

x100.

Sediment Smear Slide / Thin Section Description Sheet

Date: 9 Dec 2013

Expedition: 348

Observer: Pina

Site: C0002 Hole: M Core: 1 Sect.: 1

Interval: 9.0

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
				3	20	77

Select one and check.

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

Percent	Composition
Pelagic Grains	
	Calcareous
10	Nannofossils
5	Foraminifers
Siliceous	
3	Diatom
	Radiolarian
	Silicoflagellate
5	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	
5	Dense minerals ¹
5	Micas (biotite, musc, chl) ¹
	Glauconite
1	Phosphate (bones, teeth, etc)
	Opaque Grain
10	Marine organic matter
	Terrestrial organic matter
	Other (specify):
Authigenic components	
1	Pyrite (framboids)
	Pyrite (euhedral)
	Pyrite (grain coating)
3	Calcite
	Dolomite
	Zeolites
	Fe/Mn oxide
	Other (specify):

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks:

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

C0002 M-1R-9-1 over 0 view x2.5

Sediment Smear Slide / Thin Section Description Sheet

Date: 9, Dec, 2013

Expedition: 398 Observer: Rina

Site: C0002 Hole: M Core: 1 R Sect.: 2 Interval: 6,0 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
								10	20	70

Select one and check.

Select one and check.

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

Percent	Composition
Pelagic Grains	
	Calcareous
15	Nannofossils
1	Foraminifers
	Siliceous
	Diatom
1	Radiolarian
	Silicoflagellate
3	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)
5	Carbonate mud (apart from nannos)

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

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: _____

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

black nodule

Sediment Smear Slide / Thin Section Description Sheet

Date: 11/12/2013

Expedition: 348

Observer: Rina

Site: C0002 Hole: M Core: 1R Sect.: 2

Interval: 117.0

Sediment Name: _____

Smear Slide	Thin Section	Coarse Fraction	Grain Mount

Select one and check.

Granular Sediment			Other material	Percent Texture		
Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
				<u>1</u>	<u>5</u>	<u>94</u>

Select one and check.

Percent	Composition
Major Siliciclastic Grain Types	
<u>5</u>	Quartz
<u>3</u>	Feldspars
<u>56</u>	Clay minerals
Lithic Grains	
Sedimentary Lithics	
	Chert
<u>3</u>	Mudstone
	Siltstone/sandstone
	Limestone
	Metamorphic lithic
	Plutonic lithic
Volcaniclastic Grains	
	Vitric fragments
<u>3</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
<u>1</u>	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 nanos)

Percent	Composition
Minor Grain Types	
<u>3</u>	Dense minerals ¹
<u>3</u>	Micas (biotite, musc, chl) ¹
	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
<u>3</u>	Terrestrial organic matter
	Other (specify):
Authigenic components	
<u>20</u>	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: Gypsum, Amphibe, pyroxene

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

Five.

Sediment Smear Slide / Thin Section Description Sheet

Date: 4 Dec. 2013

Expedition: 348

Observer: KY

Site: C0002 Hole: M Core: 1 Sect.: 4

Interval: 7

Sediment Name: clay

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓								2	10	88

Select one and check.

Select one and check.

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

Percent	Composition
Pelagic Grains	
	Calcareous
20	Nannofossils
	Foraminifers
	Siliceous
2	Diatom
	Radiolarian
	Silicoflagellate
1	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	
7	Dense minerals ¹
4	Micas (biotite, musc, chl) ¹
	Glaucanite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
2	Terrestrial organic matter
	Other (specify):
Authigenic components	
5	Pyrite (framboids)
	Pyrite (euhedral)
	Pyrite (grain coating)
3	Calcite
	Dolomite
	Zeolites
	Fe/Mn oxide
	Other (specify):

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks:

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

Five

Sediment Smear Slide / Thin Section Description Sheet

Date: 9 Dec 2013

Expedition: 2480 Observer: KY

Site: 10002 Hole: M Core: 1 Sect.: CC Interval: 6

Sediment Name: Clay

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓								3	12	85

Select one and check.

Select one and check.

