IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	Diatom ooze.	Observer	Akira

Main lithology

Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
3	Quartz 1
3	Feldspar 1
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	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~~ 1
	Lithic grain

Percent	Component
	BIOGENIC GRAINS
	Calcareous
	✓ Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
9	✓ Nannofossils ≠ 3
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
66 ~~60~~	✓ Diatoms ~~70~~ 75 (20)
	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

X

light laminae in S.7.

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	diatom ooze (coccolith rich)	Observer	

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
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
2	Vitric grain 1
	Lithic grain

Percent	Component
	BIOGENIC GRAINS
	Calcareous
	✓ Foraminifera
	Planktonic foraminifera ✓
	Benthic foraminifera
14	Nannofossils 17
	Coccoliths ✓
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
84	Diatoms 80
	Centric 15 ~~10~~
	Pennate 25 ~~30~~
	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. SN

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	akira

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
3 ~~4~~	✓ Clay Minerals 1
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
3 ~~4~~	✓ Pyrite 1
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
	BIOGENIC GRAINS
	Calcareous
3 ~~4~~	✓ Foraminifera
	Planktonic foraminifera 1 ~~2~~
	Benthic foraminifera
30 ~~40~~	✓ Nannofossils 10.
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
60.	✓ Diatoms ~~50. 70~~ 20
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules 1
	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

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
V 15

Main lithology

Percent Texture		
Sand	Silt	Clay

Comments:

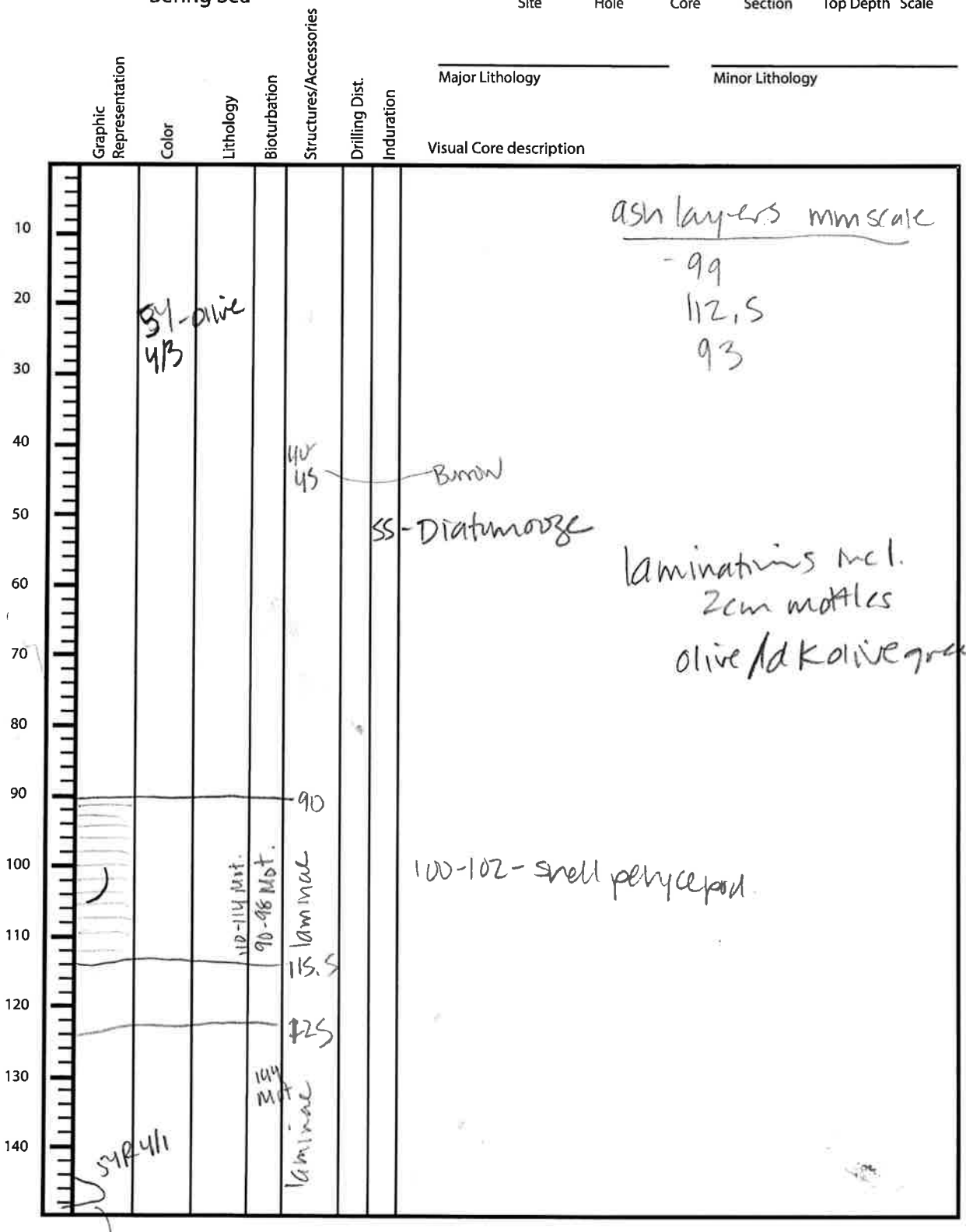
Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
16	Quartz 3
5	Feldspar 1
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
5	Ferromagnesium minerals 1
	Authigenic 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
	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 1 1 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____



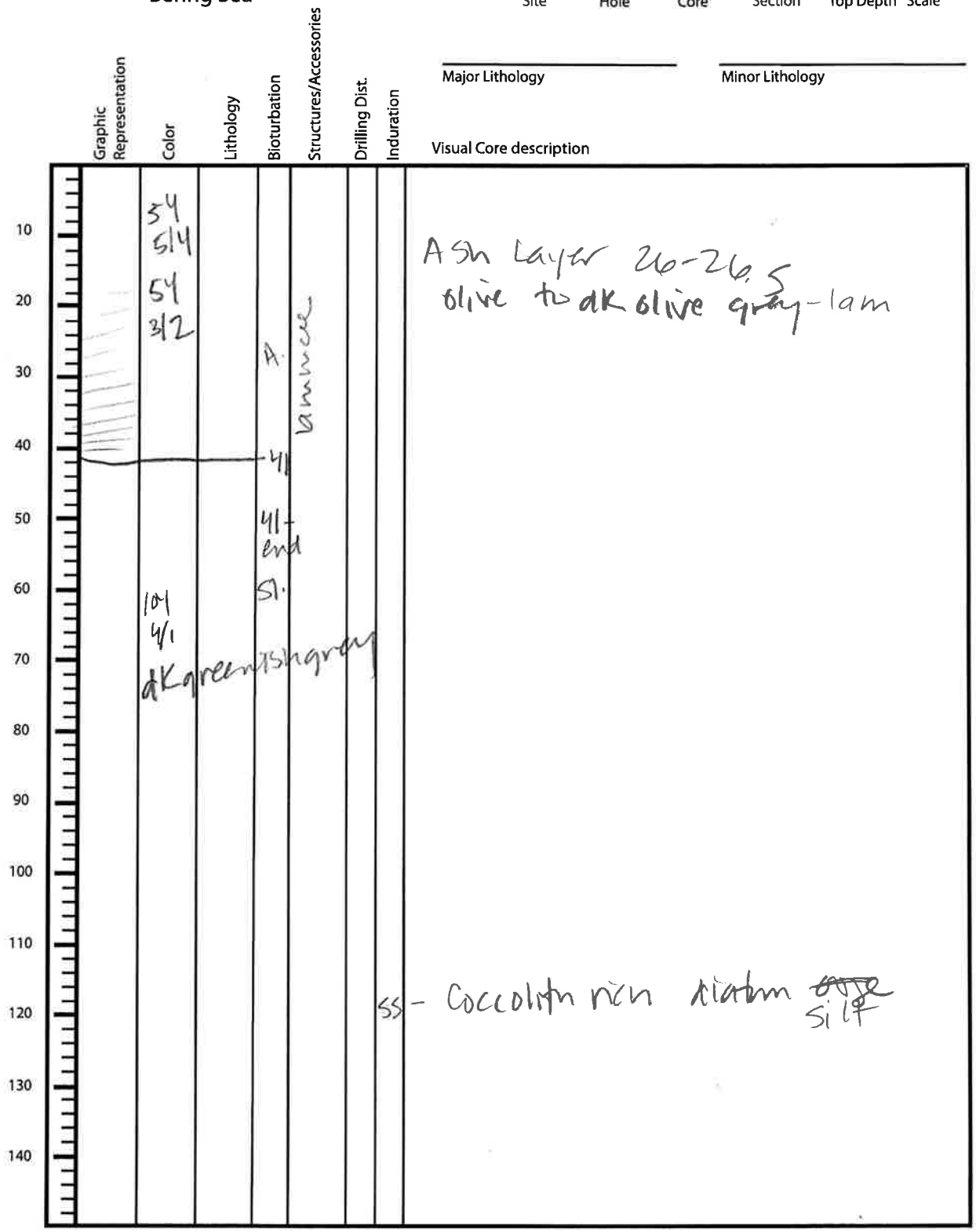
146.5-150 - 5m
pink ashy
dk gray

Observer: ____ Date: 7/23

Expedition 323
Bering Sea

U1340 A 1 2 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____



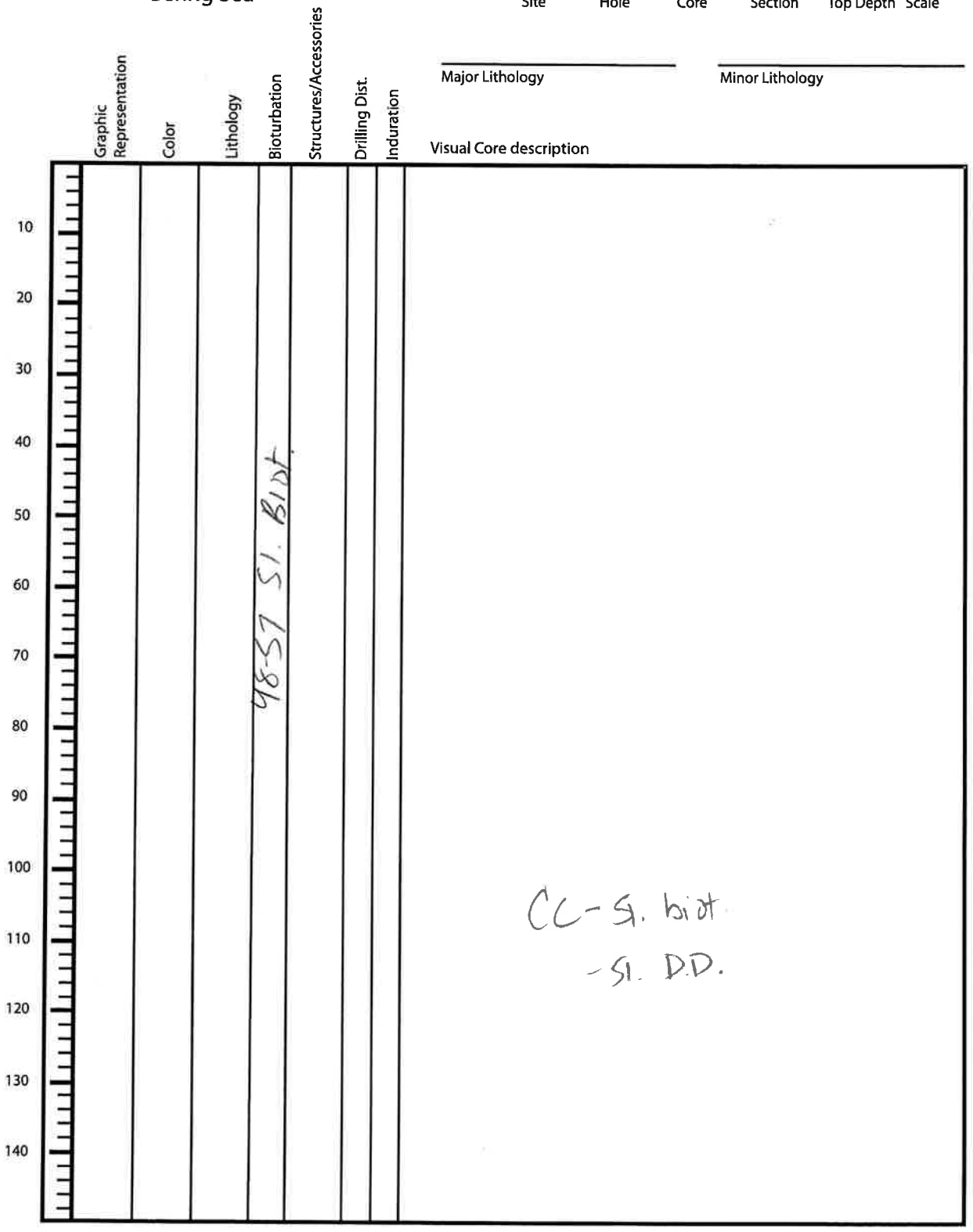
Observer: ____ Date: ____

Expedition 323
Bering Sea

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

Major Lithology

Minor Lithology



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 cm	

Sediment/Rock Name	DIATOM ~~SILT~~ CLAY	Observer	I WR

LITHICS =

MAIN LITHOLOGY

Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
10	Quartz
10	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
5%	Micas
	Biotite
	Muscovite
25%	Clay Minerals 25%
	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

X

S-0

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	NANNO-RICH DIATOM SILT

Observer	Nano

Percent Texture		
Sand	Silt	Clay

SILICICLASTIC 30%.
BIOGENIC 65%.

Comments:

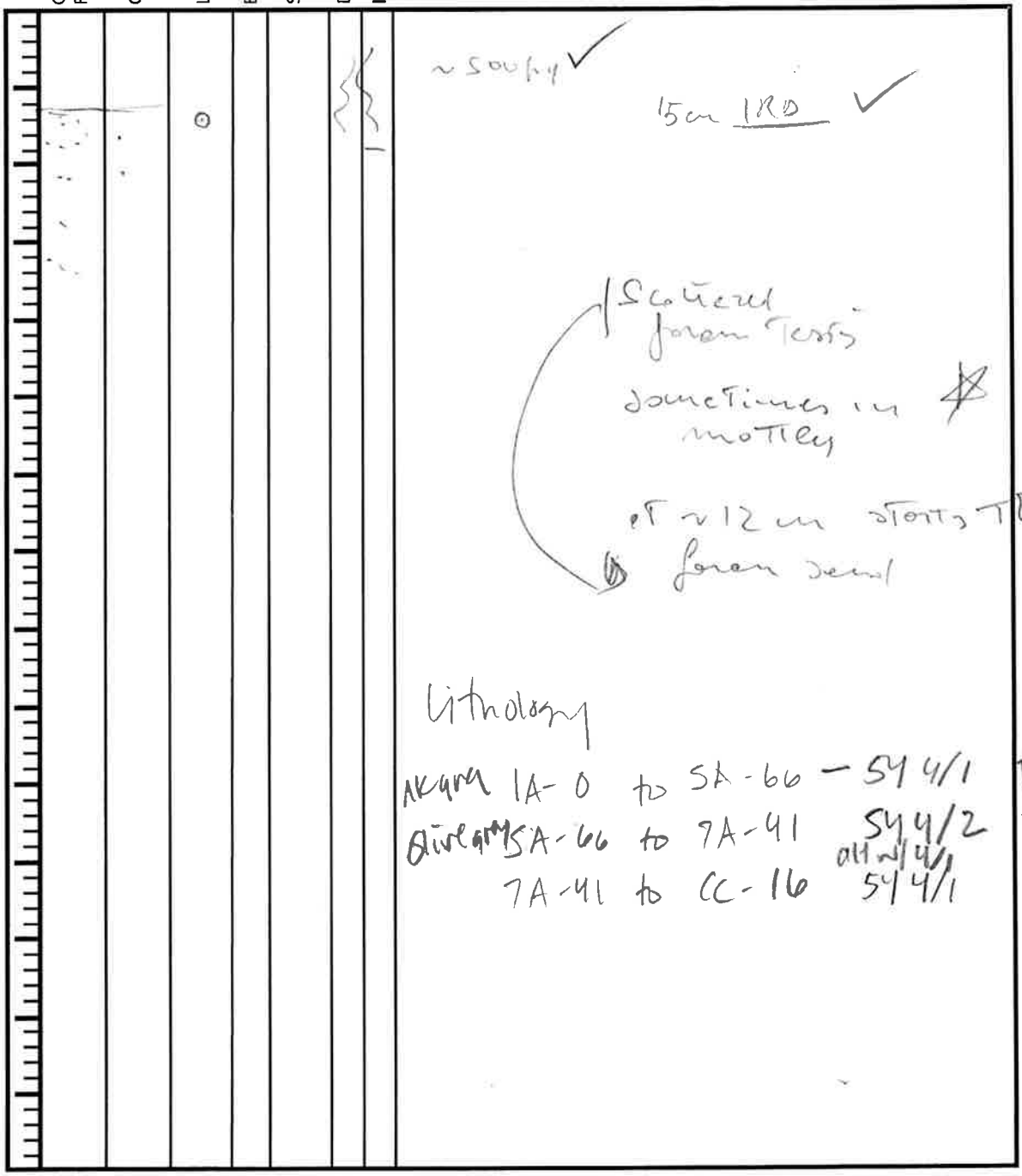
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
5%	Quartz
10%	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
5%	Micas
	Biotite
	Muscovite
10%	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic 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
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

1340 | A | 2 | 1 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

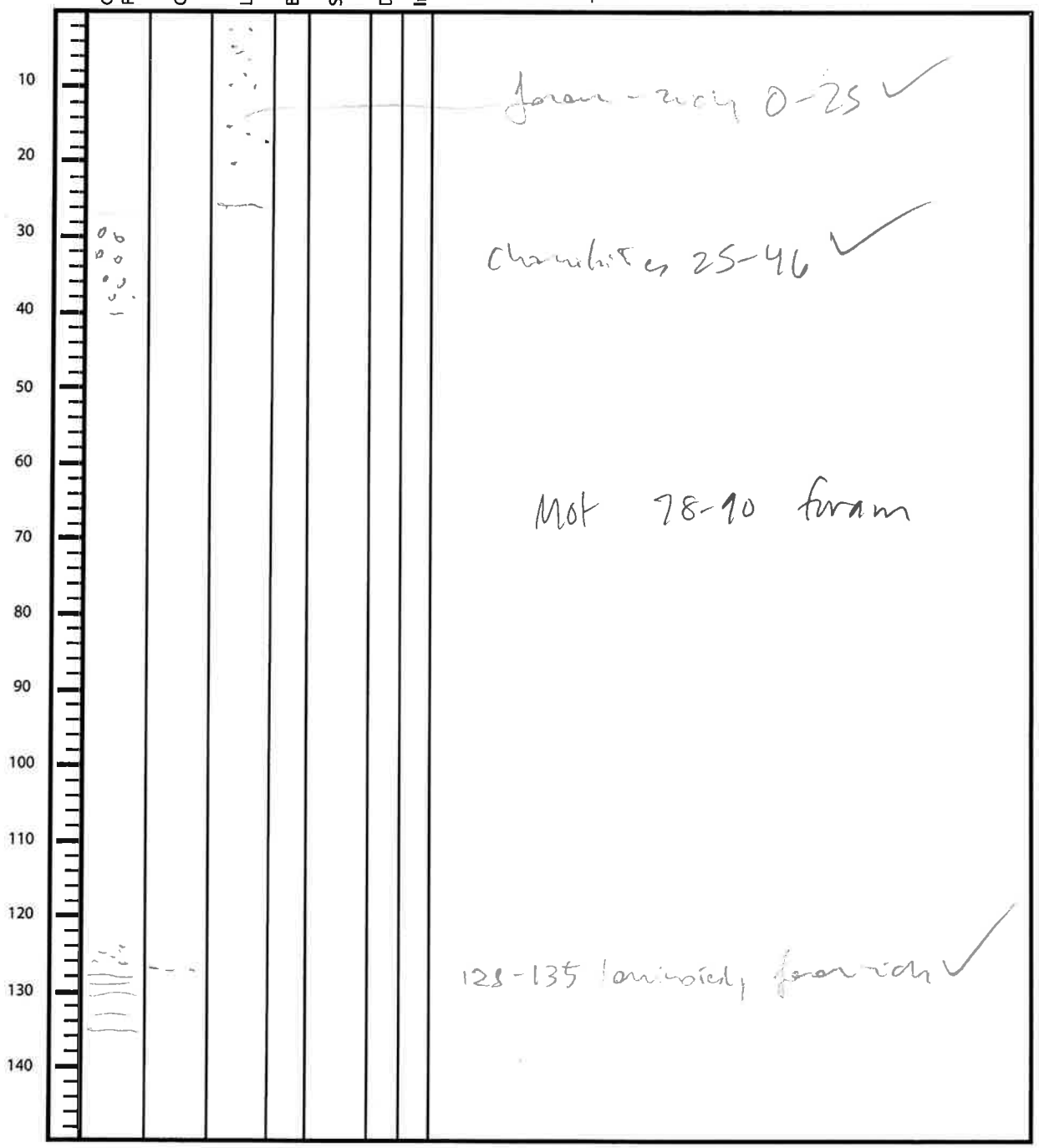


Observer: _____ Date: _____

Expedition 323
Bering Sea

1346 A 2 2 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____

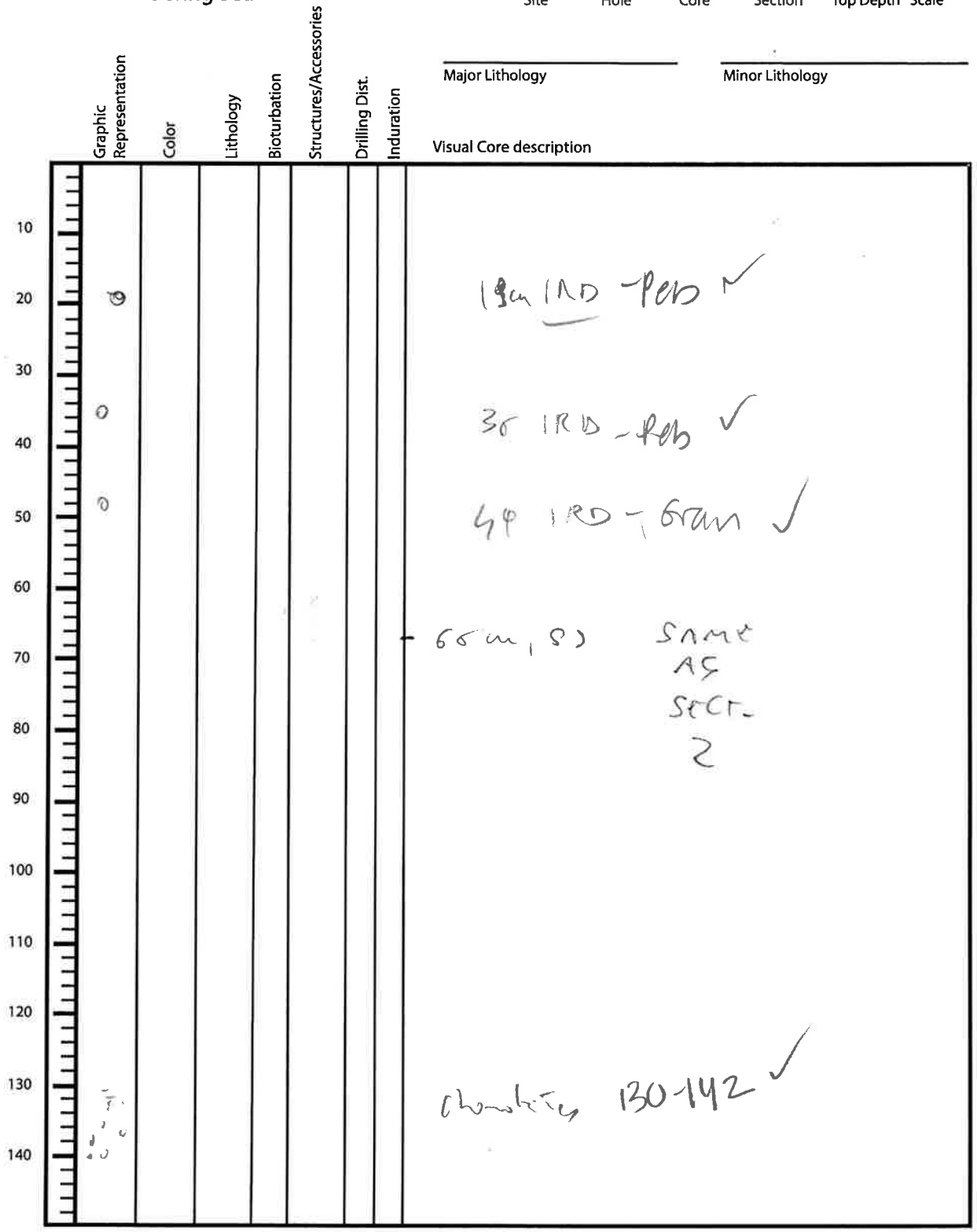


Observer: ____ Date: ____

Expedition 323
Bering Sea

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

Major Lithology ____ Minor Lithology ____

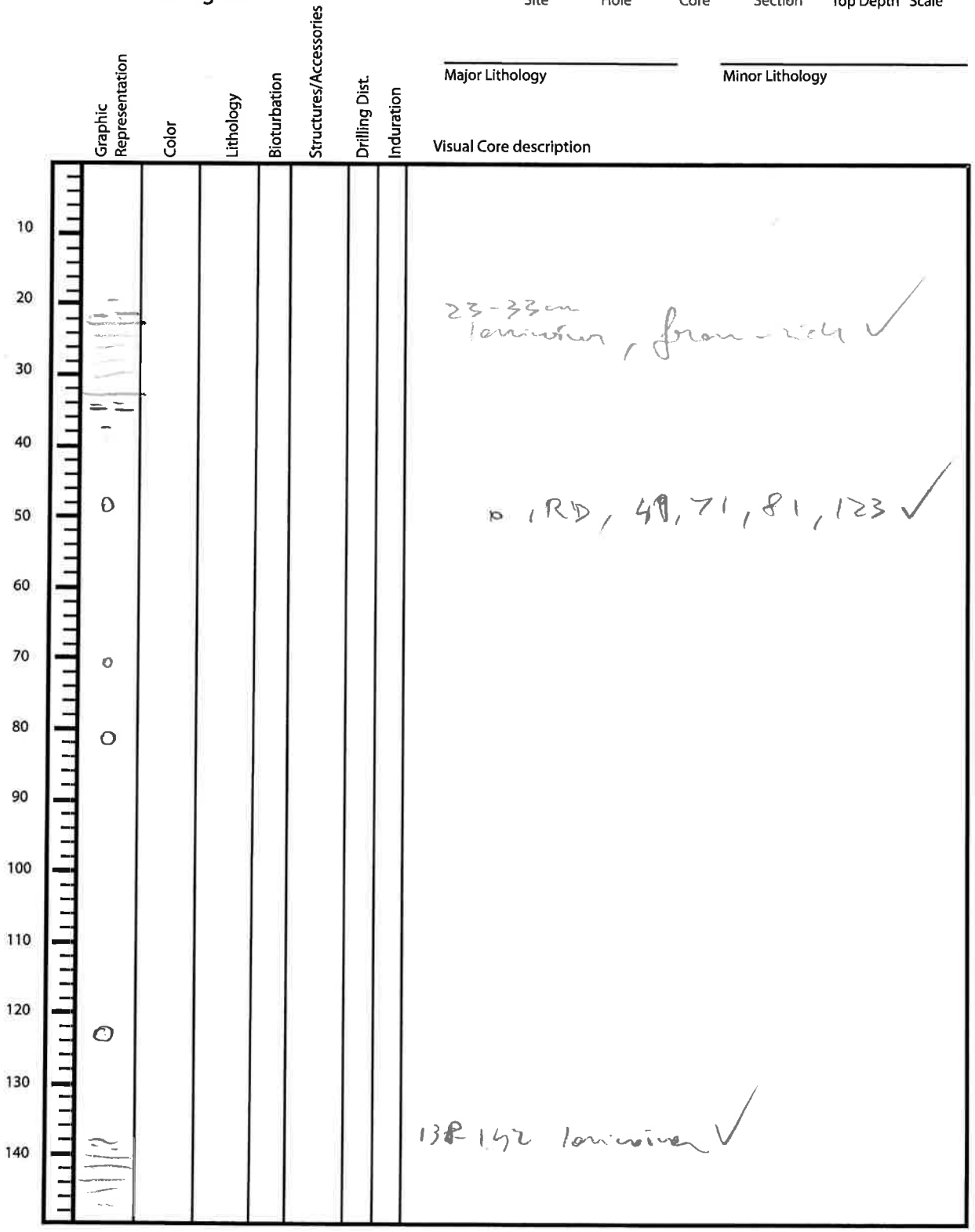


Observer: ____ Date: ____

Expedition 323
Bering Sea

1340 A 2 6 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____



Observer: ____ Date: ____

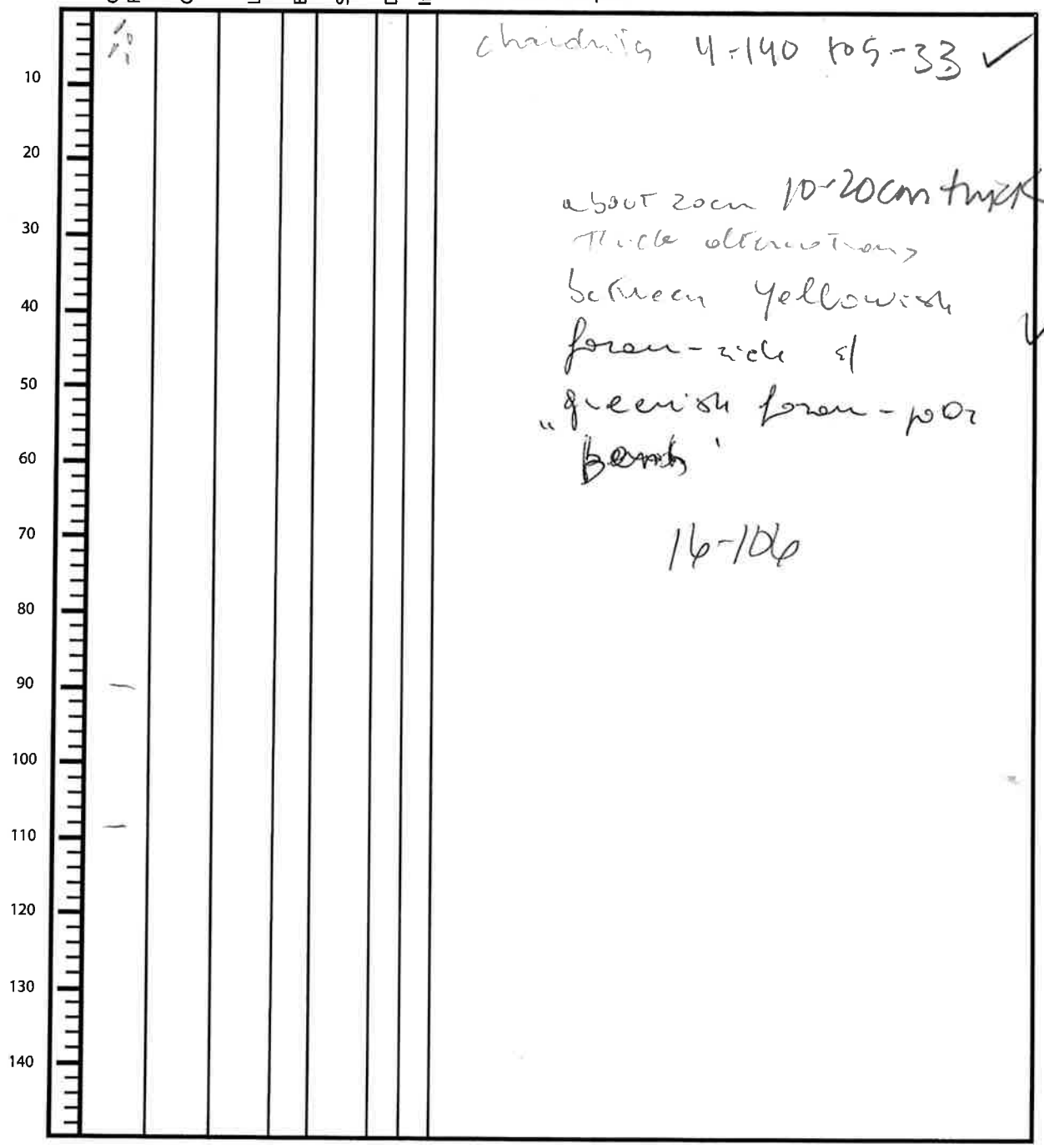
Expedition 323
Bering Sea

1336 A 2 5
Site Hole Core Section Top Depth Scale

Major Lithology

Minor Lithology

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



chaidnia 4-140 105-33 ✓

about 20cm 10-20cm thick.
Thick alternations
between yellowish
foram-rich &
"greenish foram-poor
beds"

16-106

Observer: _____ Date: _____

Expedition 323
Bering Sea

1346 A 2 6 _____ _____
Site Hole Core Section Top Depth Scale

_____ _____
Major Lithology Minor Lithology

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

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

RELATIVELY HOMOGENOUS THROUGHOUT

SCATTERED FORAM TESTS

FEW MOTTLES OF ASH 120-137

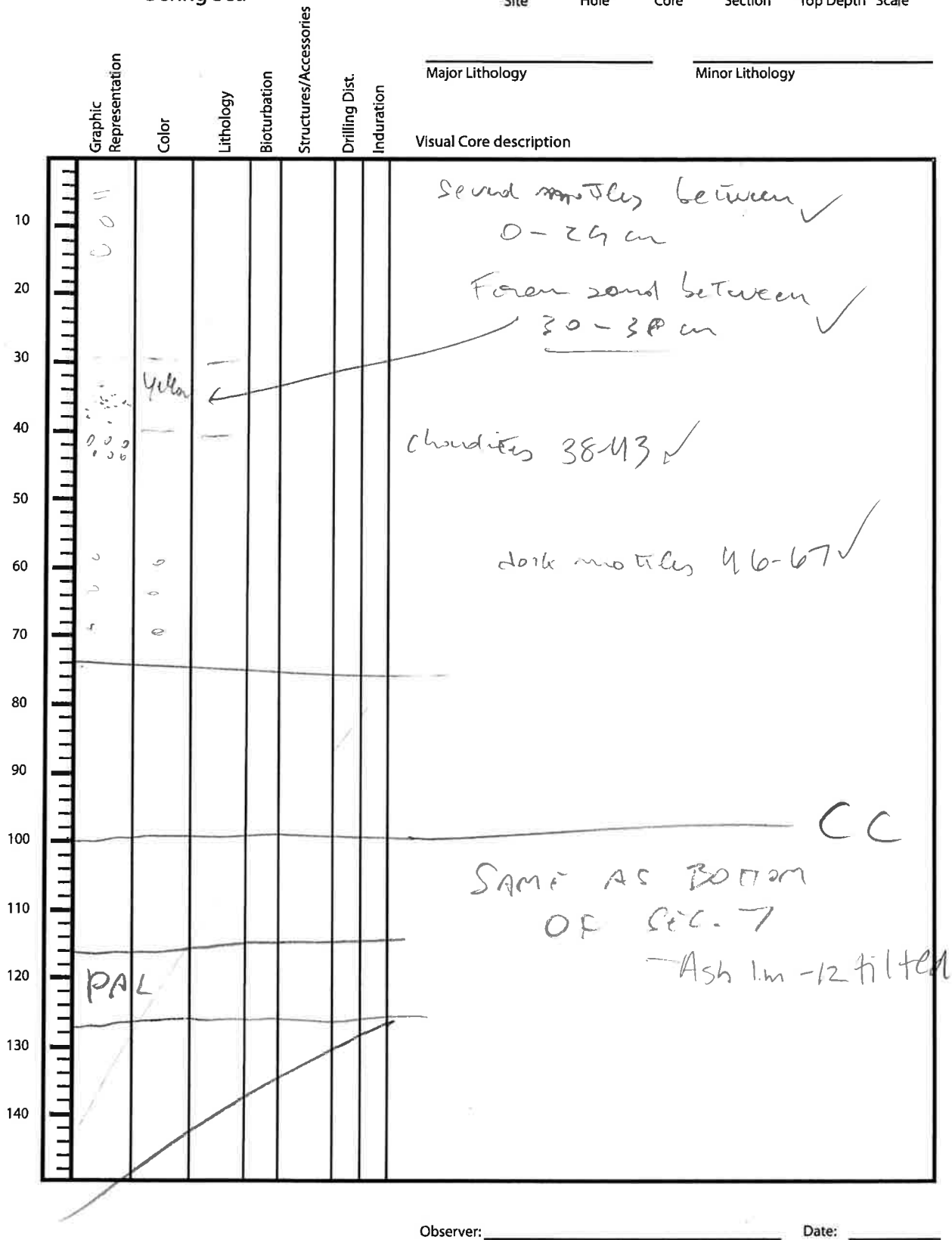
SUBVERTICAL LUMEN 145-149

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 2 7 1CC
Site Hole Core Section Top Depth Scale

Major Lithology _____ Minor Lithology _____



74

Observer: _____ Date: _____

X

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1340	A	34	5	100 cm		

Sediment/Rock Name	Main lithology (foram-rich) = Diatom Clay	Observer	G.B

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
	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
5	Planktonic foraminifera X broken
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
45 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

S.S.

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Accessory lithology (clay-rich)

Sediment/Rock Name	Foram-rich ~~clayey~~ diatom clay

Observer	G.B.

Percent Texture		
Sand	Silt	Clay

Comments: low Og content (Bulimina)

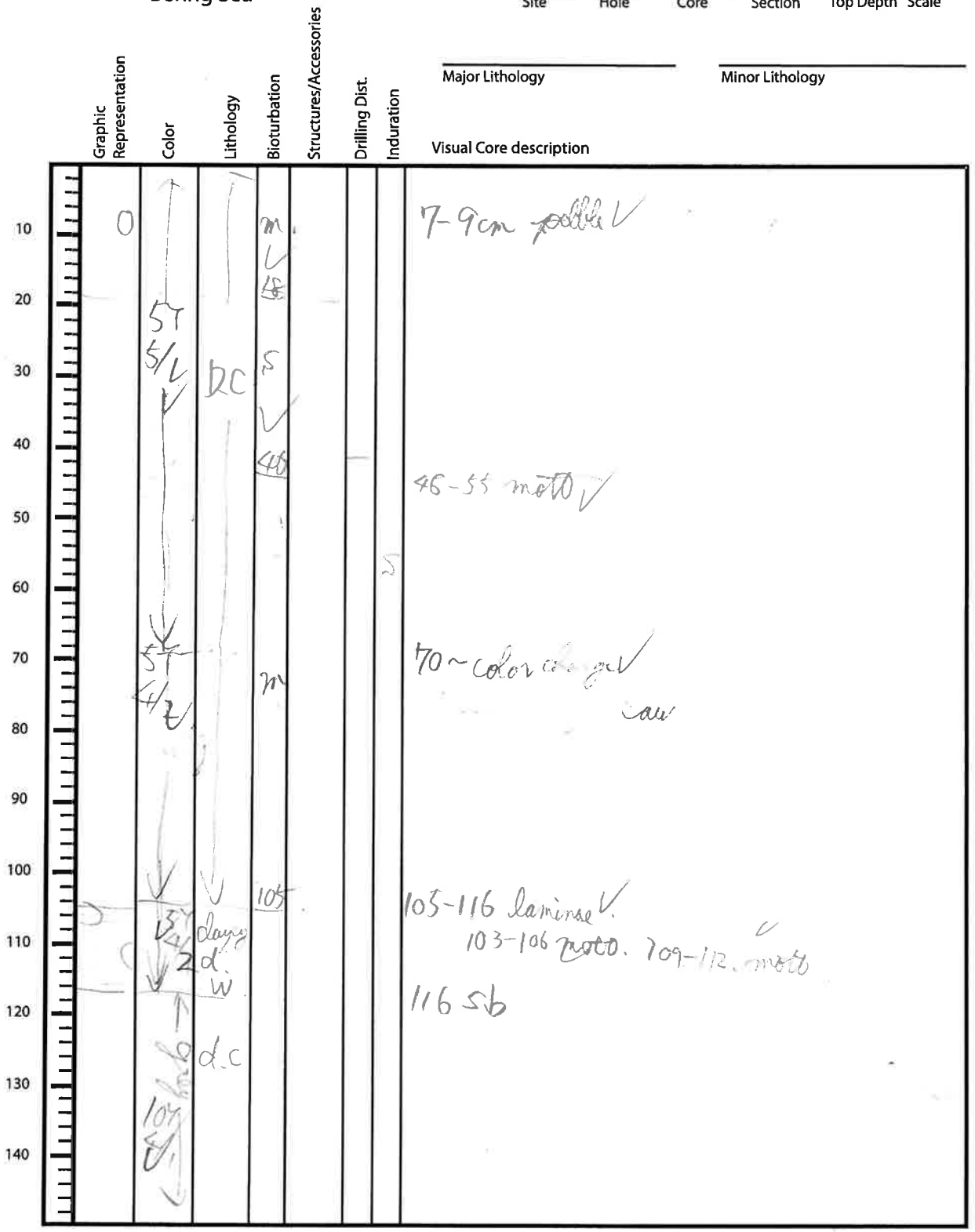
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
40	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	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
20%	Benthic foraminifera X Bulimina
	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

1340 A 3 1 _____ _____
Site Hole Core Section Top Depth Scale

Major Lithology _____ Minor Lithology _____

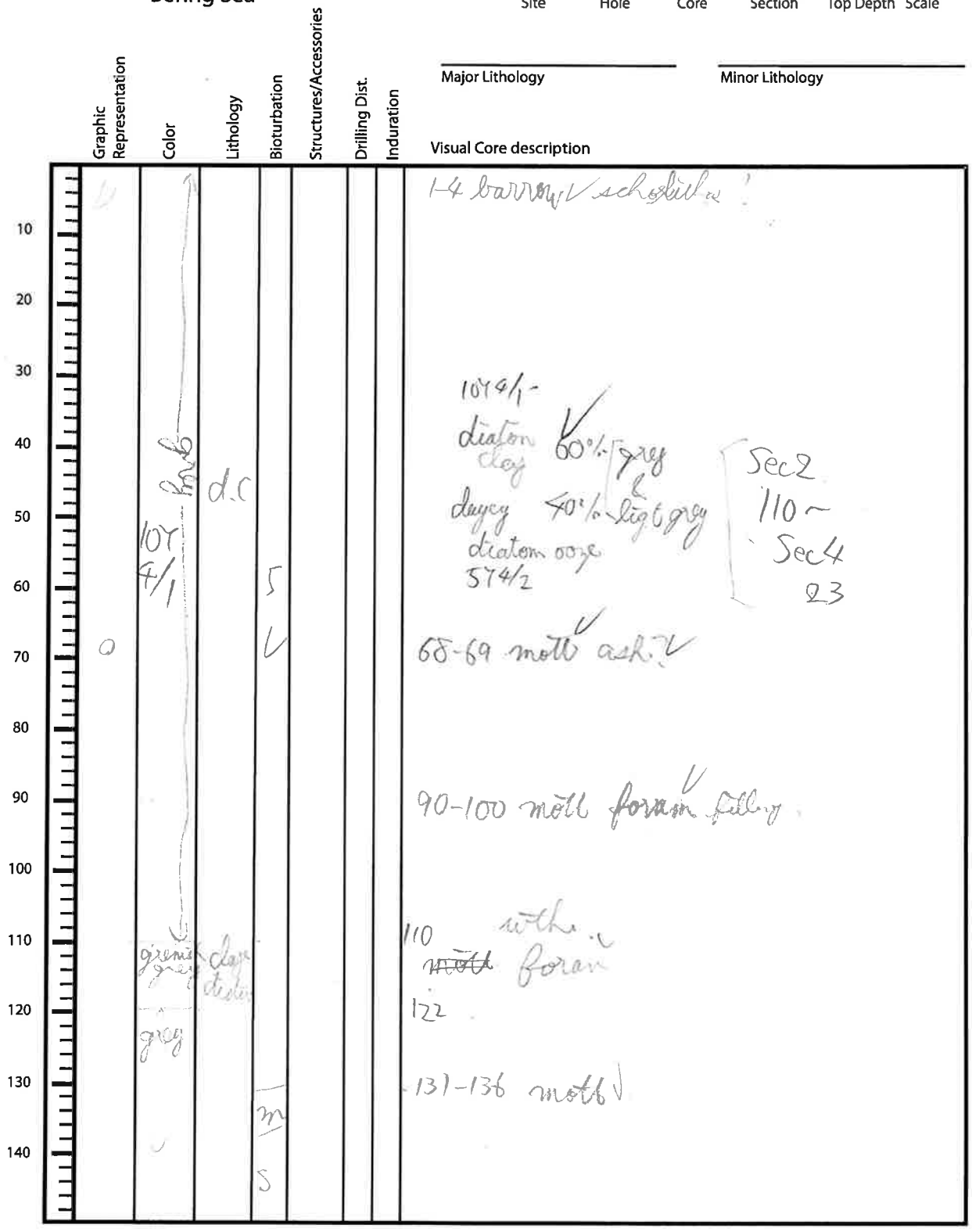


Observer: _____ Date: _____

Expedition 323
Bering Sea

U1340 A 3H 2
Site Hole Core Section Top Depth Scale

Major Lithology _____ Minor Lithology _____



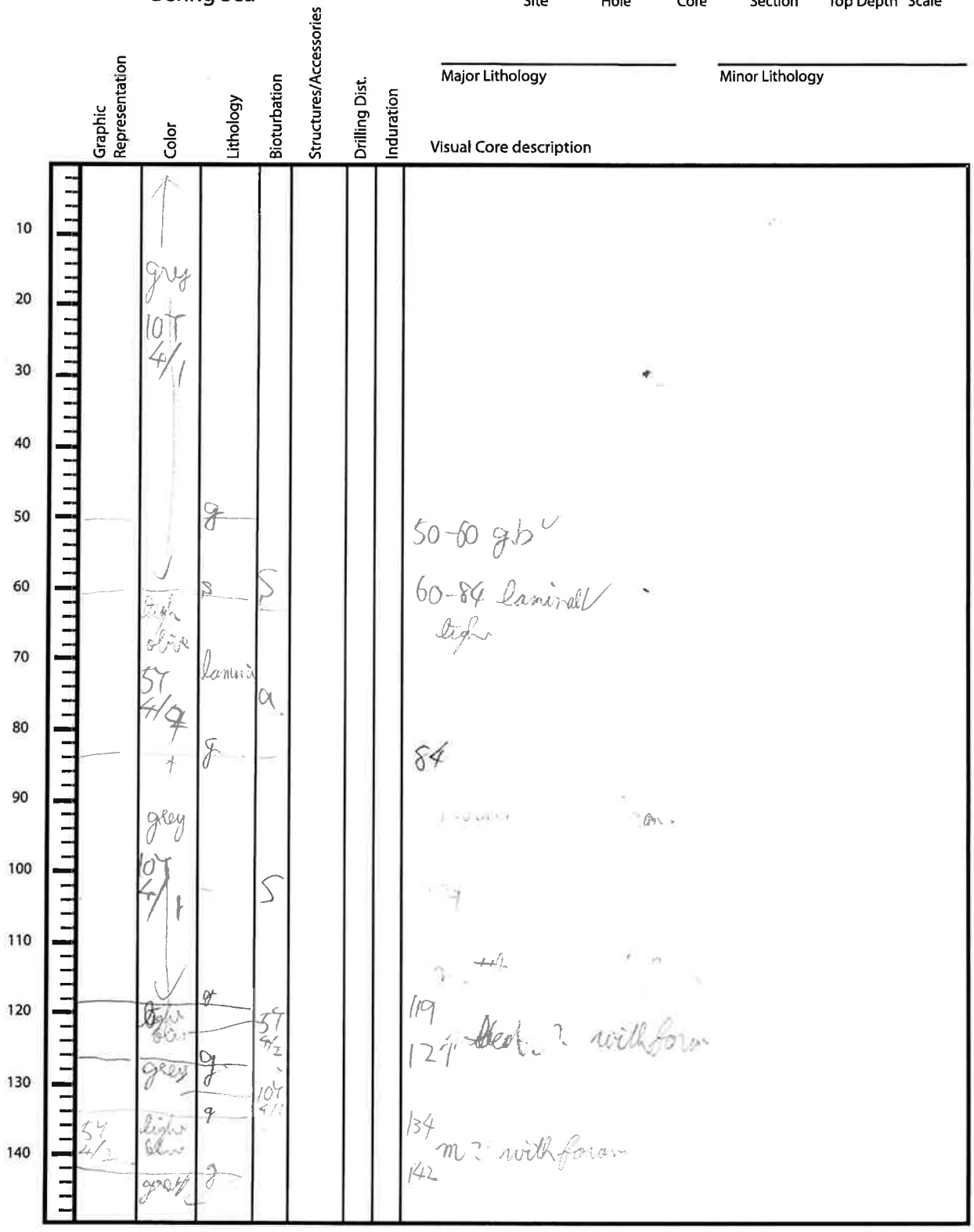
Observer: _____ Date: _____

Expedition 323
Bering Sea

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

Major Lithology

Minor Lithology



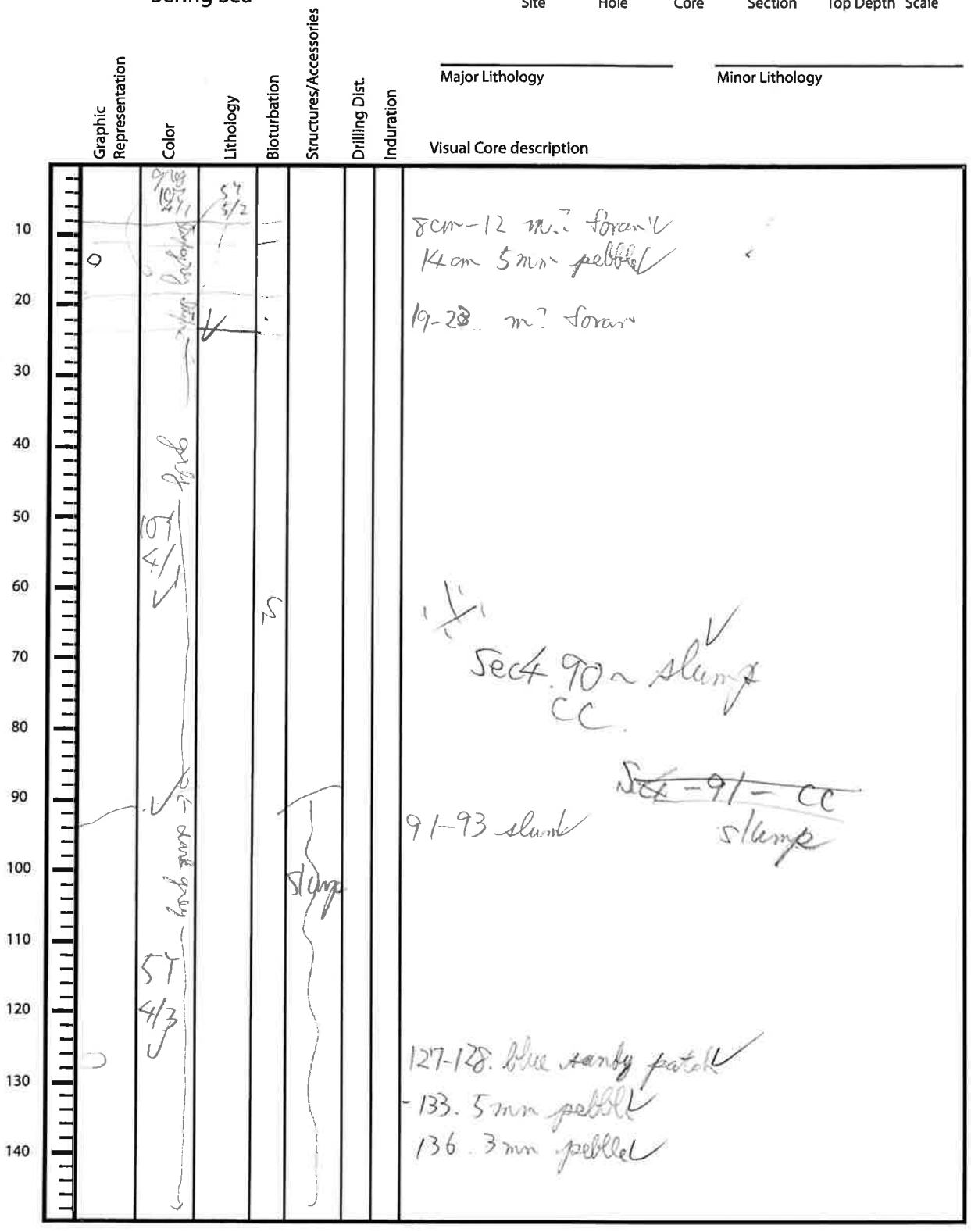
Observer: _____ Date: _____

Expedition 323
Bering Sea

U1340 A 3H 4A
Site Hole Core Section Top Depth Scale

Major Lithology

Minor Lithology



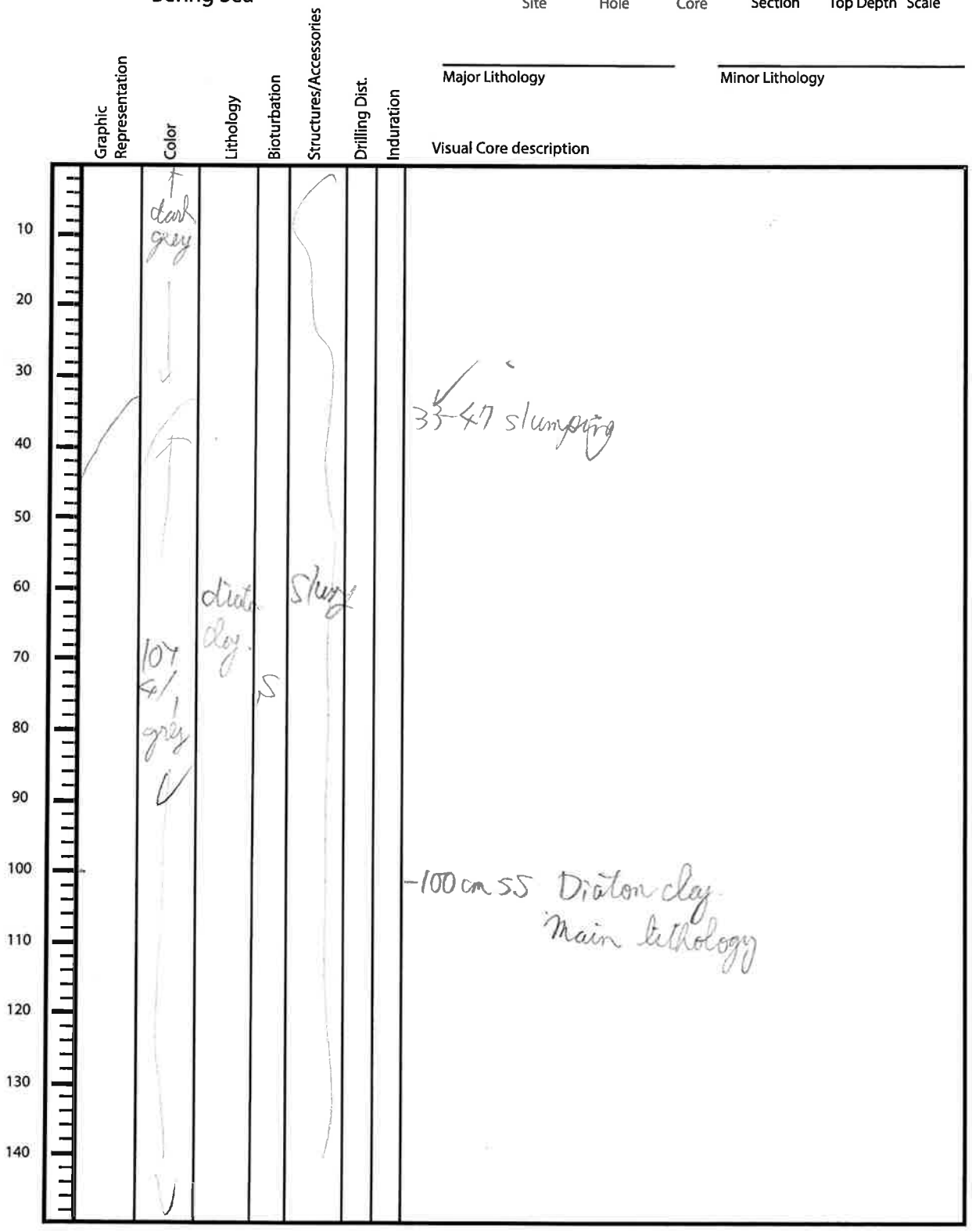
Observer: _____ Date: _____

Expedition 323
Bering Sea

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

Major Lithology

Minor Lithology



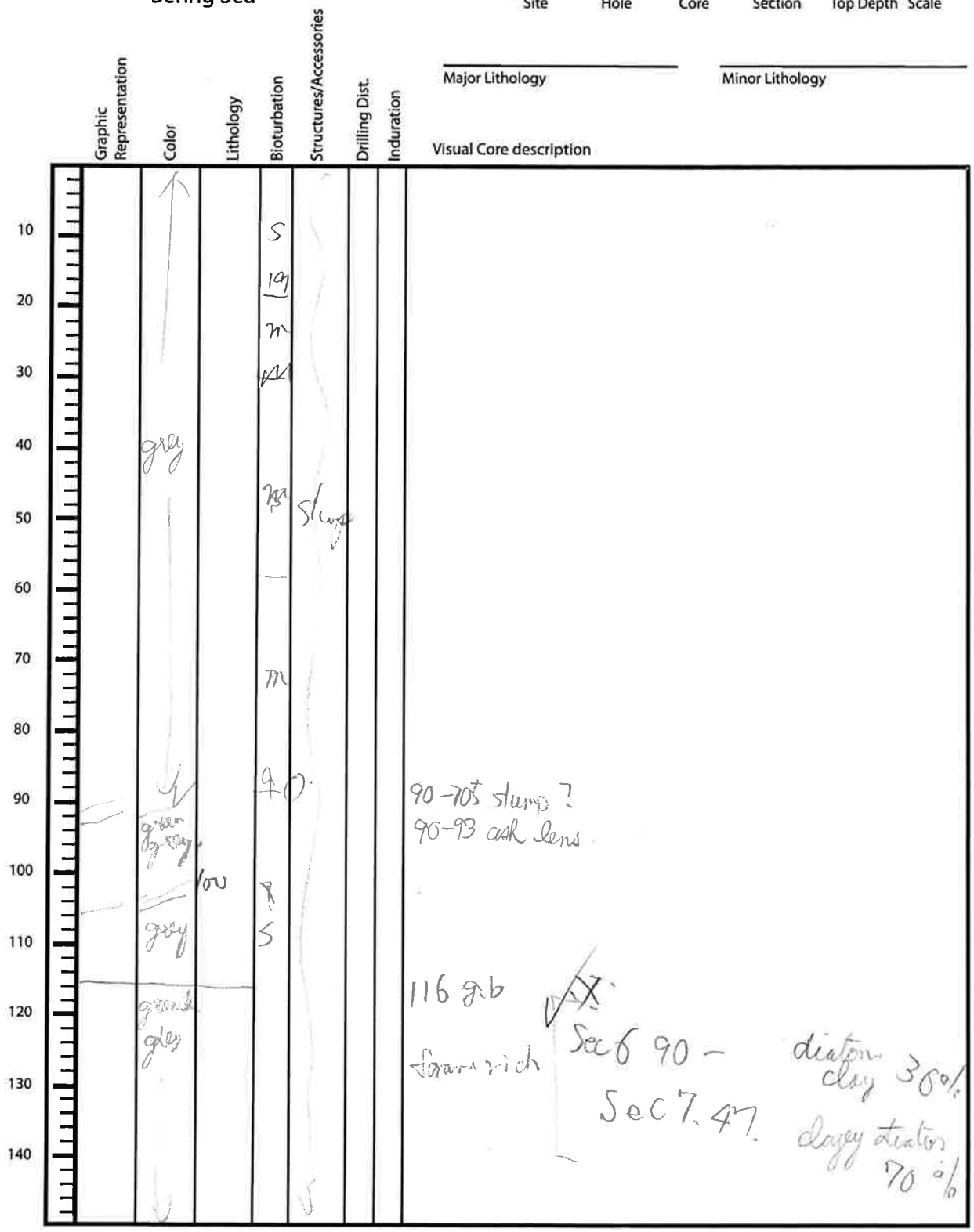
Observer: _____ Date: _____

Expedition 323
Bering Sea

U1340 A 3H 6 A
Site Hole Core Section Top Depth Scale

Major Lithology

Minor Lithology

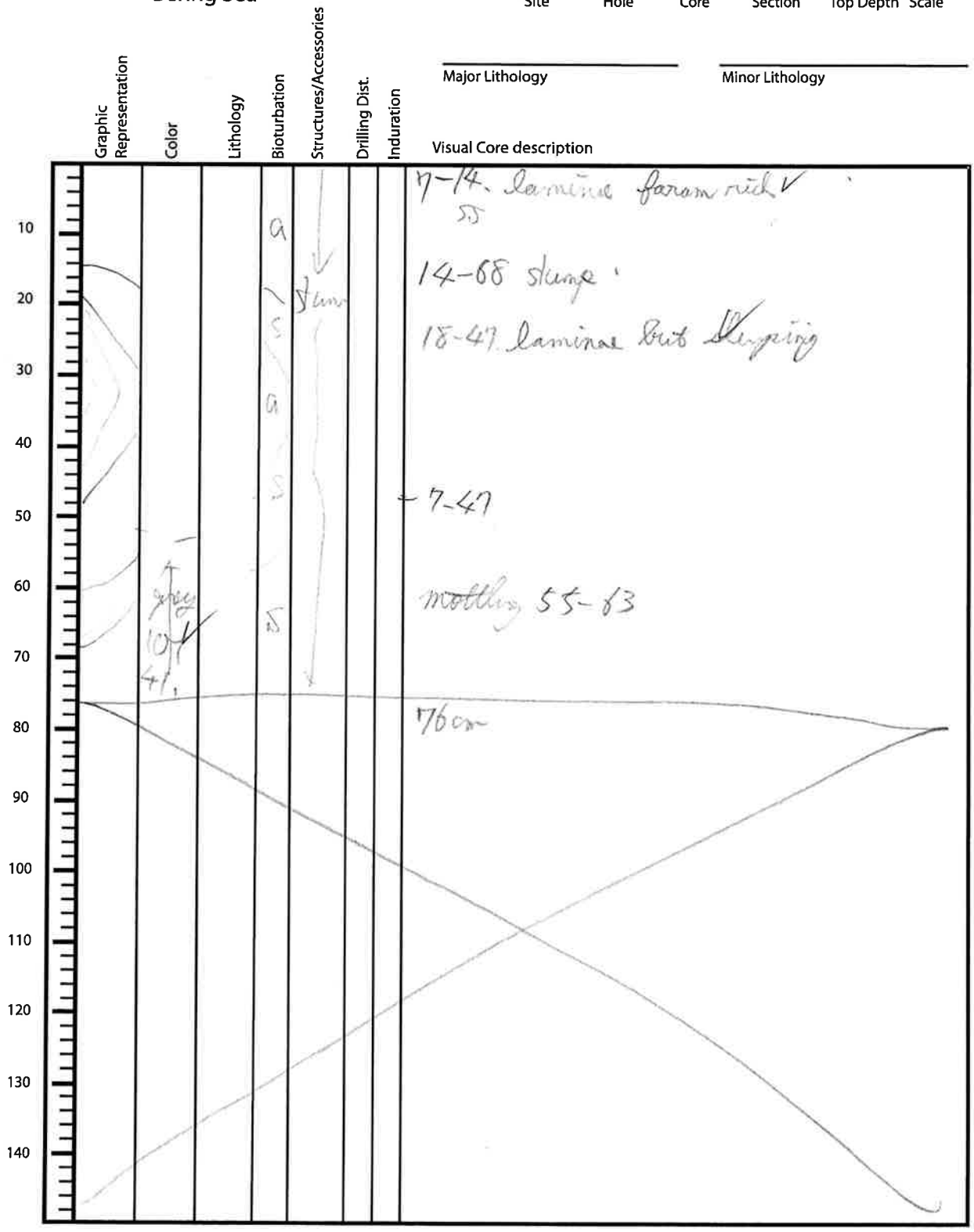


Observer: _____ Date: _____

Expedition 323
Bering Sea

Site	Hole	Core	Section	Top Depth	Scale
		34	7-A		

Major Lithology _____ Minor Lithology _____

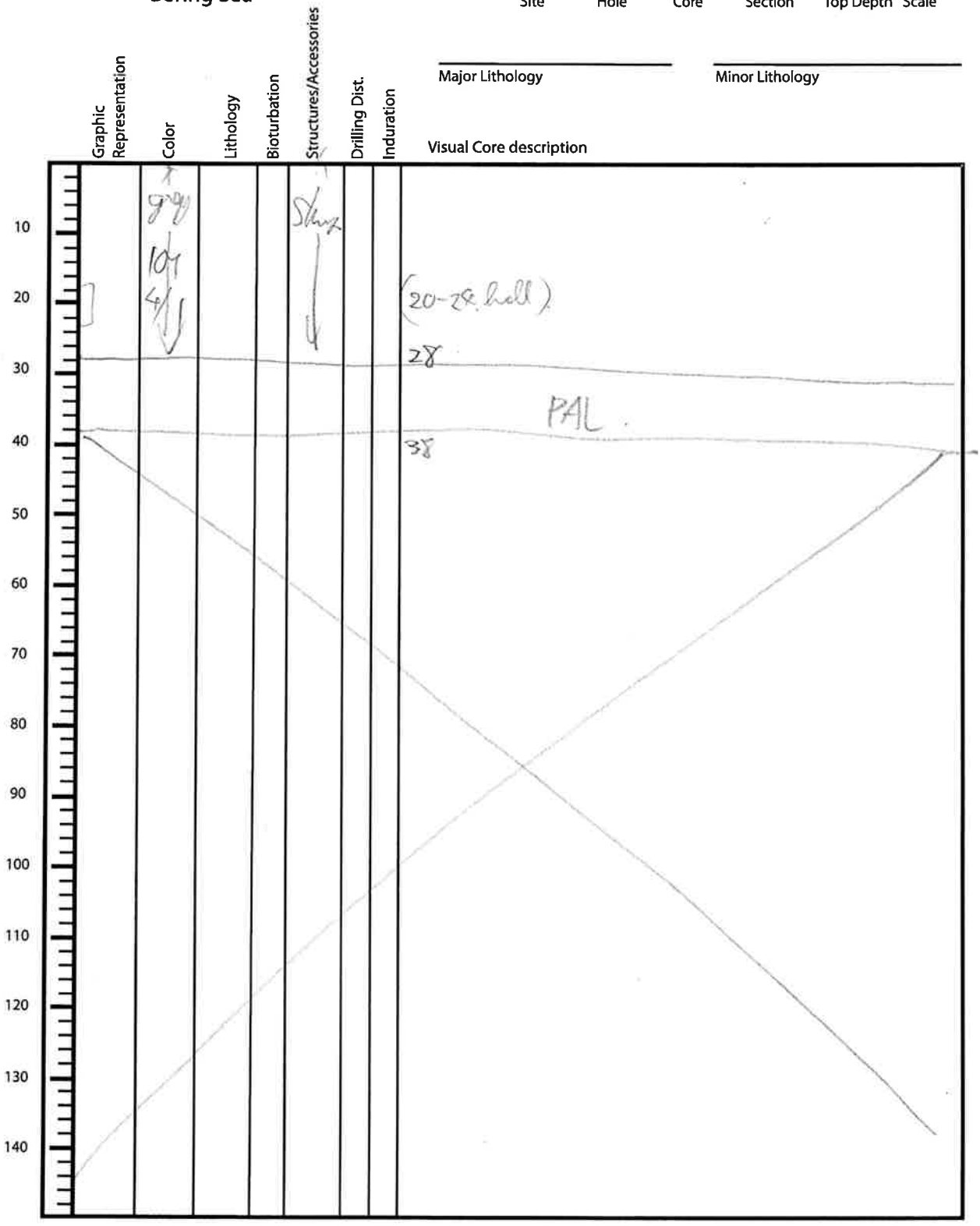


Observer: _____ Date: _____

Expedition 323
Bering Sea

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

Major Lithology ____ Minor Lithology ____



Observer: ____ Date: ____

X

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
323	U1340	A	4	H	3A	30cm	

1n
S.S.

Sediment/Rock Name	Diatom-bearing silt

Observer	BETH

B-12
S 88

Comments: V-D

Percent Texture		
Sand	Silt	Clay
10	90	

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
TD.	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
1	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

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1340	A	4	H	6A	10 cm	

in 5.7.

Sediment/Rock Name	Nannofossil-bearing diatom ooze

Observer	BETH

B-93
5-7

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

Expedition 323
Bering Sea

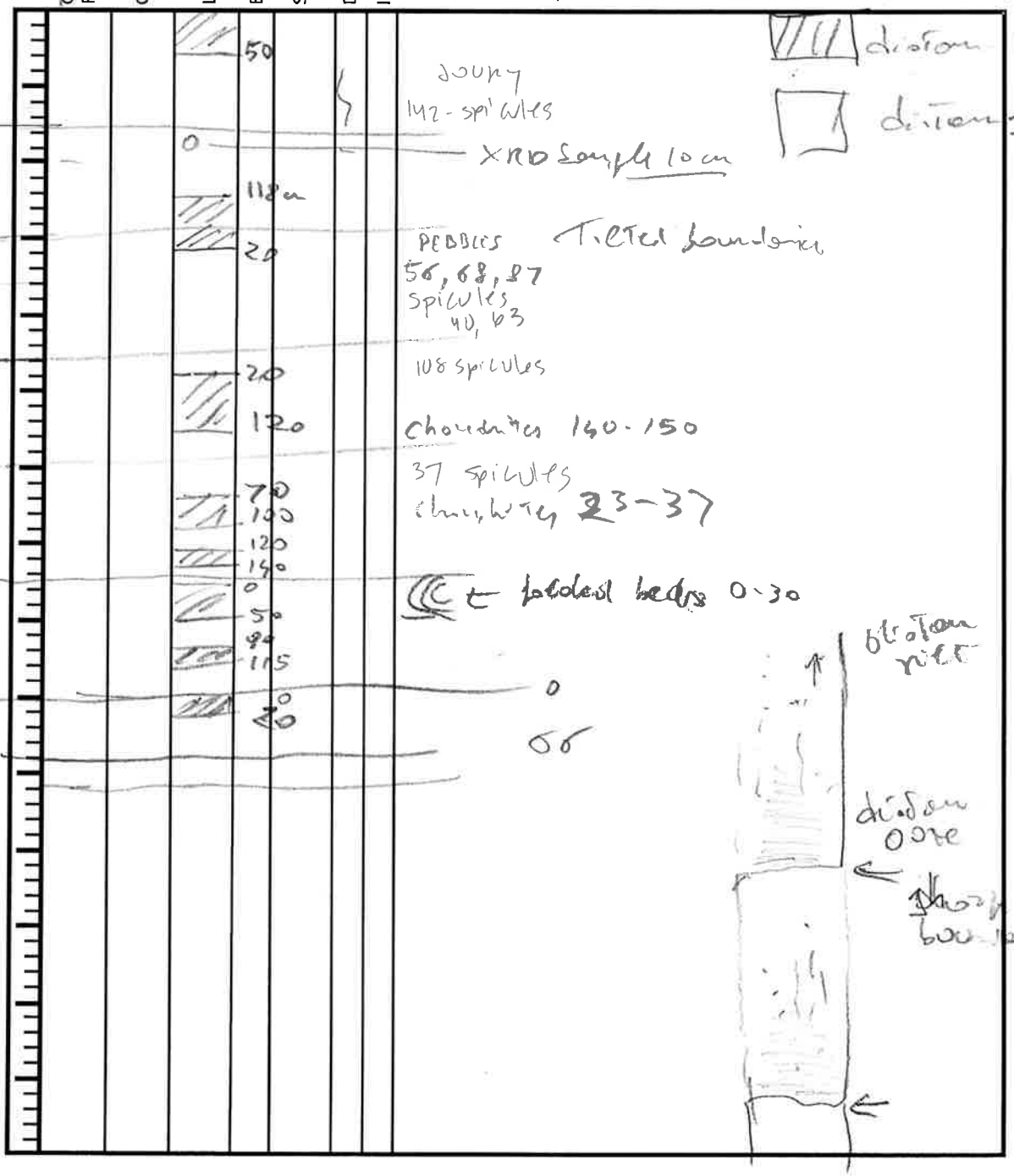
1340 A 4 1
Site Hole Core Section Top Depth Scale

Major Lithology

Minor Lithology

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

5Y 4/3
nannno - bearing



Observer: _____ Date: _____

X

S.S.

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	Nannofossil-bearing diatom ooze	Observer	BCH

Percent Texture		
Sand	Silt	Clay

Comments: laminae 3rd. ~~Major 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
	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	U1340	A	5	H	3	16cm	

Sediment/Rock Name	Diatom rich silt

Observer	Beth

B = 25
S - 75
V - 10

Percent Texture		
Sand	Silt	Clay
	85	15

Comments: ~~Major~~ Secondary Lithology

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
~~30~~ 25 A	Quartz
20 A	Feldspar
	K-feldspar (Orthoclase, Microcline...)
3 A	Plagioclase
2 A	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
5	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
3 A	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
2 A	Magnetite
4/5	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
10 A	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
	Silicoflagellates
5	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

X

5.0

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	Diatom ooze	Observer	Beth

B 70
S-30
V-0

Major ~~2nd~~ ~~Major~~ lithology

Percent Texture		
Sand	Silt	Clay
10	~~80~~ 70	20

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
10 A	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
A	Spumellaria
A	Nassellaria
	Diatoms
25	Centric
25	Pennate
10	*Chaetoceros* Resting Spores
	Silicoflagellates
5 A	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

Site	Hole	Core	Section	Top Depth	Scale
1340	A	5			

Major Lithology: ___ Minor Lithology: ___

Scale	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration
10			65, 116	m	136		
20			40	S			
30		69			115		
40		40, 70	23	S	40		
50		7, 16		S			
60		9					
70		32, 146		20, 71, 130, S			
90		13		60			
100						73, 73	

Visual Core description

1, 2, 3, 4, 5, 6, 7, CC (section labels); slump

X 132 pebble 1cm ✓ 116-119 ...

X 40-43 pebble 3cm volcanic ✓

X 70-113 laminae ✓

65 ~ slump.
69-116 yellow
-5 olive.
23-40 yellow

X 48-52 pebbles max 1.5cm fractured igneous? ✓

X 23-40 laminae ✓

16-27 yellow 27-50: grey

32-37 grey
37-50 olive
50-130 grey
130

20- slump.

X 31 pebble 5mm
X 104 mottle X 122 mottle

Sec 2-100 diatom rich silt Second,
Sec 3-15-55 3rd nanofossil rich diatom ooze
Sec 4-90-55 main diatom ooze

45 main diatom ooze. 5Y 4/2 olive gray
35 2nd. diatom rich silt 10Y 4/1 dark greenish gray
20 3rd. ~~dolomite~~ / nanofossils rich diatom ooze. 5Y 3/4 olive

X. Through this core, slump was identified

Observer: ___ Date: ___

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
323	U1340	A	6	H	4A	100cm	

Sediment/Rock Name	Diatom clay

Observer	Beth

B-58
S-27
V-15

Percent Texture		
Sand	Silt	Clay
	10	90

Comments: Major lithology

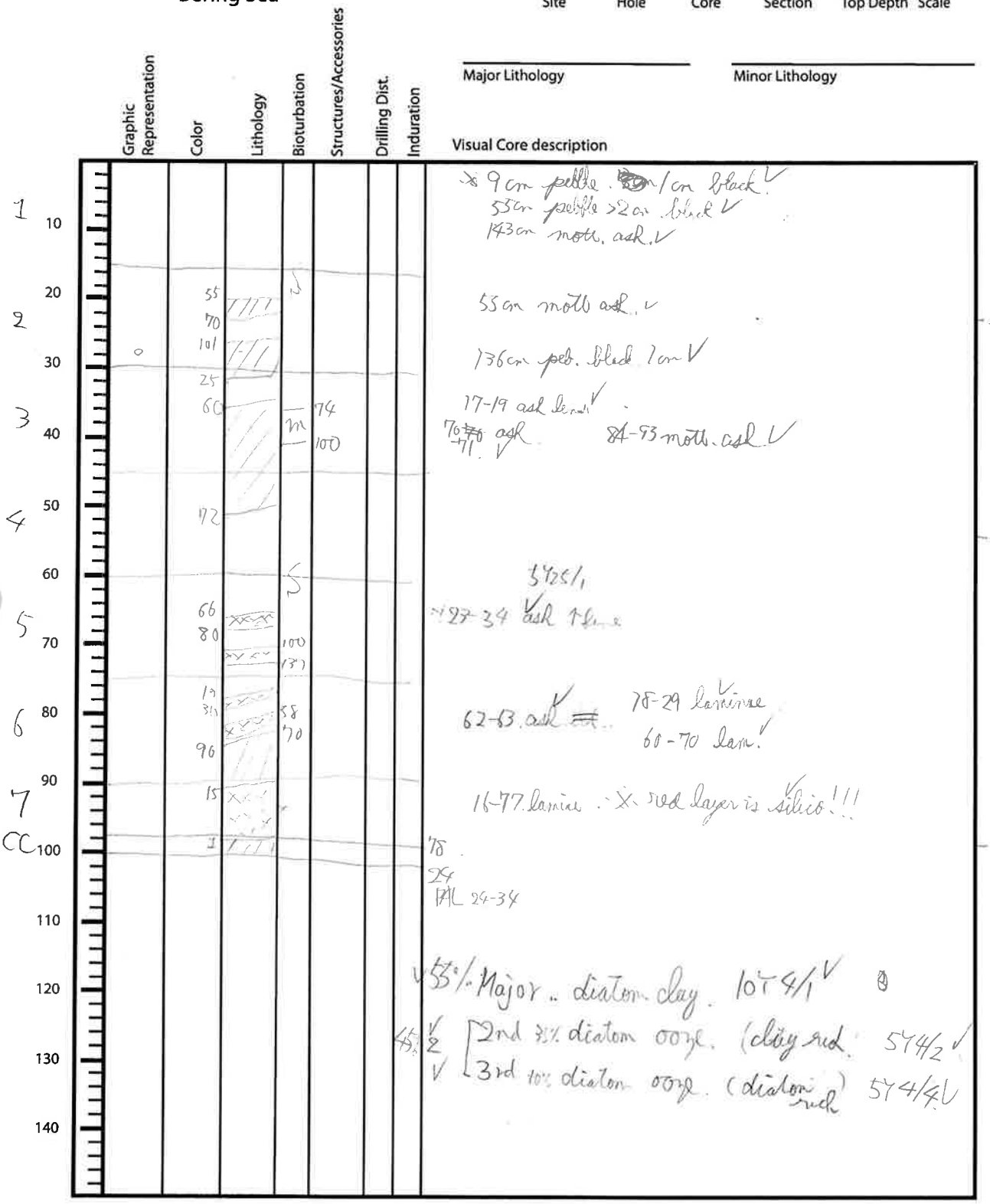
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
10	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
2	Ferromagnesium minerals
	Authigenic minerals
	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

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

Major Lithology _____ Minor Lithology _____



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	32cm	

Sediment/Rock Name	Diatom ooze	Observer	BC

Percent Texture		
Sand	Silt	Clay

Comments: Secondary Green diatoms - 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	H	2A	63cm	

Sediment/Rock Name	Diatom ooze

Observer	Bex

B-77
S-23
V-0

Percent Texture		
Sand	Silt	Clay

Comments: 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
	Glauconite
	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
35	Centric
41	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	6	H	7A	58cm	

Sediment/Rock Name	Silicoflagellate ooze!	Observer	Beth

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 Hematite? coating
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

S.M.

X

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
	1240	A	1		4	70	

Sediment/Rock Name	~~NANNO ROCK DIATOM OOZE~~	Observer	IWA

NANNO & FORAM BEARING DIATOM SILT

Comments: MAIN LITHOLOGY

Percent Texture		
Sand	Silt	Clay

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
10%	X Quartz
10%	X Feldspar
	X K-feldspar (Orthoclase, Microcline...)
	X Plagioclase
10	X Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	X 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
10%	X Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
~~15-20~~ 10%	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	X Radiolarians
	Spumellaria
	Nassellaria
5%	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.W.

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

Percent Texture		
Sand	Silt	Clay

Comments: MAIN LITH

bright laminations

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
	Quartz
<5%	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
5%	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
20	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

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 DIATOM OOZE	Observer	HWA

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
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

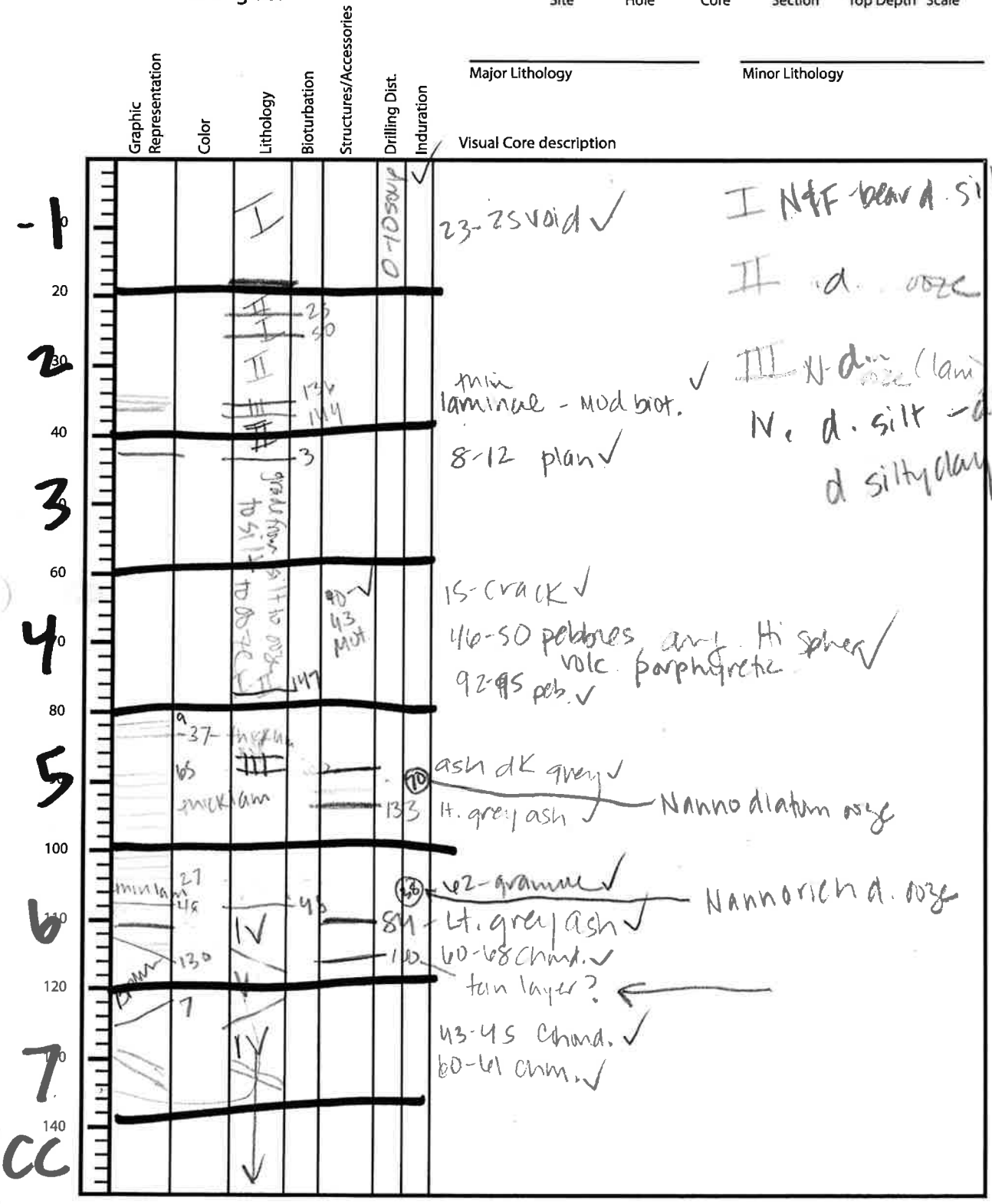
Percent	Component
	BIOGENIC GRAINS
	Calcareous
5%	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
40%	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
40%	Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
5%	Sponge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

Expedition 323
Bering Sea

1340B A 7H XVL
Site Hole Core Section Top Depth Scale

Major Lithology

Minor Lithology



Observer: Beth Date:

X

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	Diatom ooze

Observer	Kelsie

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

X

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1340	A	8	H	3	50	50

Sediment/Rock Name	Foram-bearing diatom ooze	Observer	Kelsie

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
	Chaetoceros Resting Spores
1	Silicoflagellates
1	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
	1340	A	8		5	3cm	

Sediment/Rock Name	[redacted]

D. bearing silty fine ash

Observer	LWA

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
~~90~~	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

5M

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) 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
	Chaetoceros Resting Spores
1	Silicoflagellates
1	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	8H		5	70	

Sediment/Rock Name	Diatom-rich silty fine ash

Observer	Beth

Percent Texture		
Sand	Silt	Clay

Comments: (Jamma)

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
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	Interval (cm) Bottom
323	U1340	A	8	H	6A	41	

siliceous clay-rich

Sediment/Rock Name	Diatom ooze

Observer	Beth

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
4	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

SM

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

Sediment/Rock Name	Diatom ooze

Observer	B. [illegible]

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
	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
10	Vitric grain
	Lithic grain

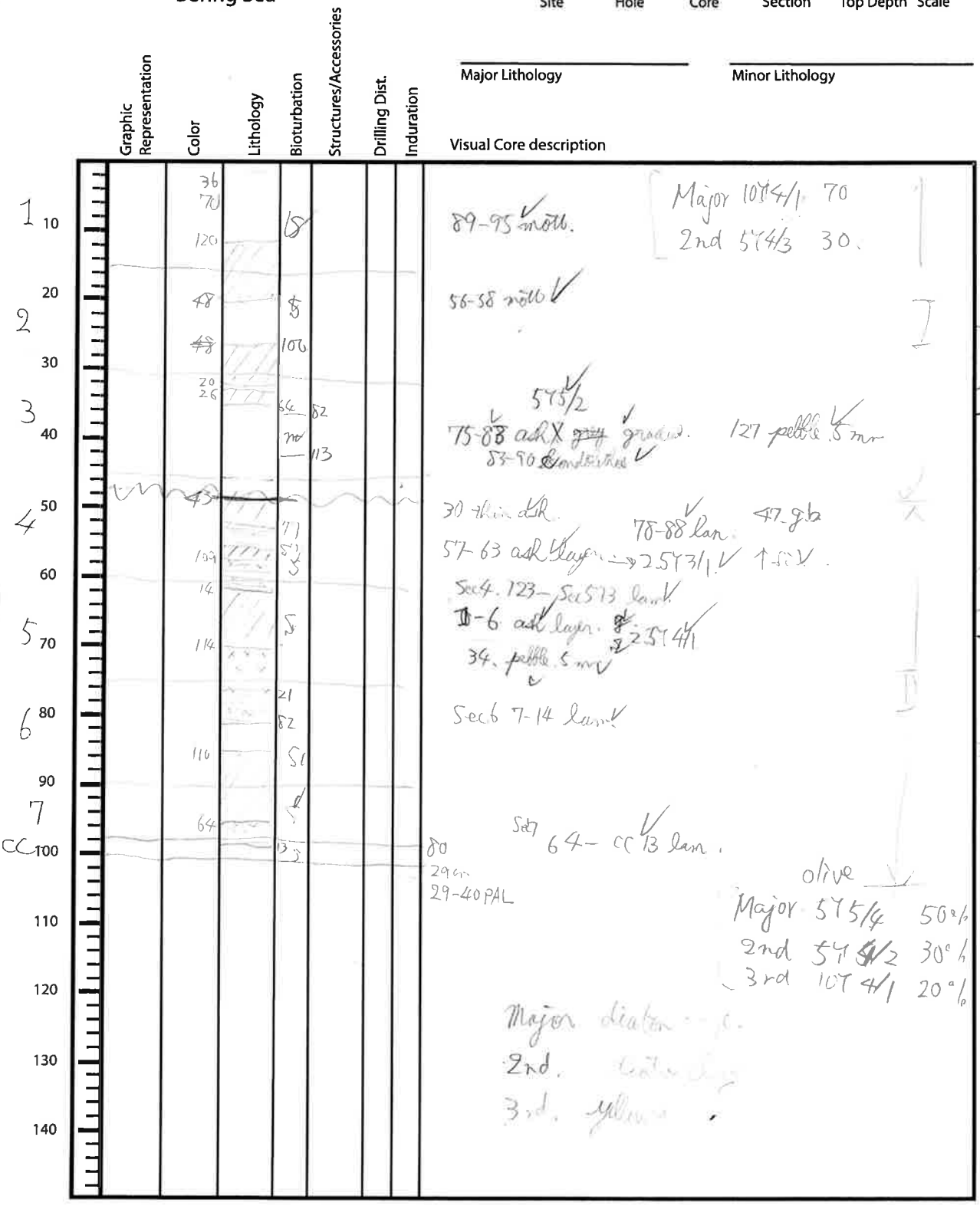
Percent	Component
	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
70	Centric Mostly A. curvatulus var
15	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates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

Actinocyclus curvatulus

Expedition 323
Bering Sea

1340 | A | 8 | | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology



SS
3A-50
foram bearing diatom ooze.

SS
2A-90cm
diatom ooze
3A-50 cm
3A-80. ash.
diatom rich silty fine ash

diatom bearing.
SS-5 silty thin ash

SS
5A-70cm
foram bearing diatom ooze
diatom ooze

SS dark
6A-40cm
6A-41cm
light
diatom ooze.

Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

SM

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

Sediment/Rock Name	Diatom-rich fine-ashy silt

Observer	Kelsie

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
10	Vitric grain
	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	Interval (cm) Bottom
323	1390	A	9	H	1	130	130

Sediment/Rock Name	Foram - bearing diatom ooze

Observer	Kelsie

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
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
	BIOGENIC GRAINS
	Calcareous
5	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	Interval (cm) Bottom
323	U1340	A	9	H	1	131.5	131.5

Sediment/Rock Name	Diatom ooze	Observer	Kelsie

Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
5	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
	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
75	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	Interval (cm) Bottom
323	U1340	A	9	H	3	18	18

Sediment/Rock Name	Foram-rich silt

Observer	Kelsie

Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
20	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

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1340	A	9	H	6	9.5	9.5

Sediment/Rock Name	Diatom ooze

Observer	Kelsie

Percent Texture		
Sand	Silt	Clay

Comments:

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
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
15	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
3	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
70	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	Interval (cm) Bottom
323	U1340	A	9	H	6	115.5	115.5

Sediment/Rock Name	Diatom ooze	Observer	Kelsie

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	Interval (cm) Bottom
323	U1340	A	9	H	6	117	117

SM

Sediment/Rock Name	Diatom ooze (centric-rich)

Observer	Kelsie

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
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
86 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

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	Diatom-bearing foram ooze	Observer	Kelsie

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	Interval (cm) Bottom
323	U1340	A	9	H	7	58	58

Sediment/Rock Name	Foram-rich fine ashy silt

Observer	Kelsie

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	Interval (cm) Bottom
323	U1340	A	9	H	7	58.5	58.5

SM

Sediment/Rock Name	Diatom-bearing foram ooze

Observer	Kelsie

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

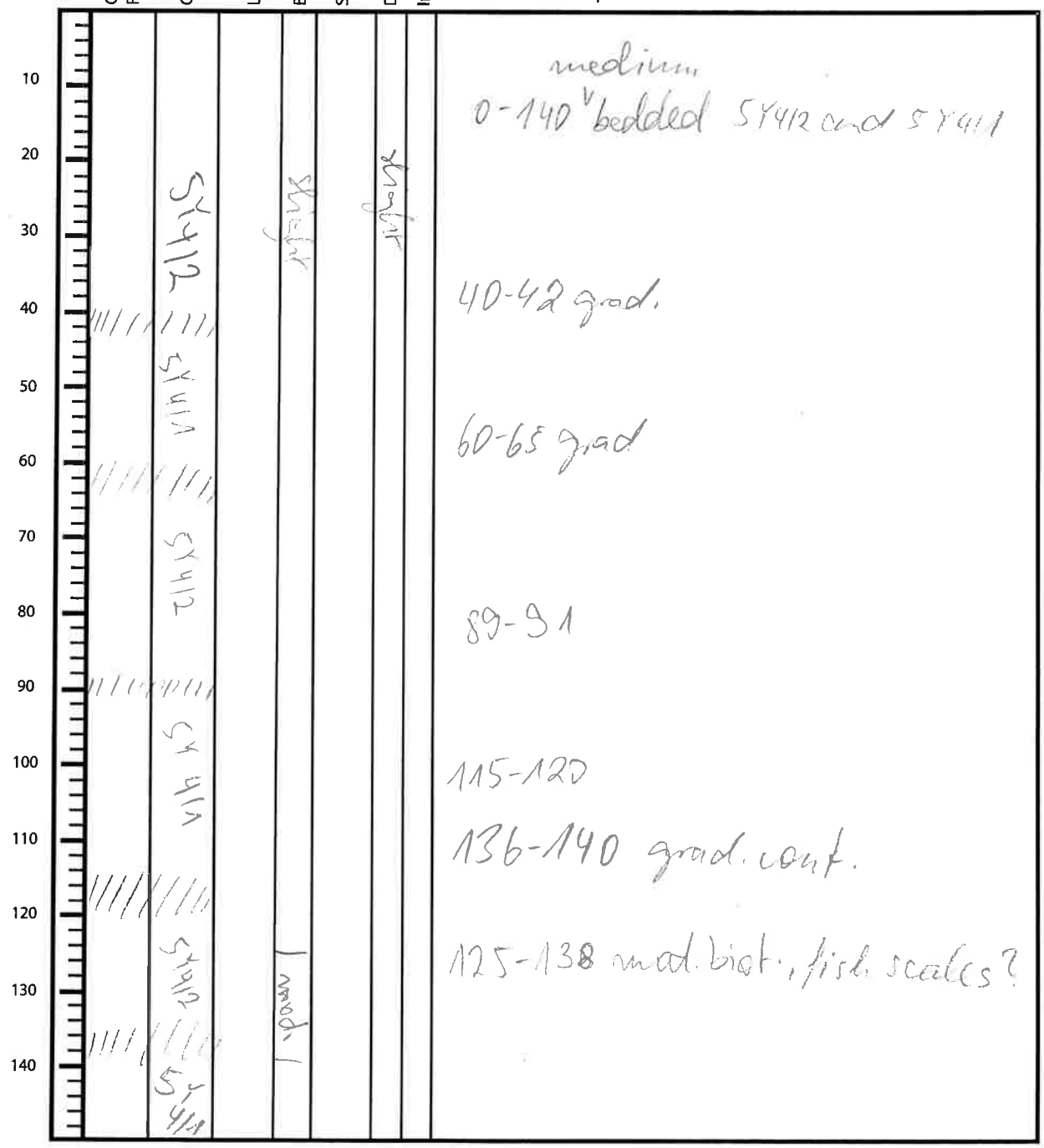
Percent	Component
	BIOGENIC GRAINS
	Calcareous
60 ~~55~~	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
10	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge 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 1
Site Hole Core Section Top Depth Scale

Major Lithology Minor Lithology

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



medium.
0-140 v bedded 5Y4/2 and 5Y4/1

40-42 grad.

60-65 grad

89-91

115-120

136-140 grad. cont.

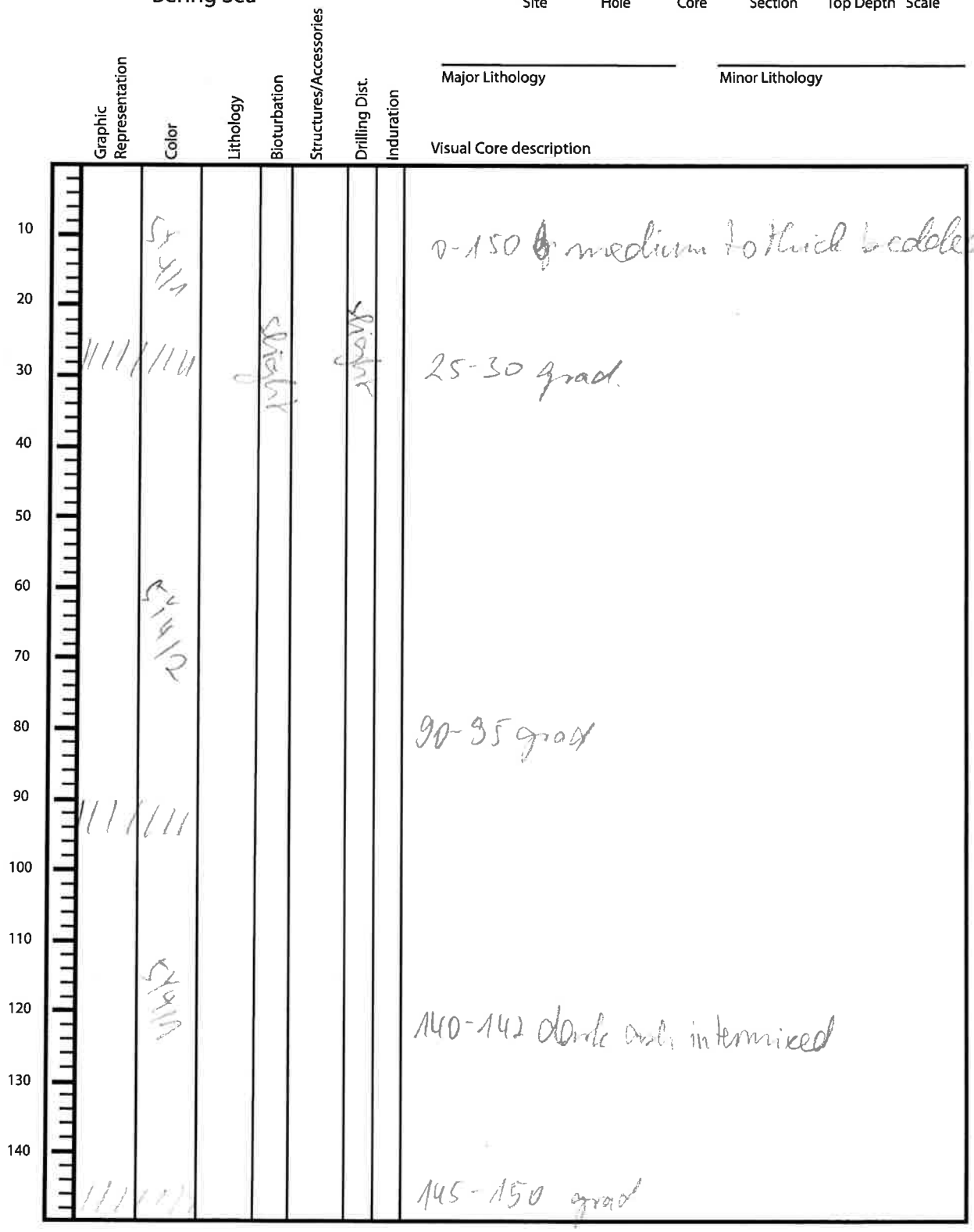
125-138 mod. biot., fish scales?

