

32-1

Sediment Smear Slide / Thin Section Description Sheet

Date: 1/23

Expedition: 358

Observer: Rina

Site: C0002 Hole: Q Core: _____ Sect.: 32 SMW Interval: _____

Sediment Name: Silty claystone

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"/>				25	30	45

Select one and check.

Select one and check.

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

80
3
3
2
4
10
7

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	
3	Dense minerals ¹
10	Micas (biotite, musc, chl) ¹
	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
	Terrestrial organic matter
1	Other (specify):
Authigenic components	
2	Pyrite (framboids)
2	Pyrite (euhedral)
	Pyrite (grain coating)
	Calcite
	Dolomite
	Zeolites
1	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

32-2



Sediment Smear Slide / Thin Section Description Sheet

Date: 11/22

Expedition: 358 Observer: Rina

Site: C0002 Hole: Q Core: 32 Sect.: SWW Interval:

Sediment Name: Fine silty claystone
silty claystone light gray clay.

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

Percent	Composition
Pelagic Grains	
	Calcareous
1	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	
<0.1	Dense minerals ¹
30	Micas (biotite, musc, chl) ¹
	Glaucanite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
	Terrestrial organic matter
	Other (specify):
Authigenic components	
3	Pyrite (framboids)
2	Pyrite (euhedral)
	Pyrite (grain coating)
	Calcite
	Dolomite
	Zeolites
2	Fe/Mn oxide
	Other (specify):

¹ List under remarks if possible Fill percentage (Total must be 100).

Remarks: Nano fossil Mica

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

32-3



Sediment Smear Slide / Thin Section Description Sheet

Date: 27/11

Expedition: 358

Observer: Pauline

Site: 60020 Hole: Q Core: 32SMW Sect.:

Interval:

Sediment Name: Sedstone / 32° SMW
sedilithic siliclastic sandy silt stone

<63µm / >63µm >2µm

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
X				✓				30%	50%	20%

Select one and check.

Select one and check.

Percent	Composition
Major Siliciclastic Grain Types	
20%	Quartz
5%	Feldspars
	Clay minerals
Lithic Grains	
	Sedimentary Lithics
	Chert
30%	Mudstone
10%	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	
	Dense minerals ¹
3%	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)
2%	Pyrite (euhedral)
1%	Pyrite (grain coating)
1%	Calcite
	Dolomite
	Zeolites
	Fe/Mn oxide
	Other (specify):

Handwritten notes: 30%, 20%, 5%, 42%, 14%, 10%

Handwritten note: 91

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Handpicked > 4mm sand and siltstone

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

10230 - 11200

36-1

Dominant

Sediment Smear Slide / Thin Section Description Sheet

Date: 11/23

Expedition: 358 Observer: Pina

Site: Hole: 2 Core: 36 Sect.: Interval:

Sediment Name: Silty claystone (sandy silt)

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓				✓				20	90	10

Select one and check.

Select one and check.

Percent	Composition
Major Siliciclastic Grain Types	
5	Quartz
3	Feldspars
10	Clay minerals
Lithic Grains	
Sedimentary Lithics	
5	Chert
10	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	
1	Dense minerals ¹
30	Micas (biotite, musc, chl) ¹
	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
	Terrestrial organic matter
	Other (specify):
Authigenic components	
5	Pyrite (framboids)
1	Pyrite (euhedral)
	Pyrite (grain coating)
	Calcite
	Dolomite
	Zeolites
	Fe/Mn oxide
27	Other (specify):
	(Halite seawater disturbed)

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Not good for observation.

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

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NOT table

Sediment Smear Slide / Thin Section Description Sheet

Date: 2018 11/22

Expedition: 358 Observer: Arito

Site: C0002 Hole: Q Core: 36 Sect.: Interval:

Sediment Name: sand-silt-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
✓				20	60	20

Select one and check.

Percent	Composition
Major Siliciclastic Grain Types	
3	Quartz
	Feldspars
20	Clay minerals
Lithic Grains	
Sedimentary Lithics	
3	Chert
40	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	
1	Dense minerals ¹
1	Micas (biotite, musc, chl) ¹
	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
	Terrestrial organic matter
	Other (specify):
Authigenic components	
12	Pyrite (framboids)
	Pyrite (euhedral)
	Pyrite (grain coating)
	Calcite
	Dolomite
	Zeolites
	Fe/Mn oxide
20	Other (specify): gypsum

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Much gypsum, zircon.

