

Expedition 323
Bering Sea

1342 Site D Hole 14 Core 1+2 Section _____ Top Depth

Graphic Representation	Color	Lithology	Bioturbation Structures/Accessories	Drilling Dist. Samples	Major Lithology	Minor Lithology
					Visual Core description	
	5Y4/3	Sandy	obs. beam	12		
	5Y4/3+ 5Y3/2 50/50				35	
	10Y4/1		slight			
	↓	↓				115-136 mottled, ash
	5Y4/2+ 10Y4/1 50/50		mod.	70		0-70 mottled
			slight			45-53 ash mottles
	5Y4/1					65-70 grad.
	↓					

Observer: _____ Date: _____

Expedition 323
Bering Sea

1342 D AH 3+4+cc
Site Hole Core Section Top Depth

Depth (cm)	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Samples	Major Lithology	Minor Lithology
								Visual Core description	
10		10Y4/1							
15		5Y4/3						14 sharp	14-22 parallel thin lam.
20		5Y4/1						22-24 grad.	
25		5Y4/2						40-44 grad.	
30		5Y4/1						65-75 grad.	
35		10Y4/1						85-90 grad.	
40		5Y4/1							
45		10Y4/1							
50		5Y4/1							
55		10Y4/1							
60		5Y4/1							
65		10Y4/1							
70		5Y4/1							
75		10Y4/1							
80		5Y4/1						20-33 mottled	
85		10Y4/1						33 sharp	
90		5Y4/1							
95		10Y4/1							
100		5Y4/1							
105		10Y4/1						48-55 grad.	
110		5Y4/1							
115		10Y4/1						70-80 grad.	
120		5Y4/1							
125		10Y4/1						75-125 punctures	
130		5Y4/1							
135		10Y4/1							
140		5Y4/1							
145		10Y4/1							
150		5Y4/1							
155		10Y4/1							
160		5Y4/1							
165		10Y4/1							
170		5Y4/1							
175		10Y4/1							
180		5Y4/1							
185		10Y4/1							
190		5Y4/1							
195		10Y4/1							
200		5Y4/1							
205		10Y4/1							
210		5Y4/1							
215		10Y4/1							
220		5Y4/1							
225		10Y4/1							
230		5Y4/1							
235		10Y4/1							
240		5Y4/1							
245		10Y4/1							
250		5Y4/1							
255		10Y4/1							
260		5Y4/1							
265		10Y4/1							
270		5Y4/1							
275		10Y4/1							
280		5Y4/1							
285		10Y4/1							
290		5Y4/1							
295		10Y4/1							
300		5Y4/1							
305		10Y4/1							
310		5Y4/1							
315		10Y4/1							
320		5Y4/1							
325		10Y4/1							
330		5Y4/1							
335		10Y4/1							
340		5Y4/1							
345		10Y4/1							
350		5Y4/1							
355		10Y4/1							
360		5Y4/1							
365		10Y4/1							
370		5Y4/1							
375		10Y4/1							
380		5Y4/1							
385		10Y4/1							
390		5Y4/1							
395		10Y4/1							
400		5Y4/1							
405		10Y4/1							
410		5Y4/1							
415		10Y4/1							
420		5Y4/1							
425		10Y4/1							
430		5Y4/1							
435		10Y4/1							
440		5Y4/1							
445		10Y4/1							
450		5Y4/1							
455		10Y4/1							
460		5Y4/1							
465		10Y4/1							
470		5Y4/1							
475		10Y4/1							
480		5Y4/1							
485		10Y4/1							
490		5Y4/1							
495		10Y4/1							
500		5Y4/1							

CC

Observer: _____ Date: _____

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1342	D	1	H	1	8	8

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

Comments: Main lith - pale green

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
5	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
3	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
12	Foraminifera + fragments
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
3	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
25	Centric
45	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	U1342	D	1	H	1	13	13

Sediment/Rock Name	Nanno + Gram-rich diatom ooze	Observer	MSC
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Percent Texture		
Sand	Silt	Clay

Comments: Main - darker green

Percent	Component
3	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
2	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
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

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

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IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	M1342	D	1	H	1	80	80

Sediment/Rock Name	Foram + Nanno-rich diatom clayey silt	Observer	MSC
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Percent Texture		
Sand	Silt	Clay
	60	40

S

Comments: Main lith - green grey

Percent	Component
48 SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
10	Quartz
10	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
25	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
52 BIOGENIC GRAINS	
10	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
12	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
15	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

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1342	D	I	H	3	32	32

Sediment/Rock Name	Diatom-rich silty clay.	Observer	MSC
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Percent Texture		
Sand	Silt	Clay
1	44	55

Comments: Main lith - grey

Percent	Component
69 SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
15	Quartz
20	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
3	Pyrite
	Magnetite
1	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
31 BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
13	Centric
18	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

1842 Site D 2H Core 1+2 Section Top Depth

Graphic Representation	Color	Lithology	Bioturbation Structures/Accessories	Drilling Dist. Samples	Major Lithology	Minor Lithology
00	5Y 3/2	D bear Foram-rich silt	S mottled			Flow in on side of core 0-30 Foram-b/burrows + thick lam
	10Y 3/1	II				30 grad
		Diatom silt				rounded black 3mm clast
			S	soft		92-106 Slightly sandy in large burrows
	5Y 4/3	DO III	S			thin lam 136 bioturbated contact
	10Y 3/1	DS	S			136-148 laminated diatom ooze + foraminifera diatom ooze (III) *
	5Y 4/3	III DO	S			148
	10Y 3/1	DS	S			12 burrows
						20
	10Y 3/1	DS				42 Grad boundary
		S				55-59 D bear f-rich silt.
						73 Grad.
	10Y 3/1	DS				

DS = Diatom bearing clayey silt (10Y 3/1) - gray
 (S) = D bear fram-rich silt 5Y 3/2 dK olive gray
 III = F bear diatom ooze (5Y 4/3) (DO) olive

Observer: _____ Date: _____

Expedition 323
Bering Sea

1342 Site J Hole 2H Core 3+4 Section _____ Top Depth

57-59

Sec 3

Sec 4

Depth (cm)	Graphic Representation	Color	Lithology	Bioturbation Structures/Accessories	Drilling Dist. Samples	Major Lithology	Minor Lithology
						Visual Core description	
20							
40		10Y 3/1	DS	S			
60			DS	S			57 Grad 59 Sharp
80		10Y 3/1	DS	S ↑f			↑ Increase in sandiness + ↓ % of mica (?)
100							103 Grad
120		5Y 3/2	Dbr Frm S	S			104-110 Chondrites
140			DO				129 130
160		10Y 3/1	DS	S			
180		"	"	S			10
200			DO				
300							37
500		5Y 3/2	S	SS ↑f			↑ Increase in sand (may be due to bioturbation)
700							69
900		10Y 3/1	DS	S			85 smear slide D bear clayey silt.
1100							94
1300		5Y 3/2	S	SS ↑f			
1500							117
1700		10Y 3/1	DS	SS			
1900							141
2100		5Y 3/2	S				145

