

# Sediment Smear Slide / Thin Section Description Sheet

Date: 2019-03-27 2019

Expedition: 358

Observer: DJ

Site: C00024 Hole: G Core: 1X Section: 6 Interval: 68 cm

Sediment Name: silty sand

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
X				R				60	30	10

Select one and check.

Select one and check.

Percent	Composition	Percent	Composition	Percent	Composition
<b>Major Siliciclastic Grain Types</b>		<b>Pelagic Grains</b>		<b>Minor Grain Types</b>	
A	Quartz		Calcareous	C	Dense minerals <sup>1</sup>
	Feldspars	R	Nannofossils	C	Micas (biotite, musc, chl) <sup>1</sup>
C	Clay minerals		Foraminifers		Glauconite
			Siliceous		Phosphate (bones, teeth, etc)
<b>Lithic Grains</b>			Diatom	C	Opaque Grain
	<b>Sedimentary Lithics</b>		Radiolarian		Marine organic matter
C	Chert		Silicoflagellate		Terrestrial organic matter
	Mudstone		Sponge Spicule		Other (specify):
	Siltstone/sandstone		<b>Other bioclasts</b>		
	Limestone		Mollusk		<b>Authigenic components</b>
C(?)	Metamorphic lithic		Algae		Pyrite (framboids)
	Plutonic lithic		Echinoderm		Pyrite (euhedral)
			Benthic foraminifer		Pyrite (grain coating)
			Other bioclast (specify)		Calcite
	<b>Volcaniclastic Grains</b>				Dolomite
	Vitric fragments		<b>Other carbonate allochems</b>		Zeolites
	Clear glass		Peloid		Fe/Mn oxide
	Colored glass		Intraclast		Other (specify):
	Pumice		Ooid		
	<b>Volcanic lithics</b>		Silt or sand-size carbonate allochem fragment (unspecified)		
	Felsitic				
	Microclite		Carbonate mud (apart from nannos)		
	Lathwork				
	Altered volcanic (palagonite)				

<sup>1</sup> List under remarks if possible

Fill percentage (Total must be 100).

Remarks: silt & sand sized angular to sub-rounded grains, chert, lithics and/or aggregates of clay.

\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)

# Sediment Smear Slide / Thin Section Description Sheet

Date: 2019-03-27 2019

Expedition: 358

Observer: DJ

Site: C00024

Hole: G

Core: 2X

Section: 4

Interval: 126 cm

Sediment Name: silty sand

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓				✓				~60	~40	<1

Select one and check.

Select one and check.

Percent	Composition	Percent	Composition	Percent	Composition
<b>Major Siliciclastic Grain Types</b>		<b>Pelagic Grains</b>		<b>Minor Grain Types</b>	
A	Quartz		Calcareous	A	Dense minerals <sup>1</sup>
C	Feldspars		Nannofossils	F	Micas (biotite, musc, chl) <sup>1</sup>
	Clay minerals		Foraminifers		Glaucónite
			Siliceous		Phosphate (bones, teeth, etc)
<b>Lithic Grains</b>			Diatom	C	Opaque Grain
	Sedimentary Lithics		Radiolarian		Marine organic matter
C	Chert		Silicoflagellate		Terrestrial organic matter
	Mudstone		Sponge Spicule		Other (specify):
	Siltstone/sandstone	<b>Other bioclasts</b>			
	Limestone		Mollusk	<b>Authigenic components</b>	
C	Metamorphic lithic		Algae		Pyrite (framboids)
	Plutonic lithic		Echinoderm		Pyrite (euhedral)
			Benthic foraminifer		Pyrite (grain coating)
			Other bioclast (specify)		Calcite
<b>Volcaniclastic Grains</b>					Dolomite
	Vitric fragments	<b>Other carbonate allochems</b>			Zeolites
	Clear glass		Peloid		Fe/Mn oxide
	Colored glass		Intraclast		Other (specify):
	Pumice		Ooid		
	Volcanic lithics		Silt or sand-size carbonate allochem fragment (unspecified)		
	Felsitic				
	Microlitic		Carbonate mud (apart from nannos)		
	Lathwork				
	Altered volcanic (palagonite)				

<sup>1</sup> List under remarks if possible

Fill percentage (Total must be 100).

Remarks:

angular to slightly rounded  
silty sand, relatively high chert content. some polycrystalline  
grains may also be metamorphic lithics. many grains covered in opaque  
layer (Mn/Fe oxide?): high HM content  
(amphibole, rutile, PX, few zircon grains observed)

\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50%), A: abundant (>10-50%), C: common (>1-10%), F: few (>0.1-1%), R: rare (<0.1%)

# Sediment Smear Slide / Thin Section Description Sheet

Date: 2019-03-27 2019

Expedition: 358

Observer: DJ

Site: C0002 4 Hole: G Core: 3X Section: 4 Interval: 110 cm

Sediment Name: silty sand

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
<u>X</u>				<u>X</u>				<u>~60</u>	<u>~35</u>	<u>~5</u>

Select one and check.

Select one and check.

Percent	Composition	Percent	Composition	Percent	Composition
<b>Major Siliciclastic Grain Types</b>		<b>Pelagic Grains</b>		<b>Minor Grain Types</b>	
<u>A</u>	Quartz		Calcareous	<u>C</u>	Dense minerals <sup>1</sup>
<u>A</u>	Feldspars		Nannofossils	<u>F</u>	Micas (biotite, musc, chl) <sup>1</sup>
	Clay minerals		Foraminifers	<u>F</u>	Glaucinite
			Siliceous		Phosphate (bones, teeth, etc)
	<b>Lithic Grains</b>		Diatom	<u>A</u>	Opaque Grain
	<b>Sedimentary Lithics</b>		Radiolarian		Marine organic matter
<u>C</u>	Chert		Silicoflagellate		Terrestrial organic matter
	Mudstone		Sponge Spicule		Other (specify):
	Siltstone/sandstone		<b>Other bioclasts</b>		
	Limestone		Mollusk		<b>Authigenic components</b>
<u>C(?)</u>	Metamorphic lithic		Algae		Pyrite (framboids)
	Plutonic lithic		Echinoderm		Pyrite (euhedral)
			Benthic foraminifer		Pyrite (grain coating)
	<b>Volcaniclastic Grains</b>		Other bioclast (specify)		Calcite
	Vitric fragments				Dolomite
	Clear glass		<b>Other carbonate allochems</b>		Zeolites
	Colored glass		Peloid		Fe/Mn oxide
	Pumice		Intraclast		Other (specify):
	Volcanic lithics		Ooid		
	Felsitic		Silt or sand-size carbonate allochem fragment (unspecified)		
	Microlite				
	Lathwork		Carbonate mud (apart from nannos)		
	Altered volcanic (palagonite)				

<sup>1</sup> List under remarks if possible

Fill percentage (Total must be 100).

Remarks: angular to subrounded silty sand with some clay-sized grains; many grains coated by opaque material; Ht assemblage includes amphibole, px, tourmaline, rutile, apatite, rel. few & small grains of zircon

\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)

# Sediment Smear Slide / Thin Section Description Sheet

Date: 24 March 2019

Expedition: 358

Observer: MH

Site: C00024 G Hole: G Core: 4X Section: 1A Interval: 13

Sediment Name: Silty Sand with large grains of mica, heavy mineral, glass (Green fine-med. sand)

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓				✓				55	25	20

Select one and check.

Select one and check.

Percent	Composition
<b>Major Siliciclastic Grain Types</b>	
C	Quartz ✓
C	Feldspars ✓
A	Clay minerals
<b>Lithic Grains</b>	
<b>Sedimentary Lithics</b>	
	Chert
A	Mudstone ✓
	Siltstone/sandstone
	Limestone
	Metamorphic lithic
	Plutonic lithic
<b>Volcaniclastic Grains</b>	
<b>Vitric fragments</b>	
A	Clear glass ✓
	Colored glass
A	Pumice ✓
<b>Volcanic lithics</b>	
	Felsitic
F	Microlitic ✓
	Lathwork
	Altered volcanic (palagonite)

Percent	Composition
<b>Pelagic Grains</b>	
	Calcareous
	Nannofossils
	Foraminifers
	Siliceous
F	Diatom ✓
	Radiolarian
	Silicoflagellate
	Sponge Spicule
<b>Other bioclasts</b>	
	Mollusk
	Algae
	Echinoderm
	Benthic foraminifer
	Other bioclast (specify)
<b>Other carbonate allochems</b>	
	Peloid
	Intraclast
	Ooid
	Silt or sand-size carbonate allochem fragment (unspecified)
	Carbonate mud (apart from nannos)

Percent	Composition
<b>Minor Grain Types</b>	
C	Dense minerals <sup>1</sup> ✓
C	Micas (biotite, musc, chl) <sup>1</sup> ✓
F	Glaucinite ✓
	Phosphate (bones, teeth, etc)
C	Opaque Grain ✓
	Marine organic matter
	Terrestrial organic matter
	Other (specify):
<b>Authigenic components</b>	
	Pyrite (framboids)
C	Pyrite (euhedral) ✓
C	Pyrite (grain coating) ✓
R	Calcite
R	Dolomite
	Zeolites
R	Fe/Mn oxide ✓
	Other (specify):

List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Pyx (green), Chlorite, Glaucinite,

Apatite, Epidote, Spinell (brown)

Large grains of mica and glass, and heavy mineral,

\* Pyrite coating on chlorite mica

\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)



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# Sediment Smear Slide / Thin Section Description Sheet

Date: 24 March 2019

Expedition: 358

Observer: MH

Site: C00024 Hole: G Core: 4X Section: 3A Interval: 53 cm

Sediment Name: Silty sand. (with various heavy mineral grains)

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>				<u>45</u>	<u>35</u>	<u>20</u>

Select one and check.

