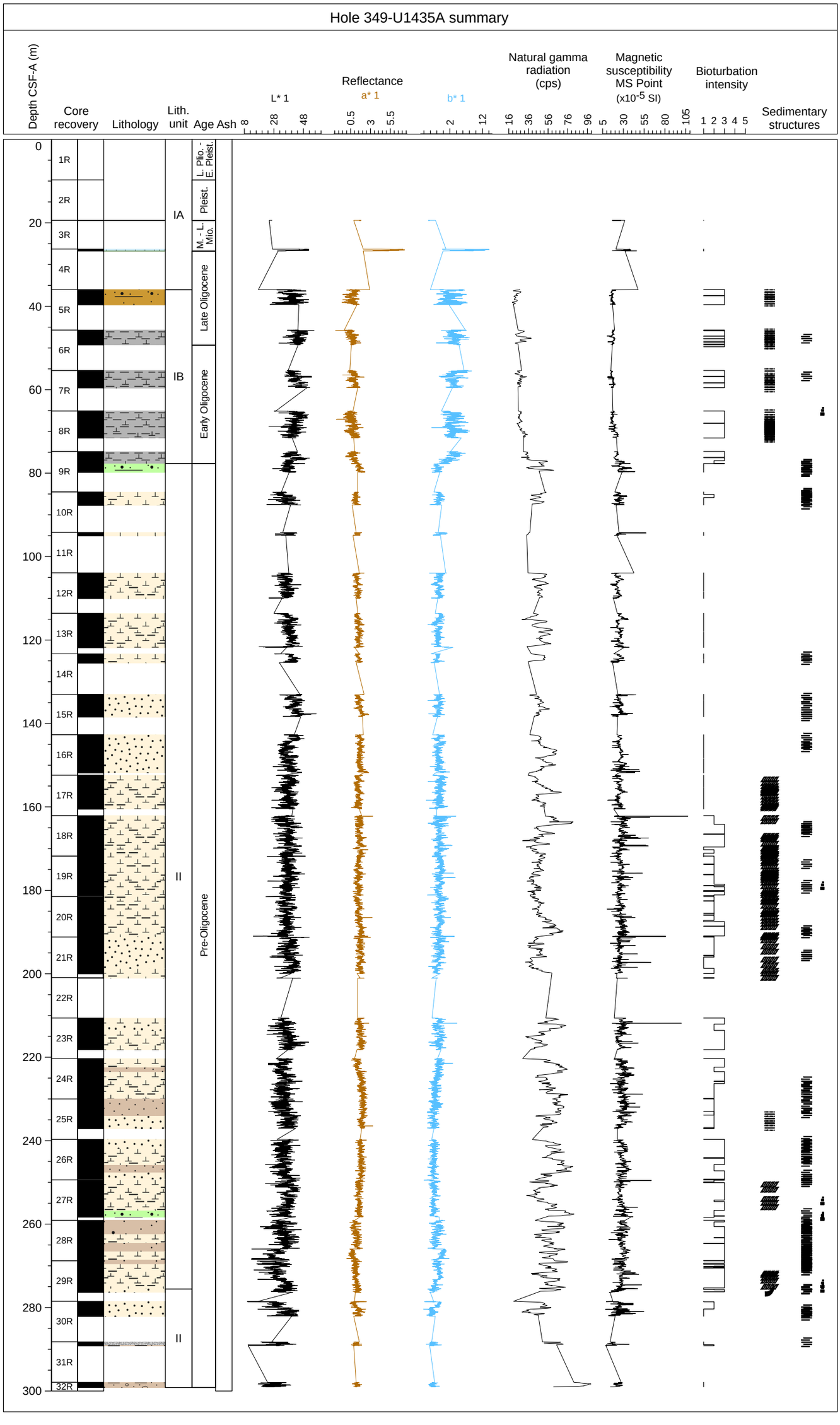
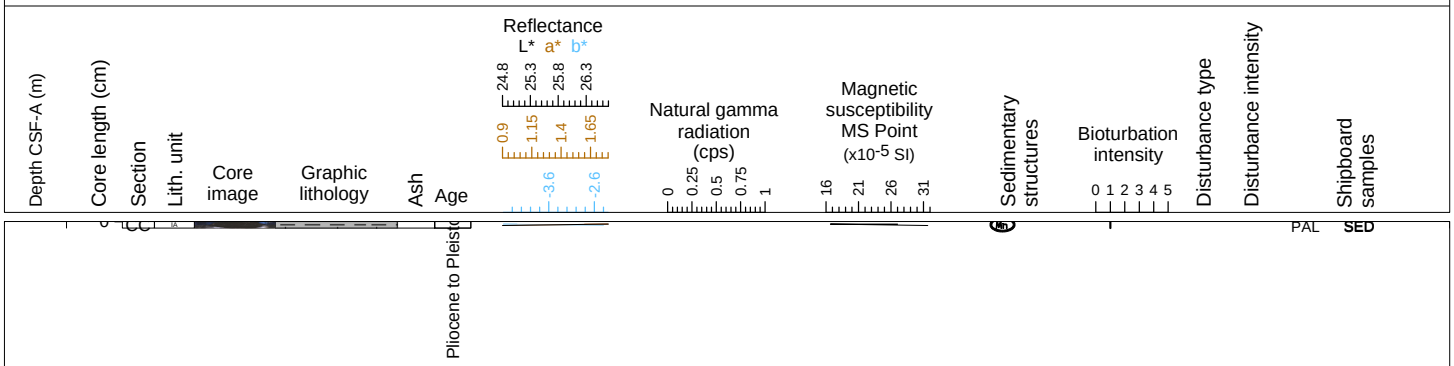

Hole 349-U1435A summary
Depth CSF-A (m)
Core recovery
Lithology
Lith. unit
Age
Ash
L* 1
Reflectance
a* 1
b* 1
Natural gamma radiation (cps)
Magnetic susceptibility MS Point (x10-5 SI)
Bioturbation intensity
Sedimentary structures
IA
IB
II
II
L. Plio. - E. Pleist.
Pleist.
M. - L. Mio.
Late Oligocene
Early Oligocene
Pre-Oligocene

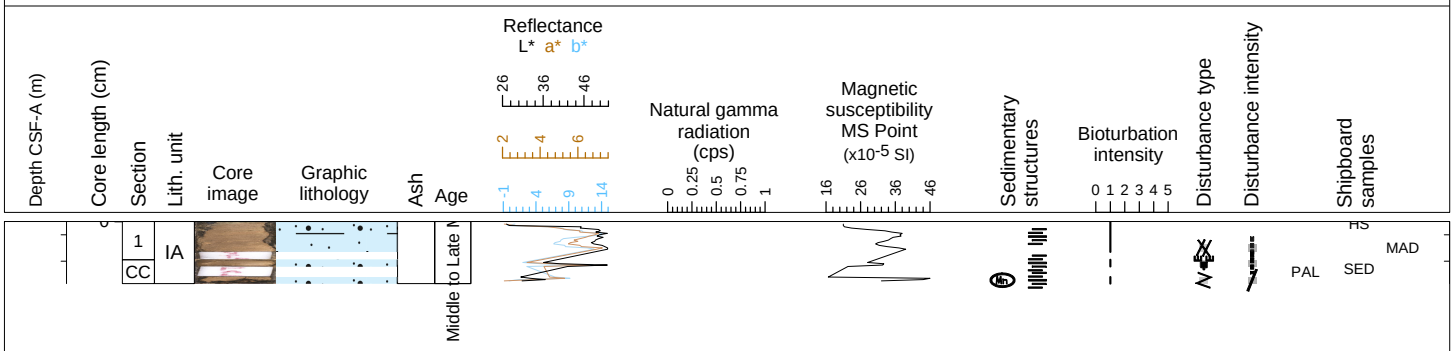
Hole 349-U1435A Core 3R, Interval 19.4-19.45 m (CSF-A)

This core contains a manganese nodule with NANNOFOSSIL-RICH CLAY on its surface.



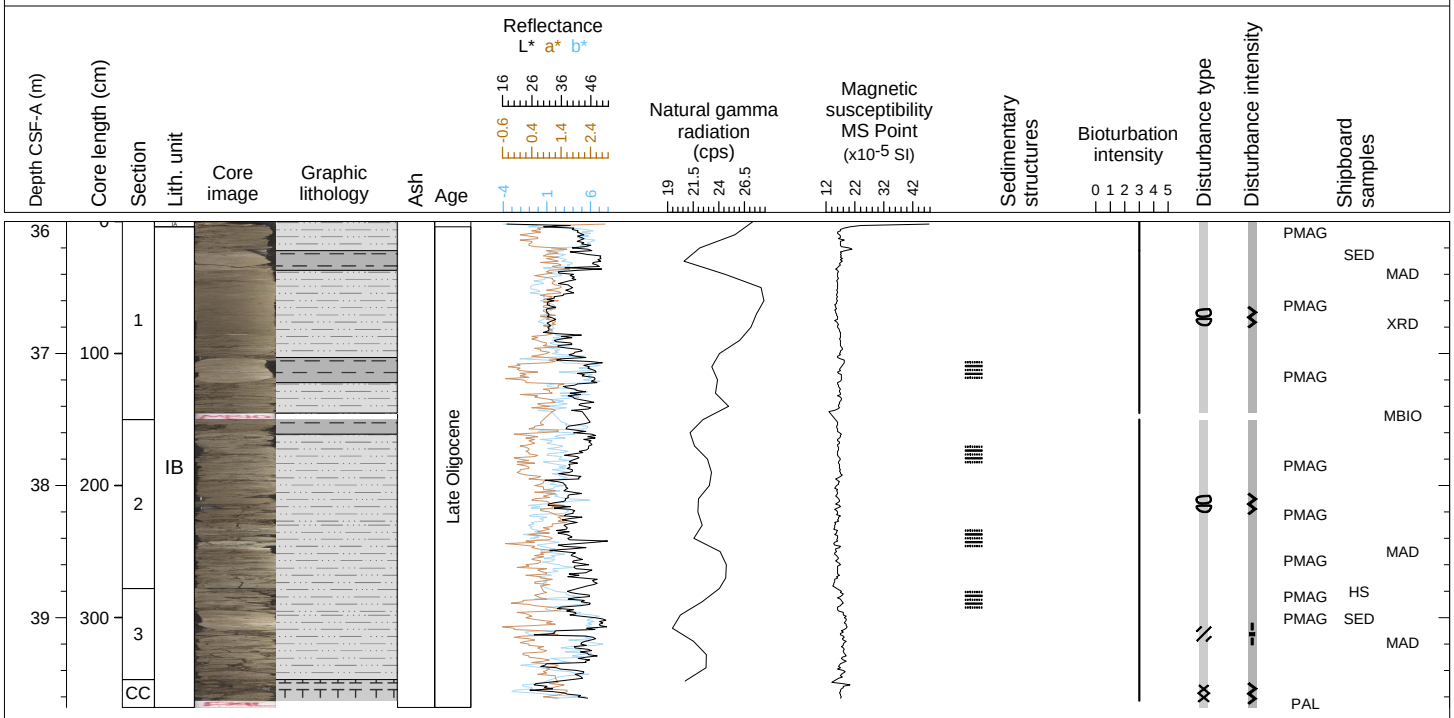
Hole 349-U1435A Core 4R, Interval 26.3-26.77 m (CSF-A)

This core is mostly composed of FORAMINIFER-RICH NANNOFOSSIL OOZE with fragments of black manganese nodules in the core catcher.



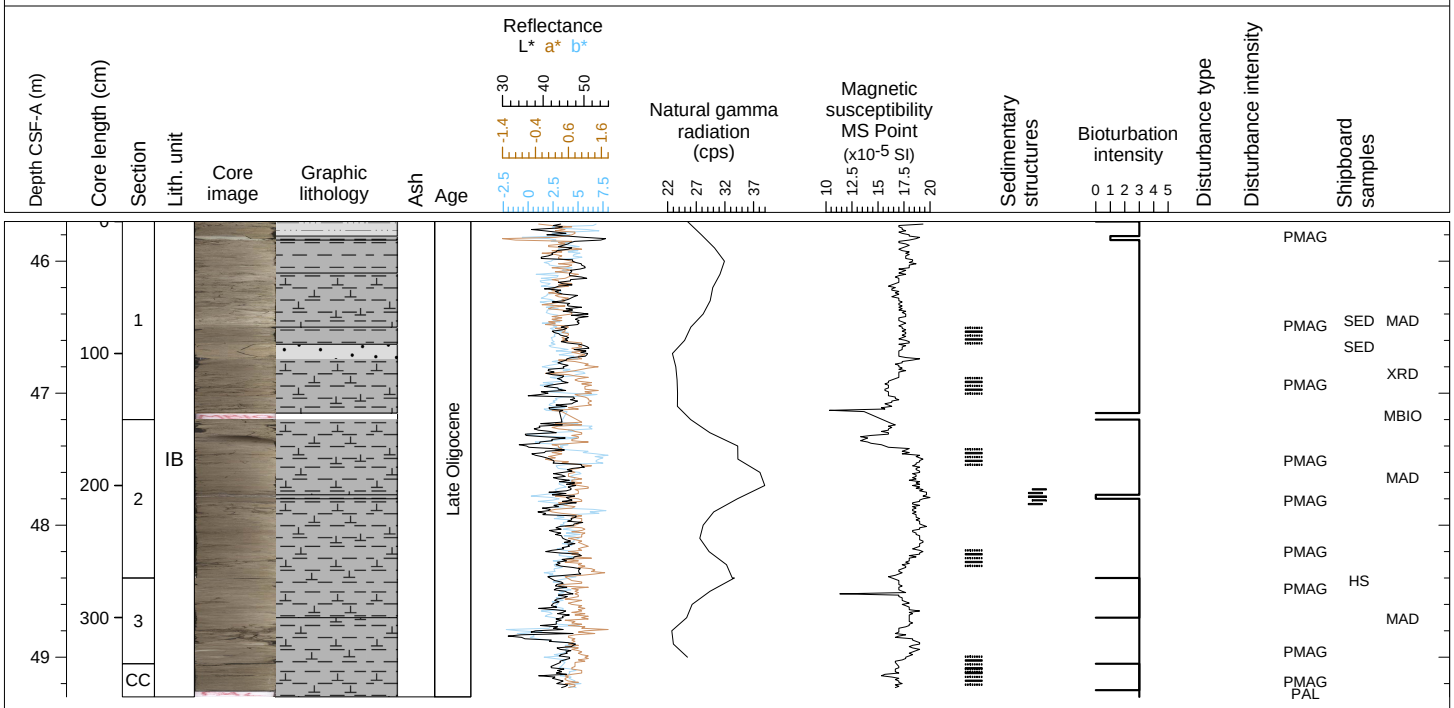
Hole 349-U1435A Core 5R, Interval 36.0-39.68 m (CSF-A)

Greenish gray SILTY CLAY with interbedded slightly lighter greenish gray CLAY WITH SILT. Boundaries between lithologies are rapid but not sharp. There are few sedimentary structures seen in coherent fragments in a core that is largely strongly disturbed by drilling. Trace fossils include Chrondrites and Planolites. A loose fragment of MANGANESE is found at the top of Section 1, likely fallen in from higher in the stratigraphy.