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

Percent	Composition
Pelagic Grains	
	Calcareous
18	Nannofossils
1	Foraminifers
	Siliceous
1	Diatom
	Radiolarian
	Silicoflagellate
1	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	
2	Dense minerals ¹
3	Micas (biotite, musc, chl) ¹
	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
2	Terrestrial organic matter
	Other (specify):
Authigenic components	
2	Pyrite (framboids)
	Pyrite (euhedral)
	Pyrite (grain coating)
3	Calcite
	Dolomite
	Zeolites
	Fe/Mn oxide
	Other (specify):

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks:

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

Five.

Sediment Smear Slide / Thin Section Description Sheet

Date: 9 Dec. 2014

Expedition: 348 Observer: KY

Site: C0002 Hole: M Core: 2 Sect.: 1 Interval: 6

Sediment Name: Clay

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓								4	14	82

Select one and check.

Select one and check.

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

Percent	Composition
Pelagic Grains	
	Calcareous
18	Nannofossils
1	Foraminifers
	Siliceous
2	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	
5	Dense minerals ¹
5	Micas (biotite, musc, chl) ¹
	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
3	Terrestrial organic matter
	Other (specify):
Authigenic components	
4	Pyrite (framboids)
	Pyrite (euhedral)
	Pyrite (grain coating)
1	Calcite
	Dolomite
	Zeolites
	Fe/Mn oxide
	Other (specify):

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks:

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

Coarse laminae.

Sediment Smear Slide / Thin Section Description Sheet

Date: 9 Dec. 2013

Expedition: 348 Observer: KY

Site: C0002 Hole: M Core: 2 Sect.: 1 Interval: 54.

Sediment Name: STITZY clay

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓								8	33	59

Select one and check.

Select one and check.

Percent	Composition
Major Siliciclastic Grain Types	
23	Quartz
3	Feldspars
15	Clay minerals
Lithic Grains	
Sedimentary Lithics	
	Chert
10	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
15	Nannofossils
2	Foraminifers
	Siliceous
2	Diatom
	Radiolarian
	Silicoflagellate
2	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	
8	Dense minerals ¹
15	Micas (biotite, musc, chl) ¹
2	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
3	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:

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

Five.

Sediment Smear Slide / Thin Section Description Sheet

Date: 9 Dec. 2013

Expedition: 348 Observer: KY

Site: C0002 Hole: M Core: 2 Sect.: 2 Interval: 7

Sediment Name: sticky clay

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓								2	16	72

Select one and check.

Select one and check.

Percent	Composition
Major Siliciclastic Grain Types	
10	Quartz
2	Feldspars
21	Clay minerals
Lithic Grains	
Sedimentary Lithics	
	Chert
23	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
16	Nannofossils
	Foraminifers
	Siliceous
	Diatom
	Radiolarian
	Silicoflagellate
3	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	
6	Dense minerals ¹
4	Micas (biotite, musc, chl) ¹
	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
2	Terrestrial organic matter
	Other (specify):
Authigenic components	
3	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:

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

Coarse.

Sediment Smear Slide / Thin Section Description Sheet

Date: 9 Dec. 2013

Expedition: 34B

Observer: KY

Site: C0002 Hole: M Core: 2 Sect.: 2 Interval: 41

Sediment Name: ST104 clay.

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓								7	30	63

Select one and check.

Select one and check.

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

Percent	Composition
Pelagic Grains	
	Calcareous
17	Nannofossils
	Foraminifers
	Siliceous
3	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	
10	Dense minerals ¹
6	Micas (biotite, musc, chl) ¹
	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
3	Terrestrial organic matter
	Other (specify):
Authigenic components	
7	Pyrite (framboids)
	Pyrite (euhedral)
	Pyrite (grain coating)
3	Calcite
	Dolomite
	Zeolites
	Fe/Mn oxide
	Other (specify):

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks:

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

Face

Sediment Smear Slide / Thin Section Description Sheet

Date: 9 Dec 2013

Expedition: 348 Observer: KY

Site: C0002 Hole: M Core: 2 Sect.: 3 Interval: 8

Sediment Name: silty clay

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

Select one and check.

Select one and check.