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 9H 2 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____

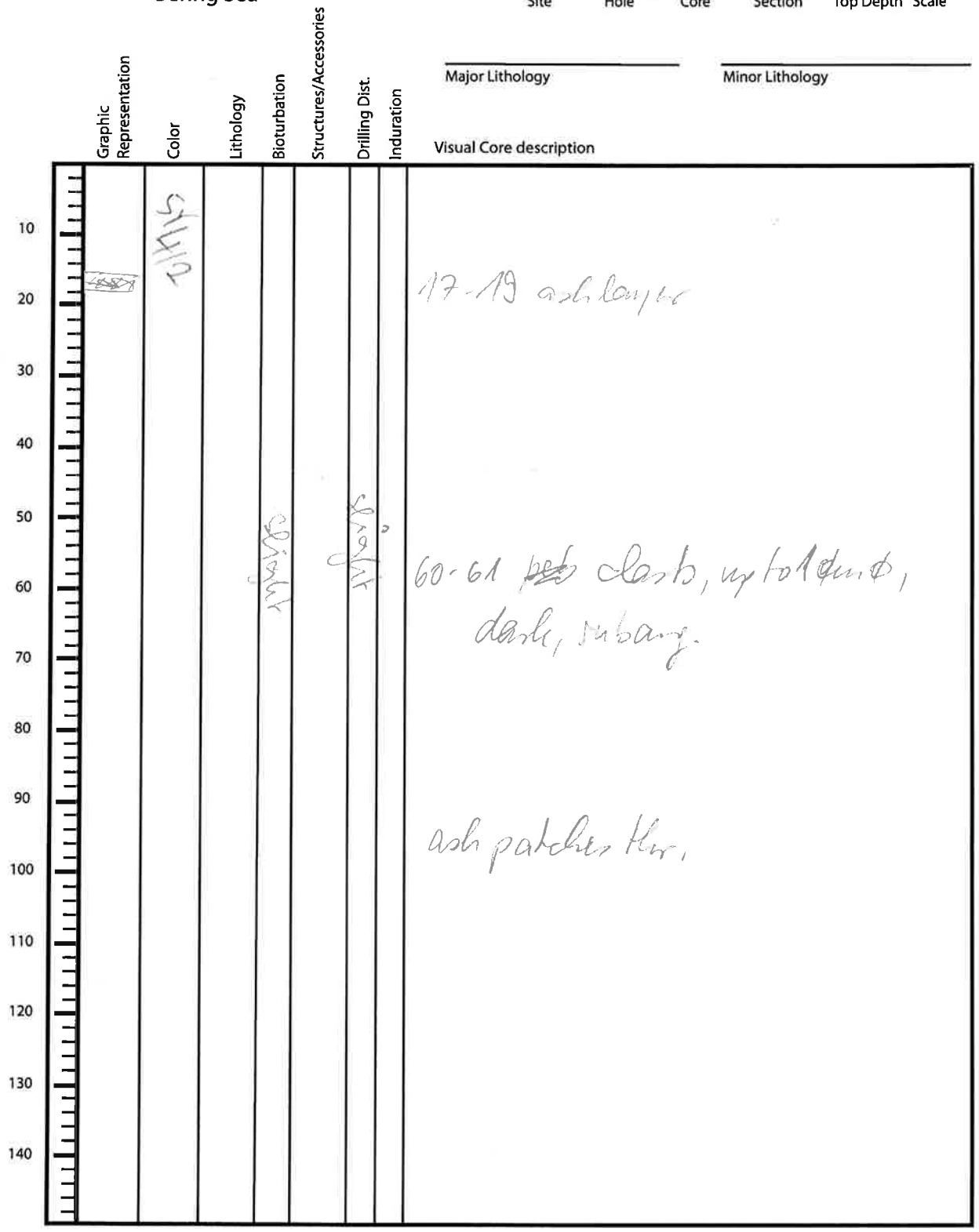


Observer: ____ Date: ____

Expedition 323
Bering Sea

1340 A 8 3 _____ _____
Site Hole Core Section Top Depth Scale

_____ _____
Major Lithology Minor Lithology

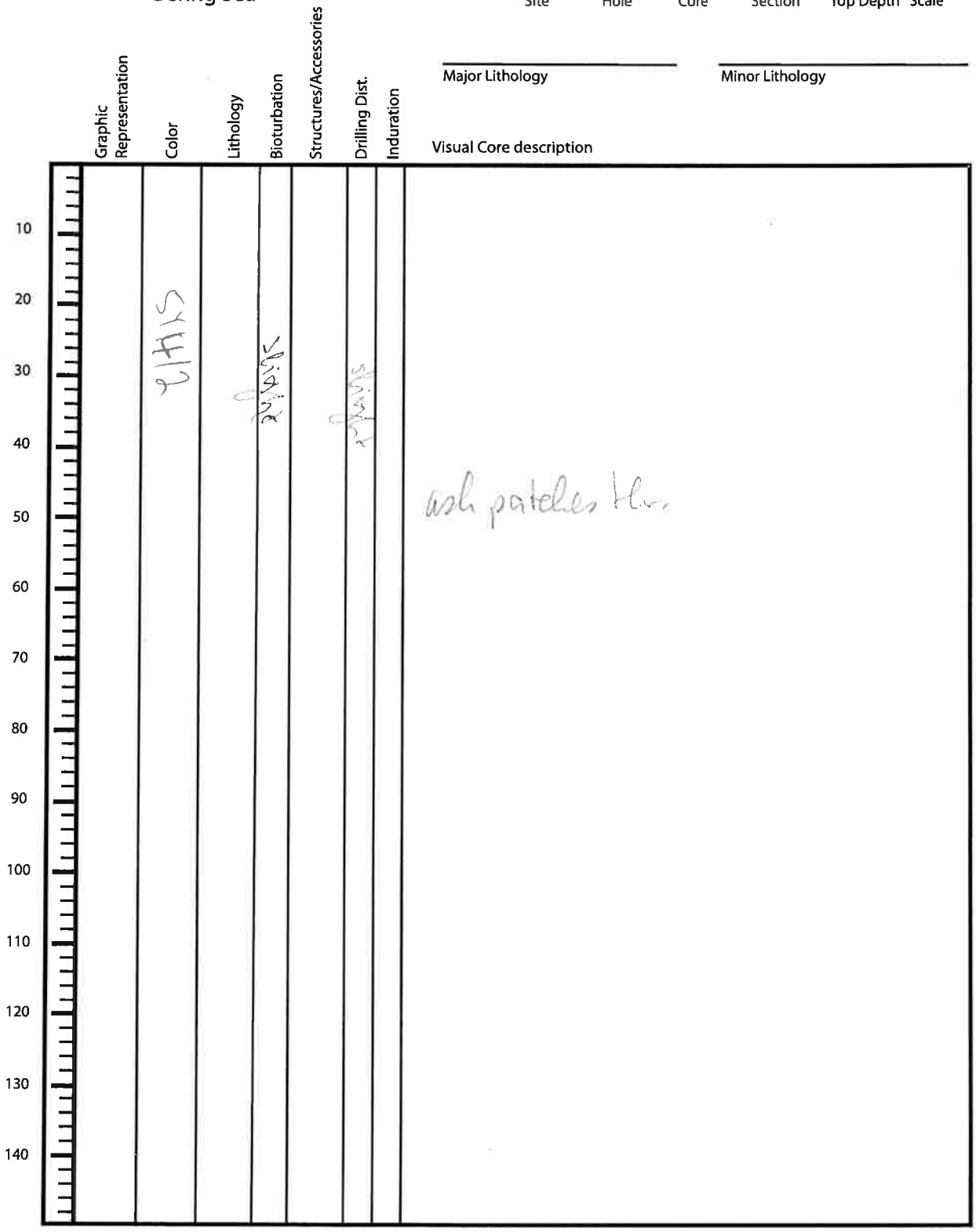


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 9 4 _____ _____
Site Hole Core Section Top Depth Scale

_____ _____
Major Lithology Minor Lithology



Observer: _____ Date: _____

Expedition 323
Bering Sea

Site	Hole	Core	Section	Top Depth	Scale
1340 (323 crossed out)	A	9	5		

Major Lithology

Minor Lithology

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

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

Bioturbation: slight (~10–27); mod. (~37–63); slight (~78–88)

Drilling Dist.: slight (~22–37)

Color: 5Y4/2 (~47–60)

80 ash layer

130-135 grad

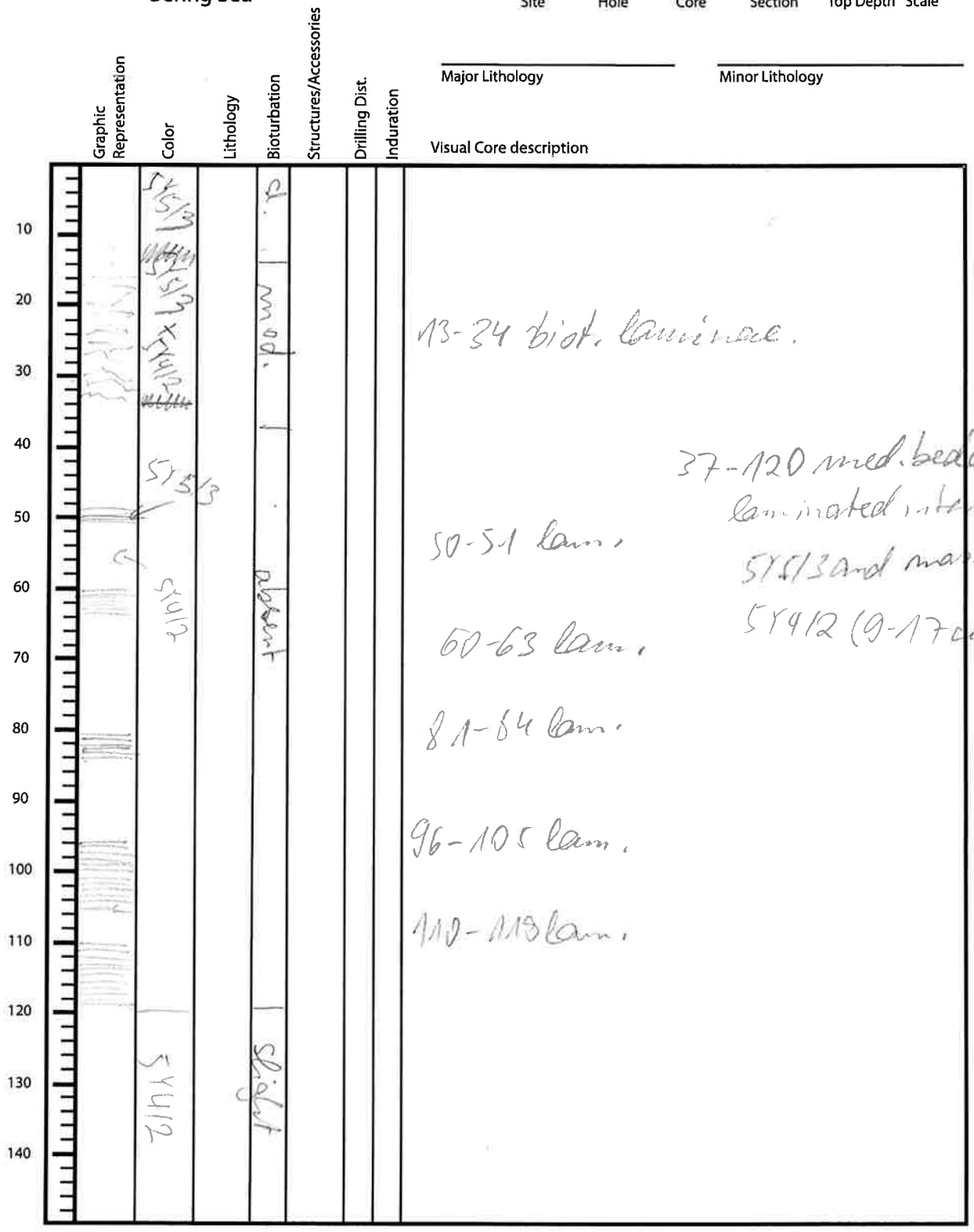
Observer: Beth

Date:

Expedition 323
Bering Sea

1340 A 8 6 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____

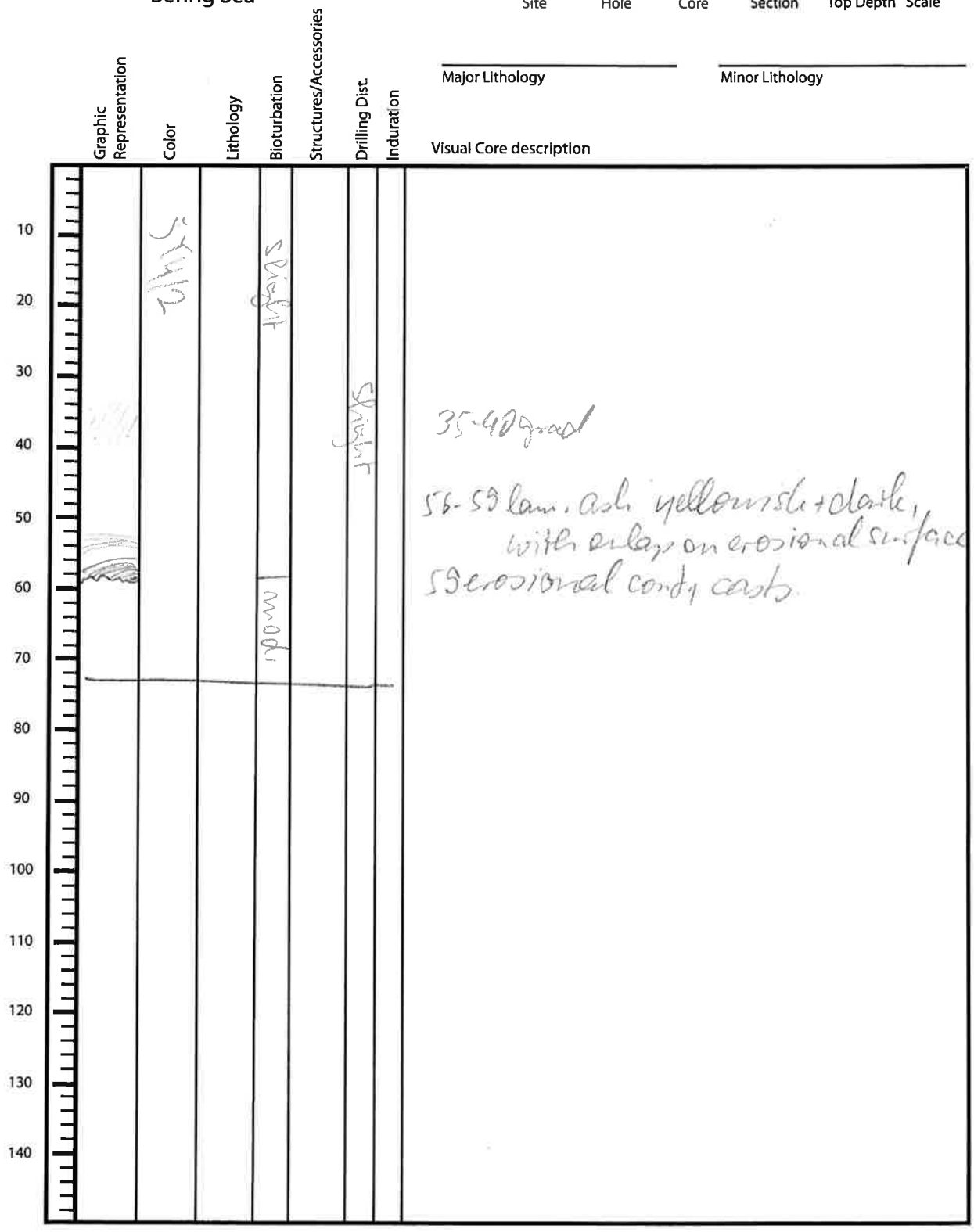


Observer: ____ Date: ____

Expedition 323
Bering Sea

1340 A 9 7 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____



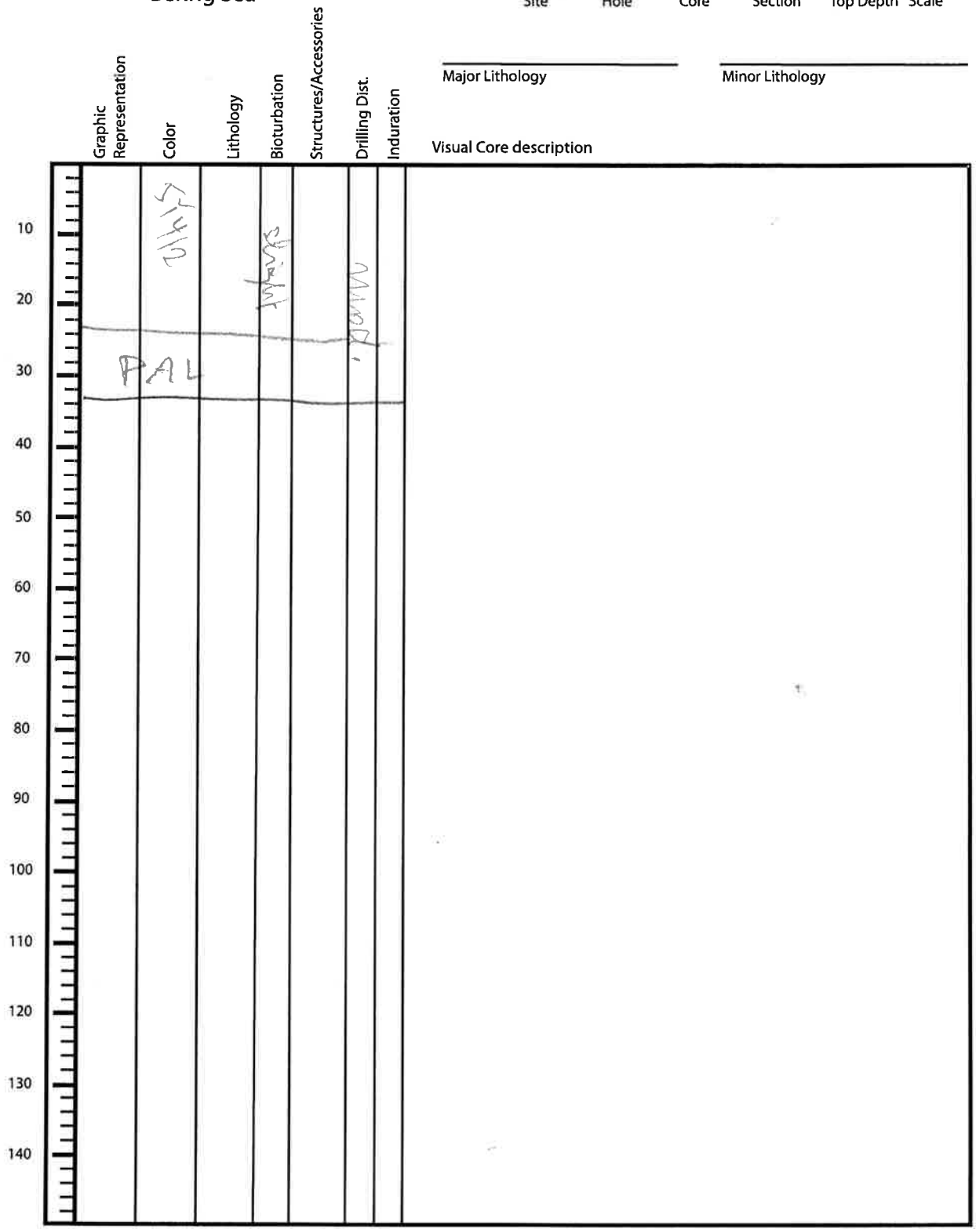
Observer: ____ Date: ____

Expedition 323
Bering Sea

1340 D 9 CC
Site Hole Core Section Top Depth Scale

Major Lithology

Minor Lithology

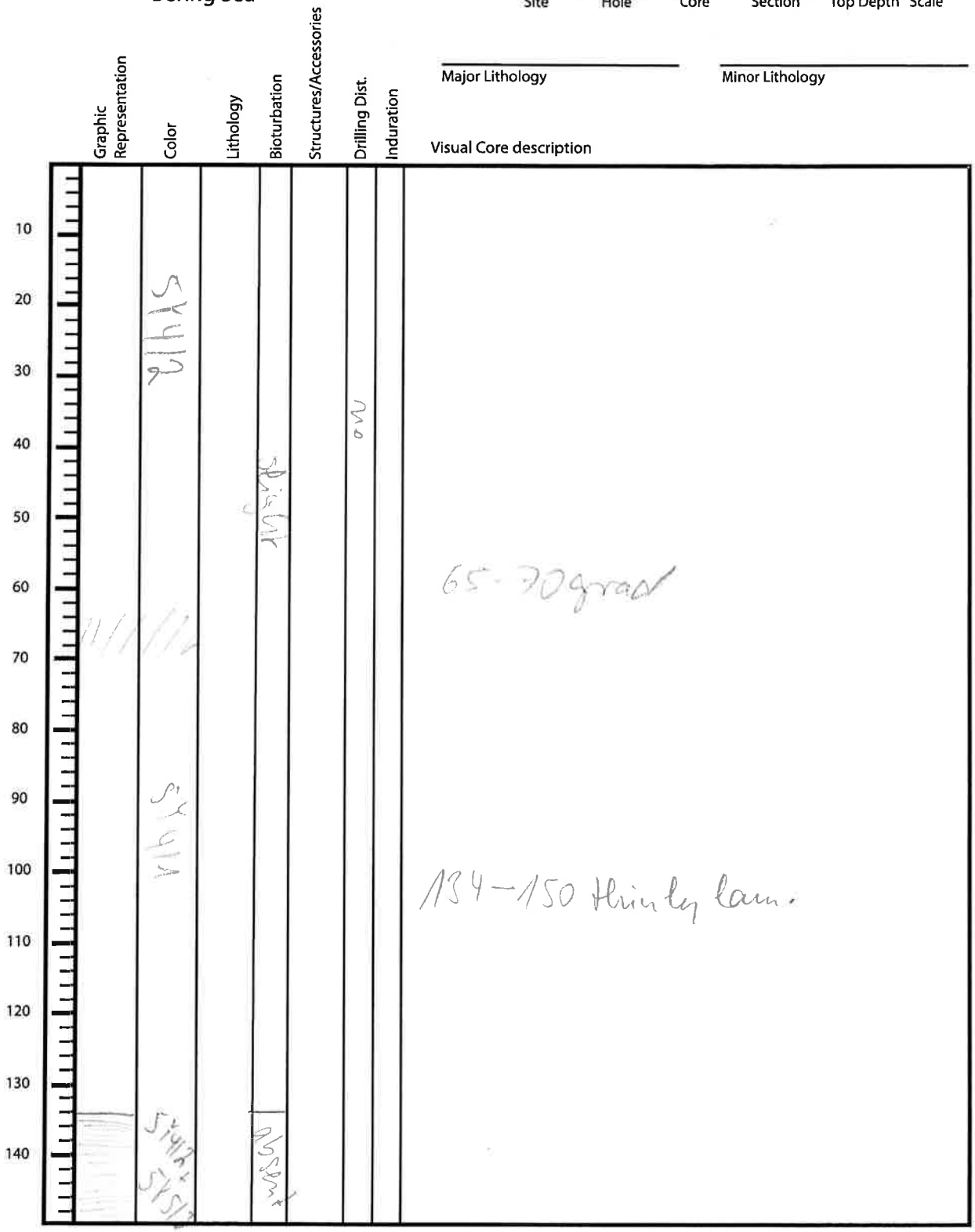


Observer: Date:

Expedition 323
Bering Sea

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

Major Lithology | Minor Lithology

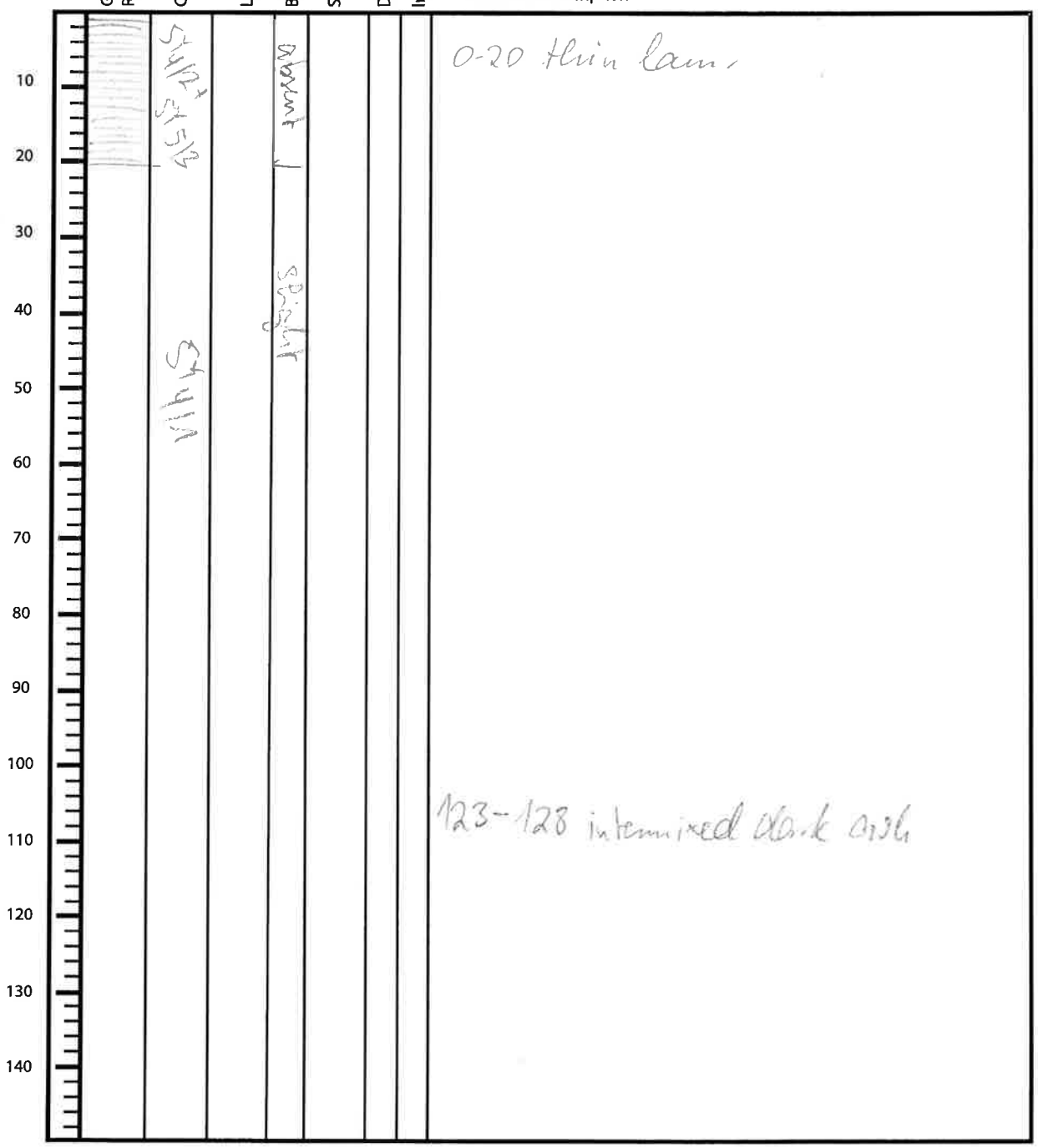


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 | A | 10 | 2 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

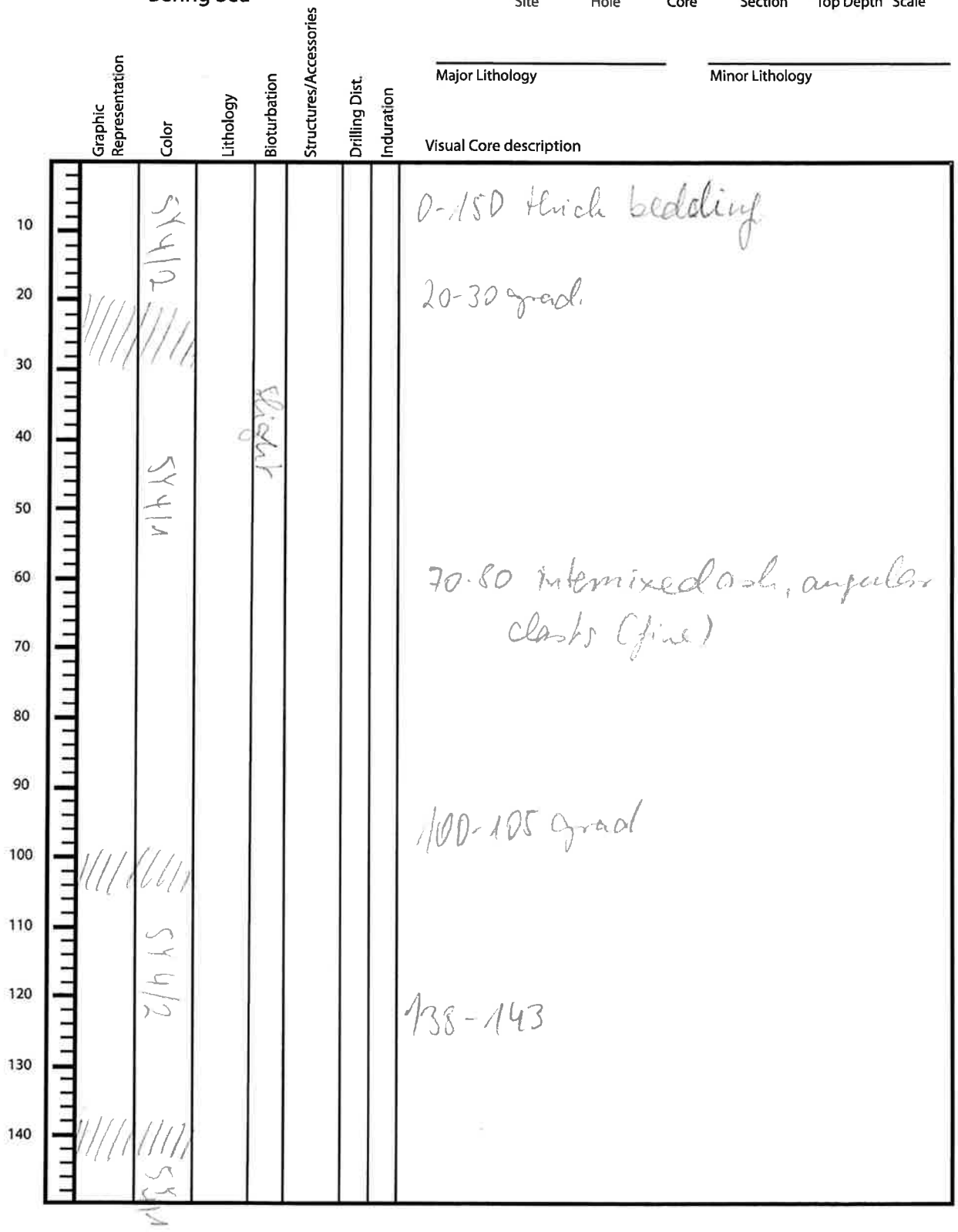


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 10 3
Site Hole Core Section Top Depth Scale

Major Lithology Minor Lithology

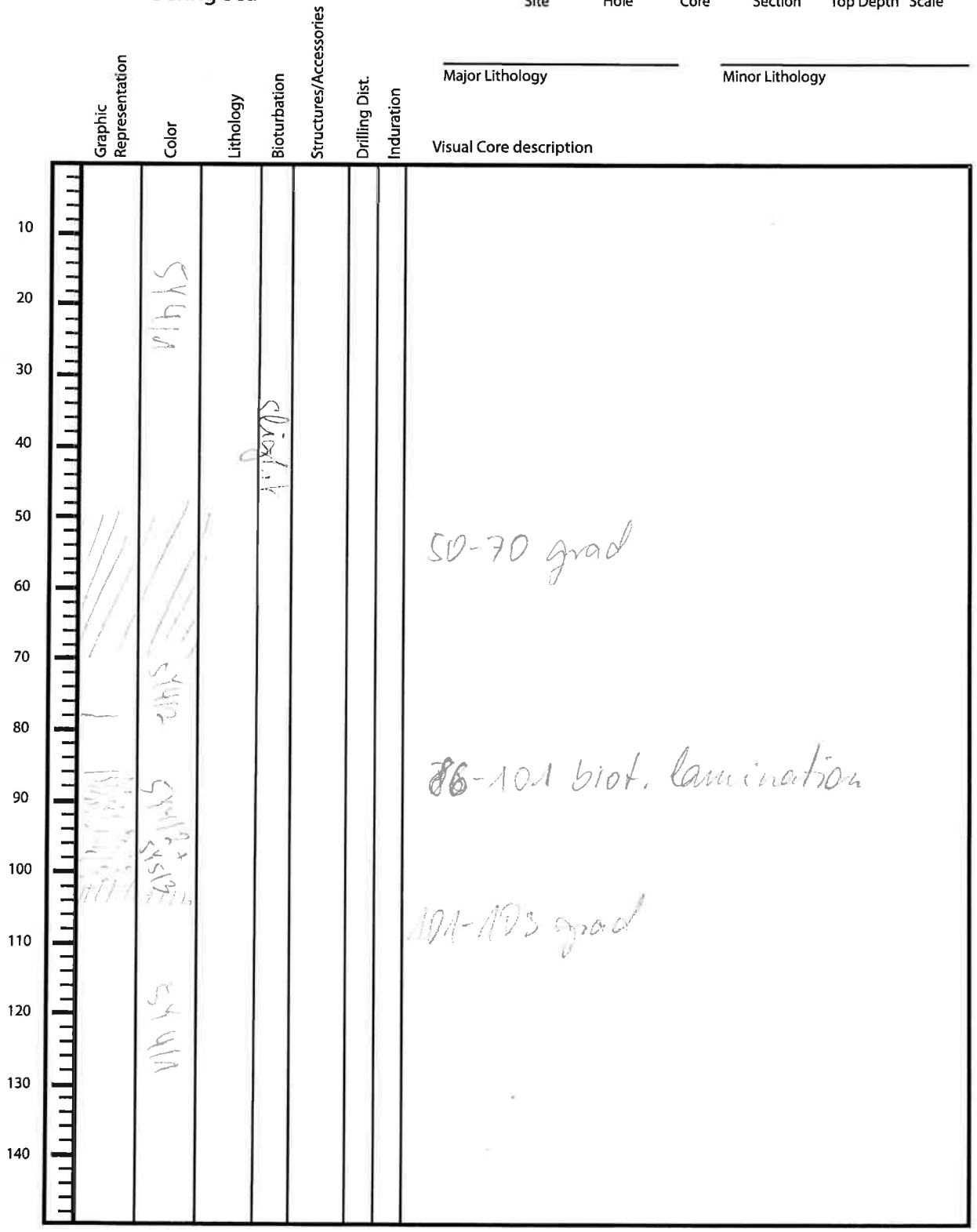


Observer: _____ Date: _____

Expedition 323
Bering Sea

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

Major Lithology | Minor Lithology

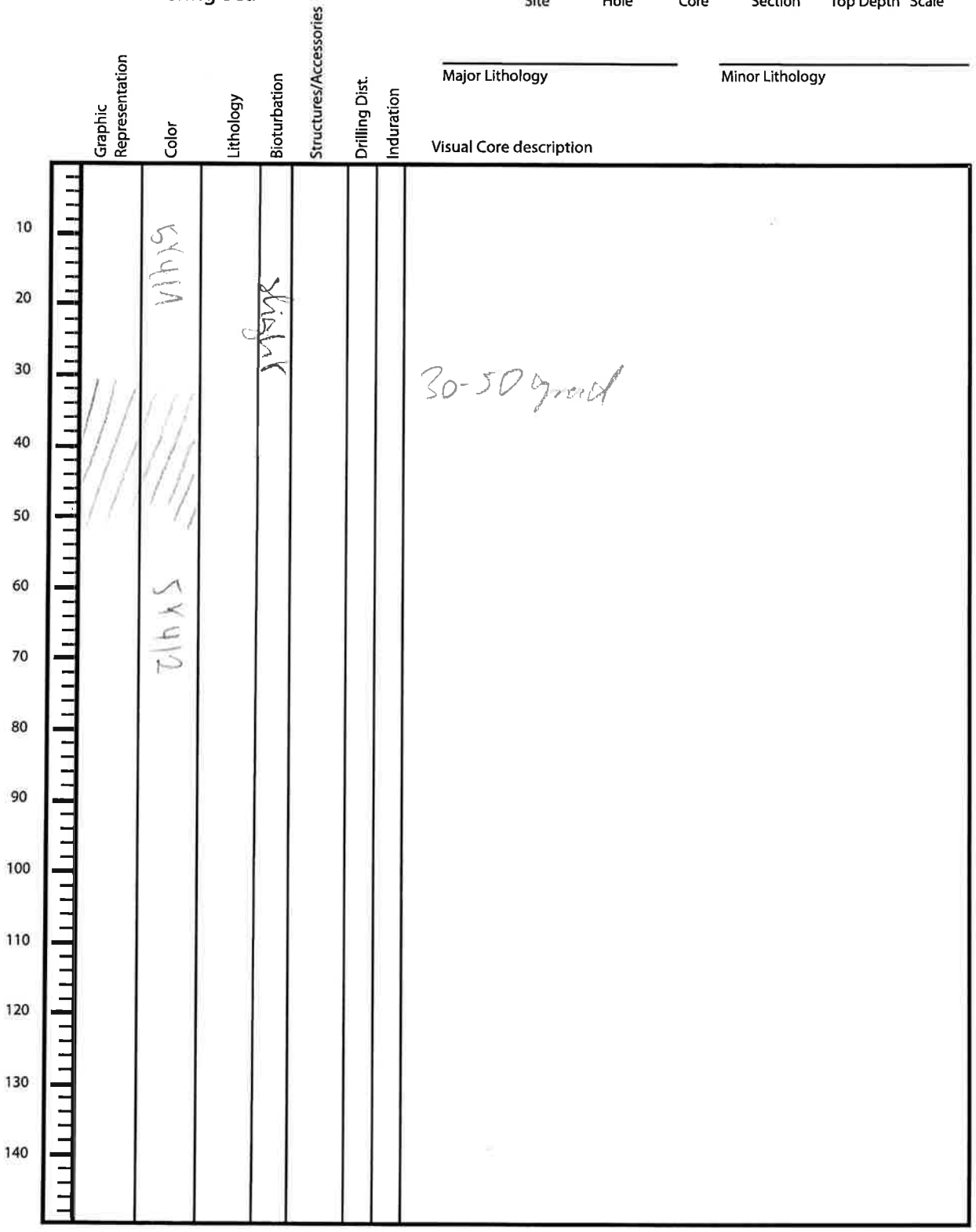


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 10 5
Site Hole Core Section Top Depth Scale

Major Lithology Minor Lithology

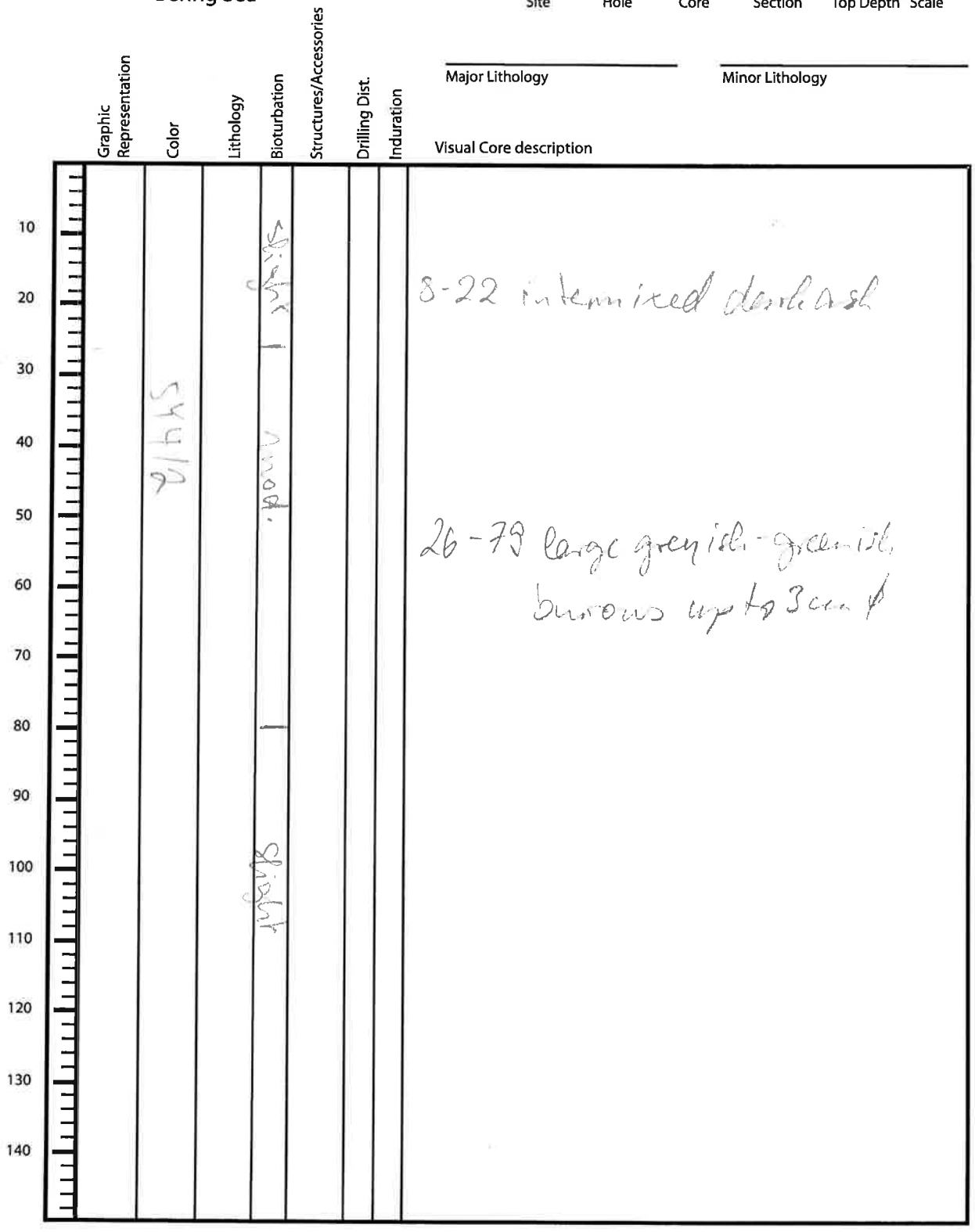


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 | A | 10 | 6 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

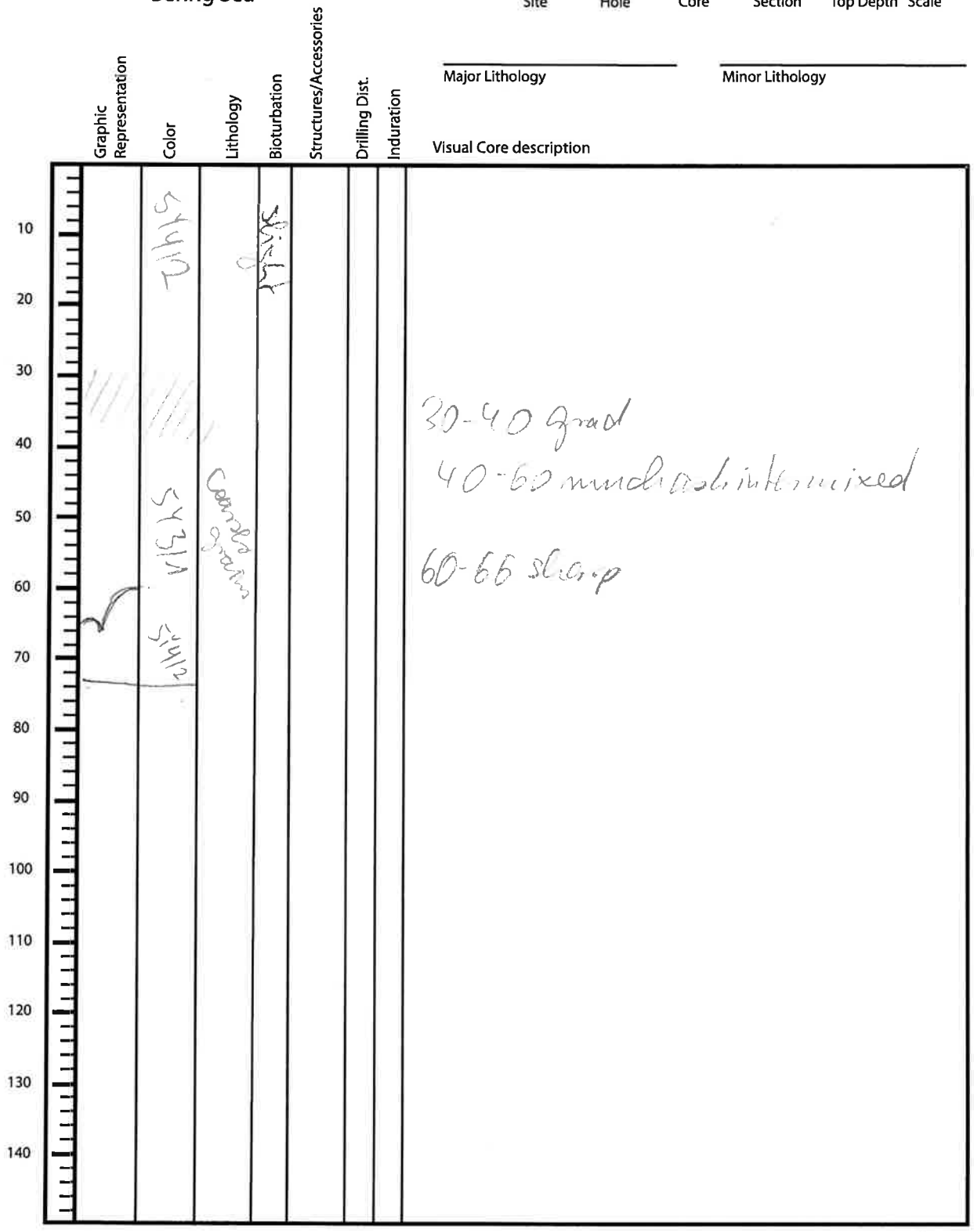


Observer: _____ Date: _____

Expedition 323
Bering Sea

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

Major Lithology | Minor Lithology

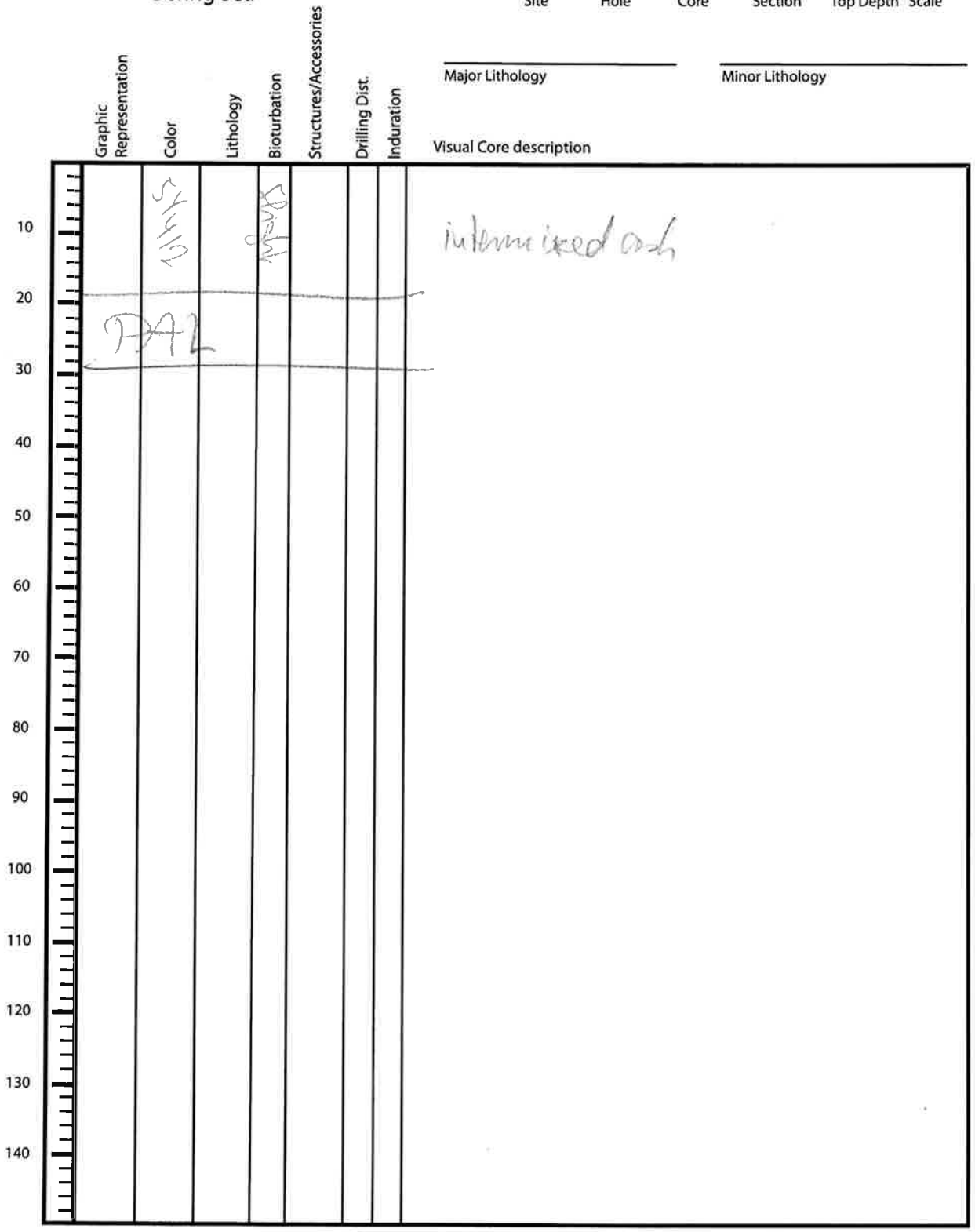


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 / A / 10 / CC / / /
Site / Hole / Core / Section / Top Depth / Scale

Major Lithology / Minor Lithology



Observer: _____ Date: _____

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Foram-rich

Sediment/Rock Name	Diatom ooze

Observer	MSC

Percent Texture		
Sand	Silt	Clay

Comments: Marr lithology – green 1-2½

Percent	Component
14	**SILICICLASTIC GRAINS/MINERAL**
	Framework minerals
7	✓ Quartz
4	Feldspar
	✓ K-feldspar (Orthoclase, Microcline...)
	✓ Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite 17x73
	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
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	Interval (cm) Bottom
323	U1340	A	11	H	3	81	81

Sediment/Rock Name	coarse ash	Observer	MSC

Percent Texture		
Sand	Silt	Clay
80	18	2

est. from appearance, not from scitab (exclude

Comments: Ash

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 (coarse grains)
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

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	Diatom-rich silty fine ash

Observer	Hiro

B 29 Sil: 27 3T V: 43

Comments: Mam lith – grey

Percent Texture		
Sand	Silt	Clay
7	89	4

2 25 1

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

Percent	Component
	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
11	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

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

Sediment/Rock Name	Diatom ooze	Observer	

Percent Texture		
Sand	Silt	Clay

Comments: Main lith - Dissolution present

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
	Glauconite
	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

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	Diatom ooze	Observer	

Percent Texture		
Sand	Silt	Clay

Comments: Mottled – darker grey

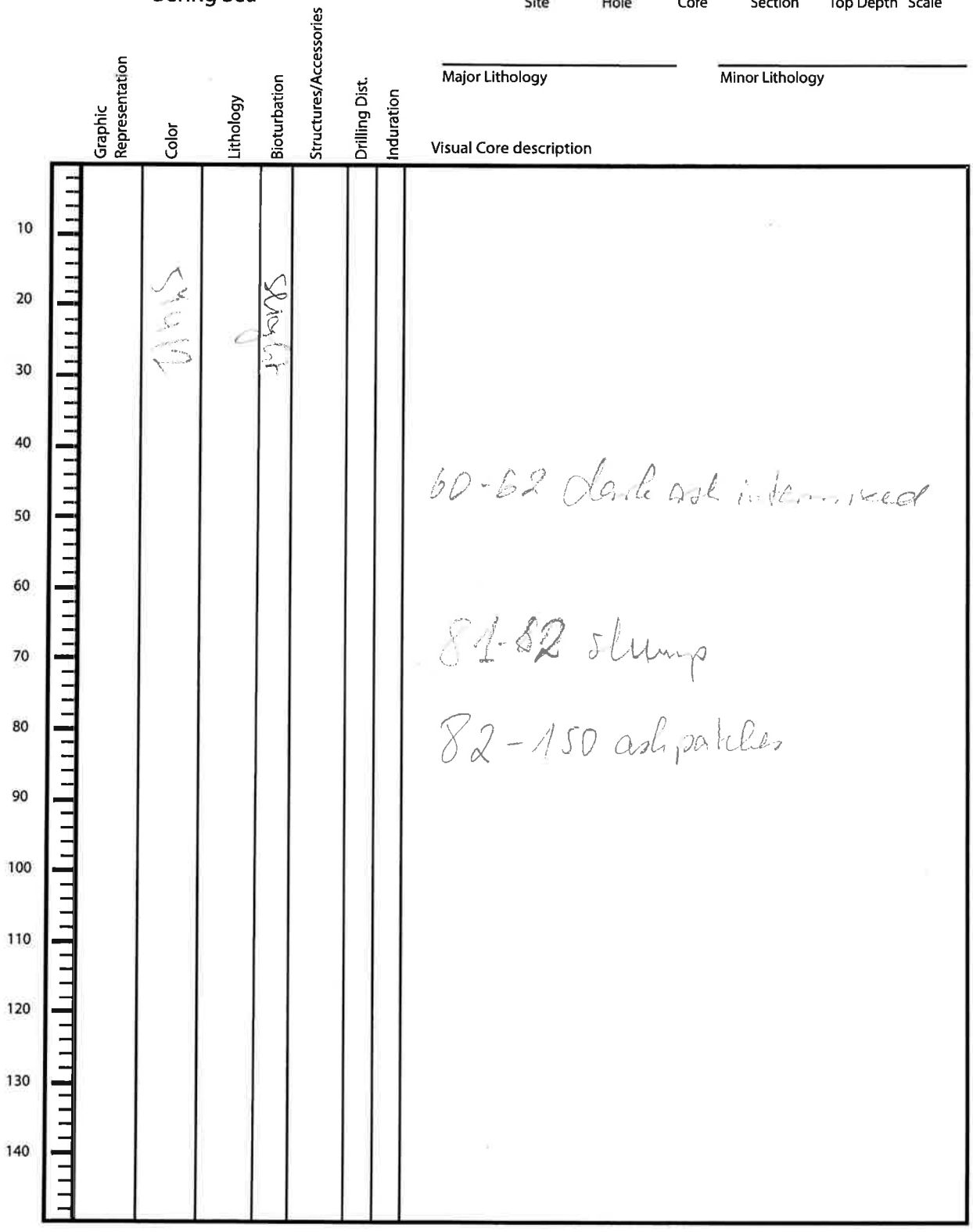
Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
90%	Quartz 2
5%	Feldspar 1
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic 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
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

Major Lithology | Minor Lithology

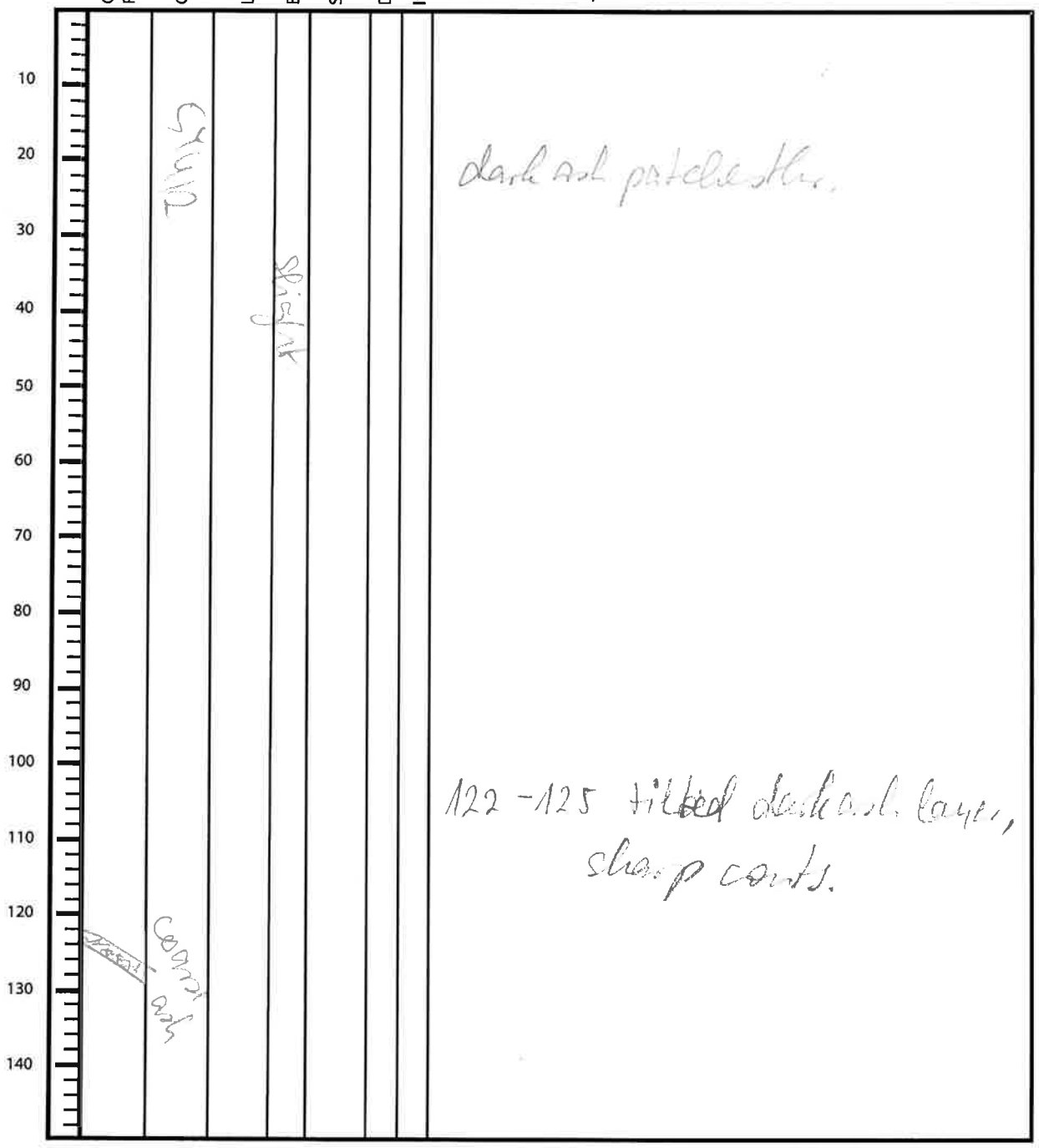


Observer: _____ Date: _____

Expedition 323
Bering Sea

1349 | A | 11 | 2 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

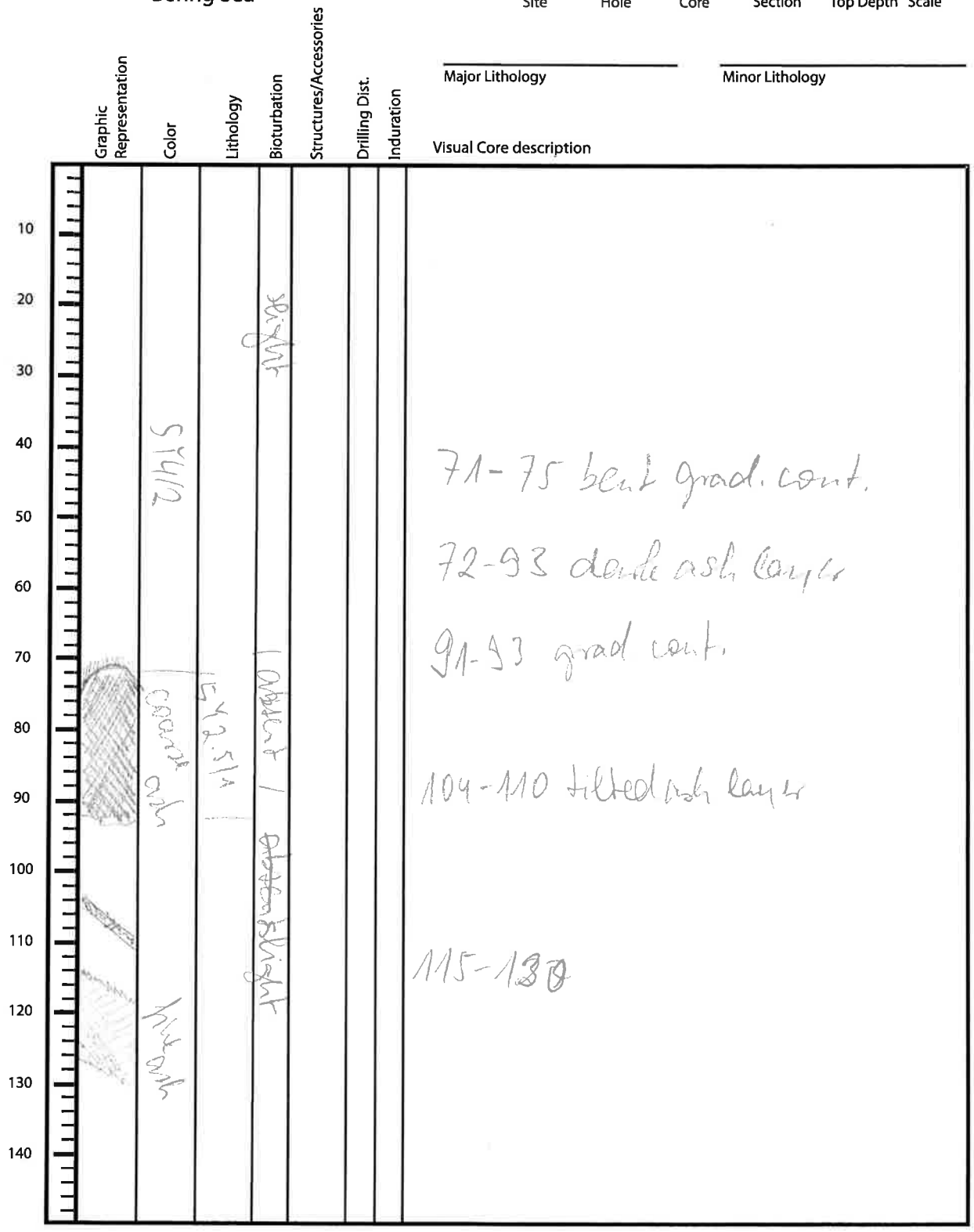


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 11 3 _____ _____
Site Hole Core Section Top Depth Scale

Major Lithology _____ Minor Lithology _____

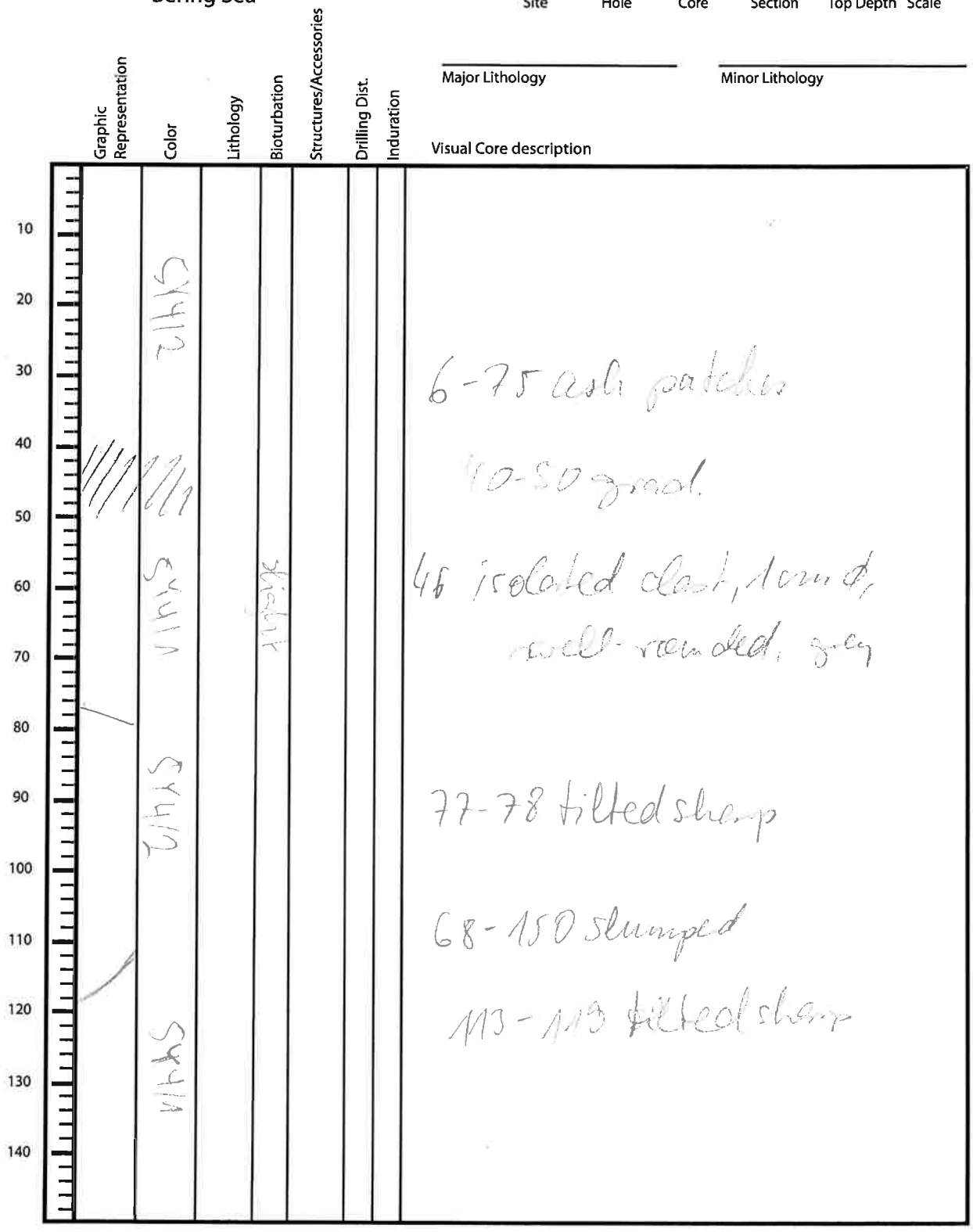


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 | A | 11 | 4 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

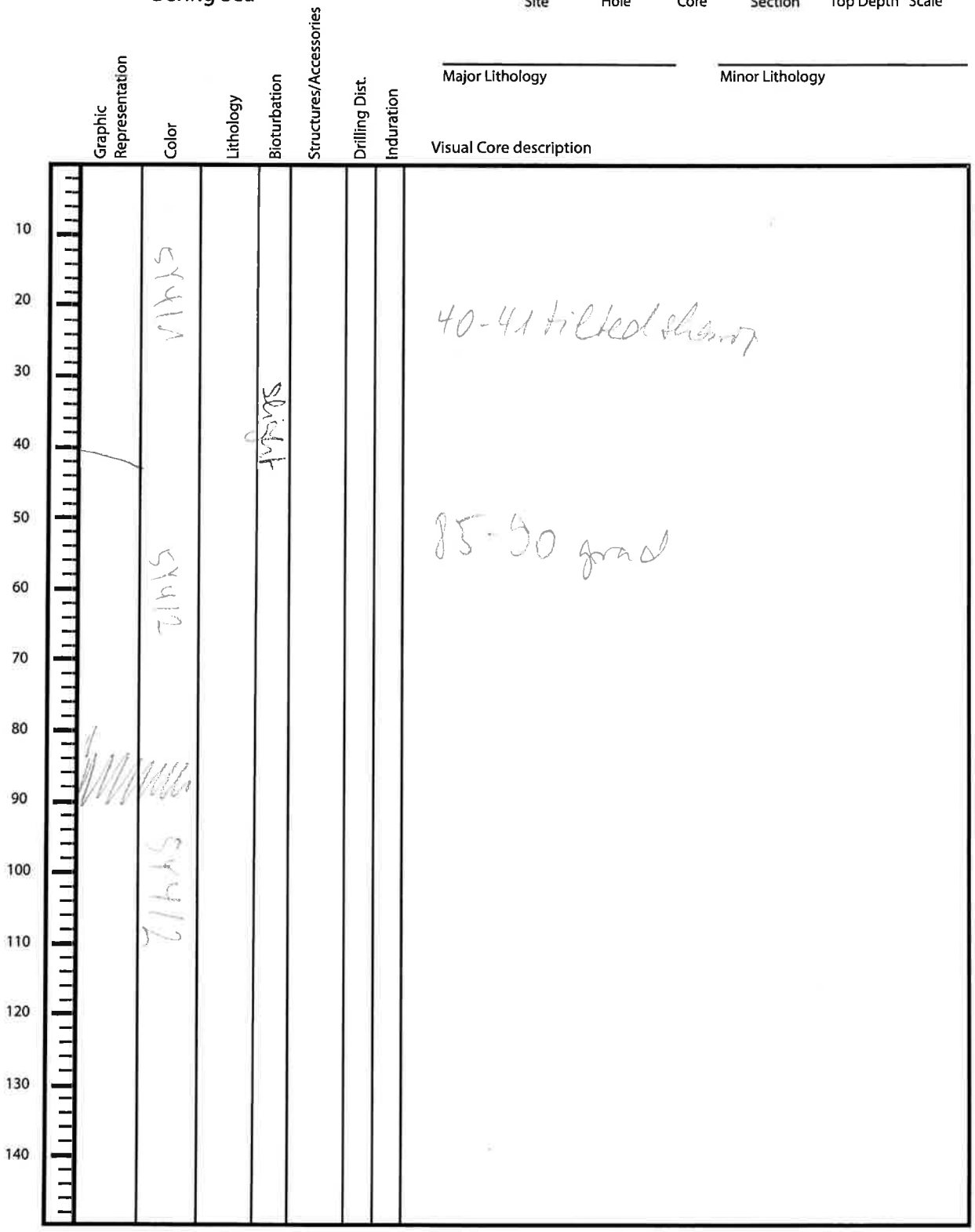


Observer: _____ Date: _____

Expedition 323
Bering Sea

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

Major Lithology | Minor Lithology

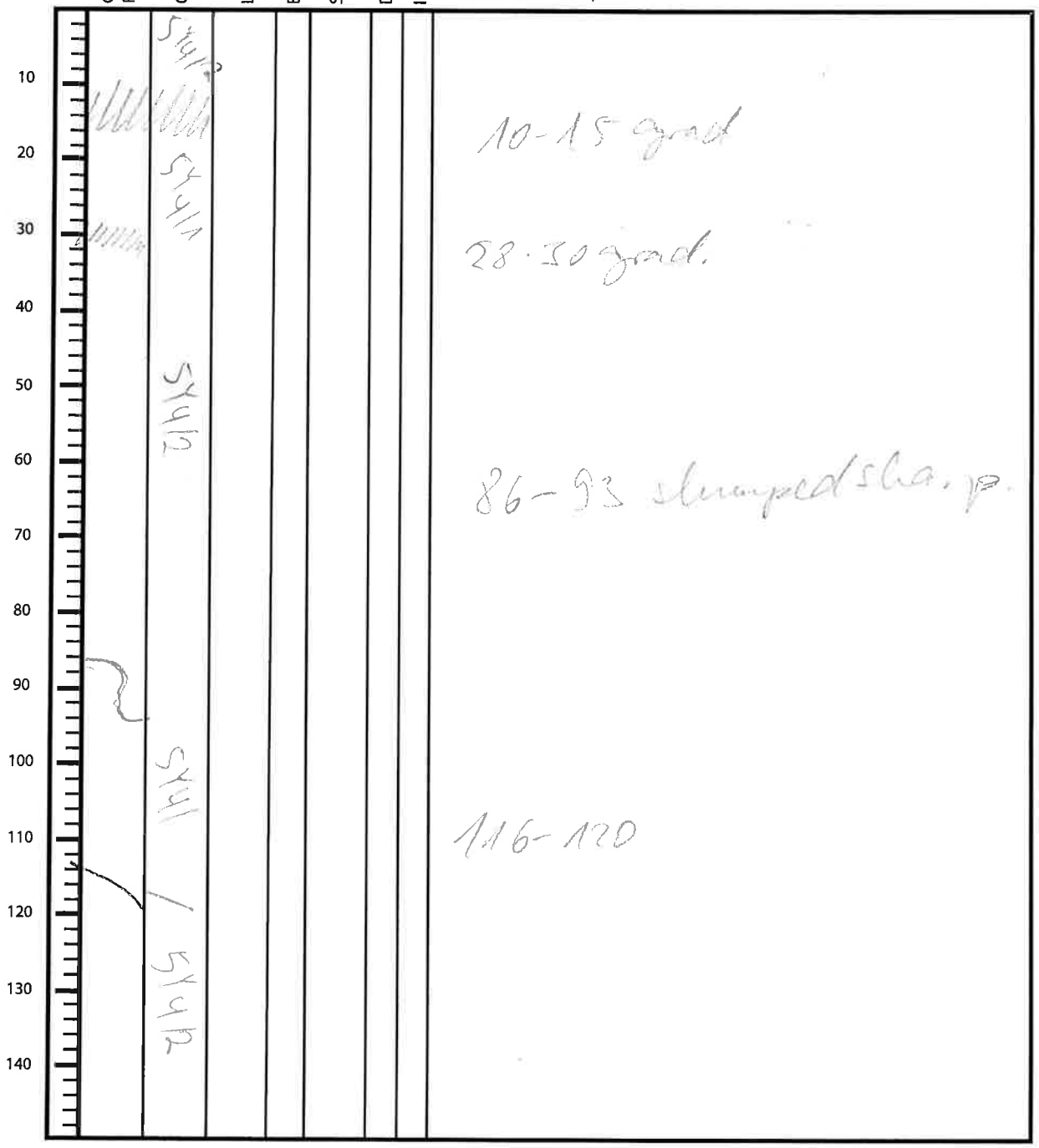


Observer: _____ Date: _____

Expedition 323
Bering Sea

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

Major Lithology | Minor Lithology

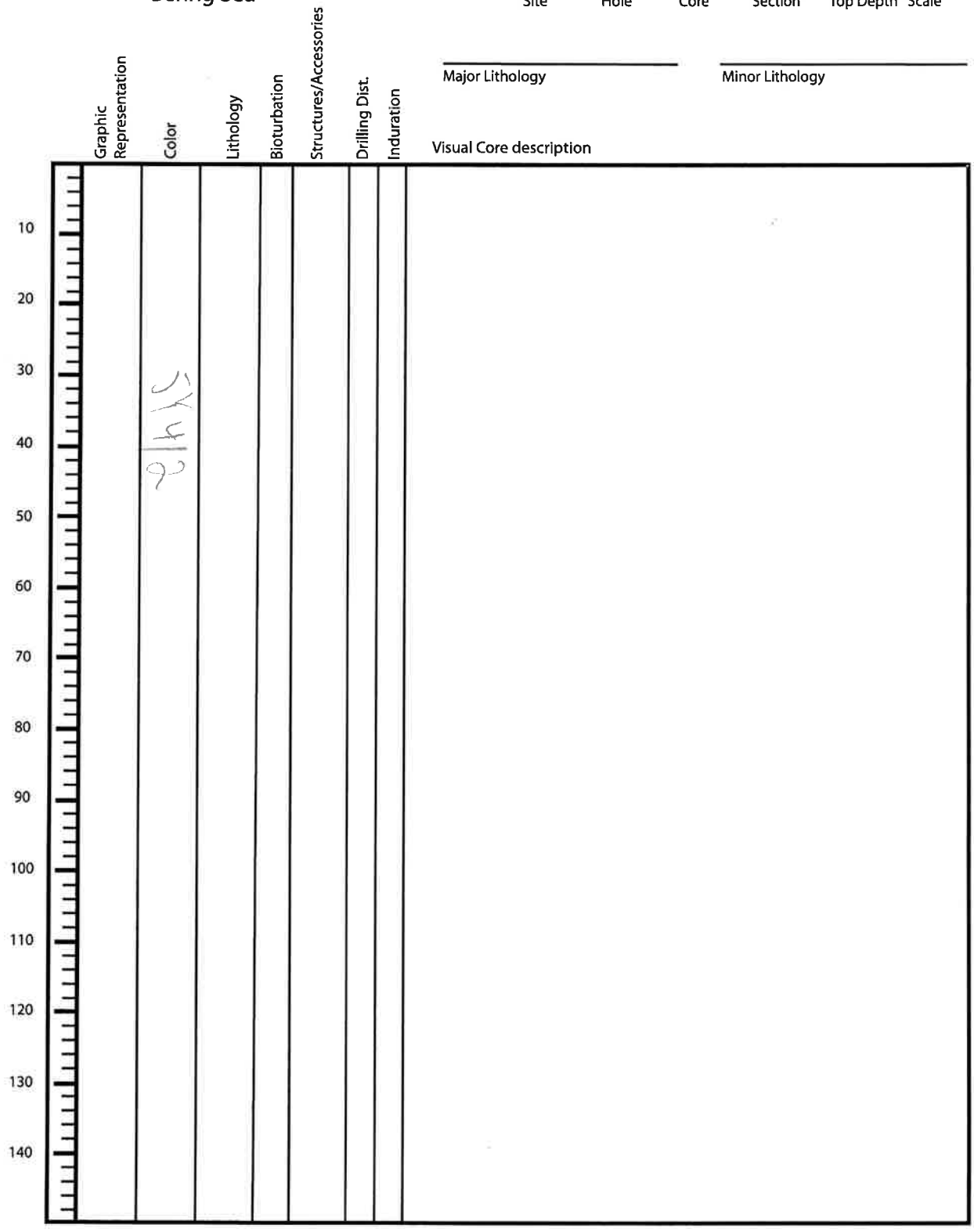


Observer: _____ Date: _____

Expedition 323
Bering Sea

1342 | A | 11 | 7 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology



Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 1M CC
Site Hole Core Section Top Depth Scale

Major Lithology

Minor Lithology

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

Sediment/Rock Name	~~Diatom ooze~~ Spic Rich Diatom Ooze	Observer	

~~B. 75 S. 21 V 4~~ ~~B 34~~

Percent Texture		
Sand	Silt	Clay

Comments: Marl silt - green

46 25 71 B. 63 S. 34 V 3

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
7 ~~8 4~~ %	Quartz 3
3 ~~3~~ %	Feldspar 1 4
"	K-feldspar (Orthoclase, Microcline...)
"	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
~~25 20~~ %	24 Clay Minerals 3 10 14
	Chlorite
36	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
30/0 ~~5 3~~ %	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 45~~ %	38 Diatoms 15 30
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
25 ~~30~~ %	Sponge spicules 10 40
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

V

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	Diatom Ooze

Observer	H. Vo. A.

B 66 S 25 V 9

32

Percent Texture		
Sand	Silt	Clay

Comments: Main Lith — grey.

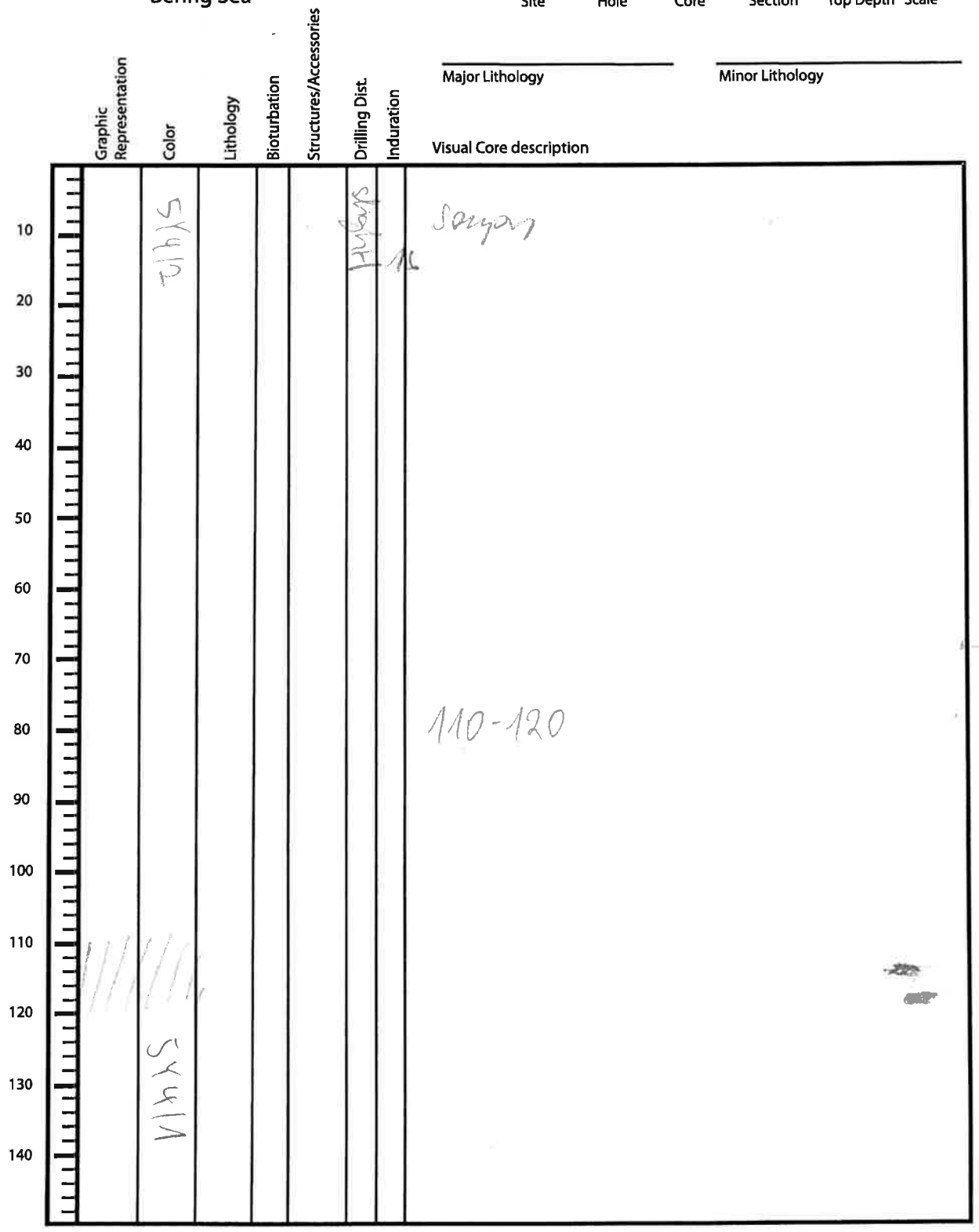
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
6.	Quartz 2
<1 ~	Feldspar 0
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
3 ~	Rock fragments /
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
16 ~	Clay Minerals 5
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
9%	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
16 ~	Pennate 5
	Chaetoceros Resting Spores
	Silicoflagellates
3 ~	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 12 1
Site Hole Core Section Top Depth Scale

Major Lithology Minor Lithology

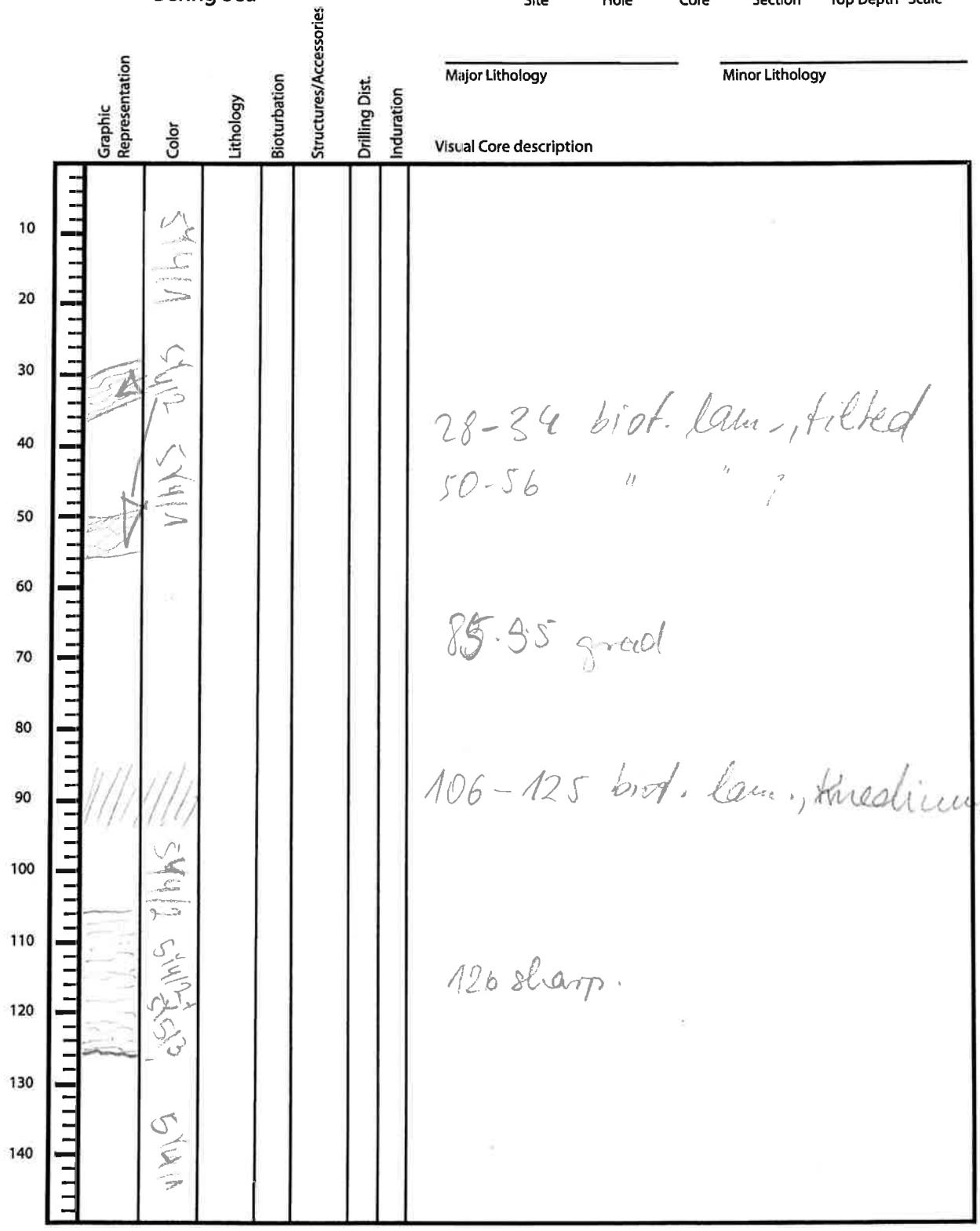


Observer: _____ Date: _____

Expedition 323
Bering Sea

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

Major Lithology ____ Minor Lithology ____

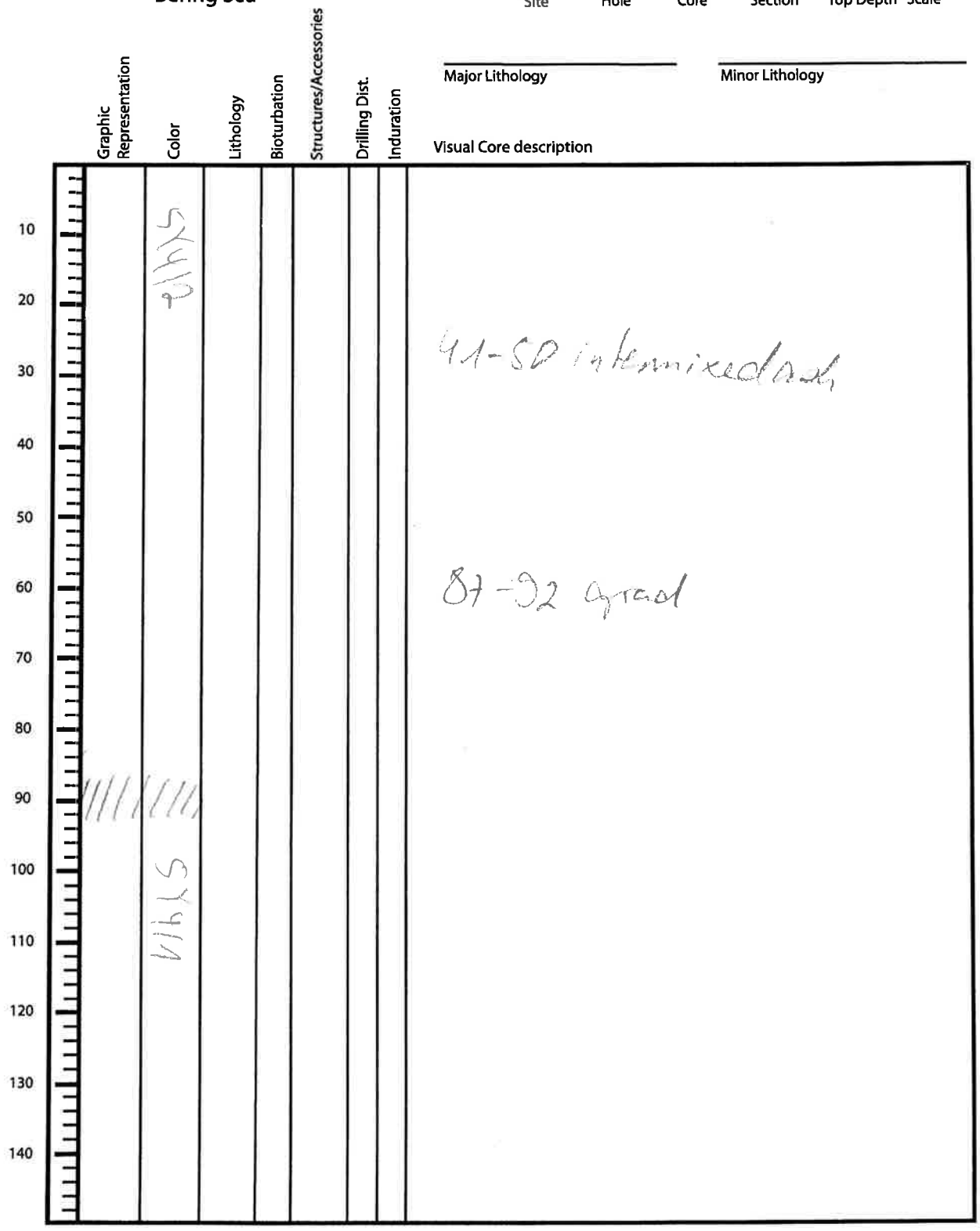


Observer: ____ Date: ____

Expedition 323
Bering Sea

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

Major Lithology _____ Minor Lithology _____

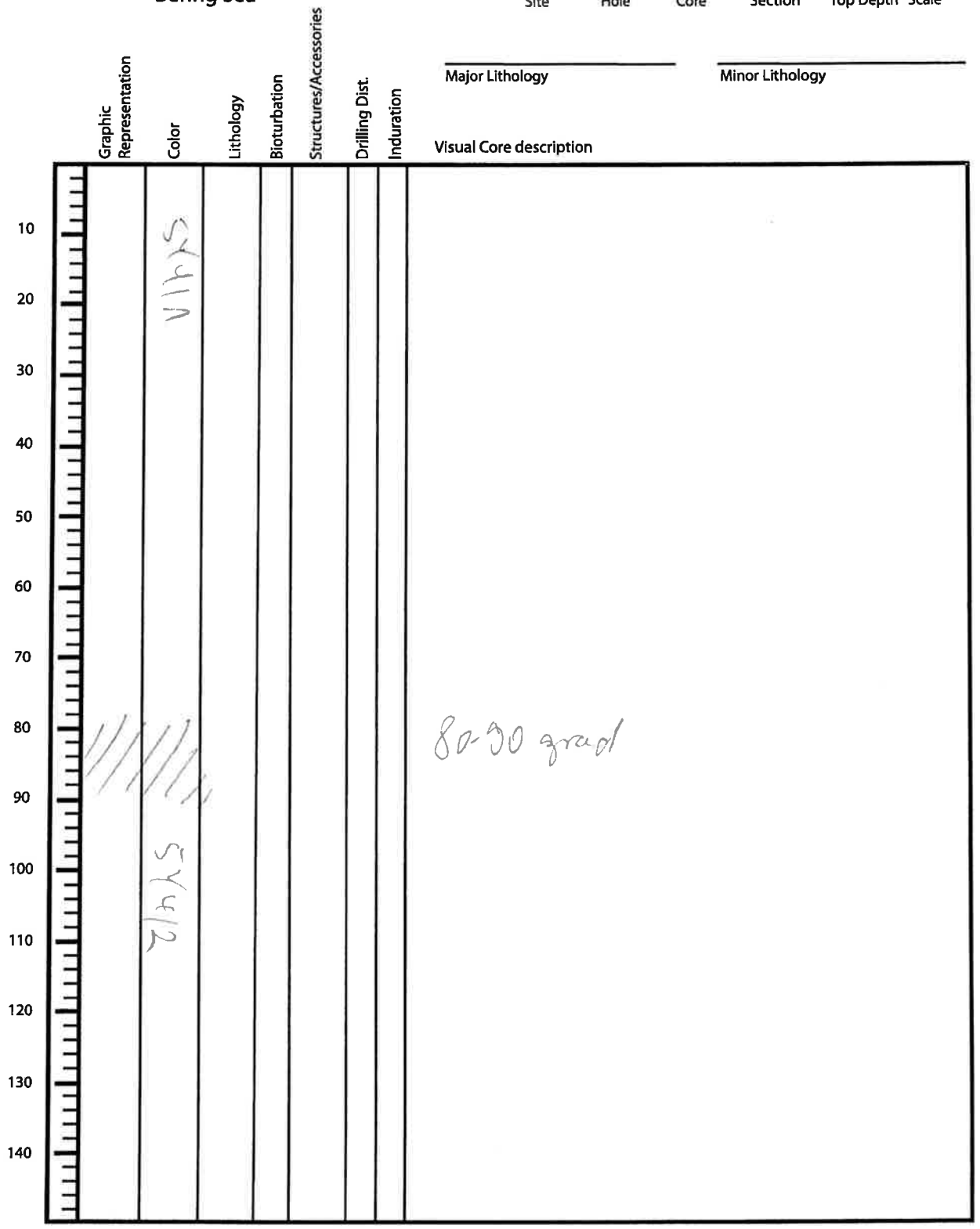


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 12 4 _____ _____
Site Hole Core Section Top Depth Scale

_____ _____
Major Lithology Minor Lithology



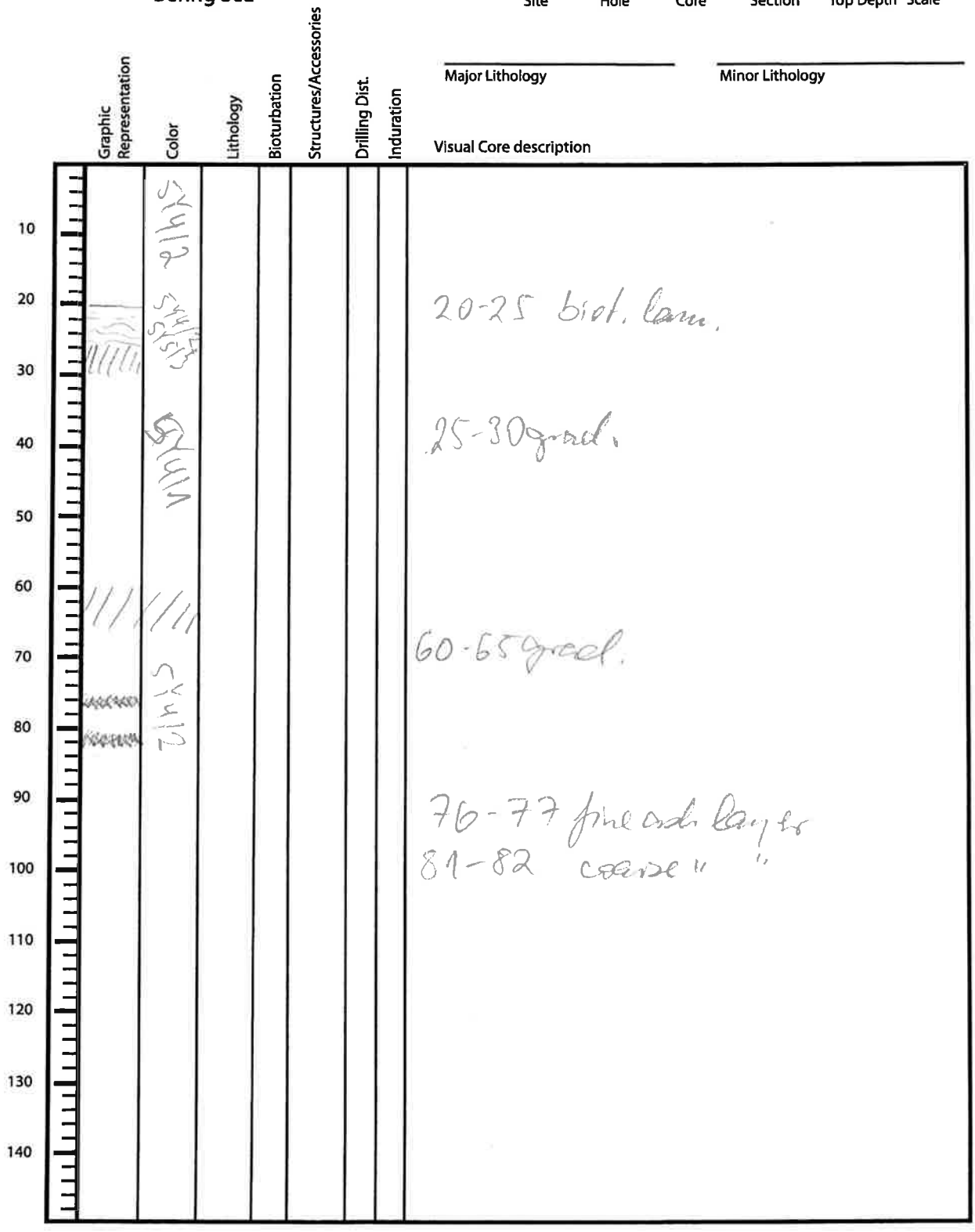
Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 12 5
Site Hole Core Section Top Depth Scale