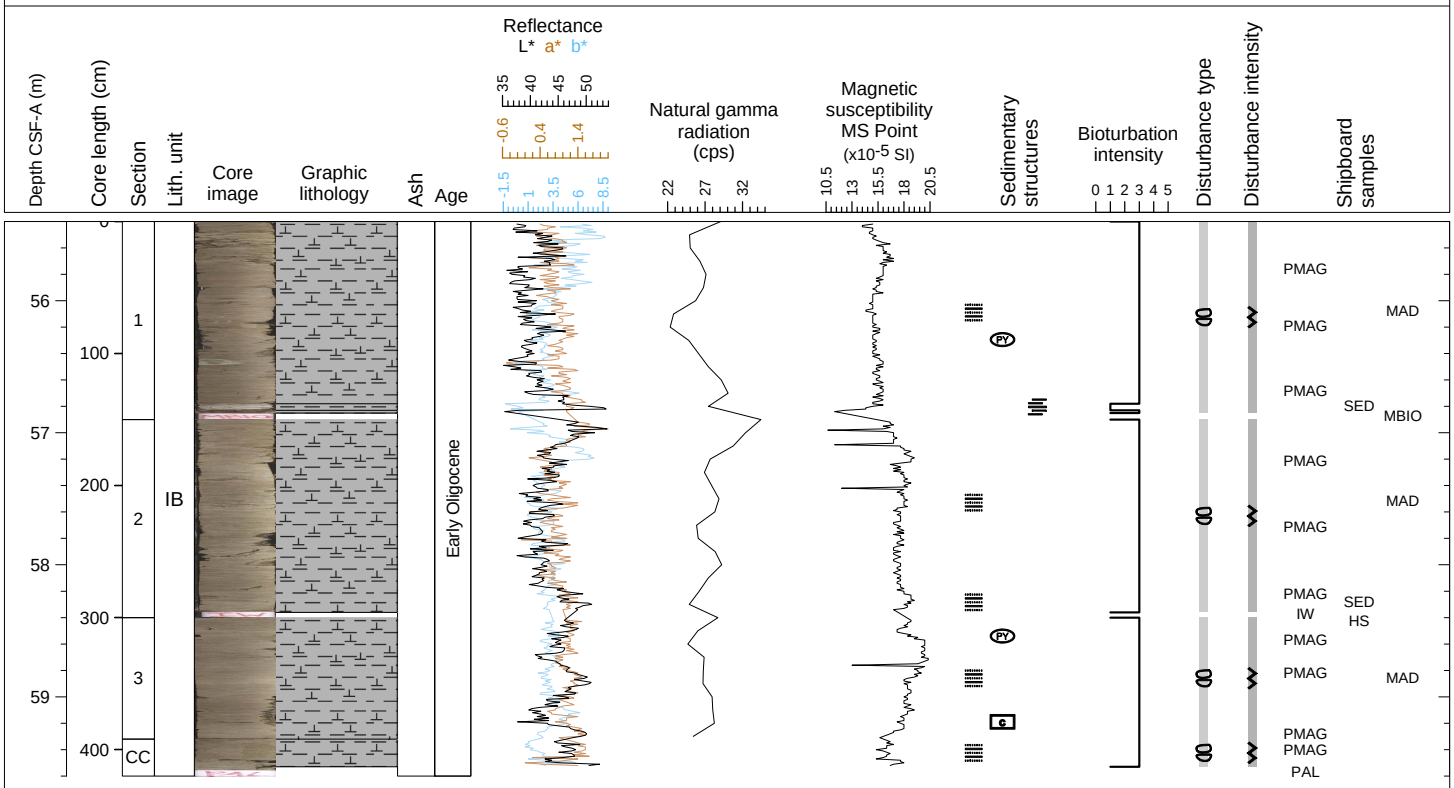
Hole 349-U1435A Core 6R, Interval 45.7-49.3 m (CSF-A)

Greenish gray NANNOFOSSIL-RICH CLAY with minor interbeds of light green CLAY and light greenish gray SANDY CLAY. Sedimentary structures are largely absent except for common bioturbation mostly of Chondrites and Planolites types, especially visible on the lighter, more carbonate-rich intervals. Core is badly disrupted by biscuiting.



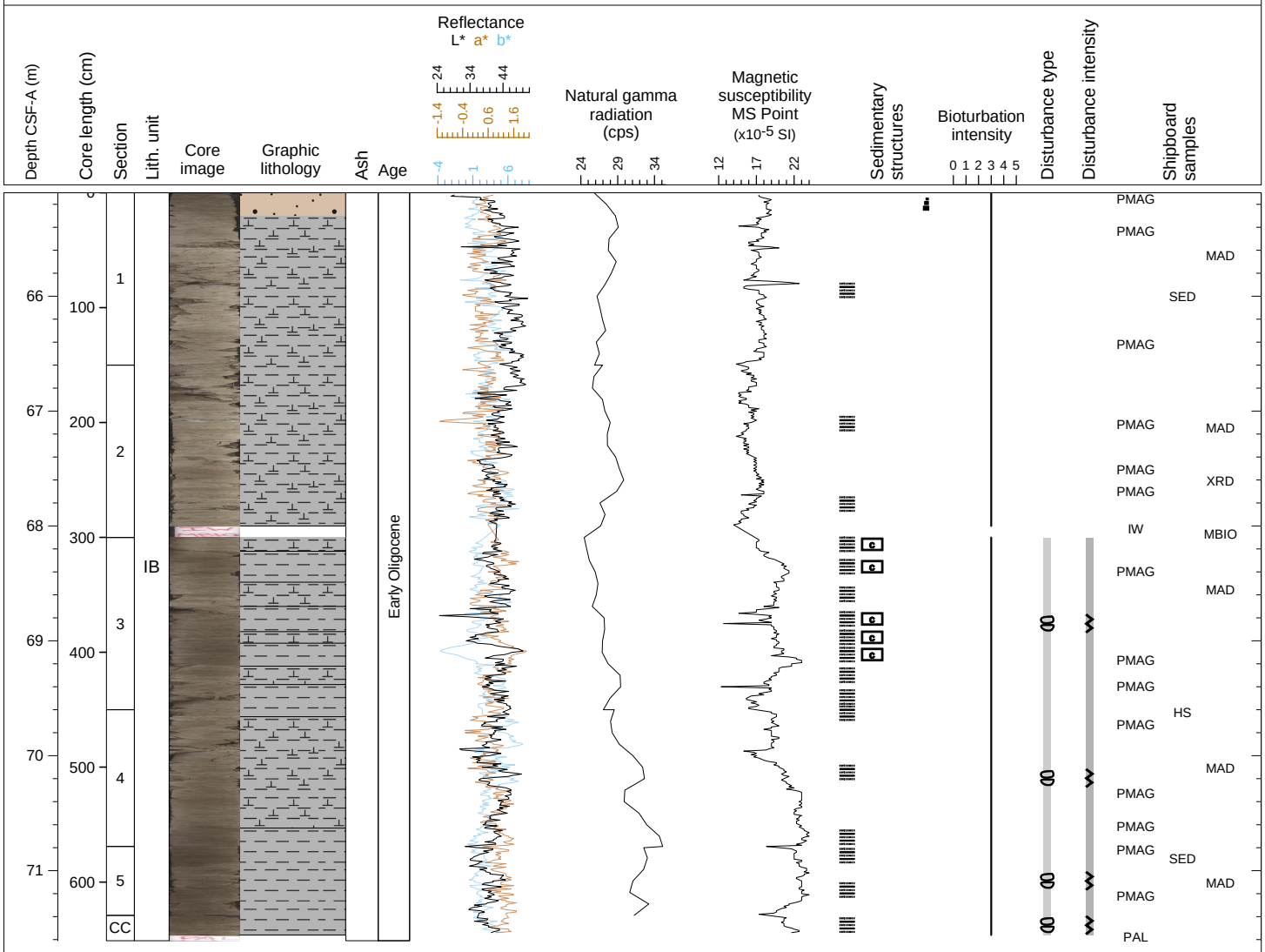
Hole 349-U1435A Core 7R, Interval 55.4-59.6 m (CSF-A)

Greenish gray NANNOFOSSIL-RICH CLAY with minor interbedded light greenish gray CLAY in Section 1. There are few sedimentary structures seen in coherent fragments in a core that is largely strongly disturbed by drilling. Trace fossils include Chondrites and Planolites. There is minor pyrite.



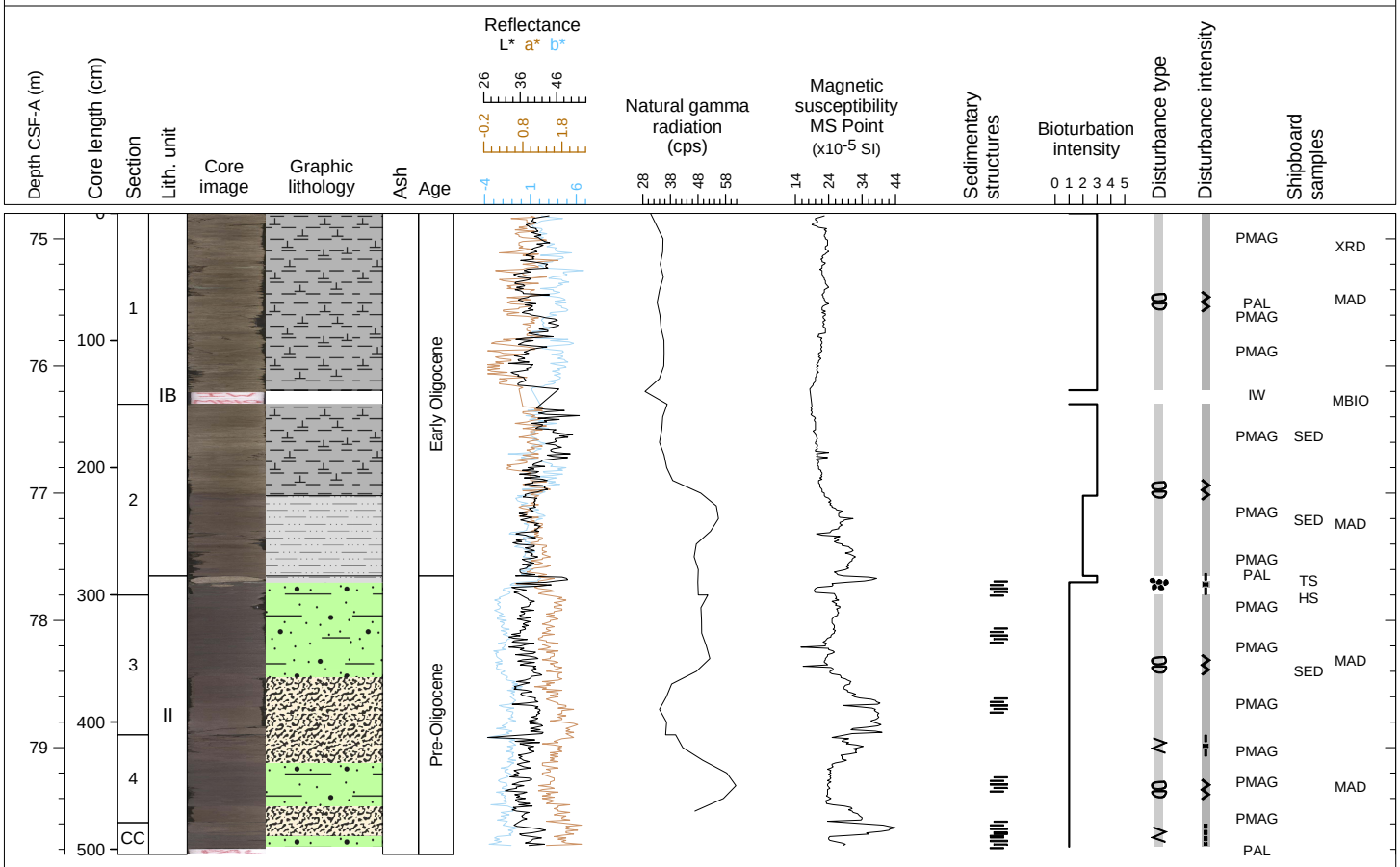
Hole 349-U1435A Core 8R, Interval 65.1-71.61 m (CSF-A)

Greenish gray NANNOFOSSIL-RICH CLAY with interbedded dark grayish brown CLAY with abundant calcite crystals. There are few sedimentary structures seen in coherent fragments in a core that is largely strongly biscuited. Trace fossils include Chondrites and Planolites. There is minor pyrite.



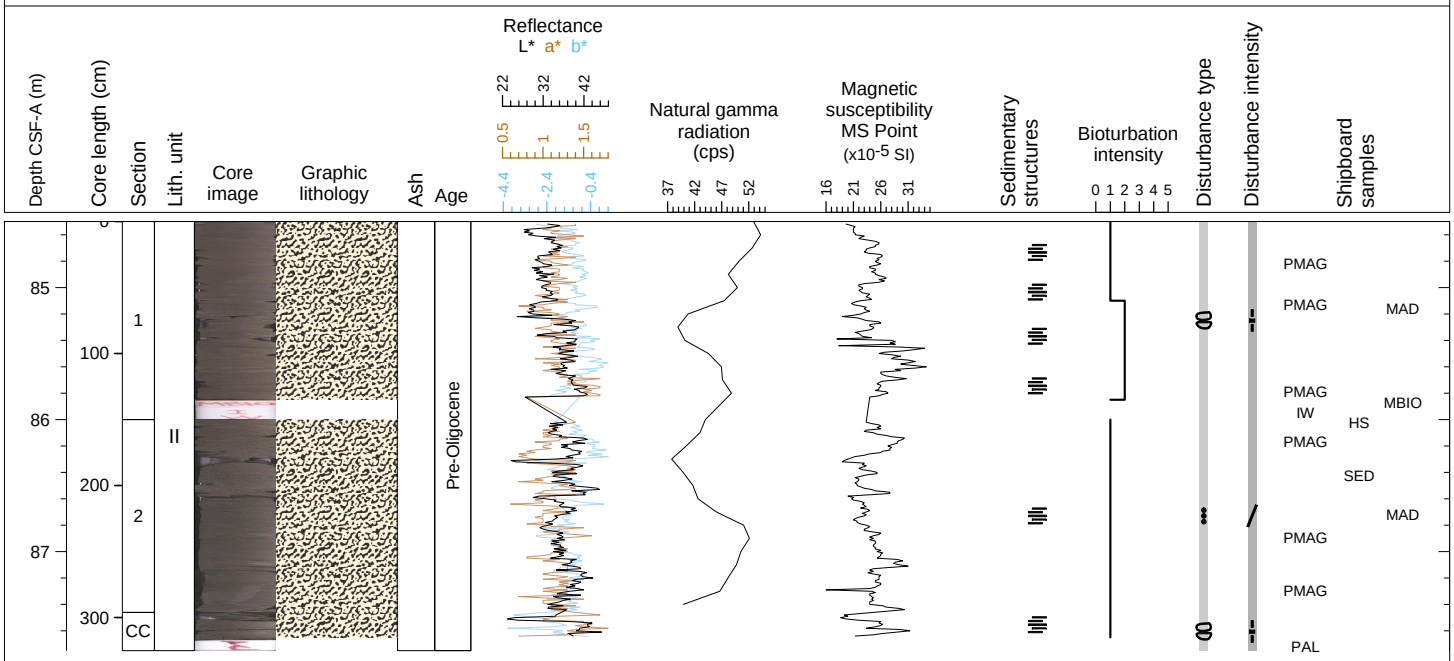
Hole 349-U1435A Core 9R, Interval 74.8-79.84 m (CSF-A)

Greenish gray NANNOFOSSIL-RICH CLAY WITH CALCITE CRYSTALS, dark gray SILTY SANDSTONE and very dark gray CLAYEY SANDSTONE. The NANNOFOSSIL-RICH CLAY WITH CALCITE CRYSTALS extends from the top of the core down to Section 2, 72 cm and is underlain by SILTY CLAY WITH SAND. There is a lithified block at Section 2, 138 cm, with underlying fall-in material. This is underlain by lithified interbedded SILTY SANDSTONE and laminated CLAYEY SANDSTONE that contains sand-sized charcoal fragments. Bioturbation is heavy in the NANNOFOSSIL-RICH CLAY WITH CALCITE CRYSTALS but slight in the SILTY SANDSTONE and CLAYEY SANDSTONE. There is drilling disturbance throughout the core.



