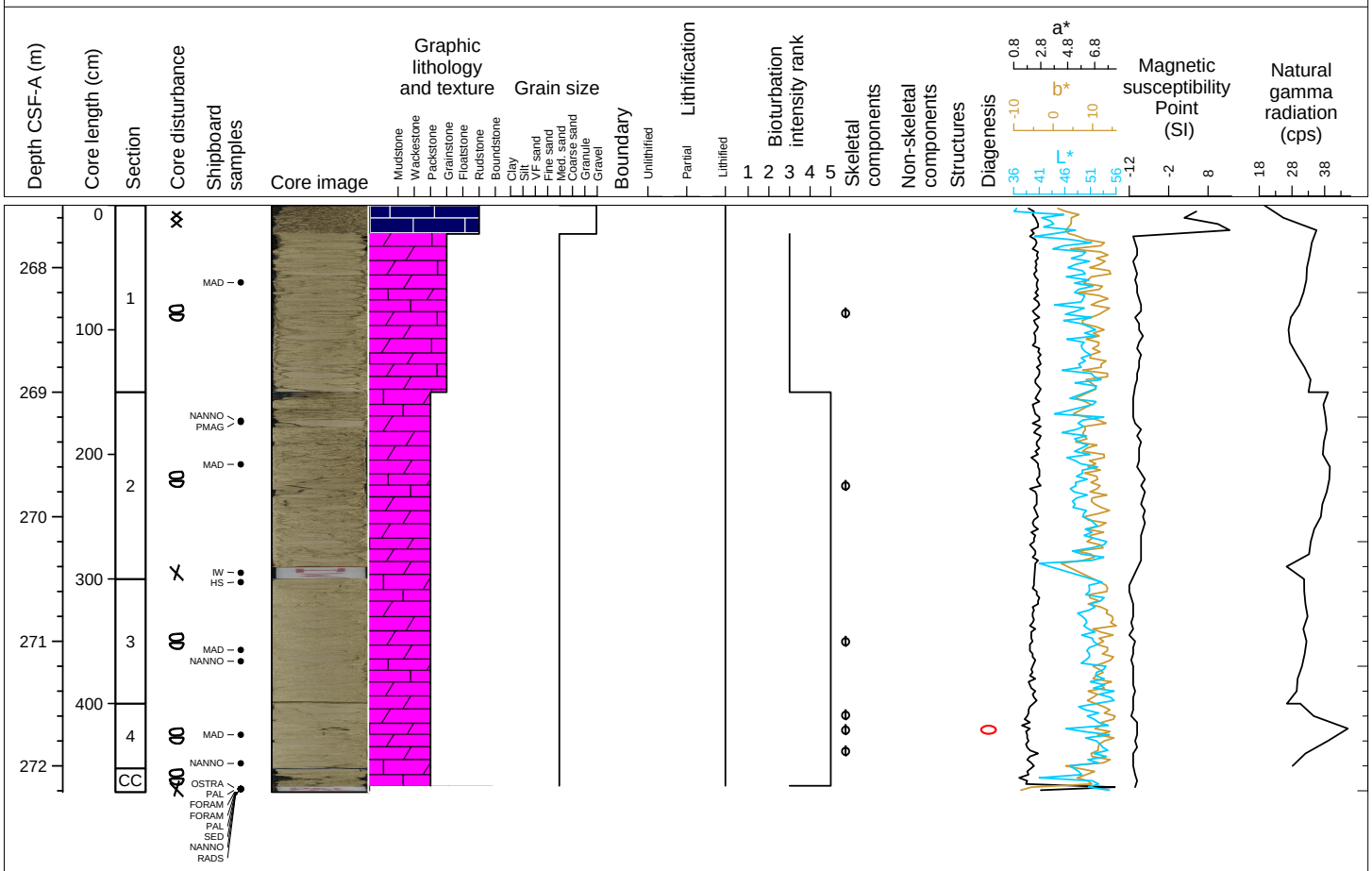
Hole 359-U1466A Core 41F, Interval 262.8-267.52 m (CSF-A)

Lithified dolomitic PACKSTONE and GRAINSTONE. Re-crystalized, medium-grained, thick bedded, moderate -sorted, light gray. No clear contacts. Significant cave-in 41F-1, 0-26 cm.



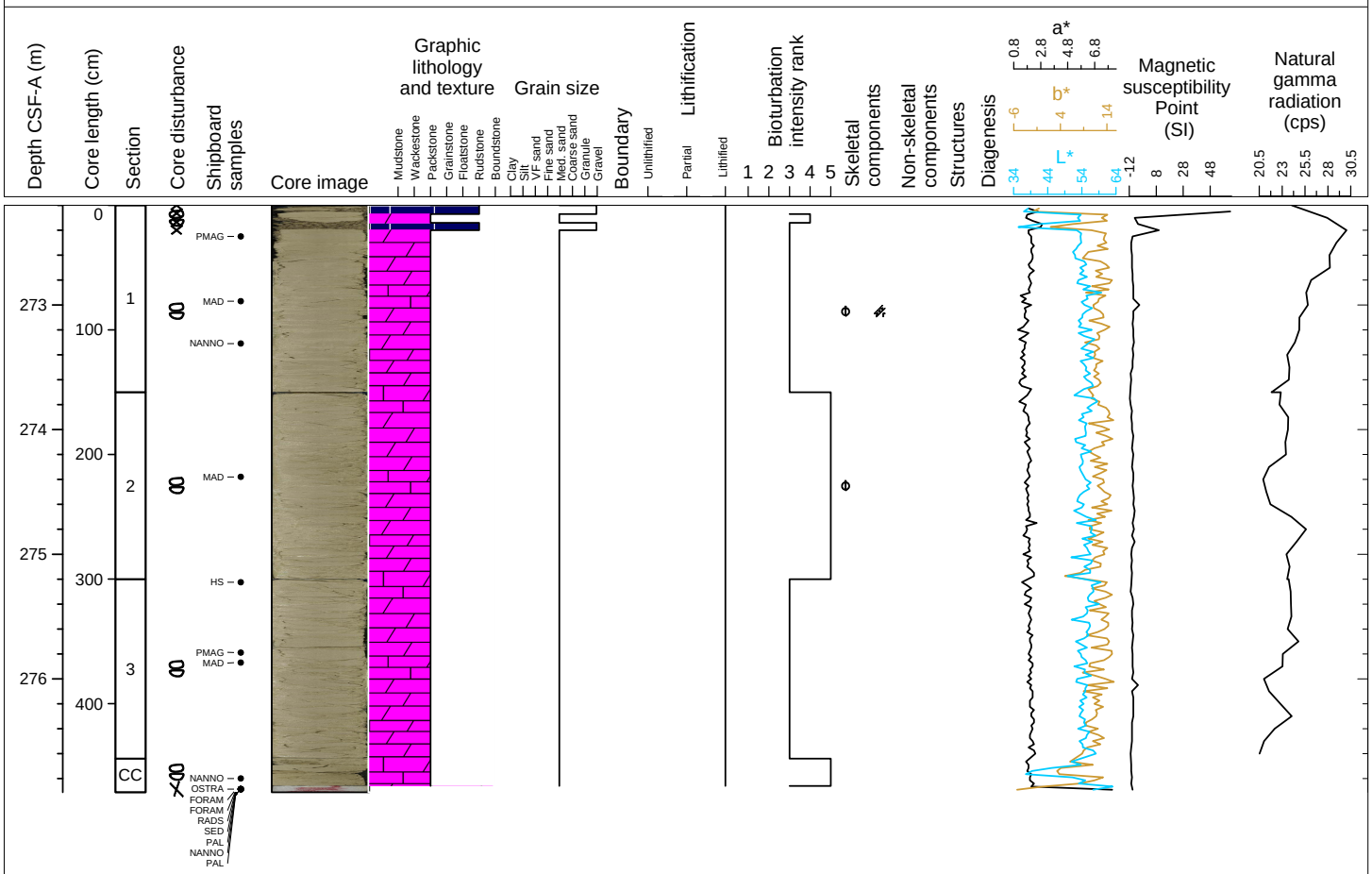
Hole 359-U1466A Core 42F, Interval 267.5-272.21 m (CSF-A)

Lithified dolomitic PACKSTONE medium to thick bedded. Re-crystalized, fine- to medium-grained, poorly- to moderately-sorted, light gray. No clear contacts. Bioclasts (A) unidentifiable due to recrystallization, shell fragments and red algae rare. Significant cave-in 42F-1, 0-23 cm.



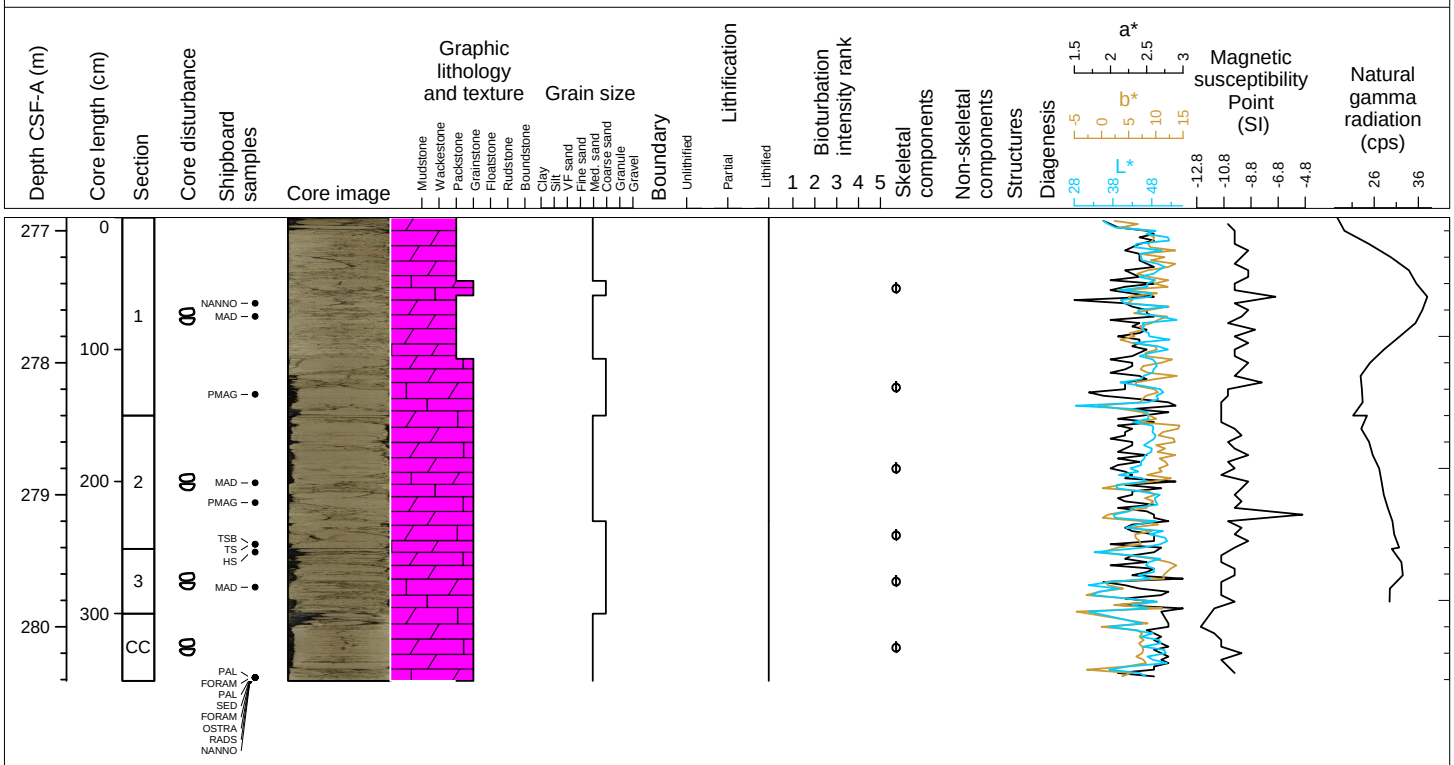
Hole 359-U1466A Core 43F, Interval 272.2-276.91 m (CSF-A)

Lithified dolomitic PACKSTONE. Medium to thick bedded. Re-crystalized, fine- to medium-grained, poorly- to moderately-sorted, light gray. Gradational contacts represented by color change and grain size differences. Bioclasts (A) unidentifiable due to recrystallization, shell fragments and red algae rare. Significant cave-in 43F-1, 0-7 cm and 14-20 cm.



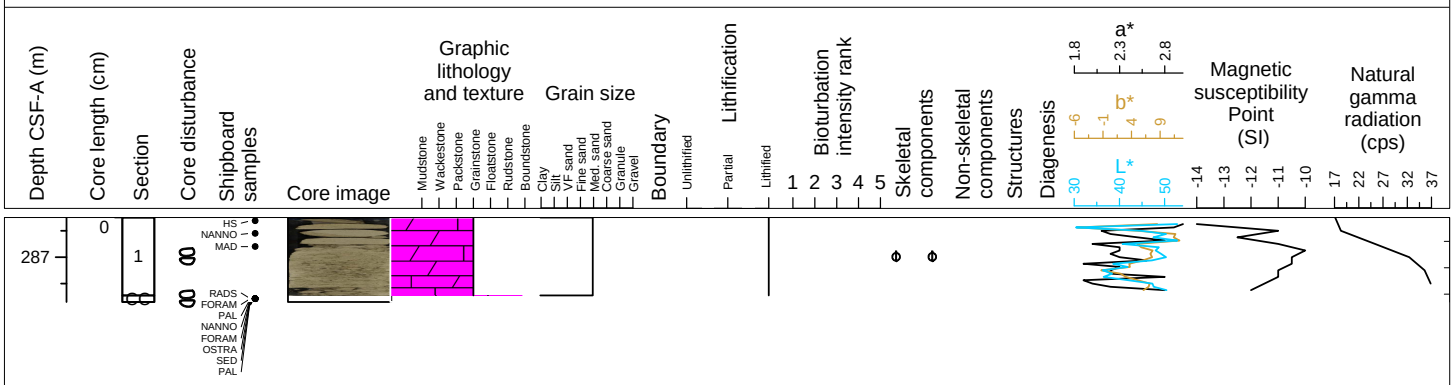
Hole 359-U1466A Core 44X, Interval 276.9-280.41 m (CSF-A)

Lithified dolomitic GRAINSTONE and PACKSTONE. Medium to thick bedded. Re-crystallized, medium- to course-grained, moderately-sorted, light gray. Gradational contacts represented by colour change and grain size differences. Thin section analysis (U1466A-44X-2-W 96/99-TSB, 279.36 to 279.39 mbsf) shows that the fine-grained packstone containes abundant planktic and benthic foraminifera (miogypsinids, Lepidociclina? Amphistegina? and Borelis?). Bioclasts and pellets in a micritic matrix are abundant and bivalve and echinoid fragments are present. Microgranular calcitic cements occur in some bioclasts. Porosity is up to a 5 % and can be divided in (1) intergranular porosity (inside of burrows), and (2) secondary moldic porosity (after dissolution of planktic foraminifera).



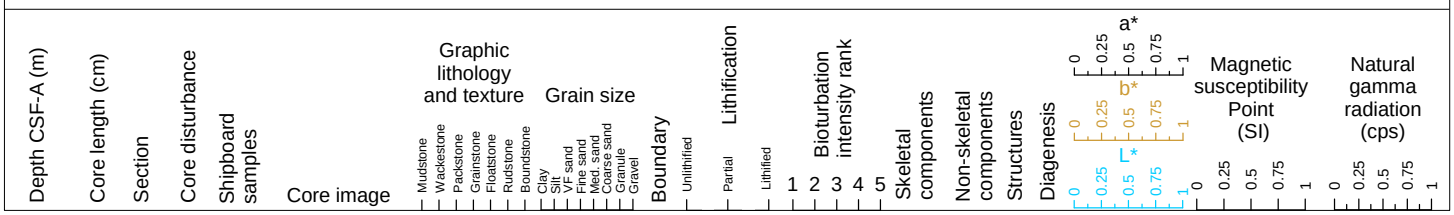
Hole 359-U1466A Core 45X, Interval 286.7-287.34 m (CSF-A)

Core Catcher - data not supplied



Hole 359-U1466A Core 46X, Interval 296.5-296.5 m (CSF-A)

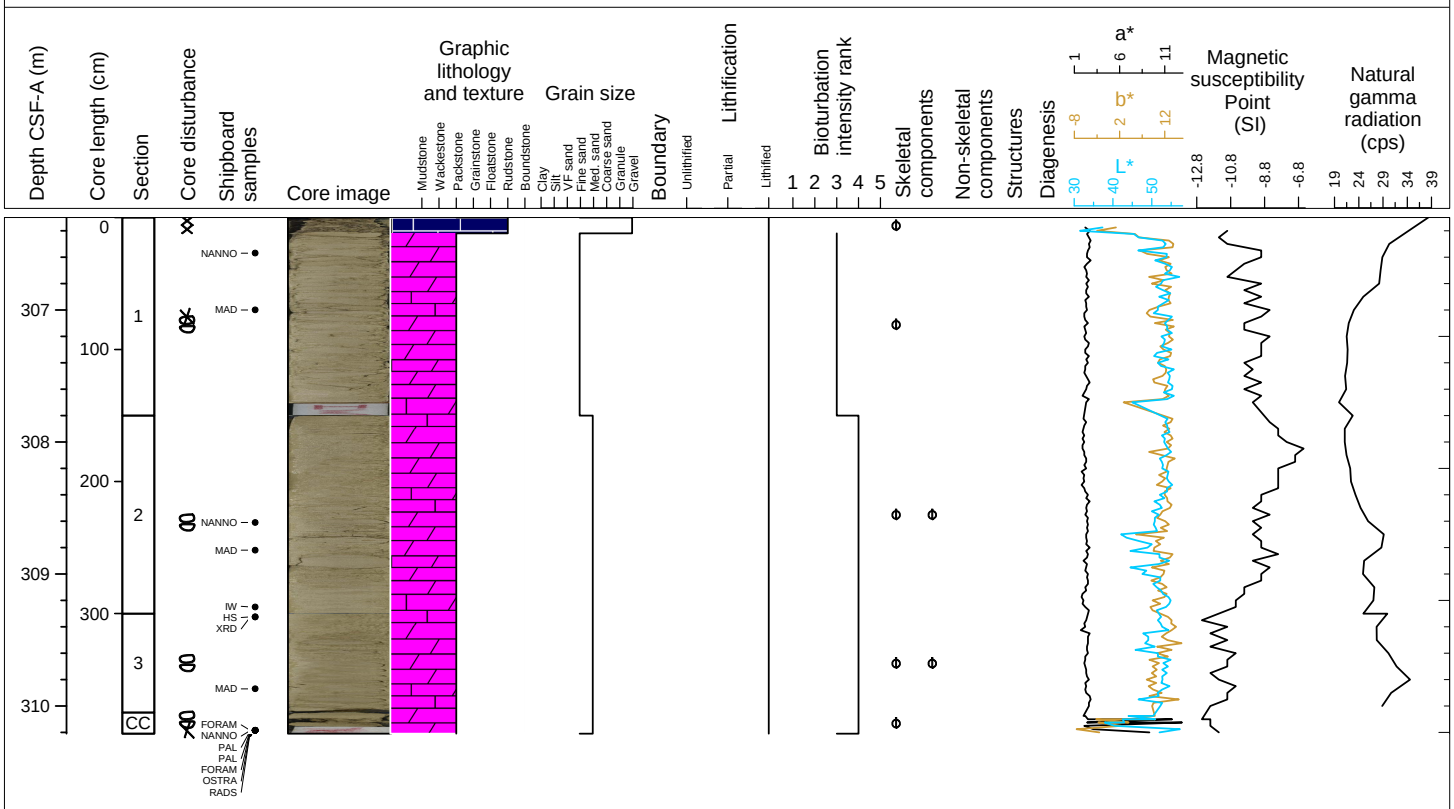
NO RECOVERY



287

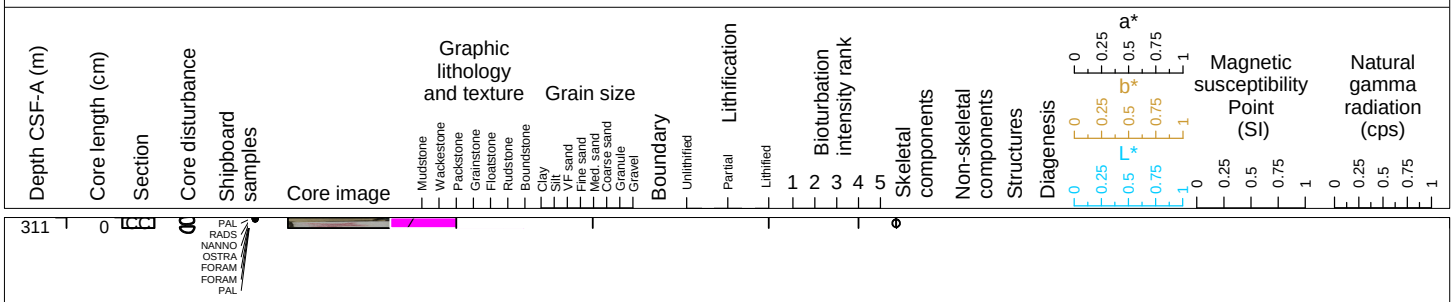
Hole 359-U1466A Core 47F, Interval 306.3-310.21 m (CSF-A)

Lithified dolomitic GRAINSTONE and PACKSTONE. Thick bedded, fine- to medium-grained, moderately-sorted, light gray to light brownish gray. Gradational contacts represented by color change and grain size differences. Bioclasts (A) unidentifiable due to recrystallization, large benthic forams common.



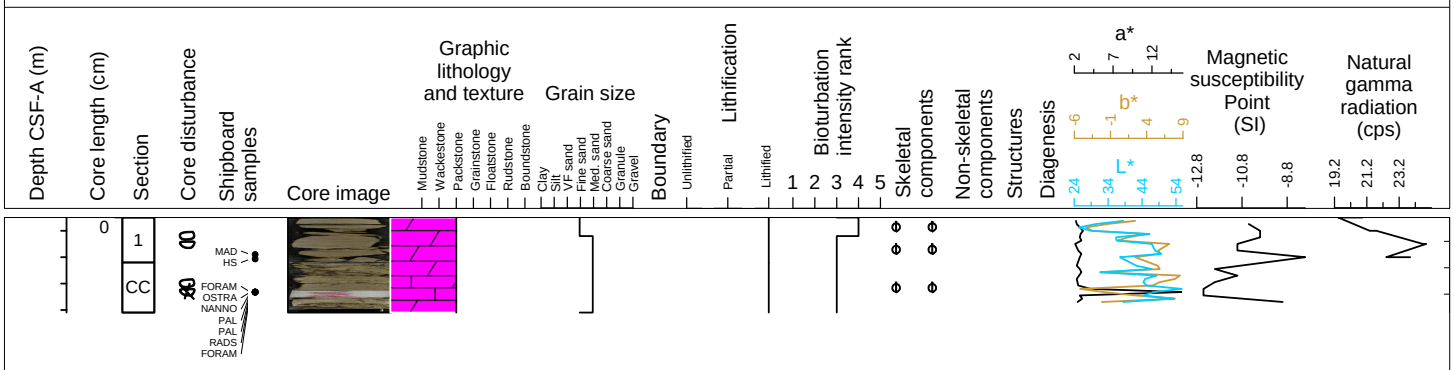
Hole 359-U1466A Core 48F, Interval 311.0-311.08 m (CSF-A)

Lithified dolomitic PACKSTONE. Core Catcher only. Medium-grained, moderately-sorted, light gray.



