

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	1340	A	1	H	1A	50	

S.P.

Sediment/Rock Name: *Diatom ooze*

Observer: *Abira*

Percent Texture		
Sand	Silt	Clay

Main lithology

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
3	Quartz /
3	Feldspar /
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucinite
	Chert
	Zircon
1	Ferromagnesium minerals ✓ 0.5
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
6	Crystal grain 2
3	Vitric grain 0.5 /
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
9	Nannofossils ≠ .3
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
66	Diatoms 75%
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
3	Sponge spicules /
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

X

light laminae. in S.F.C.

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	1340	A	1	DH	2	20	

Sediment/Rock Name	diatom ooze. (coccolith rich)	Observer	
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Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucanite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
2	Vitric grain /
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	✓ Foraminifera
	Planktonic foraminifera ✓
	Benthic foraminifera
14	Nannofossils
	Coccoliths ✓ 7
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
84	Diatoms 40
	Centric 15
	Pennate 25
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

X

dark laminae. 50

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	1340	A	1	H	2A	22	

Sediment/Rock Name	diatom ooze (coccolith rich)	Observer	Akiva
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Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
34	✓ Clay Minerals
	Chlorite
	Glaucinite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
34	✓ Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
34	✓ Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
30	✓ Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
60	✓ Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

X

30.

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	1340	A	1	H	2A	119	

Sediment/Rock Name: *nanno-bearing diatom silt*

Observer: *akira*

B 45
S 36

Main lithology

Percent Texture		
Sand	Silt	Clay

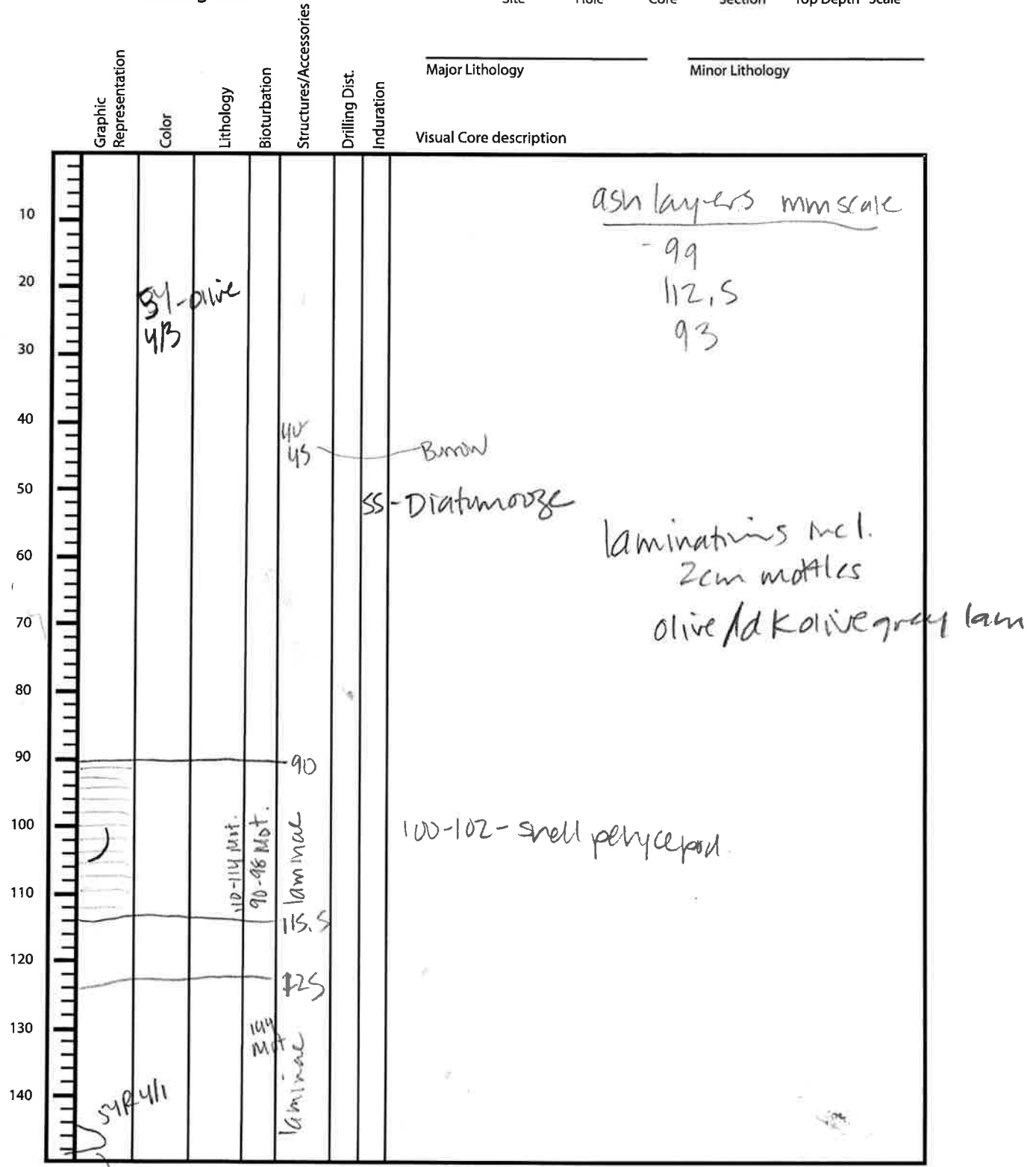
Comments: V 15

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
16	Quartz 3
5	Feldspar 3
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
Accessory/trace minerals	
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucanite
	Chert
5	Zircon
	Ferromagnesium minerals 1
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
10	Pyrite 2
	Magnetite
	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
Crystal grain	
15	Vitric grain 3
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
Foraminifera	
	Planktonic foraminifera
	Benthic foraminifera
Nannofossils	
10	Coccoliths 2
	Discoasters
	Pteropods
Siliceous	
	Radiolarians
	Spumellaria
	Nassellaria
35	Diatoms 77
	Centric
	Pennate
	<i>Chaetoceros</i> Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
Others	
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

U 1340 A 1 1
 Site Hole Core Section Top Depth Scale



146.5-150 - sm pink ash layer

Observer: _____

Date: 7/23

Expedition 323
Bering Sea

U1340 A 1 2
 Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Visual Core description
	5Y 5/4 5Y 3/2 10Y 4/1 dk greenish gray		A. 4/1 4/1 - end S1.	lance			Ash layer 26-26.5 olive to dk olive gray-lam ss - Coccolith rich diatom and silt

Observer: _____ Date: _____

Expedition 323
Bering Sea

U1340 A 1 3&C
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Visual Core description
			98-57 SI. Biot.				CC-SI. biot. -SI. D.D.

Observer: _____ Date: _____

X

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
	1340	A	2		3	66	

Sediment/Rock Name	DIATOM SILT CLAY	Observer	ICR
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LITHICS =

MAIN LITHOLOGY

Comments:

Percent Texture		
Sand	Silt	Clay

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
10	Quartz
10	<input checked="" type="checkbox"/> Feldspar
	K-feldspar (Orthoclase, Microcline...)
	<input checked="" type="checkbox"/> Plagioclase
	Rock fragments
	Accessory/trace minerals
5%	Micas
	Biotite
	<input checked="" type="checkbox"/> Muscovite
25%	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
5%	Zeolite
	Opaque minerals
5%	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
10%	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
< 5%	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
< 2%	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
25%	Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
	1340A		2		5	96	

50

Sediment/Rock Name: NANNO-RICH DIATOM SILT

Observer: Ivano

SILICICLASTIC 30%
 BIogenic 65%

Comments:

Percent Texture		
Sand	Silt	Clay

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
5%	Quartz
10%	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
5%	Micas
	Biotite
	Muscovite
10%	Clay Minerals
	Chlorite
	Glaucinite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
5%	Vitric grain
	Lithic grain

Percent	Component
	BIOGENIC GRAINS
	Calcareous
5%	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
25%	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
40%	Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1390 A 2 1
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
		○			~		<p>~ soupy ✓</p> <p>15m IRD ✓</p> <p>Scattered forams sometimes in mottles</p> <p>at ~12m starts the foram zone</p> <p>Lithology</p> <p>AK494 1A-0 to SA-66 - 5Y 4/1 Diatom clay</p> <p>AK494 SA-66 to 7A-41 5Y 4/2 N-rich diatom silt</p> <p>7A-41 to CC-16 5Y 4/1 Diatom clay</p>	

Observer: _____ Date: _____

Expedition 323
Bering Sea

1346 A 2 2
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							foram - rich 0-25 ✓	
							char. bit es 25-46 ✓	
							Not 78-90 foram	
							128-135 laminated, foram rich ✓	

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 Site A Hole 2 Core 3 Section _____ Top Depth _____ Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology	Visual Core description
									<p>19m IRD - Peb ✓</p> <p>38 IRD - Peb ✓</p> <p>48 IRD - Gran ✓</p> <p>65m, S) same as sect. 2</p> <p>Characteristics 130-142 ✓</p>

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 2 4
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology	Visual Core description
									23-33cm lamination, from 204 ✓ RD, 49, 71, 81, 123 ✓ 138-142 lamination ✓

Observer: _____ Date: _____

Expedition 323
Bering Sea

1330 A 2 5
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
10								
20								
30								
40								
50								
60								
70								
80								
90								
100								
110								
120								
130								
140								

Visual Core description

chardwig 4-140 to 5-33 ✓

about 20cm 10-20cm thick
thick alternations
between yellowish
fossil-rich sl
"greenish fossil-poor
beds"

16-100

Observer: _____ Date: _____

Expedition 323
Bering Sea

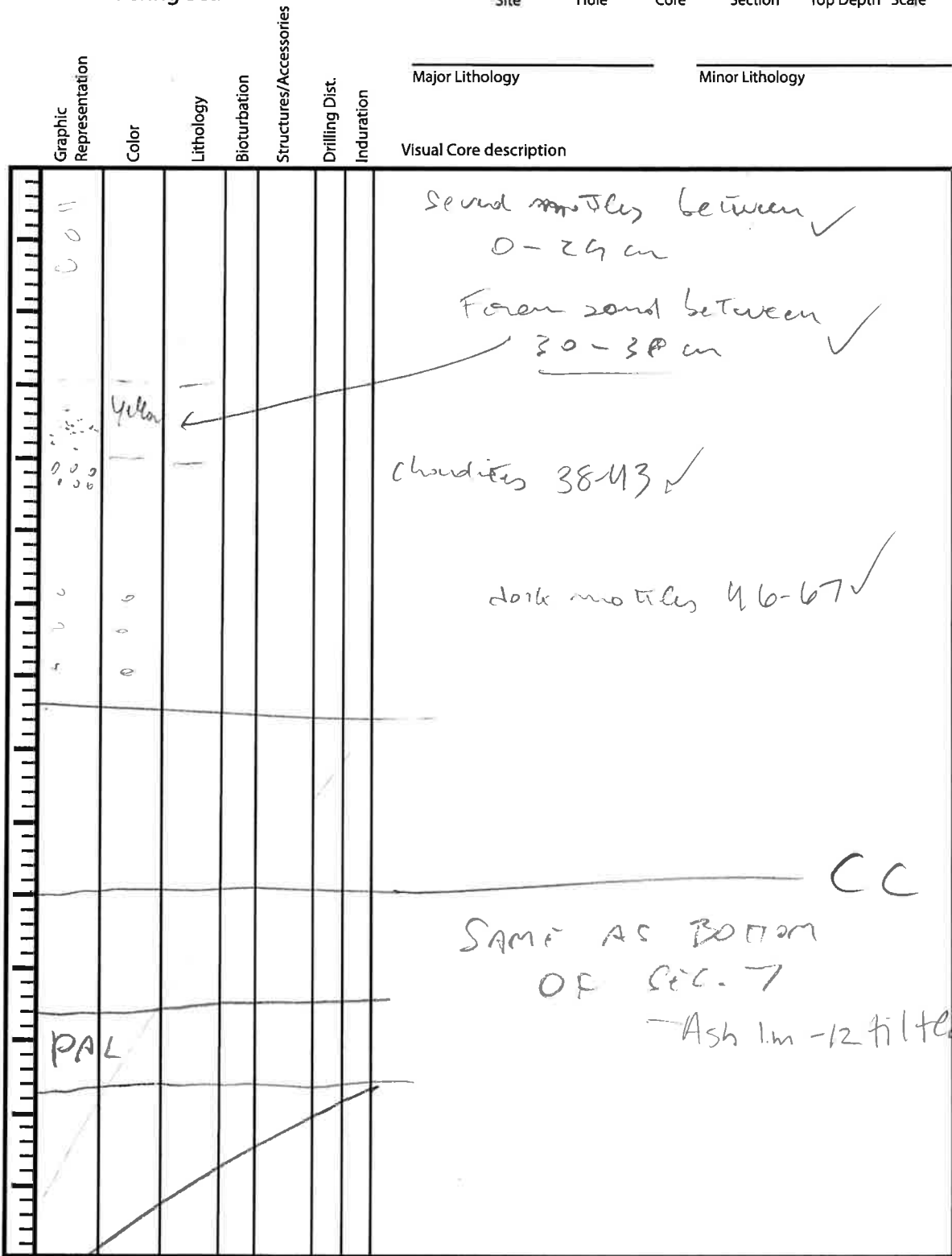
136. A 2 6
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology	Visual Core description
									RELATIVELY HOMOGENEOUS + HOMOGENEOUS SCATTERED FORAM TESTS FEW MOTTLES OF ASH 120-137 SUBSTANTIAL LUMEN 145-149

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 2 7 / CC
 Site Hole Core Section Top Depth Scale



Observer: _____ Date: _____

X

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	UB40	A	34	5	100	cm	

Sediment/Rock Name	main lithology (Foram. rich) = Diatom clay	Observer	G.B
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Percent Texture		
Sand	Silt	Clay

Comments: *Thalassiothrix*

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
5	Quartz X
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
Accessory/trace minerals	
	Micas
	Biotite
	Muscovite
45	X Clay Minerals
	Chlorite
	Glaucinite
	Chert
	Zircon
	Ferromagnesium minerals
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
	Pyrite
	Magnetite
	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
Foraminifera	
5	Planktonic foraminifera X broken
	Benthic foraminifera
Nannofossils	
	Coccoliths
	Discoasters
	Pteropods
Siliceous	
Radiolarians	
	Spumellaria
	Nassellaria
45	X Diatoms
	Centric
	Pennate
	<i>Chaetoceros</i> Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
Others	
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

X

S.N.

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	3H	7	5	cm	

Accessory lithology (laminations)
from- rich ~~diatom~~ diatom clay

Sediment/Rock Name	Observer
	G.B.

Percent Texture		
Sand	Silt	Clay

Comments: low O₂ content (Bulimina)

top
-25
75
37

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
40	Clay Minerals
	Chlorite
	Glaucinite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
20%	Benthic foraminifera X <i>Bulimina</i>
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
40	Diatoms
	Centric
	Pennate
	<i>Chaetoceros</i> Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340 A 3 1
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
0								
	5T 5/L	RC	m L E				7-9cm photo ✓	
			S V				46-55 photo ✓	
	5T 4/2		48				70~ color change ✓ can	
							105-116 laminae ✓ 103-106 photo. 109-112 photo ✓	
	107 E	d.c	105				116 sb	

Observer: _____ Date: _____

Expedition 323
Bering Sea

U1340 A310

Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
							1-4 barren ✓ ash/diatom?	
							102 4/1 - diatom clay 60% ✓ grey	Sec 2 110 ~ Sec 4 23
	102 4/1	d.c					clayey 40% - light grey diatom ooze 57 4/2	
							68-69 moll ✓ ash ✓	
							90-100 moll foram filling ✓	
							110 with ✓ moll foram	
	grey	grey clay diatom					122	
							131-136 moll ✓	

Observer: _____ Date: _____

Expedition 323
Bering Sea

U1340 A 3A 3A
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
	↑ gray 10T 4/1							
	↓ light olive 5T 4/7	laminae a.					50-60 gb ^v	
	↑ gray 10T 4/1						60-84 laminae light	
	↓ light blue 5T 4/2						84	
	↑ gray 10T 4/1							
	↓ light blue 5T 4/2						119	
	↑ gray 10T 4/1						121' bed? with foam	
	↓ light blue 5T 4/2						134	
	↑ gray 10T 4/1						142 m? with foam	

Observer: _____ Date: _____

Expedition 323
Bering Sea

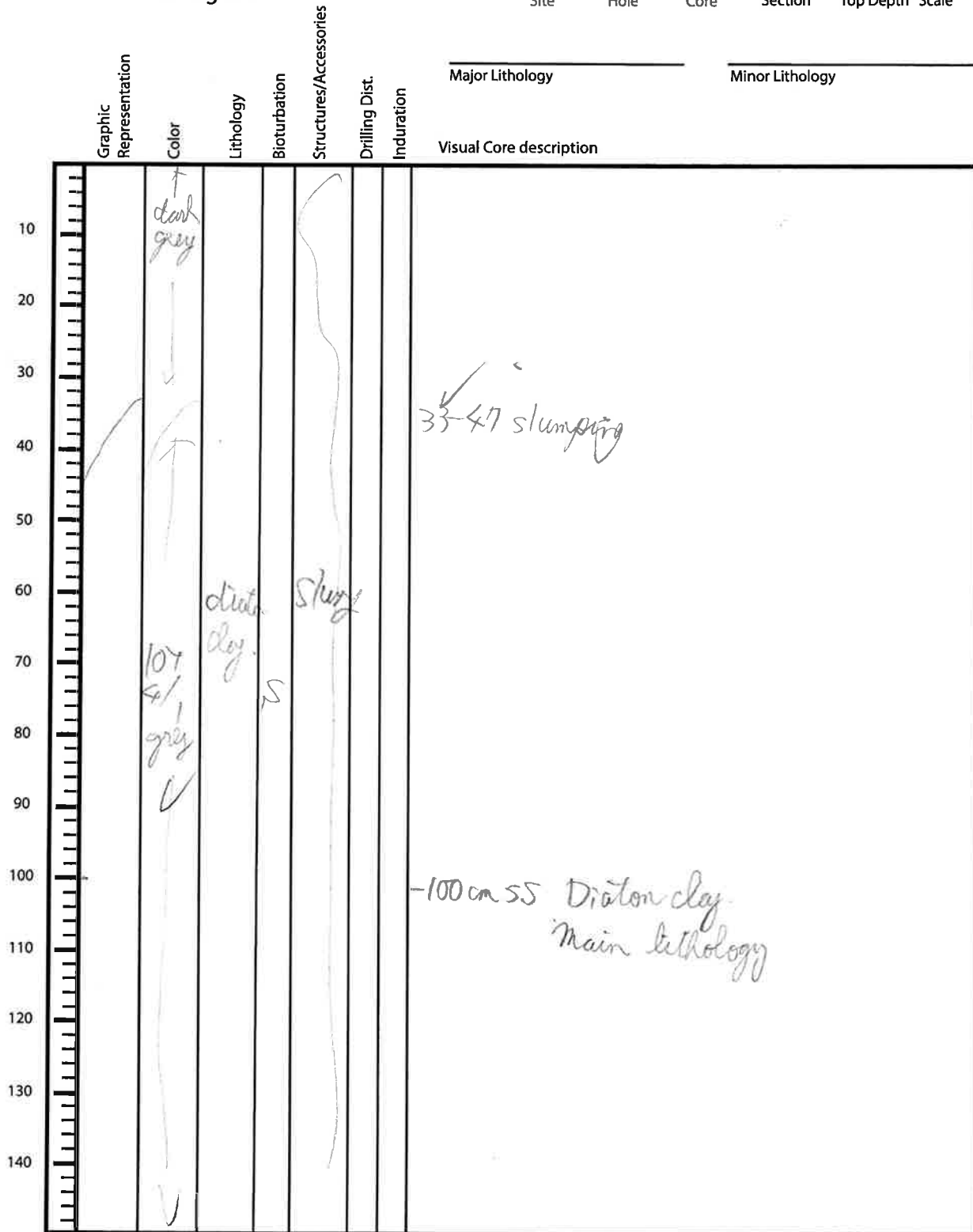
U1340 A3⁺ 4A
 Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology	Visual Core description
0	5Y 10/1	5Y 5/2							8cm-12 m? foran ✓ 14cm 5mm pebble ✓
10									19-23 m? foran
20									
30									
40									
50	4.9								
60									sect. 90 ~ slump CC
70									
80									
90									sect. 91 - CC slump
100									91-93 slump
110									
120	5Y 4/3								
130									127-128. blue sandy patch ✓ -133. 5mm pebble ✓ 136. 3mm pebble ✓
140									

Observer: _____ Date: _____

Expedition 323
Bering Sea

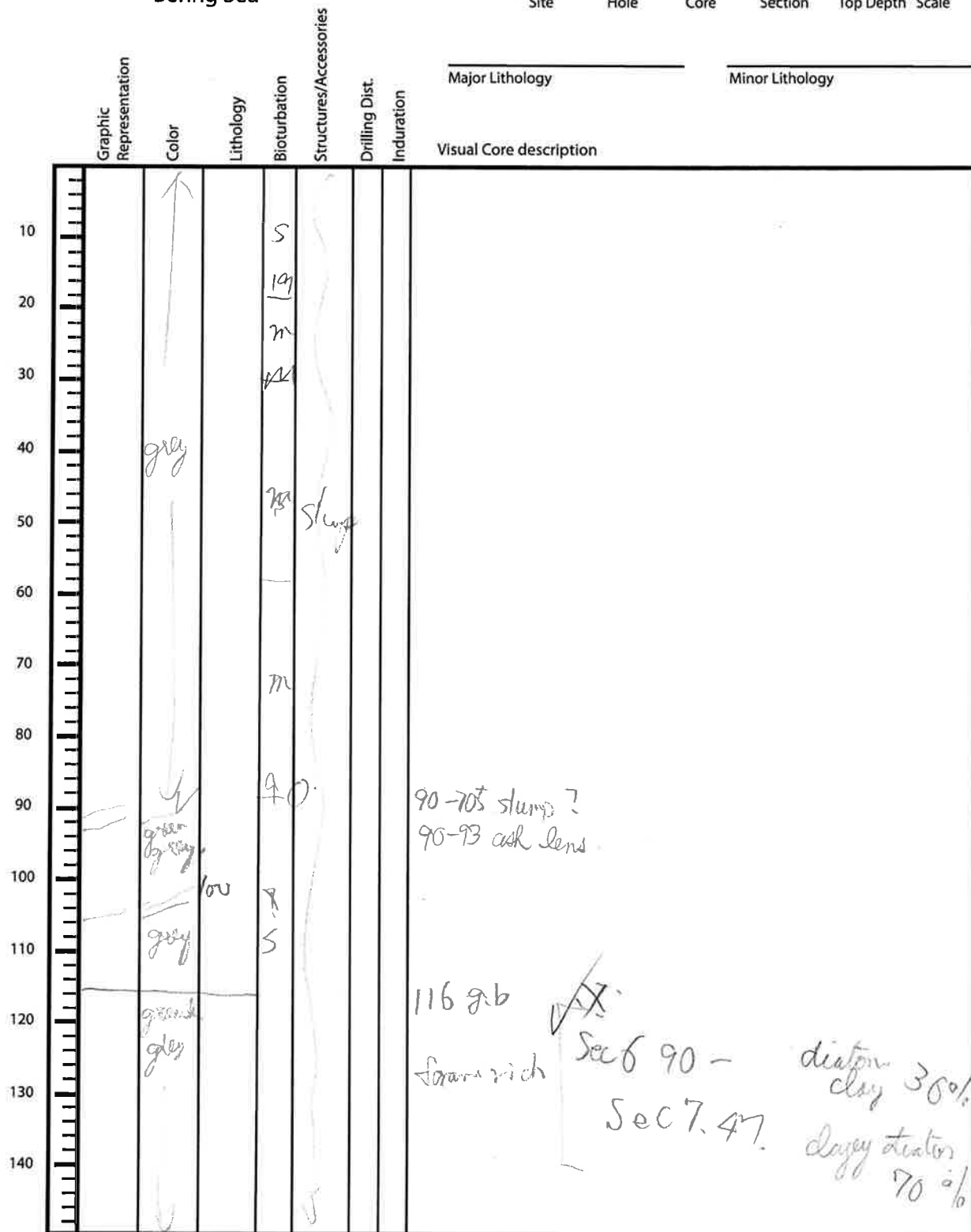
U1340 A 3H 5 A
Site Hole Core Section Top Depth Scale



Observer: _____ Date: _____

Expedition 323
Bering Sea

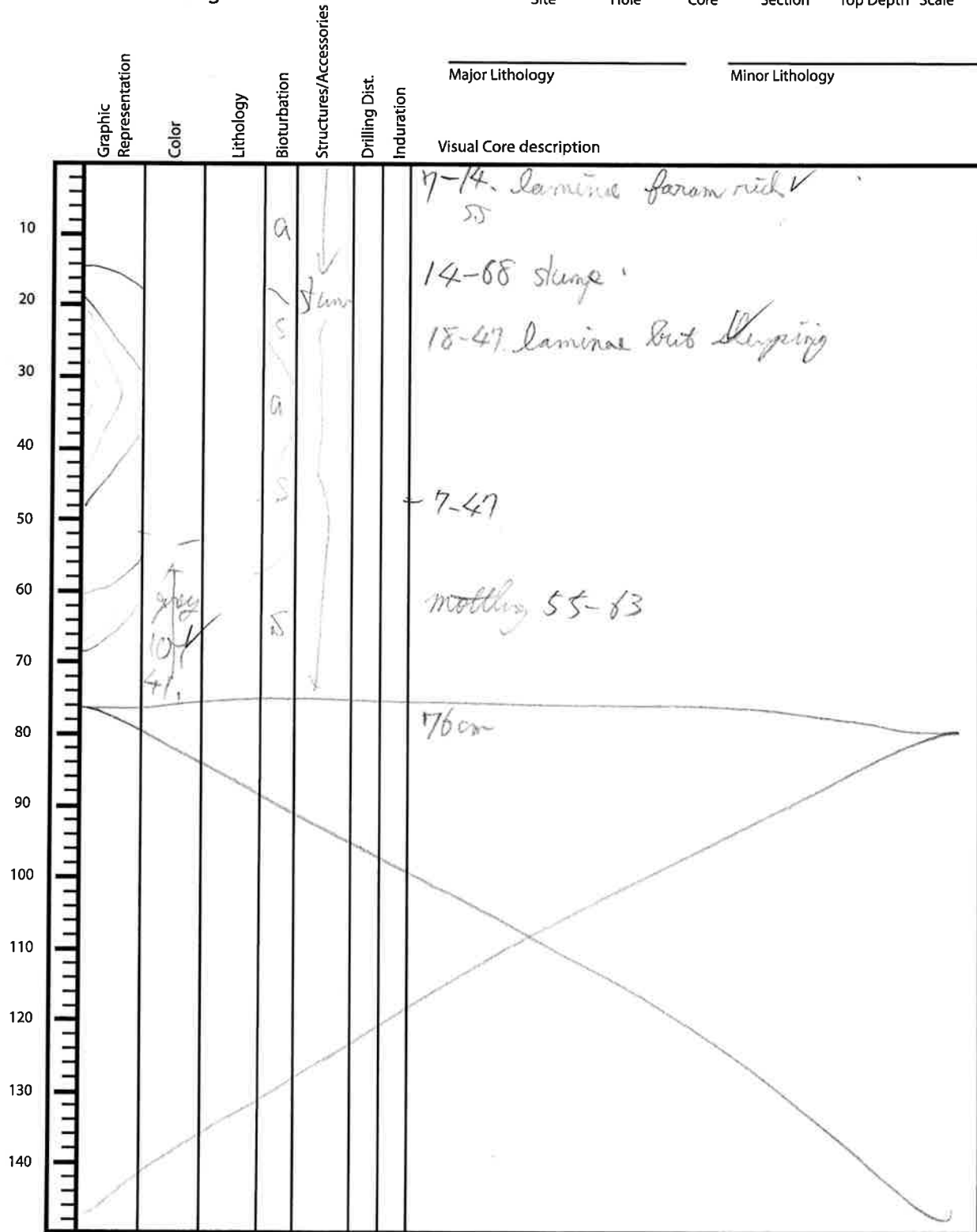
U1340 A 3A XA
 Site Hole Core Section Top Depth Scale



Observer: _____ Date: _____

Expedition 323
Bering Sea

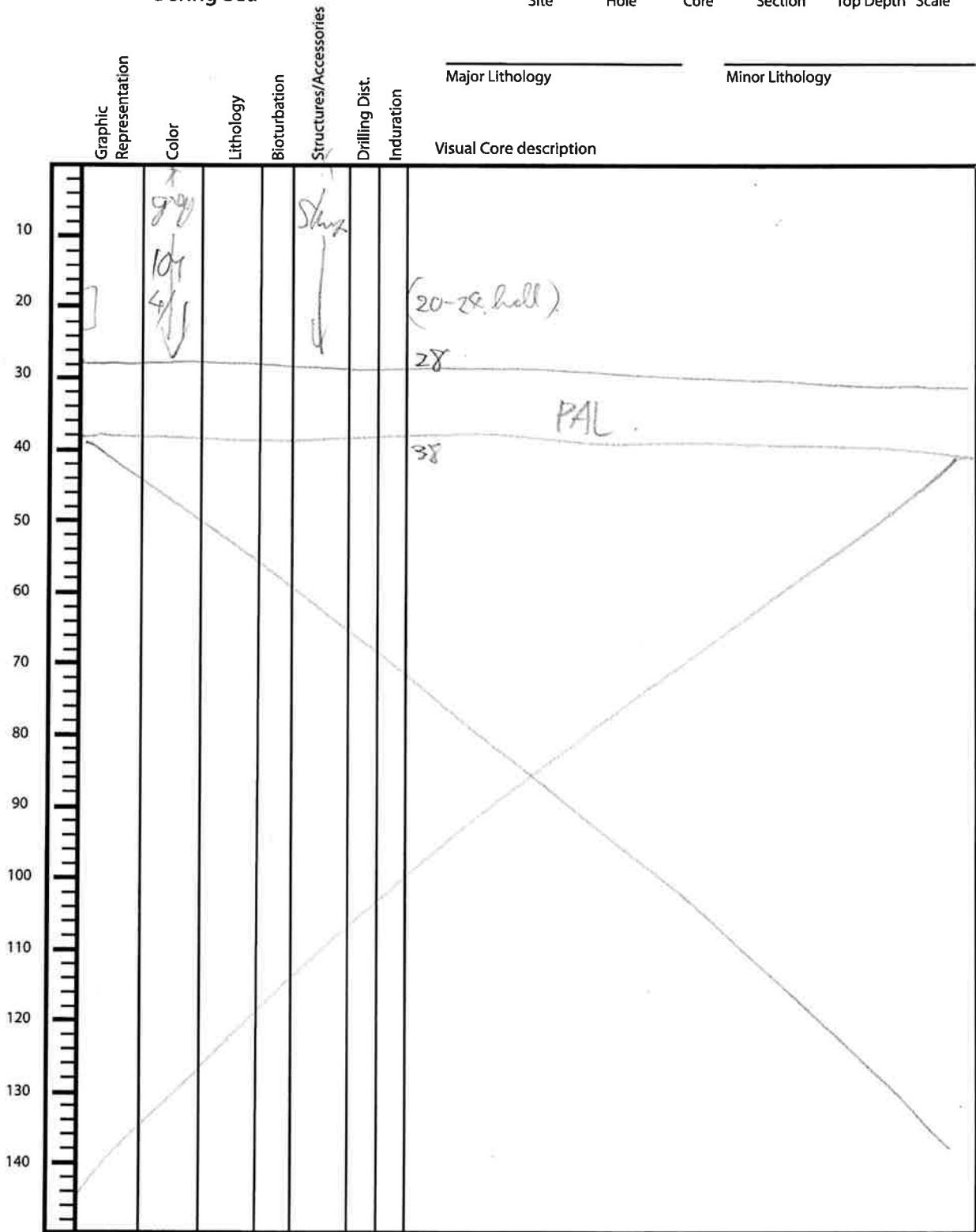
Site _____ Hole 34 Core 7-A Section _____ Top Depth _____ Scale _____



Observer: _____ Date: _____

Expedition 323
Bering Sea

Site _____ Hole _____ Core 3H Section CC Top Depth _____ Scale _____



Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	UB40	A	4	A	3A	30cm	

10
5.2

Sediment/Rock Name	Diatm-bearing silt	Observer	BETH
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B-12
S 88
V-D

Percent Texture		
Sand	Silt	Clay
10	90	

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
25	Quartz
25	Feldspar
	K-feldspar (Orthoclase, Microcline...)
10	Plagioclase
5	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
5	Chlorite
	Glauconite
	Chert
	Zircon
10	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
10	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
1	Spumellaria
1	Nassellaria
	Diatoms
7	Centric
3	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	UB40A	4		H	6A	10 cm	

in 5.7

Sediment/Rock Name	Nannofossil-bearing diatom ooze	Observer	BETH
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B-93
 S-7

Percent Texture		
Sand	Silt	Clay

Comments:

V-6

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
1	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
2	Zeolite
	Opaque minerals
2	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
2	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
5	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
28	Centric
60	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

4-1-10
4-6-10

Expedition 323
Bering Sea

1340 A ~~5~~ 1
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
			50					54 4/3 macro-bearing diatom ooze
			0				young 142-spicules	diatom ooze
			118m				XRD Sample 10m	
			20				PEBBLES T. Etal laminae 56, 68, 87 spicules 40, 63	
			20				108 spicules	
			120				Chondrites 140-150	
			70				37 spicules	
			100				chondrites 23-37	
			120					
			150					
			0				folded beds 0-30	
			50					
			90					
			115					
			20					
			20					



Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	5	H	2A	100cm	

S.P.