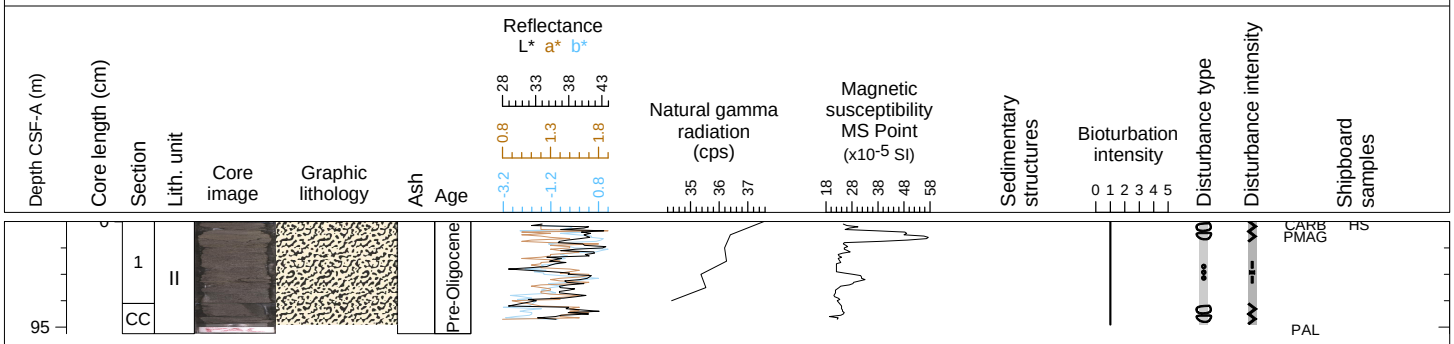
Hole 349-U1435A Core 10R, Interval 84.5-87.75 m (CSF-A)

Dark gray SILTY SANDSTONE and laminated CLAYEY SANDSTONE that contains sand-sized charcoal fragments. Bioturbation is slight to moderate in the SILTY SANDSTONE. There is drilling disturbance throughout the core.



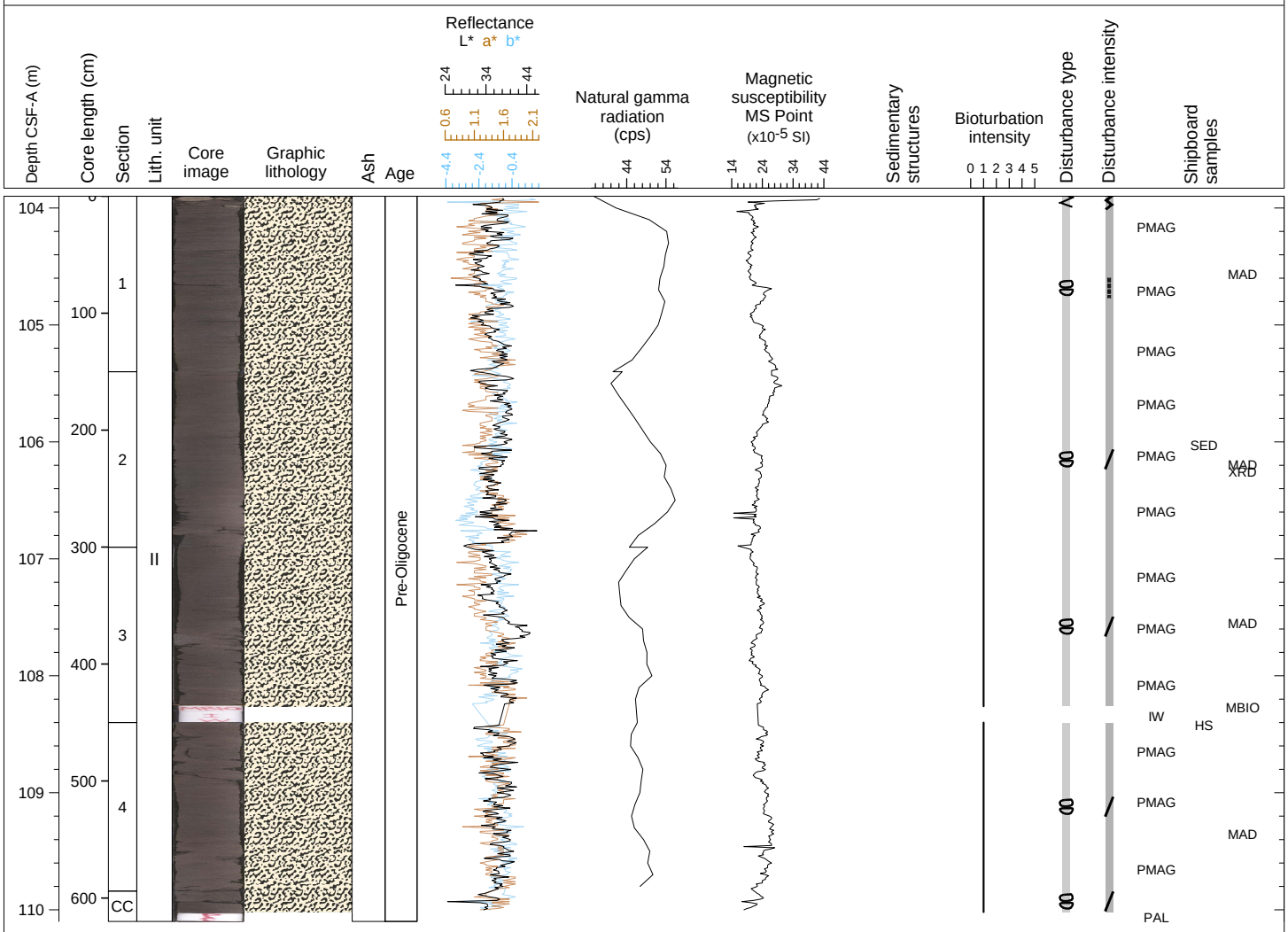
Hole 349-U1435A Core 11R, Interval 94.2-95.05 m (CSF-A)

Dark gray SILTY SANDSTONE that contains sand-sized charcoal fragments. Bioturbation is slight to moderate. There is drilling disturbance throughout the core.



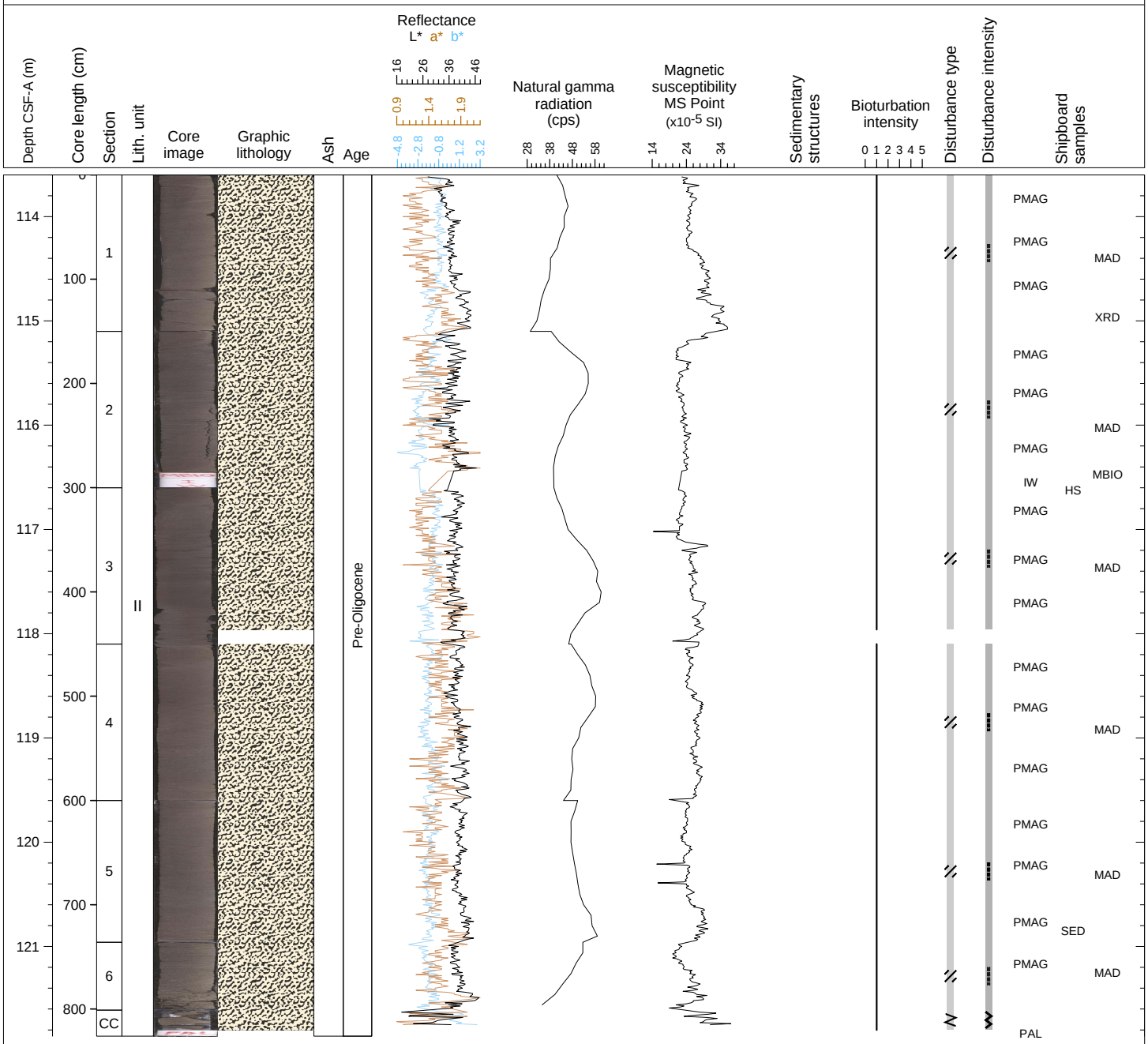
Hole 349-U1435A Core 12R, Interval 103.9-110.1 m (CSF-A)

Sediment is almost exclusively dark gray SILTY SANDSTONE with few discernable sedimentary structures in a massive, homogenous thick bedded sequence. Core is affected by moderate biscuiting. Bioturbation is only slight.



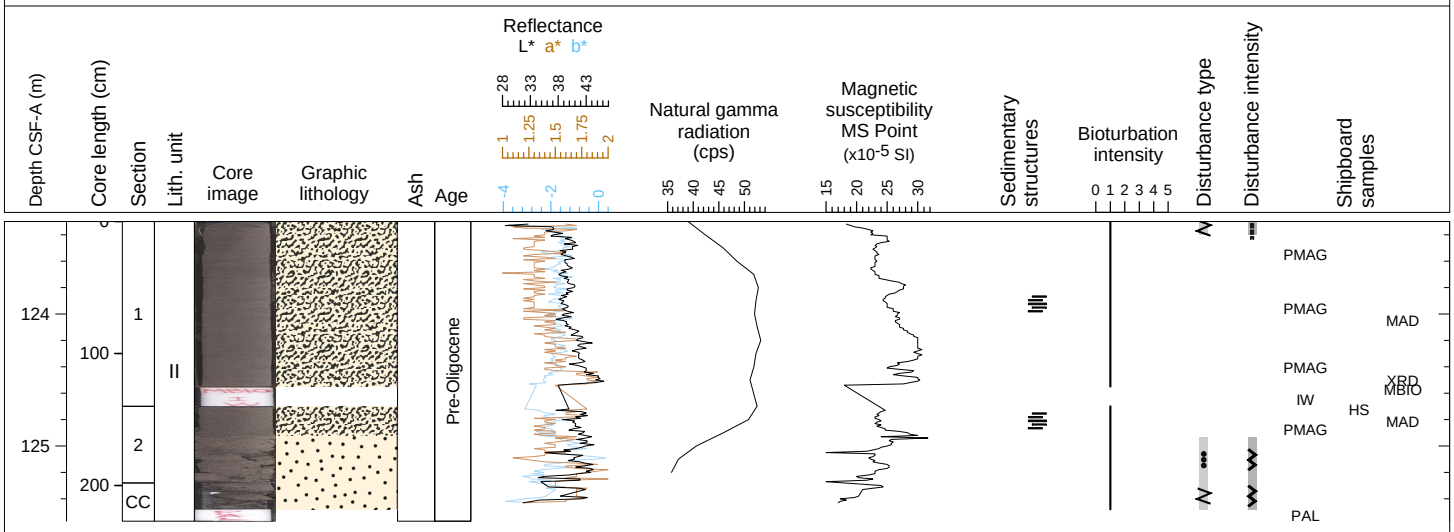
Hole 349-U1435A Core 13R, Interval 113.6-121.86 m (CSF-A)

Dark gray SILTY SANDSTONE interbedded with minor thinly bedded CLAYSTONE. Charcoal fragments, less than 1 cm in size, occur throughout the core. The SILTY SANDSTONE contains quartz and feldspar and small carbonate grains. Bioturbation and drilling disturbance are weak throughout.



