IODP Expedition 317
SEDIMENT SMEAR SLIDE
&THIN SECTION WORKSHEET

Expedition	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
317	U1352	C	85	R	2	100	

Sediment / Rock Name	Sandy mudstone	Observer	KMM

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay
20	40	40

Comments:

36%

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
	Biotite
3	Muscovite
5	Chlorite
30	Clay sized fraction
tr	Glauconite
	Ferromagnesian minerals
2	Other dense minerals
	Authigenic minerals
	Zeolite
	Pyrite
	Opaque minerals (undifferentiated)
	Fe-oxide
	Carbonates
10	Micrite
	Others

Percent	Component
	BIOGENIC GRAINS
	Calcareous
3	Foraminifera
35	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
2	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	85	R	3	20	

Sediment / Rock Name	Mudstone	Observer	Kevin

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
	✓

Percent Terrigenous Texture		
Sand	Silt	Clay
15	35	50

Comments:

Some ~~well~~ rounded grains!

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

Percent	Component
	BIOGENIC GRAINS
	Calcareous
1	Foraminifera in discrete
2	Nannofossils – pellets
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
1	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	Interval (cm) Bottom
317	U1352	C	86	R	2	12	

Sediment / Rock Name	Marlstone	Observer	KMM

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture Sand	Silt	Clay

Comments:

47%

47%

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
tr	Muscovite
tr	Chlorite
35	Clay sized fraction
tr	Glauconite
	Ferromagnesian minerals
5	Other dense minerals
	Authigenic minerals
	Zeolite
8	Pyrite
	Opaque minerals (undifferentiated)
	Fe-oxide
	Carbonates
tr	Micrite
	Others

Percent	Component
	BIOGENIC GRAINS
	Calcareous
	Foraminifera
40	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
1	Bioclast (undifferentiated)
	Siliceous
	Radiolarians
	Diatoms
	Silicoflagellates
tr	Sponge spicules fragment
tr	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	U1352	C	86	R	3	2	

Sediment / Rock Name	Sandy Mudstone	Observer	KMM

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
	✓

Percent Terrigenous Texture		
Sand	Silt	Clay
40	35	25

Comments:

rounded grains

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

Percent	Component
	BIOGENIC GRAINS
	Calcareous
1	Foraminifera
3	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
2	Bioclast (undifferentiated)
	Siliceous
	Radiolarians
	Diatoms
	Silicoflagellates
	Sponge spicules
tr	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	U1352	C	87	R	2	77	

Sediment / Rock Name	Mineralized wood	Observer	KMM

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
	✓

Percent Terrigenous Texture		
Sand	Silt	Clay

Comments:

org. bleb

Mineralized wood ?
(sulfate?)

Percent	Component
	SILICICLASTIC GRAINS/MINERALS
	Framework minerals
	Quartz
	Feldspar (undifferentiated)
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Volcanic glass
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Chlorite
	Clay sized fraction
	Glauconite
	Ferromagnesian minerals
	Other dense minerals
	Authigenic minerals
	Zeolite
	Pyrite
	Opaque minerals (undifferentiated)
	Fe-oxide
	Carbonates
	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
	Pollen
	Organic debris
100	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	87	R	5	25	

Sediment / Rock Name	Calcareous Sandy mudstone	Observer	KMM

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
	✓

Percent Terrigenous Texture		
Sand	Silt	Clay
~~40~~ 35	~~40~~ 35	30

Comments:

Dark sand

Recycled ?

rounded grains!