Select one and check.

Percent	Composition	Percent	Composition	Percent	Composition
<b>Major Siliciclastic Grain Types</b>		<b>Pelagic Grains</b>		<b>Minor Grain Types</b>	
<u>C</u>	Quartz		Calcareous <input checked="" type="checkbox"/>	<u>C</u>	Dense minerals <input checked="" type="checkbox"/>
<u>C</u>	Feldspars <input checked="" type="checkbox"/>	<u>R</u>	Nannofossils	<u>C</u>	Micas (biotite, musc, chl) <input checked="" type="checkbox"/>
<u>A</u>	Clay minerals	<u>R</u>	Foraminifers <input checked="" type="checkbox"/>	<u>F</u>	Glaucinite <input checked="" type="checkbox"/>
<b>Lithic Grains</b>			Siliceous		Phosphate (bones, teeth, etc)
<b>Sedimentary Lithics</b>			Diatom	<u>C</u>	Opaque Grain <input checked="" type="checkbox"/>
<u>C</u>	Chert <input checked="" type="checkbox"/>		Radiolarian		Marine organic matter
<u>C</u>	Mudstone <input checked="" type="checkbox"/>		Silicoflagellate	<u>R</u>	Terrestrial organic matter <input checked="" type="checkbox"/>
	Siltstone/sandstone		Sponge Spicule		Other (specify):
	Limestone	<b>Other bioclasts</b>			
<u>C</u>	Metamorphic lithic <input checked="" type="checkbox"/>		Mollusk	<b>Authigenic components</b>	
	Plutonic lithic		Algae		Pyrite (framboids)
<b>Volcaniclastic Grains</b>			Echinoderm	<u>C</u>	Pyrite (euhedral) <input checked="" type="checkbox"/>
	Vitric fragments		Benthic foraminifer		Pyrite (grain coating) <input checked="" type="checkbox"/>
<u>F</u>	Clear glass <input checked="" type="checkbox"/>		Other bioclast (specify)	<u>F</u>	Calcite
	Colored glass	<b>Other carbonate allochems</b>			Dolomite
<u>F</u>	Pumice <input checked="" type="checkbox"/>		Peloid		Zeolites
	Volcanic lithics		Intraclast		Fe/Mn oxide
	Felsitic		Ooid		Other (specify):
<u>C</u>	Microlitic <input checked="" type="checkbox"/>		Silt or sand-size carbonate allochem fragment (unspecified)		
	Lathwork		Carbonate mud (apart from nannos)		
	Altered volcanic (palagonite)				

List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Spinel (brown), Zircon, Rutile (cube)

\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)

# Sediment Smear Slide / Thin Section Description Sheet

Date: 24 March 2019

Expedition: 358

Observer: MH

Site: C00024 Hole: G Core: 5X Section: 1A Interval: 27 cm

Sediment Name: Silty sand (with abundant glass, mica, heavy mineral...) (Black sand)

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>				30	55	15

Select one and check.

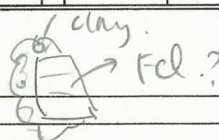
Select one and check.

Percent	Composition	Percent	Composition	Percent	Composition
<b>Major Siliciclastic Grain Types</b>		<b>Pelagic Grains</b>		<b>Minor Grain Types</b>	
C	Quartz ✓		Calcareous	C	Dense minerals <sup>1</sup> ✓
C	Feldspars ✓	R	Nannofossils	C	Micas (biotite, musc, chl) ✓
C	Clay minerals	C	Foraminifers ✓	F	Glaucinite
			Siliceous		Phosphate (bones, teeth, etc)
<b>Lithic Grains</b>			Diatom	F	Opaque Grain
	<b>Sedimentary Lithics</b>		Radiolarian		Marine organic matter
C	Chert ✓		Silicoflagellate	R	Terrestrial organic matter ✓
C	Mudstone ✓		Sponge Spicule		Other (specify):
	Siltstone/sandstone ✓	<b>Other bioclasts</b>			
	Limestone		Mollusk	<b>Authigenic components</b>	
C	Metamorphic lithic ✓		Algae		Pyrite (framboids)
	Plutonic lithic		Echinoderm	C	Pyrite (euhedral)
			Benthic foraminifer		Pyrite (grain coating)
			Other bioclast (specify)		Calcite
	<b>Volcaniclastic Grains</b>			F	Dolomite
	Vitric fragments	<b>Other carbonate allochems</b>			Zeolites
A	Clear glass ✓		Peloid		Fe/Mn oxide
	Colored glass		Intraclast		Other (specify):
C	Pumice ✓		Ooid		
	<b>Volcanic lithics</b>		Silt or sand-size carbonate allochem fragment (unspecified)		
	Felsitic		Carbonate mud (apart from nannos)		
C	Microlitic ✓				
	Lathwork				
	Altered volcanic (palagonite)				

List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Pyx, Spinel, zircon



\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)

# Sediment Smear Slide / Thin Section Description Sheet

Date: 24 March 2019

Expedition: 358

Observer: MH

Site: C0002 4 Hole: G Core: 5X Section: 1A Interval: 32 cm

Sediment Name: Calcareous ash (with common heavy mineral, + mica)

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓					✓			60	20	±0

Select one and check.

Select one and check.

Percent	Composition	Percent	Composition	Percent	Composition
<b>Major Siliciclastic Grain Types</b>		<b>Pelagic Grains</b>		<b>Minor Grain Types</b>	
F	Quartz ✓	A	Calcareous	C	Dense minerals ✓
F	Feldspars ✓	C	Nannofossils ✓	C	Micas (biotite, musc, chl) ✓
C	Clay minerals	C	Foraminifers ✓		Glauconite
			Siliceous		Phosphate (bones, teeth, etc)
<b>Lithic Grains</b>		R	Diatom		Opaque Grain
	<b>Sedimentary Lithics</b>		Radiolarian		Marine organic matter
C	Chert ✓		Silicoflagellate		Terrestrial organic matter
C	Mudstone ✓	R	Sponge Spicule ✓		Other (specify):
	Siltstone/sandstone				
	Limestone	<b>Other bioclasts</b>			<b>Authigenic components</b>
C	Metamorphic lithic ✓		Mollusk		Pyrite (framboids)
	Plutonic lithic		Algae	C	Pyrite (euhedral)
			Echinoderm		Pyrite (grain coating)
			Benthic foraminifer		Calcite
			Other bioclast (specify)	C	Dolomite
					Zeolites
	<b>Volcaniclastic Grains</b>			R	Fe/Mn oxide ✓
	Vitric fragments		<b>Other carbonate allochems</b>		Other (specify):
D	Clear glass ✓		Peloid		
	Colored glass		Intraclast		
A	Pumice ✓		Ooid		
	<b>Volcanic lithics</b>		Silt or sand-size carbonate allochem fragment (unspecified)		
	Felsitic		Carbonate mud (apart from nannos)		
	Microlitic				
	Lathwork				
	Altered volcanic (palagonite)				

List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Px Spinel  
Big grains of heavy mineral, mica, glass.

\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)

# Sediment Smear Slide / Thin Section Description Sheet

Date: 24 March 2019

Expedition: 358

Observer: MH

Site: C0002 4 Hole: G Core: 5x Section: 1A

Interval: 58 cm

Sediment Name: silty clay

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓				✓				15	45	40

Select one and check.

Select one and check.

Percent	Composition	Percent	Composition	Percent	Composition
<b>Major Siliciclastic Grain Types</b>		<b>Pelagic Grains</b>		<b>Minor Grain Types</b>	
C	Quartz		Calcareous	C	Dense minerals <sup>1</sup>
C	Feldspars	C	Nannofossils	C	Micas (biotite, musc, chl)
A	Clay minerals	C	Foraminifers ✓	F	Glaucinite ✓
<b>Lithic Grains</b>			Siliceous		Phosphate (bones, teeth, etc)
<b>Sedimentary Lithics</b>		R	Diatom ✓		Opaque Grain
F	Chert		Radiolarian	R	Marine organic matter
C	Mudstone ✓		Silicoflagellate		Terrestrial organic matter ✓
E	Siltstone/sandstone ✓		Sponge Spicule		Other (specify):
	Limestone	<b>Other bioclasts</b>			
F	Metamorphic lithic ✓		Mollusk	<b>Authigenic components</b>	
	Plutonic lithic		Algae	C	Pyrite (framboids)
<b>Volcaniclastic Grains</b>			Echinoderm		Pyrite (euhedral)
	Vitric fragments		Benthic foraminifer		Pyrite (grain coating)
C	Clear glass ✓		Other bioclast (specify)	F	Calcite
	Colored glass	<b>Other carbonate allochems</b>			Dolomite
C	Pumice ✓		Peloid		Zeolites
	Volcanic lithics		Intraclast	R	Fe/Mn oxide ✓
	Felsitic		Ooid		Other (specify):
F	Microplitic ✓		Silt or sand-size carbonate allochem fragment (unspecified)		
	Lathwork		Carbonate mud (apart from nanos)		
	Altered volcanic (palagonite)				

<sup>1</sup> List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Prx. Diatom  
pumice

\* This form is not designed for shallow water (neritic) carbonate sediments  
 D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)



# Sediment Smear Slide / Thin Section Description Sheet

Date: 24 March 2019

Expedition: 358

Observer: MH

Site: C0002 4 Hole: G Core: 5x Section: CC

Interval: 1.5 cm

Sediment Name: Sand - silt - clay

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>				35	30	40

Select one and check.

Select one and check.

