IODP Expedition 317
SEDIMENT SMEAR SLIDE
&THIN SECTION WORKSHEET

Expedition	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
317	1352	C	2	R	1	90	

Sediment / Rock Name	calcareous / clayey silty sandstone / biodastic sandstone	Observer	Laura.

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay
25	25	

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERALS	
	Framework minerals
25	Quartz
20	Feldspar (undifferentiated)
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
5	Rock fragments
	Volcanic glass
	Accessory/trace minerals
	Micas
2	Biotite
5	Muscovite
1	Chlorite
	Clay sized fraction
1	Glauconite
1	Ferromagnesian minerals
2	Other dense minerals
	Authigenic minerals
	Zeolite
	Pyrite
	Opaque minerals (undifferentiated)
	Fe-oxide
	Carbonates
20	Micrite
	Others

Percent	Component
BIOGENIC GRAINS	
	Calcareous
10	Foraminifera
8	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
1	Sponge spicules
	Other spicules
5	Bioclast (undifferentiated)
	Siliceous
	Radiolarians
	Diatoms
	Silicoflagellates
1	Sponge spicules
	Siliceous debris (undifferentiated)
	Others
	Dinoflagellates
	Pollen
	Organic debris
	Plant debris
	Fish remains (teeth, bones, scales)
	Others

IODP Expedition 317
SEDIMENT SMEAR SLIDE
&THIN SECTION WORKSHEET

Expedition	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
317	1352	C	2	R	2	60	

Sediment / Rock Name	sandy marl	Observer	Lever

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay
20	20	10

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERALS
	Framework minerals
18	Quartz
15	Feldspar (undifferentiated)
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
3	Rock fragments
	Volcanic glass
	Accessory/trace minerals
1	Micas
2	Biotite
3	Muscovite
1	Chlorite
10	Clay sized fraction
	Glauconite
1	Ferromagnesian minerals
3	Other dense minerals
	Authigenic minerals
	Zeolite
3	Pyrite
	Opaque minerals (undifferentiated)
	Fe-oxide
	Carbonates
20	Micrite
	Others

Percent	Component
	BIOGENIC GRAINS
	Calcareous
6	Foraminifera
15	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
8	Bioclast (undifferentiated)
	Siliceous
	Radiolarians
	Diatoms
	Silicoflagellates
1	Sponge spicules
	Siliceous debris (undifferentiated)
	Others
	Dinoflagellates
	Pollen
	Organic debris
	Plant debris
	Fish remains (teeth, bones, scales)
	Others

✓

IODP Expedition 317
SEDIMENT SMEAR SLIDE
&THIN SECTION WORKSHEET

Expedition	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
317	1352	C	3	R	1	104	

Sediment / Rock Name	sandy mudstone	Observer	Lena

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay
25	25	5

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERALS
	Framework minerals
20	Quartz
15	Feldspar (undifferentiated)
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
2	Rock fragments
	Volcanic glass
	Accessory/trace minerals
	Micas
2	Biotite
5	Muscovite
2	Chlorite
	Clay sized fraction
	Glauconite
3	Ferromagnesian minerals
3	Other dense minerals
	Authigenic minerals
	Zeolite
5	Pyrite
	Opaque minerals (undifferentiated)
	Fe-oxide
	Carbonates
15	Micrite
	Others

Percent	Component
	BIOGENIC GRAINS
	Calcareous
5	Foraminifera
20	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
8	Bioclast (undifferentiated)
	Siliceous
	Radiolarians
	Diatoms
	Silicoflagellates
	Sponge spicules
	Siliceous debris (undifferentiated)
	Others
	Dinoflagellates
	Pollen
	Organic debris
	Plant debris
	Fish remains (teeth, bones, scales)
	Others

✓

IODP Expedition 317
SEDIMENT SMEAR SLIDE
&THIN SECTION WORKSHEET

Expedition	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
317	1352	C	4	R	2	120	

Sediment / Rock Name	sandy marlstone.	Observer	Lang

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay
25	25	10

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERALS
	Framework minerals
22	Quartz
18	Feldspar (undifferentiated)
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
2	Rock fragments
	Volcanic glass
	Accessory/trace minerals
	Micas
1	Biotite
4	Muscovite
1	Chlorite
10	Clay sized fraction
1	Glauconite
1	Ferromagnesian minerals
	Other dense minerals
	Authigenic minerals
	Zeolite
2	Pyrite
3	Opaque minerals (undifferentiated)
	Fe-oxide
	Carbonates
11	Micrite
	Others

