

Sediment Smear Slide / Thin Section Description Sheet

Date: 17 March 2019

Expedition: 358

Observer: MH

Site: C00024

Hole: E

Core: 2R

Section: 4A

Interval: 25 cm

Sediment Name: Silty clay

Smear Slide	Thin Section	Coarse Fraction	Grain Mount
✓			

Select one and check.

Granular Sediment			Other material	Percent Texture		
Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓				5	30	65

Select one and check.

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

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

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

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: (Sediment is lithified; getting harder to disperse in smear)

* 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: 2019-03-18 2019

Expedition: 358

Observer: PJ

Site: C00024

Hole: E

Core: 3

Section: CC

Interval: 23 cm

Sediment Name: silty clay to clayey silt

Smear Slide	Thin Section	Coarse Fraction	Grain Mount
8			

Select one and check.

Granular Sediment			Other material	Percent Texture		
Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
8				<1	~50	~50

Select one and check.

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

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

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

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks:

silty clay to clayey silt, few grains of v. fine sand; qz, feldsp., clay min., HM (zircon, apatite, rutile); lithics (unidentified origin, heavily altered)

* 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%)

flakes of chlorite & biotite

Sediment Smear Slide / Thin Section Description Sheet

Date: 2019-03-18 2019

Expedition: 358

Observer: DJ

Site: C0002 U Hole: E Core: 4R Section: 1A Interval: 54

Sediment Name: sandy silt to silty v. fine sand

Smear Slide	Thin Section	Coarse Fraction	Grain Mount
<u>X</u>			

Select one and check.

Granular Sediment			Other material	Percent Texture		
Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
<u>X</u>				<u>~45</u>	<u>~45</u>	<u>~10</u>

Select one and check.

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

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

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

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: heavily altered lithics of unknown origin

* 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: 17 Jul 2019

Expedition: 358

Observer: DJ

Site: C0002 4

Hole: E

Core: 4R

Section: 4

Interval: 5

Sediment Name: silty clay- / clayey siltstone & ash/tuff

Smear Slide	Thin Section	Coarse Fraction	Grain Mount
<u>X</u>			

Select one and check.

Granular Sediment			Other material	Percent Texture		
Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
<u>X</u>					<u>~50</u>	<u>~50</u>

Select one and check.

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

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

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

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: roughly equal amounts of clay & silt-size components
silt fraction qz, feldsp & mudstone lithics, some sponge spiculae. HM include

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

amphibole, tourmaline, rutile, zircon
clear, angular glass shards & some vesicular glass; some
dispersed plates of biotite

D (>50%), A (10-50%), C (1-10%), F (0.1-1%), R (<0.1%)

Sediment Smear Slide / Thin Section Description Sheet

Date: 2019-03-18 2019

Expedition: 358

Observer:

Site: C0002⁴ Hole: E Core: SR Section: 5A Interval: 31 cm

Sediment Name: sandy siltstone (from base of gale bed)

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
X								~30	~70	

Select one and check.

Select one and check.

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

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

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

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: unidentified, heavily altered lithics; HM (apatite, rutile, tourmaline, (few, small zircon), amphibole)

* 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 taken)

Sediment Smear Slide / Thin Section Description Sheet

Date: 18 March 2019

Expedition: 358

Observer: MH

Site: C00024 Hole: E Core: 6R Section: 4A Interval: 19

Sediment Name: Foram-bearing silty clay (0.5-1mm white specs)

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓				✓				10	25	65

Select one and check.

Select one and check.

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

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

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

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Common calcite/dolomite, Abundant forams (+nannos)

* 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 taken)

Sediment Smear Slide / Thin Section Description Sheet

Date: 18 March 2019

Expedition: 358

Observer: MH

Site: C0002 4 Hole: E Core: 6R Section: 4A Interval: 37cm

Sediment Name: Volcanic ash (pod?)

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓					✓			20	75	5

Select one and check.

Select one and check.

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

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Amphibole + few metamorphic lithics, Common forams

* Volcanic ash "layer" is more visible in 6R3, 41-49 cm.

* 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%)



Similar color (light gray)

Sediment Smear Slide / Thin Section Description Sheet

Date: 2019-03-18 2019

Expedition: 358

Observer: DJ

Site: C0002 9

Hole: E

Core: 8R

Section: 1A

Interval: 103

Sediment Name: tuff/ash +

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	✓			60	40	

Select one and check.

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

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

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

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks:

mostly silt - to sand sized pieces of clear, angular glass
~~HA (amphibole, epidote, tourmaline)~~; pz & feldspar,

* 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%)

both angular glass pieces w/ gas (?) bubbles

Sediment Smear Slide / Thin Section Description Sheet

Date: 18/03/ 2019

Expedition: 358

Observer: PC

Site: C00024 Hole: E Core: 9R Section: 1 Interval: 19.0

Sediment Name: Greenish silty claystone

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

List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Silty claystone => Clay minerals have a greenish color => Alteration of smectite?

* 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: 19 March 2019

Expedition: 358

Observer: M.H

Site: C00024 Hole: E Core: 10R Section: 1A

Interval: 54.5

Sediment Name: Silty claystone (thin dark gray band) with abundant glass and mica ^{from} (e) DB???

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"/>				5	25	70

Select one and check.

Select one and check.

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

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Sand sized chlorite muscovite glass. Mica is commonly coated by Nannofossil barite thin 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 %)

Sediment Smear Slide / Thin Section Description Sheet

Date: 19 March 2019

Expedition: 358

Observer: MH

Site: C0002 4 Hole: E Core: 10R Section: 3A

Interval: 43

Sediment Name: Silty claystone

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

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Nannofossils are rare!! Chlorite + green muscovite.
very fine grained. (barren) But some Brg grains of 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: 19 March 2019

Expedition: 358

Observer: MH

Site: C00024 Hole: E Core: 11R Section: 1A

Interval: 50 cm

Sediment Name: Volcanic ash (tuff) with dominant clear glass and nanofossils

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓					✓			25	30	45

Select one and check.

Select one and check.

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

¹ 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: 17 Jul 2019

Expedition: 358

Observer: DJ

Site: C0002 4

Hole: E

Core: 12R

Section: 4

Interval: 102

Sediment Name: ash/tuff

Smear Slide	Thin Section	Coarse Fraction	Grain Mount
<u>X</u>			

Select one and check.

Granular Sediment			Other material	Percent Texture		
Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
	<u>X</u>			<u>~5</u>	<u>~55</u>	<u>~40</u>

Select one and check.

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

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

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

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: mostly silt-sized, angular glass shards, mixed with siliciclastic material (qz, fldsp, mudstone lithics & chert); some vesicular glass

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

D (>50%), A (10-50%), C (1-10%), F (0.1-1%), R (<0.1%)