Percent	Composition	Percent	Composition	Percent	Composition
<b>Major Siliciclastic Grain Types</b>		<b>Pelagic Grains</b>		<b>Minor Grain Types</b>	
C	Quartz		Calcareous	C	Dense minerals <sup>1</sup>
C	Feldspars	F	Nannofossils	C	Micas (biotite, musc, chl) <sup>1</sup>
C	Clay minerals	F	Foraminifers ✓		Glauconite
			Siliceous		Phosphate (bones, teeth, etc)
<b>Lithic Grains</b>		R	Diatom	C	Opaque Grain
	<b>Sedimentary Lithics</b>	R	Radiolarian	R	Marine organic matter
E	Chert ✓		Silicoflagellate	R	Terrestrial organic matter
C	Mudstone ✓		Sponge Spicule		Other (specify):
	Siltstone/sandstone	<b>Other bioclasts</b>			
R	Limestone ✓		Mollusk	<b>Authigenic components</b>	
C	Metamorphic lithic ✓		Algae		Pyrite (framboids)
	Plutonic lithic		Echinoderm	C	Pyrite (euhedral)
			Benthic foraminifer		Pyrite (grain coating)
			Other bioclast (specify)	F	Calcite
					Dolomite
	<b>Volcaniclastic Grains</b>	<b>Other carbonate allochems</b>		R	Zeolites ✓
	Vitric fragments		Peloid		Fe/Mn oxide ✓
F	Clear glass		Intraclast		Other (specify):
	Colored glass		Ooid		
F	Pumice ✓		Silt or sand-size carbonate allochem fragment (unspecified)		
	<b>Volcanic lithics</b>		Carbonate mud (apart from nannos)		
	Felsitic				
C	Microplitic ✓				
	Lathwork				
	Altered volcanic (palagonite)				

List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Zircon, Rutile, Pyroxene, opatite, Garnet (?), Tourmaline

Big grains of mica, chert, heavy minerals, lithic grains

\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)



lithics show clay fabric (metamorphic lithics?)

Sediment Smear Slide / Thin Section Description Sheet

Date: 29 March 2019

Expedition: 358

Observer: MH

Site: C00024 Hole: G Core: 6X Section: 2A

Interval: 46

Sediment Name: Siltstone

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓				✓				5	70	25

Select one and check.

Select one and check.

Percent	Composition	Percent	Composition	Percent	Composition
<b>Major Siliciclastic Grain Types</b>		<b>Pelagic Grains</b>		<b>Minor Grain Types</b>	
C	Quartz	F	Calcareous	C	Dense minerals <sup>1</sup>
C	Feldspars	F	Nannofossils	C	Micas (biotite, musc, chl) <sup>1</sup>
A	Clay minerals	F	Foraminifers ✓	F	Glauconite ✓
			Siliceous		Phosphate (bones, teeth, etc)
<b>Lithic Grains</b>		R	Diatom ✓		Opaque Grain ✓
	<b>Sedimentary Lithics</b>		Radiolarian		Marine organic matter ✓
C	Chert ✓		Silicoflagellate	C	Terrestrial organic matter ✓
C	Mudstone ✓	R	Sponge Spicule		Other (specify):
	Siltstone/sandstone				
	Limestone	<b>Other bioclasts</b>			
F	Metamorphic lithic		Mollusk	<b>Authigenic components</b>	
	Plutonic lithic		Algae		Pyrite (framboids)
			Echinoderm	C	Pyrite (euhedral)
			Benthic foraminifer		Pyrite (grain coating)
			Other bioclast (specify)		Calcite
	<b>Volcaniclastic Grains</b>			F	Dolomite
	<b>Vitric fragments</b>	<b>Other carbonate allochems</b>			Zeolites
C	Clear glass ✓		Peloid	R	Fe/Mn oxide ✓
	Colored glass		Intraclast		Other (specify):
F	Pumice ✓		Ooid		
	<b>Volcanic lithics</b>		Silt or sand-size carbonate allochem fragment (unspecified)		
	Felsitic				
C	Microlite ✓		Carbonate mud (apart from nannos)		
	Lathwork				
	Altered volcanic(palagonite)				

<sup>1</sup> List under remarks if possible

Fill percentage (Total must be 100).

Remarks:

\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)

# Sediment Smear Slide / Thin Section Description Sheet

Date: 27 March 2019

Expedition: 358

Observer: MJH

Site: C0002 4 Hole: G Core: 6x Section: 4A Interval: 34

Sediment Name: Very fine to fine sand (silty)

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓				✓				45	40	15

Select one and check.

Select one and check.

Percent	Composition
<b>Major Siliciclastic Grain Types</b>	
C	Quartz
C	Feldspars
C	Clay minerals
<b>Lithic Grains</b>	
<b>Sedimentary Lithics</b>	
C	Chert
C	Mudstone
	Siltstone/sandstone
	Limestone
C	Metamorphic lithic
	Plutonic lithic
<b>Volcaniclastic Grains</b>	
<b>Vitric fragments</b>	
C	Clear glass
	Colored glass
F	Pumice
<b>Volcanic lithics</b>	
	Felsitic
C	Microlite ✓
	Lathwork
	Altered volcanic (palagonite)

Percent	Composition
<b>Pelagic Grains</b>	
F	Calcareous
F-C	Nannofossils
C	Foraminifers
	Siliceous
	Diatom
	Radiolarian
	Silicoflagellate
	Sponge Spicule
<b>Other bioclasts</b>	
	Mollusk
	Algae
	Echinoderm
	Benthic foraminifer
	Other bioclast (specify)
<b>Other carbonate allochems</b>	
	Peloid
	Intraclast
	Ooid
	Silt or sand-size carbonate allochem fragment (unspecified)
	Carbonate mud (apart from nannos)

Percent	Composition
<b>Minor Grain Types</b>	
C	Dense minerals <sup>1</sup>
	Micas (biotite, musc, chl) <sup>1</sup>
F	Glauconite ✓
	Phosphate (bones, teeth, etc)
C	Opaque Grain
	Marine organic matter
F	Terrestrial organic matter
	Other (specify):
<b>Authigenic components</b>	
	Pyrite (framboids)
C	Pyrite (euhedral)
	Pyrite (grain coating)
	Calcite
C	Dolomite ← clear crystal
	Zeolites
	Fe/Mn oxide
	Other (specify):

<sup>1</sup> List under remarks if possible

Fill percentage (Total must be 100).

Remarks:

\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)

# Sediment Smear Slide / Thin Section Description Sheet

Date: 2019-03-27 2019

Expedition: 358

Observer: DJ

Site: C0002 4

Hole: G

Core: 7X

Section: 5

Interval: 20

Sediment Name: silty sand

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
X				X				~60	~40	

Select one and check.

Select one and check.

Percent	Composition	Percent	Composition	Percent	Composition
<b>Major Siliciclastic Grain Types</b>		<b>Pelagic Grains</b>		<b>Minor Grain Types</b>	
D	Quartz		Calcareous	A	Dense minerals <sup>1</sup>
A	Feldspars		Nannofossils	C	Micas (biotite, musc, chl) <sup>1</sup>
	Clay minerals		Foraminifers		Glauconite
			Siliceous		Phosphate (bones, teeth, etc)
<b>Lithic Grains</b>			Diatom		Opaque Grain
	<b>Sedimentary Lithics</b>		Radiolarian		Marine organic matter
C?	Chert		Silicoflagellate		Terrestrial organic matter
	Mudstone		Sponge Spicule		Other (specify):
	Siltstone/sandstone				
	Limestone		<b>Other bioclasts</b>		<b>Authigenic components</b>
A	Metamorphic lithic		Mollusk		Pyrite (framboids)
	Plutonic lithic		Algae		Pyrite (euhedral)
			Echinoderm		Pyrite (grain coating)
			Benthic foraminifer		Calcite
			Other bioclast (specify)		Dolomite
					Zeolites
	<b>Volcaniclastic Grains</b>		<b>Other carbonate allochems</b>		Fe/Mn oxide
	Vitric fragments		Peloid		Other (specify):
	Clear glass		Intraclast		
	Colored glass		Ooid		
	Pumice		Silt or sand-size carbonate allochem fragment (unspecified)		
	Volcanic lithics				
	Felsitic		Carbonate mud (apart from nannos)		
	Microlite				
	Lathwork				
	Altered volcanic (palagonite)				

<sup>1</sup> List under remarks if possible

Fill percentage (Total must be 100).

Remarks:

angular to subrounded silt & sand grains; abundant lithic fragments, probably metamorphic, possibly also some chert.

\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)

chert.

bed mostly

amphibole, px, rutile, tourmaline, some zircon

# Sediment Smear Slide / Thin Section Description Sheet

Date: 2019-03-27 2019

Expedition: 358

Observer: DT

Site: C0002 4 Hole: G Core: 7X Section: 5 Interval: 73 cm

Sediment Name: ash

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
<u>8</u>				<u>X</u>				<u>40</u>	<u>60</u>	

Select one and check.

Select one and check.