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

(練習) gypsum!

Sediment Smear Slide / Thin Section Description Sheet

Date: 11/22 ✓

Expedition: 358 Observer: Pina

Site: C0002 Hole: Q Core: 36 Sect.: SMW Interval:

Sediment Name: clay comment (pillow)

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓				✓					10	90

Select one and check.

Select one and check.

Percent	Composition
Major Siliciclastic Grain Types	
1	Quartz
1	Feldspars
83	Clay minerals
Lithic Grains	
Sedimentary Lithics	
	Chert
1	Mudstone
	Siltstone/sandstone
	Limestone
	Metamorphic lithic
	Plutonic lithic
Volcaniclastic Grains	
	Vitric fragments
5	Clear glass
5	Colored glass
	Pumice
Volcanic lithics	
	Felsitic
	Microclite
	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	
0.5	Dense minerals ¹
0.5	Micas (biotite, musc, chl) ¹
	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
	Terrestrial organic matter
	Other (specify):
Authigenic components	
2	Pyrite (framboids)
1	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: light gray clay is mostly clay minerals. i have There is sandstone & silty claystone in this depth

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

Not (pillow ver.) second measurement.

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Sediment Smear Slide / Thin Section Description Sheet

Date: 11/24

Expedition: 358 Observer: Pina

Site: C0002 Hole: Q Core: 30 SMW Sect.: Interval:

Sediment Name: sedi-lithic rounded siliclastic sediment Sandy & clayey silt

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

Select one and check.

Select one and check.

Percent	Composition
Major Siliciclastic Grain Types	
10	Quartz
5	Feldspars
1	Clay minerals
Lithic Grains	
Sedimentary Lithics	
	Chert
5	Mudstone
75	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	
1	Dense minerals ¹
1	Micas (biotite, musc, chl) ¹
	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
	Terrestrial organic matter
	Other (specify):
Authigenic components	
2	Pyrite (framboids)
	Pyrite (euhedral)
	Pyrite (grain coating)
	Calcite
	Dolomite
	Zeolites
	Fe/Mn oxide
	Other (specify):

50
75
5
80
1/6
96

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: coarse picked up from light gray color soft material.

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



Sediment Smear Slide / Thin Section Description Sheet

Date: 2/12

Expedition: 358

Observer: P.

Site: C0002 Hole: P Core: 36 Sect.: Interval:

Sediment Name: siliciclastic sandy siltstone

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
X				Y				30%	50%	20%

Select one and check.

Select one and check.

Percent	Composition
Major Siliciclastic Grain Types	
25%	Quartz
8%	Feldspars
25%	Clay minerals
Lithic Grains	
Sedimentary Lithics	
	Chert
15%	Mudstone
15%	Siltstone/sandstone
	Limestone
	Metamorphic lithic
	Plutonic lithic
Volcaniclastic Grains	
Vitric fragments	
	Clear glass
1%	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	
5%	Dense minerals ¹
43%	Micas (biotite, musc, chl) ¹
8%	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
	Terrestrial organic matter
	Other (specify): Many blue unknown minerals
Authigenic components	
1%	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

40-1

Sediment Smear Slide / Thin Section Description Sheet

Dominant lith. = silty claystone

✓CD was described as

Date: 1/20 (2019)

Expedition: 358

Observer: RMA

Site: 00002 Hole: Q Core: 40 Sect.: Interval: 5m

Sediment Name: siliclastic claystone

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓				✓				3	10	87

Select one and check.

Select one and check.

Percent	Composition	Percent	Composition	Percent	Composition
Major Siliciclastic Grain Types		Pelagic Grains		Minor Grain Types	
3	Quartz		Calcareous		Dense minerals ¹
5	Feldspars		Nannofossils	5	Micas (biotite, musc, chl) ¹
56	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
20	Mudstone		Sponge Spicule		Other (specify):
	Siltstone/sandstone	Other bioclasts			
	Limestone		Mollusk	Authigenic components	
	Metamorphic lithic		Algae	1	Pyrite (framboids)
	Plutonic lithic		Echinoderm	3	Pyrite (euhedral)
			Benthic foraminifer		Pyrite (grain coating)
Volcaniclastic Grains			Other bioclast (specify)		Calcite
	Vitric fragments	Other carbonate allochems			Dolomite
30	Clear glass		Peloid	6.5	Zeolites
R.P.S)	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 nannos)		
1	Microlitic				
	Lathwork				
2	Altered volcanic(palagonite)				

34
9
R.P.S.
44

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: chl. colour glass brown, amsc.

