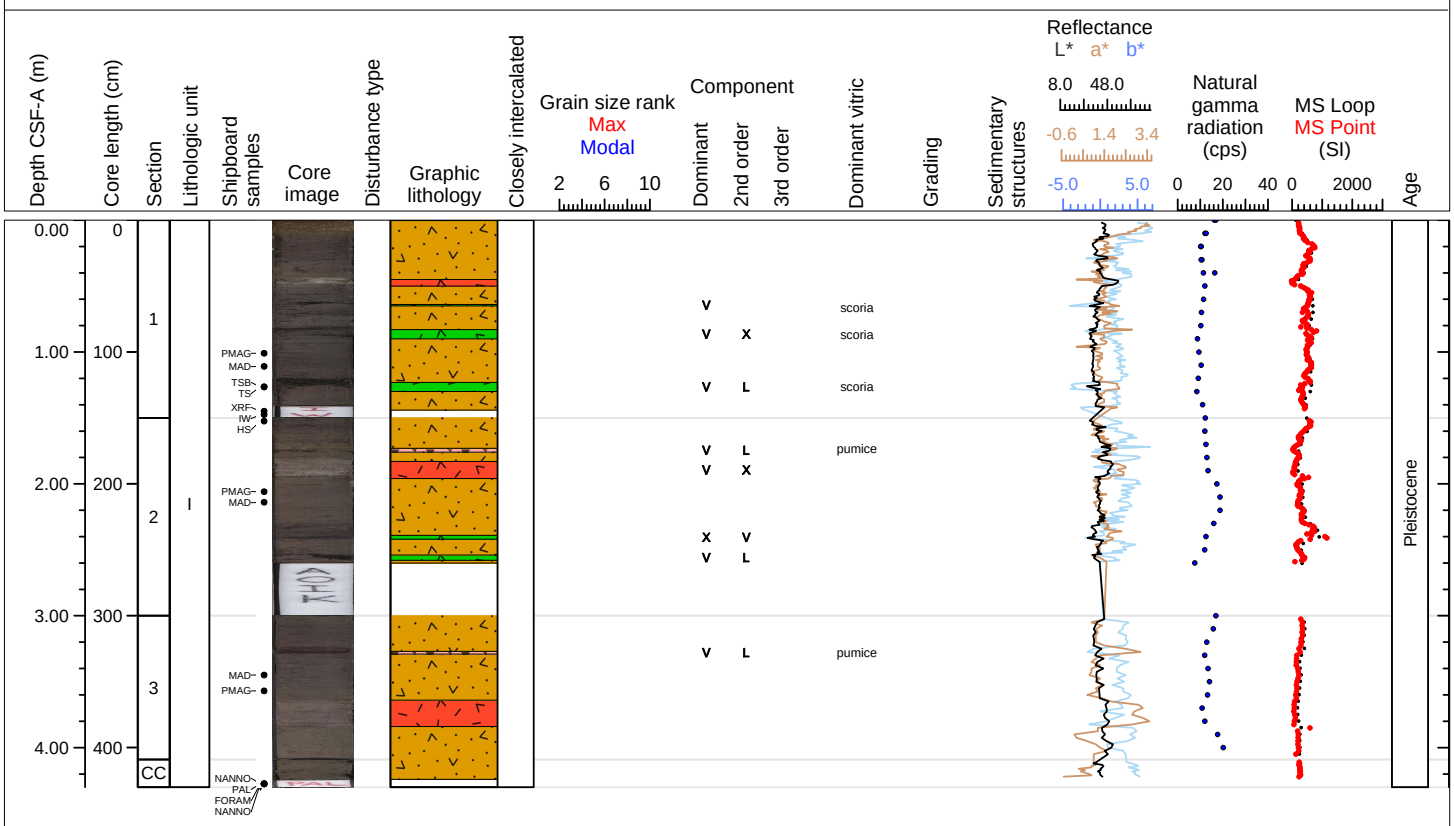
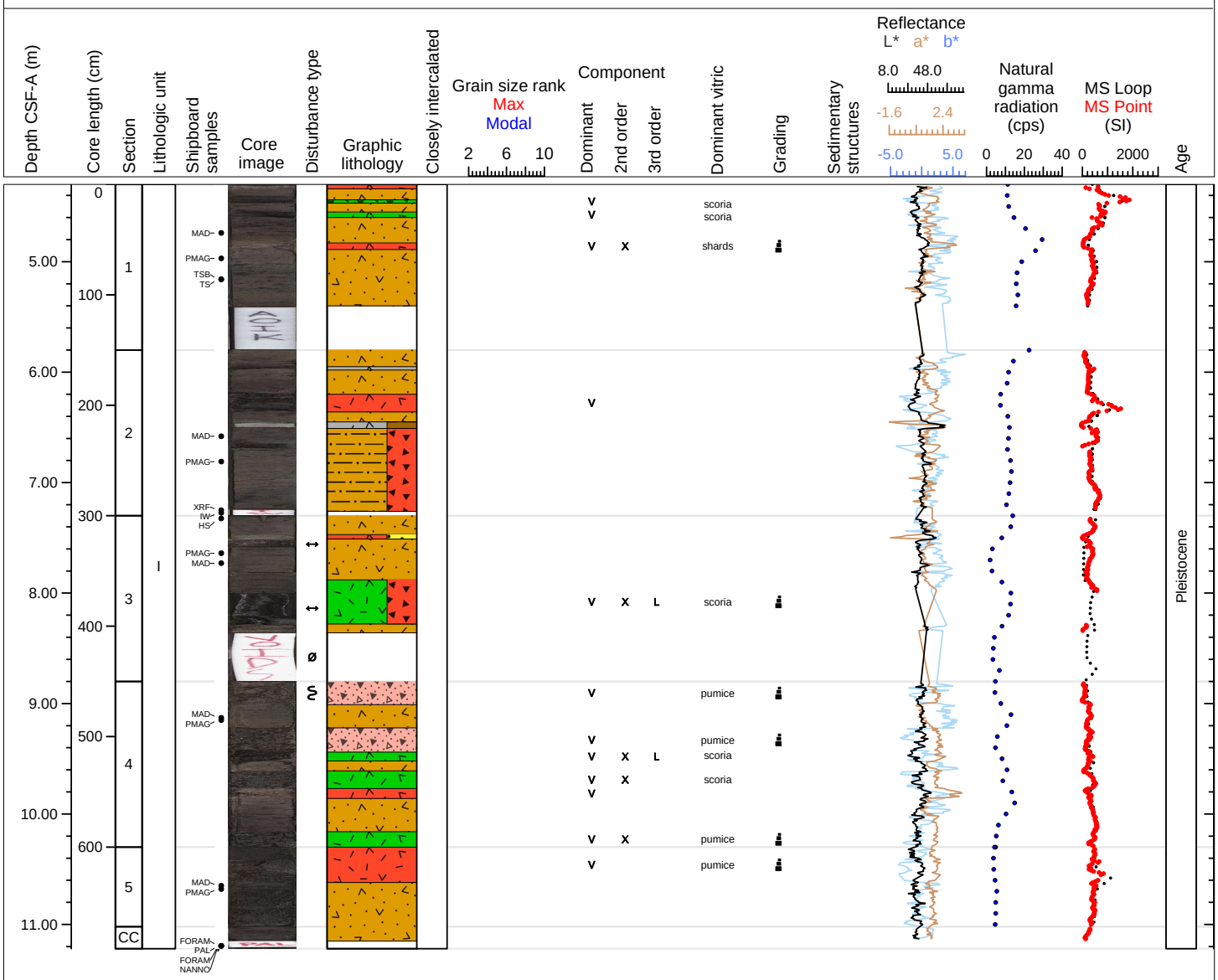
Hole 350-U1436A Core 1H, Interval 0.0-4.3 m (CSF-A)

Tuffaceous mud with layers of mafic and evolved ash



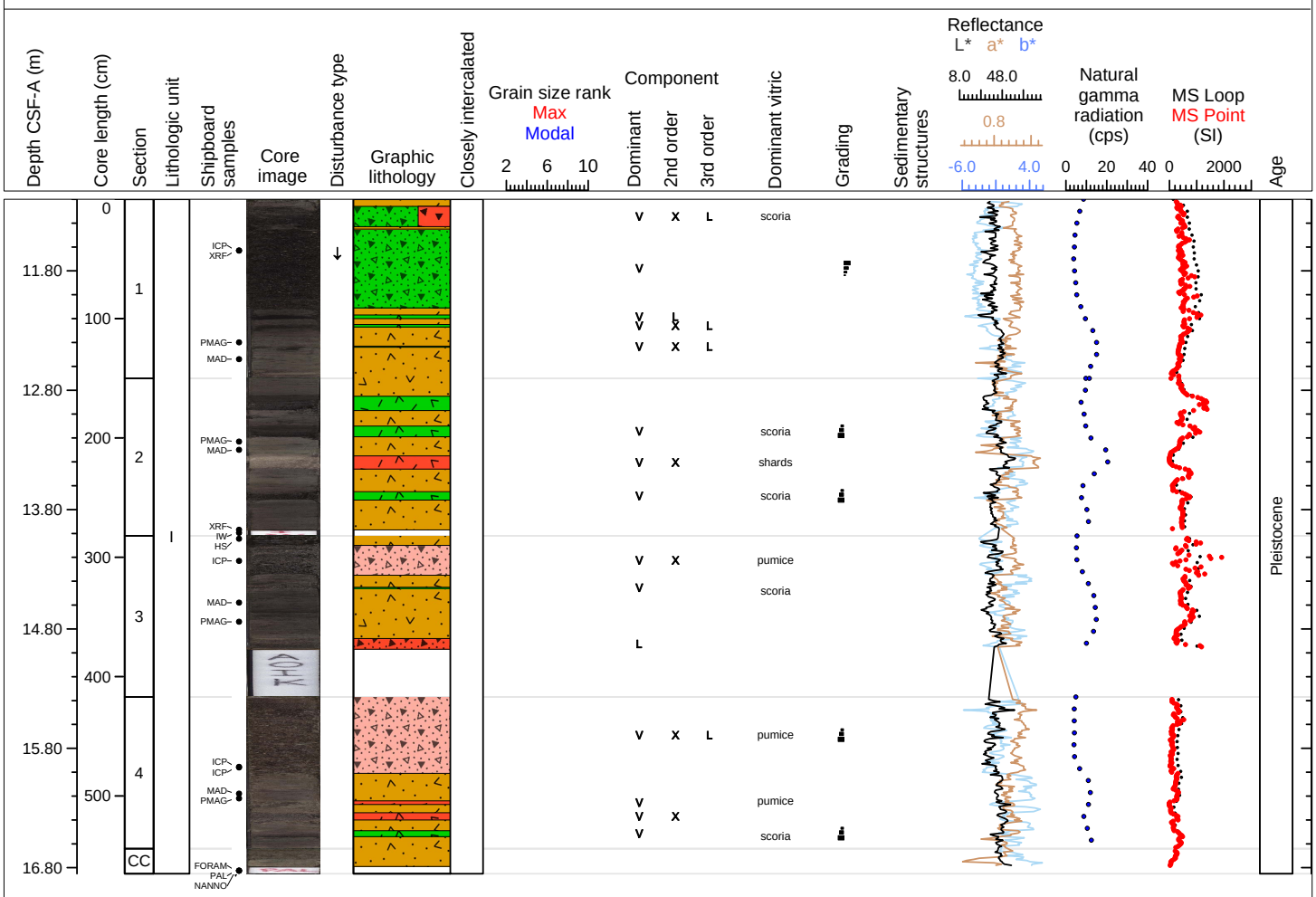
Hole 350-U1436A Core 2H, Interval 4.3-11.22 m (CSF-A)

Tuffaceous mud with layers of mafic and evolved ash



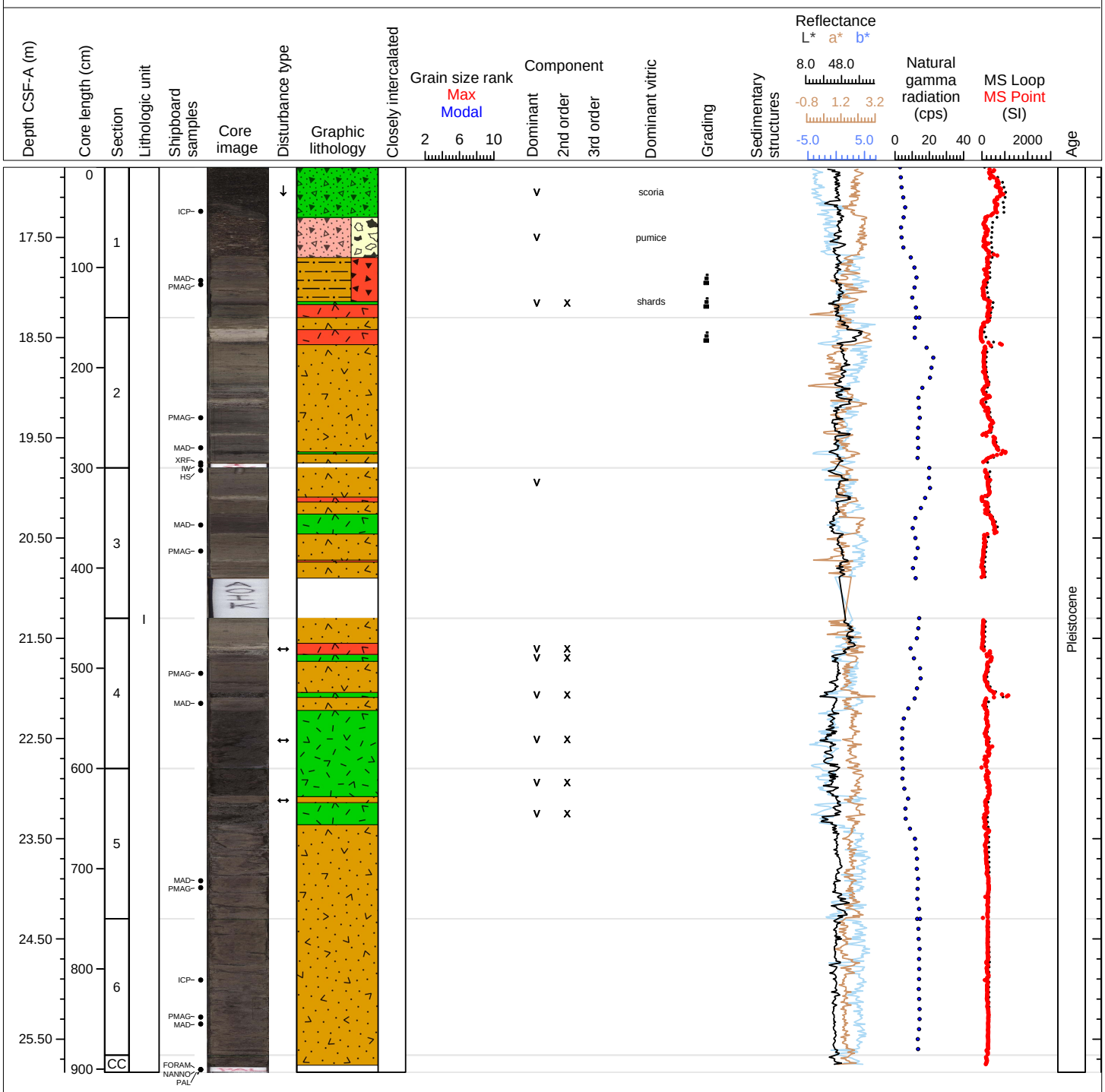
Hole 350-U1436A Core 3H, Interval 11.2-16.85 m (CSF-A)

Tuffaceous mud with layers of mafic and evolved ash



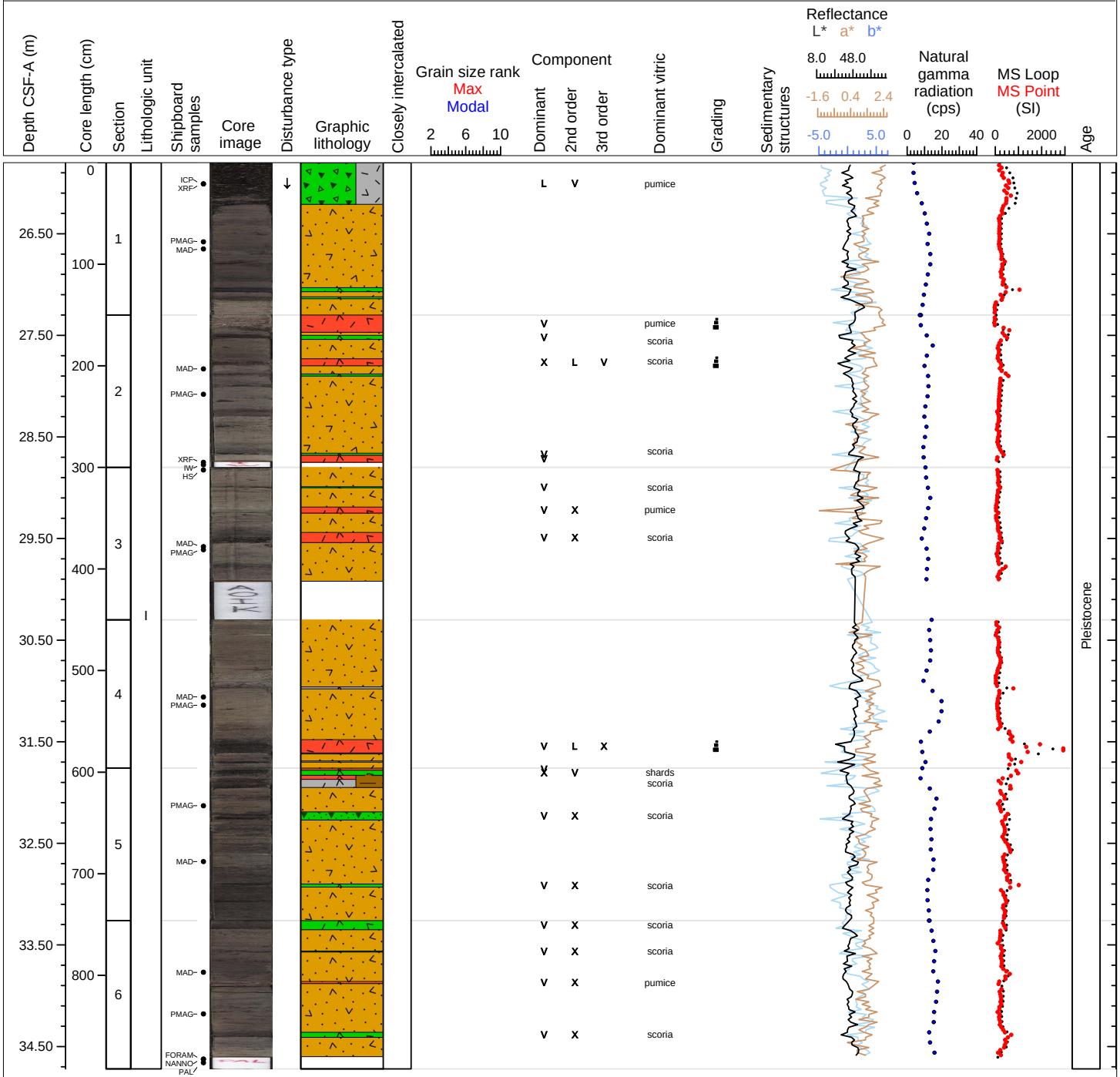
Hole 350-U1436A Core 4H, Interval 16.8-25.83 m (CSF-A)

Tuffaceous mud with layers of mafic and evolved ash



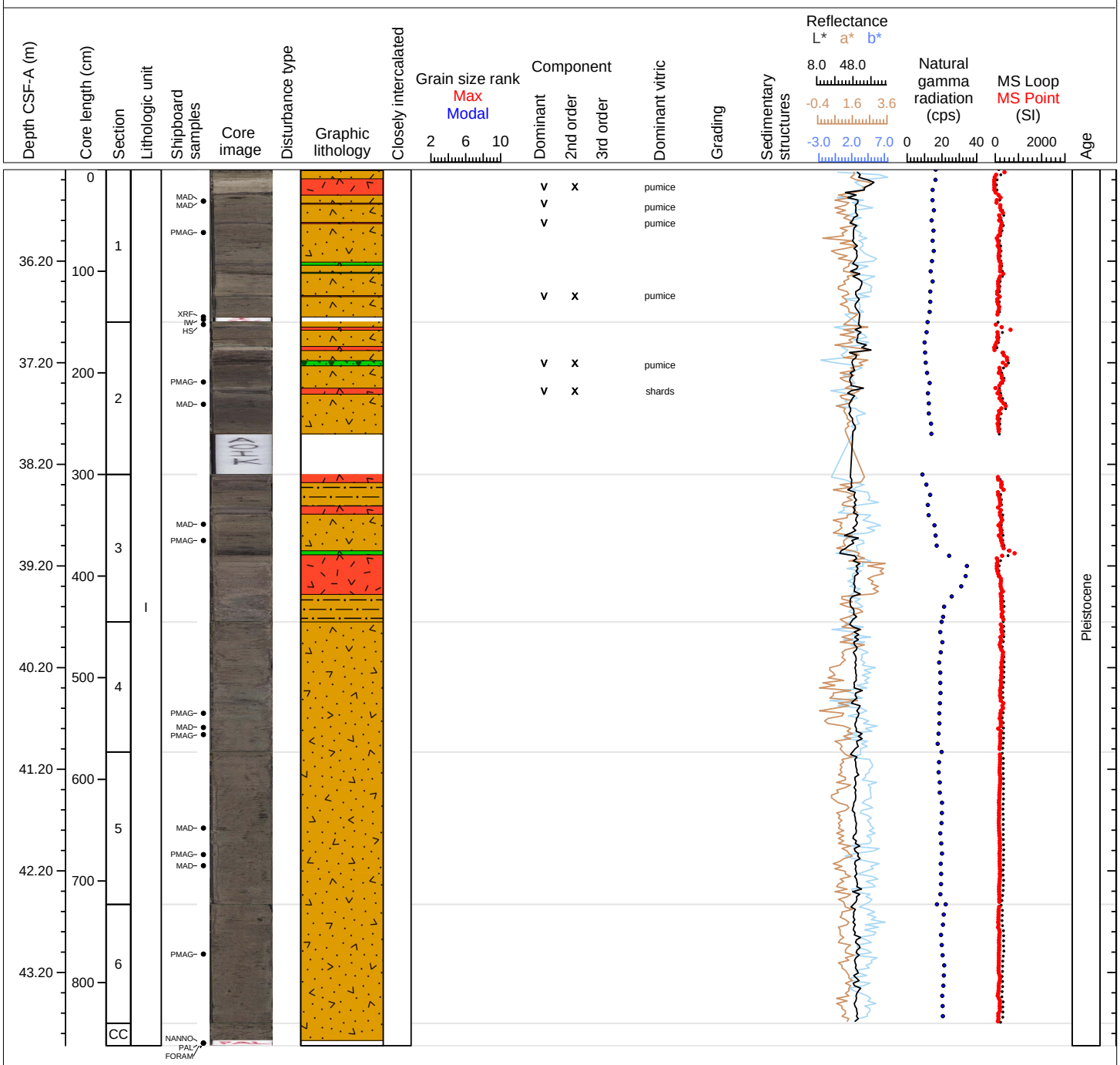
Hole 350-U1436A Core 5H, Interval 25.8-34.72 m (CSF-A)