Major Lithology

Minor Lithology

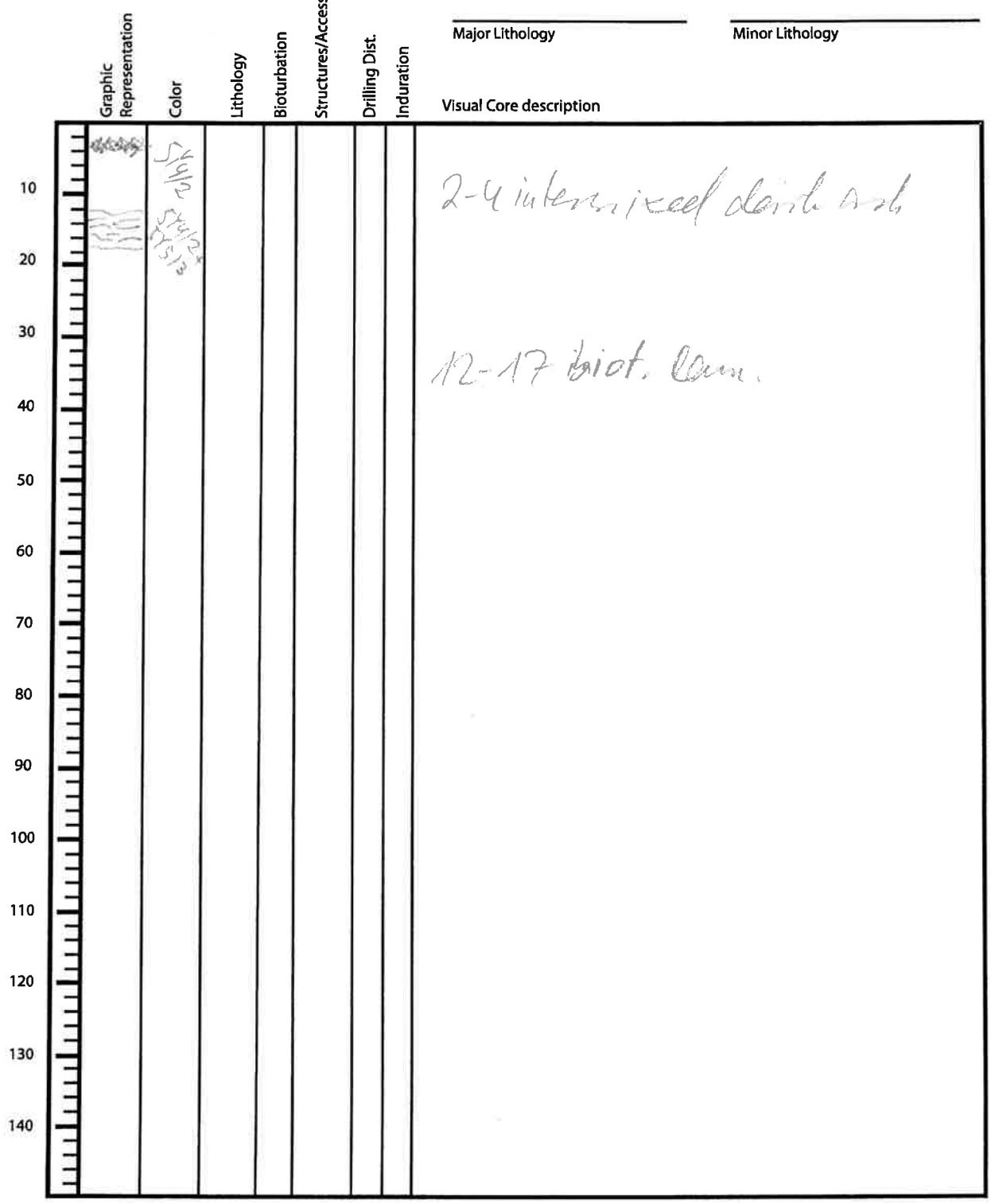


Observer: _____ Date: _____

Expedition 323
Bering Sea

1360 | A | 12 | 6 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

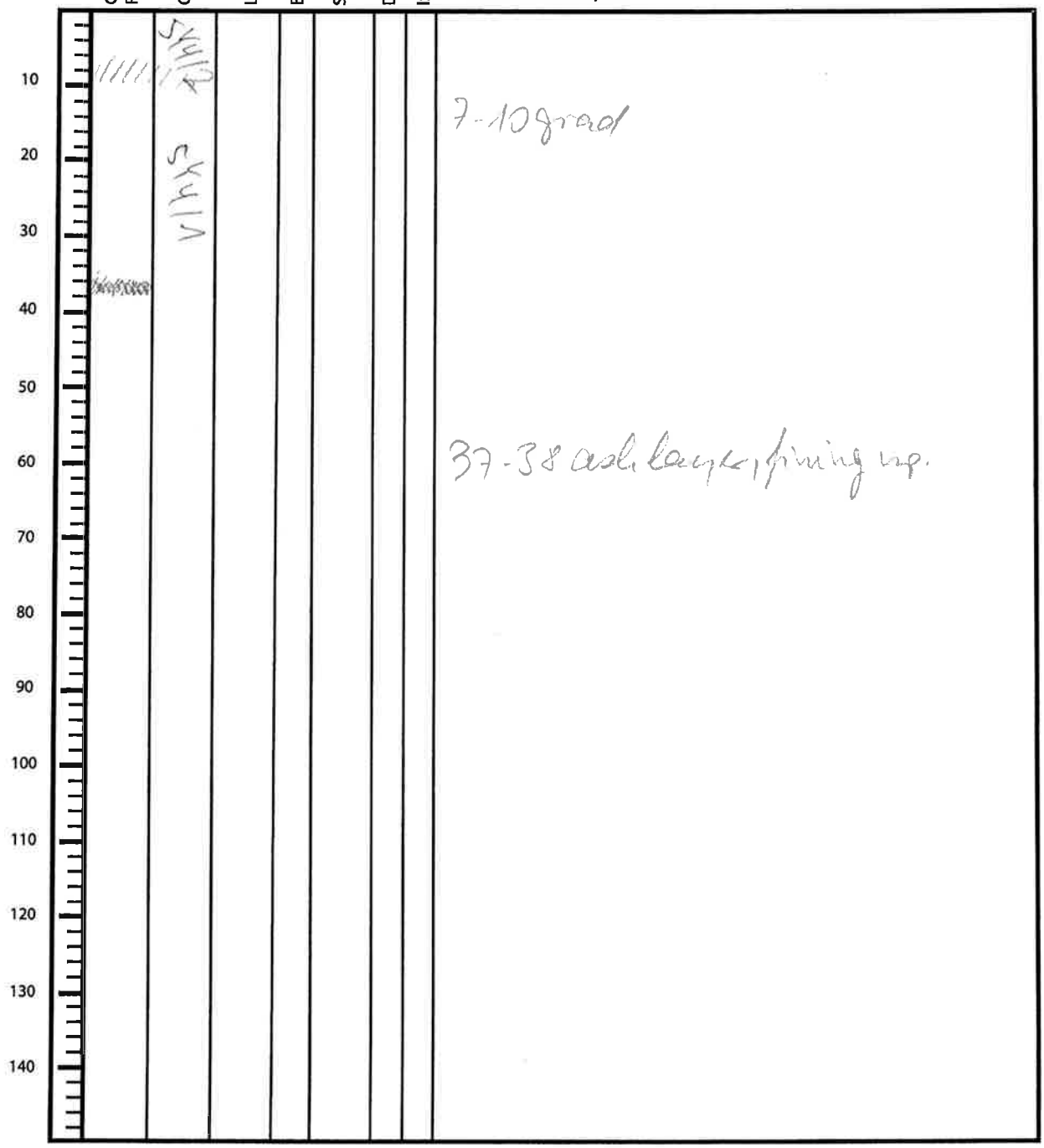


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 12 7 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____



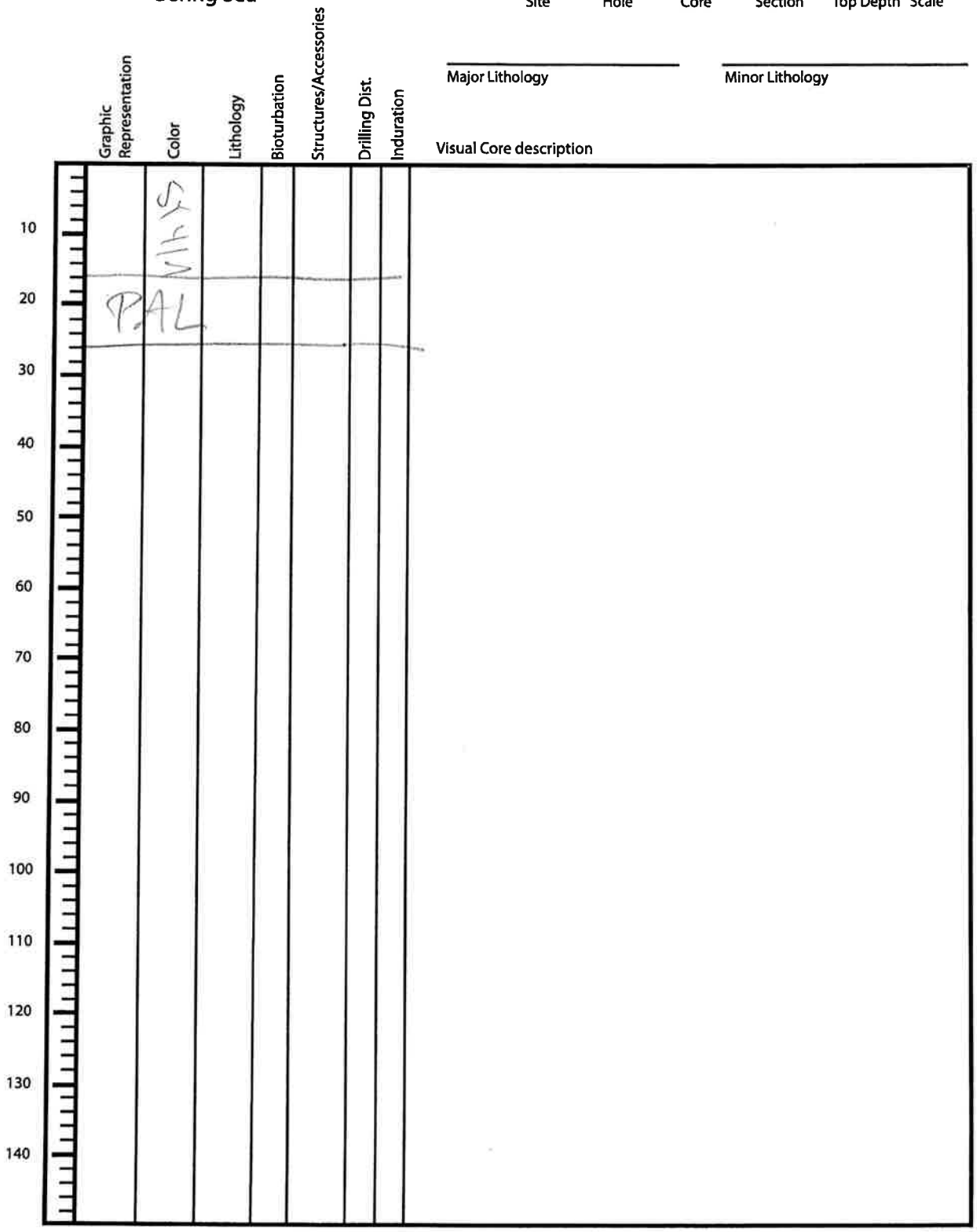
Observer: ____ Date: ____

Expedition 323
Bering Sea

1340 A 12 CC
Site Hole Core Section Top Depth Scale

Major Lithology

Minor Lithology



Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

SM

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

Sediment/Rock Name	Diatom clayey silt

Observer	Hiro A

B 40 S 52 V 8

Percent Texture		
Sand	Silt	Clay
13	43	44
3	40	40

Comments: Main Lithology

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

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	Diatom Ooze

Observer	Hiro. A

B 80% S. 10% V. 20%

Percent Texture		
Sand	Silt	Clay

Comments: Main Lithology - green 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
1 2%	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	Interval (cm) Bottom
323	U1340	A	13	H	6	140	140

Sediment/Rock Name	Diatom clayey silt B 52 S 40 V 8

Observer	Hiro A

Percent Texture		
Sand	Silt	Clay
27	~~27~~ 27	46
~~3~~	~~3~~ 3	~~5~~
25	11	

Comments: Main lithology - Diatom

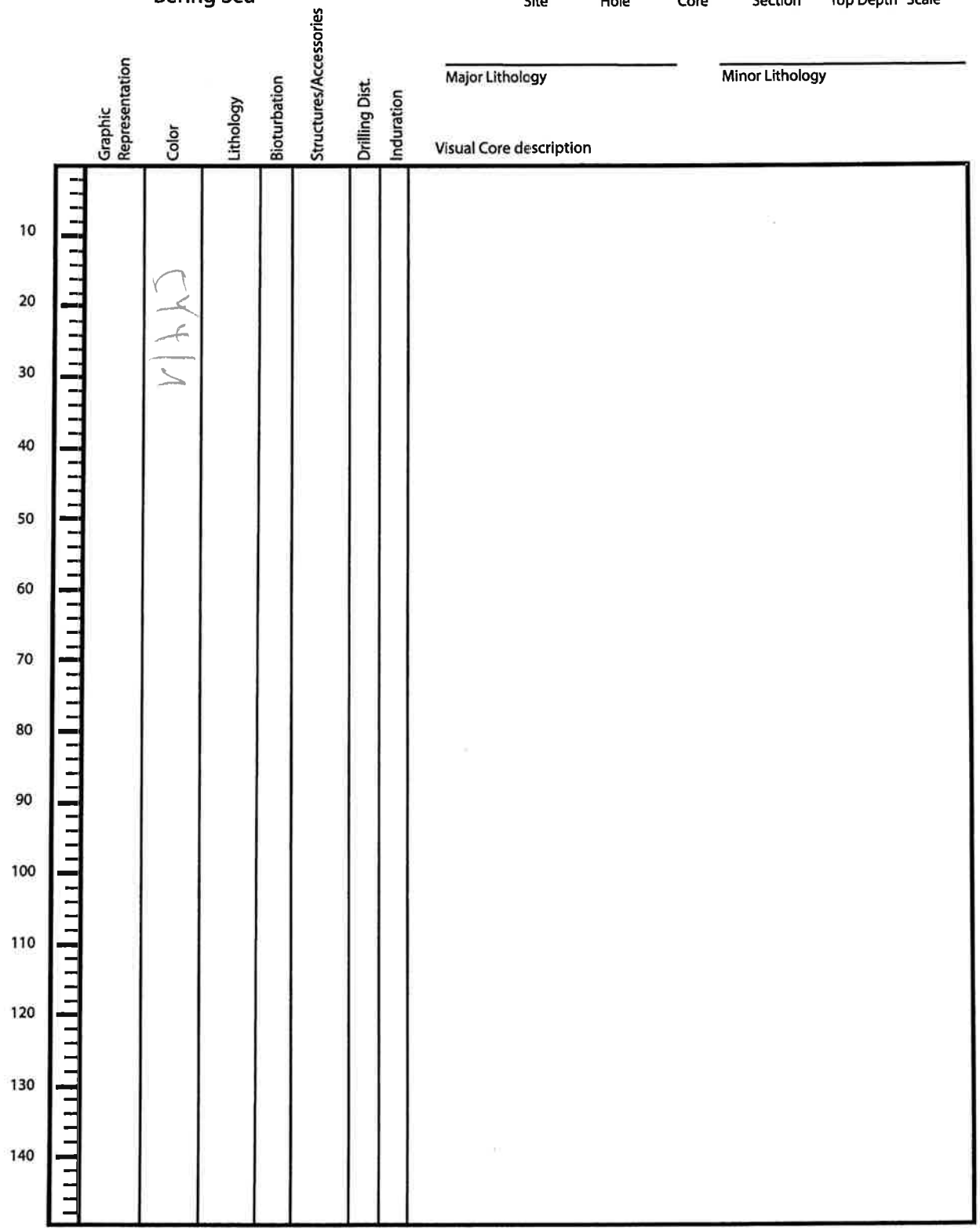
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
20	Quartz 5
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
20	Clay Minerals 5
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic 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

Major Lithology _____ Minor Lithology _____

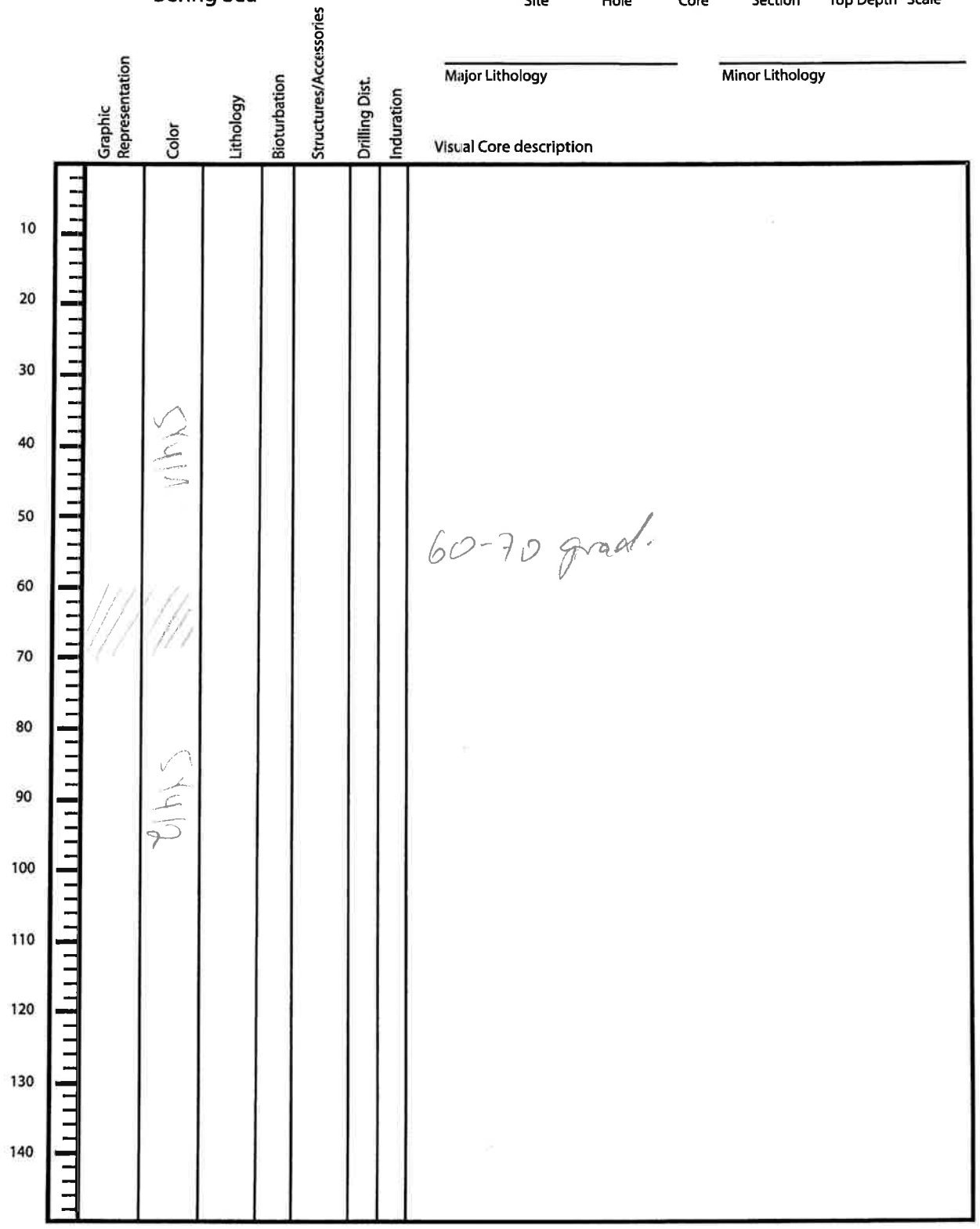


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 13 2 _____ _____
Site Hole Core Section Top Depth Scale

_____ _____
Major Lithology Minor Lithology

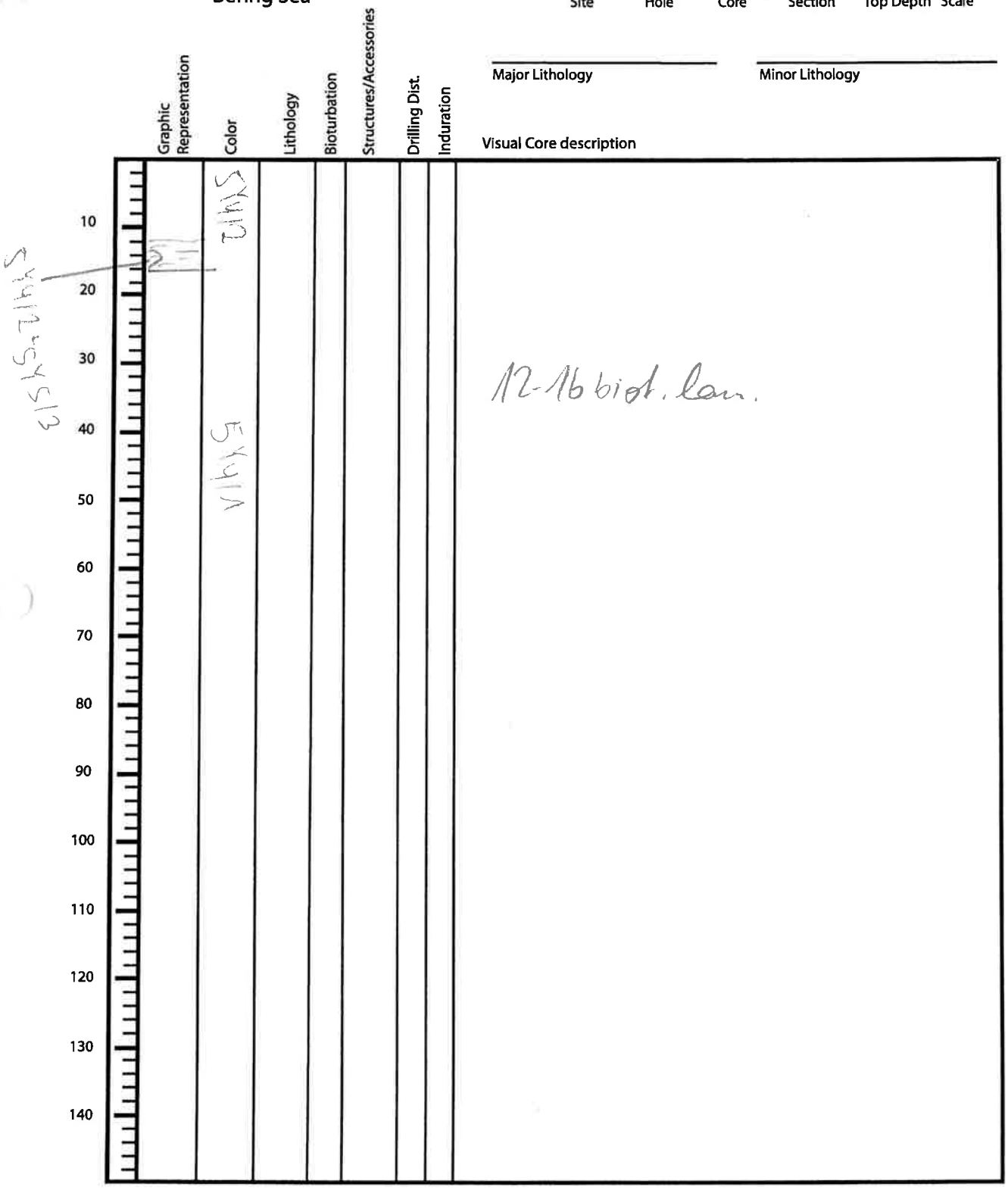


Observer: _____ Date: _____

Expedition 323
Bering Sea

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

Major Lithology | Minor Lithology



Observer: _____ Date: _____

Expedition 323
Bering Sea

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

Major Lithology _____ Minor Lithology _____

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Visual Core description
	5Y 4/2						51-53 shell frags.
							120-124 biot. lam.
							123-124 clay

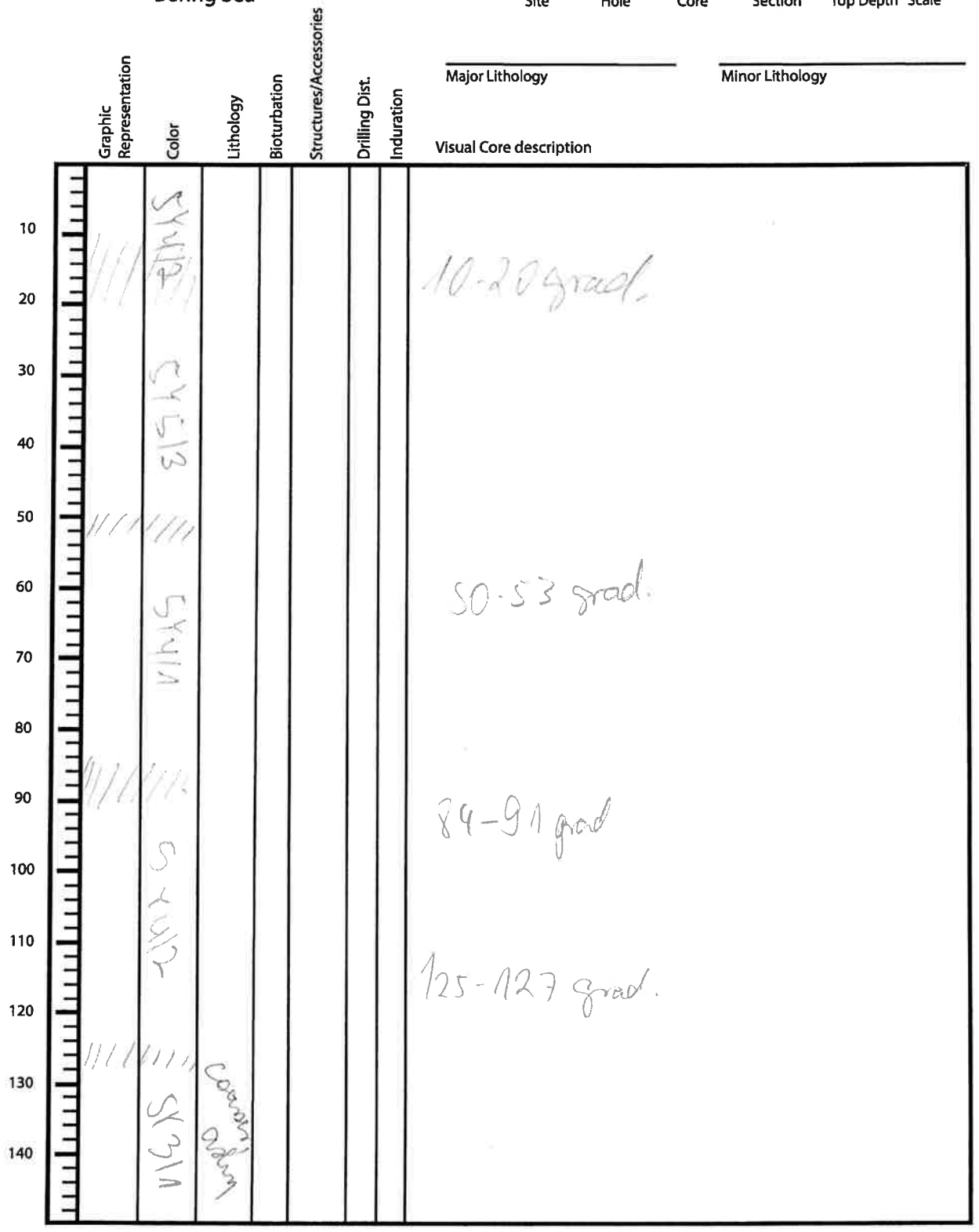
10 20 30 40 50 60 70 80 90 100 110 120 130 140

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 13 5 _____ _____
Site Hole Core Section Top Depth Scale

_____ _____
Major Lithology Minor Lithology

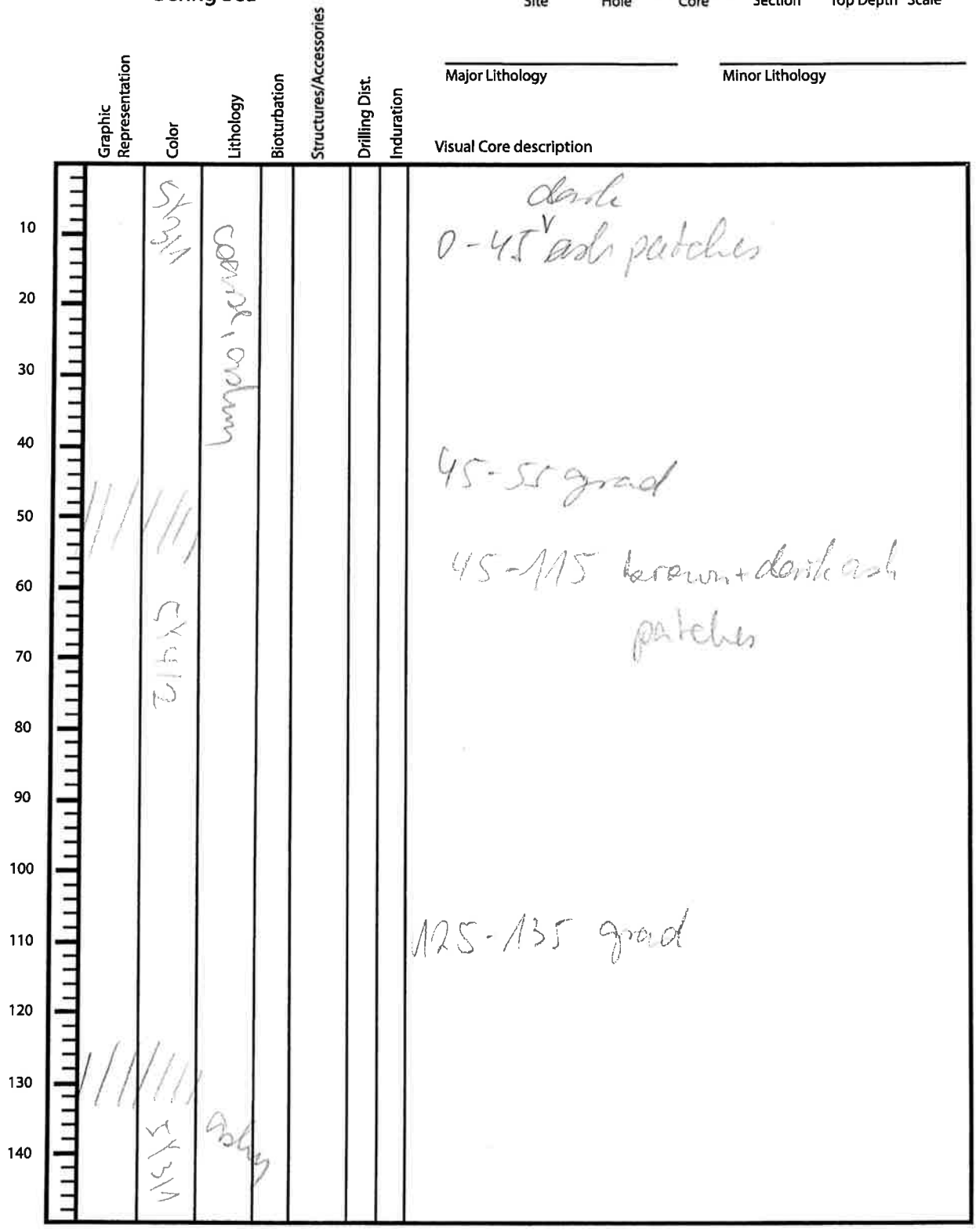


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 | A | 13 | 6 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

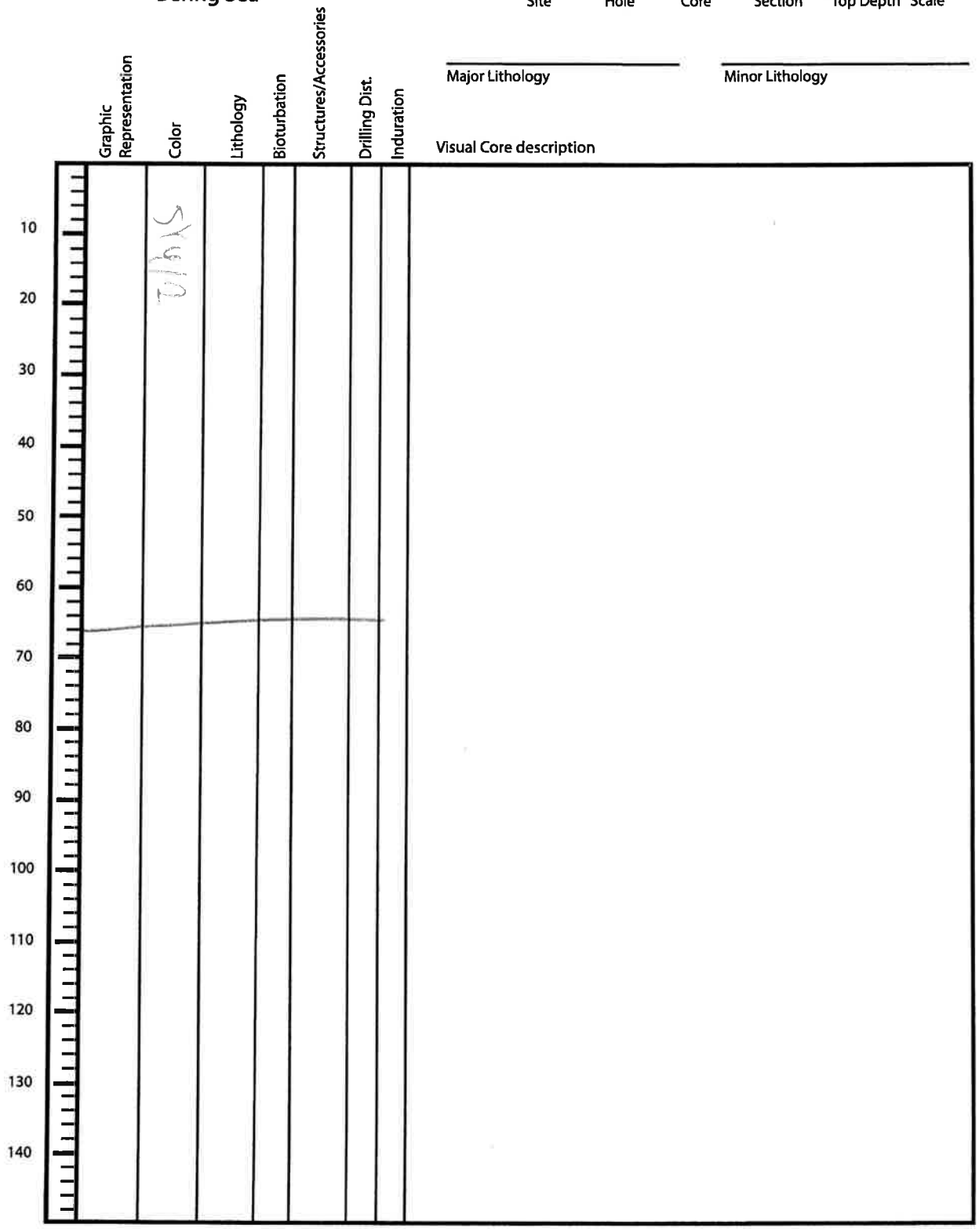


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 | A | 13 | 7 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology



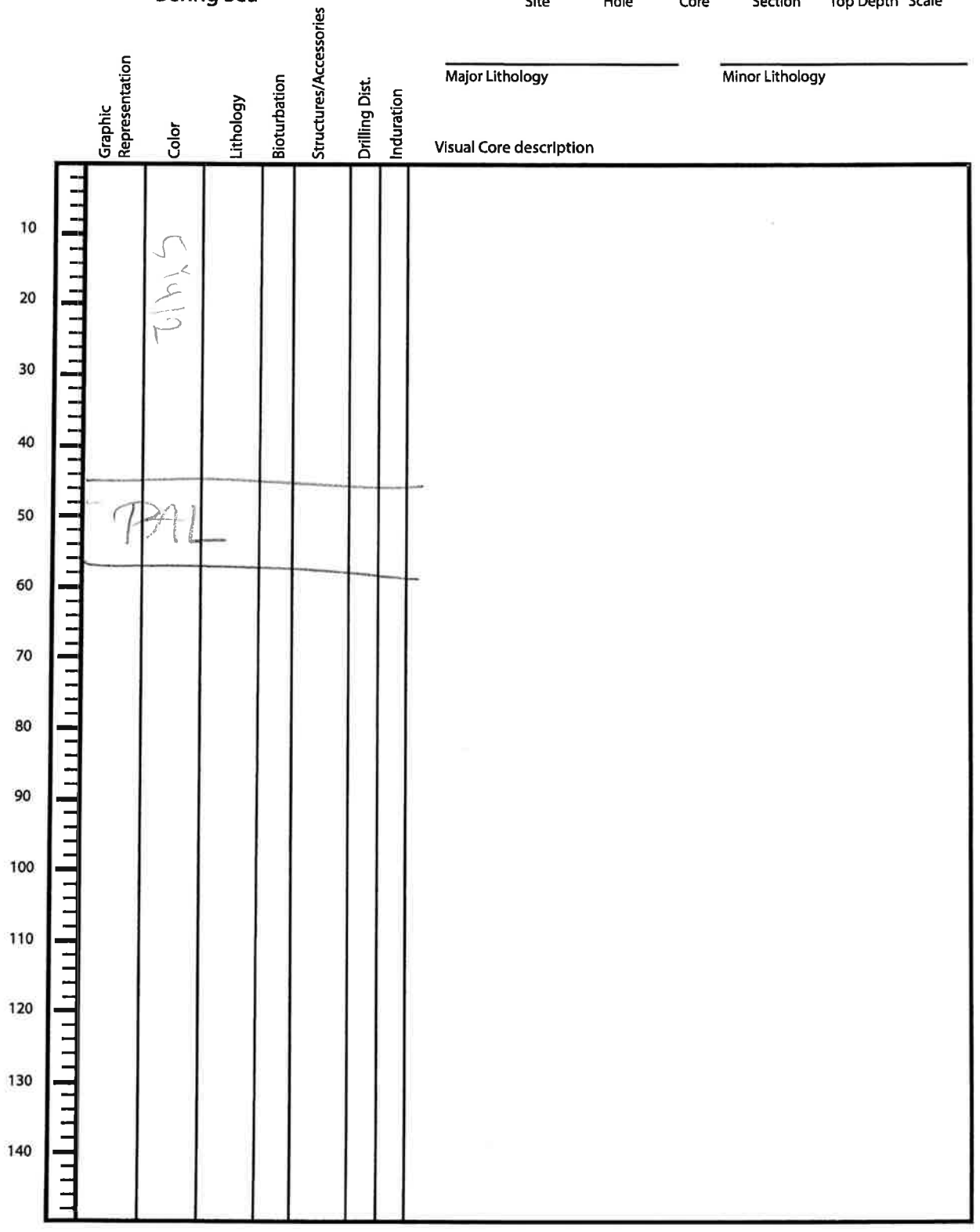
Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 13 CC
Site Hole Core Section Top Depth Scale

Major Lithology

Minor Lithology

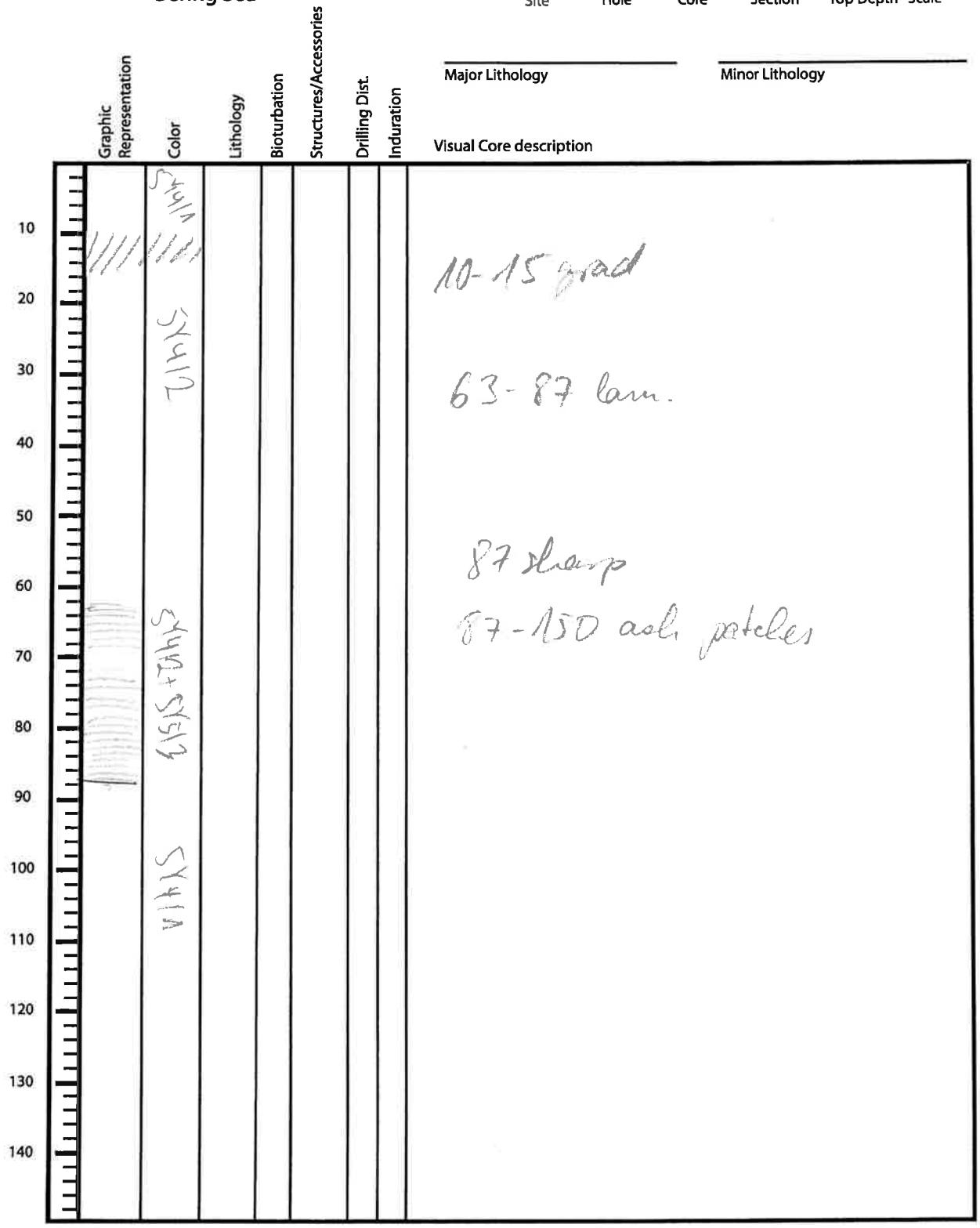


Observer: _____ Date: _____

Expedition 323
Bering Sea

1300 A 14 1
Site Hole Core Section Top Depth Scale

Major Lithology Minor Lithology

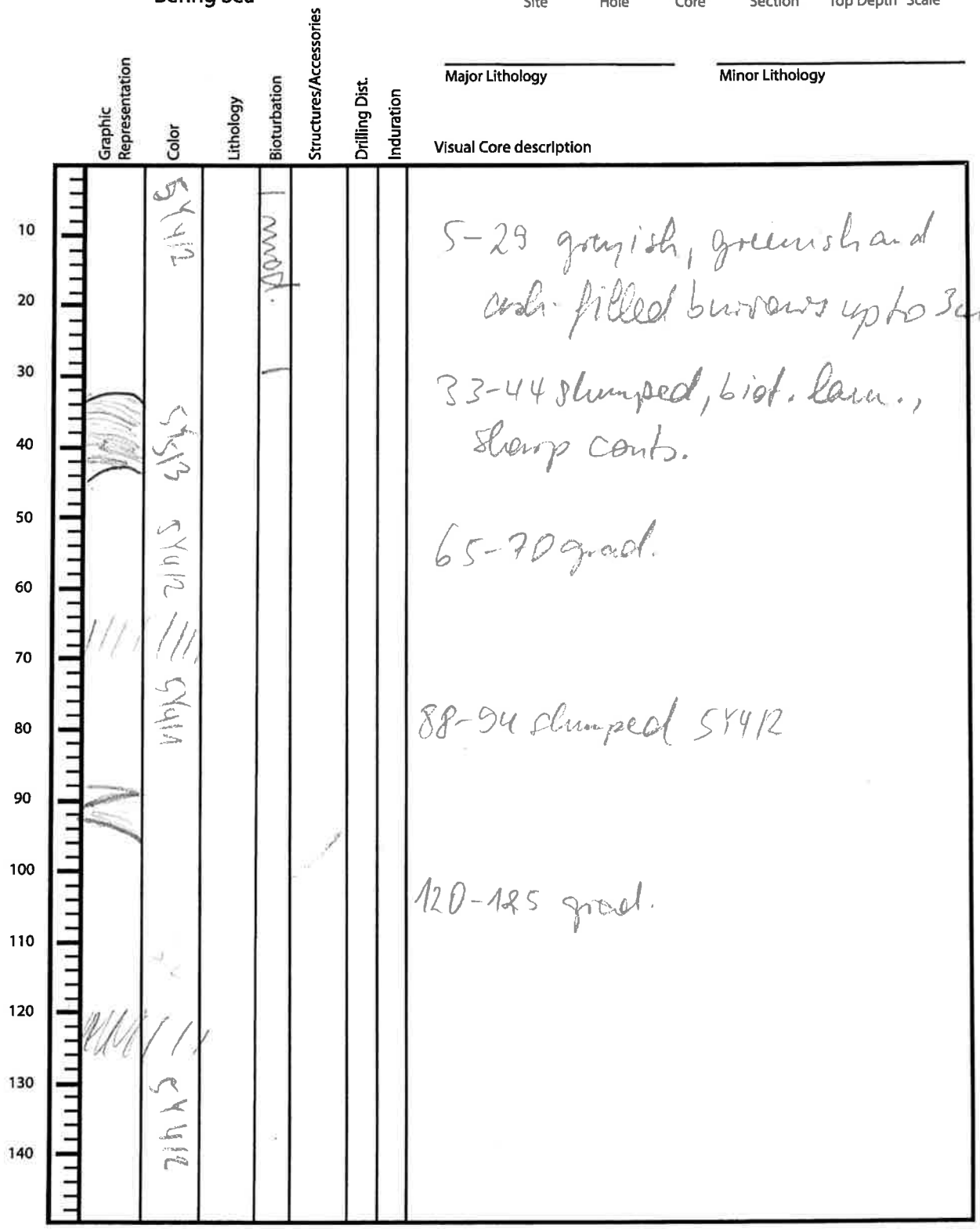


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 14 2 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____

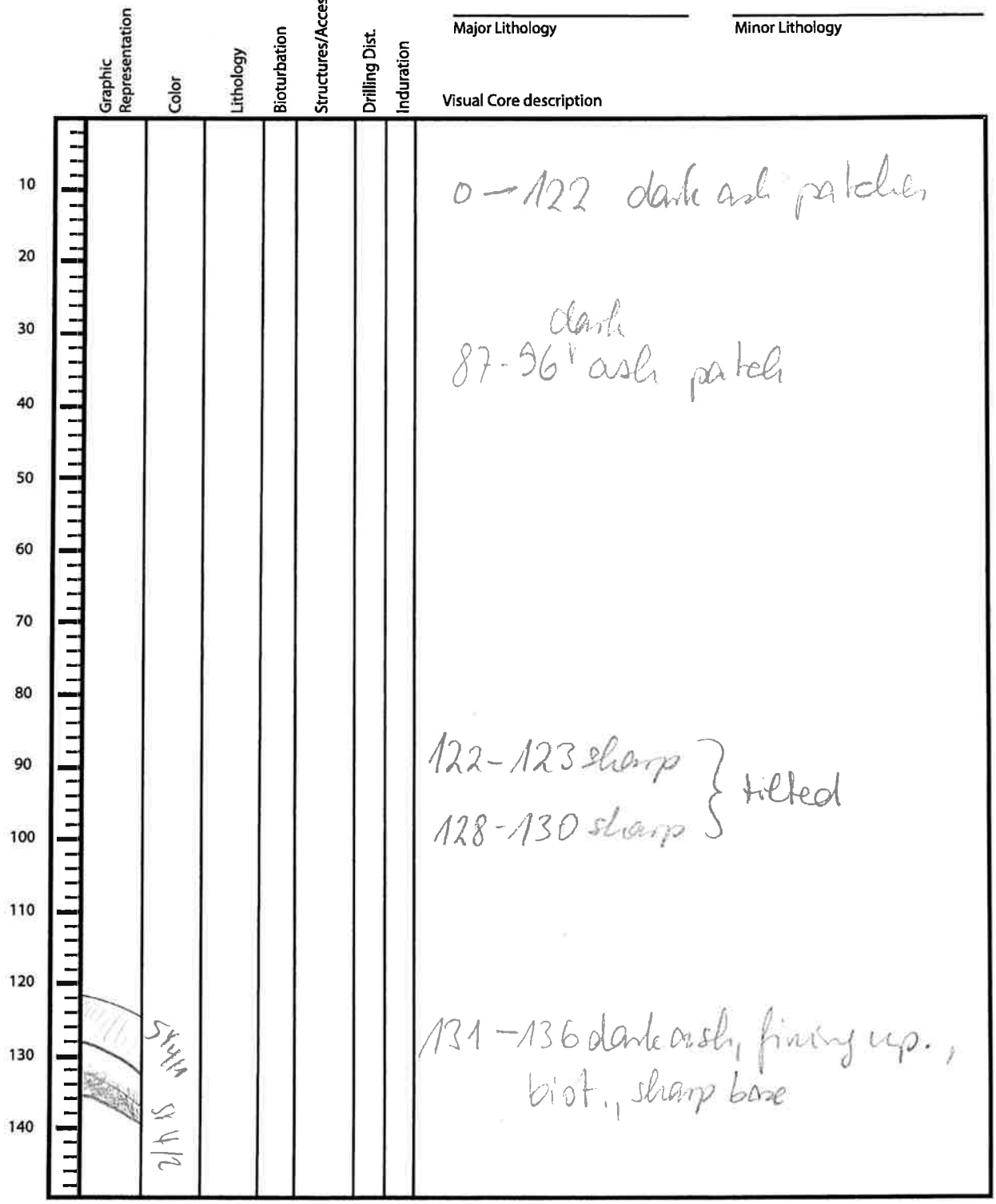


Observer: ____ Date: ____

Expedition 323
Bering Sea

1340 | A | 14 | 3 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

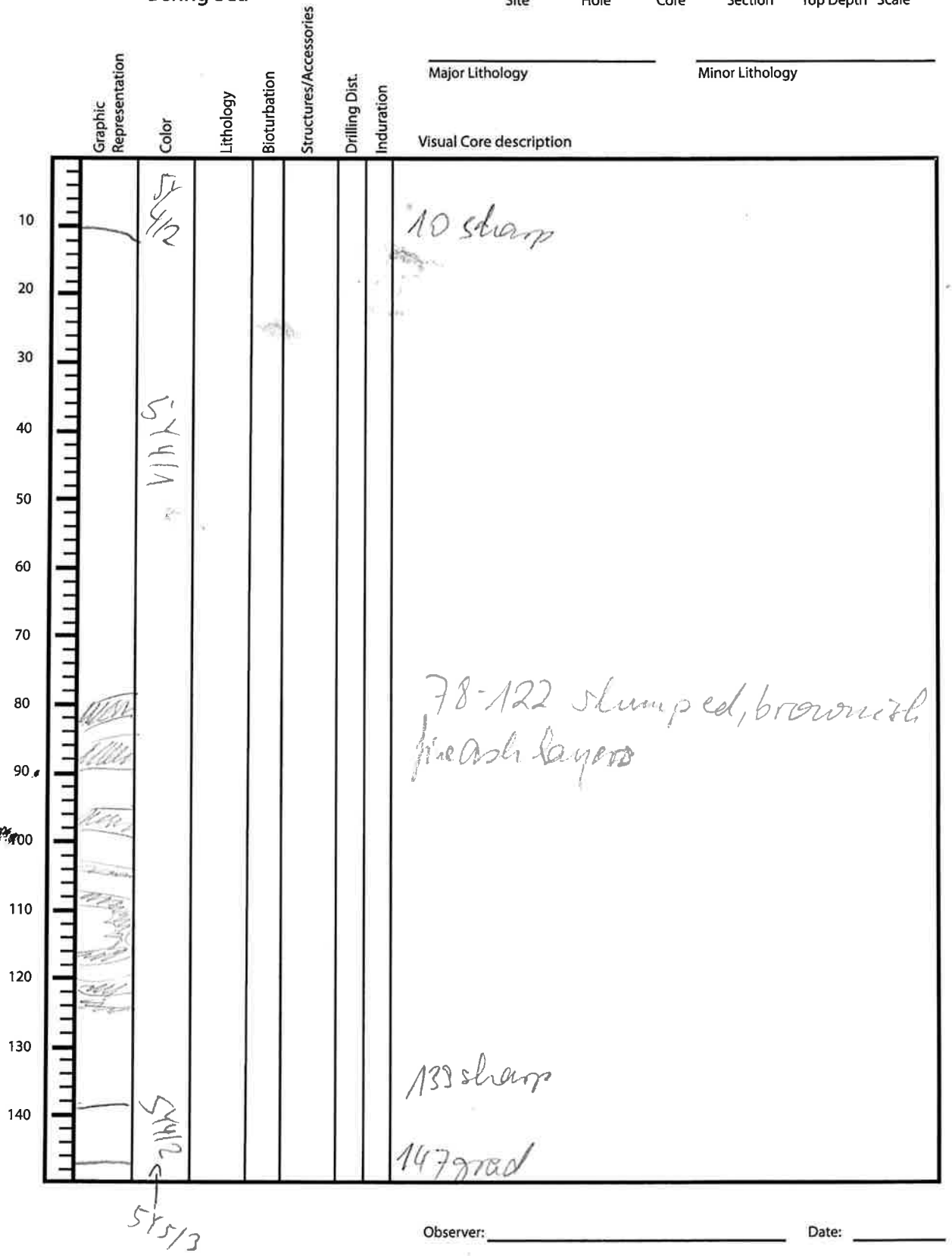


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 14 4
Site Hole Core Section Top Depth Scale

Major Lithology Minor Lithology

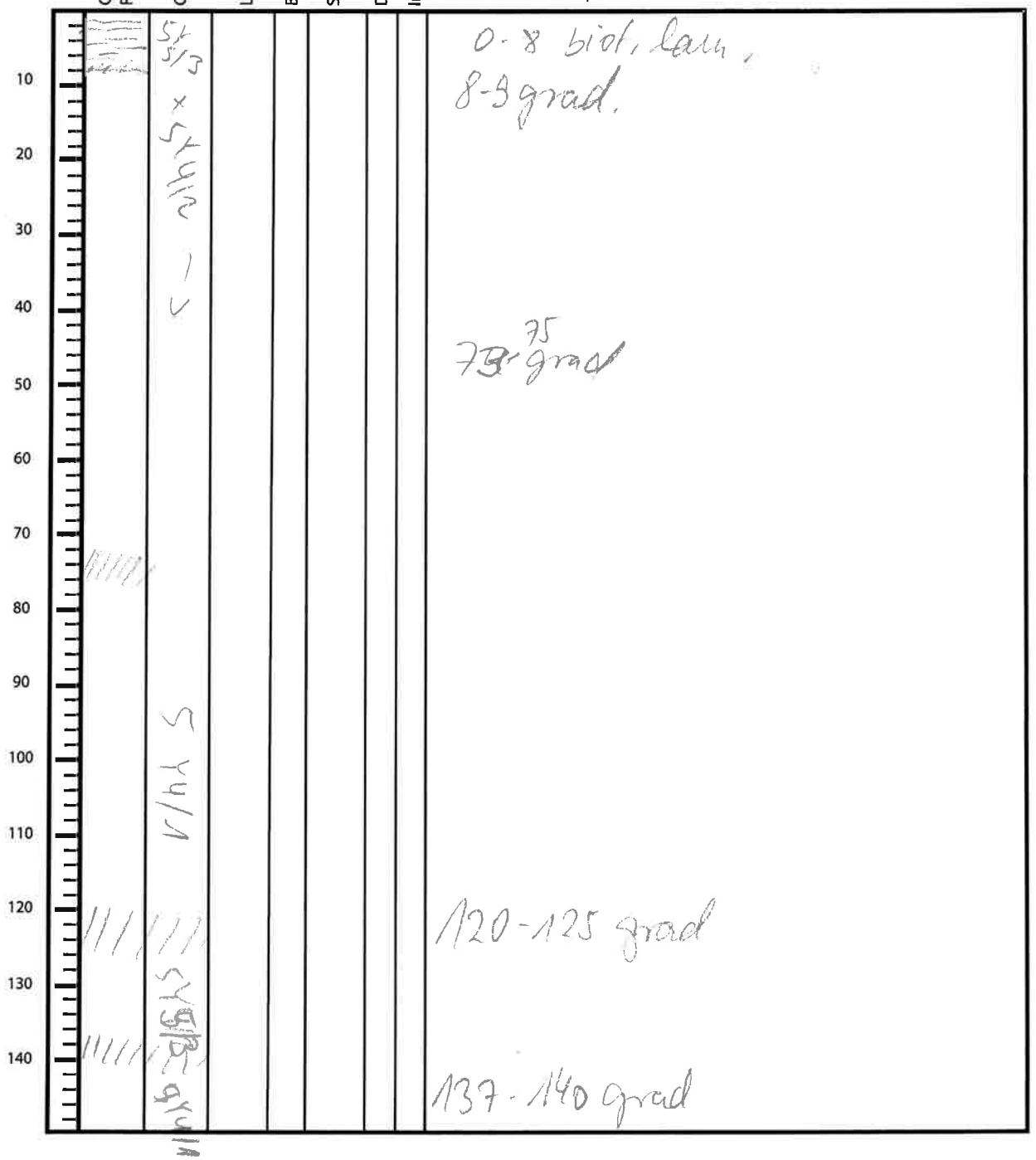


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 | A | 14 | 5 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

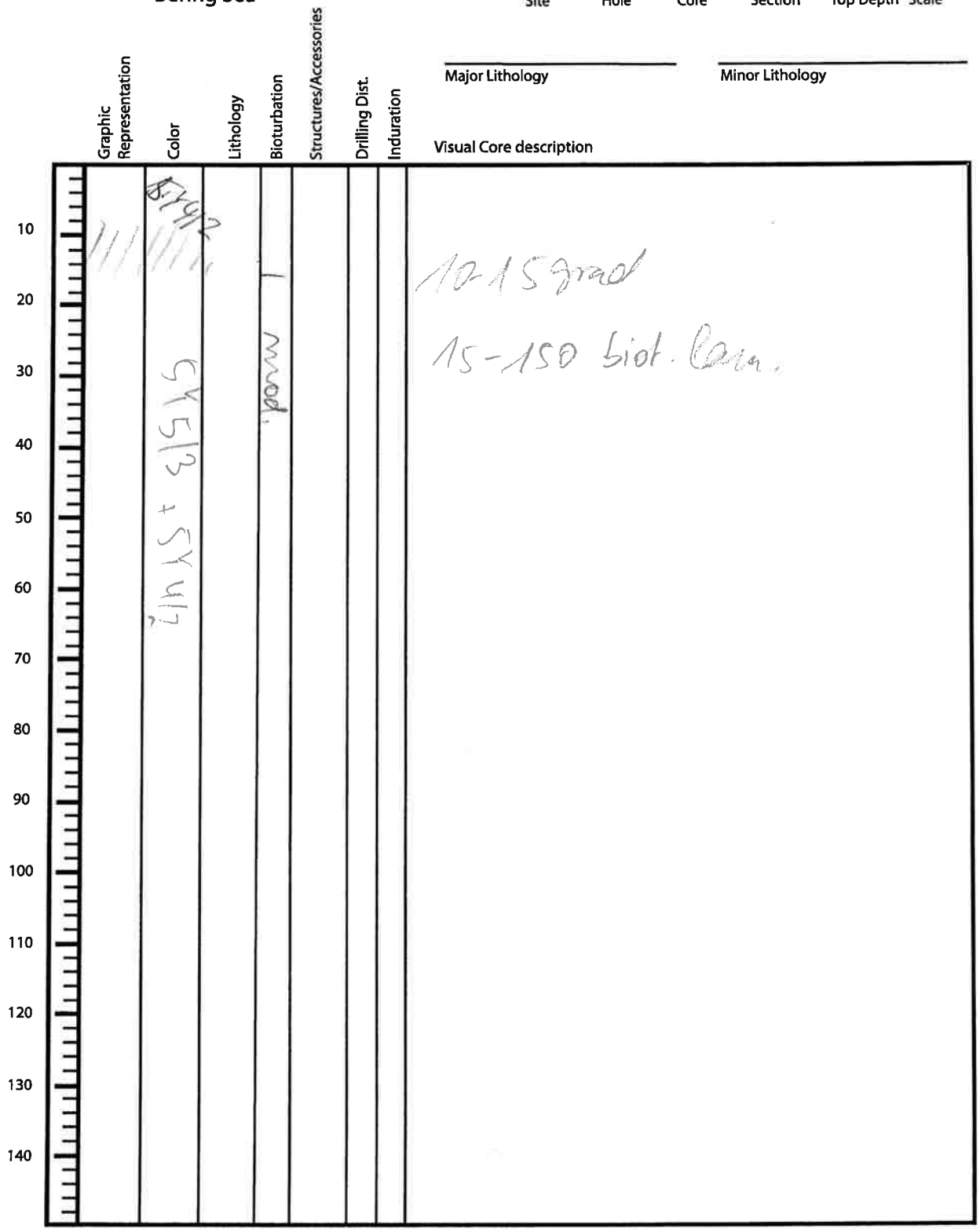


Observer: _____ Date: _____

Expedition 323
Bering Sea

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

Major Lithology | Minor Lithology

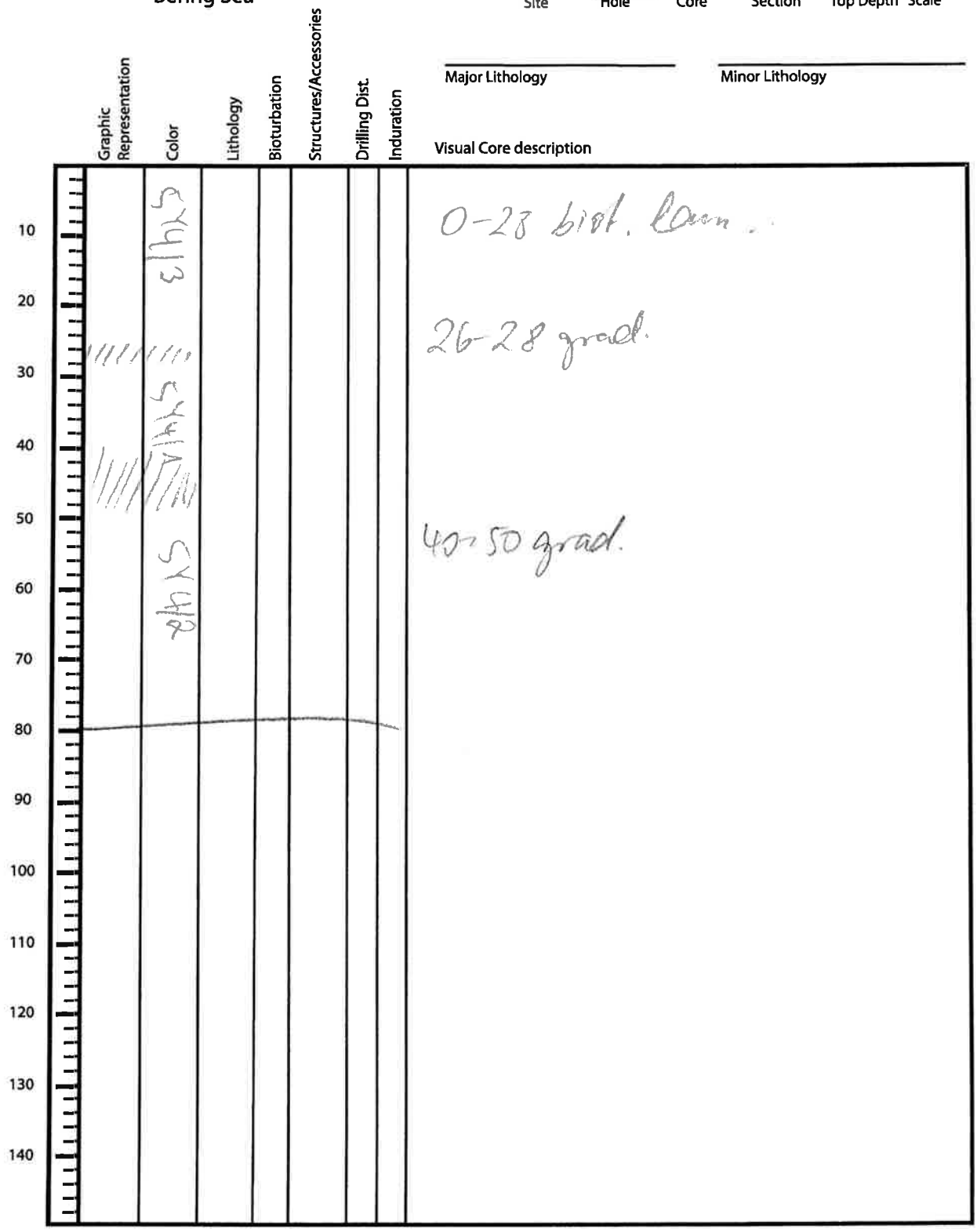


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 14 7 _____ _____
Site Hole Core Section Top Depth Scale

Major Lithology _____ Minor Lithology _____

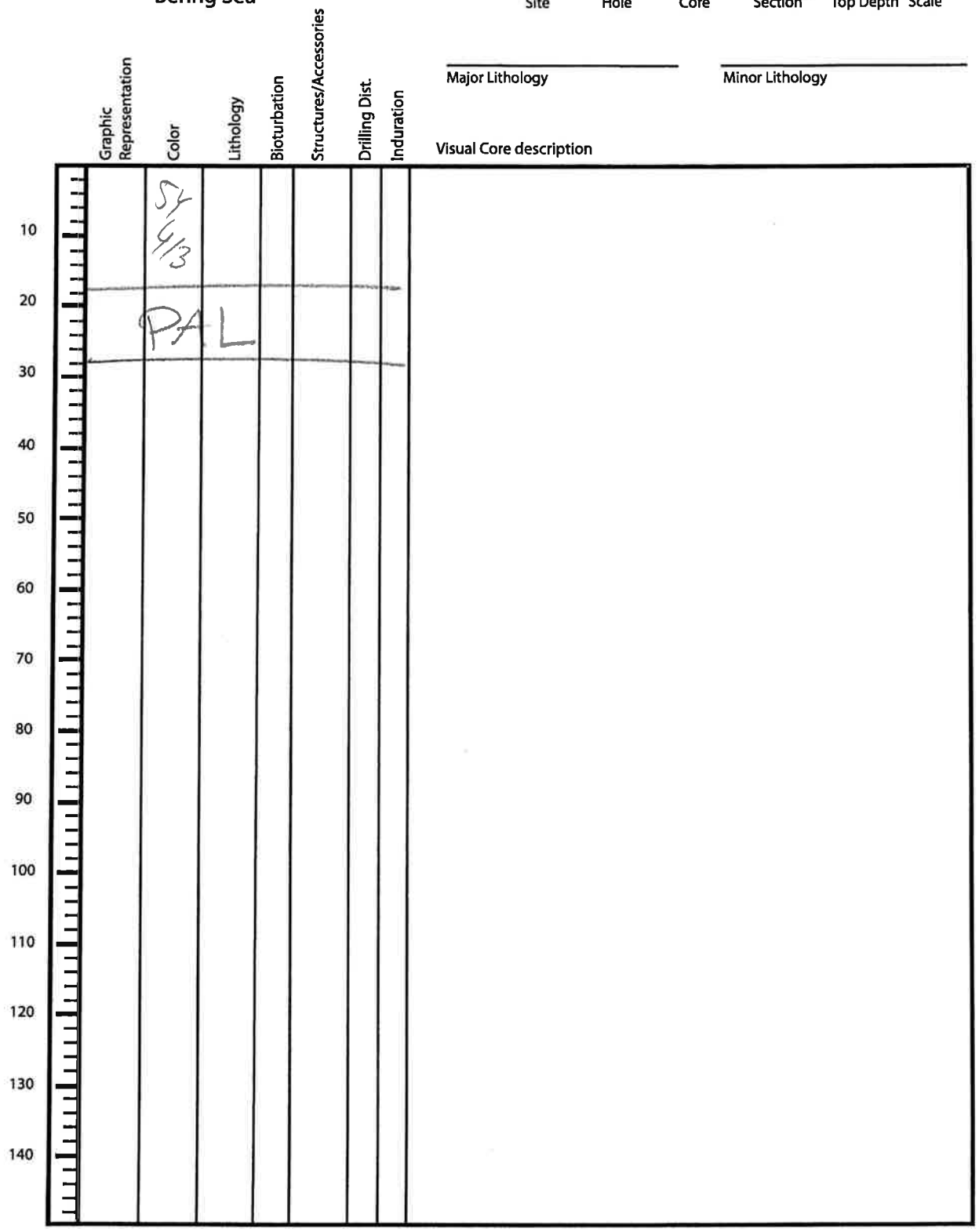


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 | A | 14 | CC | | |
Site | Hole | Core | Section | Top Depth | Scale

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	14		2	91	91

Sediment/Rock Name	Diatom ooze

Observer	Hiro

Percent Texture		
Sand	Silt	Clay

B 90 S 10 V 0

Comments: Main litho for Sec6 + patch @ sec 2
yellow
33

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
7 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	

B 1f S. 82 V. 0

Percent Texture		
Sand	Silt	Clay
4	83	13

Comments: Main Litho Sec. 4

25.5 1 ~~7~~ 20 5 57

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
55	Quartz 15
	Feldspar 3
65	K-feldspar (Orthoclase, Microcline...)
62 7	Plagioclase 2
63 7	Rock fragments 2
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
93 4	Clay Minerals 1
	Chlorite
	Glauconite
95	Chert
97 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

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
323	1340	A	14		6	40	40

Sediment/Rock Name	Diatom ooze	Observer	

B 78 S 20 V 2

Percent Texture		
Sand	Silt	Clay

Comments: Main Litho Sec. 6 Light green/tan yellow ~~=3~~ 25

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
~~48~~	Quartz 2
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
12	Clay Minerals 3
	Chlorite
	Glauconite
	Chert
<1	Zircon ~~<5~~
	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

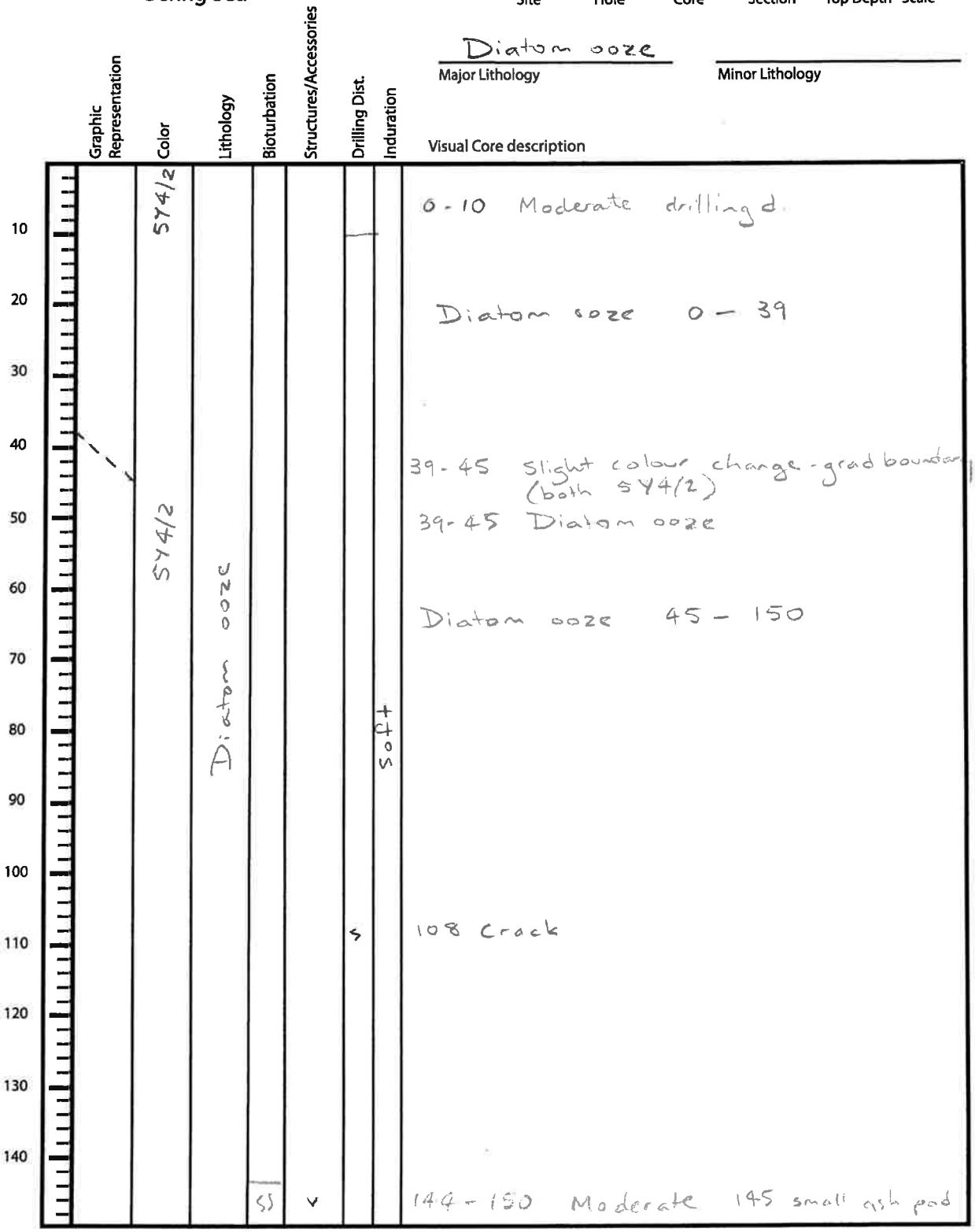
Percent	Component
	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
60	15 Centric
8	2 Pennate
	Chaetoceros Resting Spores
2	Silicoflagellates 0.5
8	Sponge 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 15 1 0
Site Hole Core Section Top Depth Scale

Diatom ooze
Major Lithology

Minor Lithology

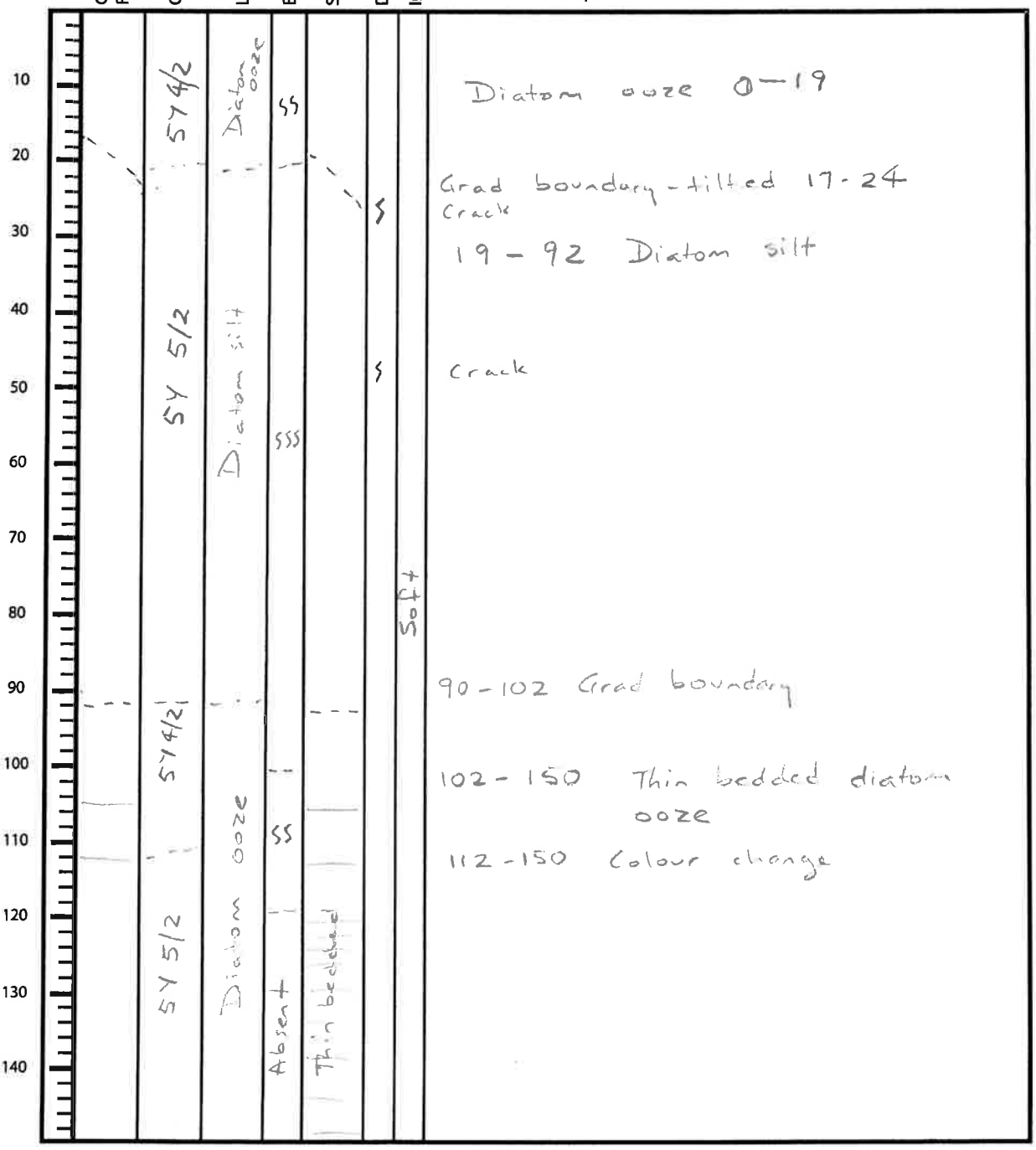


Observer: KD Date:

Expedition 323
Bering Sea

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

Diatom ooze / Diatom silt
Major Lithology | Minor Lithology

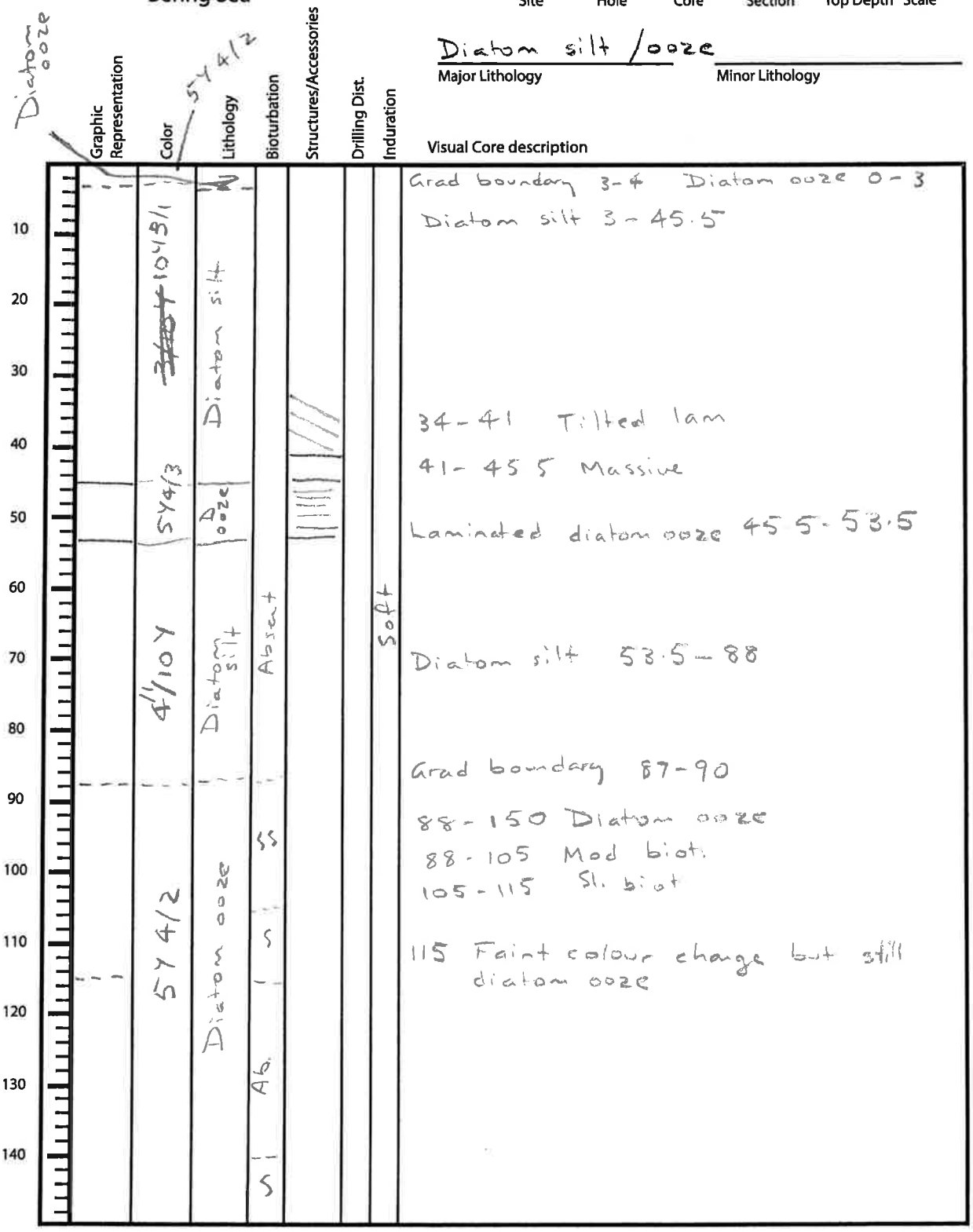


Observer: KD Date: _____

Expedition 323
Bering Sea

U1340 | A | 15 | 3 | 0 | _____
Site | Hole | Core | Section | Top Depth | Scale

Diatom silt / ooze
Major Lithology | Minor Lithology

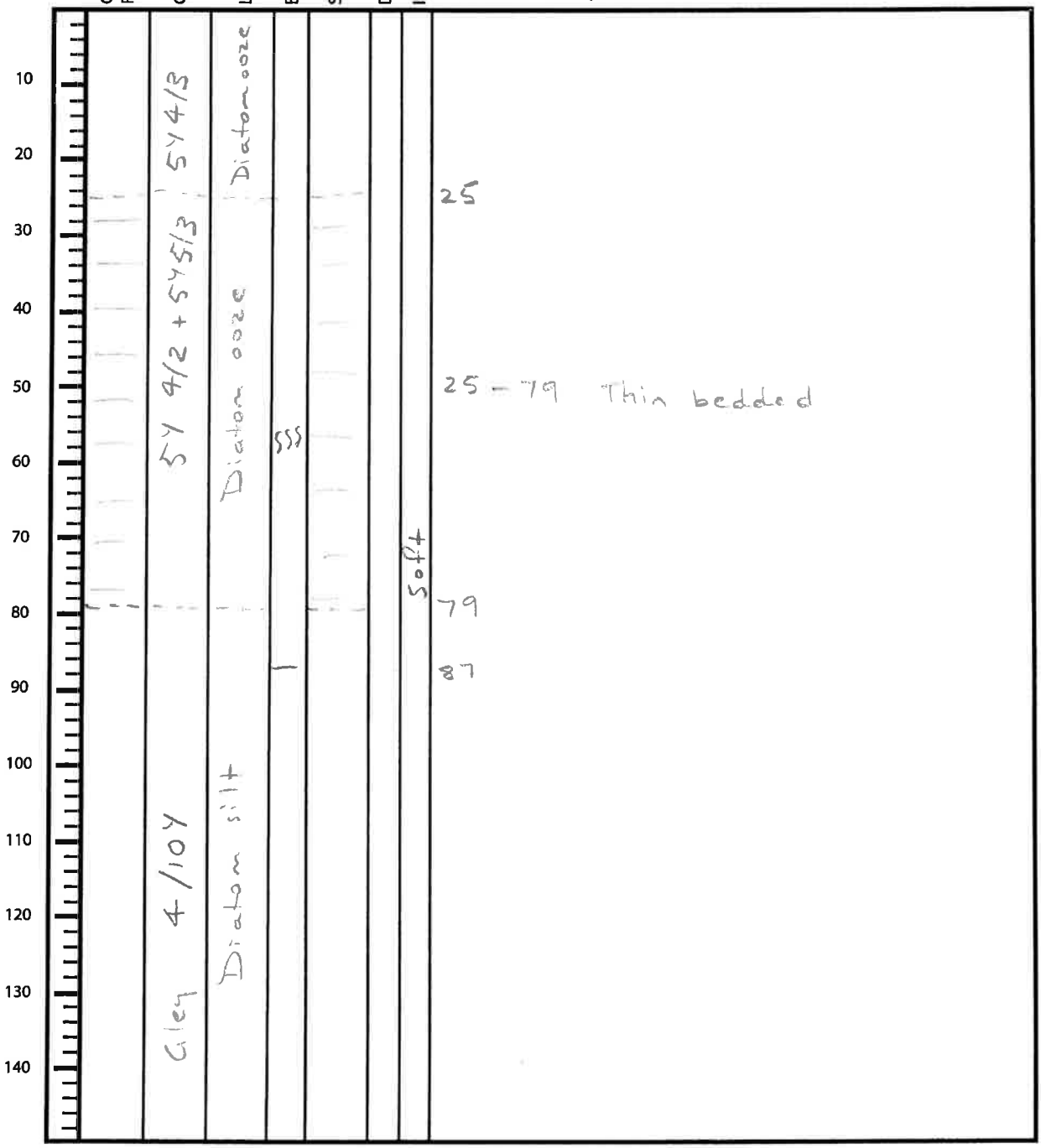


Observer: _____ Date: _____

Expedition 323
Bering Sea

U1340 | A | 15 | 4 | 0 |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology: Diatom ooze / silt
Minor Lithology:

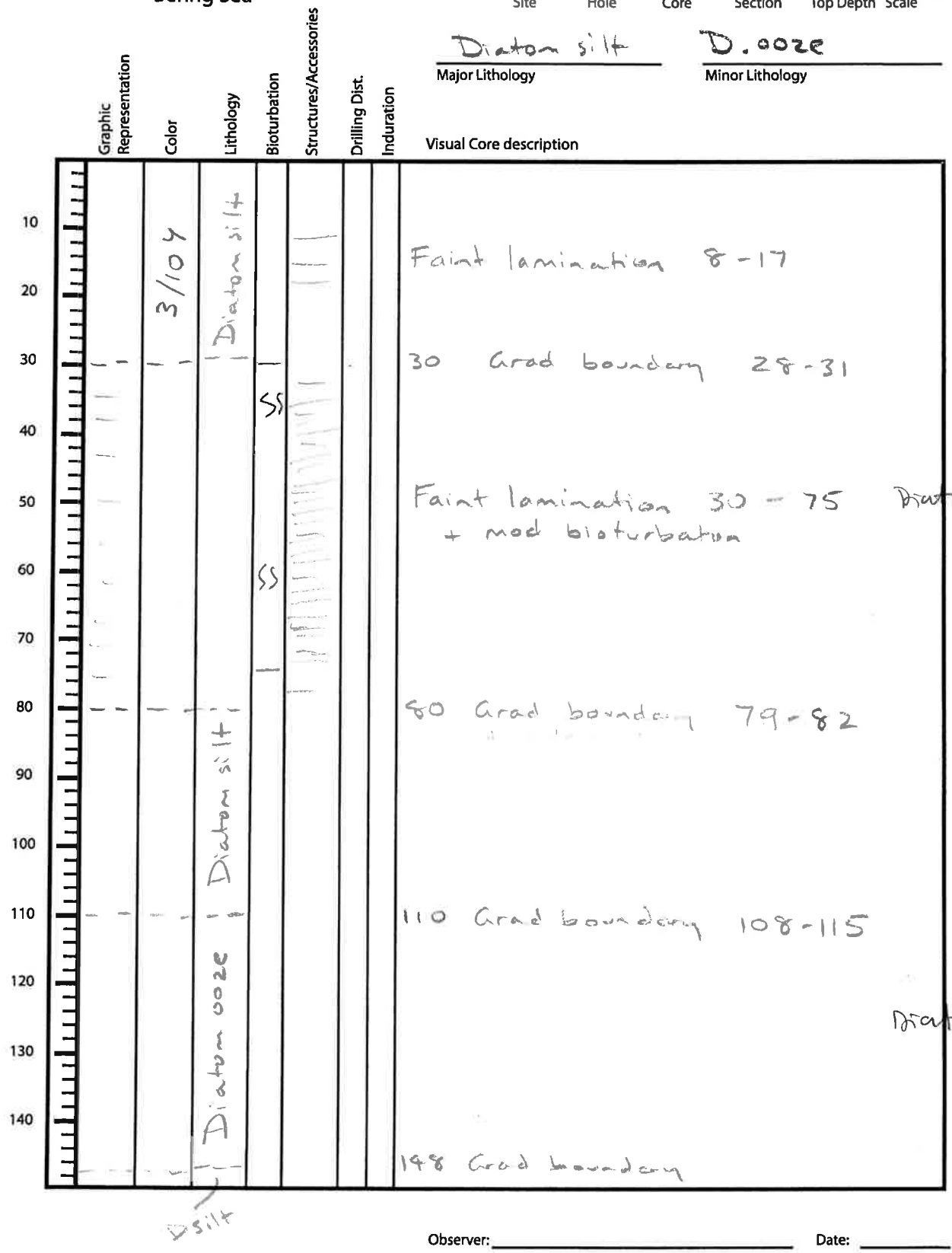


Observer: _____ Date: _____

Expedition 323
Bering Sea

U1340 | A | 15 | 5 | ____ | ____
Site | Hole | Core | Section | Top Depth | Scale

Diatom silt — Major Lithology
D.ooze — Minor Lithology

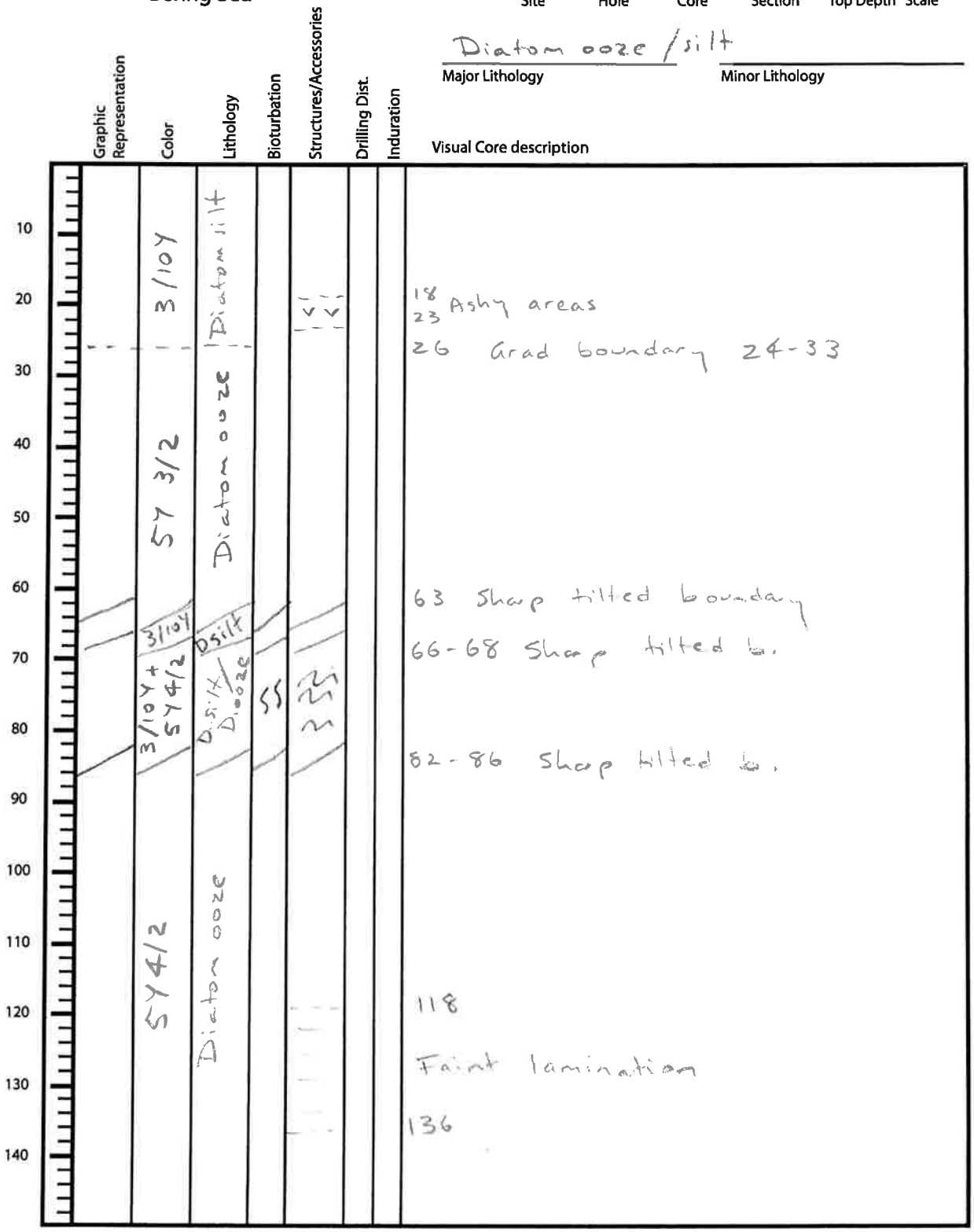


Observer: _____ Date: _____

Expedition 323
Bering Sea

U1340 | A | 15 | 6 | | |
Site | Hole | Core | Section | Top Depth | Scale

Diatom ooze / silt
Major Lithology | Minor Lithology



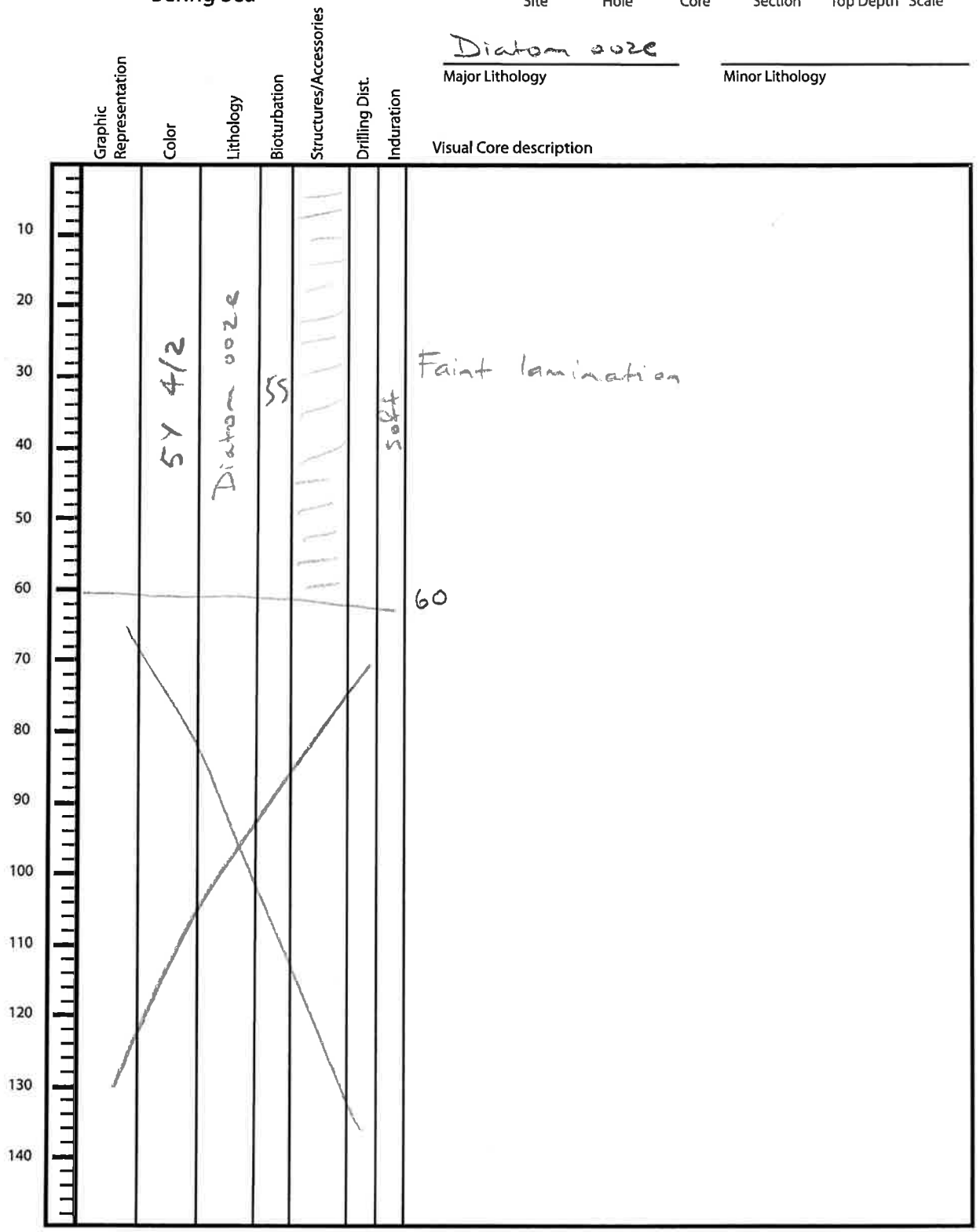
Observer: _____ Date: _____

Expedition 323
Bering Sea

U1340 | 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
323	1340	A	15H		1	120	120

Sediment/Rock Name	Diatom Ooze

Observer	Hiro A

Percent Texture		
Sand	Silt	Clay

B 85 S 15 V 0

~~34.5~~ 35.5

Comments:
Main Lith Sec. 1 Sec. 90-150, yellowish green

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
8 3	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
14 1 0.5	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
3 ≠	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
56	20 Centric
20	7 Pennate
	Chaetoceros Resting Spores
6	2 Silicoflagellates
3	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
	1340	A	15H		3	10	16

Sediment/Rock Name	Diatom Ooze	Observer	

S 79 S 2.1 V 0

Percent Texture		
Sand	Silt	Clay

Comments: Main Litho spec. 3 90–150 sec. 4 78 ~~yellowish~~ ~~green~~ greenish yellow

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
~~3~~ 1 ~~0.5~~	Quartz
~~3~~ 1 ~~0.5~~	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
3 ~~1~~	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
13 ~~13 5~~	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
3 1	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 ~~20 25~~	Centric
15 ~~7~~	Pennate
	Chaetoceros Resting Spores
	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
			15H		4	100	100

Sediment/Rock Name	Diatom-rich silt

Observer	

B39 S51 V.10

Percent Texture		
Sand	Silt	Clay
20	77	3

~~15~~ 30.
52 ~~45~~ 70 40 . 2

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

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
	Glauconite
	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
			151		5	50	50

Sediment/Rock Name	Diatom Ooze	Observer	

B 89% S 11% T V 00%

Percent Texture		
Sand	Silt	Clay

Comments: Litho Sec. 5 30 – 50 yellowish green
Sec. 6 ~~83~~ 50 ~~bottom~~ 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	Interval (cm) Bottom
			15H		5	~~50~~ 130	~~50~~ 150

Sediment/Rock Name	Diatom Ooze	Observer	Hino. A

B 66 S27 V 7

Percent Texture		
Sand	Silt	Clay

Comments: Litho. sec. 5 50 – sec. 6 20 (darker grayish ~~green~~ olive) ~~10YR~~ 5Y 5/2

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
15	Quartz 7
1	Feldspar 0.5
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
11	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
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~~
4Y	Centric 20
11	Pennate 5
	Chaetoceros Resting Spores
	Silicoflagellates
11	Sponge spicules ~~2~~ 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	Hino A.