Observer: _____ Date: _____

Expedition 323
Bering Sea

1342 D 2H 5+6
Site Hole Core Section Top Depth

Depth (cm)	Graphic Representation	Color	Lithology	Bioturbation Structures/Accessories	Drilling Dist. Samples	Major Lithology	Minor Lithology
						Visual Core description	
10							
20							
30			DS				
40		10Y 3/1		SS			Chondrites
50							48-63 Weak red ashly blebs in burrows
60							
70							
80						145	
90			III DO			0	55-18 F-bear diatom ooze
100		10Y 3/1	DS			3F	
110		5Y 3/2	DS S	↑Fn		48*	
120			DS	S		79	
130			DO	A		89*	
140			DS			100*	
150			S			110	
						137	

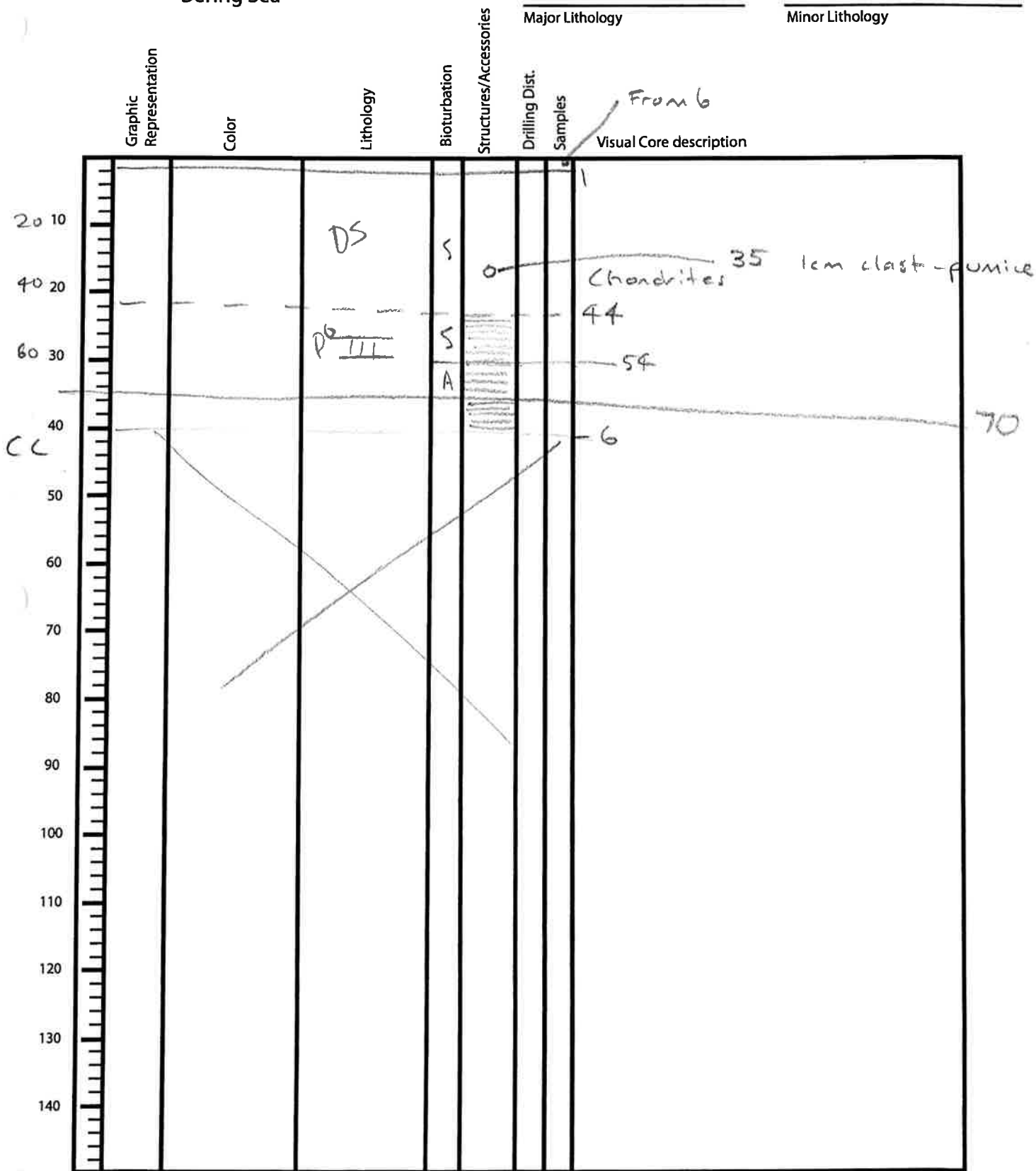
Sect 5

Sect 6

Observer: _____ Date: _____

Expedition 323
Bering Sea

1342 Site D Hole 2H Core 7+cc Section _____ Top Depth



Observer: _____ Date: _____

X

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1342	D	2	H	2	59	59

Sediment/Rock Name	diatom-bearing foram-rich silt	Observer	MSC
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Percent Texture		
Sand	Silt	Clay
10	80	10

Comments:

Main lith - greenish grey silt

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
17	Quartz 3
28	Feldspar 5
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
28	Rock fragments 5
Accessory/trace minerals	
	Micas
	Biotite
	Muscovite
17	Clay Minerals 3
	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	
28	Foraminifera 5 fragment
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
Siliceous	
	Radiolarians
	Spumellaria
	Nassellaria
11	Diatoms 2
	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

SM
2

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1342	D	2	H	4	84	84

Sediment/Rock Name	diatom-bearing clayey silt	Observer	MSC
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Percent Texture		
Sand	Silt	Clay

Comments: Main lithology: gres

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
57 17	Quartz 17
18 12	Feldspar 12
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
11	Rock fragments 3
Accessory/trace minerals	
	Micas
	Biotite
	Muscovite
25	Clay Minerals 7
	Chlorite
	Glauconite
	Chert
	Zircon
7	Ferromagnesium minerals 2
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
4	Pyrite 1
	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
11	Diatoms 2.3
	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	U1342	D	2	H	6	18	18

Sediment/Rock Name	diatom ooze	Observer	MSC
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foram-~~rich~~
bearing