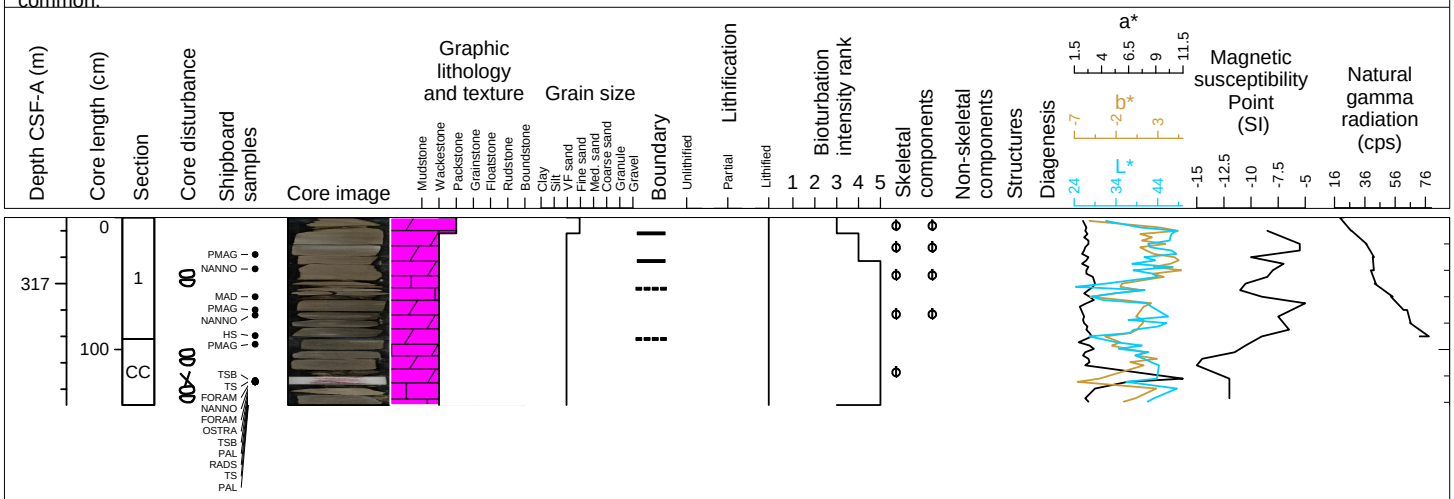
Hole 359-U1466A Core 49X, Interval 311.1-311.82 m (CSF-A)

Lithified dolomitic PACKSTONE. Thick bedded, fine- to medium-grained, well-sorted, light gray to light brownish gray. Gradational contacts represented by grain size differences. Bioclasts (A) unidentifiable due to recrystallization, large benthic forams common.



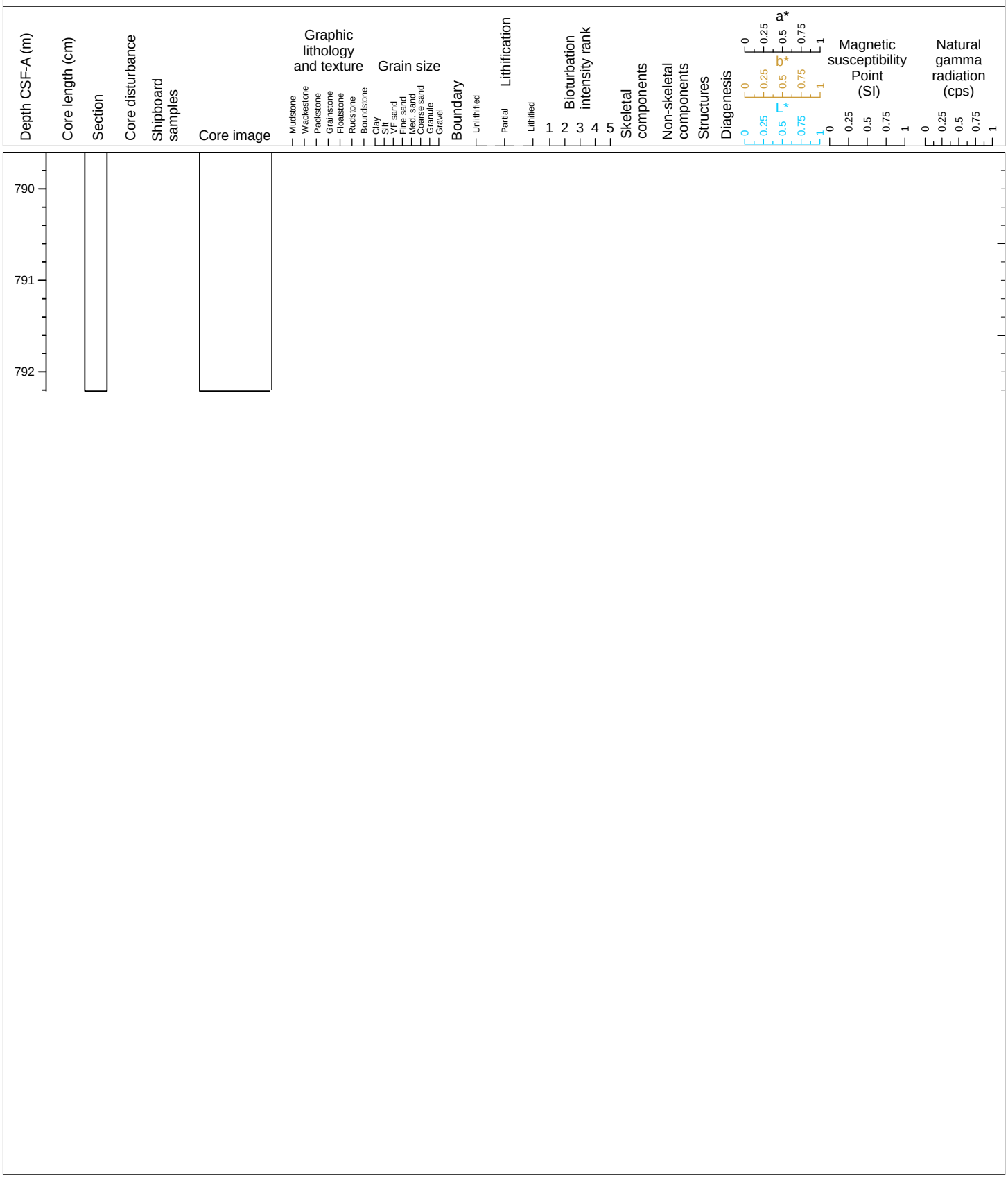
Hole 359-U1466A Core 50X, Interval 316.5-317.92 m (CSF-A)

Lithified dolomitic PACKSTONE and WACKESTONE (dolomitic limestone). PACKSTONE from 50X-1, 00 cm to 50X-1, 33 cm. Medium bedded, fine- to medium-grained, well-sorted, light gray to light brownish gray. Sharp contact with underlying well-sorted, very fine- to fine-grained WACKESTONE (dolomitic limestone) that extends from 50X-1, 33 cm to CC. Thin section analysis from the fine-grained wackestone (359-U1466A-50X-CC-PAL-TSB, 317.72 to 317.77 mbsf) shows an abundant planktic foraminifera and bioclasts in a micritic (partially recrystallized) matrix. Benthic foraminifera and pellets are common, and bryozoan and mollusk fragments are rare. Planktic foraminifera are especially abundant in a burrow. Most of the components are preserved in granular to microgranular calcitic cements. The porosity is moldic and less than 1%. Bioturbation complete throughout the core with a second generation of burrows common.



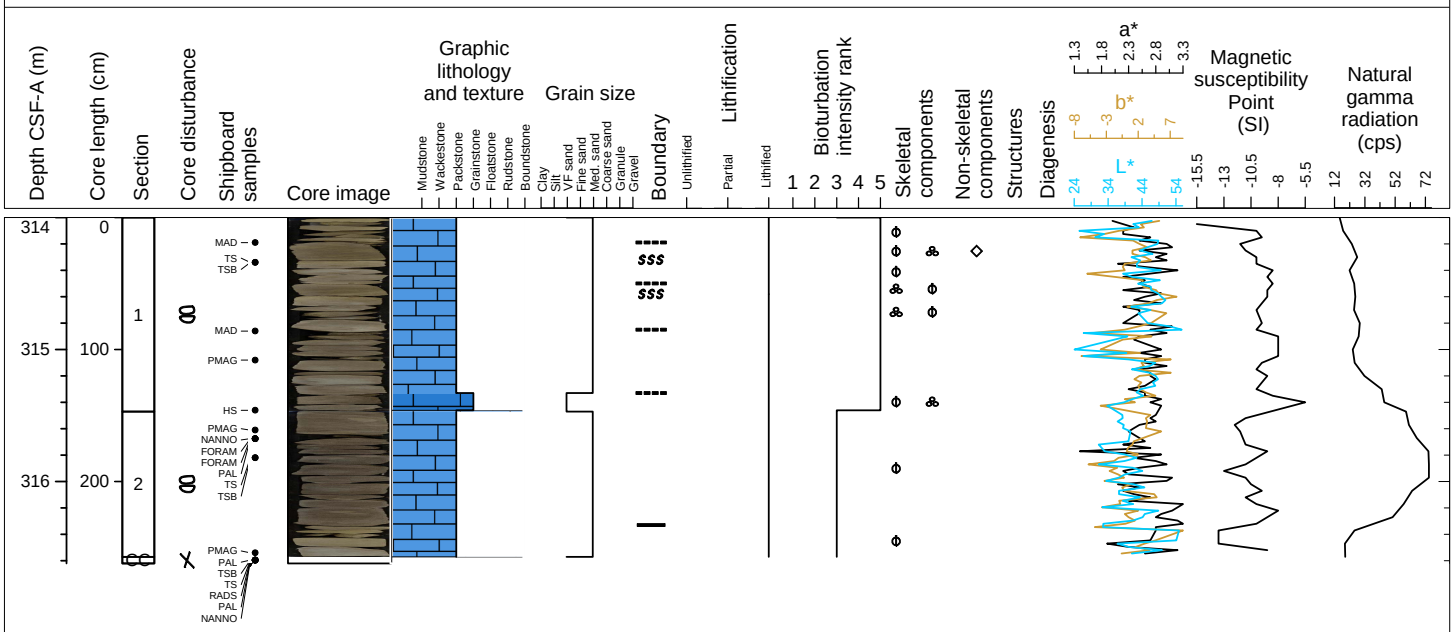
Hole 359-U1466B Core 11, Interval 0.0-0.0 m (CSF-A)

DRILLED INTERVAL



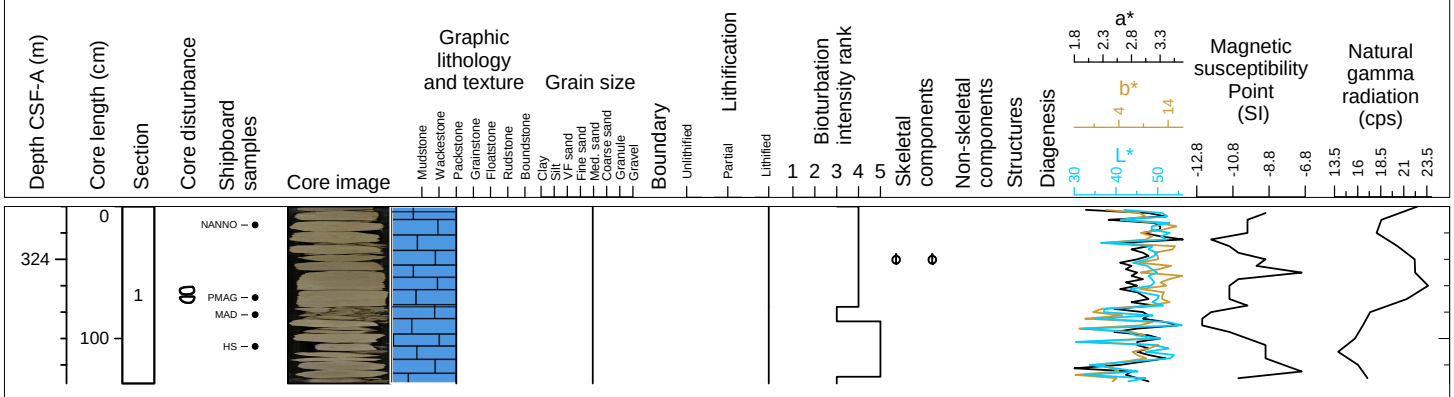
Hole 359-U1466B Core 2R, Interval 314.0-316.62 m (CSF-A)

Lithified PACKSTONE. Medium layered, fine- to medium-grained, well-sorted. Planktonic foraminifera and bioclasts common, few benthic foraminifera. Light gray to light olive brown. GRAINSTONE unit from 2R-1, 133 cm to 146 cm. Gradational and bioturbated contacts. Partly cemented and highly recrystallized. Bioturbation complete.



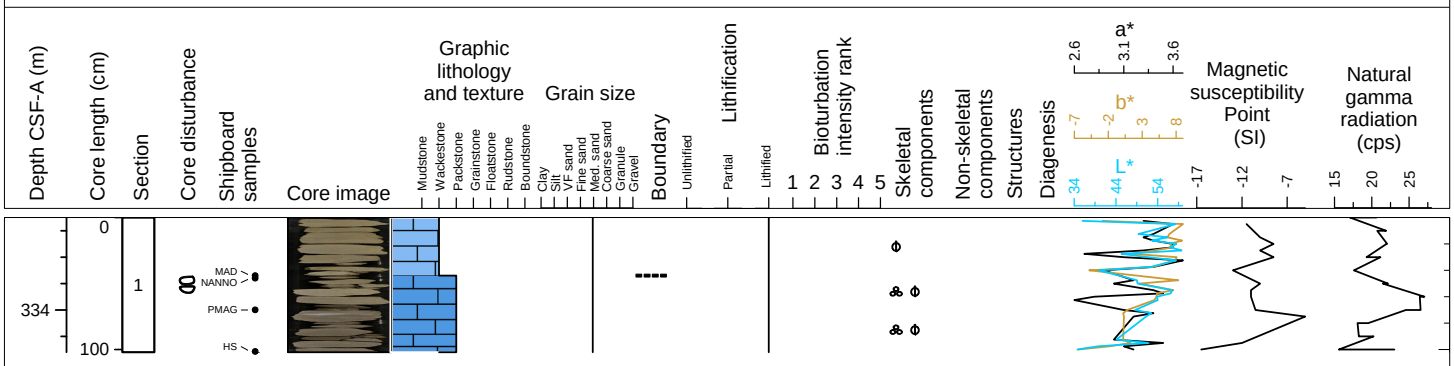
Hole 359-U1466B Core 3R, Interval 323.6-324.94 m (CSF-A)

Lithified PACKSTONE. Medium layered, fine- to medium-grained, dark grayish brown to light gray. Gradational contact. Partly cemented and highly recrystallized. Bioturbation moderate to complete. Abundant bioclasts, planktonic foraminifera are common, few benthic foraminifera and partially dissolved bivalves.



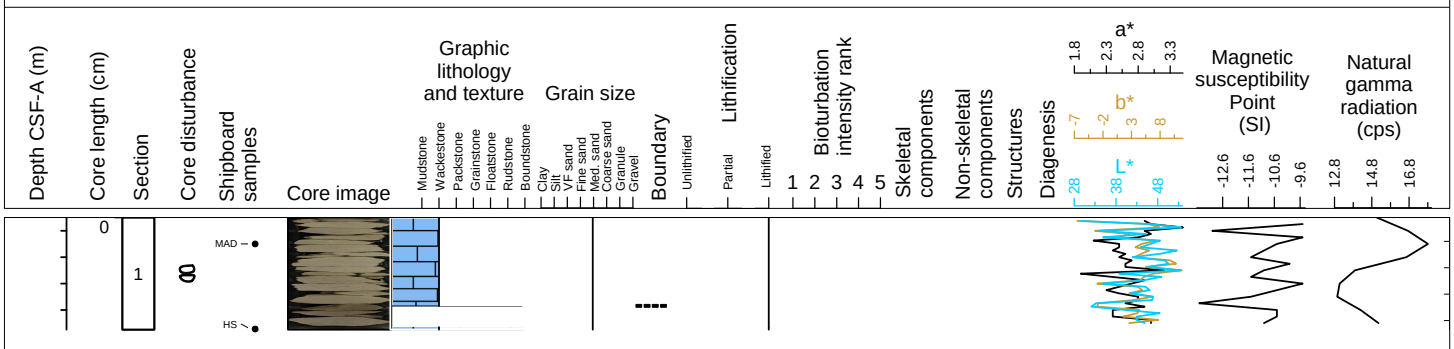
Hole 359-U1466B Core 4R, Interval 333.3-334.32 m (CSF-A)

Lithified PACKSTONE and WACKESTONE. Medium layered, fine- to medium-grained, well-sorted. Benthic and bioclasts common. Grayish brown to light brownish gray. Light yellowish brown WACKESTONE from 4R-1, 0 cm to 44 cm. Gradational contact represent changes in color and grainsize. Bioturbation moderate to complete.



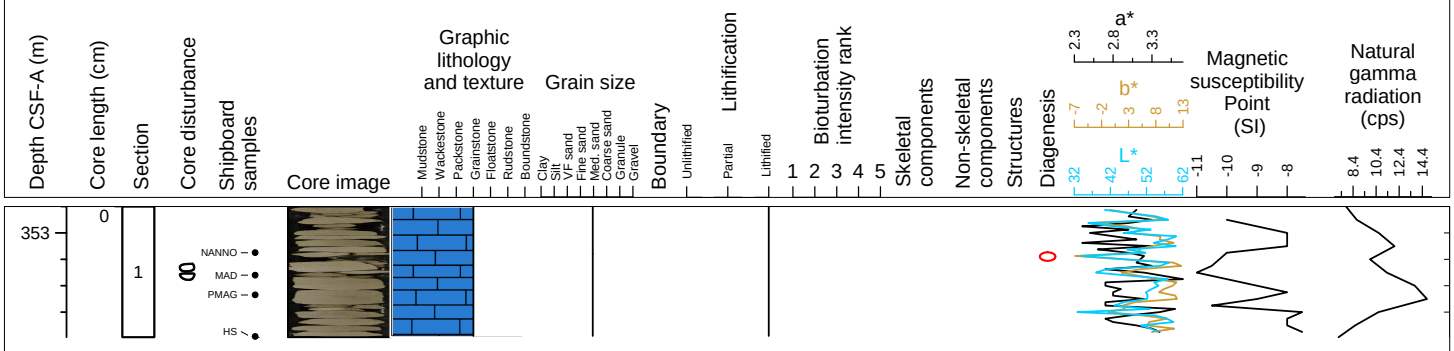
Hole 359-U1466B Core 5R, Interval 343.1-343.95 m (CSF-A)

Lithified WACKESTONE. Medium layered, fine- to medium-grained, well-sorted. Pale yellow, light brownish gray. Gradational contact represent changes in color and are bioturbated. Bioturbation complete. Bioclasts present.



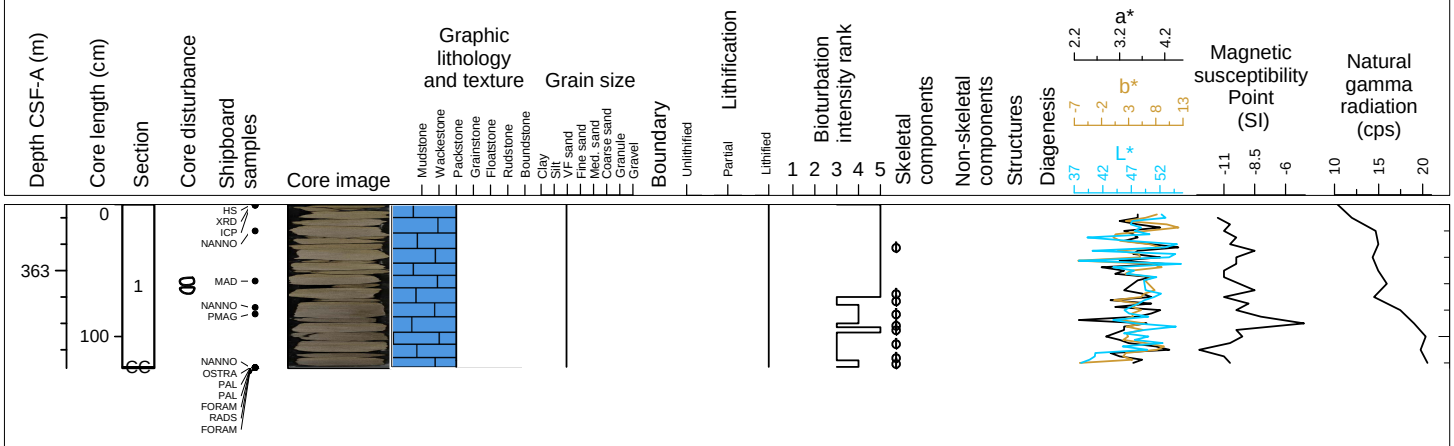
Hole 359-U1466B Core 6R, Interval 352.8-353.79 m (CSF-A)

Lithified GRAINSTONE. Medium layered, fine- to medium-grained, well-sorted. Bioclasts present. Pale yellow, light brownish gray. Gradational contact represent changes in color, and are bioturbated.