B 30 SSX V 18

Percent Texture		
Sand	Silt	Clay

Comments: Dark Sandy

43.5

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
34	Quartz 15
5	Feldspar 2
3	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
1	Rock fragments 0.5
	Accessory/trace minerals
	Micas
	Biotite
1	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

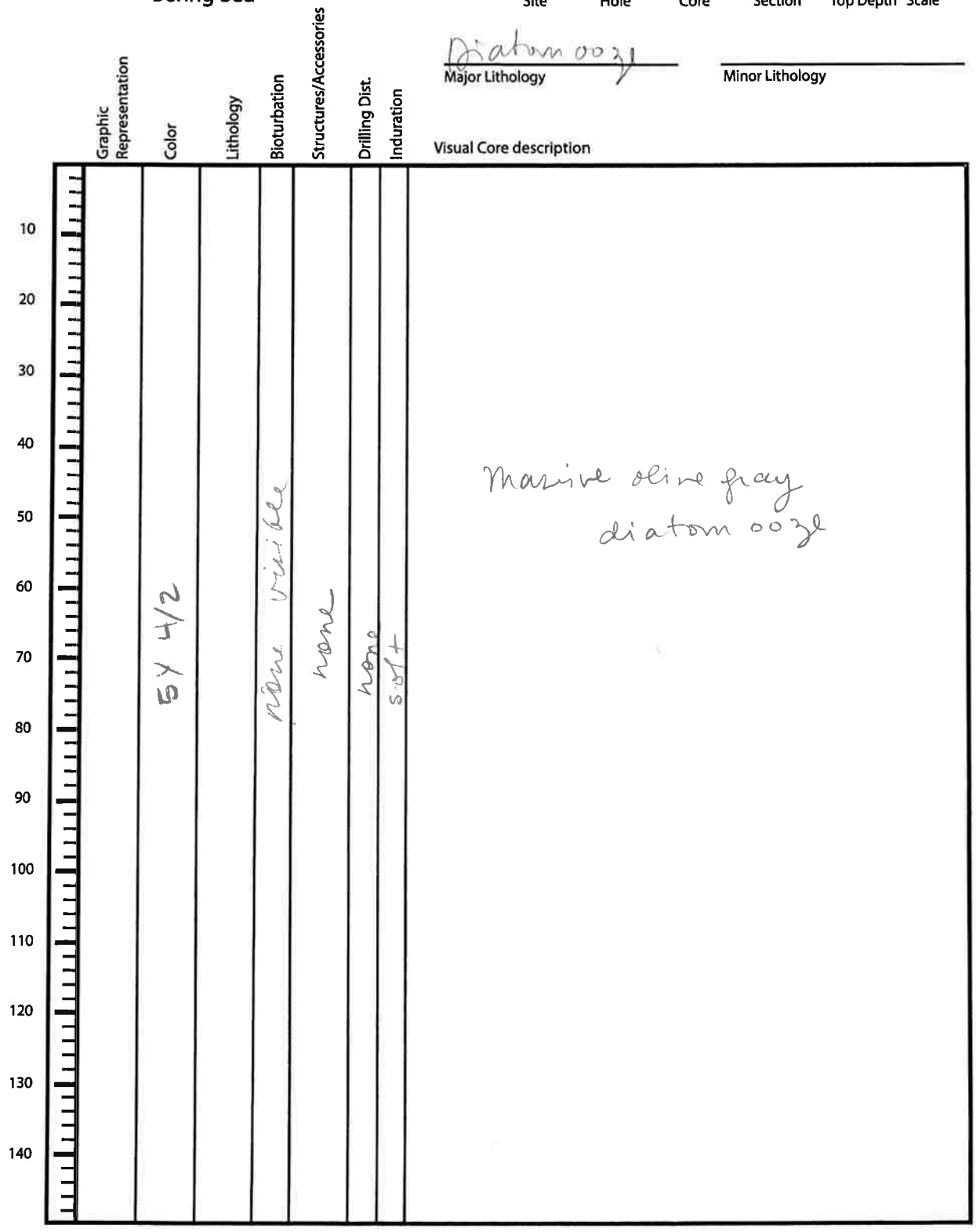
Percent	Component
	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
23	Centric 10
7	Pennate 3
	Chaetoceros Resting Spores
2	Silicoflagellates
<1	Sponge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

Expedition 323
Bering Sea

323 | U1340 | 16H | 1 | | |
Site | Hole | Core | Section | Top Depth | Scale

Diatom ooze
Major Lithology

Minor Lithology



Observer: MS COOK

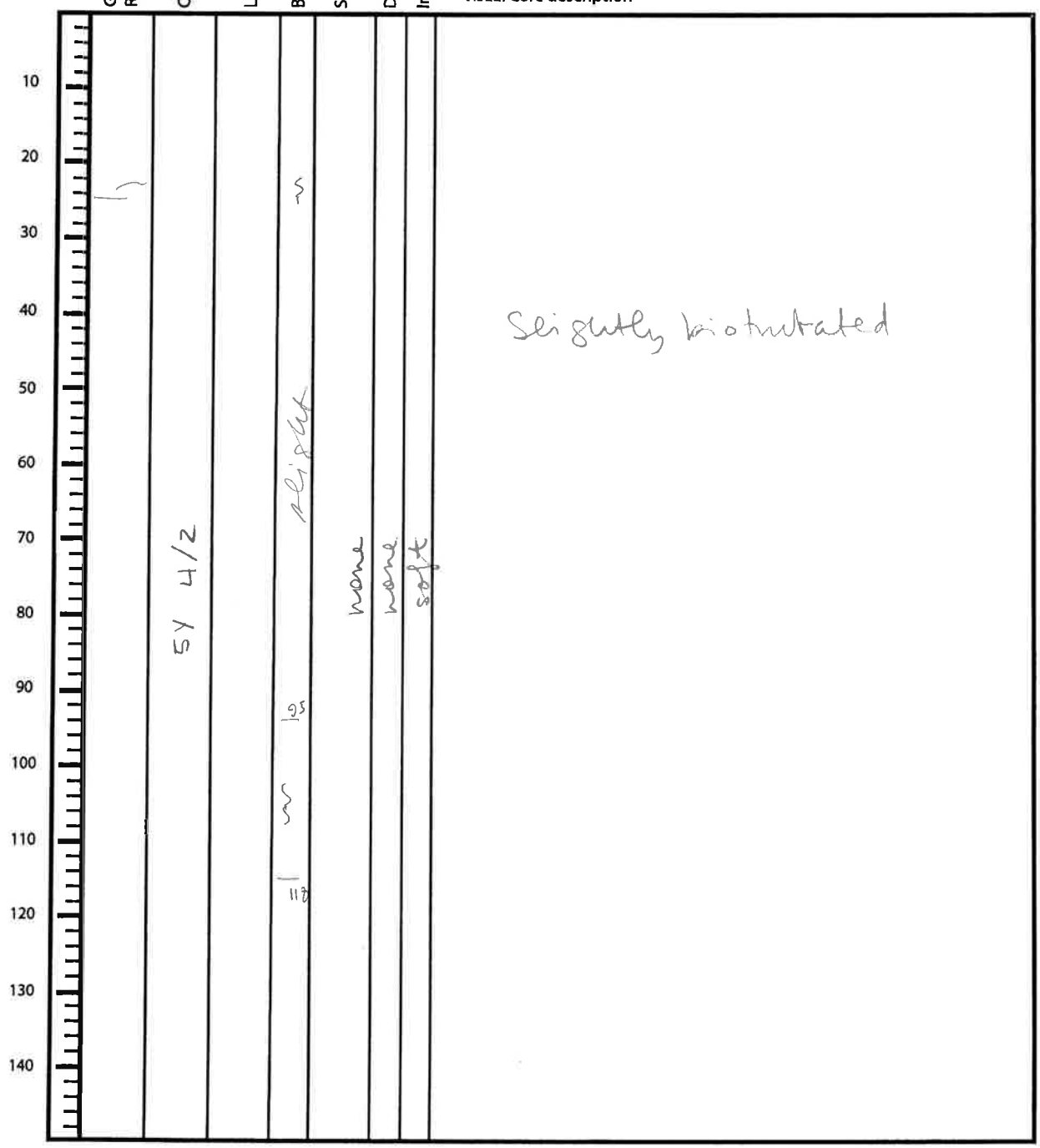
Date: 24 July 09

Expedition 323
Bering Sea

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

Diatom ooze
Major Lithology

Minor Lithology



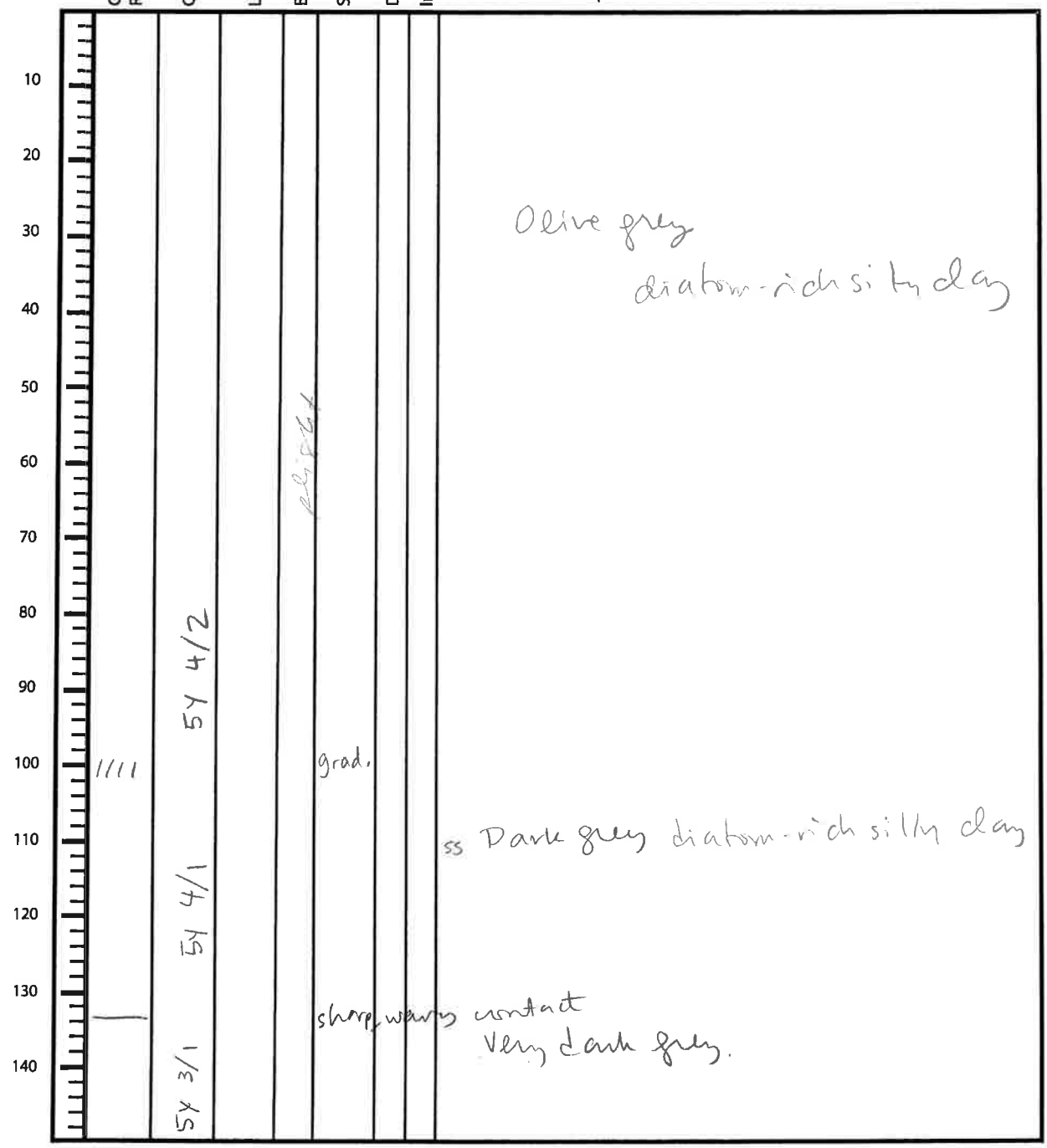
Observer: MS Cook

Date: 24 July 09

Expedition 323
Bering Sea

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

Major Lithology: diatom-rich silty clay
Minor Lithology:

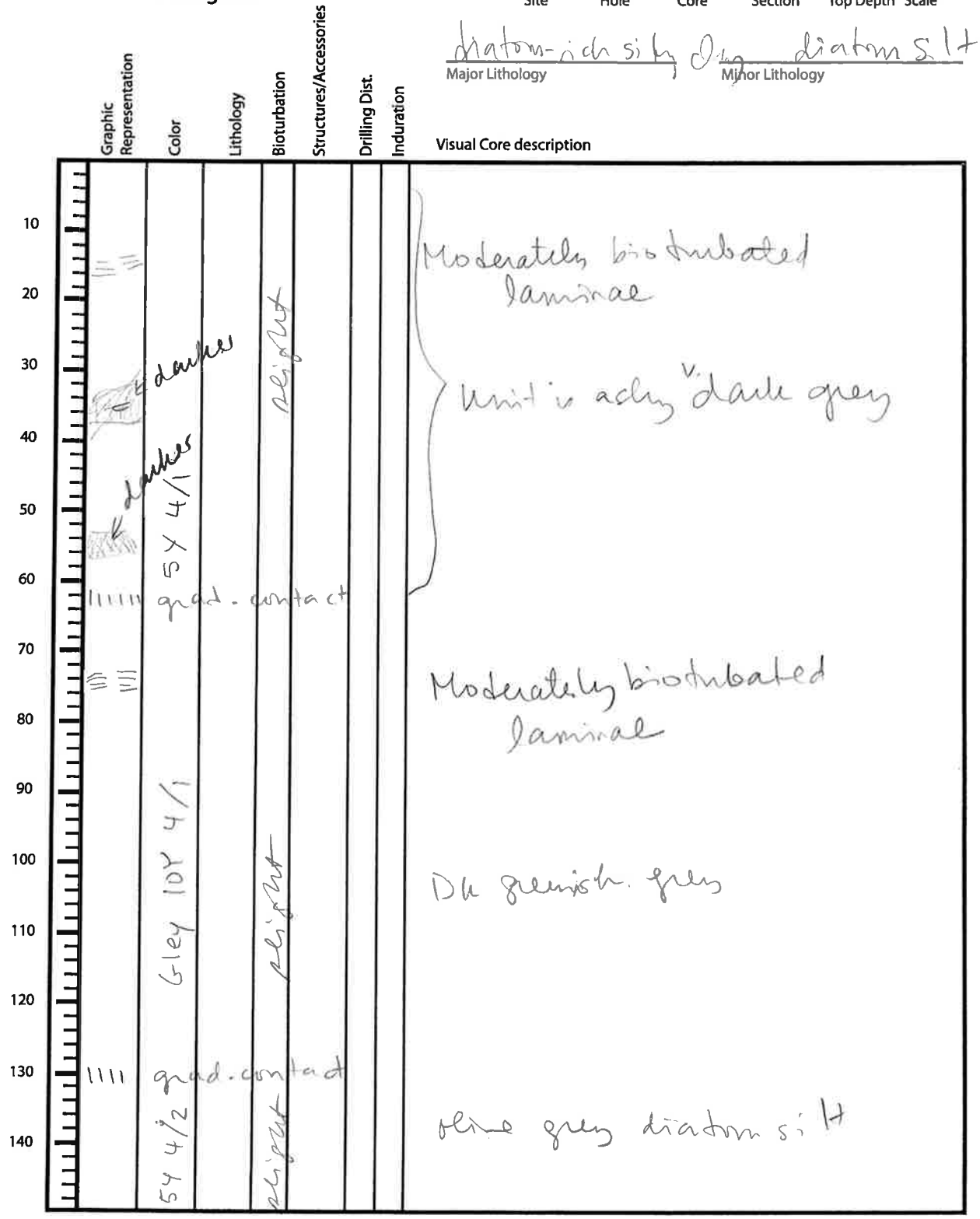


Observer: MS cook Date: 24 July 09

Expedition 323
Bering Sea

323 | U1340 | 16H | 4 | | |
Site | Hole | Core | Section | Top Depth | Scale

diatom-rich silty clay | diatom silt
Major Lithology | Minor Lithology



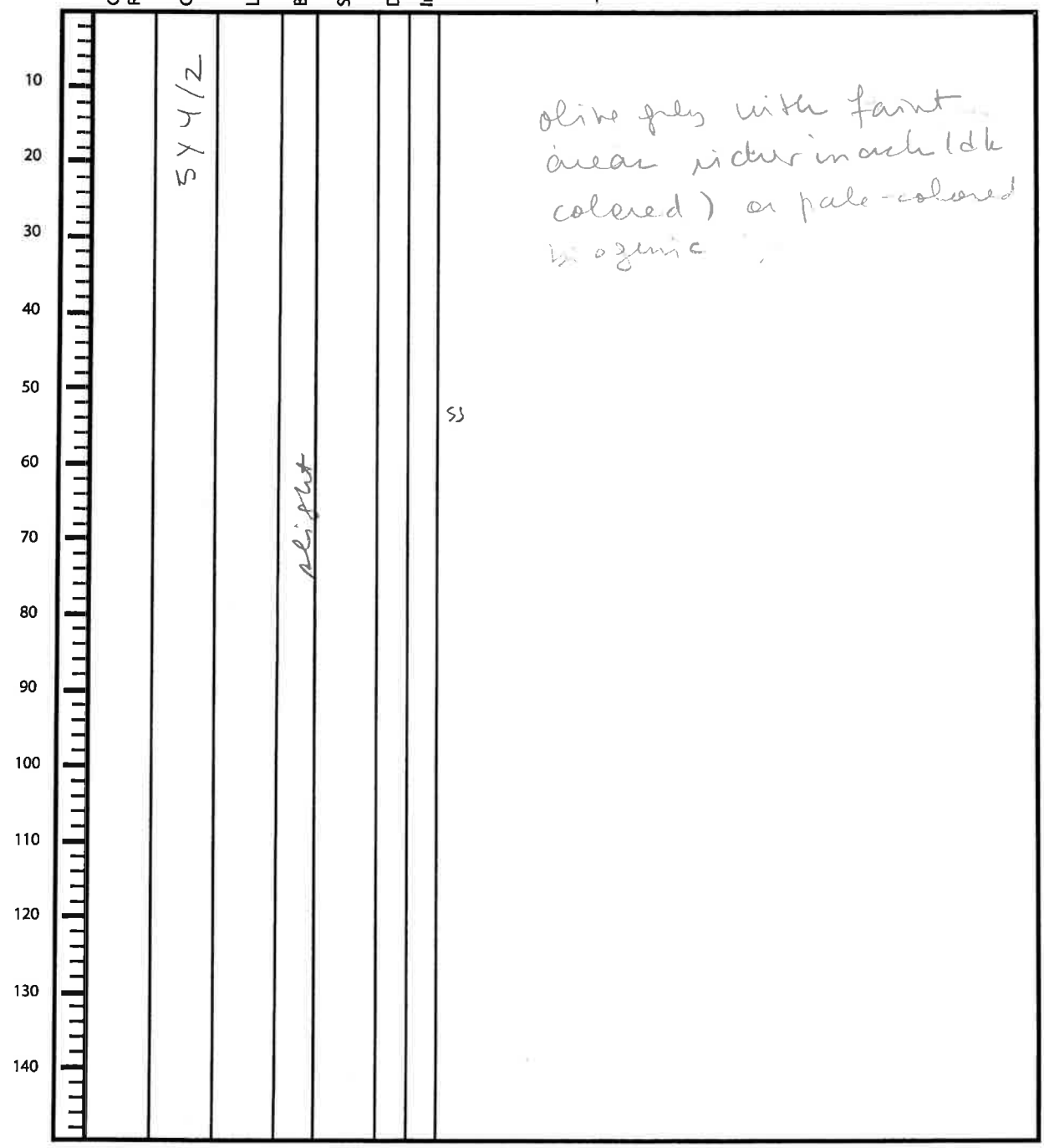
Observer: MS Cook Date: 24 July 09

Expedition 323
Bering Sea

323 | U1340 | 16P | 5 | | |
Site | Hole | Core | Section | Top Depth | Scale

Diatom silt
Major Lithology

Minor Lithology



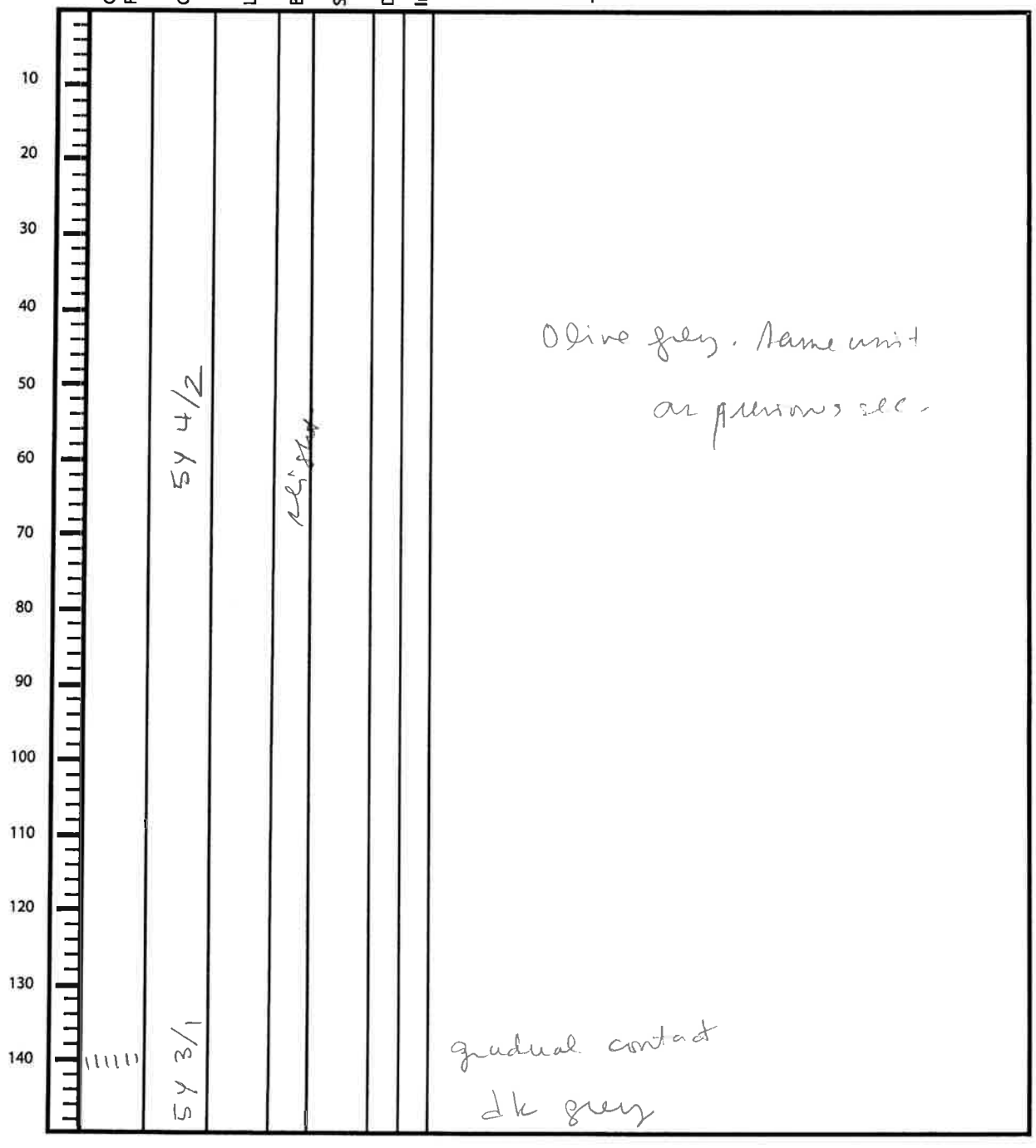
Observer: MSCook Date: 24 July 09

Expedition 323
Bering Sea

Site	Hole	Core	Section	Top Depth	Scale
323	U1340	16H	6		

Major Lithology: Diatom Silt

Minor Lithology:



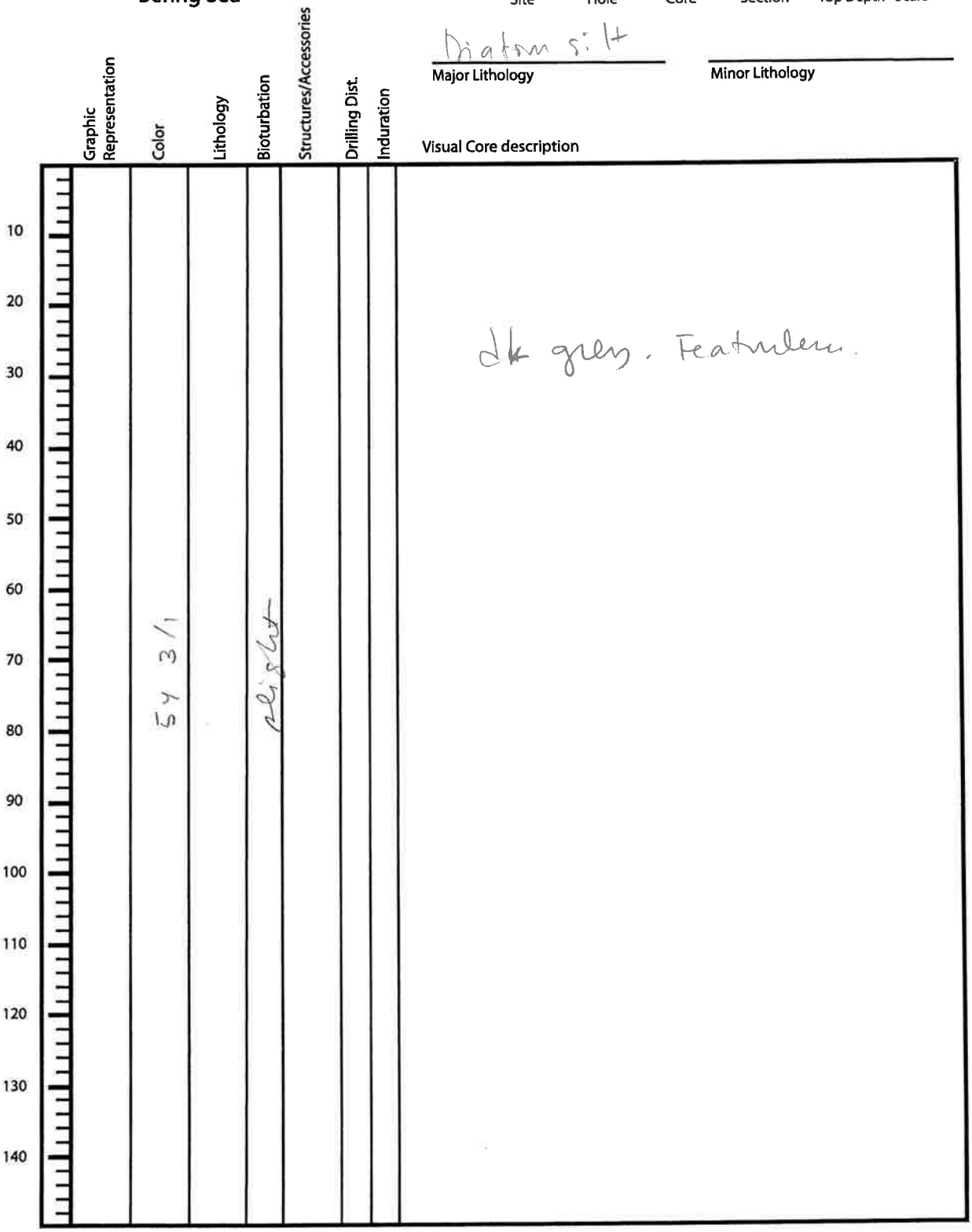
Observer: _____ Date: _____

Expedition 323
Bering Sea

323 (Site) U1340 (Hole) 16H (Core) 7 (Section) _____ (Top Depth) _____ (Scale)

Major Lithology: Diatom silt

Minor Lithology: _____



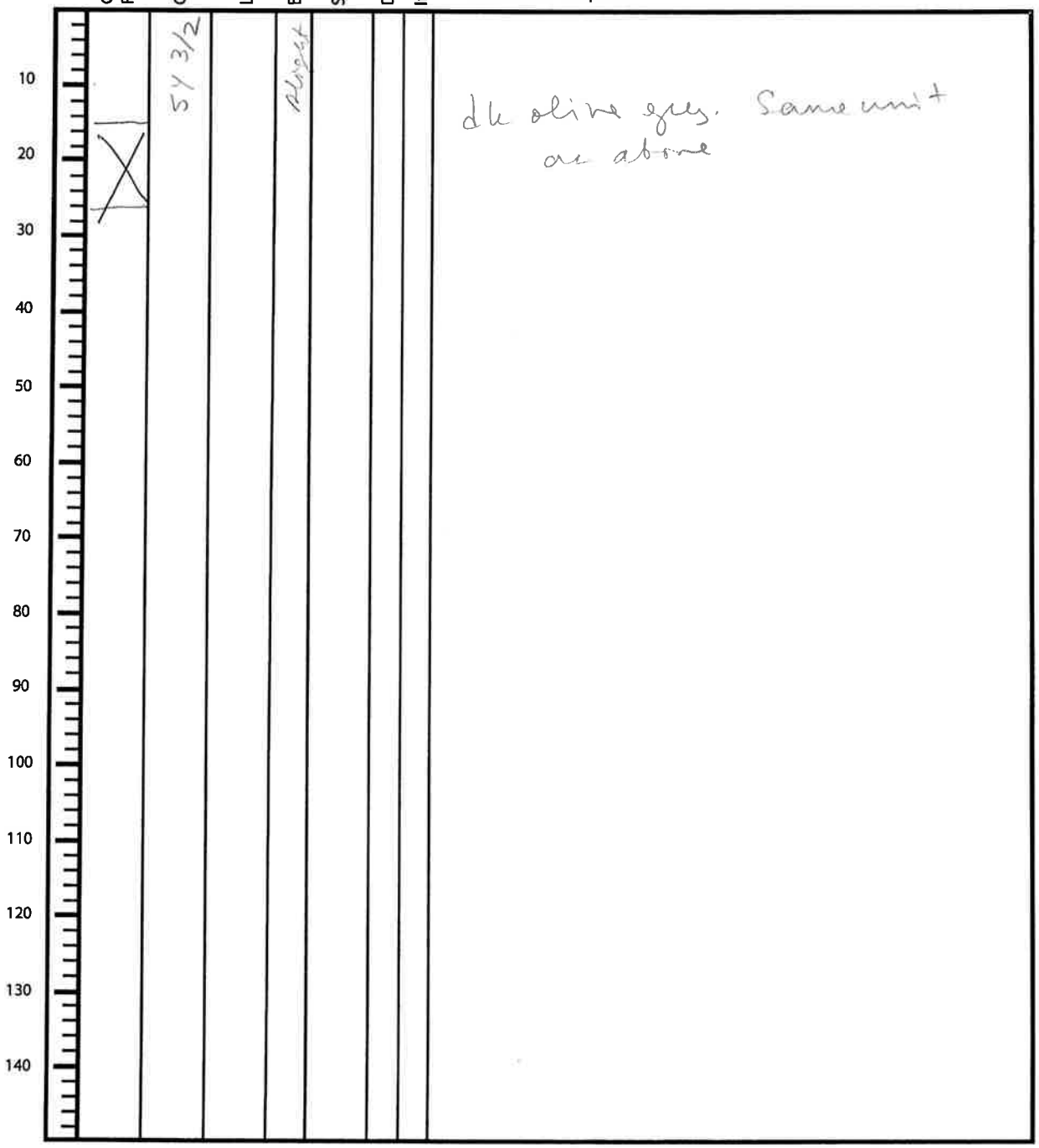
Observer: MS Cook Date: 26 July 09

Expedition 323
Bering Sea

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

Diatom silt
Major Lithology

Minor Lithology



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	NiroA

B. 90 S. 7 V 3

Percent Texture		
Sand	Silt	Clay

Comments: Lith. ~~Green~~ ~~Dar~~ 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 ~~2~~	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 35
	Chaetoceros Resting Spores
5	Silicoflagellates 2
	Sponge spicules 7
	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~~ 5	~~40~~ 55	

Sediment/Rock Name	Diatom silt	Observer	

B 59. S ~~40~~ 41 V

Percent Texture		
Sand	Silt	Clay
~~5~~	~~95~~ 90	3

Comments: Main Lith Dark Gray

7

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
18	Framework minerals
~~14~~ 15	Quartz 5
	Feldspar
3 ~~4~~	K-feldspar (Orthoclase, Microcline...) 1
	Plagioclase
3 ~~4~~	Rock fragments 1
	Accessory/trace minerals
	Micas
	Biotite
7	Muscovite
	Clay Minerals 2
	Chlorite
	Glauconite
	Chert
10	Zircon
	Ferromagnesium minerals ~~2~~ 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 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		~~5~~ 3	~~55~~ 110	

Sediment/Rock Name	diatom-rich silty clay	Observer	

B ~~10~~ 21 S ~~70~~ 79 V. 0

Percent Texture		
Sand	Silt	Clay
30	50	20
15	25	10
	40	10

Comments: ~~Dark~~ Darker Gray

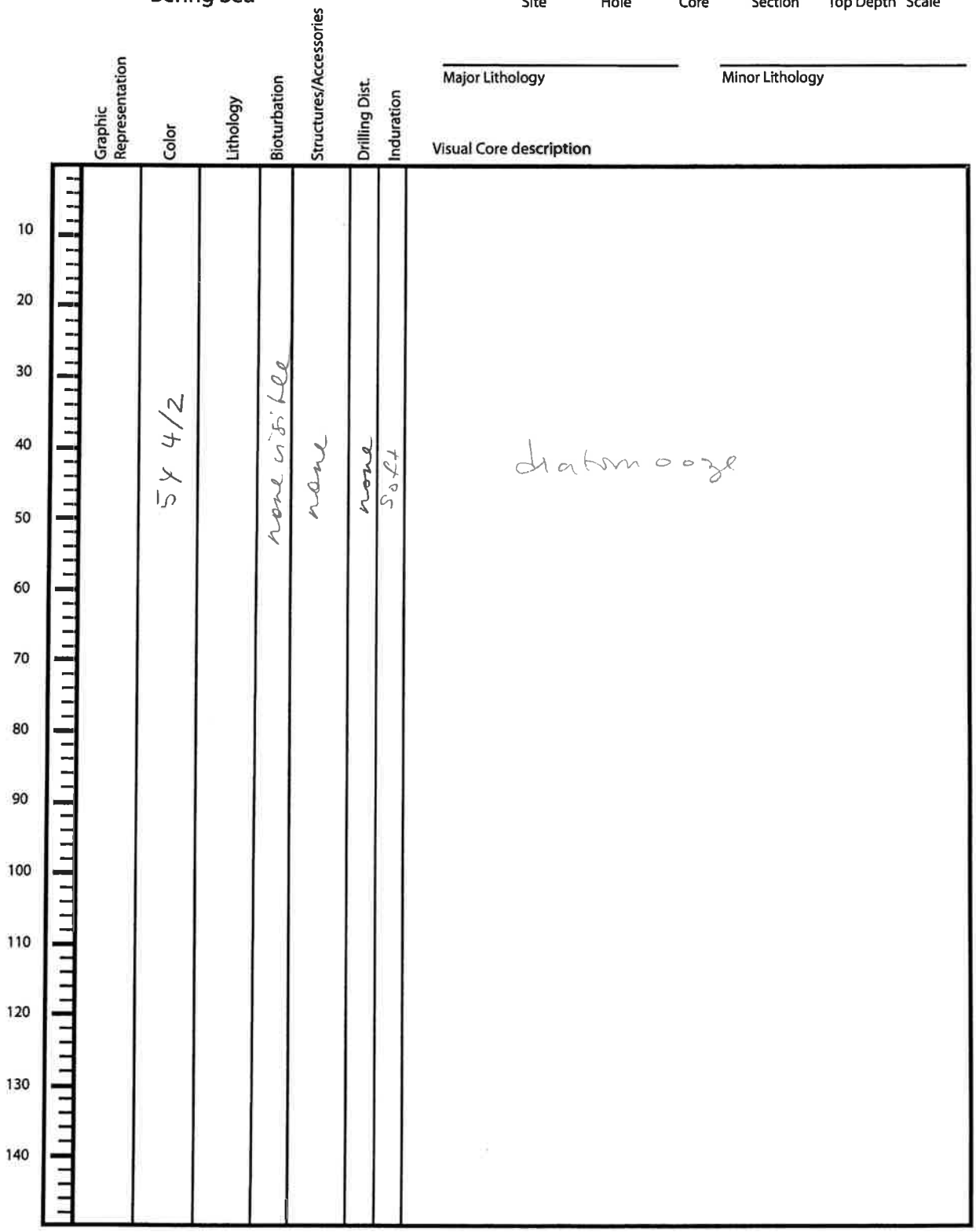
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
45 ~~52~~ ~~40~~	Quartz ~~10~~ 15
3 ~~3~~ ~~4~~	Feldspar 1
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
~~4~~	Rock fragments 1
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
~~2~~ 21	Clay Minerals 37
	Chlorite
	Glauconite
	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 37
	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 | U1340 | 17H | 1 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology



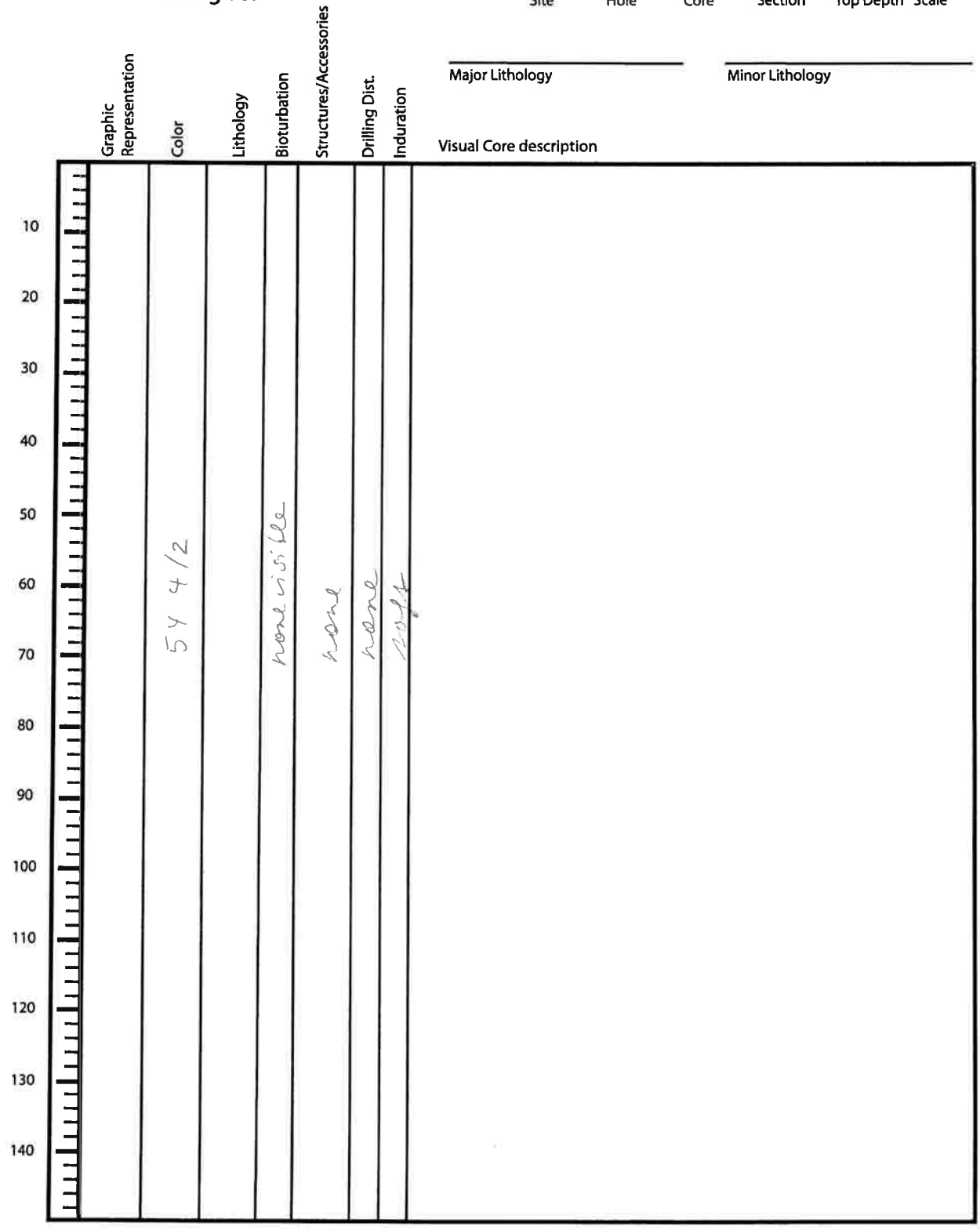
Observer: MS Cook Date: 24 July 09

Expedition 323
Bering Sea

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

Major Lithology

Minor Lithology

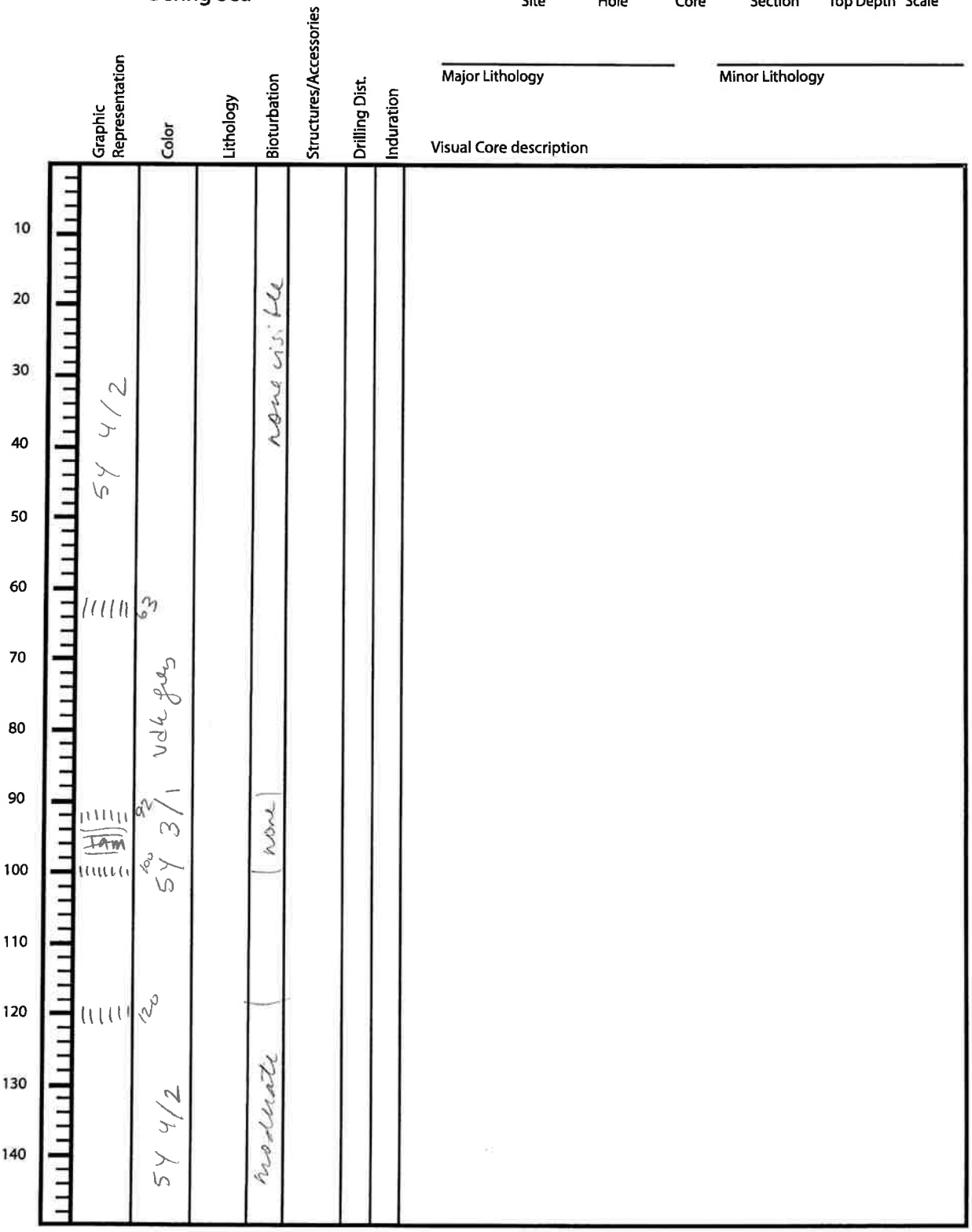


Observer: MS Cook Date: 24 July 09

Expedition 323
Bering Sea

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

Major Lithology _____ Minor Lithology _____



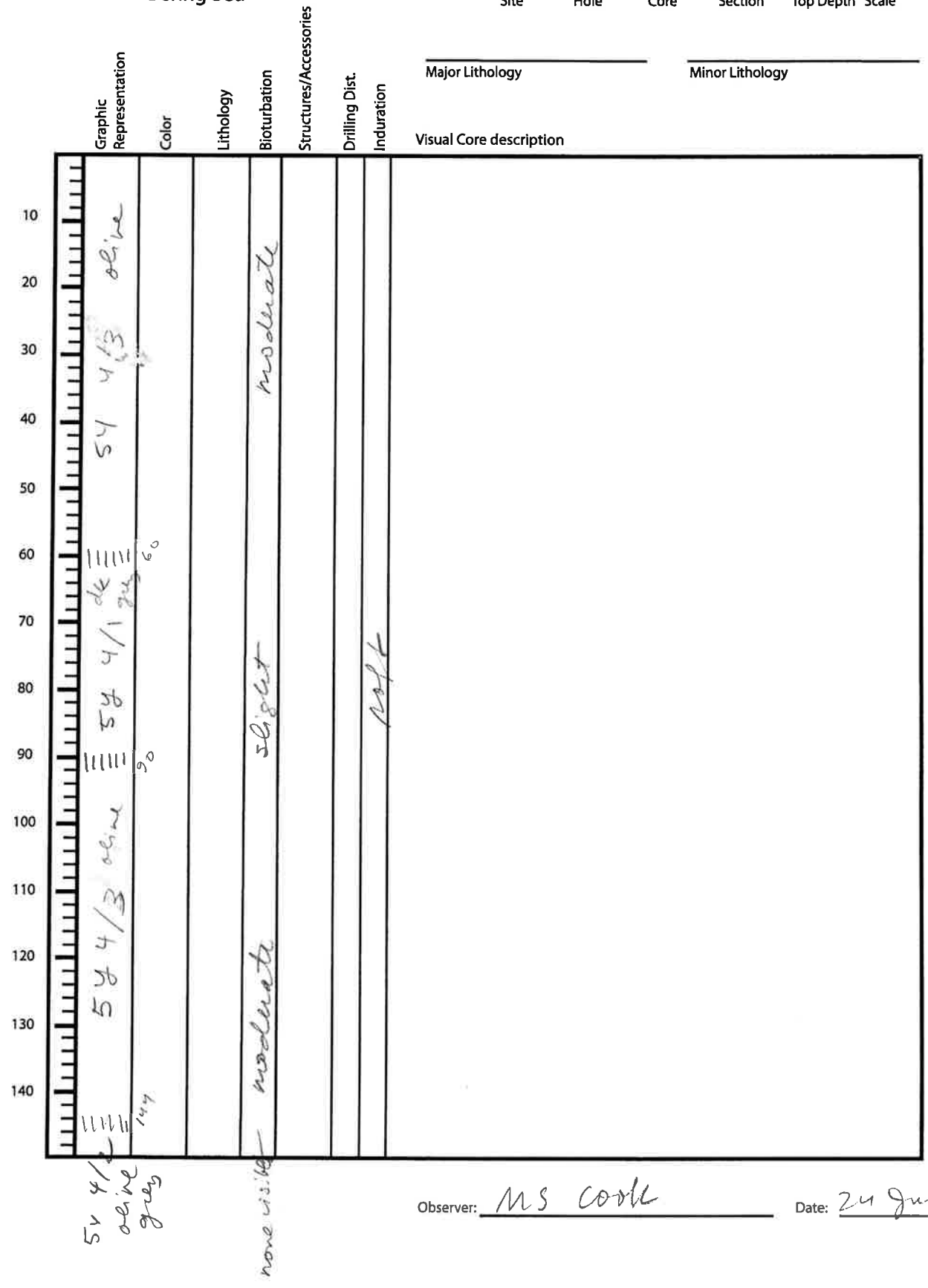
Observer: MS Cook Date: 24 July 09

Expedition 323
Bering Sea

323 U1340A 17H 4
Site Hole Core Section Top Depth Scale

Major Lithology

Minor Lithology



Observer: MS Cook

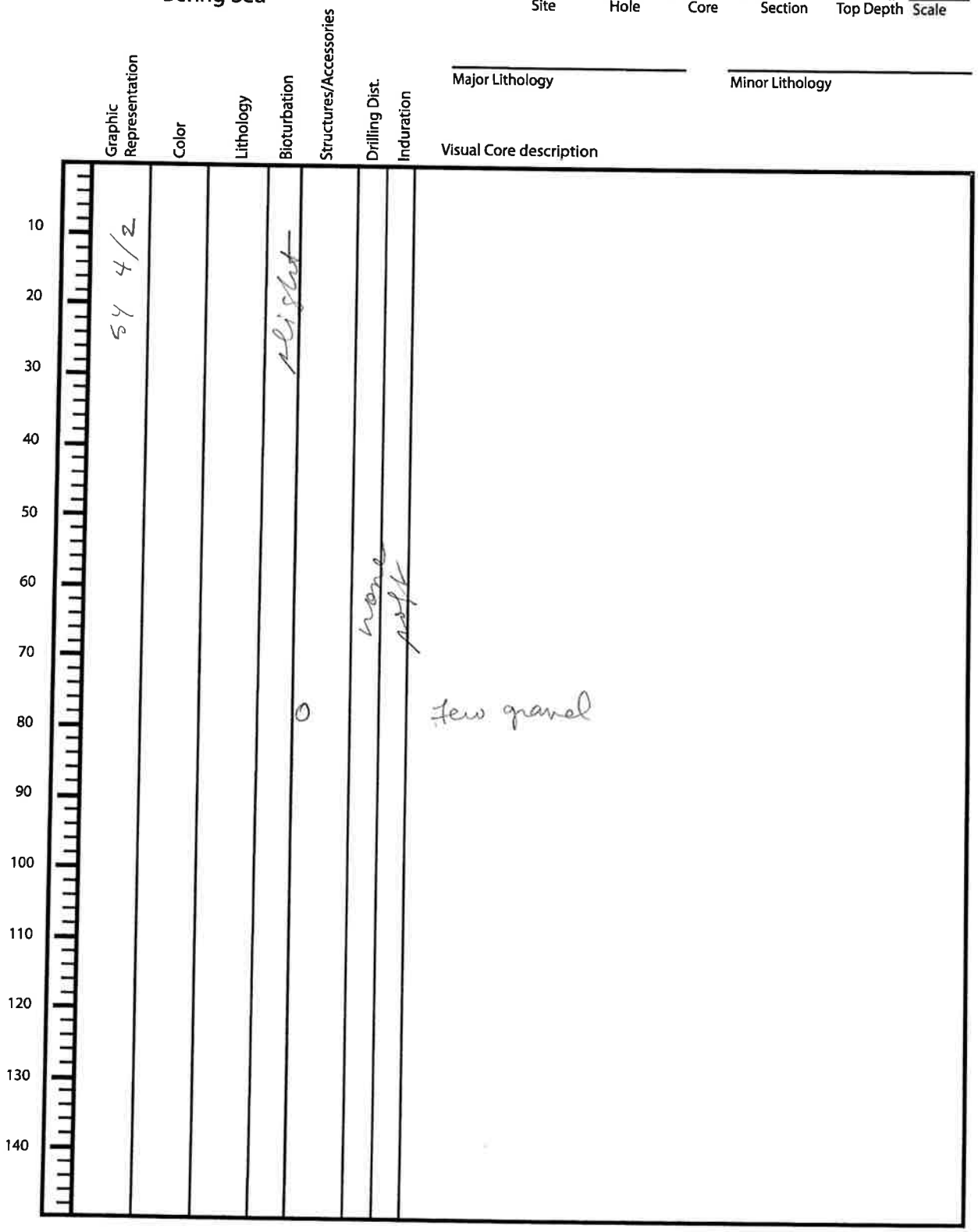
Date: 24 July 09

Expedition 323
Bering Sea

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

Major Lithology

Minor Lithology

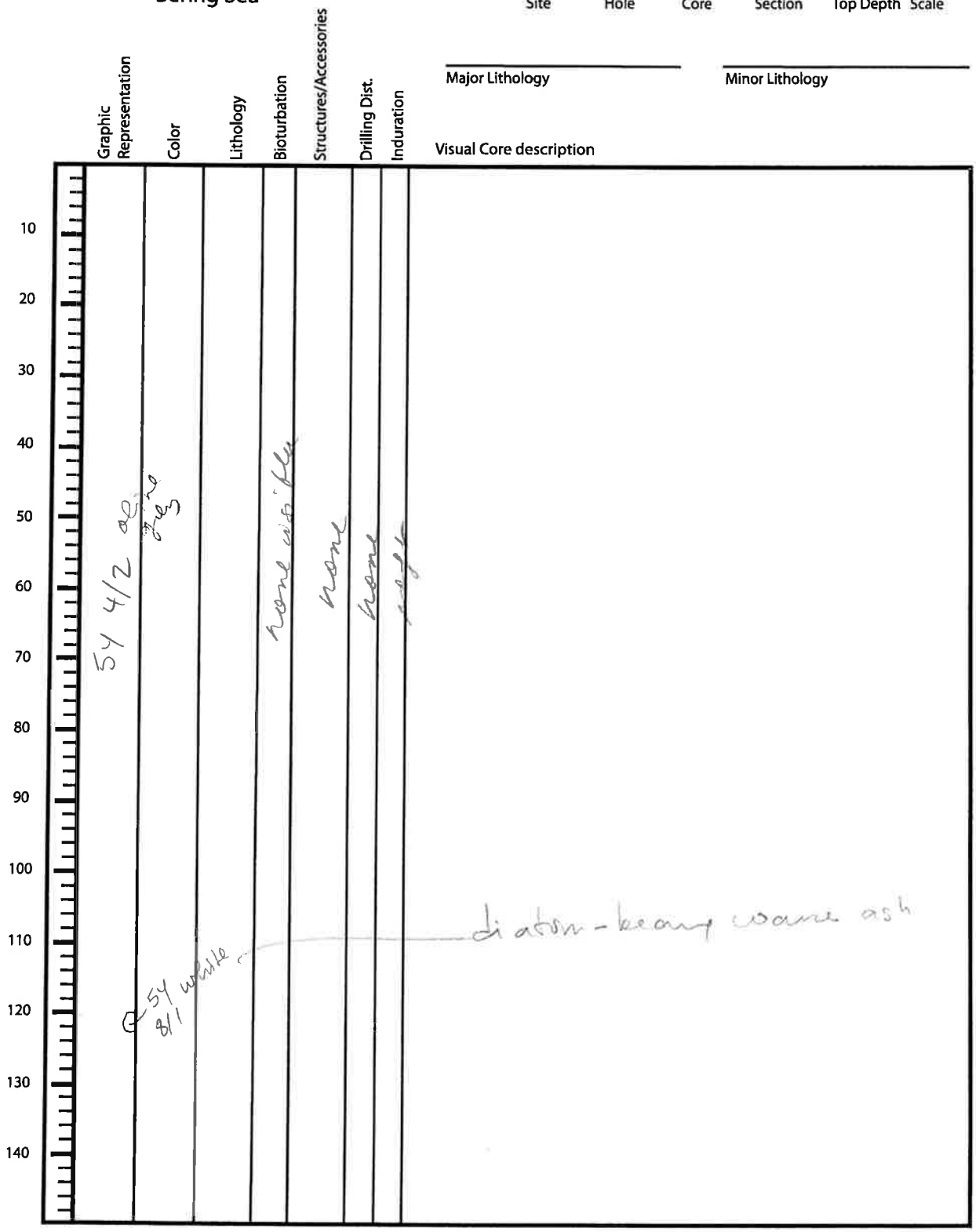


Observer: MS cook Date: 24July 09

Expedition 323
Bering Sea

323 U1340 A -17H-6 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____



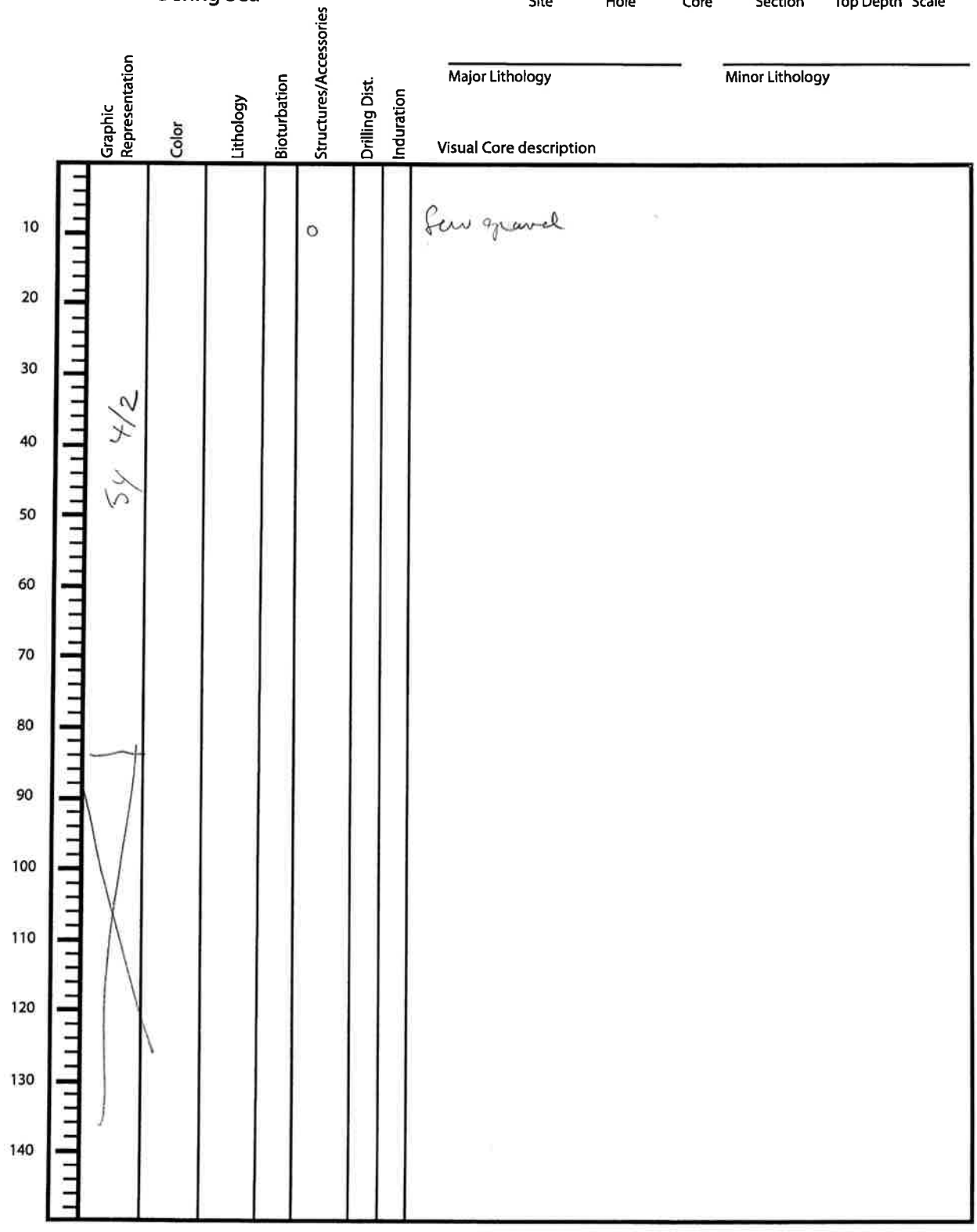
Observer: MS cook Date: 24 July 09

Expedition 323
Bering Sea

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

Major Lithology

Minor Lithology



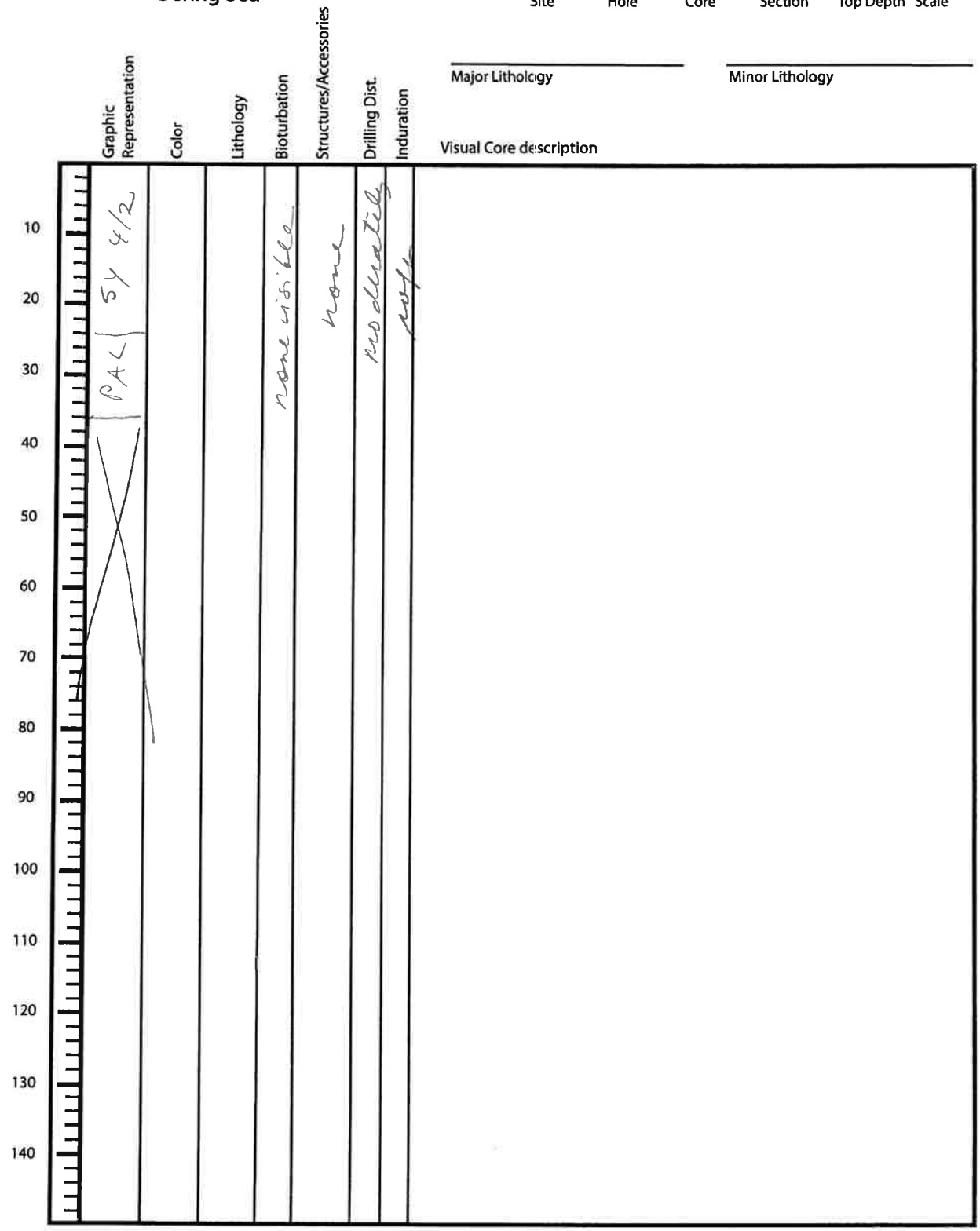
Observer: MS Cook Date: 24 July 09

Expedition 323
Bering Sea

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

Major Lithology

Minor Lithology



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		17H		1	100	102

Sediment/Rock Name	Diatom Ooze

Observer	H. A

B ~~97.3~~ 95 S 5 Ø V O

Lith. Olive

Comments:

Percent Texture		
Sand	Silt	Clay

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
	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
75 ~~74~~	Centric 30
18 ~~17~~	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
			1714		3	73	23

Sediment/Rock Name	Diatom-rich ≠ clayey silt.	Observer	Hino A.

B 29 S 6 ≠ 4 V 7

Percent Texture		
Sand	Silt	Clay
7	~~≠10~~ 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
	Glauconite
	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
	Lithic grain

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

Percent Texture		
Sand	Silt	Clay

B72 S.28. V0

Comments: White Layer in the laminae

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
12 ~~14~~	Quartz 3
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
4 ~~6~~	Plagioclase 1
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
12 ~~14~~	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 /
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
27	Centric 7
39 41	Pennate 10
	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	Hino. A.

B 8T S.15 V 0

Percent Texture		
Sand	Silt	Clay

Comments: Olive grey

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
5	Quartz 3
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
~~5~~ 4	Clay Minerals 3
76	Chlorite
	Glauconite
	Chert
	Zircon
2	Ferromagnesium minerals /
	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
57	Diatoms
45	Centric 25
36	Pennate 20
	Chaetoceros Resting Spores
	Silicoflagellates
2	Sponge spicules /
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
2	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	Interval (cm) Bottom
	1340		17H		6	120	120

Sediment/Rock Name	~~Tuff~~ Diatom-bearing ~~Tuff~~ ash Coarse

Observer	

Percent Texture		
Sand	Silt	Clay

Comments: White Spot

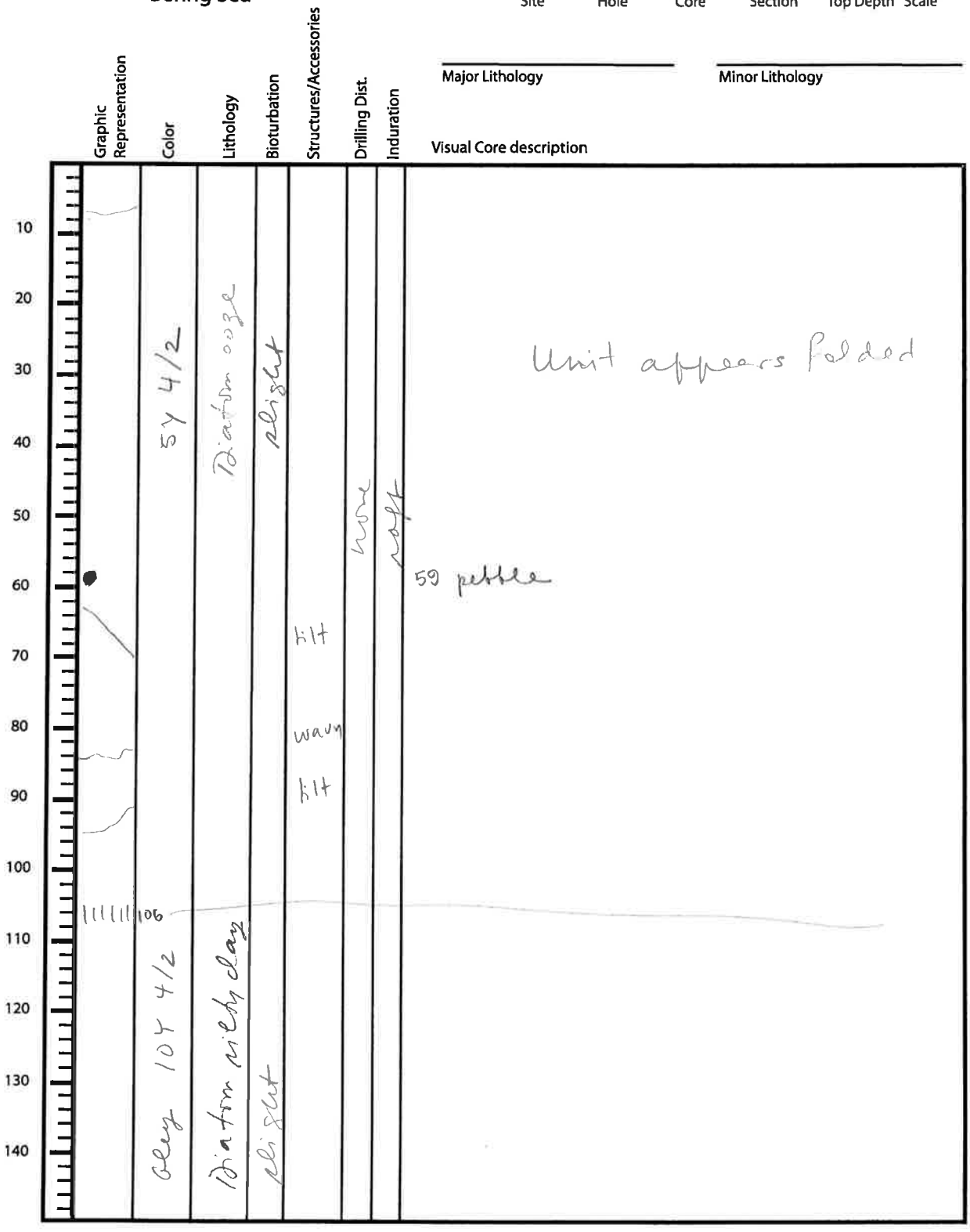
Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
34	Quartz /
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
3	Rock fragments /
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic 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

Major Lithology | Minor Lithology



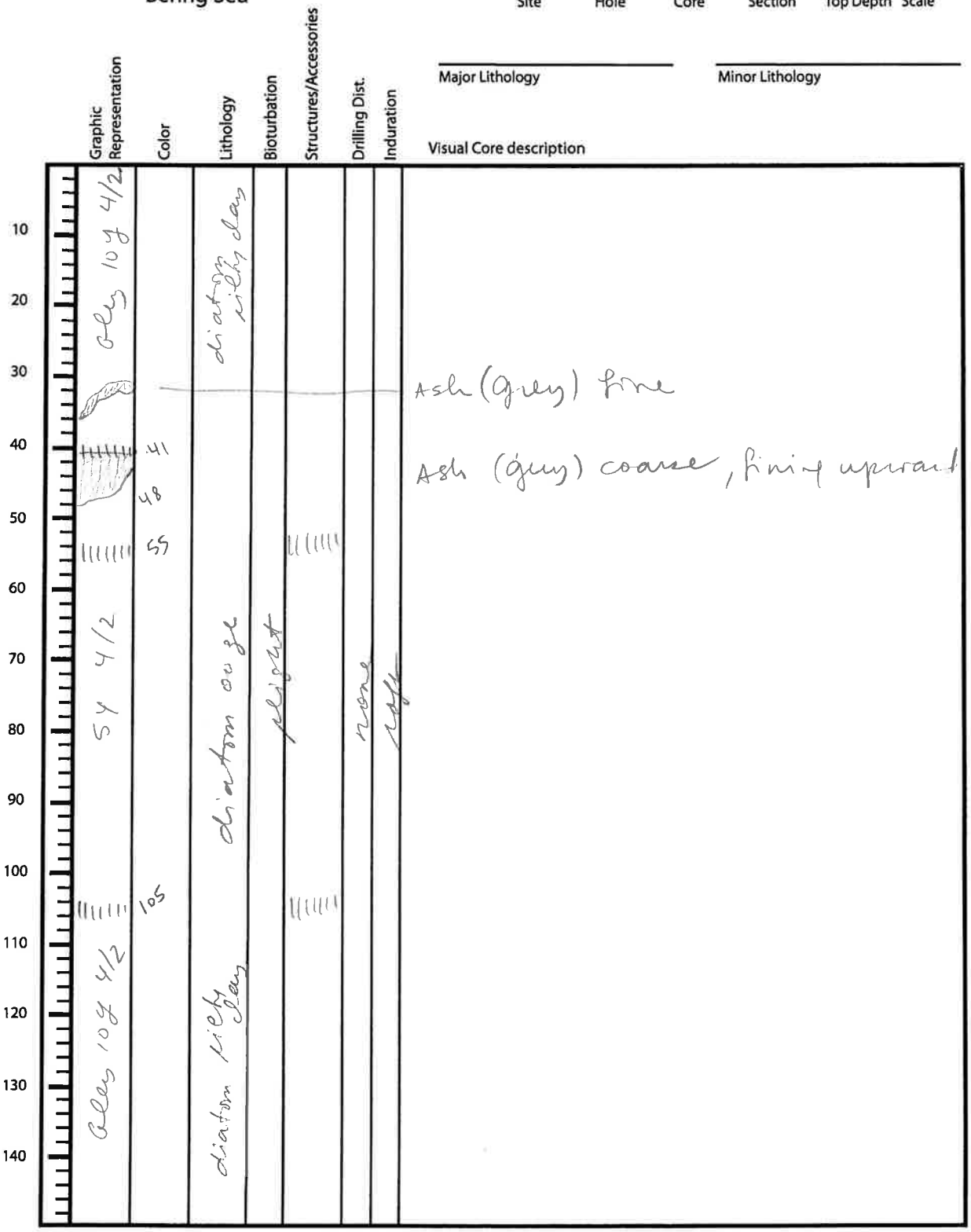
Observer: MS Cook Date: 24 Jun 09

Expedition 323
Bering Sea

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

Major Lithology

Minor Lithology



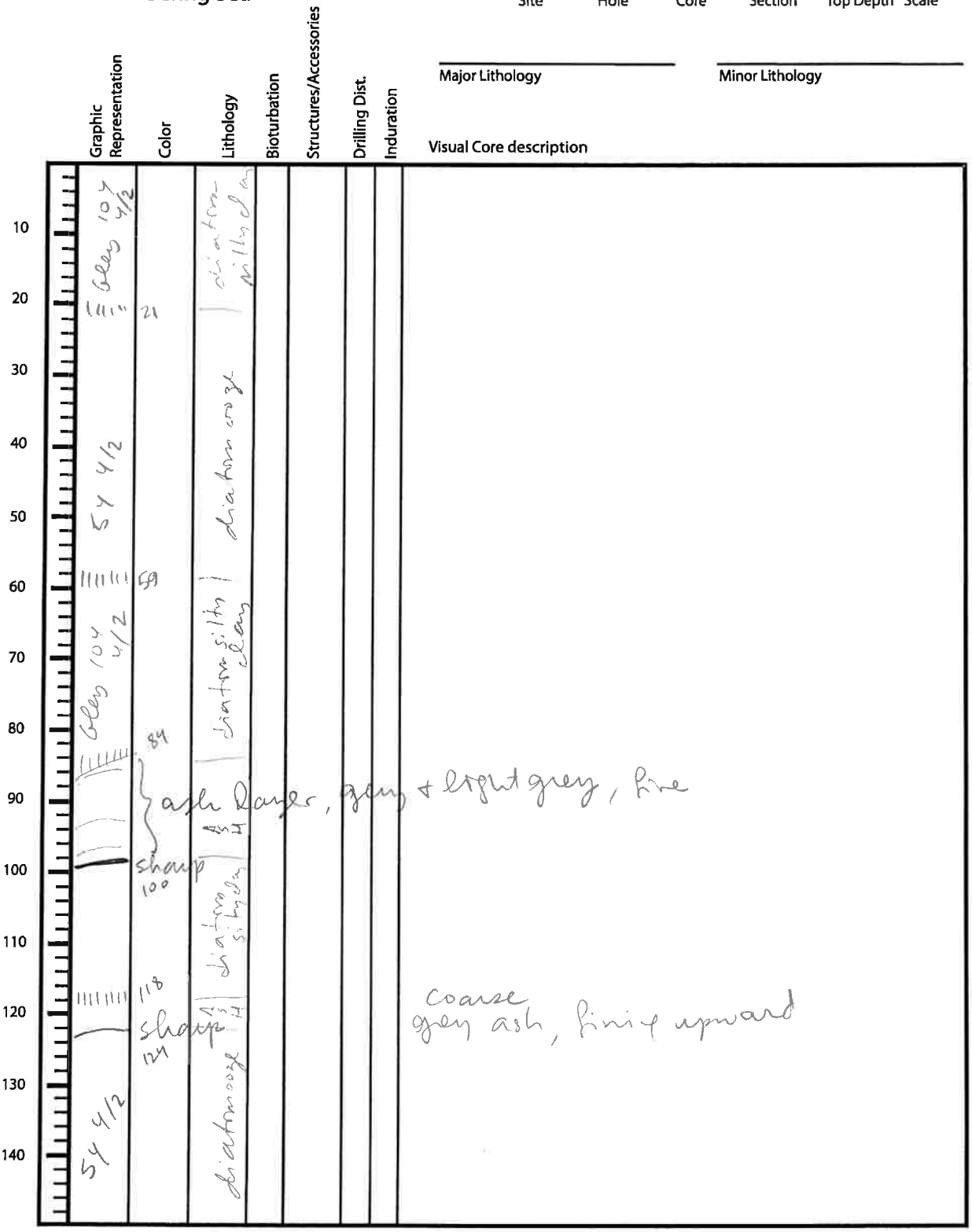
Observer: MS cook Date: 24 July 09

Expedition 323
Bering Sea

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

Major Lithology

Minor Lithology



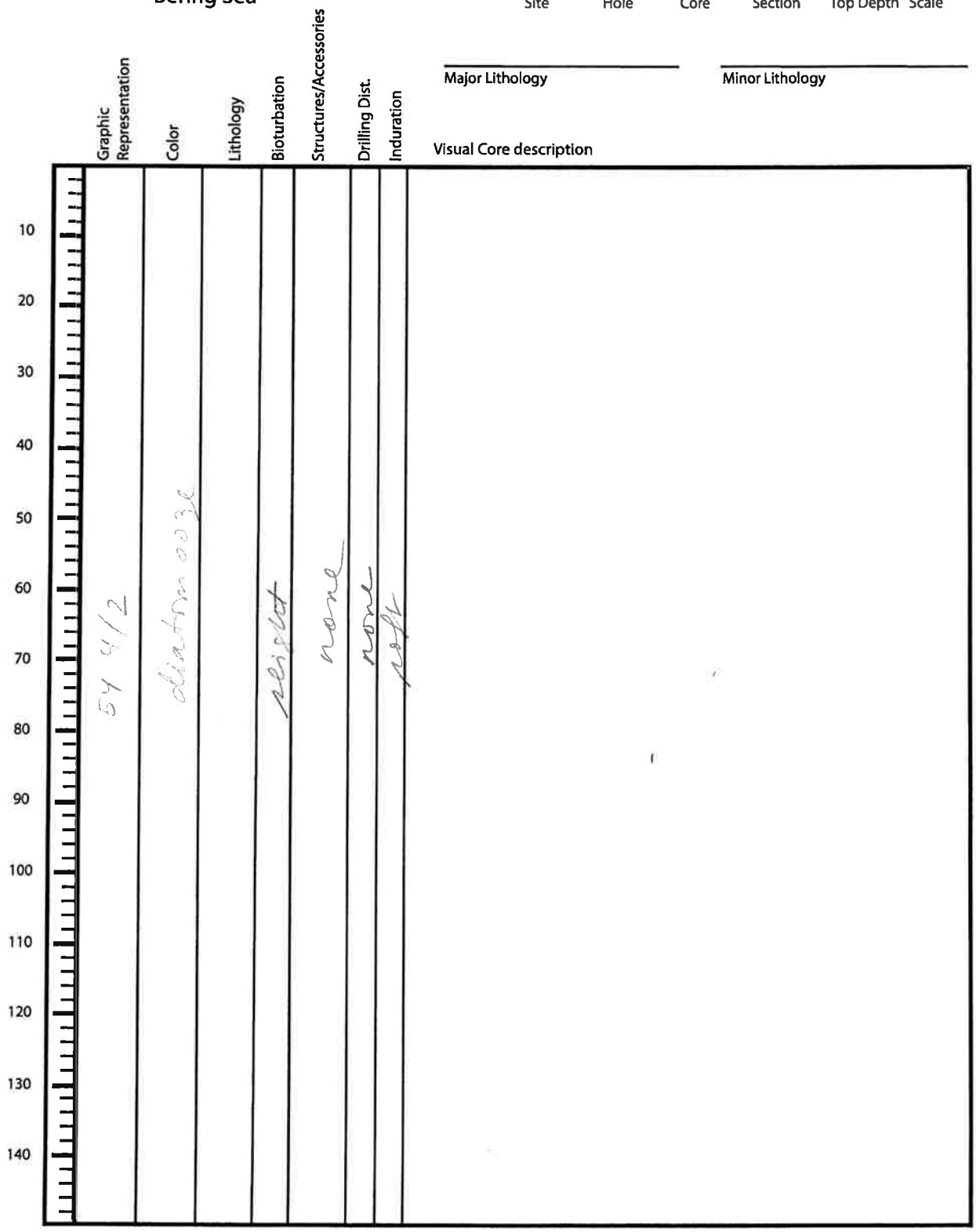
Observer: MSCook Date: 24 July 09

Expedition 323
Bering Sea

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

Major Lithology

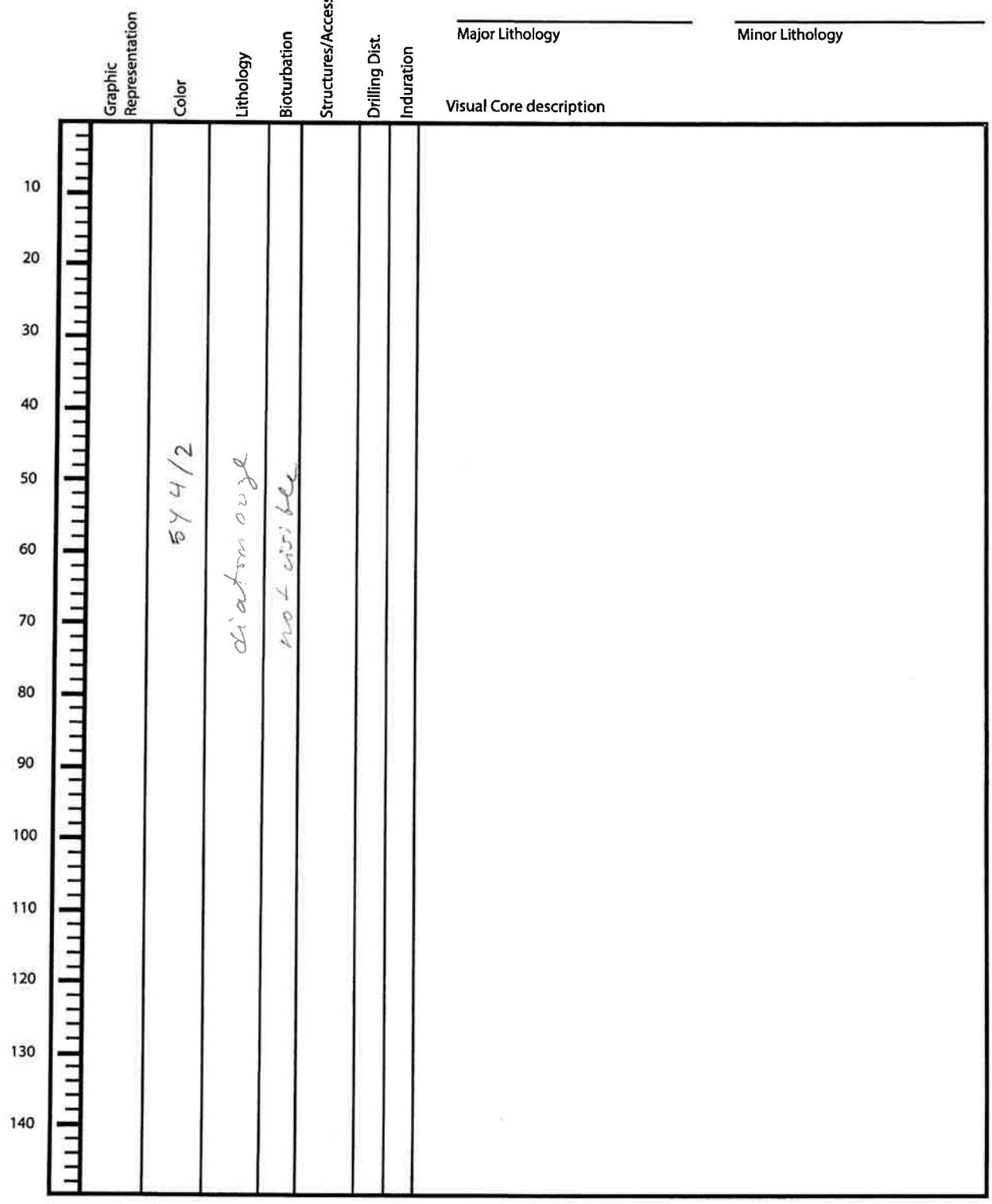
Minor Lithology



Observer: MSCOOK Date: 24 July 09

Expedition 323
Bering Sea

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



Observer: M S Coccioni Date: 24 July 09

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
			18		3	~~26~~ 19	115

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
11 ~~9 8~~	Quartz 2
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
16 5 ~~4~~ 5	Rock fragments 1
	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
5 1	Crystal grain
81 ~~65~~	Vitric grain 15
	Lithic grain

Percent	Component
	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
~~2 7 5~~ 3	Centric 0.5
	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	Interval (cm) Bottom
			18		5	120	120

Sediment/Rock Name	Diatom Silt

Observer	Hino

B 44 S 56 V 0

Percent Texture		
Sand	Silt	Clay
10	~~70~~ 90	~~20 10~~ 10

2 ~~5 15 5 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
1	Clay Minerals ~~2~~ 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 ~~2~~ 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	Interval (cm) Bottom
			18		5	1496	1496

Sediment/Rock Name	Diatom ooze	Observer	Aiza

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
~~5~~ 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 ~~25~~	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

Color
lith
oth. str

Burrd
Peb
MD
D.D.

Expedition 323
Bering Sea

Site	Hole	Core	Section	Top Depth	Scale
U1340	A	19	All		

Major Lithology:

Minor Lithology:

Columns: Graphic Representation | Color | Lithology | Bioturbation ✓ | Structures/Accessories | Drilling Dist. — None | Induration | Visual Core description

Section	Color	Lithology	Bioturbation / Structures	Drilling Dist.	Visual Core description
1		I			86-120 Mot Sli 126-145 - Mot [illegible]
2	10Y 3/1	I	106 G		11-13 Mot 30-31 Chon 74-76 Mot
3	5Y 3/2	II	0	SS-80	15-17 - light lay ? 35.5 - gran 79-80.5 to pb, rond, lt gravel 85-92 - Ash Mot, 133 ir grey ash N. bear d. ooze
4	10Y 3/1	III	30-47 G		8-29 - Chon / Hi Biot.
5	5Y 3/3 10Y 4/1	IV V	56 100 A	SS 87	10-21 Mot D ooze. same
6	5Y 6/2 5Y 4/1 5Y 4/2	IVb V IVb	13 G 77 G 126 G	SS-37	D clay.
7	5Y 4/2	II	46 SI	SS-50	73-89 Mot. D. ooze
CC					4-10. lt. mot.

I v. dark greenish grey Diatom ooze!
II dark olive grey N. bear d. ooze
III v. dark greenish grey diatom ooze
IV olive / lt. olive grey? / olive grey — Diatom clay
V dK greenish grey d. ooze

D ooze
~~D ooze~~
D ooze

1, B, S = same!

Observer:

Date:

X

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	AKM

light ~~grey~~ olive.. major lithology

Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
~~0~~	✓ Quartz
4 ~~6 2 0~~	✓ Feldspar 2
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
4 <5%	✓ Micas 2
	Biotite
	Muscovite
20 >30%	~~XX~~ Clay Minerals #20.
	~~Chlorite~~
	Glauconite
	Chert
	Zircon
1 2 ~~0 5~~	✓ Ferromagnesium minerals 0.5
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
1 2 ~~+~~	✓ Pyrite ~~0.5~~ 0.5
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
	/
2 3 ~~0~~	✓ Vitric grain 1
	Lithic grain

Percent	Component
	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
1 ~~2 0~~ 2	✓ Nannofossils 1
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
~~7 0~~	✓ Diatoms
46 ~~8 0 9 0~~	✓ Centric 25
4 ~~5 8 +~~	Pennate 2
	Chaetoceros Resting Spores
	Silicoflagellates
2	✓ Sponge spicules ~~2 0~~ 5
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

27 31.5

X

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
323	1340	H	19	H	5	87	

Sediment/Rock Name	diatom ooze (vitric rich.)	Observer	Akira

Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
	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
3	Crystal grain /
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

X

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

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 X
	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 ~~Few 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

X

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	diatom ooze	Observer	

MIXED BIOGENIC 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
	Glauconite
	Chert
	Zircon
3 TR	✓ Ferromagnesium minerals /
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	✓ Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
15	✓ Vitric grain 5
	Lithic grain

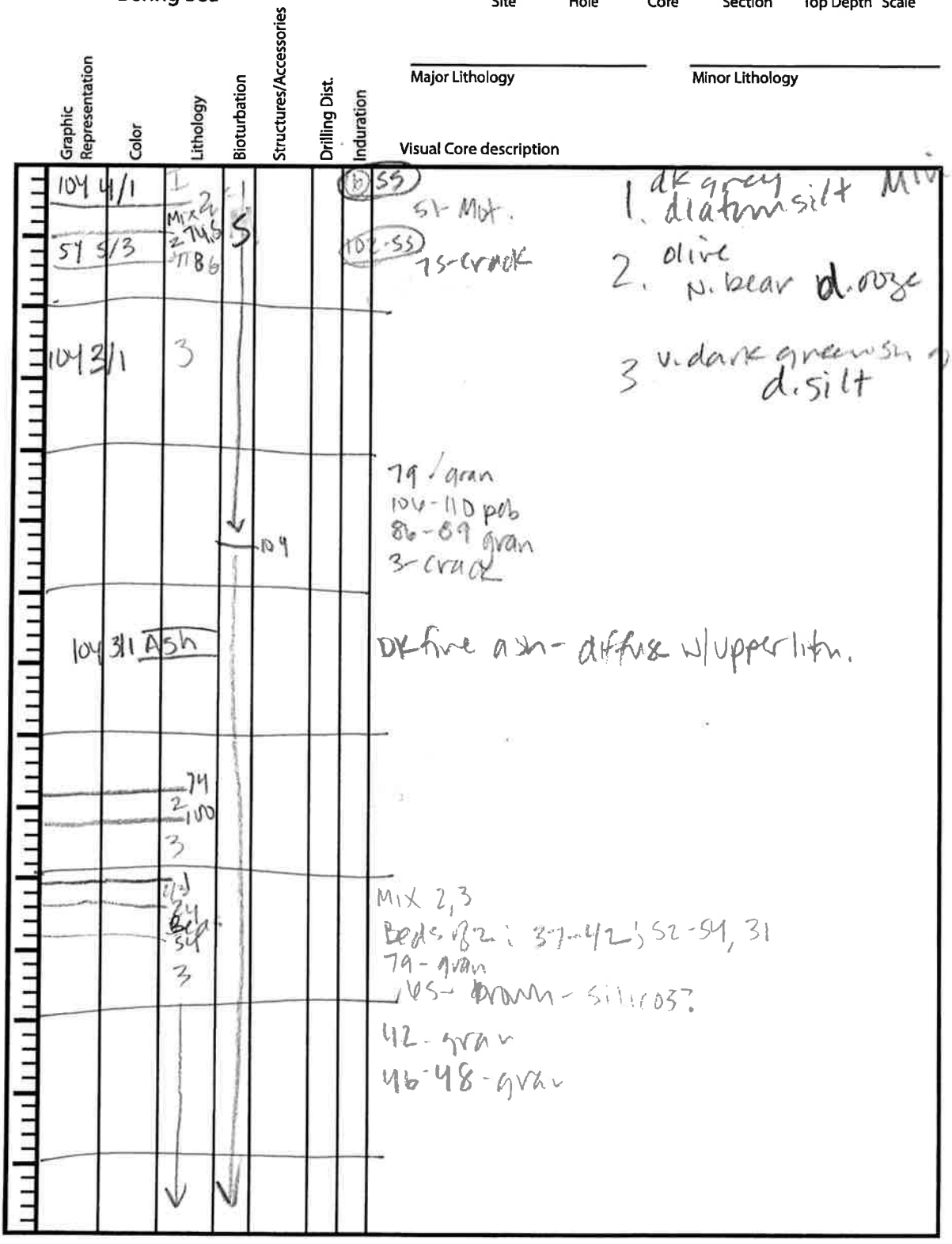
Percent	Component
	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
5-10%	Nannofossils
	✓ Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
70	✓ Diatoms 30
	Centric
	Pennate
	Chaetoceros Resting Spores
3	Silicoflagellates
	✓ 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

Major Lithology ____ Minor Lithology ____



Observer: ____ Date: ____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	diatom ooze. ~~NNAO~~ (nanofossil bearing)	Observer	Akiru

Percent Texture		
Sand	Silt	Clay

Comments: Major lithology (Lt, Dcms)

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
~~85~~ 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	Interval (cm) Bottom
323	1340	A	20	H	1	6	

Sediment/Rock Name	diatom silt	Observer	Olivia

Percent Texture		
Sand	Silt	Clay

Comments: Minor lithology

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
16 15	Quartz ✓
10 9	Feldspar ✓ 3
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments ✓
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
6 2	Clay Minerals ✓ 5 2
	Chlorite
	Glauconite
	Chert
	Zircon
3 2	Ferromagnesium minerals ✓ 1
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
6	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 <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	20	H	3A	110	

Sediment/Rock Name	diatom ~~fine ash~~ site	Observer	akira

Percent Texture		
Sand	Silt	Clay
5	~~80~~ 75	20

Comments:

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 - ~~1~~ 21 H - ~~8~~ 1 - A and CC

Site	Hole	Core	Section	Top Depth	Scale
323	U1340 A	21 H	1	A	and CC

Major Lithology: ________

Minor Lithology: ________

Depth (cm)	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Visual Core description
10	10Y	3/1						
20								dark green (diatom silt)
30								
40								subtle bioturbation? –
50								very dark greenish grey
60								
70								
80								
90					O			99 cm = pebble,
100								
110								113 cm
120								+ CC
130								
140								

Observer: M. Cook

Date: 20 Jul 09

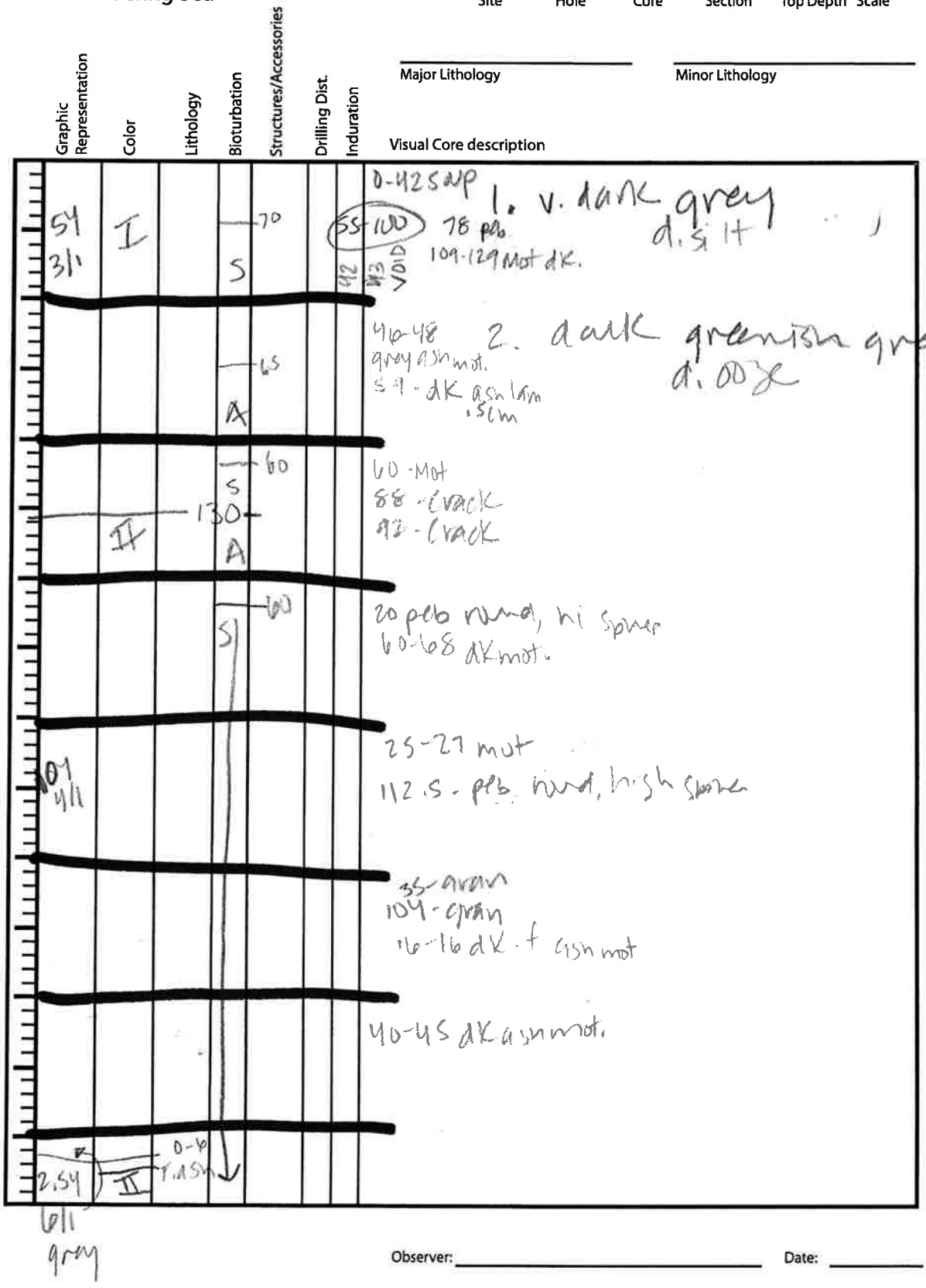
6B.

Expedition 323
Bering Sea

323-U1340A 23H ALL
Site Hole Core Section Top Depth Scale

Major Lithology

Minor Lithology



Observer: _____ Date: _____

X

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
	340	A	23		1	100cm	

Sediment/Rock Name	DIATOM SILT	Observer	UNA

Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
15%	Framework minerals
5%	Quartz
10%	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
5%	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
5%	Muscovite
20%	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
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
R	Radiolarians
	Spumellaria
	Nassellaria
45%	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

S.M.

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
	1340	A	23		5	80cm	

Sediment/Rock Name	DIATOM OOZE	Observer	ILM

Percent Texture		
Sand	Silt	Clay

Comments: MAJOR LITHOLOGY

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

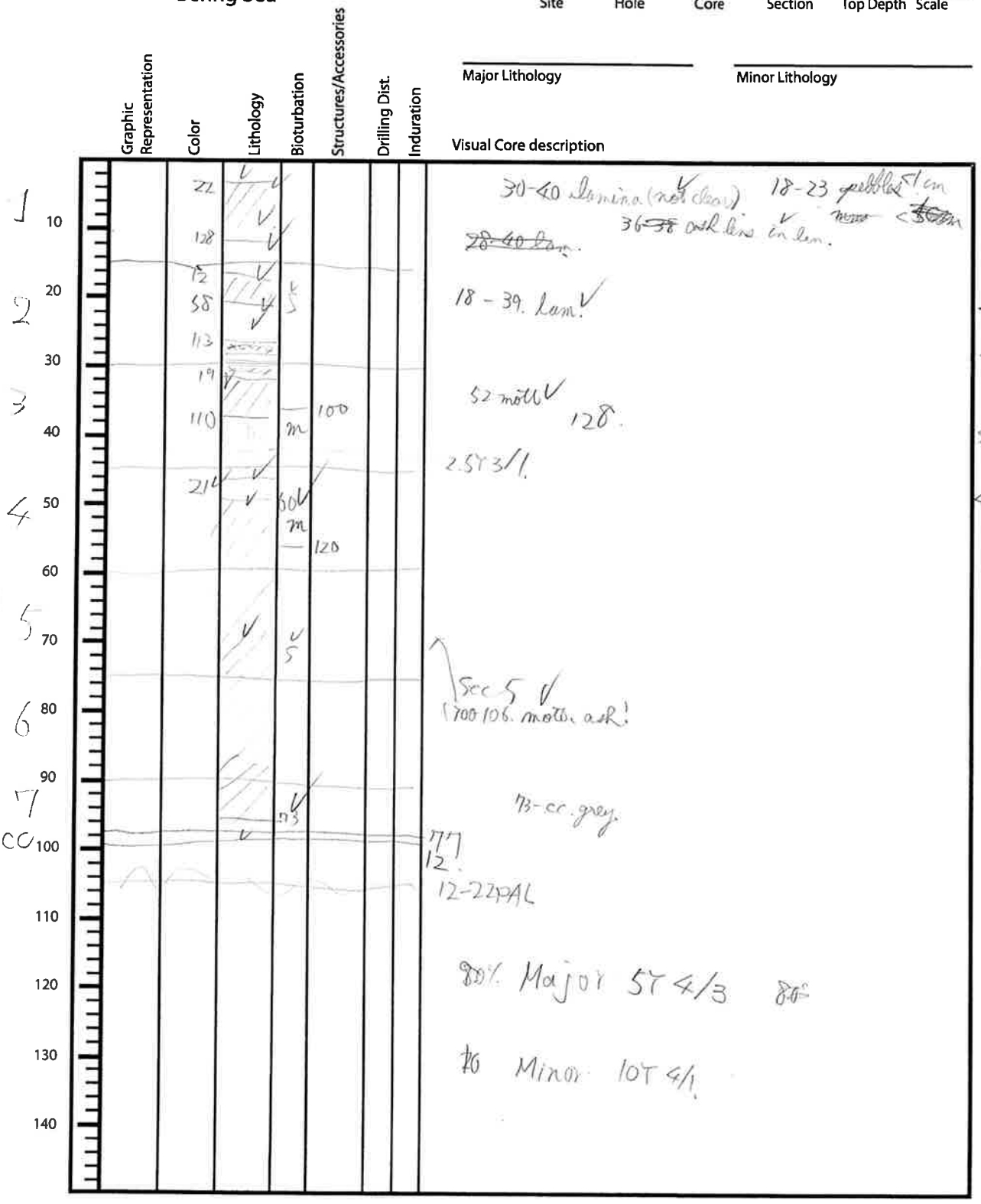
Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
2%	Radiolarians
	Spumellaria
	Nassellaria
80%	Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	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

Major Lithology

Minor Lithology



Observer: _____ Date: _____

X

SR.