Tuffaceous mud with layers of mafic and evolved ash



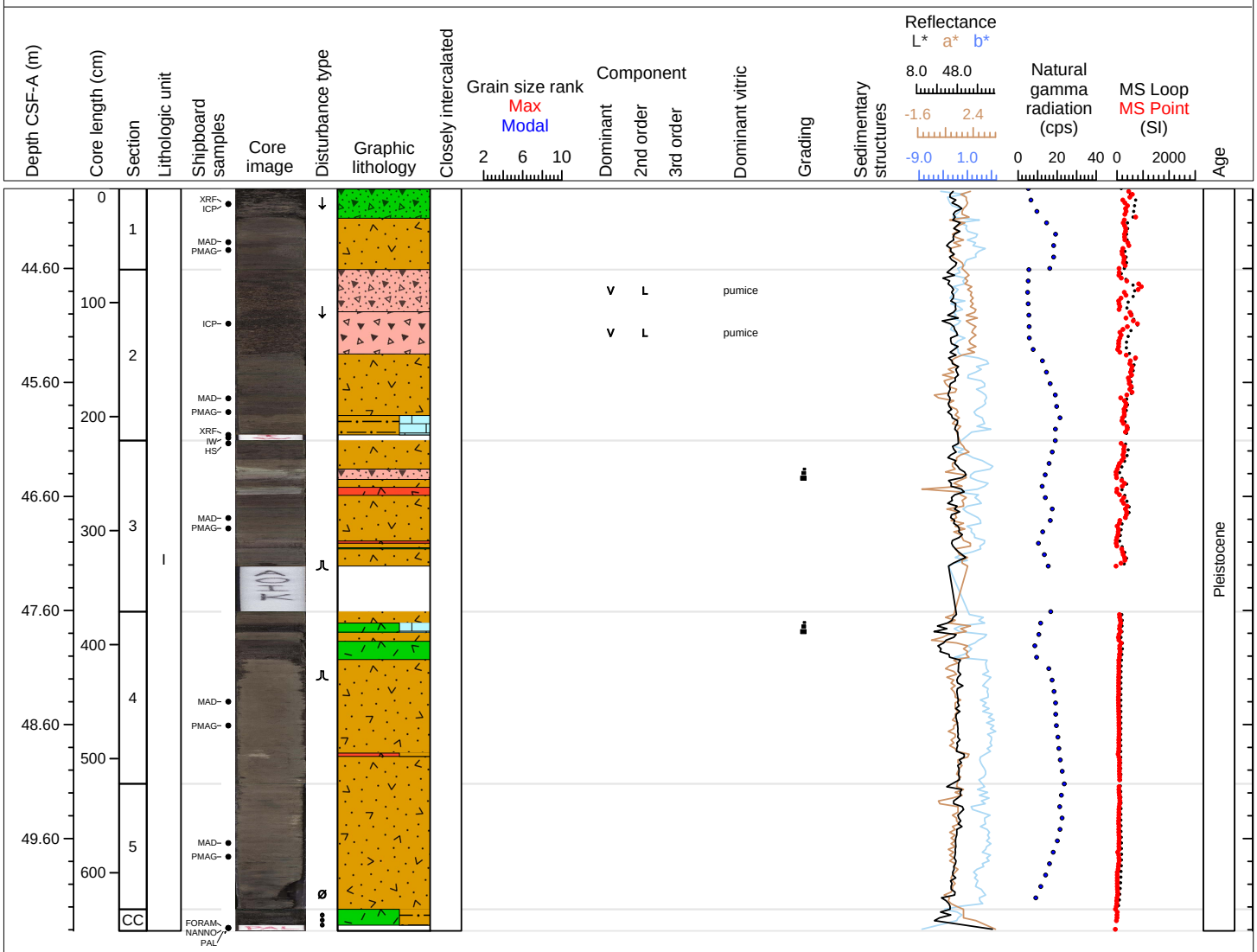
Hole 350-U1436A Core 6H, Interval 35.3-43.92 m (CSF-A)

Tuffaceous mud with layers of mafic and evolved ash



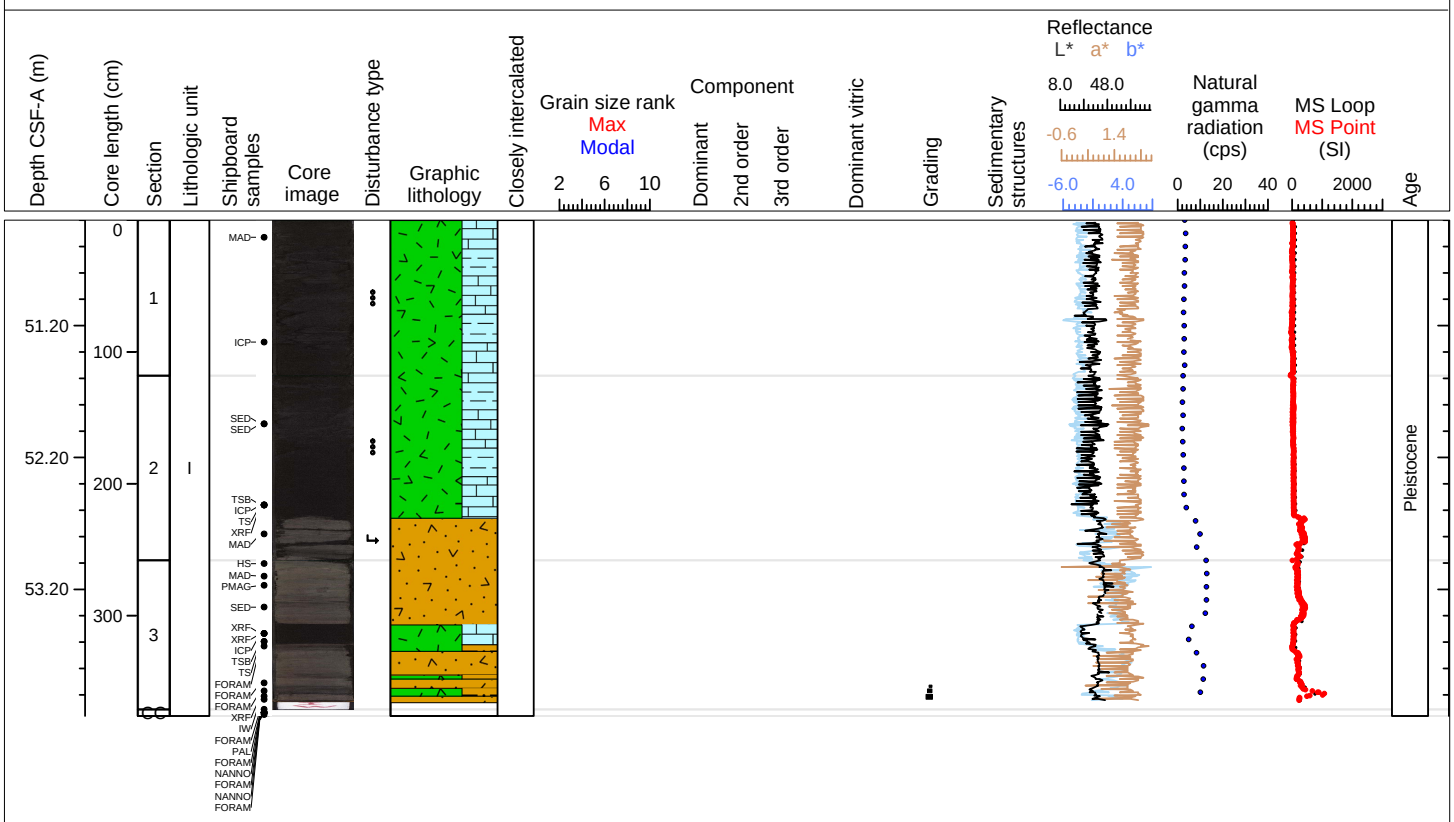
Hole 350-U1436A Core 7H, Interval 43.9-50.41 m (CSF-A)

Tuffaceous mud with layers of mafic and evolved ash



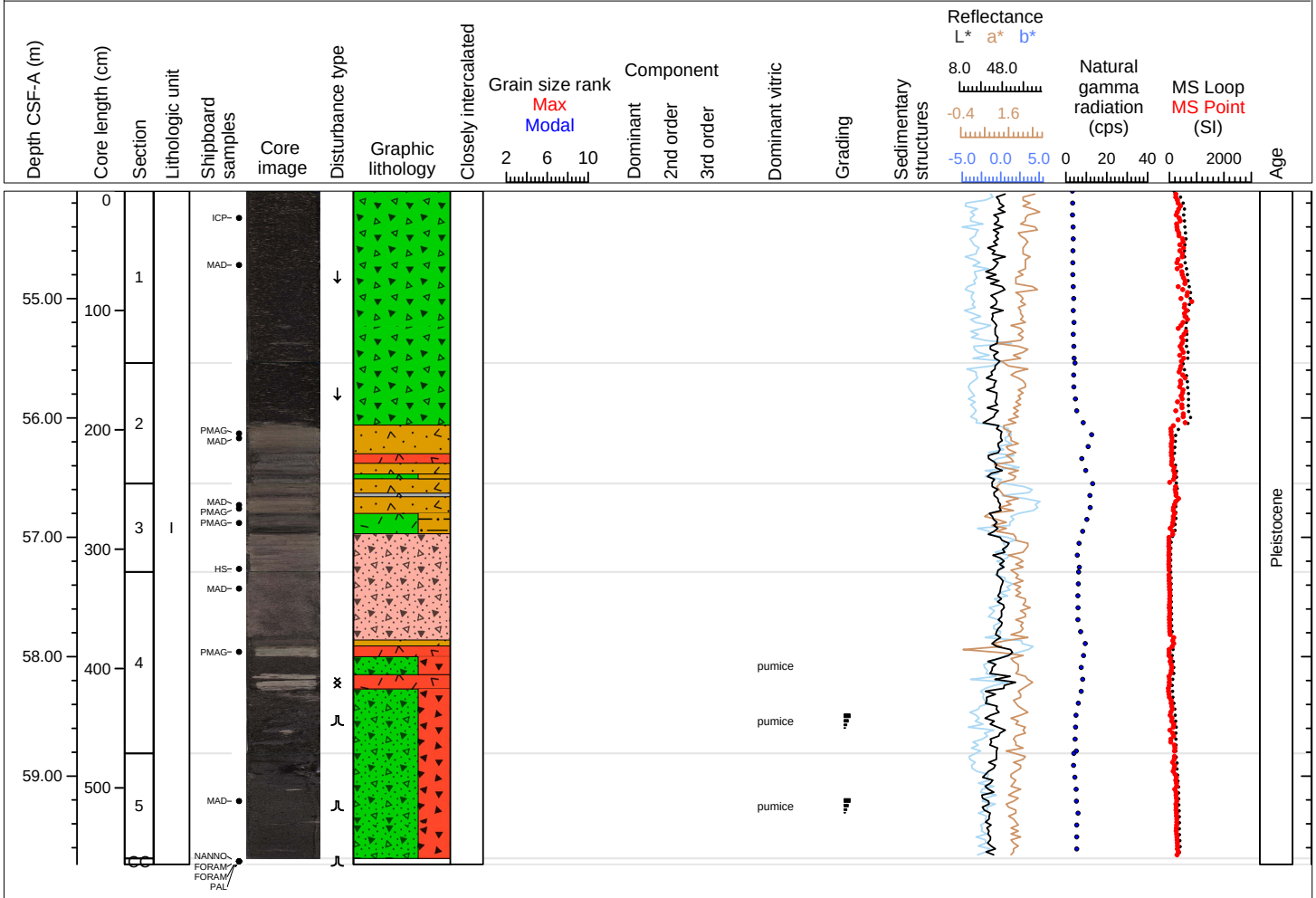
Hole 350-U1436A Core 8H, Interval 50.4-54.16 m (CSF-A)

Coarse basaltic ash with thin tuffaceous mud and ash layers



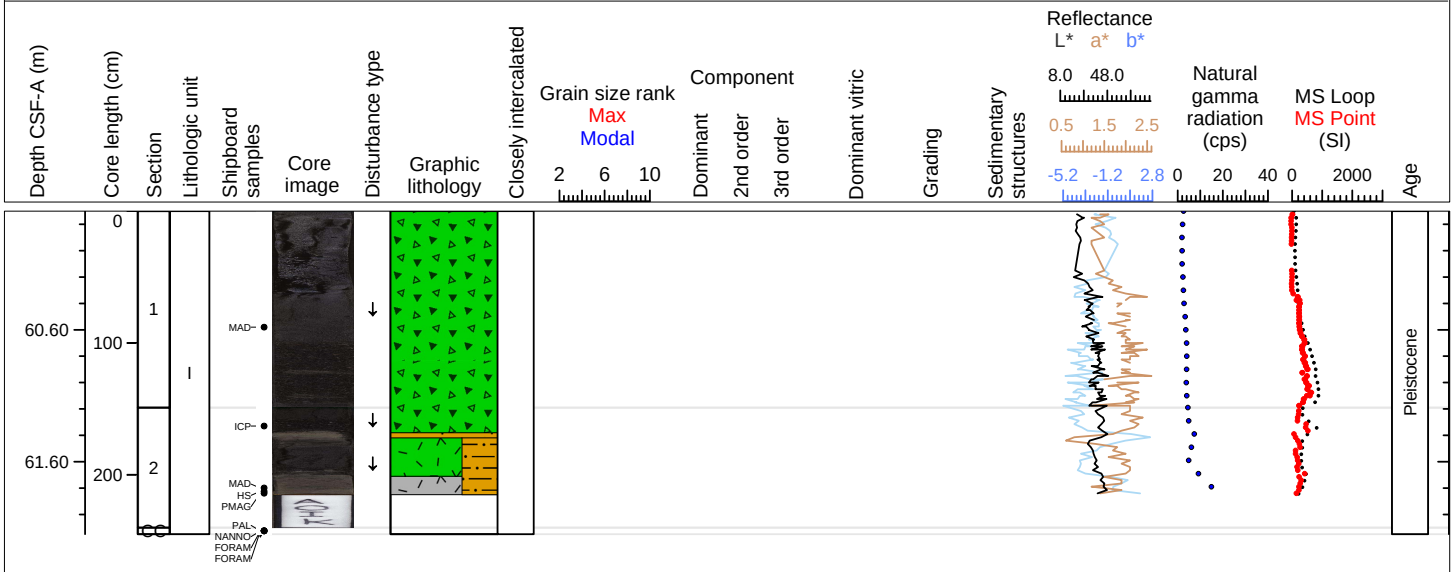
Hole 350-U1436A Core 9H, Interval 54.1-59.74 m (CSF-A)

Tuffaceous mud with layers of mafic and evolved ash and with intervals of matrix supported polymictic mafic lapilli-ash with pumice



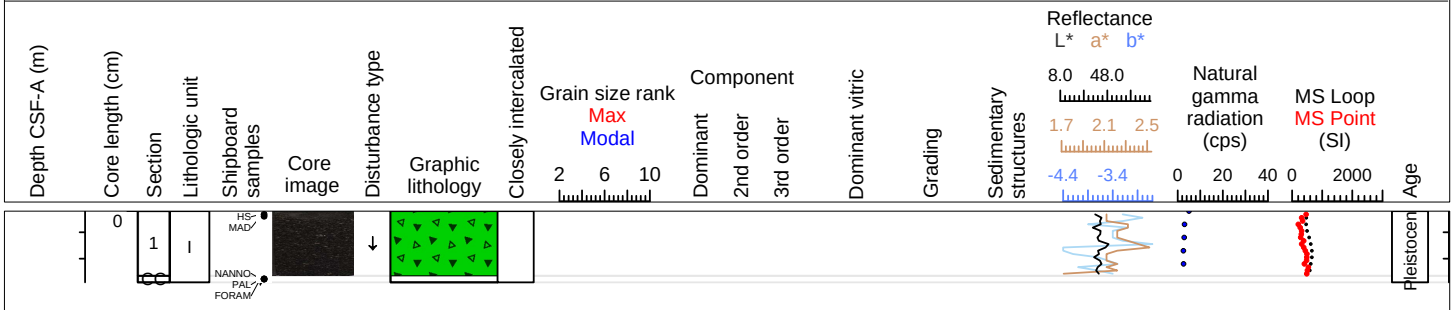
Hole 350-U1436A Core 10F, Interval 59.7-62.15 m (CSF-A)

ash with tuffaceous mud



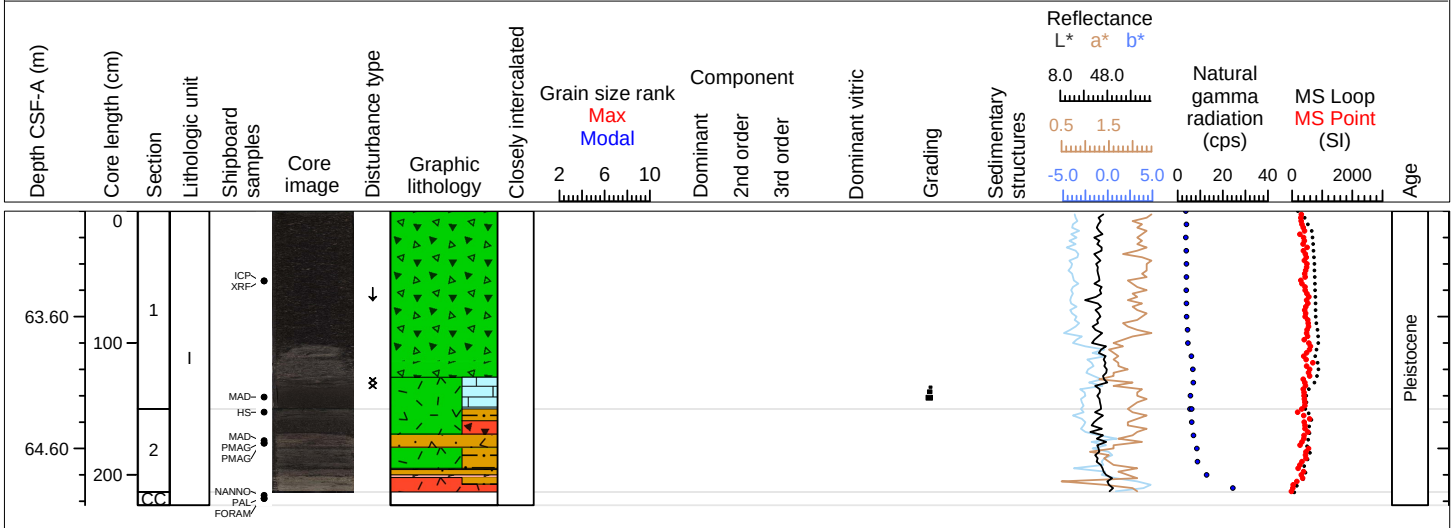
Hole 350-U1436A Core 11F, Interval 62.2-62.74 m (CSF-A)

core disturbed

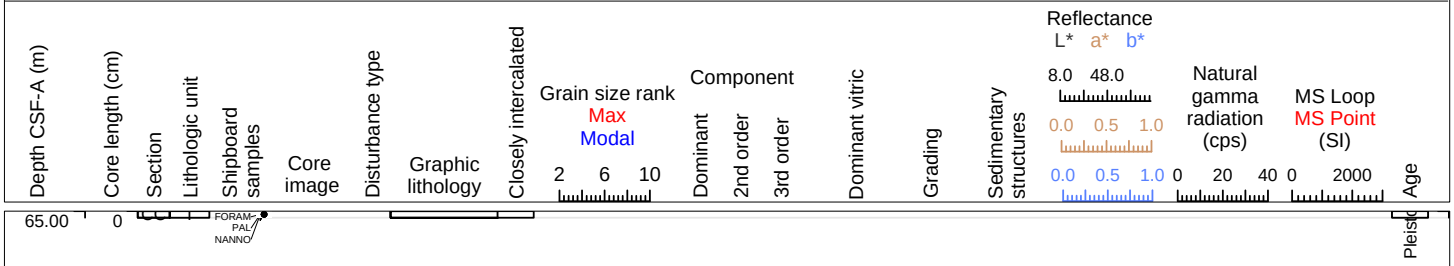


Hole 350-U1436A Core 12F, Interval 62.8-65.03 m (CSF-A)

Tuffaceous mud with layers of mafic and evolved ash (minor lapilli)

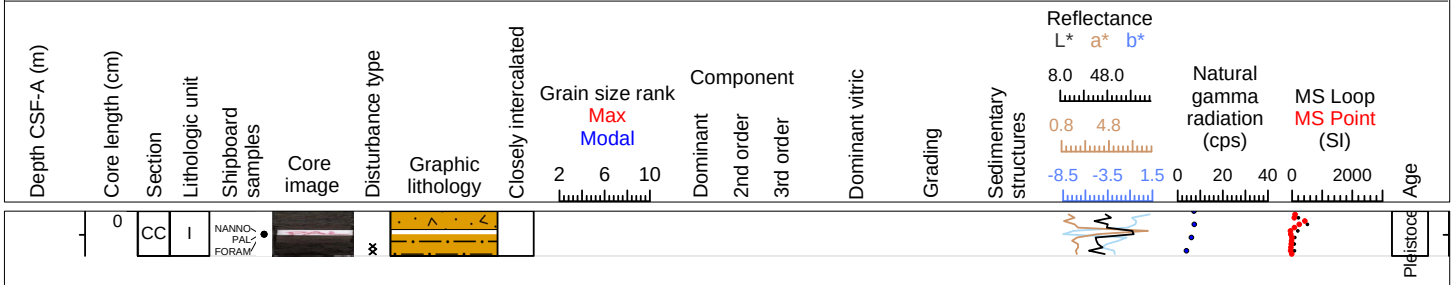


Hole 350-U1436A Core 13X, Interval 65.0-65.05 m (CSF-A)



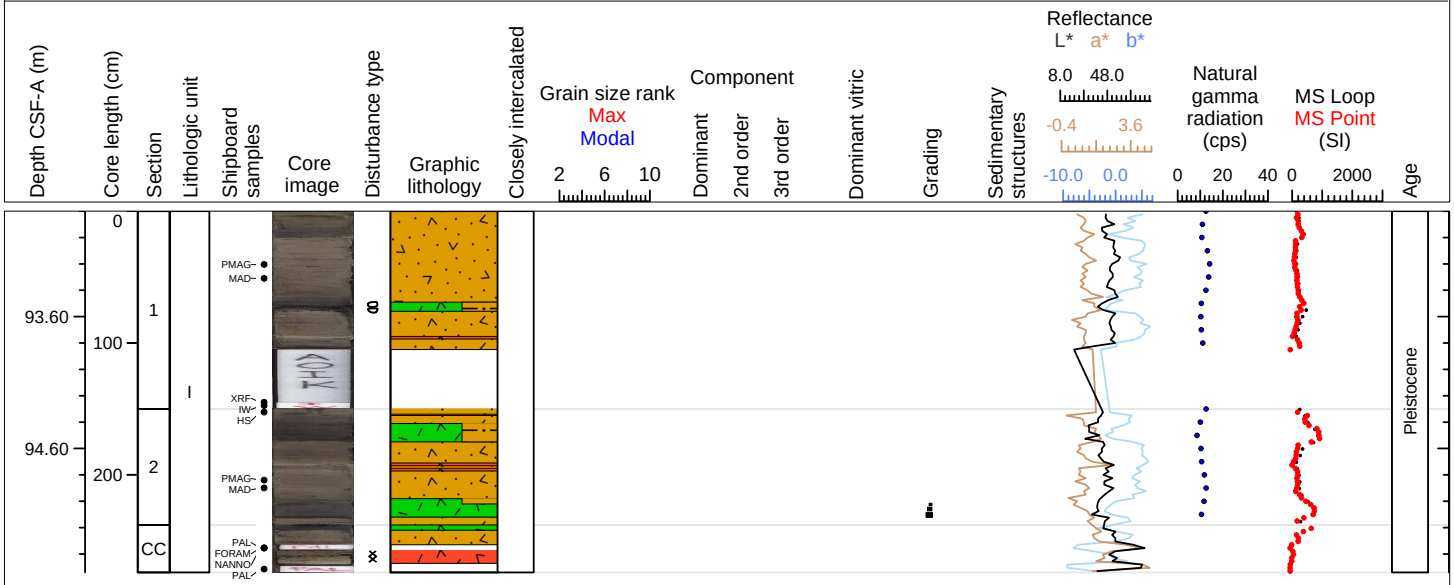
Hole 350-U1436A Core 15X, Interval 83.1-83.44 m (CSF-A)