Percent Texture		
Sand	Silt	Clay

Comments: Laminated ooze: dk green

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
8	Quartz 2
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals 3
13	Chlorite
	Glaucanite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
13	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
63	Diatoms 15
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates ✓
4	Sponge spicules ✓
	Dinoflagellates ✓
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

GAT-40

1342 Site D. 3 Core 1 Section 1 Top Depth

5A.80
1A-9
1-32

Expedition 323
Bering Sea

Graphic Representation	Color	Lithology	Bioturbation Structures/Accessories	Drilling Dist. Samples	Major Lithology	Minor Lithology
					Visual Core description	
	107 4/1					
✓	f-b.d.c.s				□ 107 4/1 site	foraminifer-bearing diatom-clayey site
	57 4/2				□ 707 5/1 site	
✓	39 d.s.				▨ 57 4/2 diatom site	
✓	51				▨ 57 4/4 nano-rich diatom ooze	
✓	57 4/3				51-66 ✓ ker.	
✓	66					
✓	107 5/1					
✓	88					
✓	57 4/3					
✓	107					
✓	110					
✓	57 4/2					
✓	124					
✓	57					
✓	57 4/4					

Observer: _____ Date: _____

1342 D 3 2
 Site Hole Core Section Top Depth

Expedition 323
 Bering Sea

Graphic Representation	Color	Lithology	Bioturbation Structures/Accessories	Drilling Dist. Samples	Major Lithology	Minor Lithology
					Visual Core description	
✓ 3	10Y4/1					
✓ 14	5Y4/2					14-20 chond. ✓ -sands lam? ✓
✓ 20						
	10Y4/1					
✓ 59						59-82 lam ✓
✓ 574/23			92			
✓ 82						
	10Y4/1					

Observer: _____ Date: _____

1342 Site 0 Hole 3 Core 3 Section Top Depth

Expedition 323
Bering Sea

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist. Samples	Major Lithology	Minor Lithology
						Visual Core description	
	✓ 1079/1						
10	✓ 13						
20	✓ 574/2 20						13-34 lam ✓
30	✓ 574/3						
40	✓ 34						
50	✓ 104 5/1						
60							
70	✓ 65 574/2 74						71-72 pebble 7cm rounded ✓
80	✓ 574/4						
90	✓ 86 1074/1						85-86 lam faint ✓
100	702						
110	✓ 574/2						
120	✓ 120 122						
130	574/4	70 Manganese-rich diatom ooze					
140							

Observer: _____ Date: _____

1342 D 3 4
 Site Hole Core Section Top Depth

Expedition 323
 Bering Sea

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist. Samples	Major Lithology	Minor Lithology
						Visual Core description	
✓	54 4/4						
✓	10						
	104 4/4						
	19 23						P 222 19-27. barrow ✓
✓	35 59 6/1						35-37 cream ash
✓	38						
✓	45						
✓							
✓	63						cream 72-73 ash mott. ✓
✓	68						73-78 chond ✓
✓	83						83-124 lam. ✓
✓	54 5/4						
	54 4/2						
	54 4/3						
✓	124						
✓	107 5/1						
✓	135						135-142 chond ✓
✓	142						Sec 4 142 - Sec 33 p. 1.
✓	54 5/4						

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1342 Site D Hole 3 Core 5 Section _____ Top Depth

Expedition 323
Bering Sea

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Samples	Major Lithology	Minor Lithology
							Visual Core description	
✓	54 5/4							
✓								
✓								
✓	42							
✓	fbd.c.s							
✓	53							
✓								
✓	68							
✓	107 4/1							
	f-bearing diatom a.s.							
✓	124							
✓	54 4/4							
✓	130							
	54 4/2							

33-37 cross lam.

54-80
foram-bearing
diatom
clayey silt

Observer: _____ Date: _____

Expedition 323
Bering Sea

Site 1342 Hole D Core 3 Section 6 Top Depth _____

Depth (cm)	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Samples	Major Lithology	Minor Lithology
								Visual Core description	
2	✓								
10	✓	5Y 4/4							
22	✓	22 f.b.d.c.s							
28	✓	28							
30	✓	2.5Y 4/2							
33	✓	33							
40	✓	f.b.d.c.s							
45	✓	45							
60	✓								
70	✓	5Y 4/3		m					
100	✓	102						102-110	
110	✓	5Y 4/3						lam	
110	✓	110							
122	✓							122 with oolite	
144	✓							144-148 mud	

GA-9
manna-rich
diatom ooze

Observer: _____ Date: _____

1342 D 3 7+00
Site Hole Core Section Top Depth

Expedition 323
Bering Sea

Depth (m)	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Samples	Major Lithology	Minor Lithology
								Visual Core description	
10	✓	54 3/2							
20	✓	22							
30				m					
40	✓							44	
50	cc							109	9-19-PAL
60									
70									
80									
90									
100									
110									
120									
130									
140									

Observer: _____ Date: _____

SM

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
	1342	D	3		5	80m	

Sediment/Rock Name	FORAM-BEARING DIATOM CLAYEY SILT	Observer	LWA
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Percent Texture		
Sand	Silt	Clay

Comments:

46%

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
8%	2 Quartz
19%	5 Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
19%	5 Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
4%	1 Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
4%	1 Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
8%	2 Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
38%	10 Diatoms
26%	7 Centric
12%	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

SM

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
	1342	D	5		8	9 cm	

Sediment/Rock Name	NANO-RICH DATUM 007E	Observer	WJ
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Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
2%	1 Quartz
2%	1 Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
20%	10 Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
5%	2 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
16%	7 Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
5%	Diatoms
	6% 7 Centric
	3% 15 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

SM

IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	B42	D	3		6	32	

Sediment/Rock Name	VITRIC FINE ASH	Observer	
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Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
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
5%	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
5%	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
15%	Diatoms
	10% 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

Expedition 323
Bering Sea

1342 Site D Hole 4 Core 1 Section _____ Top Depth _____ Scale

Depth (cm)	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
								Visual Core description	
10	✓	57 4/2							13-109 yellow lam ✓
30	✓	107 4/1							<input checked="" type="checkbox"/> diatom silts <input checked="" type="checkbox"/> foran-rich diatom ooze <input type="checkbox"/> diatom-rich silty clay
50	✓	50							74-109 lam ✓
60	✓	57 4/2		m					
74	✓	74							
90	✓	57 4/4							
109	✓	114							109-113 cross lam ✓ 113-114 lam ✓
130	✓	57 4/2							130-145 chondr ✓
146	✓	146							146 - seg 2 2 lam