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
323	U1340	A	24	H	2A	39cm	

Sediment/Rock Name	Diatom-rich fine ashy silt

Observer	Beth

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

X

5.2

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
323	U1340	A	24	H	3	130cm	

Sediment/Rock Name	Spicule-bearing diatom-rich fine ashy silt

Observer	Beth

B - 25
S - 55
V - 20

Comments: accessories

Percent Texture		
Sand	Silt	Clay
	80	20

52

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
20	Vitric grain
	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

X

S.D.

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	Diatom silt

Observer	Beth

B-39
S 46
V -15

Percent Texture		
Sand	Silt	Clay
	60	40

Comments: Minor (2nd)

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

X

S.O.

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1340	A	24	H	5A	50cm	

Sediment/Rock Name	Diatom ooze	Observer	Both

Percent Texture		
Sand	Silt	Clay

Comments: Major

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
2	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 *probosia curvirostris*
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

Site: 1340 | Hole: A | Core: 25 | Section: | Top Depth: | Scale:

Major Lithology: ______ Minor Lithology: ______

	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Visual Core description
1 / 10		8						
2 / 20		8 / 60 / 12b						3cm wood. 56cm. pebble 3mm
3 / 30–40		8						Sec 3: 41. mott. ash. 60 mott. ash layer. 1cm thick. 80 thin. 93
4 / 50–60		17						Sec 4: 24 burrow 79-82 burrow. 82cm ash. mott. 114 / 133 thin ash & law
5 / 70		70						82 thin ash.
6 / 80		30						84-87 mott ash
7 / 90								
CC / 100								83 8-18. PAL

Sec 1 - 60 spicule bearing diatom clay

Sec 4 - 90 Diatom silt

Sec 6 - 130 Spicule-bearing diatom ooze

Major. 5Y 5/3 spicule-bearing diatom ooze
2nd 10Y 4/1
3rd 5Y 4/2

Observer: ______ Date: ______

X

S.O.

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
323	U1340	A	25	H	1	60 cm	

Sediment/Rock Name	spicule-bearing diatom clay

Observer	GB

Percent Texture		
Sand	Silt	Clay

Comments: Main 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
	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	X Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
10	X Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

X

S.O.

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1340	A	25	H	4	90 cm	

Sediment/Rock Name	Diatom silt spicule-bearing

Observer	GB

Percent Texture		
Sand	Silt	Clay

Comments: Main lithology

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
30	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
15	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
5	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
40	Diatoms
	Centric
	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

X

S.R.

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
323	U1340	A	25	H	6	130 cm	

Sediment/Rock Name	spicule-bearing diatom ooze	Observer	GB.

Percent Texture		
Sand	Silt	Clay

Comments: Main lithology

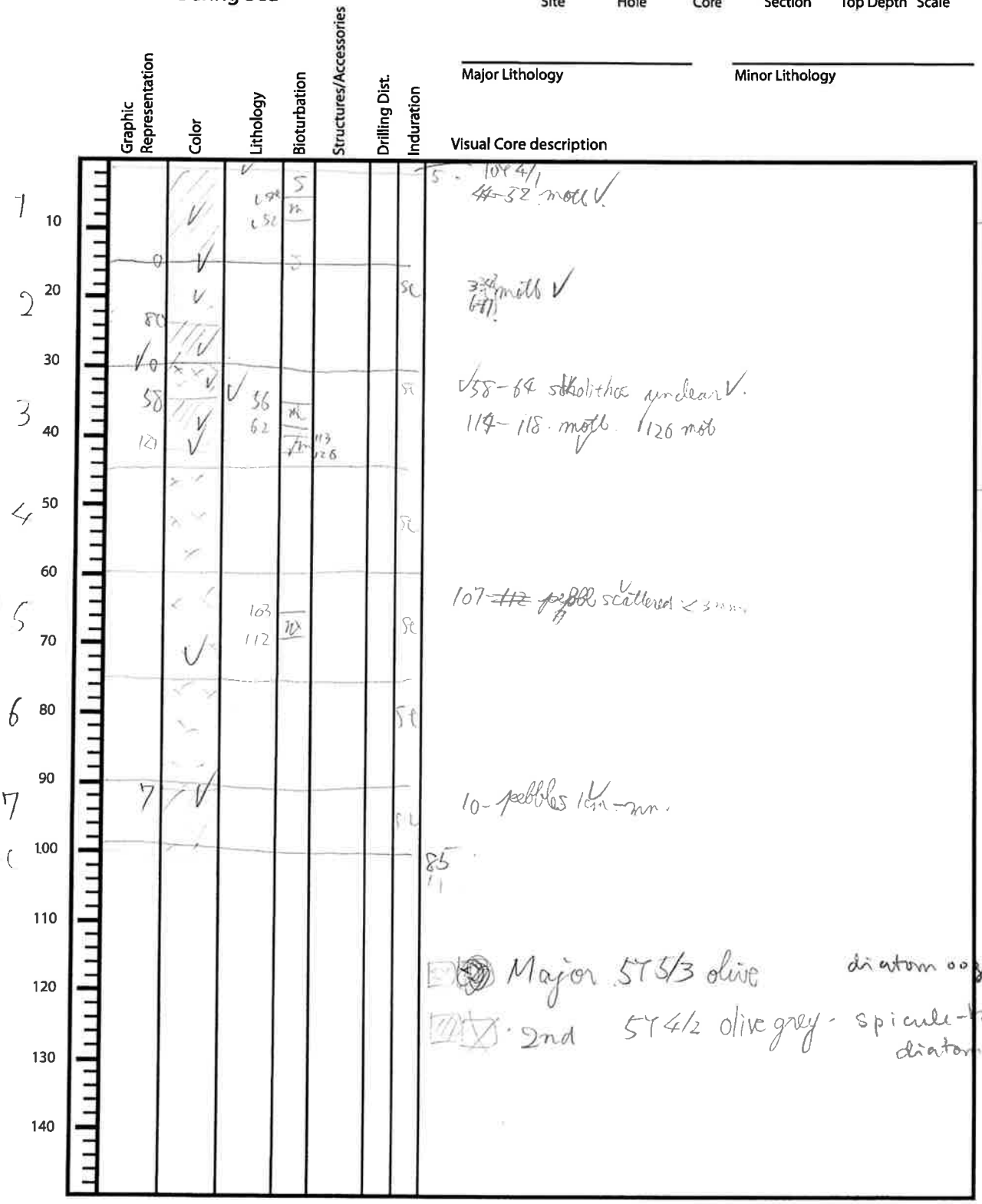
Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
15	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
5	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
20	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic 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
	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 Site | A Hole | 26 Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology



Observer: _____ Date: _____

X

5.17.

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
323	U1340	A	26	H	1A	80cm	

Sediment/Rock Name	Spicule-bearing diatom ooze

Observer	Beth

Percent Texture		
Sand	Silt	Clay

Comments: ~~Minor~~ 2nd

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
3	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
	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
40	Centric
40	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
7	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

X

S.M.

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	Diatom ooze	Observer	Beh

B-75
S-15
V-10

Major

Percent Texture		
Sand	Silt	Clay

Comments:

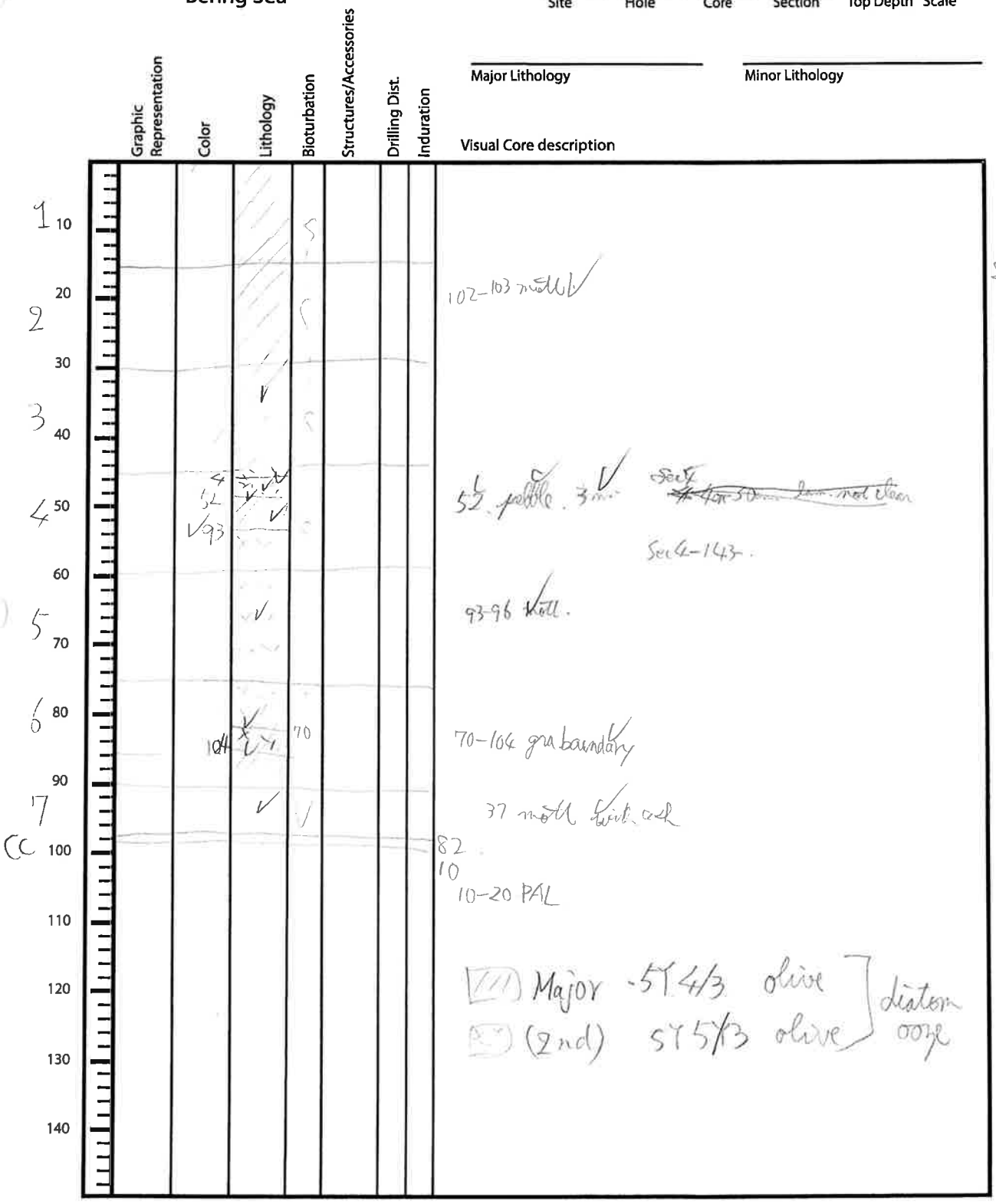
Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
10	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	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 | A 27 | 27. | | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology



Observer: _____ Date: _____

X

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.Q

Sediment/Rock Name	Diatom ooze

Observer	Beth

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.M.

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
323	U1340	A	27	H	5A	40cm	

Sediment/Rock Name	Diatom ooze

Observer	Beth

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

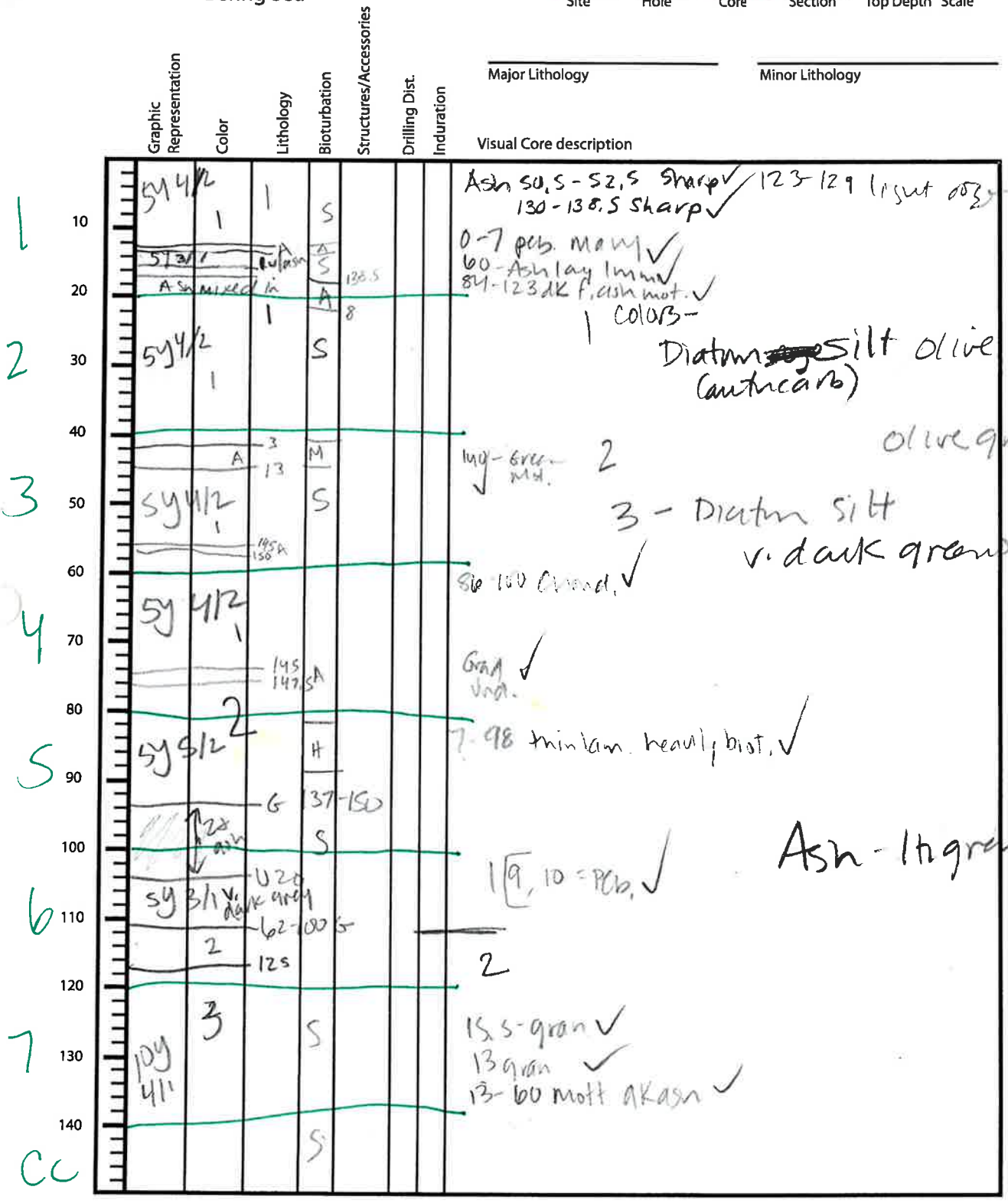
Percent	Component
	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
60	Centric
10	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	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

Major Lithology

Minor Lithology



Observer: _____ Date: _____

X

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	diatom silt ?	Observer	

b 53
S 34
V 11

Comments:

Percent Texture		
Sand	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
~~1~~	Zeolite ✓
	Opaque minerals
7	Pyrite ✓ 2
	Magnetite
	Fe-oxide 1
	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	Interval (cm) Bottom
323	1340	A	28	H	7	40	

Sediment/Rock Name	Diatom silt (w/ authigenic carbonate)	Observer	akira

Percent Texture		
Sand	Silt	Clay
0.	80.	~~25~~ 20.

Comments: Minor bioturbation

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
4	Quartz /
~~25~~	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
4	Pyrite /
	Magnetite
	Fe-oxide
	Carbonates
25	Calcite 7
~~25~~	Dolomite ~~7~~
	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	U1340	A	29	H	3	60cm	

Sediment/Rock Name	Diatom silt

Observer	Beth

B - 47
S - 43
V - 10

Percent Texture		
Sand	Silt	Clay

Comments: 2nd lithology

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
15	Quartz
17	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
3	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
5	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
3	Zeolite
	Opaque minerals
7	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
3	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
10	Pennate
	Chaetoceros Resting Spores
2	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	29	H	2	120	

Sediment/Rock Name	Diatom ooze	Observer	Beth

B - 60
S - 20
V - 20

Main lithology

Comments:

Percent Texture		
Sand	Silt	Clay

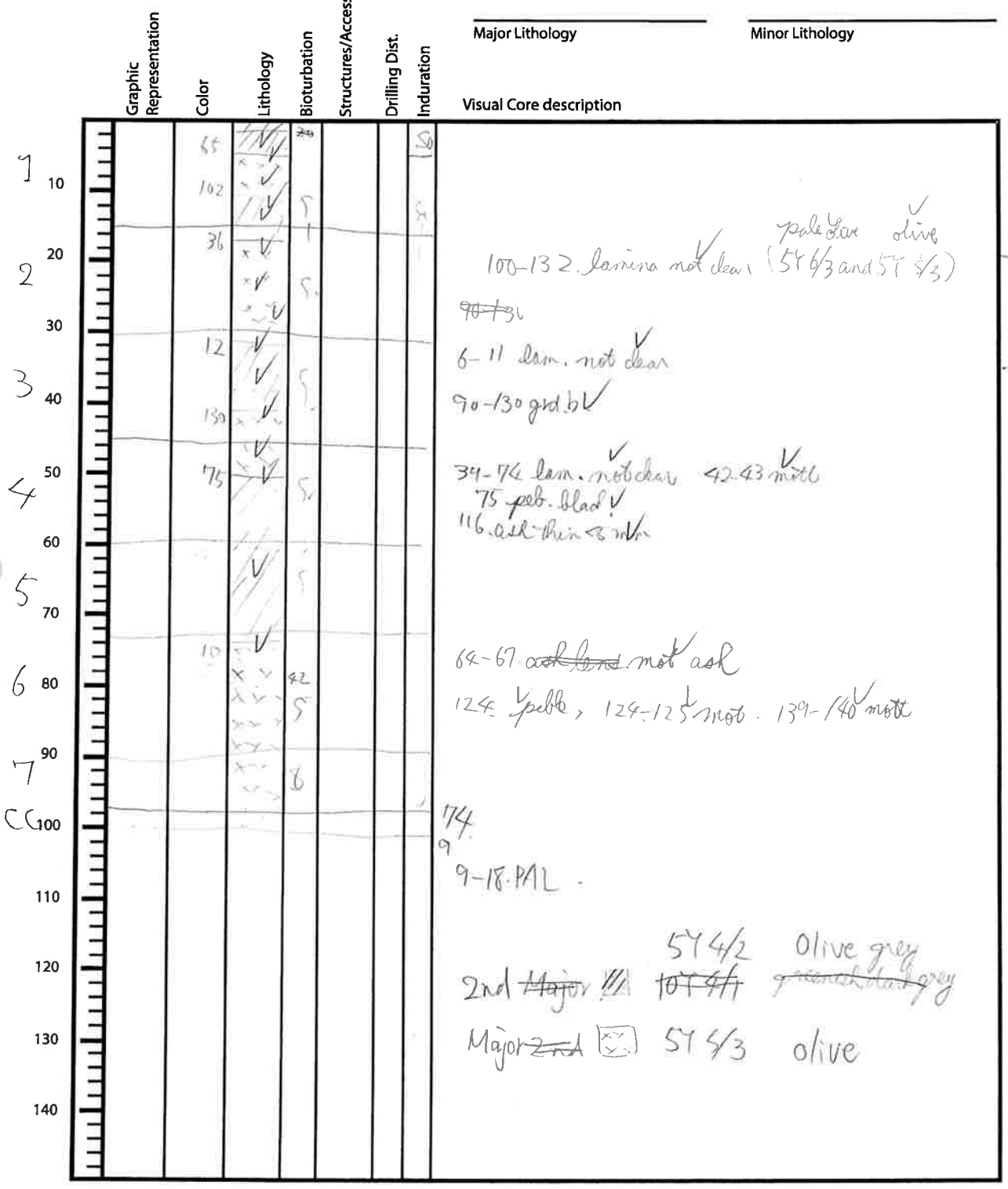
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	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 A 29 ____ ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____



Observer: ____ Date: ____

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	Diatom bearing Sandy Silt	Observer	

13 + 5 ~~22~~ . V ~~0~~ 3

Percent Texture		
Sand	Silt	Clay
~~70~~ 65	30	5

Comments: 1 ~~16~~ 91 8

10 5 1

White glassy spot

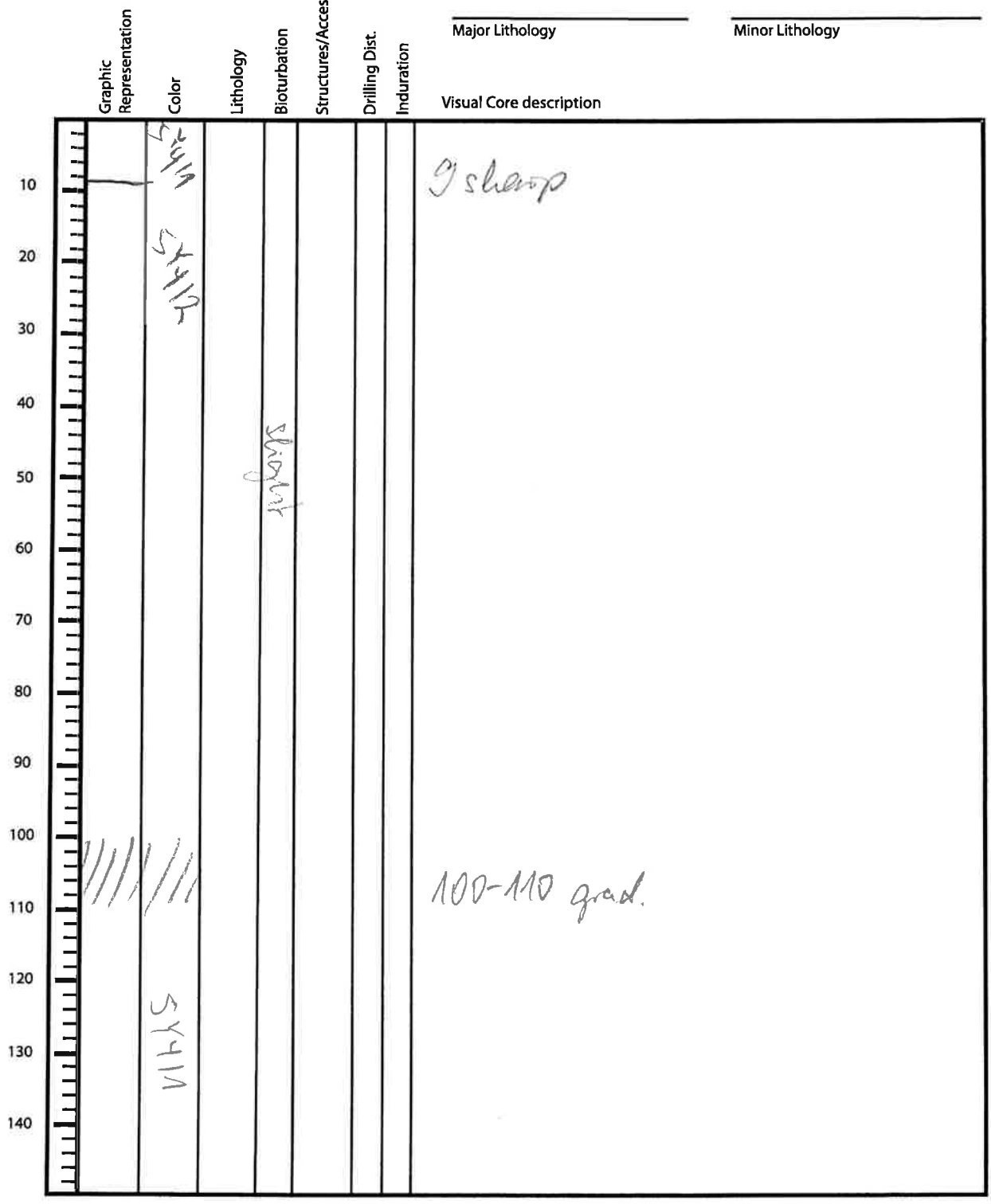
Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
39 ~~47~~	✓ Quartz 15
	Feldspar
13 ~~14~~	5 K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	✓ Micas
26 ~~28~~	Biotite 10
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	✓ Ferromagnesium minerals
5 ~~7~~ 6	~~Olivine~~ Aegirine-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 +	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 1 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____



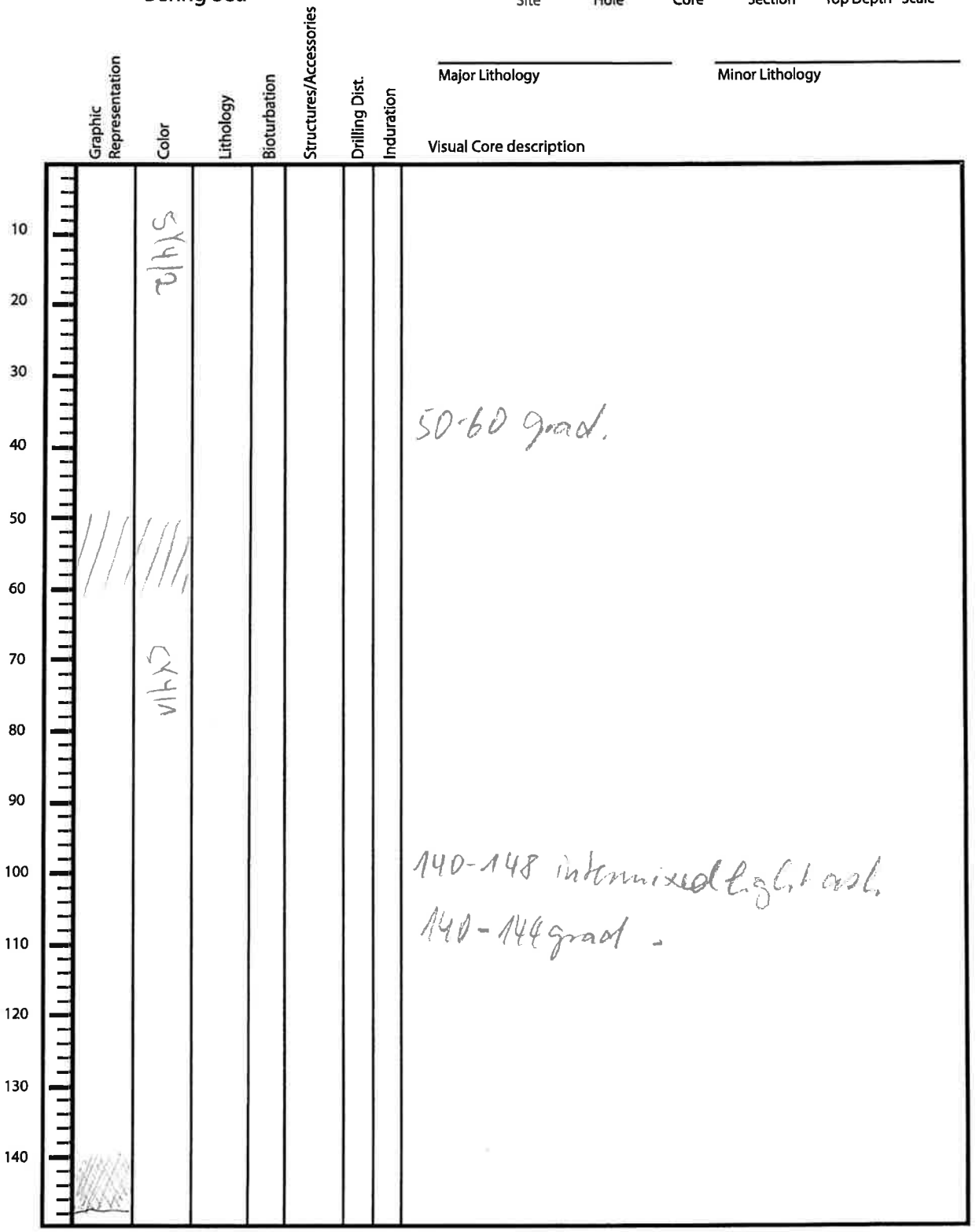
Observer: ____ Date: ____

Expedition 323
Bering Sea

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

Major Lithology

Minor Lithology

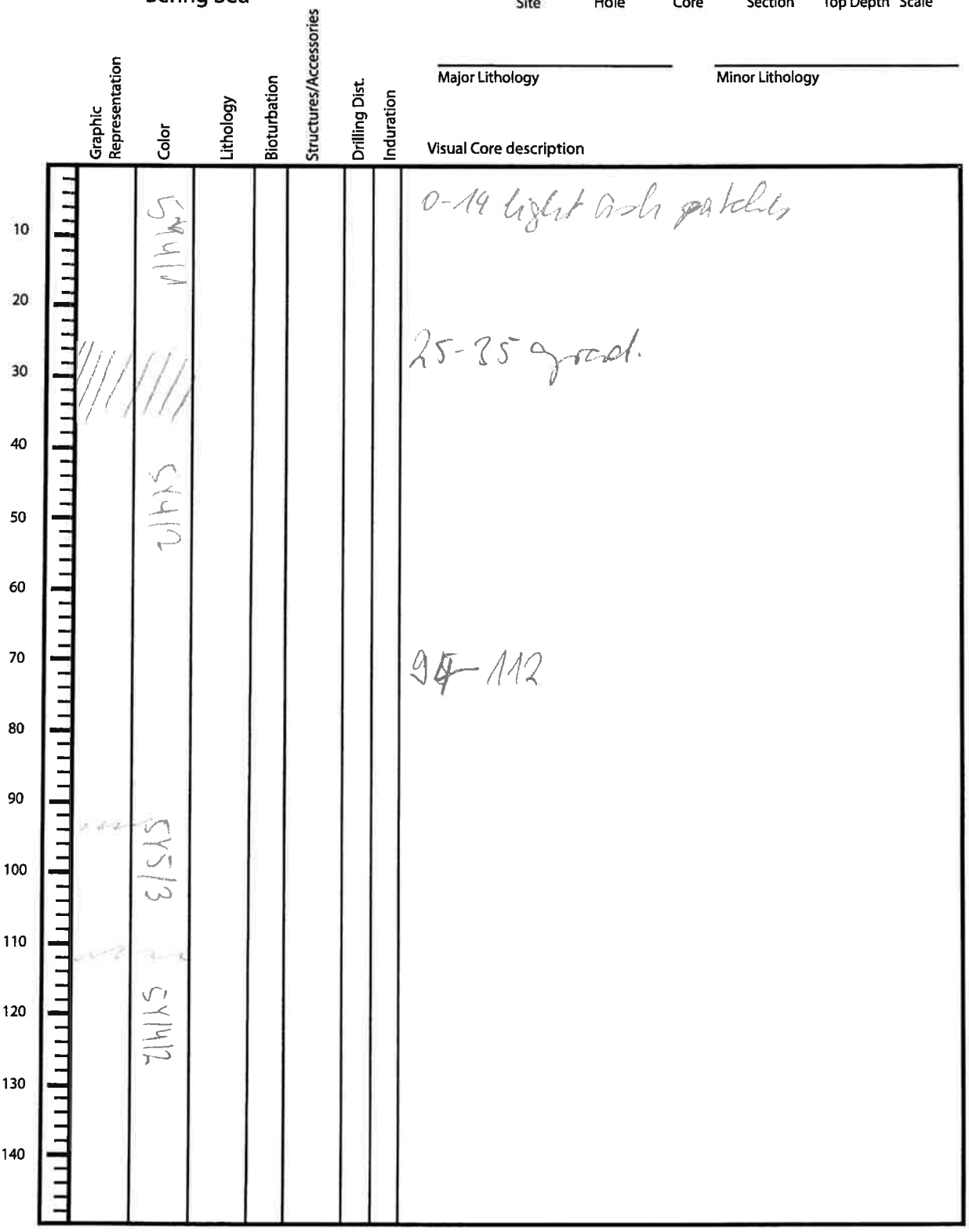


Observer: _____ Date: _____

Expedition 323
Bering Sea

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

Major Lithology ____ Minor Lithology ____

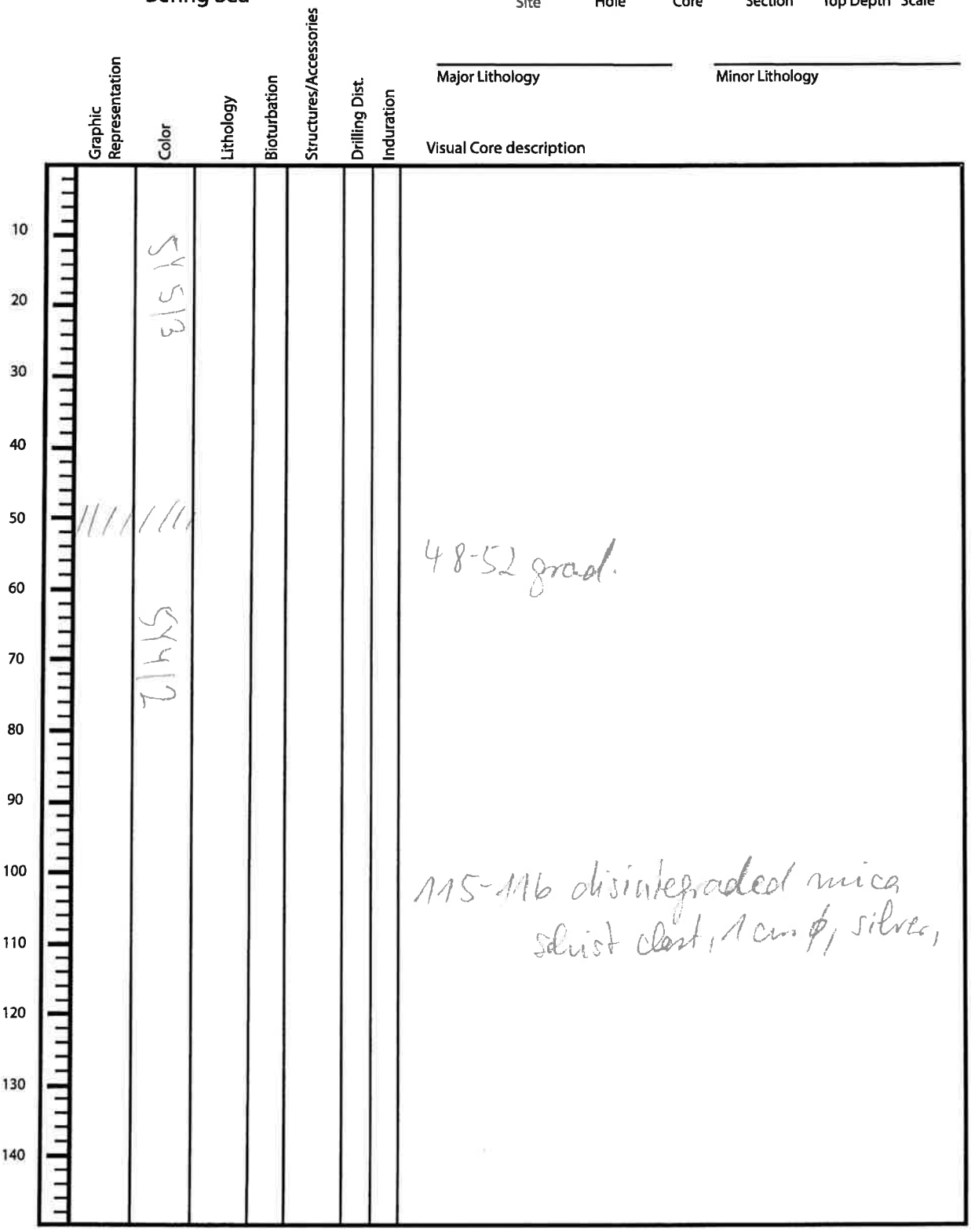


Observer: ____ Date: ____

Expedition 323
Bering Sea

1340 | A | 30 | 4 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

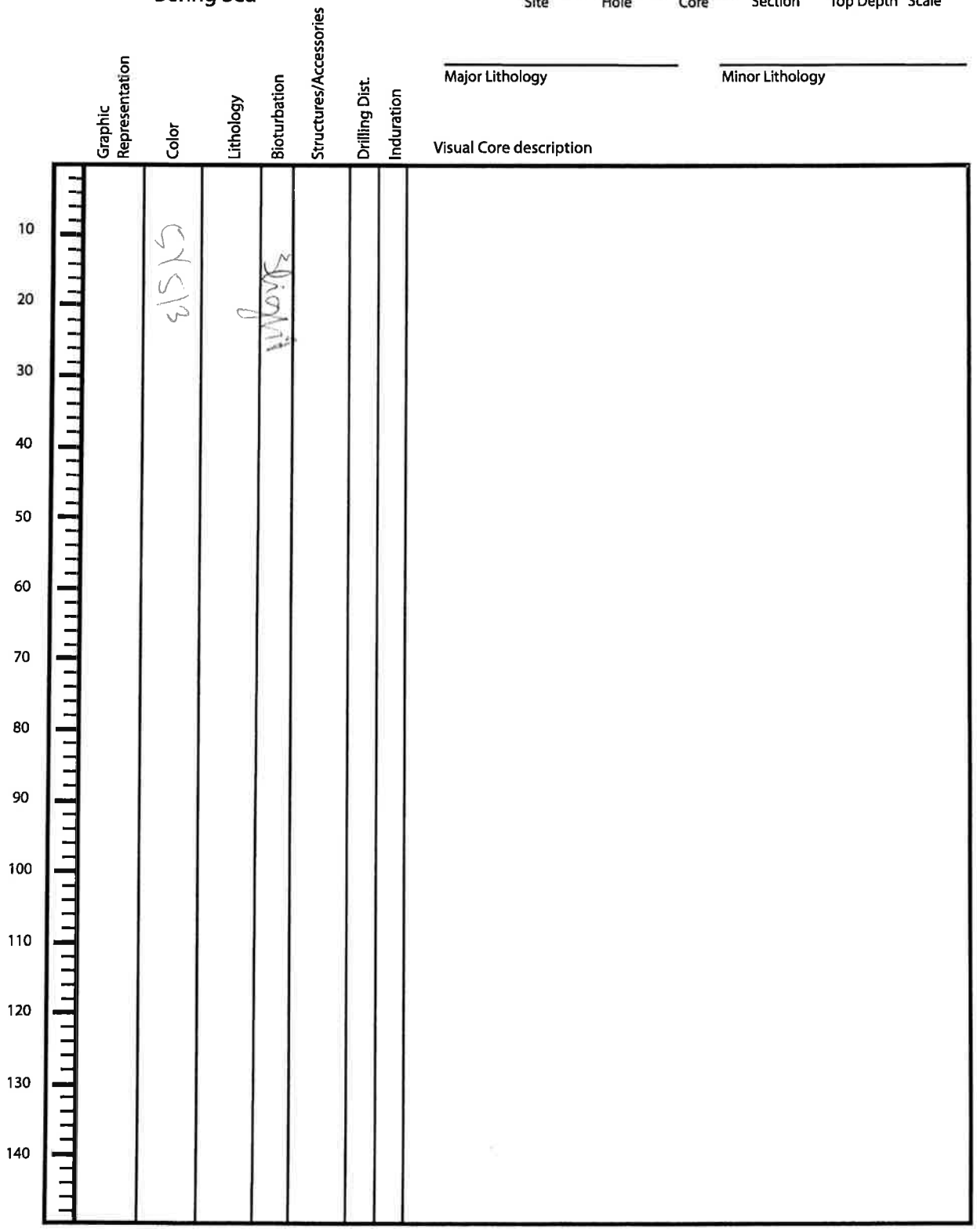


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 (Site) A (Hole) 30 (Core) 5 (Section) ____ (Top Depth) ____ (Scale)

Major Lithology ____ Minor Lithology ____

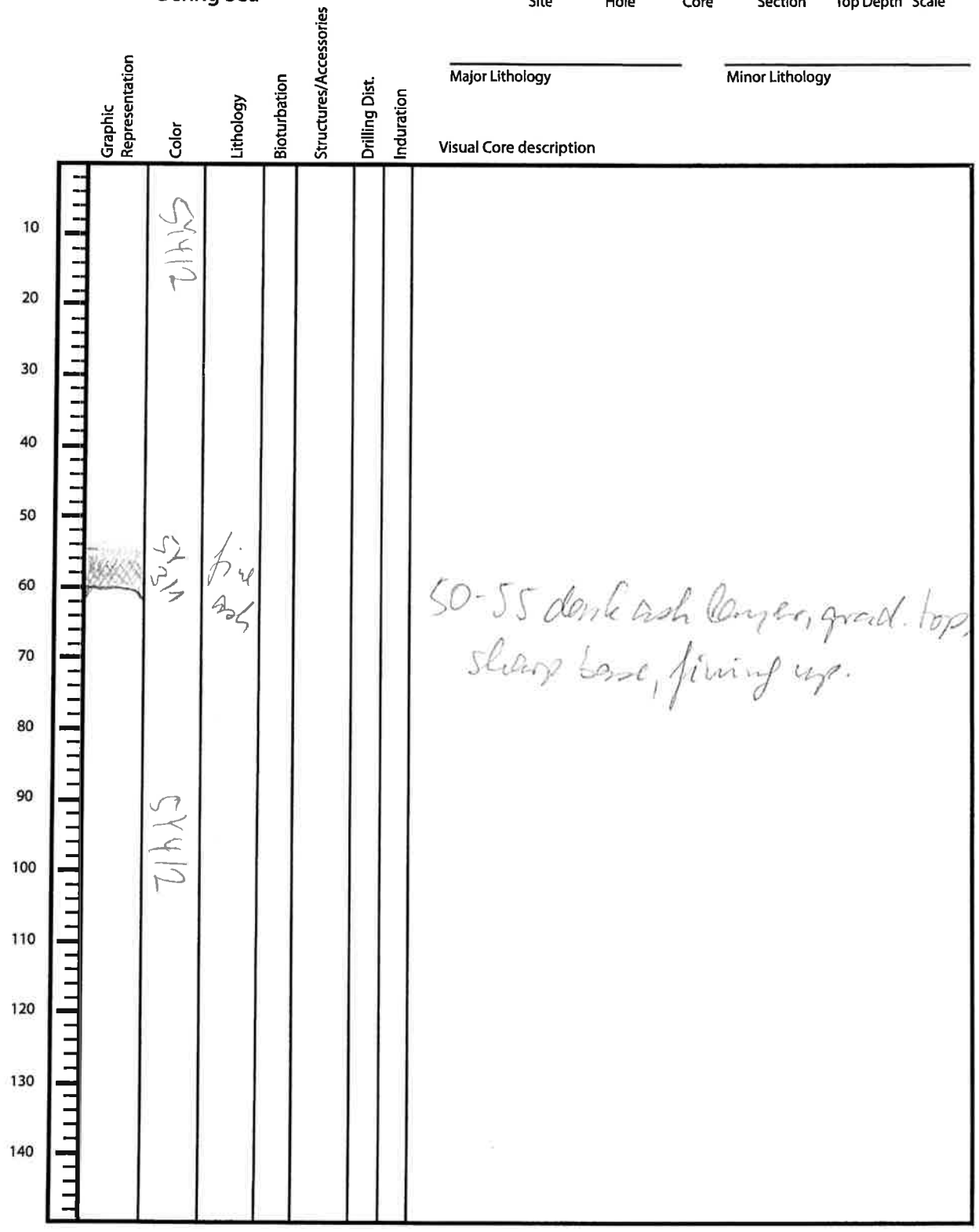


Observer: ____ Date: ____

Expedition 323
Bering Sea

1340 A 30 6 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____

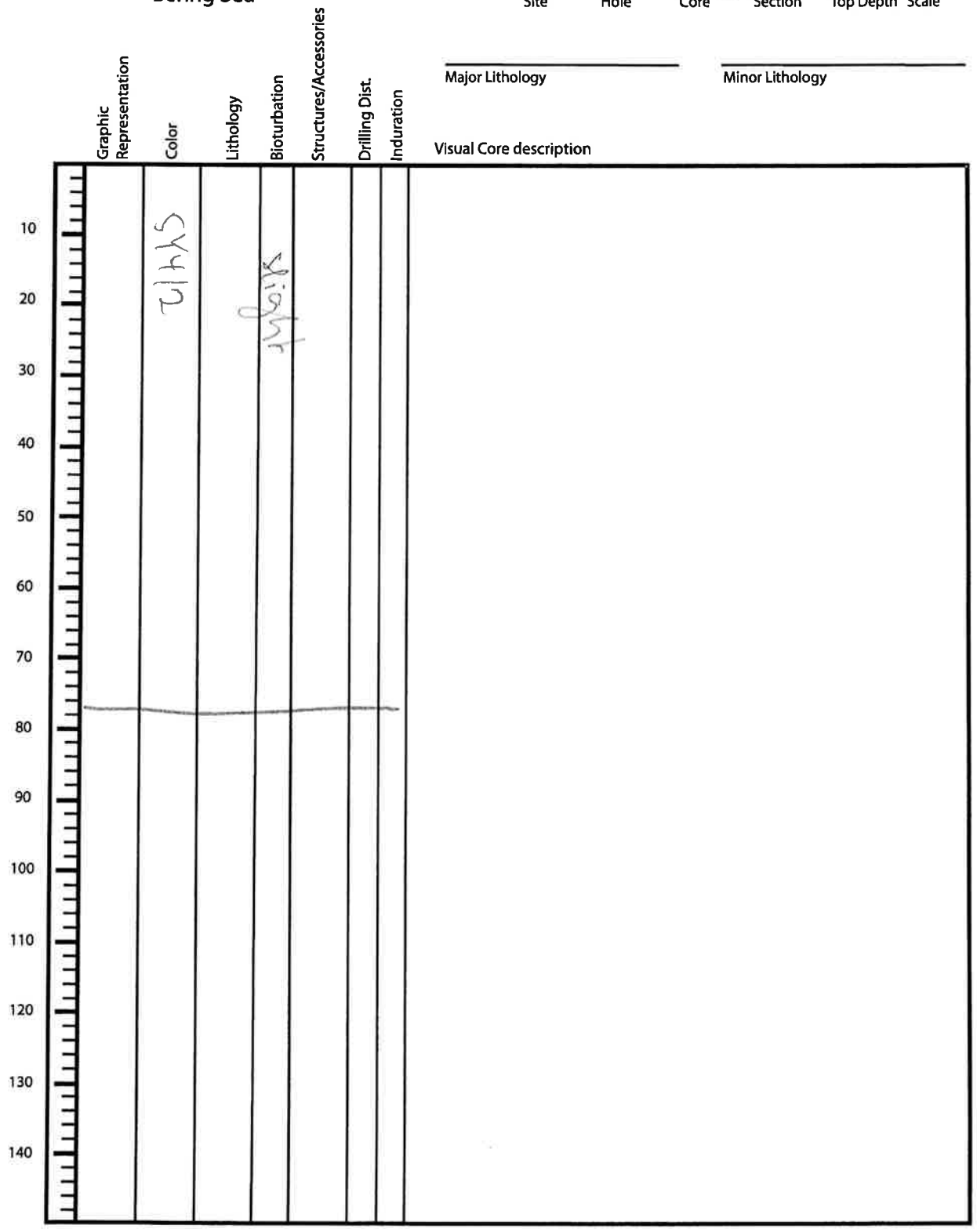


Observer: ____ Date: ____

Expedition 323
Bering Sea

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

Major Lithology | Minor Lithology

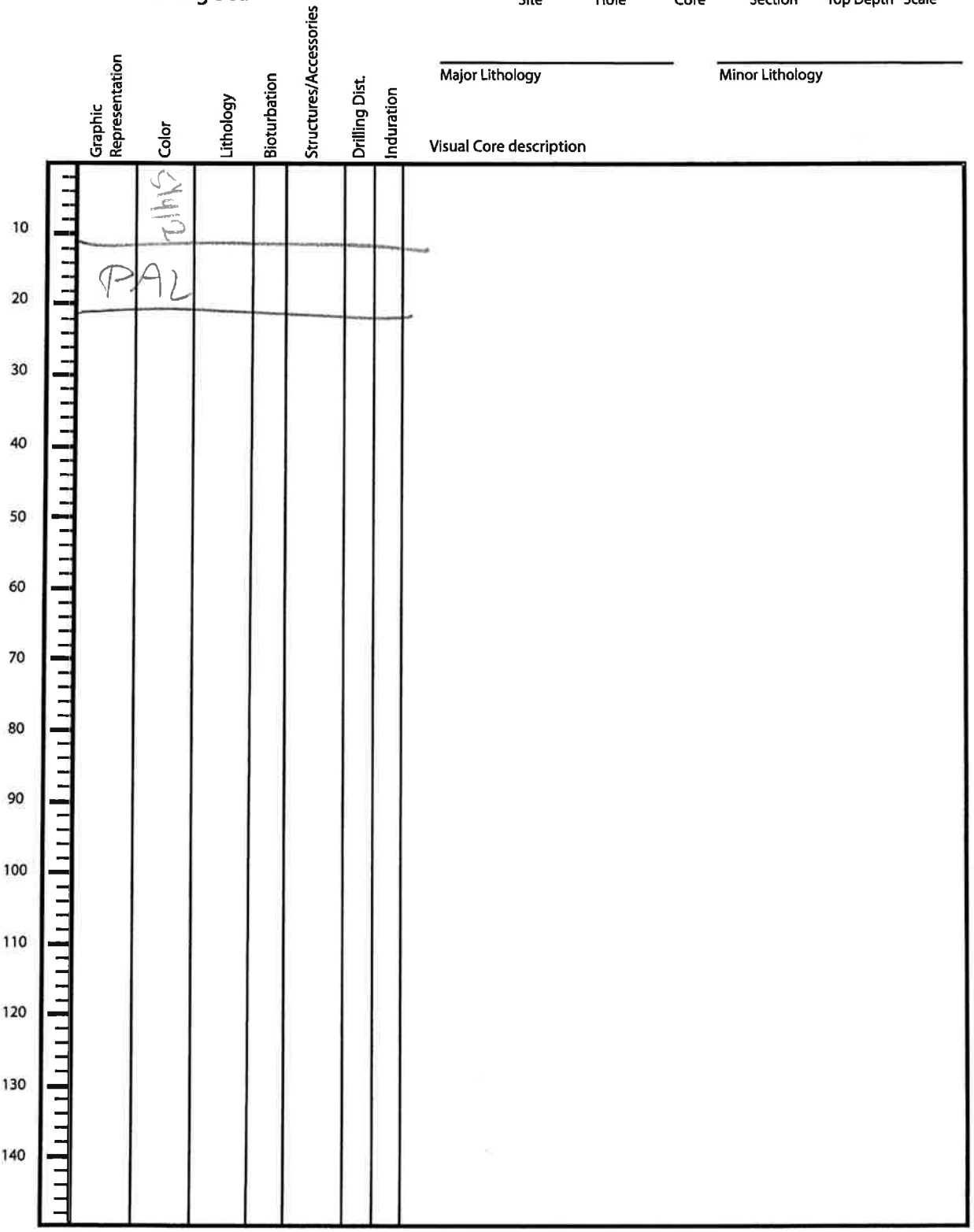


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 (Site) A (Hole) 30 (Core) CC (Section) ____ (Top Depth) ____ (Scale)

Major Lithology ____ Minor Lithology ____

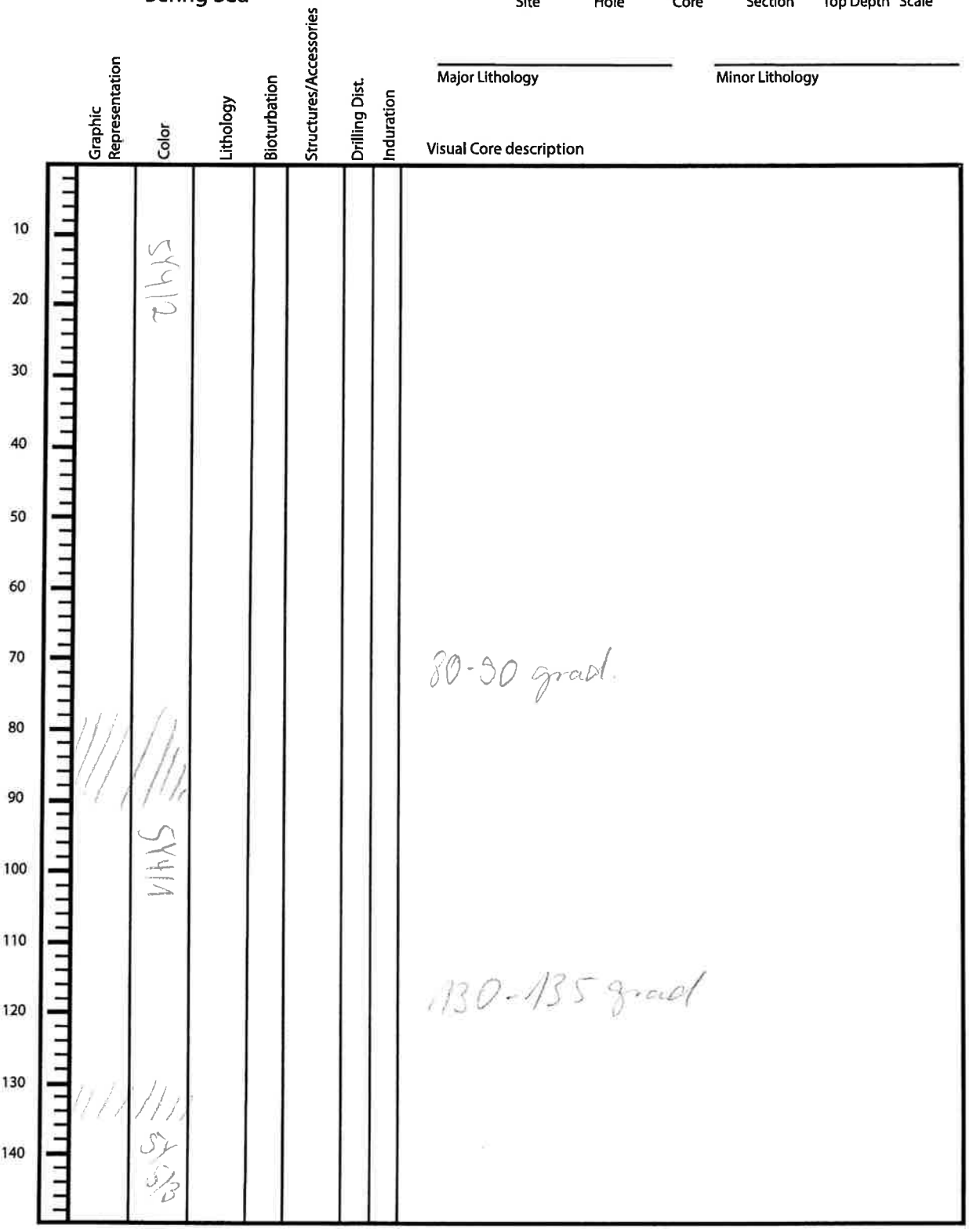


Observer: ____ Date: ____

Expedition 323
Bering Sea

1340 A 31 1 _____ _____
Site Hole Core Section Top Depth Scale

_____ _____
Major Lithology Minor Lithology

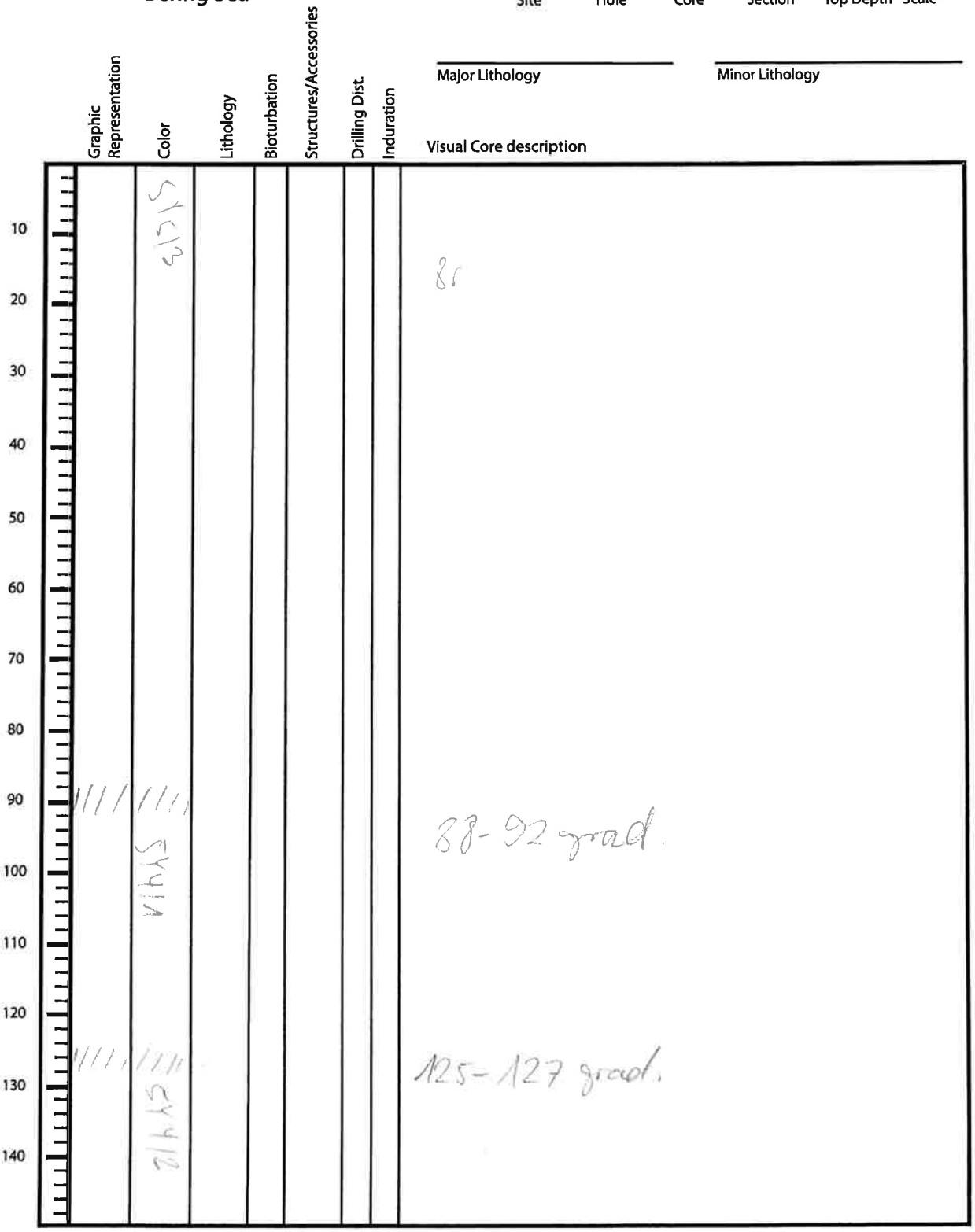


Observer: _____ Date: _____

Expedition 323
Bering Sea

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

Major Lithology | Minor Lithology

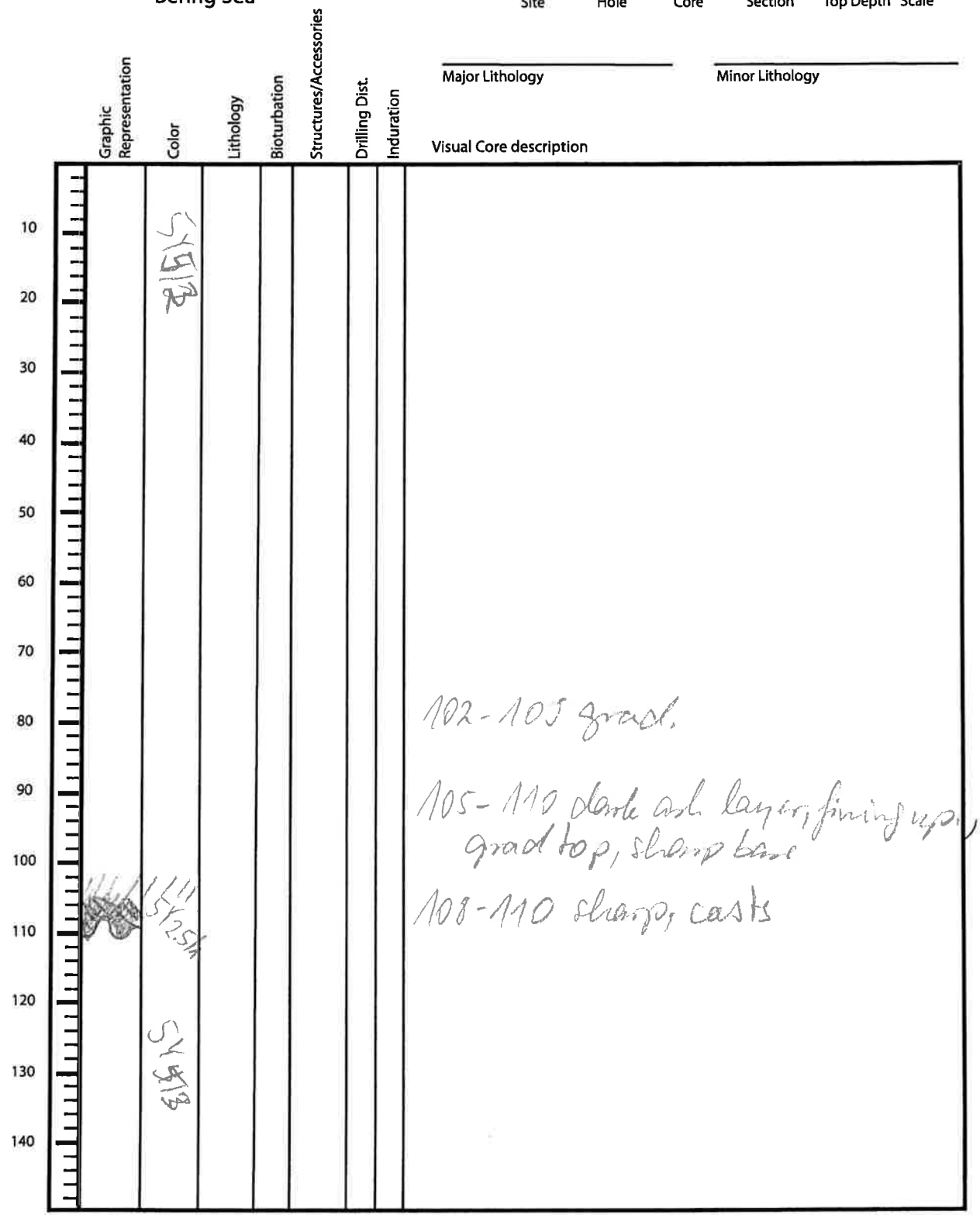


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 31 3 _____ _____
Site Hole Core Section Top Depth Scale

Major Lithology _____ Minor Lithology _____

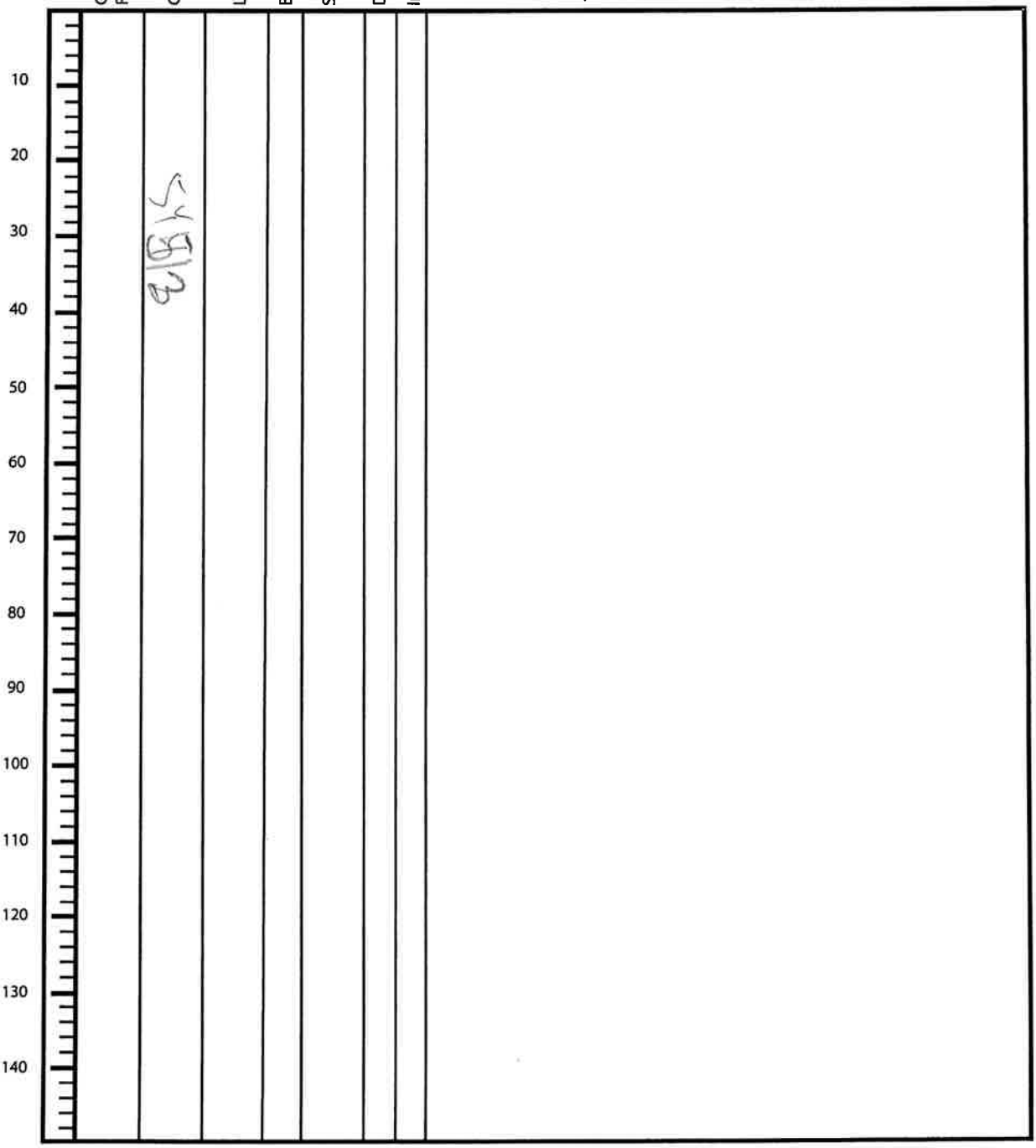


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 | A | 31 | 4 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology



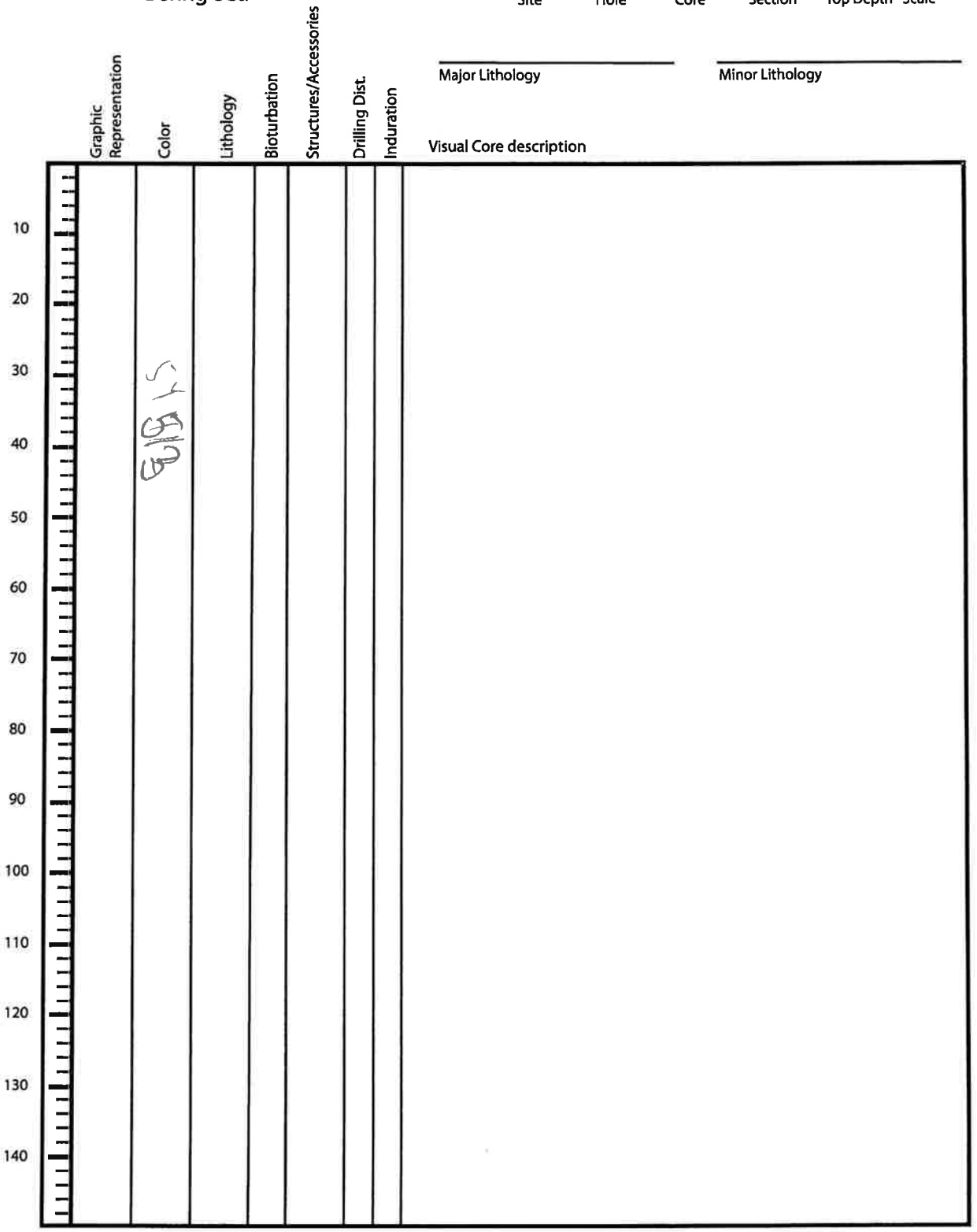
Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 31 5
Site Hole Core Section Top Depth Scale

Major Lithology

Minor Lithology

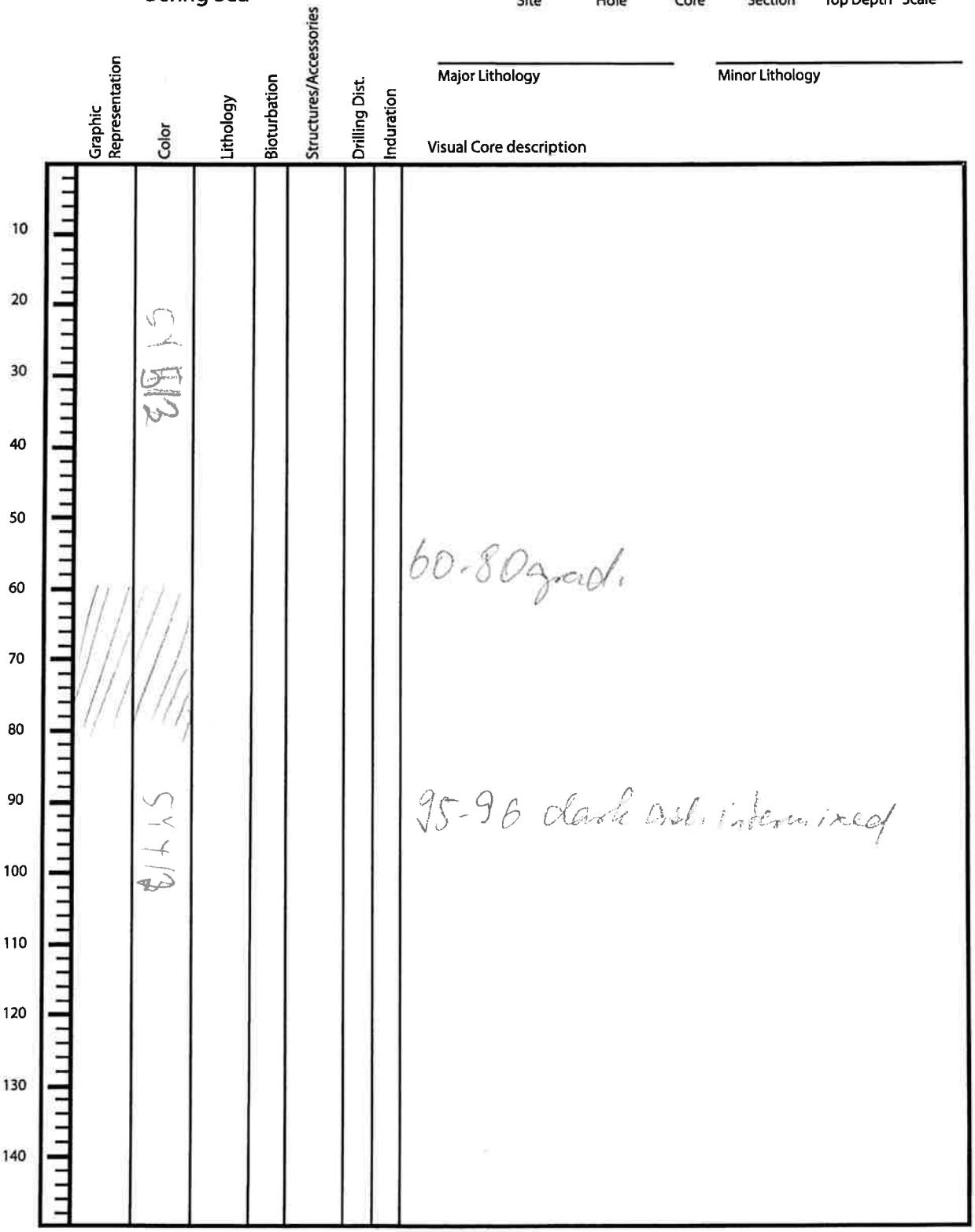


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 31 6 _____ _____
Site Hole Core Section Top Depth Scale

Major Lithology _____ Minor Lithology _____

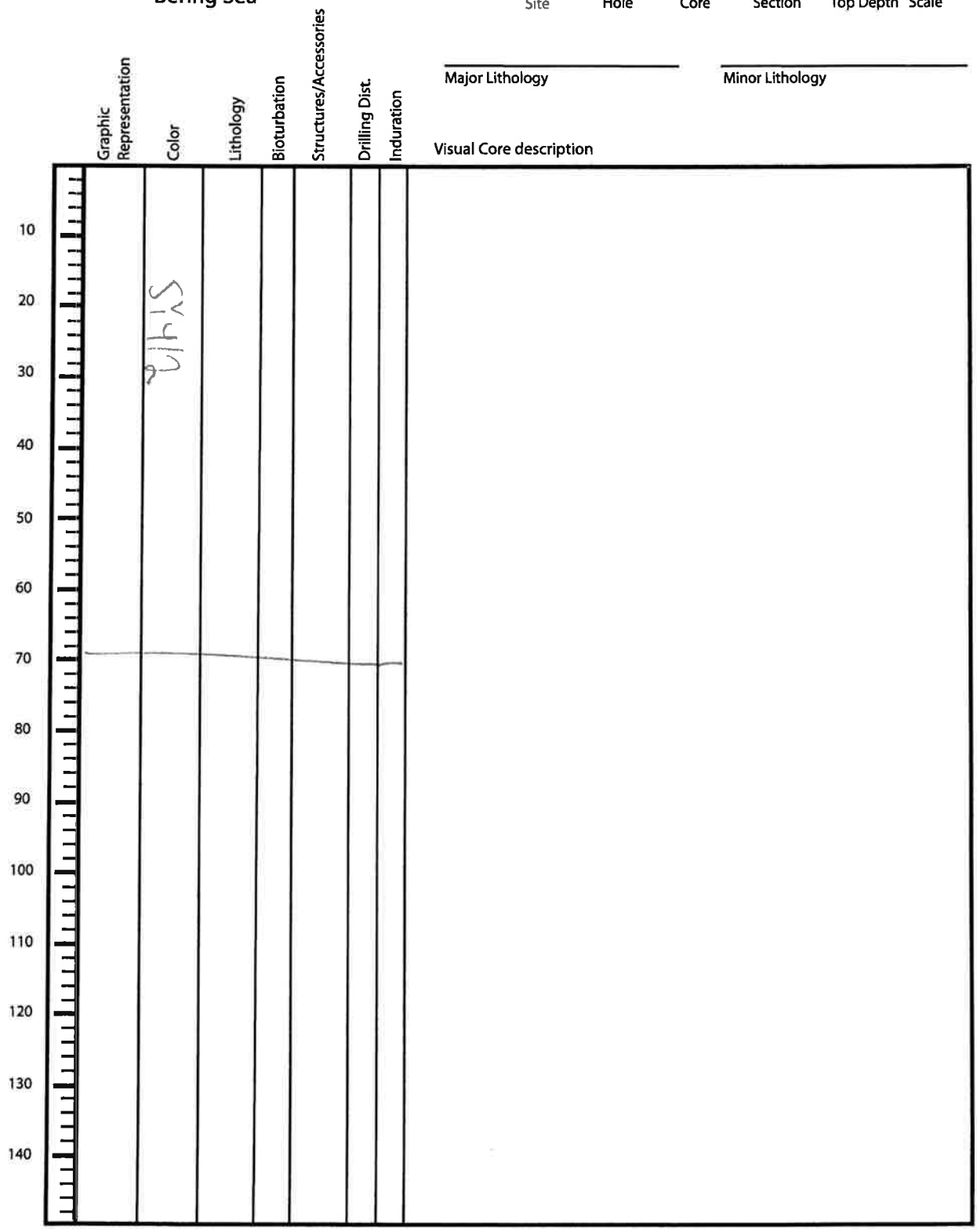


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 | A | 31 | 7 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology



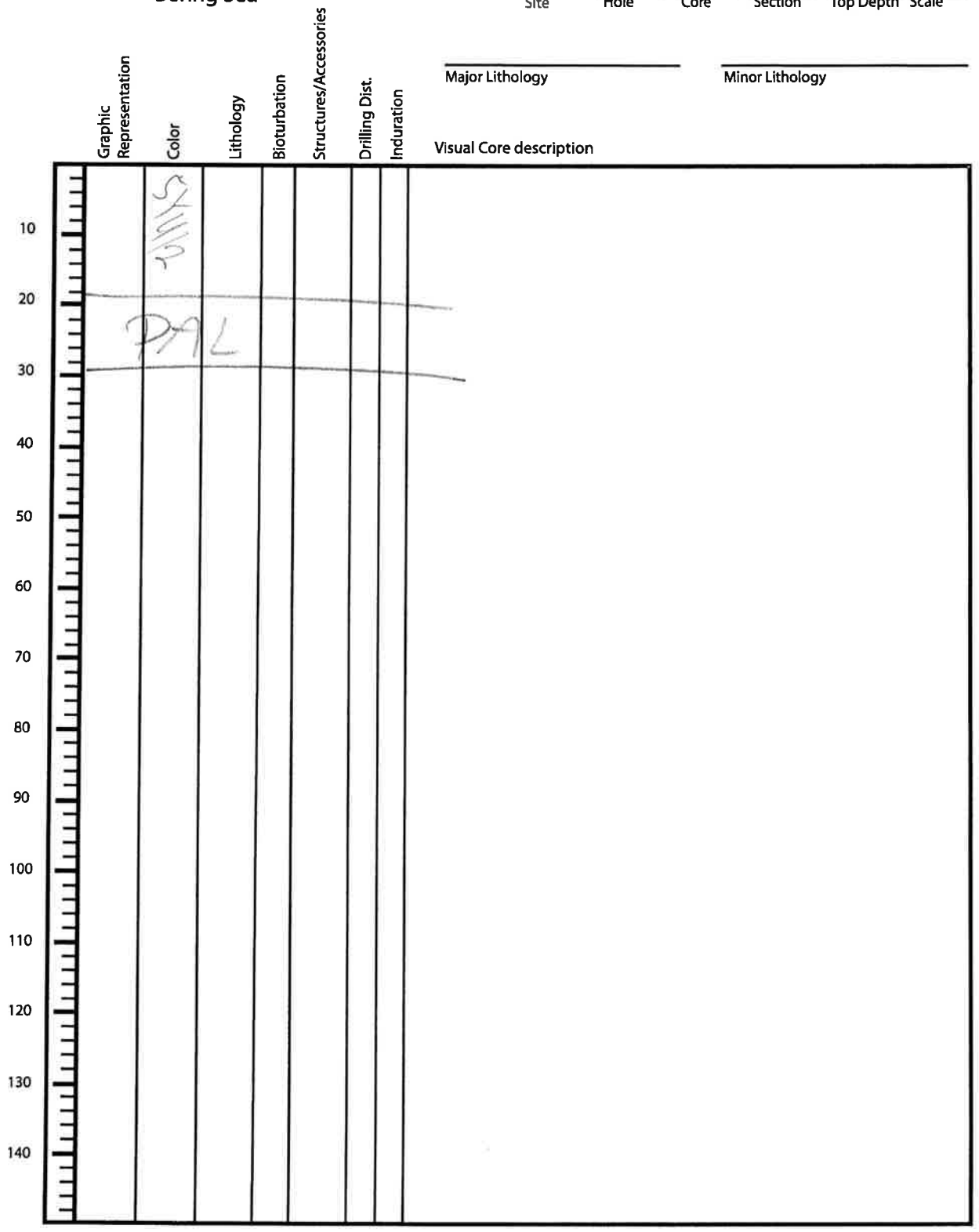
Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 31 CC
Site Hole Core Section Top Depth Scale

Major Lithology

Minor Lithology



Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	Diatom silt	Observer	

Percent Texture		
Sand	Silt	Clay
3	95	2

S

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

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	Diatom-rich fine ash	Observer	

Percent Texture		
Sand	Silt	Clay
	100	

63μm

Comments: Greenish blob

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
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
	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	Interval (cm) 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
	Glauconite
	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

SM

√

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	

Percent Texture		
Sand	Silt	Clay

Comments: Main lithology (indurated whitish)

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 2-6 μm grains
	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
	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	Interval (cm) Bottom
323	U1340	A	32	H	5	65	65

Sediment/Rock Name	Diatom ooze	Observer	

	Percent Texture		
	Sand	Silt	Clay
S	10	90	

Comments: Main lithology (wet diatom ooze)

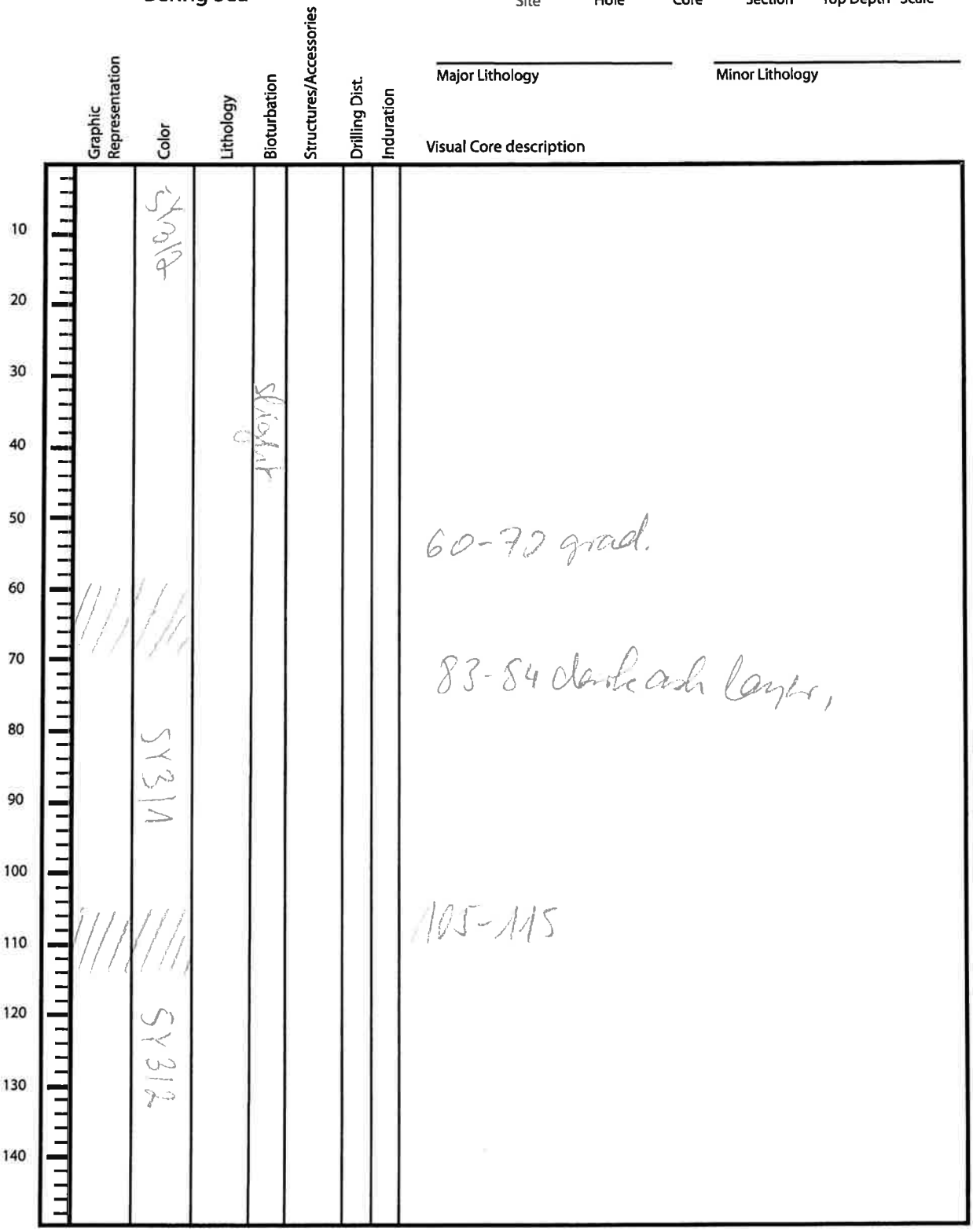
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
15	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	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
85	Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
V	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

Major Lithology | Minor Lithology

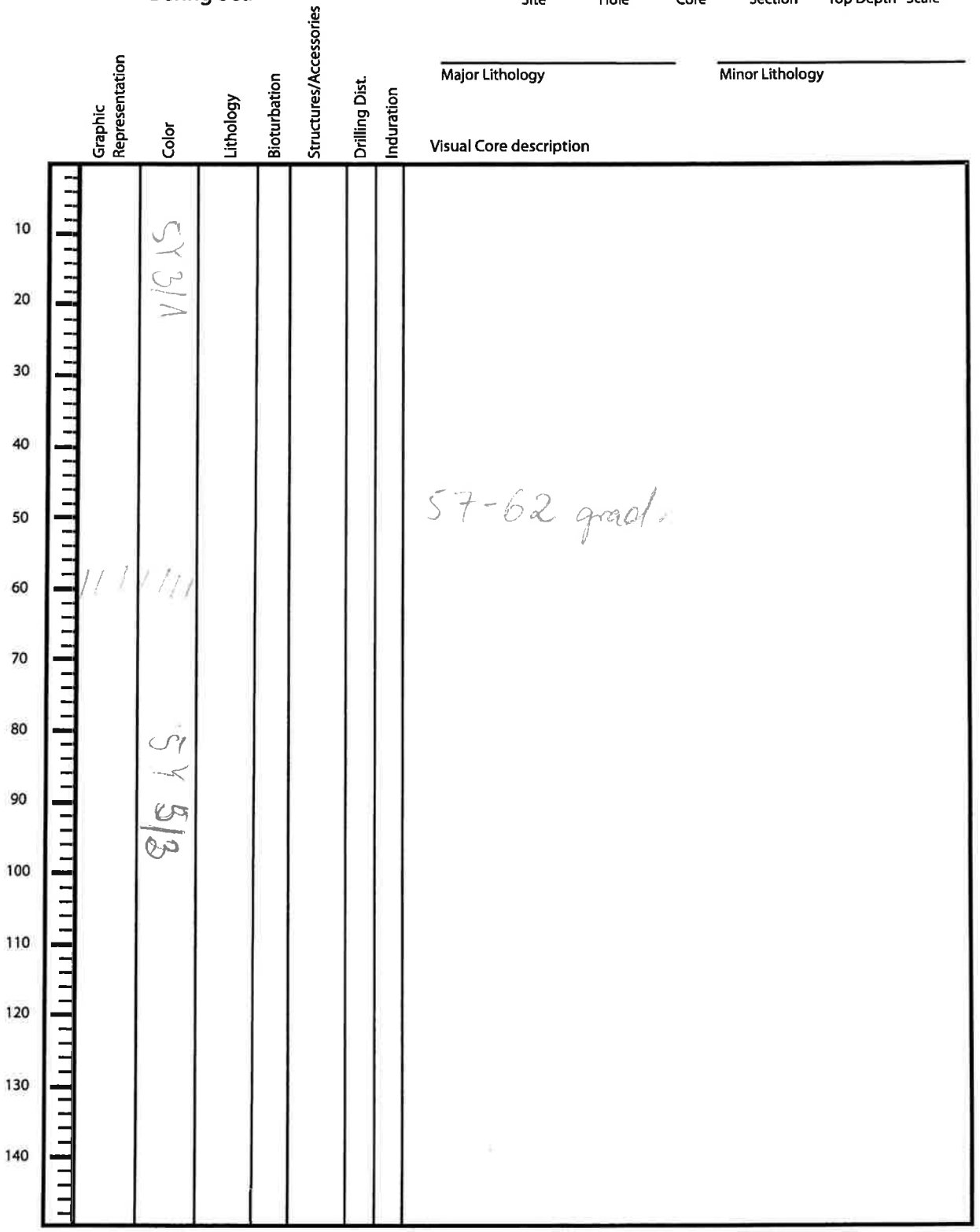


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 32 2 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____

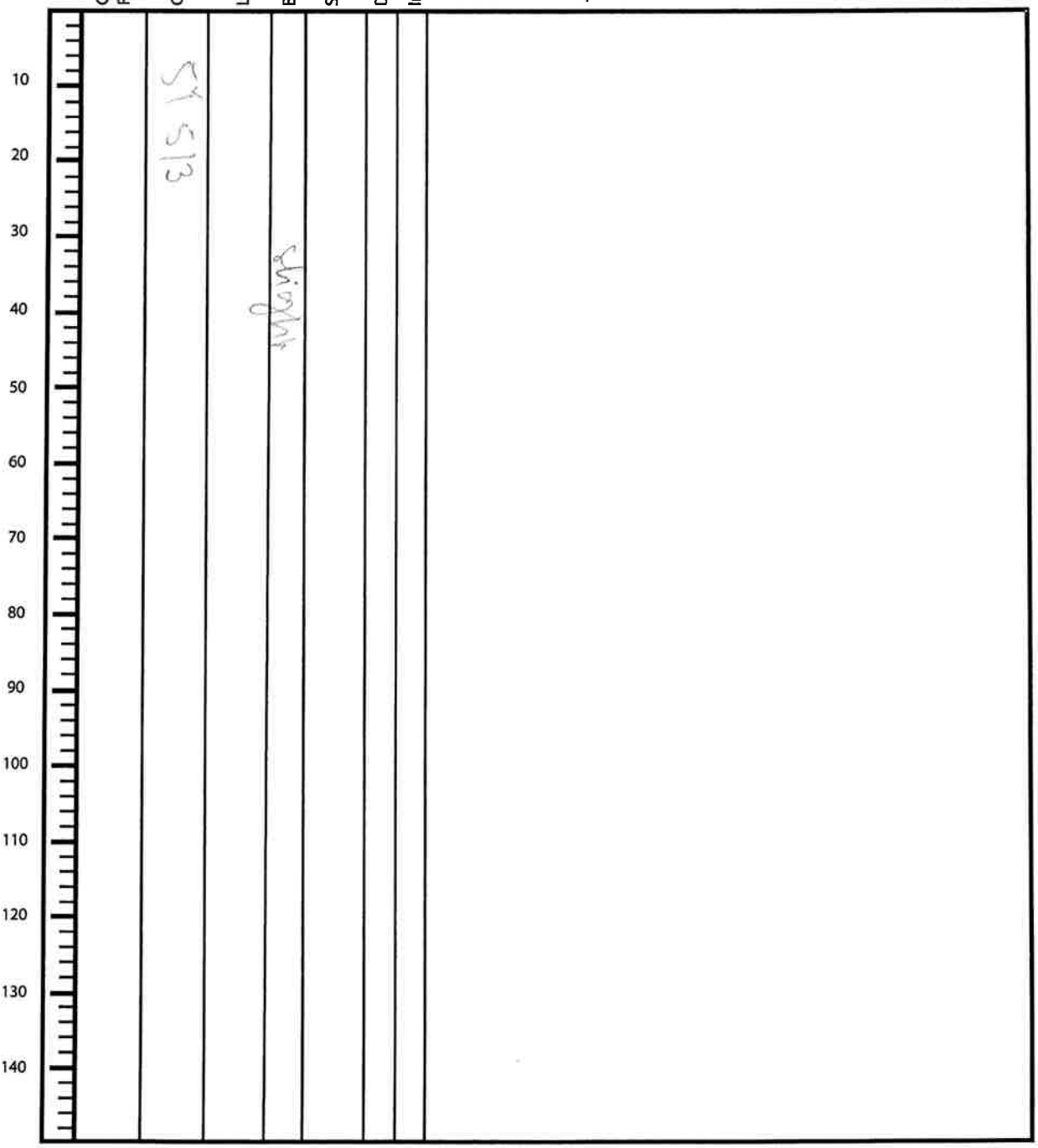


Observer: ____ Date: ____

Expedition 323
Bering Sea

1340 | A | 32 | 3 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

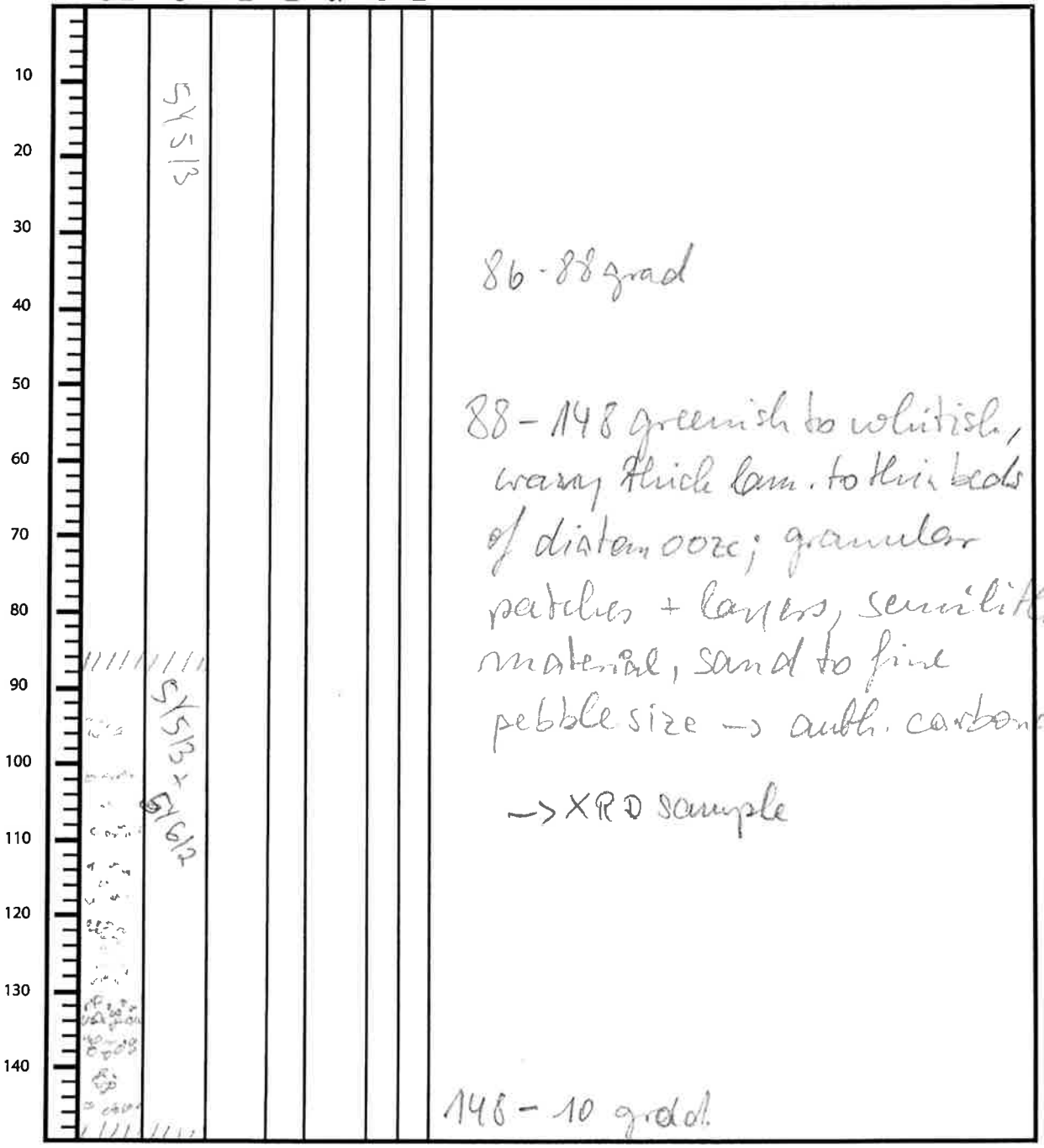


Observer: _____ Date: _____

Expedition 323
Bering Sea

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

Major Lithology | Minor Lithology

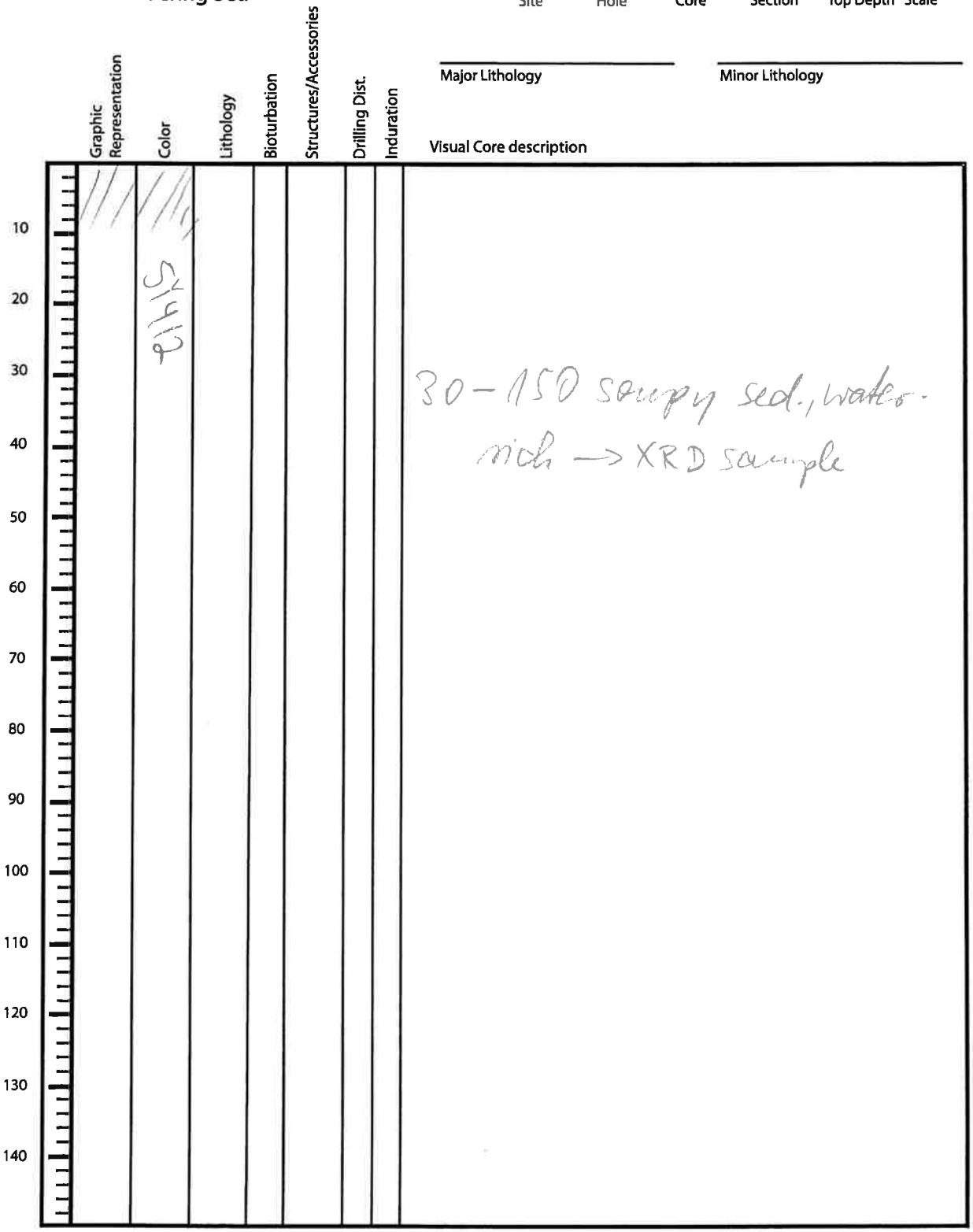


Observer: _____ Date: _____

Expedition 323
Bering Sea

A340 | 1 | 32 | 5 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

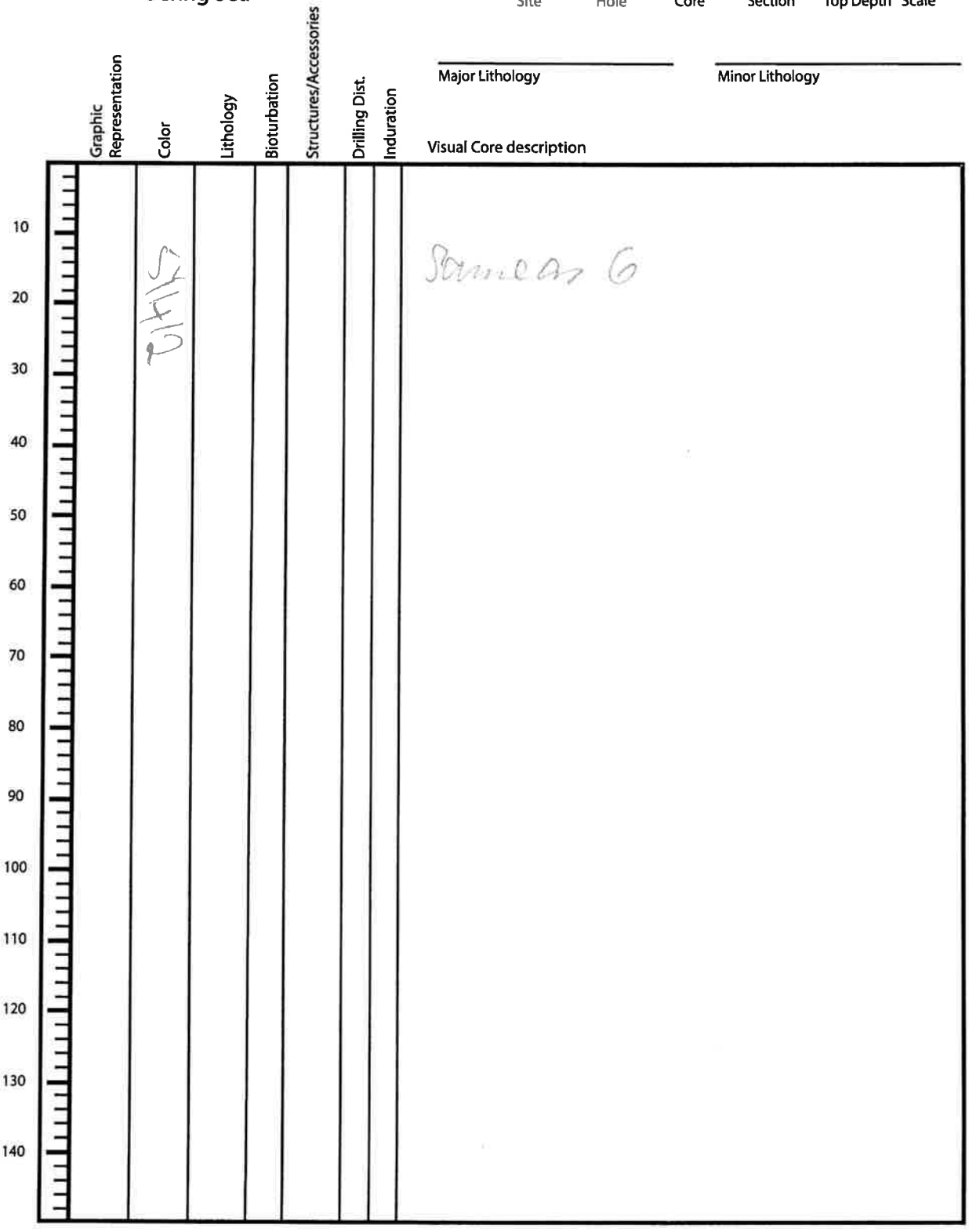


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 | A | 32 | 6 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