Tuffaceous mud with ash layers



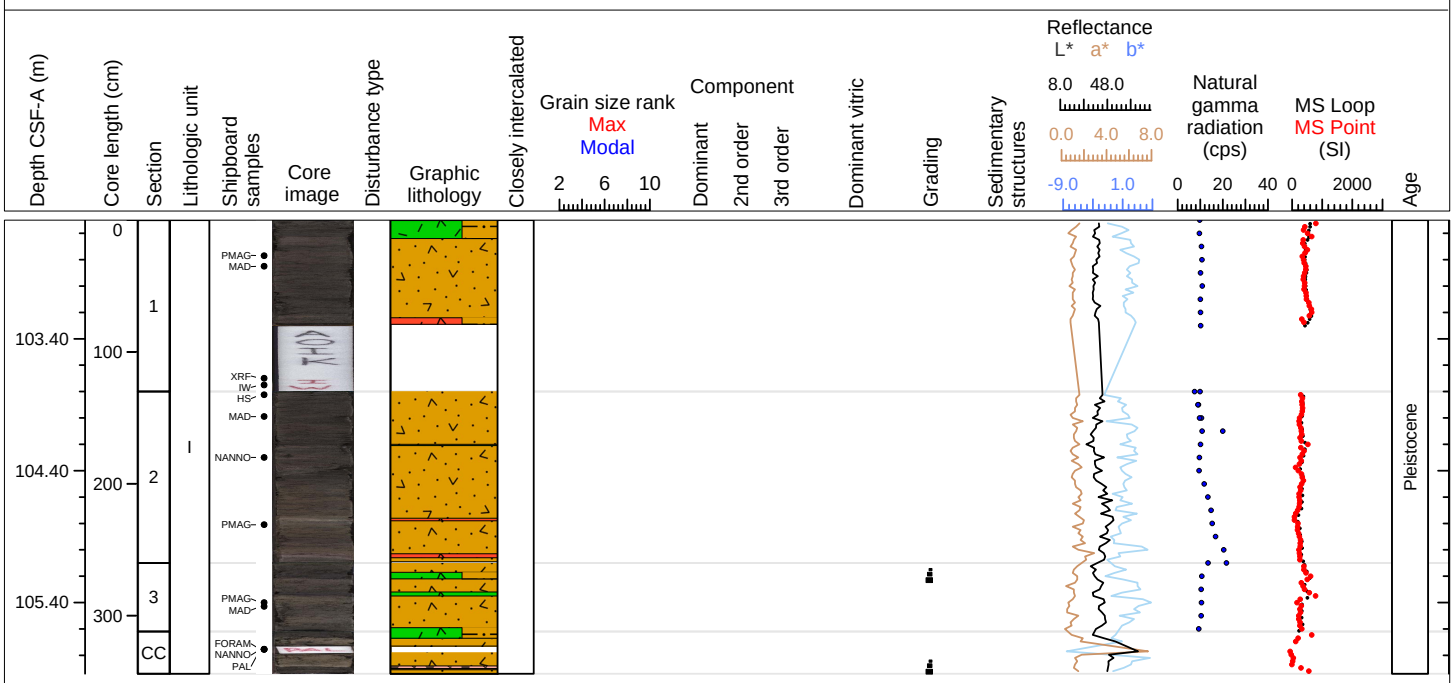
Hole 350-U1436A Core 16X, Interval 92.8-95.54 m (CSF-A)

interlayered ash and tuffaceous mud with layers of evolved and mafic ash

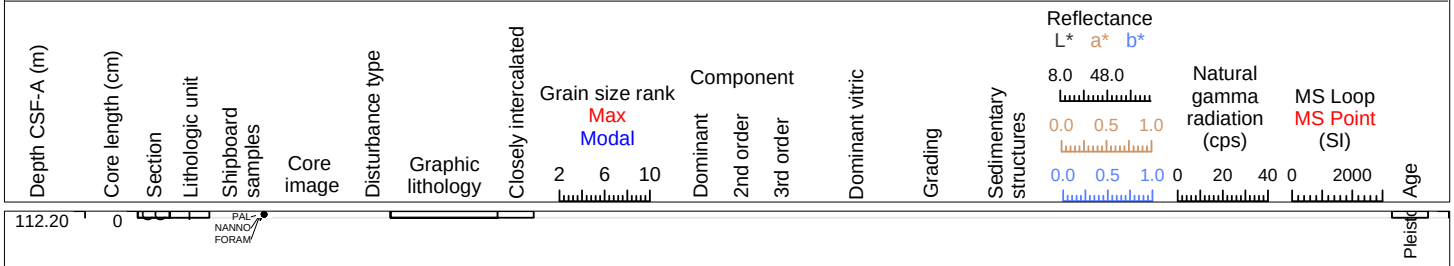


Hole 350-U1436A Core 17X, Interval 102.5-105.94 m (CSF-A)

Tuffaceous mid and mafic and evolved ash layers, one was crystal rich

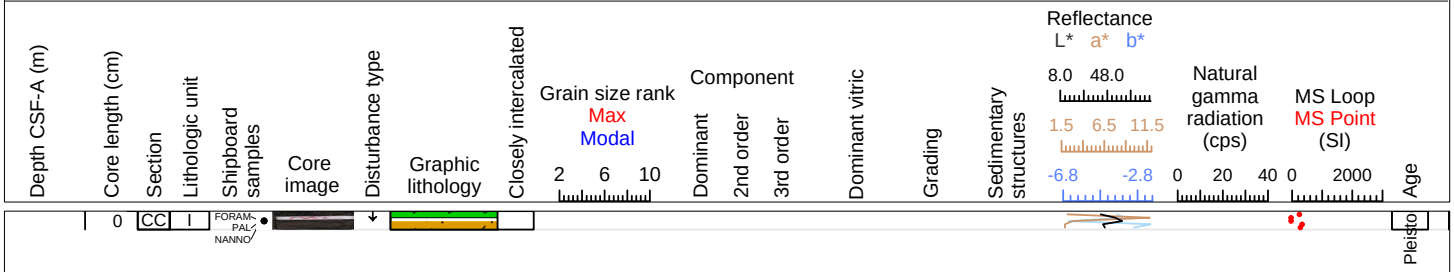


Hole 350-U1436A Core 18X, Interval 112.2-112.25 m (CSF-A)



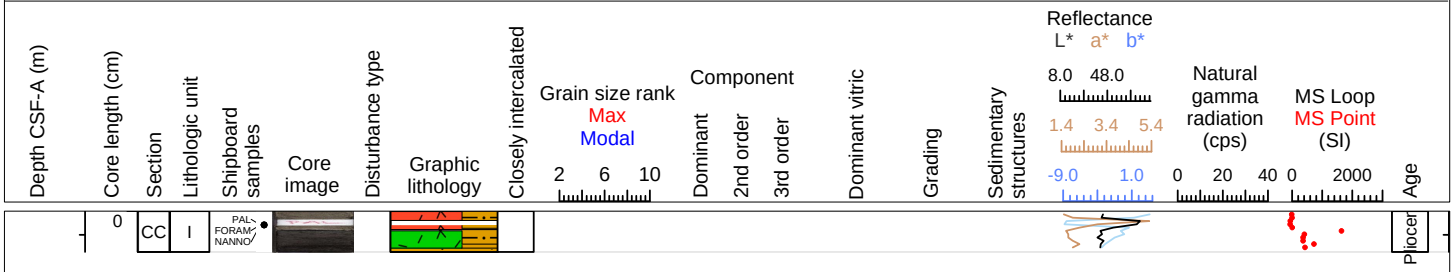
Hole 350-U1436A Core 19X, Interval 121.9-122.04 m (CSF-A)

Tuffaceous mud with ash layers



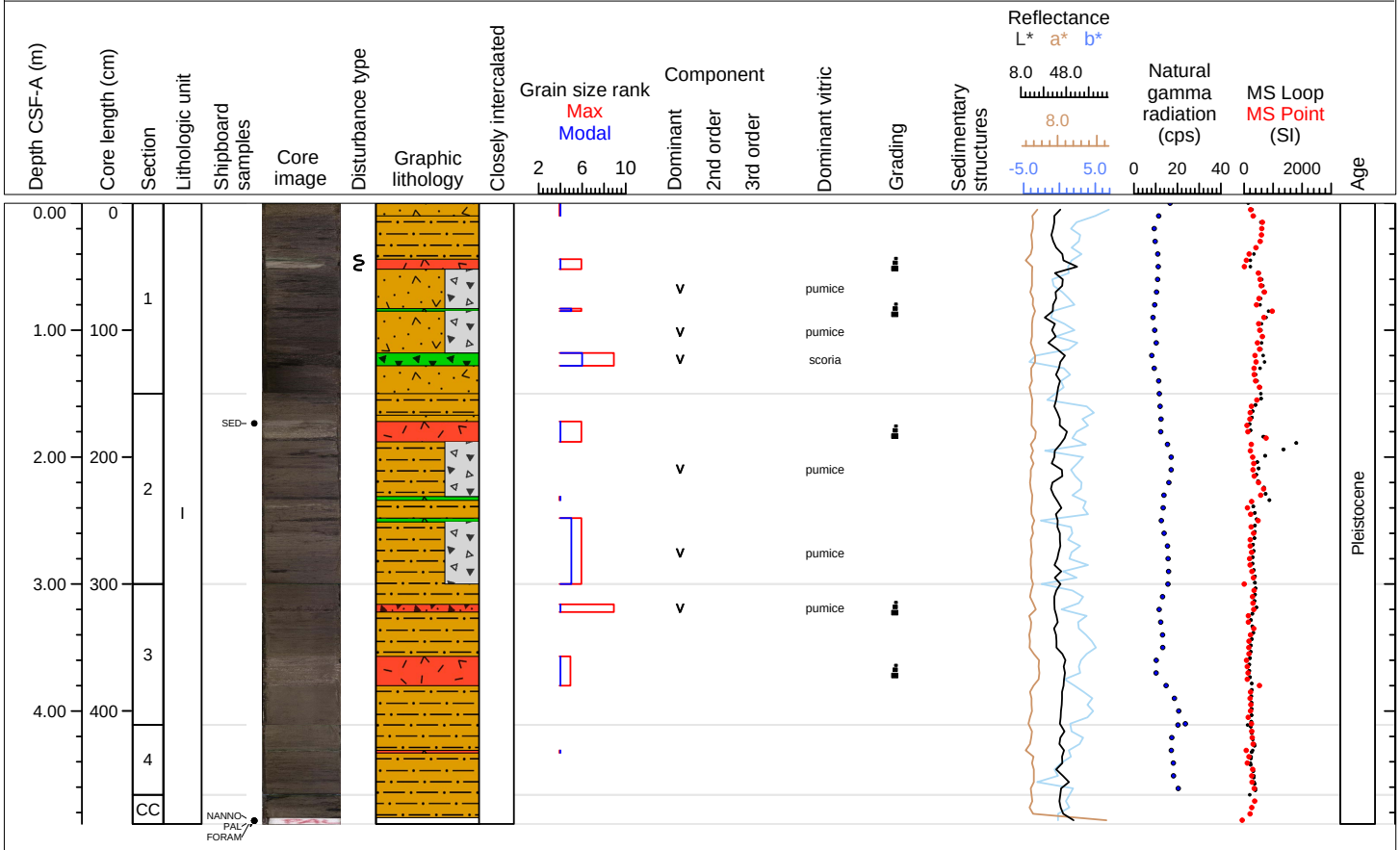
Hole 350-U1436A Core 20X, Interval 131.6-131.91 m (CSF-A)

Evolved and mafic ash with tuffaceous mud



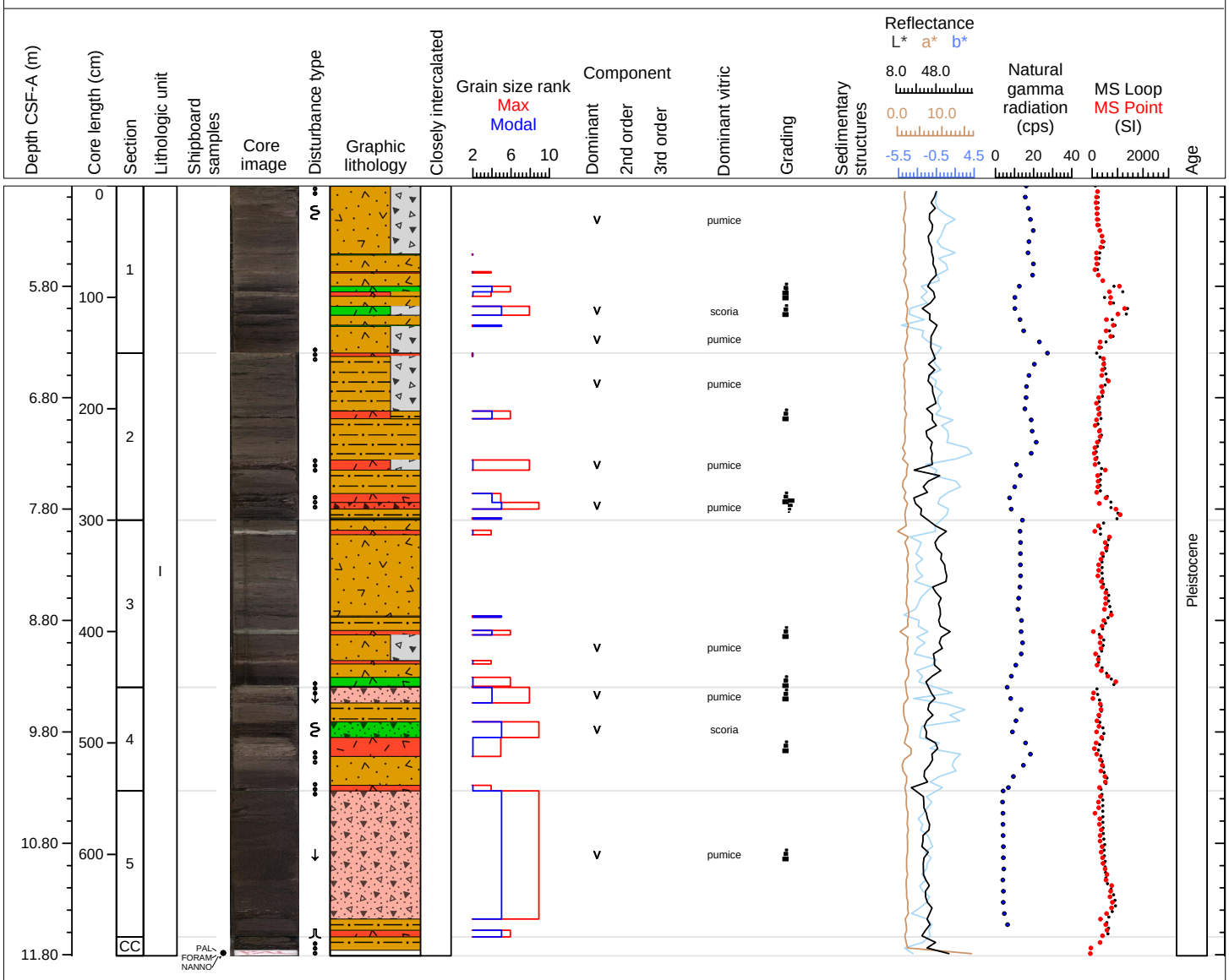
Hole 350-U1436B Core 1H, Interval 0.0-4.89 m (CSF-A)

intercalated mud with evolved and mafic tuff and lapilli-tuff



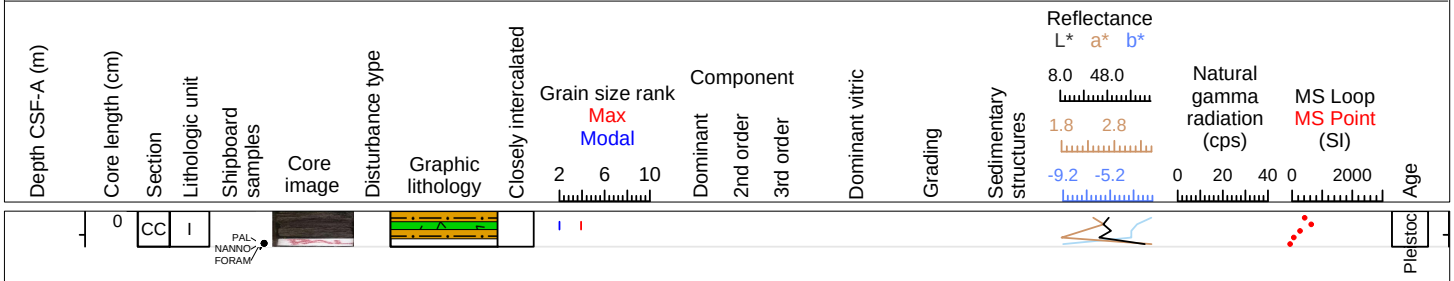
Hole 350-U1436B Core 2H, Interval 4.9-11.81 m (CSF-A)

tuffaceous mud intercalated with evolved and mafic ash



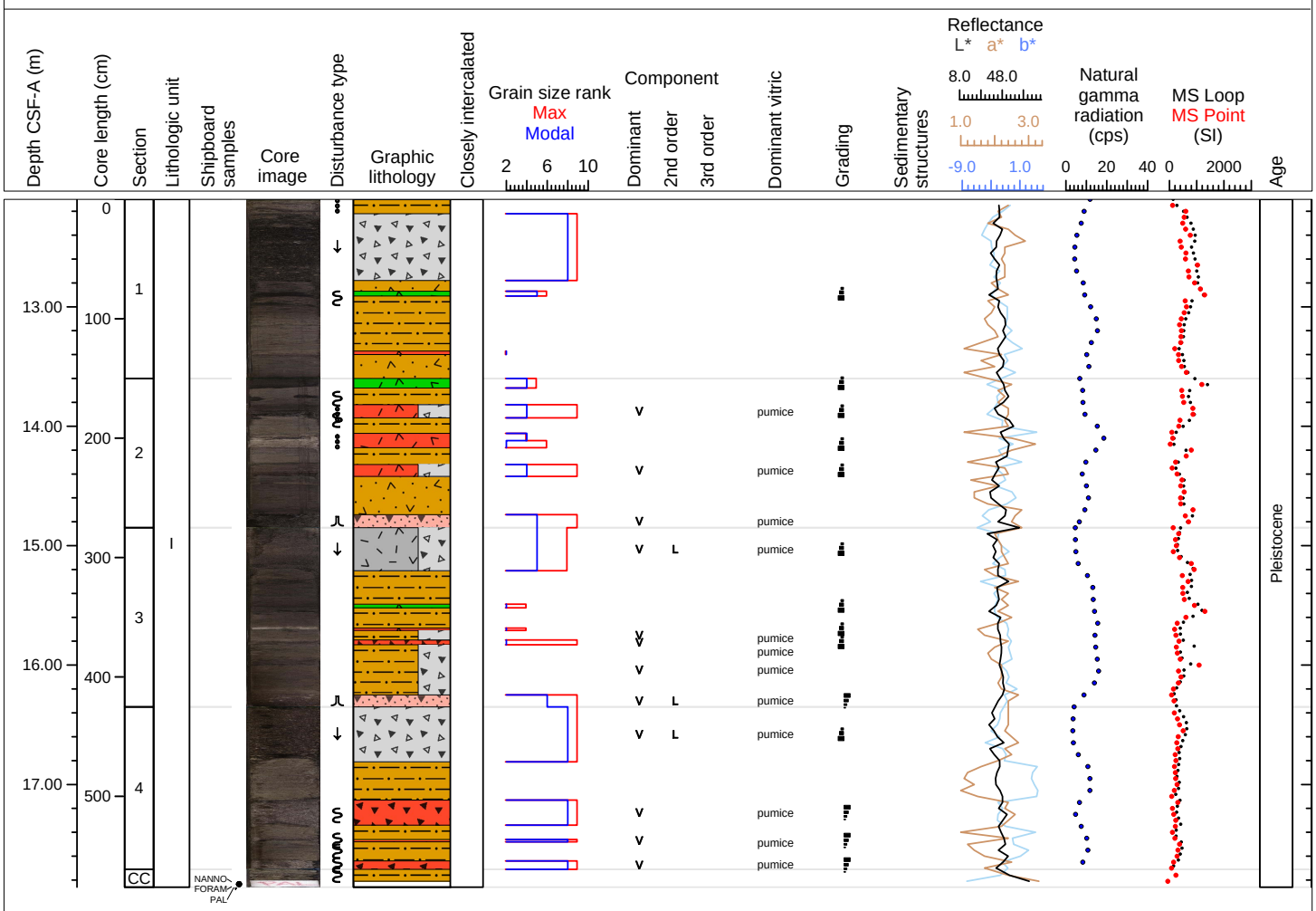
Hole 350-U1436B Core 3H, Interval 11.8-12.07 m (CSF-A)

tuffaceous mud intercalated with evolved and mafic ash



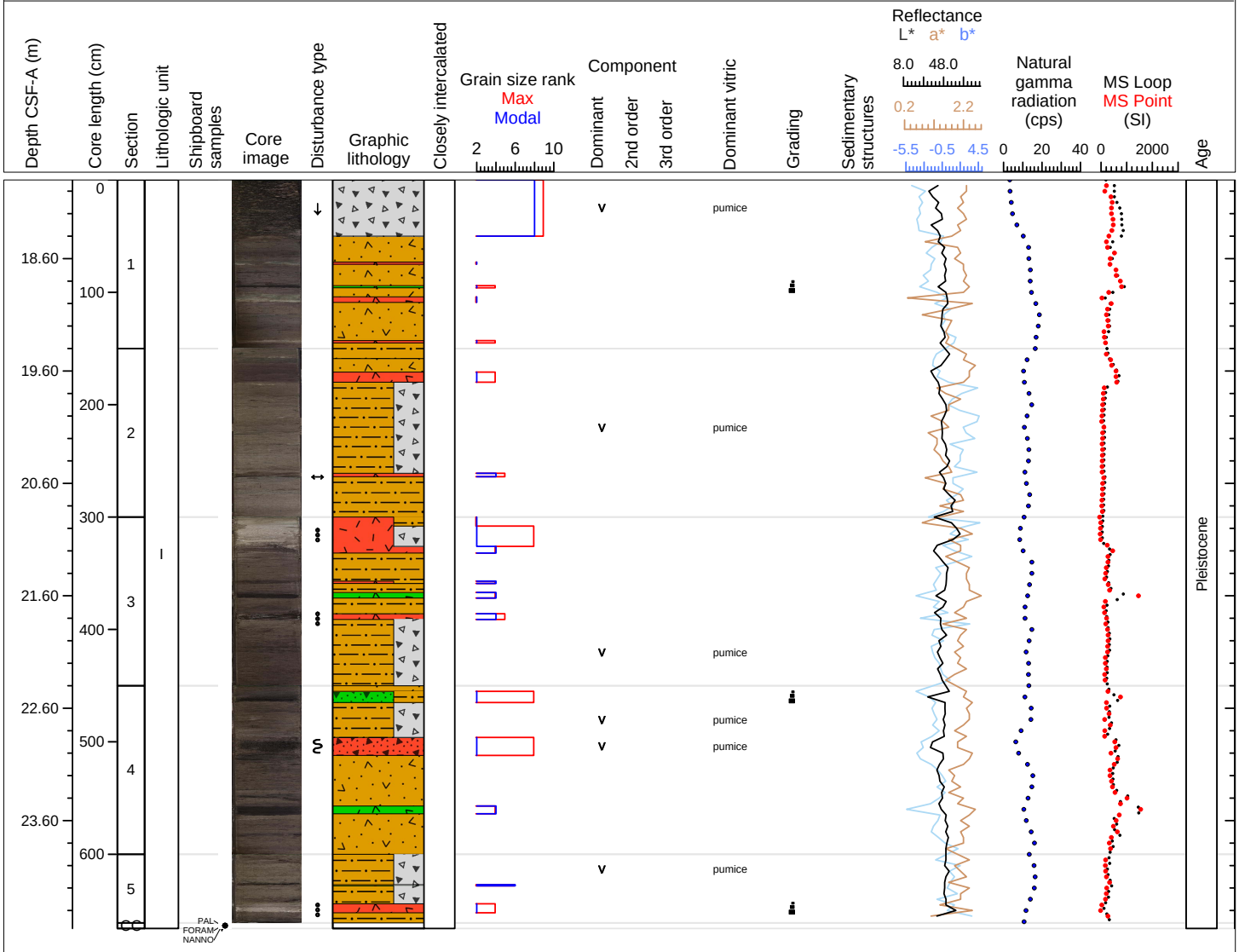
Hole 350-U1436B Core 4H, Interval 12.1-17.86 m (CSF-A)