Sediment/Rock Name	Nannofossil-bearing diatom ooze	Observer	BCH
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Percent Texture		
Sand	Silt	Clay

Comments:

3rd.
laminar Major Handogy

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucanite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
5	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
40	Centric
50	Pennate
	Chaetoceros Resting Spores
5	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	01340	A	S	B	3	16cm	

5.1-

Sediment/Rock Name	Diatom rich silt	Observer	Beth
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B = 25
 S = 65
 V = 10

Percent Texture		
Sand	Silt	Clay
	85	15

Comments:

Secondary
 Major lithology

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
25	Quartz
20	Feldspar
	K-feldspar (Orthoclase, Microcline...)
3	Plagioclase
2	Rock fragments
Accessory/trace minerals	
Micas	
	Biotite
	Muscovite
5	Clay Minerals
	Chlorite
	Glaucanite
	Chert
	Zircon
3	Ferromagnesium minerals
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
	Pyrite
2	Magnetite
4.5	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
Crystal grain	
10	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
Foraminifera	
	Planktonic foraminifera
	Benthic foraminifera
Nannofossils	
	Coccoliths
	Discoasters
	Pteropods
Siliceous	
	Radiolarians
	Spumellaria
	Nassellaria
20	Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
5	Silicoflagellates
	Sponge spicules
	Dinoflagellates
Others	
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	5	H	4A	90cm	

S.O.

Sediment/Rock Name	Diatom ooze	Observer	Beth
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B 70
S -30
V-0

Major
sand.

Percent Texture		
Sand	Silt	Clay
10	80	20

Comments:

Major lithology

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
10	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
10	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
3	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
2	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
5	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
25	Centric
25	Pennate
10	Chaetoceros Resting Spores
	Silicoflagellates
5	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340 A 5
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology	Visual Core description
1		65							
10		115	m						* 132 pebble 7cm ✓ 116-119 red siltstone
20		40	S						* 40-43 pebble 3cm volcanic ✓
30		69	a						* 170-115 laminar ✓
40		23	S						65 ~ slump 69-116 yellow -5 olive * 48-52 pebbles mm-7.5cm fractured igneous? ✓ 27-40 yellow * 27-40 laminae ✓
50		16	S						16-27 yellow 27-50: grey
60		9	S						
70		32	m						32-37 grey 37-50 olive 20 - slump * 31 pebbles 5cm 50-730 grey * 194 nodule * 122 nodule 130
80		146	S						
90	slump								
100		13	S						
110									olive grey 45 main diatom ooze. 5Y 4/2
120									35 2nd. diatom rich site 10Y 4/1 dark greenish grey
130									20' 3rd. dolomite 1 nanofossils rich diatom ooze. 5Y 3/4 olive
140									* through the core, slump was identified

Sec 2-700
Sec 3-16-55
Sec 4-90-55
diatom rich siltstone
Second
3rd nanofossil rich diatom ooze
main diatom ooze

Observer: _____ Date: _____

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	V1340	A	6	H	4A	100cm	

Sediment/Rock Name	Diatom clay	Observer	Beth
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B-58
 S-27
 V-15

Percent Texture		
Sand	Silt	Clay
	10	90

Comments:

Major lithology

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
10	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
2	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
15	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
15	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
30	Centric
25	Pennate
	Chaetoceros Resting Spores
1	Silicoflagellates
2	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1370 A 6
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
1							9 cm pebble. 20 cm black ✓ 55 cm pebble > 2 cm black ✓ 143 cm moth. ash ✓	
2		55 70 101					55 cm moth ash ✓ 136 cm peb. black 7 cm ✓	Sec 2 55-63 cm diatom ooze
3		25 60			74 100		17-19 ash lens ✓ 70-71 ash ✓ 84-93 moth. ash ✓	
4		72						Sec 4 55-100 diatom clay
5		66 80			100 107		5425/1 127-34 ash 1 line	
6		17 31 96			58 70		62-63 ash ✓ 78-29 laminae ✓ 60-70 lam ✓	
7		15					16-77 laminae. X red layer is siliceous!!!	
CC		1					78 24 PAL 24-34	Sec 7 55 -30 diatom ooze
110								
120							55% Major diatom clay. 1074/1 ✓	
130							45% 1/2 2nd 35% diatom ooze. (clay red) 574/2 ✓	
140							1/2 3rd 10% diatom ooze. (diatom red) 574/4 ✓	

Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	6	H	7A	30cm	

Sediment/Rock Name	Diatom ooze	Observer	B...
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Percent Texture		
Sand	Silt	Clay

Comments:

*Secondary
Green lamina - Minor lithology*

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
2	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
2	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
1	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
2	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
1	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
50	Centric
40	Pennate
	Chaetoceros Resting Spores
2	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	6	#1	2A	63cm	

Sediment/Rock Name	Diatom ooze	Observer	Bex
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Percent Texture		
Sand	Silt	Clay

Comments: B-77
 S-23
 V-0 Secondary
 Minor lithology

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
5	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
7	Clay Minerals
	Chlorite
	Glaucanite
	Chert
	Zircon
1	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
2	Fe-oxide
	Carbonates
	Calcite
3	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
10	Centric
35	Pennate
50	Chaetoceros Resting Spores
	Silicoflagellates
1	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	6	A	7A	58cm	

Sediment/Rock Name	Silicoflagellate ooze!	Observer	Beth
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Percent Texture		
Sand	Silt	Clay

Comments: ~~gem~~ accessory
 Brown lamina

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
3	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
2	Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
95	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Hemaphys? coating

S.P.

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
	1240	A	7		4	70	

Sediment/Rock Name	NANO RICK STATION 0087	Observer	IWA
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NANO & FORAM BEARING DIATOM SILT

Comments: MAIN LITHOLOGY

Percent Texture		
Sand	Silt	Clay

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
10%	X Quartz
10%	R Feldspar
	R K-feldspar (Orthoclase, Microcline...)
	R Plagioclase
10%	X Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	X Chlorite
	Glaucinite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
10%	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
15%	X Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
5-20% 10%	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	R Radiolarians
	Spumellaria
	Nassellaria
50%	Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	X Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

S.N.

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
	1340	A	7		6	38	

Sediment/Rock Name	NANNO-RICH DIATOM ooze	Observer	LWA
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MAW L1410

brist. laminations

Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
45%	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
5%	Clay Minerals
	Chlorite
	Glaucanite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
5%	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
5%	X Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
5%	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
2%	X Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
60%	X Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	X Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others



5.2

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
	1340	A	7		5	70	

Sediment/Rock Name	NANNO PLANKTON Ooze	Observer	AWA
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Percent Texture		
Sand	Silt	Clay

Comments: MAIN LITHO

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
57	- Clay Minerals
	Chlorite
	Glaucinite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
5	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
57	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
40	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
50	Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
57	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340A A 7H XV
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
		I			0-10	✓	23-25 void ✓	I N&F bear d. silt
		II			25-50			II d. ooze
		II			136-144		thin laminar - mod brot. ✓	III N-d. ooze (lan)
		II			3		8-12 plan ✓	N. d. silt - d. silty clay
		grad from silt to ooze						
		to silt to ooze						
					40-43	✓	15-crack ✓	
					47		46-50 pebbles any. Hi spher ✓	
							92-95 peb. ✓	
		37-65					ash dk grey ✓	
		nick lam					lt. grey ash ✓	Nannodiatom ooze
		27-45					42-granule ✓	Nannorich d. ooze
							81-100 lt. grey ash ✓	
							60-68 chmd. ✓	
							tan layer? ←	
							43-45 chmd. ✓	
							60-61 chmd. ✓	

alcoholic
MIR
olive
grey
olive
greenish grey
Min
olive grey

Observer: Beth Date: _____

X

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	8	H	2	90	90

Sediment/Rock Name	Diatom ooze	Observer	Kelsie
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Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
15	Quartz
10	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
1	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
1	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
5	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
50	Centric
20	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	01340	A	8	H	3	50	50

SM

Sediment/Rock Name	Foram-bearing diatom ooze	Observer	Kelsie
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Percent Texture		
Sand	Silt	Clay

Comments:



Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
10	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
2	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
1	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
1	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
5	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
5	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
1	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
50	Centric
20	Pennate
	<i>Chaetoceros</i> Resting Spores
1	Silicoflagellates
1	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

SM

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
	1360	A	8		5	3m	

Sediment/Rock Name	Diatom ooze	Observer	LWA
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D. bearing silty fine ash

Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
	Feldspar
10	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
10	R Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
70	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
10	Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

SM

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	8	H	5	70	70

Sediment/Rock Name: Foram-bearing diatom ooze

Observer: Kelsie

Percent Texture		
Sand	Silt	Clay

Comments:

lamina

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
10	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
1	Rock fragments
Accessory/trace minerals	
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
2	Ferromagnesium minerals
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
2	Pyrite
	Magnetite
	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
5	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
10	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
Siliceous	
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
50	Centric
20	Pennate
	<i>Chaetoceros</i> Resting Spores
1	Silicoflagellates
1	Sponge spicules
	Dinoflagellates
Others	
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

SM

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	8H		5	70	

Sediment/Rock Name	Diatom-rich silty fine ash	Observer	Beth
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Percent Texture		
Sand	Silt	Clay

Comments:

(Laminar)

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
10	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
2	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucanite
	Chert
	Zircon
1	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
1	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
65	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
15	Centric
5	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	8	+	6A	41	

54

Sediment/Rock Name	Diatom ooze	Observer	Beth
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Percent Texture		
Sand	Silt	Clay

Comments:

dark lamination

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
24	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
5	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
50	Centric Mostly
35	Pennate
	Chaetoceros Resting Spores
15	Silicoflagellates
1	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	8H	6A		42	

SM

Sediment/Rock Name	Diatom ooze	Observer	B. H.
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Percent Texture		
Sand	Silt	Clay

Comments:

light laminae



Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucanite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
5	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
10	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
70	Centric <i>Mostly A. w. V. Natu</i>
15	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Achnanthes curvatus

Expedition 323
Bering Sea

7340 A 8
Site Hole Core Section Top Depth Scale

Depth (cm)	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
								Visual Core description	
10		36 70						Major 10T4/1 70	
20		120						89-95 mott.	2nd 5T4/3 30.
30		48						56-58 mott	
40		48	100					575/2	
50		20 26		82				75-88 ash X grad. 127 pebble 5 mm	
60				113				57-90 embossed	
70		45						30 thin dk.	
80		109		77				70-88 lan. 47 gb	
90		14						57-63 ash layer → 2.5T3/1 ✓ ↑ 5. ✓	
100								Sec 4. 123 - Sec 573 lam	
110		114						10-6 ash layer. 2.5T4/1	
120				21				34. pebble 5 mm	
130				82				Sec 6 7-14 lam	
140		116							
150		64							
160								Sec 7 64 - CC 13 lam.	
170								olive	
180								Major 5T5/4 50%	
190								2nd 5T4/2 30%	dark di
200								3rd 10T4/1 20%	diatom
210								Major diatom - p.	
220								2nd. diatom	
230								3rd. yellow	

SS
3A-50
foran bearing
diatom ooze.

SS
2A-90m
diatom ooze

3A-50m
3A-80. ash.
diatom rich silty fine
ash

diatom bearing.
silty fine ash
5-5-3.

SS
5A-70m
foran bearing
diatom ooze

diatom ooze

SS dark
6A-60m
1A-41m
diatom ooze.

Observer: _____ Date: _____

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	9	H	1	51	51

SM

Sediment/Rock Name	Diatom-rich fine-ashy silt
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Observer	Kelsie
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Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
30	Quartz
20	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
10	Rock fragments
Accessory/trace minerals	
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
2	Ferromagnesium minerals
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
5	Pyrite
	Magnetite
	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
10	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
Foraminifera	
	Planktonic foraminifera
	Benthic foraminifera
Nannofossils	
	Coccoliths
	Discoasters
	Pteropods
Siliceous	
	Radiolarians
	Spumellaria
	Nassellaria
25	Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
Others	
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	9	H	3	18	18

SM

Sediment/Rock Name	Foram-rich silt	Observer	Kelsic
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Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
30	Quartz
10	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
5	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
2	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
20	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
20	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
5	Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

SM

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	01340	A	9	H	6	115.5	115.5

Sediment/Rock Name	Diatom ooze	Observer	Kalsie

Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
5	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
5	Vitric grain
	Lithic grain

Percent	Component
	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
90	Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	9	H	6	117	117

50

Sediment/Rock Name	Diatom ooze (centric-rich)	Observer	Kelsie
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Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
5	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucanite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
2	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
2	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
26-90	Centric
5	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	9	H	7	56	56

SM

Sediment/Rock Name	Diatom-bearing Foram ooze	Observer	Kelsie
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Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
10	Quartz
10	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
2	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
1	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
15	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
55	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
5	Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
2	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	9	H	7	58	58

5/6

Sediment/Rock Name	Foram-rich fine ashgy silt	Observer	Kelsie
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Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
20	Quartz
15 20	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
Accessory/trace minerals	
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
	Pyrite
	Magnetite
	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
30	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
30	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
Siliceous	
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
5	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
1	Sponge spicules
	Dinoflagellates
Others	
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	01340	A	9	H	7	58.5	58.5

SM

Sediment/Rock Name	Diatom-bearing foram ooze	Observer	Kelsie
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Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
10	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
Accessory/trace minerals	
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
	Pyrite
	Magnetite
	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
15 20	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
60 55	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
Siliceous	
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
10	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
Others	
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340

A

89

A

Site

Hole

Core

Section

Top Depth

Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
								medium 0-140 ^v bedded SY412 cont SY411
								40-42 grad.
								60-65 grad
								89-91
								115-120
								136-140 grad. cont.
								125-138 mat. biot., fish scales?

Observer: _____ Date: _____

Expedition 323
Bering Sea


1340 A 90 2
 Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
	S5 4/1		slight		slight		0-150 medium to thick bedded	
							25-30 grad.	
	S5 4/2						90-95 grad	
	S5 4/1						140-142 dark ash intermixed	
							145-150 grad	

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 8 3
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	shaly							
							17-19 ash layer	
			shaly		shaly		60-61 pebb clasts, up to 1 cm ϕ , dark, subang.	
							ash patches here.	

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 8 4
Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology	Visual Core description
10										
20										
30		CHAS								
40				striae						
50										ash patches here
60										
70										
80										
90										
100										
110										
120										
130										
140										

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340

323

A

9

5

Site

Hole

Core

Section

Top Depth

Scale

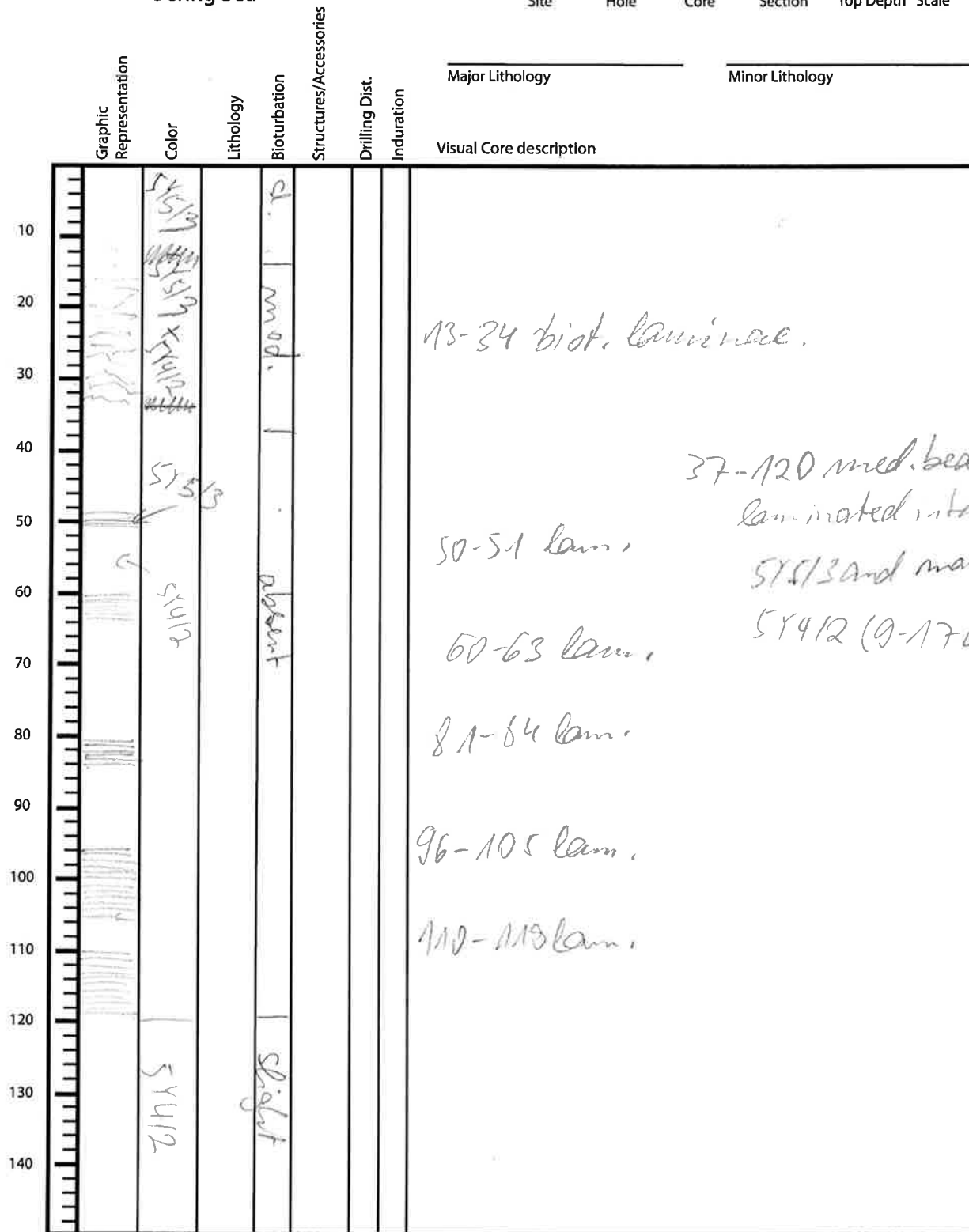
Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Visual Core description
			slight		slight		
			mod.				
	1340		slight				80cm layer
							130-135 grad

Observer: Bohn

Date: _____

Expedition 323
Bering Sea

1340 Site Hole Core Section Top Depth Scale



Observer: _____ Date: _____

Expedition 323
Bering Sea

1340
Site

A
Hole

~~8~~
Core

7
Section

Top Depth

Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
	thin		slight					
					slight			
							35-40 grad	
							56-58 lam. ash yellowish + dark, with clay on erosional surface	
			mod				58 erosional condy casts.	

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340

D

8

CC

Site

Hole

Core

Section

Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology	Visual Core description
10		White		slight						
20										
30		PAL								
40										
50										
60										
70										
80										
90										
100										
110										
120										
130										
140										

Observer: _____ Date: _____

[Handwritten signature]

Expedition 323
Bering Sea

1340 Site A Hole 10 Core 1 Section _____ Top Depth _____ Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	5Y4/2		slight		0m			
	5Y4/1						65-70 grad	
	5Y4/1						134-150 thinly lam.	
	5Y4/1							

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 10 3
 Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
10								
20	SHLS						0-150 thick bedding	
30							20-30 grad.	
40								
50	SHLS							
60							70-80 intermixed ash, angular	
70							clasts (fine)	
80								
90								
100							100-105 grad	
110								
120	SHLS							
130							138-143	
140								

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 Site A Hole 10 Core 4 Section _____ Top Depth _____ Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology	Visual Core description
10										
20		SY 41A								
30										
40										
50										50-70 grad
60										
70										
80										86-101 biot. lamination
90										
100										
110										101-103 grad
120										
130										
140										

Observer: _____ Date: _____

Expedition 323
Bering Sea

1540 A 10 5
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology	Visual Core description
	SKYIN SKYIN		Slight						30-50 grain

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 10 6
 Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Visual Core description
	grey		slight				8-22 intermixed dark ash
			mod.				26-79 large greyish-greenish burrows up to 3cm φ
			slight				

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 Site A Hole 10 Core 7 Section _____ Top Depth _____ Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	<p>5/14/12</p> <p>5/15/12</p> <p>5/31/12</p>	<p>shaly</p> <p>Coarse grains</p>	<p>shaly</p>				<p>30-40 grad</p> <p>40-60 mud/cl. intermixed</p> <p>60-65 sh. g. p.</p>	

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 10 CC
Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology	
								Visual Core description		
10		S S		S S					intermixed ash	
20	<hr/>									
30	<hr/>									
40										
50										
60										
70										
80										
90										
100										
110										
120										
130										
140										

Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	11	H	2	60	60

SM

Sediment/Rock Name	Foram-rich Diatom ooze	Observer	MSC
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Percent Texture		
Sand	Silt	Clay

Comments: Main lithology - green 1-2 1/2

Percent	Component
14	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
7	✓ Quartz
4	Feldspar
	✓ K-feldspar (Orthoclase, Microcline...)
	✓ Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite 17.73
	Muscovite
	Clay Minerals
	Chlorite
	Glaucanite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
3	✓ Pyrite
	✓ Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
3	VOLCANICLASTIC GRAINS
	Crystal grain
3	✓ Vitric grain
	Lithic grain

Percent	Component
83	BIOGENIC GRAINS
	Calcareous
20	✓ Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
60	Diatoms
	✓ Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
3	✓ Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	11	H	3	81	81

SK

Sediment/Rock Name	coarse ash	Observer	MSC
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Percent Texture		
Sand	Silt	Clay
80	18	2

Comments: Ash

est. from appearance, not from slide (excluded)

Percent	Component
13	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
10	✓ Quartz
3	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
83	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
4	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
4	Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

coarse grains

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	11	H	5	10	10

SM

Sediment/Rock Name	Diatom-rich silty fine ash	Observer	Hiro
--------------------	----------------------------	----------	------

B 29 Sil: 27ST V: 43

Comments: Man lith - grey

Percent Texture		
Sand	Silt	Clay
7	89	4
2	25	1

2

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
14	✓ Quartz 3.5
18	✓ Feldspar 0.5
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
16	Rock fragments 0.5
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
19	Clay Minerals 0.5
	Chlorite
	Glauconite
	Chert
	Zircon
15	Ferromagnesium minerals 0.5
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
25	✓ Pyrite 3
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	Other
VOLCANICLASTIC GRAINS	
	Crystal grain
34	Vitric grain 15
	Lithic grain

Percent	Component
 BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
#	Diatoms
14	✓ Centric 5
9	✓ Pennate 3
	Chaetoceros Resting Spores
	Silicoflagellates
6	✓ Sponge spicules 2
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

SM

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
			11	H	5	119	119

Sediment/Rock Name	Diatom ooze	Observer	
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Percent Texture		
Sand	Silt	Clay

Comments: Nam 4th - Diatom green

Percent	Component
12	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
10	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucinite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
2	Other clay sized
0	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
88	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
80	Diatoms
60	Centric
20	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
8	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	11	M	6	106	106

SM

Sediment/Rock Name	Diatom 0030	Observer	
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Percent Texture		
Sand	Silt	Clay

Comments: Mann lith - darker grey

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
90%	Quartz 2
5%	Feldspar 1
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
<1	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
5%	Vitric grain 1
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms 15
68%	Centric 15
9%	Pennate 2
	Chaetoceros Resting Spores
	Silicoflagellates
4%	Sponge spicules 1
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340 A 11 1
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	Dark	Shale					60-62 dark ash intermixed	
							81-82 slump	
							82-150 ash patches	

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 Site A Hole M Core 3 Section _____ Top Depth _____ Scale _____

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
Visual Core description								
10								
20								
30								
40		51412					71-75 bent grad. cont.	
50							72-93 dense ash layer	
60							91-93 grad cont.	
70							104-110 tilted ash layer	
80		51414						
90								
100								
110								
120							115-130	
130								
140								

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A M 4
 Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	10-20: 71K5 40-50: 71K5 60-70: 71K5 80-90: 71K5 110-120: 71K5 120-130: 71K5						6-75 ash patches 40-50 zmol. 46 isolated clast, 1cm d, well-rounded, grey 77-78 tilted sharp 68-150 slumped 113-113 tilted sharp	

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 Site A Hole 11 Core 5 Section _____ Top Depth _____ Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	51411 51412 51412		slight				40-41 tilted shaly 85-90 grad	

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 Site A Hole 11 Core 6 Section _____ Top Depth _____ Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
10-15 grad	5141a							
28-30 grad.	5141b							
86-93 slumped sha. p.	5141c							
116-120	5141d							

Observer: _____ Date: _____

Expedition 323
Bering Sea

1342 A M 7
Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
10									
20									
30									
40		2/4/2							
50									
60									
70									
80									
90									
100									
110									
120									
130									
140									

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 11 CC
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	51415							

Visual Core description

10
20
30
40
50
60
70
80
90
100
110
120
130
140

Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	12	H	1	80	80

SM

Sediment/Rock Name	Diatom ooze ^{epic} Diatom ooze	Observer	
--------------------	--	----------	--

~~B 75 S 21 V 4~~ ^{B 33} ~~B 34~~

Percent Texture		
Sand	Silt	Clay

Comments: *Marr lith - green*

$\frac{46}{25} = 1.84$
B. 63 S. 34 V 3

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
7	Quartz 3
3	Feldspar 1
"	K-feldspar (Orthoclase, Microcline...)
"	Plagioclase
	Rock fragments
Accessory/trace minerals	
	Micas
	Biotite
	Muscovite
25 25	Clay Minerals 3 10 14
36	Chlorite
	Glaucanite
	Chert
	Zircon
	Ferromagnesium minerals
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
	Pyrite
	Magnetite
	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
30	Vitric grain 1 15
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
Foraminifera	
Planktonic foraminifera	
Benthic foraminifera	
Nannofossils	
Coccoliths	
Discoasters	
Pteropods	
Siliceous	
	Radiolarians
	Spumellaria
	Nassellaria 20
46 38	Diatoms 15 30
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
25	Sponge spicules 10 40
	Dinoflagellates
Others	
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	12	H	3	137	137

SM

Sediment/Rock Name	Diatom ooze	Observer	H.W.A.
--------------------	-------------	----------	--------

B 66 S 25 V 9

Percent Texture		
Sand	Silt	Clay

Comments: Main lith - grey.

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
6	Quartz 2
<1	Feldspar 0
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
3	Rock fragments 1
Accessory/trace minerals	
	Micas
	Biotite
	Muscovite
16	Clay Minerals 5
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
	Pyrite
	Magnetite
	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
906	Vitric grain 3
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
Foraminifera	
<1	Planktonic foraminifera
	Benthic foraminifera
Nannofossils	
	Coccoliths
	Discoasters
	Pteropods
Siliceous	
Radiolarians	
	Spumellaria
	Nassellaria
	Diatoms 75
47	Centric 15
1663	Pennate 5
	Chaetoceros Resting Spores
	Silicoflagellates
366	Sponge spicules 1
	Dinoflagellates
Others	
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340 Site A Hole 12 Core 1 Section _____ Top Depth _____ Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist	Induration	Major Lithology	Minor Lithology
10 20 30 40 50 60 70 80 90 100 110 120 130 140	21hXS				21hXS	12	Sandy 110-120	
	21hXS							

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 Site A Hole 12 Core 2 Section _____ Top Depth _____ Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
Visual Core description								
10								
20								
30							28-34 biot. lam., tilted	
40							50-56 " " ?	
50								
60								
70							85-95 grad	
80								
90							106-125 biot. lam., horizontal	
100								
110								
120							126 sharp.	
130								
140								

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 12 3 _____
Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist. Induration	Major Lithology	Minor Lithology
10								
20		9/12/15						
30							41-50 intermixed ash	
40								
50								
60							87-92 grad	
70								
80								
90								
100		6/11/15						
110								
120								
130								
140								

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 12 4
Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
10		SY411							
20									
30									
40									
50									
60									
70									
80									
85								80-90 grad	
90									
95									
100		SY412							
110									
120									
130									
140									

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 12 S
Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
10									
20								20-25 biot. lam.	
30									
40								25-30 grad.	
50									
60									
70								60-65 grad.	
80									
90								76-77 fine ash layers	
100								81-82 coarse " "	
110									
120									
130									
140									

Observer: _____ Date: _____

Expedition 323
Bering Sea


1340 A 12 6
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
	5/16/20 5/16/20						2-4 intermixed dark ash	
							12-17 biot. com.	

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 12 7
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	7-10 grad 37-38 ash layer, fining up.							

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 12 CC
Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Visual Core description
10		MPS						
20	PAL							
30								
40								
50								
60								
70								
80								
90								
100								
110								
120								
130								
140								

Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	13	H	3	88	140

SM

Sediment/Rock Name	Diatom clayey silt	Observer	Hiro A
--------------------	--------------------	----------	--------

B 40 S. 52 V 8

Percent Texture		
Sand	Silt	Clay
13	43	44

Comments: Main Lithology

25

3

10

10

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
4	Quartz /
4	Feldspar /
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
Accessory/trace minerals	
	Micas
4	Biotite /
	Muscovite
40	Clay Minerals & 10
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
	Pyrite
	Magnetite
	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
8	Vitric grain 2
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
Foraminifera	
	Planktonic foraminifera
	Benthic foraminifera
Nannofossils	
	Coccoliths
	Discoasters
	Pteropods
Siliceous	
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
28	Centric & 7
8	Pennate 2
	Chaetoceros Resting Spores
	Silicoflagellates
4	Sponge spicules /
	Dinoflagellates
Others	
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	13	H	5	38	140

SM

Sediment/Rock Name: Diatom ooze

Observer: Hiro. A

B 82% S 10%

Percent Texture		
Sand	Silt	Clay

Comments: Main lithology - green V 2%

31

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
10%	3 Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
2%	Vitric grain 0.5
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
12%	0.5 Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
65%	Centric 20
6%	Pennate 2
	Chaetoceros Resting Spores
6%	Silicoflagellates 2
10%	Sponge spicules 3
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

SM

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	13	H	6	140	140

Sediment/Rock Name	Diatom clayey silt	Observer	Hiro A
--------------------	--------------------	----------	--------

B 52 S 40 V 8

Percent Texture		
Sand	Silt	Clay
27	15 27	46

Comments: Main lithology - silt

~~3~~ 3 5
 25 " "

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
20	Quartz 5
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
20	Clay Minerals 5
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
8	Vitric grain 2
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
28	Centric 7 ¹⁵
12	Pennate 3 ²¹
	Chaetoceros Resting Spores
	Silicoflagellates
12	Sponge spicules 3 ²¹
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340 A 13 1
Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
10		CY41A							
20									
30									
40									
50									
60									
70									
80									
90									
100									
110									
120									
130									
140									
Visual Core description									

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 13 2
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	Color						Visual Core description	
10								
20								
30								
40								
50							60-70 grad.	
60								
70								
80								
90								
100								
110								
120								
130								
140								

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 Site A Hole 13 Core 3 Section _____ Top Depth _____ Scale _____

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology	Visual Core description
	<p>5Y 12-5Y 5/13</p> <p>12-16 5Y 1/1</p>								<p>12-16 biot. lam.</p>

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 Site A Hole 13 Core 4 Section _____ Top Depth _____ Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	51-53							
							51-53 shell frags.	
							120-124 biot. lam.	
							123-124 slump	
	51-53							

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 13 5
 Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
	SYM12						10-20 grad.	
	SY513						50-53 grad.	
	SY411						84-91 grad.	
	SY1512						125-127 grad.	
	SY311	Coarse Oolite						

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 13 6
 Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	5/3/1	coarse, sandy						
10							dark	
20							0-45 ^v ash patches	
30								
40								
50							45-55 grad	
60								
70		2/1/5					45-115 brown + dark ash patches	
80								
90								
100								
110							125-135 grad	
120								
130								
140	5/3/1	coarse						

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 13 7
Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
10		S1410							
20									
30									
40									
50									
60									
70									
80									
90									
100									
110									
120									
130									
140									
Visual Core description									

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 13 CC
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140							

Observer: _____ Date: _____

Expedition 323
Bering Sea

13010 A 14 1
Site Hole Core Section Top Depth Scale

Depth (cm)	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
								Visual Core description	
10		VIK1A							
20		VIK1A						10-15 grad	
30		VIK1A						63-87 lam.	
40		VIK1A							
50		VIK1A							
60		VIK1A						87 sharp	
70		VIK1A						87-150 ash patches	
80		VIK1A							
90		VIK1A							
100		VIK1A							
110		VIK1A							
120		VIK1A							
130		VIK1A							
140		VIK1A							

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 14 2
 Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
	SY412 SY413 SY414 SY415 SY412						5-29 grayish, greenish and carb. filled burrows up to 3cm ϕ	
							33-44 slumped, biot. lam., sharp conts.	
							65-70 grad.	
							88-94 slumped SY412	
							120-125 grad.	