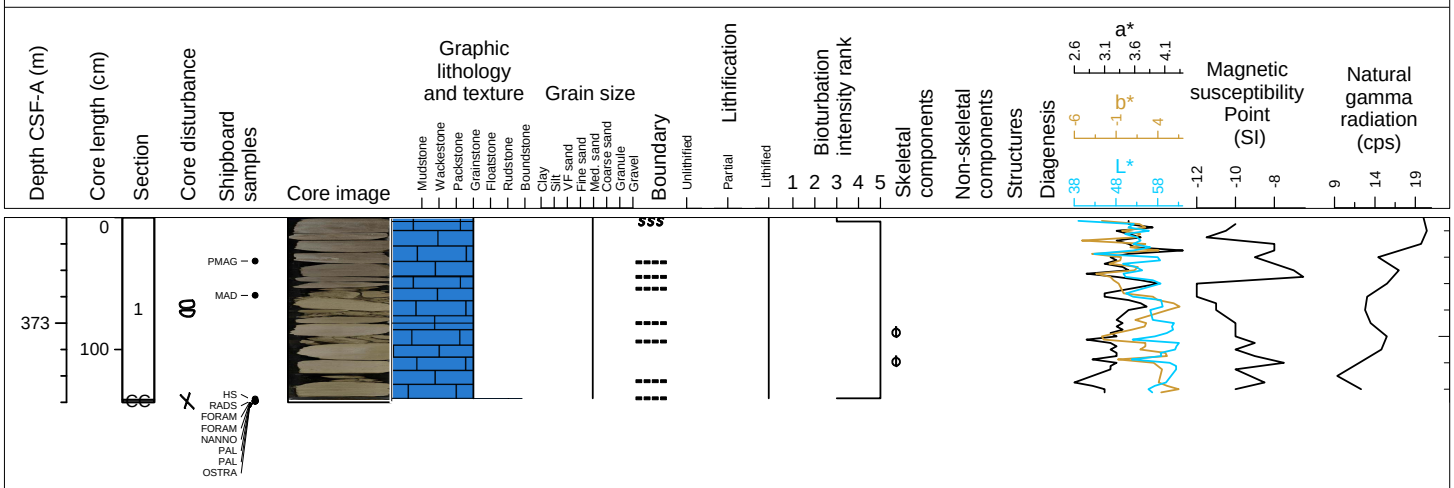
Hole 359-U1466B Core 7R, Interval 362.5-363.74 m (CSF-A)

Lithified PACKSTONE. Thin to medium layered, very fine-grained. Benthic foraminifera present. Pale yellow to light brownish gray. Gradational contact represent changes in color and are bioturbated.



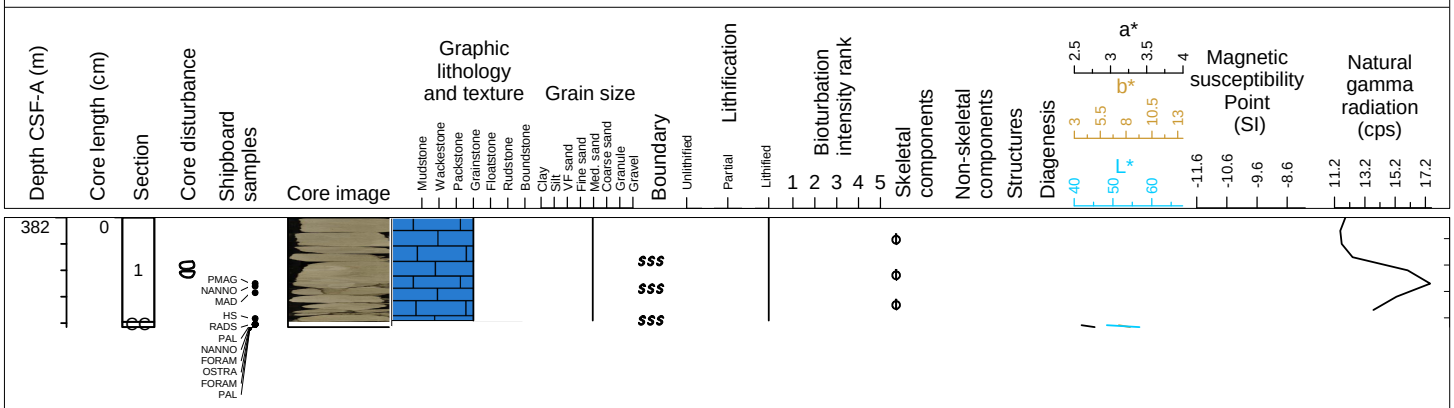
Hole 359-U1466B Core 8R, Interval 372.2-373.6 m (CSF-A)

Alternating lithified GRAINSTONE and PACKSTONE. Medium layered, fine- to medium-grained, well-sorted. Benthic foraminifera present. Grayish brown to light brownish gray, light yellowish brown. Bioturbated contact at 8R-1, 3 cm, and gradational color changes for the remainder of the core.



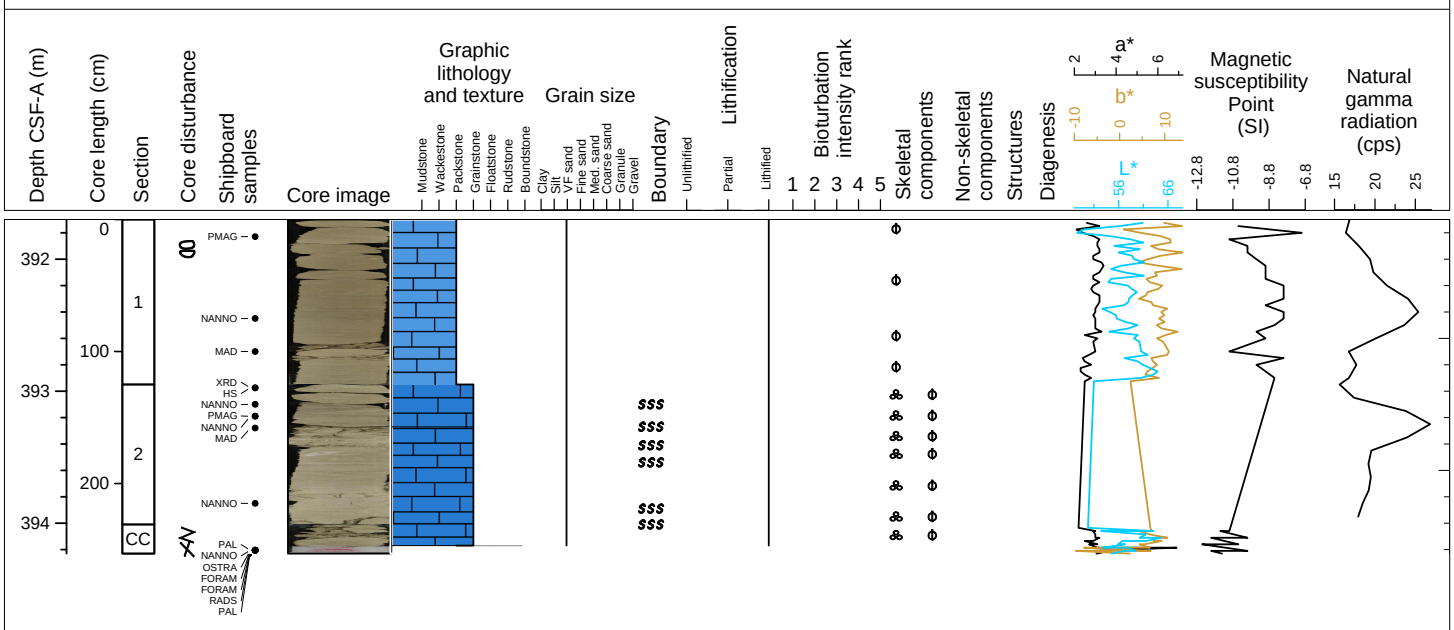
Hole 359-U1466B Core 9R, Interval 382.0-382.83 m (CSF-A)

Lithified GRAINSTONE. Medium layered, fine- to medium-grained, well-sorted. Abundant bioclasts, large benthic foraminifera present. Pale yellow to light yellowish brown. Contacts are bioturbated.



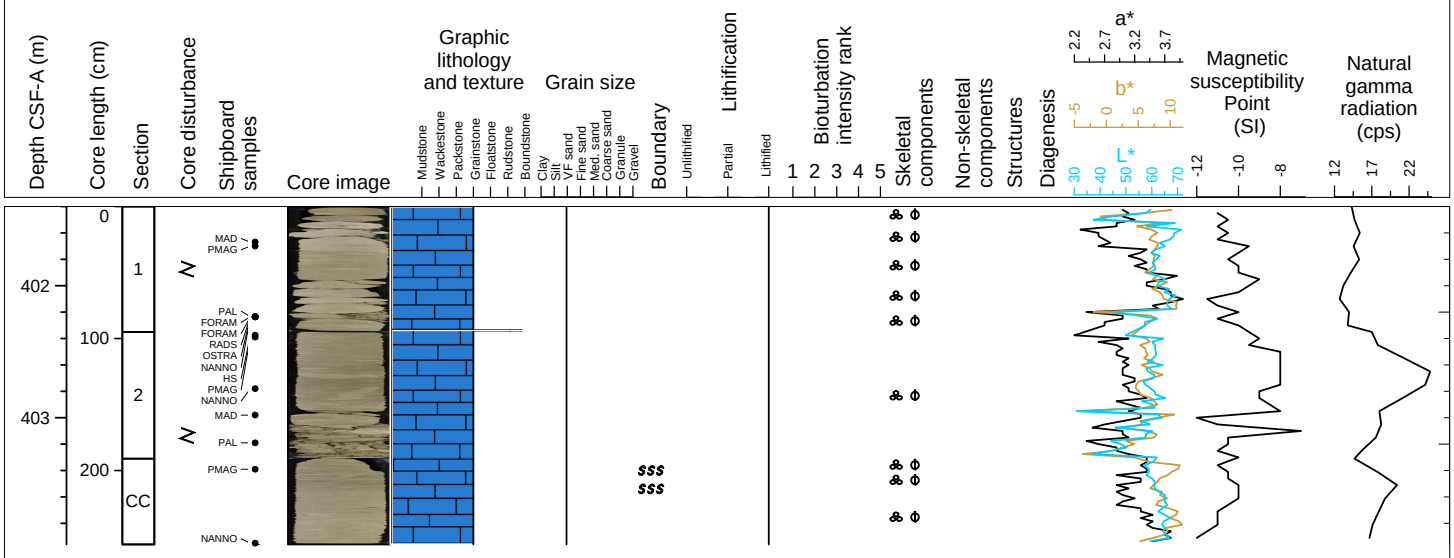
Hole 359-U1466B Core 10R, Interval 391.7-394.23 m (CSF-A)

Lithified GRAINSTONE and PACKSTONE. Medium to thick layered, very fine- to fine-grained, well-sorted, benthic foraminifera and shell fragments present. Pale yellow to light gray. Gradational bioturbated contacts. Complete bioturbation.



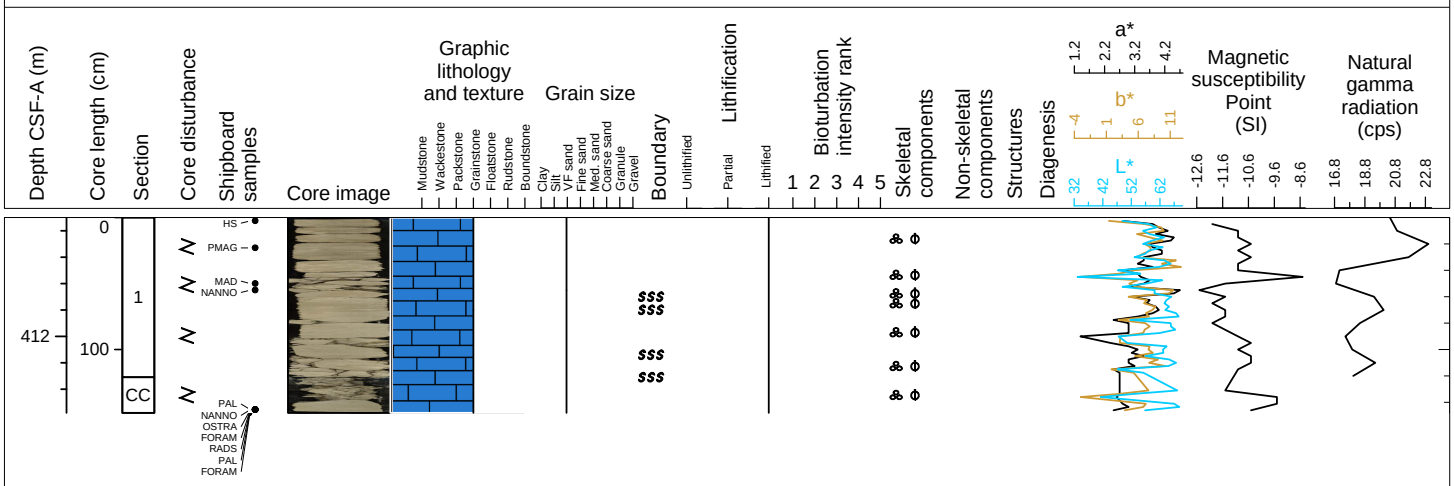
Hole 359-U1466B Core 11R, Interval 401.4-403.96 m (CSF-A)

Lithified GRAINSTONE. Medium to thick layered, very fine- to fine-grained, well-sorted. Benthic foraminifera and shell fragments present. Pale yellow to light gray. Gradational bioturbated contacts. Complete bioturbation, flattened burrows common, Chondrites present. No reaction with HCl.



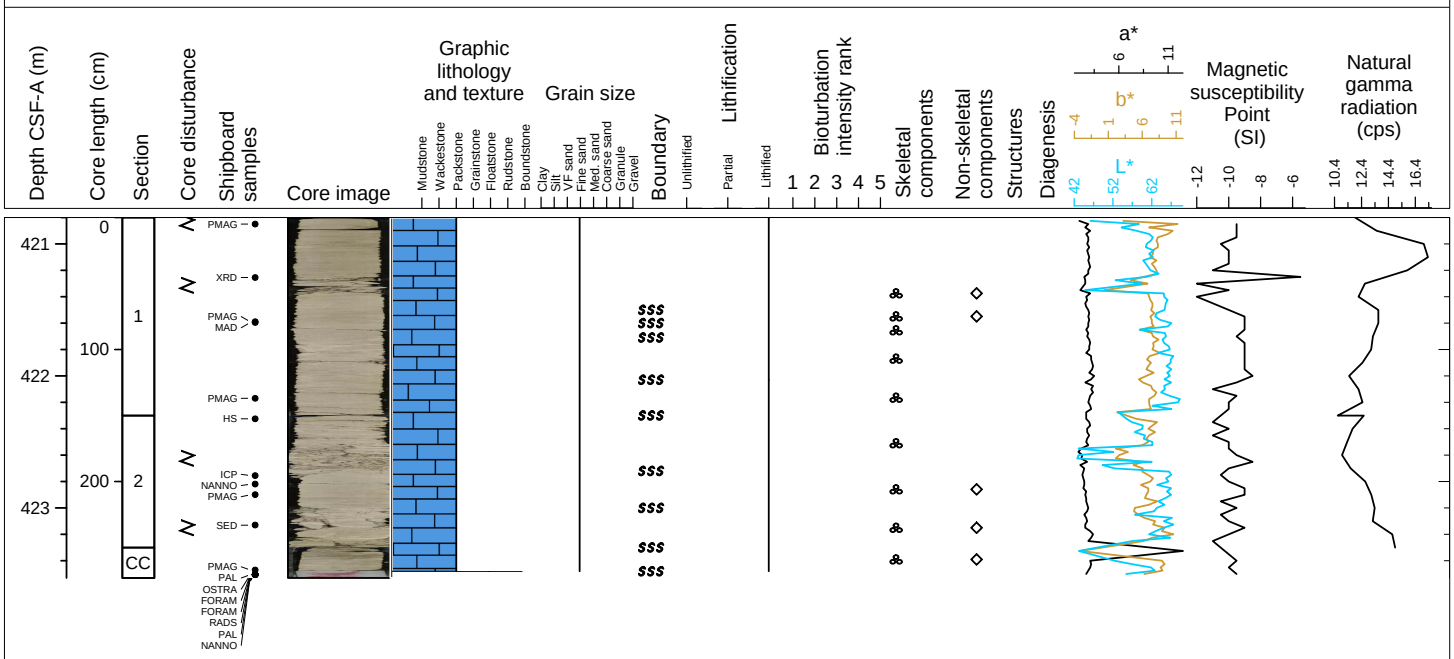
Hole 359-U1466B Core 12R, Interval 411.1-412.58 m (CSF-A)

Lithified GRAINSTONE. Medium to thick layered, very fine- to fine-grained, well-sorted. Planktonic foraminifera. Pale yellow to light gray. Gradational bioturbated contacts. Complete bioturbation.



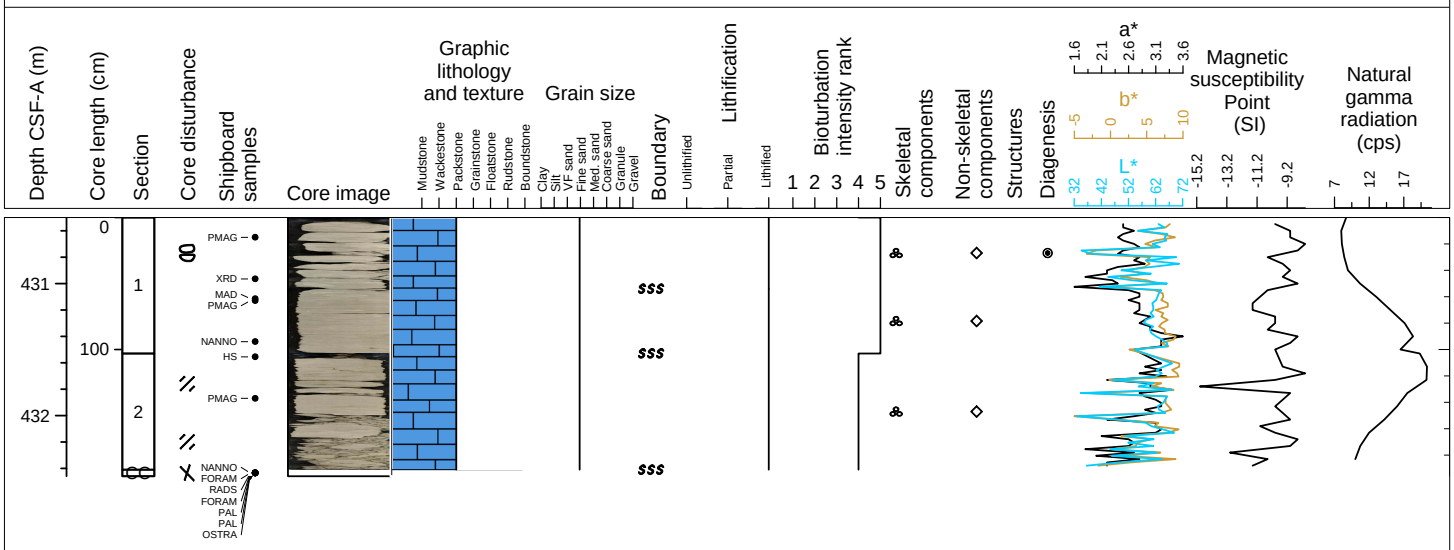
Hole 359-U1466B Core 13R, Interval 420.8-423.53 m (CSF-A)

Lithified PACKSTONE. Thin to medium layered, fine-grained, and moderately-sorted. Bioclasts present. Light gray to white. Gradational bioturbated contacts abundant. Complete bioturbation. Abundant Thalassinodies and Chondrites and Phycosiphon present, commonly concentrated in larger burrows.



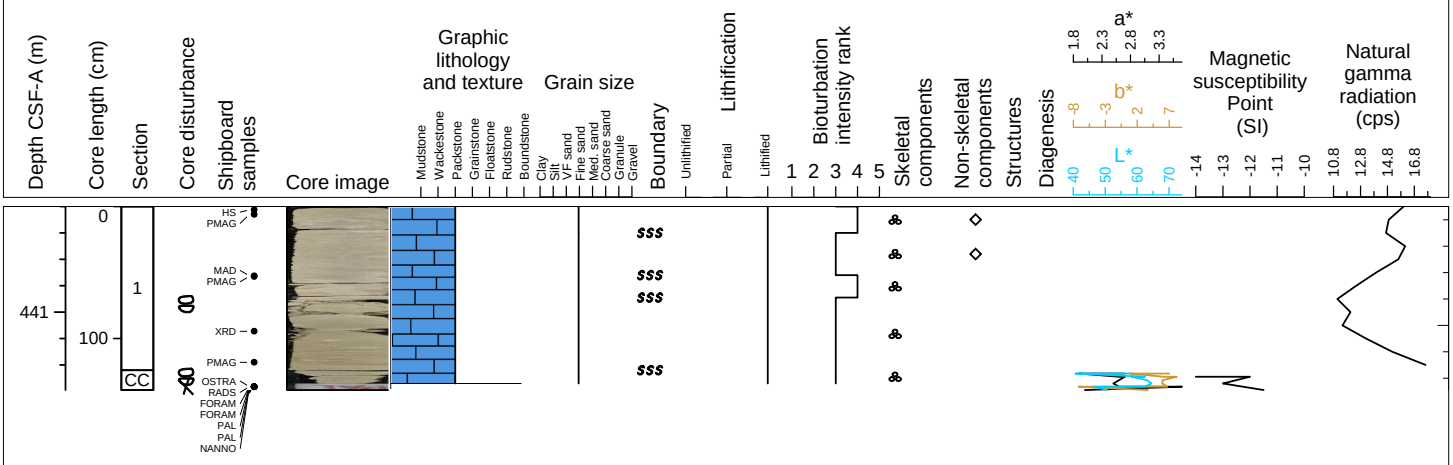
Hole 359-U1466B Core 14R, Interval 430.5-432.46 m (CSF-A)

Lithified PACKSTONE. Medium to thick layered, fine-grained, moderately-sorted. Bioclasts present. Light gray to white. Gradational bioturbated contacts abundant. Common to complete bioturbation. Abundant Thalassinodies and Chondrites and Phycosiphon present.



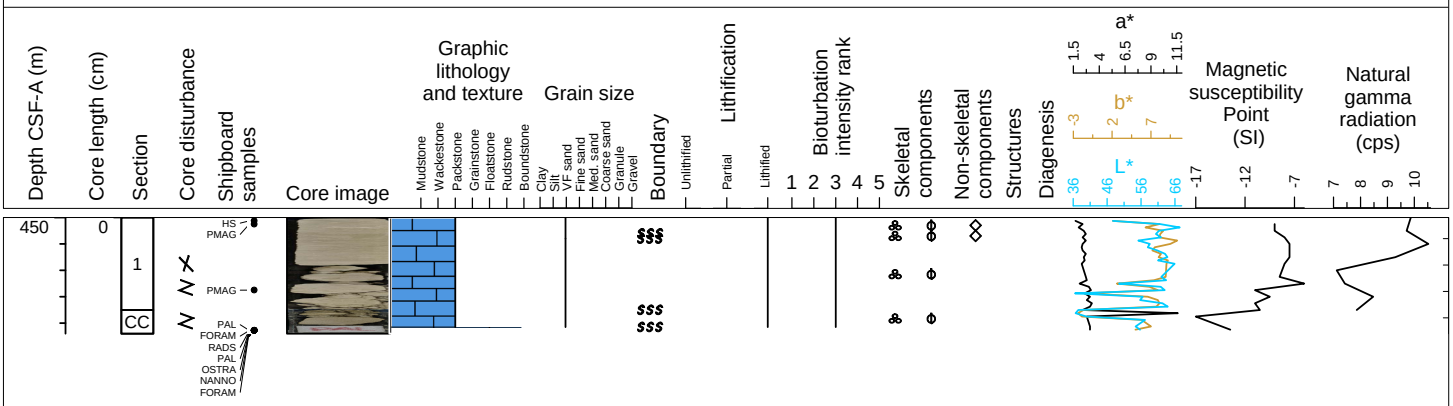
Hole 359-U1466B Core 15R, Interval 440.2-441.59 m (CSF-A)

Lithified PACKSTONE. Medium to thick layered, very fine- to fine-grained, moderately-sorted. Bioclasts present. White to pale yellow. Gradational bioturbated contacts abundant. Complete bioturbation. Abundant Thalassinodies and Chondrites and Phycosiphon common, commonly concentrated in larger burrows. Glauconite and black minerals (Mn) present.