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

Sediment Smear Slide / Thin Section Description Sheet

Date: 12/2 ✓

Expedition: 358 Observer: RINA

Site: C0002 Hole: Q Core: 40 smw Sect.: Interval:

Sediment Name: Siliciclastic Silty claystone

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
5	Feldspars
63	Clay minerals
Lithic Grains	
Sedimentary Lithics	
	Chert
5	Mudstone
5	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	
	Dense minerals ¹
5	Micas (biotite, musc, chl) ¹
	Glauconite
	Phosphate (bones, teeth, etc)
2	Opaque Grain
	Marine organic matter
3	Terrestrial organic matter
	Other (specify):
Authigenic components	
	Pyrite (framboids)
	Pyrite (euhedral)
	Pyrite (grain coating)
1	Calcite
	Dolomite
1	Zeolites
	Fe/Mn oxide
	Other (specify):

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: almost clay size (<2µm) minerals

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

gray clay soft material.

Dominant

Sediment Smear Slide / Thin Section Description Sheet

Date: 11/24

Expedition: 358

Observer: Rina

Site: 2 Hole: Q Core: 43 Sect.: Interval:

Sediment Name: Silty clay stone

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.

35
35
20
90

Percent	Composition	Percent	Composition	Percent	Composition
Major Siliciclastic Grain Types		Pelagic Grains		Minor Grain Types	
5	Quartz		Calcareous		Dense minerals ¹
3	Feldspars	/	Nannofossils	/	Micas (biotite, musc, chl) ¹
30	Clay minerals		Foraminifers		Glauconite
			Siliceous		Phosphate (bones, teeth, etc)
			Diatom		Opaque Grain
	Lithic Grains		Radiolarian		Marine organic matter
	Sedimentary Lithics		Silicoflagellate		Terrestrial organic matter
	Chert		Sponge Spicule		Other (specify):
20	Mudstone		Other bioclasts		Authigenic components
35	Siltstone/sandstone		Mollusk		Pyrite (framboids)
	Limestone		Algae	3	Pyrite (euhedral)
	Metamorphic lithic		Echinoderm		Pyrite (grain coating)
	Plutonic lithic		Benthic foraminifer		Calcite
			Other bioclast (specify)		Dolomite
					Zeolites
	Volcaniclastic Grains		Other carbonate allochems		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		Carbonate mud (apart from nannos)		
	Felsitic				
	Microlite				
	Lathwork				
	Altered volcanic(palagonite)				

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: clay rich sediment, fossil could not observe yet

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

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Sediment Smear Slide / Thin Section Description Sheet

Date: 1/24

Expedition: 358

Observer: RINA

Site: C0002 Hole: Q Core: 438MW Sect.: 0 Interval:

Sediment Name: Sedimentary semi-rounded silty clay(stone?)

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	20	75

Select one and check.

Percent	Composition
Major Siliciclastic Grain Types	
1	Quartz
1	Feldspars
73	Clay minerals
Lithic Grains	
	Sedimentary lithics
	Chert
3	Mudstone
	Siltstone/sandstone
	Limestone
2	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	
1	Dense minerals ¹
10	Micas (biotite, musc, chl)
	Glauconite
	Phosphate (bones, teeth, etc)
1	Opaque Grain
	Marine organic matter
	Terrestrial organic matter
	Other (specify):
Authigenic components	
5	Pyrite (framboids)
3	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: Micas (Big grain) is abundant, maybe some grains are disturbed from drill mud. clay rich sediment, pyr

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

43-3

Sediment Smear Slide / Thin Section Description Sheet

Date: 12/2

Expedition: 358

Observer: RINA

Site: C0002 Hole: Q Core: 43 saw Sect.:

Interval:

Sediment Name: Siliciclastic (mainly) Sandy silt stone

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

Select one and check.

Select one and check.