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 Site A Hole 14 Core 3 Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							<p>Visual Core description</p> <p>0-122 dark ash patches</p> <p>87-96^{dark} ash patches</p> <p>122-123 sharp } tilted 128-130 sharp }</p> <p>131-136 dark ash, fining up., biot., sharp base</p>	
	5/4/11							
	2/1/12							

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 14 4
 Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology	Visual Core description
10		5Y 5/2								10 sharp
20										
30										
40		5Y 4/5								
50										
60										
70										
80										78-122 slumped, brownish fine ash layers
90										
100										
110										
120										
130										133 sharp
140		5Y 1/2								147 grad

5Y 5/3

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 14 5
 Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
10	5/3						0-8 biot. lam.	
20	5/3						8-9 grad.	
30	5/3							
40	5/3							
50	5/3						75 grad	
60	5/3							
70	5/3							
80	5/3							
90	5/3							
100	5/3							
110	5/3							
120	5/3						120-125 grad	
130	5/3							
140	5/3						137-140 grad	

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 Site A Hole 14 Core 6 Section _____ Top Depth _____ Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
10		SY 5/13							
20		SY 5/13						10-15 grad	
30		SY 5/13 + SY 4/17		mod.				15-150 biot. com.	
40									
50									
60									
70									
80									
90									
100									
110									
120									
130									
140									

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 14 7
 Site Hole Core Section Top Depth Scale

Major Lithology	Minor Lithology	Visual Core description	Induration	Drilling Dist.	Structures/Accessories	Bioturbation	Lithology	Color	Graphic Representation

10		0-28 biot. brown.
20		26-28 grad.
30		
40		
50		40-50 grad.
60		
70		
80		
90		
100		
110		
120		
130		
140		

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 14 CC
Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
10		SF							
20		4/3							
30		PAL							
40									
50									
60									
70									
80									
90									
100									
110									
120									
130									
140									

Observer: _____ Date: _____

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
	1340	A	14		2	91	91

Sediment/Rock Name	Diatom ooze	Observer	Hino
--------------------	-------------	----------	------

B 90 S 10 V 0

Comments: Main litho for sec 6 + patch @ sec 2
 yellow

Percent Texture		
Sand	Silt	Clay

33

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
10	Clay Minerals 3
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
Other 21	7 Diatoms
45	15 Centric
9	3 Pennate
	Chaetoceros Resting Spores
9	2 Silicoflagellates
6	2 Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
	1340	A	14	4	4	37	37

Sediment/Rock Name	Diatom-rich silt	Observer	
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B 18 S. P2 V. 0

Comments: Main Litho Sec. y

Percent Texture		
Sand	Silt	Clay
4	83	13

29.5

1 7 20 5

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
55	Quartz 15
1	Feldspar 2
65	K-feldspar (Orthoclase, Microcline...)
62 7	Plagioclase 2
62 7	Rock fragments 2
Accessory/trace minerals	
	Micas
	Biotite
	Muscovite
4	Clay Minerals 1
	Chlorite
	Glaucanite
	Chert
2	Zircon 0.5
	Ferromagnesium minerals
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
7	Pyrite 2
	Magnetite
	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
Foraminifera	
Planktonic foraminifera	
Benthic foraminifera	
Nannofossils	
Coccoliths	
Discoasters	
Pteropods	
Siliceous	
Radiolarians	
Spumellaria	
Nassellaria	
Diatoms	
11	Centric 3
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
7	Sponge spicules 2
	Dinoflagellates
Others	
Pollen	
Organic debris	
Plant debris	
Ebridians	
Echinoderm	
Fish remains (teeth, bones, scales)	
Bryozoans	
Bivalves	
Others	

Expedition 323
Bering Sea

U1340 A 15 1 0
Site Hole Core Section Top Depth Scale

Diatom ooze
Major Lithology Minor Lithology

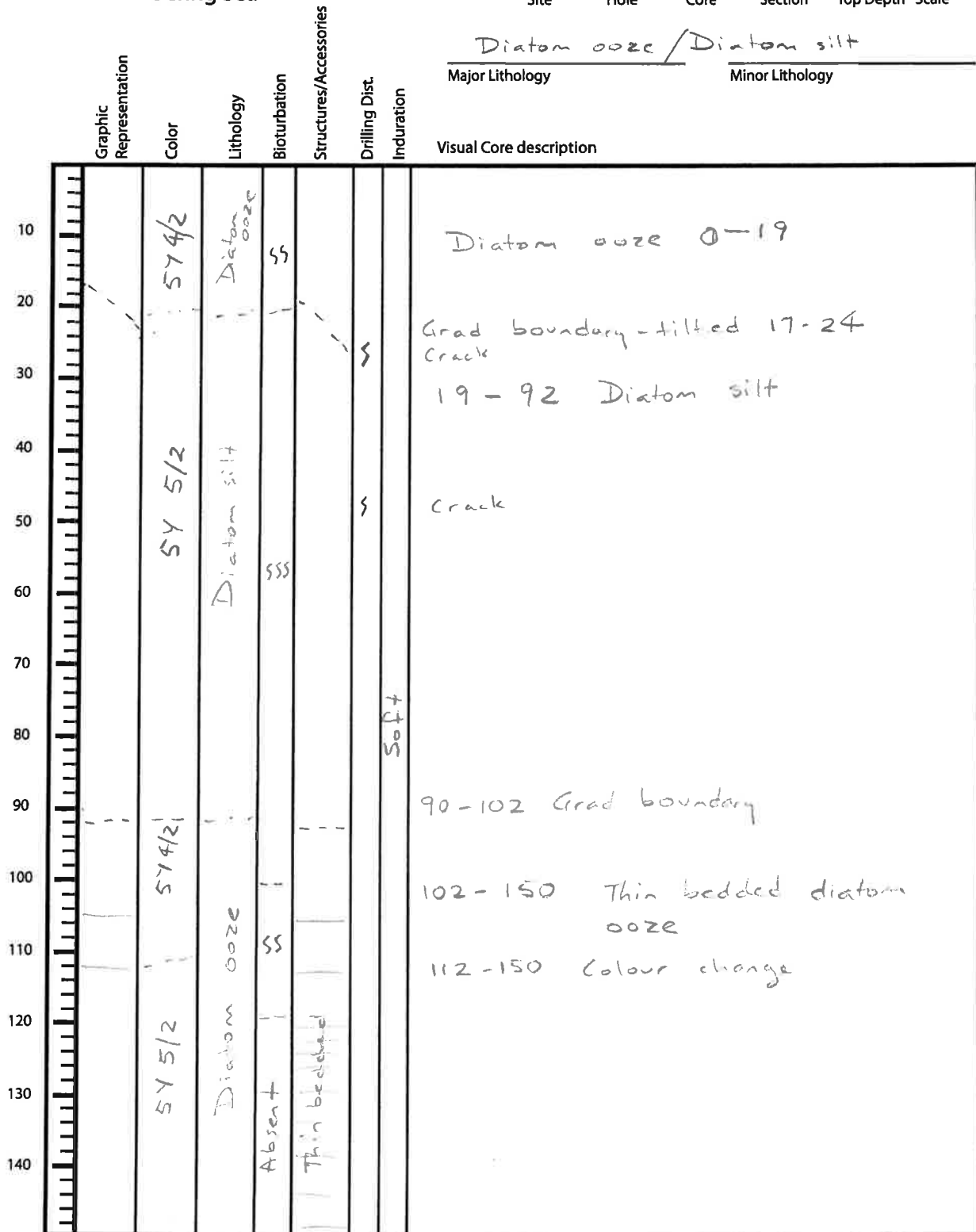
Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Visual Core description
	SY4/2						0-10 Moderate drilling d.
							Diatom ooze 0-39
	SY4/2	Diatom ooze					39-45 slight colour change - grad boundary (both SY4/2) 39-45 Diatom ooze
						soft	Diatom ooze 45-150
							108 Crack
			S	V			144-150 Moderate 145 small ash pad

Observer: KD Date: _____

Expedition 323
Bering Sea

U1340 A 15 2 0
Site Hole Core Section Top Depth Scale

Diatom ooze / Diatom silt
Major Lithology Minor Lithology



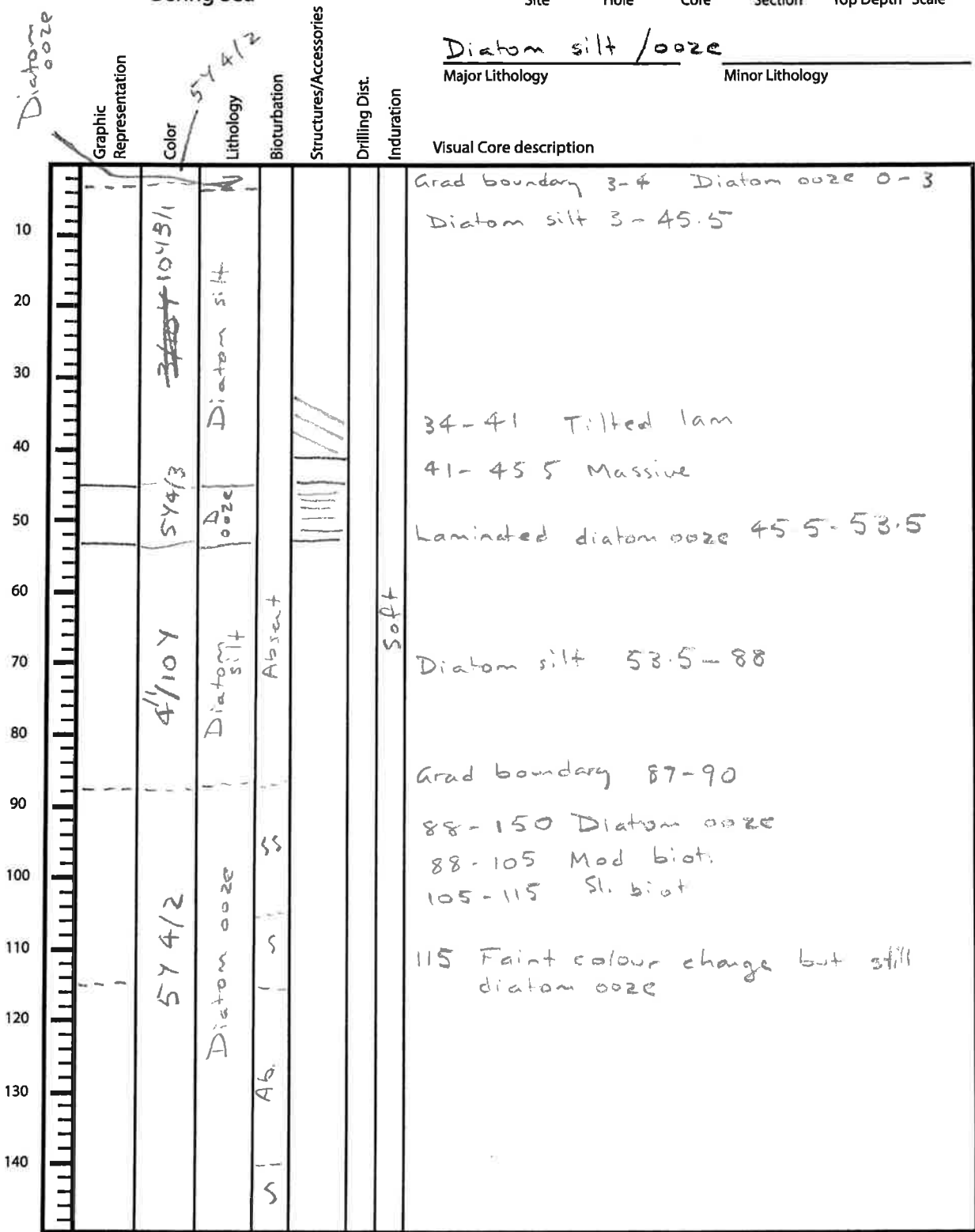
Observer: KD Date: _____

Expedition 323
Bering Sea

01340 A 15 3 0
Site Hole Core Section Top Depth Scale

Diatom silt / ooze
Major Lithology Minor Lithology

Diatom ooze



Observer: _____ Date: _____

Expedition 323
Bering Sea

01340 A 15 4 0
Site Hole Core Section Top Depth Scale

Diatom ooze/silt

Major Lithology

Minor Lithology

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Visual Core description
	5Y 4/3	Diatom ooze					25
	5Y 4/2 + 5Y 5/3	Diatom ooze					25 - 79 Thin bedded
		Diatom ooze	SSS				
						Soft	79
							87
	Gley 4/10Y	Diatom silt					

Observer: _____ Date: _____

Expedition 323
Bering Sea

U 1340 A 15 5
Site Hole Core Section Top Depth Scale

Diatom silt Major Lithology
D. ooze Minor Lithology

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Visual Core description
	3/10Y	Diatom silt					Faint lamination 8-17
							30 Grad boundary 28-31
							Faint lamination 30-75 + mod bioturbation
							80 Grad boundary 79-82
		Diatom ooze					110 Grad boundary 108-115
							148 Grad boundary

Dsilt

Diatom ooze

Diatom ooze

Observer: _____ Date: _____

Expedition 323
Bering Sea

U1340 A 15 6
Site Hole Core Section Top Depth Scale

Diatom ooze / silt
Major Lithology Minor Lithology

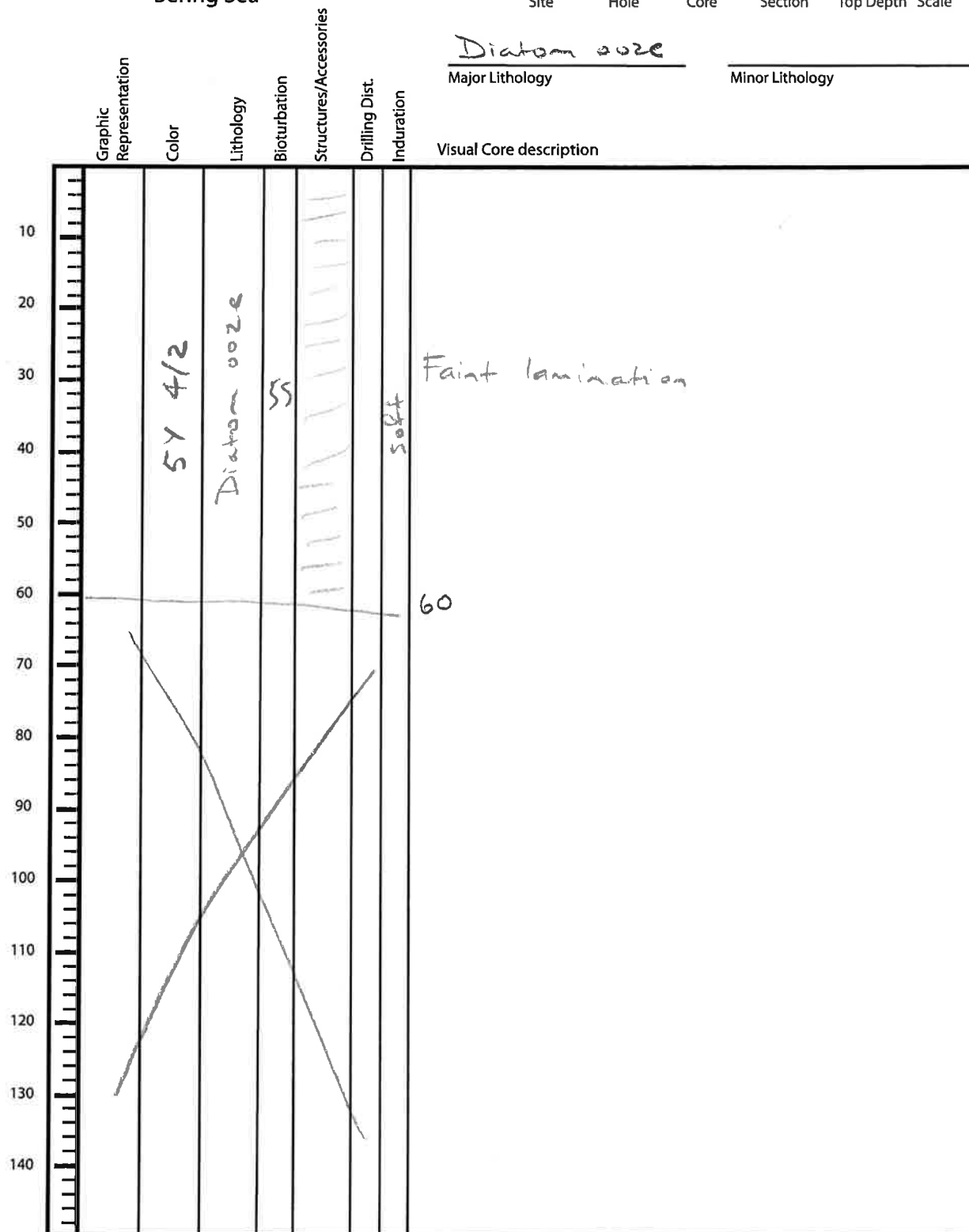
Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Visual Core description
	3/10Y	Diatom silt					18 Ashy areas 23
	5Y 3/2	Diatom ooze					26 Grad boundary 24-33
	3/10Y + 5Y 4/2	D.silt / Di. ooze					63 Sharp tilted boundary 66-68 Sharp tilted b.
	5Y 4/2	Diatom ooze					82-86 Sharp tilted b.
							118 Faint lamination
							136

Observer: _____ Date: _____

Expedition 323
Bering Sea

V1340 A 15 7
Site Hole Core Section Top Depth Scale

Diatom ooze
Major Lithology Minor Lithology



Observer: _____ Date: _____

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
	1340	A	154		3	10	16

Sediment/Rock Name	Diatom ooze	Observer	
--------------------	-------------	----------	--

S 79 S 2.1 V 0

Percent Texture		
Sand	Silt	Clay

Comments:

Main Litho sec. 3 90-150 sec. 4 78 yellowish. ~~green~~ greenish yellow

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
3 / 0.5	Quartz
3 / 0.5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
3	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
13	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
3	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
54	Centric
19	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
6	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
			1514		4	100	100

Sediment/Rock Name	Diatom-rich silt	Observer	
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B39 S 51 V. 10

Percent Texture		
Sand	Silt	Clay
20	77	3

Comments: Main litho Sec. 4. bottom ~ Sec. 5 top gray

52 10 30 40 2

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
48	Quartz 25
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
21	Rock fragments /
Accessory/trace minerals	
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucanite
	Chert
	Zircon
2	Ferromagnesium minerals 5 /
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
	Pyrite
	Magnetite
	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
Crystal grain	
10	Vitric grain 5
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
Foraminifera	
Planktonic foraminifera	
Benthic foraminifera	
Nannofossils	
Coccoliths	
Discoasters	
Pteropods	
Siliceous	
Radiolarians	
Spumellaria	
Nassellaria	
29	Diatoms 15
	Centric
	Pennate
Chaetoceros Resting Spores	
Silicoflagellates	
10	Sponge spicules 5
Dinoflagellates	
Others	
Pollen	
Organic debris	
Plant debris	
Ebridians	
Echinoderm	
Fish remains (teeth, bones, scales)	
Bryozoans	
Bivalves	
Others	

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
			1514		5#	50	50

Sediment/Rock Name: Diatom ooze

Observer:

B 89% S 11% ~~to~~ V 0%

Percent Texture		
Sand	Silt	Clay

Comments: Litho Sec. 5 30-50 yellowish green
 Sec. 6 85-90 ~~to~~ cc.

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
9%	Quartz 2
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
2%	Dolomite 0.5
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
67%	Centric 15
22%	Pennate 5
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
			154		5	130	150

Sediment/Rock Name	Diatom ooze	Observer	Hin. A
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B. 66 § 27 V 7

Percent Texture		
Sand	Silt	Clay

Comments: Litho. sec. 5 so - sec. 6 20 (darker graish green) olive (0.5 x 0.5)

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
15	Quartz 7
1.6	Feldspar 0.5
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
Accessory/trace minerals	
	Micas
	Biotite
	Muscovite
11.2	Clay Minerals 5
	Chlorite
	Glaucinite
	Chert
	Zircon
	Ferromagnesium minerals
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
	Pyrite
	Magnetite
	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
Crystal grain	
7	Vitric grain 2 3
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
Siliceous	
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms 20
44	Centric 20
11	Pennate 5
	Chaetoceros Resting Spores
	Silicoflagellates
11	Sponge spicules 5
	Dinoflagellates
Others	
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
			15H		6	64	64

Sediment/Rock Name	Diatom-rich silt	Observer	H.W.A.
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Percent Texture		
Sand	Silt	Clay

B 30 P 5 X V 16

Comments:

Dark
Sandy

43.5

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
34	Quartz 15
5	Feldspar 2
38	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
10	Rock fragments 0.5
Accessory/trace minerals	
Micas	
	Biotite
5	Muscovite
11	Clay Minerals 5
	Chlorite
	Glauconite
	Chert
	Zircon
3	Ferromagnesium minerals 1
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
	Pyrite
	Magnetite
	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
16	Vitric grain 7
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
Foraminifera	
	Planktonic foraminifera
	Benthic foraminifera
Nannofossils	
	Coccoliths
	Discoasters
	Pteropods
Siliceous	
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
23	Centric 10
7	Pennate 3
	Chaetoceros Resting Spores
2	Silicoflagellates
<1	Sponge spicules
	Dinoflagellates
Others	
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

323 41340 16H 1
 Site Hole Core Section Top Depth Scale

Diatom ooze
 Major Lithology

Minor Lithology

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Visual Core description
	5Y 4/2		none visible	none	none	soft	Massive olive gray diatom ooze

Observer: MS COOK

Date: 24 July 09

Expedition 323
Bering Sea

323 U1340 16H 2
Site Hole Core Section Top Depth Scale

Diatom 0030
Major Lithology Minor Lithology

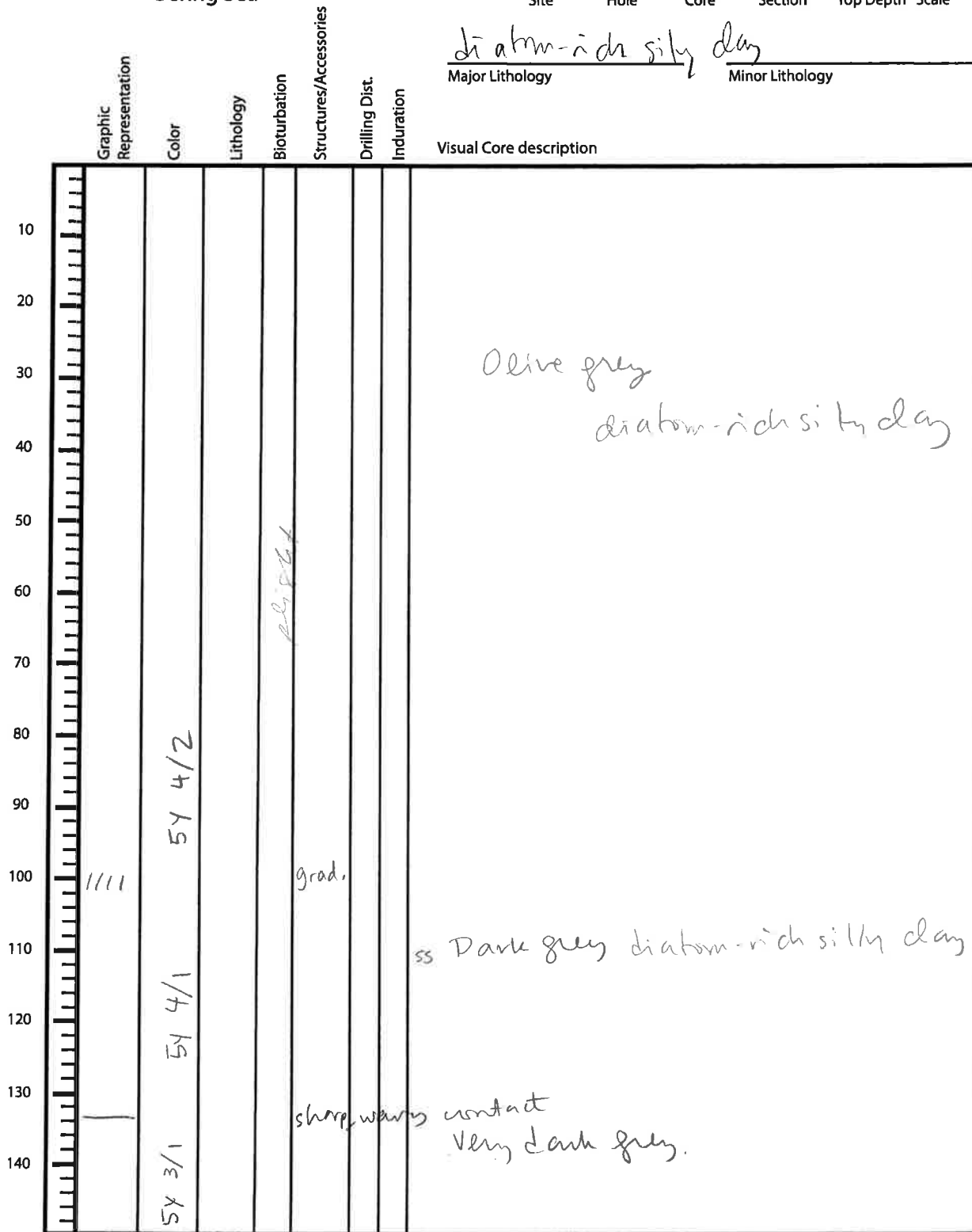
Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Visual Core description
	5Y 4/2		slight	none	none	soft	Slightly bioturbated

Observer: MS Cook Date: 24 July 09

Expedition 323
Bering Sea

323 41340 16H 3
Site Hole Core Section Top Depth Scale

diatom-rich silty clay
Major Lithology Minor Lithology

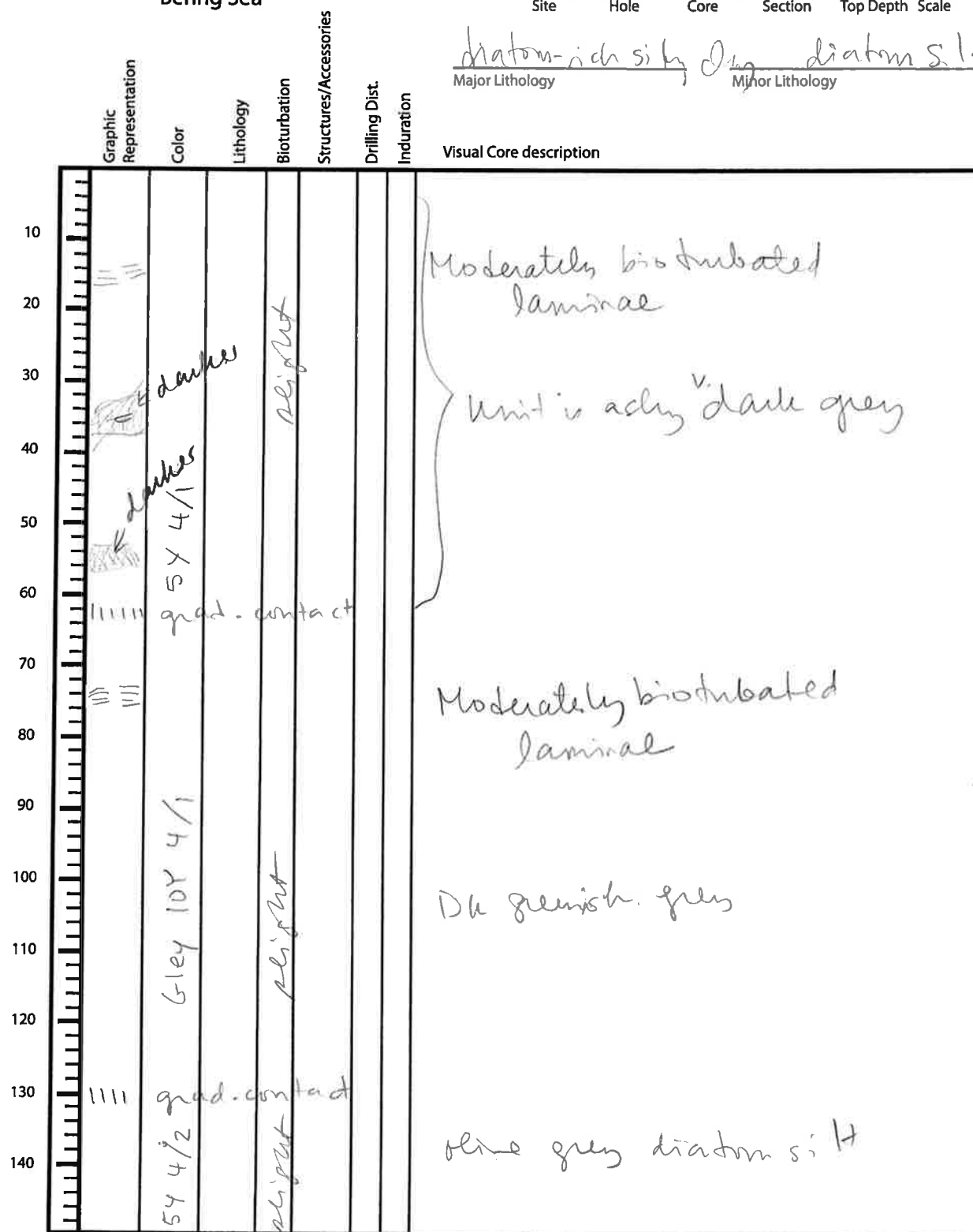


Observer: MS Cook Date: 24 July 09

Expedition 323
Bering Sea

323 11340 16H 4
Site Hole Core Section Top Depth Scale

diatom-rich silty clay diatom silt
Major Lithology Minor Lithology



Observer: MS Cook

Date: 24 July 09

Expedition 323
Bering Sea

323 41340 16P 5
Site Hole Core Section Top Depth Scale

Diatom silt

Major Lithology

Minor Lithology

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Visual Core description
	SY4/2						<p>olive grey with faint areas richer in ash (dk colored) or pale-colored biogenic</p> <p>SS</p>
			slight				

Observer: MSCOOK

Date: 24 July 09

Expedition 323
Bering Sea

323 U1340 18H 6
Site Hole Core Section Top Depth Scale

Diatom silt
Major Lithology Minor Lithology

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Visual Core description
	5Y 4/2						Olive grey. Same unit as previous sec.
	5Y 3/1						gradual contact dk grey

Observer: _____ Date: _____

Expedition 323
Bering Sea

323 41340 16H 7
Site Hole Core Section Top Depth Scale

Diatom silt

Major Lithology

Minor Lithology

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Visual Core description
	54 3/1		slight				dk grey. Featureless.

Observer: MS Cook

Date: 26 July 09

Expedition 323
Bering Sea

323 U1340 16H CC
 Site Hole Core Section Top Depth Scale

Diatom silt

Major Lithology

Minor Lithology

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Visual Core description
	5Y 3/2		Allogst				<p>dk olive grey. Same unit as above</p>

Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
			16		1	80	.