tuffaceous mud intercalated with evolved and mafic ash



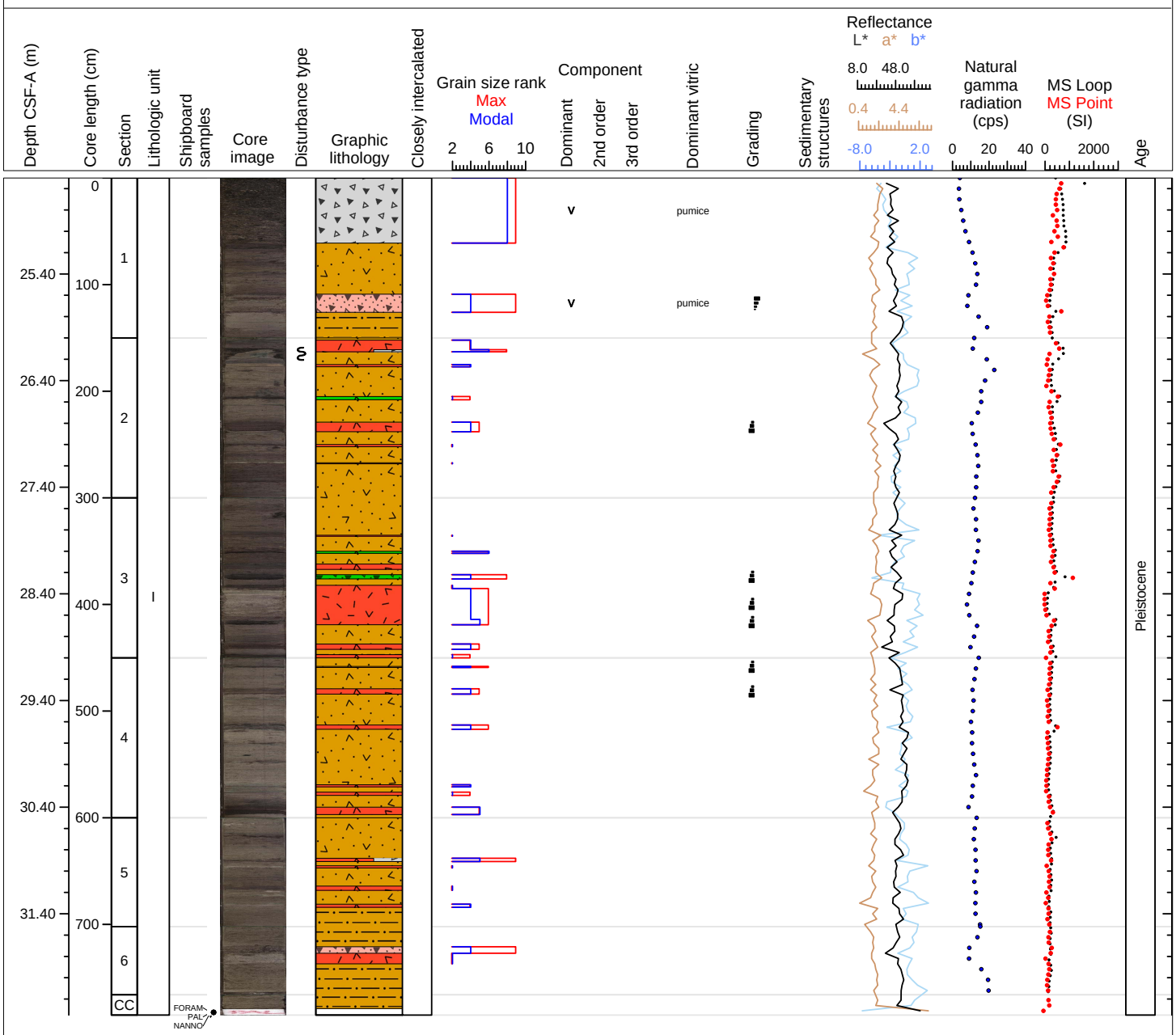
Hole 350-U1436B Core 5H, Interval 17.9-24.56 m (CSF-A)

tuffaceous mud intercalated with evolved and mafic ash



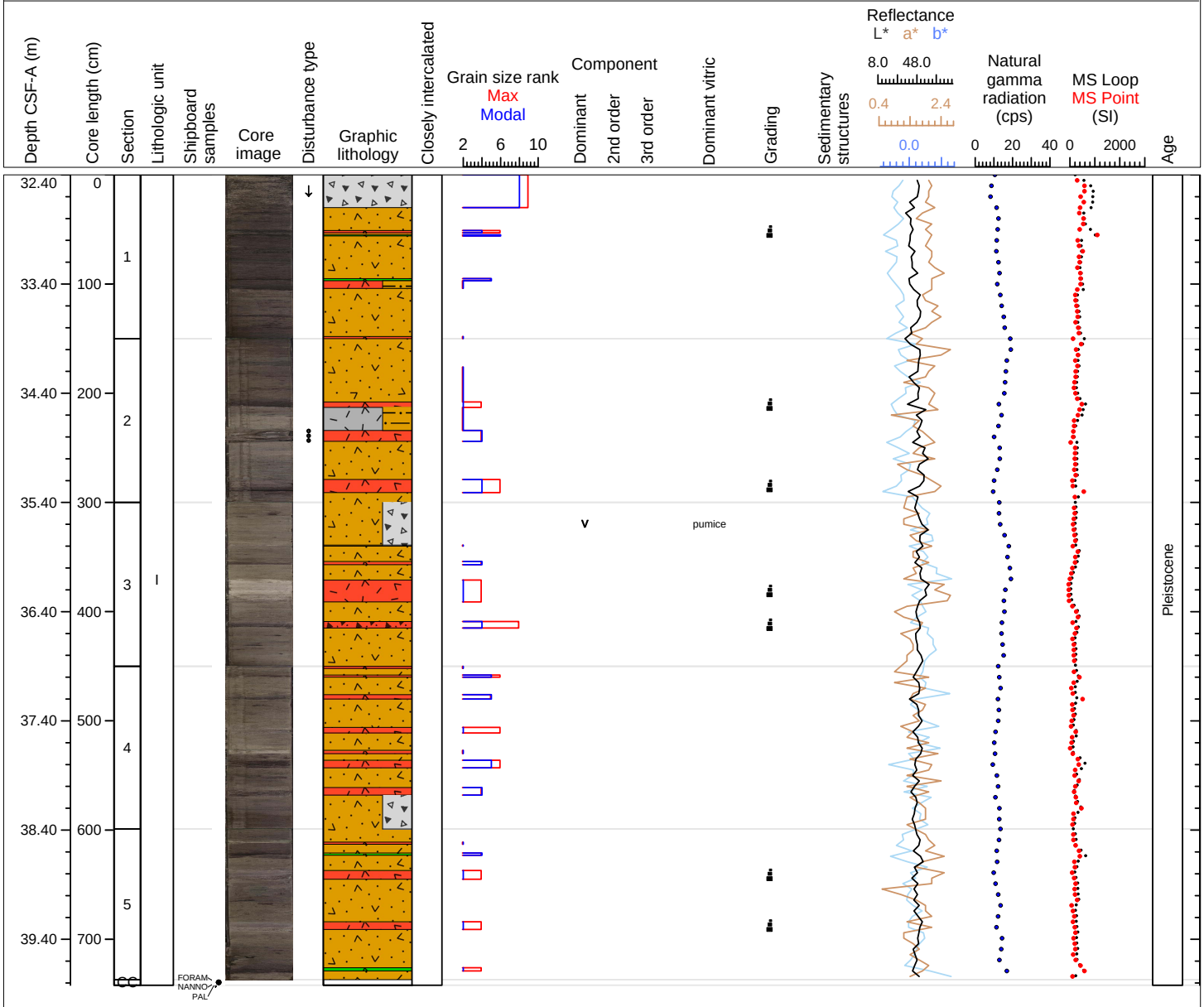
Hole 350-U1436B Core 6H, Interval 24.5-32.35 m (CSF-A)

tuffaceous mud intercalated with evolved and mafic ash



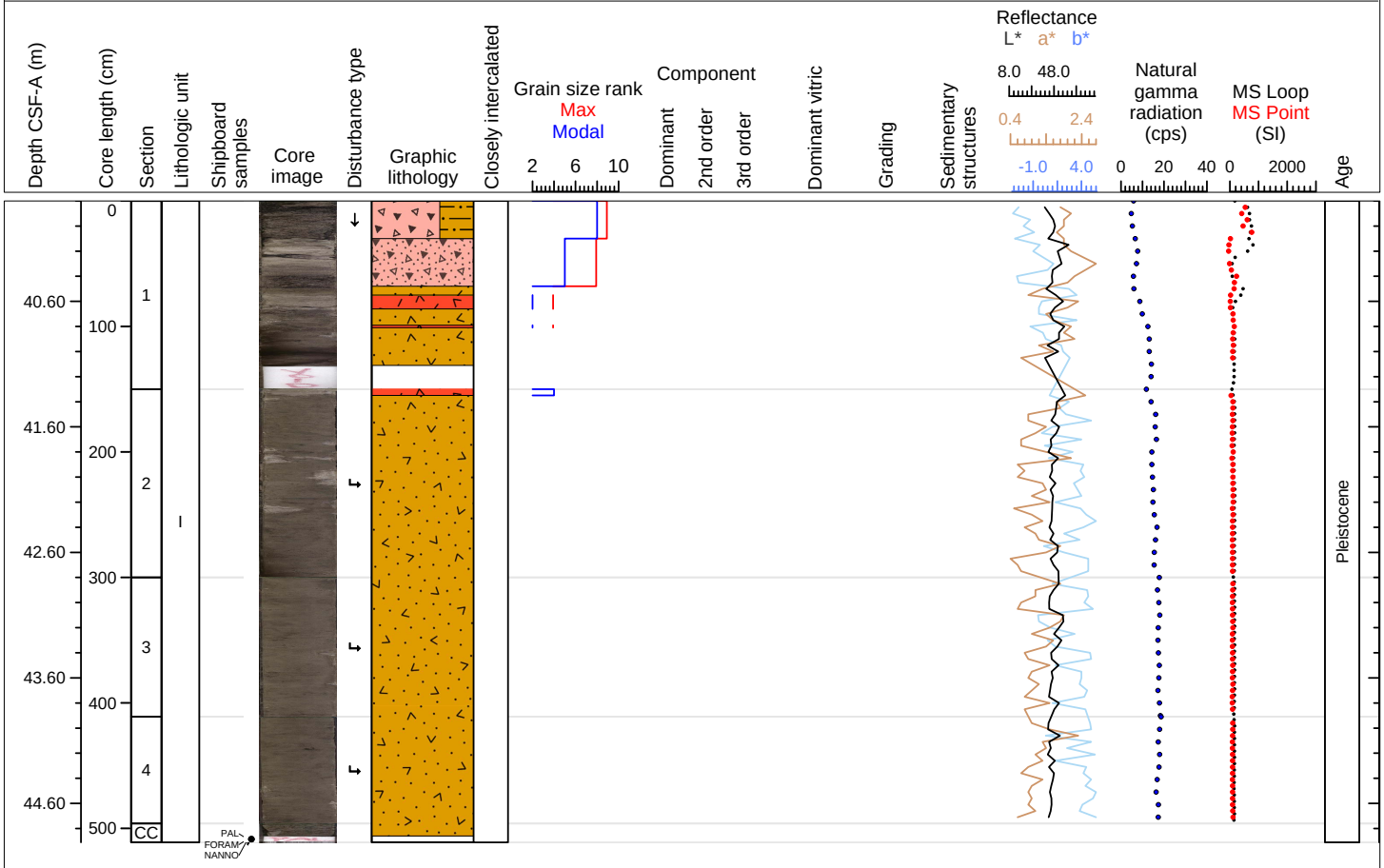
Hole 350-U1436B Core 7H, Interval 32.4-39.82 m (CSF-A)

tuffaceous mud intercalated with evolved and mafic ash



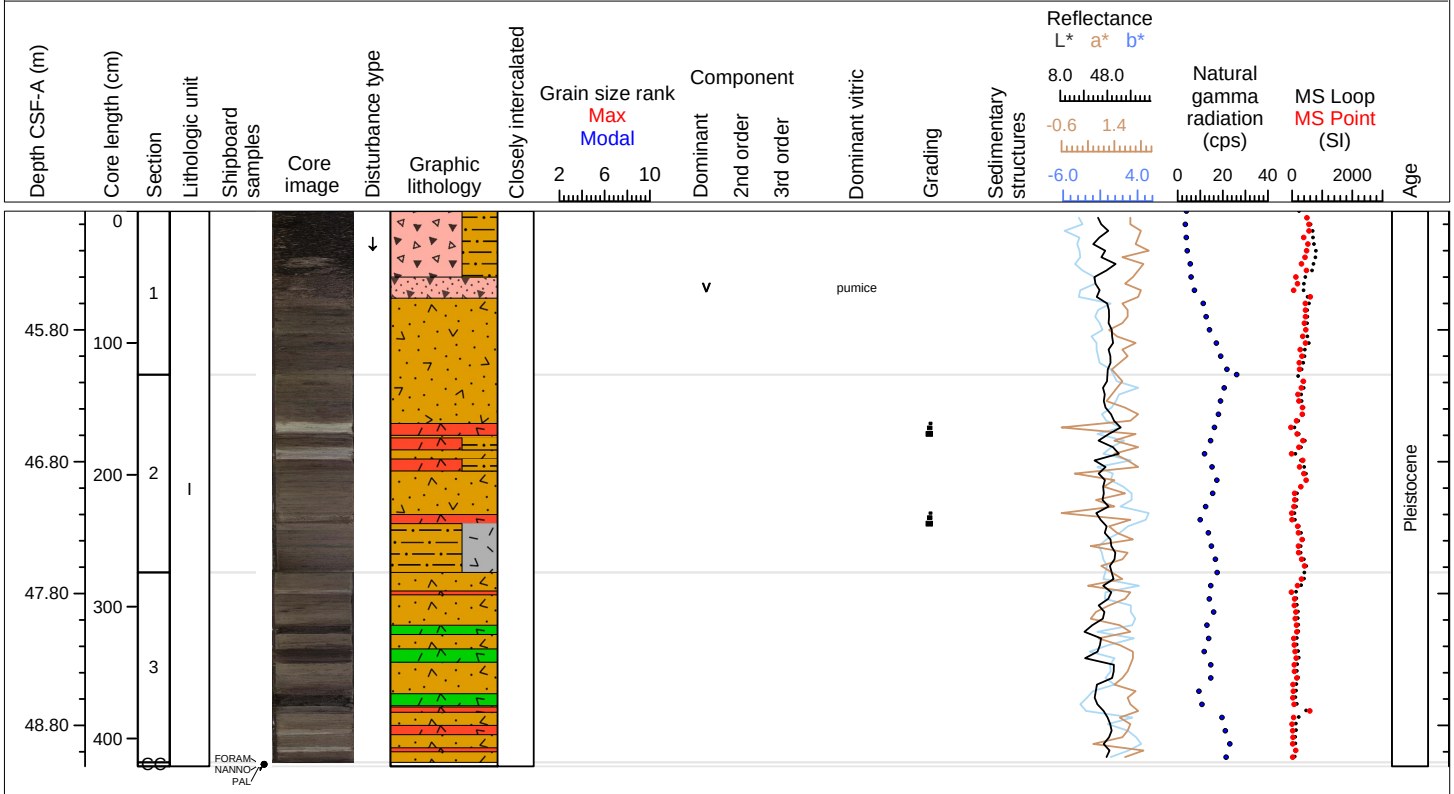
Hole 350-U1436B Core 8H, Interval 39.8-44.91 m (CSF-A)

tuffaceous mud intercalated with evolved and mafic ash



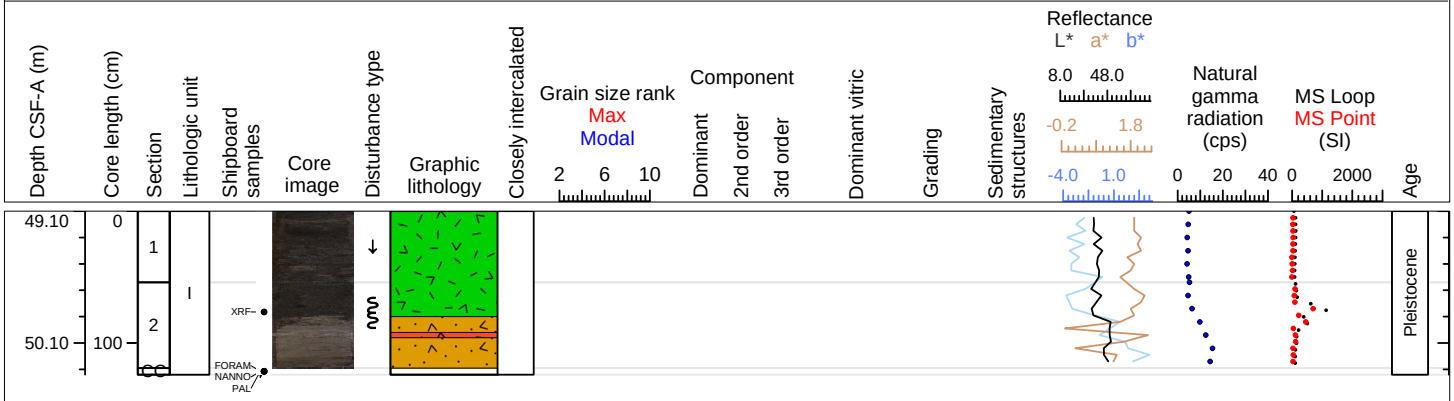
Hole 350-U1436B Core 9H, Interval 44.9-49.11 m (CSF-A)

tuffaceous mud intercalated with evolved and mafic ash



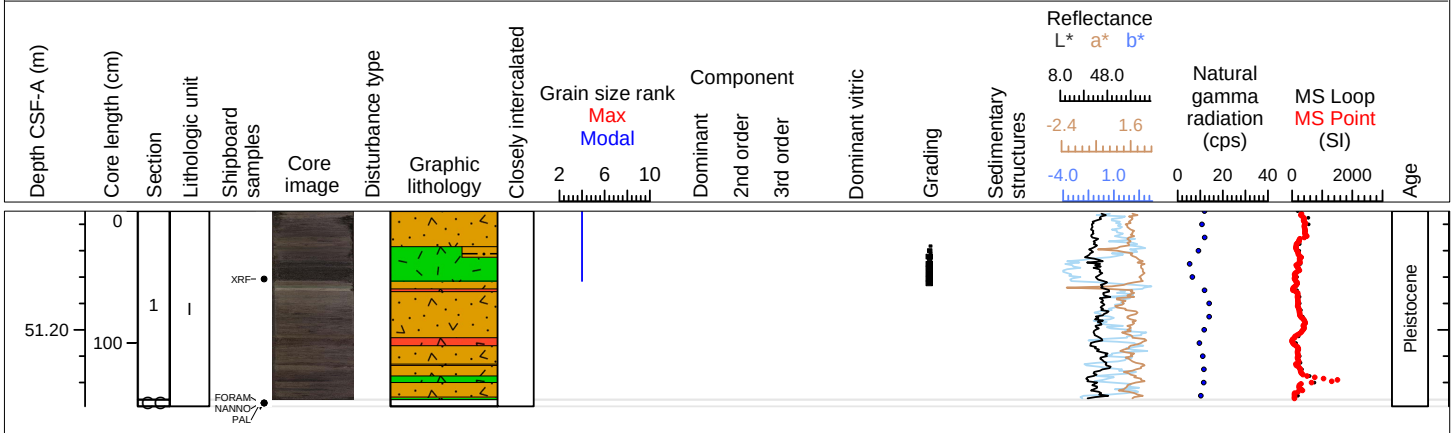
Hole 350-U1436B Core 10H, Interval 49.1-50.34 m (CSF-A)

mafic ash intercalated with tuffaceous mud and evolved ash



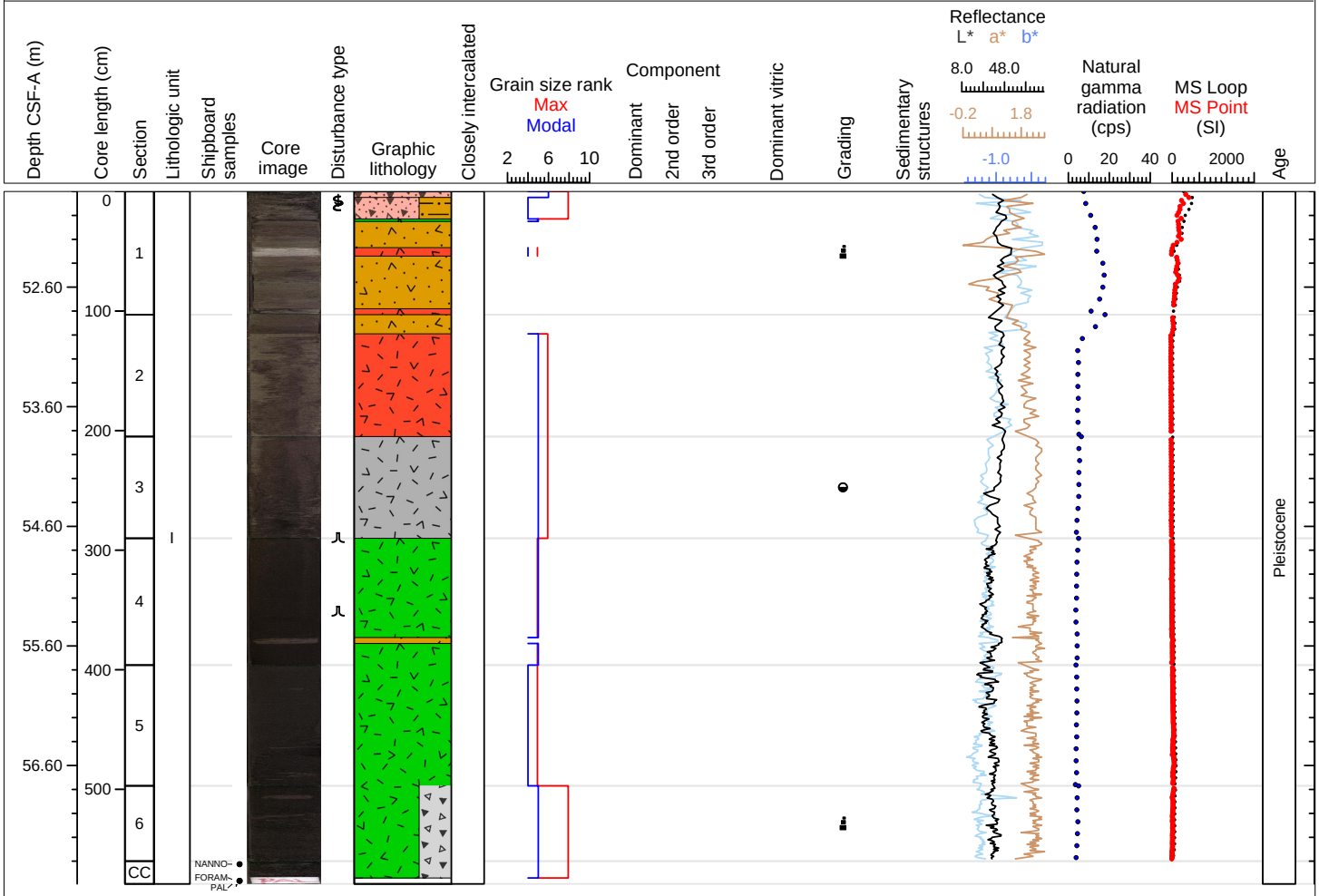
Hole 350-U1436B Core 11H, Interval 50.3-51.78 m (CSF-A)