Percent	Composition	Percent	Composition	Percent	Composition
<b>Major Siliciclastic Grain Types</b>		<b>Pelagic Grains</b>		<b>Minor Grain Types</b>	
<u>C</u>	Quartz		Calcareous	<u>C</u>	Dense minerals <sup>1</sup>
<u>C</u>	Feldspars		Nannofossils	<u>C</u>	Micas (biotite, musc, chl) <sup>1</sup>
	Clay minerals		Foraminifers		Glaucinite
			Siliceous		Phosphate (bones, teeth, etc)
<b>Lithic Grains</b>			Diatom		Opaque Grain
	<b>Sedimentary Lithics</b>		Radiolarian		Marine organic matter
	Chert		Silicoflagellate		Terrestrial organic matter
	Mudstone		Sponge Spicule		Other (specify):
	Siltstone/sandstone				
	Limestone		<b>Other bioclasts</b>		
	Metamorphic lithic		Mollusk		<b>Authigenic components</b>
	Plutonic lithic		Algae		Pyrite (framboids)
			Echinoderm		Pyrite (euhedral)
			Benthic foraminifer		Pyrite (grain coating)
	<b>Volcaniclastic Grains</b>		Other bioclast (specify)		Calcite
	Vitric fragments				Dolomite
<u>D</u>	Clear glass		<b>Other carbonate allochems</b>		Zeolites
	Colored glass		Peloid		Fe/Mn oxide
	Pumice		Intraclast		Other (specify):
	Volcanic lithics		Ooid		
	Felsitic		Silt or sand-size carbonate allochem fragment (unspecified)		
	Microfite				
	Lathwork		Carbonate mud (apart from nannos)		
	Altered volcanic (palagonite)				

<sup>1</sup> List under remarks if possible

Fill percentage (Total must be 100).

Remarks: mostly silt to sand sized <sup>clear</sup> glass shards, mixed with siliciclastic material (gz, bly, O HMs: ~~staurolite~~, px), apatite) some vesicular glass shards

\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)

# Sediment Smear Slide / Thin Section Description Sheet

Date: 27 March 2019

Expedition: 358

Observer: MH

Site: C0002 4 Hole: G Core: AX Section: 6A Interval: 75 cm

Sediment Name: Very fine sand (rich in organic material + opaque grains (grain coated))

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓				✓				85	40	15

Select one and check.

Select one and check.

Percent	Composition	Percent	Composition	Percent	Composition
<b>Major Siliciclastic Grain Types</b>		<b>Pelagic Grains</b>		<b>Minor Grain Types</b>	
<u>A</u>	Quartz	<u>C</u>	Calcareous	<u>C</u>	Dense minerals <sup>1</sup> ✓
<u>C</u>	Feldspars	<u>C</u>	Nannofossils	<u>C</u>	Micas (biotite, musc, chl) <sup>1</sup> ✓
<u>C</u>	Clay minerals	<u>F</u>	Foraminifers	<u>F</u>	Glauconite ✓
			Siliceous		Phosphate (bones, teeth, etc)
<b>Lithic Grains</b>			Diatom	<u>C</u>	Opaque Grain ✓
	<b>Sedimentary Lithics</b>		Radiolarian	<u>C</u>	Marine organic matter
<u>C</u>	Chert		Silicoflagellate		Terrestrial organic matter
<u>C</u>	Mudstone		Sponge Spicule		Other (specify):
	Siltstone/sandstone	<b>Other bioclasts</b>			
	Limestone		Mollusk	<b>Authigenic components</b>	
<u>C</u>	Metamorphic lithic		Algae	<u>C</u>	Pyrite (framboids)
	Plutonic lithic		Echinoderm	<u>C</u>	Pyrite (euhedral)
			Benthic foraminifer	<u>C</u>	Pyrite (grain coating)
			Other bioclast (specify)		Calcite
	<b>Volcaniclastic Grains</b>	<b>Other carbonate allochems</b>			Dolomite
	Vitric fragments		Peloid		Zeolites
<u>C</u>	Clear glass		Intraclast	<u>R</u>	Fe/Mn oxide ✓
	Colored glass		Ooid		Other (specify):
	Pumice	<u>F</u>	Silt or sand-size carbonate allochem fragment (unspecified)		
	<b>Volcanic lithics</b>				
	Felsitic		Carbonate mud (apart from nannos)	<u>C</u>	
<u>C</u>	Microlite				
	Lathwork				
	Altered volcanic (palagonite)				

<sup>1</sup> List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Big grains of mica, OM.

\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)

# Sediment Smear Slide / Thin Section Description Sheet

Date: 25 March 2019

Expedition: 358

Observer: MH

Site: C0002 4 Hole: G Core: 10X Section: 2A Interval: 104 cm

Sediment Name: Silty clay

*JB*

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓				✓				5	30	65

Select one and check.

Select one and check.

Percent	Composition	Percent	Composition	Percent	Composition
<b>Major Siliciclastic Grain Types</b>		<b>Pelagic Grains</b>		<b>Minor Grain Types</b>	
A	Quartz ✓		Calcareous	C	Dense minerals <sup>1</sup> ✓
A	Feldspars ✓	F	Nannofossils	C	Micas (biotite, musc. chl) <sup>1</sup> ✓
D	Clay minerals	F	Foraminifers ✓		Glaucinite
<b>Lithic Grains</b>			Siliceous		Phosphate (bones, teeth, etc)
<b>Sedimentary Lithics</b>			Diatom		Opaque Grain
F	Chert ✓		Radiolarian		Marine organic matter
C	Mudstone ✓	F	Silicoflagellate	F	Terrestrial organic matter ✓
	Siltstone/sandstone		Sponge Spicule ✓		Other (specify):
	Limestone	<b>Other bioclasts</b>			
F	Metamorphic lithic ✓		Mollusk	<b>Authigenic components</b>	
F	Plutonic lithic		Algae		Pyrite (framboids)
<b>Volcaniclastic Grains</b>			Echinoderm	C, V	Pyrite (euhedral) ✓
	Vitric fragments		Benthic foraminifer		Pyrite (grain coating)
C	Clear glass ✓		Other bioclast (specify)	F	Calcite
	Colored glass	<b>Other carbonate allochems</b>			Dolomite
	Pumice		Peloid		Zeolites
	<b>Volcanic lithics</b>		Intraclast	F	Fe/Mn oxide ✓
	Felsitic		Ooid		Other (specify):
F	Microclitic ✓		Silt or sand-size carbonate allochem fragment (unspecified)		
	Lathwork		Carbonate mud (apart from nannos)		
	Altered volcanic (palagonite)				

<sup>1</sup> List under remarks if possible

Fill percentage (Total must be 100).

Remarks:

\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)

# Sediment Smear Slide / Thin Section Description Sheet

Date: 25 March 2019

Expedition: 358

Observer:

Site: C0002 4 Hole: G Core: 10x Section: 6A

Interval: 11cm

Sediment Name: very fine sand. (silty)

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>				50	40	10

Select one and check.

Select one and check.

Percent	Composition	Percent	Composition	Percent	Composition
<b>Major Siliciclastic Grain Types</b>		<b>Pelagic Grains</b>		<b>Minor Grain Types</b>	
A	Quartz ✓		Calcareous ✓	C	Dense minerals <sup>1</sup> ✓
A	Feldspars ✓	F	Nannofossils ✓	C	Micas (biotite, musc. chl) ✓
C	Clay minerals	F	Foraminifers ✓	F	Glauconite
			Siliceous	F	Phosphate (bones, teeth, etc)
	<b>Lithic Grains</b>		Diatom	C	Opaque Grain
	<b>Sedimentary Lithics</b>		Radiolarian		Marine organic matter
C	Chert ✓		Silicoflagellate	F	Terrestrial organic matter ✓
C	Mudstone ✓		Sponge Spicule		Other (specify):
C	Siltstone/sandstone		<b>Other bioclasts</b>		
	Limestone		Mollusk		<b>Authigenic components</b>
C	Metamorphic lithic ✓		Algae	C	Pyrite (framboids)
	Plutonic lithic		Echinoderm	C	Pyrite (euhedral)
			Benthic foraminifer		Pyrite (grain coating)
			Other bioclast (specify)	F	Calcite
	<b>Volcaniclastic Grains</b>		<b>Other carbonate allochems</b>		Dolomite ✓
	Vitric fragments		Peloid		Zeolites
C	Clear glass ✓		Intraclast		Fe/Mn oxide
	Colored glass		Ooid		Other (specify):
F	Pumice ✓		Silt or sand-size carbonate allochem fragment (unspecified)		
	<b>Volcanic lithics</b>		Carbonate mud (apart from nannos)		
	Felsitic				
	Microlitic				
	Lathwork				
	Altered volcanic (palagonite)				

<sup>1</sup> List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Common chert lithics.

\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)



photo not yet

**Sediment Smear Slide / Thin Section Description Sheet**

Date: 25 March 2019

Expedition: 358

Observer: MH

Site: C0002 4 Hole: G Core: 11X Section: CC Interval: 12.5 cm

Sediment Name: Sandy silt (silt to very fine sand) (lighter gray in color)

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>				30	50	20

Select one and check.

Select one and check.

Percent	Composition
<b>Major Siliciclastic Grain Types</b>	
C	Quartz
C	Feldspars
A	Clay minerals
<b>Lithic Grains</b>	
<b>Sedimentary Lithics</b>	
E	Chert ✓
C	Mudstone ✓
	Siltstone/sandstone
	Limestone ✓
F	Metamorphic lithic ✓
	Plutonic lithic
<b>Volcaniclastic Grains</b>	
Vitric fragments	
C	Clear glass ✓
	Colored glass
F	Pumice ✓
<b>Volcanic lithics</b>	
	Felsitic
C	Microinite ✓
	Lathwork
	Altered volcanic (palagonite)

Percent	Composition
<b>Pelagic Grains</b>	
	Calcareous
F	Nannofossils
F	Foraminifers ✓
	Siliceous
	Diatom
	Radiolarian
	Silicoflagellate
	Sponge Spicule
<b>Other bioclasts</b>	
	Mollusk
	Algae
	Echinoderm
	Benthic foraminifer
	Other bioclast (specify)
<b>Other carbonate allochems</b>	
	Peloid
	Intraclast
	Ooid
	Silt or sand-size carbonate allochem fragment (unspecified)
	Carbonate mud (apart from nannos)

Percent	Composition
<b>Minor Grain Types</b>	
C	Dense minerals <sup>1</sup> ✓
C	Micas (biotite, musc, chl) <sup>1</sup> ✓
	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
F	Terrestrial organic matter ✓
	Other (specify):
<b>Authigenic components</b>	
	Pyrite (framboids)
	Pyrite (euhedral)
F	Pyrite (grain coating)
	Calcite
	Dolomite
	Zeolites
	Fe/Mn oxide
	Other (specify):

<sup>1</sup>List under remarks if possible

Fill percentage (Total must be 100).