57 4/4

Observer: _____ Date: _____

Expedition 323
Bering Sea

1342 D 4 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	
✓ 2	5Y 5/2							
✓ 22	5Y 4/2				17		34-35 pebbles black rounded ✓ 1.5 cm pebble	35 cm diatom site
✓ 44	10Y 4/1						76-100 chond. ✓	
✓ 76	5Y 4/2						130-134 muddy and coarse	
✓ 100								
✓ 116								

Observer: _____ Date: _____

Expedition 323
Bering Sea

1342 D 4 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	
✓ 2 ✓ 51 6-4/3								
✓ 15 ✓ 20							20-53 lam ✓	
✓ 51 4/4							53-80 cross lam ✓	
✓							60-79 lam ✓	
✓ 86			nl				79-80 cross lam ✓ 80-86 lam ✓	
✓ 107 4/1								
✓ 130 ✓ 51 4/3 140								
✓ 54 4/2								

100 cm
diatom-rich
silty clay

Observer: _____ Date: _____

Expedition 323
Bering Sea

1342 D 4 4
Site Hole Core Section Top Depth Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
10	✓	5Y 4/2							8-9. pebble basaltic ✓
20	✓	18							18-40 lam ✓
30	✓	5Y 4/4							49-58 lam ✓
40	✓	40							70-72 lam ✓
50	✓	49							30. Rad-bearing silico-bearing Spicule-bearing foram-rich
60	✓	5Y 4/3							
70	✓	58							
80	✓	64							
90	✓	70							
100	✓	72	5Y 4/4						
110	✓	99							
120	✓	106	5Y 4/2						119-127 lam ✓
130	✓	119	5Y 4/2						
140	✓	122	5Y 4/3						
	✓	127							
	✓	101R							not with ash 134-136 ✓
	✓	141	5Y 4/2						
	✓	143							

5Y 9/4

Observer: _____ Date: _____

Expedition 323
Bering Sea

1342 Site D Hole 4 Core 5 Section _____ Top Depth _____ Scale

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology	Visual Core description
10	✓	4								
12	✓	12								
20	✓			m						
29	✓	29								
33	✓				33					
41	✓	41								
50										
60										
70										
80										
90		5T 4/4		g a						
100										
110										
120										
130										
140										Sect 41 - Sect ✓ 42

Observer: _____ Date: _____

Expedition 323
Bering Sea

1342 Site D Hole 4 Core 6 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									
20-30		57 4/4		a ✓					
30-40									
40-50		8 ✓ 42			42				
50-60		57 4/2 58							
60-70									
70-80									
80-90	✓								
90-100									
100-110									
110-120									
120-130	✓	121							127
130-140	✓	132 133	34 4/3						121-129 chond. 132-133 faint lam.
140-150	✓	140	34 4/2						

Observer: _____ Date: _____

Expedition 323
Bering Sea

1342 Site D Hole 4 Core 7+00 Section _____ Top Depth _____ Scale

Depth (cm)	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Major Lithology	Minor Lithology
								Visual Core description	
0-10	✓	✓							8-14 sand ✓
10-20	✓	✓							
20-30	✓	✓							
30-40	✓	✓		m					37-34 sand ✓
40-50	✓	46							acc. 43-44 light brown ash 2.54 5/2 ✓
50-60	✓	✓							
60-70	✓	✓		m				61	
70-80	✓	✓						13	
80-90									
90-100									
100-110									
110-120									
120-130									
130-140									

7

60

Observer: _____ Date: _____

X

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	UB42	D	4	4	2	35 cm	

Sediment/Rock Name	Diatom Silt	Observer	G.B.
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Foram - rich

Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
35 35 X	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
5	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 X	Pyrite
	Magnetite
5 X	Fe-oxide
	Carbonates
5 X	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
10 X	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
40 40 X	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

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	01342	D	4	H	3	100	cm

Sediment/Rock Name	Diatom-rich Silty Clay	Observer	GB.
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Percent Texture		
Sand	Silt	Clay

Comments:

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

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
20 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

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1342	D	4	H	4	30 cm	

Sediment/Rock Name	Rad-bearing, silicof. bearing, Diatom ooze <i>foram-rich</i> Sponge spicule-bearing	Observer	GB
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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
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
15	Calcite <i>foram?</i>
	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	x Radiolarians
	Spumellaria
	Nassellaria
60	x Diatoms
	Centric
	Pennate
	<i>Chaetoceros</i> Resting Spores
5	x Silicoflagellates
10	x Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
 Bering Sea

Depth (cm)	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Samples	Major Lithology	Minor Lithology
								Visual Core description	
10		3/1	25						
10-15		2.5/2	27	0.24	TILTED				
15-20		3/2	57						
20-25	60	3/2	0.55	50					
25-30		5/4	81	ASH	H				
30-35		3/2	118	125					
35-40	68	3/2		0.144					
40-45		2.5/2	23	24					
45-50		3/2							
50-55		2.5/2	40	46	TILTED				
55-60		5/4		0.53					
60-65		3/1		108					
65-70		3/1		110					
70-75		5/4							
75-80		3/1							
80-85		5/4							
85-90		3/1							
90-95		5/4							
95-100		3/1							
100-105		5/4							
105-110		3/1							
110-115		5/4							
115-120		3/1							
120-125		5/4							
125-130		3/1							
130-135		5/4							
135-140		3/1							