tuffaceous mud intercalated with evolved and mafic ash



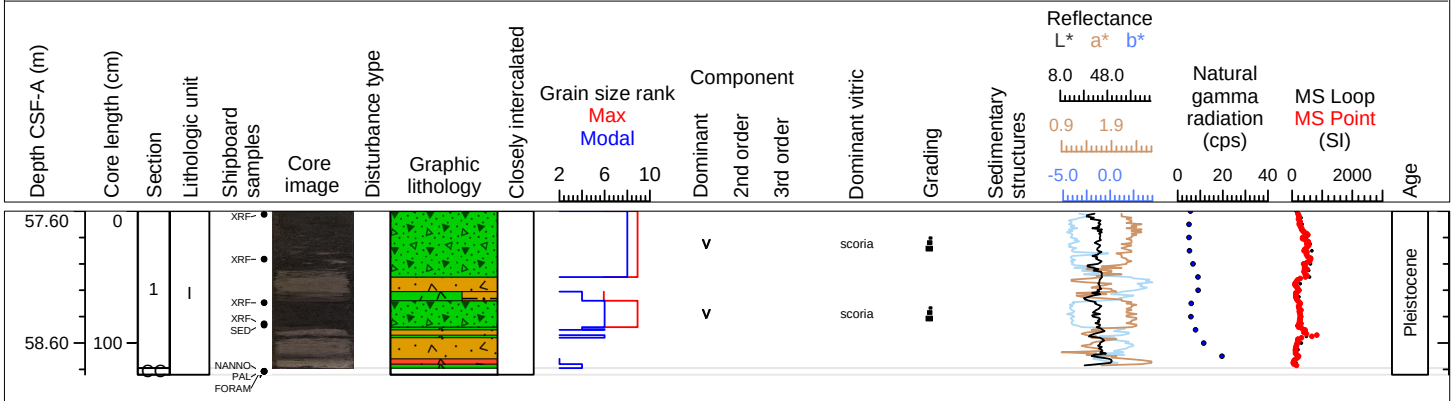
Hole 350-U1436B Core 12H, Interval 51.8-57.59 m (CSF-A)

mafic ash intercalated with evolved ash and tuffaceous mud



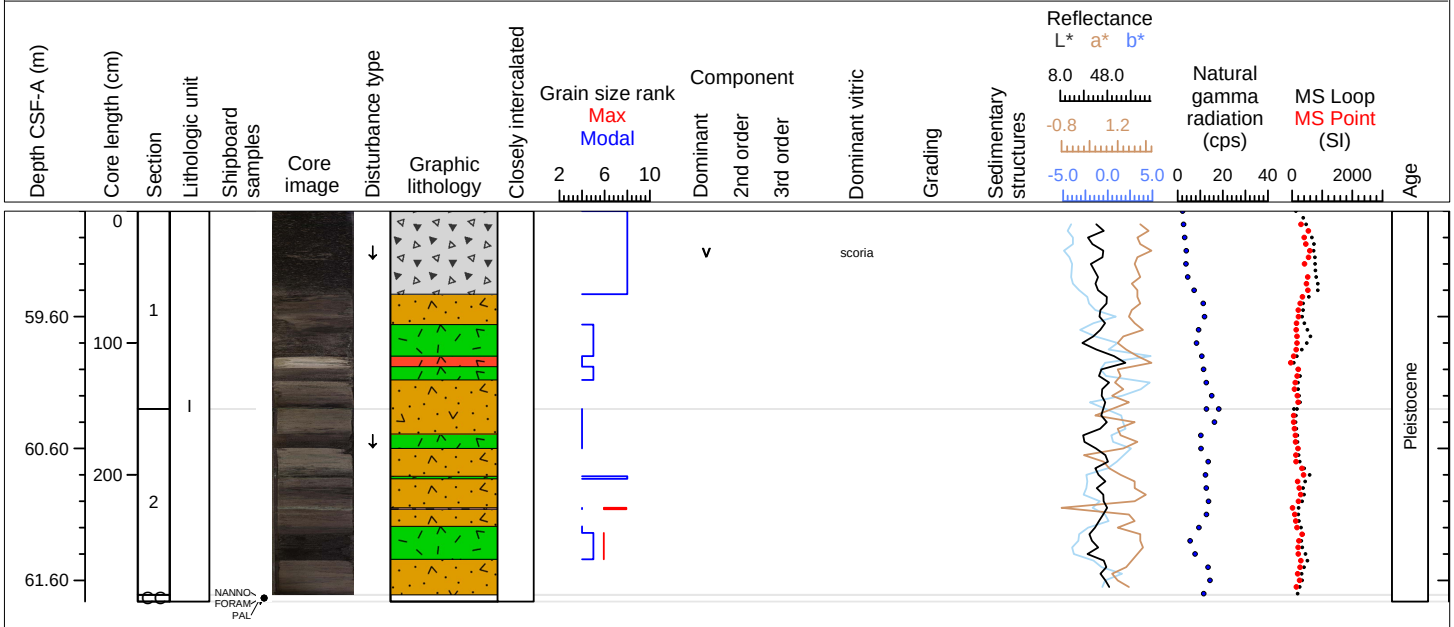
Hole 350-U1436B Core 13H, Interval 57.6-58.84 m (CSF-A)

mafic ash intercalated with tuffaceous mud and evolved ash



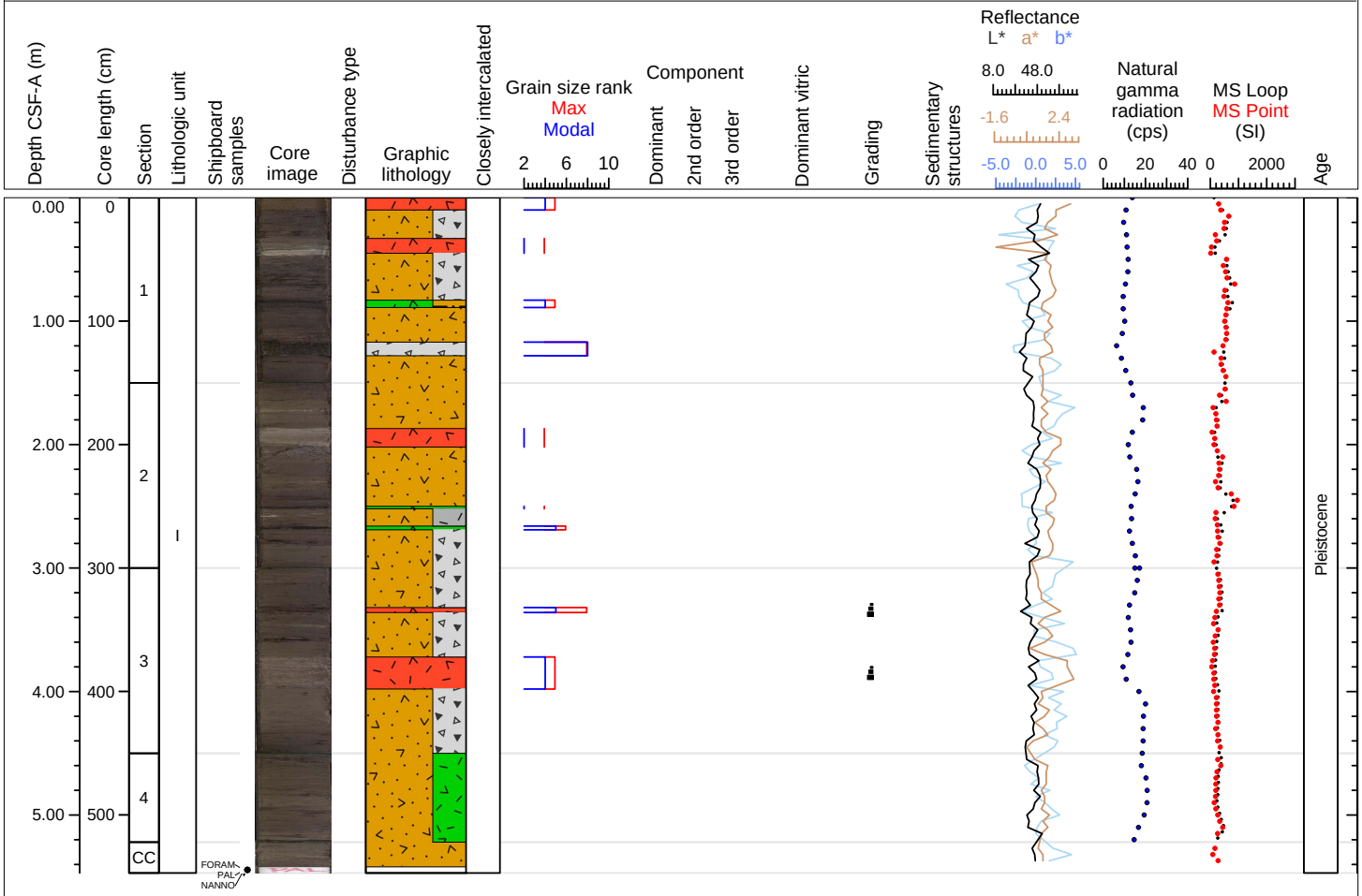
Hole 350-U1436B Core 14H, Interval 58.8-61.76 m (CSF-A)

tuffaceous mud intercalated with mafic and evolved ash



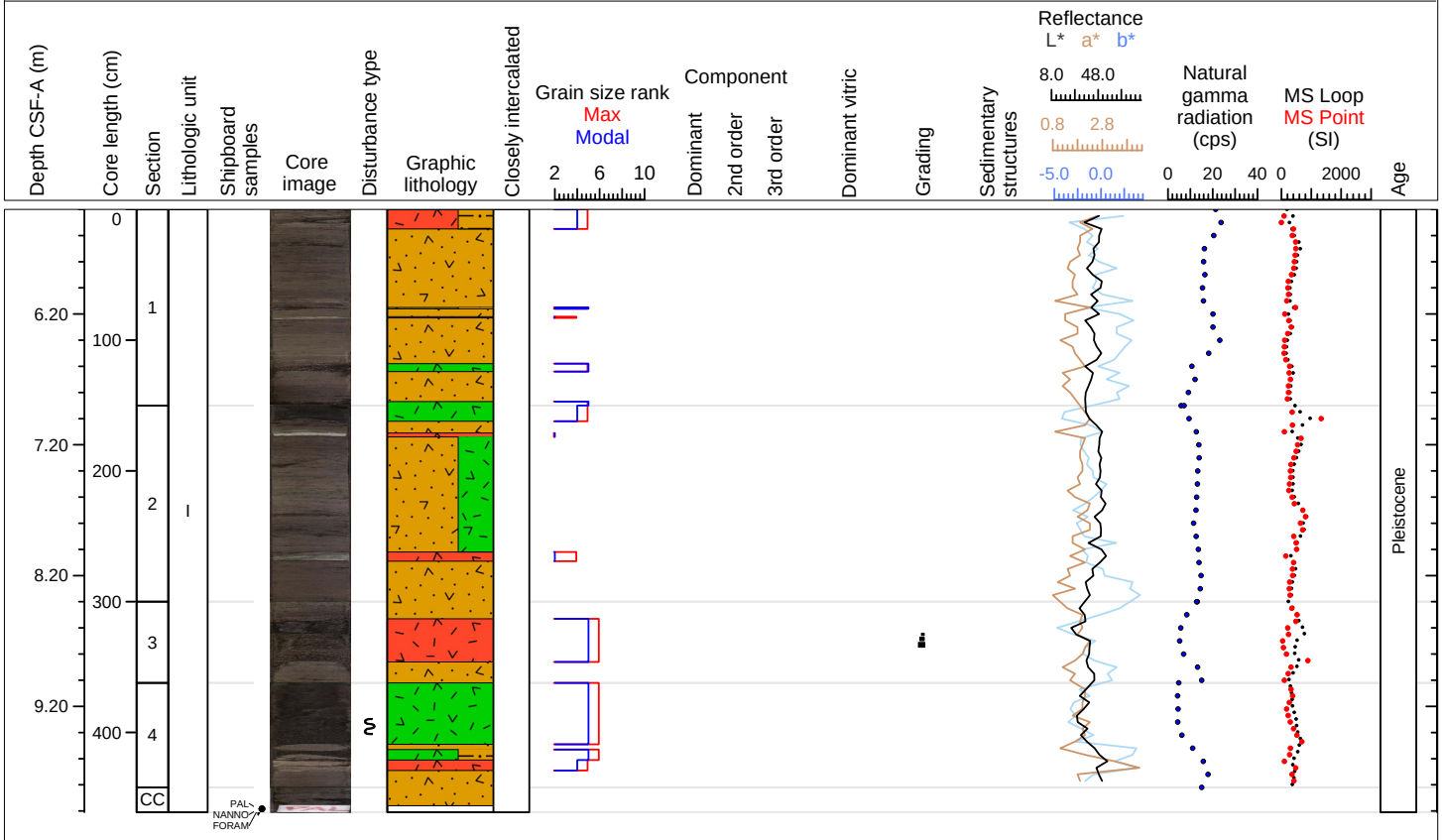
Hole 350-U1436C Core 1H, Interval 0.0-5.47 m (CSF-A)

tuffaceous mud intercalated with evolved and mafic ash



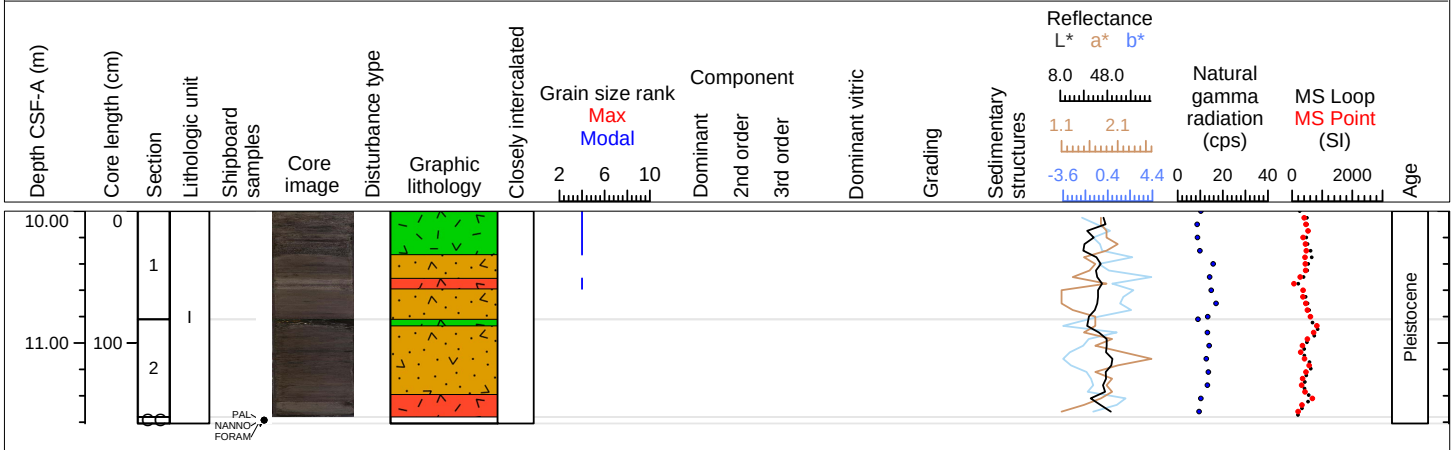
Hole 350-U1436C Core 2H, Interval 5.4-10.01 m (CSF-A)

tuffaceous mud intercalated with evolved and mafic ash



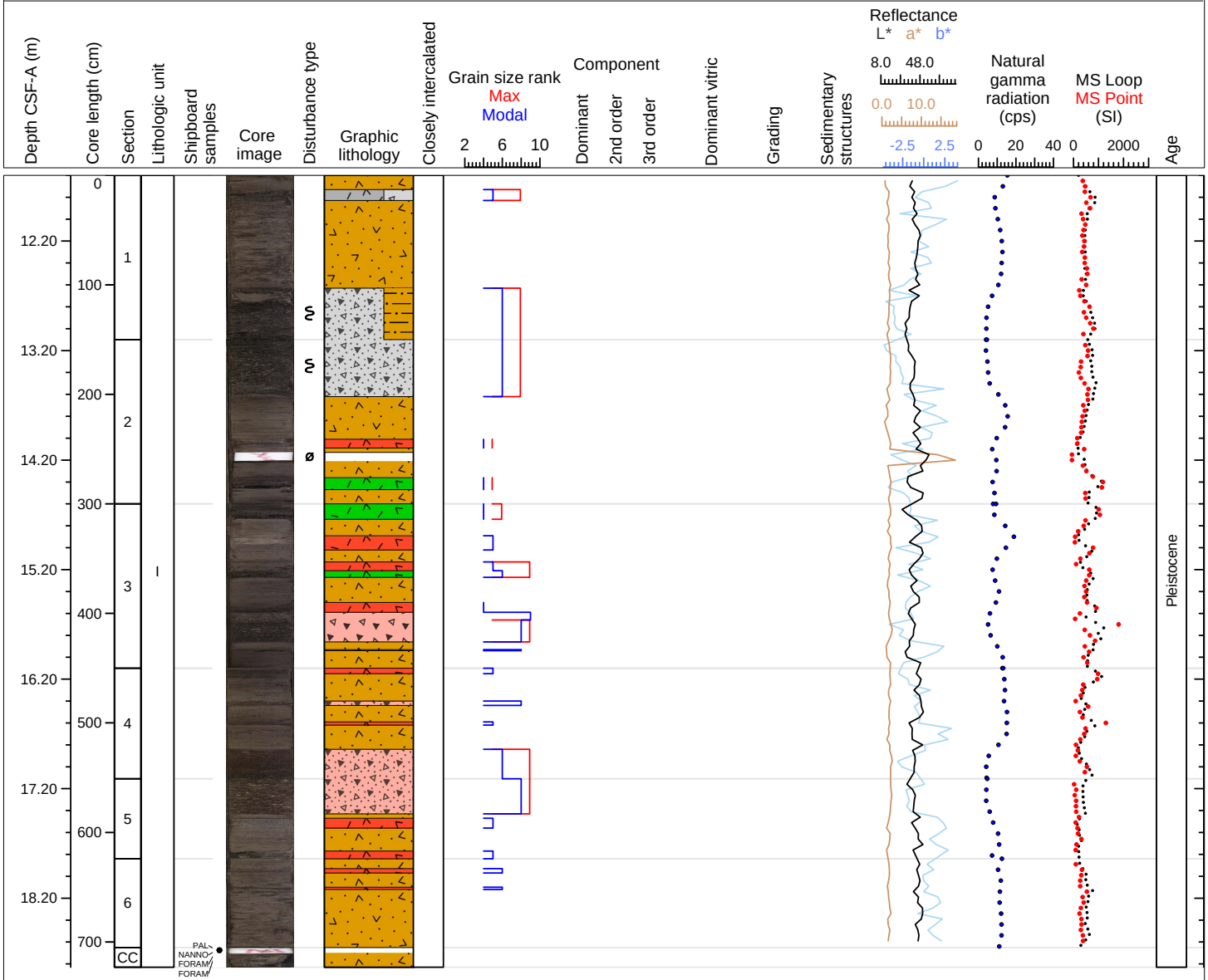
Hole 350-U1436C Core 3H, Interval 10.0-11.61 m (CSF-A)

tuffaceous mud intercalated with mafic and evolved ash



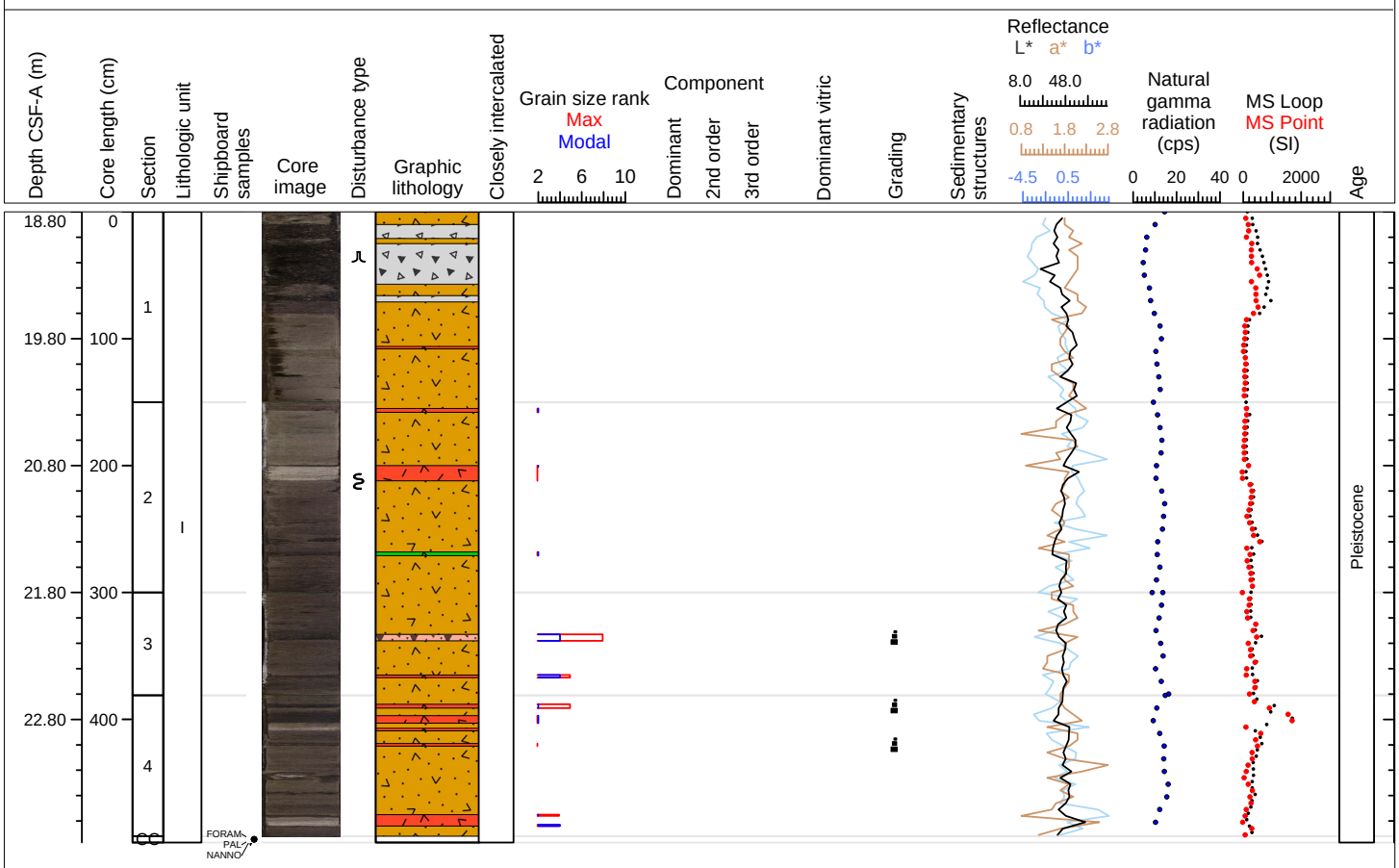
Hole 350-U1436C Core 4H, Interval 11.6-18.83 m (CSF-A)