Remarks: \_\_\_\_\_

\* This form is not designed for shallow water (neritic) carbonate sediments  
 D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)

Photo not yet.

**Sediment Smear Slide / Thin Section Description Sheet**

Date: 25 March 2019

Expedition: 358

Observer: MH

Site: C0002 4 Hole: G Core: 12 X Section: 1 W Interval: 68 cm

Sediment Name: Siltstone

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>				20	65	15

Select one and check.

Select one and check.

Percent	Composition
<b>Major Siliciclastic Grain Types</b>	
C	Quartz
C	Feldspars
C	Clay minerals
<b>Lithic Grains</b>	
Sedimentary Lithics	
C	Chert <input checked="" type="checkbox"/>
C	Mudstone <input checked="" type="checkbox"/>
	Siltstone/sandstone
F	Limestone <input checked="" type="checkbox"/>
C	Metamorphic lithic <input checked="" type="checkbox"/>
	Plutonic lithic
<b>Volcaniclastic Grains</b>	
Vitric fragments	
C	Clear glass <input checked="" type="checkbox"/>
	Colored glass
	Pumice
Volcanic lithics	
	Felsitic
C	Microclite <input checked="" type="checkbox"/>
	Lathwork
	Altered volcanic(palagonite)

Percent	Composition
<b>Pelagic Grains</b>	
	Calcareous
R	Nannofossils
	Foraminifers
	Siliceous
	Diatom
	Radiolarian
	Silicoflagellate
	Sponge Spicule
<b>Other bioclasts</b>	
	Mollusk
	Algae
	Echinoderm
	Benthic foraminifer
	Other bioclast (specify)
<b>Other carbonate allochems</b>	
	Peloid
	Intraclast
	Ooid
	Silt or sand-size carbonate allochem fragment (unspecified)
	Carbonate mud (apart from nannos)

Percent	Composition
<b>Minor Grain Types</b>	
C	Dense minerals <sup>1</sup> <input checked="" type="checkbox"/>
C	Micas (biotite, musc, chl) <input checked="" type="checkbox"/>
R	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
	Terrestrial organic matter
	Other (specify):
<b>Authigenic components</b>	
	Pyrite (framboids)
C	Pyrite (euhedral) <input checked="" type="checkbox"/>
	Pyrite (grain coating)
PV	Calcite <input checked="" type="checkbox"/>
	Dolomite
	Zeolites
	Fe/Mn oxide
	Other (specify):

<sup>1</sup> List under remarks if possible

Fill percentage (Total must be 100).

Remarks: various types of lithics

\* This form is not designed for shallow water (neritic) carbonate sediments  
 D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)

photo not yet

# Sediment Smear Slide / Thin Section Description Sheet

Date: 25 March 2019

Expedition: 358

Observer: MH

Site: C00024 Hole: G Core: 13X Section: 4A

Interval: 68cm

Sediment Name: fine to very fine sand

Smear Slide	Thin Section	Coarse Fraction	Grain Mount
✓			

Granular Sediment			Other material	Percent Texture		
Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓				65	20	15

Select one and check.

Select one and check.

Percent	Composition
<b>Major Siliciclastic Grain Types</b>	
C	Quartz ✓
C	Feldspars ✓
C	Clay minerals
<b>Lithic Grains</b>	
<b>Sedimentary Lithics</b>	
C	Chert ✓
C	Mudstone ✓
	Siltstone/sandstone
	Limestone
C	Metamorphic lithic ✓
	Plutonic lithic
<b>Volcaniclastic Grains</b>	
	Vitric fragments
C	Clear glass ✓
	Colored glass
	Pumice
	<b>Volcanic lithics</b>
	Felsitic
	Microlite
	Lathwork
	Altered volcanic (palagonite)

Percent	Composition
<b>Pelagic Grains</b>	
	Calcareous
F	Nannofossils
F	Foraminifers ✓
	<b>Siliceous</b>
	Diatom
	Radiolarian
	Silicoflagellate
	Sponge Spicule
<b>Other bioclasts</b>	
	Mollusk
	Algae
	Echinoderm
	Benthic foraminifer
	Other bioclast (specify)
<b>Other carbonate allochems</b>	
	Peloid
	Intraclast
	Ooid
	Silt or sand-size carbonate allochem fragment (unspecified)
	Carbonate mud (apart from nannos)

Percent	Composition
<b>Minor Grain Types</b>	
C	Dense minerals <sup>1</sup> ✓
C	Micas (biotite, musc, chl) <sup>1</sup>
F	Glauconite
	Phosphate (bones, teeth, etc)
C	Opaque Grain
	Marine organic matter
F	Terrestrial organic matter
	Other (specify):
<b>Authigenic components</b>	
	Pyrite (framboids)
C	Pyrite (euhedral)
C	Pyrite (grain coating)
	Calcite
F	Dolomite
	Zeolites
	Fe/Mn oxide
	Other (specify):

<sup>1</sup> List under remarks if possible

Fill percentage (Total must be 100).

Remarks:

\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)

# Sediment Smear Slide / Thin Section Description Sheet

Date: 25 March 2019

Expedition: 358

Observer: MH

Site: C0002 & Hole: G Core: 14x Section: CC Interval: 28cm

Sediment Name: Silt to very fine sand

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>				40	50	10

Select one and check.

Select one and check.

Percent	Composition
<b>Major Siliciclastic Grain Types</b>	
<u>C</u>	Quartz
<u>C</u>	Feldspars
	Clay minerals
<b>Lithic Grains</b>	
Sedimentary Lithics	
<u>C</u>	Chert
<u>C</u>	Mudstone <input checked="" type="checkbox"/>
	Siltstone/sandstone
	Limestone
<u>C</u>	Metamorphic lithic <input checked="" type="checkbox"/>
	Plutonic lithic
<b>Volcaniclastic Grains</b>	
	Vitric fragments
<u>C</u>	Clear glass <input checked="" type="checkbox"/>
	Colored glass
	Pumice
	Volcanic lithics
	Felsitic
<u>C</u>	Microlite <input checked="" type="checkbox"/>
	Lathwork
	Altered volcanic (palagonite)

Percent	Composition
<b>Pelagic Grains</b>	
<u>F</u>	Calcareous
<u>F</u>	Nannofossils <input checked="" type="checkbox"/>
<u>F</u>	Foraminifers <input checked="" type="checkbox"/>
	Siliceous
	Diatom
	Radiolarian
	Silicoflagellate
	Sponge Spicule
<b>Other bioclasts</b>	
	Mollusk
	Algae
	Echinoderm
	Benthic foraminifer
	Other bioclast (specify)
<b>Other carbonate allochems</b>	
	Peloid
	Intraclast
	Ooid
	Silt or sand-size carbonate allochem fragment (unspecified)
	Carbonate mud (apart from nannos)

Percent	Composition
<b>Minor Grain Types</b>	
<u>C</u>	Dense minerals <sup>1</sup> <input checked="" type="checkbox"/>
<u>C</u>	Micas (biotite, musc, chl) <input checked="" type="checkbox"/>
	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
	Terrestrial organic matter
	Other (specify):
<b>Authigenic components</b>	
	Pyrite (framboids)
	Pyrite (euhedral)
	Pyrite (grain coating)
<u>F</u>	Calcite <input checked="" type="checkbox"/>
	Dolomite
	Zeolites
	Fe/Mn oxide
	Other (specify):

<sup>1</sup> List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Rutile, zircon

\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)

# Sediment Smear Slide / Thin Section Description Sheet

Date: 2019-03-27 2019

Expedition: 358

Observer: DJ

Site: C00024

Hole: G

Core: 15X

Section: 6

Interval: 27 cm

Sediment Name: silty sand

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
<u>8</u>				<u>8</u>				<u>~60</u>	<u>~40</u>	<u>?</u>

Select one and check.

Select one and check.

Percent	Composition	Percent	Composition	Percent	Composition
<b>Major Siliciclastic Grain Types</b>		<b>Pelagic Grains</b>		<b>Minor Grain Types</b>	
<u>A</u>	Quartz		Calcareous	<u>A</u>	Dense minerals <sup>1</sup>
<u>A</u>	Feldspars		Nannofossils	<u>C</u>	Micas (biotite, musc, chl) <sup>1</sup>
	Clay minerals		Foraminifers		Glauconite
<b>Lithic Grains</b>			Siliceous		Phosphate (bones, teeth, etc)
<b>Sedimentary Lithics</b>			Diatom	<u>C</u>	Opaque Grain
	Chert		Radiolarian		Marine organic matter
	Mudstone		Silicoflagellate		Terrestrial organic matter
	Siltstone/sandstone		Sponge Spicule		Other (specify):
	Limestone	<b>Other bioclasts</b>		<b>Authigenic components</b>	
<u>A (B)</u>	Metamorphic lithic		Mollusk		Pyrite (framboids)
	Plutonic lithic		Algae		Pyrite (euhedral)
			Echinoderm		Pyrite (grain coating)
			Benthic foraminifer		Calcite
			Other bioclast (specify)		Dolomite
<b>Volcaniclastic Grains</b>		<b>Other carbonate allochems</b>			Zeolites
	Vitric fragments		Peloid		Fe/Mn oxide
	Clear glass		Intraclast		Other (specify):
	Colored glass		Ooid		
	Pumice		Silt or sand-size carbonate allochem fragment (unspecified)		
	Volcanic lithics		Carbonate mud (apart from nannos)		
	Felsitic				
	Microinite				
	Lathwork				
	Altered volcanic (palagonite)				

<sup>1</sup> List under remarks if possible

Fill percentage (Total must be 100).