Percent	Component
	BIOGENIC GRAINS
	Calcareous
5	Foraminifera
8	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
1	Sponge spicules
	Other spicules
15	Bioclast (undifferentiated)
	Siliceous
	Radiolarians
	Diatoms
	Silicoflagellates
3	Sponge spicules
	Siliceous debris (undifferentiated)
	Others
	Dinoflagellates
	Pollen
	Organic debris
	Plant debris
	Fish remains (teeth, bones, scales)
	Others

✓

IODP Expedition 317
SEDIMENT SMEAR SLIDE
&THIN SECTION WORKSHEET

Expedition	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
317	1352	C	4	R	6	27	

Sediment / Rock Name	sandy marlstone.	Observer	haer.

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay
20.	30	10

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERALS
	Framework minerals
20	Quartz
15	Feldspar (undifferentiated)
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
3	Rock fragments
	Volcanic glass
	Accessory/trace minerals
	Micas
2	Biotite
4	Muscovite
1	Chlorite
10	Clay sized fraction
	Glauconite
2.	Ferromagnesian minerals
2	Other dense minerals
	Authigenic minerals
	Zeolite
3	Pyrite
	Opaque minerals (undifferentiated)
	Fe-oxide
	Carbonates
15	Micrite
	Others

Percent	Component
	BIOGENIC GRAINS
	Calcareous
6	Foraminifera
4	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
15	Bioclast (undifferentiated)
	Siliceous
	Radiolarians
	Diatoms
	Silicoflagellates
3	Sponge spicules
	Siliceous debris (undifferentiated)
	Others
	Dinoflagellates
	Pollen
	Organic debris
	Plant debris
	Fish remains (teeth, bones, scales)
	Others

✓

IODP Expedition 317
SEDIMENT SMEAR SLIDE
&THIN SECTION WORKSHEET

Expedition	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
317	1352	C	6	R	1	60	

Sediment / Rock Name	calcareous sandy mud	Observer	Steve

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay
15	35	20

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERALS
	Framework minerals
20	Quartz
15	Feldspar (undifferentiated)
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
2	Rock fragments
	Volcanic glass
	Accessory/trace minerals
2	Micas
1	Biotite
1	Muscovite
2	Chlorite
20	Clay sized fraction
	Glauconite
2	Ferromagnesian minerals
4	Other dense minerals
	Authigenic minerals
	Zeolite
3	Pyrite
	Opaque minerals (undifferentiated)
	Fe-oxide
	Carbonates
6	Micrite
	Others

Percent	Component
	BIOGENIC GRAINS
	Calcareous
2	Foraminifera
15	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
2	Other spicules
3	Bioclast (undifferentiated)
	Siliceous
	Radiolarians
	Diatoms
	Silicoflagellates
1	Sponge spicules
	Siliceous debris (undifferentiated)
	Others
	Dinoflagellates
	Pollen
	Organic debris
	Plant debris
	Fish remains (teeth, bones, scales)
	Others

✓

IODP Expedition 317
SEDIMENT SMEAR SLIDE
&THIN SECTION WORKSHEET

Expedition	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
317	1352	C	7	R	2	60	

Sediment / Rock Name	calcareous sandy mud.	Observer	Lever.

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay
12.	45	18

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERALS
	Framework minerals
23	Quartz
20	Feldspar (undifferentiated)
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
2	Rock fragments
	Volcanic glass
	Accessory/trace minerals
2	Micas
2	Biotite
2	Muscovite
1	Chlorite
18	Clay sized fraction
1	Glauconite
1	Ferromagnesian minerals
3	Other dense minerals
	Authigenic minerals
	Zeolite
3	Pyrite
2	Opaque minerals (undifferentiated)
	Fe-oxide
	Carbonates
4	Micrite
	Others

Percent	Component
	BIOGENIC GRAINS
	Calcareous
2.	Foraminifera
12.	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
2	Other spicules
6	Bioclast (undifferentiated)
	Siliceous
	Radiolarians
	Diatoms
	Silicoflagellates
2	Sponge spicules
	Siliceous debris (undifferentiated)
	Others
	Dinoflagellates
	Pollen
	Organic debris
	Plant debris
	Fish remains (teeth, bones, scales)
	Others