Sediment/Rock Name	Diatom Ooze	Observer	HiroA
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B. 90 S. 7 V 3

Percent Texture		
Sand	Silt	Clay

Comments: Lith. ~~Green~~ olive

41

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
2	Quartz 1
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
Accessory/trace minerals	
	Micas
	Biotite
	Muscovite
5	Clay Minerals 2
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
	Pyrite
	Magnetite
	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
3	Vitric grain 1
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
Siliceous	
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
61	Centric 25 25
24	Pennate 10 5
	Chaetoceros Resting Spores
5	Silicoflagellates 2
	Sponge spicules 1
	Dinoflagellates
Others	
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
			16		35	14	55

Sediment/Rock Name	Diatom silt	Observer	
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B 59. S 40⁴¹ V

Percent Texture		
Sand	Silt	Clay
5	90	3

Comments: Main Lith Dark Gray

7

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
18	Framework minerals
17	Quartz 5
	Feldspar
3	K-feldspar (Orthoclase, Microcline...) /
	Plagioclase
3	Rock fragments /
Accessory/trace minerals	
	Micas
	Biotite
7	Muscovite
	Clay Minerals 2
	Chlorite
	Glaucanite
	Chert
10	Zircon
	Ferromagnesium minerals 3
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
	Pyrite
	Magnetite
	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
Foraminifera	
Planktonic foraminifera	
Benthic foraminifera	
Nannofossils	
Coccoliths	
Discoasters	
Pteropods	
Siliceous	
Radiolarians	
Spumellaria	
Nassellaria	
Diatoms	
33	Centric 7 10
23	Pennate 7
Chaetoceros Resting Spores	
Silicoflagellates	
3	Sponge spicules /
Dinoflagellates	
Others	
Pollen	
Organic debris	
Plant debris	
Ebridians	
Echinoderm	
Fish remains (teeth, bones, scales)	
Bryozoans	
Bivalves	
Others	

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
			16		3	55	110

Sediment/Rock Name	diatom-rich silty clay	Observer	
--------------------	------------------------	----------	--

21 79
B to S to V.O

Percent Texture		
Sand	Silt	Clay
30	50	20

15 25 10
20 10

Comments:

Darker Darker Gray

45
3

48
5 15 8

72
3 2

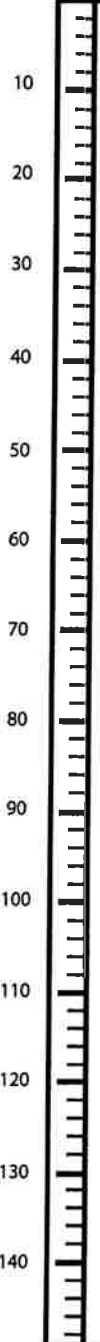
58
8 5

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
52 10	Quartz 15
34	Feldspar 1
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
14	Rock fragments 1
Accessory/trace minerals	
	Micas
	Biotite
	Muscovite
21	Clay Minerals 3 7
	Chlorite
	Glaucanite
	Chert
	Zircon
7 6	Ferromagnesium minerals 2
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
	Pyrite
	Magnetite
	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
Foraminifera	
Planktonic foraminifera	
Benthic foraminifera	
Nannofossils	
Coccoliths	
Discoasters	
Pteropods	
Siliceous	
Radiolarians	
Spumellaria	
Nassellaria	
10 3 21	Diatoms 7 25
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
< 1	Sponge spicules
	Dinoflagellates
Others	
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

323 11340 17H 1
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	5Y 4/2		none visible	none	none	soft		
							diatom ooze	

Observer: MS Cook Date: 24 July 09

Expedition 323
Bering Sea

323 U1340A 17H 2
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Visual Core description
	5Y 4/2		none visible	none	none	soft	

Observer: MS Cook Date: 24 July 09

Expedition 323
Bering Sea

323 U1340A 17H 3
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	5Y 4/2 63 5Y 3/1 120 5Y 4/2		none visible none moderate					

Observer: MS Cook

Date: 24 July 09

Expedition 323
Bering Sea

323 U1340A 17H4
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
54 4/3 olive			moderate					
54 4/3 dk grey			slight			soft		
54 4/3 olive			moderate					
54 4/3 grey			moderate					

Observer: MS Cook Date: 24 July 09

Expedition 323
Bering Sea

323 U1340A 17M 5
 Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
10	54 4/2			slight					
20									
30									
40									
50									
60									
70									
80									
90									
100									
110									
120									
130									
140									
						none soft			
				0					few gravel

Observer: MS Cook

Date: 24 July 09

Expedition 323
Bering Sea

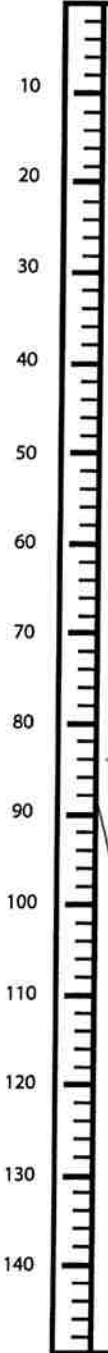
323 U1340A-17H-6
 Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
10								
20								
30								
40								
50	54 4/2							
60								
70								
80								
90								
100								
110								diatom-bearing coarse ash
120	54 white 8/1							
130								
140								

Observer: MS Cook Date: 24 July 09

Expedition 323
Bering Sea

323-U1339A-17H-7
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
				○				
Visual Core description								
few gravel								

Observer: MS Cook Date: 27 July 09

Expedition 323
Bering Sea

323-U1340A-17H-CC
 Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology	Visual Core description
			none visible	none	moderately	soft			

Observer: MS Cook Date: 24 July 09

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
	1340		174		1	100	100

Sediment/Rock Name	Diatom Qazp	Observer	H.A
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Percent Texture		
Sand	Silt	Clay

Comments: Lith. Olive B ~~94.3~~ S 5 Ø VO 95

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
1	Quartz 0.5
	Feldspar
2	K-feldspar (Orthoclase, Microcline...) /
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
2	Clay Minerals /
	Chlorite
	Glaucanite
	Chert
	Zircon
	Ferromagnesium minerals
	Aauthigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
75 74	Centric 30
18 19	Pennate 7
	Chaetoceros Resting Spores
	Silicoflagellates
2	Sponge spicules /
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
			174		3	73	73

Sediment/Rock Name	Diatom-rich silty clayey silt.	Observer	H. A.
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B 29 S 6 ~~5~~ V 7
 4

Percent Texture		
Sand	Silt	Clay
7	72	21

Comments: Main Litho Dark Greenish Gray (± More Silty)

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
5 3	Quartz 15
4	Feldspar 1
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
Accessory/trace minerals	
	Micas
	Biotite
	Muscovite
7	Clay Minerals 2
	Chlorite
	Glaucanite
	Chert
	Zircon
	Ferromagnesium minerals
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
	Pyrite
	Magnetite
	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
7	Vitric grain 1 2
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
Foraminifera	
	Planktonic foraminifera
	Benthic foraminifera
Nannofossils	
	Coccoliths
	Discoasters
	Pteropods
Siliceous	
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
1 8	Centric 5
11	Pennate 3
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
Others	
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
			174		3	98	98

Sediment/Rock Name	Diatom ooze	Observer	ALIDA
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B72 S.28. V0

Percent Texture		
Sand	Silt	Clay

Comments:

White layer in the laminae

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
12 18	Quartz 3
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
4 6	Plagioclase 1
	Rock fragments
Accessory/trace minerals	
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucanite
	Chert
	Zircon
	Ferromagnesium minerals
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
12 18	Pyrite 3
	Magnetite
	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
Foraminifera	
4 6	Planktonic foraminifera /
7 10	Benthic foraminifera
Nannofossils	
	Coccoliths
	Discoasters
	Pteropods
Siliceous	
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
27 30	Centric 7
39 41	Pennate 70
	Chaetoceros Resting Spores
2	Silicoflagellates 0.5
	Sponge spicules
	Dinoflagellates
Others	
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
			17H		4	34	34

Sediment/Rock Name	Diatom ooze	Observer	H. A.
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B 8T S.15 V 0

Percent Texture		
Sand	Silt	Clay

Comments:

Olive jrg

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
5	Quartz 3
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
Accessory/trace minerals	
	Micas
	Biotite
	Muscovite
54	Clay Minerals 3
76	Chlorite
	Glauconite
	Chert
	Zircon
2	Ferromagnesium minerals 1
31	
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
4	Pyrite 2
	Magnetite
	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
Siliceous	
	Radiolarians
	Spumellaria
	Nassellaria
87	Diatoms
45	Centric 25
36	Pennate 20
	Chaetoceros Resting Spores
83	Silicoflagellates
2	Sponge spicules 1
	Dinoflagellates
Others	
	Pollen
	Organic debris
	Plant debris
2	Ebridians 1
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
	1340		17H		6	120	120

Sediment/Rock Name	Diat Diatom-bearing Fine ash coarse	Observer	
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Percent Texture		
Sand	Silt	Clay

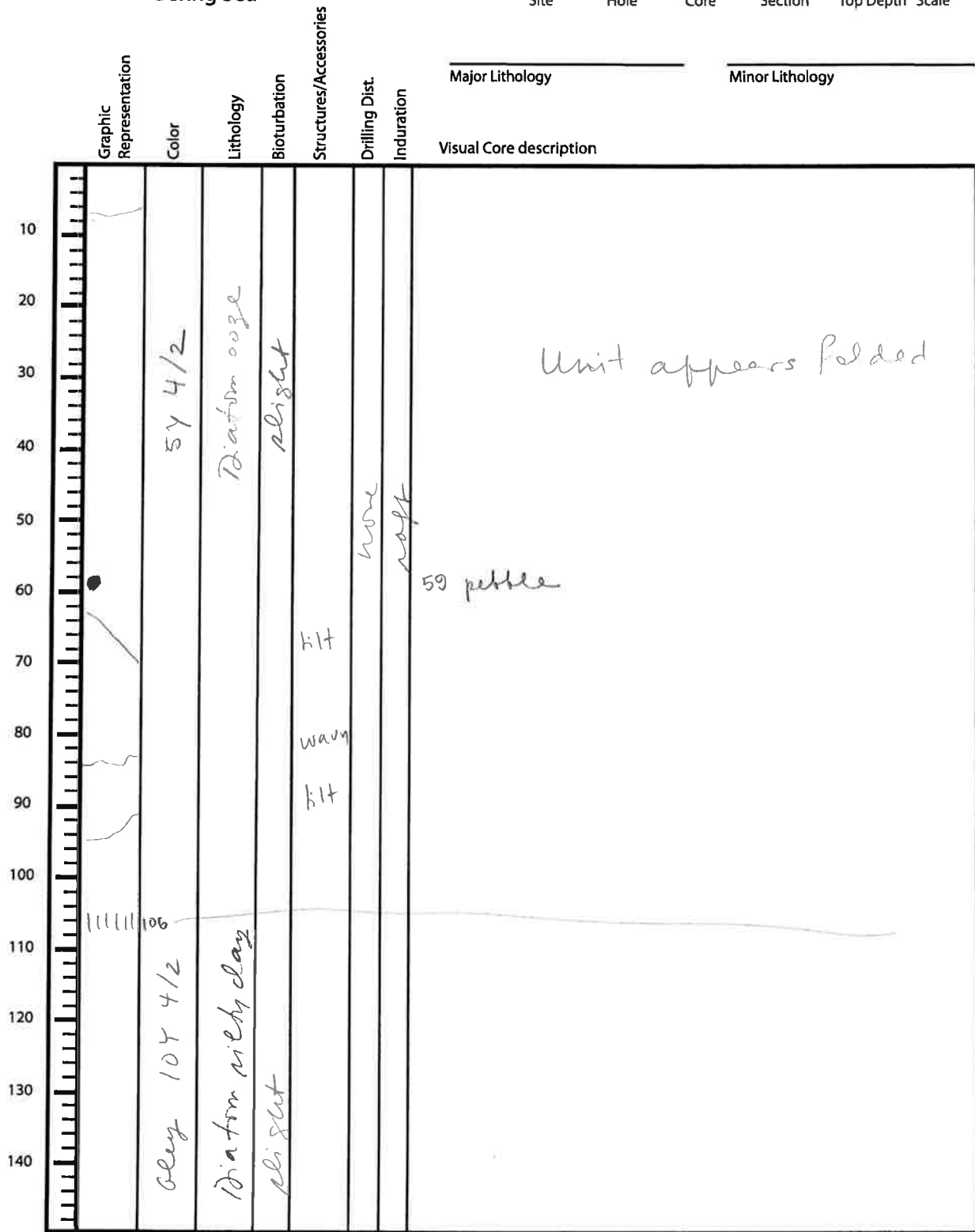
Comments: White spot

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
34	Quartz /
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
3	Rock fragments /
Accessory/trace minerals	
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
	Pyrite
	Magnetite
	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
86	Vitric grain 25
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
Siliceous	
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
7	Centric ≠ 2
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
Others	
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

323-U1340A-18H-1-A
 Site Hole Core Section Top Depth Scale



Observer: MS Cook

Date: 24 Jun 09

Expedition 323
Bering Sea

323-U1340A-18H-2 -A
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
10		diatom rich clay						
20								
30							Ash (grey) fine	
40	41						Ash (grey) coarse, fining upward	
48								
50	48							
55	55							
60								
70		diatom ooze						
80								
90								
100								
110	105							
120		diatom rich clay						
130								
140								

Observer: MS Cook Date: 24 July 09

Expedition 323
Bering Sea

323-U1339A-18H-3-A
 Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology	Visual Core description
10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140		<p>10-21: clay 10 1/2</p> <p>21-54: clay 4 1/2</p> <p>54-59: clay 4 1/2</p> <p>59-84: clay 4 1/2</p> <p>84-100: ash layers, grey + light grey, fine</p> <p>100-118: sharp 100</p> <p>118-124: sharp 118</p> <p>124-140: clay 4 1/2</p>	<p>10-21: diatom pillared</p> <p>21-54: diatom ooze</p> <p>54-59: diatom silt clay</p> <p>59-84: diatom silt clay</p> <p>84-100: diatom silt clay</p> <p>100-118: diatom silt clay</p> <p>118-124: diatom silt clay</p> <p>124-140: diatom ooze</p>						<p>coarse grey ash, fining upward</p>

Observer: M. S. Cook Date: 24 July 07

Expedition 323
Bering Sea

323-U1340A-18H-4A-CCA
 Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
10								
20								
30								
40								
50								
60								
70								
80								
90								
100								
110								
120								
130								
140								

54 4/2

diatom ooze

slight

none

none

soft

Observer: MSCOOK Date: 24 July 09

Expedition 323
Bering Sea

323-U1340A-18H-7-A, CC-A
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	6Y4/2	diatom ooze	not visible					

Visual Core description

Observer: Ms Cook Date: 24 July 09

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
			18		3	119	119

Sediment/Rock Name: fine ash

Observer: Hiro

B 3 S 16 V 81

Percent Texture		
Sand	Silt	Clay

Comments: white ash

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
9	Quartz 2
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
5	Rock fragments 1
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucanite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
81	Vitric grain 15
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
27	Centric 0.5
	Pennate
	<i>Chaetoceros</i> Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
			18		5	120	120

Sediment/Rock Name	Diatom silt	Observer	Hiro
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B 44 S 56 V D

Percent Texture		
Sand	Silt	Clay
10	70	20 10
	15	10

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
53	Quartz 15
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
2	Rock fragments 0.5
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
12	Clay Minerals 0.5
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
2	Radiolarians 0.5
	Spumellaria
	Nassellaria
	Diatoms
35	Centric 10
7	Pennate 2
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
			18		5	1476	1476

Sediment/Rock Name	Diatom 99 3e	Observer	Air A
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B 76 S 11 V 13

Percent Texture		
Sand	Silt	Clay

Comments: white patch in olive.

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
11.25	Clay Minerals /
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
13	Vitric grain /
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
63	Centric 5
13	Pennate /
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Bound Color
 Peb 117M
 MO: 071-5702
 D.D.

Expedition 323
Bering Sea

V1340 Site
 A Hole
 19 Core
 A11 Section
 Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
		I					86-120 Mot S11 126-145 - Mot REV.	
1								
2	10/1 3/1						11-13 Mot 30-31 Chun 74-76 Mot	
3	5/1 3/2	II					15-17 - light lay ← ? 35.5 - gran 79-80.5 tr pbb, round, no gran 88, 92 - Ash Mot. 133 - grey ash 8-29 - Chun / Hi Biot.	D ooze D ooze
4	10/1 3/1	III						
5	5/1 3/3	IV					10-21 Mot D ooze - same	I v. dark greenish grey Diatom ooze II dark olive grey N. bear d. ooze III v. dark greenish grey diatom ooze IV olive Diatom clay lt. olive grey? olive grey V dk greenish grey d. ooze
6	5/1 4/1	V						
7	5/1 4/2	IVb					73-89 Mot. D clay D ooze	
CC	5/1 4/2	II					4 to lt. mot.	1 B.S. = same!

Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	1340	A	19	H	6.	37	

Sediment/Rock Name	diatom ooze DIATOM CLAY	Observer	AKIWA
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light green olive... major lithology

Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
4*	✓ Quartz
62*	✓ Feldspar 2
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
Accessory/trace minerals	
4	✓ Micas 2
	Biotite
	Muscovite
20	>30% ✓ Clay Minerals #20
	Chlorite
	Glaucanite
	Chert
	Zircon
1	2% ✓ Ferromagnesium minerals 0.5
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
1	2% ✓ Pyrite #5.25
	Magnetite
	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
Crystal grain	
2	3% ✓ Vitric grain 1
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
Foraminifera	
	Planktonic foraminifera
	Benthic foraminifera
46	✓ 100% Nannofossils 1
	Coccoliths
	Discoasters
	Pteropods
Siliceous	
	Radiolarians
	Spumellaria
	Nassellaria
	✓ Diatoms
46	80% ✓ Centric 25 31.5
4	58% Pennate 2
	Chaetoceros Resting Spores
	Silicoflagellates
2	✓ Sponge spicules #0.5
	Dinoflagellates
Others	
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
393	1340	H	19	H	5	85	

Sediment/Rock Name	diatom core (vitrific rich.)	Observer	R. K. ...
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Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
3	Feldspar ✓ 1
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
3	Crystal grain 1
24	Vitric grain 7
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
70	Diatoms ✓ 20
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	1340	A	19	H	1	50	

Sediment/Rock Name	diatom ooze	Observer	Abira
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Percent Texture		
Sand	Silt	Clay

Comments:

minor lithology?

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
10	Quartz 3
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
3	Clay Minerals 1
	Chlorite 8
	Glauconite
	Chert
	Zircon
3	Ferromagnesium minerals 1
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
6	Pyrite 2
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
10	Vitric grain 3
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
64	Diatoms 20
	Centric Centric
	✓ Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
3	Sponge spicules 1
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	1340	A	19	H	3	80	

Sediment/Rock Name	diatom ooze	Observer	
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MAJNO BEARNU DIATOM OOZE

Percent Texture		
Sand	Silt	Clay

Comments:

Major lithology

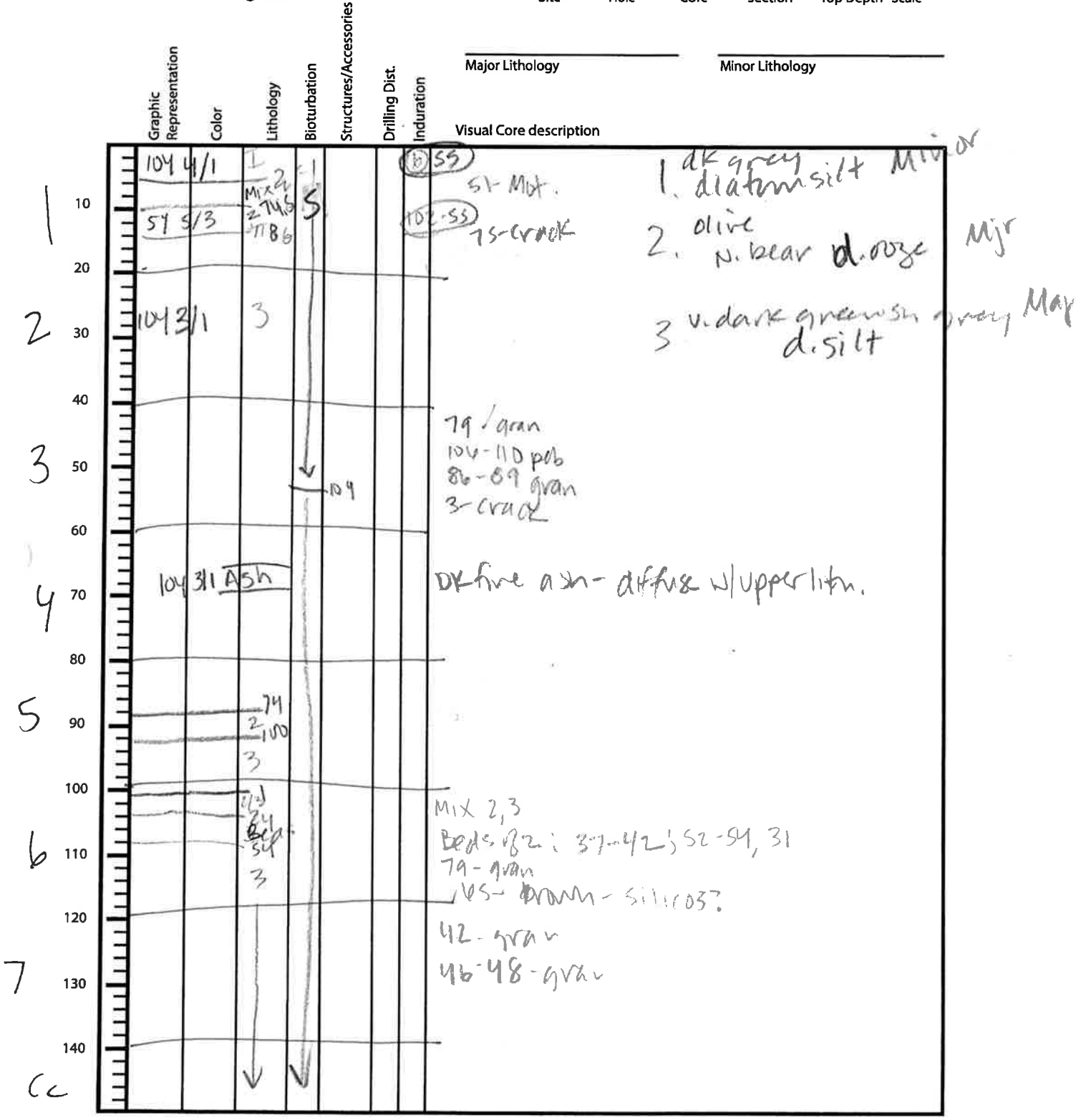
Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
3	✓ Quartz
3	✓ Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
Accessory/trace minerals	
	Micas
	Biotite
	Muscovite
<5%	Clay Minerals
	Chlorite
	Glaucinite
	Chert
	Zircon
3-13	✓ Ferromagnesium minerals
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
	✓ Pyrite
	Magnetite
	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
Crystal grain	
15	✓ Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
Foraminifera	
	Planktonic foraminifera
	Benthic foraminifera
5-10%	Nannofossils
	✓ Coccoliths
	Discoasters
	Pteropods
Siliceous	
	Radiolarians
	Spumellaria
	Nassellaria
78	✓ Diatoms
	30
	Centric
	Pennate
	Chaetoceros Resting Spores
3	Silicoflagellates
	✓ Sponge spicules
	Dinoflagellates
Others	
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

X

Expedition 323
Bering Sea

U1340 A 20 A11
Site Hole Core Section Top Depth Scale



Observer: _____ Date: _____

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	1340	A	20	H	1	102	

Sediment/Rock Name	diatom ooze	Observer	Arivu
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~~NAAD~~ (nanofossil bearing)

Percent Texture		
Sand	Silt	Clay

Comments:

Major lithology (lt. beds)

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
2	✓ Micas 0.5
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
2	Vitric grain 0.5
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
12	✓ Nannofossils 3
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
83	Diatoms 20%
	Centric ← almost
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	✓ Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	7340	A	20	H1		6	

Sediment/Rock Name: *diatom site*

Observer: *AKIRA*

Percent Texture		
Sand	Silt	Clay

Comments:

Mineralogy

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
16 15	Quartz ✓ 15
10 9	Feldspar ✓ 13
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments ✓
Accessory/trace minerals	
	Micas
	Biotite
	Muscovite
6 2	Clay Minerals ✓ 7 82
	Chlorite
	Glaucanite
	Chert
	Zircon
3 8	Ferromagnesium minerals ✓ 1
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
6	Opaque minerals 2
	✓ Pyrite
	Magnetite
	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
3	Vitric grain ✓ 1
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	✓ Coccoliths < 0.5
	Discoasters
	Pteropods
Siliceous	
	✓ Radiolarians
	Spumellaria
	Nassellaria
52 46	✓ Diatoms 15
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	✓ Sponge spicules
	Dinoflagellates
Others	
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	1340	A	3	H	3A	110	

Sediment/Rock Name	<i>dilation fine ash site</i>	Observer	<i>akira</i>
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Percent Texture		
Sand	Silt	Clay
5	20	20

Comments:

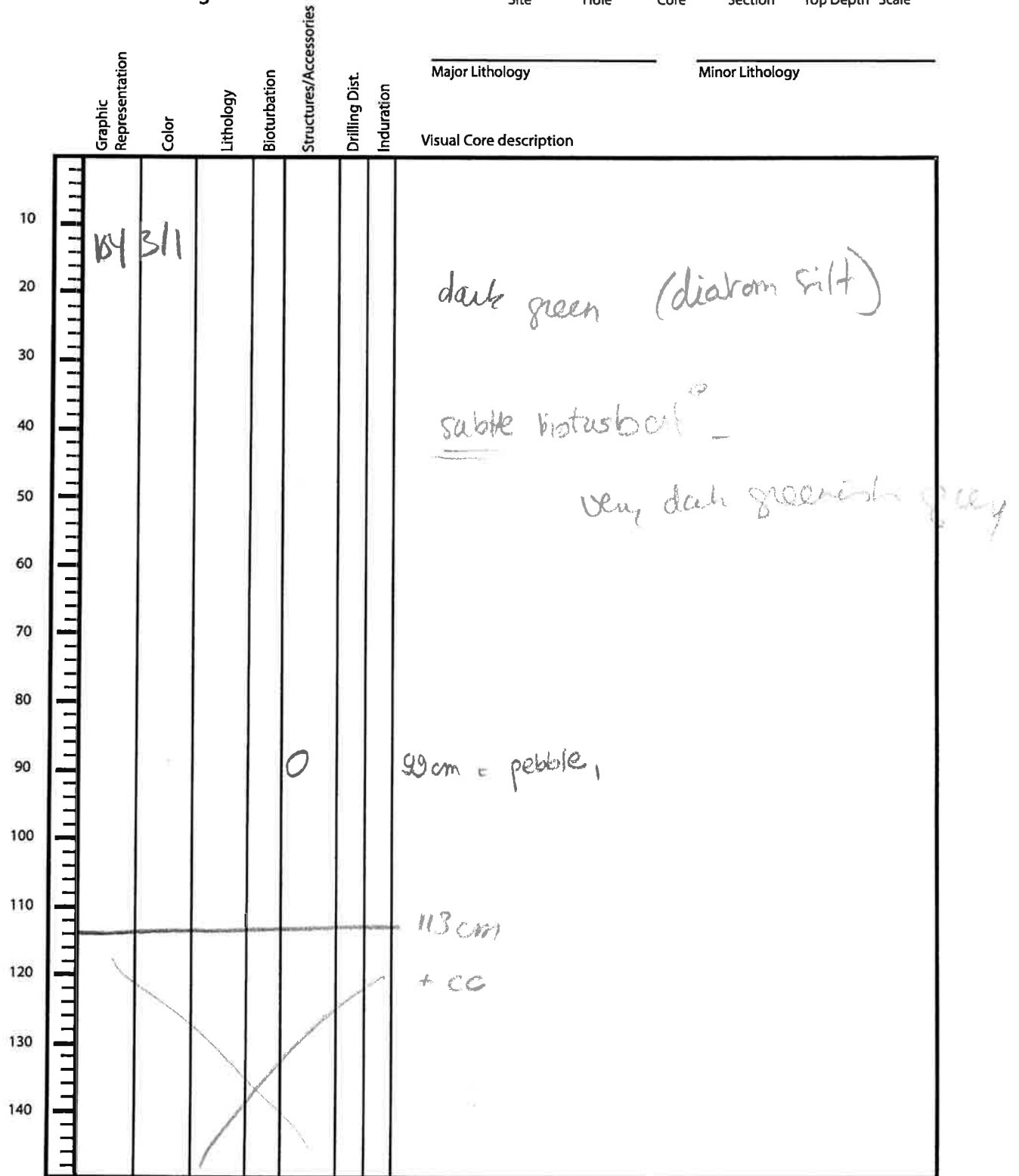
75.

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
15	✓ Quartz 5
6	✓ Feldspar 2
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite ✓
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
30	✓ Vitric grain 10
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
✓ 45	✓ Diatoms 15
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	✓ Sponge spicules /
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

323-U1340 A - ²¹ ~~H-8A~~ and CC
Site Hole Core Section Top Depth Scale



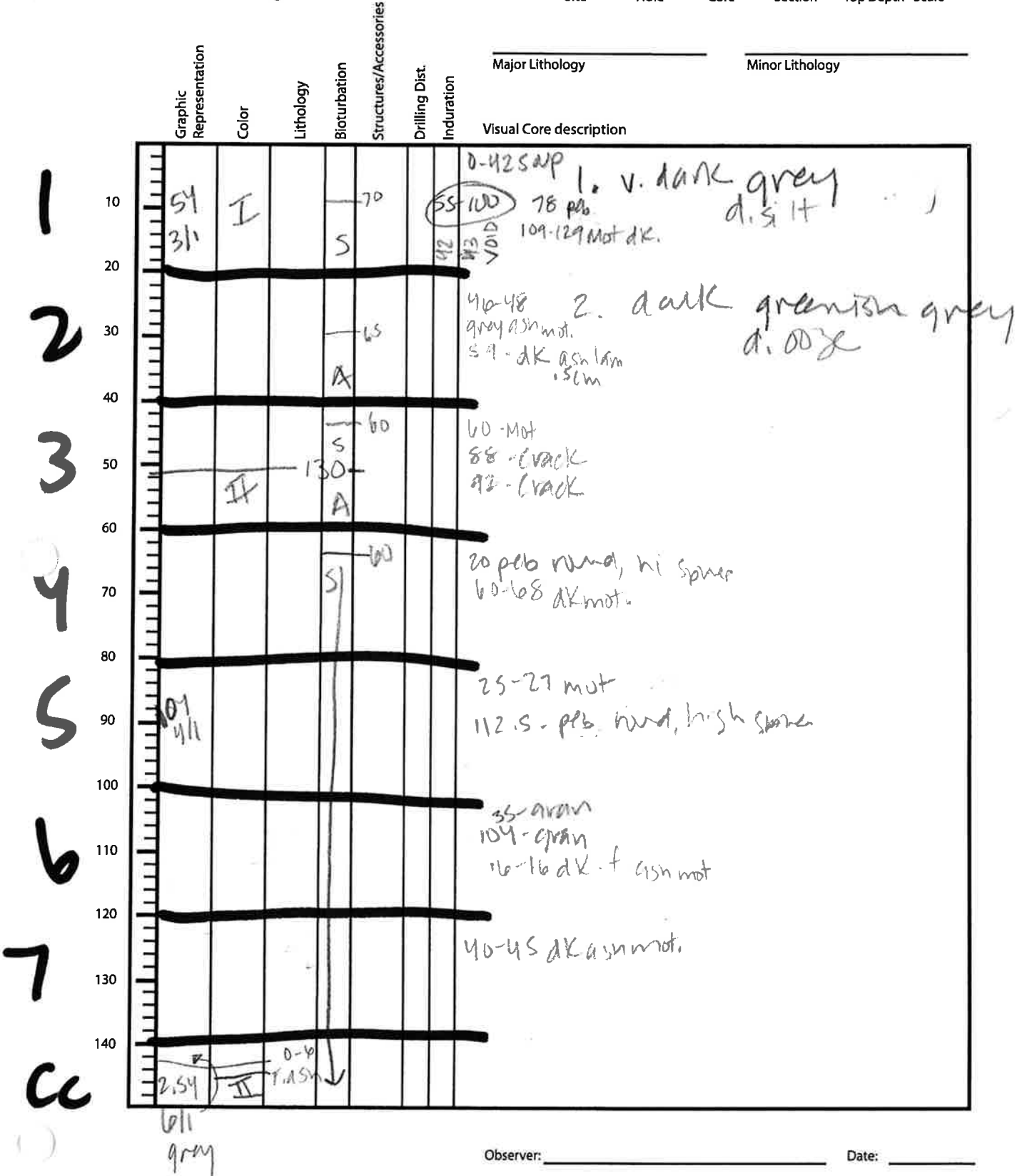
Observer: M. COOK

Date: 20 July 09

G.B.

Expedition 323
Bering Sea

323-1134 ~~0A~~ 23H All
 Site Hole Core Section Top Depth Scale



Observer: _____ Date: _____

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
	1340	A	23		5	10m	

S.D.

Sediment/Rock Name	Diatom ooze	Observer	ILM
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Percent Texture		
Sand	Silt	Clay

MASON LITHOLOGY

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
2%	Quartz
2%	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
5%	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
2%	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
5%	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
2%	Radiolarians
	Spumellaria
	Nassellaria
80%	Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340 A 24
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
1	27	V	V				30-40 lamina (not clear)	18-23 pebbles 5cm
	128	V	V				28-40 lam.	36-38 ash lens in lam.
2	12	V	V				18-39 lam.	
	58	V	V					
	113	V	V					
3	19	V	V				52 moll.	128
	110	V	V		100		2.5T 3/1	
4	214	V	V		80			
		V	V		70			
		V	V		120			
5		V	V					
		V	V					
6		V	V				Sec 5	
		V	V				(700-106. moll. ash)	
7		V	V				73-cc. grey.	
CC		V	V				77	
		V	V				12	
		V	V				12-22 AL	
		V	V				80% Major 5T 4/3	8%
		V	V				20 Minor 10T 4/1	

2-39 on.
diatom rich
fine. ash sil
3A-30.
Spindle bearing
diatom rich fine
ashy sil
4-30 on
diatom sil
5-50 on
diatom rich

Observer: _____ Date: _____

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	V1340	A	24	A	2A	39cm	

Sediment/Rock Name	Diatom + rich fine ash silt	Observer	Betw
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B -35
 S -50
 V -15

Comments:

Brown lamina

Percent Texture		
Sand	Silt	Clay

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
10	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
30	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
5	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
15	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
5	Centric
29	* Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
1	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	24	H	31	130cm	

S.Ω

Sediment/Rock Name	Spicule-bearing diatom-rich fine ashly silt	Observer	Beth
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B - 25
S - 55
V - 20

Percent Texture		
Sand	Silt	Clay
	80	20

Comments:

accessories



Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
10	Quartz
20	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
15	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
2	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
3	Fe-oxide
	Carbonates
	Calcite
5	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
20	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
3	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
5	Centric
12	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
5	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	24	H	4A	31cm	

S.D.