Remarks: silt - to sand sized grains, angular to subangular  
mostly qz, feldsp, lithics (metamorphic?), biotite & chlorite; opaque grains

\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)

HMs: Px,  
apatite, zircon,  
tourmaline

# Sediment Smear Slide / Thin Section Description Sheet

Date: 2019-03-27 2019

Expedition: 358

Observer: DJ

Site: C0002 u Hole: G Core: 16X Section: 9

Interval: 8 cm

Sediment Name: clayey siltstone

Smear Slide	Thin Section	Coarse Fraction	Grain Mount
X			

Select one and check.

Granular Sediment			Other material	Percent Texture		
Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
X				5	70	25

Select one and check.

Percent	Composition
<b>Major Siliciclastic Grain Types</b>	
A	Quartz
C	Feldspars
A	Clay minerals
<b>Lithic Grains</b>	
<b>Sedimentary Lithics</b>	
	Chert
C	Mudstone
	Siltstone/sandstone
	Limestone
	Metamorphic lithic
	Plutonic lithic
<b>Volcaniclastic Grains</b>	
	Vitric fragments
	Clear glass
	Colored glass
	Pumice
	Volcanic lithics
	Felsitic
	Microlitic
	Lathwork
	Altered volcanic (palagonite)

Percent	Composition
<b>Pelagic Grains</b>	
	Calcareous
R	Nannofossils
	Foraminifers
	Siliceous
	Diatom
	Radiolarian
	Silicoflagellate
	Sponge Spicule
<b>Other bioclasts</b>	
	Mollusk
	Algae
	Echinoderm
	Benthic foraminifer
	Other bioclast (specify)
<b>Other carbonate allochems</b>	
	Peloid
	Intraclast
	Ooid
	Silt or sand-size carbonate allochem fragment (unspecified)
	Carbonate mud (apart from nannos)

Percent	Composition
<b>Minor Grain Types</b>	
C	Dense minerals <sup>1</sup>
C	Micas (biotite, musc, chl) <sup>1</sup>
	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
	Terrestrial organic matter
	Other (specify):
<b>Authigenic components</b>	
	Pyrite (framboids)
	Pyrite (euhedral)
	Pyrite (grain coating)
	Calcite
	Dolomite
	Zeolites
	Fe/Mn oxide
	Other (specify):

<sup>1</sup> List under remarks if possible

Fill percentage (Total must be 100).

Remarks:

\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)

**Sediment Smear Slide / Thin Section Description Sheet**

Date: 26 March 2019

Expedition: 358

Observer: MH

Site: C0002 4 Hole: G Core: 17 x Section: 1A Interval: 9 cm

Sediment Name: Organic-rich (fine - very fine grained) fragment (wood?)

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓				✓				50	40	10

Select one and check.

Select one and check.

Percent	Composition
<b>Major Siliciclastic Grain Types</b>	
C	Quartz
C	Feldspars
A	Clay minerals
<b>Lithic Grains</b>	
Sedimentary Lithics	
C	Chert ✓
C	Mudstone ✓
	Siltstone/sandstone
	Limestone
C	Metamorphic lithic ✓
	Plutonic lithic
<b>Volcaniclastic Grains</b>	
Vitric fragments	
C	Clear glass ✓
	Colored glass
	Pumice
Volcanic lithics	
	Felsitic
C	Microlite ✓
	Lathwork
	Altered volcanic (palagonite)

Percent	Composition
<b>Pelagic Grains</b>	
	Calcareous
C	Nannofossils
C	Foraminifers ✓
	Siliceous
	Diatom
	Radiolarian
	Silicoflagellate
R	Sponge Spicule
<b>Other bioclasts</b>	
	Mollusk
	Algae
	Echinoderm
	Benthic foraminifer
	Other bioclast (specify)
<b>Other carbonate allochems</b>	
	Peloid
	Intraclast
	Ooid
	Silt or sand-size carbonate allochem fragment (unspecified)
	Carbonate mud (apart from nannos)

Percent	Composition
<b>Minor Grain Types</b>	
C	Dense minerals <sup>1</sup> ✓
C	Micas (biotite, musc, chl) ✓
F	Glauconite ✓
	Phosphate (bones, teeth, etc)
C	Opaque Grain
	Marine organic matter
A	Terrestrial organic matter ✓
	Other (specify):
<b>Authigenic components</b>	
	Pyrite (framboids)
C	Pyrite (euhedral)
	Pyrite (grain coating)
F	Calcite
	Dolomite
	Zeolites
	Fe/Mn oxide
	Other (specify):

<sup>1</sup> List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Mica-rich, various lithics

\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)

# Sediment Smear Slide / Thin Section Description Sheet

Date: 26 March 2019

Expedition: 358

Observer: MH

Site: C00024

Hole: G

Core: 17x

Section: 1

Interval: 128cm

Sediment Name: Volcanic ash with abundant glass + nannos

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>			80	20	

Select one and check.

Select one and check.

Percent	Composition
<b>Major Siliciclastic Grain Types</b>	
C	Quartz
C	Feldspars
F	Clay minerals
<b>Lithic Grains</b>	
Sedimentary Lithics	
E	Chert ✓
	Mudstone ✓
	Siltstone/sandstone
	Limestone
F	Metamorphic lithic
	Plutonic lithic
<b>Volcaniclastic Grains</b>	
Vitric fragments	
D	Clear glass ✓
	Colored glass
A	Pumice
Volcanic lithics	
	Felsitic
C	Microlite ✓ <u>Brown/Black</u>
	Lathwork <u>Black</u>
	Altered volcanic (palagonite)

Percent	Composition
<b>Pelagic Grains</b>	
	Calcareous
A	Nannofossils ✓
C	Foraminifers ✓
	Siliceous
	Diatom
	Radiolarian
	Silicoflagellate
	Sponge Spicule
<b>Other bioclasts</b>	
	Mollusk
	Algae
	Echinoderm
	Benthic foraminifer
	Other bioclast (specify)
<b>Other carbonate allochems</b>	
	Peloid
	Intraclast
	Ooid
	Silt or sand-size carbonate allochem fragment (unspecified)
	Carbonate mud (apart from nannos)

Percent	Composition
<b>Minor Grain Types</b>	
F	Dense minerals <sup>1</sup> ✓
F	Micas (biotite, musc, chl) <sup>1</sup>
F	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
F	Terrestrial organic matter
	Other (specify):
<b>Authigenic components</b>	
	Pyrite (framboids)
F	Pyrite (euhedral)
	Pyrite (grain coating)
	Calcite
	Dolomite
	Zeolites
	Fe/Mn oxide
	Other (specify):

<sup>1</sup> List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Microoliths are often brown + tanned

\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)



# Sediment Smear Slide / Thin Section Description Sheet

Date: 26 March 2019

Expedition: 358

Observer: MH

Site: C00024 Hole: 6 Core: 17X Section: 4A Interval: 46 cm

Sediment Name: Calcareous nanno-fossil-rich clay (lithified than other sediment) in core

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓						✓		10	10	80

Select one and check.

Select one and check.

Percent	Composition
<b>Major Siliciclastic Grain Types</b>	
F	Quartz
F	Feldspars
C	Clay minerals
<b>Lithic Grains</b>	
Sedimentary lithics	
	Chert
A	Mudstone (cluster of nanno-rich mud)
	Siltstone/sandstone
	Limestone
	Metamorphic lithic
	Plutonic lithic
<b>Volcaniclastic Grains</b>	
	Vitric fragments
F	Clear glass
	Colored glass
	Pumice
	Volcanic lithics
	Felsitic
	Microlite
	Lathwork
	Altered volcanic (palagonite)

Percent	Composition
<b>Pelagic Grains</b>	
	Calcareous
D	Nannofossils
	Foraminifers ✓
	Siliceous
R	Diatom ✓
	Radiolarian
	Silicoflagellate
	Sponge Spicule ✓
<b>Other bioclasts</b>	
	Mollusk
	Algae
	Echinoderm
	Benthic foraminifer
	Other bioclast (specify)
<b>Other carbonate allochems</b>	
	Peloid
	Intraclast
	Ooid
	Silt or sand-size carbonate allochem fragment (unspecified)
	Carbonate mud (apart from nannos)

Percent	Composition
<b>Minor Grain Types</b>	
R	Dense minerals <sup>1</sup>
C	Micas (biotite, musc, chl) <sup>1</sup>
	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
F	Terrestrial organic matter
	Other (specify):
<b>Authigenic components</b>	
	Pyrite (framboids)
F	Pyrite (euhedral)
	Pyrite (grain coating)
	Calcite
	Dolomite
	Zeolites
	Fe/Mn oxide
	Other (specify):

<sup>1</sup> List under remarks if possible

Fill percentage (Total must be 100).

Remarks:

\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)

# Sediment Smear Slide / Thin Section Description Sheet

Date: 26 March 2019

Expedition: 358

Observer: MH

Site: C00024 Hole: 9 Core: 18X Section: 5A Interval: 4cm

Sediment Name: Medium sand (fine-med.) med-coarse sand

Smear Slide	Thin Section	Coarse Fraction	Grain Mount
✓			

Select one and check.

Granular Sediment			Other material	Percent Texture		
Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓				15	20	5

Select one and check.