✓

J

IODP Expedition 317
SEDIMENT SMEAR SLIDE
&THIN SECTION WORKSHEET

Expedition	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
317	U1352	C	8	R	1	11	

Sediment / Rock Name	Sandy mudstone	Observer	KMM

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay
50	40	10

Comments:

26% at 01

a

Percent	Component
	SILICICLASTIC GRAINS/MINERALS
	Framework minerals
20	Quartz
10	Feldspar (undifferentiated)
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
1	Rock fragments
	Volcanic glass
	Accessory/trace minerals
	Micas
	Biotite
3	Muscovite
5 ~~10~~	Chlorite
5	Clay sized fraction
tr	Glauconite
2	Ferromagnesian minerals
2	Other dense minerals
	Authigenic minerals
	Zeolite
	Pyrite
	Opaque minerals (undifferentiated)
	Fe-oxide
	Carbonates
30 ~~35~~	Micrite
	Others

Percent	Component
	BIOGENIC GRAINS
	Calcareous
5 ~~2~~	Foraminifera
5	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
10	Bioclast (undifferentiated)
	Siliceous
	Radiolarians
	Diatoms
	Silicoflagellates
5 ~~10~~	Sponge spicules
	Siliceous debris (undifferentiated)
	Others
	Dinoflagellates
	Pollen
	Organic debris
	Plant debris
	Fish remains (teeth, bones, scales)
	Others

IODP Expedition 317
SEDIMENT SMEAR SLIDE
&THIN SECTION WORKSHEET

Expedition	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
317	U1352	C	9	R	1	1	

Sediment / Rock Name	Observer
Sandy Mudstone	KM

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay
40	40	10

Comments:

9R CC = 23%

Percent	Component
	SILICICLASTIC GRAINS/MINERALS
	Framework minerals
~~22~~ 25	Quartz
10	Feldspar (undifferentiated)
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
5	Rock fragments Shrd
	Volcanic glass
	Accessory/trace minerals
	Micas
	Biotite
5	Muscovite
8 ~~10~~	Chlorite
5	Clay sized fraction
	Glauconite
tr	Ferromagnesian minerals
2	Other dense minerals
	Authigenic minerals
	Zeolite
	Pyrite
	Opaque minerals (undifferentiated)
	Fe-oxide
	Carbonates
25 ~~15~~	Micrite
	Others

Percent	Component
	BIOGENIC GRAINS
	Calcareous
1	Foraminifera
2	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules ugly bit
10	Bioclast (undifferentiated)
	Siliceous
	Radiolarians
tr	Diatoms
	Silicoflagellates
5 ~~10~~	Sponge spicules
	Siliceous debris (undifferentiated)
	Others
	Dinoflagellates
	Pollen
	Organic debris
	Plant debris
	Fish remains (teeth, bones, scales)
	Others

IODP Expedition 317
SEDIMENT SMEAR SLIDE
&THIN SECTION WORKSHEET

Expedition	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
317	U1352	C	10	R	1	17	

Sediment / Rock Name	Sandy mudstone	Observer	KMS

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay
40	40	20

Comments:

22% at 46 in

Percent	Component
	SILICICLASTIC GRAINS/MINERALS
	Framework minerals
25 ~~30~~	Quartz
~~50~~ 10	Feldspar (undifferentiated)
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
2 ~~5~~	Rock fragments
	Volcanic glass
	Accessory/trace minerals
	Micas
1	Biotite
10	Muscovite
5	Chlorite
5	Clay sized fraction
	Glauconite
1	Ferromagnesian minerals dissol.
5	Other dense minerals / text.
	Authigenic minerals
	Zeolite
1	Pyrite
	Opaque minerals (undifferentiated)
	Fe-oxide
	Carbonates
15	Micrite
	Others

Percent	Component
	BIOGENIC GRAINS
	Calcareous
1	Foraminifera
3	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules highly bits
	Other spicules /
15 ~~20~~	Bioclast (undifferentiated)
	Siliceous
	Radiolarians
1	Diatoms
	Silicoflagellates
	Sponge spicules
	Siliceous debris (undifferentiated)
	Others
	Dinoflagellates
	Pollen
	Organic debris
	Plant debris
	Fish remains (teeth, bones, scales)
	Others