Percent	Component
	SILICICLASTIC GRAINS/MINERALS
	Framework minerals
25	Quartz
15	Feldspar (undifferentiated)
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
5	Rock fragments
	Volcanic glass
	Accessory/trace minerals
	Micas
	Biotite
5	Muscovite
2	Chlorite
25 ~~40~~	Clay sized fraction
	Glauconite
tr	Ferromagnesian minerals
3	Other dense minerals
	Authigenic minerals
	Zeolite
2	Pyrite — replacing detr. silicate
	Opaque minerals (undifferentiated)
	Fe-oxide
	Carbonates
1	Micrite
	Others

Percent	Component
	BIOGENIC GRAINS
	Calcareous
1	Foraminifera
15	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
1	Bioclast (undifferentiated)
	Siliceous
	Radiolarians
	Diatoms
	Silicoflagellates
tr	Sponge spicules — altered opal-CT
	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	Bottom
317	1352	C	88	R	1	40	

Sediment / Rock Name	sandy marlstone.	Observer	heve

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay
35	30	

Comments:

laminated green cems

rounded 30% (of sand)
angular 70%

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

Percent	Component
	BIOGENIC GRAINS
	Calcareous
3	Foraminifera
1	Nannofossils v.v unhappy.
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
4	Bioclast (undifferentiated) pellets
	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	88	R.	4	62	

Sediment / Rock Name	sandy marlstone	Observer	heaver

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
	✓

Percent Terrigenous Texture		
Sand	Silt	Clay
30	25	

Comments:
vf.
sandy laminae.

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

Percent	Component
	BIOGENIC GRAINS
	Calcareous
	Foraminifera
1	Nannofossils vv unhappy
	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	Interval (cm) Bottom
317	1352	C	88	R	6	45	

Sediment / Rock Name	sandy calcareous mudstone.	Observer	Leve

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
	✓

Percent Terrigenous Texture		
Sand	Silt	Clay
10	40	30

Comments:

black layer.

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

Percent	Component
	BIOGENIC GRAINS
	Calcareous
	Foraminifera
3	Nannofossils healthy.
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
2	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	89	R	1	115	

Sediment / Rock Name	Sandy mudstone.	Observer	Laura

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay
20	30	20

Comments:

mostly angular

normal green biol?

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
	Biotite
2	Muscovite
3	Chlorite
20	Clay sized fraction
3	Glauconite rounded
	Ferromagnesian minerals
5	Other dense minerals
	Authigenic minerals
	Zeolite
2	Pyrite
3	Opaque minerals (undifferentiated)
	Fe-oxide
	Carbonates
10	Micrite
	Others

Percent	Component
	BIOGENIC GRAINS
	Calcareous
3	Foraminifera
12	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
6	Bioclast (undifferentiated) pellets?
	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	89	R	3	109	

Sediment / Rock Name	calc. sndy mud.

Observer	Leve

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
	✓

Percent Terrigenous Texture Sand	Silt	Clay
25	30	30

Comments:

brn layer (cmts)

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

Percent	Component
	BIOGENIC GRAINS
	Calcareous
1	Foraminifera
5	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
4	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	89	R	4	13	

Sediment / Rock Name	calc sndy mudstone	Observer	hlmes.

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
	✓

Percent Terrigenous Texture		
Sand	Silt	Clay
30	30	20

Comments:
upto fine sd.
brn layer.

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

Percent	Component
	BIOGENIC GRAINS
	Calcareous
3	Foraminifera
2	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
3	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	89	R	CC	5	

Sediment / Rock Name	calcite cemented muddy sandstone	Observer	Heuer

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
	✓

Percent Terrigenous Texture		
Sand	Silt	Clay
30	10	10

Comments:

laminated pellets

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

Percent	Component
	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
2	Bioclast (undifferentiated) ?pellets
	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	90	R	1	98	

Sediment / Rock Name	calc sandy mudstone.	Observer	Lane

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
	✓

Percent Terrigenous Texture		
Sand	Silt	Clay
20	30	20

Comments:

pellets?

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

Percent	Component
	BIOGENIC GRAINS
	Calcareous
3	Foraminifera
12	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
1	Sponge spicules
	Other spicules
2	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	Interval (cm) Bottom
317	1352	C	90	R	3	80	

Sediment / Rock Name	Sandy marlstone.	Observer	Lara

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay
35	25	

Comments:
mica flakes upto 0.3mm
medium sand.
pellets?