HOMOTILE

54 2.5/2 = black ASH

54 3/2 = dark - olive gray silt

54 5/4 = light olive brown silt

54 3/1 = very dark gray silt

80cm, SS DATUM - BEARING SILT

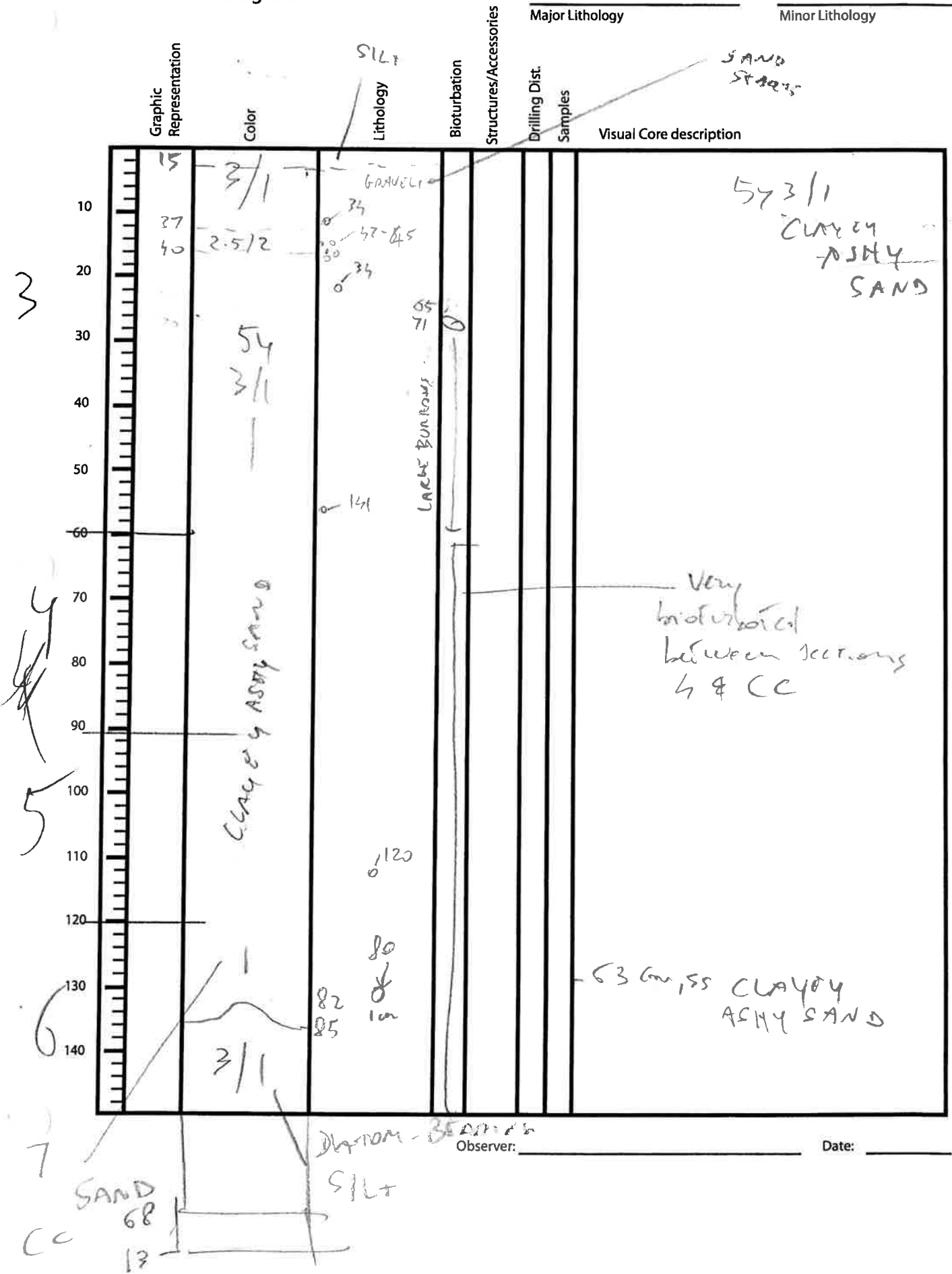
FINE
 TO RICH
 DATUM
 Ooze

1

2

Expedition 323
Bering Sea

132D Site Hole Core Section Top Depth
5 3-CC



IODP Expedition 323
 SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1342	D	S	H	2	80 cm	

SM

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

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
50 x	Quartz
	Feldspar
5	K-feldspar (Orthoclase, Microcline...)
5	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
20 x	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
5 x	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
10 x	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

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

SM

Leg	Site	Hole	Core	Type	Sec	Interval (cm)	
						Top	Bottom
323	U1342	D	5	H	5	10 cm	

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

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
80	x Quartz
5	x Feldspar
	K-feldspar (Orthoclase, Microcline...)
5	x Plagioclase
	Rock fragments
Accessory/trace minerals	
	Micas
	Biotite
	Muscovite
20	x Clay Minerals
	Chlorite
	Glaucinite
	Chert
	Zircon
	Ferromagnesium minerals
Authigenic minerals	
	Barite
	Phosphorite/Apatite
	Zeolite
Opaque minerals	
5	x Pyrite
	Magnetite
5	x 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	x 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
	1372	D	5		6	63cm	

Sediment/Rock Name	CLAYEY SAND	Observer	LUU
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~~CLAYEY ASHY SAND~~

Percent Texture		
Sand	Silt	Clay
70	20	

Comments:

30 20 45
Fine-ashy clayey sand.

FINE SAND

↳ MOSTLY SILICICLASTIC

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
Framework minerals	
15%	Quartz
15%	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
15%	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
	Fe-oxide
Carbonates	
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
20%	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
Calcareous	
	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

(dark color)

VESICLES/ind²

Expedition 323
Bering Sea
(Hard rock VCD)

1342 A 9X 1W
Site Hole Core Section Top Depth

GLY 1 4/N = DARK GRAY

Major Lithology

	Graphic Representation	Color	Lithology Unit	Structures	Grain size	Alteration	Samples	Constituent minerals	Phenocrysts	Glass	Sedimentary structures	Visual Core description
0												
10		GLY 1 4/N		SUBCIRCULAR TO ELONGATED HIG VESICLES <1mm & 7mm								VESICULAR BASALT, RELATIVELY LARGE (1-3mm) PLAGIOCLASE (ANORTHITE?) PORPHYRIES
20				VESICLES ARE ELONGATED & SKEWED								
30												
40				#17 (1-2mm)								
50				#16								
60				#5								
70				NONE								
80				NONE								
90				#10 NONE								
100				#10								
110												
120												
130												
140												

THIS SECTION
f
XRD

HIGHLY PNYRIC

Observer: _____ Date: _____

Expedition 323
Bering Sea
(Hard rock VCD)

1342 Site D Hole 8X Core 1a Section _____ Top Depth



Major Lithology

SORTINA

IGNEOUS ROCKS

SEDIMENTARY ROCKS

Graphic Representation	Color	Lithology Unit	Structures	Grain size	Alteration	Samples	Constituent minerals	Phenocrysts	Glass	Sedimentary structures	Visual Core description
0-10		GLY 1 G/M	vesicles per inches 10								Groundmass: microcrystalline vesicles elongated color: very dark grey
10-20											(Basalt)
20-30			7								
30-40			8								
40-50											
50-60			Texture: *								(Sedimentary Rock)
60-70		RAVICS BETWEEN	Silt. size w/ few sand-size clasts. Moderately sorted, poorly micritic								Volcaniclastic siltstone
70-80											
80-90			silt. medium-sand - poorly sorted								
90-100			see *								
100-110											
110-120											
120-130			Silt. to pebble size very poorly sorted								
130-140			*								
140-150											

CONT

Observer: _____ Date: _____

Expedition 323
 Bering Sea
 (Hard rock VCD)