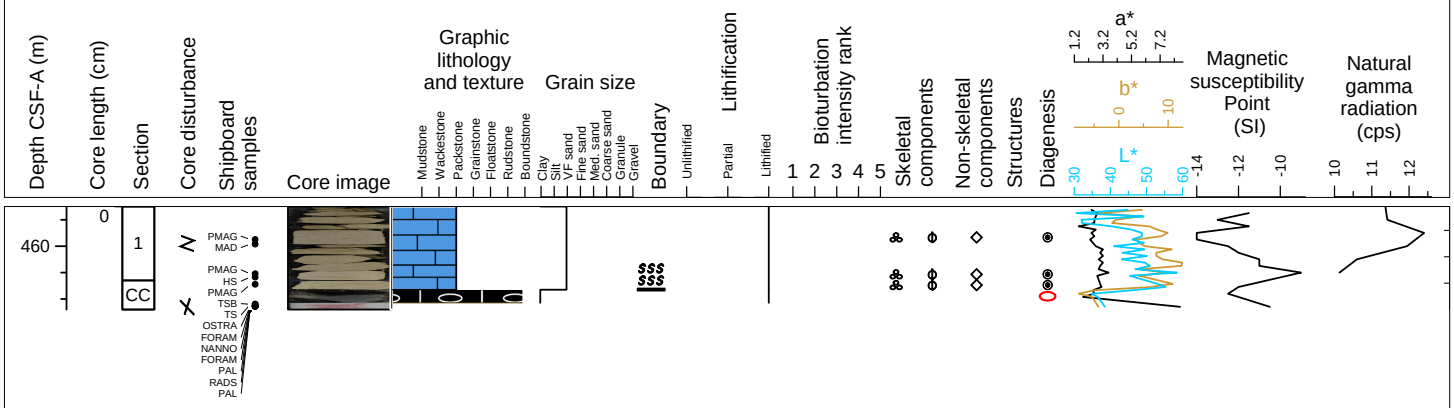
Hole 359-U1466B Core 16R, Interval 450.0-450.88 m (CSF-A)

Lithified PACKSTONE. Thin to thick layered, very fine-grained, moderately-sorted. Planktonic foraminifera are abundant and Bioclasts present. Light gray to white. Gradational bioturbated contacts abundant. Complete bioturbation. Abundant Thalassinodies and Chondrites and Phycosiphon present, commonly concentrated in larger burrows. Glauconite and black minerals (Mn) present.



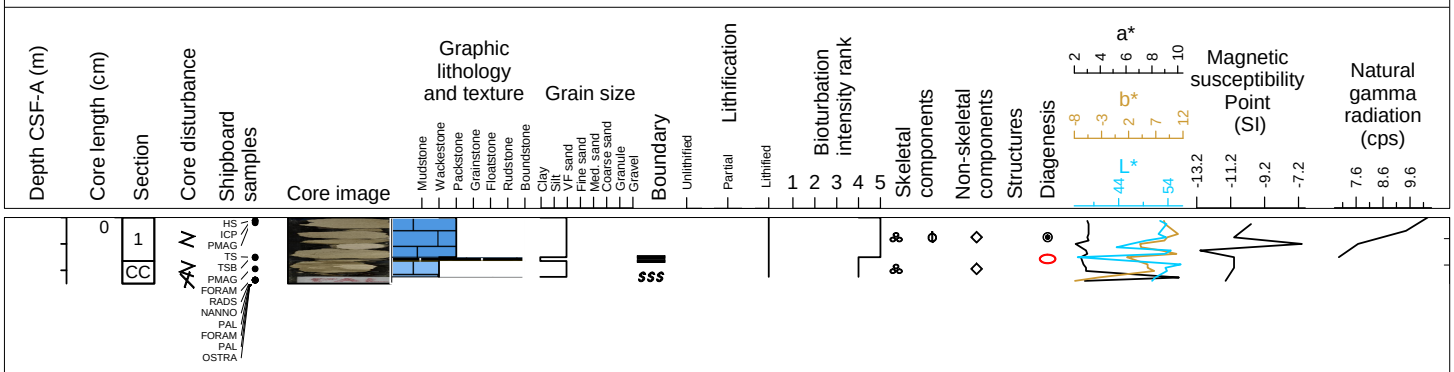
Hole 359-U1466B Core 17R, Interval 459.7-460.48 m (CSF-A)

Lithified PACKSTONE. Thin to medium layered, very fine- to fine-grained, moderately-sorted. CHERT nodule showing concentric bands with silicified carbonate mud 17R-CC, 7 - 17 cm. Planktonic foraminifera are abundant and Bioclasts present. Light gray to white. Gradational bioturbated contacts abundant. Complete bioturbation. Abundant Thalassinodies and Chondrites and Phycosiphon present, commonly concentrated in larger burrows. Glauconite and black minerals (Mn) present.



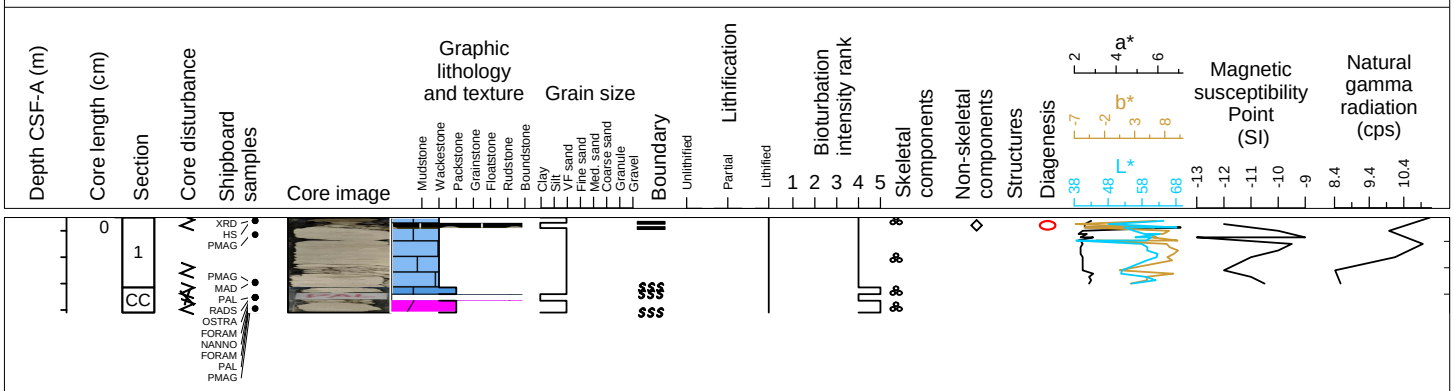
Hole 359-U1466B Core 18R, Interval 469.4-469.9 m (CSF-A)

Lithified PACKSTONE and WACKESTONE with a very thin interlayered CHERT (18R-1, 30-33 cm). Medium layered, very fine- to fine-grained, moderately-sorted. Planktonic foraminifera and Bioclasts present. Light gray to grayish brown. Sharp contacts with chert layer. Completed bioturbation in the PACKSTONE and common in the WACKESTONE. Planolites present, commonly concentrated in larger burrows. Glauconite and black minerals (Mn) present.



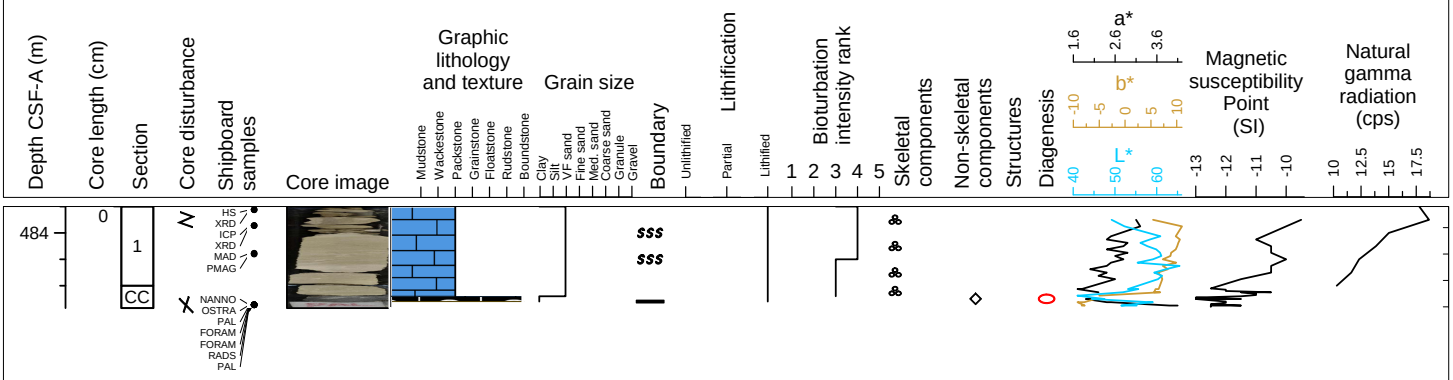
Hole 359-U1466B Core 19R, Interval 479.1-479.82 m (CSF-A)

Lithified WACKESTONE with a very thin interlayered CHERT (19R-1, 4-8 cm). Medium layered, very fine- to fine-grained, moderately-sorted. Planktonic foraminifera and Bioclasts present. Dark gray to pale yellow and commonly mottled. Sharp contacts with chert layer. Other contacts represent color changes and are gradational and bioturbated. Moderate to completed bioturbation. Abundant Phycosiphon? (possibly Chondrites) and common Planolites. Glauconite and black minerals (Mn) present. Moldic porosity.



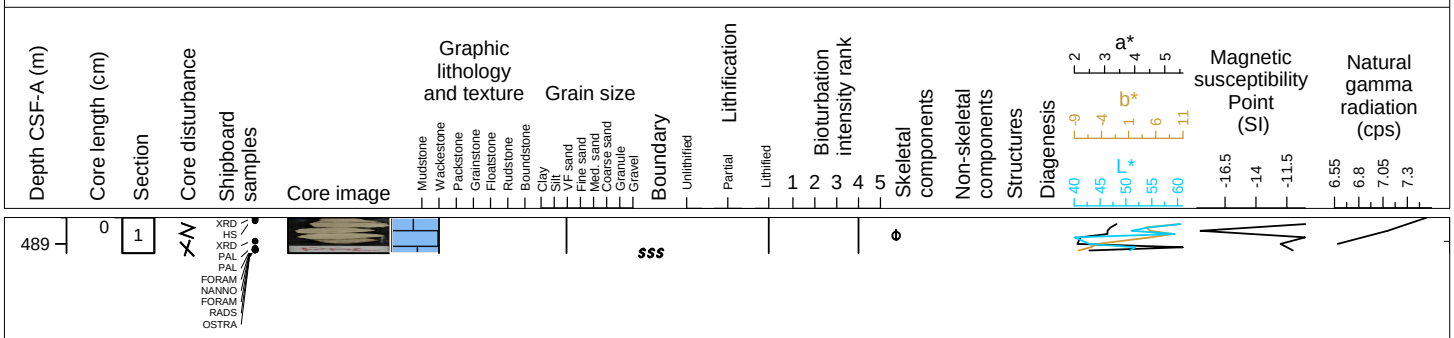
Hole 359-U1466B Core 20R, Interval 483.8-484.57 m (CSF-A)

Lithified PACKSTONE with a very thin interlayered CHERT (20R-CC, 8-12 cm). Medium layered, very fine-grained, moderately-sorted. Planktonic foraminifera and bioclasts are present. Dark gray to pale yellow and commonly mottled. Sharp contacts with chert layer. Other contacts represent color changes and are gradational and bioturbated. Abundant Phycosiphon? (Possibly Chondrites) and common Planolites. Moldic porosity.



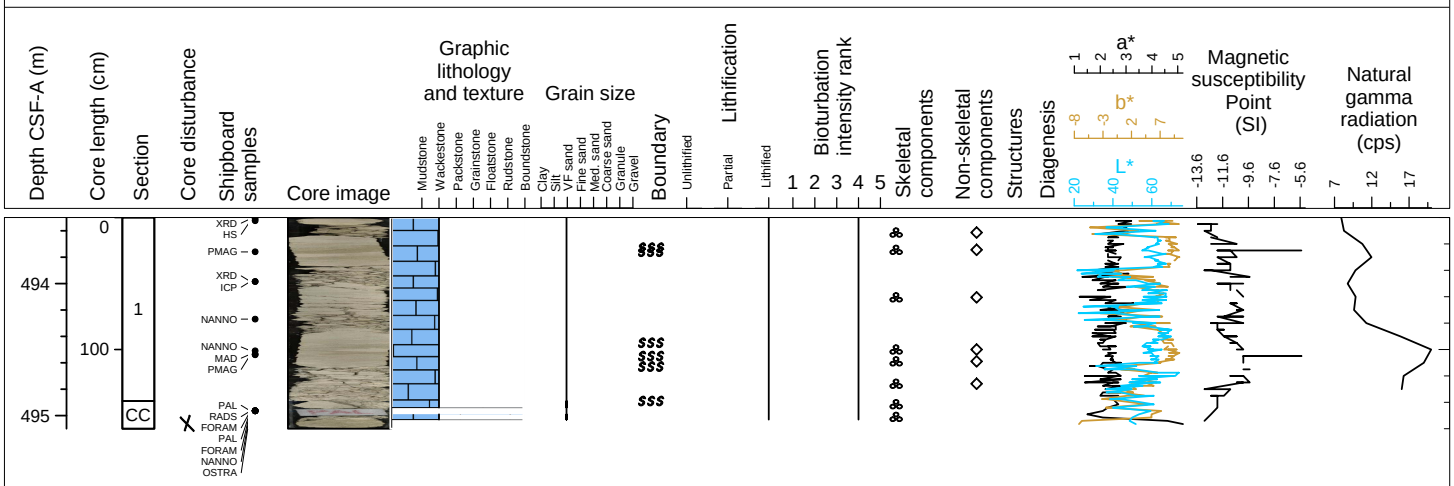
Hole 359-U1466B Core 21R, Interval 488.8-489.07 m (CSF-A)

WACKESTONE, recrystallized. Very fine-grained, well-sorted. Benthic foraminifera and Bioclasts are present. Light gray. Abundant Phycosiphon.



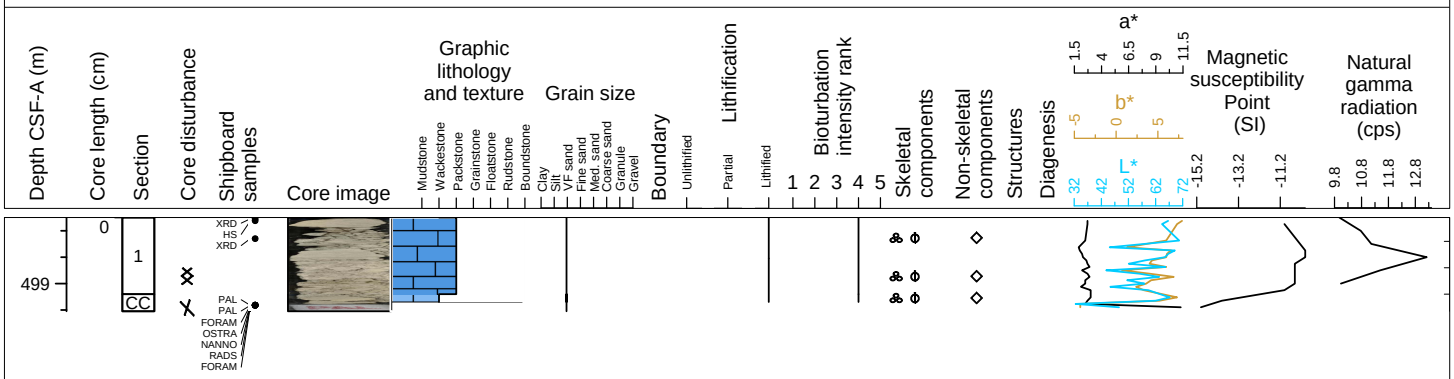
Hole 359-U1466B Core 22R, Interval 493.5-495.1 m (CSF-A)

WACKESTONE, recrystallized. Medium to thick layered. Very fine- to fine-grained, well-sorted. Planktonic foraminifera are present and bioclasts present. Light brownish gray to pale yellow, commonly mottled. Contacts are bioturbated. Phycosiphon (22R-1, 00 to 27 cm) and Thalassinoides becomes dominant down core.



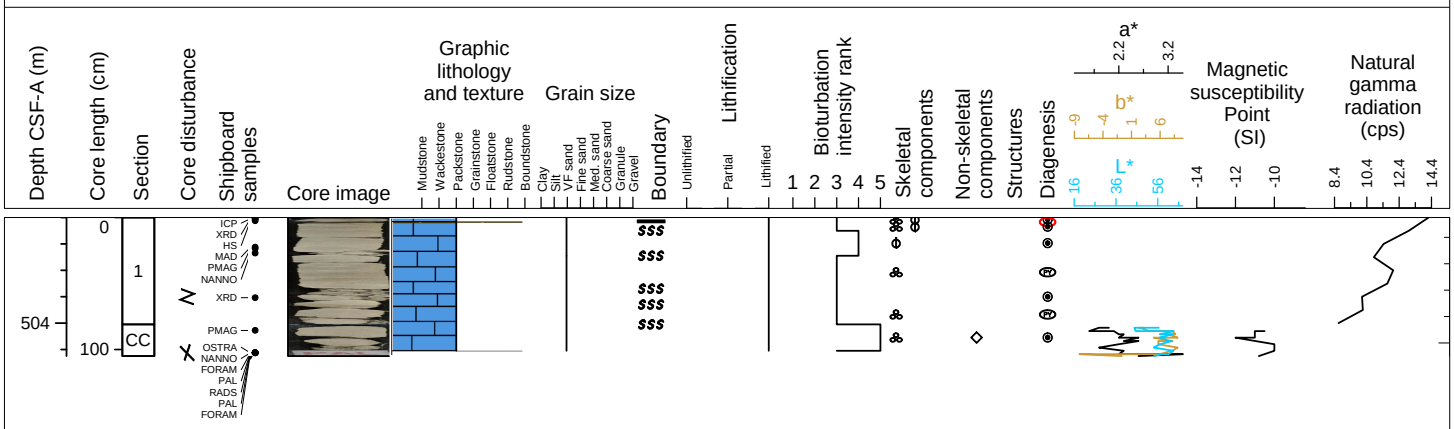
Hole 359-U1466B Core 23R, Interval 498.5-499.21 m (CSF-A)

WACKESTONE, recrystallized. Thick layered. Very fine-grained, well-sorted. Planktonic foraminifera are common and benthic foraminifera are present. Light brownish gray to light gray, commonly mottled. Contacts are poorly defined due to drilling disturbance (23R-1, 31-58 cm). Phycosiphon 23R-1, 00 to 31 cm.



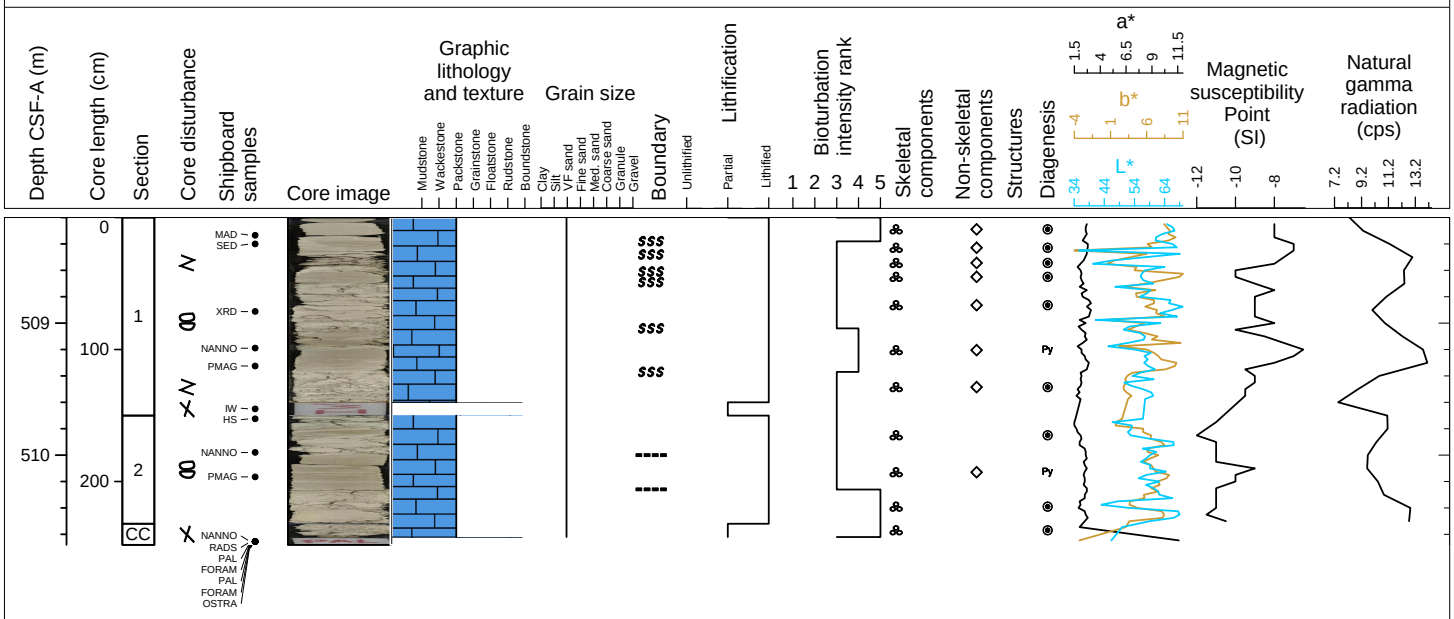
Hole 359-U1466B Core 24R, Interval 503.2-504.25 m (CSF-A)

Lithified PACKSTONE with very thin interlayered CHERT (25R-1, 3-4 cm). Thin to medium layered. Very fine-grained, moderately-sorted. Planktonic foraminifera and benthic foraminifera, with benthic more common in 24R-1, 00-10cm. White in color. Bioturbated contacts representing changes in ichno-fabrics. Bioturbation moderate to complete, with Planolites common in 24R-1, 29-81 cm.