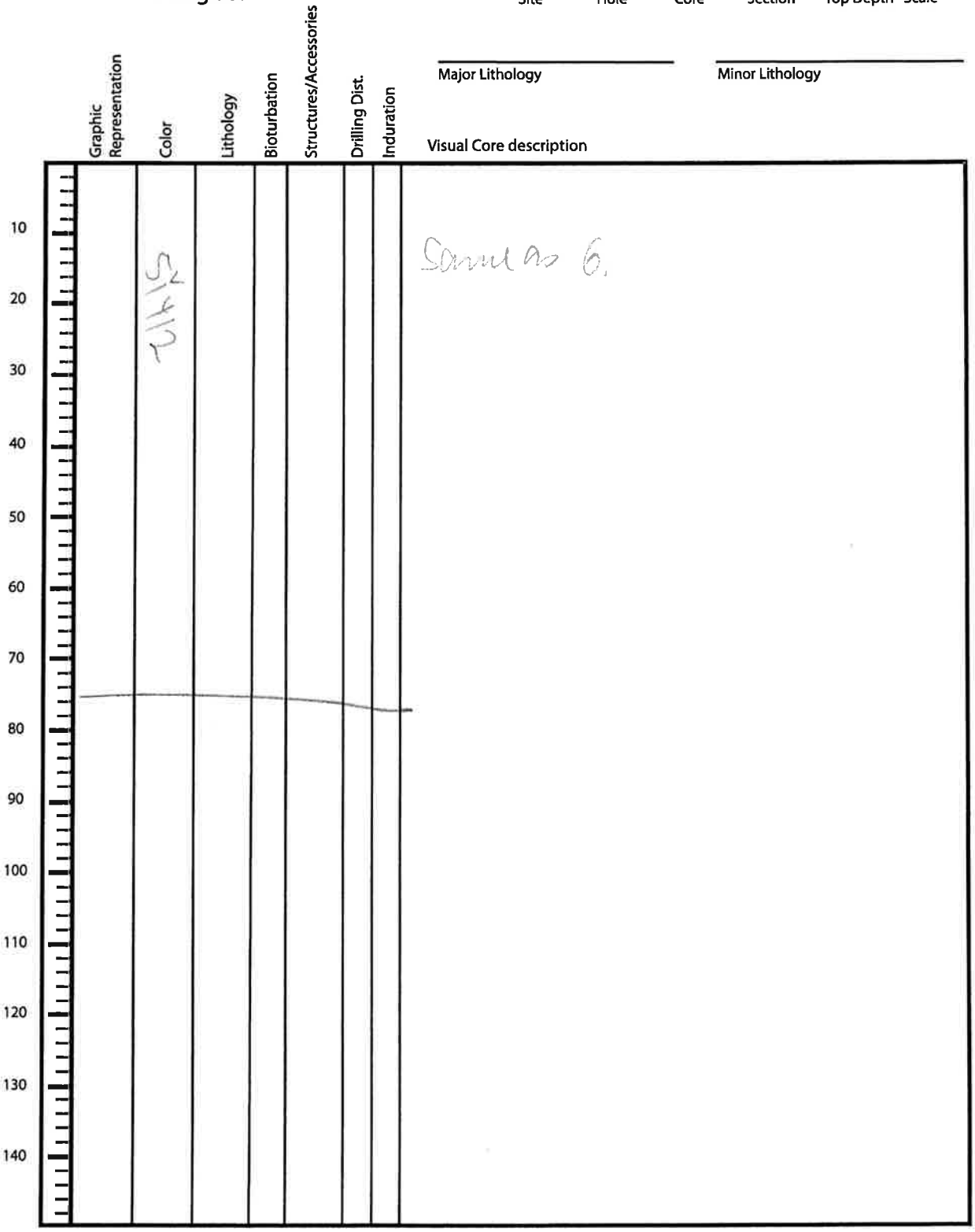


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 32 7 _____ _____
Site Hole Core Section Top Depth Scale

Major Lithology _____ Minor Lithology _____



Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 32 CC
Site Hole Core Section Top Depth Scale

Major Lithology Minor Lithology

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

SM

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

Sediment/Rock Name	Diatom silt	Observer	

S

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
5	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

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1340	A	33H		4	90	90

Sediment/Rock Name	Diatom ooze	Observer	

Percent Texture		
Sand	Silt	Clay
2	88	10

S

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

SM

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

Sediment/Rock Name	Diatom ooze	Observer	

Percent Texture		
Sand	Silt	Clay

Comments: Main lithology

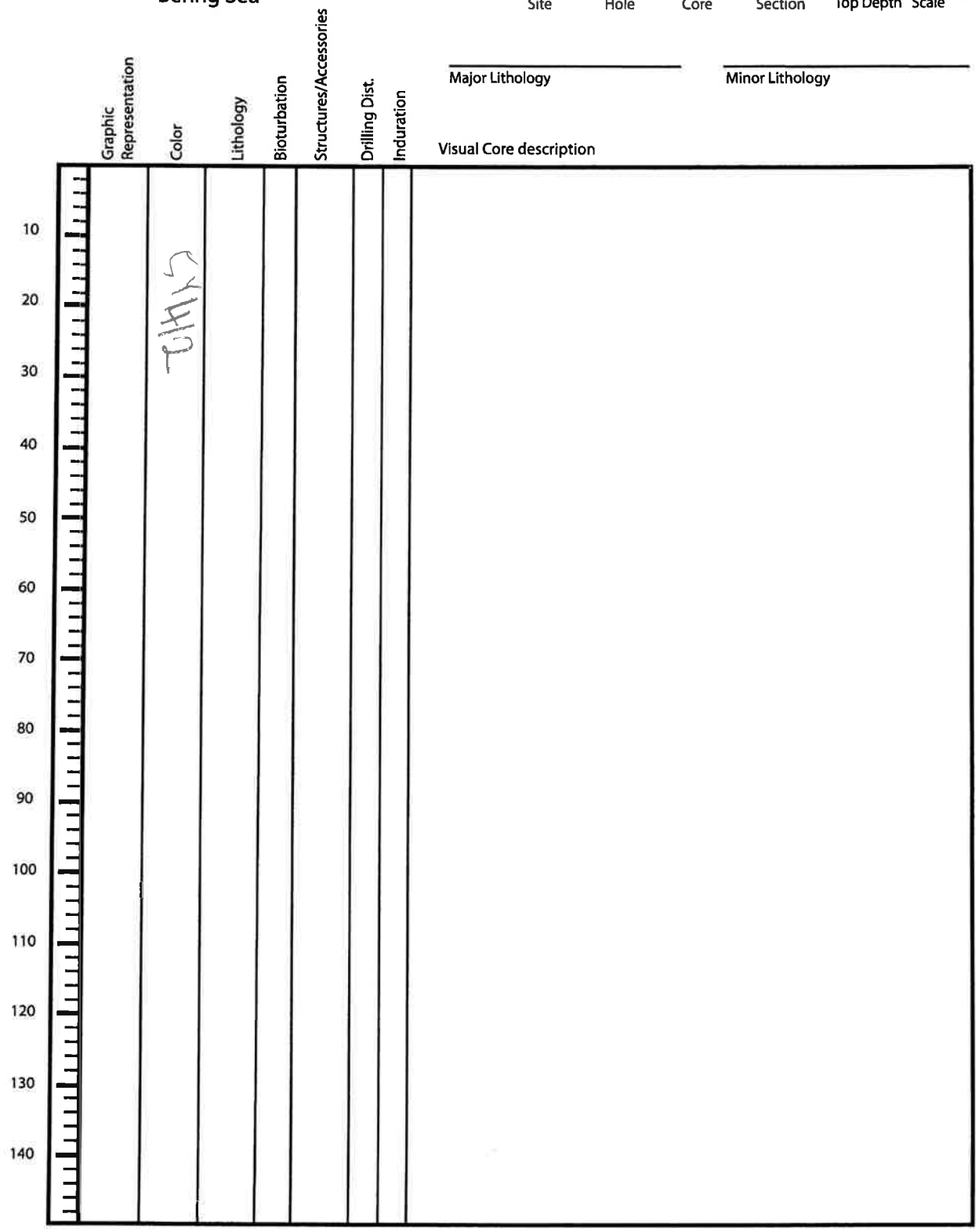
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
30	Framework minerals
25	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic 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

1340 A 33 1 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____

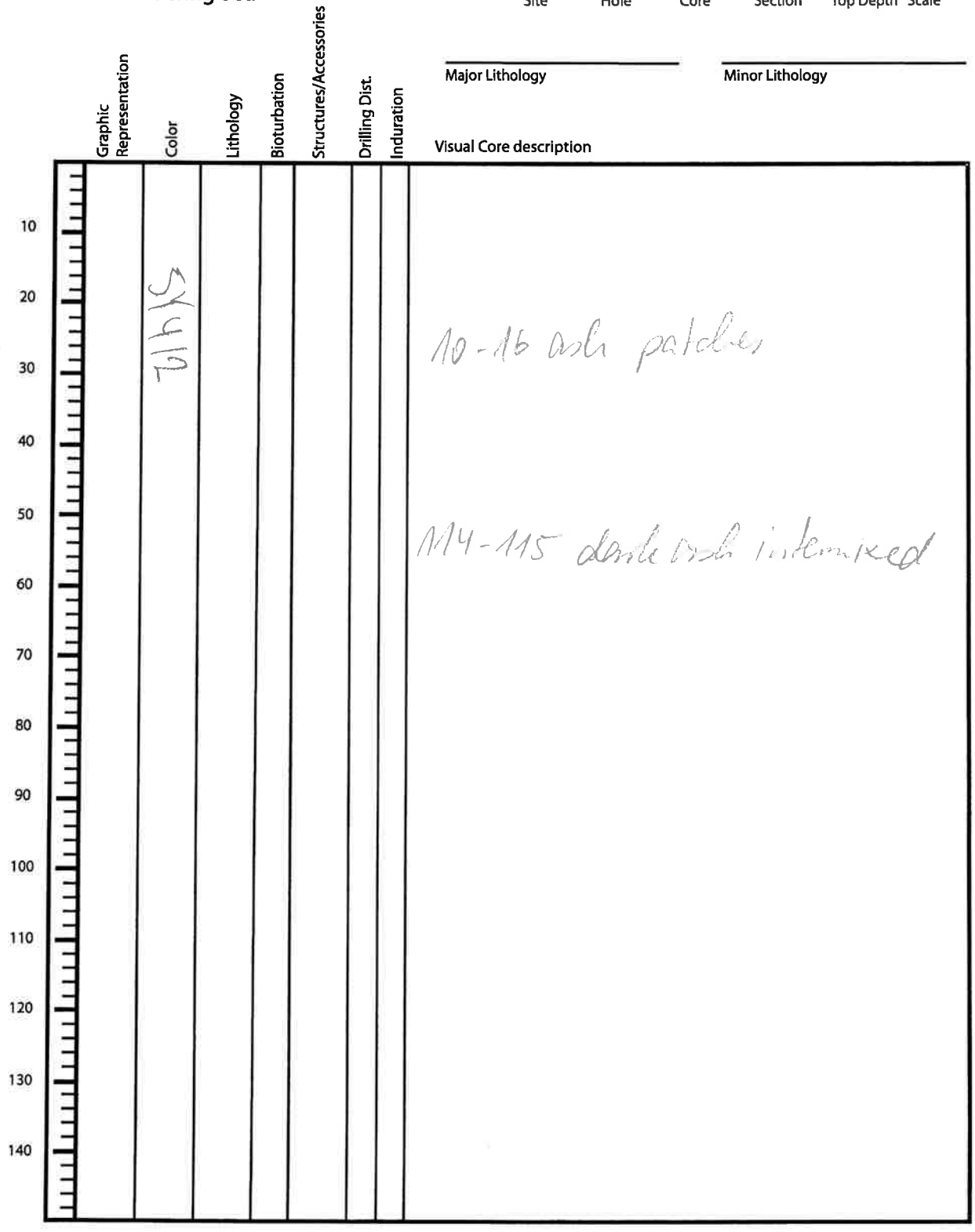


Observer: ____ Date: ____

Expedition 323
Bering Sea

1340 | A | 33 | 2 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology



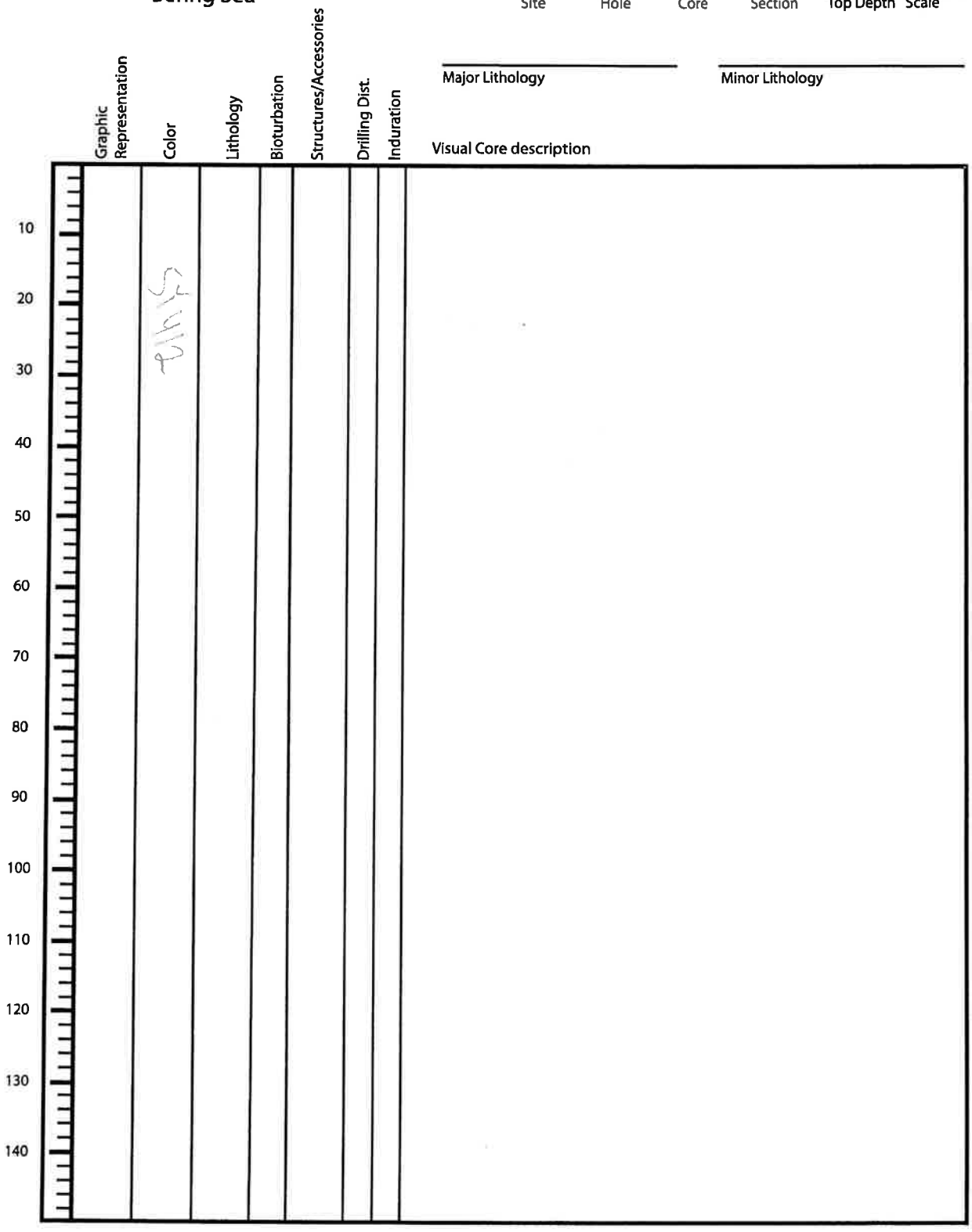
Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 33 3
Site Hole Core Section Top Depth Scale

Major Lithology

Minor Lithology

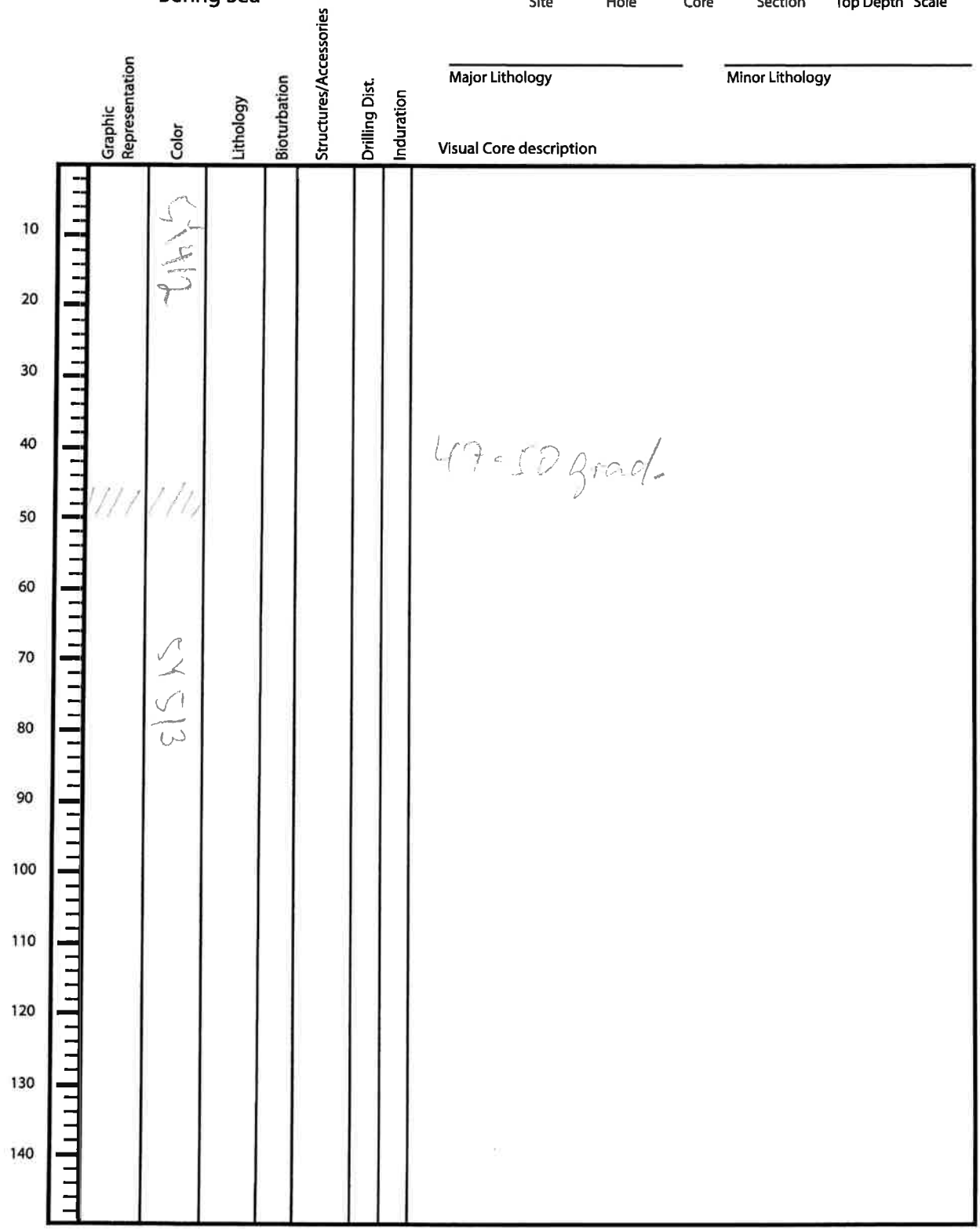


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 33 4 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____

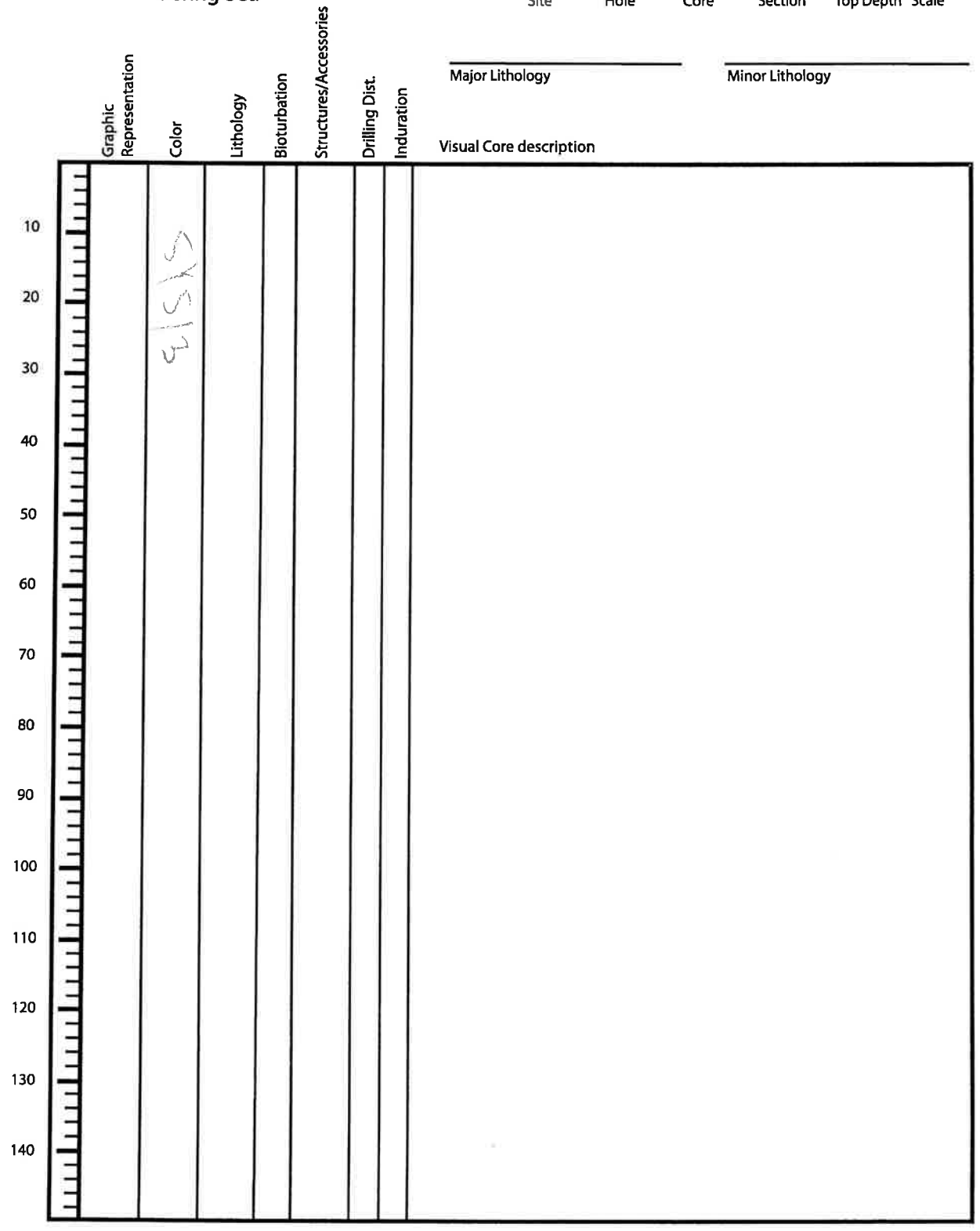


Observer: ____ Date: ____

Expedition 323
Bering Sea

1340 A 33 5 _____ _____
Site Hole Core Section Top Depth Scale

_____ _____
Major Lithology Minor Lithology

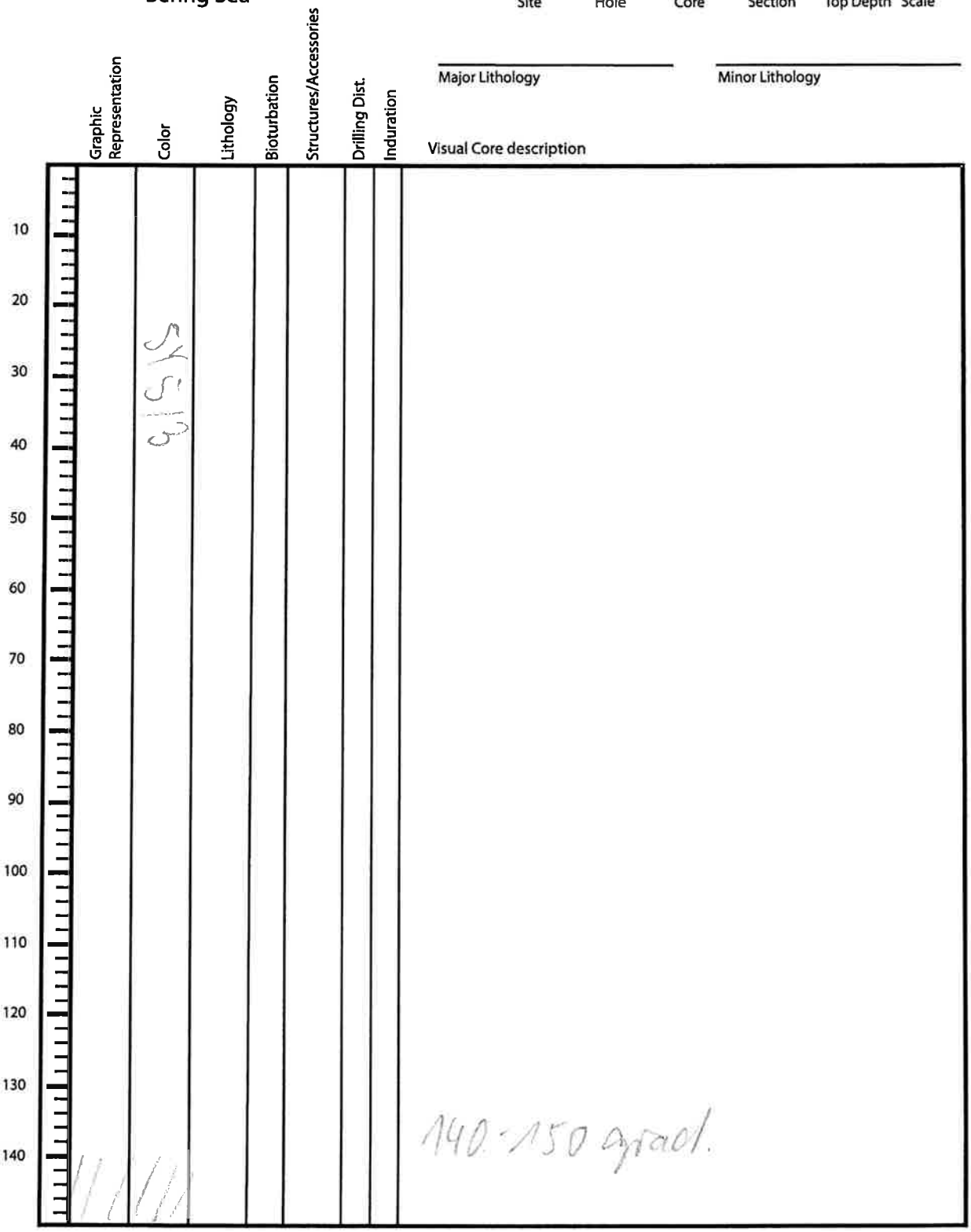


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 Site | A Hole | 33 Core | 6 Section | ____ Top Depth | ____ Scale

Major Lithology ____ Minor Lithology ____

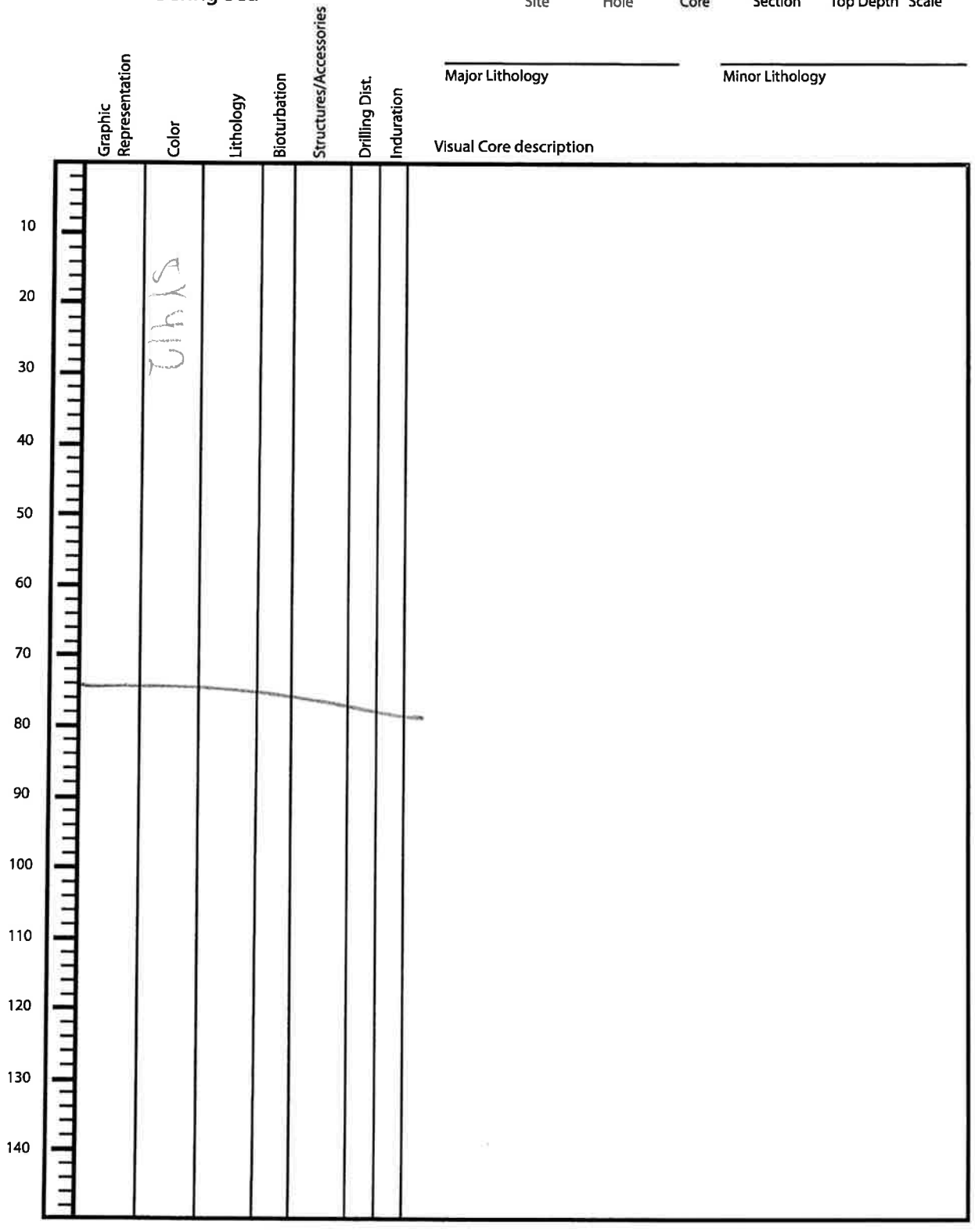


Observer: ____ Date: ____

Expedition 323
Bering Sea

1340 A 33 7 _____ _____
Site Hole Core Section Top Depth Scale

Major Lithology _____ Minor Lithology _____

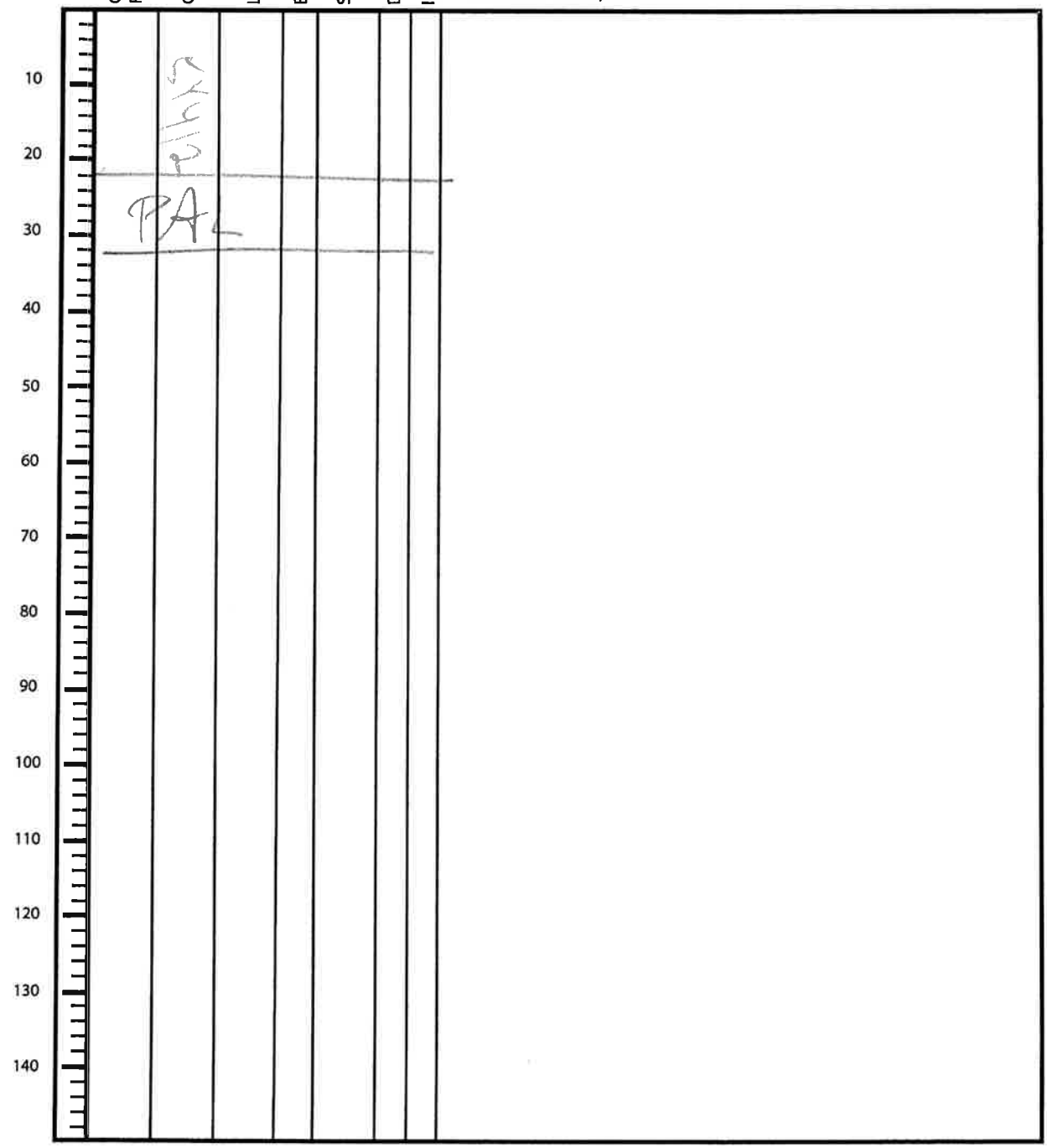


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 | A | 33 | CC | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology



Observer: _____ Date: _____

V

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	Diatom ooze

Observer	MSlook

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
	Glauconite
	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
	Bivalves
	Others

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

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

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	Diatom ooze.	Observer	MSaito

Percent Texture		
Sand	Silt	Clay

Comments: White thin layer

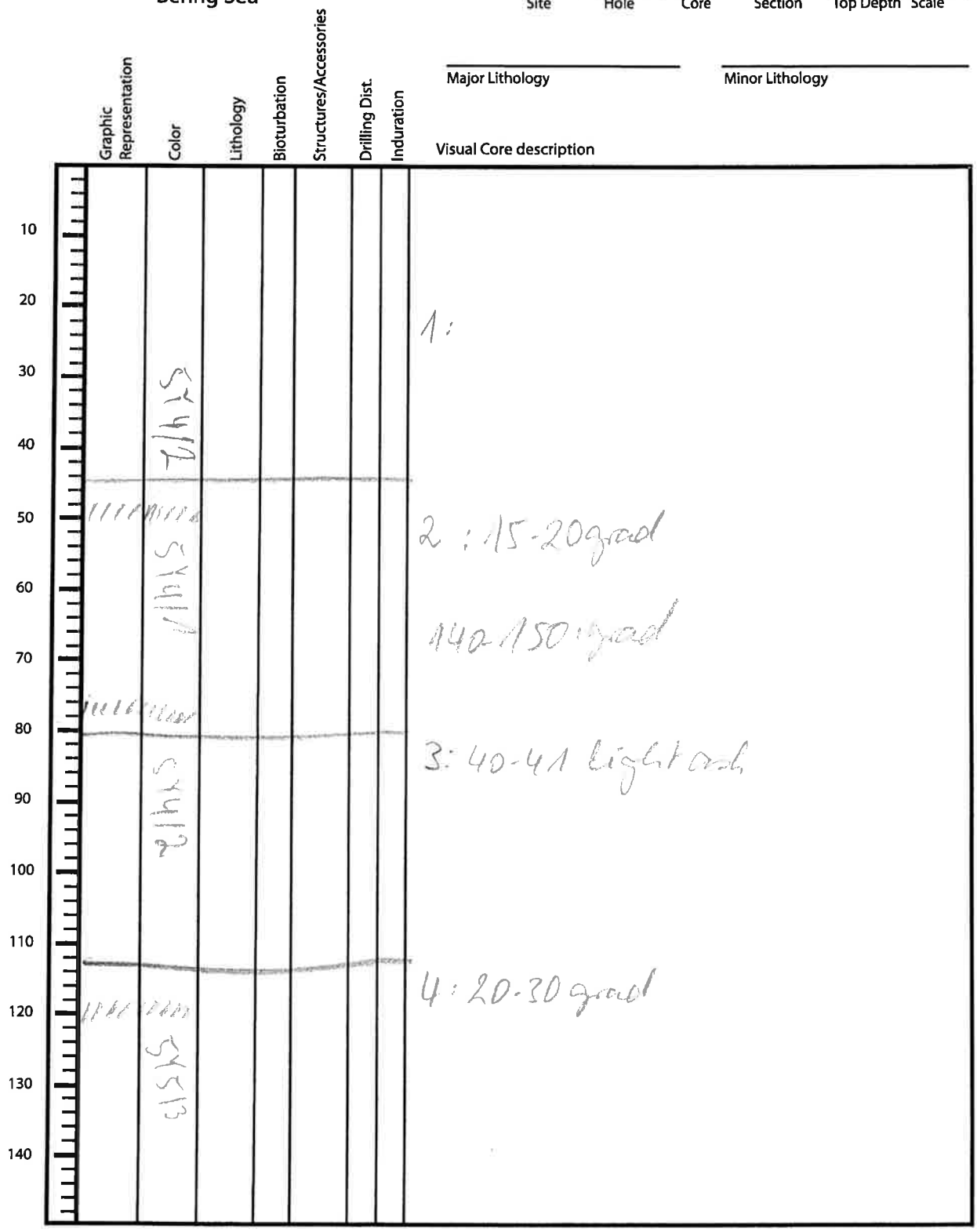
Percent	Component
3	**SILICICLASTIC GRAINS/MINERAL**
	Framework minerals
3	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic 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**
~~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

1349 | A | 34 | 1-4 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology



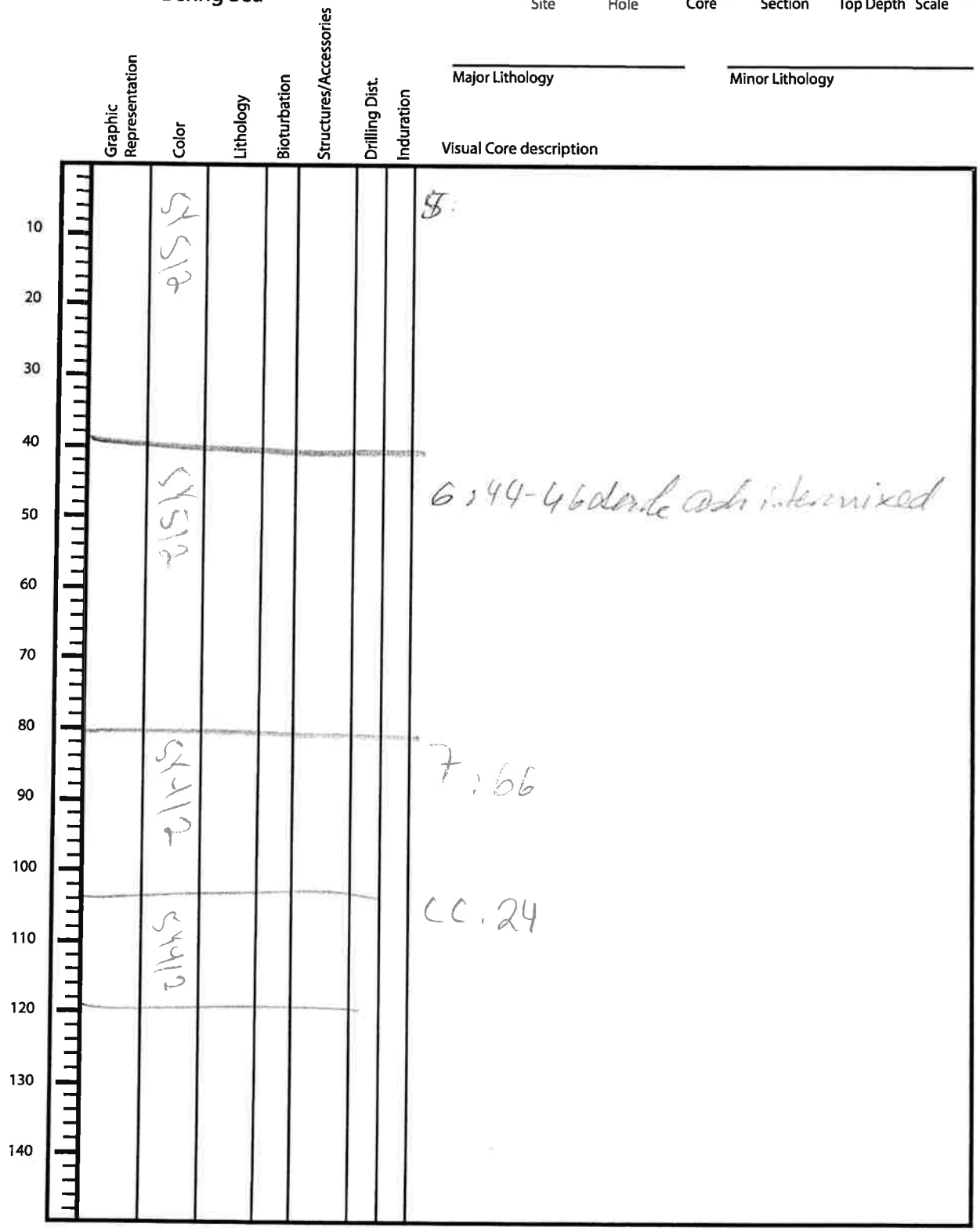
Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 34 5-CC
Site Hole Core Section Top Depth Scale

Major Lithology

Minor Lithology



Observer: _____ Date: _____

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) 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
1	**VOLCANICLASTIC GRAINS**
	Crystal grain
1	✓ 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

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	Diatom ooze

Observer	

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
28	✓ 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

Site: 1340 | Hole: A | Core: 35 | Section: | Top Depth: | Scale:

Major Lithology:

Minor Lithology:

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

Visual Core description

0 0–16 soft. (5Y 3/2)
1 16–33 (5Y 4/3)
33. grad.
33–40 Dark
62 ash. (Dark)
70–120 grad
0/120 Sec. 2 42 light
Sec. 2
42–44 Black ash patch
44–100 light
100–120 grad.
120–3-31 light (5Y 4/2)
ash (black) Sec. 3–4 → 5Y 2.5/1
white patch 3–31~35 → 5Y 8/1
grad 35–50
Sec. 3 50–100 Dark (5Y 3/2)
grad
100–140 light (5Y 4/3)
3– 140–4-60 grad. 4–30~60 sl. laminated 1~0.5 cm
4-60–150 Dark (5Y 4/2)
5-0–14 Dark (5Y 4/2)
5-14–46 (5Y 4/6) 5-46–49 ash (5Y 3/1) white patch
5-50–60 grad
5-60~114. light (5Y 5/2) vs (5Y 6/6) bioturb 1~0.5 cm
5-114–118 white visible 0.5 cm

Observer: [illegible] Date:

5-118–6-27. Dark
grad 27~30 (5Y 3/2) 6-75–120 (5Y 4/2)
6-27–72. light 6-35–75 ash (5Y 3/1)
ash (5Y 4/3) 100–150 grad
6-120–150 (5Y 4/1)

SS Sec 3 80, Sec. 4 30

white

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	Sponge spicule-rich diatom ooze

Observer	

	Percent Texture		
	Sand	Silt	Clay
S	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	Interval (cm) Bottom
323	U1340	A	36	H	2A	30	30

Sediment/Rock Name	Diatom ooze

Observer	

S

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
	Glauconite
	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	Interval (cm) Bottom
323	U1340	A	36	H	2A	60	60

Sediment/Rock Name	Observer
Opal-carb-bearing diatom ooze	

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 authigenic
	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
	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	Interval (cm) Bottom
323	U1340	A	36	H	2	100	100

Sediment/Rock Name	auth-carb-rich diatom ooze

Observer	

Percent Texture		
Sand	Silt	Clay

Comments: Main lithology

Percent	Component
21	**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
15	Carbonates authigenic
	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
45	Centric
32	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	Interval (cm) Bottom
323	U1340	A	36	H	4	62	62

Sediment/Rock Name	Authcarb-rich diatom ooze

Observer	

Percent Texture		
Sand	Silt	Clay

Comments: Main lithology

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

Percent	Component
80	**BIOGENIC GRAINS**
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
56	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

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1340	A	36	H	6	40	46

Sediment/Rock Name	auth-carb-rich diatom ooze

Observer	

Percent Texture		
Sand	Silt	Clay

Comments: Main lithology

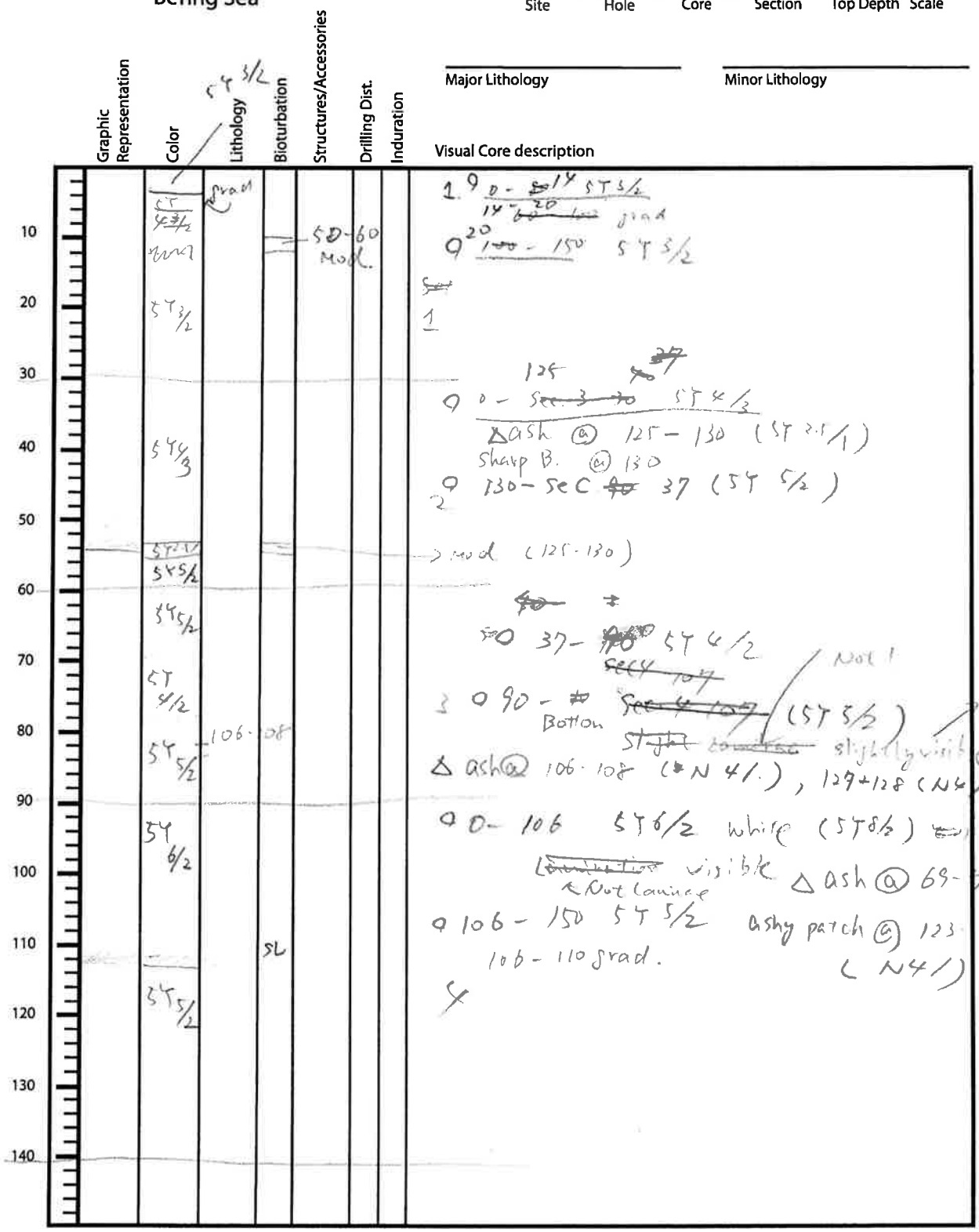
Percent	Component
18	**SILICICLASTIC GRAINS/MINERAL**
	Framework minerals
3	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic 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
	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 | 36H | | | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

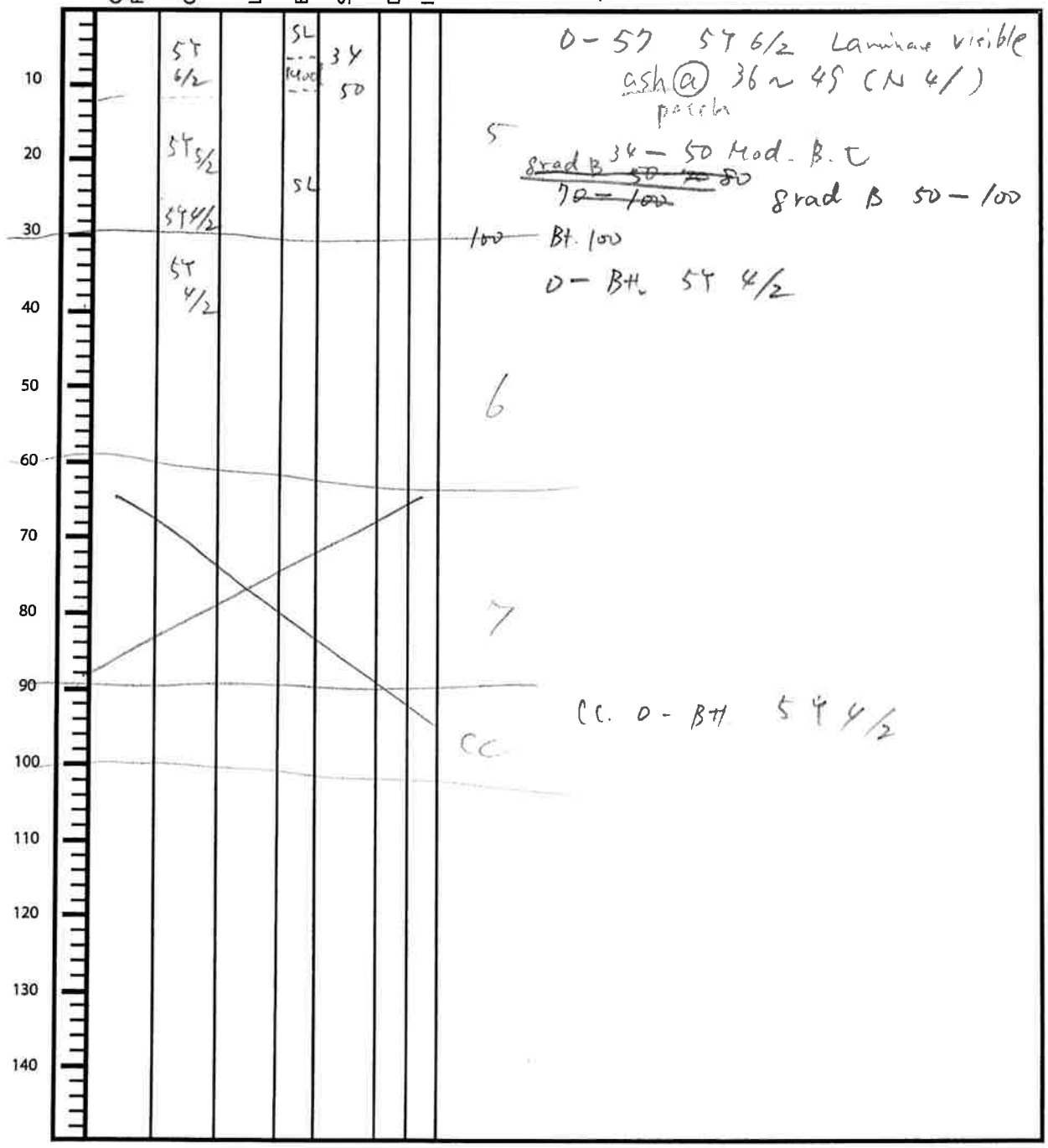


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 | A | 3b | | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology



Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	Diatom ooze

Observer	MSC

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
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
3	✓ Pyrite
	Magnetite
	Fe-oxide
3	Carbonates authigenic
	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
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

V

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	Diatom-bearing fine ash

Observer	MSC

Percent Texture		
Sand	Silt	Clay
	100	

V

Comments: White ashy

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

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	Diatom ooze	Observer	MSC

Percent Texture		
Sand	Silt	Clay

Comments: Main lithology

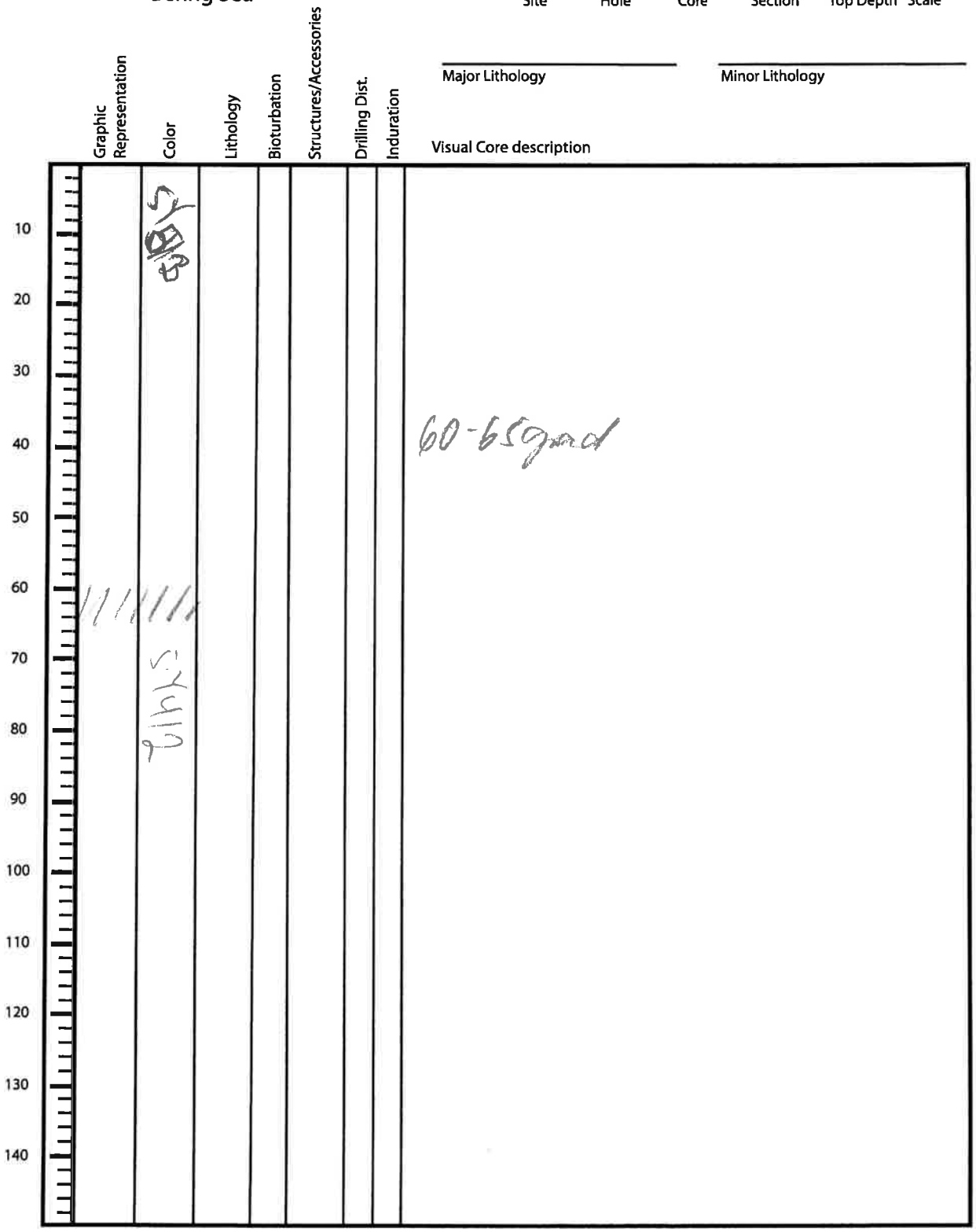
Percent	Component
8	**SILICICLASTIC GRAINS/MINERAL**
	Framework minerals
3	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic 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

Major Lithology ____ Minor Lithology ____

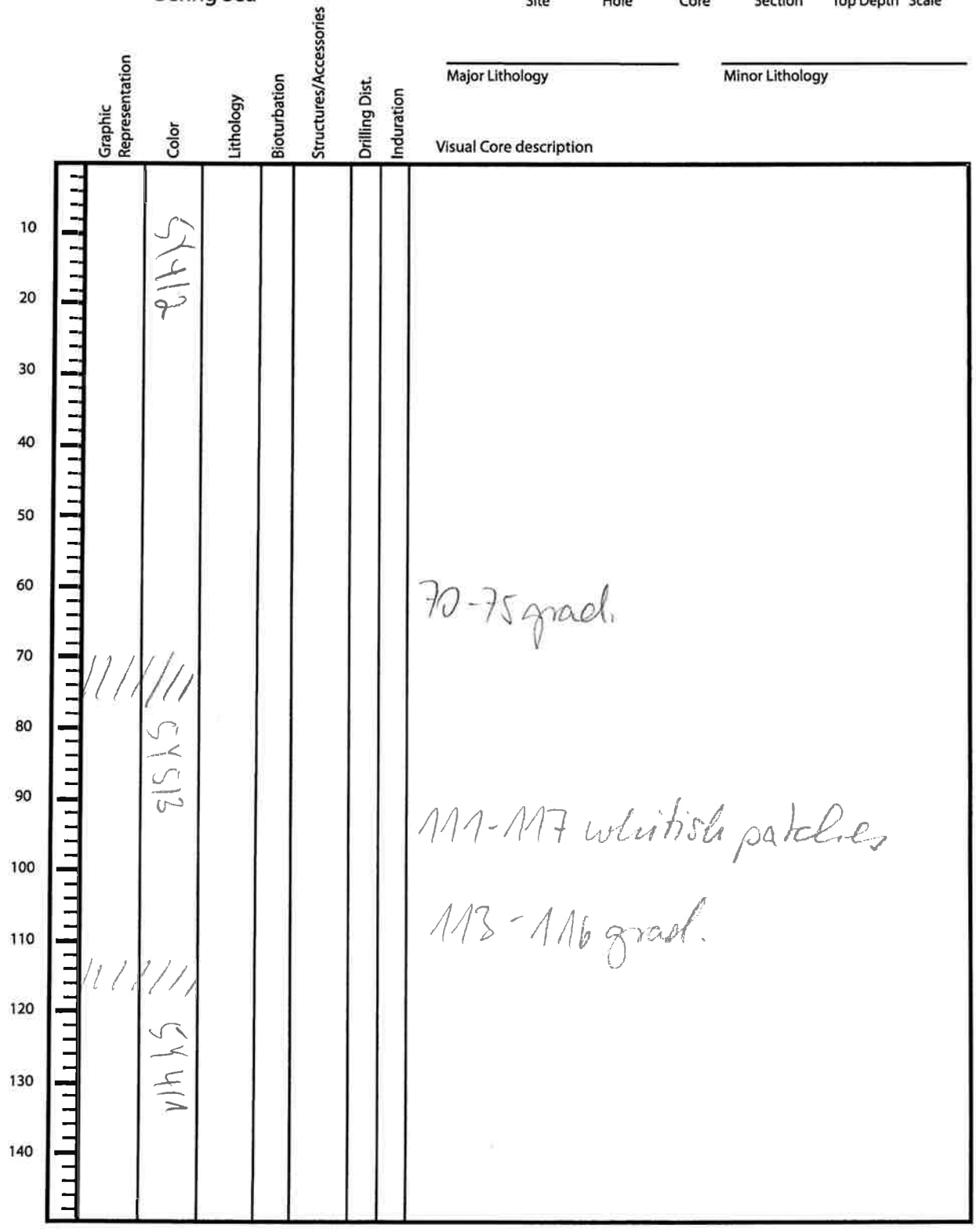


Observer: ____ Date: ____

Expedition 323
Bering Sea

1340 A 37 2 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____

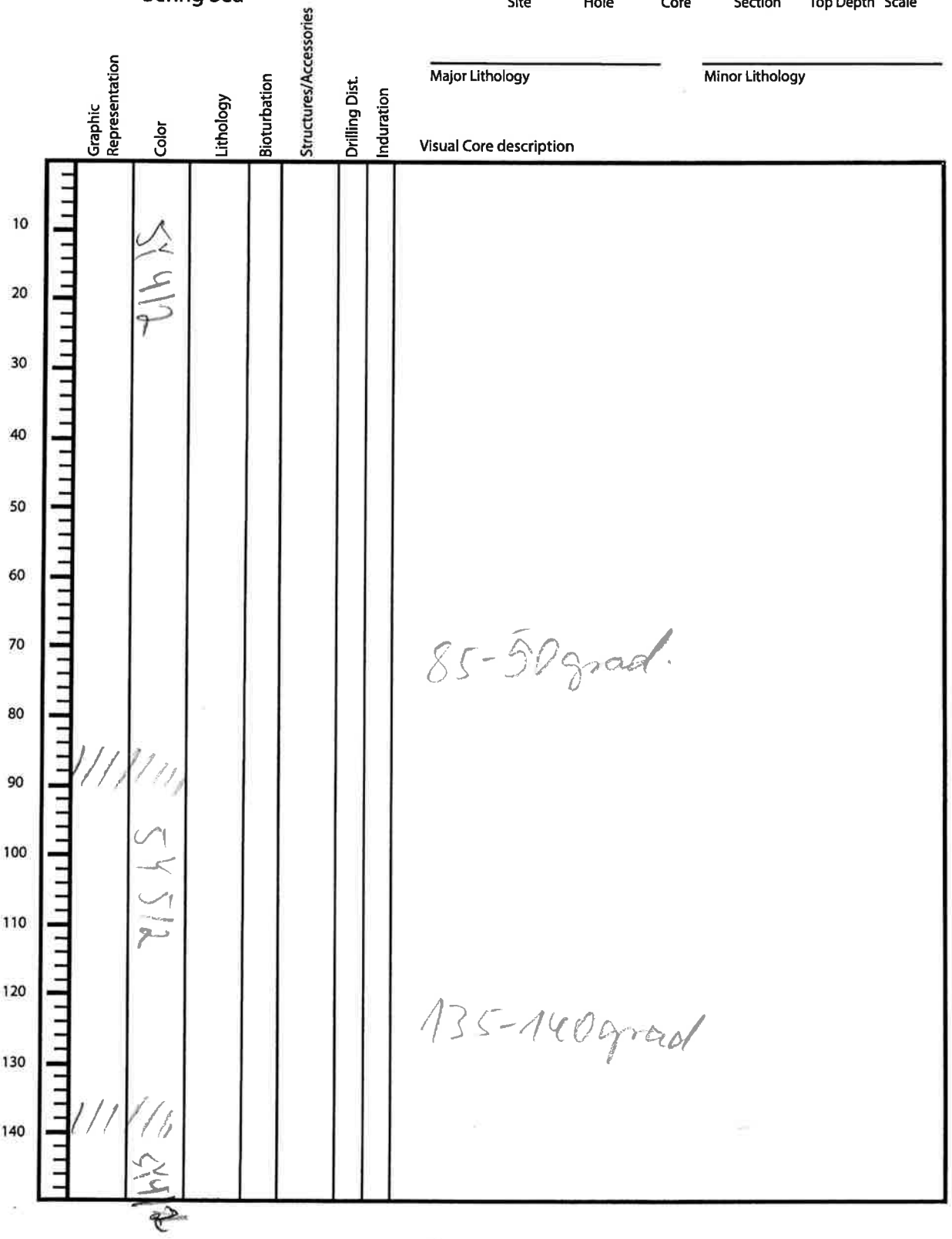


Observer: ____ Date: ____

Expedition 323
Bering Sea

1340 A 37 3 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____

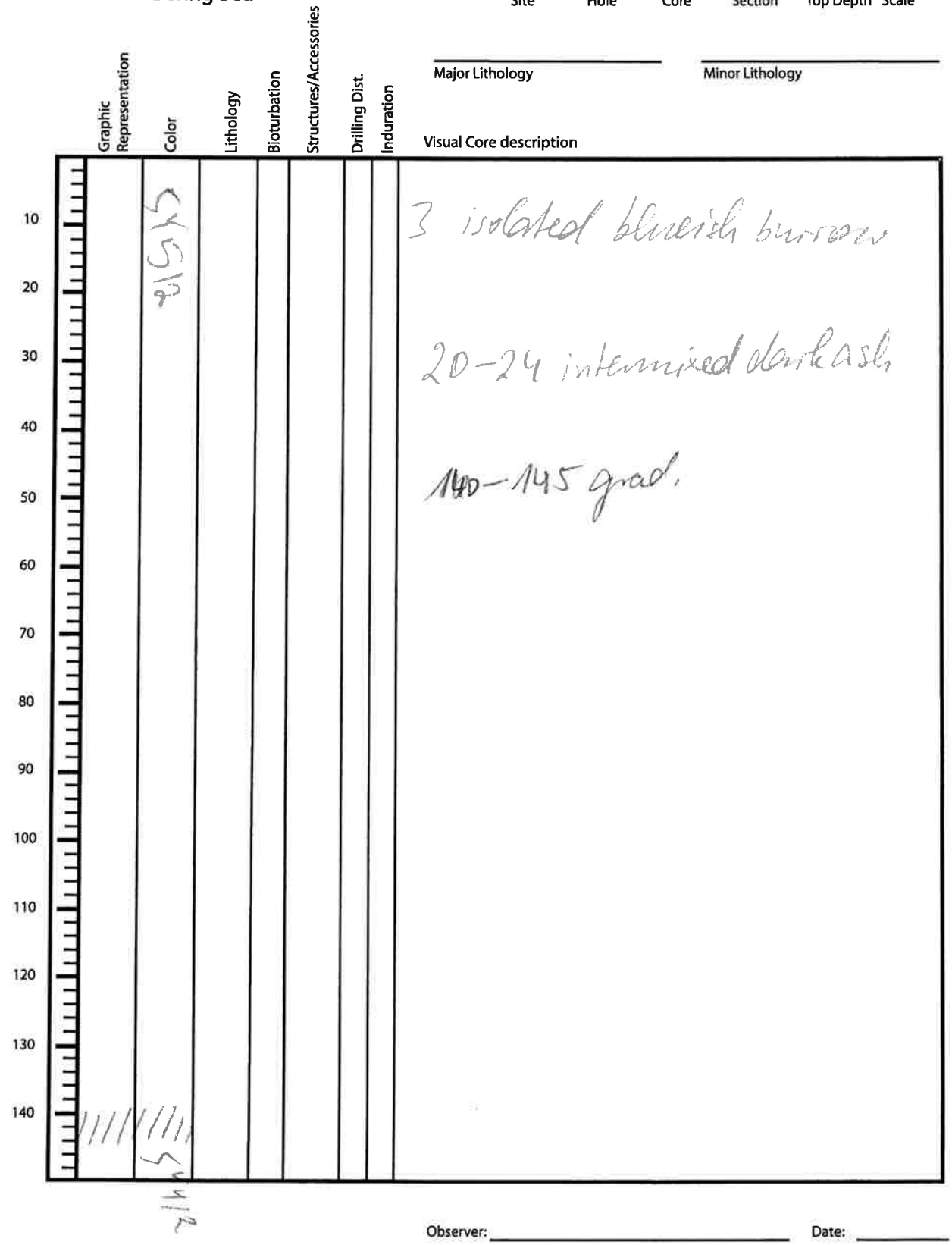


Observer: ____ Date: ____

Expedition 323
Bering Sea

1340 A 37 4 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____

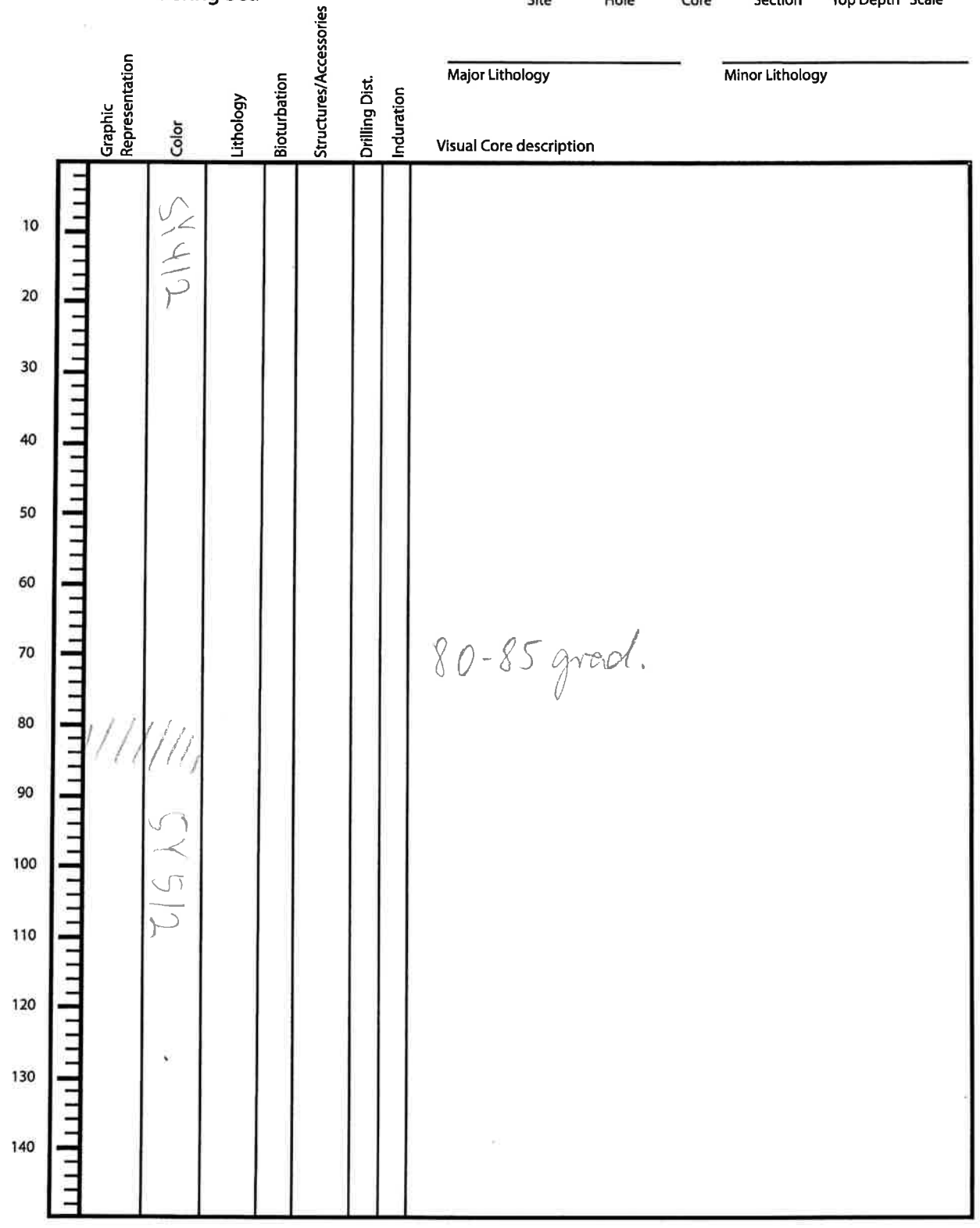


Observer: ____ Date: ____

Expedition 323
Bering Sea

1340 A 37 5 _____ _____
Site Hole Core Section Top Depth Scale

_____ _____
Major Lithology Minor Lithology



Observer: _____ Date: _____

Expedition 323
Bering Sea

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

Major Lithology

Minor Lithology

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

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

5Y 6/2

70-80 gravel

5Y 4/2

110-111 isolated clast, 1 cm Ø, angular, reddish

5Y 4/2

10

PAL

20

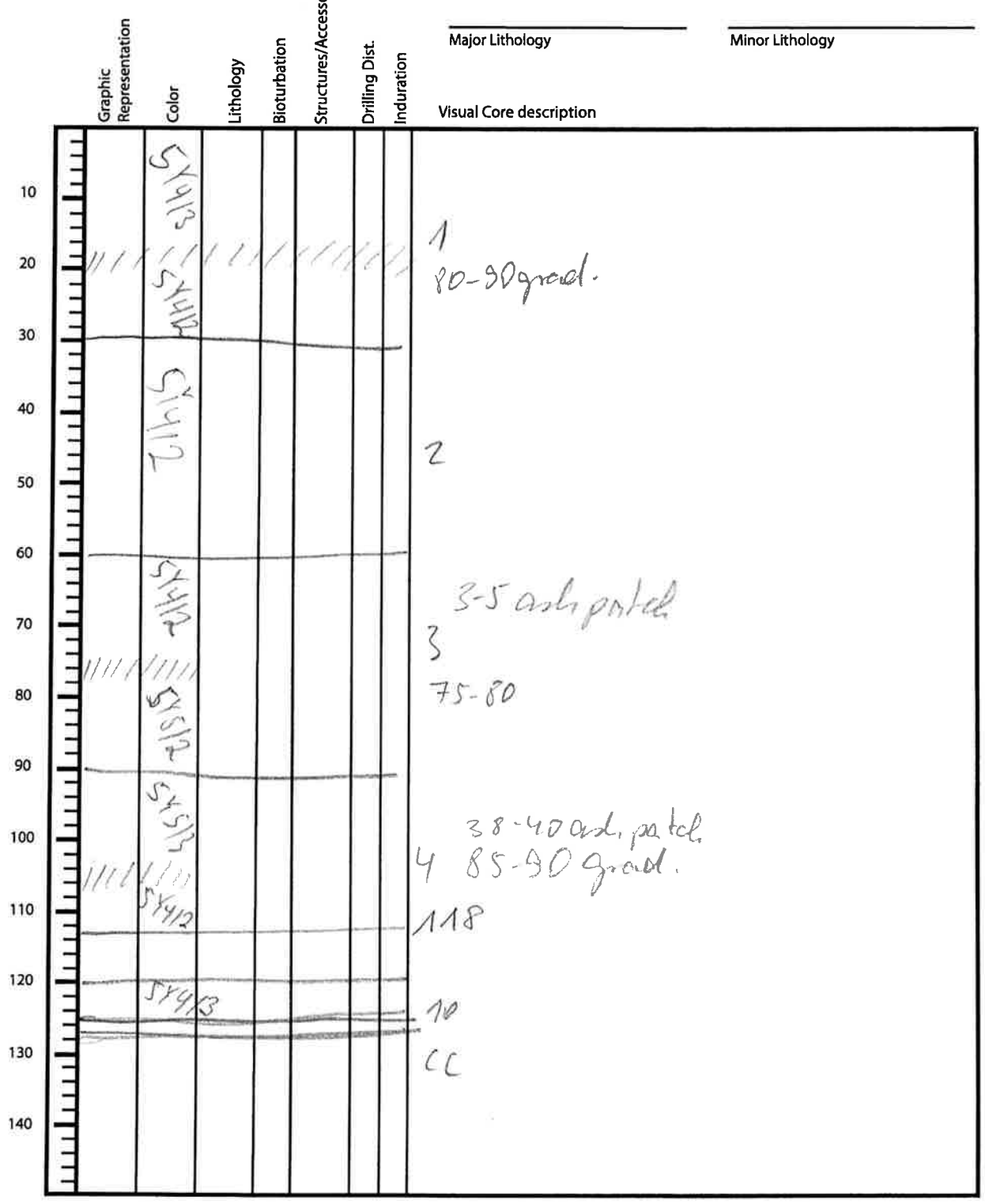
Observer: Date:

Expedition 323
Bering Sea

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

Major Lithology

Minor Lithology



Observer: _____ Date: _____

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
323	U1340	A	39H		1	70	

Sediment/Rock Name	Diatom ooze

Observer	MSC

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

√ 5M

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	Diatom ooze

Observer	MSC

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

✓ SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	Diatom ooze	Observer	MSC

Percent Texture		
Sand	Silt	Clay

Comments: dark green layer

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 authigenic ◻
	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
	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	Interval (cm) Bottom
323	U1340	A	39	H	5	129	129

Sediment/Rock Name	Diatom ooze	Observer	MSC

Percent Texture		
Sand	Silt	Clay

Comments: green-blade 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
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
2	Pyrite
	Magnetite
	Fe-oxide
2	Carbonates authigenic
	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
94	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

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	Diatom ooze

Observer	MSC

Percent Texture		
Sand	Silt	Clay

Comments: light green lamina

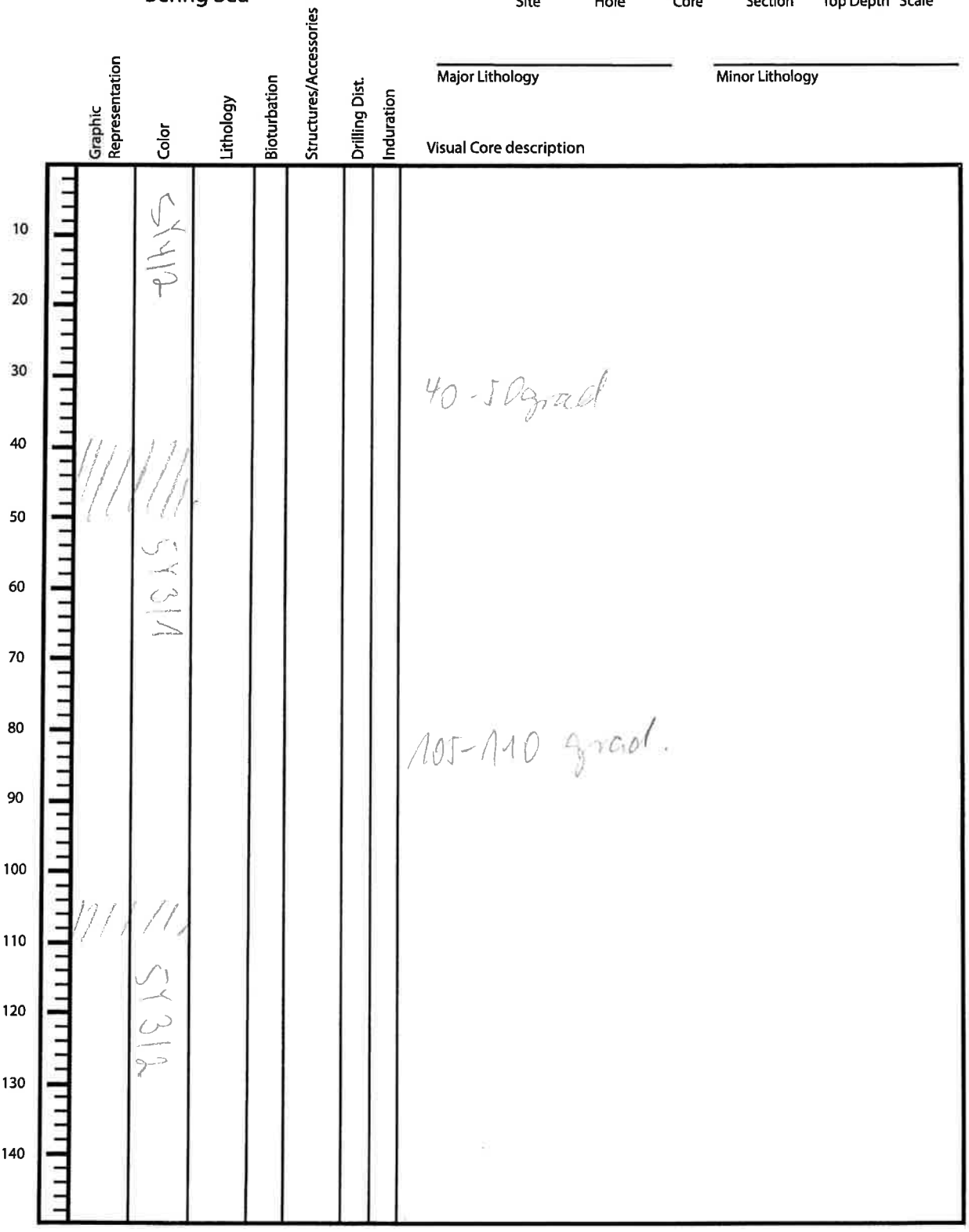
Percent	Component
11	**SILICICLASTIC GRAINS/MINERAL**
	Framework minerals
5	✓ Quartz
2	✓ Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic 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

1346 | A | 39 | 1 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

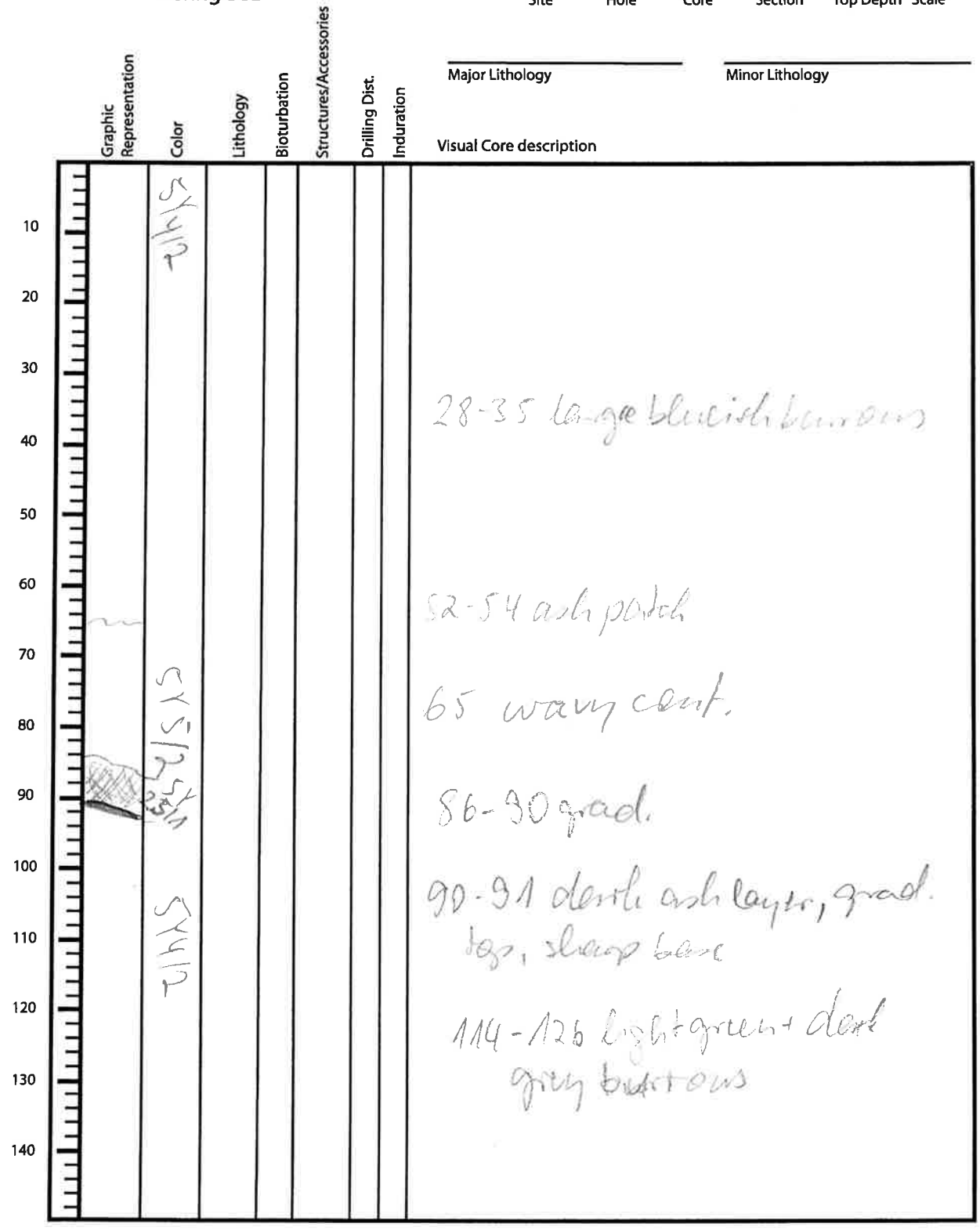


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 33 2 _____ _____
Site Hole Core Section Top Depth Scale

Major Lithology _____ Minor Lithology _____

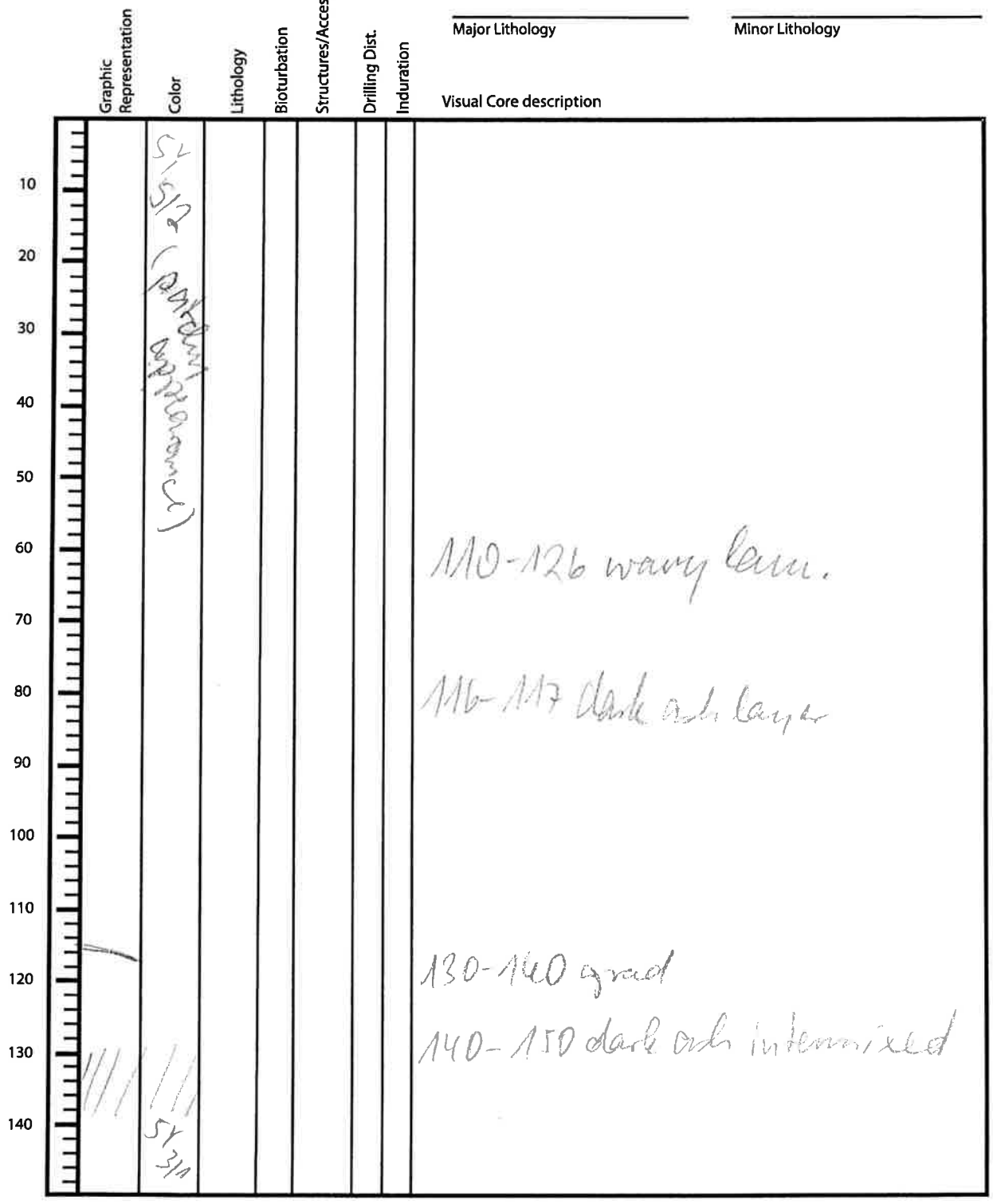


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 39 3 _____ _____
Site Hole Core Section Top Depth Scale

Major Lithology _____ Minor Lithology _____

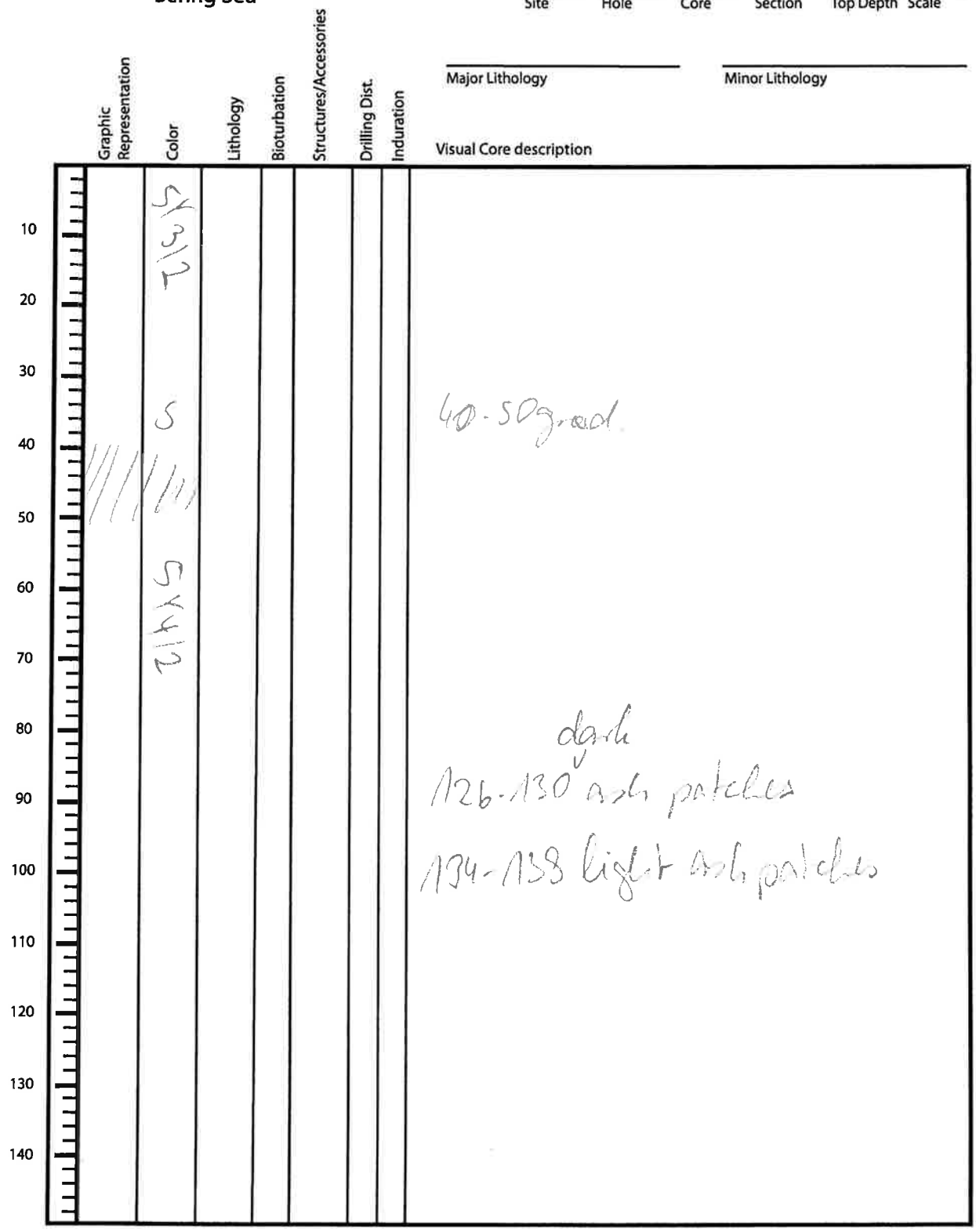


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 | A | 39 | 4 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