IODP Expedition 317
SEDIMENT SMEAR SLIDE
&THIN SECTION WORKSHEET

Expedition	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
317	U1352	C	11	R	1	71	

Sediment / Rock Name	Mud	Observer	Kimm

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay
5	70	25

Comments:

at 66 cm
9%

Percent	Component
	SILICICLASTIC GRAINS/MINERALS
~~25~~	Framework minerals
20	Quartz
20 ~~15~~	Feldspar (undifferentiated)
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
1	Rock fragments
	Volcanic glass
	Accessory/trace minerals
	Micas
tr	Biotite
20	Muscovite
5	Chlorite
25	Clay sized fraction
	Glauconite
	Ferromagnesian minerals
5	Other dense minerals
	Authigenic minerals
	Zeolite
tr	Pyrite
	Opaque minerals (undifferentiated)
	Fe-oxide
	Carbonates
tr	Micrite
	Others

Percent	Component
	BIOGENIC GRAINS
	Calcareous
	Foraminifera
1	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
1	Bioclast (undifferentiated)
	Siliceous
	Radiolarians
tr	Diatoms
	Silicoflagellates
1	Sponge spicules
	Siliceous debris (undifferentiated)
	Others
	Dinoflagellates
	Pollen
	Organic debris
	Plant debris
	Fish remains (teeth, bones, scales)
	Others

✓

IODP Expedition 317
SEDIMENT SMEAR SLIDE
&THIN SECTION WORKSHEET

Expedition	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
317	U1352	C	11	R	2	20	

Sediment / Rock Name	Sandy Marl	Observer	KWW

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay
40	30	~~20~~ 30

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERALS
	Framework minerals
15	Quartz
5	Feldspar (undifferentiated)
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Volcanic glass
	Accessory/trace minerals
	Micas
1 ~~5~~	Biotite
5	Muscovite
15 ~~20~~	Chlorite
20	Clay sized fraction
	Glauconite
tr	Ferromagnesian minerals
2	Other dense minerals
	dissol text
	Authigenic minerals
	Zeolite
2	Pyrite
	Opaque minerals (undifferentiated)
	Fe-oxide
	Carbonates
	Micrite
	Others

Percent	Component
	BIOGENIC GRAINS
	Calcareous
2	Foraminifera
18 ~~20~~	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
20	Bioclast (undifferentiated)
	↳ pellets?
	Siliceous ↳ alt. bioclasts
	Radiolarians
tr	Diatoms
	Silicoflagellates
2	Sponge spicules
0	Siliceous debris (undifferentiated)
	Others
	Dinoflagellates
	Pollen
	Organic debris
	Plant debris
	Fish remains (teeth, bones, scales)
	Others

IODP Expedition 317
SEDIMENT SMEAR SLIDE
&THIN SECTION WORKSHEET

Expedition	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
317	U1352	C	12	R	1	98	

Sediment / Rock Name	Sandy Mud	Observer	kmm

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay

Comments:

NA - too calc.

12R 1 08 41%

Percent	Component
	SILICICLASTIC GRAINS/MINERALS
	Framework minerals
5	Quartz
5	Feldspar (undifferentiated)
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Volcanic glass
	Accessory/trace minerals
	Micas
tr	Biotite
2	Muscovite
5 ~~3~~	Chlorite
10	Clay sized fraction ?
	Glauconite
1	Ferromagnesian minerals
2	Other dense minerals
	Authigenic minerals
	Zeolite
	Pyrite
	Opaque minerals (undifferentiated)
	Fe-oxide
	Carbonates
~~50~~	Micrite
	Others

3 cement in part?

Percent	Component
	BIOGENIC GRAINS
	Calcareous
2	Foraminifera unhappy!
5	Nannofossils alt.
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules ? pollen
~~13~~	Other spicules
13	Bioclast (undifferentiated)
	Siliceous
	Radiolarians
tr	Diatoms
	Silicoflagellates
	Sponge spicules
	Siliceous debris (undifferentiated)
	Others
	Dinoflagellates
	Pollen
	Organic debris
	Plant debris
	Fish remains (teeth, bones, scales)
	Others

IODP Expedition 317
SEDIMENT SMEAR SLIDE
&THIN SECTION WORKSHEET

Expedition	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
317	U1352	C	13	R	1	99	