1342 Site D Hole 8X Core 4b Section Top Depth

Major Lithology

	Graphic Representation	Color	Lithology Unit	Structures	Grain size	Alteration	Samples	Constituent minerals	Phenocrysts	Glass	Sedimentary structures	Visual Core description
75			Gey 2 5/51 901/98 to 96/108	Poorly - Moderately sorted silty-sand								
80				Slight banding								
90				*								
110												
120				Moderately sorted silty-sand								
130												
140												
148			Gey 2 5/51G	silt sized, w/ clast sand-sized - moderately well-sorted -								

Observer: _____ Date: _____

Expedition 323
Bering Sea

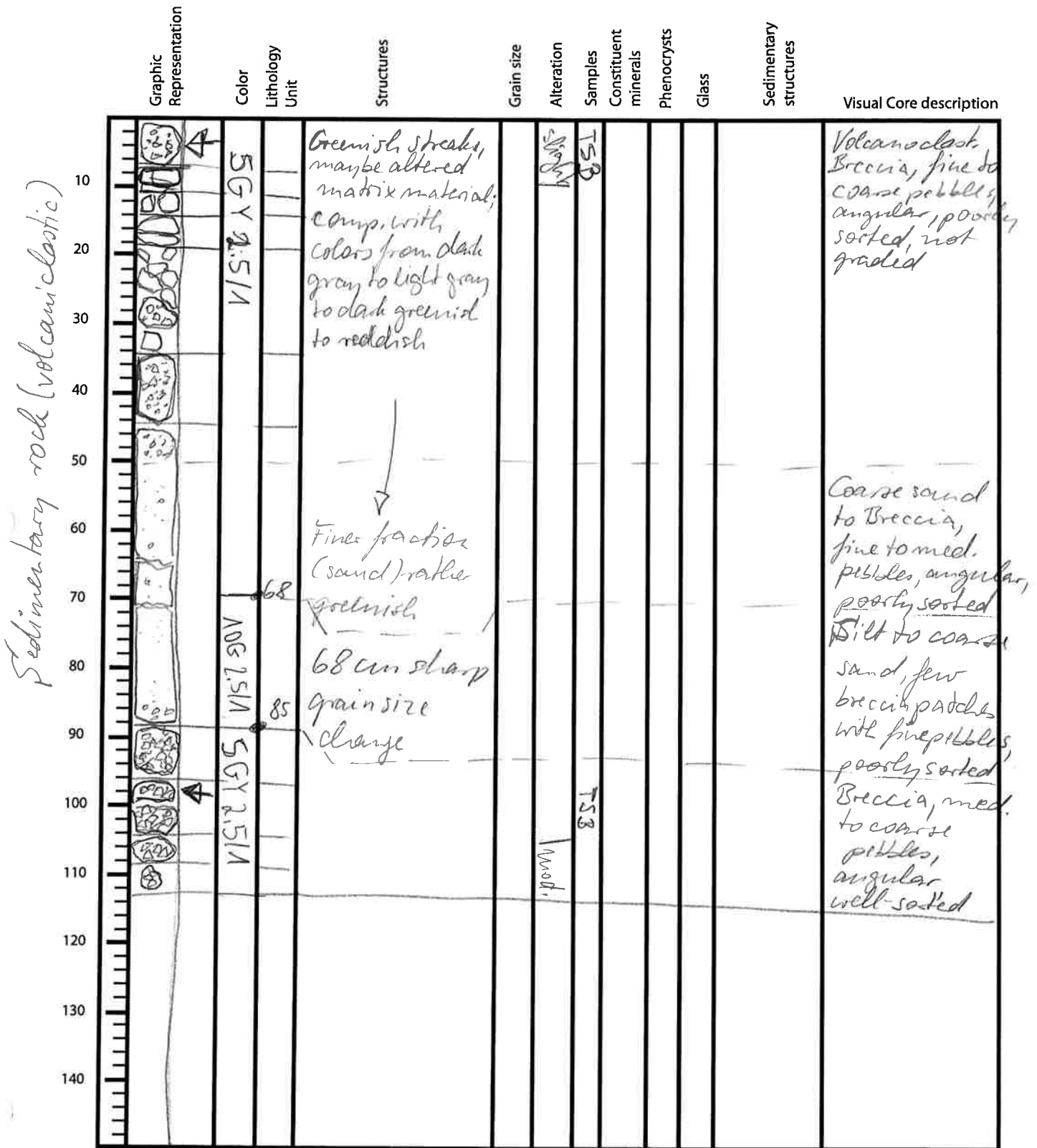
(Hard-rock VCD)

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Samples	Major Lithology	Minor Lithology	
							Visual Core description		
10	10B 2.5/1	Silt to med. sand, poorly sorted, poorly rounded grains					0-133 sedimentary rock → Volcaniclastic Siltstone to Sandstone, some Breccia lithous		
20									
30									
40			Silt to pebbles, poorly sorted, angular grains						
50			43-49 breccia, coarse sands to pebbles 49-56 silt to sand, poorly sorted						
60									
70									
80									
90			Silt to sandstone, partly breccia						
100			soft, granular mixture of clayey silt with angular, fine pebbles and pebbles of volcaniclast. siltstone						
110			Silt to fine sand, poorly sorted, thin black lamina						
120		10K 2.5/1	Laminated Silt to Sand, altered at rims, fractured, slightly more greenish						
130			Breccia of volcanic fine to coarse pebbles						
140									

Expedition 323
 Bering Sea
 (Hard rock VCD)

1342 Site D Hole 9X Core 1 Section Top Depth

Major Lithology



Observer: _____ Date: _____

Expedition 323
 Bering Sea
 (Hard rock VCD)

1342 Site D Hole 9X Core 2 Section Top Depth

Major Lithology

Graphic Representation	Color	Lithology Unit	Structures	Grain size	Alteration	Samples	Constituent minerals	Phenocrysts	Glass	Sedimentary structures	Visual Core description
											Breccia, fine to coarse pebbles mod. sorted.
		2.5Y/N	14 sharp change in grain size								Fine to coarse sand, mod. sorted, isolated fine to med. pebbles
											Sands to breccia, med. sand to fine pebbles, poorly sorted
			Thin bedding of coarse + fine layers								Bedded med. to coarse sand + fine pebbles, single layers, mod. sorted
		5Y 4/1	90-94 De-watering structures, concave-up, dark brown in gray matrix			TSP					106-110 "
			125 sharp contact, below lighter color + slightly coarser								
		10Y 5/1									Silt to med. sand, mod. sorted

Observer: _____ Date: _____

Expedition 323
 Bering Sea
 (Hard rock VCD)