Percent	Composition
<b>Major Siliciclastic Grain Types</b>	
C	Quartz
C	Feldspars
C	Clay minerals
<b>Lithic Grains</b>	
Sedimentary Lithics	
C	Chert ✓
C	Mudstone ✓
	Siltstone/sandstone
	Limestone
C	Metamorphic lithic
	Plutonic lithic
<b>Volcaniclastic Grains</b>	
	Vitric fragments
C	Clear glass
	Colored glass
	Pumice
	Volcanic lithics
	Felsitic
C	Microlite
	Lathwork
	Altered volcanic (palagonite)

Percent	Composition
<b>Pelagic Grains</b>	
	Calcareous
F	Nannofossils
C	Foraminifers
	Siliceous
	Diatom
	Radiolarian
	Silicoflagellate
	Sponge Spicule
<b>Other bioclasts</b>	
	Mollusk
	Algae
	Echinoderm
	Benthic foraminifer
	Other bioclast (specify)
<b>Other carbonate allochems</b>	
	Peloid
	Intraclast
	Ooid
	Silt or sand-size carbonate allochem fragment (unspecified)
	Carbonate mud (apart from nannos)

Percent	Composition
<b>Minor Grain Types</b>	
C	Dense minerals <sup>1</sup> ✓
C	Micas (biotite, musc, chl)
	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
F	Terrestrial organic matter ✓
	Other (specify):
<b>Authigenic components</b>	
	Pyrite (framboids)
C	Pyrite (euhedral)
	Pyrite (grain coating)
	Calcite
	Dolomite
	Zeolites
	Fe/Mn oxide
	Other (specify):

<sup>1</sup> List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Rutile, Amphibole, Pyroxene, etc. + various lithics  
Big grains of foram

\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)

# Sediment Smear Slide / Thin Section Description Sheet

Date: 27 March 2019

Expedition: 358

Observer: M.H.

Site: C0002 4 Hole: G Core: 18X Section: 5 A

Interval: 67

Sediment Name: Fine to medium sand

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓				✓				60	15	25

Select one and check.

Select one and check.

Percent	Composition	Percent	Composition	Percent	Composition
<b>Major Siliciclastic Grain Types</b>		<b>Pelagic Grains</b>		<b>Minor Grain Types</b>	
C	Quartz		Calcareous	C	Dense minerals' ✓
C	Feldspars ✓	(A) E	Nannofossils	C	Micas (biotite, musc, chl) ✓
C	Clay minerals	F	Foraminifers ✓	F	Glaucinite ✓
<b>Lithic Grains</b>			Siliceous		Phosphate (bones, teeth, etc)
<b>Sedimentary Lithics</b>			Diatom	C	Opaque Grain
C	Chert ✓		Radiolarian ✓		Marine organic matter
A	Mudstone ✓	F	Silicoflagellate	F	Terrestrial organic matter ✓
	Siltstone/sandstone		Sponge Spicule ✓		Other (specify):
	Limestone	<b>Other bioclasts</b>			
C	Metamorphic lithic		Mollusk	<b>Authigenic components</b>	
	Plutonic lithic		Algae		Pyrite (framboids)
<b>Volcaniclastic Grains</b>			Echinoderm	E	Pyrite (euhedral)
	Vitric fragments		Benthic foraminifer		Pyrite (grain coating)
C	Clear glass ✓		Other bioclast (specify)		Calcite
	Colored glass	<b>Other carbonate allochems</b>			Dolomite
F	Pumice ✓		Peloid	F	Zeolites
	Volcanic lithics		Intraclast		Fe/Mn oxide ✓
	Felsitic		Ooid		Other (specify):
C	Microlitic ✓	C	Silt or sand-size carbonate allochem fragment (unspecified)		
	Lathwork				
	Altered volcanic (palagonite)	C	Carbonate mud (apart from nannos)		

List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Zircon

\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50%), A: abundant (>10-50%), C: common (>1-10%), F: few (>0.1-1%), R: rare (<0.1%)

# Sediment Smear Slide / Thin Section Description Sheet

Date: 2 2019

Expedition: 358

Observer: MH

Site: C00024 Hole: G Core: 10X Section: 2A Interval: 11cm

Sediment Name: Nannofossil-dominant ash

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓						✓				

Select one and check.

Select one and check.

Percent	Composition
<b>Major Siliciclastic Grain Types</b>	
F	Quartz
F	Feldspars
	Clay minerals
<b>Lithic Grains</b>	
Sedimentary Lithics	
	Chert
C	Mudstone
	Siltstone/sandstone
	Limestone
	Metamorphic lithic
	Plutonic lithic
<b>Volcaniclastic Grains</b>	
Vitric fragments	
C	Clear glass ✓
	Colored glass
C	Pumice
Volcanic lithics	
	Felsitic
C	Microlitic ✓
	Lathwork
	Altered volcanic (palagonite)

Percent	Composition
<b>Pelagic Grains</b>	
	Calcareous
A	Nannofossils ✓
	Foraminifers
	Siliceous
	Diatom
	Radiolarian
	Silicoflagellate
	Sponge Spicule
<b>Other bioclasts</b>	
	Mollusk
	Algae
	Echinoderm
	Benthic foraminifer
	Other bioclast (specify)
<b>Other carbonate allochems</b>	
	Peloid
	Intraclast
	Ooid
	Silt or sand-size carbonate allochem fragment (unspecified)
	Carbonate mud (apart from nannos)

Percent	Composition
<b>Minor Grain Types</b>	
F	Dense minerals <sup>1</sup>
C	Micas (biotite, musc, chl) <sup>1</sup>
	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
F	Marine organic matter
	Terrestrial organic matter
	Other (specify):
<b>Authigenic components</b>	
C	Pyrite (framboids)
C	Pyrite (euhedral)
C	Pyrite (grain coating)
	Calcite
	Dolomite
	Zeolites
	Fe/Mn oxide
	Other (specify):

<sup>1</sup> List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Nannofossils are more dominant than ash

\* This form is not designed for shallow water (neritic) carbonate sediments  
 D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)

# Sediment Smear Slide / Thin Section Description Sheet

Date: 27 March 2019

Expedition: 358

Observer: MH

Site: C00024 Hole: G Core: 19X Section: 7A Interval: 15cm

Sediment Name: Calcareous nannofossil rich silty clay

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓				✓		✓		5	25	70

Select one and check.

Select one and check.

Percent	Composition
<b>Major Siliciclastic Grain Types</b>	
C	Quartz
C	Feldspars
C	Clay minerals
<b>Lithic Grains</b>	
Sedimentary Lithics	
	Chert
A	Mudstone
	Siltstone/sandstone
	Limestone
	Metamorphic lithic
	Plutonic lithic
<b>Volcaniclastic Grains</b>	
Vitric fragments	
F	Clear glass
	Colored glass
	Pumice
Volcanic lithics	
	Felsitic
	Microlite
	Lathwork
	Altered volcanic (palagonite)

Percent	Composition
<b>Pelagic Grains</b>	
	Calcareous
D	Nannofossils
E	Foraminifers
	Siliceous
R	Diatom
	Radiolarian
	Silicoflagellate
F	Sponge Spicule
<b>Other bioclasts</b>	
	Mollusk
	Algae
	Echinoderm
	Benthic foraminifer
	Other bioclast (specify)
<b>Other carbonate allochems</b>	
	Peloid
	Intraclast
	Ooid
	Silt or sand-size carbonate allochem fragment (unspecified)
	Carbonate mud (apart from nannos)

Percent	Composition
<b>Minor Grain Types</b>	
F	Dense minerals <sup>1</sup>
C	Micas (biotite, musc, chl) <sup>1</sup>
F	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
F	Terrestrial organic matter
	Other (specify):
<b>Authigenic components</b>	
	Pyrite (framboids)
C	Pyrite (euhedral)
	Pyrite (grain coating)
	Calcite
C	Dolomite
	Zeolites
F	Fe/Mn oxide
	Other (specify):

<sup>1</sup> List under remarks if possible

Fill percentage (Total must be 100).

Remarks:

\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)

# Sediment Smear Slide / Thin Section Description Sheet

Date: 27 March 2019

Expedition: 358

Observer: MH

Site: C00024

Hole: G

Core: 19x

Section: 7A

Interval: 31cm

Sediment Name: Very fine to Fine sand

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓				✓				50	35	15

Select one and check.

Select one and check.

Percent	Composition
<b>Major Siliciclastic Grain Types</b>	
C	Quartz
C	Feldspars
C	Clay minerals
<b>Lithic Grains</b>	
<b>Sedimentary Lithics</b>	
C	Chert
C	Mudstone
	Siltstone/sandstone
	Limestone
C	Metamorphic lithic
	Plutonic lithic
<b>Volcaniclastic Grains</b>	
	Vitric fragments
F	Clear glass ✓
	Colored glass
F	Pumice ✓
	Volcanic lithics
	Felsitic
C	Microlite ✓
	Lathwork
	Altered volcanic(palagonite)

Percent	Composition
<b>Pelagic Grains</b>	
	Calcareous
F	Nannofossils
	Foraminifers
	Siliceous
	Diatom
	Radiolarian
	Silicoflagellate
	Sponge Spicule
<b>Other bioclasts</b>	
	Mollusk
	Algae
	Echinoderm
	Benthic foraminifer
	Other bioclast (specify)
<b>Other carbonate allochems</b>	
	Peloid
	Intraclast
	Ooid
	Silt or sand-size carbonate allochem fragment (unspecified)
	Carbonate mud (apart from nannos)

Percent	Composition
<b>Minor Grain Types</b>	
C ✓	Dense minerals <sup>1</sup> ✓
C	Micas (biotite, musc, chl) <sup>1</sup>
F	Glauconite ✓
	Phosphate (bones, teeth, etc)
C	Opaque Grain
	Marine organic matter
	Terrestrial organic matter
	Other (specify):
<b>Authigenic components</b>	
	Pyrite (framboids)
C	Pyrite (euhedral)
	Pyrite (grain coating)
	Calcite
R	Dolomite
	Zeolites
	Fe/Mn oxide
	Other (specify):

<sup>1</sup> List under remarks if possible

Fill percentage (Total must be 100).