Sediment/Rock Name	Diatom silt	Observer	Beth
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B-39
S 410
V-15

Percent Texture		
Sand	Silt	Clay
	60	40

Comments:

Minor (2nd)

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
8	Quartz
10	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
1	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
5	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
5	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
10	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
15	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
25	Centric
20	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
1	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	24	H	SA	50cm	

Sediment/Rock Name	Diatom ooze	Observer	Beth
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Percent Texture		
Sand	Silt	Clay




Comments: Major

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
2	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
10	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
5	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
10	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
52	Centric <i>proboscia curvirostris</i>
20	Pennate
	Chaetoceros Resting Spores
1	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340 A 25
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Biorturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
1	10	8	✓	✓				
2	20	60 126	✓	✓			3cm wood. ✓ 56cm pebbles zone	Sec 1-60 spicule-bearing diatom clay
3	30	8	✓	✓				
4	40	17	✓	✓			Sec 3 4. moll. ash. 60 } moll. ash layer. 1cm thick 80 } 83 } Sec 4 ✓ 24 barren 79-82 barren 82 thin ash. 114 } 133 } thin ash & law	Sec 4-90 Diatom site
5	50		✓	✓				
6	60	70	✓	✓				
7	70	30	✓	✓			84-87 moll. ash ✓	
8	80		✓	✓				
9	90		✓	✓				
10	100		✓	✓				Sec 8-130 spicule-bearing diatom zone
11	110		✓	✓				
12	120		✓	✓				
13	130		✓	✓			Major. 5Y 5/3  spicules-bearing diatom zone	
14	140		✓	✓			2nd. 10Y 4/1 	
			✓	✓			3rd. 5Y 4/2 	

Observer: _____ Date: _____

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	01340	A	25	11	1	60cm	

S.O.

Sediment/Rock Name	spicule-bearing diatom clay	Observer	GB
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Percent Texture		
Sand	Silt	Clay

Comments: Thin lithology

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
5	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
35 X	Clay Minerals
	Chlorite
	Glaucinite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
50	X Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
40	X Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	01340	A	25	H	6	130 cm	

S.P.

Sediment/Rock Name	spicule-bearing diatom ooze	Observer	GB.
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Percent Texture		
Sand	Silt	Clay

Comments: Grain litology

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
15	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
5	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
20	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
50	Diatoms X
	Centric
	Pennate
	<i>Chaetoceros</i> Resting Spores
	Silicoflagellates
10	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340 A. 26
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
1	10	✓	✓	5			5-10 4/1 44-52 moll ✓	55 1A 80 in Spicule-bearing diatom ooze
2	20	✓	✓	3		sc	33-4 moll ✓ (67)	
3	30	✓	✓	56		sc	58-64 strolithos undular ✓ 114-118 moll. 1126 moll	
4	40	✓	✓	62	113 126			55 5A 110 in diatom ooze
5	50	✓	✓	103	112	sc	107-112 for 800 scattered < 3 mm	
6	60	✓	✓			sc		
7	70	✓	✓			sc	10- pebbles 1/4 in - mm.	
8	80	✓	✓			sc	85	
9	90	✓	✓			sc		
10	100	✓	✓			sc		
11	110	✓	✓			sc		
12	120	Major	5T 5/3	olive			diatom ooze	
13	130	2nd	5T 4/2	olive grey			spicule-bearing diatom ooze	
14	140							

Observer: _____ Date: _____

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	26	H	SA	110cm	

S.M.

Sediment/Rock Name	Diatom ooze	Observer	Behr
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B-75
 S-15
 V-10

Percent Texture		
Sand	Silt	Clay

Comments: Major

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
10	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
10	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
50	Centric
20	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
5	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340 Site A Hole 27 Core Section Top Depth Scale

Depth (cm)	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
								Visual Core description	
1-10									
20								102-103 moll ✓	2A-70 diatom ooze
30									
40									
45-50		52 V93						52 pebble 3m ✓ Sec 4-143 4m 50mm 2mm med clean	
60									
70								93-96 moll.	5A-40 diatom ooze
80								70-104 gra boundary	
90								37 moll. with ool	
100								82 10 10-20 PAL	
120								Major - 514/3 olive } diatom ooze (2nd) 515/3 olive }	
130									
140									

Observer: _____ Date: _____

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	27	H	2A	70cm	

S.R

Sediment/Rock Name	Diatom ooze	Observer	Beth
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Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
5	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
5	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
68	Centric
20	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
2	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

X

S.R.

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	UB40	A	27	H	SA	40cm	

Sediment/Rock Name	Diatm ooze	Observer	Beth
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Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
15	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
2	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
2	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
3	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
3	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
60	Centric
10	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

323 U1340A 28H A11

Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
1	5Y 4/2	1	1	S				Ash 50.5-52.5 Sharp ✓ 130-138.5 Sharp ✓	123-129 (silt) ash mot ✓
2	5Y 4/2	1	1	S				0-7 pec. mott ✓ 60-Ash lay 1mm ✓ 81-123 dk f. ash mot. ✓ COLORS-	Diatm grey silt olive grey (authcarb)
3	5Y 4/2	1	3 13	M S				100-gran 2 145-147.5 A	olive grey
4	5Y 4/2	1	145A 150	S				86-100 Oliv. ✓ Gran ✓ Und.	3 - Diatom silt v. dark greenish grey
5	5Y 5/2	2	145 147.5 A	H				7-98 thin lam. heavily biot. ✓	
6	5Y 3/1	2	U20 162-100 G	S				19, 10 = pec. ✓	Ash - lt grey to black
7	10Y 4/1	3	125	S				2	
CC				S				15.5-gran ✓ 13 gran ✓ 13-60 mott AK ash ✓	

Observer: _____ Date: _____

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	1339	28	28	H	2	100	

Sediment/Rock Name	diatom silt?	Observer	
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Comments:
 b 53
 s 34
 v 11



Sand	Percent Texture	
	Silt	Clay
	20	80
5	75	20

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
10	Quartz 3
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
Accessory/trace minerals	
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
7	Pyrite 2
	Magnetite
	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
11	✓ Vitric grain 3
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
Foraminifera	
Planktonic foraminifera	
Benthic foraminifera	
Nannofossils	
	✓ Coccoliths
Discoasters	
Pteropods	
Siliceous	
Radiolarians	
Spumellaria	
Nassellaria	
53	✓ Diatoms 15
	Centric ✓ 5
	Pennate ✓
Chaetoceros Resting Spores	
	✓ Silicoflagellates
	✓ Sponge spicules
Dinoflagellates	
Others	
Pollen	
Organic debris	
Plant debris	
Ebridians	
Echinoderm	
Fish remains (teeth, bones, scales)	
Bryozoans	
Bivalves	
17	✓ Others 5
	coccolith dissolved?

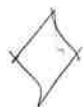
IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	1340	A	28	FA	7	40	

Sediment/Rock Name	Diatom silt (w/ authigenic carbonate)	Observer	akira
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Percent Texture		
Sand	Silt	Clay

Comments:



Minor lithology

0 80 25
20

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
4	Quartz /
4	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucanite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
4	Pyrite /
	Magnetite
	Fe-oxide
	Carbonates
25	Calcite 7
25	Dolomite X
VOLCANICLASTIC GRAINS	
	Crystal grain
11 25	Vitric grain X3
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
55	Diatoms 15
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	V1340	A	29	H	2	120	

Sediment/Rock Name	Diatom ooze	Observer	Beth
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Percent Texture		
Sand	Silt	Clay

Comments: B - 60
S - 20
V - 20
Main lithology

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
10	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
10	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
20	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
3	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
.42	Centric
15	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340 Site A Hole 29 Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
1		85					10		
2		102					20		
3		36					30		
4		12					40		
5		130					50		
6		75					60		
7		10					70		
8							80		
9							90		
10							100		
11							110		
12							120		
13							130		
14							140		

Visual Core description

100-132 lamina not clear (58 6/3 and 57 4/3) pale grey olive
 90-130
 6-11 lam. not clear
 90-130 grad. b
 39-74 lam. not clear 42-43 mott
 75 pebb. black
 116. ash thin 3 mtr
 64-67 ash thin not ash
 124 pebble, 124-125 mott. 139-140 mott
 174
 9
 9-18. PAL.
 2nd Major 57 4/2 Olive grey
 105 4/1 ~~greenish black grey~~
 Major 2nd 57 4/3 olive

SS 2-20
dialon. oop
SS 3-60

Observer: _____ Date: _____

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	1340		24 30		4	114	

Sediment/Rock Name	Diatom bearing Sandy silt	Observer	
--------------------	---------------------------	----------	--

13 ± N ~~15~~ V ~~10~~ 3

Percent Texture		
Sand	Silt	Clay
65 10	30	5

Comments:

white glassy spot
#691

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
39 42	✓ Quartz 15
Feldspar	
13 14	5 K-feldspar (Orthoclase, Microcline...)
Plagioclase	
Rock fragments	
Accessory/trace minerals	
✓ Micas	
26 28	Biotite 10
Muscovite	
Clay Minerals	
Chlorite	
Glauconite	
Chert	
Zircon	
✓ Ferromagnesium minerals	
5 7	Olivine Olivine - Augite 2
Authigenic minerals	
Barite	
Phosphorite/Apatite	
Zeolite	
8 8	✓ Opaque minerals 3
Pyrite	
Magnetite	
Fe-oxide	
Carbonates	
Calcite	
Dolomite	
VOLCANICLASTIC GRAINS	
Crystal grain	
8 8	Vitric grain
Lithic grain	

Percent	Component
BIOGENIC GRAINS	
Calcareous	
Foraminifera	
Planktonic foraminifera	
Benthic foraminifera	
Nannofossils	
Coccoliths	
Discoasters	
Pteropods	
Siliceous	
Radiolarians	
Spumellaria	
Nassellaria	
1 1	Diatoms 0.5
Centric	
Pennate	
Chaetoceros Resting Spores	
Silicoflagellates	
Sponge spicules	
Dinoflagellates	
Others	
Pollen	
Organic debris	
Plant debris	
Ebridians	
Echinoderm	
Fish remains (teeth, bones, scales)	
Bryozoans	
Bivalves	
Others	

Expedition 323
Bering Sea

1340 A 30 2
 Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Visual Core description
	<p>S/Y/L C/Y/L</p>						<p>50-60 grad.</p> <p>140-148 intermixed light ash.</p> <p>140-144 grad.</p>

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 Site A Hole 30 Core 3 Section _____ Top Depth _____ Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
	SY14/1						0-19 light ash patches	
	SY14/2						25-35 grad.	
	SY14/3						94-112	
	SY14/4							

Observer: _____ Date: _____

Expedition 323
Bering Sea

1390 A 30 4
Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
10									
20		S/S/S							
30									
40									
50									
60									48-52 grad.
70		S/S/S							
80									
90									
100									115-116 disintegrated mica
110									schist clast, 1 cm ϕ , silice,
120									
130									
140									

Observer: _____ Date: _____

Expedition 323
Bering Sea


1340 A 30 5
Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology	
10		S/S/S		W/0/S						
20										
30										
40										
50										
60										
70										
80										
90										
100										
110										
120										
130										
140										

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 30 6
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	7115	fine sand					50-55 dark ash layer, grad. top, sharp base, firming up.	
	7112							

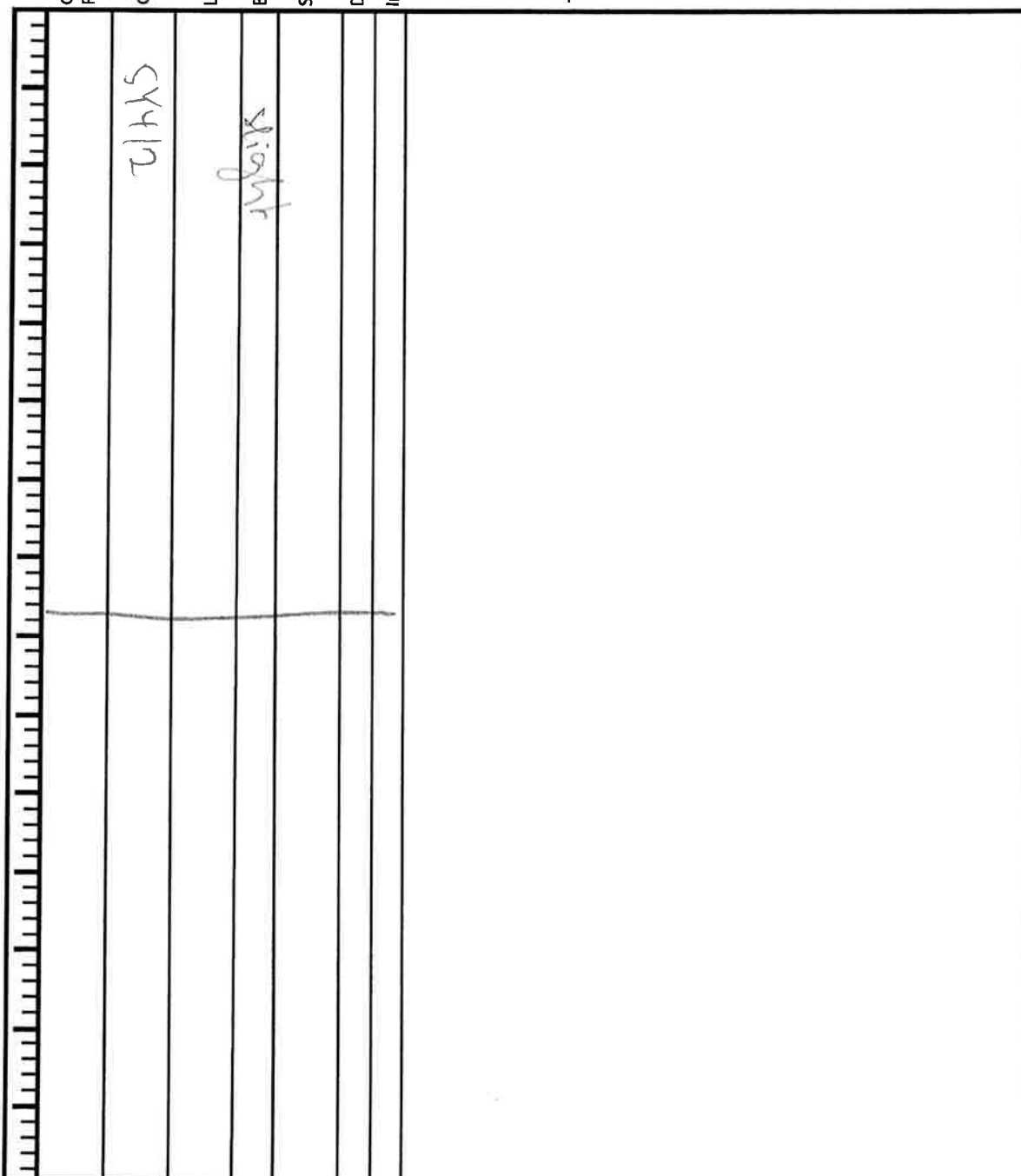
Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 Site A Hole 30 Core 7 Section _____ Top Depth _____ Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	White		Slight					

Visual Core description



Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 30 CC _____
Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology	Visual Core description
10		SHK								
20		PAZ								
30										
40										
50										
60										
70										
80										
90										
100										
110										
120										
130										
140										

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 31 1
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	SY12							
							80-90 grad.	
	SY11							
							130-135 grad.	
	SY 3/3							

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 Site A Hole 31 Core 2 Section _____ Top Depth _____ Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
10		SY13							
20									
30									
40									
50									
60									
70									
80									
88-92 grad.		SY11							
90									
100									
110									
120									
125-127 grad.		SY12							
130									
140									

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 31 3
 Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
	5Y 1/2 R							
							102-105 grad.	
							105-110 dark ash layer, fining up, grad top, sharp base	
							108-110 sharp, casts	
	5Y 1/2 R							

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 31 4
Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
10		51B13							
20									
30									
40									
50									
60									
70									
80									
90									
100									
110									
120									
130									
140									

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 31 5
Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology	Visual Core description
10										
20										
30										
40										
50										
60										
70										
80										
90										
100										
110										
120										
130										
140										

81815

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 31 6
Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
10									
20									
30									
40									
50									
60									
70									
80									
90									
100									
110									
120									
130									
140									

Visual Core description

60-80 grade

95-96 dark ash intermixed

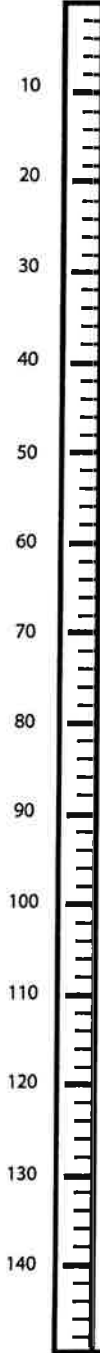
Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 31 7
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	2/HS							

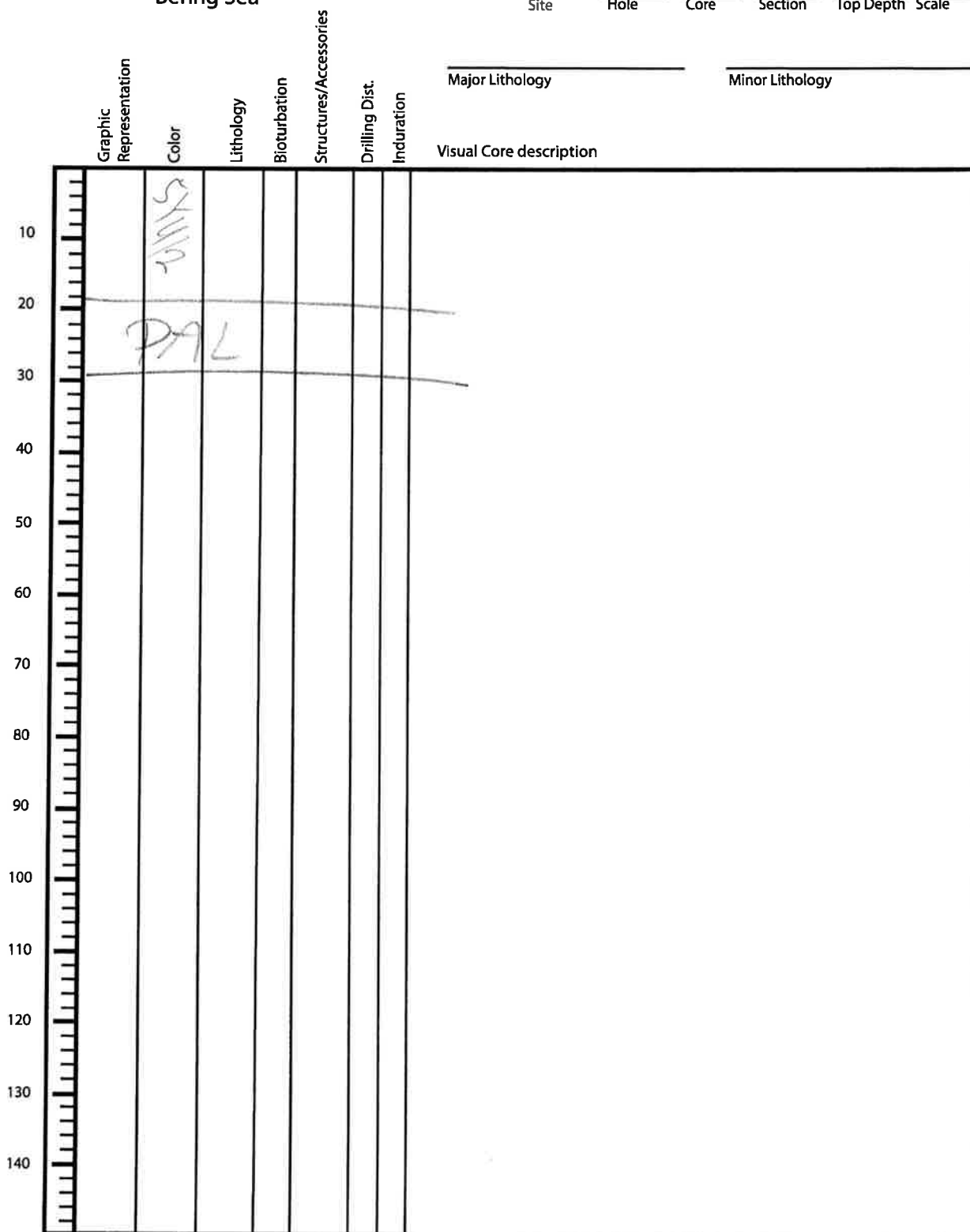
Visual Core description



Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 31 CC
Site Hole Core Section Top Depth Scale



Observer: _____ Date: _____

54

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	32	H	1	70	70

Sediment/Rock Name	Diatom pilt	Observer	

Percent Texture		
Sand	Silt	Clay
3	95	2

5

Comments:

Main lithology (dark ooze)

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
50	Framework minerals
45	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
50	Diatoms
40	Centric
10	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	32	A	1	82	82

SM

Sediment/Rock Name	Diatom-rich fine ash	Observer	
--------------------	----------------------	----------	--

Percent Texture		
Sand	Silt	Clay
	100	100

Comments: Greenish blob

V

63µm

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucanite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	✓ Pyrite
	✓ Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
70	VOLCANICLASTIC GRAINS
	Crystal grain
	✓ Vitric grain
	Lithic grain

Percent	Component
	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
30	Diatoms
	Centric
	Pennate
	<i>Chaetoceros</i> Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	32	H	3	65	65

Sediment/Rock Name	Diatom ooze	Observer	
--------------------	-------------	----------	--

Percent Texture		
Sand	Silt	Clay
0	10	90

S

Comments: Main lithology (ooze)

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
20	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	✓ Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucanite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
2	✓ Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
77	Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
1	✓ Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	32	H	3	130	130

Sediment/Rock Name	Auth-carb-rich diatom ooze	Observer
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Percent Texture		
Sand	Silt	Clay

Comments: *Monolithology (indicated with SA)*

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
10	✓ Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
Accessory/trace minerals	
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
	✓ Pyrite
	Magnetite
	✓ Fe-oxide
25	Carbonates <i>2-6 μm grains</i>
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
Foraminifera	
	Planktonic foraminifera
	Benthic foraminifera
Nannofossils	
	Coccoliths
	Discoasters
	Pteropods
Siliceous	
	Radiolarians
	Spumellaria
	Nassellaria
65	Diatoms
	✓ Centric
	✓ Pennate
	<i>Chaetoceros</i> Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
Others	
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

SM

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	32	H	5	65	65

Sediment/Rock Name	Diatom ooze	Observer	
--------------------	-------------	----------	--

Percent Texture		
Sand	Silt	Clay
10	90	

Comments: Main lithology (wet diatom ooze)

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
15	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucinite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
85	Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	✓ Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340 A 32 1
 Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	SY318							
			Skogat					
							60-72 grad.	
							83-84 dark ash layer,	
	SY31A							
							105-115	
	SY31B							

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 32 2
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	SY 3/1							
	SY 5/3						57-62 grad.	

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 32 3
Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
10		S1513							
20									
30									
40									
50									
60									
70									
80									
90									
100									
110									
120									
130									
140									

Visual Core description

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 Site A Hole 32 Core 4 Section _____ Top Depth _____ Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	SY513						Visual Core description	
10							86-88 grad	
20							88-148 greenish to whitish, wavy thick lam. to thin beds of diatom ooze; granular patches + layers, semi-lith. material, sand to fine pebble size → auth. carbonates	
30							→ XRD sample	
40								
50								
60								
70								
80								
90	SY513 - 51612							
100								
110								
120								
130								
140							148-10 grad.	

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 32 5
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	SHLS						Visual Core description 30-150 soupy sed., water-rich → XRD sample	

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 32 6
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	GRAY						Same as G	

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 32 7
Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
10		216/2						Sand as 6.	
20									
30									
40									
50									
60									
70									
80									
90									
100									
110									
120									
130									
140									

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 32 CC
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology

Visual Core description *Maybe upside-down?*
Not described?

10
20
30
40
50
60
70
80
90
100
110
120
130
140

Observer: _____ Date: _____

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	33	H	2	100	100

SM

Sediment/Rock Name	Diatom pilt	Observer	
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Percent Texture		
Sand	Silt	Clay
5	90	5

Comments: *Main lithology*

Percent	Component
45	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
35	Quartz
10	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
5	VOLCANICLASTIC GRAINS
	Crystal grain
3	Vitric grain
	Lithic grain

Percent	Component
50	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
50	Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	334		4	90	90

SM

Sediment/Rock Name	Diatom ooze	Observer	
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Percent Texture		
Sand	Silt	Clay
2	88	10

Comments: *Main lithology*

Percent	Component
27	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
20	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
1	Pyrite
	Magnetite
1	✓ Fe-oxide
	Carbonates
	Calcite
	Dolomite
5	VOLCANICLASTIC GRAINS
	Crystal grain
5	Vitric grain
	Lithic grain

Percent	Component
68	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
68	Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	33	H	7	30	30

SM

Sediment/Rock Name	Diatom ooze	Observer	
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Percent Texture		
Sand	Silt	Clay

Comments: *Main lithology*

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
30	Framework minerals
25	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
5	VOLCANICLASTIC GRAINS
	Crystal grain
5	Vitric grain
	Lithic grain

Percent	Component
65	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
50	Centric
15	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1840 A 33 1 _____
Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Inclination	Major Lithology	Minor Lithology
10		CHAS							
20									
30									
40									
50									
60									
70									
80									
90									
100									
110									
120									
130									
140									

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 33 2
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	SK19							
							10-16 ash patches	
							114-115 dense ash intermixed	

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 33 3
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	blks							

Visual Core description

10
20
30
40
50
60
70
80
90
100
110
120
130
140

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 33 4
Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Biurbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology	Visual Core description
10										
20		SY 4/2								
30										
40										
50										47-50 grad.
60										
70		SY 5/3								
80										
90										
100										
110										
120										
130										
140										

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 33 5
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	S/S/S							

Visual Core description

10
20
30
40
50
60
70
80
90
100
110
120
130
140

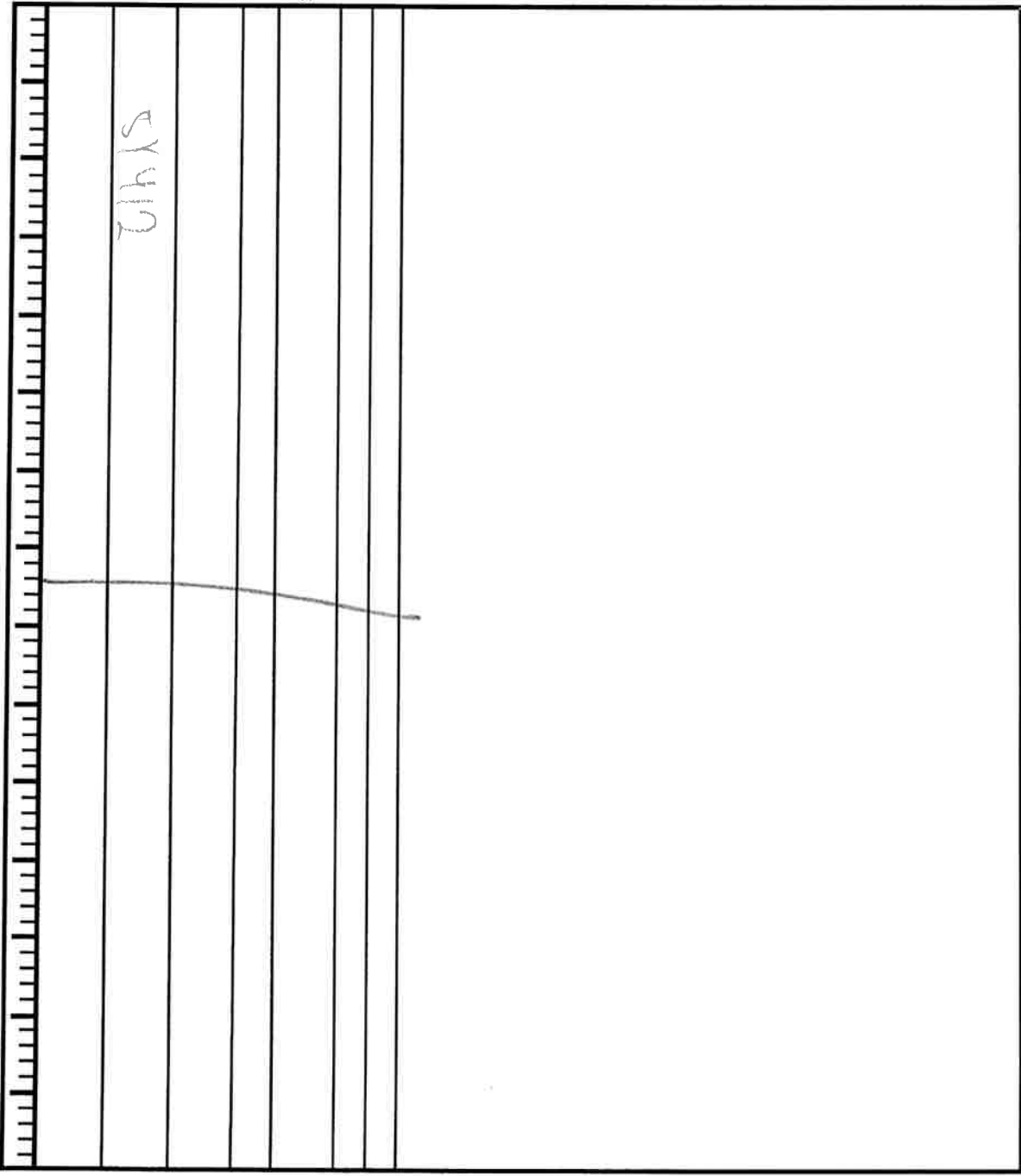
Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 33 7
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	UHS							

Visual Core description



Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	34	H	1	40	40

SM

Sediment/Rock Name	Diatom ooze	Observer	MSLOOK
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Percent Texture		
Sand	Silt	Clay

Comments: Main Lithology

Percent	Component
7	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
3	Quartz
2	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucinite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
2	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
5	VOLCANICLASTIC GRAINS
	Crystal grain
5	Vitric grain
	Lithic grain

Percent	Component
88	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
35	Centric
51	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
2	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Rivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	34	H	2	90	90

SM

Sediment/Rock Name	Diatom ooze	Observer	MSCOOK
--------------------	-------------	----------	--------

Percent Texture		
Sand	Silt	Clay

Comments: Main lithology

Percent	Component
25	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
18	Quartz
7	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
5	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
70	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
70	Diatoms
35	Centric
35	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

SN

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	34	H	3	41	41

Sediment/Rock Name	Diatom ooze.	Observer	MSCORIC
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Percent Texture		
Sand	Silt	Clay

Comments: white thin layers

Percent	Component
3	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
3	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucinite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
97	BIOGENIC GRAINS
100	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
17	Centric
80	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340 Site A Hole 34 Core 1-4 Section _____ Top Depth _____ Scale

Depth (cm)	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
								Visual Core description	
0-45		SY412							
45-55		SY412						2: 15-20 grad	
55-80		SY412						140-150 grad	
80-115		SY412						3: 40-41 light ash	
115-140		SY513						4: 20-30 grad	

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 34 8-CC
 Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
	2/5/5							5:
	2/5/10						6:44-46 dark ash intermixed	
	2/1/5							7:66
	2/1/5							CC.24

Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

SM

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
			35	H	3	80	80

Sediment/Rock Name	Diatom ooze	Observer	
--------------------	-------------	----------	--

Percent Texture		
Sand	Silt	Clay

Comments: Main lithology

Percent	Component
25 SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
15	✓ Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
5	✓ Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
7 VOLCANICLASTIC GRAINS	
	Crystal grain
7	✓ Vitric grain
	Lithic grain

Percent	Component
68 BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
68	Diatoms
38	✓ Centric
30	✓ Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
			35	H	7	30	30

SM

Sediment/Rock Name	Diatom ooze	Observer	
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Percent Texture		
Sand	Silt	Clay

Comments: Main lithology

Percent	Component
5	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
3	Quartz
1	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
1	✓ Pyrite
	Magnetite
	✓ Fe-oxide
	Carbonates
	Calcite
	Dolomite
2	VOLCANICLASTIC GRAINS
	Crystal grain
2	Vitric grain
	Lithic grain

Percent	Component
93	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
60	✓ Centric
20	✓ Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
5	✓ Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340 A 35
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							0-216 soft. (5Y 3/2)	
							21-33 grad 16 (5Y 4/3)	
							33- sta grad. 1.	
							33-40 Dark	
	5Y 4/6						62 ash. (dark) SS	
white							70-80 grad	Sec 3 20
							90-92 Sec. 2, 4, 2 light	Sec. 7 30
							0/120- 92 Sec. 2 42 light (circled)	41-43
							42-44 Black ash patch	
							40-44-100 light	
							5-0/100-120 grad.	
							120-31 light (5Y 4/2)	
							ash (black) Sec. 3-4	
							white patch 3-31 ash	
							grad 35-50 5Y 8/1	
							50-100 Dark (5Y 3/2)	
							100-140 light (5Y 4/3)	
							140-4-60 grad. 4-30 ~ 60	sl. laminated 1-0.5 cm
							4-60-150 Dark (5Y 4/2)	
							5-0-60 ^{1x} Dark (5Y 4/2)	
							5-14-46 (5Y 4/6)	
							5-46-49 ash (5Y 3/1)	
							5-50-60 grad	
							5-60 ~ 114. light (5Y 5/2) vs (5Y 6/3)	white patch
							5-114 ~ 118. laminated (white) ash	1-0.5 cm