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

Percent	Composition
Pelagic Grains	
	Calcareous
20	Nannofossils
2	Foraminifers
	Siliceous
	Diatom
	Radiolarian
	Silicoflagellate
2	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	
5	Dense minerals ¹
5	Micas (biotite, musc, chl) ¹
	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
3	Terrestrial organic matter
	Other (specify):
Authigenic components	
3	Pyrite (framboids)
	Pyrite (euhedral)
	Pyrite (grain coating)
3	Calcite
	Dolomite
	Zeolites
	Fe/Mn oxide
	Other (specify):

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks:

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

Five

Sediment Smear Slide / Thin Section Description Sheet

Date: 9 Dec. 2013

Expedition: 34B

Observer: KY

Site: C0002 Hole: M Core: 2 Sect.: CC

Interval: 8

Sediment Name: silty clay.

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

Select one and check.

Select one and check.

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

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

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks:

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

Sediment Smear Slide / Thin Section Description Sheet

Date: 8 Dec. 2013

Expedition: 348 Observer: KY

Site: C0002 Hole: M Core: 3 Sect.: 1 Interval: 52cm

Sediment Name: Silty clay

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓								7	30	63

Select one and check.

Select one and check.

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

Percent	Composition
Pelagic Grains	
	Calcareous
5	Nannofossils ✓
	Foraminifers
	Siliceous
3	Diatom ✓
	Radiolarian
	Silicoflagellate
2	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	
3	Dense minerals ¹ Au
10	Micas (biotite, musc.(chl)) ¹ ✓
1	Glauconite
	Phosphate (bones, teeth, etc) ✓
1	Opaque Grain ✓
	Marine organic matter
5	Terrestrial organic matter ✓
	Other (specify):
Authigenic components	
3	Pyrite (framboids) ✓
	Pyrite (euhedral)
	Pyrite (grain coating)
1	Calcite ✓
	Dolomite
	Zeolites
	Fe/Mn oxide
	Other (specify):

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Amphibole, Zircon

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

Sediment Smear Slide / Thin Section Description Sheet

Date: 9 Dec. 2013

Expedition: 348 Observer: KF

Site: C0002 Hole: M Core: 3 Sect.: 1 Interval: B4

Sediment Name: Stilty clay

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓								4	20	76

Select one and check.

Select one and check.

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

Percent	Composition
Pelagic Grains	
	Calcareous
5	Nannofossils ✓
1	Foraminifers ✓
	Siliceous
	Diatom
	Radiolarian
	Silicoflagellate
2	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	
3	Dense minerals ¹ ✓
5	Micas (biotite, musc, chl) ¹ ✓
	Glaucinite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
7	Terrestrial organic matter ✓
	Other (specify):
Authigenic components	
5	Pyrite (framboids) ✓
	Pyrite (euhedral)
	Pyrite (grain coating)
2	Calcite ✓
	Dolomite
	Zeolites
	Fe/Mn oxide
	Other (specify):

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Amphibole, biotite, muscovite, chlorite.

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

Sediment Smear Slide / Thin Section Description Sheet

Date: 9 Dec. 2013

Expedition: 348 Observer: KY

Site: C0002 Hole: M Core: 3 Sect.: 1 Interval: 13B

Sediment Name: Silty 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"/>									25	75

Select one and check.

Select one and check.

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

Percent	Composition
Pelagic Grains	
	Calcareous
10	Nannofossils <input checked="" type="checkbox"/>
	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	
5	Dense minerals ¹ <input checked="" type="checkbox"/>
8	Micas (biotite, musc, chl) ¹ <input checked="" type="checkbox"/>
	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
	Terrestrial organic matter <input checked="" type="checkbox"/>
	Other (specify):
Authigenic components	
5	Pyrite (framboids)
	Pyrite (euhedral)
	Pyrite (grain coating)
3	Calcite
	Dolomite
	Zeolites
	Fe/Mn oxide
	Other (specify):