tuffaceous mud intercalated with evolved and mafic ash



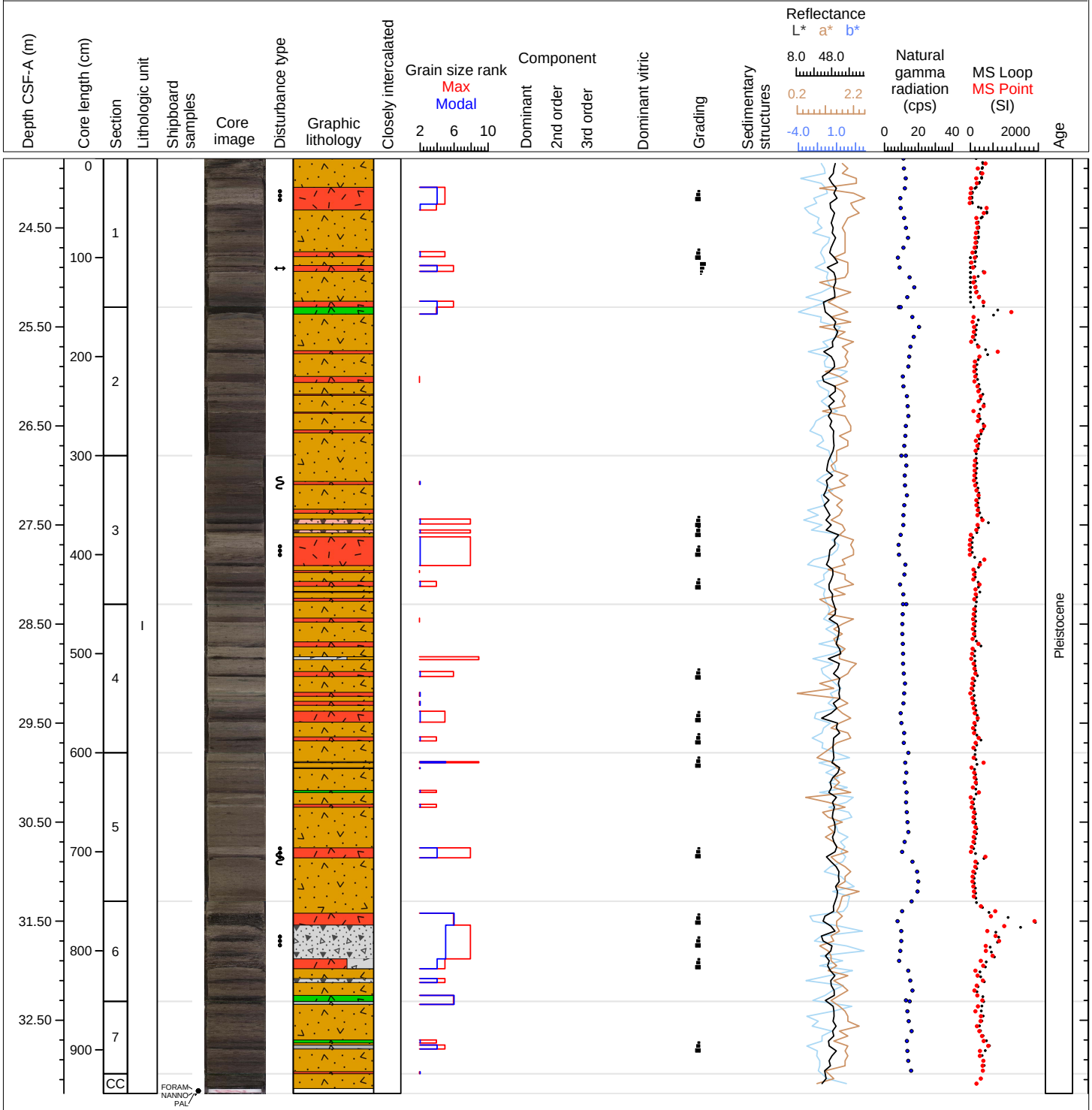
Hole 350-U1436C Core 5H, Interval 18.8-23.77 m (CSF-A)

tuffaceous mud intercalated with evolved ash



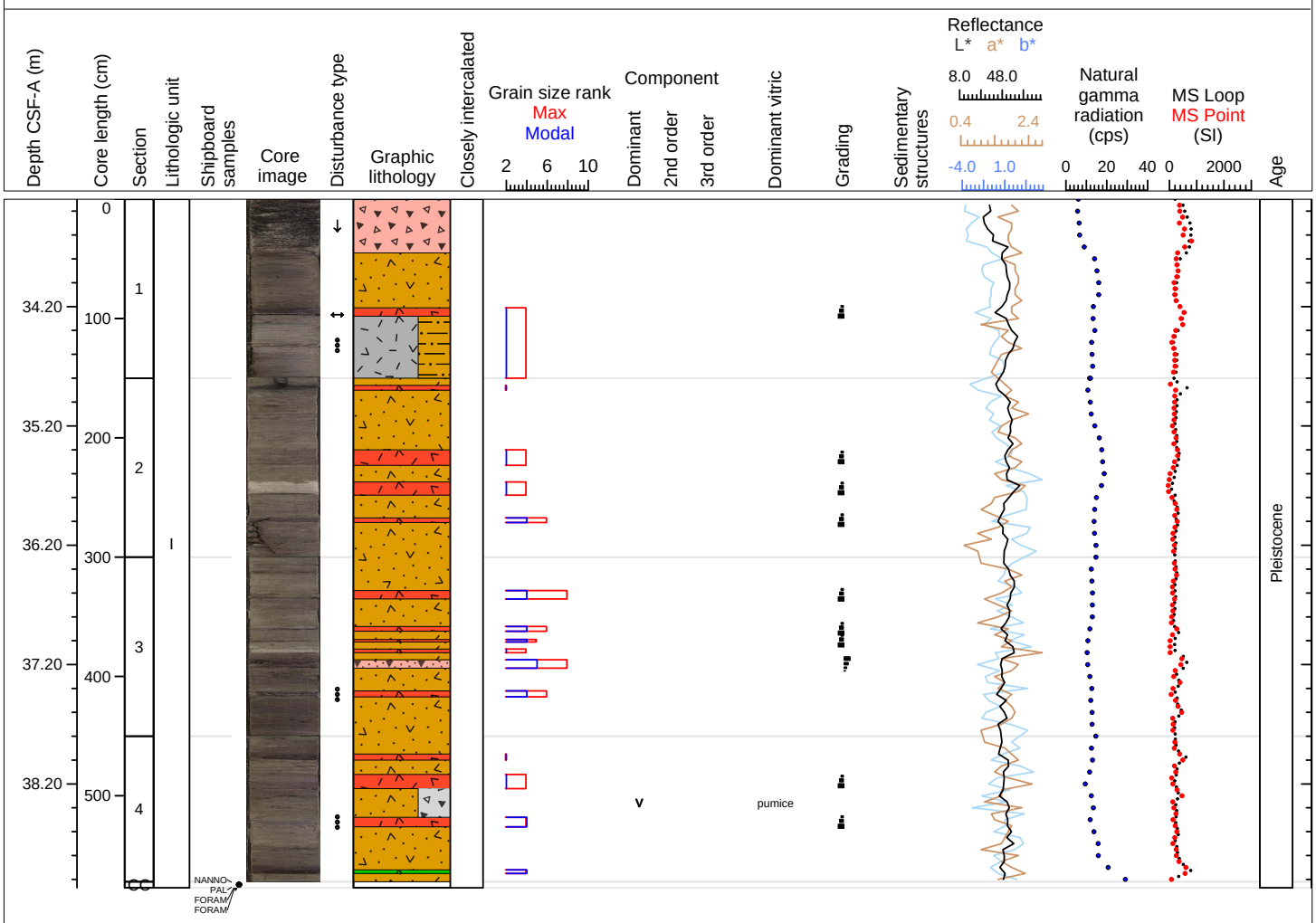
Hole 350-U1436C Core 6H, Interval 23.8-33.24 m (CSF-A)

tuffaceous mud intercalated with evolved and mafic ash



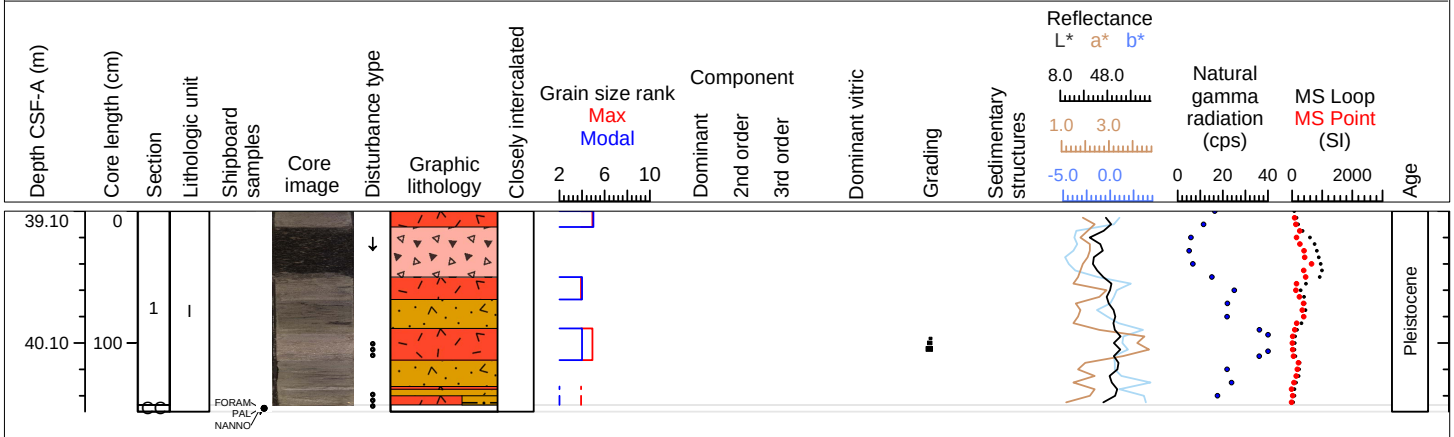
Hole 350-U1436C Core 7H, Interval 33.3-39.07 m (CSF-A)

tuffaceous mud intercalated with evolved and mafic ash



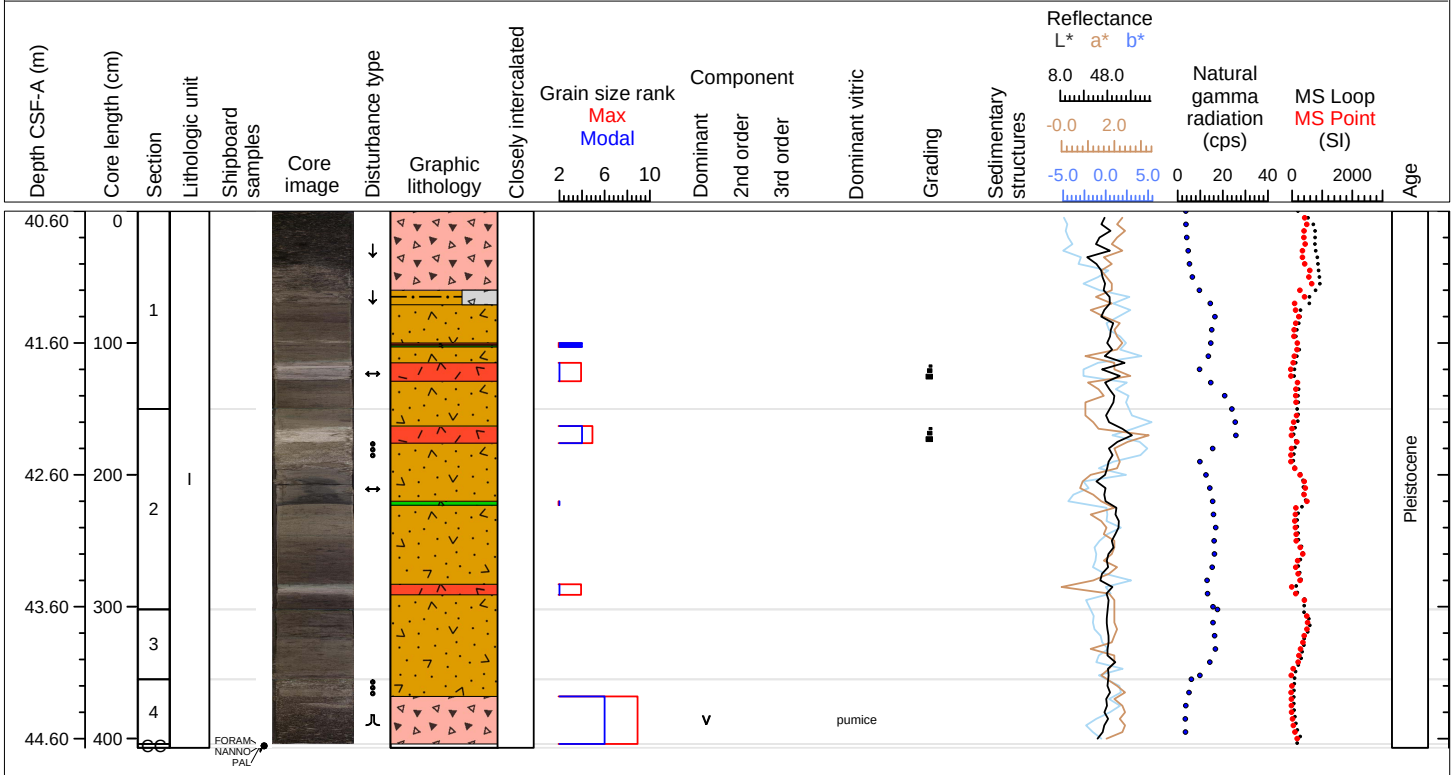
Hole 350-U1436C Core 8F, Interval 39.1-40.62 m (CSF-A)

evolved ash intercalated with tuffaceous mud



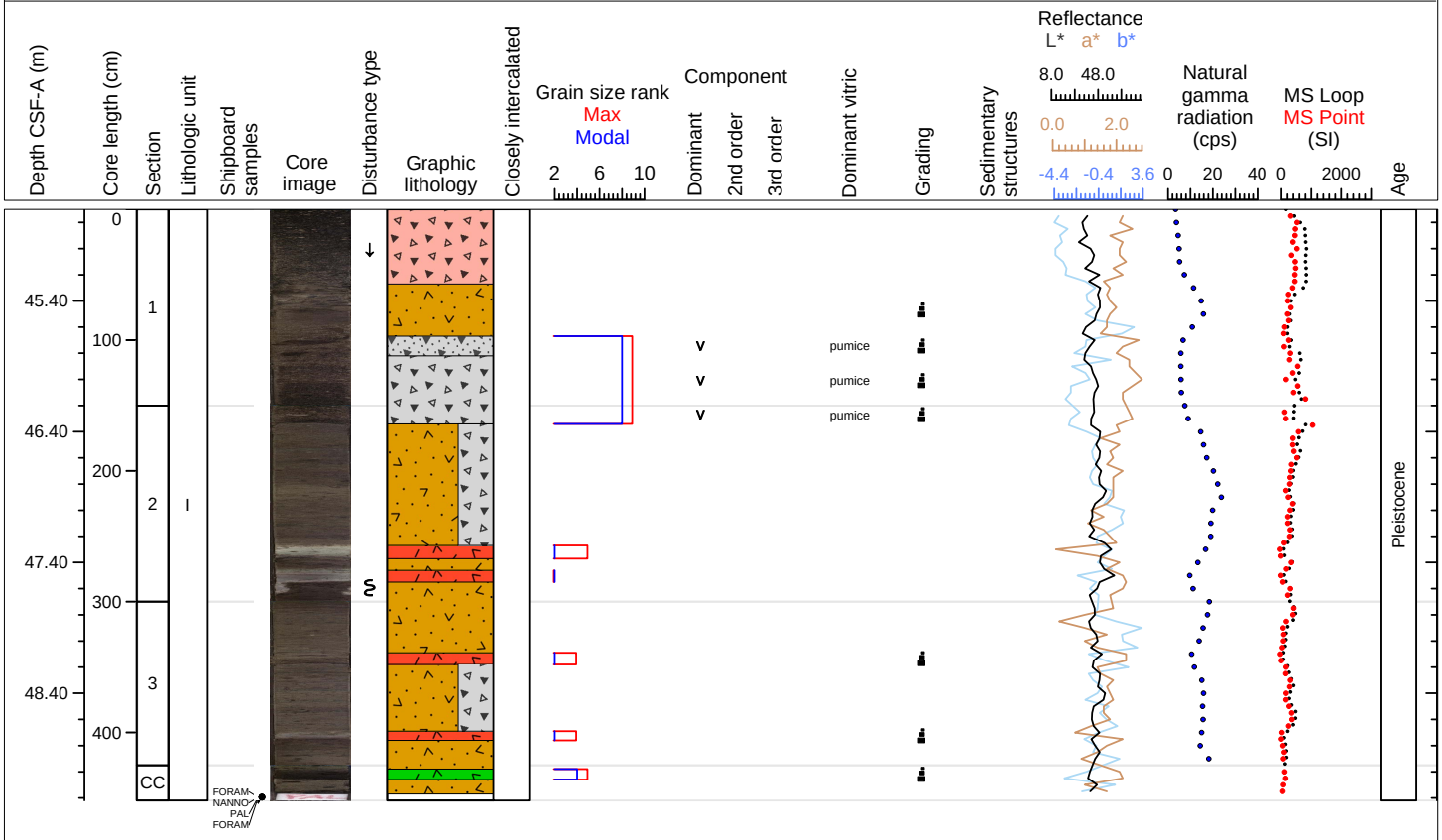
Hole 350-U1436C Core 9F, Interval 40.6-44.67 m (CSF-A)

tuffaceous mud intercalated with evolved and mafic ash



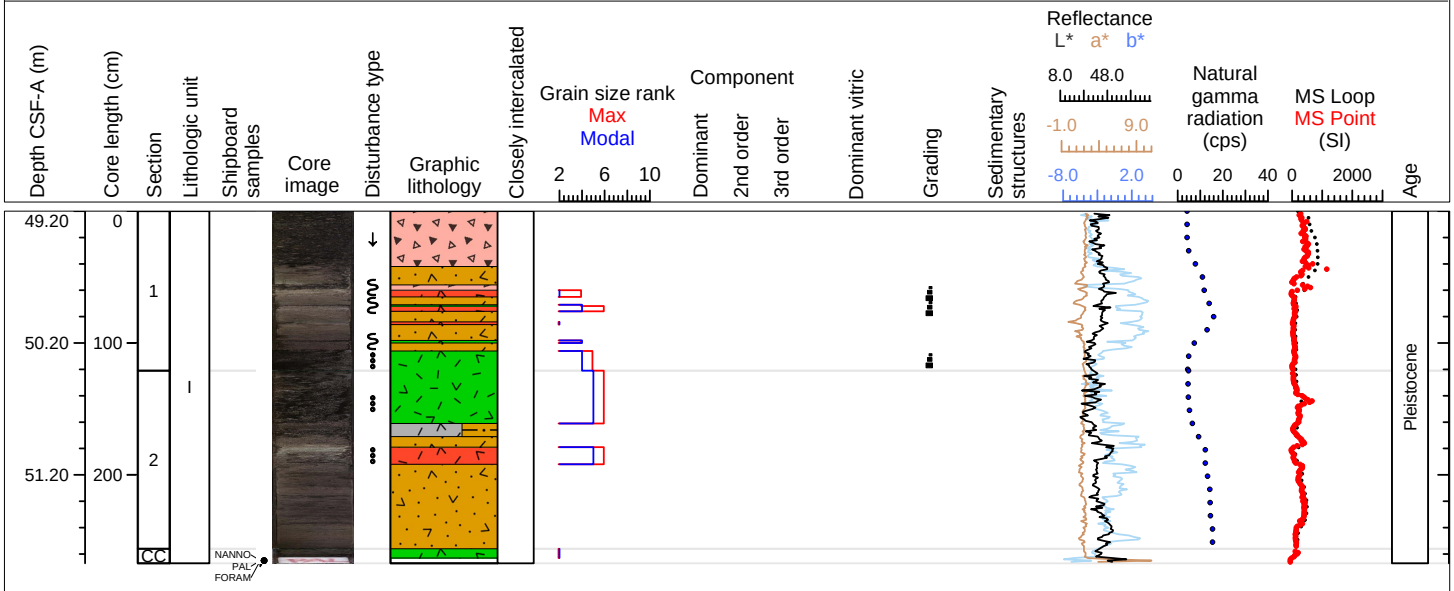
Hole 350-U1436C Core 10F, Interval 44.7-49.22 m (CSF-A)

tuffaceous mud intercalated with bimodal lapilli, evolved and mafic ash



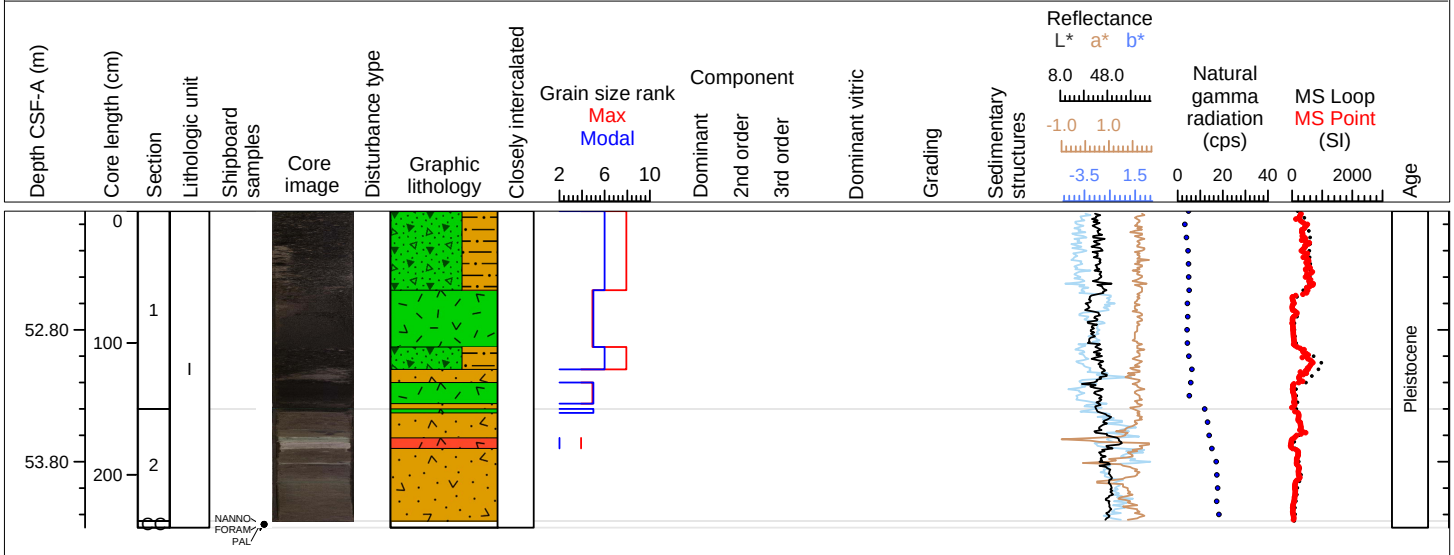
Hole 350-U1436C Core 11F, Interval 49.2-51.87 m (CSF-A)

mafic ash with tuffaceous mud and evolved ash



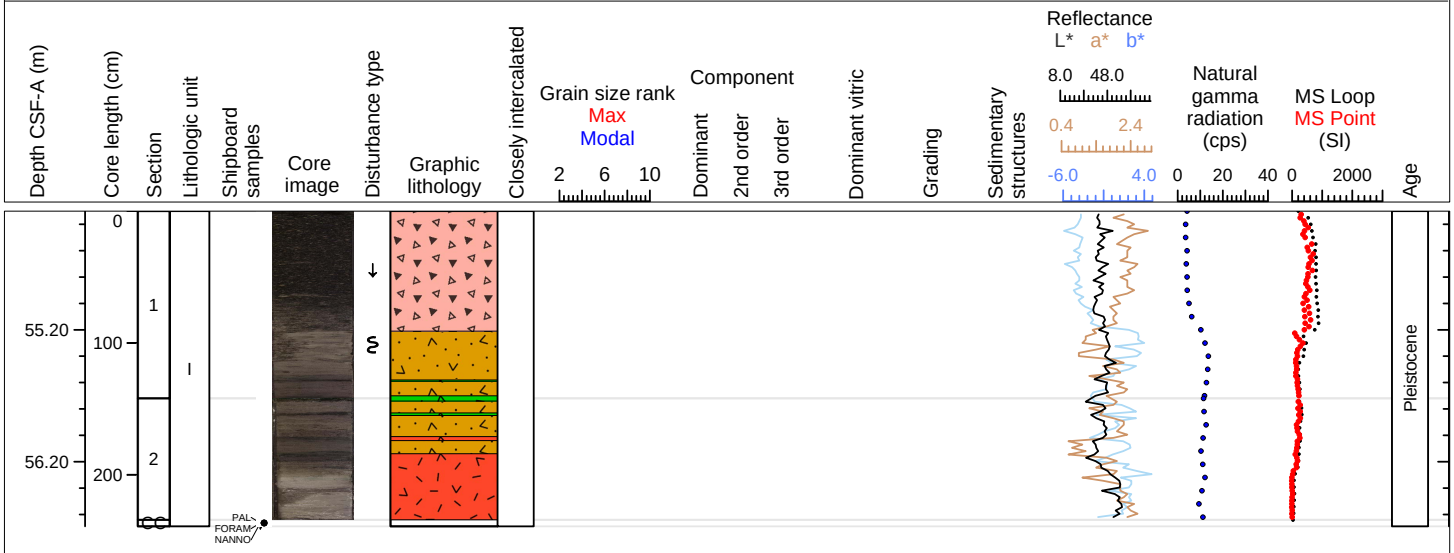
Hole 350-U1436C Core 12F, Interval 51.9-54.3 m (CSF-A)