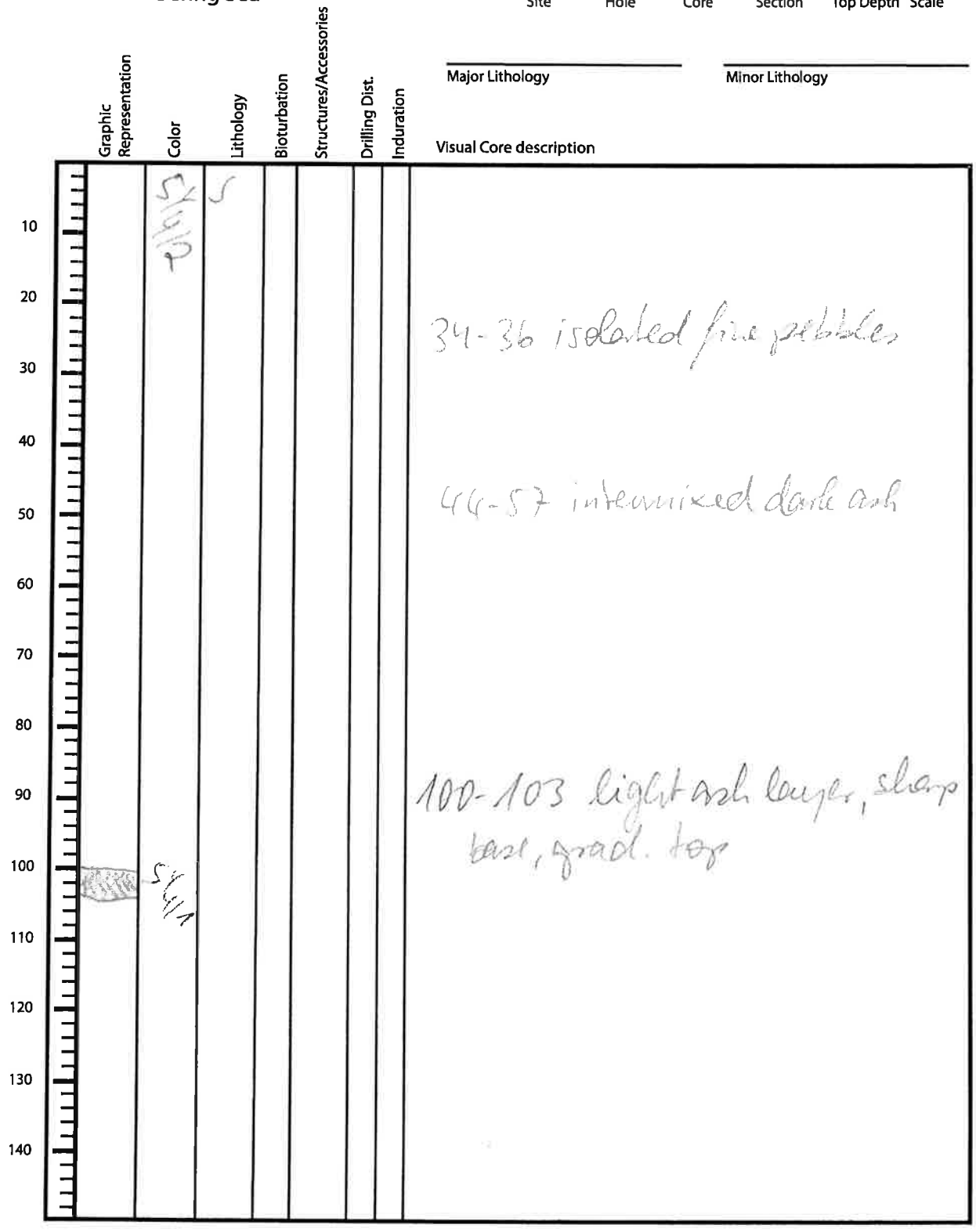


Observer: _____ Date: _____

Expedition 323
Bering Sea

1342 A 33 5 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____

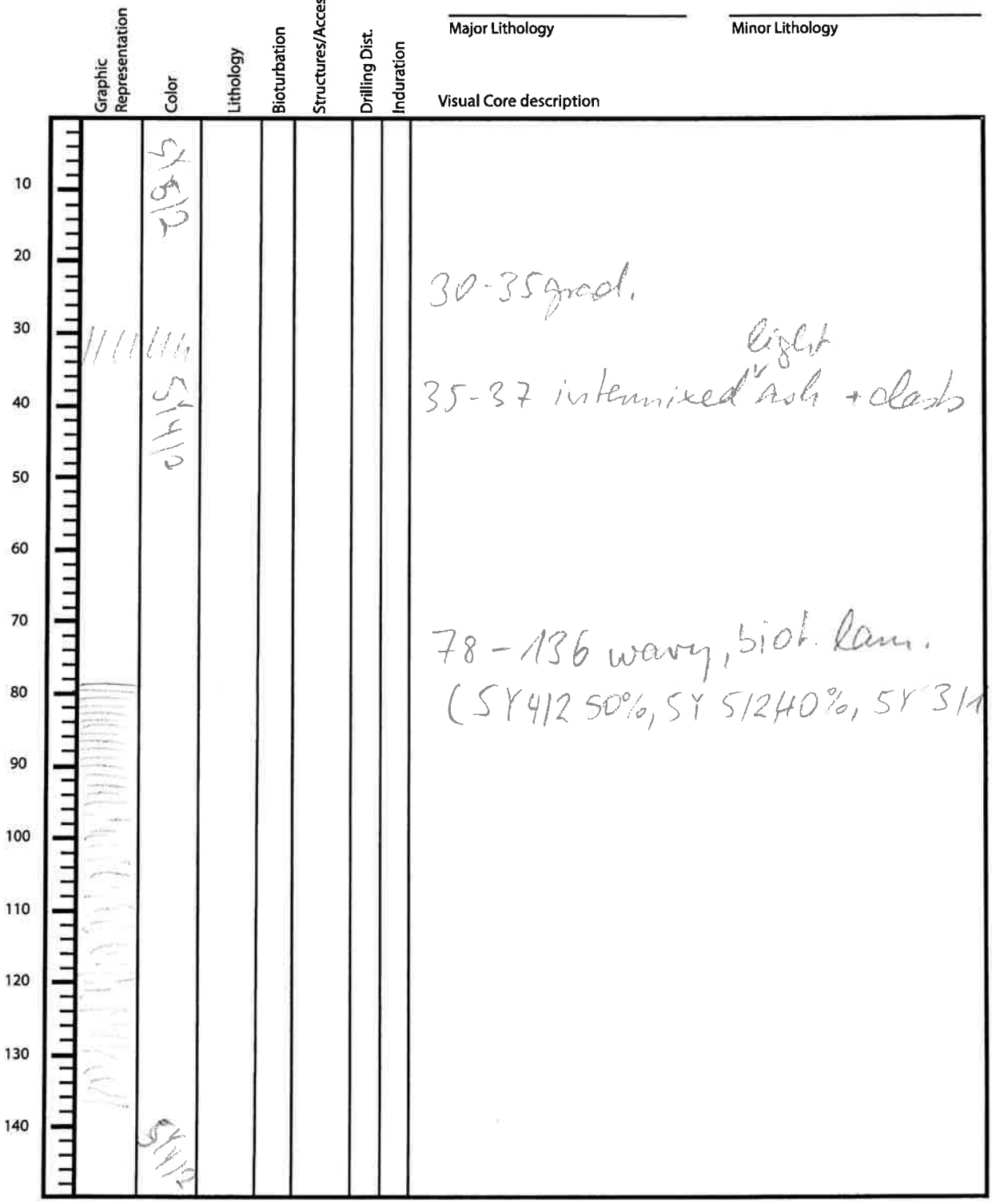


Observer: ____ Date: ____

Expedition 323
Bering Sea

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

Major Lithology | Minor Lithology



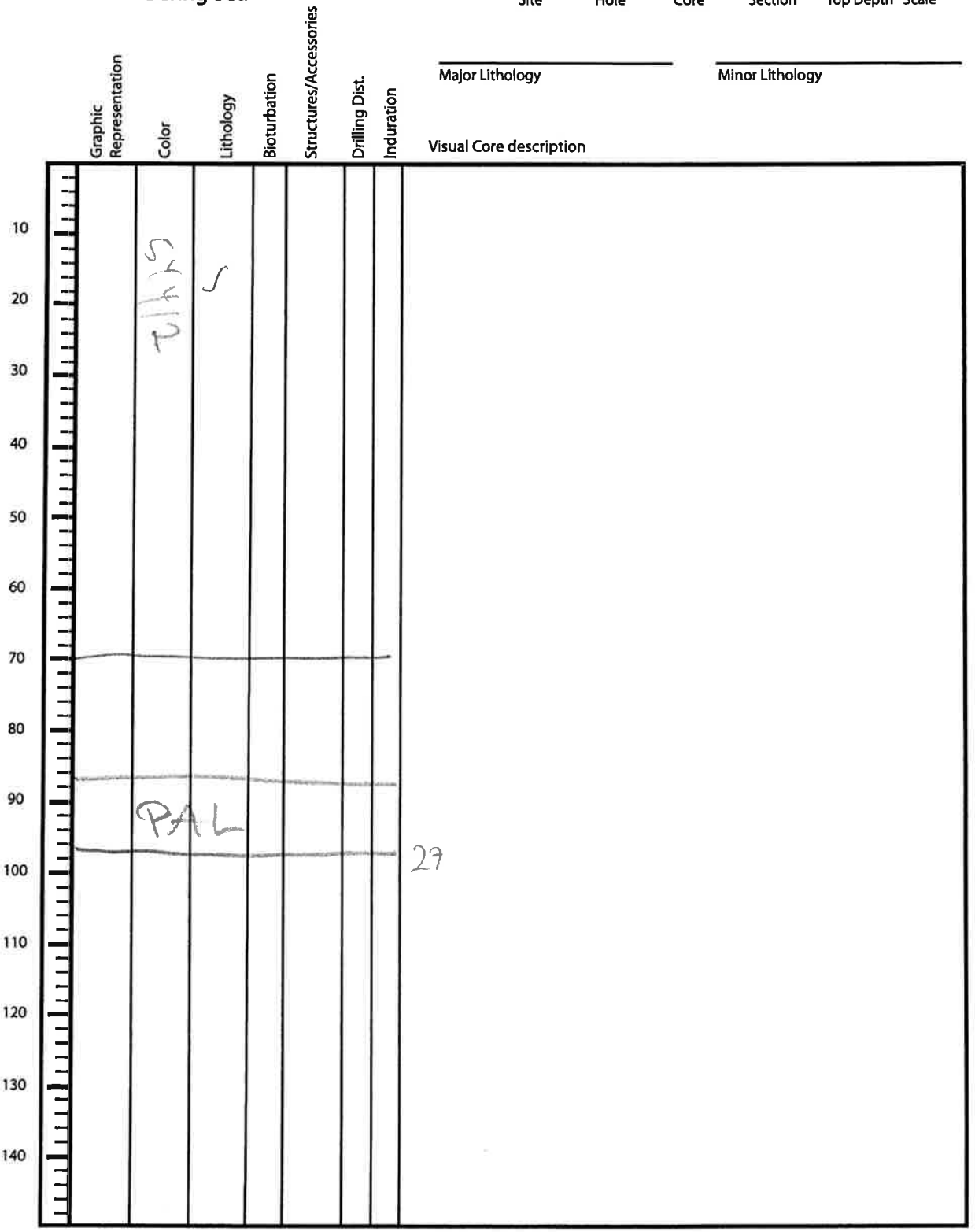
Observer: _____ Date: _____

Expedition 323
Bering Sea

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

Major Lithology

Minor Lithology



Observer: _____ Date: _____

✓ JM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	Diatom ooze

Observer	

Percent Texture		
Sand	Silt	Clay

Comments: Main litho Copy

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

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1340	A	40	H	5	50	50

Sediment/Rock Name	diatom ooze	Observer	MSC

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
	Glauconite
	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
	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	Interval (cm) Bottom
323	U1340	A	40	H	6	37	37

Sediment/Rock Name	Diatom Ooze

Observer	MSC

Percent Texture		
Sand	Silt	Clay

Comments: Main Lithology

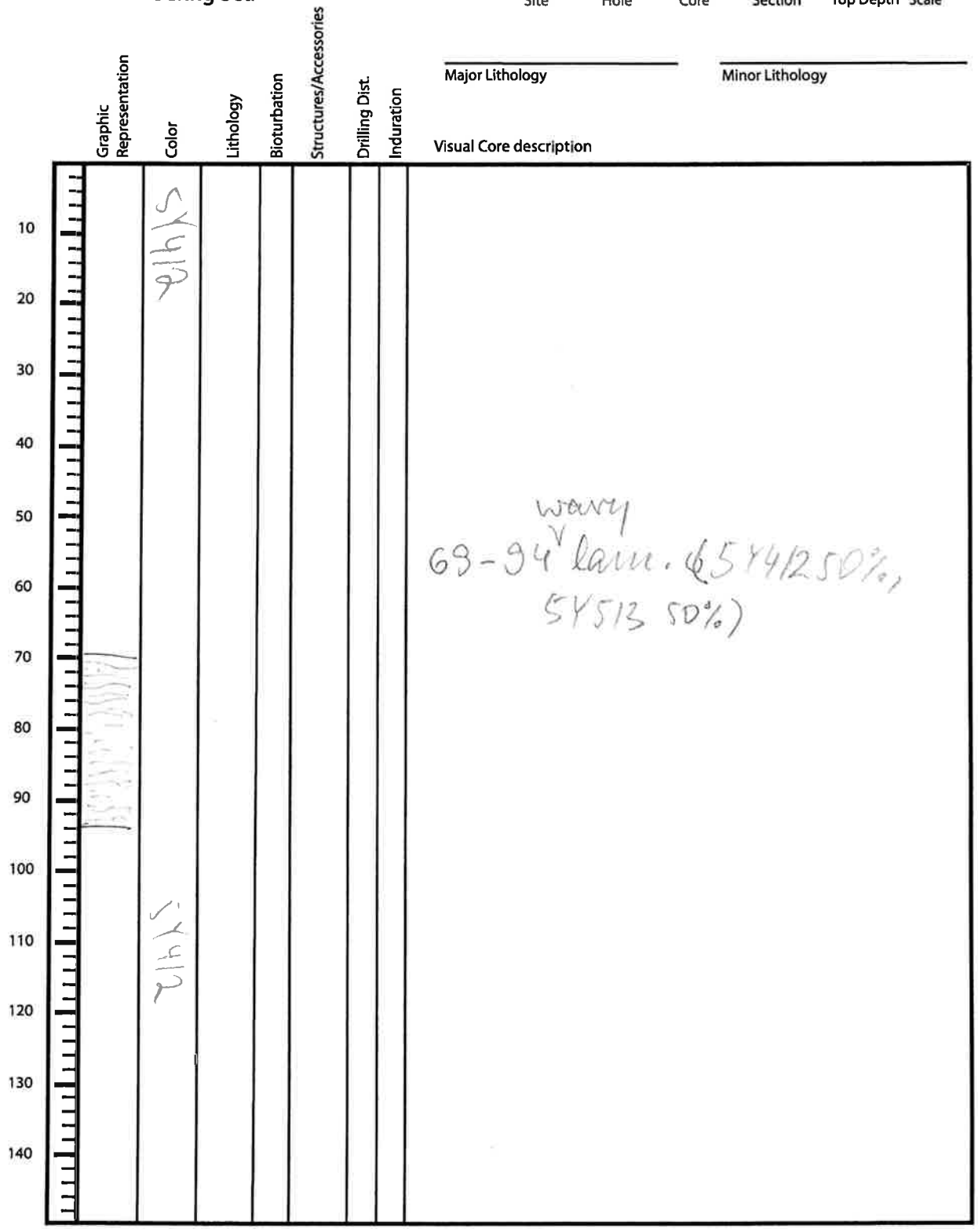
Percent	Component
6	**SILICICLASTIC GRAINS/MINERAL**
	Framework minerals
3	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic 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 Site | A Hole | 40 Core | 1 Section | ____ Top Depth | ____ Scale

Major Lithology ____ Minor Lithology ____

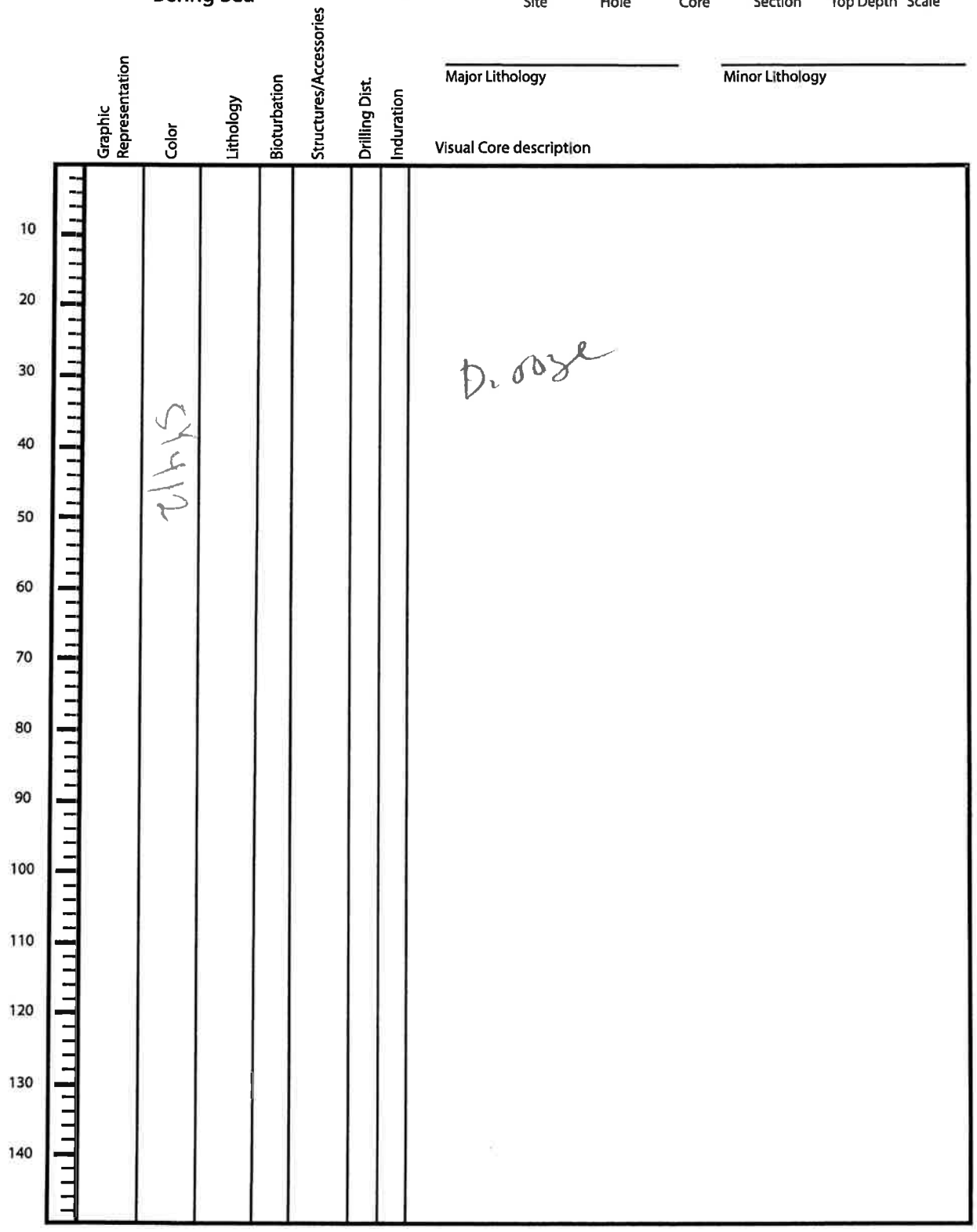


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 40 2 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____



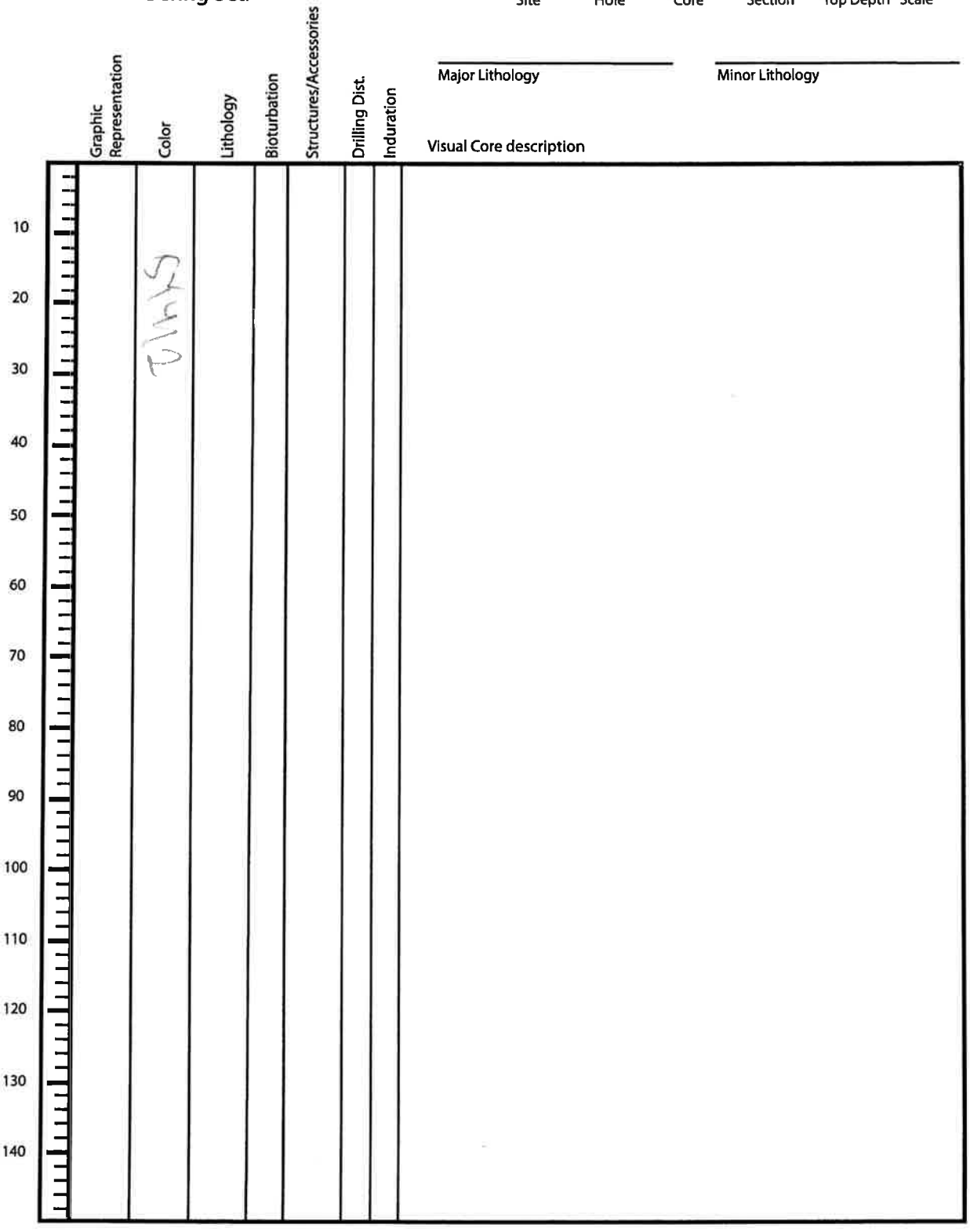
Observer: ____ Date: ____

Expedition 323
Bering Sea

1340	A	40	3		
Site	Hole	Core	Section	Top Depth	Scale

Major Lithology

Minor Lithology

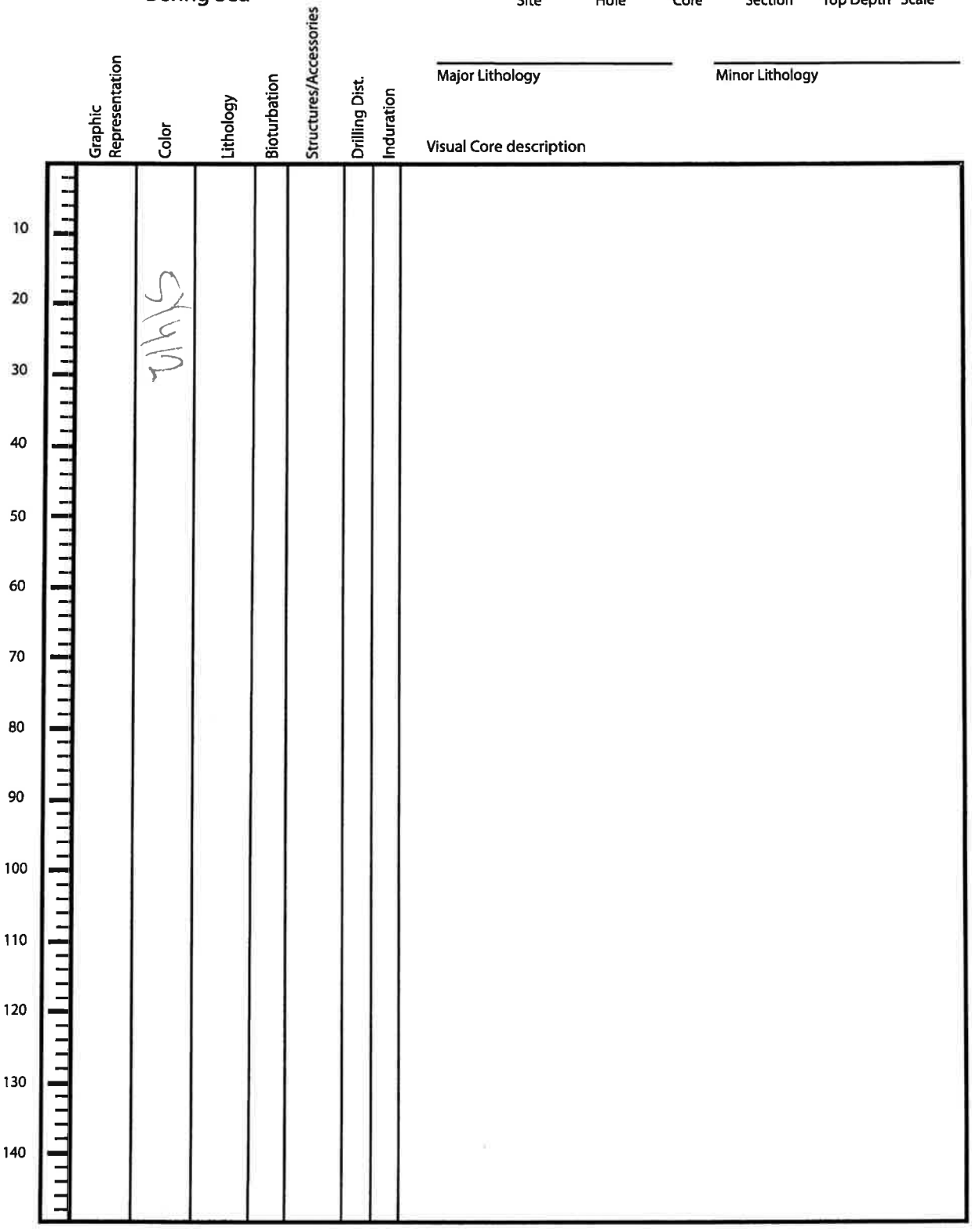


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 | A | 4D | 4 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

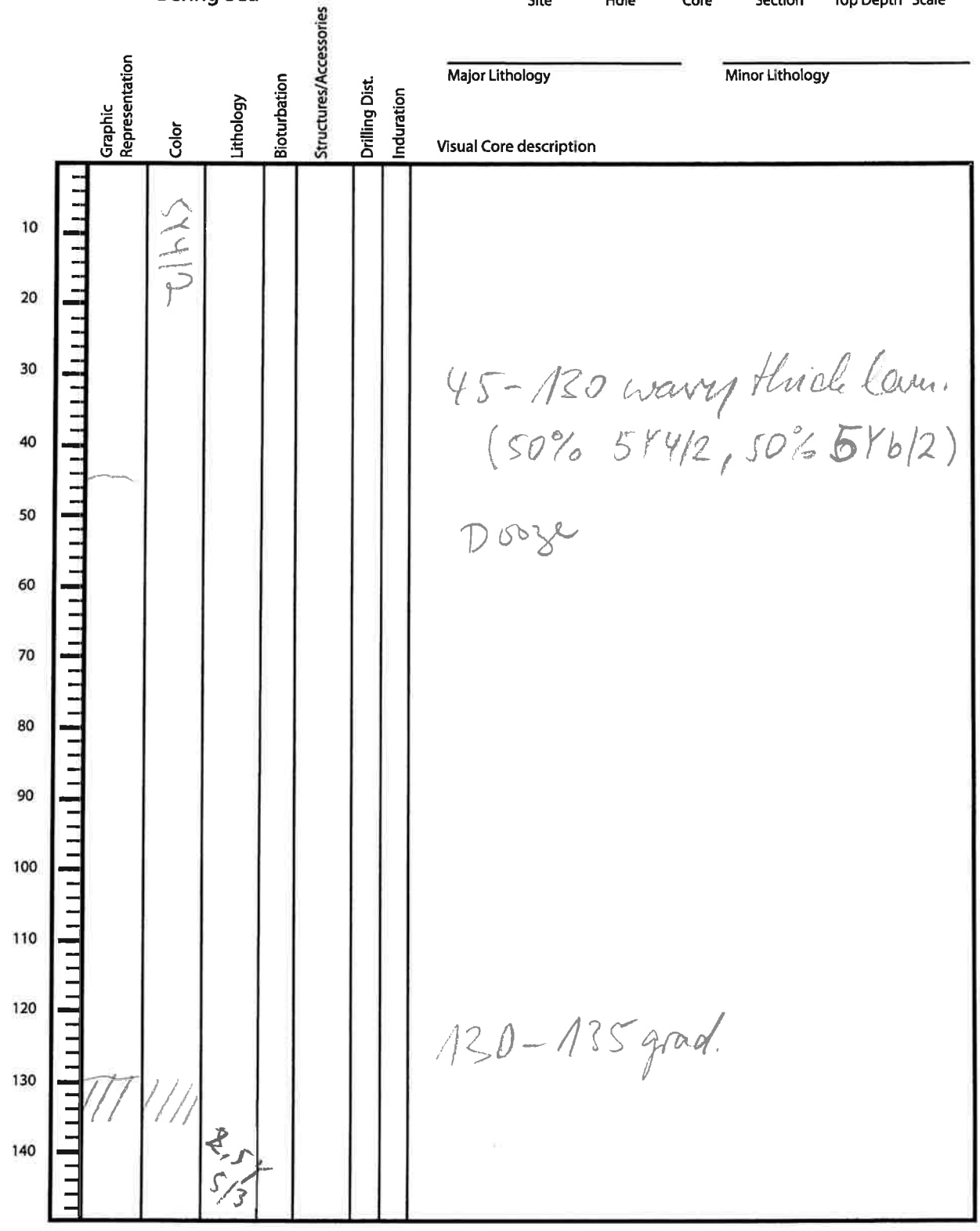


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 | A | 40 | 5 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

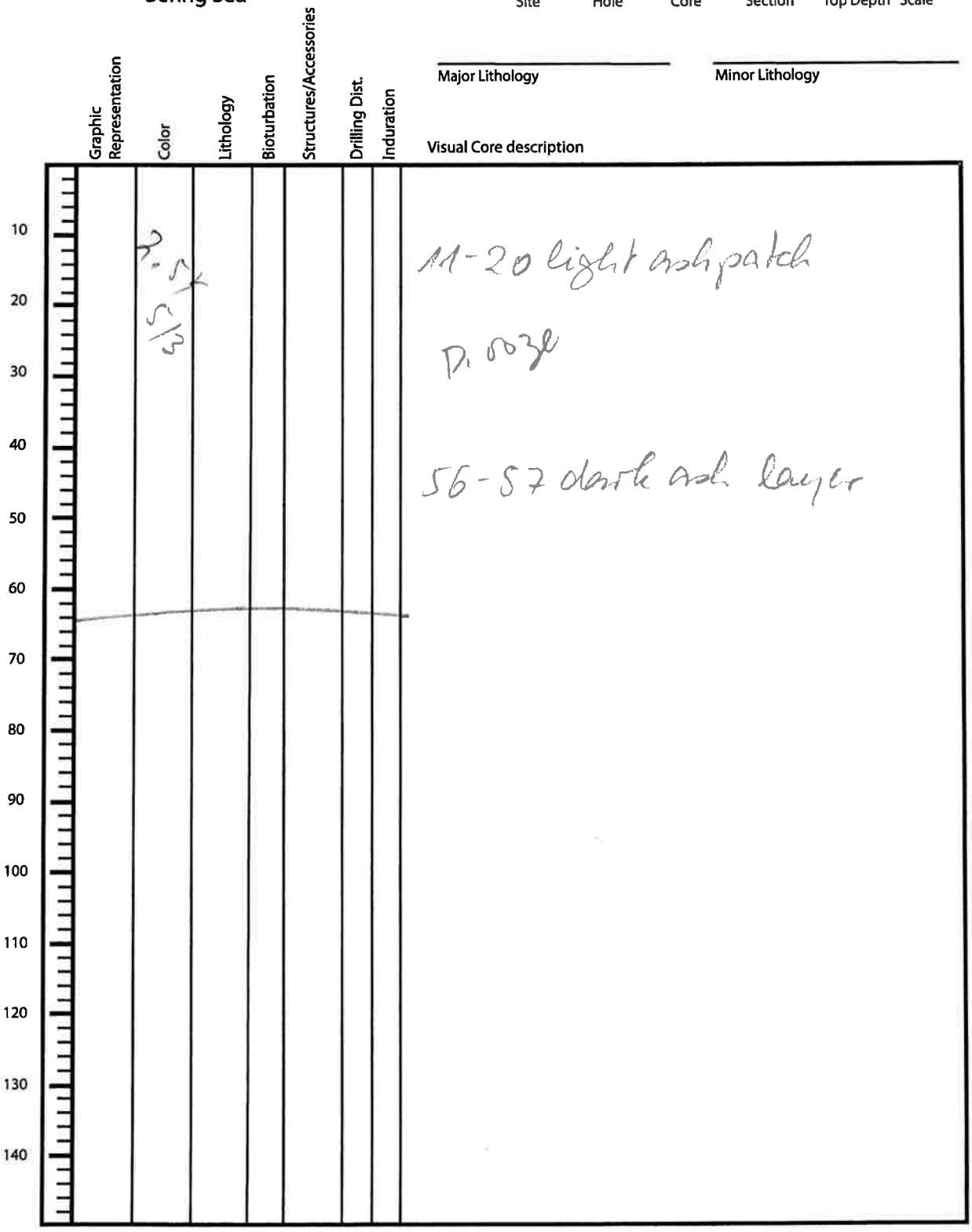


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 | A | 40 | 6 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology



Observer: _____ Date: _____

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1340	A	41	H	2	126	126

Sediment/Rock Name	~~Ooze-chalk~~ 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 authigenic ☐
	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
	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	Interval (cm) Bottom
323	U1340	A	41	H	1	4	4

Sediment/Rock Name	Diatom ooze	Observer	

Percent Texture		
Sand	Silt	Clay

Comments: Reddish Ramina

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
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
2	Pyrite
	Magnetite
	Fe-oxide
5	Carbonates authigenic
	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
	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	41	H	1	40	40

Sediment/Rock Name	Diatom ooze / Authi-carb-rich	Observer	

Percent Texture		
Sand	Silt	Clay

Comments: white lamina

Percent	Component
17	**SILICICLASTIC GRAINS/MINERAL**
	Framework minerals
2	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
	aragonite?
15	Carbonates authigenic (needles and)
	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
38	Centric
40	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	Interval (cm) Bottom
323	U1340	A	41	H	1	123	123

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
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
6	Carbonates authigenic ◻
	Calcite
	Dolomite
10	**VOLCANICLASTIC GRAINS**
	Crystal grain
10	Vitric grain
	Lithic grain

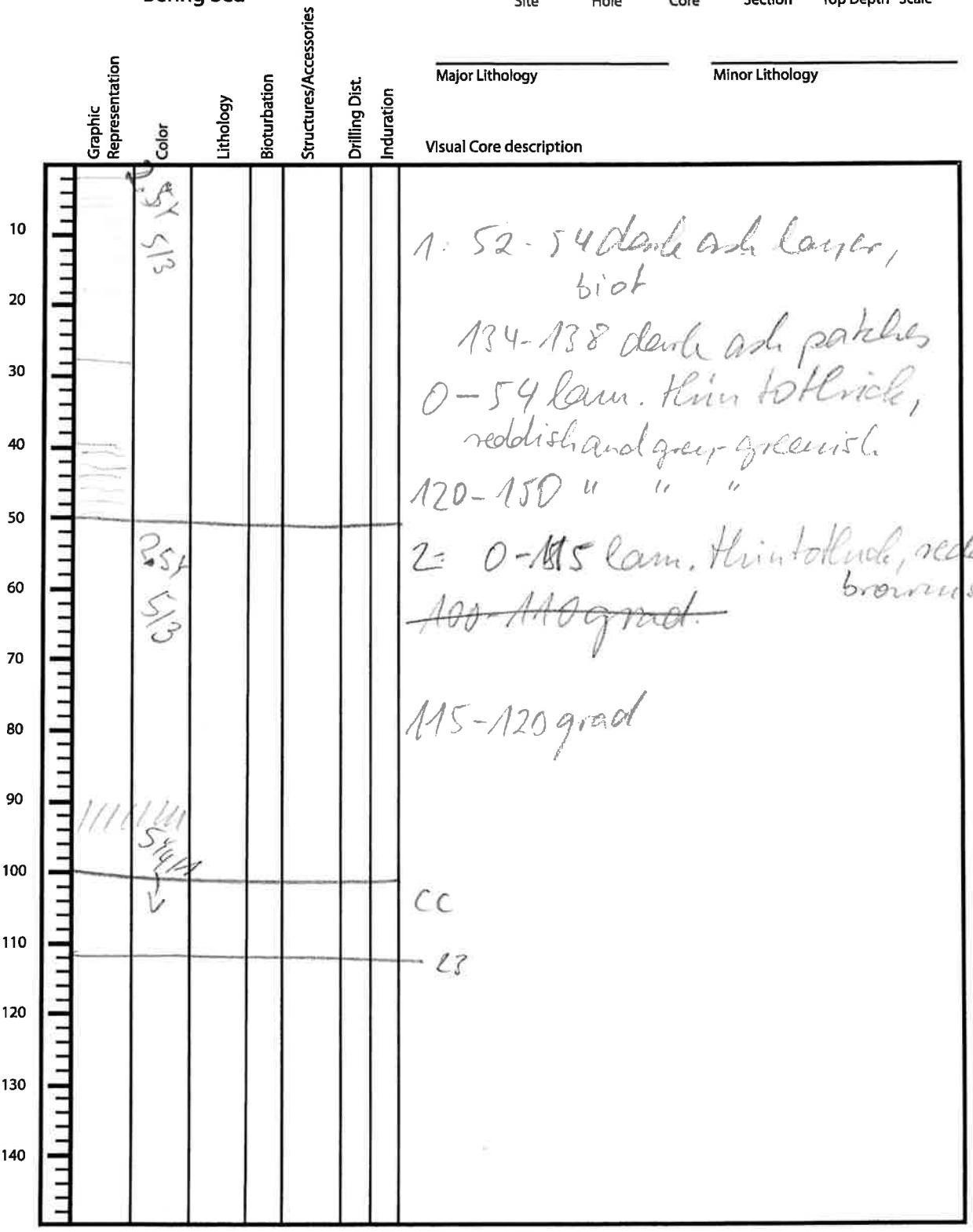
Percent	Component
81	**BIOGENIC GRAINS**
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
60	Centric
21	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge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

Expedition 323
Bering Sea

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

Major Lithology

Minor Lithology

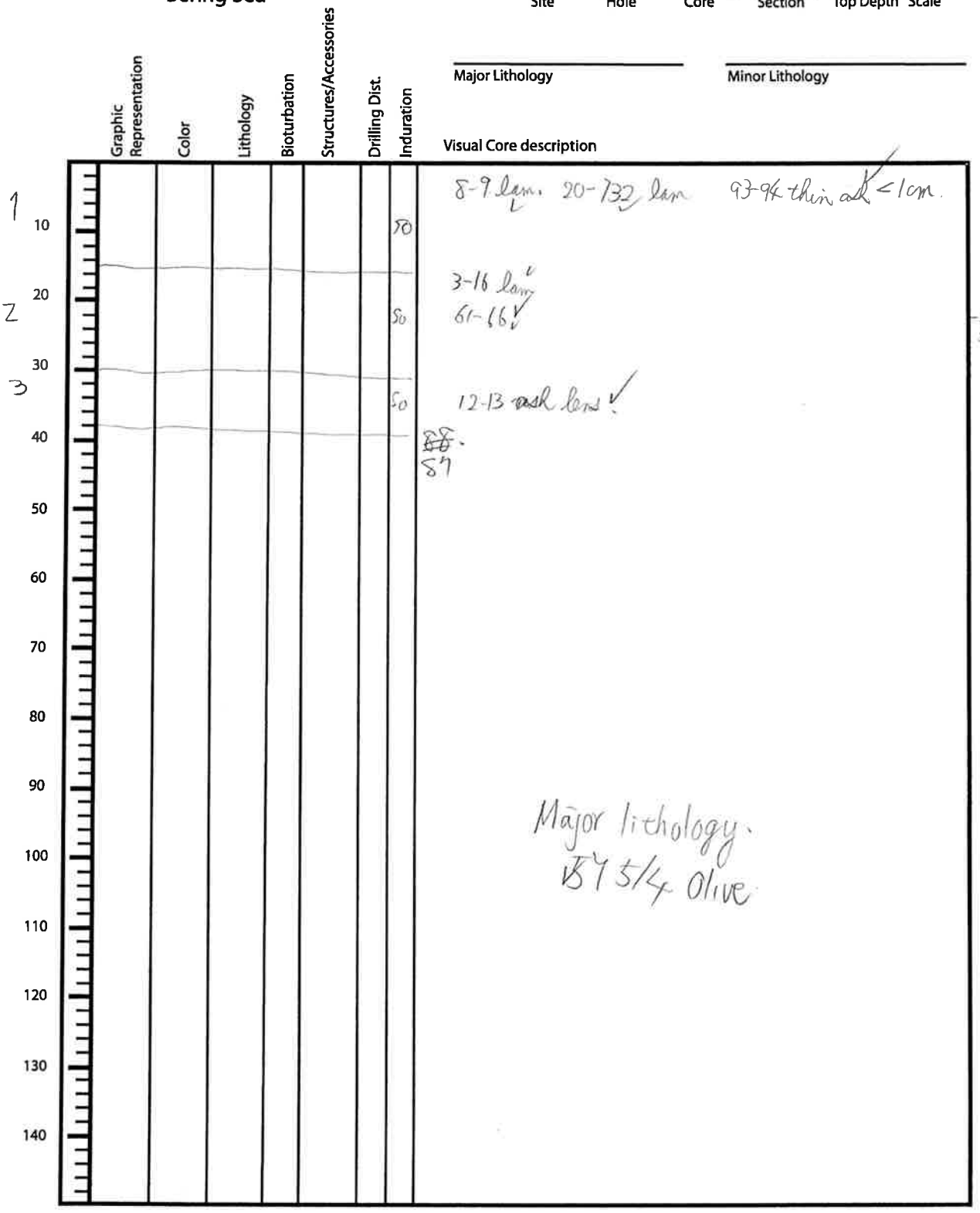


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 | A | 42 | 2 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology



Observer: _____ Date: _____

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	Diatom ooze

Observer	Beth

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
10	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

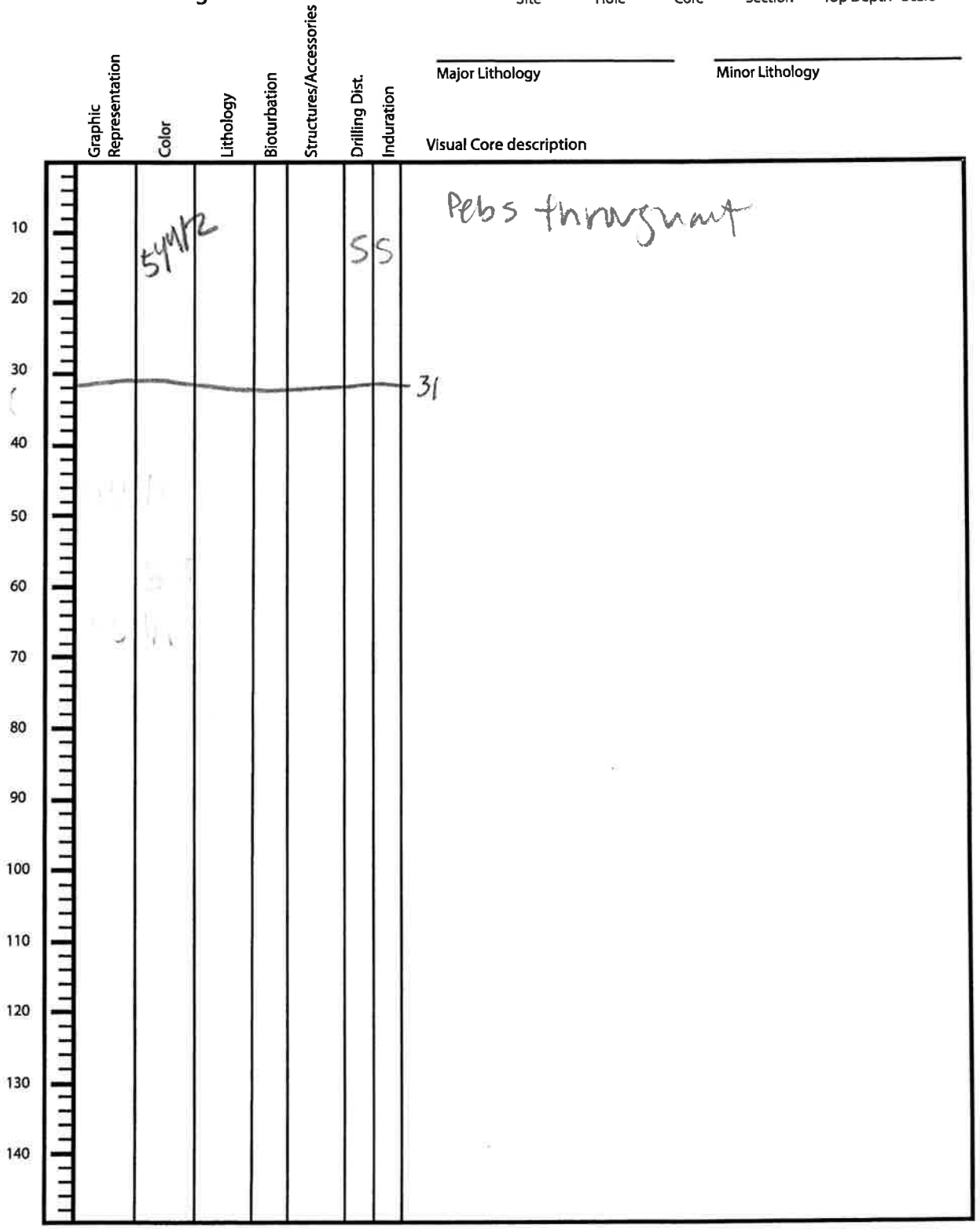
Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
	Centric
50	Pennate
19	*Chaetoceros* Resting Spores
	Silicoflagellates
1	Sponge spicules
	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

Major Lithology

Minor Lithology



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Observer: _____ Date: _____

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	1340	A	44	X	CC	15	

Sediment/Rock Name	diatom silt

Observer	akira

Percent Texture		
Sand	Silt	Clay

Comments:

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

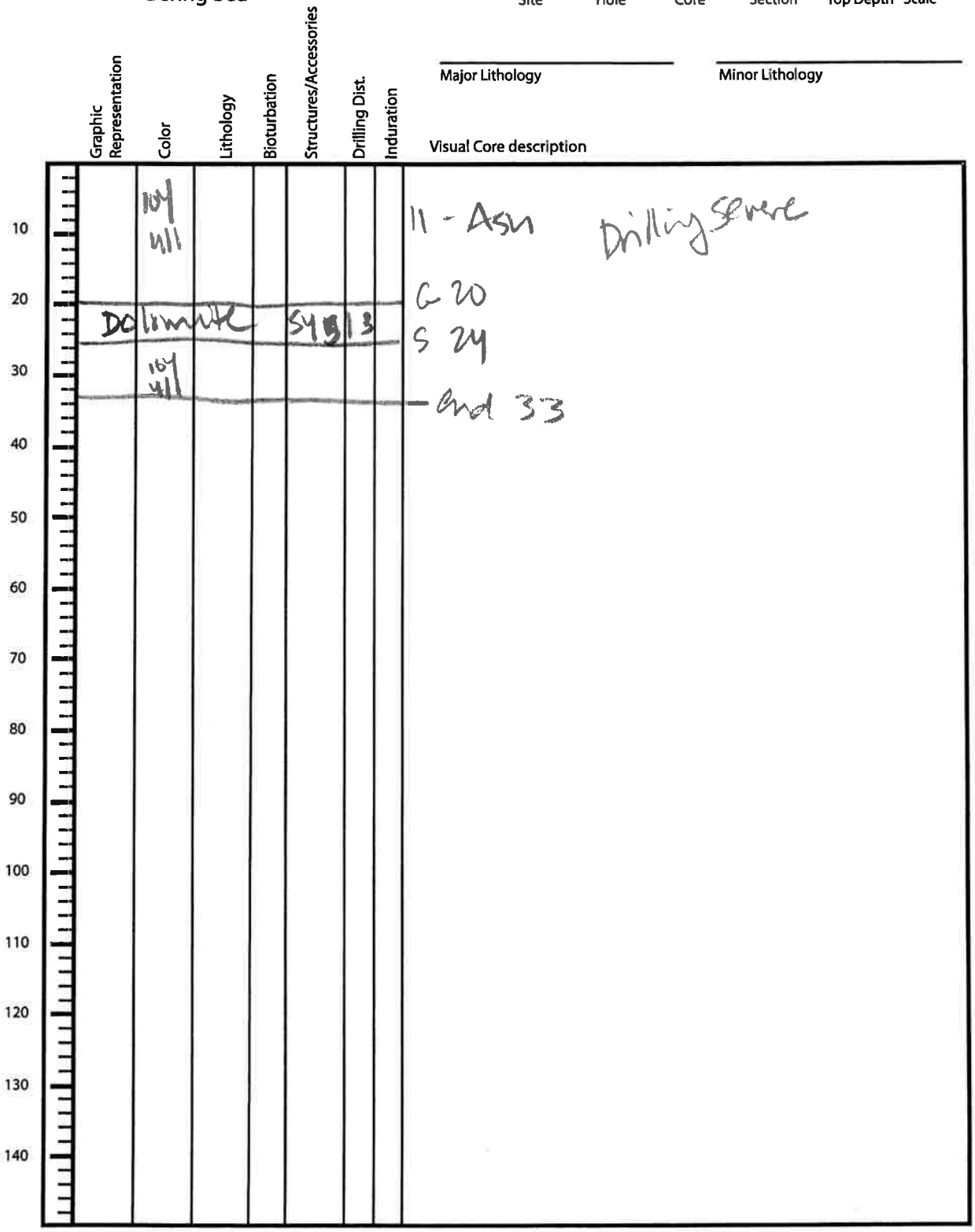
Percent	Component
	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
59	Diatoms 20
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules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

Expedition 323
Bering Sea

U1340 A 4SX CC
Site Hole Core Section Top Depth Scale

Major Lithology

Minor Lithology



Observer: _____ Date: _____

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	1340	A	45	X	1A	10	

Sediment/Rock Name	diatom ooze. (dolomite rich)

Observer	Akira

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
	Glauconite
	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

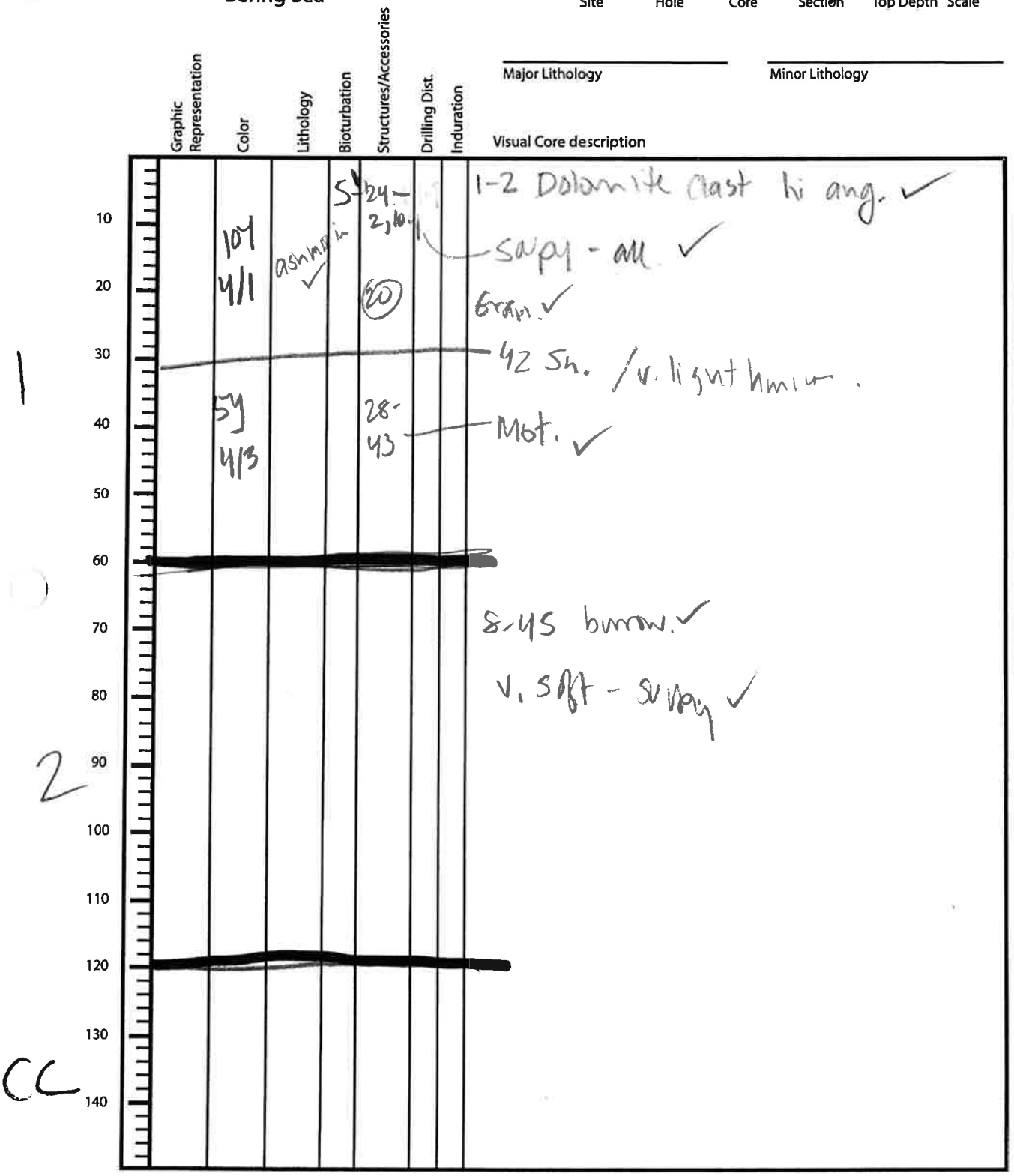
Percent	Component
	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
65	Diatoms ✓ 15
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
8	Sponge spicules ✓ 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 1,2CC
Site Hole Core Section Top Depth Scale

Major Lithology

Minor Lithology



Observer: _____ Date: _____

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
	1340	A	46X		1	30cm	

Sediment/Rock Name	DIATOM CLAY

Observer	LWA

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
30	X 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
5%	X 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

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	DIATOM OOZE	Observer	LWB

Percent Texture		
Sand	Silt	Clay

Comments:

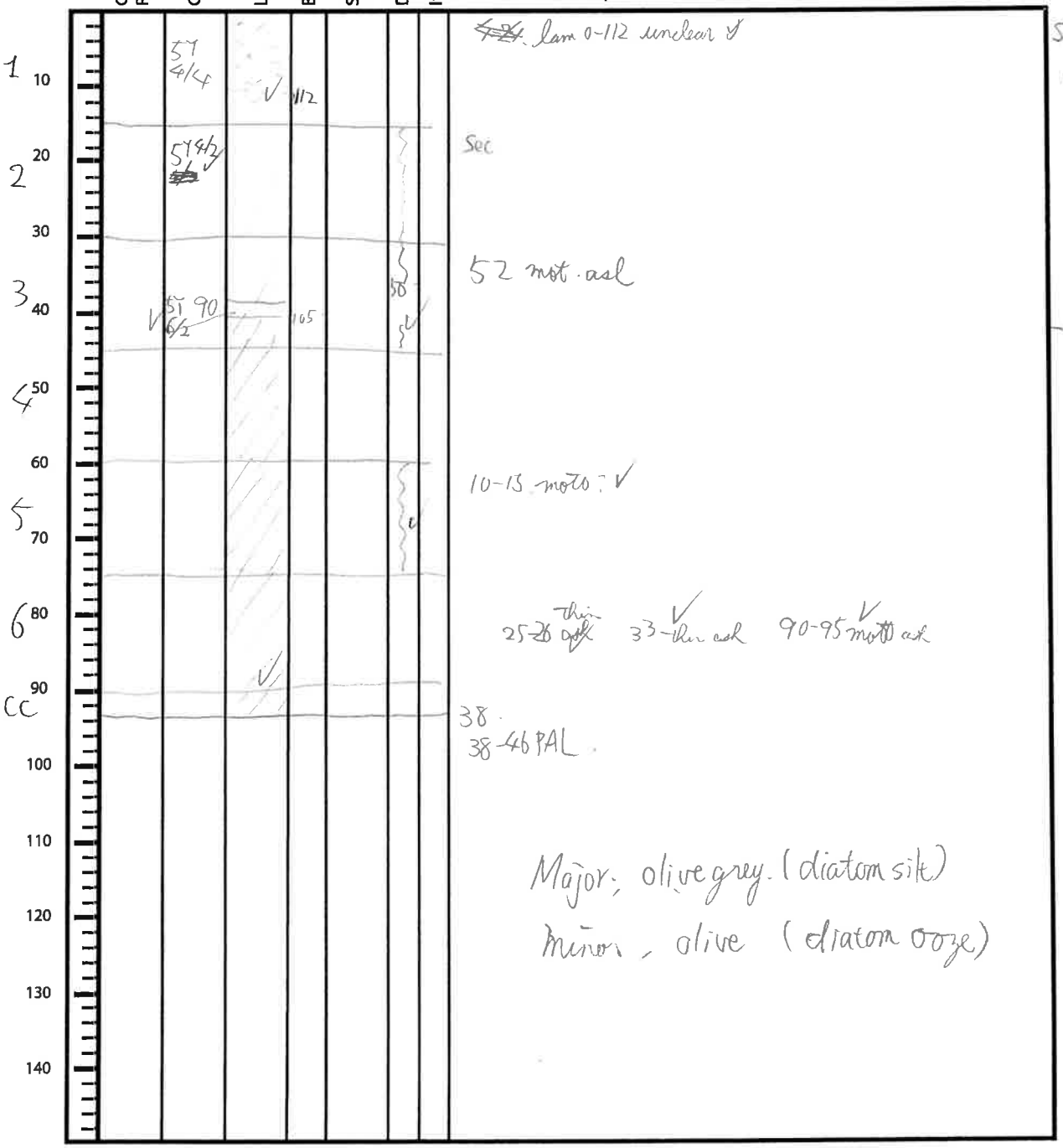
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
	Quartz
5%	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	< Micas
	Biotite
	Muscovite
10%	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic 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

Major Lithology ____ Minor Lithology ____



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	52cm	

Sediment/Rock Name	Diatom ooze

Observer	Beth

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

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

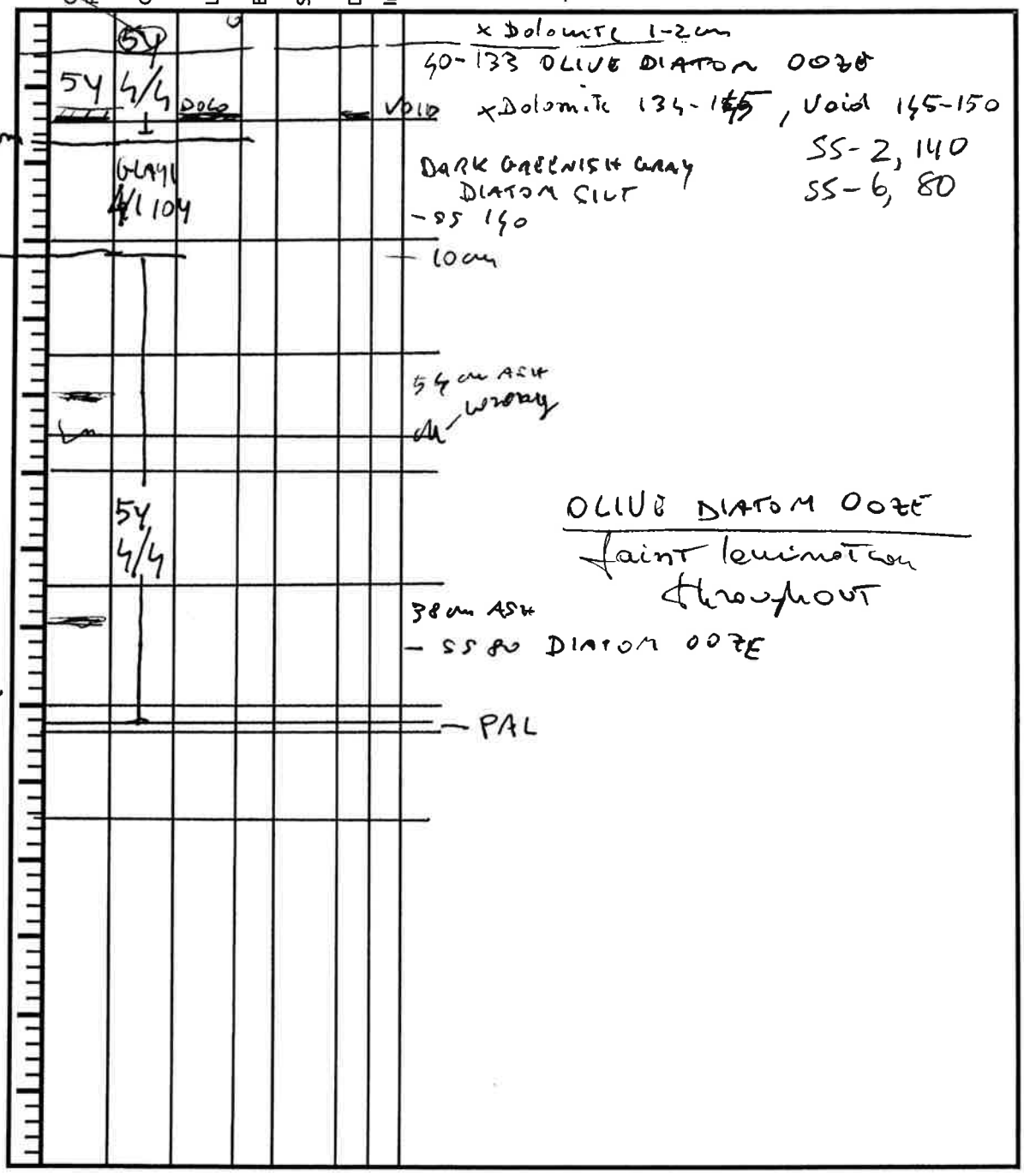
Expedition 323
Bering Sea

1340 A 48X
Site Hole Core Section Top Depth Scale

DIATOM SILT
GRAY 4/1 10Y

Major Lithology

Minor Lithology



SS-2, 140
SS-6, 80

Observer: _____ Date: _____

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Comments:

Percent Texture		
Sand	Silt	Clay
	90	10

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

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
323	U1340	A	48	X	6A	80cm	

Sediment/Rock Name	Diatom ooze

Observer	Beth

Percent Texture		
Sand	Silt	Clay

Comments:

Major lithology

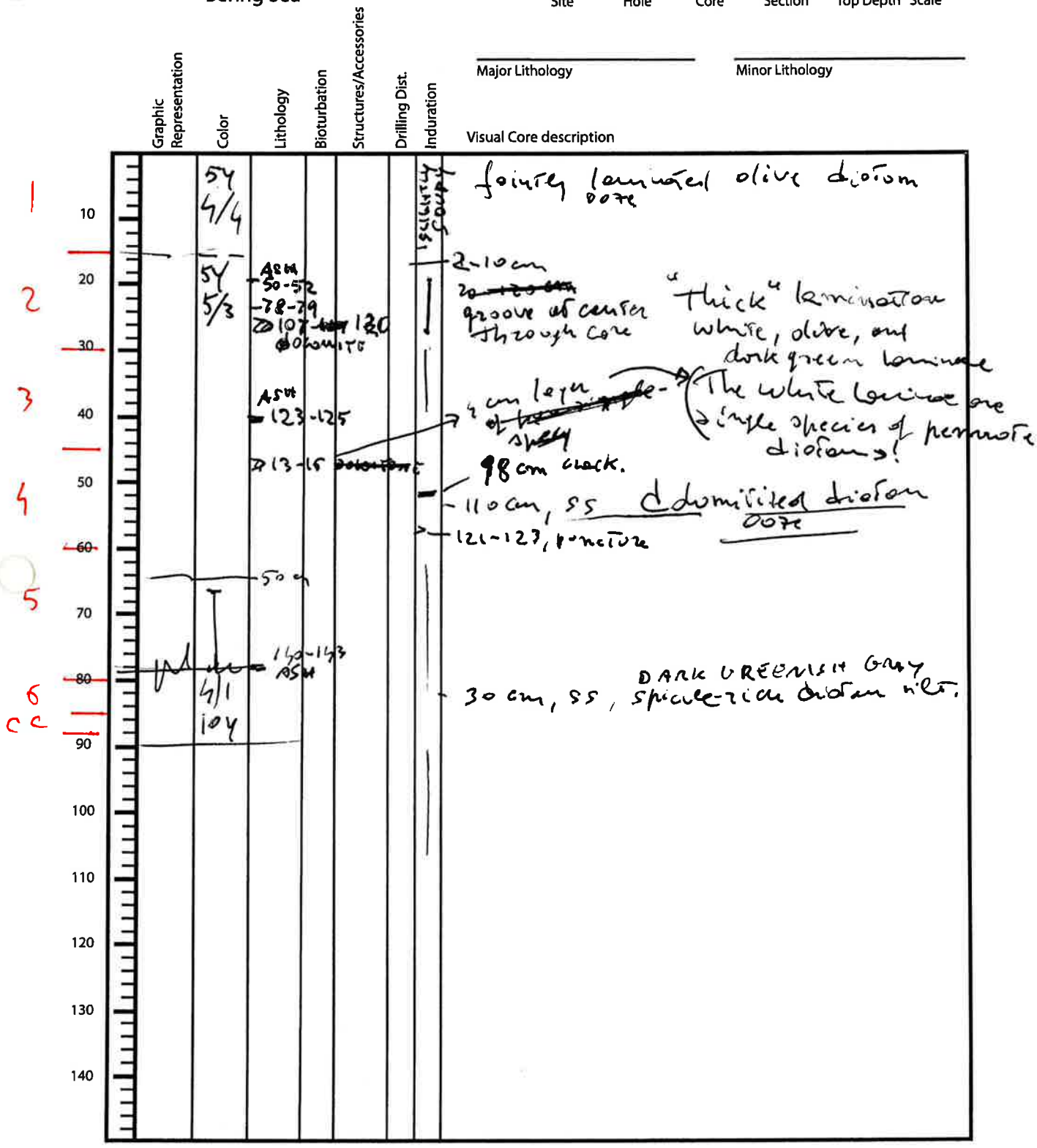
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
10	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
2	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
3	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic 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
	Chaetoceros 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

Major Lithology | Minor Lithology



Observer: _____ Date: _____

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	Dolomotized diatom ooze

Observer	Beth

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

X

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
323	U1340	A	49	X	6A	30cm	

Sediment/Rock Name	spicule-rich diatom silt

Observer	Beth

B - 50
S - 35
V - 15

Comments:

Percent Texture		
Sand	Silt	Clay

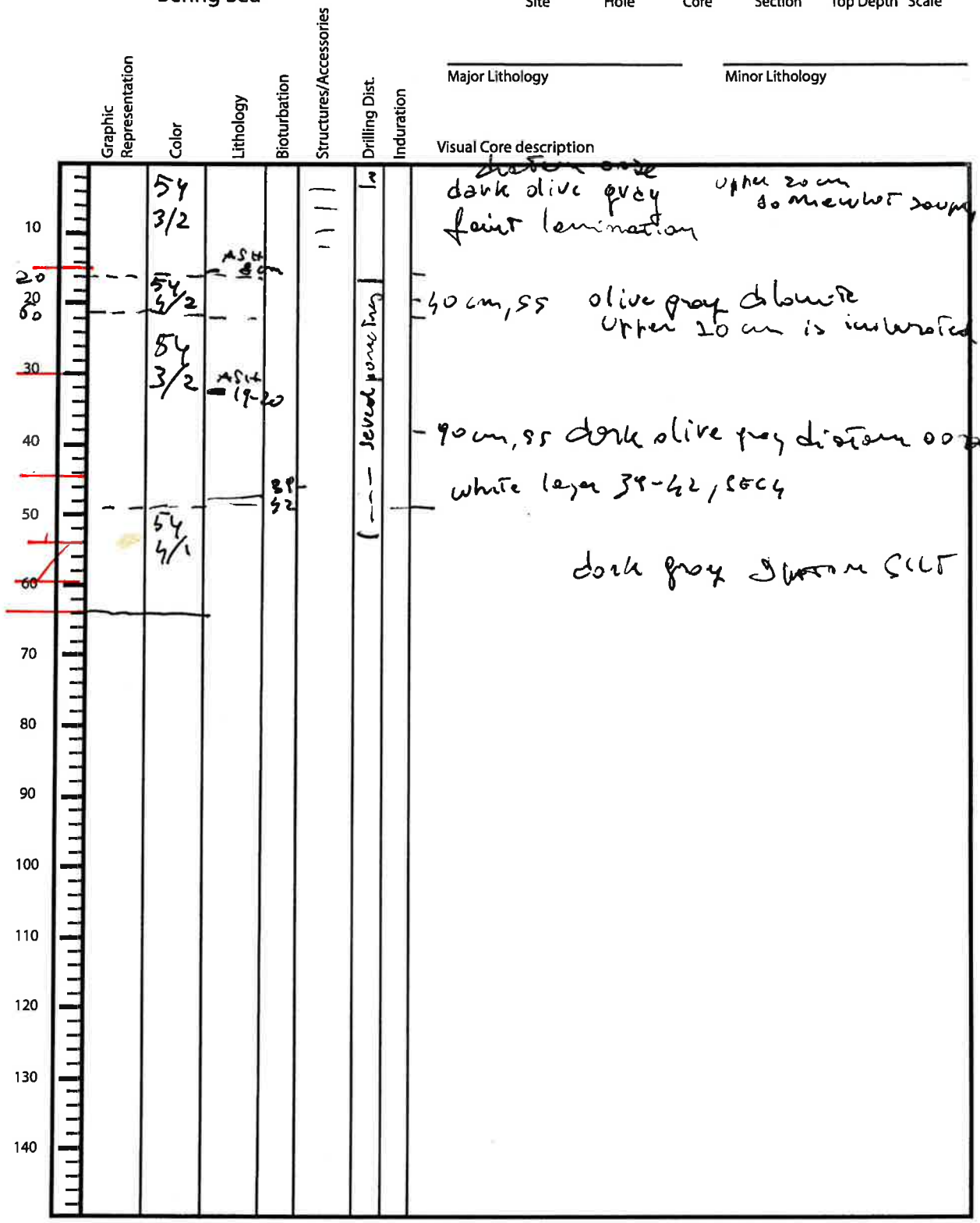
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
10	Quartz
15	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic 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

Major Lithology ____ Minor Lithology ____



Observer: ____ Date: ____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	diatom ooze.	Observer	Alexia

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	Interval (cm) Bottom
323	1340	A	50	X	2	40	

Sediment/Rock Name	bottom-set dolomite.	Observer	Akira

Percent Texture		
Sand	Silt	Clay

Comments:

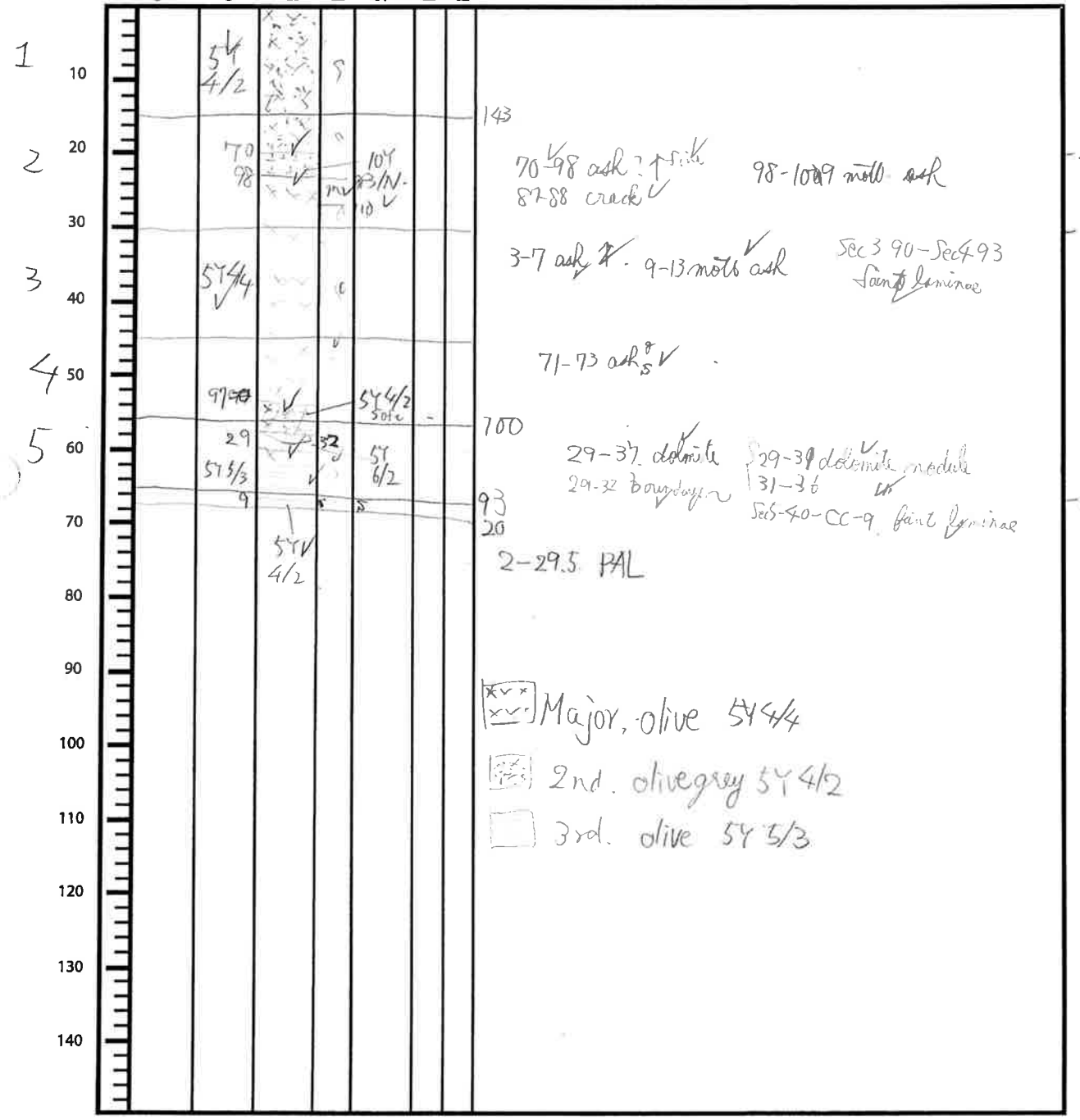
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
3	Quartz 1
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	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

Major Lithology | Minor Lithology



Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
323	U1340	A	51	X	5	70 cm	

Sediment/Rock Name	Diatom ooze

Observer	G. B.

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
	Glauconite
	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
90	X Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
3	X 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	U1340	A	51	X	2A	120cm	

Sediment/Rock Name	Diatom ooze

Observer	Bex

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
3	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	

Sediment/Rock Name	Diatom ooze

Observer	Beth

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
	Glauconite
	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

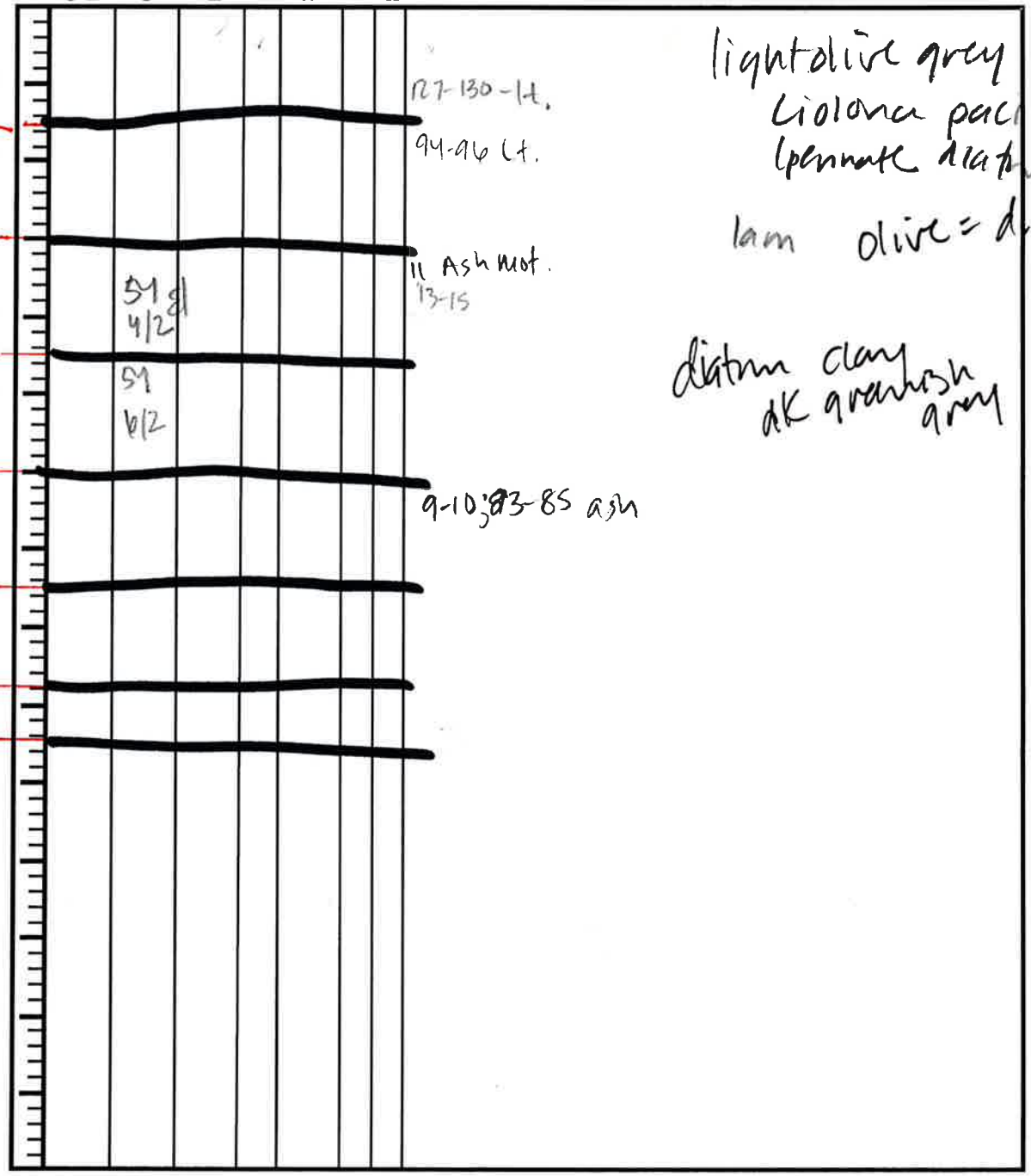
Expedition 323
Bering Sea

1340 A 52X A1
Site Hole Core Section Top Depth Scale

Major Lithology

Minor Lithology

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



Observer: _____ Date: _____

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IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
	340	A	52	R	1	110	cm

Sediment/Rock Name	DIATOM ~~SILT~~ CLAY	Observer	WA

Percent Texture		
Sand	Silt	Clay

Comments: MAIN LITHOLOGY

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

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	DIATOM OOZE	Observer	

Percent Texture		
Sand	Silt	Clay

Comments: LIOLOMA PACIFICA White laminae

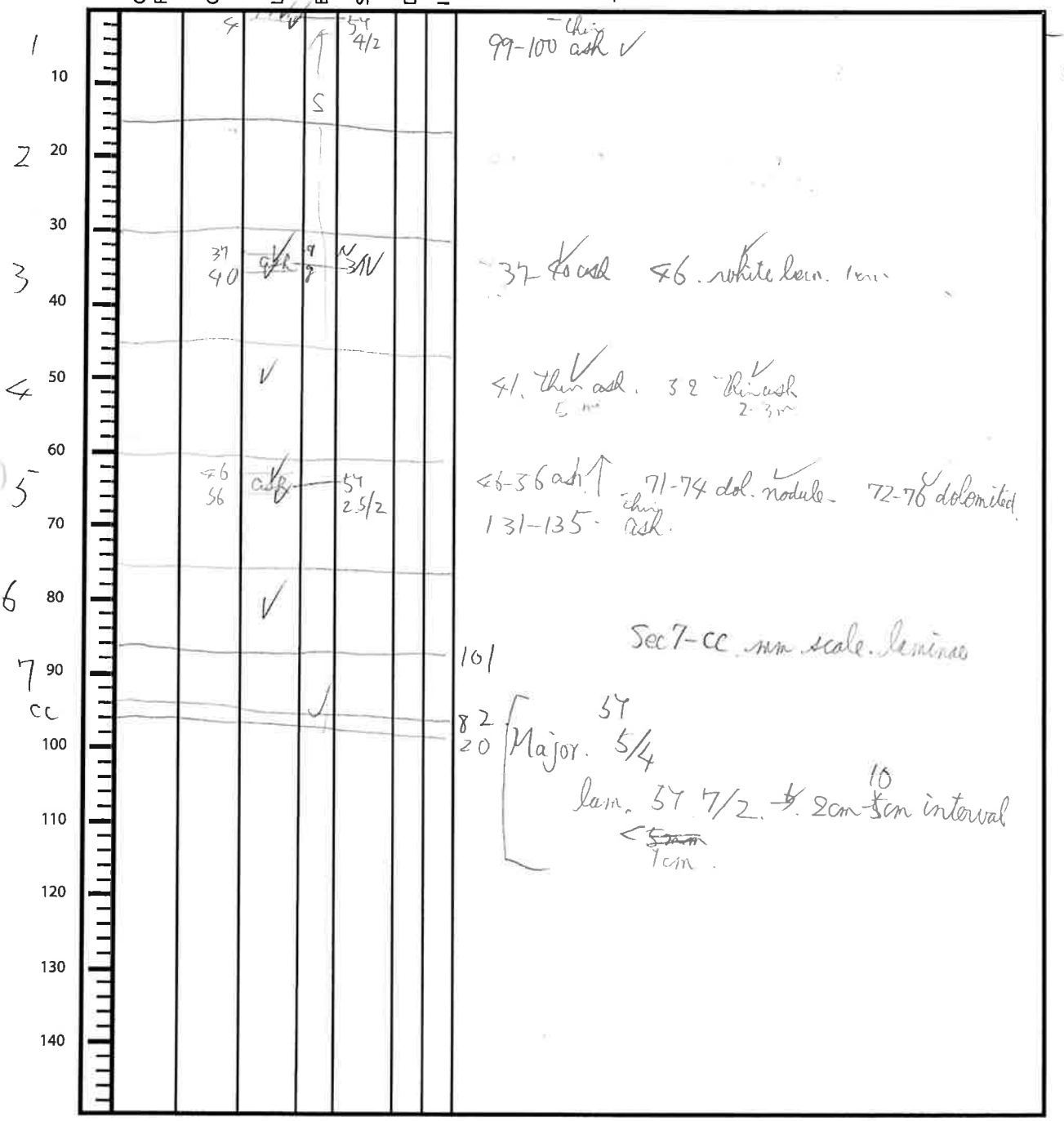
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	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
90 10%	Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
10%	LIOLOMA PACIFICA
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1340 . A . 53 ____ ____ ____ ____
Site Hole Core Section Top Depth Scale

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	33	X	1	2 cm	

Sediment/Rock Name	DIATOM CLAY	Observer	

Percent Texture		
Sand	Silt	Clay

Comments:

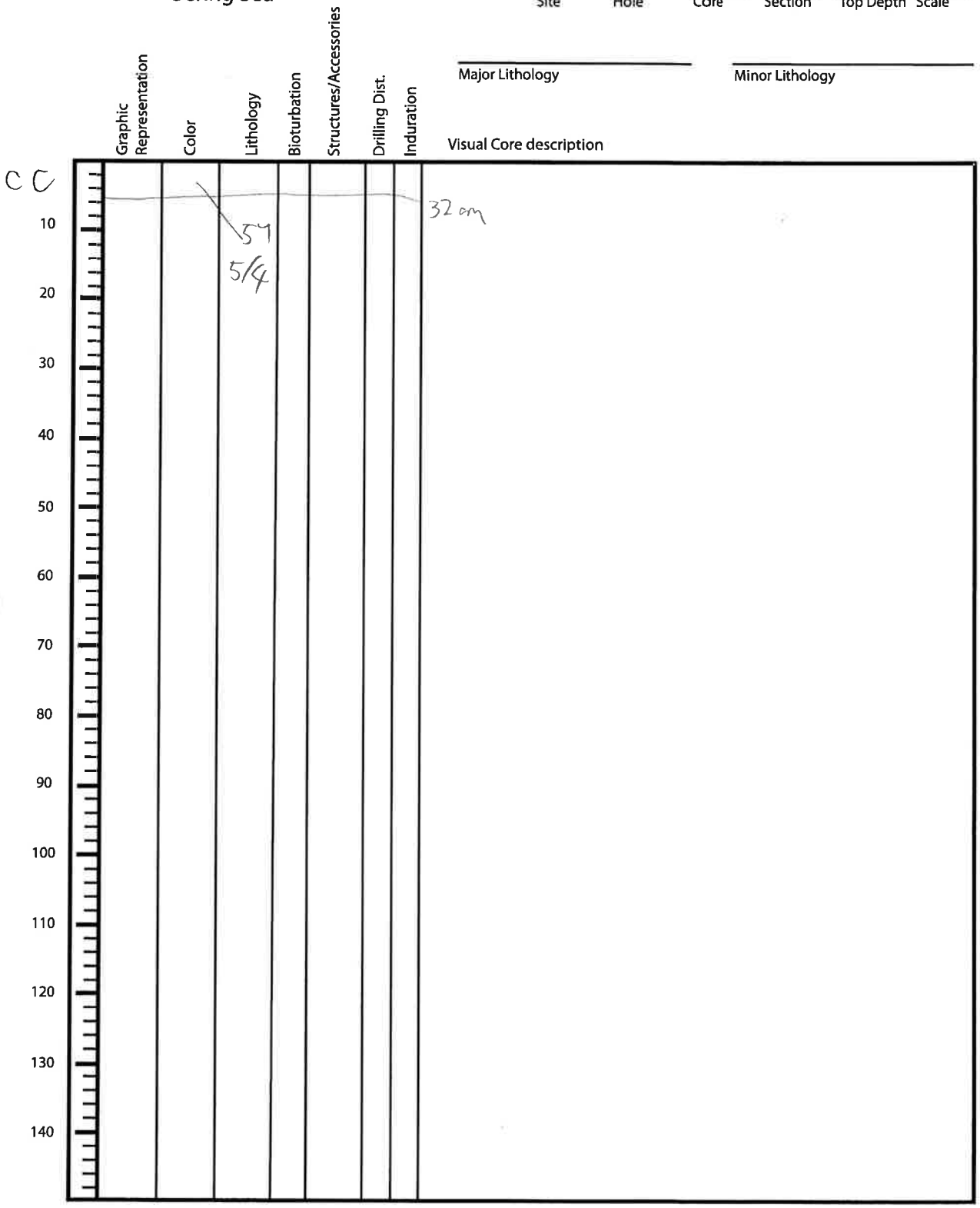
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
	Quartz
5%	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
5%	Micas
	Biotite
	Muscovite
30%	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic 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

Major Lithology | Minor Lithology

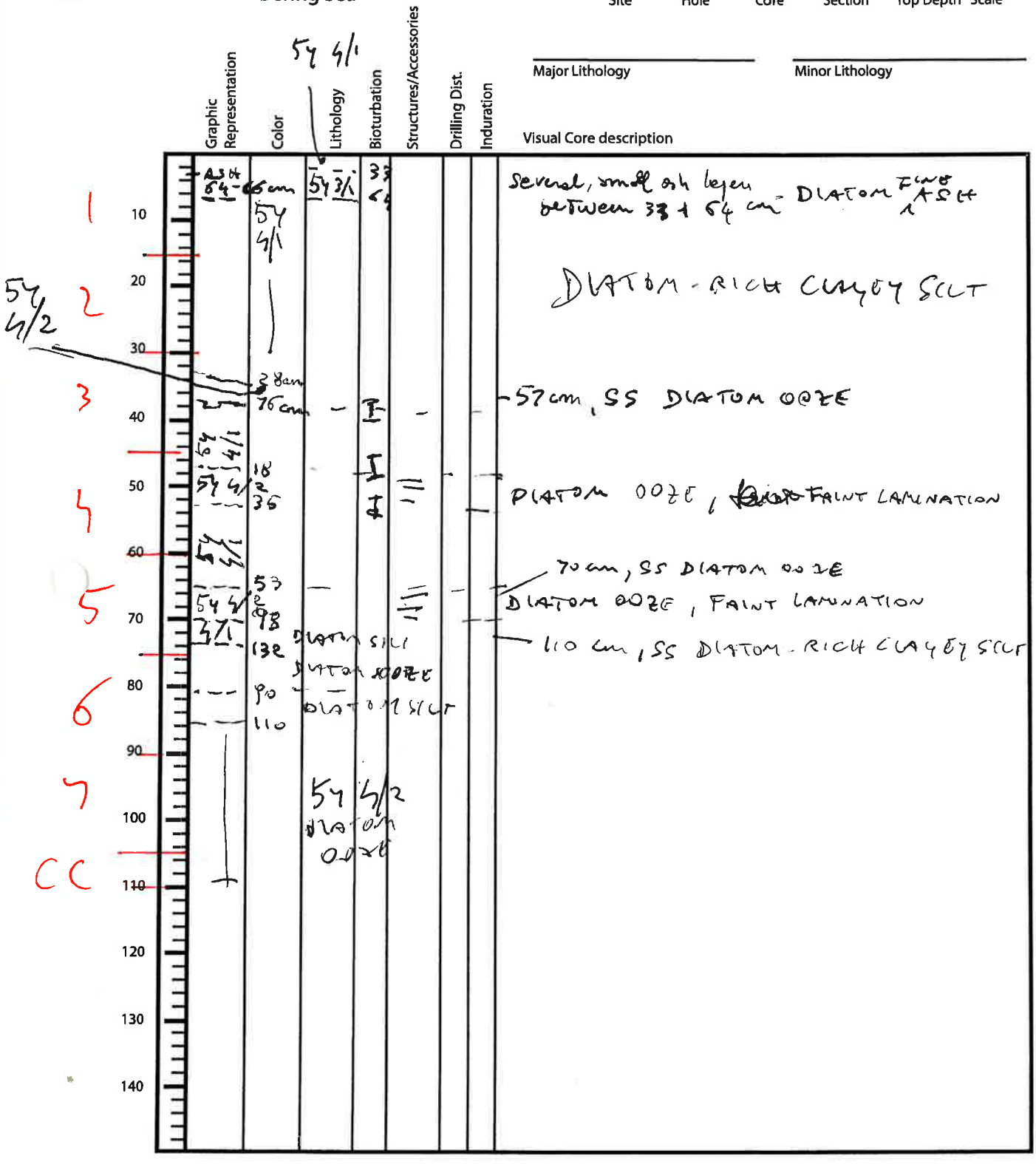


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 55X ✓
Site Hole Core Section Top Depth Scale

Major Lithology Minor Lithology



Observer: _____ Date: _____

X

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1340	A	55	X	3A	57cm	

Sediment/Rock Name	Diatom ooze	Observer	BeT

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
	Glauconite
	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	U1340	A	5S	X	SA	70cm	

Sediment/Rock Name	Diatom ooze

Observer	Beth

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
	Glauconite
	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

X

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1340	A	5S	X	5A	110 cm	

Sediment/Rock Name	Diatom-rich clayey silt

Observer	Be

Percent Texture		
Sand	Silt	Clay
	70	30

Comments:

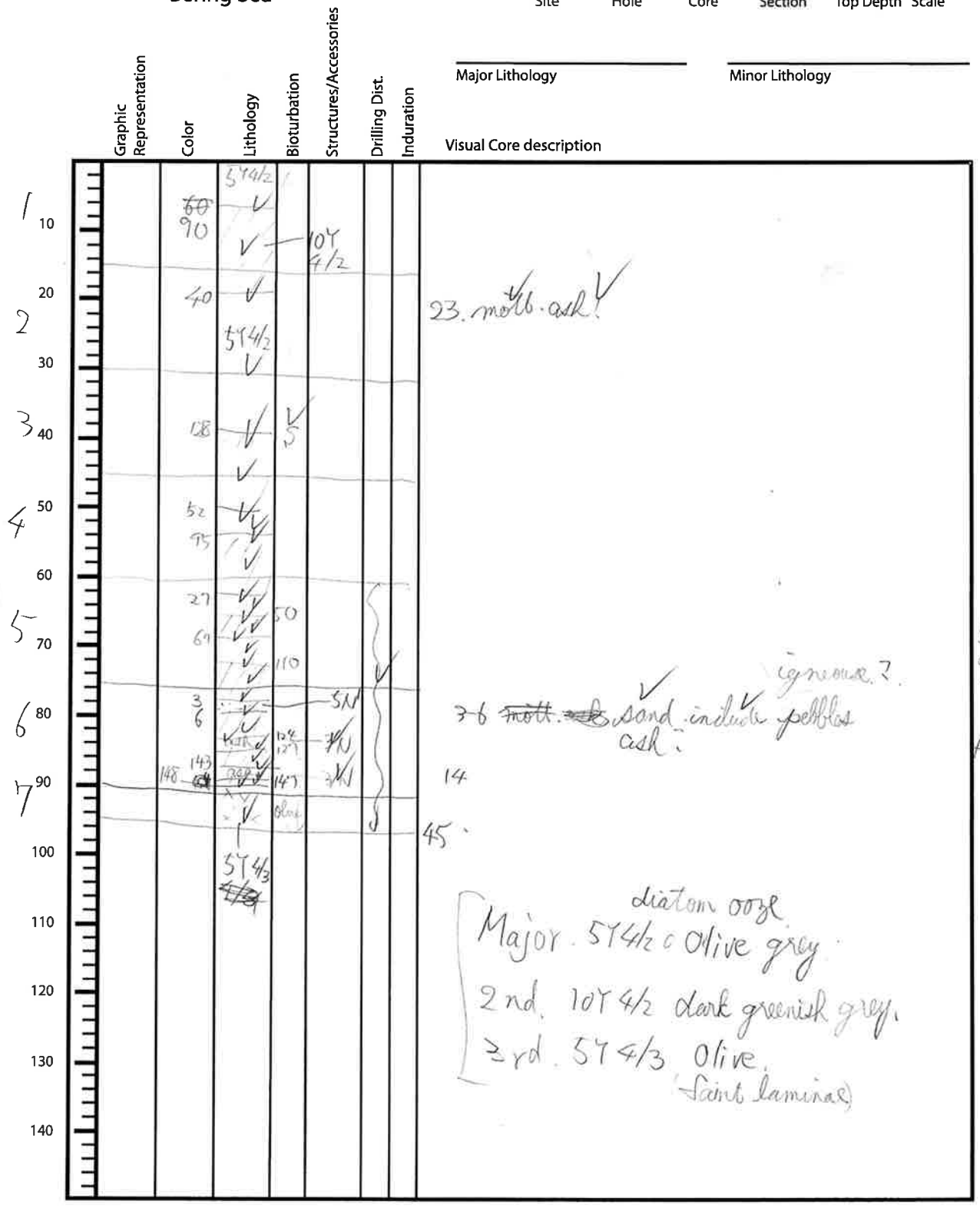
Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
12	Quartz
10	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
20	Clay Minerals
2	Chlorite
	Glauconite
	Chert
	Zircon
3	Ferromagnesium minerals
	Authigenic 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 A 56 ____ ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____



Observer: ____ Date: ____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
323	U1340	A	56	X	3A	80cm	

Sediment/Rock Name	Diatom ooze

Observer	Beth

Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
1	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
2	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
1	Clay Minerals
1	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
2	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
60	Centric
25	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	Interval (cm) Bottom
323	U1340	A	56	X	7A	20cm	

Sediment/Rock Name	Diatom silt

Observer	Beth

S-55
B-45
Comments: V-5

Percent Texture		
Sand	Silt	Clay
5	75	20

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
8	Quartz
12	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
5	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
7	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
3	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
	Diatoms
23	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

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
323	U1340	A	56	X	5A	60cm	

Sediment/Rock Name	Diatom-rich silty clay

Observer	Beth

B - 30
S - 70
V - 0

Comments:

Percent Texture		
Sand	Silt	Clay
10	40	50

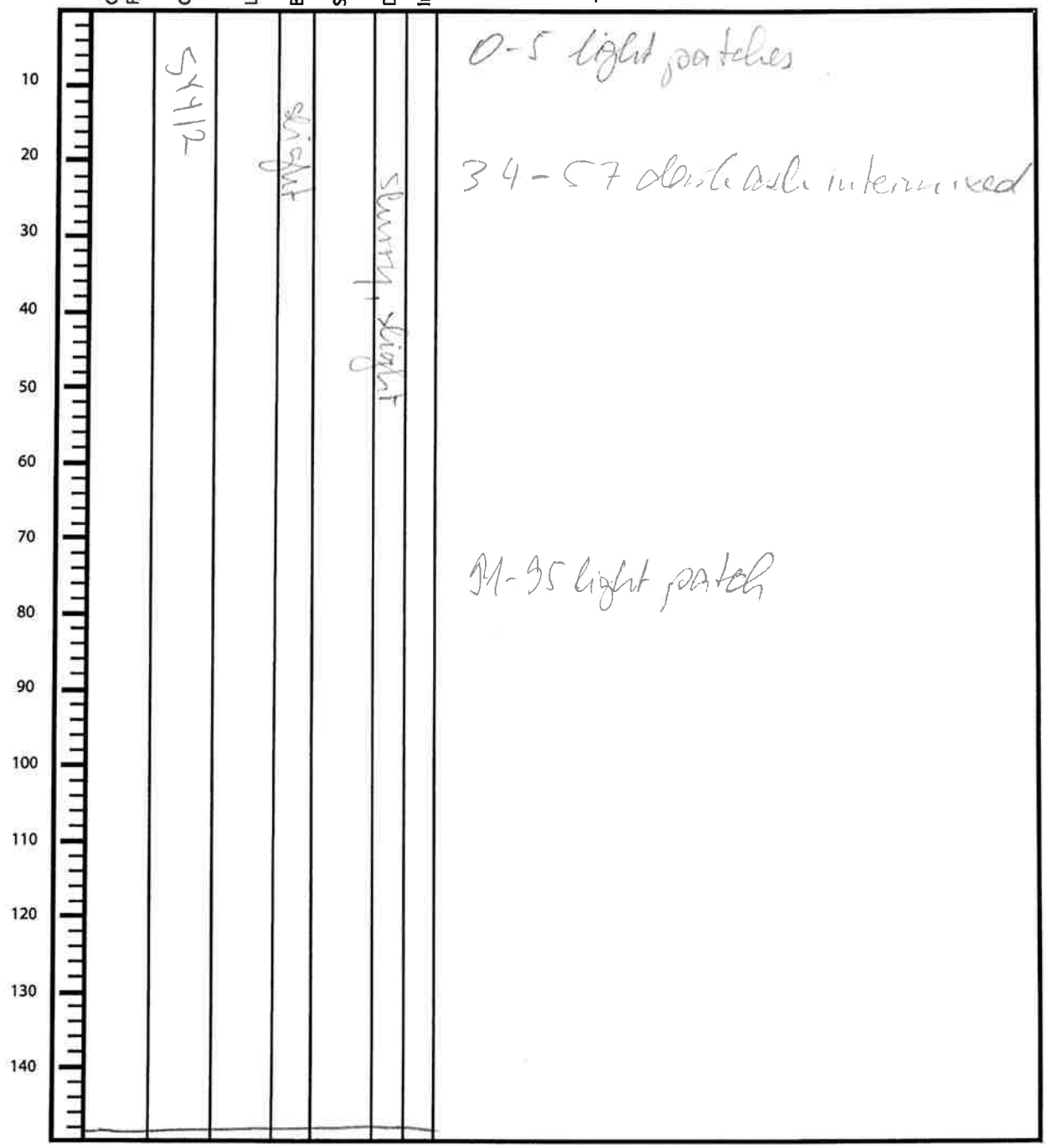
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
10	Quartz
10	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
2	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
40	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
3	Ferromagnesium minerals
	Authigenic 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
	Diatoms
25	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