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: _____

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

Sediment Smear Slide / Thin Section Description Sheet

Date: 9. Dec. 2013

Expedition: 248 Observer: KF

Site: 0002 Hole: M Core: 3 Sect.: 2 Interval: 15

Sediment Name: 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
Major Siliciclastic Grain Types	
10	Quartz
3	Feldspars
18	Clay minerals
Lithic Grains	
	Sedimentary Lithics
	Chert
29	Mudstone ✓
	Siltstone/sandstone
	Limestone
	Metamorphic lithic
	Plutonic lithic
Volcaniclastic Grains	
	Vitric fragments
3	Clear glass
	Colored glass
	Pumice
	Volcanic lithics
	Felsitic
	Microclite
	Lathwork
	Altered volcanic(palagonite)

Percent	Composition
Pelagic Grains	
	Calcareous
9	Nannofossils
	Foraminifers
	Siliceous
4	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	
6	Dense minerals ¹ ✓
8	Micas (biotite, musc, chl) ¹ ✓
	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
5	Terrestrial organic matter ✓
	Other (specify):
Authigenic components	
1	Pyrite (framboids) ✓
	Pyrite (euhedral)
	Pyrite (grain coating)
4	Calcite
	Dolomite
	Zeolites
	Fe/Mn oxide
	Other (specify):

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: _____

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

Sediment Smear Slide / Thin Section Description Sheet

Date: 9 Dec. 2013

Expedition: 348 Observer: KY

Site: C0002 Hole: M Core: 3 Sect.: 2 Interval: 85 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
✓									26	74

Select one and check. Select one and check.

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

Percent	Composition
Pelagic Grains	
	Calcareous
10	Nannofossils
1	Foraminifers ✓
	Siliceous
2	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	
4	Dense minerals ¹ ✓
5	Micas (biotite, musc, chl) ¹ ✓
1	Glauconite ✓
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
	Terrestrial organic matter
	Other (specify):
Authigenic components	
4	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: _____

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

Sediment Smear Slide / Thin Section Description Sheet

Date: 9 Dec 2013

Expedition: 348 Observer: KY

Site: C0002 Hole: M Core: 3 Sect.: CC Interval: 20

Sediment Name: clay.

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓									20	80

Select one and check.

Select one and check.

Percent	Composition
Major Siliciclastic Grain Types	
10	Quartz
2	Feldspars
47	Clay minerals
Lithic Grains	
Sedimentary Lithics	
	Chert
25	Mudstone
	Siltstone/sandstone
	Limestone
	Metamorphic lithic
	Plutonic lithic
Volcaniclastic Grains	
	Vitric fragments
1	Clear glass
	Colored glass
	Pumice
	Volcanic lithics
	Felsitic
	Microclite
	Lathwork
	Altered volcanic(palagonite)

Percent	Composition
Pelagic Grains	
	Calcareous
6	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	
3	Dense minerals ¹
2	Micas (biotite, musc, chl) ¹
	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
	Terrestrial organic matter
	Other (specify):
Authigenic components	
3	Pyrite (framboids)
	Pyrite (euhedral)
	Pyrite (grain coating)
1	Calcite
	Dolomite
	Zeolites
	Fe/Mn oxide
	Other (specify):

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: _____

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

Sediment Smear Slide / Thin Section Description Sheet

Date: 9. Dec. 2013

Expedition: 348

Observer: KY

Site: C0002 Hole: M Core: 4 Sect.: 3

Interval: 67

Sediment Name: clay

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓									23	77

Select one and check.

Select one and check.

Percent	Composition
Major Siliciclastic Grain Types	
15	Quartz
2	Feldspars
23	Clay minerals
Lithic Grains	
Sedimentary Lithics	
	Chert
20	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
10	Nannofossils
	Foraminifers
	Siliceous
	Diatom
	Radiolarian
	Silicoflagellate
1	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 pannon)

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

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks:

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

Black seed like - pyrite nodules.

Sediment Smear Slide / Thin Section Description Sheet

Date: 9 Dec 2013

Expedition: 348 Observer: KY

Site: C0002 Hole: M Core: 4 Sect.: 3 Interval: 86

Sediment Name: STILTY CLAY

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓								3	20	77

Select one and check.

Select one and check.

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

Percent	Composition
Pelagic Grains	
	Calcareous
18	Nannofossils
2	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	
3	Dense minerals ¹
4	Micas (biotite, musc, chl) ¹
	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
2	Terrestrial organic matter
	Other (specify):
Authigenic components	
30	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:

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