1342 Site ① Hole 10X Core 1 Section _____ Top Depth

Major Lithology

Graphic Representation	Color	Lithology Unit	Structures	Grain size	Alteration	Samples	Constituent minerals	Phenocrysts	Glass	Sedimentary structures	Visual Core description
10											Fine to coarse sand, mod. sorted, few isolated fine pebbles
20		2.5/N									
30											
42		↕	Thin bedding								Bedded silt to fine sand, and coarse sand to fine pebbles
51		↕	58-69 vein, greenish filling + zeolite crystals								Coarse sand to fine pebbles, poorly sorted
59											Breccia, fine to coarse pebbles, very poorly sorted, polymict
60											
70		SGY	Some coarse pebbles slightly vesicular, voids can be open or filled								
80											
90											
100											
110											
120											
130											
140											

Observer: _____ Date: _____

Expedition 323
 Bering Sea
 (Hard rock VCD)

1342 Site D Hole 10X Core 2 Section _____ Top Depth

Major Lithology

Graphic Representation	Color	Lithology Unit	Structures	Grain size	Alteration	Samples	Constituent minerals	Phenocrysts	Glass	Sedimentary structures	Visual Core description	
	5G12.S1A		Many cored lapilli								Breccia, fine to coarse pebbles, poorly sorted, polymict	
	5Y2.S1A		Many cored lapilli; coarse pebbles + fine cobbles with clear vesicles, partly internal flow structure								29-42: undulating layers of silt to fine sand, well-sorted 58-62 brownish undulating silt-sand layers,	29-42: Breccia to silt/sand-stone, fine sand to coarse pebbles, very poorly sorted, even fine cobbles. mono-to oligomict

Observer: _____ Date: _____

Expedition 323
 Bering Sea
 (Hard rock VCD)

1342 Site ① Hole 10X Core 3 Section _____ Top Depth

Major Lithology

Graphic Representation	Color	Lithology Unit	Structures	Grain size	Alteration	Samples	Constituent minerals	Phenocrysts	Glass	Sedimentary structures	Visual Core description
		SR2.51A	Many coated lapilli; coarse comp. with vesicles								<p>Breccia to fine sandstone, poorly sorted, mono- to oligomict</p> <p>47-48 Thin laminae of silt between pebbles, undulated</p>

Observer: _____ Date: _____

Expedition 323
 Bering Sea
 (Hard rock VCD)

1342 Site ϕ Hole 10X Core 4 Section _____ Top Depth

Major Lithology

Graphic Representation	Color	Lithology Unit	Structures	Grain size	Alteration	Samples	Constituent minerals	Phenocrysts	Glass	Sedimentary structures	Visual Core description
		SYR.S1A									<p>as 10X-3</p> <p>sluff form grain supported to matrix - supported. Fine to coarse pebbles in fine groundmass of silt(?); bimodal grain size distribution</p>

Observer: _____ Date: _____

Expedition 323
Bering Sea
(Hard rock VCD)

1342 Site D Hole 11X Core 1A Section Top Depth

XLS = crystals

Major Lithology

Graphic Representation	Color	Lithology Unit	Structures	Grain size	Alteration	Samples	Constituent minerals	Phenocrysts	Glass	Sedimentary structures	Visual Core description
		2.5N groundmass w/ 6" clasts	<p>vesiculated basalt clasts</p> <p>Poorly sorted</p> <p>most have halo surrounding it.</p> <p>some vesicles have pale blue mineral coating</p> <p>others filled w/ white XLS or pyrite</p> <p>clast-supported</p> <p>Matrix = v. fine grain, no vesicles visible</p> <p>vesicles are elongate in general</p> <p>11X 10A:</p> <p>sub angular clasts</p> <p>poorly sorted clasts</p> <p>Basalt clasts w/ halo</p> <p>Bottom 2cm is lg basalt (vesiculated) piece. vesicles filled w/ calcite</p> <p>Some clasts = altered glass?</p> <p>sm. vesicles = spherul</p> <p>lg. vesicles = void.</p> <p> to bedding</p>	mm to 5cm	Relatively Fresh						

Observer: _____ Date: _____

Expedition 323
 Bering Sea
 (Hard rock VCD)

1342 Site D Hole 11X 2 Core 2 Section Top Depth

Major Lithology

	Graphic Representation	Color	Lithology Unit	Structures	Grain size	Alteration	Samples	Constituent minerals	Phenocrysts	Glass	Sedimentary structures	Visual Core description
8												
10												
14												
16.5												
20												
24.5												
30												
35												
40												
42												
50												
55.5												
60												
65												
70												
78												
80												
90												
99												
100												
106												
110												
114.5												
120												
123												
130												
133												
136												
140												

29
54

Pipe vesicles
 Vesiculated Basalt
 Maybe 1
 Clast from breccia or may be primary frag?
 B