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

80
10

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
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)
2	Pyrite (euhedral)
	Pyrite (grain coating)
	Calcite
	Dolomite
1	Zeolites philipsite?
	Fe/Mn oxide
	Other (specify):

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: altered volcanic glass & fragments observed.

for compare thin section coming >> sandstone

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

Sediment Smear Slide / Thin Section Description Sheet

Date: 2018. 1/24

Expedition: 358

Observer: Arto

Site: C0002 Hole: Q Core: 47

Sect.:

Interval:

Sediment Name: Clayey silt

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	70	20

Select one and check.

Percent	Composition
Major Siliciclastic Grain Types	
25	Quartz
5	Feldspars
25	Clay minerals
Lithic Grains	
Sedimentary Lithics	
	Chert
25	Mudstone
8	Siltstone/sandstone
	Limestone
	Metamorphic lithic
	Plutonic lithic
Volcaniclastic Grains	
	Vitric fragments
1	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
1	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
1	Terrestrial organic matter
	Other (specify):
Authigenic components	
2	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: siltstone

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

< Sandstone >

51-1

Sediment Smear Slide / Thin Section Description Sheet

Date: 27/11

Expedition: 358

Observer: Pauline

Site: C0002 Hole: Q Core: 51 Sect.: SMX Interval:

Sediment Name: Silty claystone (pillow)

63 | 23 | 18

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
X				X				20%	26%	60%

Select one and check.

Select one and check.

Percent	Composition
Major Siliciclastic Grain Types	
10%	Quartz
	Feldspars
	Clay minerals
Lithic Grains	
	Sedimentary Lithics
	Chert
40	Mudstone
80	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	
1	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	
	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

51-2



Sediment Smear Slide / Thin Section Description Sheet

Date: 11/26

Expedition: 358 Observer: RINA

Site: C0002 Hole: Q Core: 51 SMW Sect.: Interval:

Sediment Name: Siliciclastic clayey siltstone

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

Select one and check.

Select one and check.

55
5
3
3
68
20
86
91

Percent	Composition
Major Siliciclastic Grain Types	
3	Quartz
5	Feldspars
38	Clay minerals
Lithic Grains	
Sedimentary Lithics	
5	Chert
20	Mudstone
10	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
1	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
15	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: The sample is disturbed by drill mud. (~50%)
white mica flakes? (x40) 51 SMW has many

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

53-1

Sediment Smear Slide / Thin Section Description Sheet

Date: 11/22

Expedition: 358 Observer: Rina

Site: C0002 Hole: Q Core: 53 saw Sect.: Interval:

Sediment Name: Silty claystone (->

Table with columns for Smear Slide, Thin Section, Coarse Fraction, Grain Mount, Granular Sediment (Siliciclastic, Volcaniclastic, Pelagic), Other material, and Percent Texture (Sand, Silt, Clay).

Select one and check.

Select one and check.

Table with columns for Percent and Composition, categorized into Major Siliciclastic Grain Types, Lithic Grains, and Volcaniclastic Grains.

Handwritten notes: 80, 10, 3, 83, 2

Table with columns for Percent and Composition, categorized into Pelagic Grains, Other bioclasts, and Other carbonate allochems.

Table with columns for Percent and Composition, categorized into Minor Grain Types and Authigenic components.

1 List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Silicious, sometimes calcareous mudstone. Nannofossil

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

took the pick

53-2



Sediment Smear Slide / Thin Section Description Sheet

Date: 11/27

Expedition: 358 Observer: R. NA

Site: C0002 Hole: Q Core: B3 suw Sect.: Interval:

Sediment Name: Siliciclastic clay

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓				✓				0	15	85

Select one and check.

Select one and check.

Percent	Composition
Major Siliciclastic Grain Types	
3	Quartz
5	Feldspars
80	Clay minerals
Lithic Grains	
	Sedimentary Lithics
	Chert
3	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	
	Dense minerals ¹
5	Micas (biotite, musc, chl) ¹
	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
1	Terrestrial organic matter
	Other (specify):
Authigenic components	
1	Pyrite (framboids)
1	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: The white micas are abundant. (← disturbed drill mud??)

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

Hard Dark greenish gray silty claystone (Main lithology) ✓

Sediment Smear Slide / Thin Section Description Sheet

Date: 12/3

Expedition: 358 Observer: PINA

Site: C0002 Hole: Q Core: 381SMW Sect.: Interval:

Sediment Name: Siliciclastic claystone

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓				✓					3	97

Select one and check. Select one and check.