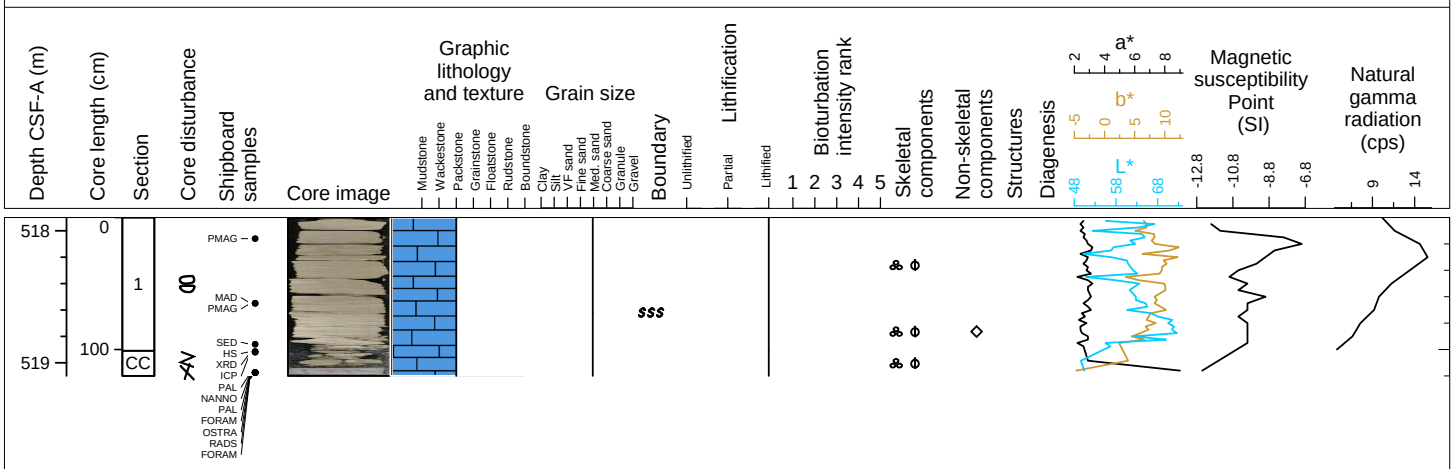
Hole 359-U1466B Core 25R, Interval 508.2-510.68 m (CSF-A)

Lithified PACKSTONE. Medium to thick layered. Very fine-grained, moderately-sorted. Planktonic foraminifera are the dominant component, often as mold porosity. Pyrite is present (25R-1, 84-117 cm). Light gray to white, commonly mottled. Bioturbated contacts, partially masked by drilling disturbances. Bioturbation moderate to complete, abundant Thalassinoides.



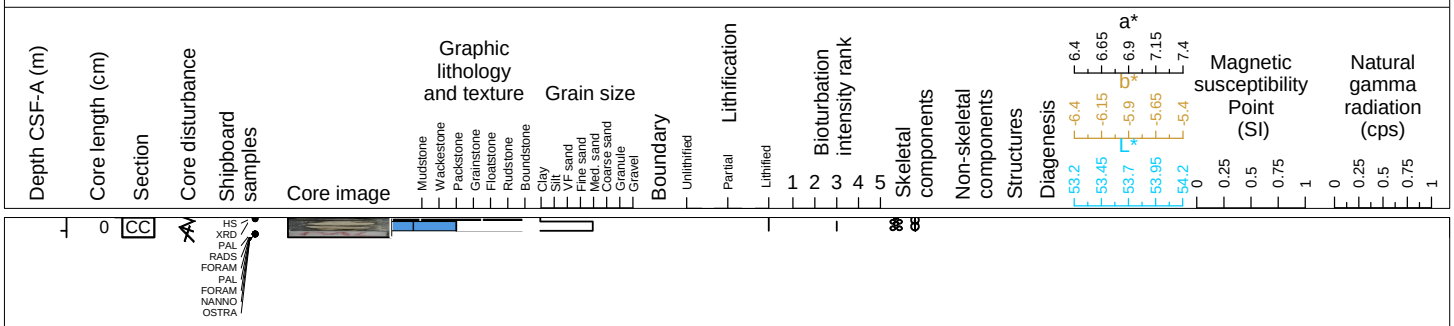
Hole 359-U1466B Core 26R, Interval 517.9-519.1 m (CSF-A)

Lithified PACKSTONE. Thick layered. Planktonic foraminifera and benthic foraminifera are common as the principle component. Glauconite present (26R-1, 72-10.1 cm). Bioturbated contacts, partially masked by drilling disturbances. Pale yellow to white. Bioturbation complete, abundant Thalassinoides.



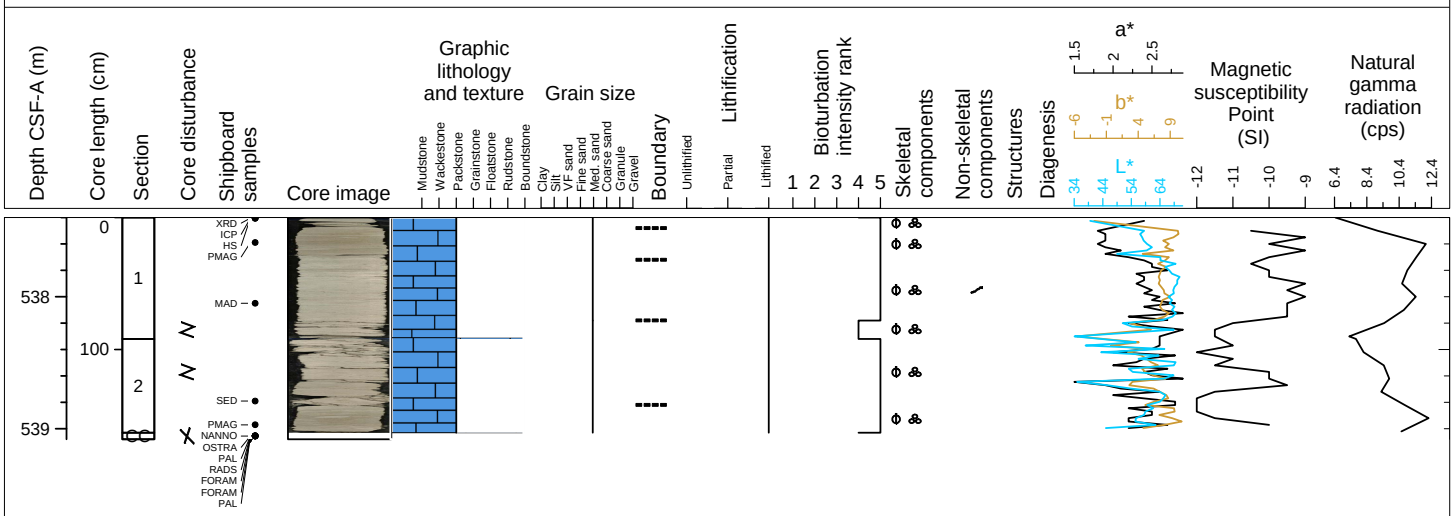
Hole 359-U1466B Core 27R, Interval 527.7-527.85 m (CSF-A)

Lithified PACKSTONE with CHERT nodules (27R-CC, 00-03 cm). Benthic foraminifera are common. No contacts observed. Packstone is white, chert is bluish gray. Bioturbation moderate.



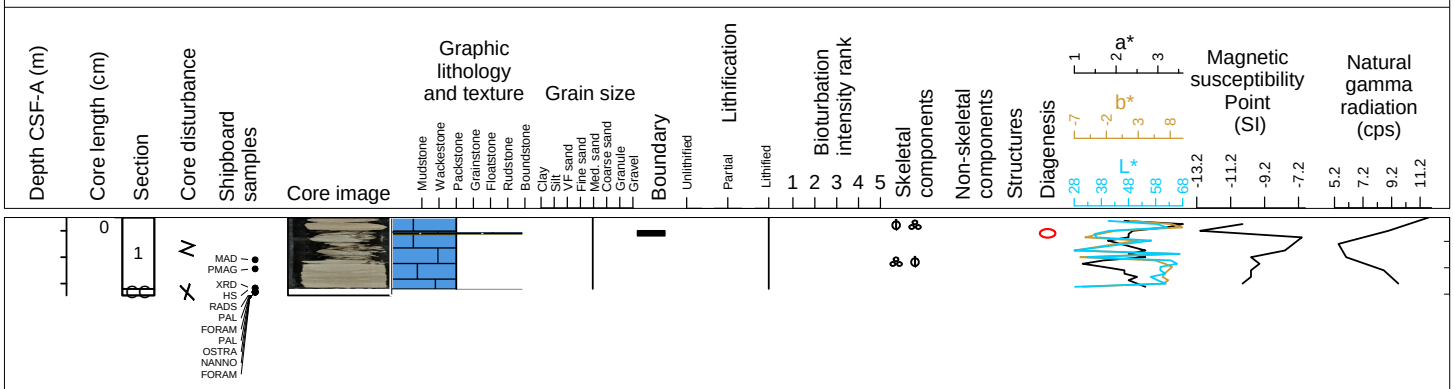
Hole 359-U1466B Core 28R, Interval 537.4-539.08 m (CSF-A)

Lithified PACKSTONE. Medium to thick layered. Medium-grained, moderately- to well-sorted. Benthic foraminifera and planktonic foraminifera are common, organic matter also present (28R-1, 32-78 cm). Gradational contacts. Light gray to white. Bioturbation common to complete, with common Planolites, Thalassinodies, Chondrites and Palaeophycus are present.



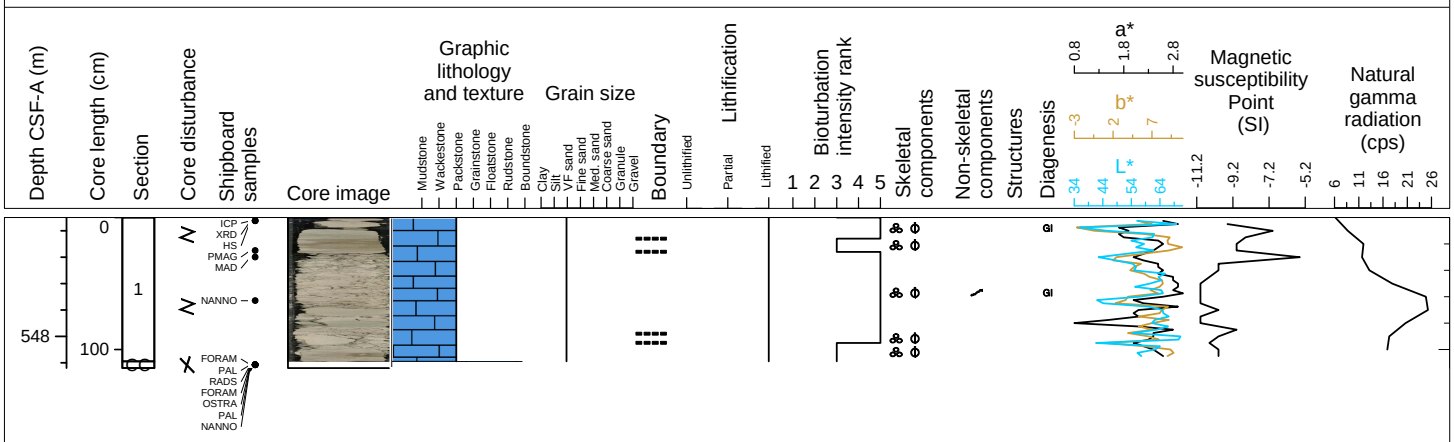
Hole 359-U1466B Core 29R, Interval 542.1-542.69 m (CSF-A)

Lithified PACKSTONE with CHERT. Medium to thick layered. Medium-grained, moderately- to well-sorted. Benthic foraminifera and planktonic foraminifera are common. Sharp contacts, defined by chert nodule boundaries. Packstone is pale yellow and the chert is dark blueish gray. Bioturbation complete with common Planolites, Thalassinodies and Palaeophycus are present.



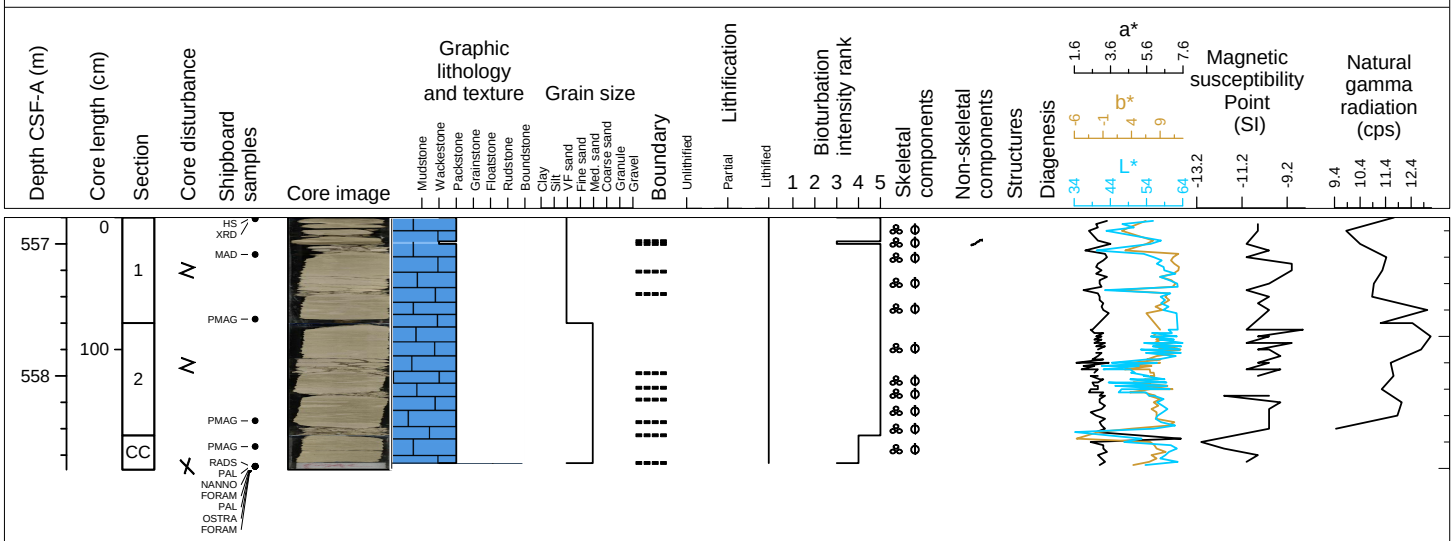
Hole 359-U1466B Core 30R, Interval 547.1-548.24 m (CSF-A)

Lithified PACKSTONE. Medium to thick layered. Very fine-grained, well-sorted. Planktonic foraminifera and benthic foraminifera are common as the principle components. Gradational contacts representing color change. Light gray to white. Bioturbation moderate to complete, with common Thalassinodies, Planolites and few Palaeophycus and Chondrites are present. Thin lamina of glauconite (30R-1, 13-17 cm and 78-82 cm) and organic matter (30R-1, and 71 cm) are present.



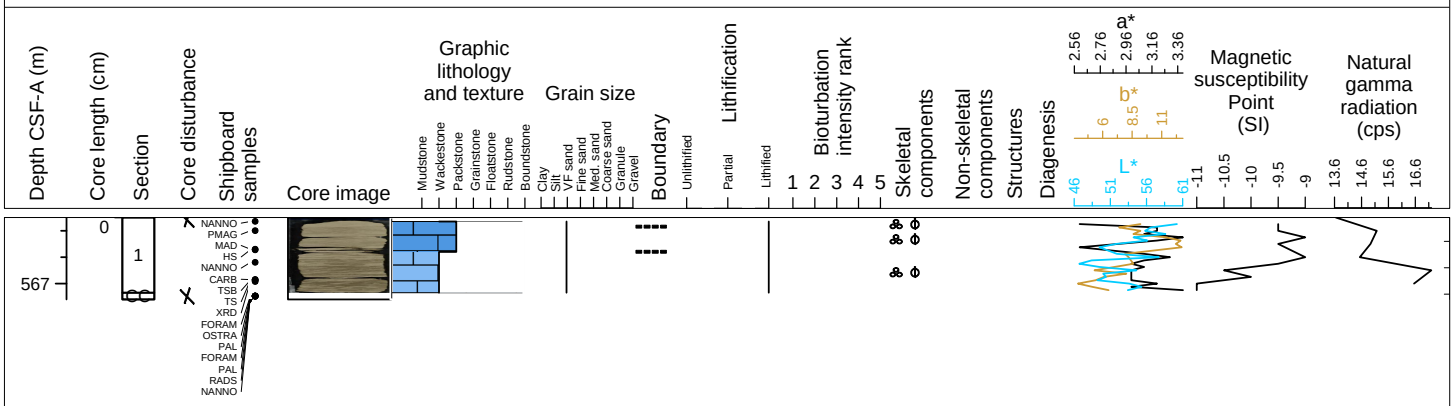
Hole 359-U1466B Core 31R, Interval 556.8-558.71 m (CSF-A)

Lithified PACKSTONE and interlayered WACKESTONE (31R-1, 18-20 cm). Medium to thick layered. Very fine-grained, well- to moderately-sorted (down core). Planktonic foraminifera and benthic foraminifera are common. Gradational contacts representing color change and changes in ichnofossils assemblage. Light gray to white, commonly mottled, and one grayish brown interval (31R-1, 18-20 cm). Bioturbation is moderate to complete, with common Thalassinodies, Planolites, Palaeophycus and rare Chondrites and Phycosiphon present (flattened burrows 31R-1, 18-20 cm). Glauconite present (31R-2, 38-49 cm), and suspected organic matter in dark interval (31R-1, 18-20 cm).



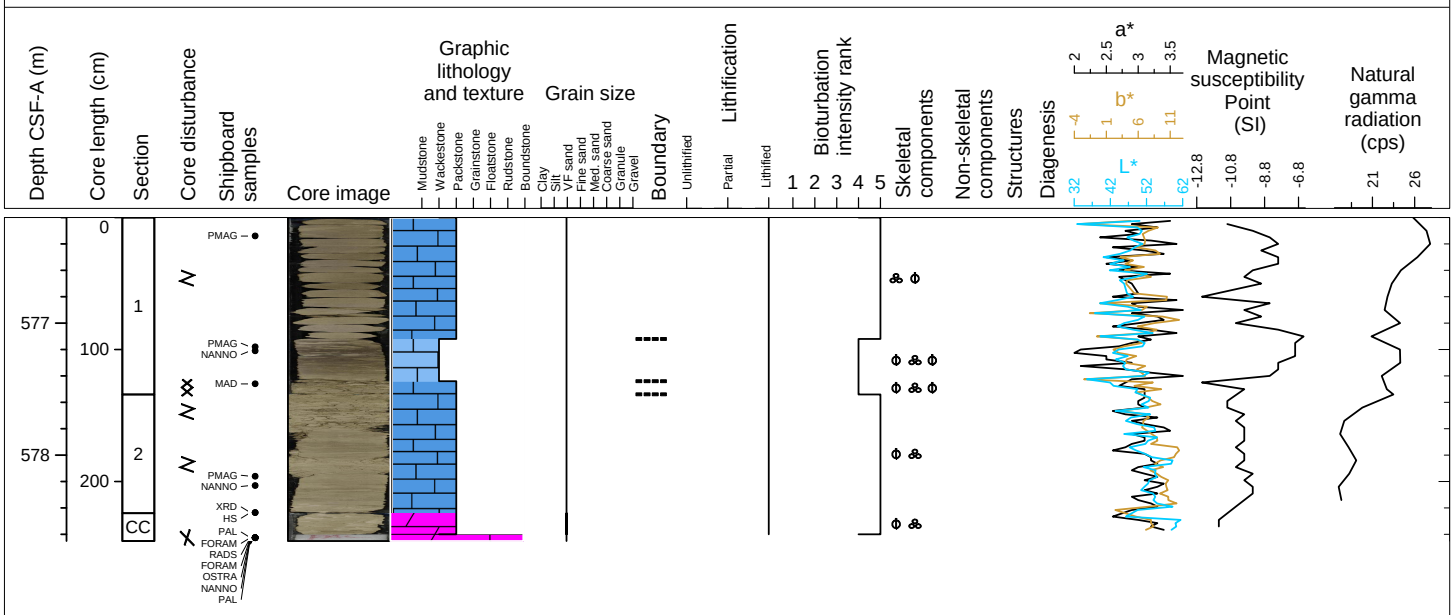
Hole 359-U1466B Core 32R, Interval 566.5-567.12 m (CSF-A)

Lithified PACKSTONE and WACKESTONE. Thin to medium layered. Very fine-grained, well-sorted. Planktonic foraminifera and benthic foraminifera are common. Color grades from pale yellow to grayish brown down core, distinct color difference in base of core (dark matrix 2.5y 5/2 to 2.5y 8/2 in-fill). Gradational contacts representing color change. Complete bioturbation with common Thalassinoides, Planolites and Zoophycos present (32R-1, 34-49 cm).



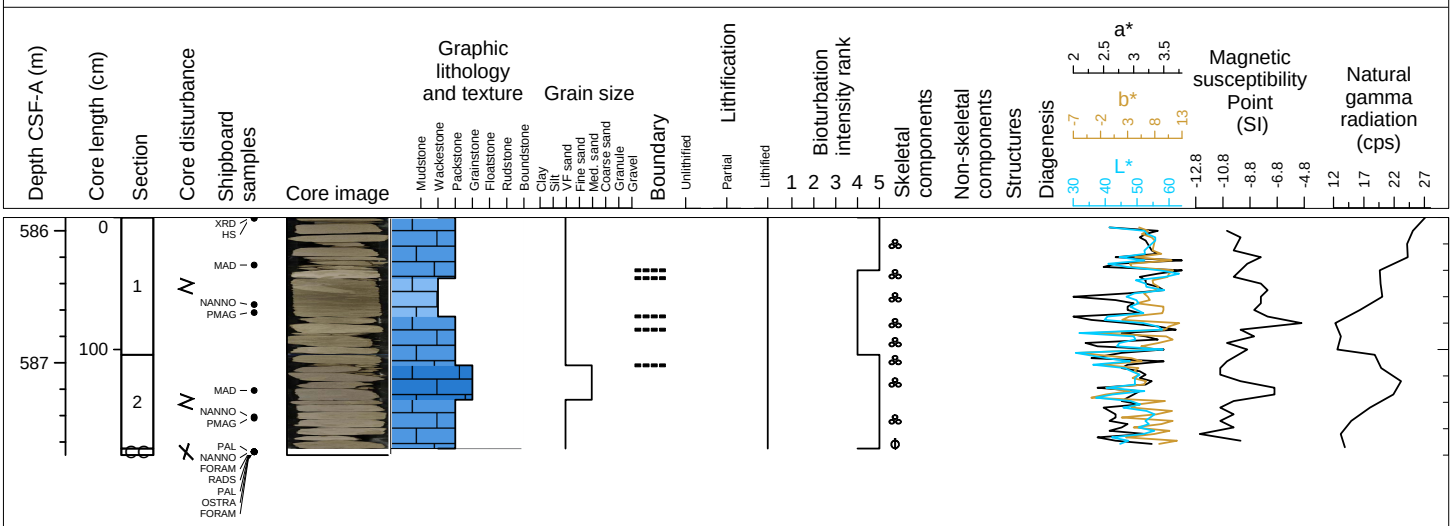
Hole 359-U1466B Core 33R, Interval 576.2-578.65 m (CSF-A)

Lithified PACKSTONE and WACKESTONE. Medium to thick layered. Very fine-grained, well-sorted. Planktonic foraminifera and benthic foraminifera are common (32R-1, 26-57 cm and 124-134 cm). Grayish brown to pale yellow. Gradational contacts representing color and changes in ichnofabrics. Complete bioturbation with abundant Thalassinoides, common Planolites, rare Palaeophycus, with Chondrites and Phycosiphon present.