Breccia

Desc. same as sec. 1

REFRESH

8-14 TB

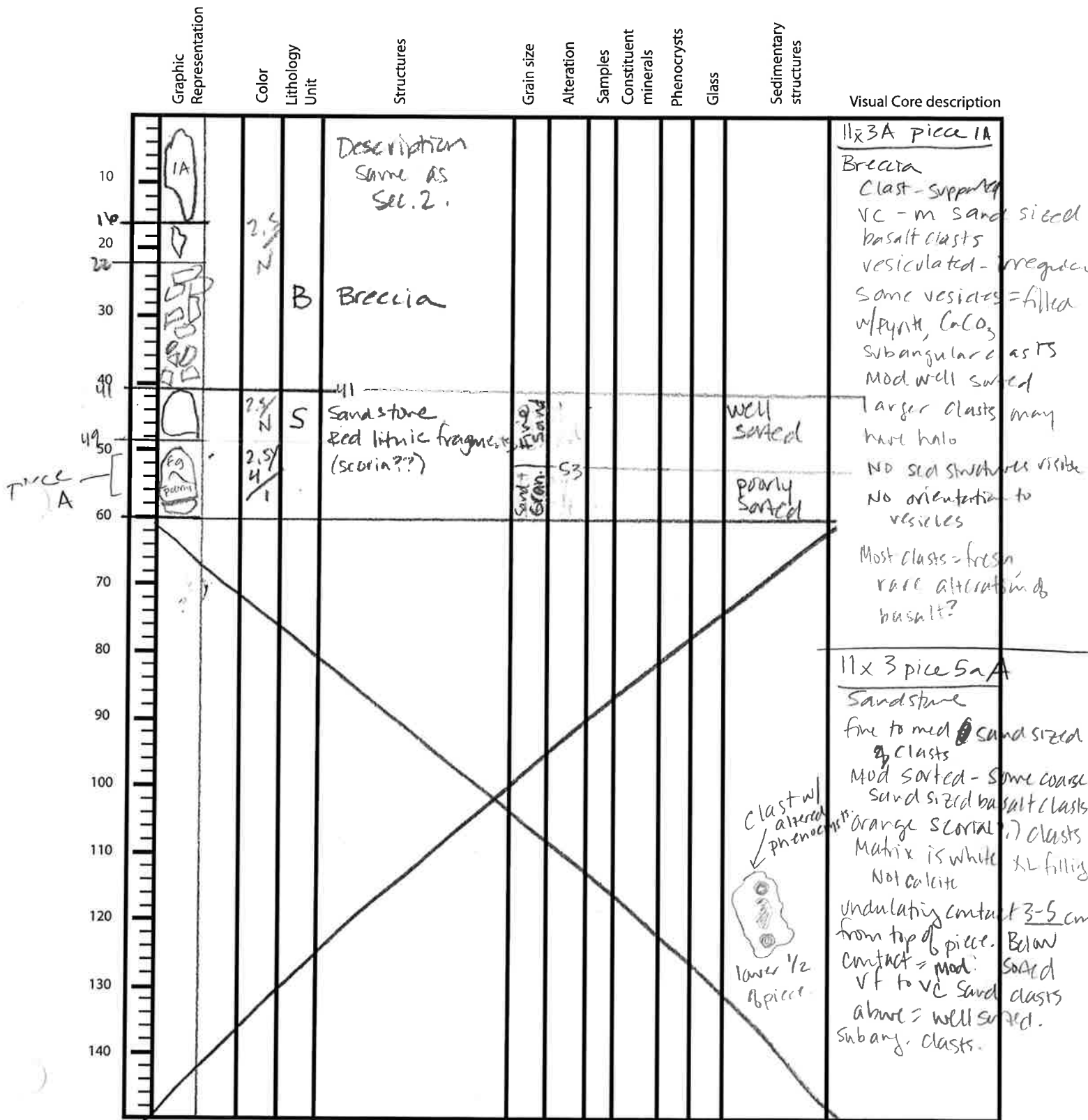
Clast w/ vesicles & alteration

Piece 11X 2A 14A
 description essentially the same as 11X 3A piece 1A

Expedition 323
 Bering Sea
 (Hard rock VCD)

1342 D 11X 3
 Site Hole Core Section Top Depth

Major Lithology



Observer: _____ Date: _____

Expedition 323
 Bering Sea
 (Hard rock VCD)

1342 9 12X 1
 Site Hole Core Section Top Depth

Major Lithology

Graphic Representation	Color	Lithology Unit	Structures	Grain size	Alteration	Samples	Constituent minerals	Phenocrysts	Glass	Sedimentary structures	Visual Core description
	N/S/N		VERY POORLY SORTED, POLYMIC BRECCIA, clasts 2cm to 1mm, clay supported								
			SANDSTONE, LAMINATED. (5m-1cm thick) THE BARRIER BANDS ARE COMPOSED OF FINE-SAND TO SILT AND DARK (VITRIC?) MATERIAL								
			SILT TO SAND SIZE, MODERATELY WELL SORTED, UPPER 5cm ARE COARSER								
	N/S/N		SAME AS 26m to 65m								
											CONJUGATE FAULTS

Observer: _____ Date: _____

Expedition 323
Bering Sea
(Hard rock VCD)

1342 Site D Hole 13X Core 1.10P Section Top Depth

Major Lithology

Graphic Representation	Color	Lithology Unit	Structures	Grain size	Alteration	Samples	Constituent minerals	Phenocrysts	Glass	Sedimentary structures	Visual Core description
	2.5/10B		2.5/10B to 10R3/6 Moderately well-sorted	mm	?	X	?	X	X	X	undulating combed medium sand
	2.5/10B		2.5/10B		?	X	?	X	X	X	silt-size grain
	2.5/10B		? conglomerate	silt to sand	?						Thin to medium bedded between silt-sized grains, black, and sand-size grains, reddish.
	2.5/10B w/ red crystals	10R3/6				X	?	X	X		
			? conglomerate	pebble	?	X	?	X	X	Medium bedded poorly sorted	w/ basalt clasts (64cm)
	10R 2.5/12			Fine-medium sand	?	X	?	X	X	well sorted	

Observer: G.B. Date: _____

10
20
30
40
50
60
70
80
90
100
110
120
130
140
150

↓
80

Expedition 323
Bering Sea
(Hard rock VCD)

1342
Site

D
Hole

13X
Core

1 Bottom
Section Top Depth

Major Lithology

Graphic Representation	Color	Lithology Unit	Structures	Grain size	Alteration	Samples	Constituent minerals	Phenocrysts	Glass	Sedimentary structures	Visual Core description
		2.5/10B	? conglomerate	Pebble	~	X	?	X	X	Medium bedded poorly sorted	
		10R 2.5/2	? conglomerate	silt-to-sand clast size	?	X	?	X	X	Medium bedded well sorted w/ thin laminations of black grains.	undulating boundary
		10R 2.5/2	? conglomerate	Pebble	?	X	?	X	X	medium bedded cross-lami.	undulating boundary
		5/N	Basalt vesicles ovoid filled w/ green crystals (? amphiboles) ? olivine	X	No alteration hole visible	Palomaa; TSB @ 61-65 cm		h p a		Thick lamination between basalt and (?) other basalt	wavy boundary description based on piece 7a.
			vesicles per inch? & SEDIMENT/BASALT CONTACT								

Observer: GB

Date: _____

Expedition 323
 Bering Sea
 (Hard rock VCD)

1342 Site D Hole 13X- Core 2 Section Top Depth

		Major Lithology									
Graphic Representation	Color	Lithology Unit	Structures	Grain size	Alteration	Samples	Constituent minerals	Phenocrysts	Glass	Sedimentary structures	Visual Core description
10		JOR 2.5/2	Sharp boundary between basalt and conglomerate (1-3 cm)	silt. to sand-size	?	+	?	+	+	Tickly bedded, well sorted	clasts circular cobbles to sand-size + darker bigger clasts
20			red crystals 18-19 cm: thin laminations								
30		S/N									
40			Basalt- vesicles filled w/ green crystals	X	?	TSB	?	pa	a	X	
50		JOR 2.5/1	Similar to ① but more reddish	silt. to sand-size						Tickly bedded up to 70 cm. very poorly sorted	clasts circular to elongated
60			73-77 cm: bigger clasts								
70											
80											
90											
100											
110											
120											
130											
140											

Observer: _____ Date: _____