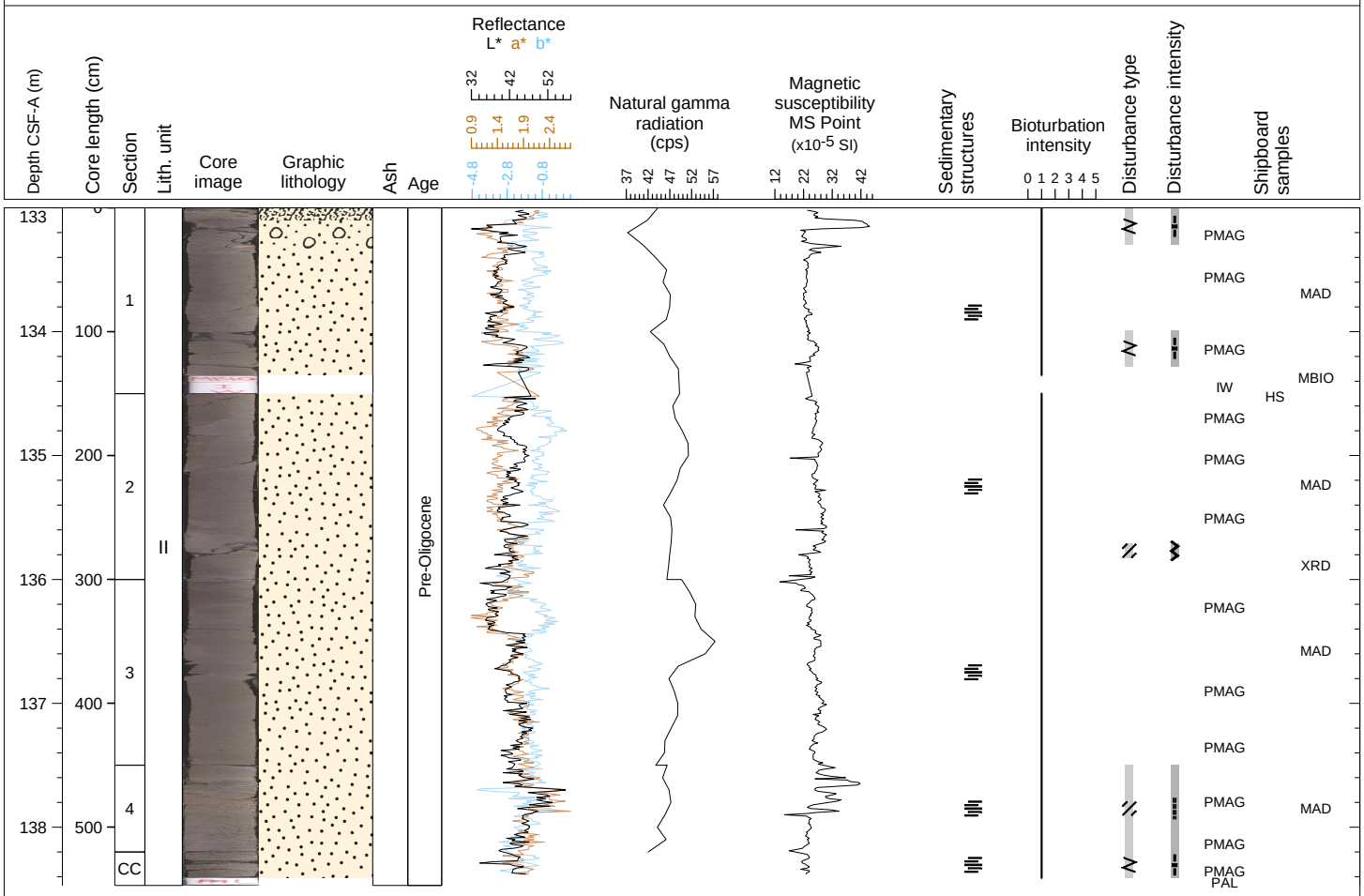
Hole 349-U1435A Core 14R, Interval 123.3-125.57 m (CSF-A)

Dark gray SILTY SANDSTONE and gray medium-grained SANDSTONE. Parallel lamination and small cross laminations occur in SILTY SANDSTONE. Small black charcoal particles are abundant through the core. The SANDSTONE consist mainly quartz, feldspar, volcanic glass, charcoal detritus, and calcite grains. Bioturbation is weak throughout.



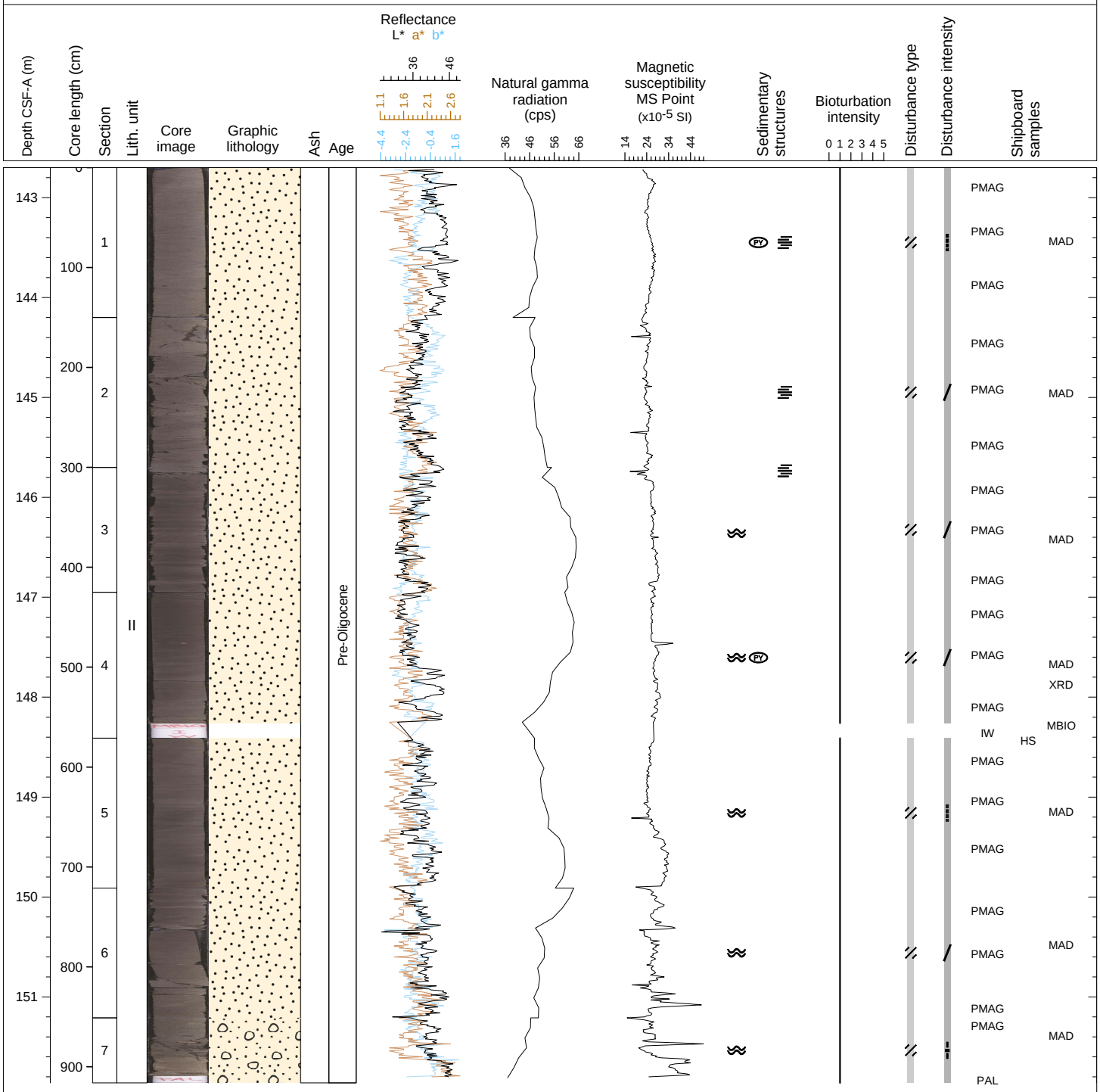
Hole 349-U1435A Core 15R, Interval 133.0-138.47 m (CSF-A)

Dark gray SILTY SANDSTONE and medium-grained SANDSTONE. Lamination and small cross laminations occur in the SILTY SANDSTONE. A layer of PEBBLY SANDSTONE occurs in the upper part of Section 1. Pebbles are rounded, 2-8 cm in size, yellowish gray and dark gray colors. Millimeter-scale shell fragments are present in SANDSTONE in Section 4. Small black charcoal particles are abundant through the core. Bioturbation is weak throughout.



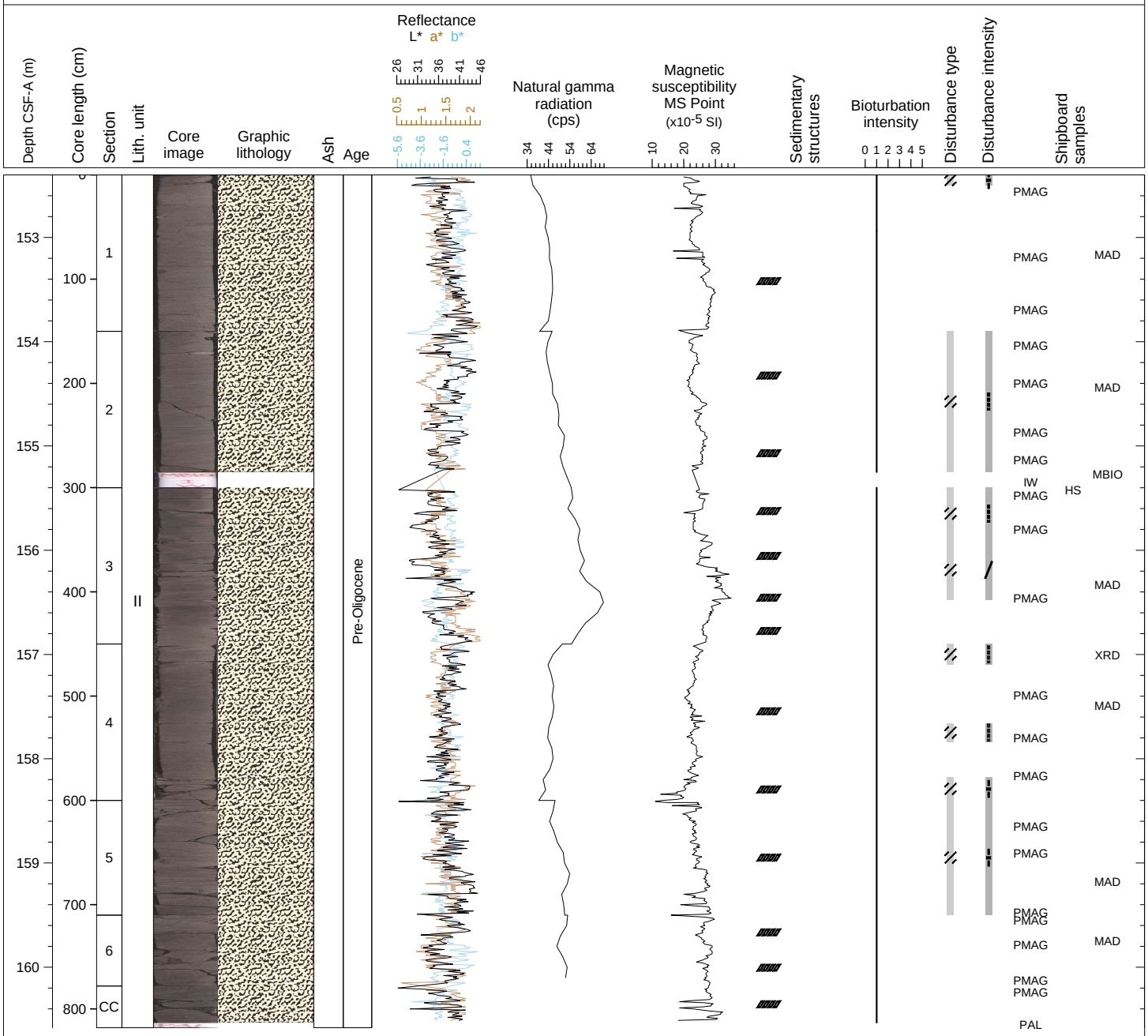
Hole 349-U1435A Core 16R, Interval 142.7-151.86 m (CSF-A)

Dark gray SILTY SANDSTONE and fine-grained SANDSTONE. A layer of PEBBLY SANDSTONE occurs in the lower part of Section 7. Millimeter-scale shell fragments are present in SANDSTONE of Section 4. Millimeter-scale pyrite minerals are present in Sections 1 and 3. Rare, small black charcoal particles occur in Sections 1 and 2. Bioturbation and drilling disturbance are weak throughout.



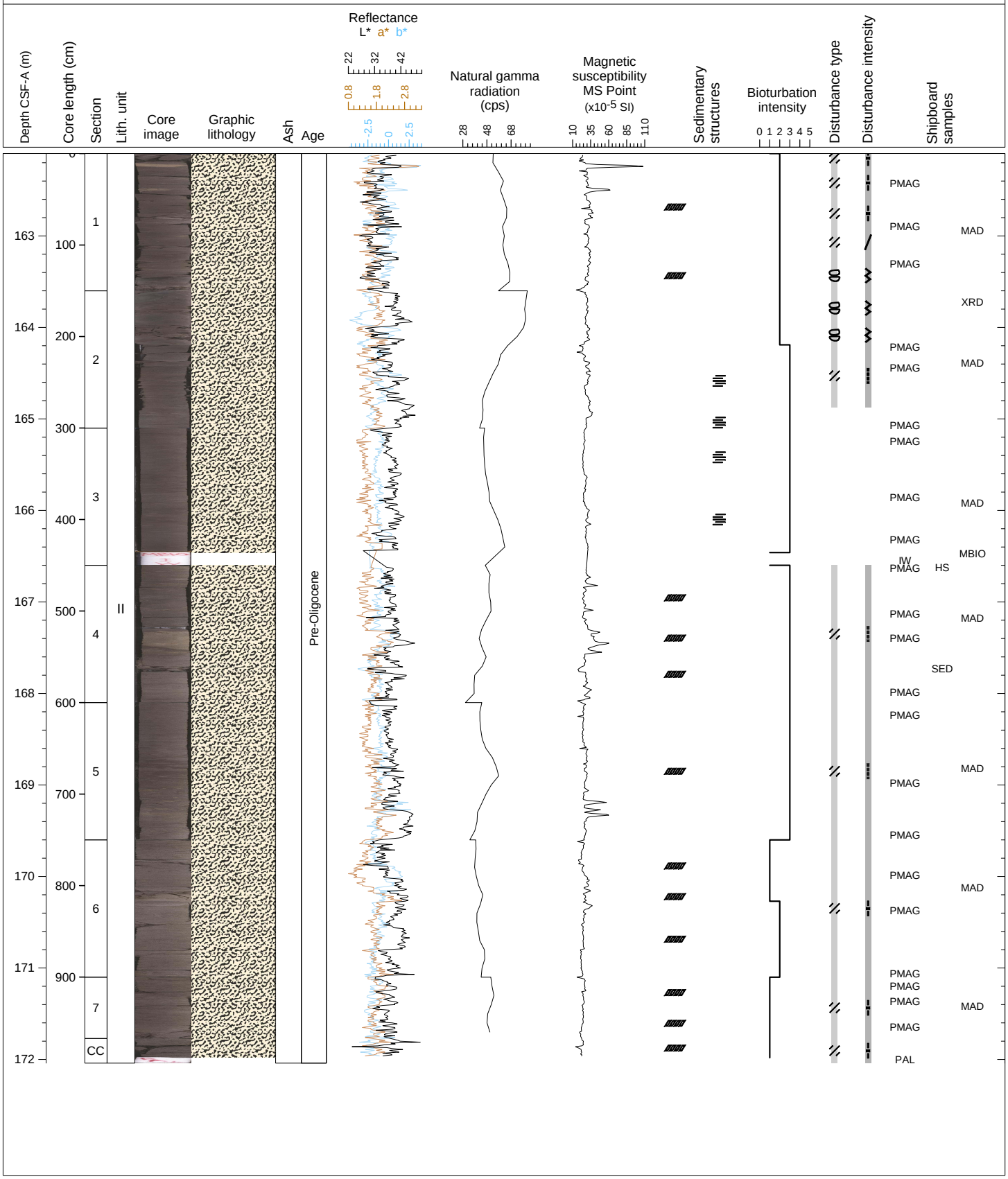
Hole 349-U1435A Core 17R, Interval 152.4-160.58 m (CSF-A)

Dark gray SILTY SANDSTONE with lamination defined by black wood fragments. There are minor changes in grain size but otherwise the sediment is homogenous. There are shell fragments throughout and one bivalve in Section 4, 93 cm. Bioturbation is slight.