Observer: T. Day Date: _____

6-27 Dark (5Y 3/4)
6-28-30 (5Y 3/2)
6-29-72 light ash (5Y 4/3)
6-75-120 (5Y 4/2)
100-150 grad 2
6-120-B (5Y 4/4)

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	36	H	1	30	30

Sediment/Rock Name	Sponge spicule-rich diatom ooze	Observer	
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Sand	Percent Texture	
	Silt	Clay
30	70	

Comments: Main lithology

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
15	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
3	✓ Pyrite
	Magnetite
1	✓ Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
76 BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
61	Diatoms
31	✓ Centric
30	✓ Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
15	✓ Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	36	H	2A	30	30

Sediment/Rock Name	Diatom ooze	Observer	
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Percent Texture		
Sand	Silt	Clay
3	94	3

Comments: Main lithology

Percent	Component
15	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
10	Quartz
2	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucanite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
2	Pyrite
	Magnetite
1	Fe-oxide
	Carbonates
	Calcite
	Dolomite
3	VOLCANICLASTIC GRAINS
	Crystal grain
3	Vitric grain
	Lithic grain

Percent	Component
82	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
77	Diatoms
30	Centric
47	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
5	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	36	H	2A	60	60

Sediment/Rock Name	<i>Auth-carb-bearing diatom ooze</i>	Observer	
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Percent Texture		
Sand	Silt	Clay

Comments: *Main lithology*

Percent	Component
16	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
3	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
3	Pyrite
	Magnetite
	Fe-oxide
10	Carbonates <i>authigenic</i>
	Calcite
	Dolomite
1	VOLCANICLASTIC GRAINS
	Crystal grain
1	Vitric grain
	Lithic grain

Percent	Component
83	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
78	Diatoms
58	Centric
20	Pennate
	<i>Chaetoceros</i> Resting Spores
	Silicoflagellates
5	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	36	H	2	100	100

Sediment/Rock Name	<i>Auth-carb-ni diatom ooze</i>	Observer	
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Percent Texture		
Sand	Silt	Clay

Comments: *Main lithology*

Percent	Component
21	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
<i>3</i>	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
<i>3</i>	Pyrite
	Magnetite
	Fe-oxide
<i>15</i>	Carbonates <i>authigenic</i>
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
79	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
<i>45</i>	Centric
<i>32</i>	Pennate
	<i>Chaetoceros</i> Resting Spores
	✓ Silicoflagellates
<i>2</i>	✓ Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1346	A	36	H	4	62	62

Sediment/Rock Name	<i>Authcarb-rich diatom ooze</i>	Observer	
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Percent Texture		
Sand	Silt	Clay

Comments: *Main lithology*

Percent	Component
<i>20</i>	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
<i>2</i>	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
<i>3</i>	Pyrite
	Magnetite
	Fe-oxide
<i>15</i>	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
<i>80</i>	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
<i>56</i>	Centric
<i>24</i>	Pennate
	<i>Chaetoceros</i> Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	36	H	6	40	40

Sediment/Rock Name	<i>Auth-carb-rich diatom ooze</i>	Observer	
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Percent Texture		
Sand	Silt	Clay

Comments: *Main lithology*

Percent	Component
18	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
3	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
15	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
82	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
82	Diatoms
	Centric
	Pennate
	<i>Chaetoceros</i> Resting Spores
	✓ Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340 A 364
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
	ST 5 3/2	gran		50-60 Mod.			1 90 - 14 ST 3 1/2 14 - 20 grad	
	ST 3 1/2						2 100 - 150 ST 3 1/2	
	ST 4 3/2						125 27 3 0 - Sec 3 to ST 4 1/2 Δ ash @ 125 - 130 (ST 3 1/2)	
	ST 5 1/2						Sharp B. @ 130 2 130 - Sec 4 to 37 (ST 5 1/2)	
	ST 5 1/2						mod (125-130)	
	ST 5 1/2						30 37 - 100 ST 4 1/2	
	ST 4 1/2						3 0 90 - 107 Sec 4 to 107 (ST 5 1/2) Bottom	white
	ST 5 1/2	106-108					Δ ash @ 106-108 (*N 41), 129+128 (N 41)	slightly visible
	ST 6 1/2						4 0 - 106 ST 6 1/2 white (ST 6 1/2)	
	ST 5 1/2			SL			visibile Δ ash @ 69-70 (N 41) Not laminar	
	ST 5 1/2						5 106 - 150 ST 5 1/2 ash patch @ 123-124 106-110 grad. (N 41)	

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 Site A Hole 36 Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
	5Y 6/2		SL 1400 3Y 50				0-57 5Y 6/2 Laminae visible ash @ 36 ~ 45 (N 4/1) patch	
	5Y 5/2		SL				5 grad B 36 - 50 Mod. B. C 70 - 100 grad B 50 - 100	
	5Y 4/2						100 - Bt. 100 0 - Bt. 5Y 4/2	
							6	
							7	
							cc	cc. 0 - Bt. 5Y 4/2

Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

SM

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	37	H	1A	53.5	53.5

Sediment/Rock Name	<i>Diatom ooze</i>	Observer	<i>MSC</i>
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Percent Texture		
Sand	Silt	Clay

Comments: *Main lithology*

Percent	Component
11	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
5	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucanite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
3	✓ Pyrite
	Magnetite
	Fe-oxide
3	Carbonates <i>authigenic</i>
	Calcite
	Dolomite
0	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
89	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
49	Centric
40	Pennate
	<i>Chaetoceros</i> Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	37	H	2A	114	114

SM

Sediment/Rock Name	Diatom-bearing fine ash	Observer	MSC
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Percent Texture		
Sand	Silt	Clay
	100	

Comments: white ash

✓

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
90	VOLCANICLASTIC GRAINS
	Crystal grain
90	Vitric grain
	Lithic grain

Percent	Component
10	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
10	Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

SM

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	37	H	6A	130	130

Sediment/Rock Name	Diatom ooze	Observer	MSC
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Percent Texture		
Sand	Silt	Clay

Comments: Main lithology

Percent	Component
8	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
3	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
3	Pyrite
	Magnetite
	✓ Fe-oxide
	Carbonates
2	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
92	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
65	Centric
27	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340 A 37 1
Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
10		grey							
20									
30									
40								60-65 grad	
50									
60									
70		grey							
80									
90									
100									
110									
120									
130									
140									

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 37 2
 Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
10	SYA12							
20								
30								
40								
50								
60							70-75 grad.	
70	SYA13							
80								
90							111-117 whitish patches	
100								
110							113-116 grad.	
120	SYA14							
130								
140								

Observer: _____ Date: _____

Expedition 323
Bering Sea

1240 A 37 3
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	SY 912							
	SY 512						85-90 grad.	
	SY 412						135-140 grad.	

Visual Core description

Observer: _____ Date: _____

Expedition 323
Bering Sea

1390 A 37 4
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	2/5/12						Visual Core description	
							3 isolated bluish burrows	
							20-24 intermixed dark ash	
							140-145 grad.	
	5/12							

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 37 6+CC
Site Hole Core Section Top Depth Scale

Depth (cm)	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
								Visual Core description	
10		5Y 6/2							
20									
30									
40									
50									
60									70-80 gravel
70									
80									
90									
100		5Y 4/2							
110									110-111 isolated clast, 1 and, angular, reddish
120									
130									
140									
150		5Y 4/2							
160									
170									
180									
190									
200									

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 38 1-CC
 Site Hole Core Section Top Depth Scale

Depth (cm)	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
								Visual Core description	
10									
20		SY413						1	80-90 grad.
30		SY412							
40		71h15						2	
50									
60		SY412							
70		SY412						3	3-5 ash partcl 75-80
80		SY412							
90		SY413							
100		SY412						4	38-40 ash partcl 85-90 grad.
110		SY412						118	
120		SY413							
130								10	CC
140									

Observer: _____ Date: _____

SM

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	41340	A	39H		1	70	

Sediment/Rock Name	Diatom ooze	Observer	MSC
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Percent Texture		
Sand	Silt	Clay

Comments: *Main lithology*

Percent	Component
38	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
30	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
3	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
2	VOLCANICLASTIC GRAINS
	Crystal grain
2	Vitric grain
	Lithic grain

Percent	Component
60	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
40	Centric
20	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	39	H	3	50	

SM

Sediment/Rock Name	Diatom ooze	Observer	MSC
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Percent Texture		
Sand	Silt	Clay

Comments: Main lithology

Percent	Component
9	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
5	Quartz
1	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
3	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
3	VOLCANICLASTIC GRAINS
	Crystal grain
3	Vitric grain
	Lithic grain

Percent	Component
88	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
60	Centric
28	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	39	H	5	97	97

Sediment/Rock Name	Diatom ooze	Observer	MSC
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Percent Texture		
Sand	Silt	Clay

Comments: last few layers

Percent	Component
16	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
5	Quartz
1	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
5	Pyrite
	Magnetite
	Fe-oxide
5	Carbonates <i>authigenic</i> □
	Calcite
	Dolomite
3	VOLCANICLASTIC GRAINS
	Crystal grain
3	Vitric grain
	Lithic grain

Percent	Component
81	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
81	Diatoms
60	Centric
21	Pennate
	<i>Chaetoceros</i> Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

SM

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	39	H	5	129	129

Sediment/Rock Name	Diatom ooze	Observer	MSC
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Percent Texture		
Sand	Silt	Clay

Comments: green-black lamina

Percent	Component
6	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
2	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucanite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
2	Pyrite
	Magnetite
	Fe-oxide
2	Carbonates <i>authigenic</i>
	Calcite
	Dolomite
0	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
94	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
24	Diatoms
70	Centric
24	Pennate
	<i>Chaetoceros</i> Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	39	11	5	131	131

SM

Sediment/Rock Name	Diatom ooze	Observer	MSC
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Percent Texture		
Sand	Silt	Clay

Comments: light green lamina

Percent	Component
11	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
5	✓ Quartz
2	✓ Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
3	✓ Pyrite
	Magnetite
	Fe-oxide
	✓ Carbonates
1	Calcite
	Dolomite
5	VOLCANICLASTIC GRAINS
	Crystal grain
5	✓ Vitric grain
	Lithic grain

Percent	Component
84	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	✓ Nannofossils
	✓ Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
84	Diatoms
	✓ Centric
	✓ Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340 Site A Hole 39 Core 1 Section _____ Top Depth _____ Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
	SY312							
	SY313						40-50 grad	
	SY314						105-110 grad.	
	SY315							

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 33 2
 Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	T1415						Visual Core description	
							28-35 large bluish burrows	
							52-54 ash patch	
							65 wavy cent.	
							86-90 grad.	
							90-91 dense ash layer, grad. top, sharp base	
							114-126 light green + dark grey burrows	

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 39 J
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	5Y 5/2 (partly apparently sandy)						110-126 wavy lam.	
							116-117 dark ash layer	
							130-140 grad	
	5Y 3/1						140-150 dark ash intermixed	

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 39 4
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
	5Y4/2							
	5						40-50 grad.	
	5Y4/2						dark 126-130 ash patches	
							134-138 light ash patches	

Observer: _____ Date: _____

Expedition 323
Bering Sea

1342 A 35 S
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	5/10/2	S					34-36 isolated fine pebbles	
							44-57 intermixed dark ash	
							100-103 light ash layer, sharp base, grad. top	
	5/4/17							

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 Site A Hole 39 Core 6 Section _____ Top Depth _____ Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
10		SY 512							
20									
30								30-35 grad.	
40		SY 419						35-37 intermixed ^v ash + clasts	light
50									
60									
70									
80								78-136 wavy, biot. lam.	
90								(SY 412 50%, SY 512 40%, SY 311 10%)	
100									
110									
120									
130									
140		SY 412							

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 39 7+CC
Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
10									
20		CLAY	S						
30									
40									
50									
60									
70									
80									
90									
95		PAL							
100							29		
110									
120									
130									
140									

Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	40	H	2	40	40

SM

Sediment/Rock Name	Diatom ooze	Observer	
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Percent Texture		
Sand	Silt	Clay

Comments: Main lithology

Percent	Component
(35)	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
25	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
5	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
(0)	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
(65)	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
45	Centric
20	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

SM

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	40	H	S	50	50

Sediment/Rock Name	diatom ooze	Observer	MSC
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Percent Texture		
Sand	Silt	Clay

Comments: Main lithology

Percent	Component
(12)	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
10	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucinite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
2	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
(0)	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
(88)	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
60	Centric
28	Pennate
	<i>Chaetoceros</i> Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

SM

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	40	H	G	37	37

Sediment/Rock Name	Diatom ooze	Observer	MSC
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Percent Texture		
Sand	Silt	Clay

Comments: Main lithology

Percent	Component
6	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
3	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
3	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
0	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain


Percent	Component
94	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
70	Centric
24	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340 A 40 3
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	TLMS							

Visual Core description



Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 40 4
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	grey							

Visual Core description

10
20
30
40
50
60
70
80
90
100
110
120
130
140

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 40 6
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	W/S 20 W/S 5						11-20 light ash patch D. ooze 56-57 dark ash layer	

Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

SM

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	Y1	H	2	126	126

Sediment/Rock Name	Auth-carb rock Diatom ooze	Observer

Percent Texture		
Sand	Silt	Clay

Comments: main lithology

Percent	Component
25	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
3	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
3	Pyrite
	Magnetite
	Fe-oxide
19	Carbonates <i>authigenic</i> □
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
75	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
55	Centric
20	Pennate
	<i>Chaetoceros</i> Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	41	H	1	4	4

Sediment/Rock Name	Diatom ooze	Observer	
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Percent Texture		
Sand	Silt	Clay

Comments: Reddish lamina

Percent	Component
9	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
2	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucinite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
2	Pyrite
	Magnetite
	Fe-oxide
5	Carbonates <i>authigenic</i>
	Calcite
	Dolomite
20	VOLCANICLASTIC GRAINS
	Crystal grain
20	Vitric grain
	Lithic grain

Percent	Component
71	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
60	Centric
11	Pennate
	<i>Chaetoceros</i> Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

SM

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	41	H	1	40	40

Sediment/Rock Name	<i>auth calc-rich Diatom ooze</i>	Observer	
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Percent Texture		
Sand	Silt	Clay

Comments: *white lamina*

Percent	Component
(17)	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
<i>2</i>	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
<i>15</i>	Carbonates <i>authigenic</i>
	Calcite
	Dolomite <i>(□)</i>
(5)	VOLCANICLASTIC GRAINS
	Crystal grain
<i>5</i>	Vitric grain
	Lithic grain

Percent	Component
78	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
<i>38</i>	Centric
<i>40</i>	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	41	H	1	123	123

SM

Sediment/Rock Name	Auth-carbonate bearing Diatom ooze	Observer

Percent Texture		
Sand	Silt	Clay

Comments: main lithology

Percent	Component
8	SILICICLASTIC GRAINS/MINERAL
2	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucanite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
6	Carbonates <i>authigenic</i> □
	Calcite
	Dolomite
10	VOLCANICLASTIC GRAINS
	Crystal grain
10	Vitric grain
	Lithic grain

Percent	Component
81	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
06	Centric
21	Pennate
	<i>Chaetoceros</i> Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

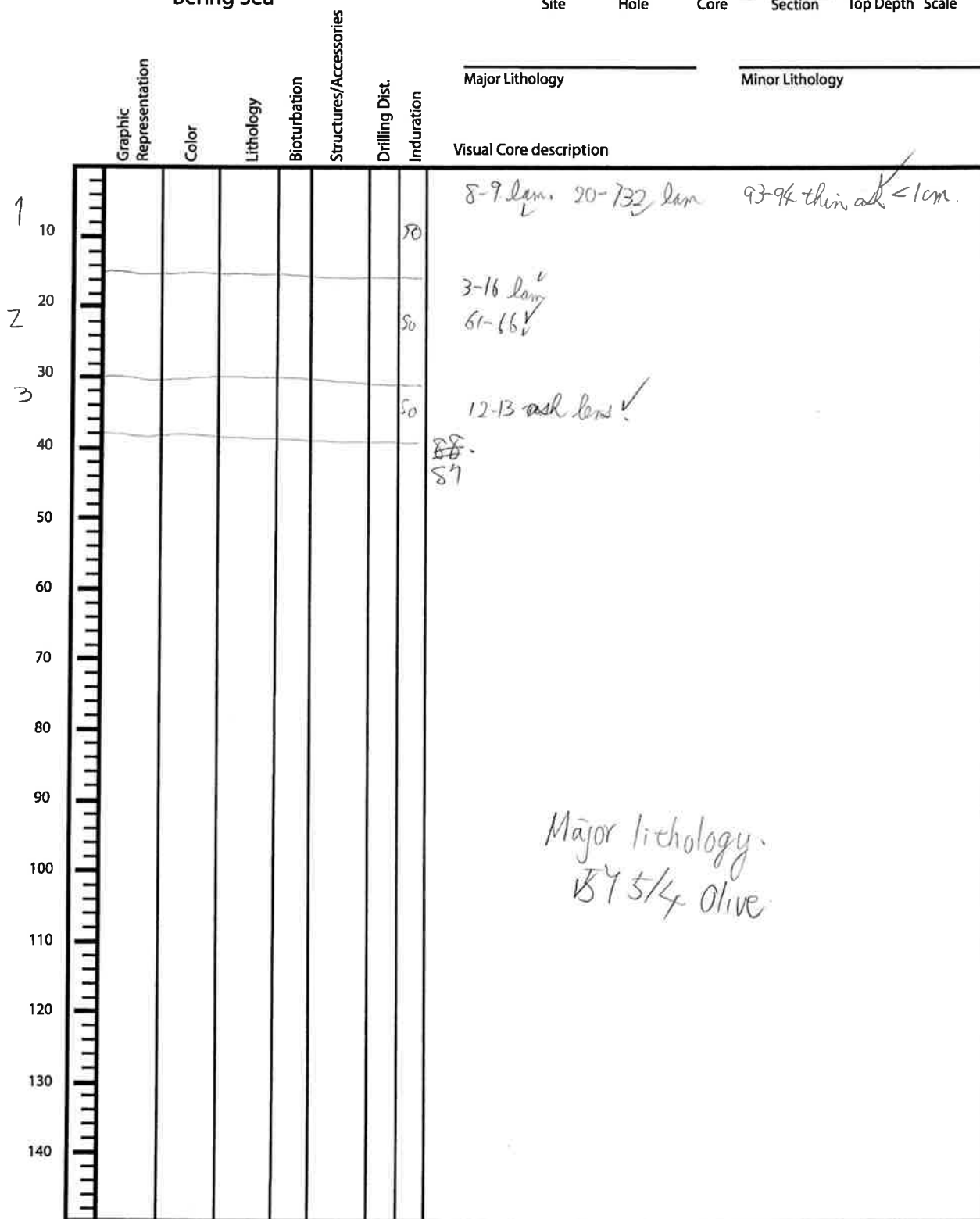
1340 A 41 1+2+cc
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
	<p>54 5/3</p> <p>25 5/3</p> <p>54 5/3</p>						<p>1: 52-54 dark ash layer, biot</p> <p>134-138 dark ash patches</p> <p>0-54 lam. thin to thick, reddish and grey greenish</p> <p>120-150 " " "</p> <p>2: 0-115 lam. thin to thick, reddish to brownish</p> <p>100-110 grad.</p> <p>115-120 grad</p> <p>cc</p> <p>23</p>	

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 42 2
Site Hole Core Section Top Depth Scale



Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

SM

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	42	H	2A	70cm	

Sediment/Rock Name	Diatum ooze	Observer	Beth
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Percent Texture		
Sand	Silt	Clay

Comments: Major lithology

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
2	Quartz
3	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
16	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
10	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
5	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
	Centric
50	Pennate
19	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

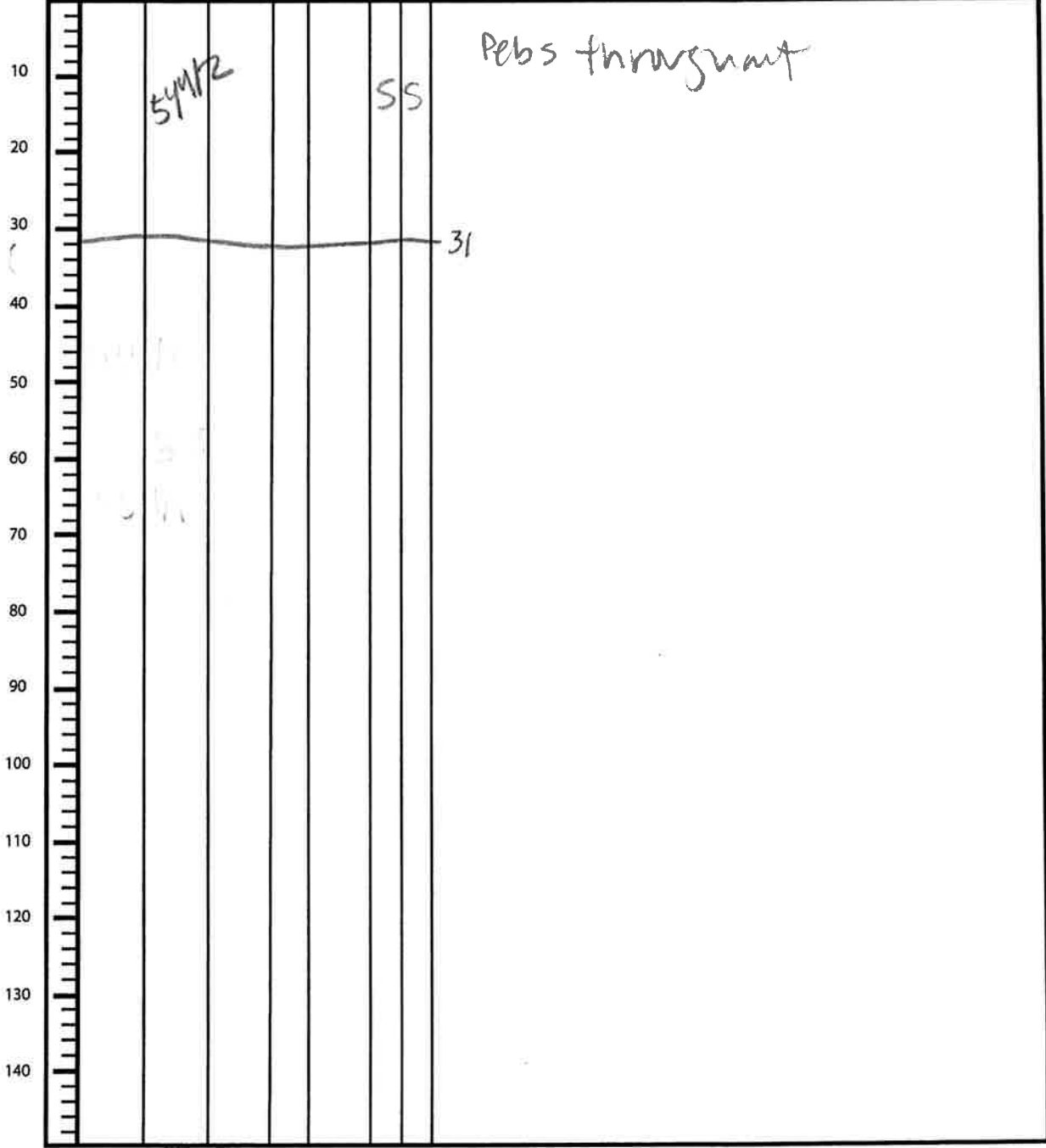
Expedition 323
Bering Sea

U1340 A 44X CC
Site Hole Core Section Top Depth Scale

Graphic Representation
Color
Lithology
Bioturbation
Structures/Accessories
Drilling Dist.
Induration

Major Lithology
Minor Lithology

Visual Core description



54S

Observer: _____ Date: _____

Expedition 323
Bering Sea

U1340 A YSX CC
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
	104 4/11						11 - Ash	Drilling severe
		Dolomite		S4913			G 20	
	104 4/11						S 24	
							end 33	

Observer: _____ Date: _____

SM

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	7340	A	45	X	1A	10	

Sediment/Rock Name	diatom ooze. (dolomite rich)	Observer	akira
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Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
8	Feldspar ✓ 2
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucanite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
13	Dolomite ✓ 3
VOLCANICLASTIC GRAINS	
	Crystal grain
4	Vitric grain ✓ 1
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
65	Diatoms ✓ 15
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
8	Sponge spicules ✓ 2
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

U1340 A 46X 12CC
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
	10Y 4/1	ash m. ✓	S ↓ 24- 2, 10.	(20)			1-2 Dolomite clast hi ang. ✓	
	5Y 4/3		28- 43				sapy - all ✓ gran. ✓ 42 Sh. / v. light hmic.	
							Mot. ✓	
							8-45 burrow. ✓	
							v. soft - sapy ✓	

Observer: _____ Date: _____

SM

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
	1340	A	46	X	1	60a	

Sediment/Rock Name Alatom ooze

Observer 1W6

Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
5%	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
X	Micas
	Biotite
	Muscovite
10%	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
5%	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
15	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
65%	Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340 ^A~~47~~ 47X
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
1	57 4/4	✓	112				47 lam 0-112 uncler ✓	SS: 1A-32 diatom ooze
2	519/2 4						Sec	
3	5190 6/2		105		50		52 mt. ash	SS 3A/30
4								
5							10-15 mto. ✓	
6							25-26 thin ash ✓ 33-thin ash ✓ 90-95 mto ash ✓	
CC							38. 38-46 PAL.	
100								
110								
120							Major: olive grey. (diatom silt)	
130							Minor: olive (diatom ooze)	
140								

Observer: _____ Date: _____

SM

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	47	X	1A	S2cm	

Sediment/Rock Name	Diatom ooze	Observer	Beth
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Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
3	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
10	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
5	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
50	Centric
30	Pennate
	Chaetoceros Resting Spores
2	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

SM

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	47	X	3A	130cm	

Sediment/Rock Name	Diatom silt	Observer	Beth
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B-40
 S-45
 V-5

Comments:

Percent Texture		
Sand	Silt	Clay
	90	10

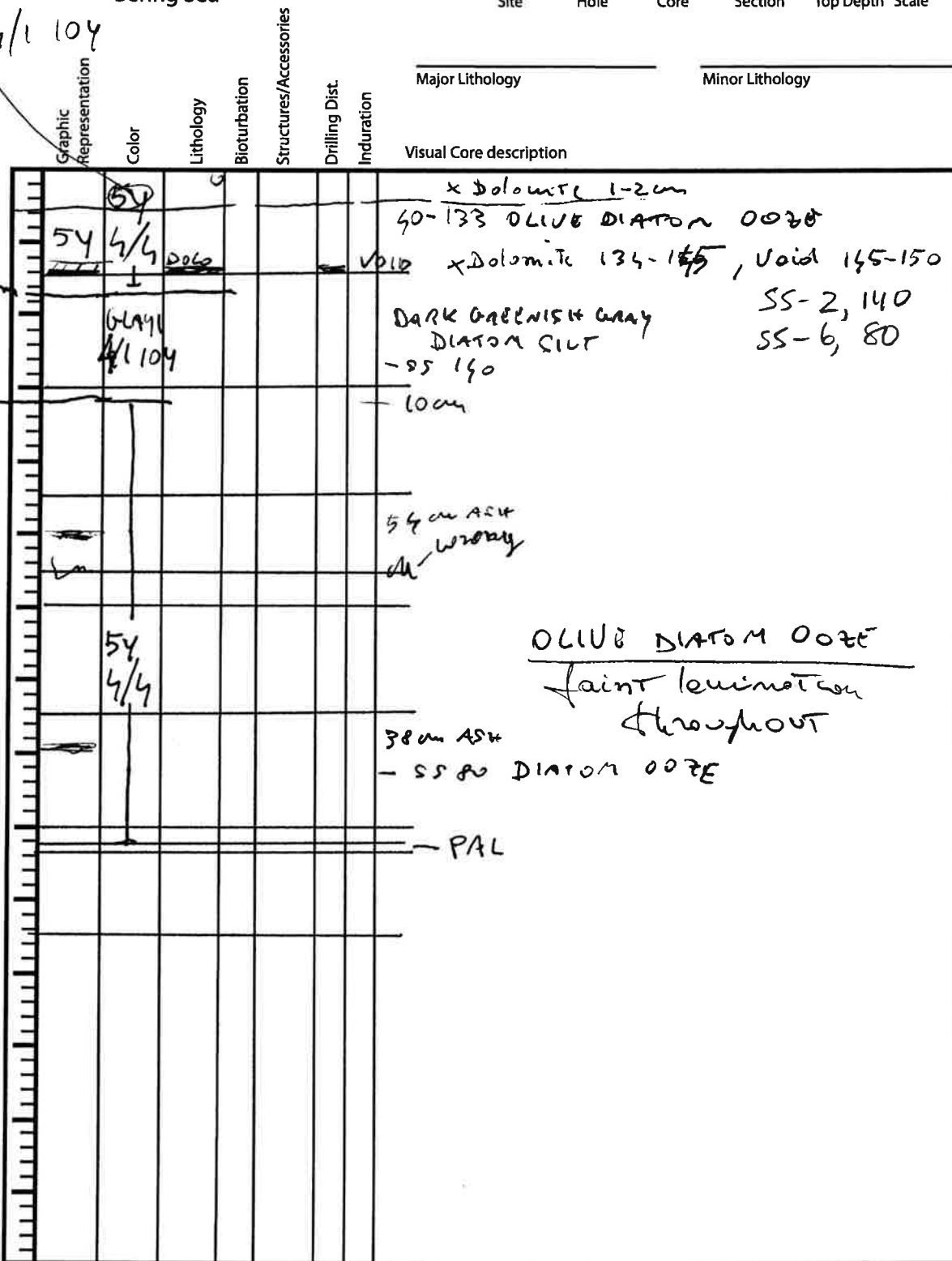
Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
13	Quartz
10	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
7	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
20	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
5	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
5	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
29	Centric
10	Pennate
	Chaetoceros Resting Spores
1	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

DIATOM SILT
GLAY 4/1 104

Expedition 323
Bering Sea

1340 Site A 48X Hole Core Section Top Depth Scale



Observer: _____ Date: _____

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

SM

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	48	X	2A	140cm	

Sediment/Rock Name	Diatom silt
--------------------	-------------

Observer	Beth
----------	------

B-40
 S-50
 V-10

Sand	Percent Texture	
	Silt	Clay
	90	10

Comments:

Major lithology

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
10	Quartz
15	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
7	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
5	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
3	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
10	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
10	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
30	Centric
7	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
3	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

SM

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	V1340	A	48	X	6A	80cm	

Sediment/Rock Name: *Diatom ooze*

Observer: *Beth*

Percent Texture		
Sand	Silt	Clay

Comments:

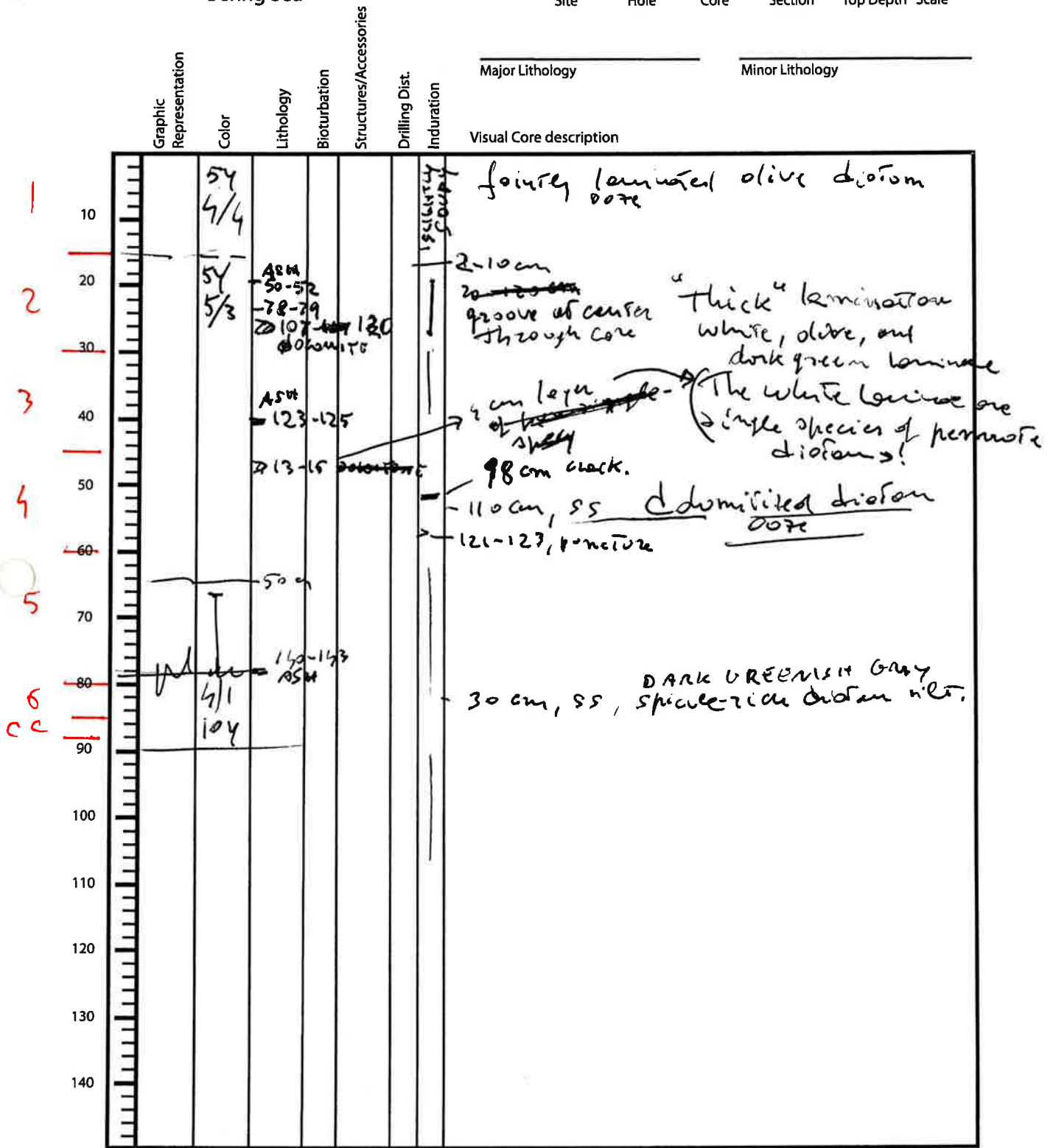
Major lithology

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
10	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
2	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
3	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
3	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
3	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
50	Centric
20	Pennate
	<i>Chaetoceros</i> Resting Spores
2	Silicoflagellates
2	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340 A 49X
Site Hole Core Section Top Depth Scale



Observer: _____ Date: _____

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

SM

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	49	X	4A	110cm	

Sediment/Rock Name	Dolomitized diatom ooze	Observer	Beth
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Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
2	Quartz
3	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
8	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
40	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
30	Centric
15	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
2	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	01340	A	49	X	6A	30cm	

527

Sediment/Rock Name	Spicule-rich diatom silt	Observer	Beth
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B - 50
 S - 35
 V - 15

Comments:

Percent Texture		
Sand	Silt	Clay

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
10	Quartz
15	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
10	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
15	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
5	Nassellaria
	Diatoms
20	Centric
10	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
15	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340 A 52X
Site Hole Core Section Top Depth Scale



	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
1		54 3/2						dark olive gray faint lamination	Upper 20 cm to newbot zone
2		54 3/2	ASH 18 cm					40 cm, ss olive gray dolomite	Upper 20 cm is indurated
3		54 3/2	ASH 19-20					90 cm, ss dark olive gray distal ooze	
4		54 4/1			SP 32			white layer 38-42, SSC4	
5								dark gray silty silt	

Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	1340	A	50	X	3A	90	

SM

Sediment/Rock Name: *diatom ooze*

Observer: *Okura*

Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
6	Quartz ✓ 2
9	Feldspar ✓ 3
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
Accessory/trace minerals	
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
6	Pyrite ✓ 2
	Magnetite
	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
Crystal grain	
6	Vitric grain ✓ 2
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
Foraminifera	
	Planktonic foraminifera
	Benthic foraminifera
Nannofossils	
	Coccoliths
	Discoasters
	Pteropods
Siliceous	
	✓ Radiolarians
	Spumellaria
	Nassellaria
73	Diatoms ✓ 25
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
Others	
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	1340	A	50	X	2	40	

SM

Sediment/Rock Name	dolomite	Observer	akira
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Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
3	Quartz 1
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucanite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
7	Pyrite 2
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
66	Dolomite 20
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
23	Diatoms 7
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

323 Site
A Hole
51X Core
Section
Top Depth
Scale

Depth (m)	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
								Visual Core description	
10		5Y 4/2	XV						
20		70 98	XV		10Y 3/N			70-98 ash? ↑ s.k. 87-88 crack ✓	98-1029 moll. ash
30		5Y 4/4	XV					3-7 ash? 9-13 moll. ash	Sec 3 90 - Sec 4 93 faint laminae
40		97 29	XV		5Y 4/2 50% 5Y 6/2			71-73 ash ⁸ ✓	
50		5Y 5/3	XV					29-37 dolomite 29-32 boundary	29-39 dolomite, nodules 31-36 ✓ Sec 5-70-CC-9 faint laminae
60			XV					93 20	
70			XV					2-29.5 PAL	
80			XV						
90			XV						
100			XV						
110			XV						
120			XV						
130			XV						
140			XV						

2A 40
diatom ooze

2A 120
diatom ooze

5A 70
diatom ooze

XV Major, olive 5Y 4/4
 XV 2nd, olive grey 5Y 4/2
 XV 3rd, olive 5Y 5/3

Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	01340	A	S1	X	5	70 cm	

SM

Sediment/Rock Name	Diatom ooze	Observer	G. B.
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Percent Texture		
Sand	Silt	Clay

Comments:

3rd.