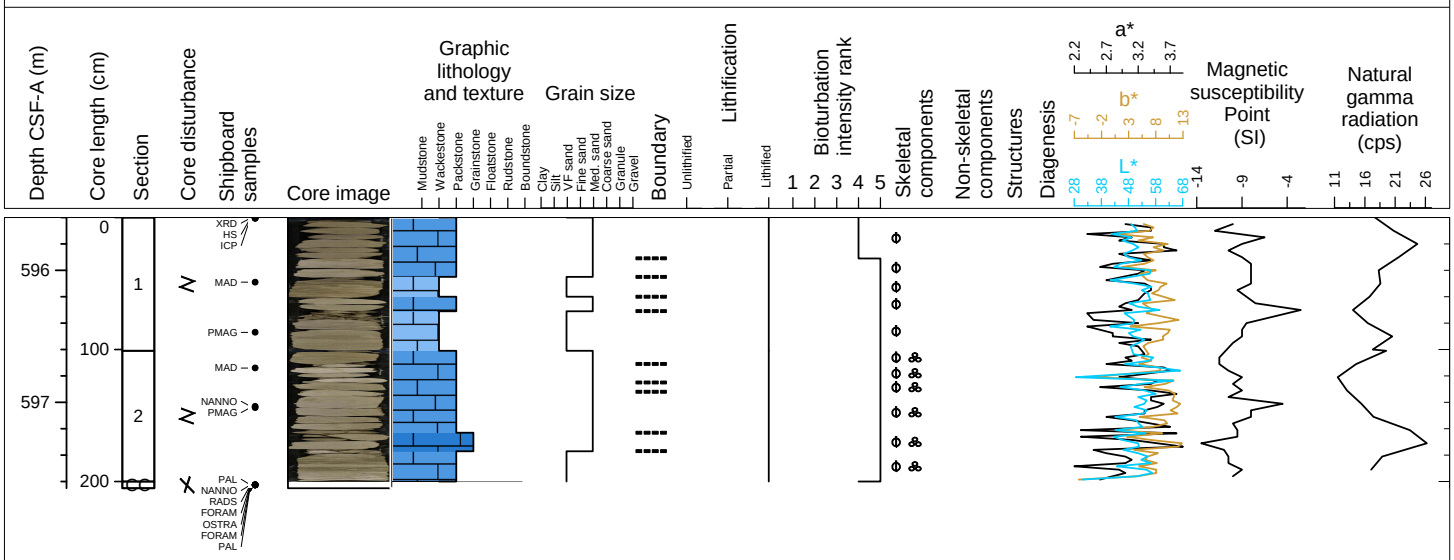
Hole 359-U1466B Core 34R, Interval 585.9-587.7 m (CSF-A)

Interlayered Lithified PACKSTONE, WACKESTONE (34R-1, 46-75 cm) and GRAINSTONE (34R-1, 08-34 cm). Medium to thick layered. Very fine- to medium-grained, well-sorted. Planktonic foraminifera and benthic foraminifera are common. Grayish brown to white. Gradational contacts representing color change. Bioturbation common to complete with common Thalassinodies and Planolites, few Palaeophycus, rare Chondrites and Phycosiphon are present.



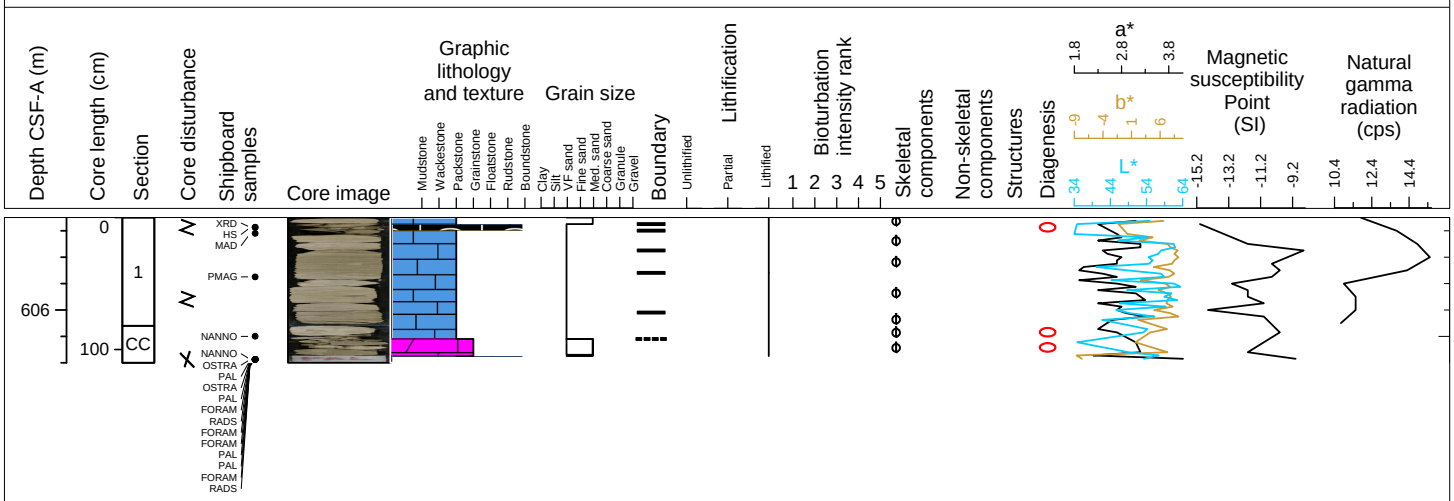
Hole 359-U1466B Core 35R, Interval 595.6-597.65 m (CSF-A)

Lithified PACKSTONE to WACKESTONE, GRAINSTONE (35R-2, 062-067). Medium layered. Very fine- to medium-grained, poorly- to well-sorted. Planktonic foraminifera and benthic foraminifera are common. Grayish brown to white, distinctly lighter in burrows (35R-1, 45-60 cm). Complete bioturbation with poorly preserved common Thalassinoides and Planolites, rare Palaeophycus, few Chondrites, and Phycosiphon present. Individual Zoophycos occur in 35R-1, 45-60 cm and 35R-2, 31-61 cm.



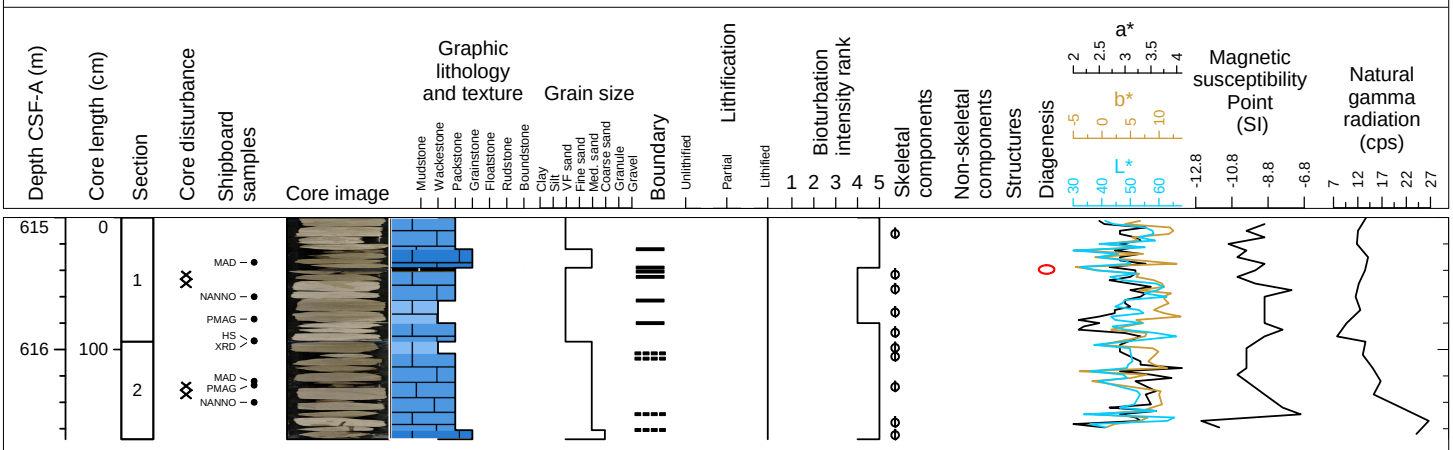
Hole 359-U1466B Core 36R, Interval 605.3-606.4 m (CSF-A)

Lithified GRAINSTONE and PACKSTONE with interlayered CHERT at 36R-1, 05-10 cm and 36R-CC, 00-10 cm. Thin to medium layered. Very fine- to medium-grained. Moderately- to well-sorted. Planktonic foraminifera and benthic foraminifera are common. Light brownish gray to white, the chert is bluish gray. Sharp contacts. Completely bioturbated with common Thalassinodies and Planolites and Chondrites and Phycosiphon are present. Distinct ichnofossils change to common Zoophycos from 36R-1, 42-74 cm. Large chert nodules near top (36R-1, 05-10 cm) and small chert nodules in the CC (36R-CC, 00-10 cm).



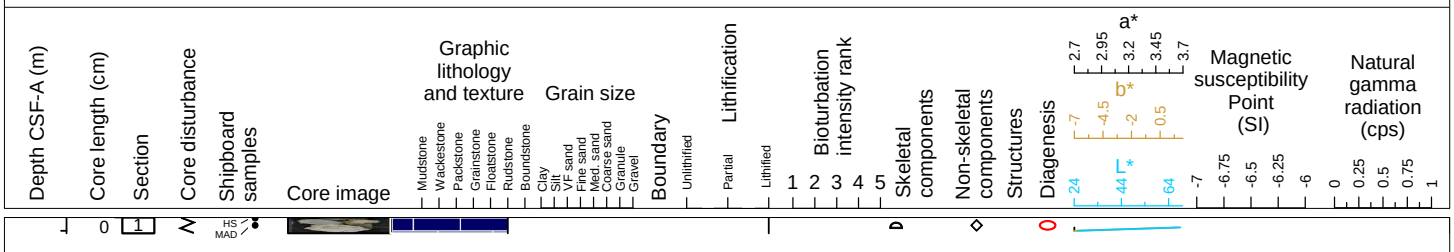
Hole 359-U1466B Core 37R, Interval 615.0-616.68 m (CSF-A)

Lithified PACKSTONE with interlayered WACKESTONE, GRAINSTONE and CHERT (37R-1, 38-41 cm). Thin to medium layered. Very fine- to coarse-grained, grain size increasing down core. Poorly- to well-sorted. Planktonic foraminifera and benthic foraminifera are common with planktic foraminifera absent in 37R-1, 41-93 cm (the base 37R-1). Large benthic foraminifera are present at the base of 37R-2, 67-74 cm. Light brownish gray to pale yellow, chert is bluish gray. Bioturbation common to complete with common Thalassinoides and Planolites, Chondrites and Palaeophycus present.



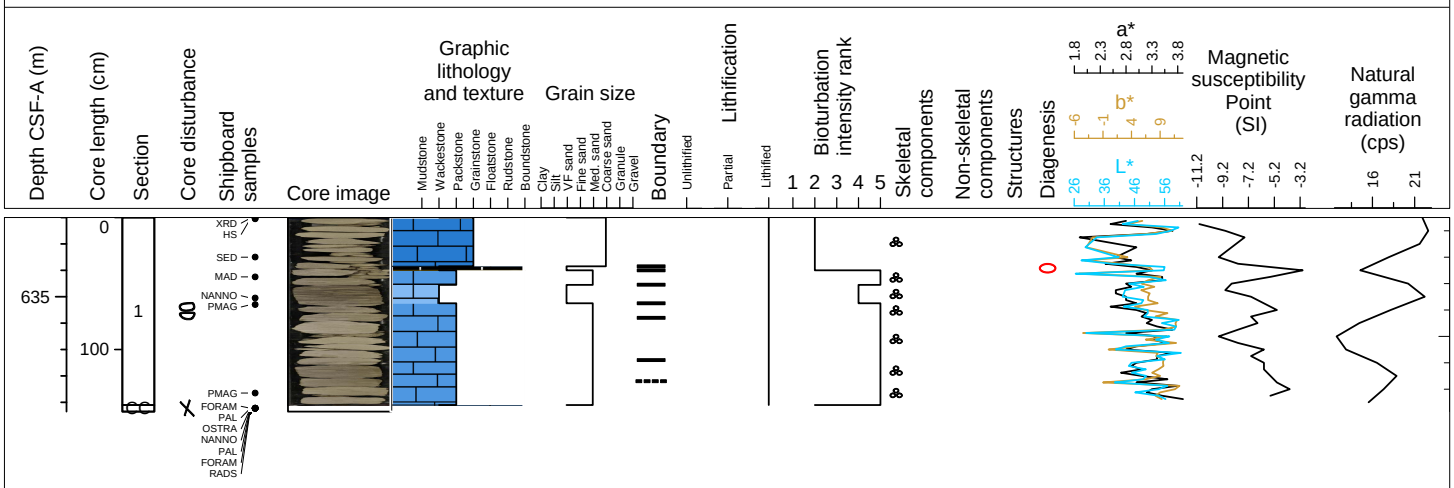
Hole 359-U1466B Core 38R, Interval 624.7-624.82 m (CSF-A)

Lithified RUDSTONE. No layering present. Granule to pebble size grains and poorly-sorted. Dolomitized calcareous rock fragments containing massive corals and granular size chert nodules. Matrix is light brownish gray, clasts are pale yellow, white and chert clasts as grayish blue. No discernable bioturbation.



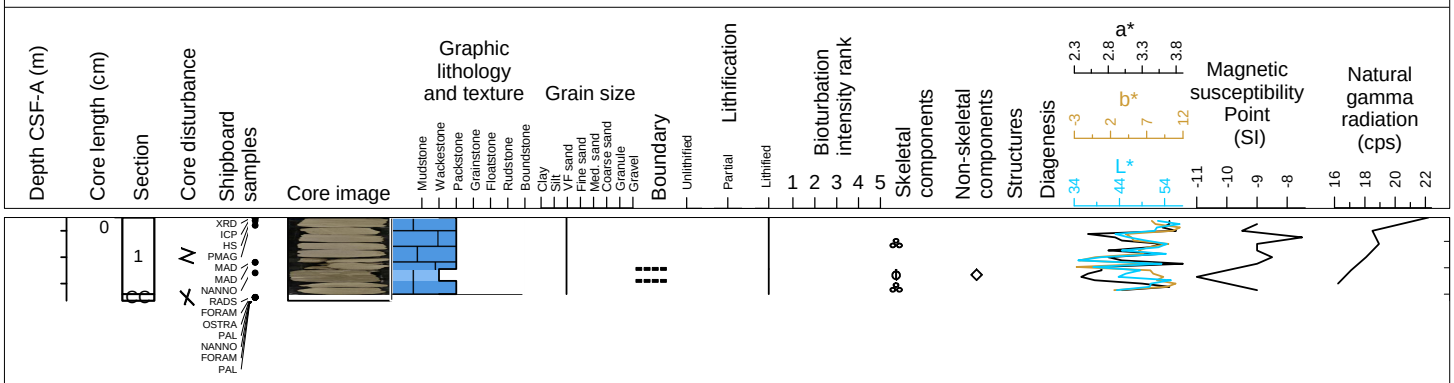
Hole 359-U1466B Core 39R, Interval 634.4-635.87 m (CSF-A)

Interlayered Lithified WACKESTONE and GRAINSTONE with a CHERT layer at 39R-1, 37-40 cm. Thin to medium layered. Very fine- to coarse-grained. Poorly- to well-sorted. Planktonic foraminifera and benthic foraminifera are common with benthic foraminifera are absent in 39R-1, 00-37 cm (top 39R-1). Light brownish gray to pale yellow, chert is pale yellow. Bioturbation common to complete with common Thalassinoides, and Planolites, Chondrites and Palaeophycus present.



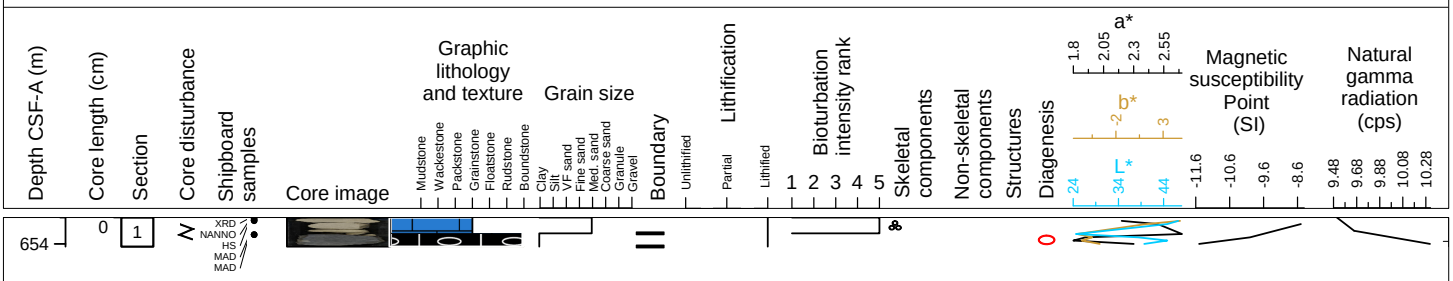
Hole 359-U1466B Core 40R, Interval 644.1-644.73 m (CSF-A)

Interlayered Lithified WACKESTONE and PACKSTONE. Thin to medium layered. Very fine-grained. Well-sorted. Medium layered. Very fine-grained. Well-sorted. Planktonic foraminifera are common. Contacts are gradational and bioturbated and represent changes in color and/or ichnofabrics. Bioturbation is complete with common Thalassinoides and Planolites.



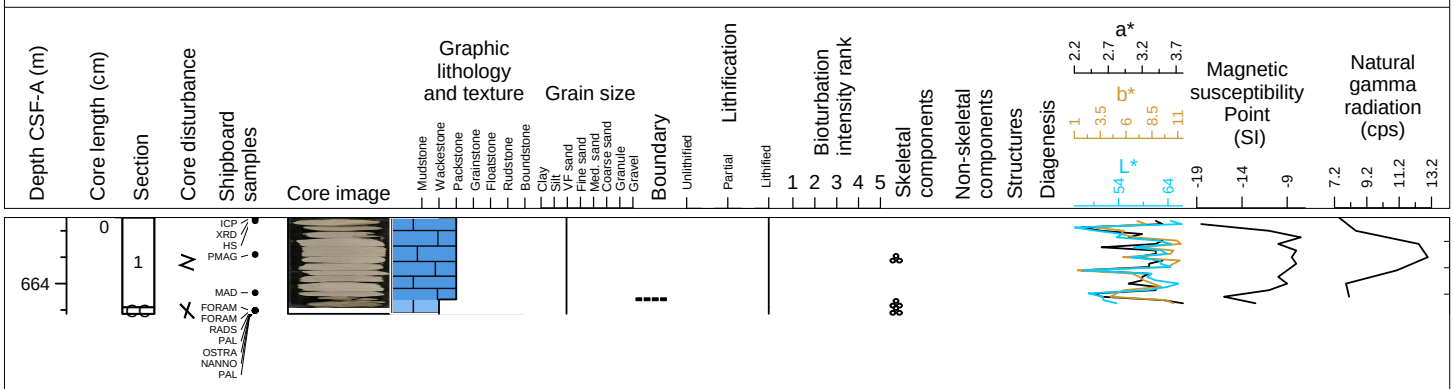
Hole 359-U1466B Core 41R, Interval 653.8-654.02 m (CSF-A)

Lithified GRAINSTONE with interlayered CHERT at 41R-1, 12 cm to 22 cm. GRAINSTONE is medium-grained and well sorted. Planktonic foraminifera are common. GRAINSTONE is pale yellow and the CHERT is bluish gray. Contacts are gradational and bioturbated and represent changes in color and/or ichnofabrics. Bioturbation complete with Palaeophycus present.



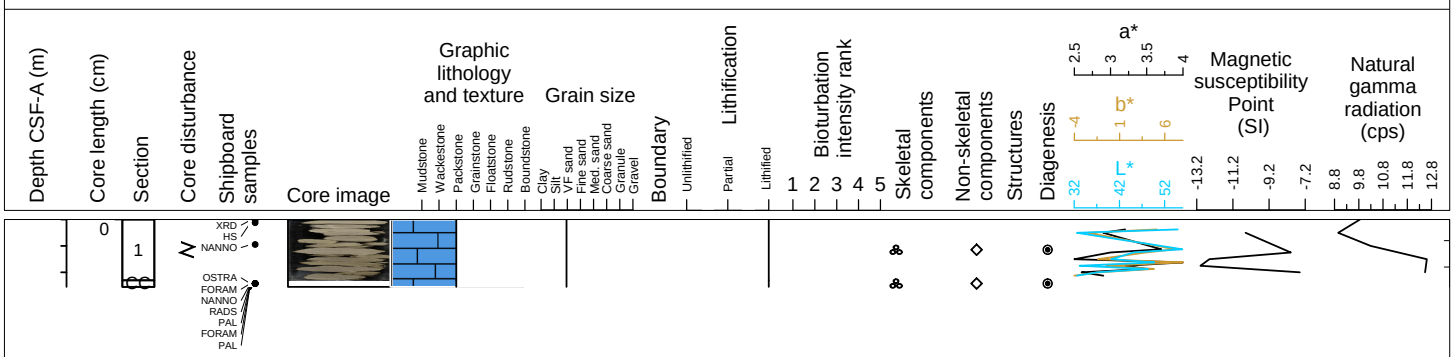
Hole 359-U1466B Core 42R, Interval 663.5-664.23 m (CSF-A)

Interlayered Lithified PACKSTONE and WACKESTONE. Thin to medium layered. Very fine-grained and well-sorted. Planktonic foraminifera are common. Pale yellow to light brownish gray. Contacts are gradational and bioturbated and represent changes in color and/or ichnofabrics. Bioturbation is complete with abundant Planolites and common Thalassinoides.