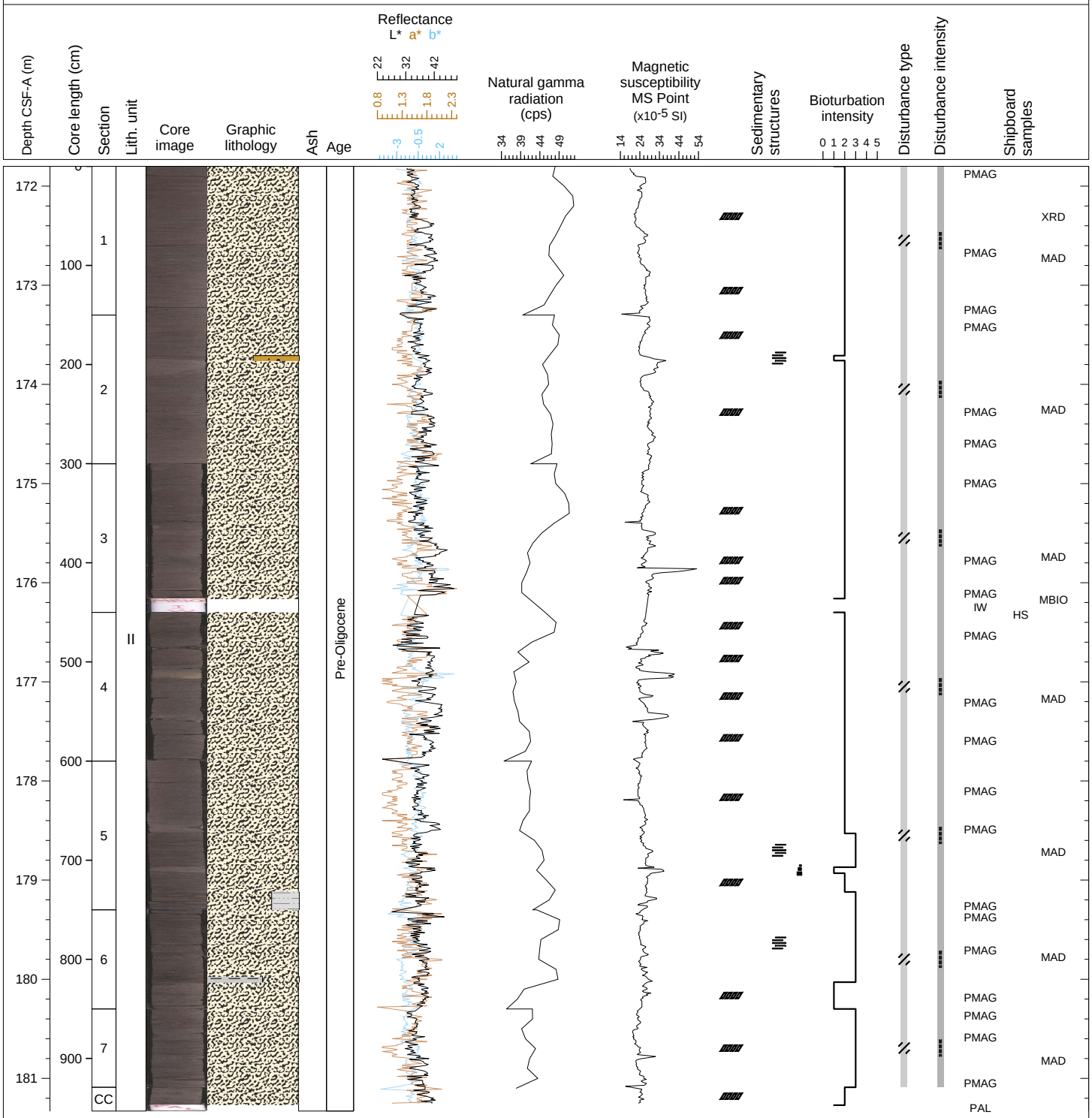
Hole 349-U1435A Core 18R, Interval 162.1-172.04 m (CSF-A)

Dark gray SILTY SANDSTONE with lamination defined by black wood fragments. There are minor changes in grain size but otherwise the sediment is homogenous. There are shell fragments throughout. Bioturbation is heavy.



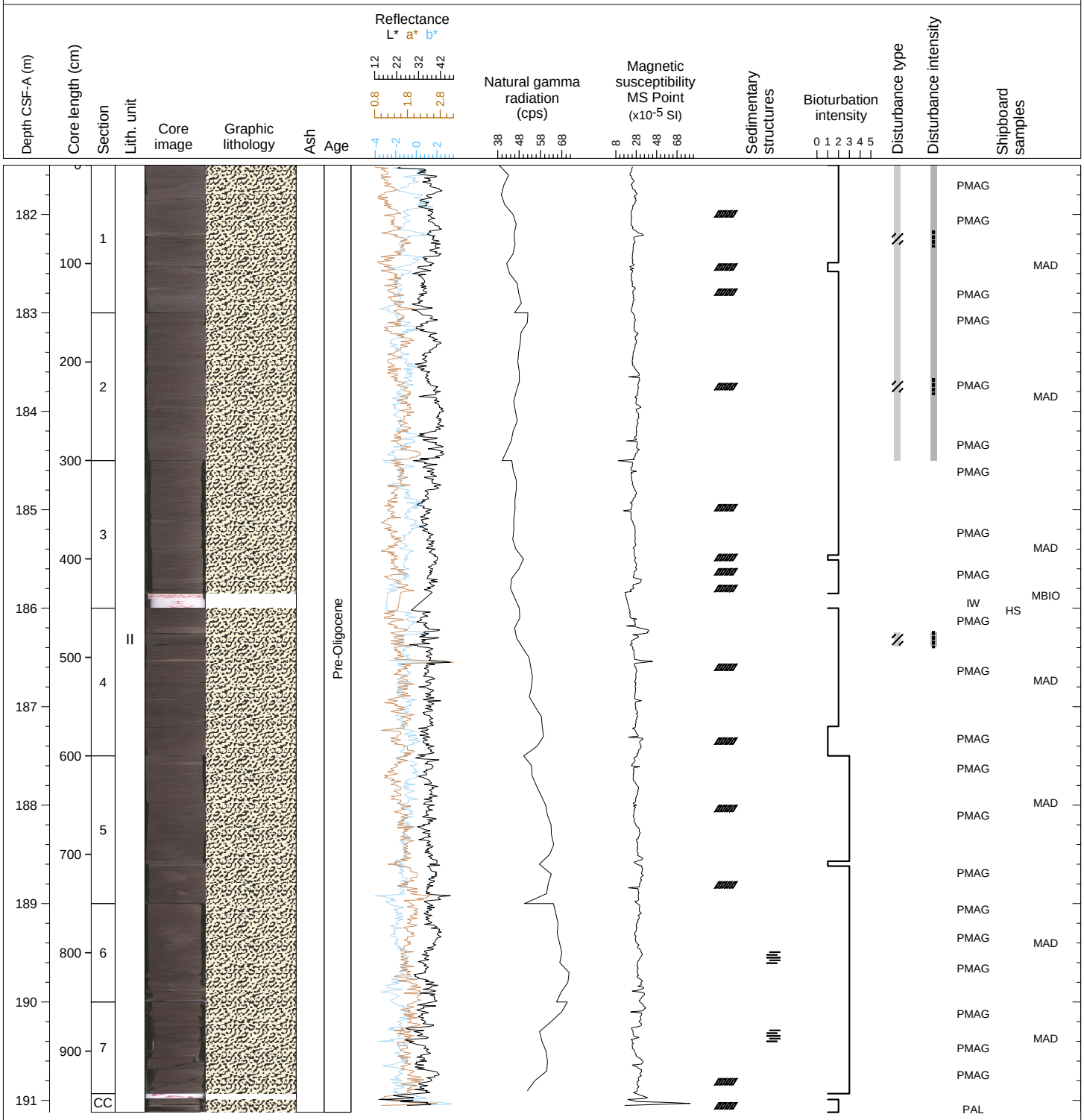
Hole 349-U1435A Core 19R, Interval 171.8-181.33 m (CSF-A)

Dark gray SILTY SANDSTONE with lamination defined by black wood fragments in some places. The sediment is mostly homogenous but there are large-scale graded sequences in Section 5. Minor intervals with CLAYSTONE are found occasionally, <10 cm thick, with interbedded SILTY SANDSTONE preferentially concentrated into large burrows (Thalassinoides). There are shell fragments throughout. Bioturbation is heavy and is of typical shallow marine type with large horizontal and vertical burrows.



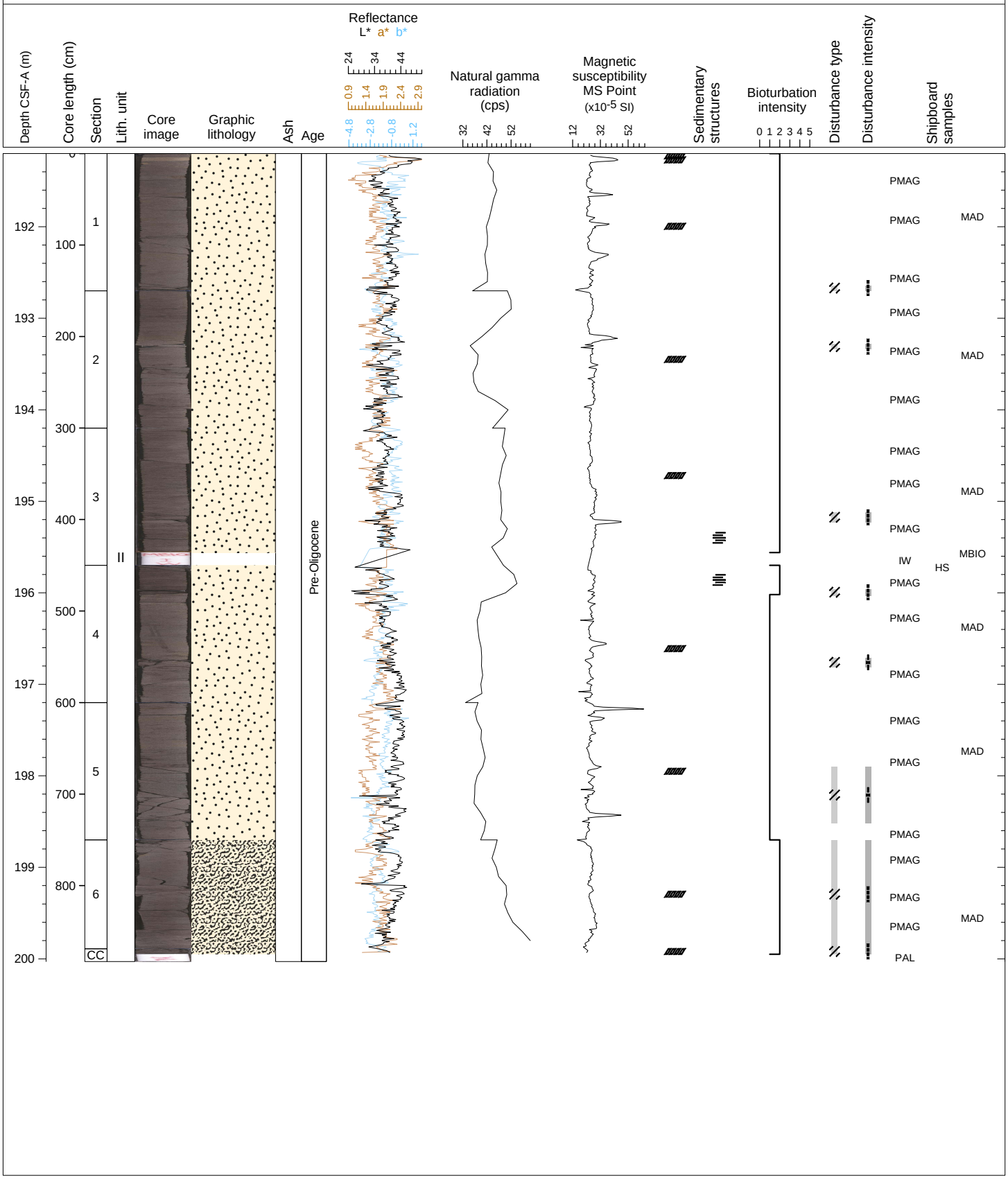
Hole 349-U1435A Core 20R, Interval 181.5-191.12 m (CSF-A)

Dark gray SILTY SANDSTONE with lamination defined by black wood fragments in some places. The sediment is mostly homogenous but there are intervals of darker-colored, slightly finer-grained SILTY SANDSTONE with less woody fragments in Sections 4, 6, 7 and CC. Bioturbation is moderate to heavy and is of typical shallow marine type with large horizontal and vertical burrows (Thalassinoides). There are shell fragments throughout and a bivalve shell in the CC.



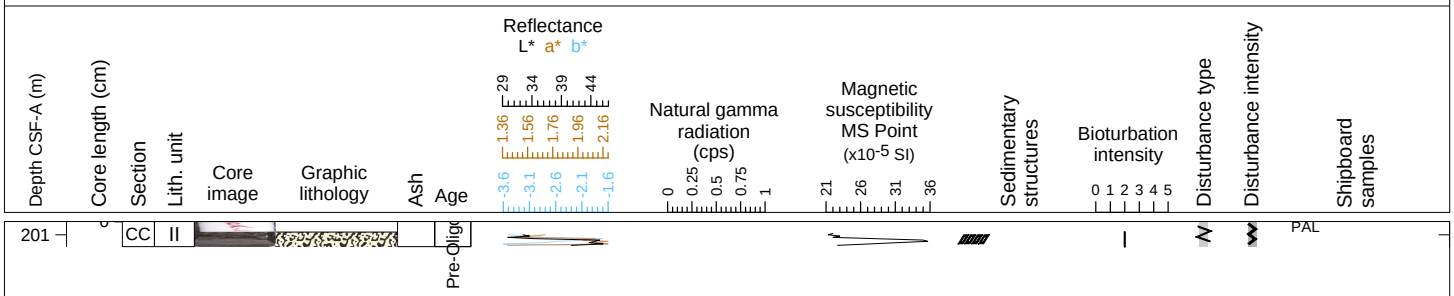
Hole 349-U1435A Core 21R, Interval 191.2-200.03 m (CSF-A)

Dark gray SANDSTONE and SILTY SANDSTONE with lamination defined by black wood and small shell fragments in some places. The sediment is mostly homogenous but there are intervals of darker-colored, slightly finer-grained SANDSTONE with less woody fragments in Sections 2 and 3. Small shell fragments occur at some intervals in Sections 4 and 5. Bioturbation is generally moderate and is of typical shallow marine type with large horizontal and vertical burrows (Thalassinoides), with a long one (up to 30 cm) in Section 4.