Percent	Composition
Major Siliciclastic Grain Types	
1	Quartz
1	Feldspars
81	Clay minerals
Lithic Grains	
Sedimentary Lithics	
0.5	Chert
2	Mudstone
0.5	Siltstone/sandstone
	Limestone
	Metamorphic lithic
	Plutonic lithic
Volcaniclastic Grains	
	Vitric fragments
	Clear glass
1	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	
1	Dense minerals ¹
1	Micas (biotite, musc, chl) ¹
	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
3	Terrestrial organic matter
	Other (specify):
Authigenic components	
5	Pyrite (framboids)
2	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: mainly clay size minerals, framboids pyr. & mudstone

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

Dark hard silty clay stone (finer?)



388-1

Sediment Smear Slide / Thin Section Description Sheet

Date: 12/3

Expedition: 358 Observer: RINA

Site: C0002 Hole: Q Core: 388SMW Sect.: Interval:

Sediment Name: siliciclastic clay stone

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

Select one and check.

Select one and check.

Percent	Composition
Major Siliciclastic Grain Types	
1	Quartz
2	Feldspars
~81 (82.8)	Clay minerals
Lithic Grains	
Sedimentary Lithics	
1	Chert
3	Mudstone
1	Siltstone/sandstone
	Limestone
	Metamorphic lithic
	Plutonic lithic
Volcaniclastic Grains	
Vitric fragments	
5	Clear glass
1	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	
1	Dense minerals ¹
5	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
<0.1%	Dolomite
<0.1	Zeolites
	Fe/Mn oxide
	Other (specify):

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: cpx, biotite, volcanic glass (clay size mineral rich.)

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

Sandstone
for thin section

4

388-2

Sediment Smear Slide / Thin Section Description Sheet

Date: 12/4

Expedition: 358

Observer: RINA

Site: 0002 Hole: 2 Core: 208 SMW Sect.:

Interval:

Sediment Name: Siliciclastic Silty Sandstone with sedi-lithic & Volcaniclastic grains.

Smear Slide	Thin Section	Coarse Fraction	Grain Mount
✓			

Select one and check.

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

Select one and check.

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

35
12
47
30
3
3
83
90

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	
1	Dense minerals ¹
7-10	Micas (biotite, musc, chl) ¹
	Glauconite
	Phosphate (bones, teeth, etc)
3	Opaque Grain
	Marine organic matter
	Terrestrial organic matter
	Other (specify):
Authigenic components	
1	Pyrite (framboids)
	Pyrite (euhedral)
	Pyrite (grain coating)
	Calcite
	Dolomite
	Zeolites
1	Fe/Mn oxide
	Other (specify):

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Zircon, volcanic glass, altered plagioclase with opaque grain.

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

Main Fine silty claystone



Sediment Smear Slide / Thin Section Description Sheet

Date: 12/5

Expedition: 358 Observer: R/M

Site: C0002 Hole: Q Core: 482 Sect.: SMW Interval: ~5m

Sediment Name: Calcareous silty claystone

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓				✓	△			7	20	73

Select one and check.

Select one and check.

Percent	Composition
Major Siliciclastic Grain Types	
1	Quartz
2	Feldspars
54	Clay minerals
Lithic Grains	
Sedimentary Lithics	
	Chert
3	Mudstone
3	Siltstone/sandstone
	Limestone
2	Metamorphic lithic
	Plutonic lithic
Volcaniclastic Grains	
Vitric fragments	
2	Clear glass
1	Colored glass
3	Pumice
Volcanic lithics	
	Felsitic
	Microplitic
	Lathwork
5	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)
10	Carbonate mud (apart from nanos)

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

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Calcite rich. (volcanic lithic or altered volcanic rich?)

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

Main

Fine silty claystone(?) >> gray soft material > 4mm

Sediment Smear Slide / Thin Section Description Sheet

Date: 12/5

Expedition: 358

Observer: RINA

Site: C0002

Hole: Q

Core: 492

Sept.: SMW

Interval:

Sediment Name:

Siliciclastic silty claystone

32

Smear Slide	Thin Section	Coarse Fraction	Grain Mount
✓			

Select one and check.