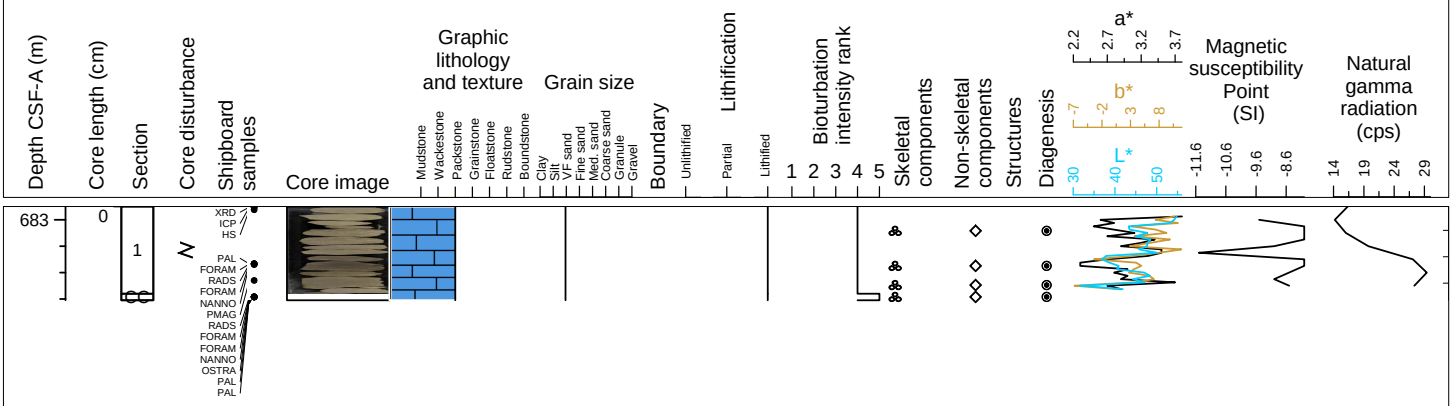
Hole 359-U1466B Core 43R, Interval 673.2-673.71 m (CSF-A)

Lithified PACKSTONE. Thick layered. Very fine-grained and moderately-sorted. Planktonic foraminifera are common. Pale yellow to white. Contacts are gradational and bioturbated and represent changes in color and/or ichnofabrics. Bioturbation is common to complete, with abundant Thalassinoides and common Planolites. Several generations of burrows with concentrations of Planolites within Thalassinoides. Moldic porosity. Black grains are present to common.



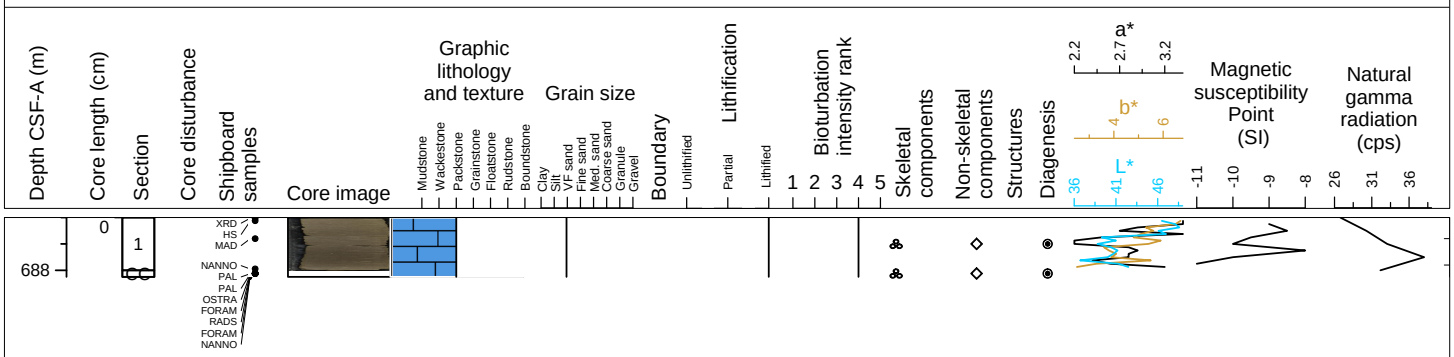
Hole 359-U1466B Core 44R, Interval 682.9-683.61 m (CSF-A)

Lithified PACKSTONE. Thin to thick layered. Very fine-grained and moderately-sorted. Planktonic foraminifera are common. Pale yellow to white. Contacts are gradational and bioturbated and represent changes in color and/or ichnofabrics. Bioturbation is common to complete, with abundant Thalassinoides and common Planolites and Chondrites. Several generations of burrows with concentrations of Planolites within Thalassinoides. Moldic porosity. Black grains are present to common.



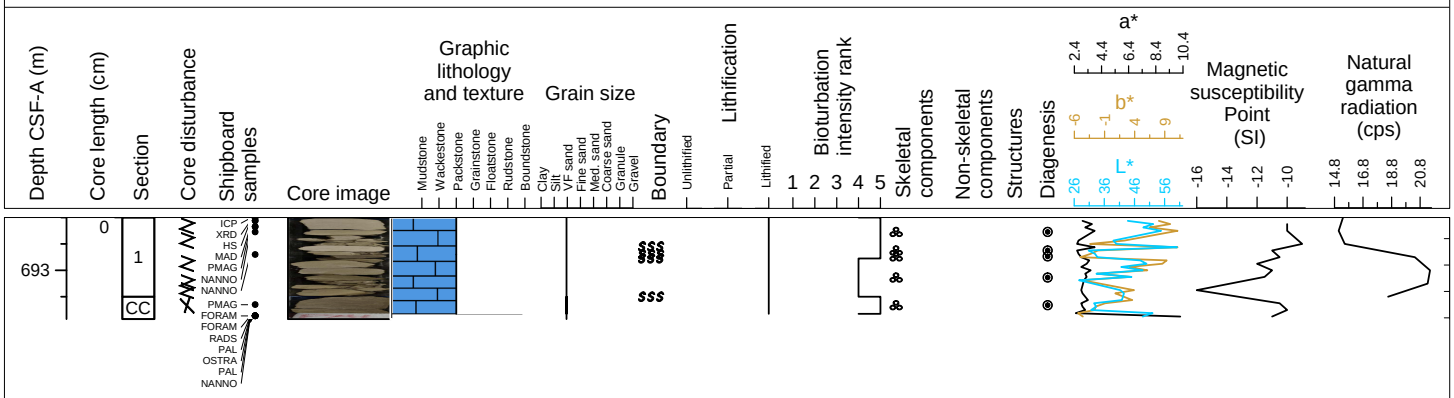
Hole 359-U1466B Core 45R, Interval 687.6-688.05 m (CSF-A)

Lithified PACKSTONE. Thin to thick layered. Very fine-grained and moderately-sorted. Planktonic foraminifera are common. Pale yellow to white. No contacts identified. Bioturbation is common, with abundant Thalassinoides and common Planolites and Chondrites. Moldic porosity. Black grains are present to common.



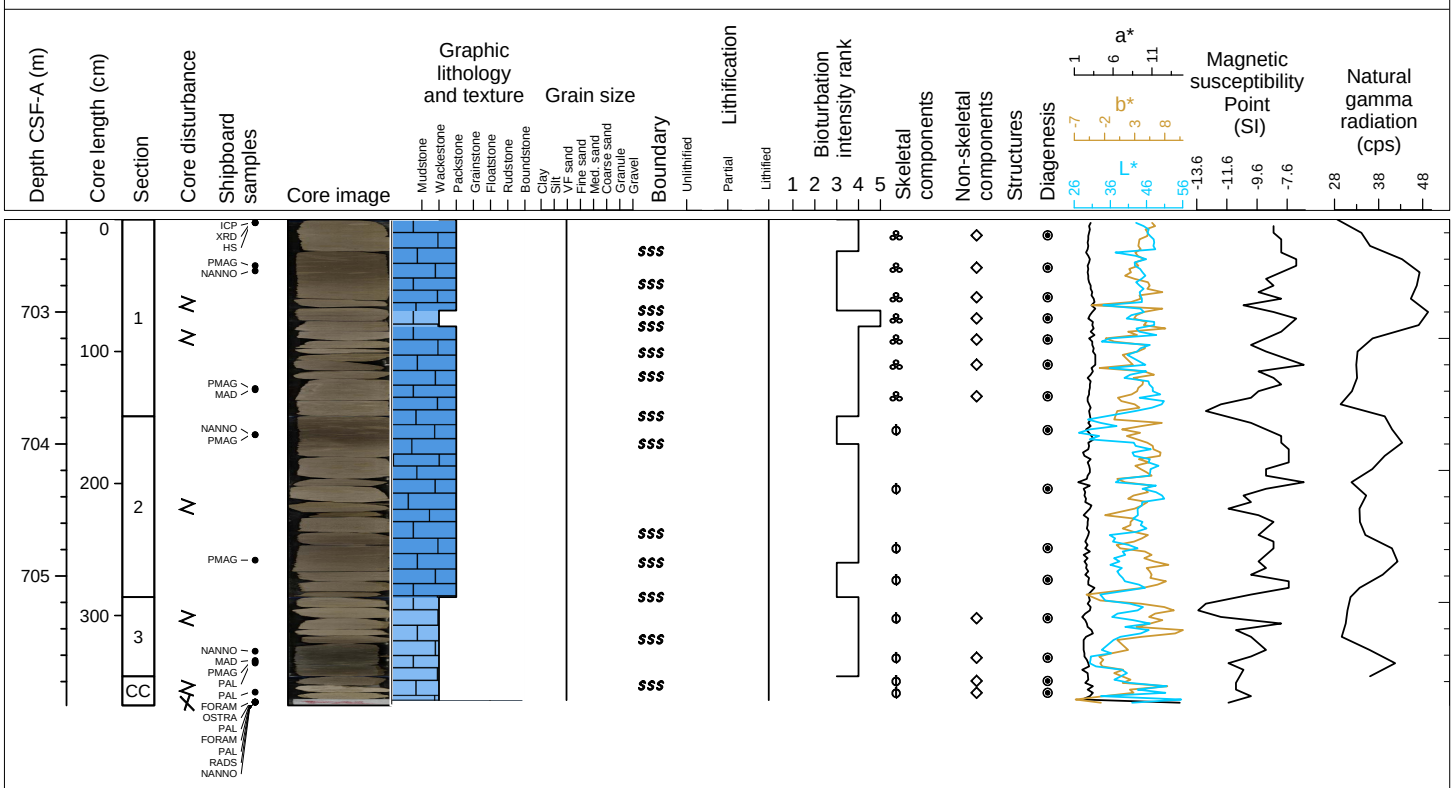
Hole 359-U1466B Core 46R, Interval 692.6-693.37 m (CSF-A)

Lithified PACKSTONE. Thin to medium layered. Very fine-grained and moderately-sorted. Planktonic foraminifera are common. Light gray. Bioturbated contacts. Bioturbation is common to complete, at times too bioturbated to determine ichnofossils. When observed abundant Planolites; Thalassinoides is present. Moldic porosity.



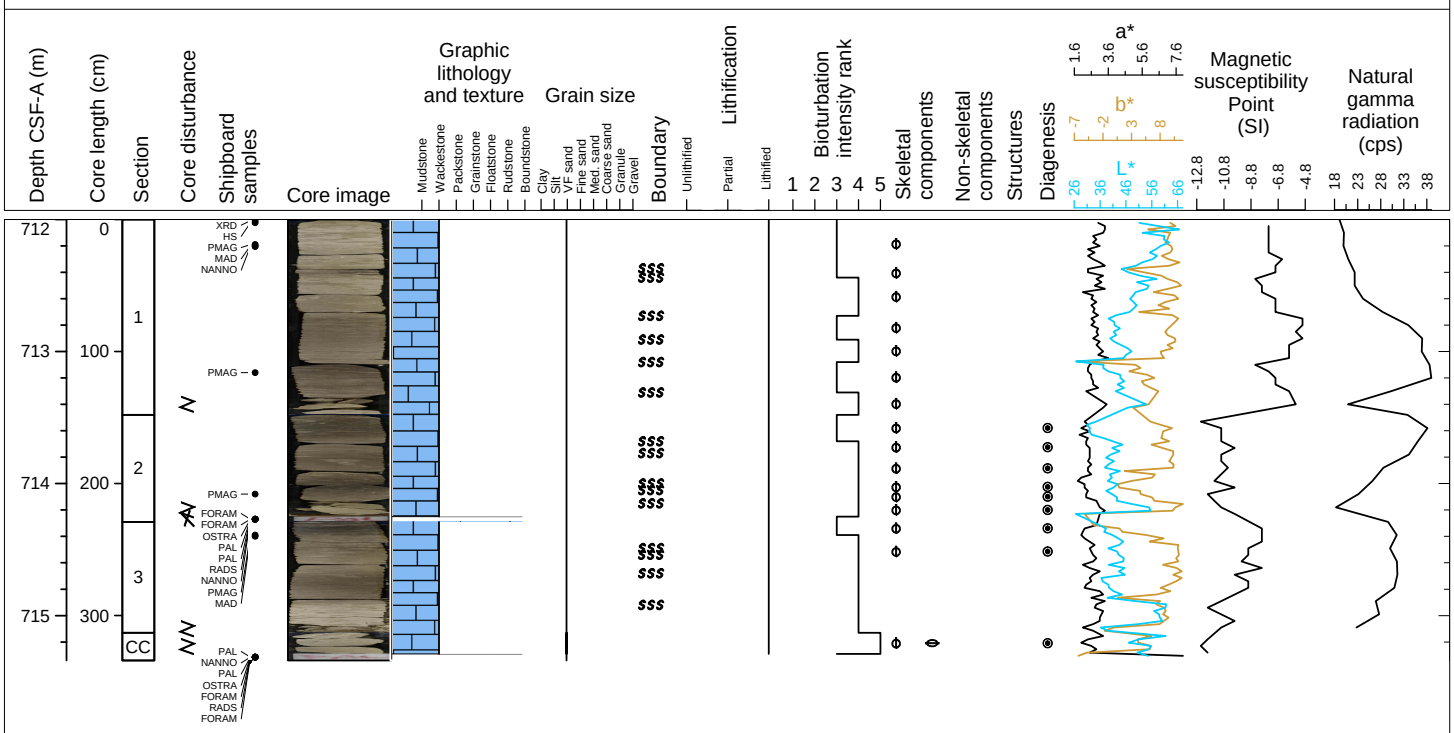
Hole 359-U1466B Core 47R, Interval 702.3-705.98 m (CSF-A)

Lithified PACKSTONE to interlayered WACKESTONE (47R-1, 69-81 cm and 47R-3, 00 to 47-CC, 18). Thin to medium layered and moderately- to well-sorted. Planktonic foraminifera are common in upper portion. Benthic foraminifera dominant from 47R-2 (00 cm) down core. Alternating dark (black) and light (gray to light brownish gray). Bioturbated contacts. Bioturbation is common to complete and often too bioturbated to determine ichnofossils. When observed Planolites is abundant and Thalassinoides common and few Chondrites and Palaeophycus; Zoophycos in 47R-3, 32-60 cm. Moldic porosity. Black grains are present to common in lower portion (47R-3 and 47R-CC).



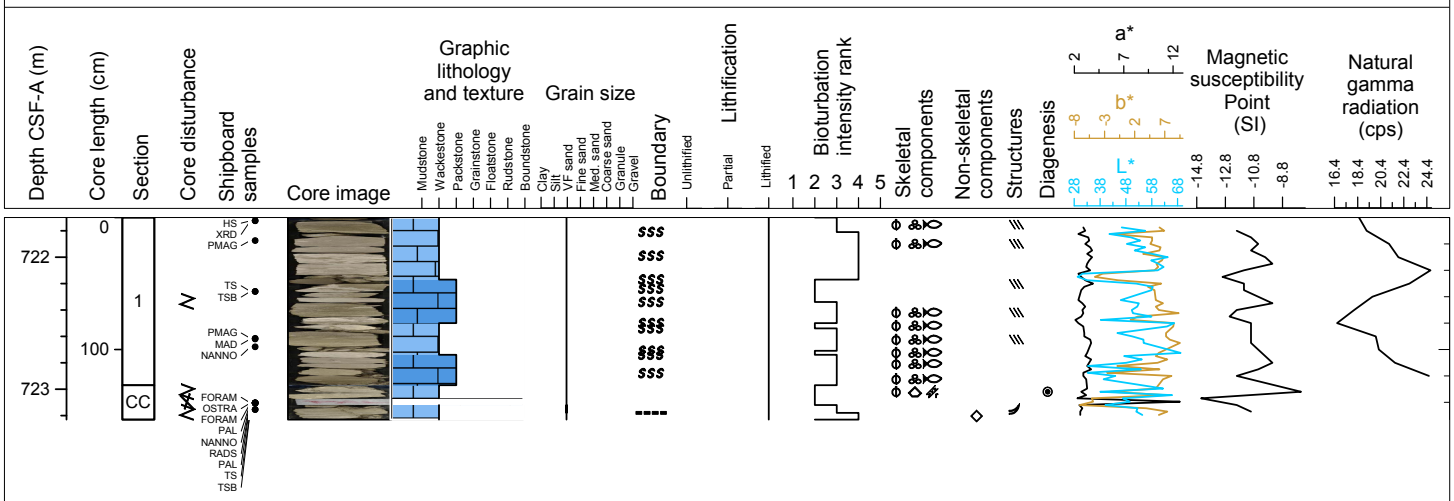
Hole 359-U1466B Core 48R, Interval 712.0-715.34 m (CSF-A)

Lithified WACKESTONE. Thin to medium layered, very fine-grained and well-sorted. Benthic and planktonic foraminifera are common in upper portion (48R-1) and become less identifiable down core and often represented as mold porosity. Alternating dark (dark gray) and light (gray to white) layers. Bioturbated contacts. Bioturbation is moderate to complete, at times too bioturbated to determine ichnofossils. When observed, Planolites is abundant in 48R-1, and Thalassinoides in 48R-3. Few Chondrites and Palaeophycus; Zoophycos in 48R-3, 44-73 cm. Moldic porosity.



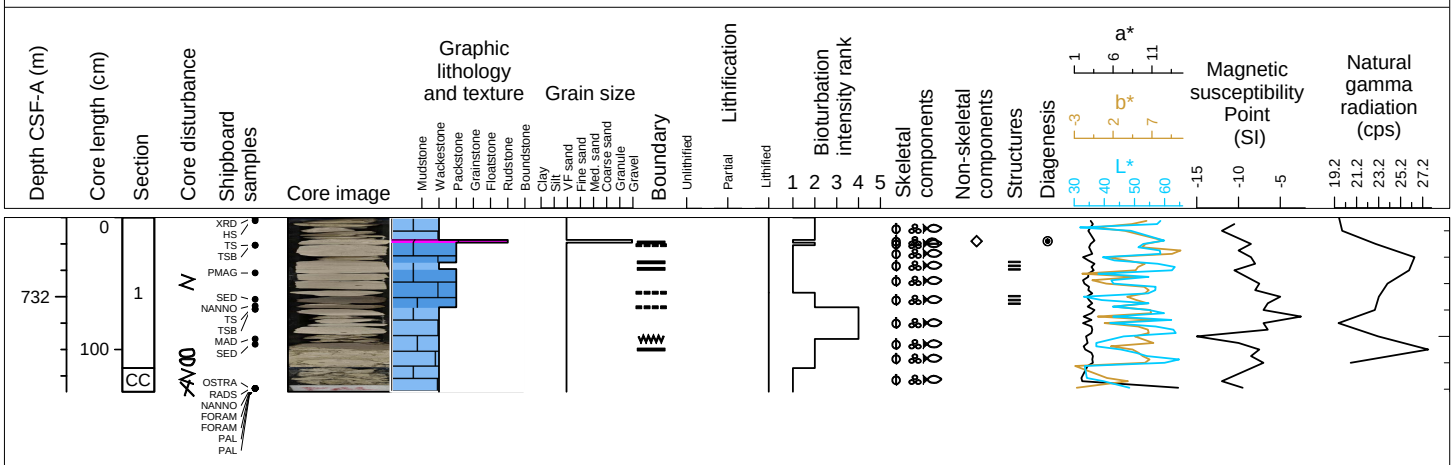
Hole 359-U1466B Core 49R, Interval 721.7-723.23 m (CSF-A)

Lithified WACKESTONE to WACKESTONE-PACKSTONE. Thin to medium layered, suspected flaser bedding (49R-CC, 14-21), very fine-grained. Benthic and planktonic foraminifera are common in upper portion (49R-1) and become less prominent down core often represented as moldic porosity. Bioturbated inclined to horizontal contacts. Bioturbation is slight to complete, at times too bioturbated to determine ichnofossils. When observed Planolites and Chondrites are abundant. Moldic porosity. 49R-1, 00-104cm, is characterized by inclined bedding of up to 30Ã□Â¿Ã□Â°, declines down core. The core has distinct alternating (cyclic) poorly laminated dark layers (dark gray) with sharp basal contacts and gradational/bioturbated upper contacts into the moderate to completely bioturbated lighter layers (gray to white).



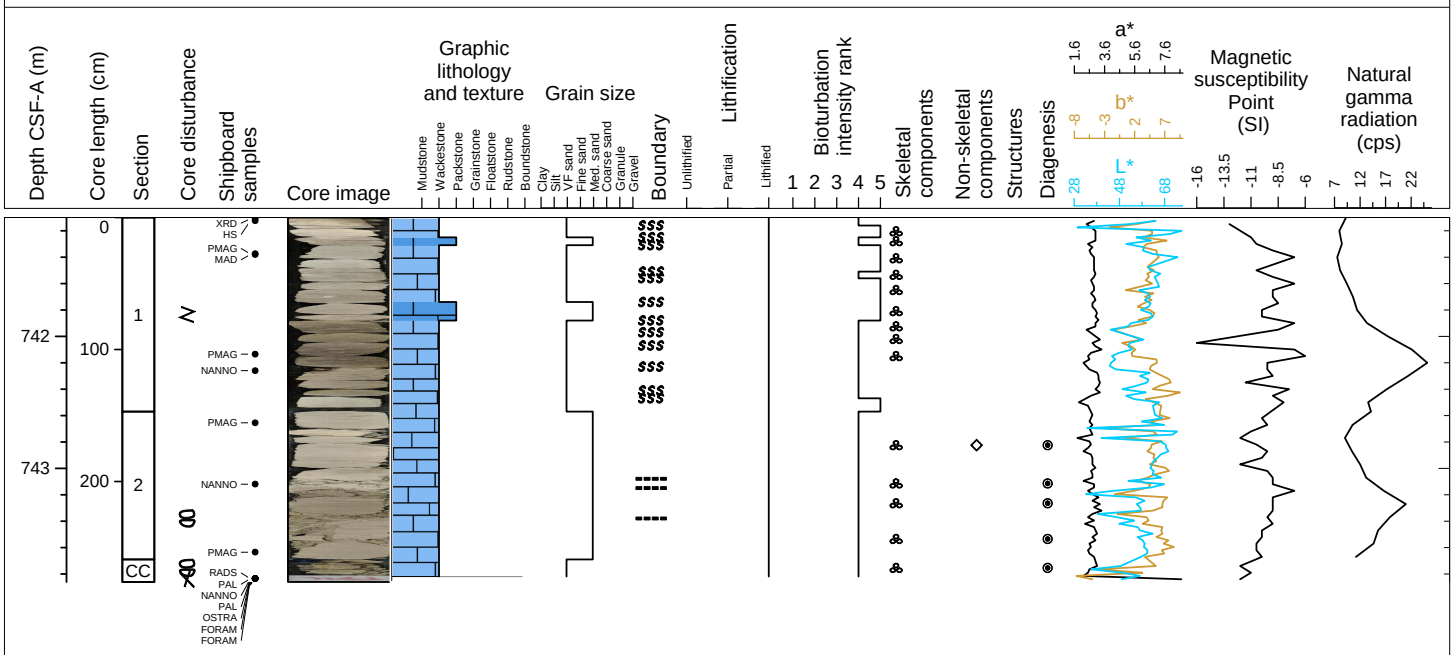
Hole 359-U1466B Core 50R, Interval 731.4-732.72 m (CSF-A)

Lithified WACKESTONE to PACKSTONE. Interlayered very coarse to gravel size lithified RUDSTONE (limestone) (50R-119-19cm). Abundant large benthic and planktonic foraminifera, Halimeda, red algae, fragmented gastropods and bivalves. Common coral fragments up to 1 cm (at least 2 species present). Dark layers are lithified very fine-grained and poorly laminated (horizontal), and slight to common bioturbation. The core has distinct alternating (cyclic) poorly laminated dark layers (dark gray) with sharp basal contacts and gradational/bioturbated upper contacts into the moderate to completely bioturbated lighter layers (gray to white). Lighter layers have convolute bedding with flattened and stretched chondrites.