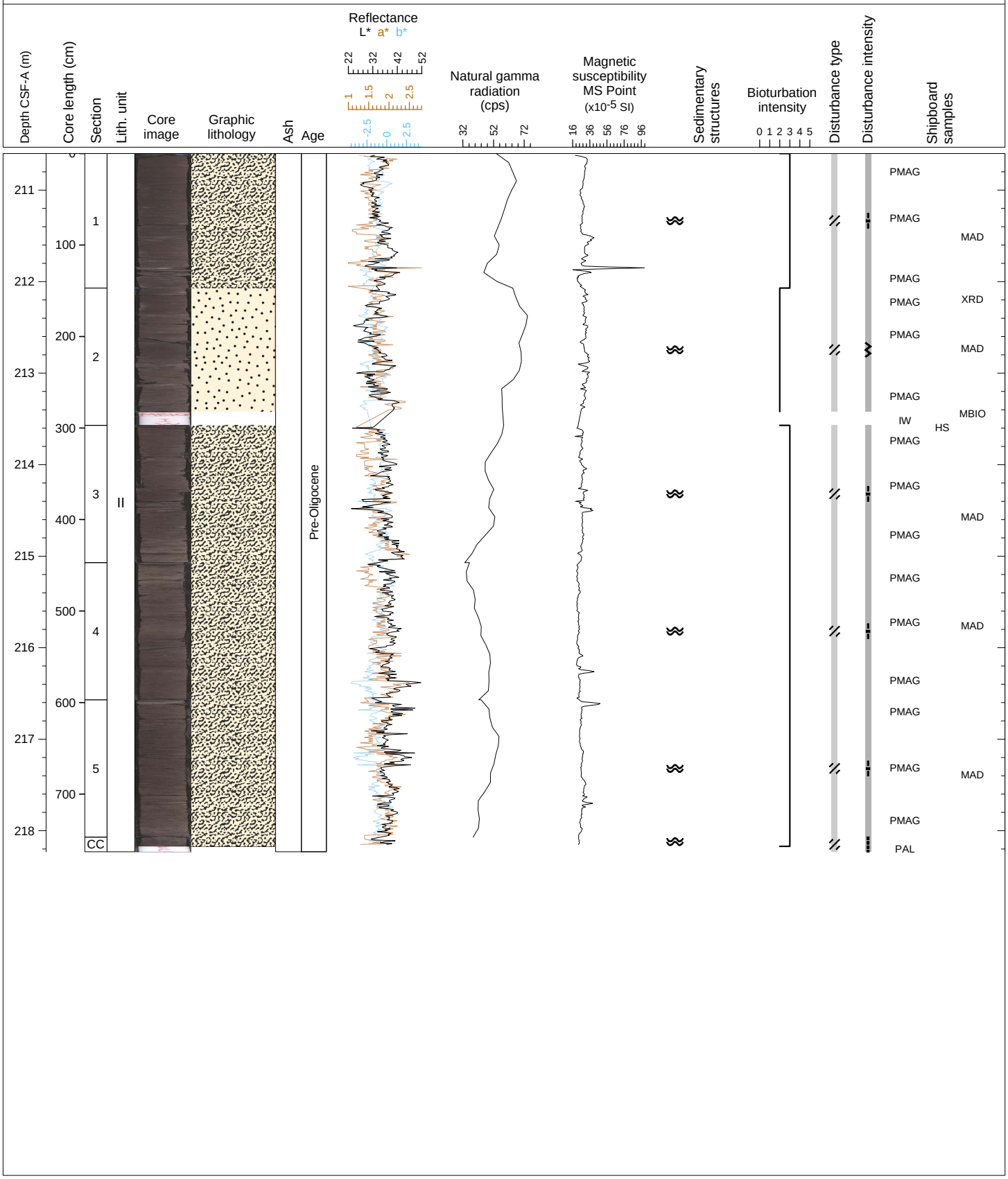
Hole 349-U1435A Core 22R, Interval 200.9-201.09 m (CSF-A)

Dark gray SILTY SANDSTONE with lamination. Small shell fragments occur in the lower part of the CC. Bioturbation is moderate to high.



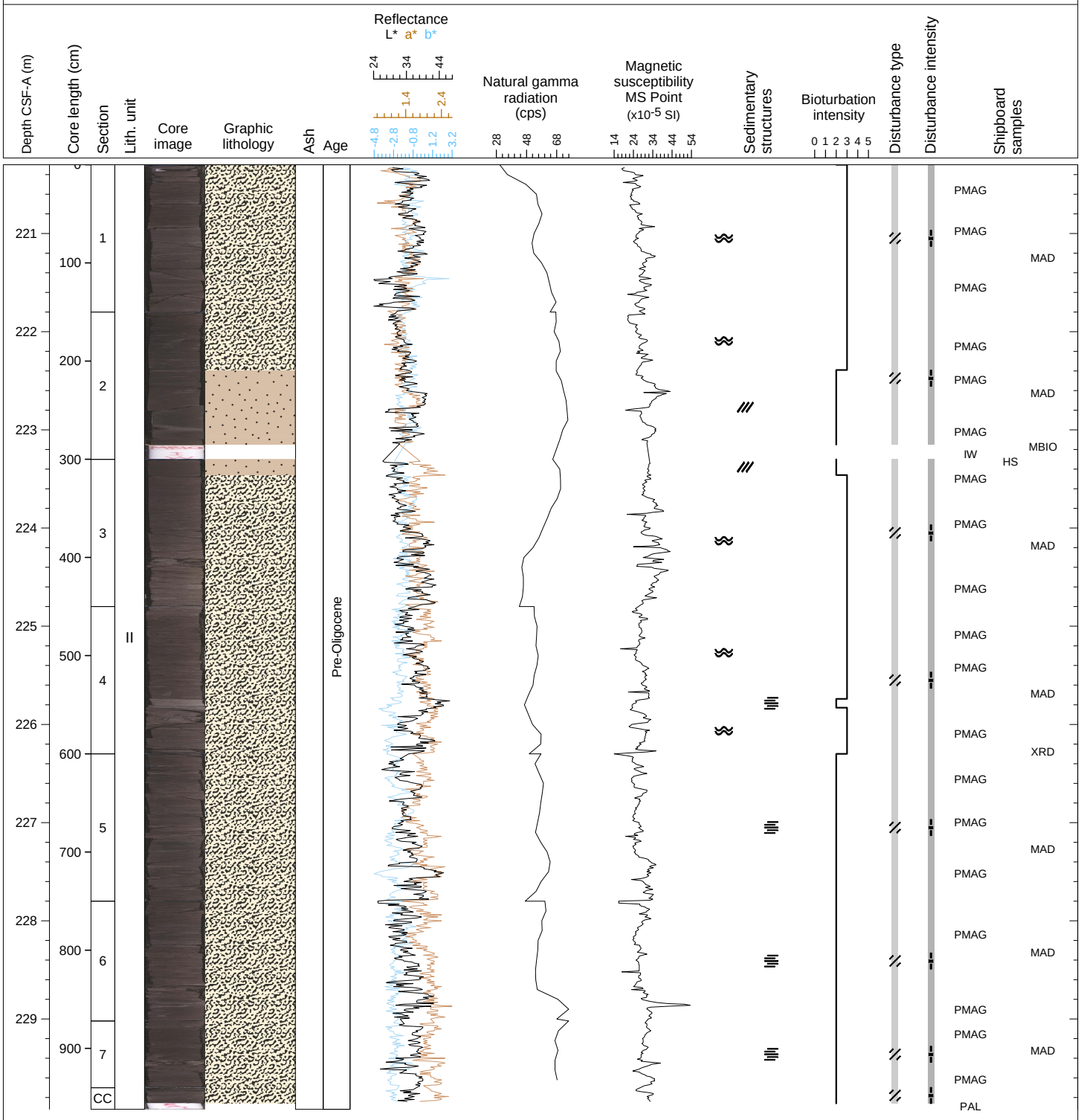
Hole 349-U1435A Core 23R, Interval 210.6-218.23 m (CSF-A)

Dark gray SILTY SANDSTONE with lamination and varying grain size. Most sections are medium-grained SILTY SANDSTONE, but Section 2 is fine-grained SANDSTONE. The sediment is mostly homogenous and contains millimeter-scale shell fragments, but these are rare in Section 2. Bioturbation is generally moderate to high and is of typical shallow marine type with large horizontal and vertical burrows.



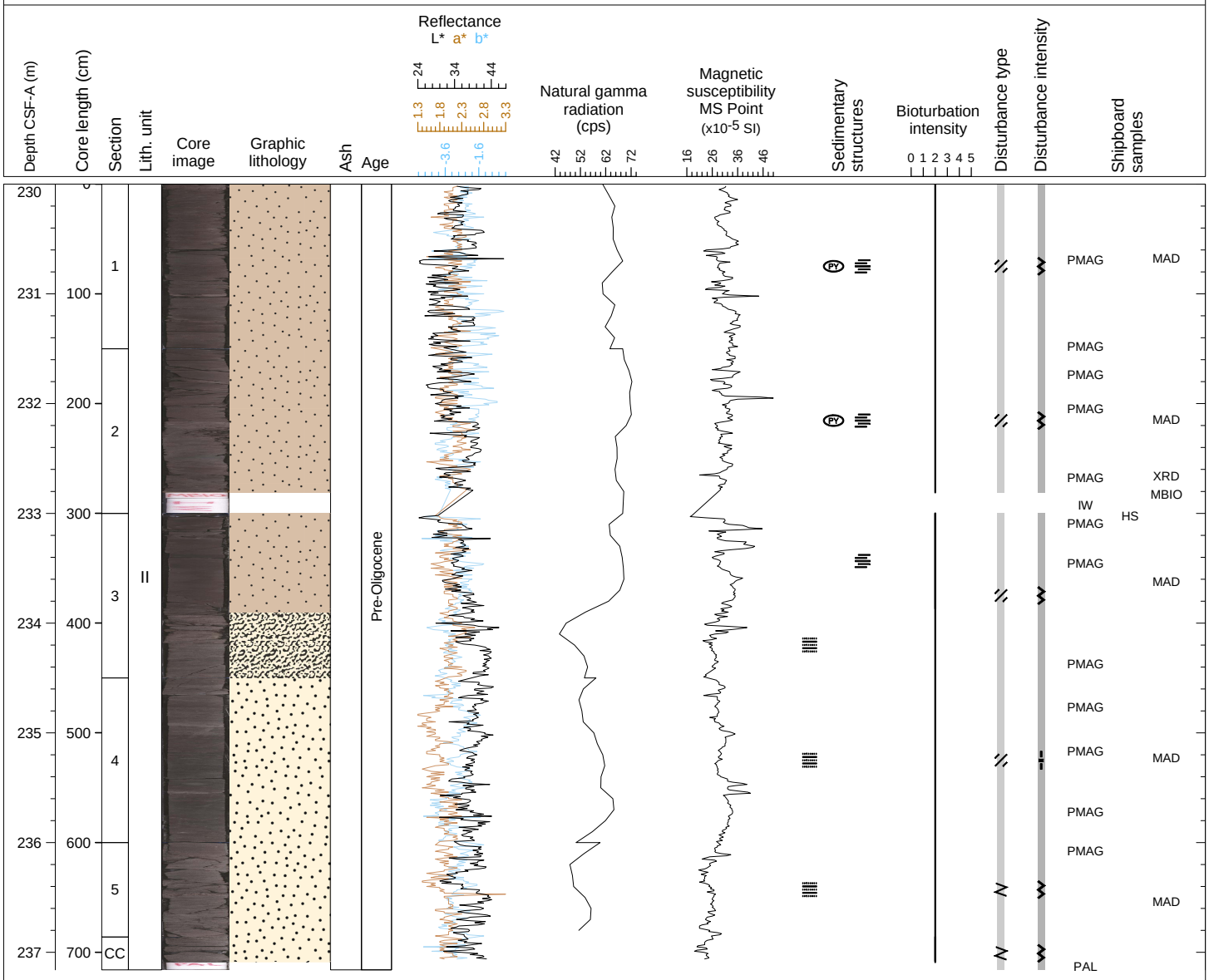
Hole 349-U1435A Core 24R, Interval 220.3-229.92 m (CSF-A)

Dark gray SILTY SANDSTONE and SILTSTONE with wavy lamination in SILTY SANDSTONE. Many shell fragments are seen in SILTY SANDSTONE and less in SILTSTONE. Bioturbation is generally moderate to strong and is of typical shallow marine type with large horizontal and vertical burrows. A few millimeter-scale black spots occur through the core.



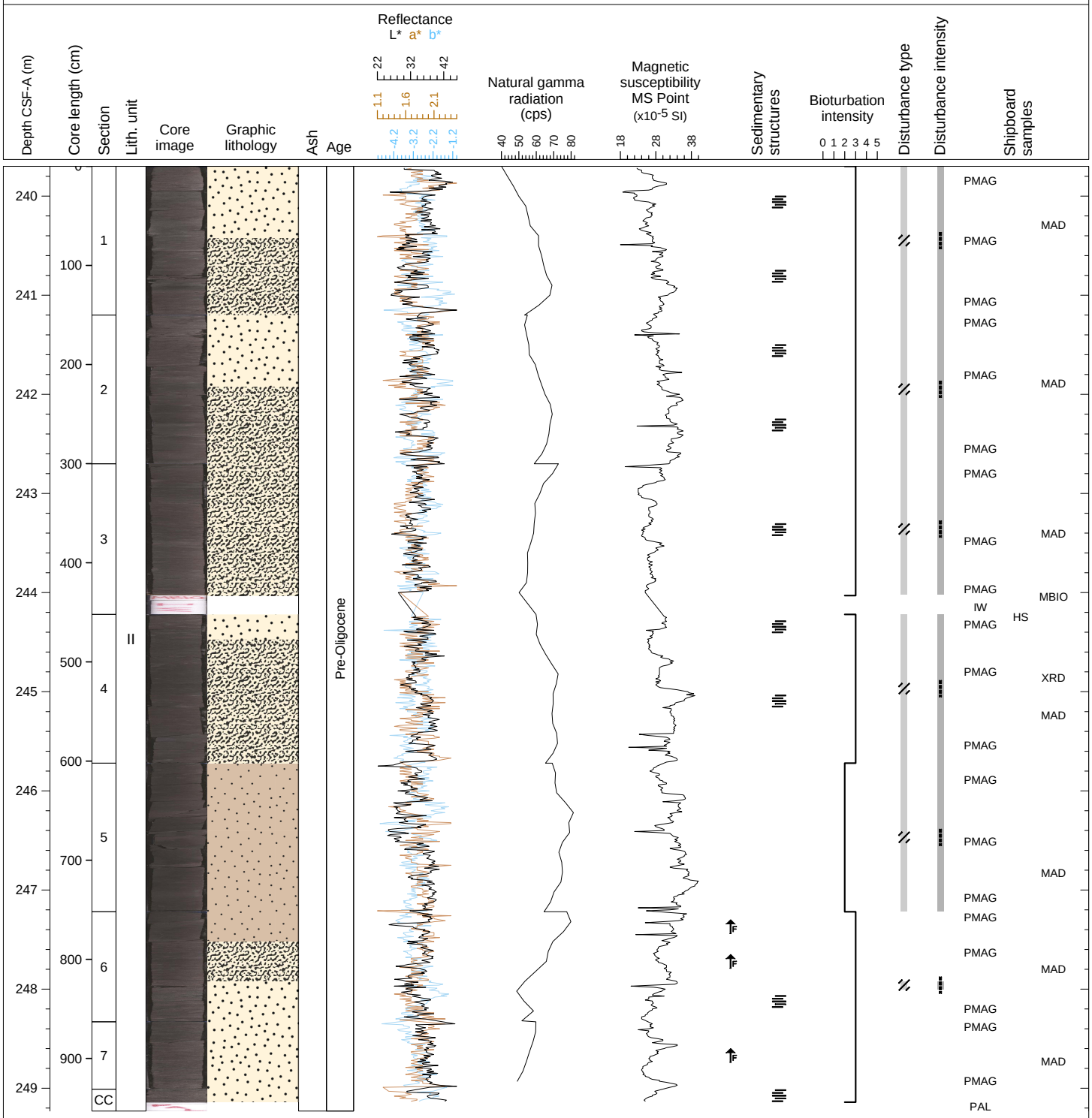
Hole 349-U1435A Core 25R, Interval 230.0-237.16 m (CSF-A)

Dark gray SANDSTONE, SILTY SANDSTONE and SILTSTONE with wavy laminations in SANDSTONE. Many shell fragments are seen in SANDSTONE and less in SILTSTONE. Bioturbation is generally heavy with large horizontal and vertical burrows typical of a shallow-water environment. The dark gray color may result from a high organic content.