Granular Sediment			Other material	Percent Texture		
Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓				7	25	68

Select one and check.

12
4.5
10
36.5

Percent	Composition
Major Siliciclastic Grain Types	
3	Quartz
7	Feldspars
63.5	Clay minerals
Lithic Grains	
Sedimentary lithics	
1	Chert
25	Mudstone
5	Siltstone/sandstone
	Limestone
1	Metamorphic lithic
	Plutonic lithic
Volcaniclastic Grains	
Vitric fragments	
5	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	
0.5	Dense minerals ¹
10	Micas (biotite, musc, chl) ¹
	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
0.5	Marine organic matter
	Terrestrial organic matter
	Other (specify):
Authigenic components	
2	Pyrite (framboids)
1	Pyrite (euhedral)
	Pyrite (grain coating)
0.5	Calcite
	Dolomite
	Zeolites
	Fe/Mn oxide
	Other (specify):

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks:

crushed calcareous included, sedimentary grains are more coarser. siltstone dominant / altered plagioclase observed. was

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

Main

light gray soft sedi.

Sediment Smear Slide / Thin Section Description Sheet

Date: 12/6

Expedition: 358 Observer: PINA

Site: C0002 Hole: Q Core: 568 Sect.: Interval:

Sediment Name: ~~Silty claystone~~ siliciclastic Claystone

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	10	85

Select one and check.

10
0.5
0.8
11.3

Percent	Composition
Major Siliciclastic Grain Types	
0.8	Quartz
1	Feldspars
98.7	Clay minerals
Lithic Grains	
	Sedimentary Lithics
	Chert
1	Mudstone
1	Siltstone/sandstone
	Limestone
	Metamorphic lithic
	Plutonic lithic
Volcaniclastic Grains	
	Vitric fragments
1	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	
1	Dense minerals ¹
3	Micas (biotite, musc, chl) ¹
	Glauconite
	Phosphate (bones, teeth, etc)
	Opaque Grain
	Marine organic matter
0.5	Terrestrial organic matter
	Other (specify):
Authigenic components	
0.5	Pyrite (framboids)
0.5	Pyrite (euhedral)
	Pyrite (grain coating)
	Calcite
0.5	Dolomite
	Zeolites
0.5	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

main silty claystone (hard rock)

Sediment Smear Slide / Thin Section Description Sheet

Date: 12/61

Expedition: 358

Observer: RINA

Site: C0002

Hole: Q

Core: 570

Section:

Interval: ~ 5m

Sediment Name:

siliclastic silty claystone

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	25	72

Select one and check.

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

29
5
7
61

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

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: zircon, hypersthene, (3 kinds of Nannofossils.)

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

Sediment Smear Slide / Thin Section Description Sheet

Date: 12/7

Expedition: 358

Observer: RINA

Site: C0002 Hole: Q Core: 620 Sect.: SMW Interval:

Sediment Name: Siliciclastic sand-silt-claystone

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>20</u>	<u>25</u>	<u>55</u>

Select one and check.

Percent	Composition
Major Siliciclastic Grain Types	
<u>1</u>	Quartz
<u>2</u>	Feldspars
<u>70</u>	Clay minerals
Lithic Grains	
Sedimentary Lithics	
	Chert
<u>7</u>	Mudstone
<u>3</u>	Siltstone/sandstone
	Limestone
	Metamorphic lithic
	Plutonic lithic
Volcaniclastic Grains	
	Vitric fragments
<u>5</u>	Clear glass
<u>2</u>	Colored glass
	Pumice
	Volcanic lithics
	Felsitic
	Microlitic
	Lathwork
<u>1</u>	Altered volcanic (palagonite)

Percent	Composition
Pelagic Grains	
	Calcareous
<u>0.1</u>	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
<u>3</u>	Micas (biotite, musc, chl) ¹
	Glauconite
	Phosphate (bones, teeth, etc)
<u>0.4</u>	Opaque Grain
	Marine organic matter
<u>0.5</u>	Terrestrial organic matter
	Other (specify):
Authigenic components	
<u>2</u>	Pyrite (framboids)
<u>1</u>	Pyrite (euhedral)
	Pyrite (grain coating)
<u>0.5</u>	Calcite
<u>0.5</u>	Dolomite
	Zeolites
	Fe/Mn oxide
	Other (specify):

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: biotite, musc, chl, altered pl in opaque or PYR.