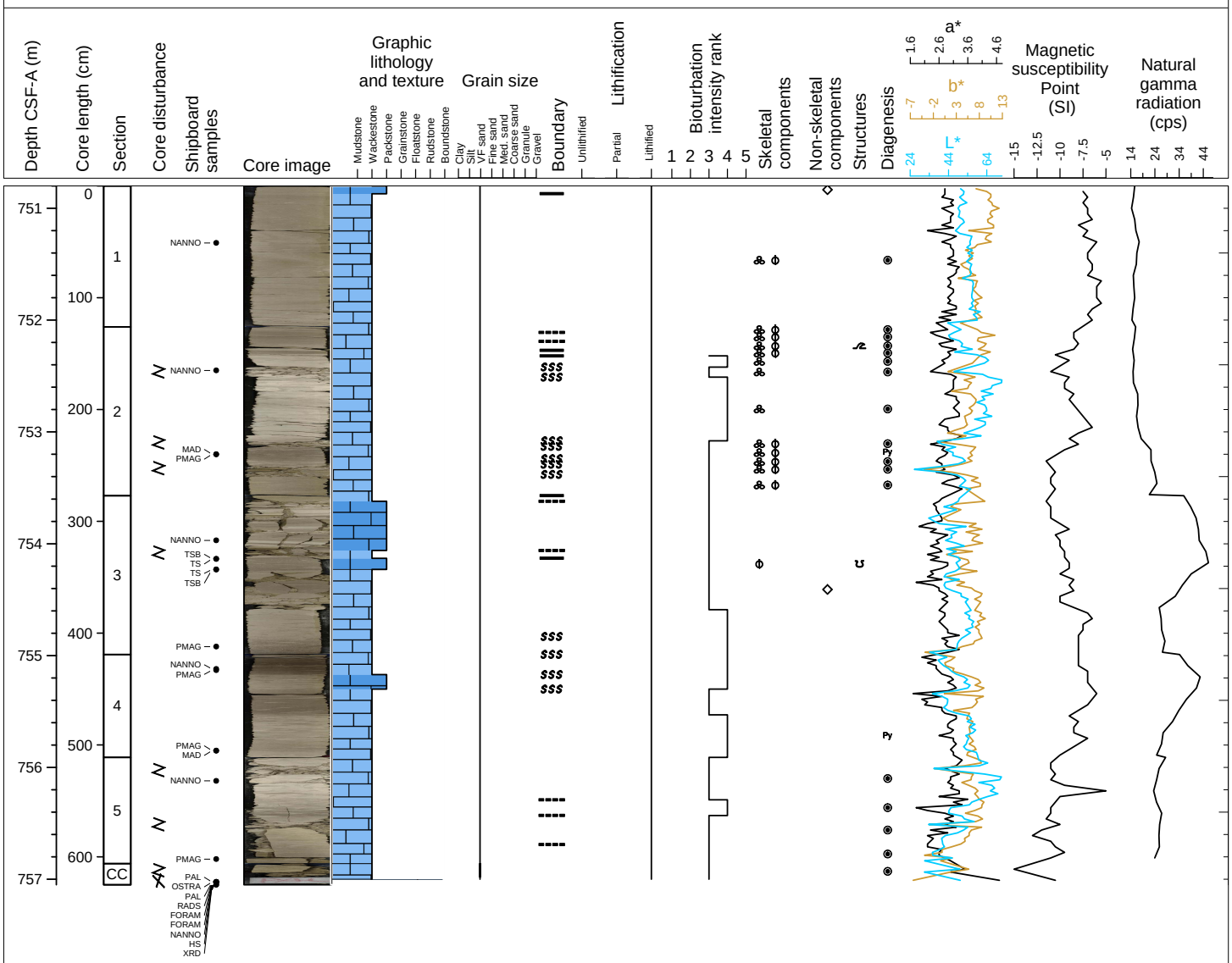
Hole 359-U1466B Core 51R, Interval 741.1-743.86 m (CSF-A)

Lithified WACKESTONE and interlayered PACKSTONE (51R-1, 15-21 cm). Very thin to medium layered, fine- to medium-grained and moderately- to well-sorted. Planktonic foraminifera are common, often as mold porosity. Grayish brown to white. Bioturbated contacts. Bioturbation is common to complete, at times too bioturbated to determine ichnofossils. When observed, Thalassinoides is abundant. Few Chondrites and Planolites. Zoophycos in 51R-2, 81-112 cm. Moldic porosity.



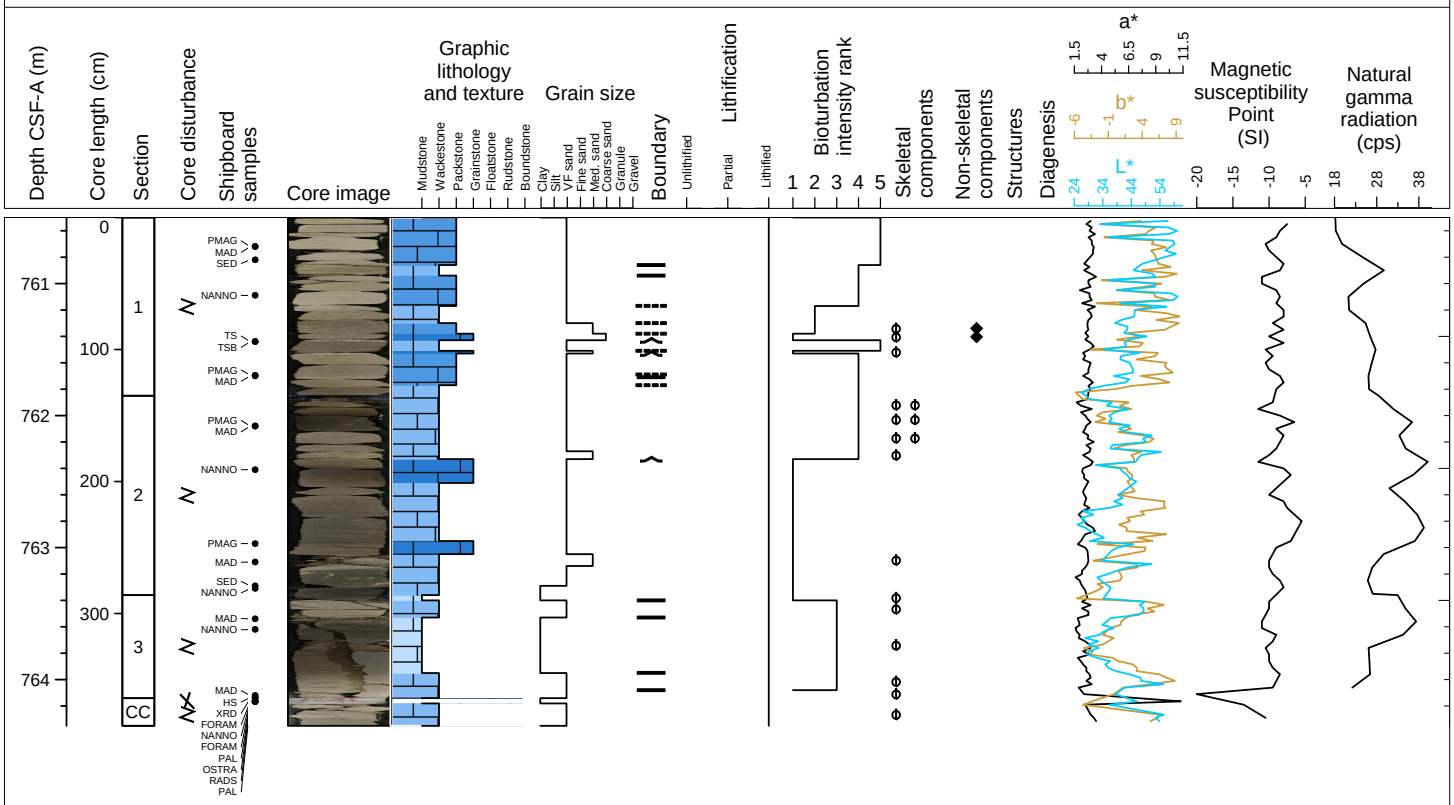
Hole 359-U1466B Core 52R, Interval 750.8-757.05 m (CSF-A)

Lithified WACKESTONE to PACKSTONE. Very thin to medium layered, convolute layered (slump deposit) in 52R-1, 7-126 cm and 52R-2, 00-13 cm. Very fine-grained and poorly- to moderately-sorted. Planktonic and benthic foraminifera are common in upper portion (52R-1, 2) and become less down core, as of 52R-3 only benthic foraminifera. Contacts are sharp, gradational and bioturbated, in some cases sub-horizontal. Bioturbation is common to moderate when discernable. When observed, Thalassinoides is abundant, common Chondrites and Planolites and few Palaeophycus; Zoophycos in 52R-2, 45-102 cm and 52R-4, 31-92 cm. Moldic porosity. The core has distinct alternating (cyclic) poorly laminated organic rich dark layers (dark gray) with sharp basal contacts and gradational/bioturbated upper contacts into the moderate to completely bioturbated lighter layers (gray to white).



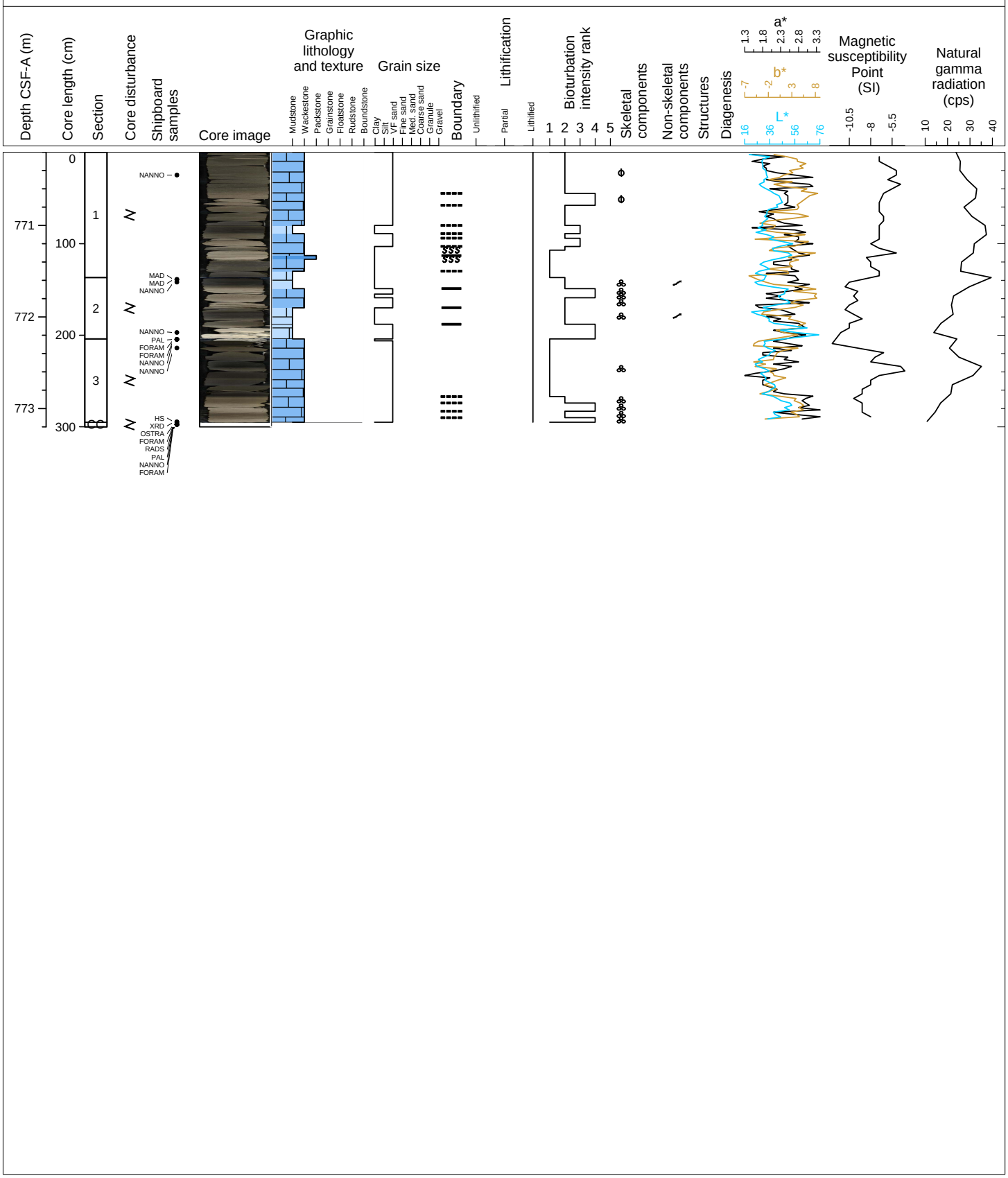
Hole 359-U1466B Core 53R, Interval 760.5-764.35 m (CSF-A)

Lithified WACKESTONE to GRAINSTONE. Very thin to thin layered. Clay- to coarse-grained and poorly- to well-sorted. Benthic and large benthic foraminifera (Operculina, Lepidocyclina Sp. (Eulepidina), Heterostegina and Nummulites) and red algae occur in upper portion (53R-1, 53R-2 cm), and generally concentrated in base of normal grading sequences. Contacts are sharp, gradational, bioturbated and erosional in some cases; normal grading with and erosional base (possible turbidites). Bioturbation is absent to complete. When observed, Thalassinoides is abundant. Common Chondrites and Planolites. Possible slump deposit in 53R-1 and 53R-2. The core has distinct alternating (cyclic) poorly laminated organic rich dark layers (dark gray) with sharp basal contacts and gradational/bioturbated upper contacts into the moderate to completely bioturbated lighter layers (gray to white).



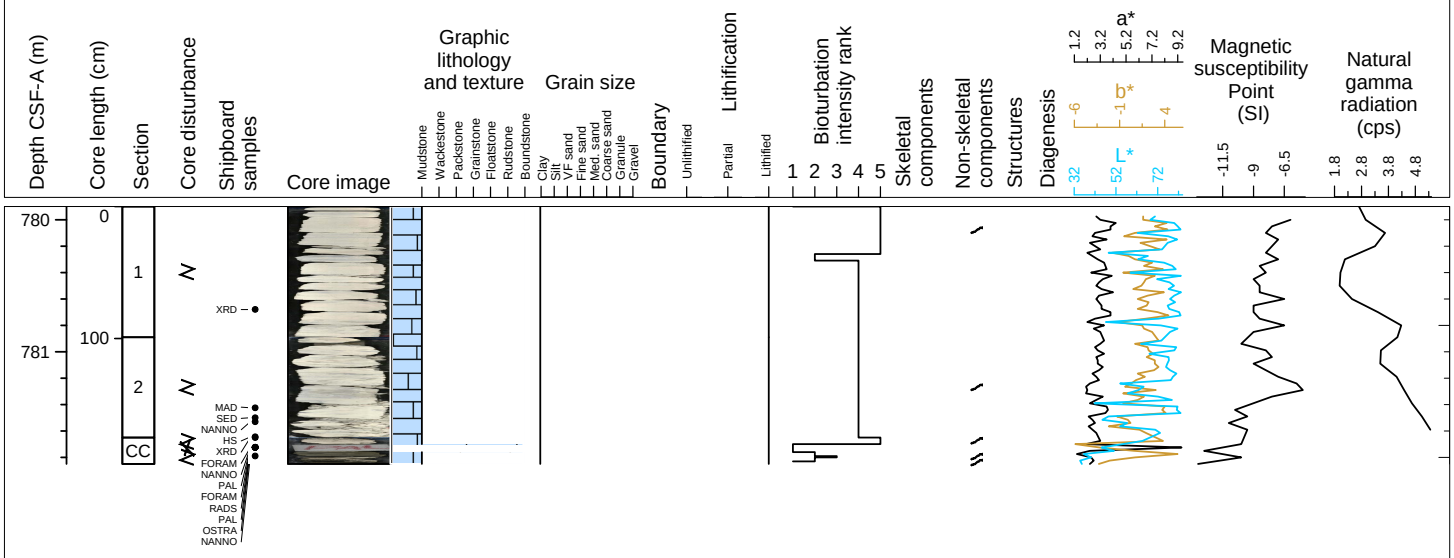
Hole 359-U1466B Core 54R, Interval 770.2-773.2 m (CSF-A)

Lithified WACKESTONE to MUDSTONE (non-dolomitized 54R-2, 51cm to 54R-3, 02 cm; remainder of the section is dolomitized). Laminated to medium layered defined by color changes. Clay- to very fine-grained and well to moderately-sorted. Planktic foraminifera and calcareous nanno-fossils are dominant components (54R-2, 51 cm to 54R-3, 02cm). Contacts are sharp and gradational representing color changes. Bioturbation is absent to common, when observed Chondrites is common to abundant in the light intervals and Planolites common to abundant in the dark intervals. The core has distinct alternating (cyclic) poorly laminated organic rich dark layers (dark gray) with sharp basal contacts and gradational/bioturbated upper contacts into the moderate to completely bioturbated lighter layers (gray to white). Darker units are poorly laminated and have absent to moderate bioturbation. In contrast lighter units have higher degree of bioturbation.



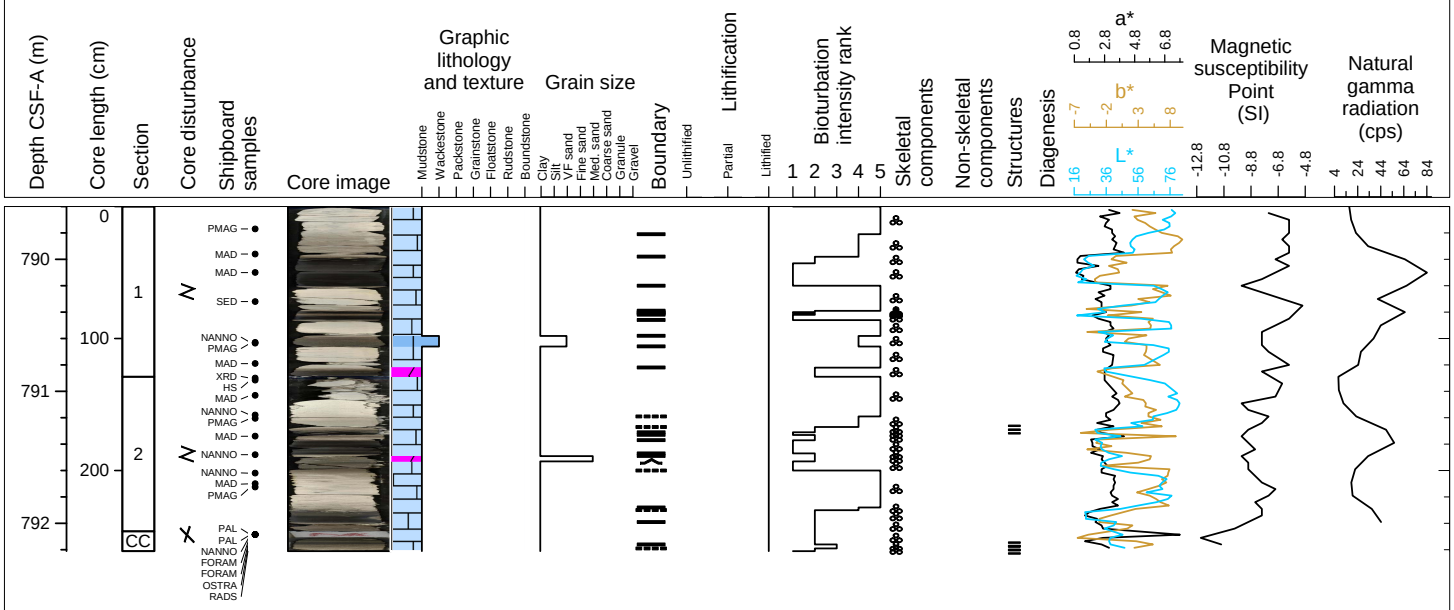
Hole 359-U1466B Core 55R, Interval 779.9-781.85 m (CSF-A)

Lithified MUDSTONE (CHALK). Very thin to thin layered, clay-grain size, well-sorted. Dominant by calcareous nanno-fossils. White through the majority of the core with the lower part of the section dark gray to black (55R-CC). No clear contacts aside from 55R-CC were transition is marked by changes in color and bioturbation intensity. Bioturbation is slight to complete Thalassinoides, Planolites, Astrosoma and possible Rhizocoralium (?) are observed. The core cater contained alternating (cyclic) poorly laminated organic rich dark layers (dark gray) with sharp basal contacts and gradational/bioturbated upper contacts into the moderate to completely bioturbated lighter layers (gray to white).



Hole 359-U1466B Core 56R, Interval 789.6-792.21 m (CSF-A)

Lithified MUDSTONE with interlayers MUDSTONE (56R-, 122-129 cm and 56R-2, 60-64 cm) Laminated to medium layered defined by color changes. Clay- to very fine-grained and well to moderately-sorted. Planktic foraminifera and calcareous nanno-fossils are dominant components. Contacts are sharp and gradational/bioturbated representing color changes. Bioturbation is absent to slight in darker units and common to complete in lighter units. When observed Chondrites and Thalassinoides is common to abundant in the light intervals, and Planolites is common to abundant in the dark intervals. The core has distinct alternating (cyclic) poorly laminated organic rich dark layers (dark gray) with sharp basal contacts and gradational/bioturbated upper contacts into the moderate to completely bioturbated lighter layers (gray to white). Darker units are poorly laminated and have absent to moderate bioturbation. In contrast lighter units have higher degree of bioturbation.



Hole 359-U1466B Core 57R, Interval 800.0-803.61 m (CSF-A)

Dark gray MUDSTONE with interlayered light colored MUDSTONE. The core has distinct alternating (cyclic) poorly laminated organic rich dark layers (dark gray) with sharp basal contacts and gradational/bioturbated upper contacts into the moderate to completely bioturbated lighter layers (gray to white). Dark gray to black cycles dominate from 57R-2, 101 cm to the base of the core. Darker units are poorly laminated and have absent to moderate bioturbation dominated by common Planolites, often stretched and flattened. In contrast lighter units have higher degree of bioturbation dominated by Thalassinoides.