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

Percent	Component
	BIOGENIC GRAINS
	Calcareous
2	Foraminifera
3	Nannofossils v.v. unhappy
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
6	Bioclast (undifferentiated) pellets?
	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	91	R	7	70	

Sediment / Rock Name	sandy mudstone.	Observer	Lane

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
	✓

Percent Terrigenous Texture Sand	Silt	Clay
20	15	10

Comments:

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

Percent	Component
	BIOGENIC GRAINS
	Calcareous
4	Foraminifera
3	Nannofossils v. unhappy
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
15	Bioclast (undifferentiated) recrystallized
	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	91	R	1	107	

Sediment / Rock Name	sandy marlstone.	Observer	heuer.

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay
10	30	10

Comments:

med sand marl. pellets?

opaque mineral alteration of some ?pellets, + chlorite

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

Percent	Component
	BIOGENIC GRAINS
	Calcareous
4	Foraminifera
1	Nannofossils altered, unhappy.
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
12	Bioclast (undifferentiated) pellets?
	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	91	R	3	90	

Sediment / Rock Name	calcareous mudstone	Observer	bauer

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
	✓

Percent Terrigenous Texture		
Sand	Silt	Clay
5	70	25

Comments:

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

Percent	Component
	BIOGENIC GRAINS
	Calcareous
2	Foraminifera
2	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
3	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	9	R	5	80	

Sediment / Rock Name	Sandy mudstone	Observer	kmw

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
	✓

Percent Terrigenous Texture		
Sand	Silt	Clay
40	25	5?

Comments:

pellet.

sandy.

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

Percent	Component
	BIOGENIC GRAINS
	Calcareous
3	Foraminifera
1	Nannofossils v- unknown ??
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
8	Bioclast (undifferentiated) pellets!
	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	91	R	6	35	

Sediment / Rock Name	sandy marlstone	Observer	Lever

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay
10	30	23

Comments:

laminated silty

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

Percent	Component
	BIOGENIC GRAINS
	Calcareous
2	Foraminifera
	Nannofossils ? possible, altered
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
7	Bioclast (undifferentiated) pellets!
	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	91	R	7	100	

Sediment / Rock Name	sandy marlstone	Observer	Lever

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay
20	30	5?

Comments:

v. rounded grains as well as usual angular grain population

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

Percent	Component
	BIOGENIC GRAINS
	Calcareous
2	Foraminifera
	Nannofossils none
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
1	Sponge spicules
	Other spicules
10	Bioclast (undifferentiated) pellets?
	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	94	R	3[illegible]	63	

Sediment / Rock Name	Sandy Marlstone

Observer	KMM

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
✓	

Percent Terrigenous Texture		
Sand	Silt	Clay
20	20	60

Comments:

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

Percent	Component
	BIOGENIC GRAINS
	Calcareous
5 ~~0~~	Foraminifera Unhappy!
40 ~~35~~	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
	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	94	R	6	51	

Sediment / Rock Name	Calcareous Sandy Mudstone	Observer	

Smear Slide	Thin Section
✓	

Dominant Lithology	Minor Lithology
	✓

Percent Terrigenous Texture		
Sand	Silt	Clay
30	40	30

Comments:

21%

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
	Biotite
25	Muscovite
10	Chlorite
20 ~~25~~	Clay sized fraction
	Glauconite
	Ferromagnesian minerals
8	Other dense minerals
	Authigenic minerals
	Zeolite
5	Pyrite
	Opaque minerals (undifferentiated)
	Fe-oxide
	Carbonates
tr	Micrite
	Others

Percent	Component
	BIOGENIC GRAINS
	Calcareous
tr	Foraminifera
~~20~~ ~~30~~	Nannofossils
	Pteropods
	Ostracods
	Echinoderm
	Bivalves
	Bryozoans
	Corals
	Sponge spicules
	Other spicules
	Bioclast (undifferentiated)
	Siliceous
tr	Radiolarians (or sponge (?) balls?)
	Diatoms
	Silicoflagellates
	Sponge spicules
	Siliceous debris (undifferentiated)
	Others
	Dinoflagellates
	Pollen
2	Organic debris
	Plant debris
	Fish remains (teeth, bones, scales)
	Others