Sediment / Rock Name	Sandy Marl	Observer	kmn

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay

Comments:

Not applicable

ca. 18 cm

47%

Percent	Component
	SILICICLASTIC GRAINS/MINERALS
	Framework minerals
10	Quartz
10	Feldspar (undifferentiated)
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
1	Rock fragments
	Volcanic glass
	Accessory/trace minerals
	Micas
tr	Biotite
1	Muscovite
5	Chlorite — alt. opaque
20	Clay sized fraction
	Glauconite
1	Ferromagnesian minerals
3	Other dense minerals
	Authigenic minerals
	Zeolite
	Pyrite
	Opaque minerals (undifferentiated)
	Fe-oxide
	Carbonates
10	Micrite
	Others

Percent	Component
	BIOGENIC GRAINS
	Calcareous
15	Foraminifera — unhappy
20	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
5	Bioclast (undifferentiated)
	Siliceous
	Radiolarians
	Diatoms
	Silicoflagellates
tr	Sponge spicules
	Siliceous debris (undifferentiated)
	Others
	Dinoflagellates
	Pollen
tr	Organic debris
	Plant debris
	Fish remains (teeth, bones, scales)
	Others

IODP Expedition 317
SEDIMENT SMEAR SLIDE
&THIN SECTION WORKSHEET

Expedition	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
317	1352	C	14	R	2	30	

Sediment / Rock Name	sandy marlstone.	Observer	heuer.

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay
18	30	10

Comments:

updo fine sand.

Percent	Component
	SILICICLASTIC GRAINS/MINERALS
	Framework minerals
18	Quartz
13	Feldspar (undifferentiated)
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
4	Rock fragments
	Volcanic glass
	Accessory/trace minerals
	Micas
1	Biotite
4	Muscovite
2	Chlorite
10	Clay sized fraction
1	Glauconite
1	Ferromagnesian minerals
3	Other dense minerals
	Authigenic minerals
	Zeolite
2	Pyrite
4	Opaque minerals (undifferentiated)
	Fe-oxide
	Carbonates
12	Micrite
	Others

Percent	Component
	BIOGENIC GRAINS
	Calcareous
3	Foraminifera
15	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
12	Bioclast (undifferentiated)
	Siliceous
	Radiolarians
	Diatoms
	Silicoflagellates
	Sponge spicules
	Siliceous debris (undifferentiated)
	Others
	Dinoflagellates
	Pollen
	Organic debris
	Plant debris
	Fish remains (teeth, bones, scales)
	Others

✓

IODP Expedition 317
SEDIMENT SMEAR SLIDE
&THIN SECTION WORKSHEET

Expedition	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
317	1356	C	15	R	2	90	

Sediment / Rock Name	sandy mudstone.	Observer	heve.

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay
17	30	10

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERALS
	Framework minerals
17	Quartz
13	Feldspar (undifferentiated)
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
2	Rock fragments
	Volcanic glass
	Accessory/trace minerals
	Micas
3	Biotite
4	Muscovite
1	Chlorite
10	Clay sized fraction
	Glauconite
3	Ferromagnesian minerals
3	Other dense minerals
	Authigenic minerals
	Zeolite
3	Pyrite
2	Opaque minerals (undifferentiated)
	Fe-oxide
10	Carbonates
12	Micrite
	Others

Percent	Component
	BIOGENIC GRAINS
	Calcareous
3	Foraminifera
9	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
12	Bioclast (undifferentiated)
	Siliceous
	Radiolarians
	Diatoms
	Silicoflagellates
	Sponge spicules
	Siliceous debris (undifferentiated)
	Others
	Dinoflagellates
	Pollen
	Organic debris
	Plant debris
	Fish remains (teeth, bones, scales)
	Others

✓

IODP Expedition 317
SEDIMENT SMEAR SLIDE
&THIN SECTION WORKSHEET

Expedition	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
317	1352	C	16	R	1	25	

Sediment / Rock Name	sandy marlstone.	Observer	Lenor.

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay
30	30	5

Comments:

?alteration

cemented sst.