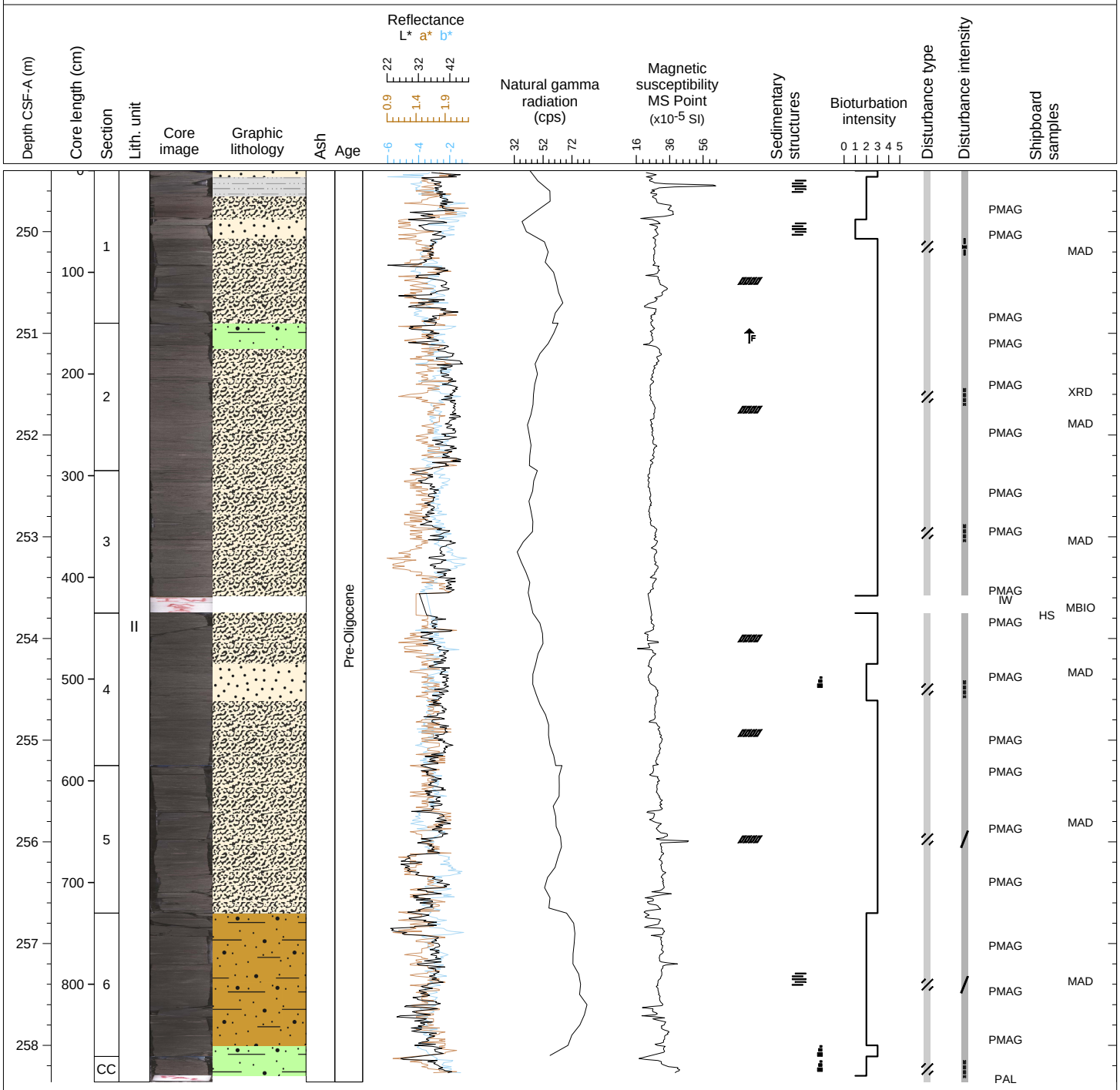
Hole 349-U1435A Core 26R, Interval 239.7-249.23 m (CSF-A)

Dark gray SANDSTONE, SILTY SANDSTONE and SILTSTONE. Sequences fining upward from SANDSTONE to SILTSTONE and coarsening upward from SILTSTONE to SANDSTONE are observed through the core with an entire sequence spanning 1-2 sections. Wavy laminations occur in both SANDSTONE and SILTSTONE layers. Shell fragments occur frequently throughout. Bioturbation is generally heavy with large horizontal and vertical burrows typical of a shallow-water environment.



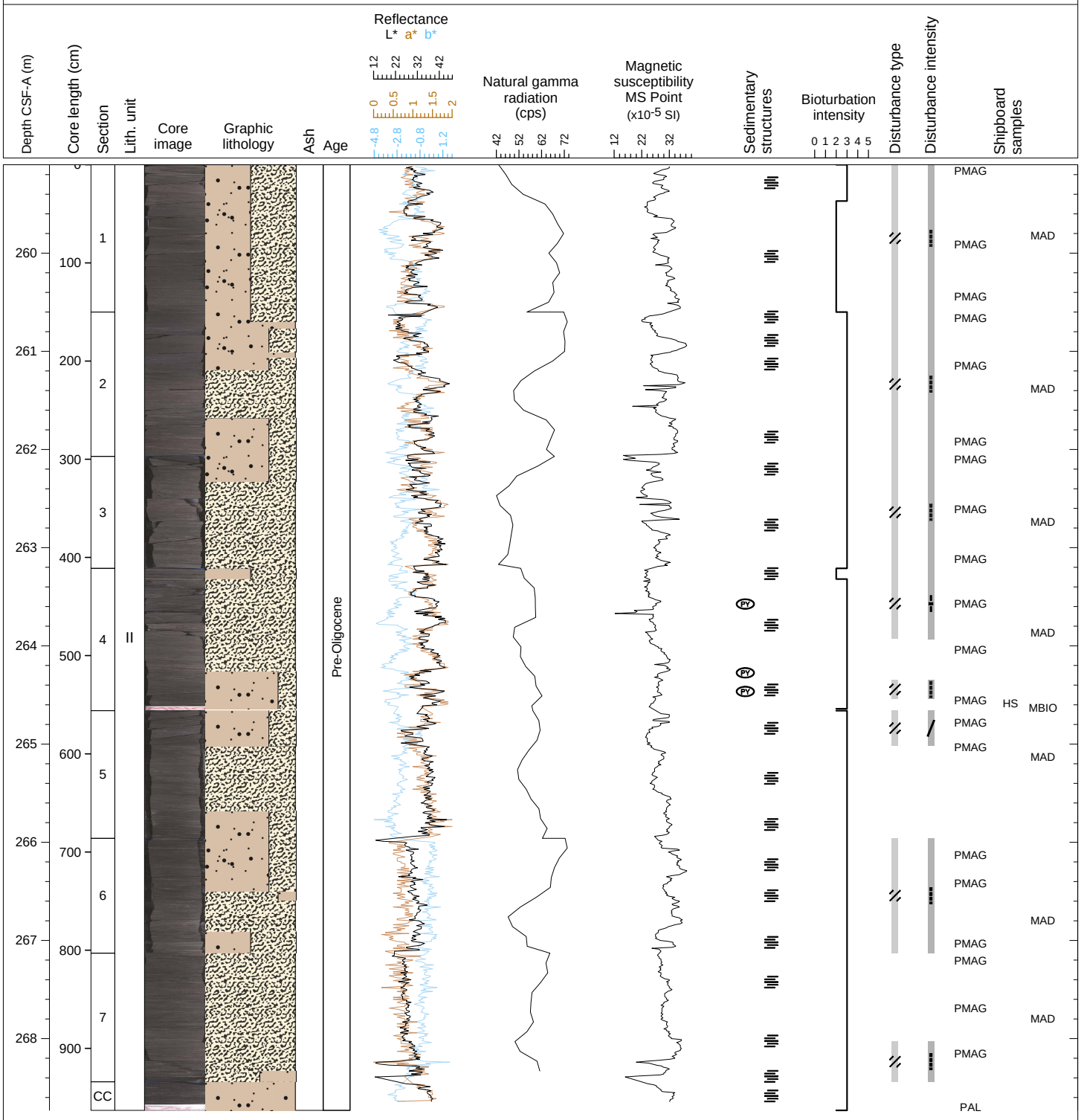
Hole 349-U1435A Core 27R, Interval 249.4-258.36 m (CSF-A)

Core comprises dark gray, thick-bedded SILTY SANDSTONE with minor amounts of interbedded CLAYEY SANDSTONE. The sediment is heavily bioturbated with large burrows, typical of shallow marine conditions. There are a few sharp boundaries but more typically rapid gradations from coarser into finer sediments. There are both fining and coarsening upward sequences. The base of the core, especially Section 6, is distinguished in being very dark gray and formed of CLAYEY SILTSTONE, with faint laminations.



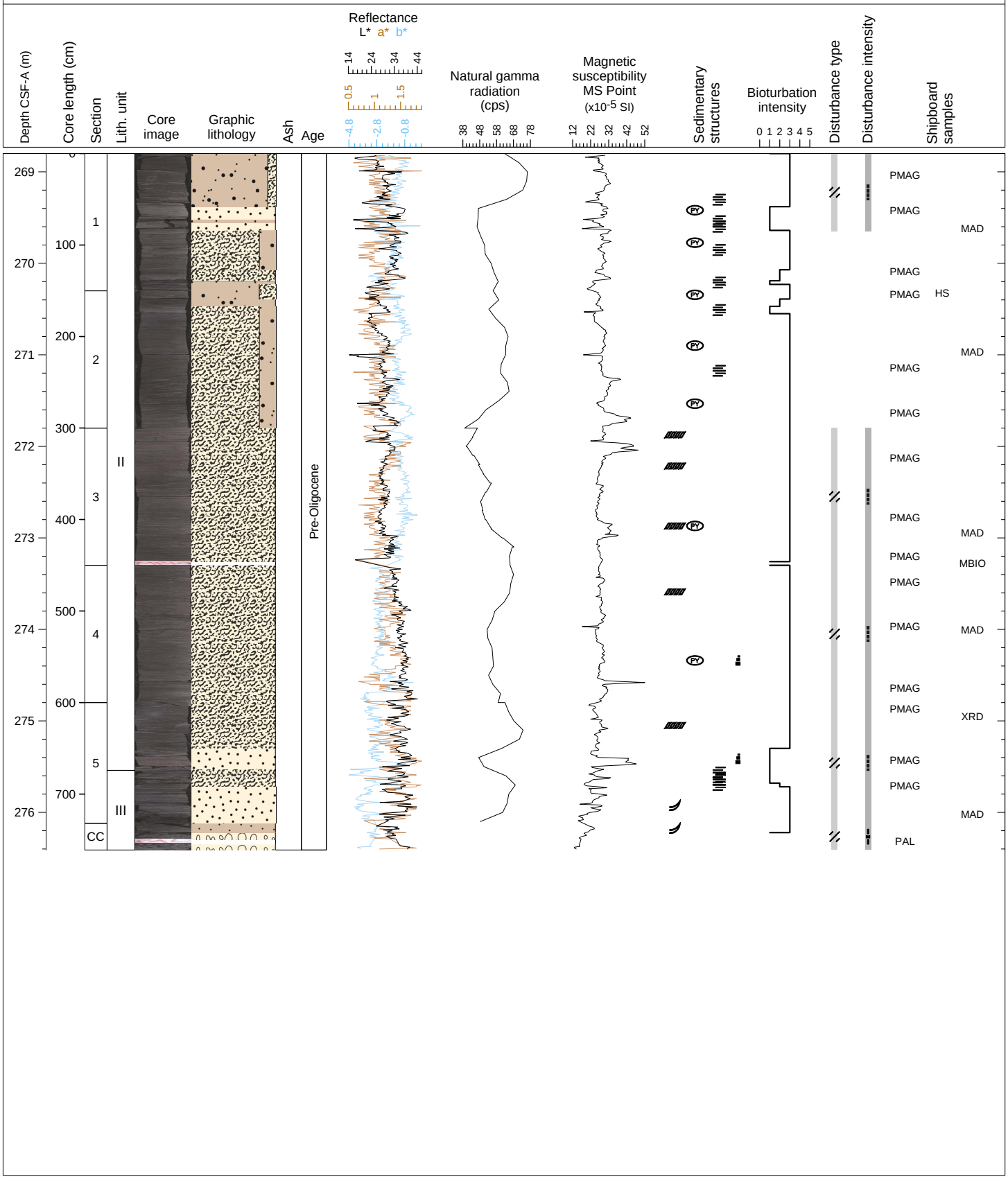
Hole 349-U1435A Core 28R, Interval 259.1-268.73 m (CSF-A)

Dark gray SILTY SANDSTONE interbedded with lesser very dark gray SANDY SILTSTONE. Both lithologies have a faint lamination that is just visible through the heavy bioturbation. There are small wood and shell fragments throughout much of the core. Near complete bivalve shells occur in Sections 2 and 4 and a gastropod shell is present in Section 4. There is a large pyrite-filled burrow in Section 4.