tuffaceous mud intercalated with evolved and mafic ash



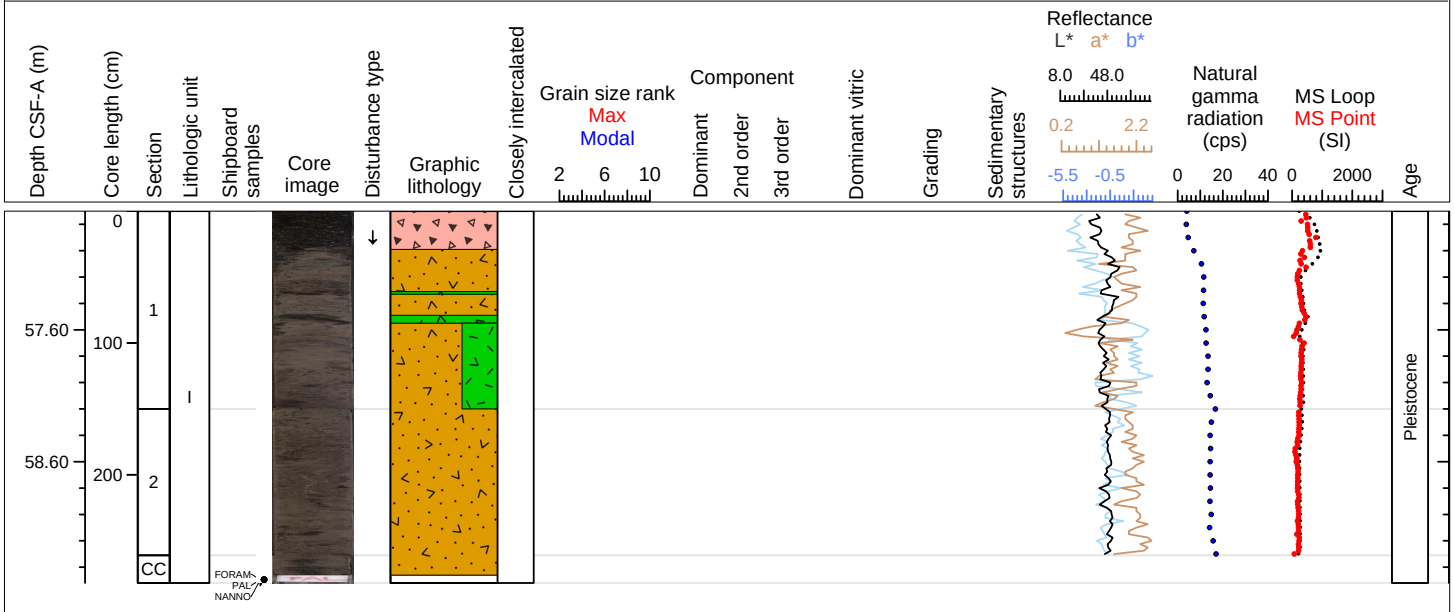
Hole 350-U1436C Core 13F, Interval 54.3-56.69 m (CSF-A)

tuffaceous mud intercalated with evolved and mafic ash



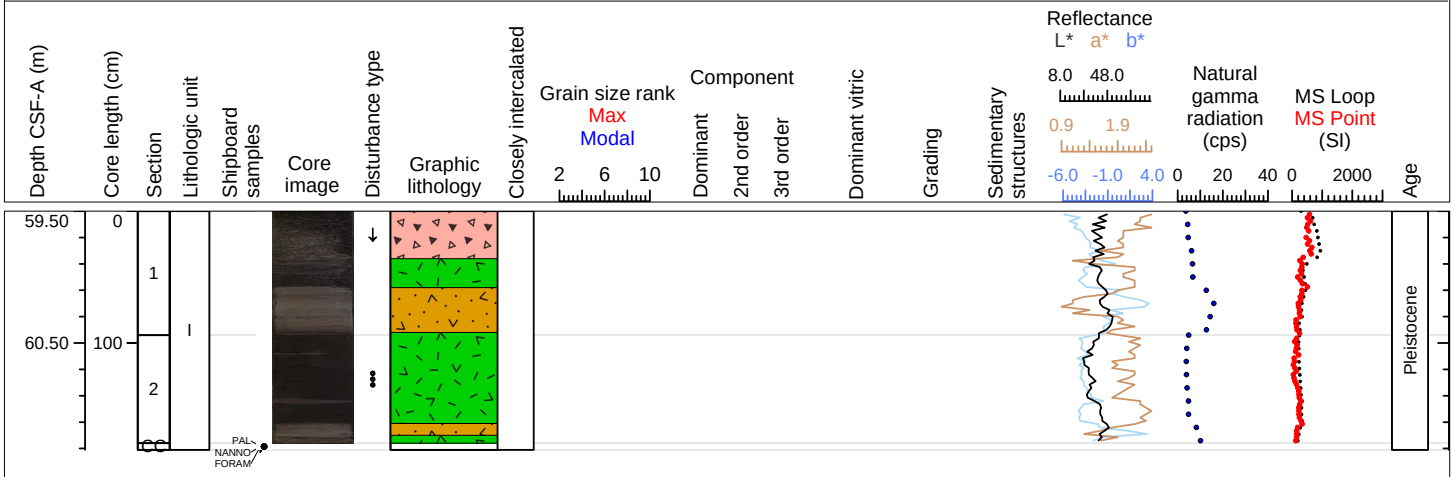
Hole 350-U1436C Core 14F, Interval 56.7-59.52 m (CSF-A)

tuffaceous mud intercalated with mafic ash



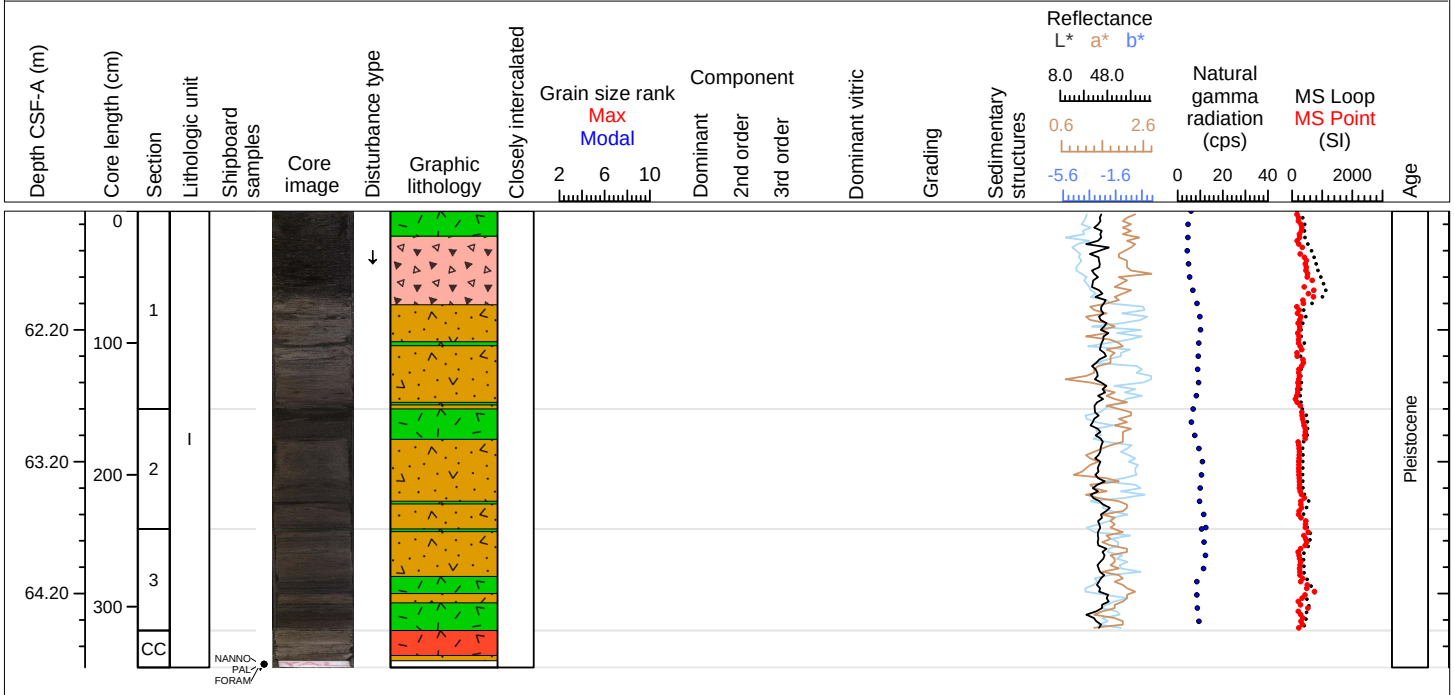
Hole 350-U1436C Core 15F, Interval 59.5-61.31 m (CSF-A)

tuffaceous mud intercalated with mafic ash



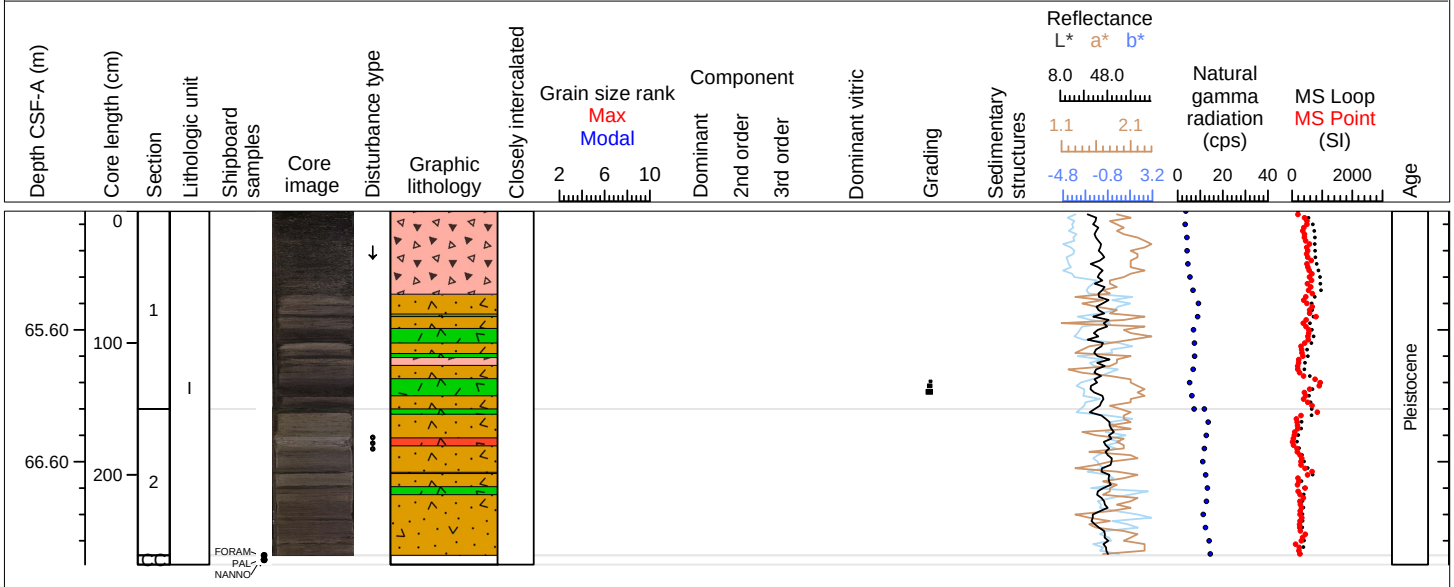
Hole 350-U1436C Core 16F, Interval 61.3-64.76 m (CSF-A)

tuffaceous mud intercalated with evolved and mafic ash



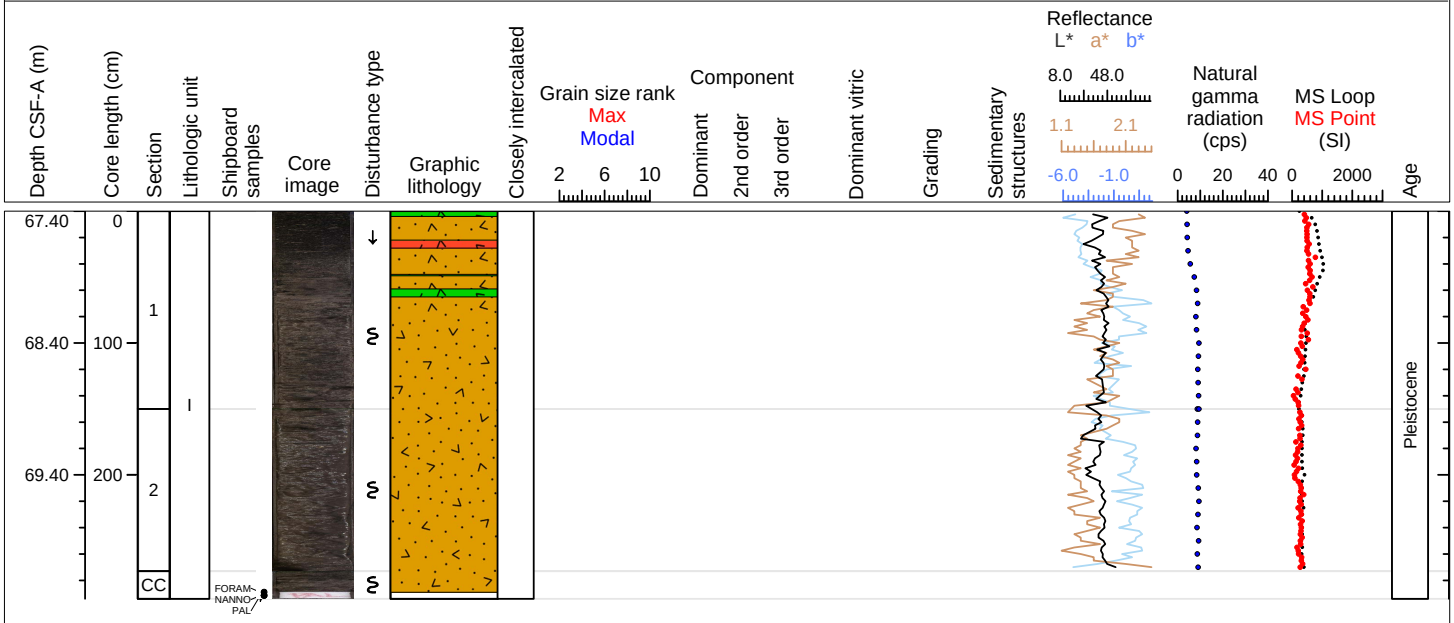
Hole 350-U1436C Core 17F, Interval 64.7-67.38 m (CSF-A)

tuffaceous mud intercalated with mafic ash



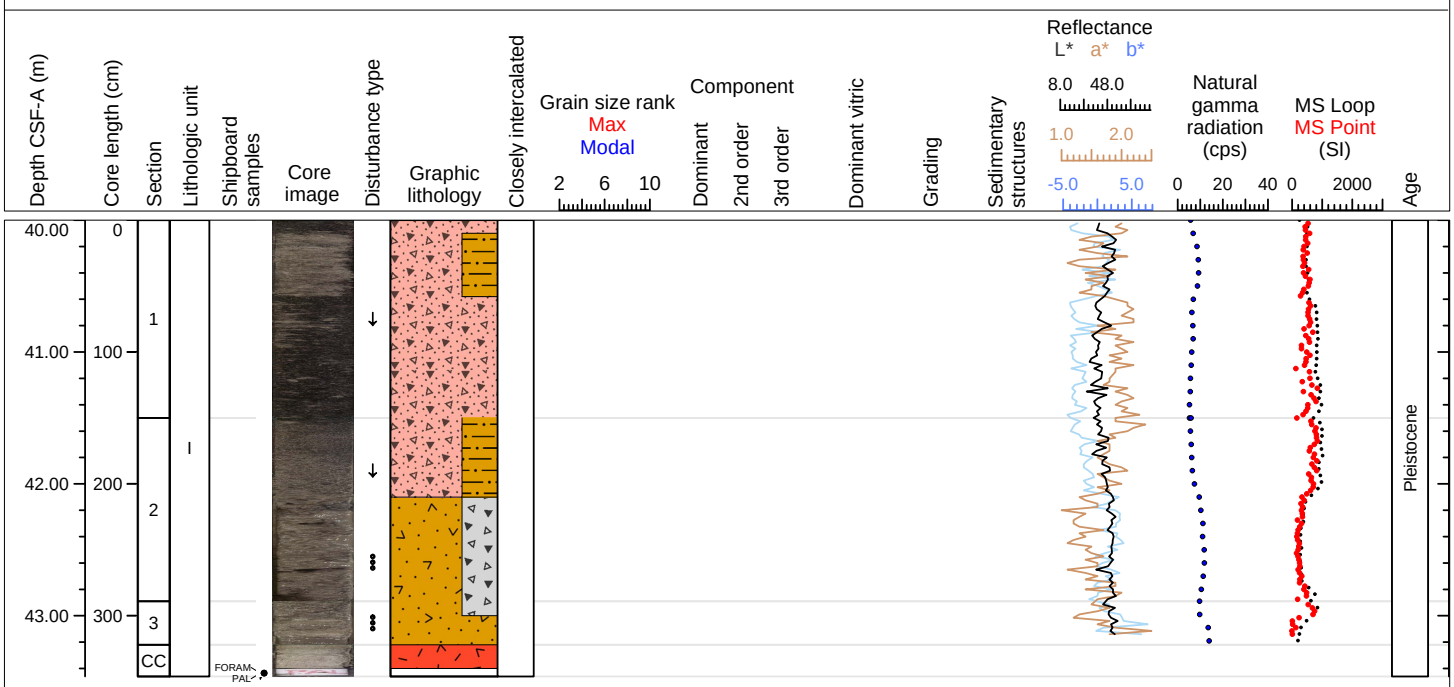
Hole 350-U1436C Core 18F, Interval 67.4-70.34 m (CSF-A)

tuffaceous mud intercalated with evolved and mafic ash



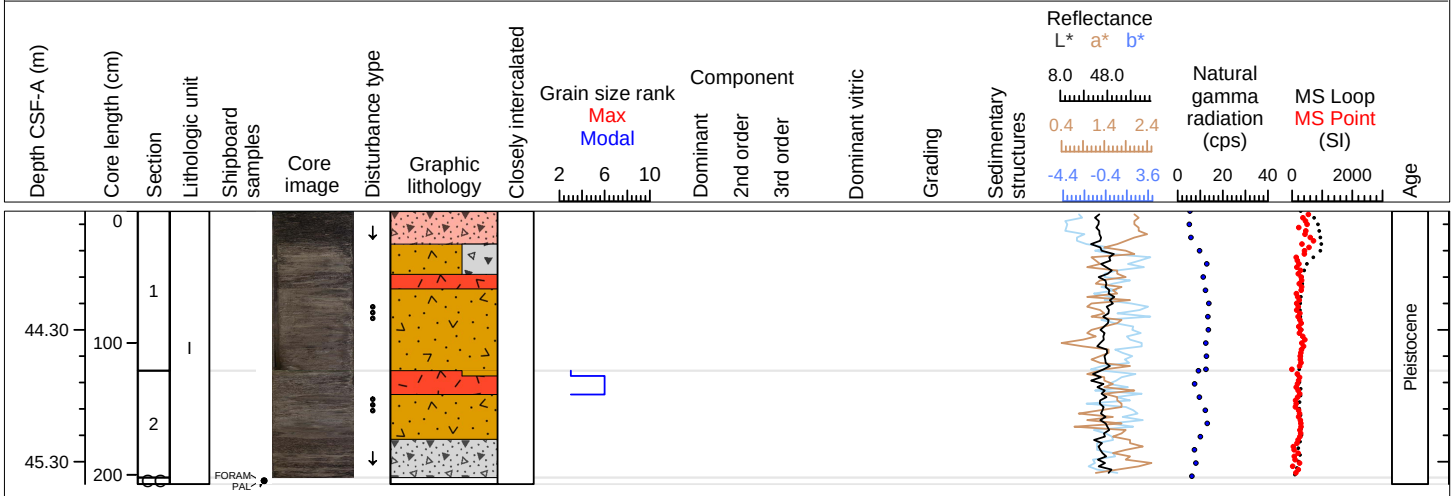
Hole 350-U1436D Core 2F, Interval 40.0-43.46 m (CSF-A)

clast-supported lapilli-ash (drilling disturbance) and tuffaceous mudstone



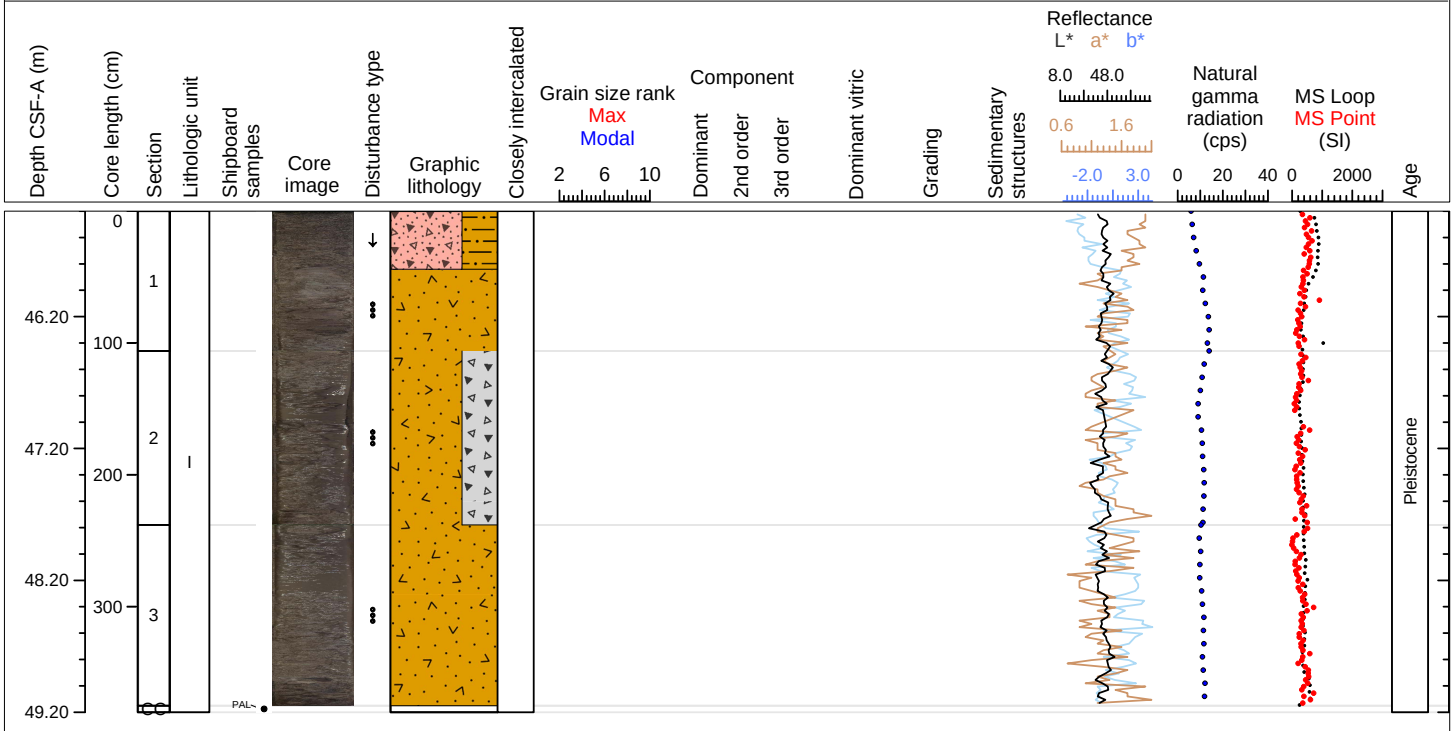
Hole 350-U1436D Core 3F, Interval 43.4-45.47 m (CSF-A)