Percent	Component
	SILICICLASTIC GRAINS/MINERALS
	Framework minerals
25	Quartz
20	Feldspar (undifferentiated)
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
4	Rock fragments
	Volcanic glass
	Accessory/trace minerals
	Micas
	Biotite
6	Muscovite
2	Chlorite
5	Clay sized fraction
	Glauconite
2	Ferromagnesian minerals
3	Other dense minerals
	Authigenic minerals
	Zeolite
1	Pyrite
3	Opaque minerals (undifferentiated)
	Fe-oxide
7	Carbonates alteration
5	Micrite
	Others

Percent	Component
	BIOGENIC GRAINS
	Calcareous
3	Foraminifera
10	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
1	Other spicules
4	Bioclast (undifferentiated)
	Siliceous
	Radiolarians
	Diatoms
	Silicoflagellates
	Sponge spicules
	Siliceous debris (undifferentiated)
	Others
	Dinoflagellates
	Pollen
1	Organic debris
	Plant debris
	Fish remains (teeth, bones, scales)
	Others

✓

IODP Expedition 317
SEDIMENT SMEAR SLIDE
&THIN SECTION WORKSHEET

Expedition	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
317	1352	C	17	R	1	37	

Sediment / Rock Name	sandy marlstone	Observer	heuer

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay
30	25	10

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERALS
	Framework minerals
20	Quartz
15	Feldspar (undifferentiated)
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
4	Rock fragments
	Volcanic glass
	Accessory/trace minerals
	Micas
2	Biotite brown & grn
7	Muscovite
2	Chlorite
10	Clay sized fraction
	Glauconite
2	Ferromagnesian minerals
2	Other dense minerals
	Authigenic minerals
	Zeolite
1	Pyrite
3	Opaque minerals (undifferentiated)
	Fe-oxide
4	Carbonates alteration
6	Micrite
	Others

Percent	Component
	BIOGENIC GRAINS
	Calcareous
5	Foraminifera
8	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
8	Bioclast (undifferentiated)
	Siliceous
	Radiolarians
	Diatoms
	Silicoflagellates
	Sponge spicules
	Siliceous debris (undifferentiated)
	Others
	Dinoflagellates
	Pollen
	Organic debris
	Plant debris
	Fish remains (teeth, bones, scales)
	Others

✓

IODP Expedition 317
SEDIMENT SMEAR SLIDE
&THIN SECTION WORKSHEET

Expedition	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
317	1352	C	18	R	1	57	

Sediment / Rock Name	sandy mudstone.	Observer	Lever.

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay
20	35	15

Comments:
cemented ss.

Percent	Component
	SILICICLASTIC GRAINS/MINERALS
	Framework minerals
18	Quartz
15	Feldspar (undifferentiated)
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
4	Rock fragments
	Volcanic glass
	Accessory/trace minerals
	Micas
1	Biotite
5	Muscovite
1	Chlorite
15	Clay sized fraction
	Glauconite
2	Ferromagnesian minerals
1	Other dense minerals
	Authigenic minerals
	Zeolite
1	Pyrite
3	Opaque minerals (undifferentiated)
	Fe-oxide
6	Carbonates
12	Micrite
	Others

Percent	Component
	BIOGENIC GRAINS
	Calcareous
2	Foraminifera
7	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
5	Bioclast (undifferentiated)
	Siliceous
	Radiolarians
	Diatoms
	Silicoflagellates
	Sponge spicules
	Siliceous debris (undifferentiated)
	Others
	Dinoflagellates
	Pollen
	Organic debris
	Plant debris
	Fish remains (teeth, bones, scales)
	Others

✓

IODP Expedition 317
SEDIMENT SMEAR SLIDE
&THIN SECTION WORKSHEET

Expedition	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
317	1552	C	19	R	2	17	

Sediment / Rock Name	sandy mudstone.	Observer	here

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay
30	25	10

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERALS
	Framework minerals
20	Quartz
15	Feldspar (undifferentiated)
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
3	Rock fragments
	Volcanic glass
	Accessory/trace minerals
	Micas
2	Biotite
8	Muscovite
2	Chlorite
10	Clay sized fraction
	Glauconite
2	Ferromagnesian minerals
4	Other dense minerals
	Authigenic minerals
	Zeolite
2	Pyrite
3	Opaque minerals (undifferentiated)
	Fe-oxide
2	Carbonates
8	Micrite
	Others