Remarks:

\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)



# Sediment Smear Slide / Thin Section Description Sheet

Date: 27 March 2019

Expedition: 358

Observer: MH

Site: C00024 Hole: G Core: 22X Section: 2A Interval: 33

Sediment Name: Clay (nanno-fossil rich) (Dark olive gray silty clay)

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓				✓				5	15	80

Select one and check.

Select one and check.

Percent	Composition
<b>Major Siliciclastic Grain Types</b>	
C	Quartz
F	Feldspars
A	Clay minerals
<b>Lithic Grains</b>	
<b>Sedimentary Lithics</b>	
	Chert
C	Mudstone
	Siltstone/sandstone
	Limestone
	Metamorphic lithic
	Plutonic lithic
<b>Volcaniclastic Grains</b>	
<b>Vitric fragments</b>	
F	Clear glass ✓
	Colored glass
F	Pumice ✓
<b>Volcanic lithics</b>	
	Felsitic
	Microinite
	Lathwork
	Altered volcanic (palagonite)

Percent	Composition
<b>Pelagic Grains</b>	
	Calcareous
1-A	Nannofossils
C	Foraminifers
	Siliceous
F	Diatom
	Radiolarian
	Silicoflagellate
	Sponge Spicule
<b>Other bioclasts</b>	
	Mollusk
	Algae
	Echinoderm
	Benthic foraminifer
	Other bioclast (specify)
<b>Other carbonate allochems</b>	
	Peloid
	Intraclast
	Ooid
	Silt or sand-size carbonate allochem fragment (unspecified)
C	Carbonate mud (apart from nannos)

Percent	Composition
<b>Minor Grain Types</b>	
F	Dense minerals <sup>1</sup>
C	Micas (biotite, musc, chl) <sup>1</sup>
	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
C	Terrestrial organic matter
	Other (specify):
<b>Authigenic components</b>	
	Pyrite (framboids)
C	Pyrite (euhedral)
	Pyrite (grain coating)
	Calcite
F	Dolomite
	Zeolites
	Fe/Mn oxide
	Other (specify):

<sup>1</sup> List under remarks if possible

Fill percentage (Total must be 100).

Remarks:

\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)



# Sediment Smear Slide / Thin Section Description Sheet

Date: 29 March 2019

Expedition: 358

Observer: MH

Site: C0002 4 Hole: G Core: 23 X Section: 4 A Interval: 56 cm

Sediment Name: Silt to medium sand

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>				55	40	5

Select one and check.

Select one and check.

Percent	Composition
<b>Major Siliciclastic Grain Types</b>	
A	Quartz
C	Feldspars
C	Clay minerals
<b>Lithic Grains</b>	
<b>Sedimentary Lithics</b>	
C	Chert
C	Mudstone
	Siltstone/sandstone
	Limestone
F	Metamorphic lithic
	Plutonic lithic
<b>Volcaniclastic Grains</b>	
<b>Vitric fragments</b>	
C	Clear glass
	Colored glass
	Pumice
<b>Volcanic lithics</b>	
	Felsitic
C	Microlite
	Lathwork
	Altered volcanic (palagonite)

Percent	Composition
<b>Pelagic Grains</b>	
	Calcareous
C	Nannofossils
C-F	Foraminifers
	Siliceous
	Diatom
	Radiolarian
	Silicoflagellate
	Sponge Spicule
<b>Other bioclasts</b>	
	Mollusk
	Algae
	Echinoderm
	Benthic foraminifer
	Other bioclast (specify)
<b>Other carbonate allochems</b>	
	Peloid
	Intraclast
	Ooid
	Silt or sand-size carbonate allochem fragment (unspecified)
	Carbonate mud (apart from nannos)

Percent	Composition
<b>Minor Grain Types</b>	
C	Dense minerals <sup>1</sup>
C	Micas (biotite, musc, chl) <sup>1</sup>
F	Glauconite
	Phosphate (bones, teeth, etc)
C	Opaque Grain
	Marine organic matter
F	Terrestrial organic matter
	Other (specify):
<b>Authigenic components</b>	
	Pyrite (framboids)
C	Pyrite (euhedral)
	Pyrite (grain coating)
C	Calcite
	Dolomite
	Zeolites
F	Fe/Mn oxide
	Other (specify):

<sup>1</sup> List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Zircon  
Big grains of HM, mica,

\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)

# Sediment Smear Slide / Thin Section Description Sheet

Date: 27 March 2019

Expedition: 358

Observer: MH

Site: C0002 ♀ Hole: G Core: 23X Section: 5A Interval: 120 cm

Sediment Name: Siltstone

Smear Slide	Thin Section	Coarse Fraction	Grain Mount
✓			

Select one and check.

Granular Sediment			Other material	Percent Texture		
Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓				10	90	20

Select one and check.

Percent	Composition
<b>Major Siliciclastic Grain Types</b>	
C	Quartz
C	Feldspars
A	Clay minerals
<b>Lithic Grains</b>	
<b>Sedimentary Lithics</b>	
C	Chert ✓
C	Mudstone ✓
	Siltstone/sandstone
	Limestone
C	Metamorphic lithic ✓
	Plutonic lithic
<b>Volcaniclastic Grains</b>	
<b>Vitric fragments</b>	
C	Clear glass ✓
	Colored glass
F	Pumice ✓
<b>Volcanic lithics</b>	
	Felsitic
	Microinite ✓
	Lathwork
	Altered volcanic (palagonite)

Percent	Composition
<b>Pelagic Grains</b>	
	Calcareous
A-C	Nannofossils
C	Foraminifers ✓
	Siliceous
R	Diatom ✓
	Radiolarian
	Silicoflagellate
	Sponge Spicule
<b>Other bioclasts</b>	
	Mollusk
	Algae
	Echinoderm
	Benthic foraminifer
	Other bioclast (specify)
<b>Other carbonate allochems</b>	
	Peloid
	Intraclast
	Ooid
	Silt or sand-size carbonate allochem fragment (unspecified)
C	Carbonate mud (apart from nannos)

Percent	Composition
<b>Minor Grain Types</b>	
F	Dense minerals <sup>1</sup>
C	Micas (biotite, musc, chl) <sup>1</sup>
	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
C	Marine organic matter
C	Terrestrial organic matter
	Other (specify):
<b>Authigenic components</b>	
	Pyrite (framboids)
C	Pyrite (euhedral)
	Pyrite (grain coating)
C	Calcite
	Dolomite
	Zeolites
R	Fe/Mn oxide
	Other (specify):

<sup>1</sup> List under remarks if possible

Fill percentage (Total must be 100).

Remarks: \_\_\_\_\_

\* This form is not designed for shallow water (neritic) carbonate sediments  
 D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)

# Sediment Smear Slide / Thin Section Description Sheet

Date: 27 March 2019

Expedition: 358

Observer: MH

Site: C00024 Hole: G Core: 24x Section: 1A

Interval: 20

Sediment Name: usilt to very fine sand

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>				40	35	25

Select one and check.

Select one and check.

Percent	Composition	Percent	Composition	Percent	Composition
<b>Major Siliciclastic Grain Types</b>		<b>Pelagic Grains</b>		<b>Minor Grain Types</b>	
<u>C</u>	Quartz		Calcareous	<u>E</u>	Dense minerals <sup>1</sup> <input checked="" type="checkbox"/>
<u>A</u>	Feldspars	<u>F</u>	Nannofossils	<u>C</u>	Micas (biotite, musc, chl) <sup>1</sup>
<u>A</u>	Clay minerals		Foraminifers		Glaucinite
			Siliceous		Phosphate (bones, teeth, etc)
<b>Lithic Grains</b>		<u>R</u>	Diatom	<u>C</u>	Opaque Grain
	<b>Sedimentary Lithics</b>		Radiolarian	<u>F</u>	Marine organic matter
<u>C</u>	Chert <input checked="" type="checkbox"/>		Silicoflagellate		Terrestrial organic matter
<u>C</u>	Mudstone <input checked="" type="checkbox"/>		Sponge Spicule		Other (specify):
	Siltstone/sandstone	<b>Other bioclasts</b>			
	Limestone		Mollusk	<b>Authigenic components</b>	
<u>C</u>	Metamorphic lithic <input checked="" type="checkbox"/>		Algae	<u>C</u>	Pyrite (framboids)
	Plutonic lithic		Echinoderm		Pyrite (euhedral)
			Benthic foraminifer		Pyrite (grain coating)
<b>Volcaniclastic Grains</b>			Other bioclast (specify)		Calcite
	Vitric fragments	<b>Other carbonate allochems</b>			Dolomite
<u>C</u>	Clear glass		Peloid		Zeolites
	Colored glass		Intraclast		Fe/Mn oxide
	Pumice		Ooid		Other (specify):
	<b>Volcanic lithics</b>	<u>F</u>	Silt or sand-size carbonate allochem fragment (unspecified)		
	Felsitic		Carbonate mud (apart from nannos)		
<u>C</u>	Microclitic <input checked="" type="checkbox"/>				
	Lathwork				
	Altered volcanic (palagonite)				

<sup>1</sup> List under remarks if possible

Fill percentage (Total must be 100).

Remarks:

\* This form is not designed for shallow water (neritic) carbonate sediments

D: dominant (>50 %), A: abundant (>10-50 %), C: common (>1-10 %), F: few (>0.1-1 %), R: rare (<0.1 %)