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
5	X Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
Accessory/trace minerals	
	Micas
	Biotite
	Muscovite
	Clay Minerals
2	X Chlorite
	Glaucanite
	Chert
	Zircon
	Ferromagnesium minerals
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
	X Pyrite
	Magnetite
	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
Foraminifera	
	Planktonic foraminifera
	Benthic foraminifera
Nannofossils	
	Coccoliths
	Discoasters
	Pteropods
Siliceous	
	Radiolarians
	Spumellaria
	Nassellaria
5	X Diatoms
	Centric
	Pennate
	<i>Chaetoceros</i> Resting Spores
	Silicoflagellates
3	✓ Sponge spicules
	Dinoflagellates
Others	
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

SM

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	V1340	A	51	X	2A	120cm	

Sediment/Rock Name	Diatom ooze	Observer	Bohn
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Percent Texture		
Sand	Silt	Clay

Comments:

Major

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
5	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
2	X Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
5	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
85	X Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
2	Silicoflagellates X
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	51	H	2A	40cm	

527

Sediment/Rock Name	Diatom ooze
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Observer	Behr
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Percent Texture		
Sand	Silt	Clay

Comments:

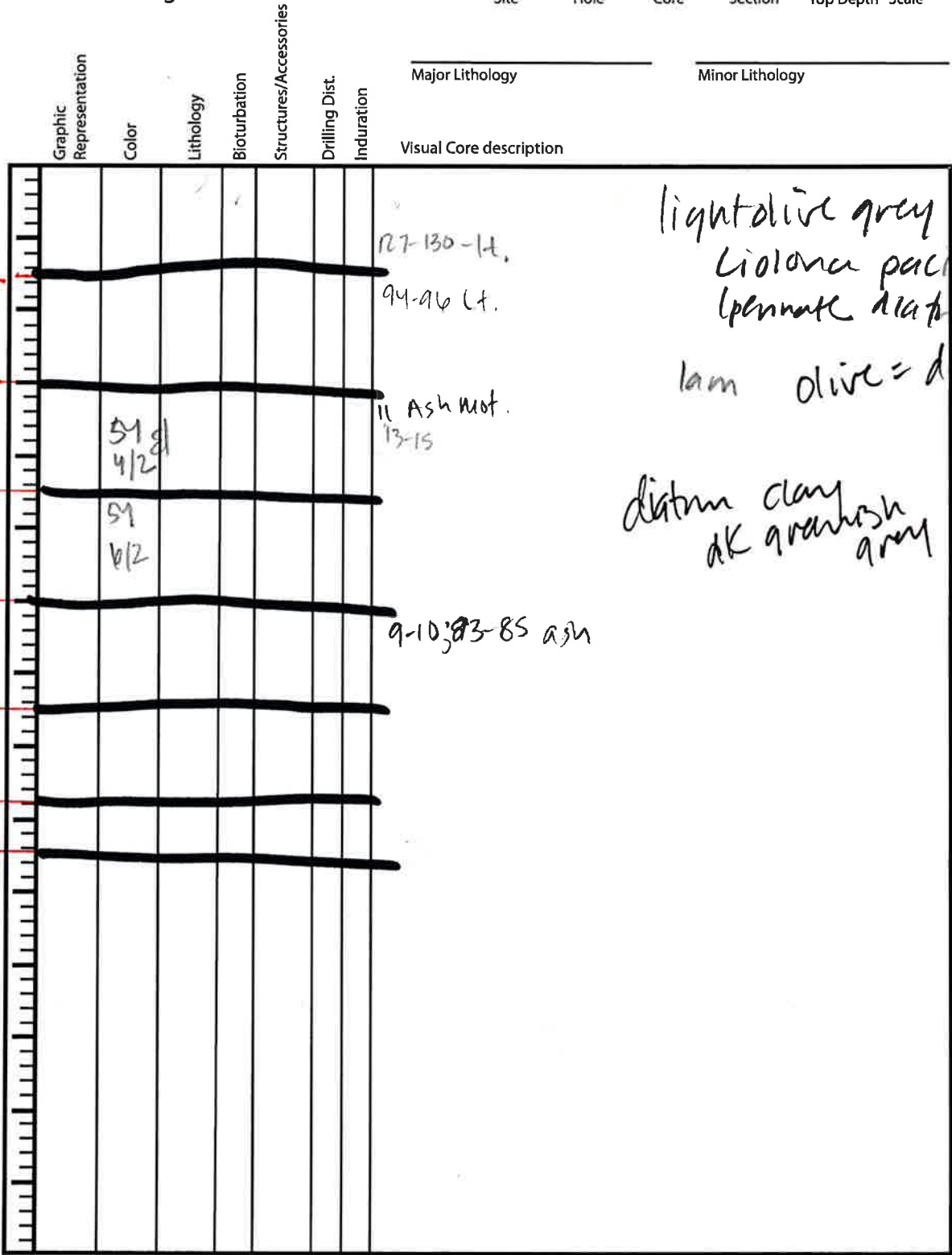
2nd

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
5	Quartz
2	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
8	Clay Minerals
	Chlorite
	Glaucosite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
5	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
2	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
5	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
1	Spumellaria
	Nassellaria
	Diatoms
35	Centric
35	Pennate
	Chaetoceros Resting Spores
2	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340 Site A Hole 52X Core A11 Section Top Depth Scale



6
cc 140
21m

Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

SM

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	1340	A	52	X	5A	137.5	

Sediment/Rock Name	<i>WATON 2070</i>	Observer	
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Percent Texture		
Sand	Silt	Clay

Comments: *L I O L O N A P A C I F I C A* White lamina

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
	Centric
	Pennate
	<i>Chaetoceros</i> Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

90
10%

80% L I O L O N A P A C I F I C A

Expedition 323
Bering Sea

1340 A 53
Site Hole Core Section Top Depth Scale



Depth (cm)	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
								Visual Core description	
1-10		✓		54 4/2				99-100 ash ✓	14 2cm trator clay.
20				5					
30-40		37 40	9/2	9 7	54 3 1/2			37 ash 46 white lam. 1cm	
50			✓					41 thin ash 32 thin ash 2-3cm	
60-70		56 56	ash		54 2 1/2			46-56 ash 71-74 dol. nodule thin ash 72-76 dolomited 131-135 ash	
80			✓						
90								101	Sec 7-cc mm scale. lamination
100								82 20	Major 54 5/4 lam. 54 7/2. 2cm 10 5cm interval 7cm
110									
120									
130									
140									

Observer: _____ Date: _____

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
	1340	A	53	X	1	2 cm	

54

Sediment/Rock Name	DIATOM CLAY CLAY	Observer	MA
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Percent Texture		
Sand	Silt	Clay

Comments:



Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
57.	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
50%	Micas
	Biotite
	Muscovite
30%	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
2%	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
5%	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
55%	Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340 A 54
Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
CC			51 5/4						
10									
20									
30									
40									
50									
60									
70									
80									
90									
100									
110									
120									
130									
140									

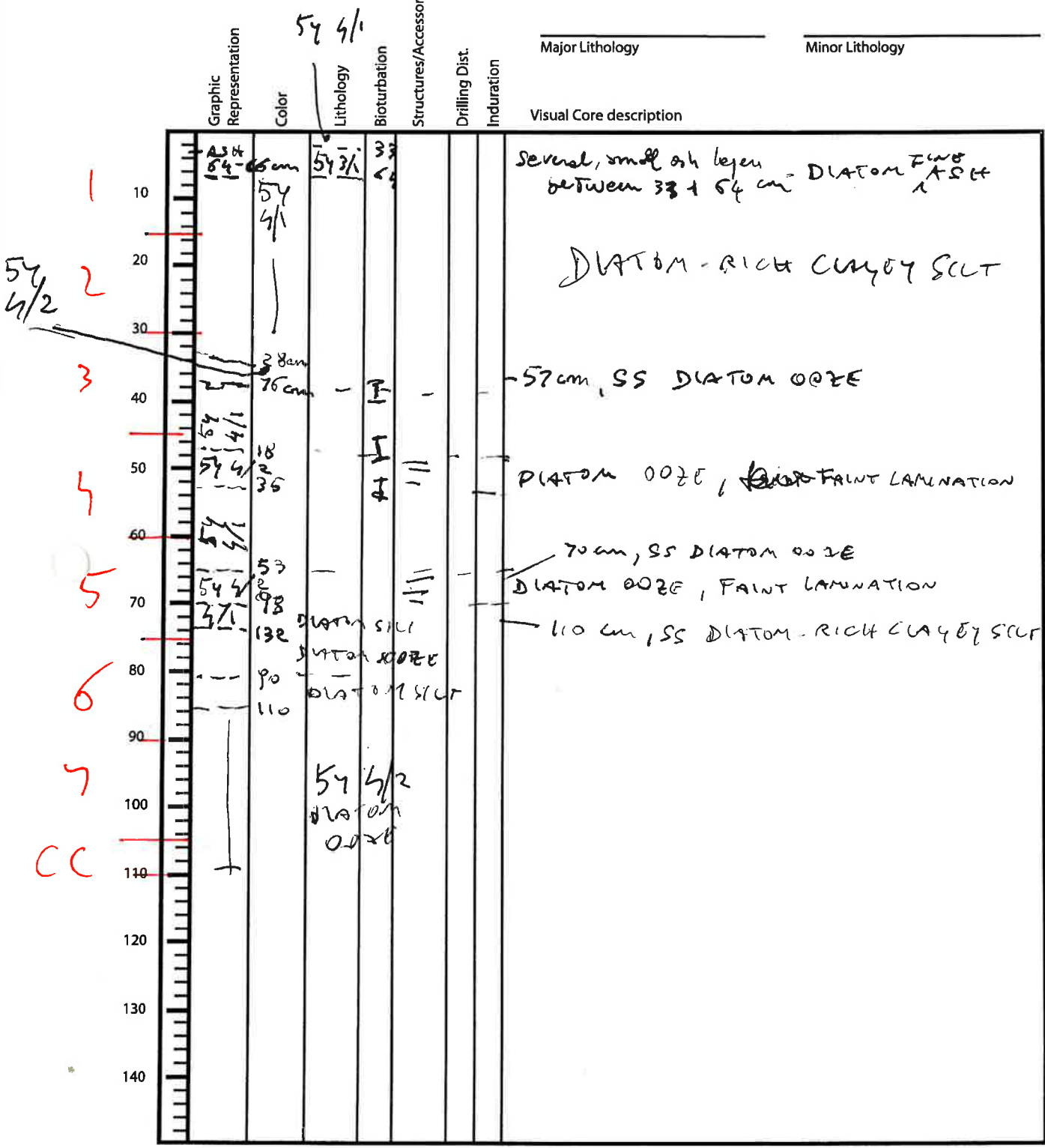
32 cm

Visual Core description

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 Site A 55x Section Top Depth Scale



Observer: _____ Date: _____

X

SM

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	SS	X	3A	57cm	

Sediment/Rock Name	Diatom ooze	Observer	Bet
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Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
	Quartz
2	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
Accessory/trace minerals	
	Micas
	Biotite
	Muscovite
2	Clay Minerals
	Chlorite
	Glaucanite
	Chert
	Zircon
	Ferromagnesium minerals
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
6	Pyrite
	Magnetite
	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
Foraminifera	
	Planktonic foraminifera
	Benthic foraminifera
Nannofossils	
	Coccoliths
	Discoasters
	Pteropods
Siliceous	
2	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
60	Centric
25	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
3	Sponge spicules
	Dinoflagellates
Others	
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	V1340	A	SS	X	SA	70cm	

SM

Sediment/Rock Name	Diatom ooze	Observer	Beth
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Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
2	Quartz
2	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
1	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucinite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
1	Zeolite
	Opaque minerals
5	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
2	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
4	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
50	Centric
30	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
3	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
B23	U1340	A	SS	X	SA	110 cm	

SM

Sediment/Rock Name	Diatom-rich clayey silt	Observer	BeA
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Sand	Percent Texture	
	Silt	Clay
	70	30

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
12	Quartz
10	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
20	Clay Minerals
2	Chlorite
	Glauconite
	Chert
	Zircon
3	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
5	Zeolite
	Opaque minerals
10	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
3	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
5	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
20	Centric
10	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340 Site A Hole 56 Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
1	60 90	5Y4/2 ✓ ✓						
2	40	✓ 5Y4/2 ✓					23. mott. ash ✓	
3	18	✓ ✓	✓ 5					3A 80 diatom ooze
4	52 75	✓ ✓ ✓						
5	27 69	✓ ✓ ✓	50 110					55 5A-60 diatom rich silty clay
6	3 6	✓ ✓ ✓ ✓		SN			36 mott. sand include pebbles ash. igneous? ✓	55 14/20
7	148 143	✓ ✓ ✓ ✓					14	
		5Y4/3 ✓					45	7A-20 diatom sett
							diatom ooze Major. 5Y4/2 olive grey. 2nd. 10Y4/2 dark greenish grey. 3rd. 5Y4/3 olive. (faint laminar)	

Observer: _____ Date: _____

Expedition 323
Bering Sea

4340 A 57 1
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	5Y 1/2		slight		slurry, slight		Visual Core description	
10							0-5 light patches	
20							34-57 dense ash intermixed	
30								
40								
50								
60								
70								
80							M-35 light patch	
90								
100								
110								
120								
130								
140								

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 57 2
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	grey		slight		slurry		56-60 light patch	64-126 dark ash patches + intermixed

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 57 3
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	511A				slugs		16-22 dark ash intermixed	
							46-53 ash intermixed	
							135-140 grad	
	513A							

Observer: _____ Date: _____

Expedition 323
Bering Sea

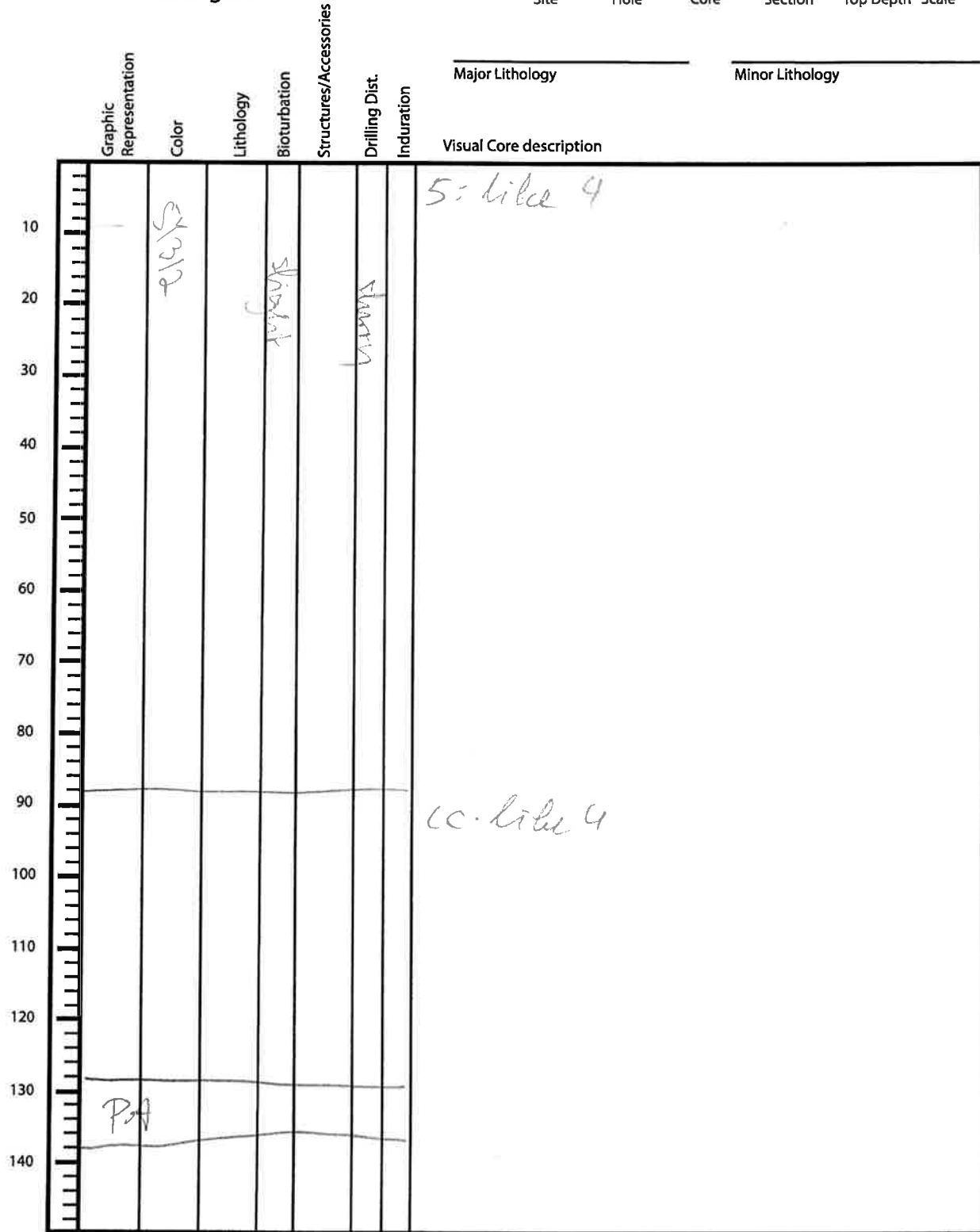
1340 Site A Hole 57 Core 4 Section _____ Top Depth _____ Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
10		SW/S		SW/S		SW/S			
20									
30									
40									
50									
60									
70									
80									
90									
100									
110									
120									
130									
140									
								Visual Core description	
								<p>12 rounded clasts, semi-lith., maybe precipitates</p> <p>0-10% mottling/disturbed lam., dark + greenish</p>	

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 Site A Hole 57 Core S+CC Section _____ Top Depth _____ Scale



Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
			57X		32	84	84

Sediment/Rock Name **Coarse Ash**

Observer **Hiro.A**

Percent Texture		
Sand	Silt	Clay
73/5	20	5

Comments:

Black layer

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
100	Vitric grain 100
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
			57X		3	53 57	53

Sediment/Rock Name	Diatom Ooze	Observer	Hiro A
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Percent Texture		
Sand	Silt	Clay

Comments: White Spot

Percent	Component	19
SILICICLASTIC GRAINS/MINERAL		
Framework minerals		
7	Quartz	2
6	Feldspar	1.5
	K-feldspar (Orthoclase, Microcline...)	
	Plagioclase	
	Rock fragments	
Accessory/trace minerals		
	Micas	
4	Biotite	1
	Muscovite	
	Clay Minerals	
	Chlorite	
	Glauconite	
	Chert	
	Zircon	
	Ferromagnesium minerals	
Authigenic minerals		
	Barite	
	Phosphorite/Apatite	
	Zeolite	
Opaque minerals		
2	Pyrite	0.5
	Magnetite	
	Fe-oxide	
Carbonates		
	Calcite	
	Dolomite	
VOLCANICLASTIC GRAINS 3		
	Crystal grain	
3	Vitric grain	1
	Lithic grain	

Percent	Component	28
BIOGENIC GRAINS		
Calcareous		
Foraminifera		
	Planktonic foraminifera	
	Benthic foraminifera	
	Nannofossils	
	Coccoliths	
	Discoasters	
	Pteropods	
Siliceous		
	Radiolarians	
	Spumellaria	
	Nassellaria	
	Diatoms	
56	Centric	15
11	Pennate	3
	Chaetoceros Resting Spores	
<1	Silicoflagellates	
11	Sponge spicules	3
	Dinoflagellates	
Others		
	Pollen	
	Organic debris	
	Plant debris	
	Ebridians	
	Echinoderm	
	Fish remains (teeth, bones, scales)	
	Bryozoans	
	Bivalves	
	Others	

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
			57X		3	97	97

Sediment/Rock Name	B: Diatom Ooze	Observer	Hiro
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Percent Texture		
Sand	Silt	Clay

Comments: Olive Main Litho

28, 15

Percent	Component
	SILICICLASTIC GRAINS/MINERAL 8
	Framework minerals
3	Quartz /
3	Feldspar / 2
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
2	Opaque minerals 0.5 2+
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
	BIOGENIC GRAINS 92
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
78.5	Centric 25 25 20 15 23
7	Pennate 2
	Chaetoceros Resting Spores
	Silicoflagellates
7	Sponge spicules 2
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
			57X		5	35	38

Sediment/Rock Name	Diatom ooze	Observer	
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Percent Texture		
Sand	Silt	Clay

Comments: Main Lith. Dark

Percent	Component
SILICICLASTIC GRAINS/MINERAL 21	
	Framework minerals
6	Quartz 1
6	Feldspar 1
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
3	Micas 0.5
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucinite
	Chert
	Zircon
6	Ferromagnesium minerals 1
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS 29	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
61	Diatoms 10
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
18	Sponge spicules 3
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340 A 5B 1
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	15/13						135-140 grad	140-150 dark ash intermixed
	25/12							

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 59 2
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	2.5 x 4/2						0-70 dense ash intermixed	
	2.5 x 1/4						60-70 grad.	
							70-150 Semilith. granular layers + patches, maybe auth. prec.	

Observer: _____ Date: _____

Expedition 323
Bering Sea


1340 A 59 3 _____
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	2.5 5/4						0-10 semi-lith. m. to	
	2.5 4/2						50-60 grad.	
							60-150 mottled light brown + dark patches, maybe biot. lam.	

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 55 4 _____
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Biorturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	2.5 514							
Visual Core description								
40 - 110 mottling ... "								

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 59 5 _____
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
	25x 514							
							70-80 grad.	
	25x 4182						135-150 intermixed dark ash	

Observer: _____ Date: _____

Expedition 323
Bering Sea

1840 A 5B 6
 Site Hole Core Section Top Depth Scale

Depth (cm)	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
								Visual Core description	
10		2.5 4/21							
20		2.5 5/4							
30									
40									
50		2.5 4/3							
60									
70									
80									
90									
100									
110									
120									
130									
140									

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 59 71CC
Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
10		2.57 15/13							
20									
30									
40									
50									
60									
70									
80									
90									
100									
110									
120									
130									
140									

Visual Core description

7 =

CC

PAL

Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
			58X		2	130	

Sediment/Rock Name	# Diatom Silt (Dolomite)	Observer	HWA
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Percent Texture		
Sand	Silt	Clay
9	87	4

Comments: Main Litho
Light Brown.

Percent	Component
SILICICLASTIC GRAINS/MINERAL 41	
	Framework minerals
42	Quartz 7
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Aauthigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
37	Dolomite 7
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS 58	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
53	Centric 10
5	Pennate 1
	<i>Chaetoceros</i> Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

S.M.

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
			55-X		4	60	60

Sediment/Rock Name	Diatom ooze (Authigenic Carbonate)	Observer	H.W. A
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Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERAL 22
	Framework minerals
4	Quartz 1
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
18	Carbonates (Authigenic 2-5mm)
	Calcite (Authigenic)
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain 25
	Lithic grain

Percent	Component
	BIOGENIC GRAINS 28
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
71	Centric 20
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
7	Sponge spicules 2
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340 A 63 A2
 Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
	2.5 3/2						1: white small nodules 5-45 light patches	
	2.5 4/3						40-50 grad	
	2 ↓						2 30-34 light patches 31-42 void along line	
	5 4/3						48 sharp 80-100 grad	
	5 3/2				1 slurry		105	

Observer: _____ Date: _____

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
			63		1	120	120

Sediment/Rock Name	Diatom ooze	Observer	Hiro A
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Percent Texture		
Sand	Silt	Clay

Comments: Major 2

Percent	Component
	SILICICLASTIC GRAINS/MINERAL 5
	Framework minerals
57	Quartz 0.5
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS 4
	Crystal grain
4	Vitric grain 0.5
	Lithic grain

Percent	Component
	BIOGENIC GRAINS 91
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
83	Centric 16
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
8	Sponge spicules 1
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
			63		2	90	90

Sediment/Rock Name	Diatom case	Observer	HWA
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Percent Texture		
Sand	Silt	Clay

Comments: Major 1

Percent	Component
SILICICLASTIC GRAINS/MINERAL 6	
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
6	Clay Minerals 0.25
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS 6	
	Crystal grain
	Vitric grain 0.25
	Lithic grain

Percent	Component
BIOGENIC GRAINS 88	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
50	Centric 2
25	Pennate 0.5 /
	Chaetoceros Resting Spores
	Silicoflagellates
13	Sponge spicules 0.15
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

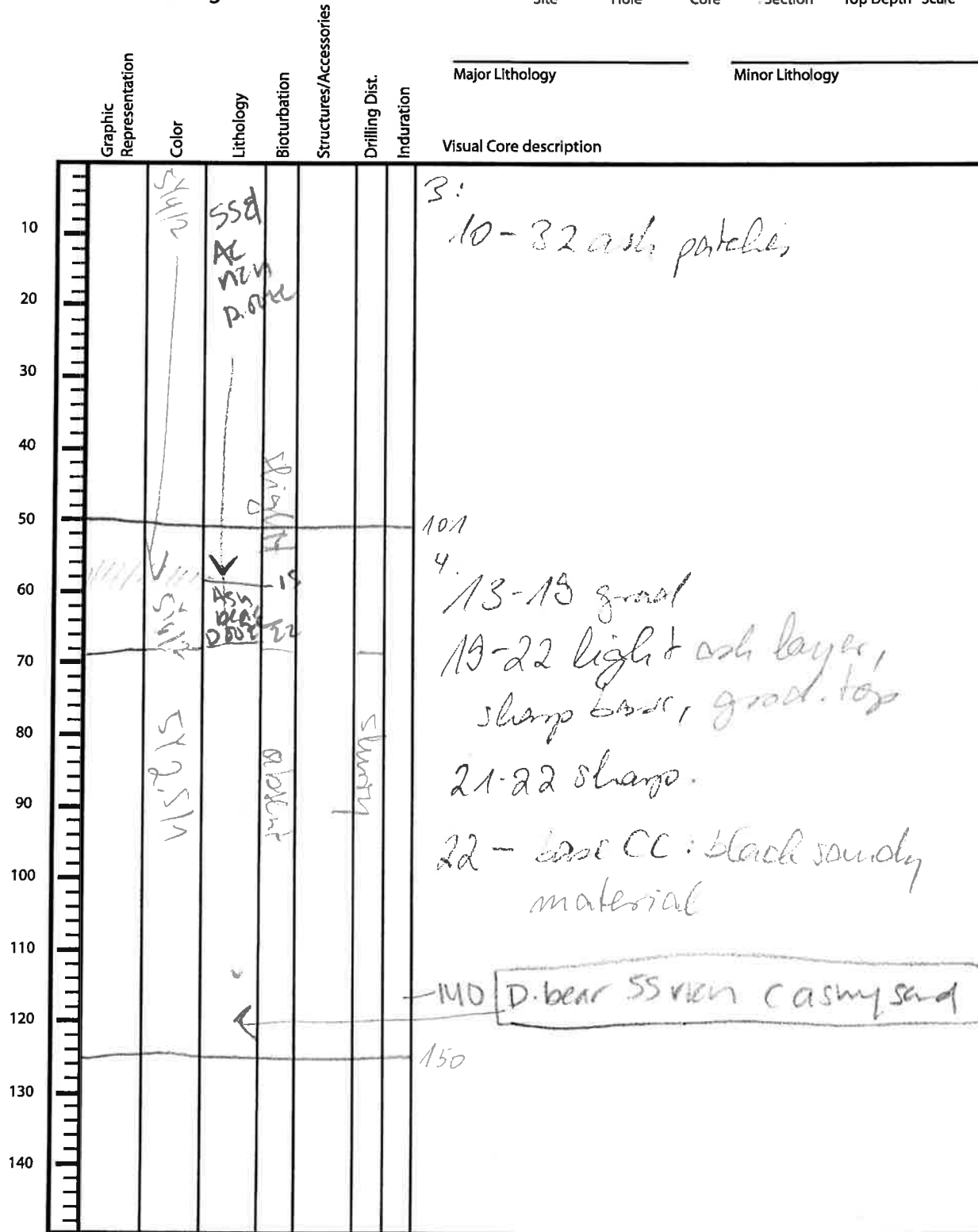
1340 A 64 1+2
Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology	Visual Core description
10		S1 S1/R1	D. ooze							1 3-5 subang. clasts, upto 1 cm of 6-8 grad.
20		S1 S1/R1	SS & AC new D. ooze							8-10 white nodules
30		S1 S1/R1								
40										80 SS & AC new d ooze
50										102-140 dark ash patches
60										
70										
80										2
90										16-18 tilted dark ash layer
100			SS SS D. ooze F. ash							30-60 grad 65 SS bear d. ooze
110		S1 S1/R1								69-71 sharp cont., bent
120			SS & AC new D. ooze.							60-71 dark ash layer
130		S1 S1/R1								124-130 light patches - Ash!
140										30 SS bear d-new F. ash

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 64 3+4
Site Hole Core Section Top Depth Scale



Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 64 5+6
Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
10									
20									
30	○	VIS 6.5		Absent		starry			
40									
50									
60									
70									
80				↓		↓			
90									
100									
110									
120									
130				↓		↓			
140		PAL		↓		↓			

5:
42-49 = 5Y7/1 whitish
round, homogeneous
"mud clast", very strange...
maybe mould, Steinkern

146 D-non fine ash

150
6:
D-bearing SS-rich coarse ash sand

Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	64	H	2	65	65

SM

Sediment/Rock Name	<i>Sp. spicule-bearing diatom ooze</i>	Observer	
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Percent Texture		
Sand	Silt	Clay

Comments: *Bottom of dark interval*

Percent	Component
22	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
4	✓ Quartz
2	✓ Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
8	✓ Pyrite
	Magnetite
3	✓ Fe-oxide
	Carbonates
5	✓ Calcite
	Dolomite
15	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
(15)	Lithic grain

Percent	Component
63	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
49	✓ Centric
7	✓ Pennate
	<i>Chaetoceros</i> Resting Spores
	✓ Silicoflagellates
6	✓ Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	64	H	2	130	130

Sediment/Rock Name	<i>Sp Spic beaurg - diatom rich - fine ash</i>	Observer	
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Percent Texture		
Sand	Silt	Clay
	100	

Comments: *Pink layer (ash?)*

V

63

Percent	Component
14	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
5	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
3	Pyrite
	Magnetite
1	✓ Fe-oxide
	Carbonates
	Calcite
	Dolomite
61	VOLCANICLASTIC GRAINS
	Crystal grain
61	Vitric grain
	Lithic grain

Percent	Component
25	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
10	Centric
5	Pennate
	<i>Chaetoceros</i> Resting Spores
	Silicoflagellates
10	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	64	H	4	140	140

SM

Sediment/Rock Name	Diatom-bearing sponge-spicule-rich coarse-ashy sand	Observer	MSC
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Percent Texture		
Sand	Silt	Clay
90	10	

Comments: main lithology (blk sand)

Percent	Component
40	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
22	✓ Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
5	✓ Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
10	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
3	✓ Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
30	VOLCANICLASTIC GRAINS
	Crystal grain
	✓ Vitric grain
	Lithic grain

Percent	Component
30	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
8	✓ Centric
2	✓ Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
20	✓ Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

SM

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	64	H	5	46	46

Sediment/Rock Name	Diatom-rich fine ash	Observer	MSC
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Percent Texture		
Sand	Silt	Clay
	90	10

Comments: white round lens w/in blue band

Percent	Component
10	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
7	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	? Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucinite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
3	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
50	VOLCANICLASTIC GRAINS
	Crystal grain
50	Vitric grain
	Lithic grain

Percent	Component
40	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
20	Centric
15	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
5	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	64	H	6	90	90

SM

Sediment/Rock Name	Diatom-bearing, sponge-spicule-rich coarse-ashy sand	Observer	MSC
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Percent Texture		
Sand	Silt	Clay
87	10	3

Comments: Main lithology (blk sand)

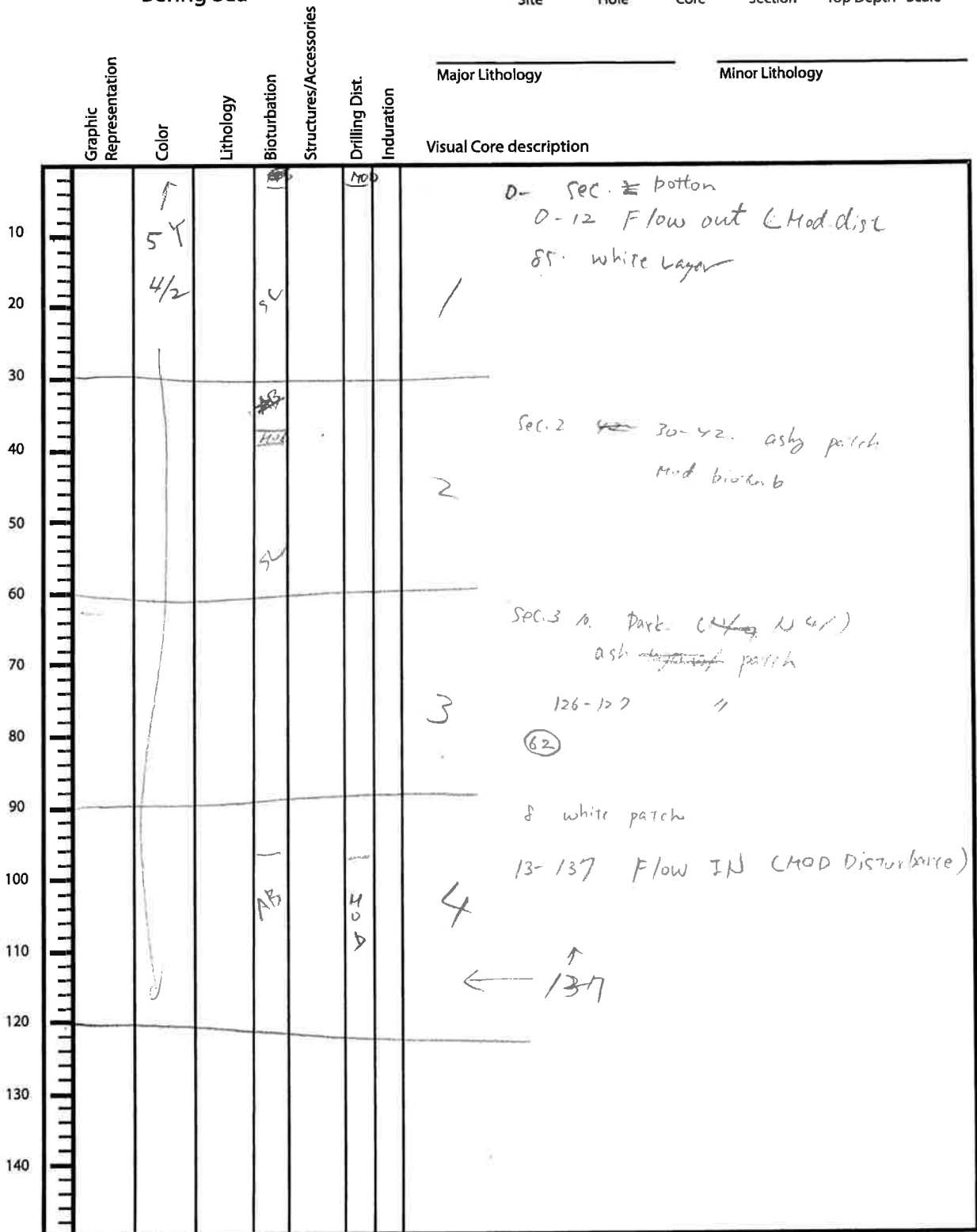
Wait for thin for more detail grains NOT reworked

Percent	Component
50	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
30	✓ Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
5	✓ Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
15	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
25	VOLCANICLASTIC GRAINS
	Crystal grain
25	✓ Vitric grain
	Lithic grain

Percent	Component
25	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
8	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
17	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340 A 65H¹⁻⁴
Site Hole Core Section Top Depth Scale



Observer: W. J. ... Date: _____

Expedition 323
Bering Sea

Spongy Spicules heavily ash ^{carbonate-rich} ^{Antipac 66} ^{biatom ooze}

1340 A ~~65~~ ~~3+4+cc~~
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
	5Y 4/3		sl				0-6 Drilling Dist. pieces	
	5Y 4/3		mod				0 6-100 5Y 4/3	
	5Y 3/2		sl				1 80-100 grad. ashy patch	
	5Y 3/2						0 100-150 5Y 3/2	
	5Y 4/3						0-95 60 5Y 3/2 4/3	
	5Y 3/2						60-90 grad.	
	5Y 3/2						2 90-sec. 3, 50 5Y 3/2	
	5Y 3/2						grad. 30-50	
	5Y 3/2						grad 50-90 5Y 3/2 (little darker)	
	5Y 4/3						0 90-110 5Y 4/3	
	5Y 4/3						0 103-104 white ash (5Y 7/1)	
	5Y 4/3						0 110-112 ash (") patch	
	5Y 4/3						114-140 5Y 4/3	
	5Y 4/3						138-142 grad.	
	5Y 4/3						142- Bottom 5Y 4/3	
	5Y 4/4						← 87cm 35-89	

Observer: Krause Date: _____

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	66	H	2A	70	70

5A

Sediment/Rock Name	Sp-Spicule bearing, authigenic carbonate-rich diatom ooze	Observer	
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Percent Texture		
Sand	Silt	Clay

Comments: main lithology

Percent	Component
24	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
4	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucinite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
3	✓ Pyrite
	Magnetite
2	✓ Fe-oxide
15	Carbonates <i>authigenic</i> □
	Calcite
	Dolomite
3	VOLCANICLASTIC GRAINS
	Crystal grain
3	Vitric grain
	Lithic grain

Percent	Component
73	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
50	✓ Centric
13	✓ Pennate
	<i>Chaetoceros</i> Resting Spores
	Silicoflagellates
10	✓ Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340 Site A Hole 674 Core 1-2 Section _____ Top Depth _____ Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
							54 2.5/1 (D-4) Sharp contact	
							0 0-38 5T 4/2	
							0 38-85 white ash (Mod. B.T.)	
							0 38-80 sd white ash sd. grad. B	
	54 1/2						(5T 7/2)	
	54 1/3						1 045-70 3T 4/2	
							0 70-106 5T 3/2	prod. sec.
							0 106 - Sec. 2, 29 5T 4/3	
							0 Sec. 2, 29-36 (SD) ashy patch 5T 2.5/1	
							29 (SD) 5T 4/3 (MOD B.T.)	
							0 36-50 5T 4/3	
							0 54-70 (D) 5T 4/2 (MOD B.T.)	
							(SD) ash (54 2.5/1)	
							0 70-114 5T 3/1	
							0 114-13 5T 4/3	

Observer: Richard A. ... Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

SM

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	UB40	A	67	H	2	50	50

Sediment/Rock Name	Sp. spicule bearing diatom ooze	Observer	MSC
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Percent Texture		
Sand	Silt	Clay

Comments: main lithology

Percent	Component
15	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
5	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucanite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
5	Pyrite
	Magnetite
2	Fe-oxide
3	Carbonates <i>authigenic</i>
	Calcite
	Dolomite
5	VOLCANICLASTIC GRAINS
	Crystal grain
5	Vitric grain
	Lithic grain

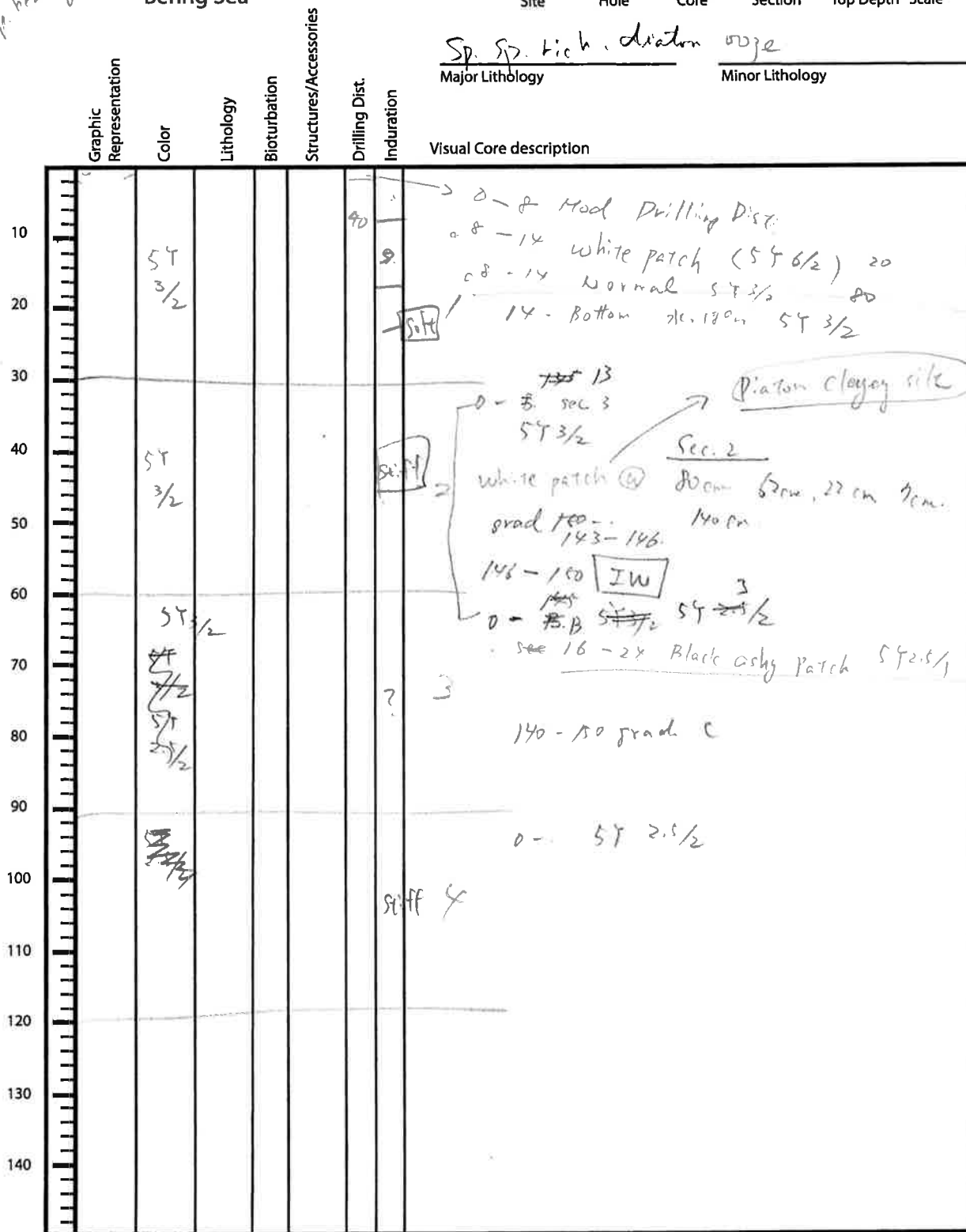
Percent	Component
80	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
60	Centric
10	Pennate
	<i>Chaetoceros</i> Resting Spores
	Silicoflagellates
10	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

67. sp bearing heavy diatom ooze

Expedition 323
Bering Sea

Site 'A' Hole 60x Core 1-4 Section 1 Top Depth 1 Scale

Major Lithology Sp. sp. rich diatom ooze Minor Lithology



B.7
Mud

Observer: _____ Date: _____

Expedition 323
Bering Sea

1380 Site A Hole 68X Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
								o sec. 5. 5T 3/2 throughout
	5T 3/2				RTF		5	
								o 50-55 Bioturbated. (Mod)
								o 50-60 5T 3/2 (white layers)
	5T 4/3		5T 4/3 Mod		RTF		6	o 60-90 5T 4/2
								10-100 grad.
								o 100-150 148 2/148-150 grad
								5T 3/2
	5T 4/2							o 46-48 5T 4/2
					RTF		7	Spec. 6 148
	5T 3/2							46-48 grad.
								o 46-B. 5T 3/2
								8
	5T 3/2						CC	o 24 Crack. (Mod. disc)
								24-30 pieces. (Heavy disc)

Observer: _____ Date: _____

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

SM

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	68	X	6	57	57

Sediment/Rock Name	Sp. Spicull-rich diatom ooze	Observer	MSC
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Percent Texture		
Sand	Silt	Clay

Comments: paler green interval

Percent	Component
18	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
10	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
3	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
82	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
60	Centric
10	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
17	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

SM

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	68X		5	80	80

Sediment/Rock Name	Sp. Spicule-rich diatom ooze	Observer	MSC

Percent Texture		
Sand	Silt	Clay

Comments: Main lithology

Percent	Component
8	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
5	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucanite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
3	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
92	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
50	Centric
12	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
30	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

SM

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	68X		2	30	30

Sediment/Rock Name	Diatom layered silt	Observer	MSC
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Percent Texture		
Sand	Silt	Clay
5	50	45

Comments: white blebs

5

Percent	Component
(45)	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
40	Quartz perhaps C/T?
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
5	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
(55)	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
3	Centric
42	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
10	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

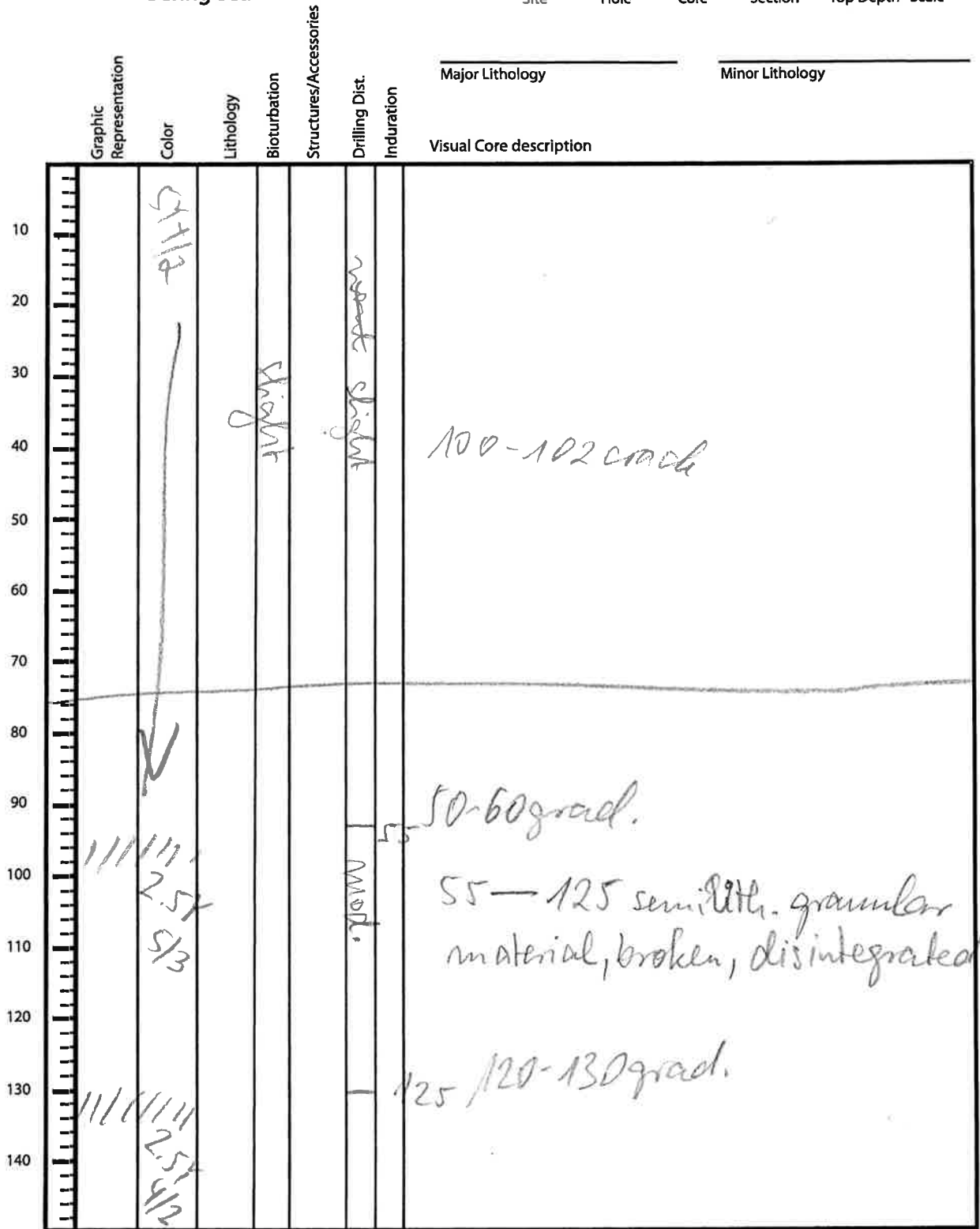
1340 A 69 1+2
 Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist	Induration	Major Lithology	Minor Lithology
							Visual Core description	
	5Y 10/1							
			slight		slight			90-118 mod. alist
					mod.			
					slight			
	5Y 10/1							95-20 grad
	5Y 10/1							
	5Y 10/2							70-80 grad.
	5Y 10/2							

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 69 3+4
 Site Hole Core Section Top Depth Scale



Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 63 5+6
 Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
	SY 4/2							5-105 dark ash intermixed
	SY 3/2							4-6 grad. 11-13 grad.
	SY 4/5							65-82 dark ash intermixed
								90-100 grad 101

Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	69	X	2	20	20

SM

Sediment/Rock Name	Spicule bearing Diatomooze	Observer	
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Percent Texture		
Sand	Silt	Clay

Comments: Main Lithology

Percent	Component
(15)	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
7	Quartz
3	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	✓ Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
3	Pyrite
	Magnetite
2	Fe-oxide
	Carbonates
	Calcite
	Dolomite
(7)	VOLCANICLASTIC GRAINS
	Crystal grain
7	Vitric grain
	Lithic grain

Percent	Component
(78)	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
45	Centric
25	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
8	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

SM

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	69	X	4	107	107

Sediment/Rock Name	Diatom - auth carbonate	Observer	MSC
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Percent Texture		
Sand	Silt	Clay

Comments: *semi-lithified interval*

Percent	Component
50	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
50	Carbonates <i>authigenic</i>
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
50	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
25	Centric
20	Pennate
	<i>Chaetoceros</i> Resting Spores
	Silicoflagellates
5	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	69	X	5	100	100

SM

Sediment/Rock Name	Diatom ooze	Observer	MSC
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Percent Texture		
Sand	Silt	Clay

Comments: Main lithology

Percent	Component
17	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
10	Quartz
2	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
5	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
5	VOLCANICLASTIC GRAINS
	Crystal grain
5	Vitric grain
	Lithic grain

Percent	Component
78	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
48	Centric
30	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
3	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	69	X	7	15	15

Sediment/Rock Name	Diatom auth carbonate	Observer	MSC
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Percent Texture		
Sand	Silt	Clay

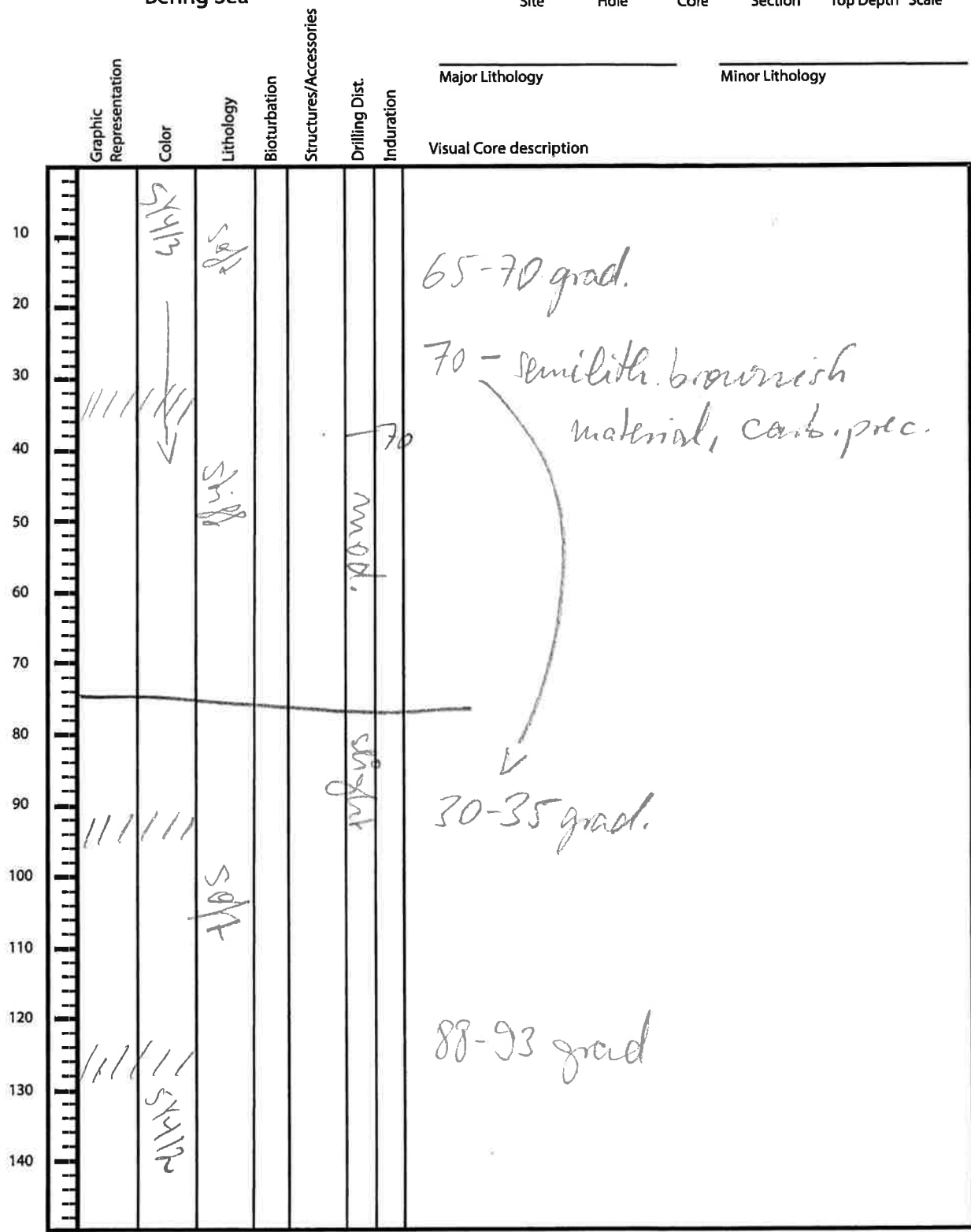
Comments: Main lithology

Percent	Component
60	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucanite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
60	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
40	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
20	Centric
18	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
2	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

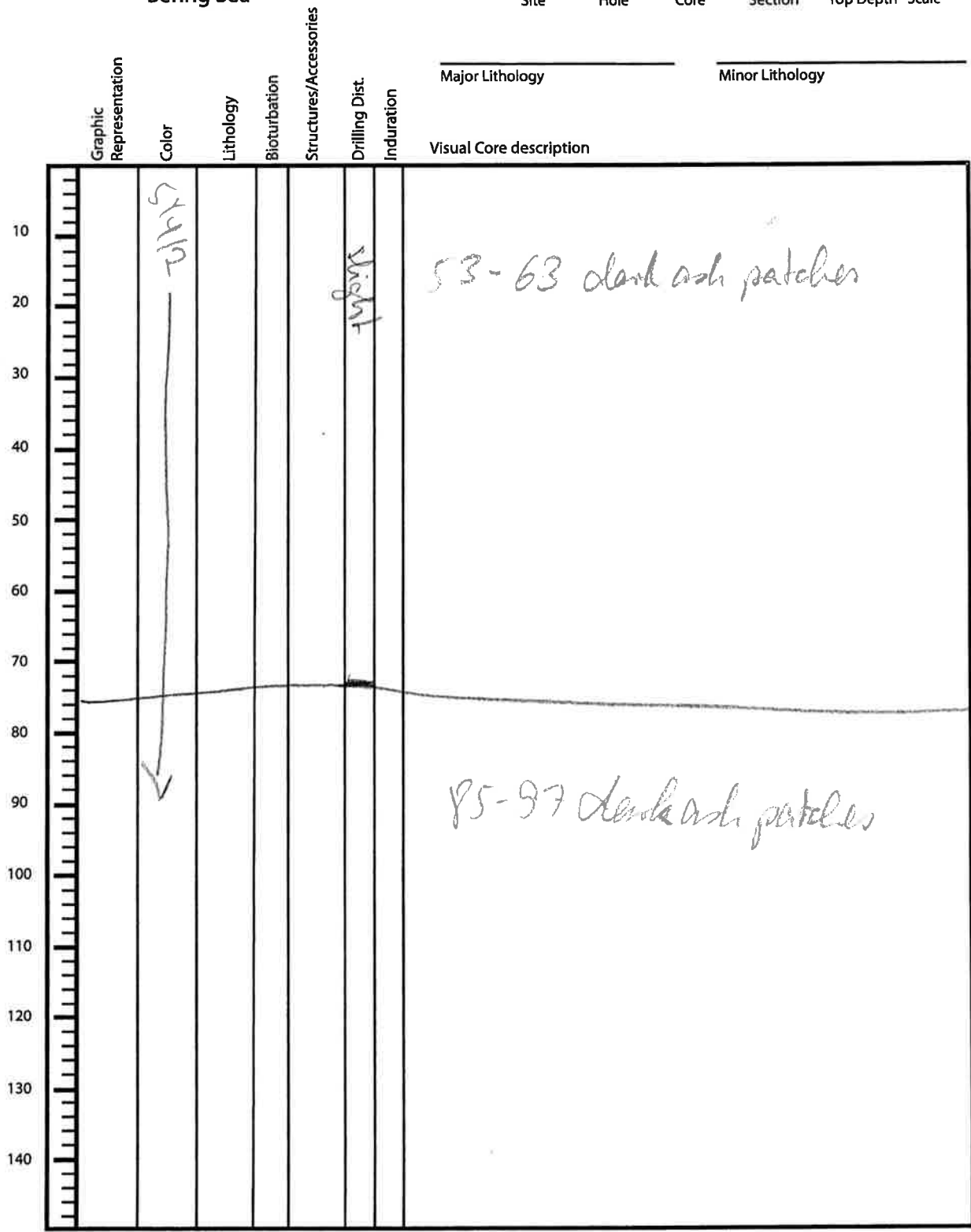
1340 Site A 70 Core 1+2 Section _____ Top Depth _____ Scale _____



Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 Site A Hole 70 Core 3+4 Section _____ Top Depth _____ Scale



Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 70 S+6 _____
Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology	Visual Core description
10		blks								
20										
30										
40										
50										
60										
70										
80										
90										
100		↓								105-110 grad
110										
120										
130										
140		S+6								

Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

SM

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	70	X	6	70	70

Sediment/Rock Name	Diatom ooze	Observer	
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Percent Texture		
Sand	Silt	Clay

Comments: Main lithology

Percent	Component
(15)	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
5	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glaucanite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
5	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
(85)	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
65	Centric
15	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
5	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

SM

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1340	A	70	X	2	70	70

Sediment/Rock Name	Diatom ooze	Observer	
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Percent Texture		
Sand	Silt	Clay

Comments: Main lithology

Percent	Component
6	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
3	Quartz
3	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
94	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
65	Centric
24	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
5	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

B46 A 71 _____
Site Hole Core Section Top Depth Scale

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
							Visual Core description	
1	51 4/3						28.36 } mott 1-2m 46 } 104 } yellow	
2							0108 mott 1-2m yellow	2A-100
3							012 mott 1-2m spiculi ↑ wet	
4							53 of wet to dry	4A-130
5	51 4/2						78 pebble 1cm grey dry 7-2m white patch mott spiculi?	
6							12-17 mott 112. 116. 133 149 Δ	
7	5						5-53 lam sand 7 spiculi patch scattered 45-47 ash in lam. thin	55 7A-20 grey spiculi diatom clay 55 7A-18 light
							All spiculi diatom clay. color change. 514/3. Sect 1-Sect 514/2 Second [515/4 with lam. → 516/2	

Observer: _____ Date: _____

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)
	U1339A	71X	7A			18cm
Sediment/Rock Name	Spicule-diatom ooze		Observer	Beh		
Comments:	light lam		Percent	Turbid	Silt	Clay

Percent	Component	Percent	Component
	SILICICLASTIC GRAINS/MINERAL		BIOGENIC GRAINS
	Framework minerals		Calcareous Foraminifera
2	Quartz		Planktonic foraminifera
5	Feldspar		Benthic foraminifera
	K-feldspar (Orthoclase, Microcline...)		Nannofossils
5	Plagioclase		Coccoliths
	Rock fragments		Discoasters
	Accessory/trace minerals		Pteropods
	Micas		
	Biotite		
	Muscovite		Siliceous
10	Clay Minerals		Radiolarians
	Chlorite		Spumellana
	Glauconite		Nassellaria
	Chert		Diatoms
	Zircon	35	Centric
3	Ferromagnesium minerals	5	Pennate
			Chaetoceros Resting Spores
	Authigenic minerals		Silicoflagellates
	Barite		Sponge spicules
	Phosphorite/Apatite	40	Dinoflagellates
	Zeolite		
	Opaque minerals		Others
	Pyrite		Pollen
	Magnetite		Organic debris
	Fe-oxide		Plant debris
	Carbonates		Ebridians
	Calcite		Echinoderm
	Dolomite		Fish remains (teeth, bones, scales)
			Bryozoans
	VOLCANICLASTIC GRAINS		Bivalves
	Crystal grain		Others
	Vitric grain		
	Lithic grain		

SM

X

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)
B23	V1341A	71X	7A	7A	20cm	Bottom

Sediment/Rock Name: Spicule diatom clay
 Observer: BCH

Sand	Silt	Clay
10	10	80

Comments:

B-50
S-35
V-15

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
30	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Bamite
	Phosphonite/Apatite
	Zeolite
	Opaque minerals
5	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
15	Vitric grain
	Lithic grain

Percent	Component
	BIOGENIC GRAINS
	Calcareous Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
25	Centric
5	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
20	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others