tuffaceous mud intercalated with evolved ash layers



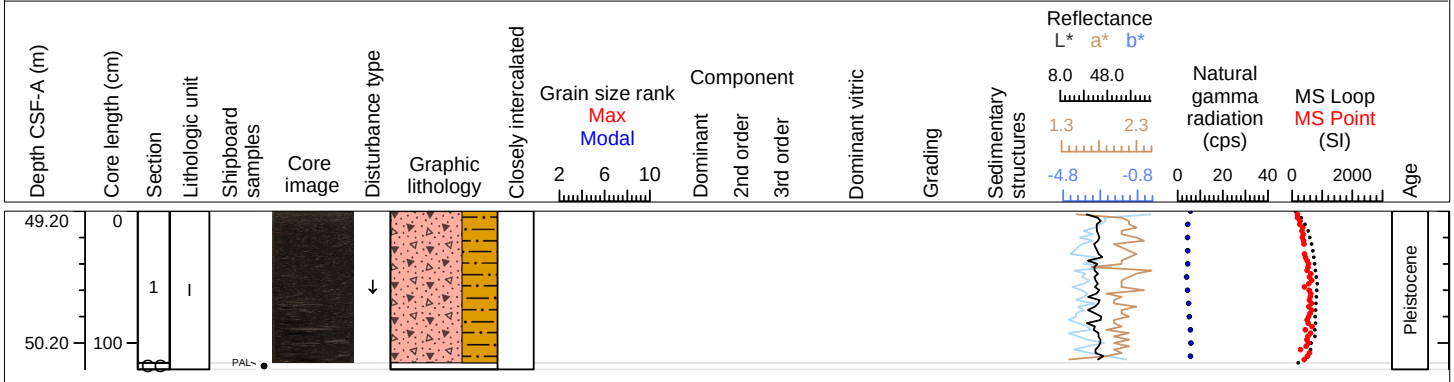
Hole 350-U1436D Core 4F, Interval 45.4-49.2 m (CSF-A)

clast-supported lapilli-ash (drilling disturbance) and tuffaceous mudstone



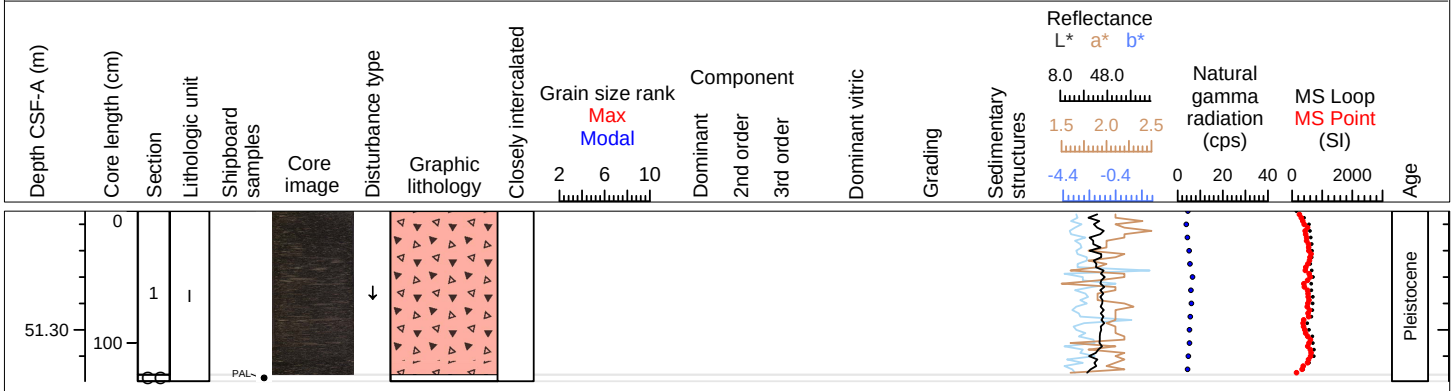
Hole 350-U1436D Core 5F, Interval 49.2-50.4 m (CSF-A)

clast-supported lapilli-ash (drilling disturbance)



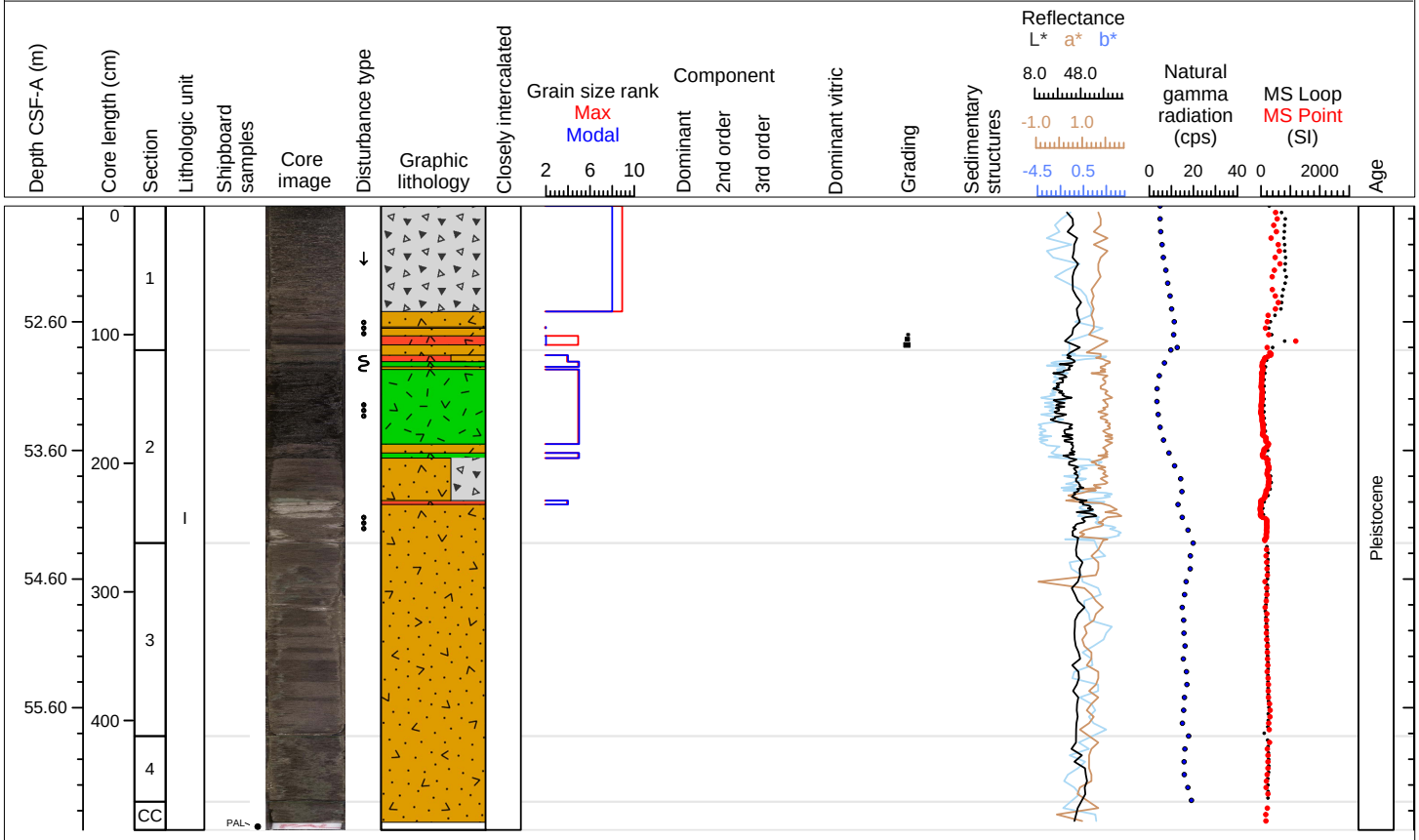
Hole 350-U1436D Core 6F, Interval 50.4-51.69 m (CSF-A)

clast-supported lapilli (drilling disturbance)



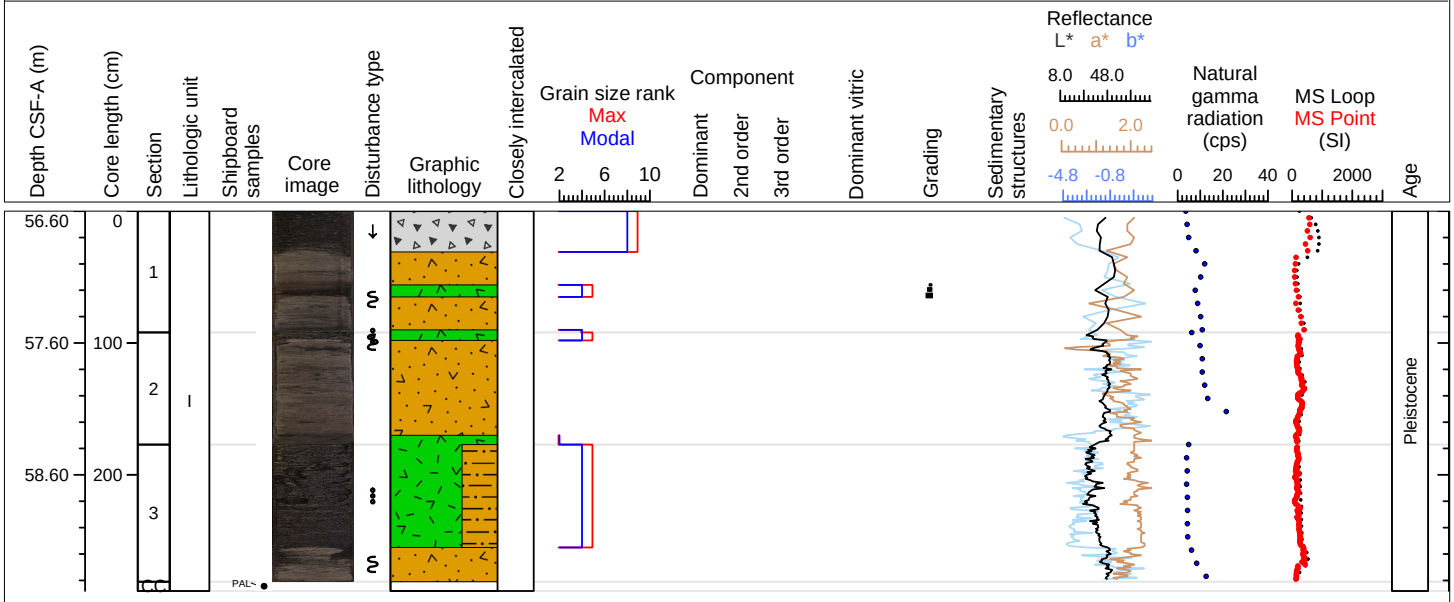
Hole 350-U1436D Core 7F, Interval 51.7-56.55 m (CSF-A)

tuffaceous mud intercalated with evolved ash and thick mafic ash



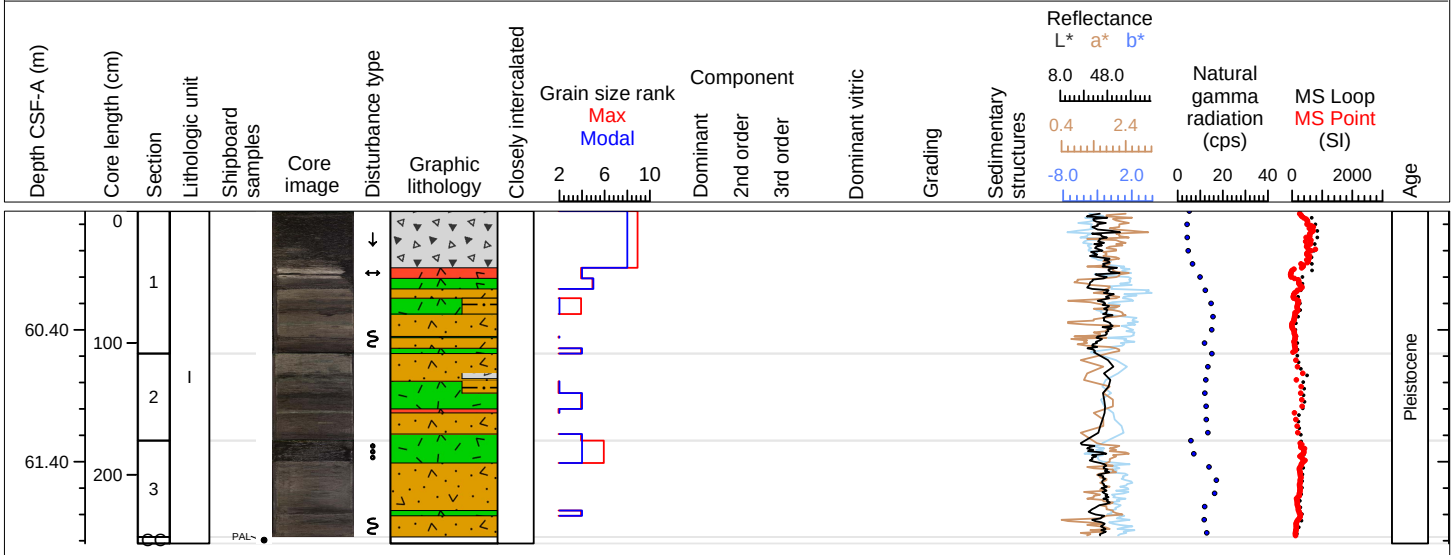
Hole 350-U1436D Core 8F, Interval 56.6-59.48 m (CSF-A)

tuffaceous mud intercalated with mafic and evolved ash layers



Hole 350-U1436D Core 9F, Interval 59.5-62.02 m (CSF-A)

tuffaceous mud intercalated with mafic and evolved ash layers



Sample	Top Depth [m]	Bottom Depth [m]	Lithology prefix	Principal lithology	Lithology suffix	Complete lithology name	Ash [%]	Siliciclastic [%]	Mineral grain roundness	Ash grain roundness	Mafic tephra abundance	Felsic tephra abundance	Lithic grains abundance	Glass abundance	Palagonite abundance	Feldspar abundance	Oxide abundance	Radiolarians abundance	General comment
350-U1436A-8H-2-W 36/37-SED	51.94	51.95	mafic	ash		mafic ash	100			very angular	D			D		R			
350-U1436A-8H-3-W 35/36-SED	53.33	53.34	mafic	ash		mafic ash	100			very angular	D			D		R			

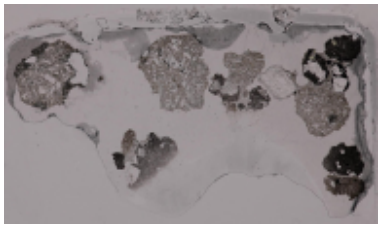
Sample	Top Depth [m]	Bottom Depth [m]	Lithology prefix	Principal lithology	Lithology suffix	Complete lithology name	Ash [%]	Siliciclastic [%]	Mineral grain roundness	Ash grain roundness	Mafic tephra abundance	Felsic tephra abundance	Lithic grains abundance	Glass abundance	Palagonite abundance	Feldspar abundance	Oxide abundance	Radiolarians abundance	General comment
350-U1436B-1H-2-A 23/24-SED	1.73	1.74	evolved	ash		evolved ash	98	2	angular	angular		D				C	R		
350-U1436B-13H-1-W 86/87-SED	58.46	58.47	mafic	ash		mafic ash	100		angular	angular	D	Tr	Tr		R			Tr	

THIN SECTION LABEL ID: **350-U1436A-1H-1-W 126/127-TSB-TS_01** Thin section no.: 1

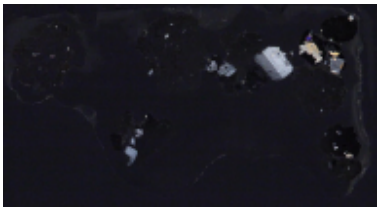
Unit/Subunit: Piece no.: Observer: DeBari

Thin section summary: Thin section shows evidence of magma mingling between a host, devitrified glass and two types of magmatic inclusons. The first is a coarsely cpx-plag phyric basalt, the second is a vesicular and partially devitrified andesite. Both are included in a devitrified, non vesicular andesite

Plane-polarized:



Cross-polarized:



SEDIMENT

Dominant particles: lithic **2nd order particles:** **3rd order particles:**

Grain Type	Dominant grains	Dominant roundness	Dominant max size (mm)	2nd order grains	2nd order roundness	2nd order max size (mm)	3rd order grains	3rd order roundness	3rd order max size (mm)
Vitric			-- -- -- -- --			-- -- -- -- --			-- -- -- -- --
Lithic	igneous, evolved	sub-rounded	-- -- -- -- --			-- -- -- -- --			-- -- -- -- --
Crystal									

Clast Type	Dominant clasts	Dominant clast roundness	2nd order clasts	2nd order clast roundness	3rd order clasts	3rd order clast roundness
Vitric	pumice	sub-rounded				
Lithic	igneous, evolved	sub-rounded				

PRIMARY (IGNEOUS) MINERALOGY

Sample domain name: **Inclusion1** Domain no.: 1 Domain rel. abundance (%): 30

Lithology:	highly augite-plagioclase phyric basalt inclusion	Texture:	hypocrystalline
Grain size:	cryptocrystalline	Grain size distribution:	bimodal

Phenocrysts	Present [%]	Size mode (mm)	Comments
Plagioclase	20	2	twinning
Clinopyroxene	5	0.4	

Sample domain name: **Inclusion 2** Domain no.: 2 Domain rel. abundance (%): 55

Lithology:	sparsely plagioclase phyric andesite inclusion	Texture:	hypocrystalline
Grain size:	cryptocrystalline	Grain size distribution:	bimodal

Phenocrysts	Present [%]	Size mode (mm)	Comments
Plagioclase	2	0.5	one large phenocryst 2.4 mm in one clast

Sample domain name: **matrix** Domain no.: 3 Domain rel. abundance (%): 15

Lithology:	aphyric andesite host magma	Texture:	aphanitic
Grain size:	microcrystalline	Grain size distribution:	equigranular

SECONDARY (ALTERATION) MINERALOGY

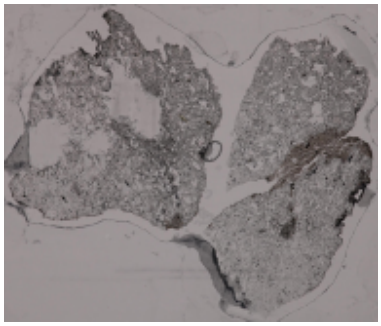
Alteration Domain	Original [%]	Altered [%]	DOMINANT	2nd Order	3rd Order	Comments
Groundmass			carbonate	zeolite		

THIN SECTION LABEL ID: **350-U1436A-2H-1-W 86/86-TSB-TS_02** Thin section no.: 2

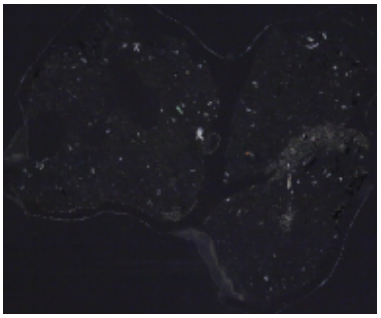
Unit/Subunit: Piece no.: Observer: DeBari

Thin section summary: Pumice dropstone in "mud with ash". Fresh glassy, sparsely phyric vesicular andesite with fine grained phenocrysts of plagioclase and lesser orthopyroxene and clinopyroxene

Plane-polarized:



Cross-polarized:



SEDIMENT

Dominant particles: microfossil **2nd order particles:** crystal **3rd order particles:** lithic

Grain Type	Dominant grains	Dominant roundness	Dominant max size (mm)	2nd order grains	2nd order roundness	2nd order max size (mm)	3rd order grains	3rd order roundness	3rd order max size (mm)
Vitric			-- -- -- -- --			-- -- -- -- --			-- -- -- -- --
Lithic	igneous, evolved	sub-rounded	-- -- -- -- --			-- -- -- -- --			-- -- -- -- --
Crystal	plagioclase	subhedral	0.2						

Clast Type	Dominant clasts	Dominant clast roundness	2nd order clasts	2nd order clast roundness	3rd order clasts	3rd order clast roundness
Vitric	pumice	sub-rounded				
Lithic						

PRIMARY (IGNEOUS) MINERALOGY

Lithology:	sparsely orthopyroxene-plagioclase phyric andesite pumice clasts	Texture:	hypocrystalline
Grain size:	cryptocrystalline	Grain size distribution:	bimodal

Phenocrysts	Present [%]	Size mode (mm)	Comments
Plagioclase	3	0.5	
Clinopyroxene	1	0.5	
Orthopyroxene	1	0.5	

SECONDARY (ALTERATION) MINERALOGY

Mineral	Original [%]	Altered [%]	DOMINANT	2nd ORDER	3rd ORDER	Comment
Glass			zeolite			

Vesicles original (%)	Vesicle fill (%)	Vesicle fill dominant	Vesicle fill 2nd order	Vesicle fill 3rd order	Vesicle fill comment
		zeolite			

THIN SECTION LABEL ID: **350-U1436A-8H-2-W 97/99-TSB-TS_03** Thin section no.: 3

Unit/Subunit: Piece no.: Observer: DeBari

Thin section summary: Fresh basalt glass, multiple fragments, some have microlites of plagioclase, a lesser number have clinopyroxene microlites

Plane-polarized:

Cross-polarized:

SEDIMENT

General domain comment: fresh glass, some shards microcrystalline

Dominant particles: vitric **2nd order particles:** crystal **3rd order particles:**

Grain Type	Dominant grains	Dominant roundness	Dominant max size (mm)	2nd order grains	2nd order roundness	2nd order max size (mm)	3rd order grains	3rd order roundness	3rd order max size (mm)
Vitric	glass shards	angular	-- -- -- -- --			-- -- -- -- --			-- -- -- -- --
Lithic			-- -- -- -- --			-- -- -- -- --			-- -- -- -- --
Crystal	plagioclase	subhedral	0.1	clinopyroxene	subhedral	0.1			

SECONDARY (ALTERATION) MINERALOGY

Mineral	Original [%]	Altered [%]	DOMINANT	2nd ORDER	3rd ORDER	Comment
Glass			devitrification			

Vesicles original (%)	Vesicle fill (%)	Vesicle fill dominant	Vesicle fill 2nd order	Vesicle fill 3rd order	Vesicle fill comment
		zeolite			

THIN SECTION LABEL ID: **350-U1436A-8H-3-W 61/62-TSB-TS_05** Thin section no.: 5

Unit/Subunit: Piece no.: Observer: NICH

Thin section summary: Fragments of basaltic glass and crystals (fp and cpx). Glass fragments fresh, some containing fp and cpx microphenocrysts, some others completely microcrystalline.

Plane-polarized:

Cross-polarized:

SEDIMENT

General domain comment: fresh glass, microcrystalline in places

Dominant particles: vitric **2nd order particles:** crystal **3rd order particles:**

Grain Type	Dominant grains	Dominant roundness	Dominant max size (mm)	2nd order grains	2nd order roundness	2nd order max size (mm)	3rd order grains	3rd order roundness	3rd order max size (mm)
Vitric	glass shards	angular	-- -- -- -- --			-- -- -- -- --			-- -- -- -- --
Lithic			-- -- -- -- --			-- -- -- -- --			-- -- -- -- --
Crystal	plagioclase	subhedral	0.1	clinopyroxene	anhedral	0.1			