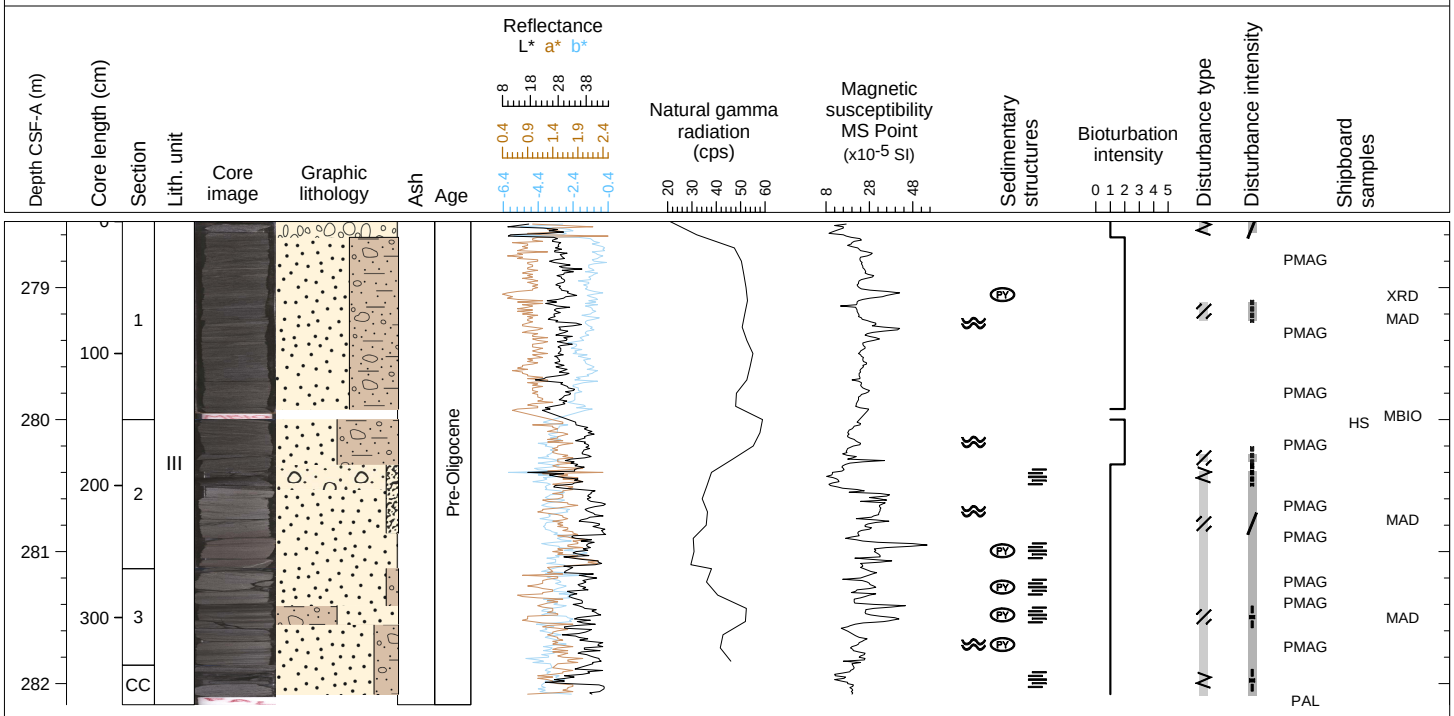
Hole 349-U1435A Core 29R, Interval 268.8-276.41 m (CSF-A)

Dark gray SILTY SANDSTONE interbedded with very dark gray SANDY SILTSTONE and minor CONGLOMERATE. The SILTY SANDSTONE and SANDY SILTSTONE have a faint lamination that is visible through the heavy bioturbation in most sections, however, lamination is well developed in the lower part of Section 5 and the top of the CC. CONGLOMERATE occurs in the lower part of the CC. Pyrite is scattered throughout the core.



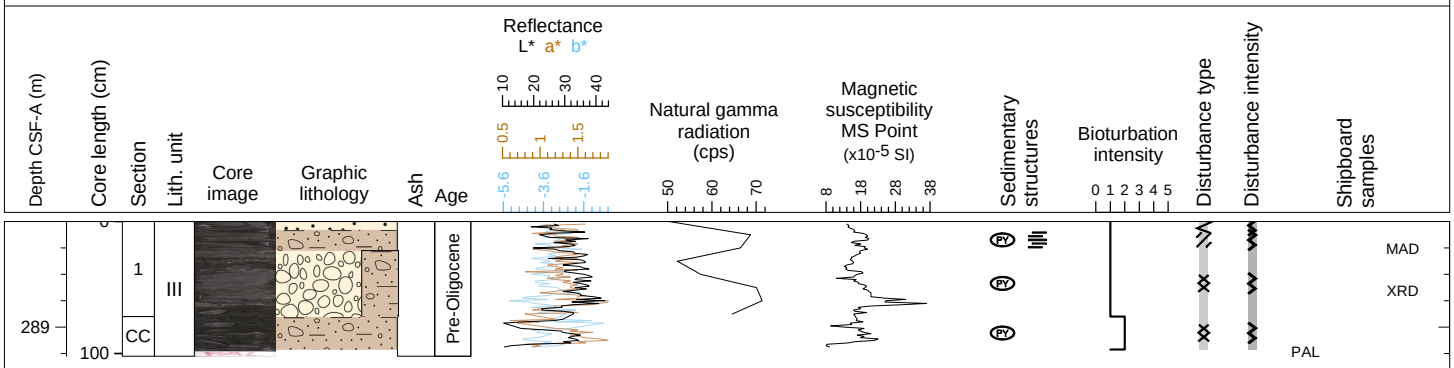
Hole 349-U1435A Core 30R, Interval 278.5-282.16 m (CSF-A)

Gray SANDSTONE interbedded with black SILTY MUDSTONE and minor CONGLOMERATE. The SANDSTONE and SILTY MUDSTONE have a faint wavy lamination that is visible through the moderate to heavy bioturbation in most sections, however, lamination is well developed in Section 3. CONGLOMERATE occurs at the top of Section 1 and in Section 2. Pyrite is scattered throughout the core.



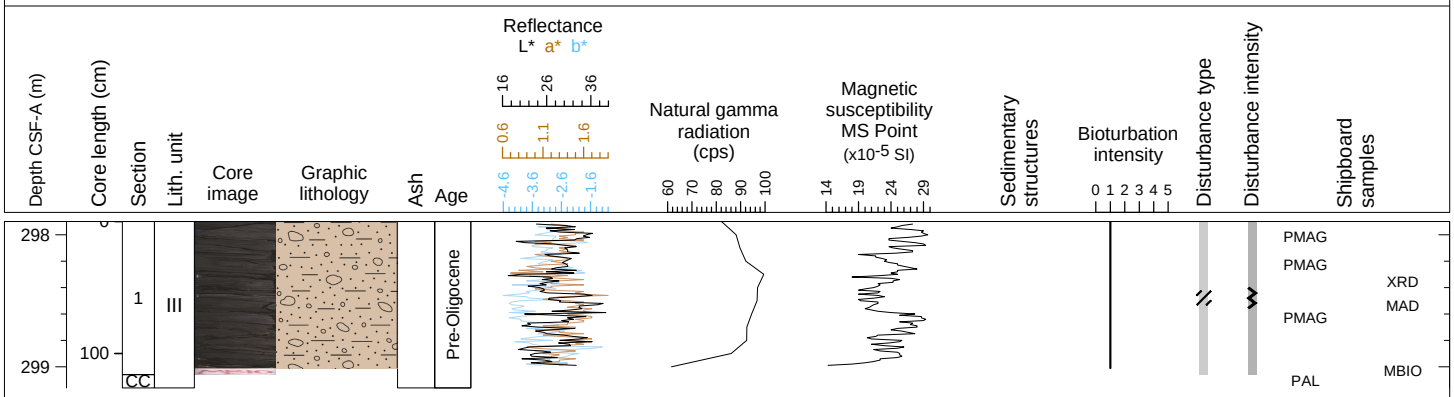
Hole 349-U1435A Core 31R, Interval 288.2-289.22 m (CSF-A)

Black SILTY MUDSTONE, dark gray CONGLOMERATE, and minor dark gray SANDSTONE. The SILTY MUDSTONE in Section 1 is laminated. All lithologies are highly fragmented due to drilling disturbance. Pyrite is present in the fragmented core.



Hole 349-U1435A Core 32R, Interval 297.9-299.16 m (CSF-A)

Black SILTY MUDSTONE. Drilling disturbance is high throughout.

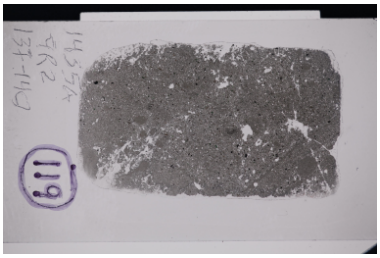


Sample	Top Depth [m]	Bottom Depth [m]	Lithology prefix	Principal lithology	Lithology suffix	Complete lithology name	Rock/domain comment	Total of texture group estimates [%]	Sand texture [%]	Silt texture [%]	Clay texture [%]	Ash [%]	Siliciclastic [%]	Detrital carbonate [%]	Biogenic carbonate [%]	Biogenic silica [%]	Mineral grain roundness	Ash grain roundness	Mafic tephra abundance	Felsic tephra abundance	Lithic grains abundance	Quartz abundance	Calcite, allogenic abundance	Glass abundance	Palagonite abundance	Chlorite abundance	Clay minerals abundance	Feldspar abundance	Mica - biotite, musc abundance	Ferromagnesian - ol, pyx, amph abundance	Heavy minerals abundance	Apatite abundance	Barite abundance	Zircon abundance	Opaques abundance	Oxide abundance	Clay minerals, authigenic abundance	Glauconite abundance	Dolomite, authigenic abundance	Sulfides, authigenic abundance	Pyrite, authigenic abundance	Calcite, authigenic abundance	Calcareous nannofossils abundance	Benthic foraminifers abundance	Planktonic foraminifers abundance	Foraminifers abundance	Shells abundance	Diatoms abundance	Radiolarians abundance	Silicoflagellate, ebridian, actinisicidian abundance	Other microfossils abundance	Calcareous bioclasts (undiff.) abundance	Biosiliceous fossil fragments abundance	Sponge spicule fragments abundance	Organic matter abundance	Wood fragments abundance	Charcoal abundance	Biogenic fragment roundness
349-U1435A-2R-CC-PAL-SED	9.71	9.71	clayey	nannofossil ooze		clayey nannofossil ooze		100	10	20	70		30		65	5								Tr			D							Tr	Tr	D							A			D			R				Tr			
349-U1435A-3R-CC-PAL-SED	19.435	19.435		nannofossil ooze		nannofossil ooze		100	5	40	55		20		75	5											R							Tr		R					A			R			R				Tr			
349-U1435A-3R-CC-PAL-SED	19.44	19.44	sandy	nannofossil ooze		sandy nannofossil ooze		100	20	30	50		20		50	5								Tr			D							D	D	D					A			D			R							
349-U1435A-4R-CC-PAL-SED	26.66	26.66		nannofossil ooze		nannofossil ooze		100	10	40	50		20		75	5											R							Tr		R					A			R			R				Tr			
349-U1435A-5R-1-W 25/25-SED	36.25	36.25	silty	clay		silty clay		100		20	80		80	5	5	10	subrounded					A					D	C						Tr		D					R													
349-U1435A-5R-3-W 23/23-SED	39.01	39.01	silty	clay		silty clay		100		20	80		85	5	5	5	subrounded					A					D	C						Tr		D					R													
349-U1435A-6R-1-A 75/75-SED	46.45	46.45	clayey	limestone	with nannofossils	clayey limestone		100		5	95		25	70	5		subrounded				Tr	R	D				C							Tr		C				D	C													
349-U1435A-6R-1-A 95/95-SED	46.65	46.65		nannofossil ooze		nannofossil ooze		100		10	90		5	10	85		subrounded					Tr	C				R							Tr		R				C	D			R									subrounded
349-U1435A-7R-1-W 140/140-SED	56.8	56.8		clay		clay		100		2	98		100														D							C		D																
349-U1435A-7R-2-W 138/138-SED	58.28	58.28	nannofossil rich	clay		nannofossil rich clay		100		30	70		60	10	30								A				D							C		D				A	A												
349-U1435A-8R-1-A 90/90-SED	66	66	nannofossil rich	claystone	with foraminifers	nannofossil rich claystone with foraminifers		100	5	15	80		62	3	35		subrounded					Tr	C	Tr			D							C		D				C	A			R									angular
349-U1435A-8R-5-A 11/11-SED	70.9	70.9		clay		clay		40		20	20		80	20			angular						A				D							A		D				A	R												
349-U1435A-9R-2-A 25/25-SED	76.55	76.55	nannofossil rich	clay		nannofossil rich clay		100		15	85		35	5	60		angular					C	C				D							R		D				C	A												angular
349-U1435A-9R-2-A 91/91-SED	77.21	77.21		clay		clay		100		10	90		95	5			angular					C	C				D							C		D				C												
349-U1435A-9R-3-A 60/60-SED	78.4	78.4	silty	sand		silty sand		100	60	30	10		95	5			subangular				C	D	R				C		R	C				C		C				R													
349-U1435A-10R-2-A 43/43-SED	86.43	86.43	silty	sand		silty sand		100	50	40	10		95	5			angular		Tr		C	D	R				C	R	R	R				C		C				R							C						
349-U1435A-12R-2-A 63/63-SED	106.03	106.03	silty	sand		silty sand		100	60	30	10	10	85	5			subangular		R		C	D	R	R			D	D	R					D		D		R		R	R							C						
349-U1435A-13R-5-A 125/125-SED	120.85	120.85		silt		silt		100		80	20	10	80	10			subangular		R		C	D	R	R			Tr	D	R					R		Tr		R		R	R												
349-U1435A-18R-4-A 113/113-SED	167.73	167.73		sandstone		sandstone		100	85	10	5		95	5			subrounded				C	D	C				C	R	R	Tr				C		C				C													

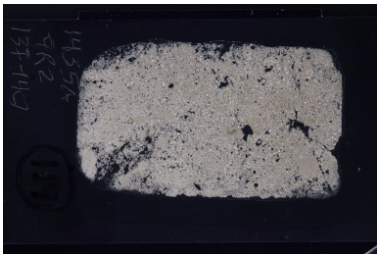
THIN SECTION LABEL ID: **349-U1435A-9R-2-W 137/140-TSB(137-140)-TS119** Thin section no.: 119

Unit/Subunit: II Piece no.: Observer: Tao

Thin section summary: Limestone with clay. Well crystallized calcite is common.



Plane-polarized: 25153531



Cross-polarized: 25153551

SEDIMENT/SEDIMENTARY ROCK

Sample domain name: sediment clasts Domain rel. abundance (%): 100 Observer: Tao

Lithology: limestone with clay

TEXTURE	Percent:	CONSTITUENT	Percent:	GRAIN ROUNDNESS	
Gravel texture	10	Tephra		Mineral grains	subangular
Sand texture	30	Siliciclastics	30	Ash grains	
Silt texture	40	Detrital carbonate	60		
Clay texture	20	Biogenic carbonate	5		
		Biogenic silica	5		