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

Main silty claystone

Sediment Smear Slide / Thin Section Description Sheet

Date: 12/7

Expedition: 358

Observer: RINA

Site: C0002 Hole: Q Core: 622 Sect.: SMW Interval: -5m

Sediment Name: Silticlastic claystone

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	10	85

Select one and check.

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

9
1.5
10
18.5

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

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: Amp. bioclasts

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

633-1

Sediment Smear Slide / Thin Section Description Sheet

Date: 12/7

Expedition: 358

Observer: RINA

Site: C0002

Hole: Q

Core: 631

Sept.: SAMU

Interval: -5m

Sediment Name:

Siliciclastic silty claystone

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	30	55

Select one and check.

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

30
10
1.7
4.7

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	
<0.1	Dense minerals ¹
1	Micas (biotite, musc, chl) ¹
	Glauconite
	Phosphate (bones, teeth, etc)
0.5	Opaque Grain ✓
	Marine organic matter
0.5	Terrestrial organic matter
	Other (specify):
Authigenic components	
0.5	Pyrite (framboids)
	Pyrite (euhedral)
	Pyrite (grain coating)
	Calcite
	Dolomite
0.1	Zeolites
	Fe/Mn oxide
	Other (specify):

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: zircon, volcanic glass, opaque grains.

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

Sand (white ...)

633-2

Sediment Smear Slide / Thin Section Description Sheet

Date: 12/7

Expedition: 358

Observer: RINA

Site: C0002 Hole: Q Core: 631 Sect.: SMW Interval: -5m

Sediment Name: siliciclastic sandstone
Fine to very fine sand (1/8 - 1/16)

Smear Slide	Thin Section	Coarse Fraction	Grain Mount
✓			

Select one and check.

Granular Sediment			Other material	Percent Texture		
Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓				93	5	2

Select one and check.

20
20
15
5
65
10
95
79
20
10
70

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

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	
1	Dense minerals ¹
7	Micas (biotite, musc, chl) ¹
1	Glauconite
	Phosphate (bones, teeth, etc)
5	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: Altered pl with opages

(whiter & coarser sand) >> olive gray sand

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

Sand

633-3

Sediment Smear Slide / Thin Section Description Sheet

Date: 12/7

Expedition: 358 Observer: PINA

Site: C0002 Hole: 2 Core: 631 Sect.: Interval: -

Sediment Name: Siliciclastic sandy siltstone.

Smear Slide	Thin Section	Coarse Fraction	Grain Mount	Granular Sediment			Other material	Percent Texture		
				Siliciclastic	Volcaniclastic	Pelagic		Sand	Silt	Clay
✓								20	65	15

Select one and check.

Select one and check.

Percent	Composition
Major Siliciclastic Grain Types	
40	Quartz
35	Feldspars
10	Clay minerals
Lithic Grains	
Sedimentary Lithics	
	Chert
3.4	Mudstone
	Siltstone/sandstone
	Limestone
2	Metamorphic lithic
	Plutonic lithic
Volcaniclastic Grains	
Vitric fragments	
1	Clear glass
	Colored glass <i>of arc rocks</i>
	Pumice
Volcanic lithics	
	Felsitic
	Microlite
	Lathwork
3	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	
3	Dense minerals ¹
1	Micas (biotite, musc, chl) ¹
	Glauconite
	Phosphate (bones, teeth, etc)
0.5	Opaque Grain
	Marine organic matter
0.1	Terrestrial organic matter
	Other (specify):
Authigenic components	
	Pyrite (framboids)
	Pyrite (euhedral)
	Pyrite (grain coating)
	Calcite
	Dolomite
1	Zeolites
	Fe/Mn oxide
	Other (specify):

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: silt size, dense mineral Amp.

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

Comment of JCORES: silty sandstone

main

Sediment Smear Slide / Thin Section Description Sheet

Date: 12/7

Expedition: 358

Observer: RINA

Site: C0002

Hole: Q

Core: 633

Section:

Interval:

Sediment Name:

Siliciclastic silty clay scone

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	20	70

Select one and check.

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

3
2.5
0.5
0.5
0.5
2.0

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

¹ List under remarks if possible

Fill percentage (Total must be 100).

Remarks: musc, zircon, pyr. >> Black hard silty clay scone

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