Percent	Component
	BIOGENIC GRAINS
	Calcareous
3	Foraminifera
12	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
6	Bioclast (undifferentiated)
	Siliceous
	Radiolarians
	Diatoms
	Silicoflagellates
	Sponge spicules
	Siliceous debris (undifferentiated)
	Others
	Dinoflagellates
	Pollen
	Organic debris
	Plant debris
	Fish remains (teeth, bones, scales)
	Others

IODP Expedition 317
SEDIMENT SMEAR SLIDE
&THIN SECTION WORKSHEET

Expedition	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
317	1352	C	00	R	1	57	

Sediment / Rock Name	Sandy marlstone.	Observer	[illegible]

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
1	

Percent Terrigenous Texture		
Sand	Silt	Clay
20	35	10

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERALS
	Framework minerals
20	Quartz
15	Feldspar (undifferentiated)
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
4	Rock fragments = long dashes
	Volcanic glass
	Accessory/trace minerals
	Micas
2	Biotite brown
8	Muscovite
1	Chlorite
10	Clay sized fraction
1	Glauconite
3	Ferromagnesian minerals
2	Other dense minerals
	Authigenic minerals
	Zeolite
2	Pyrite
3	Opaque minerals (undifferentiated)
	Fe-oxide
5	Carbonates
10	Micrite
	Others

Percent	Component
	BIOGENIC GRAINS
	Calcareous
5	Foraminifera
7	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
8	Bioclast (undifferentiated)
	Siliceous
	Radiolarians
	Diatoms
	Silicoflagellates
	Sponge spicules
	Siliceous debris (undifferentiated)
	Others
	Dinoflagellates
	Pollen
	Organic debris
	Plant debris
	Fish remains (teeth, bones, scales)
	Others

IODP Expedition 317
SEDIMENT SMEAR SLIDE
&THIN SECTION WORKSHEET

Expedition	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
317	1352	C	21	R	1	60	

Sediment / Rock Name	sandy marlstone	Observer	heuer

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay
25	28	6

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERALS
	Framework minerals
20	Quartz
15	Feldspar (undifferentiated)
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
3	Rock fragments
	Volcanic glass
	Accessory/trace minerals
	Micas
2	Biotite
4	Muscovite
1	Chlorite blue?
6	Clay sized fraction
	Glauconite
3	Ferromagnesian minerals
2	Other dense minerals
	Authigenic minerals
	Zeolite
3	Pyrite
1	Opaque minerals (undifferentiated)
	Fe-oxide
5	Carbonates
13	Micrite
	Others

Percent	Component
	BIOGENIC GRAINS
	Calcareous
4	Foraminifera
9	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
5	Bioclast (undifferentiated)
	Siliceous
	Radiolarians
	Diatoms
	Silicoflagellates
	Sponge spicules
	Siliceous debris (undifferentiated)
	Others
	Dinoflagellates
	Pollen
	Organic debris
	Plant debris
	Fish remains (teeth, bones, scales)
	Others

✓

IODP Expedition 317
SEDIMENT SMEAR SLIDE
&THIN SECTION WORKSHEET

Expedition	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
317	U1352	C	22	R	2	97	

Sediment / Rock Name	Observer
Sandy marlstone	Icmms

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay
•		

Comments:

Limestone/Chalk! boundary

Not enough sand

~~20%~~ 50%

Percent	Component
	SILICICLASTIC GRAINS/MINERALS
	Framework minerals
~~8~~ 10	Quartz
~~8~~ 10	Feldspar (undifferentiated)
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
1	Rock fragments
	Volcanic glass
	Accessory/trace minerals
	Micas
	Biotite
tr	Muscovite
1	Chlorite
5	Clay sized fraction
	Glauconite
	Ferromagnesian minerals
~~2~~ 6	Other dense minerals
	Authigenic minerals
	Zeolite
1	Pyrite
	Opaque minerals (undifferentiated)
	Fe-oxide
~~100~~	Carbonates
~~70~~	Micrite
	Others

Percent	Component
	BIOGENIC GRAINS
	Calcareous
	Foraminifera ?
	Nannofossils ?
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
	Bioclast (undifferentiated)
	Siliceous
	Radiolarians
	Diatoms
	Silicoflagellates
	Sponge spicules
	Siliceous debris (undifferentiated)
	Others
	Dinoflagellates
tr	Pollen
	Organic debris
	Plant debris
	Fish remains (teeth, bones, scales)
	Others