1340 (Site) A (Hole) 57 (Core) 1 (Section) ____ (Top Depth) ____ (Scale)

Major Lithology ____ Minor Lithology ____

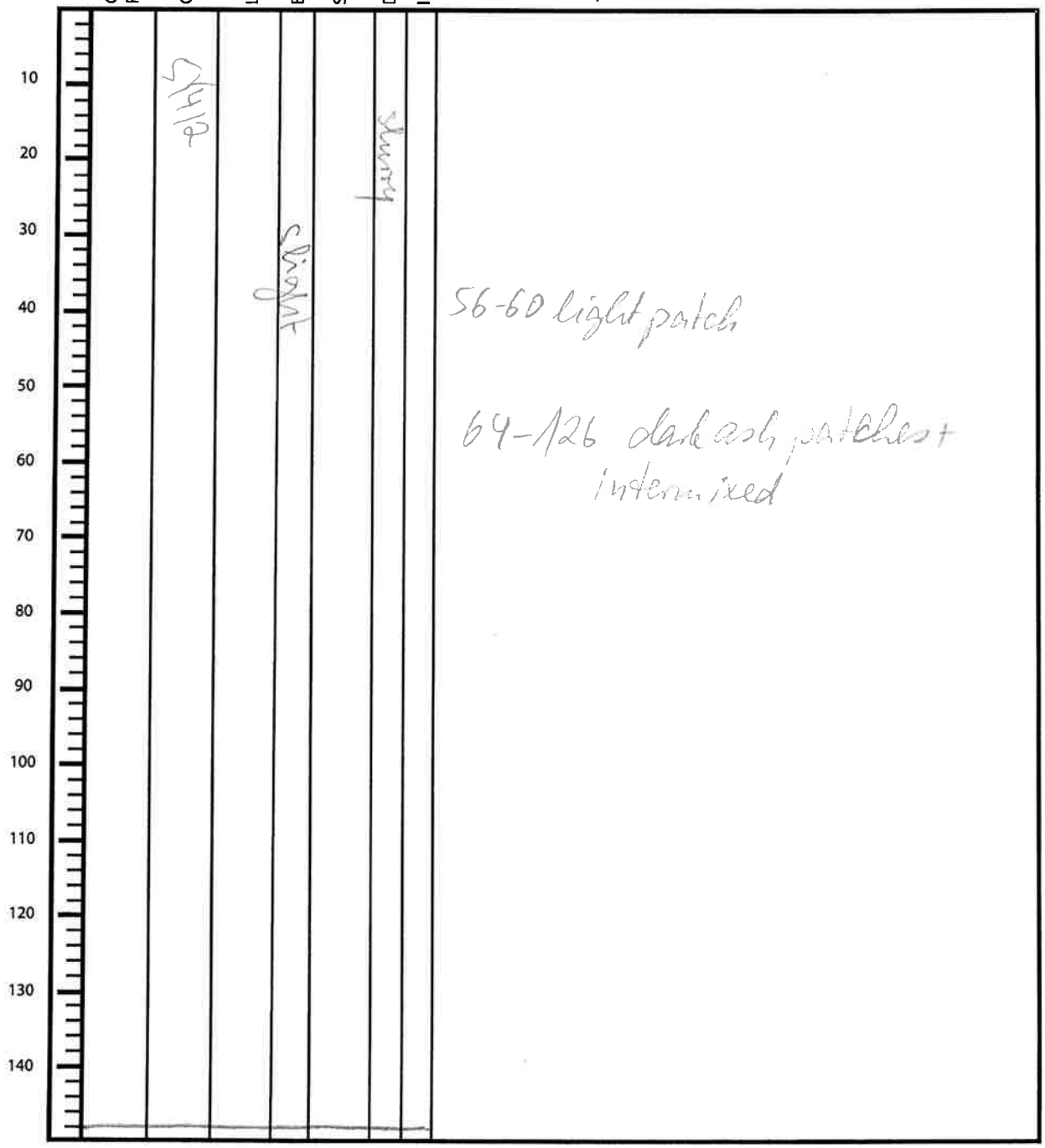


Observer: ____ Date: ____

Expedition 323
Bering Sea

1340 | A | 57 | 2 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

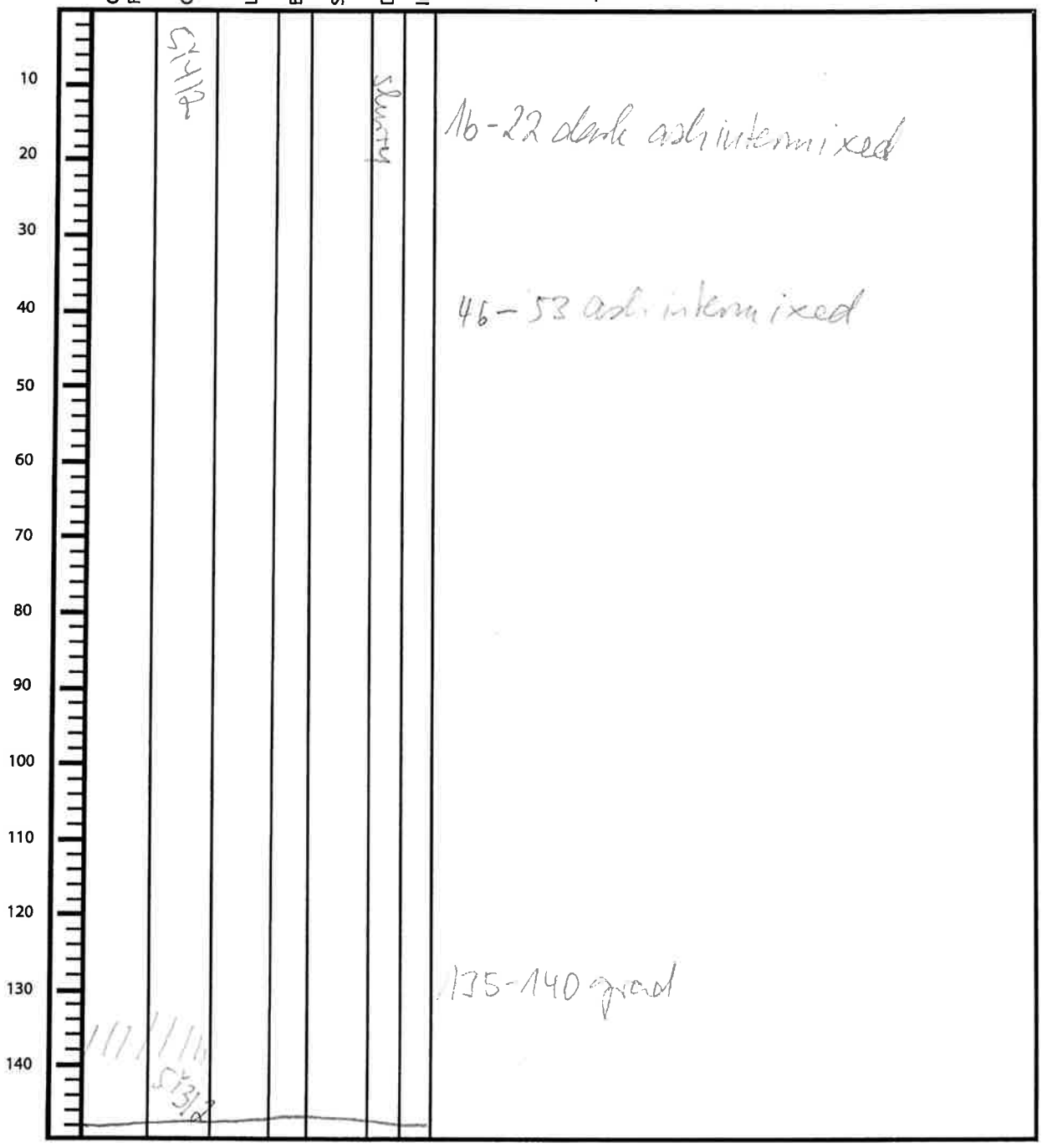


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 | A | 57 | 3 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

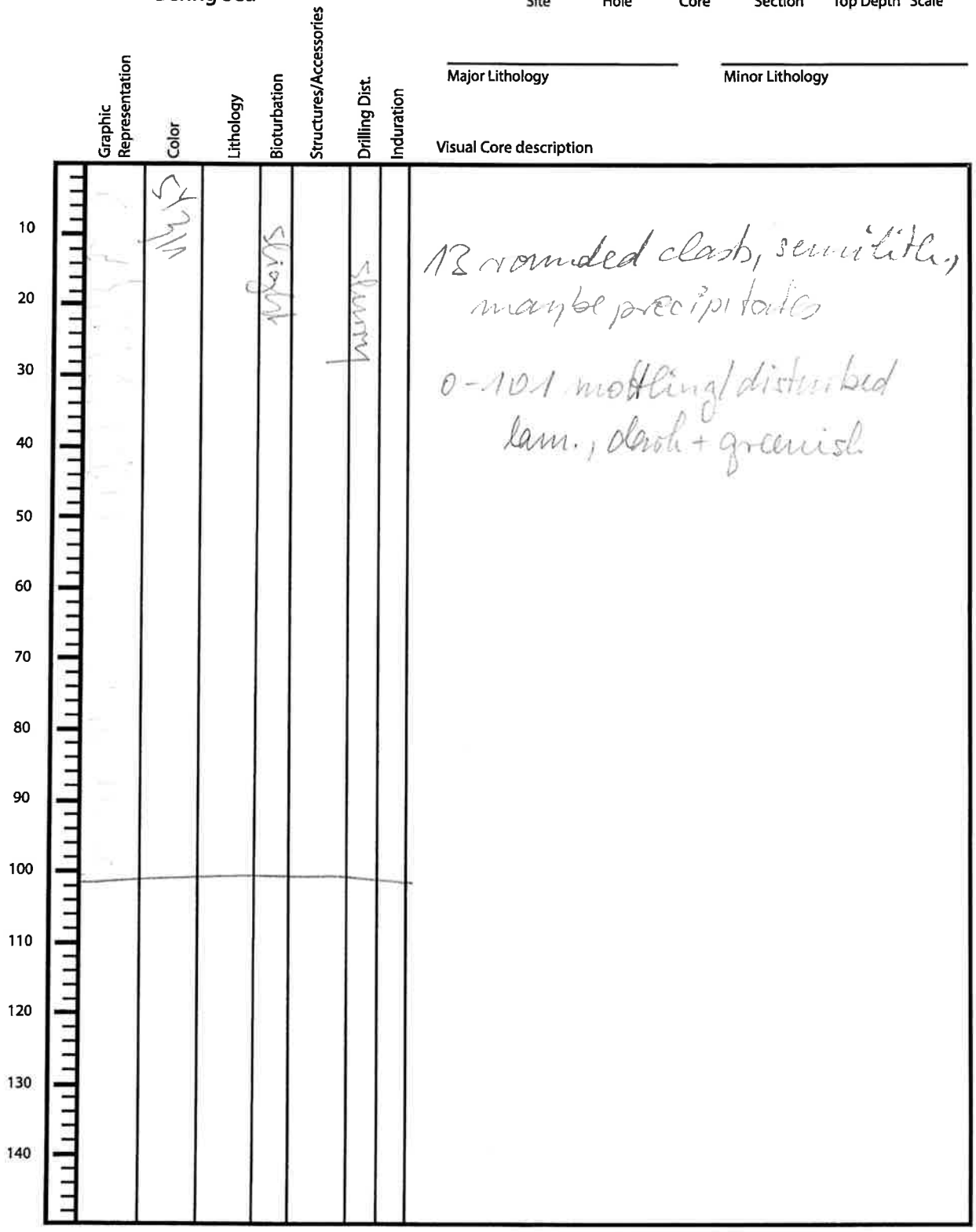


Observer: _____ Date: _____

Expedition 323
Bering Sea

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

Major Lithology | Minor Lithology

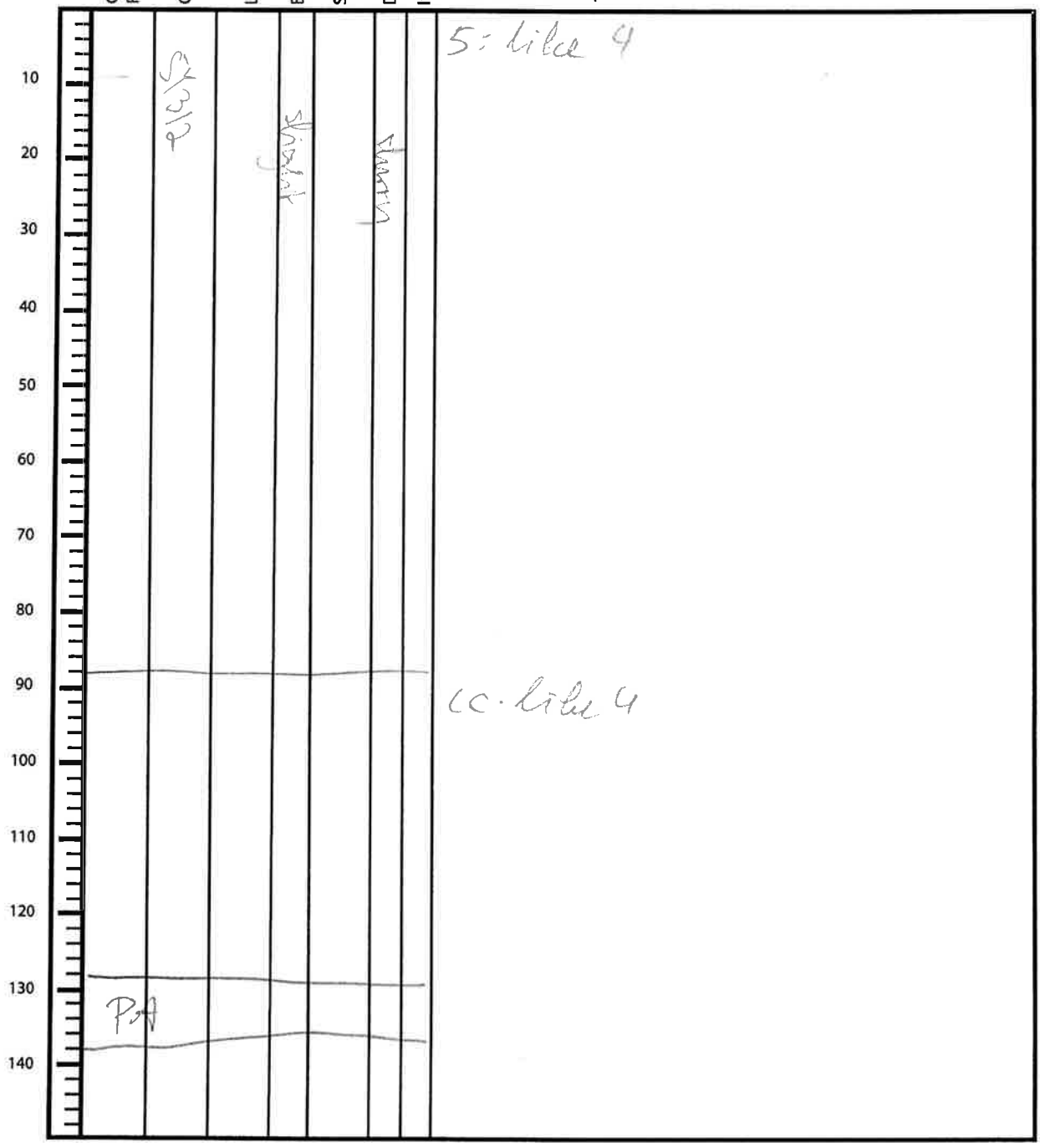


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 | A | 57 | 5 + cc | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology



Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
			57X		3 2	84	84

Sediment/Rock Name	Coarse Ash	Observer	Hino.A

Percent Texture		
Sand	Silt	Clay
~~75~~ 75	~~20~~ 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	~~83~~ 87	~~83~~

Sediment/Rock Name	Diatom Ooze	Observer	Hino A

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 ~~4~~	Vitric grain 1
	Lithic grain

Percent	Component 78
	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
56	\ Centric ~~20~~ 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
			67X		3	97	97

Sediment/Rock Name	B: Diatom Ooze	Observer	Hiro

Percent Texture		
Sand	Silt	Clay

Comments: Olive Main Litho

28, 1

Percent	Component
	SILICICLASTIC GRAINS/MINERAL 8
	Framework minerals
3	Quartz 1
3	Feldspar 1 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	Centric ~~25~~ ~~25~~ ~~30~~ 11, 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	Interval (cm) Bottom
			54 X		5	35	35

Sediment/Rock Name	Diatom Ooze	Observer	

Percent Texture		
Sand	Silt	Clay

Comments: Main Lith. Dark

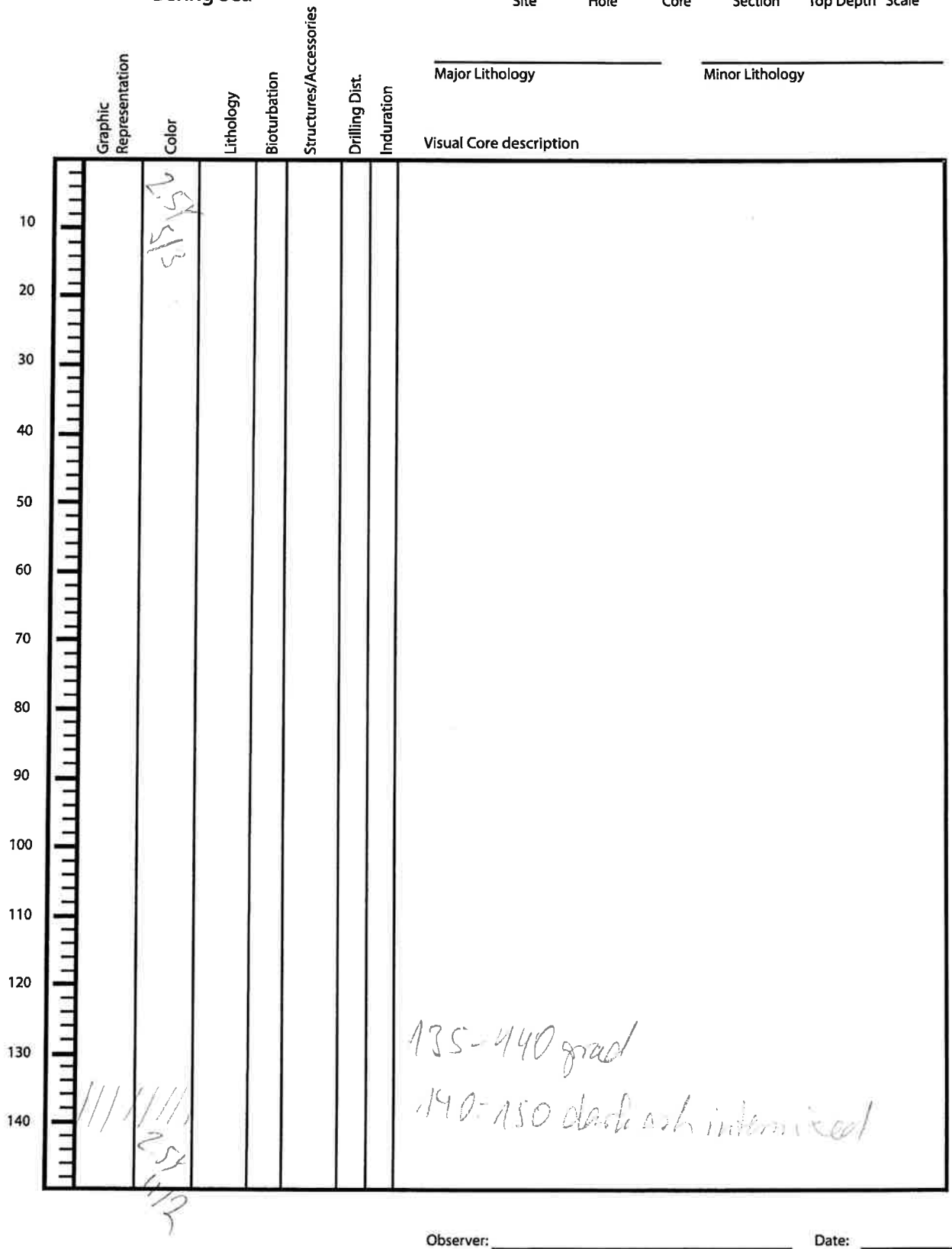
Percent	Component
	SILICICLASTIC GRAINS/MINERAL 21
	Framework minerals
6	Quartz 7
6	Feldspar 1
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
3	Micas 0.5
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
6	Ferromagnesium minerals 1
	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 79
	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 3B 1 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____

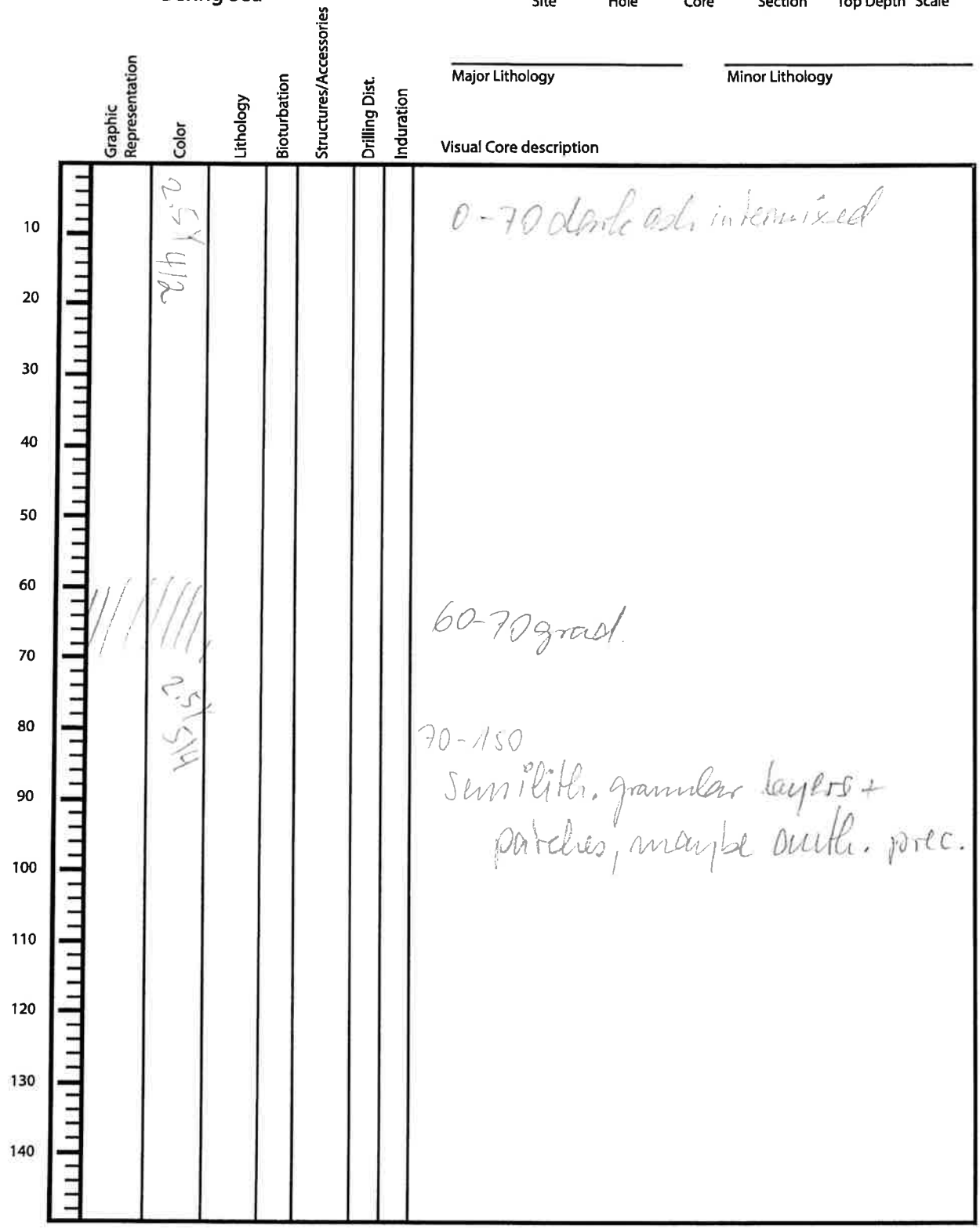


Observer: ____ Date: ____

Expedition 323
Bering Sea

1340 | A | 59 | 2 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

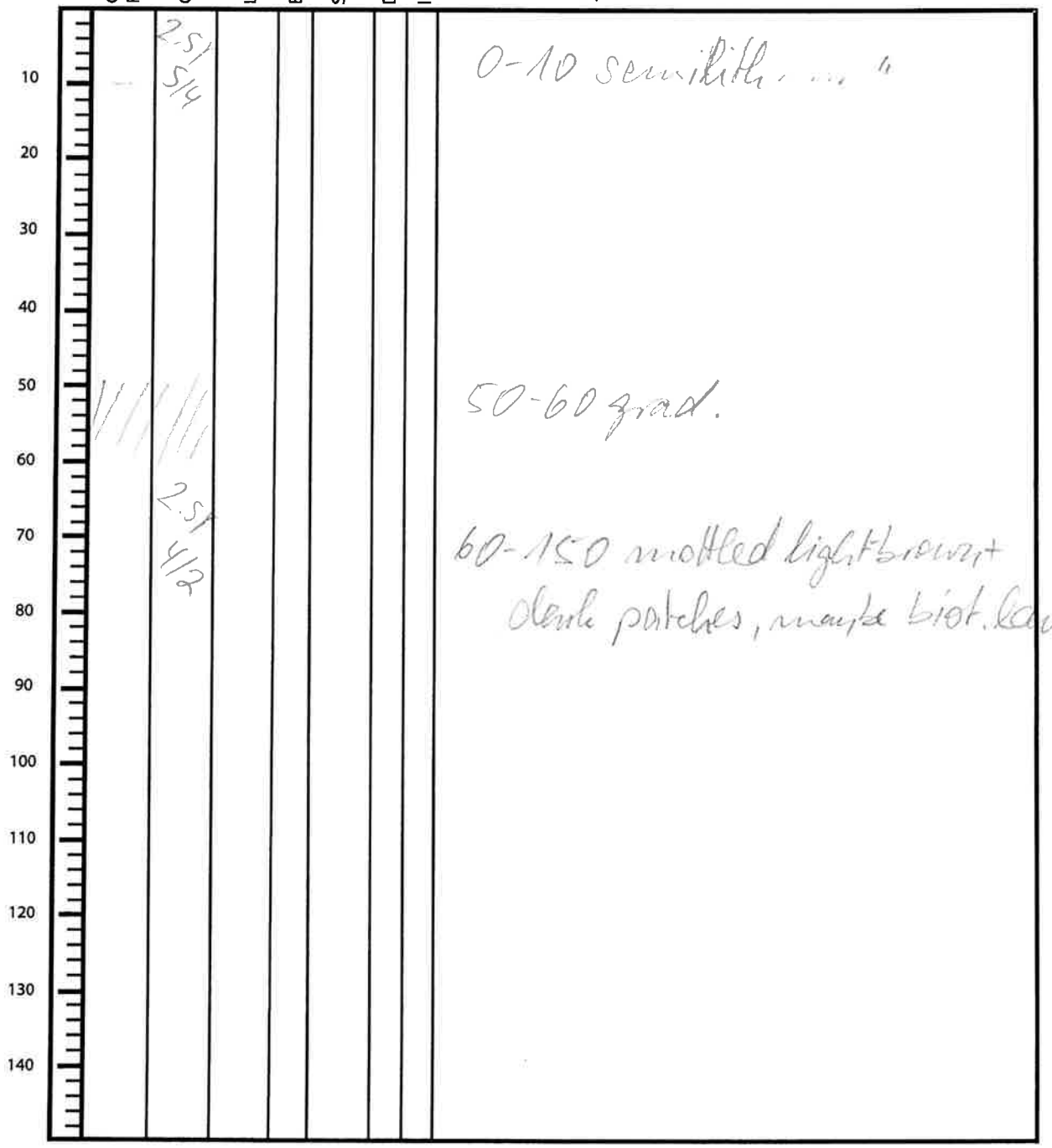


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 | A | 59 | 3 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

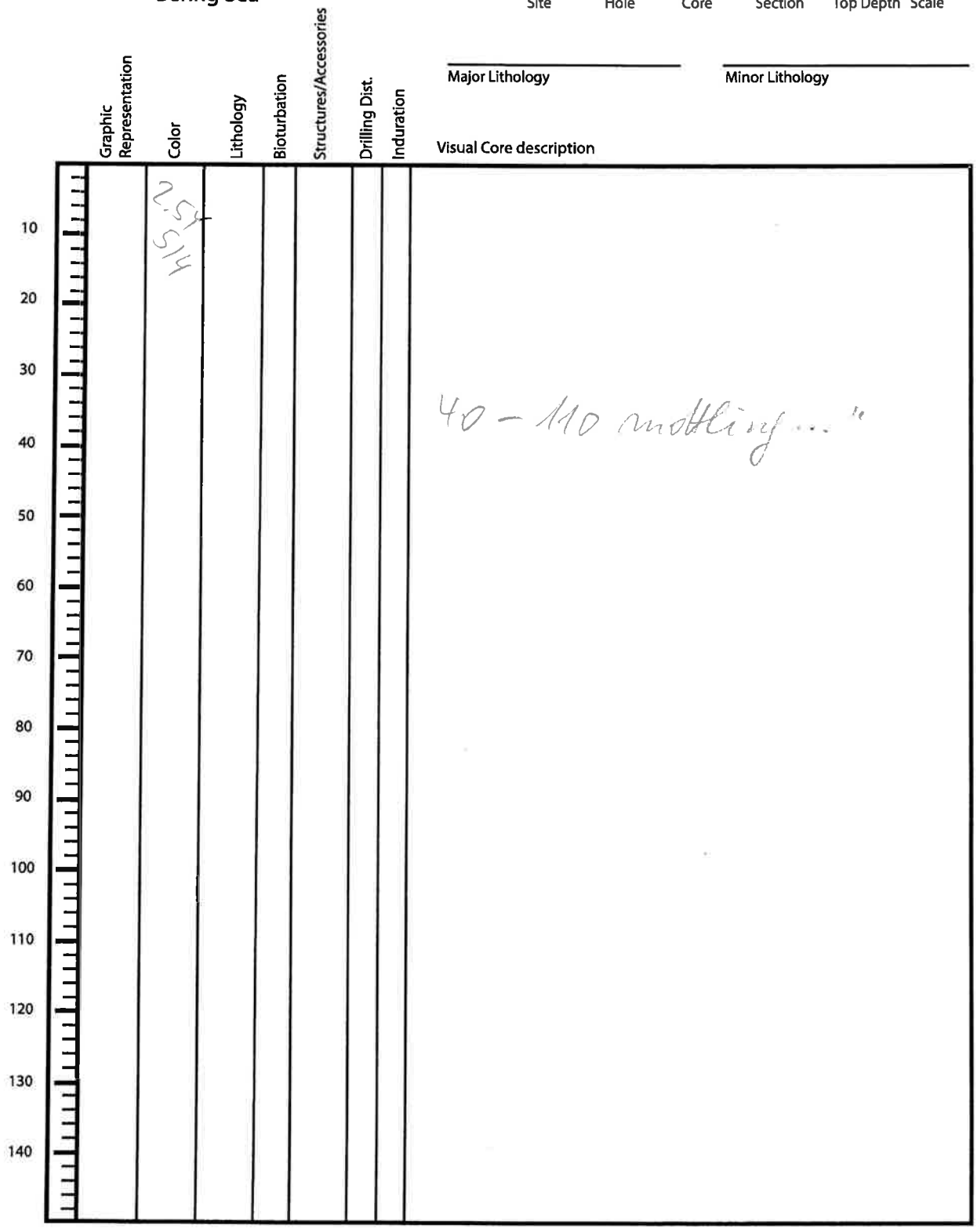


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 | A | 59 | 4 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

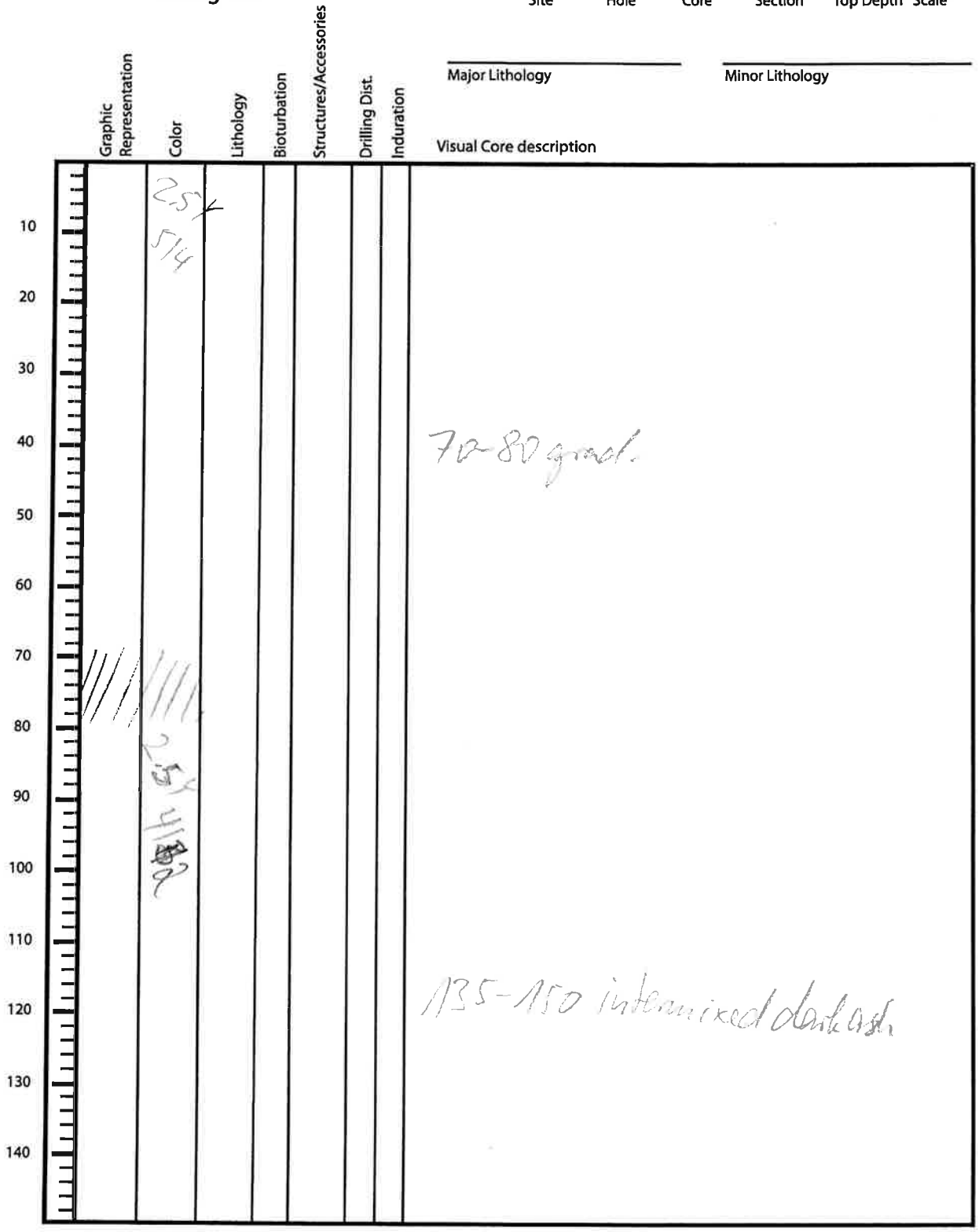


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 / A / 59 / 5 / ____ / ____
Site / Hole / Core / Section / Top Depth / Scale

Major Lithology ____ Minor Lithology ____

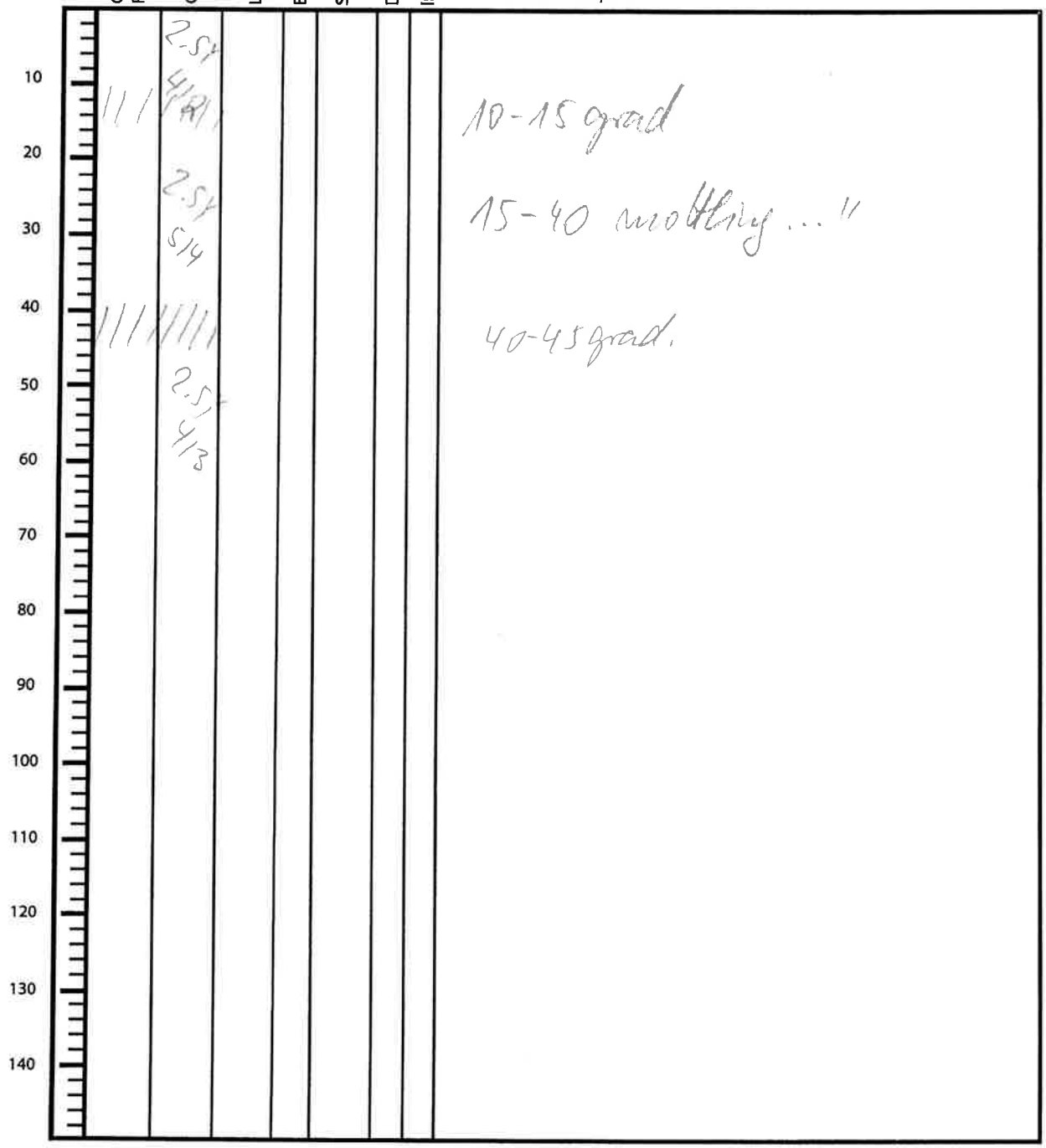


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 / A / 59 / 6 / ____ / ____
Site / Hole / Core / Section / Top Depth / Scale

Major Lithology ____ Minor Lithology ____



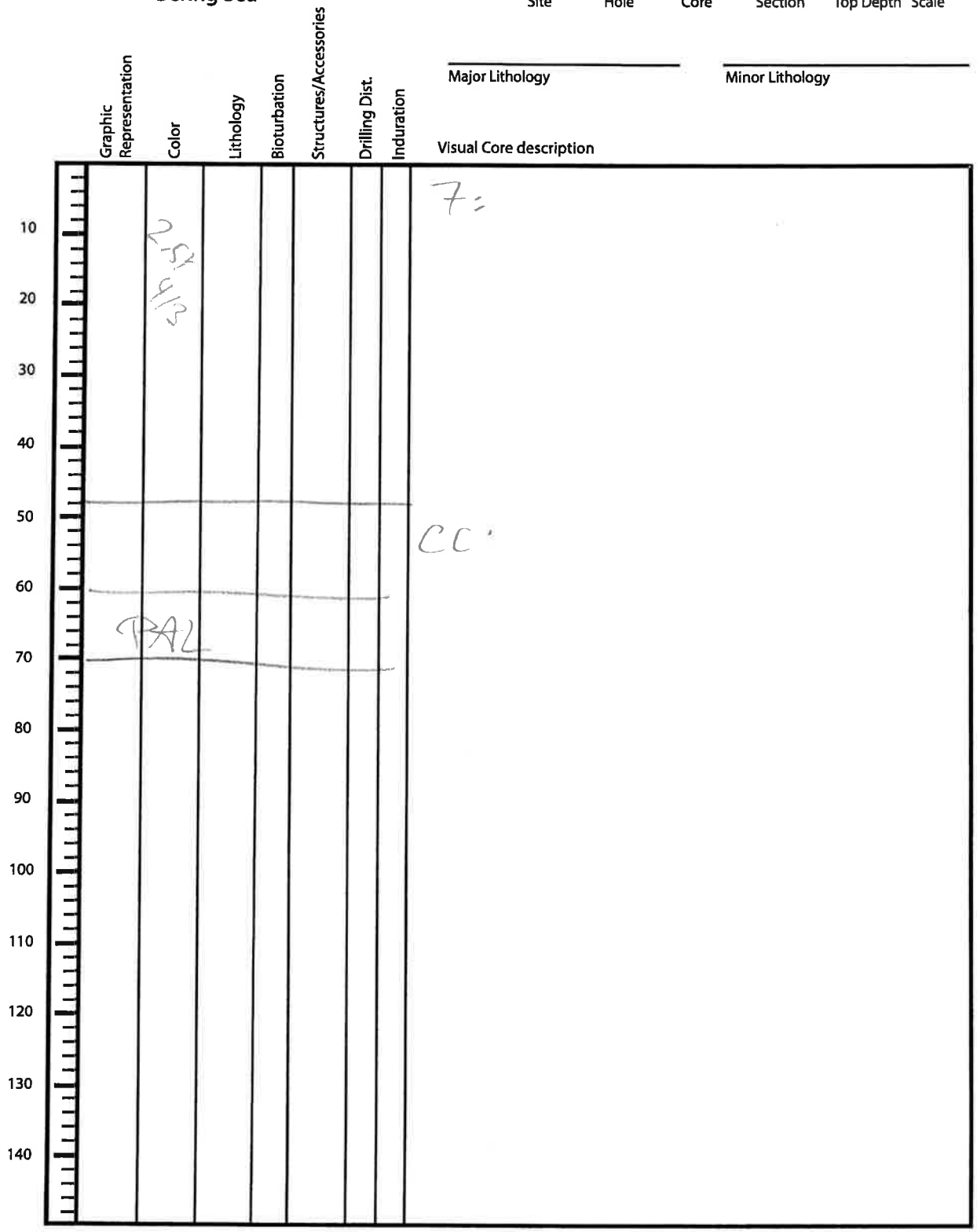
Observer: ____ Date: ____

Expedition 323
Bering Sea

1340 A 54 7+CC
Site Hole Core Section Top Depth Scale

Major Lithology

Minor Lithology



Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
			56X		2	130	

Sediment/Rock Name	Bo Diatom Silt (Dolomite)	Observer	Hina.

Percent Texture		
Sand	Silt	Clay
9	87	4

Comments: Main Litho Bo Light Brown.

Percent	Component
	SILICICLASTIC GRAINS/MINERAL 41
	Framework minerals
42	Quartz 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
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
37	Dolomite 7
	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
	BIOGENIC GRAINS 59
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
53	Centric 10
5	Pennate 1
	Chaetoceros 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	Interval (cm) Bottom
			~~55~~ X 57		4	60	60

Sediment/Rock Name	Diatom Ooze (Authigenic Carbonate)	Observer	Hiro A

Percent Texture		
Sand	Silt	Clay

Comments:

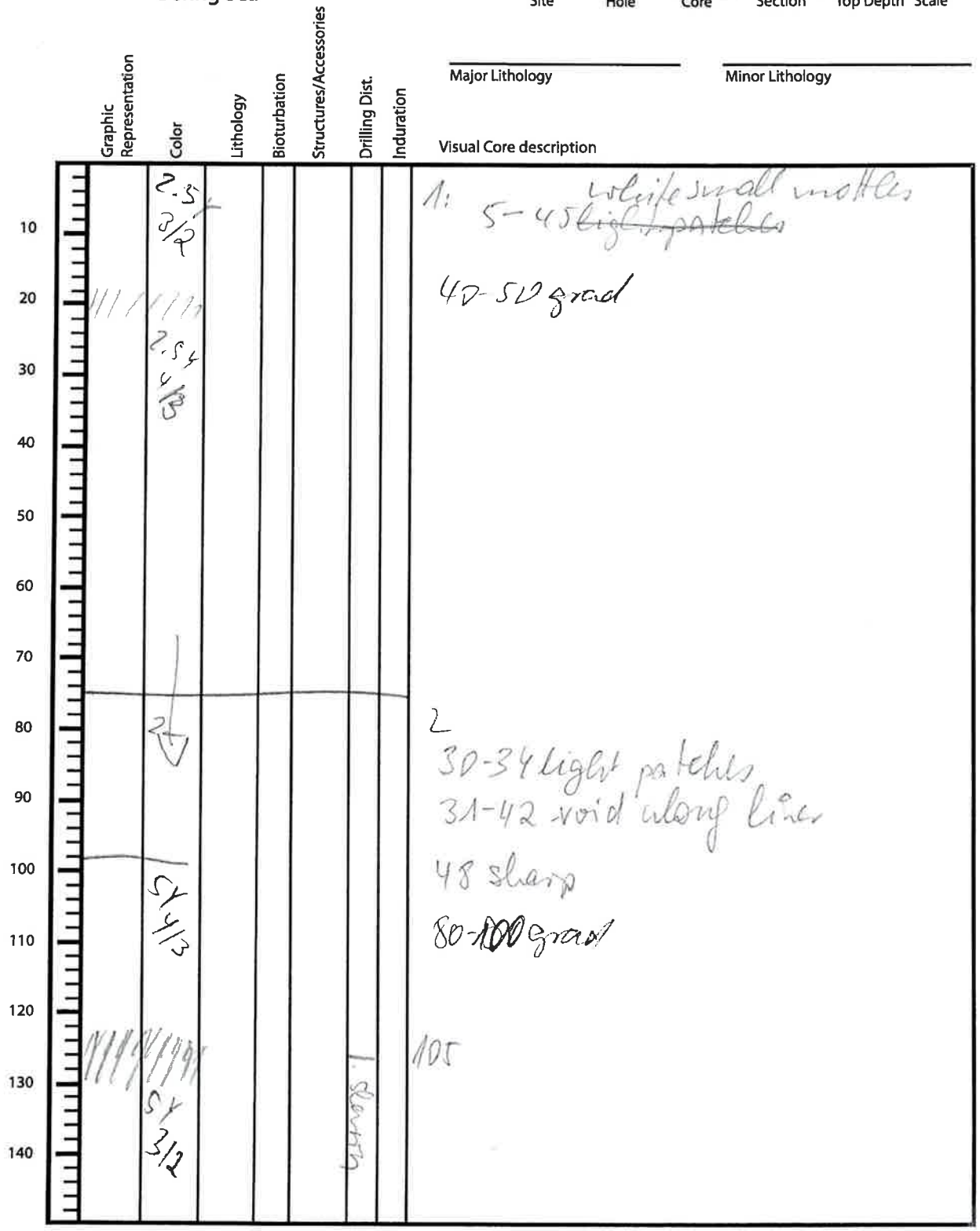
Percent	Component
	SILICICLASTIC GRAINS/MINERAL 22
	Framework minerals
4	Quartz 1
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
18 5	Carbonates (Authigenic 2-5 mm)
	Calcite ~~(Authigenic)~~
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain ~~sect~~
	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 / 17 / 63 / 1H 2 / ____ / ____
Site / Hole / Core / Section / Top Depth / Scale

Major Lithology ____ Minor Lithology ____



Observer: ____ Date: ____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
			63		1	120	120

Sediment/Rock Name	Diatom Ooze

Observer	Hino A

Percent Texture		
Sand	Silt	Clay

Comments: Major 2

Percent	Component
	SILICICLASTIC GRAINS/MINERAL 5
	Framework minerals
5	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 ≥ 10
	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	Interval (cm) Bottom
			63		2	90	90

Sediment/Rock Name	Diatom Ooze	Observer	HoA

Percent Texture		
Sand	Silt	Clay

Comments: Major 1

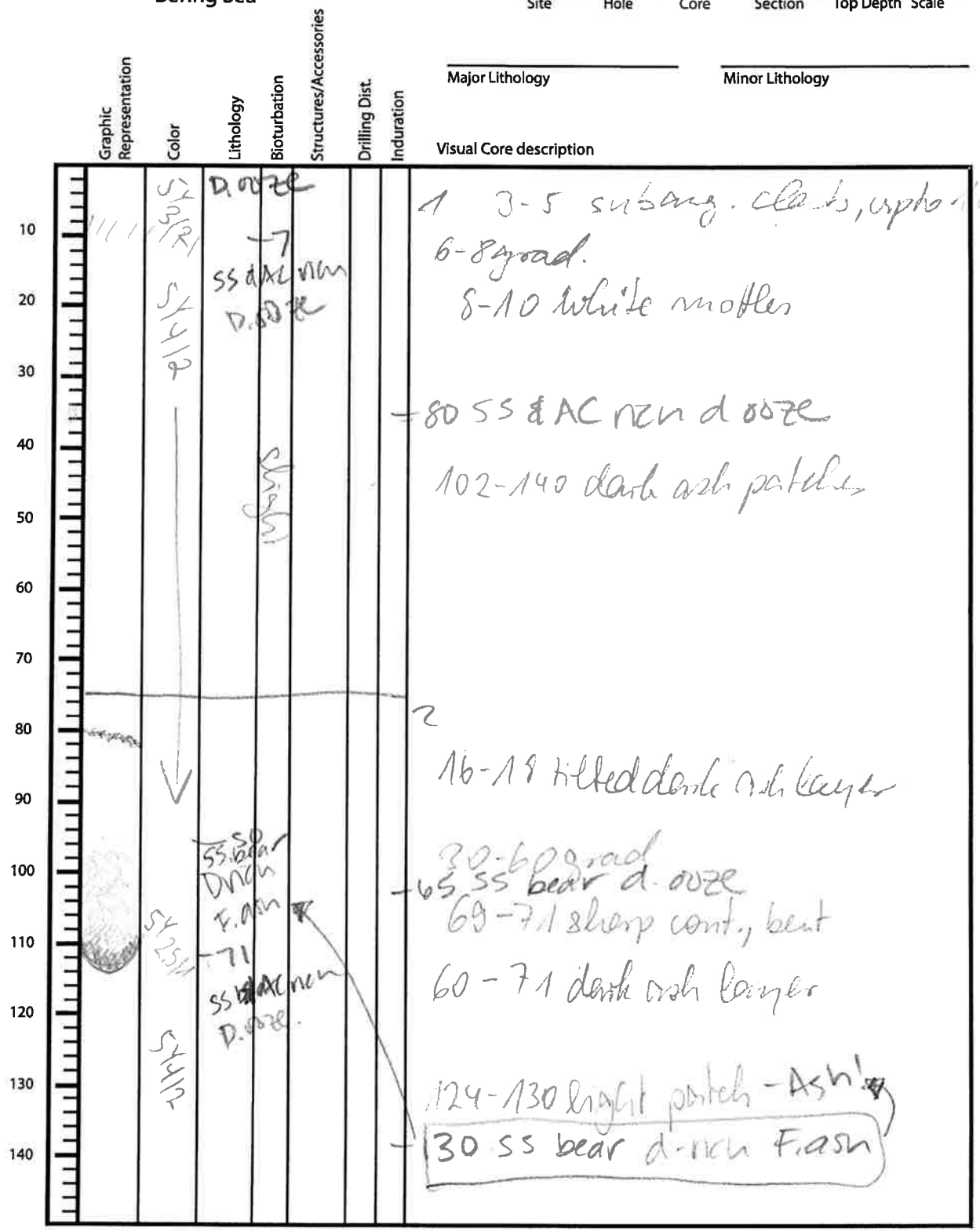
Percent	Component
	SILICICLASTIC GRAINS/MINERAL 6
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
6	Clay Minerals 0.25
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS 6
	Crystal grain
6	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 0.15 1
	Chaetoceros Resting Spores
	Silicoflagellates
13	Sponge spicules 0.1
	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

Major Lithology Minor Lithology

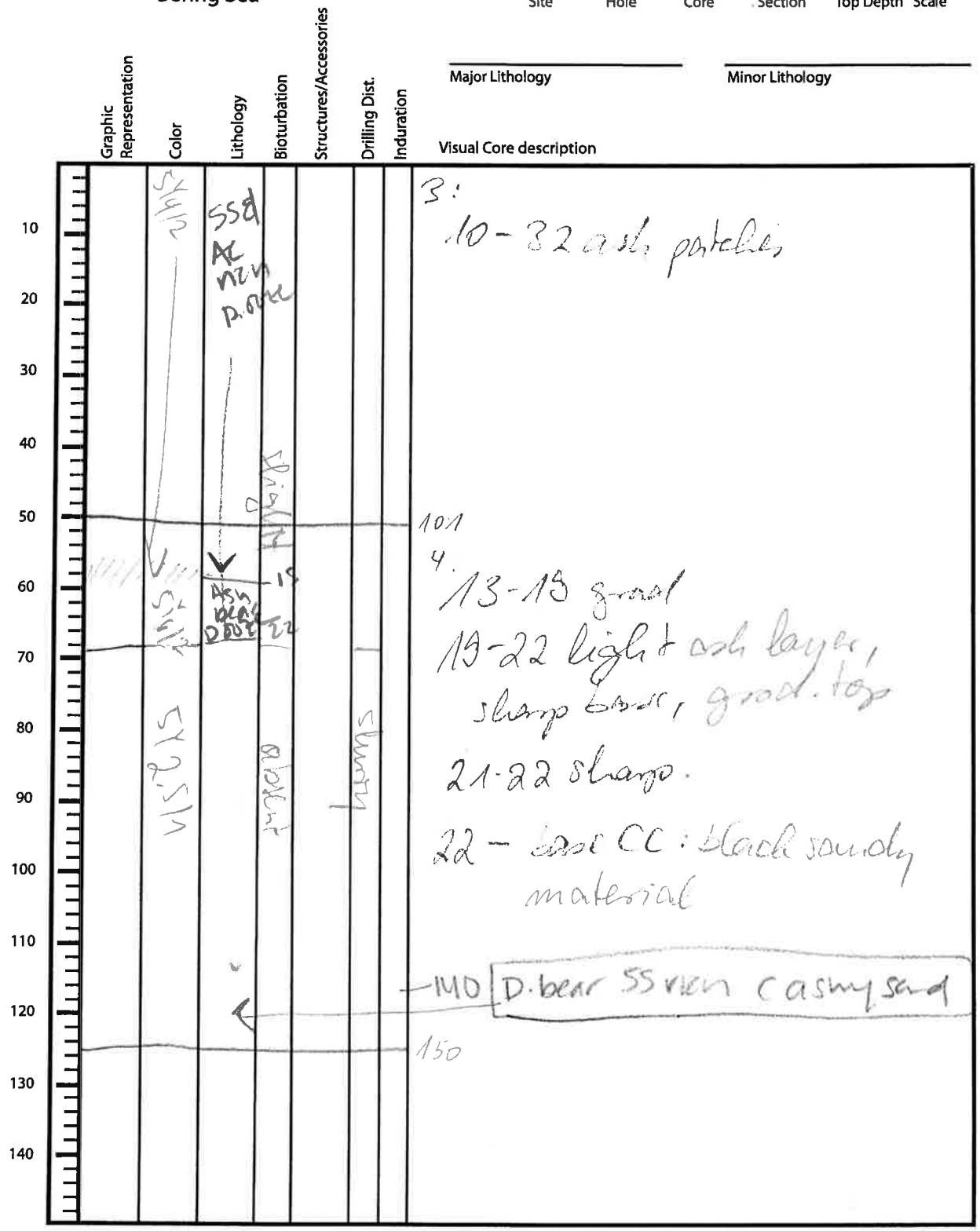


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 A 64 3+4 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____

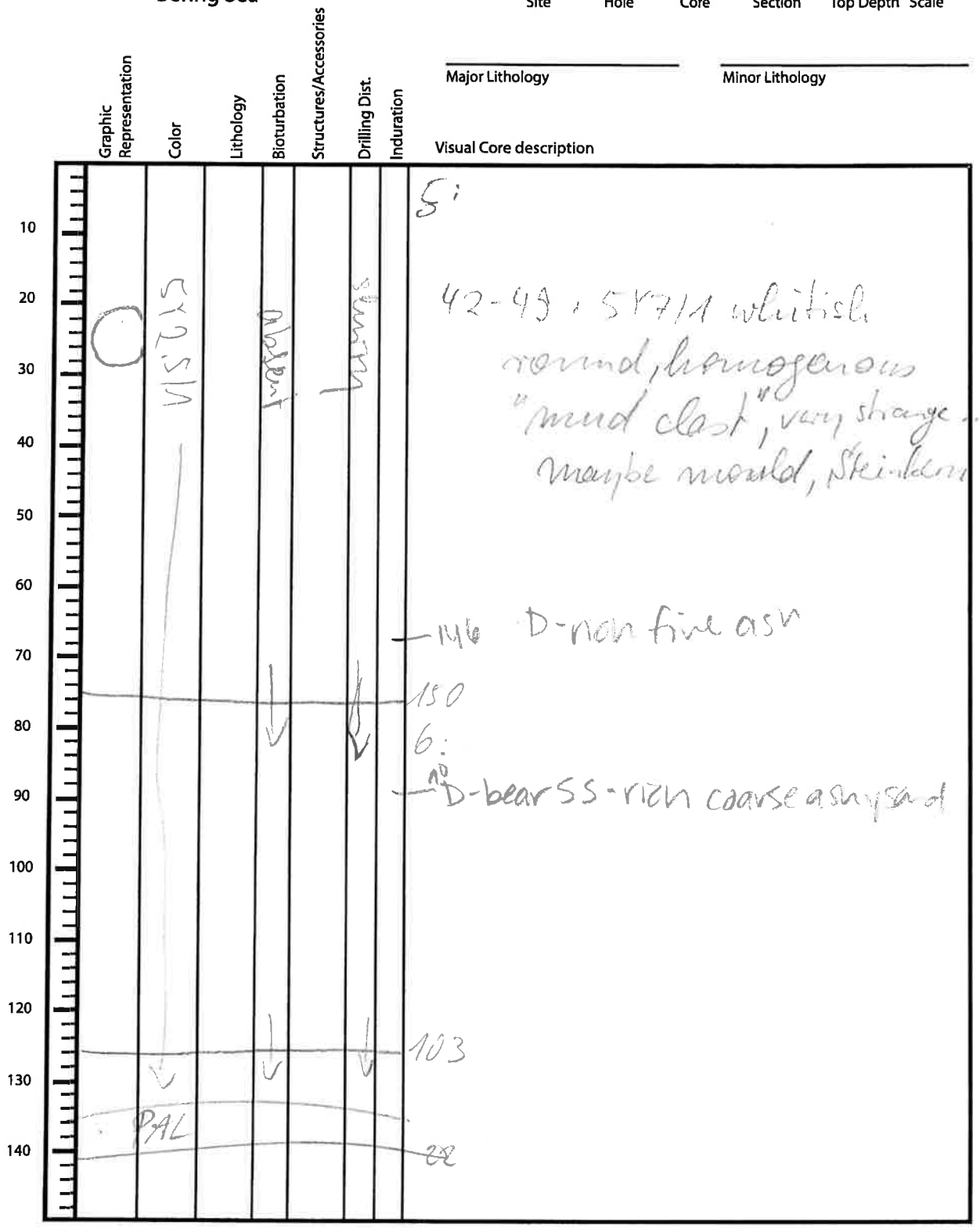


Observer: ____ Date: ____

Expedition 323
Bering Sea

1340 | A | 64 | 5+6 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology



Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1340	A	64	H	1	80	80

SM

Sediment/Rock Name	Sponge-spicule-rich diatom ooze with carbonate-rich	Observer	

Percent Texture		
Sand	Silt	Clay

Comments: Main lithology

62 X 63H

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

Percent	Component
81	**BIOGENIC GRAINS**
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
51	Centric
	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

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1340	A	64	H	2	65	65

Sediment/Rock Name	Sp. spicule-bearing diatom ooze	Observer	

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
5	✓ Carbonates
	Calcite
	Dolomite
15	**VOLCANICLASTIC GRAINS**
	Crystal grain
(15)	Vitric grain
	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
	Chaetoceros Resting Spores
	✓ Silicoflagellates
6	✓ 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	Interval (cm) Bottom
323	U1340	A	64	H	2	130	130

Sediment/Rock Name	Sp Spic bearing - diatom rich - fine ash	Observer	

Percent Texture		
Sand	Silt	Clay
	100	

Comments: Pink layer (ash?)

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
	Chaetoceros 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	Interval (cm) Bottom
323	U1340	A	64	H	4	140	140

Sediment/Rock Name	Diatom-bearing sponge-spicule-rich coarse-ashy sand.	Observer	MSC

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

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IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1340	A	64	H	5	46	46

Sediment/Rock Name	Diatom-rich fine ash

Observer	MSC

Percent Texture		
Sand	Silt	Clay
V	90	10

Comments: White round lens w/in blk band

Percent	Component
10	**SILICICLASTIC GRAINS/MINERAL**
	Framework minerals
7	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
7?	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
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

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IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1340	A	64	H	6	90	90

Sediment/Rock Name	Diatom-bearing, sponge-spicule-rich coarse-ashy sand	Observer	MSC

	Percent Texture		
	Sand	Silt	Clay
S	87	10	3

Comments: Main lithology (ash sand)

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

Wait for thin section. Grains NOT identified.

Expedition 323
Bering Sea

Site	Hole	Core	Section	Top Depth	Scale
1340	A	65H	1-4		

Major Lithology

Minor Lithology

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Visual Core description
	5Y 4/2		SV		MOD		1 0- Sec. 1 bottom 0-12 Flow out (Mod dist 85 white Layer
			MOD				2 Sec. 2 30-42. ashy patch Mod bioturb
							3 Sec. 3 10. Dark (N4 N 4/) ash patch 126-127 " (62)
			AB		MOD		4 8 white patch 13-137 Flow IN (MOD Disturbance) ← 137

Depth scale: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140

Observer: [signature] Date:

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1340	A	65	H	3	70	70

Sediment/Rock Name	Sponge-spicule-rich diatom ooze	Observer	

Percent Texture		
Sand	Silt	Clay

Comments: main lithology

Percent	Component
9	**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
4	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
91	**BIOGENIC GRAINS**
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
76	Diatoms
	Centric
	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

Spong. Spicule heavily ash Carbonate-rich Diatom ooze
Authigenic 66

Expedition 323
Bering Sea

Site	Hole	Core	Section	Top Depth	Scale
1340	A	~~65~~ 66	3 ~~4 CC~~		

Major Lithology

Minor Lithology

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration
5Y 3/2	5Y 4/3; 5Y ~~3/~~ 4/3; 5Y ~~3/~~ 4/3 ... 3/2; 5Y 3/2; 5Y 3/4/3; 5Y 4/4	4/3	sl; mod; sl			

Visual Core description

0-6 Drilling Disc. Pieces
0 6 – 100 5Y 4/3
/ 80 – ~~90~~ 100 grad. ~~B~~ ashy Patch
0 100 – 150 5Y 3/2

0 – ~~95~~ 60 5Y ~~4/3~~ ~~3/2~~ 4/3
60 – 90
~~90 – 100~~ grad.
2 0 70 – Sec. 3, 50 5Y 3/2
grad ~~50~~ 30 – 50
grad 0 50 – 90 5Y 3/2 (Little Darker)
0 90 – 110 5Y 4/3
0 103 – 104 white ash (5Y 7/1)
3 0 110 – ~~113~~ ~~114~~ 112 ash (") patch
114 – 140 5Y 4/2
138 – 142 grad.
142 – Bottom 5Y 4/4

← 5 – 83 cm 35 – 89

Observer: [signature] Date:

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1340	A	66	H	2A	70	70

Sediment/Rock Name	Observer
Sp-Spicule bearing, authigenic carbonate-rich diatom ooze	

Percent Texture		
Sand	Silt	Clay

Comments: main lithology

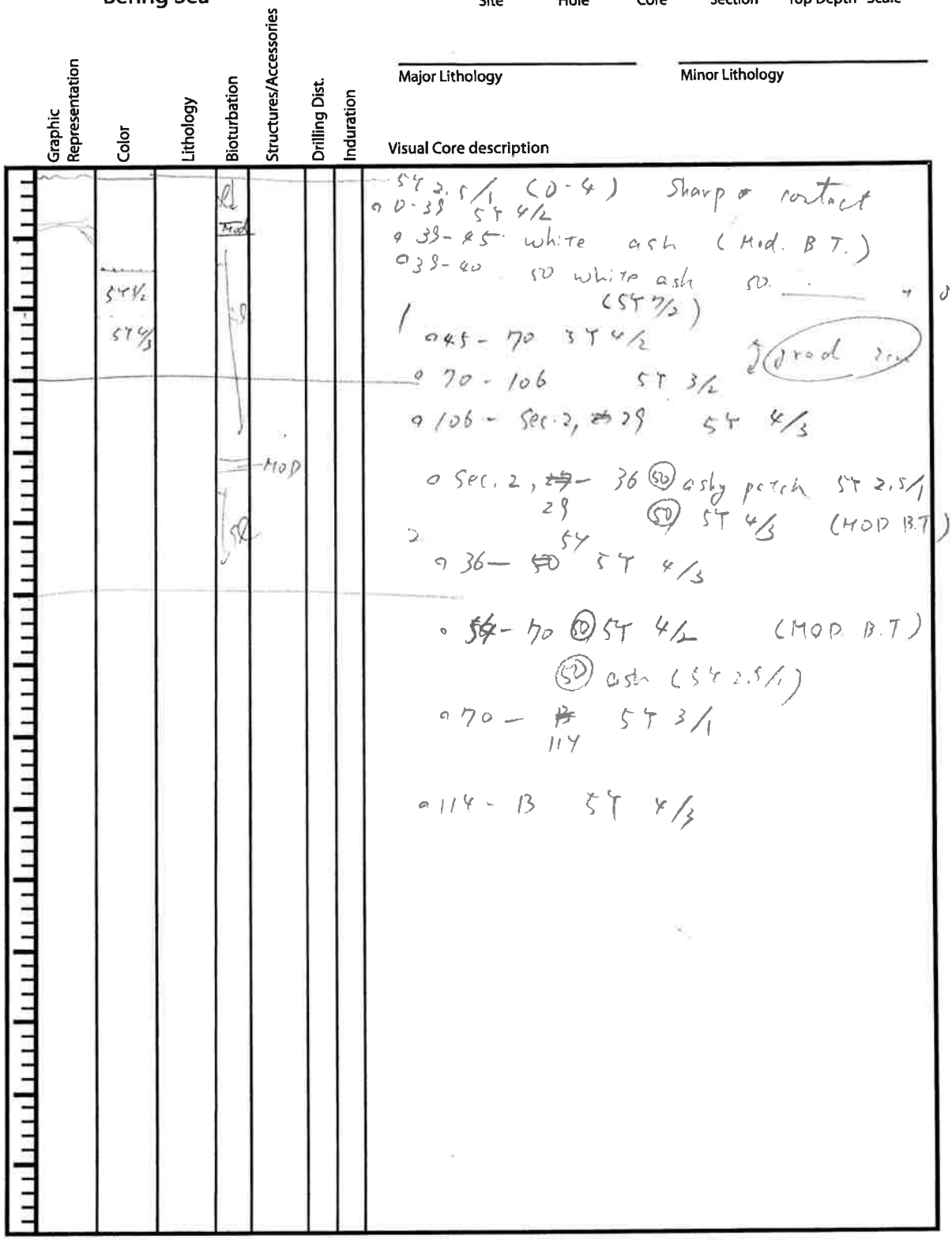
Percent	Component
24	**SILICICLASTIC GRAINS/MINERAL**
	Framework minerals
4	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
3	✓ Pyrite
	Magnetite
2	✓ Fe-oxide
15	Carbonates authigenic ☐
	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
	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 / 674 / 1-2 / ____ / ____
Site / Hole / Core / Section / Top Depth / Scale

Major Lithology ____ Minor Lithology ____



Observer: ____ Date: ____

Y.

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IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1340	A	67	H	2	50	50

Sediment/Rock Name	Sp. spicule bearing diatom ooze

Observer	MSC

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
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
5	Pyrite
	Magnetite
2	Fe-oxide
3	Carbonates authigenic
	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
	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

Site	Hole	Core	Section	Top Depth	Scale
	A	68X	1-4		1"

Major Lithology: Sp. Sp. Lich. diatom ooze
Minor Lithology:

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

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

5Y 3/2

5Y 3/2

5Y 3/2

5Y 2.5/2

Stiff 4

0 - 8 Mod Drilling Dist.
8 - 14 white patch (5Y 6/2) 20
8 - 14 Normal 5Y 3/2 80
14 - Bottom pc. 130 cm 5Y 3/2

13
0 - B. sec 3
5Y 3/2

Diatom clayey silt

Sec. 2
white patch @ 80 cm 62 cm, 22 cm 7 cm.
grad 143 - 146. 140 cm
146 - 150 IW
0 - B. B 5Y 3/2

B.7
16 - 24 Black ashy patch 5Y 2.5/1 Mod

140 - 150 grad C

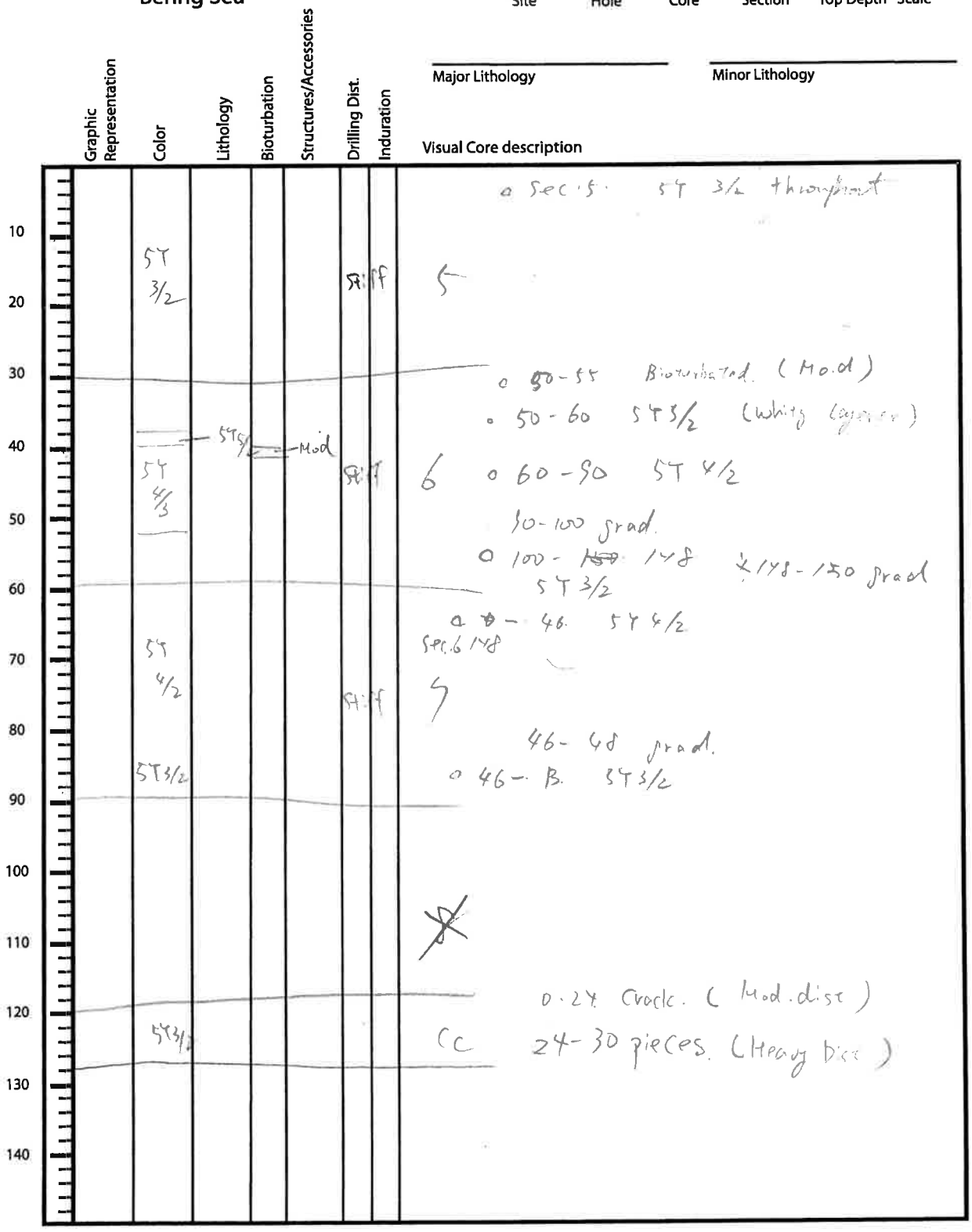
0 - 5Y 2.5/2

Observer: _____ Date: _____

Expedition 323
Bering Sea

1340	A	68X			
Site	Hole	Core	Section	Top Depth	Scale

Major Lithology _____ Minor Lithology _____



Observer: _____ Date: _____

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IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1340	A	68	X	6	57	57

Sediment/Rock Name	Sp. Spicule-rich diatom ooze	Observer	MSC

Percent Texture		
Sand	Silt	Clay

Comments: pale 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

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1340	A	68X		5	80	80

Sediment/Rock Name	Sp. Spicule-rich diatm 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
	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
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

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IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1340	A	68X		2	80	80

Sediment/Rock Name	Diatom clayey silt	Observer	MSC

Percent Texture		
Sand	Silt	Clay
5	50	45

(5)

Comments: White blebs

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

Site	Hole	Core	Section	Top Depth	Scale
1340	A	69	1+2		

Major Lithology

Minor Lithology

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Visual Core description
	5Y 3/2		slight		slight		90-118 mod. dist
					mod.		
					slight		
	5Y 4/2						85-20 grad
	5Y 5/2						70-80 grad.
	5Y 3/2						

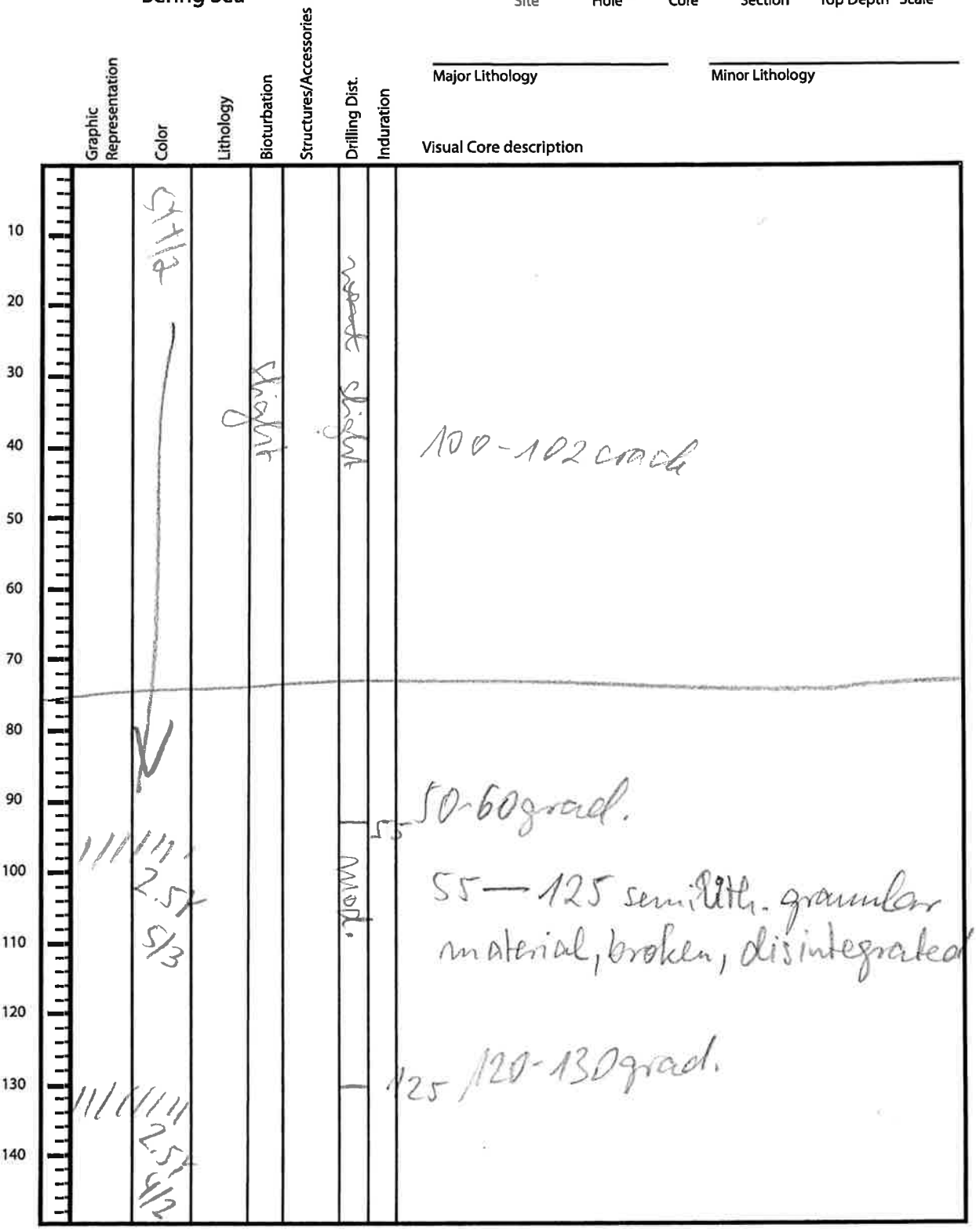
Observer:

Date:

Expedition 323
Bering Sea

1340 A 69 3+4 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____



Observer: ____ Date: ____

Expedition 323
Bering Sea

1340 (Site) A (Hole) 65 (Core) 5+6 (Section) ____ (Top Depth) ____ (Scale)

Major Lithology ____ Minor Lithology ____

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Visual Core description
	5Y 4/2						5–105 dark ash intermixed
	5Y 4/2						4-6 grad.
	5Y 4/2						11-13 grad.
	5Y 4/2						65-82 dark ash intermixed
	5Y 4/2						90-100 grad
	5Y 4/2						101

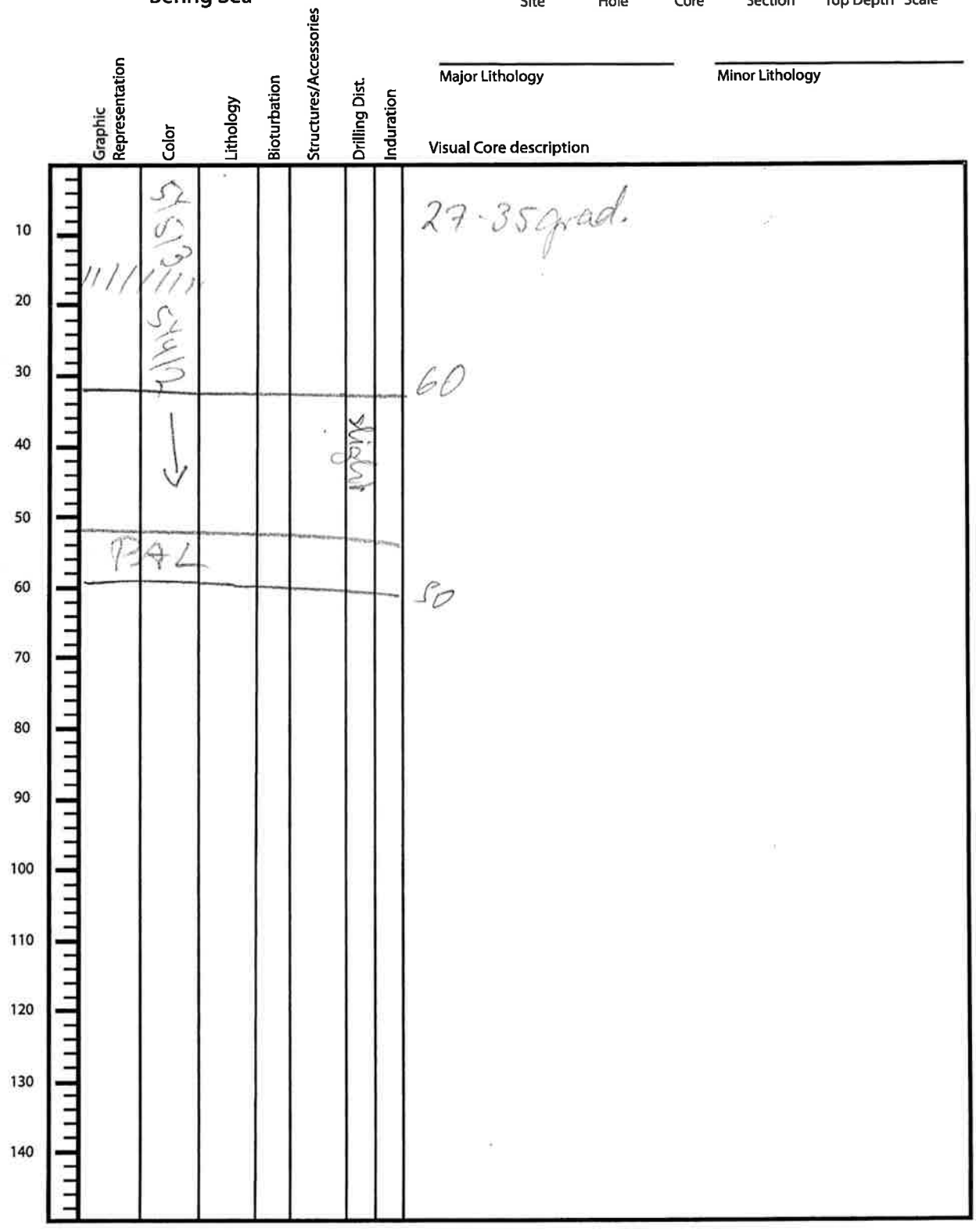
Observer: ____ Date: ____

Expedition 323
Bering Sea

1340 A 63 7+CC
Site Hole Core Section Top Depth Scale

Major Lithology

Minor Lithology



Observer: _____ Date: _____

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IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1340	A	69	X	2	20	20

Sediment/Rock Name	Sp spicule bearing Diatom ooze

Observer	

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	Interval (cm) Bottom
323	U1340	A	69	X	4	107	107

Sediment/Rock Name	Diatom – auth carbonate	Observer	MSC

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 authigenic
	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
	Chaetoceros Resting Spores
	Silicoflagellates
5	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	Interval (cm) Bottom
323	U1340	A	69	X	5	100	100

Sediment/Rock Name	Diatom ooze

Observer	MSC

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

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IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1340	A	69	X	7	15	15

Sediment/Rock Name	Diatom ooze with carbonate	Observer	MSC

Percent Texture		
Sand	Silt	Clay

Comments: Main lithology

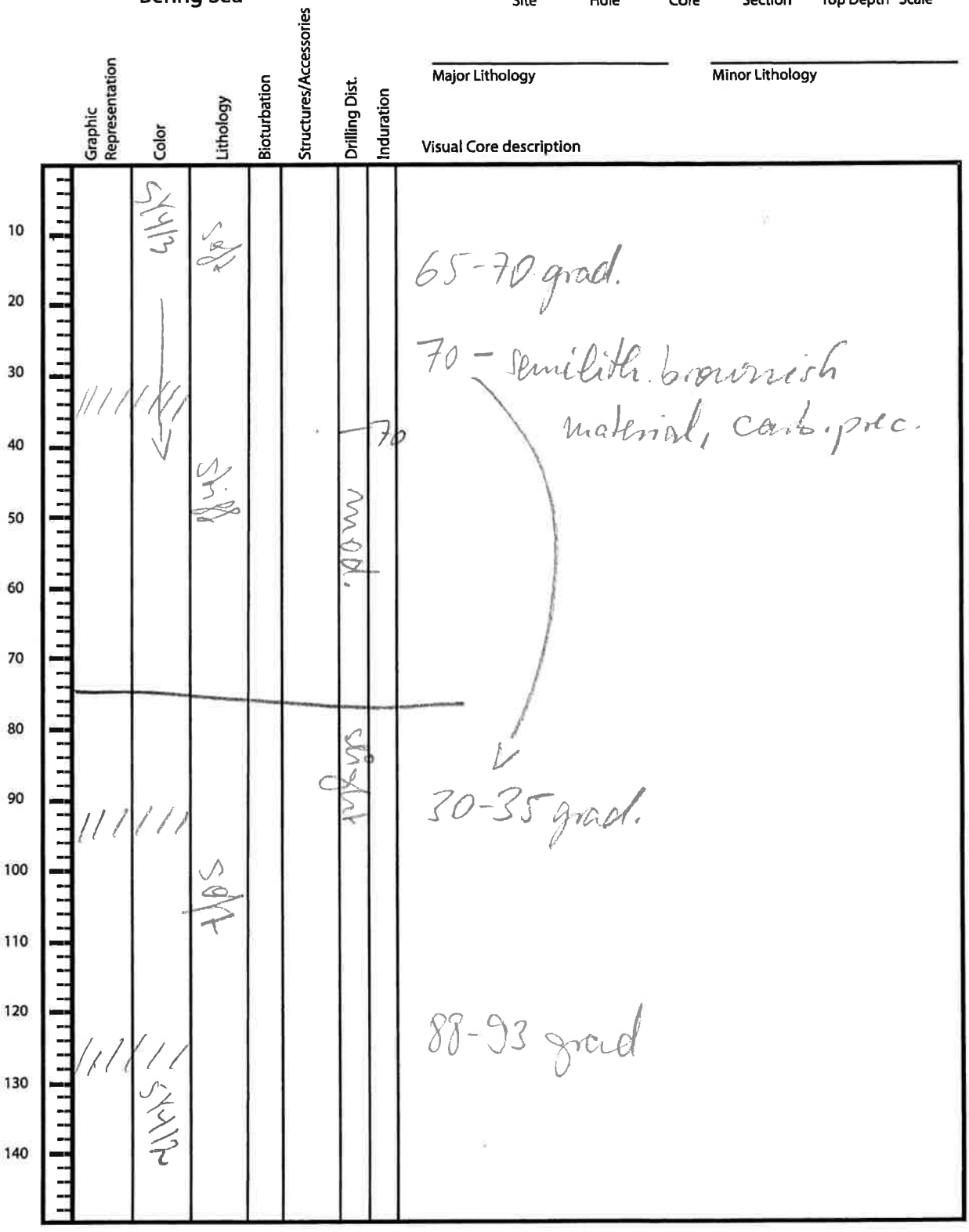
Percent	Component
60	**SILICICLASTIC GRAINS/MINERAL**
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic 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 A 70 1H2 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____

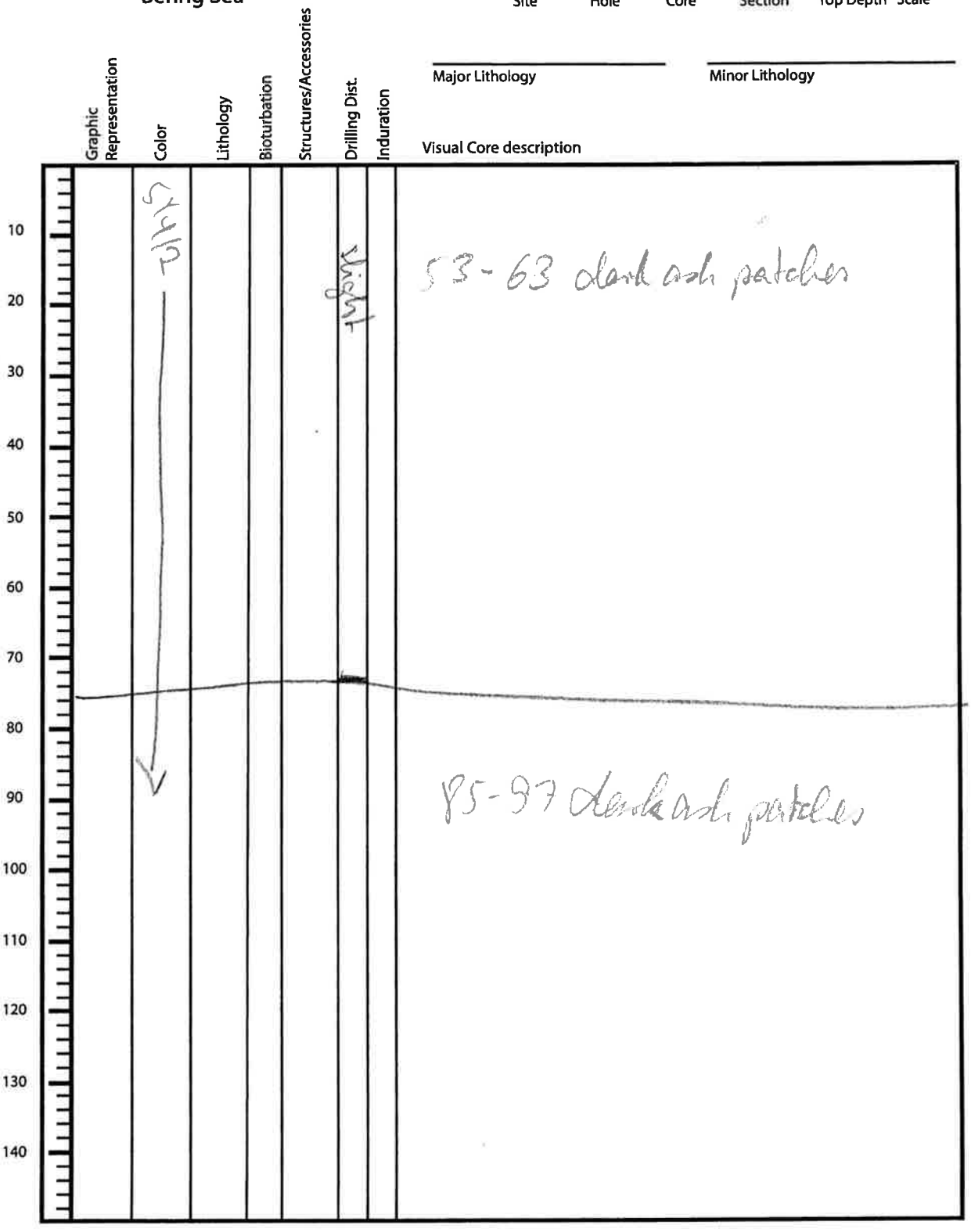


Observer: ____ Date: ____

Expedition 323
Bering Sea

1340 Site | A Hole | 70 Core | 3+4 Section | ____ Top Depth | ____ Scale

Major Lithology ____ Minor Lithology ____

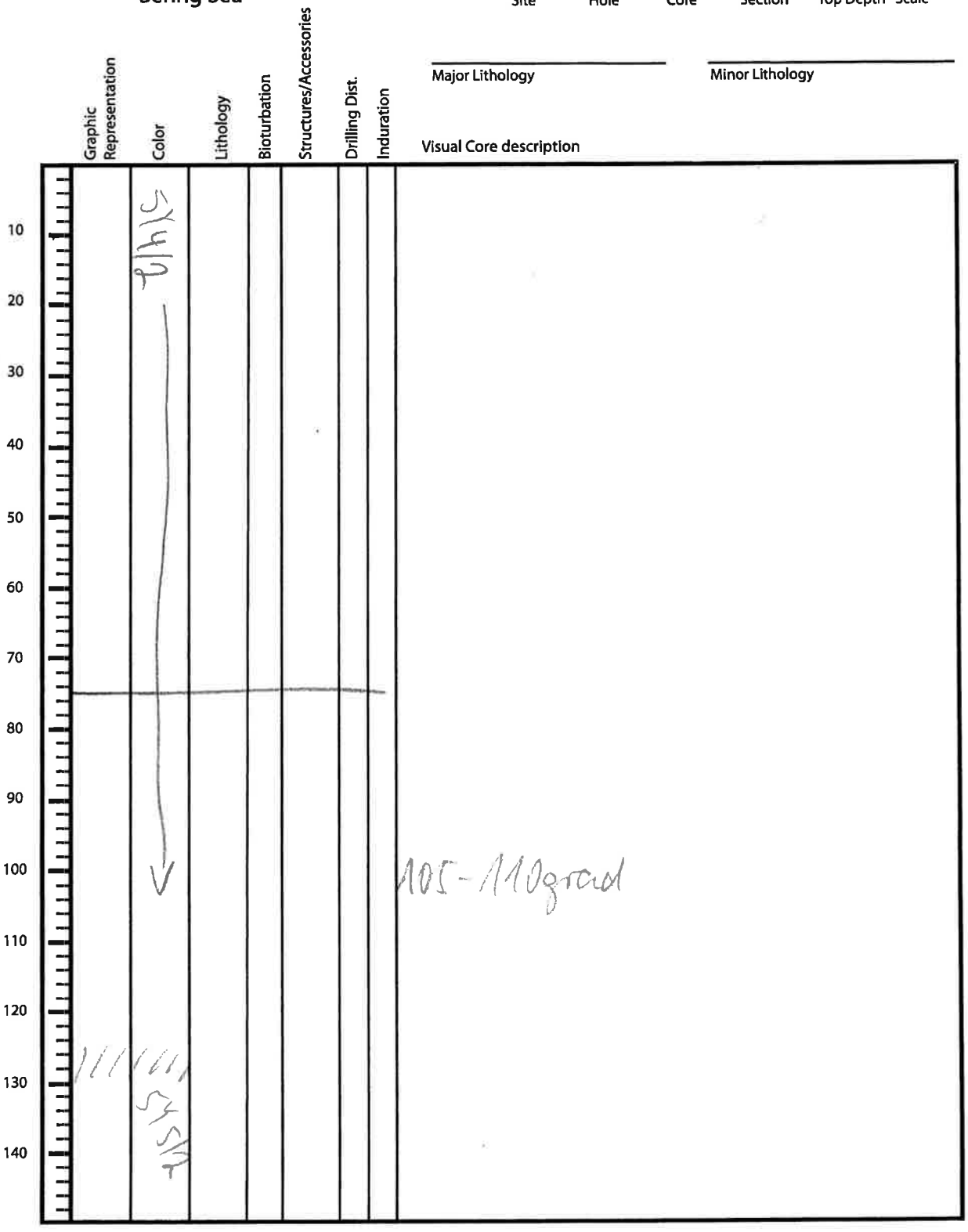


Observer: ____ Date: ____

Expedition 323
Bering Sea

1340 A 7D 5+6 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____



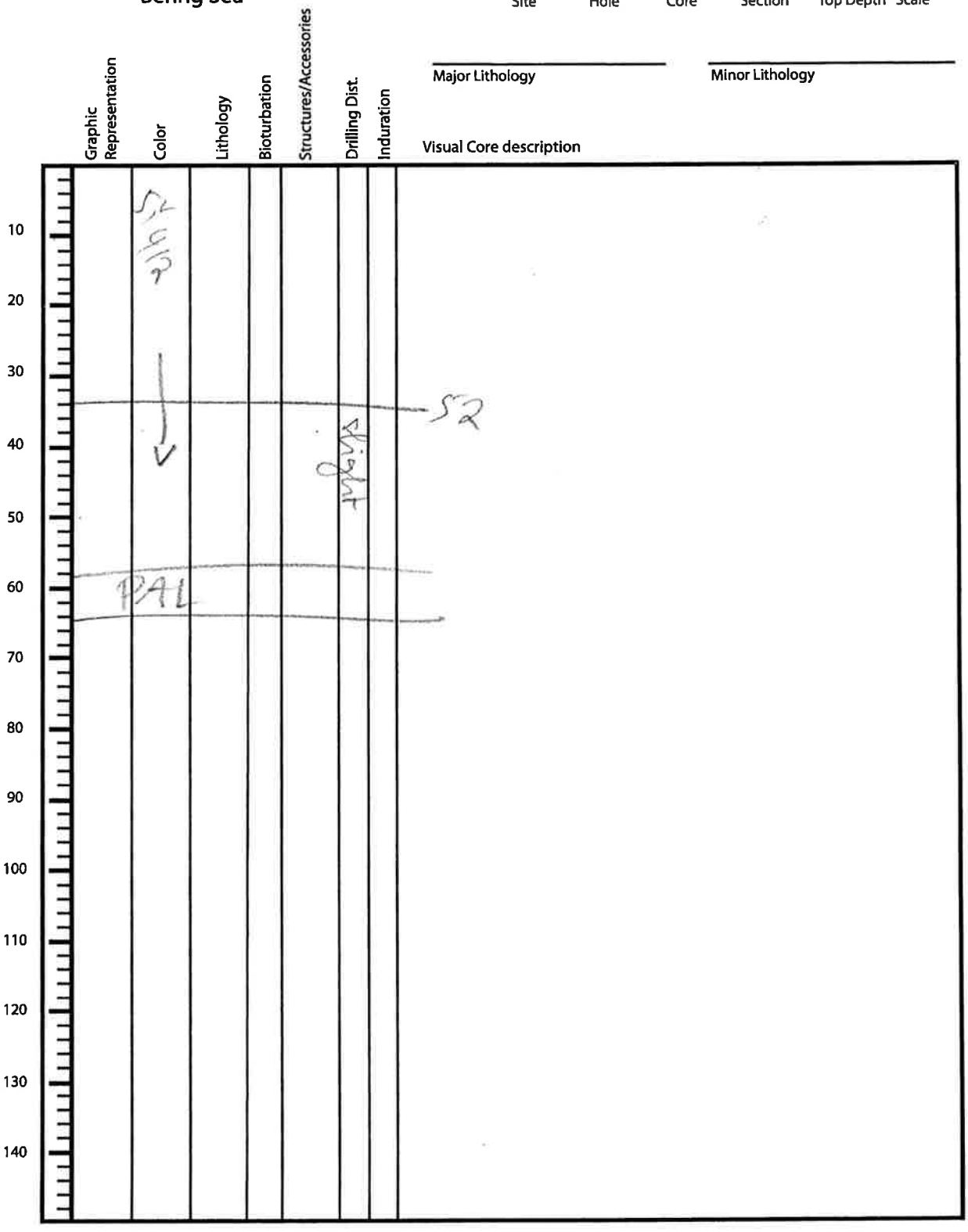
Observer: ____ Date: ____

Expedition 323
Bering Sea

1340 A 70 7+CC
Site Hole Core Section Top Depth Scale

Major Lithology

Minor Lithology



Observer: _____ Date: _____

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IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1340	A	70	X	6	70	70

Sediment/Rock Name	Diatom ooze	Observer	

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
	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
(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

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

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

Sediment/Rock Name	Diatom ooze	Observer	

Percent Texture		
Sand	Silt	Clay

Comments: Main lithology

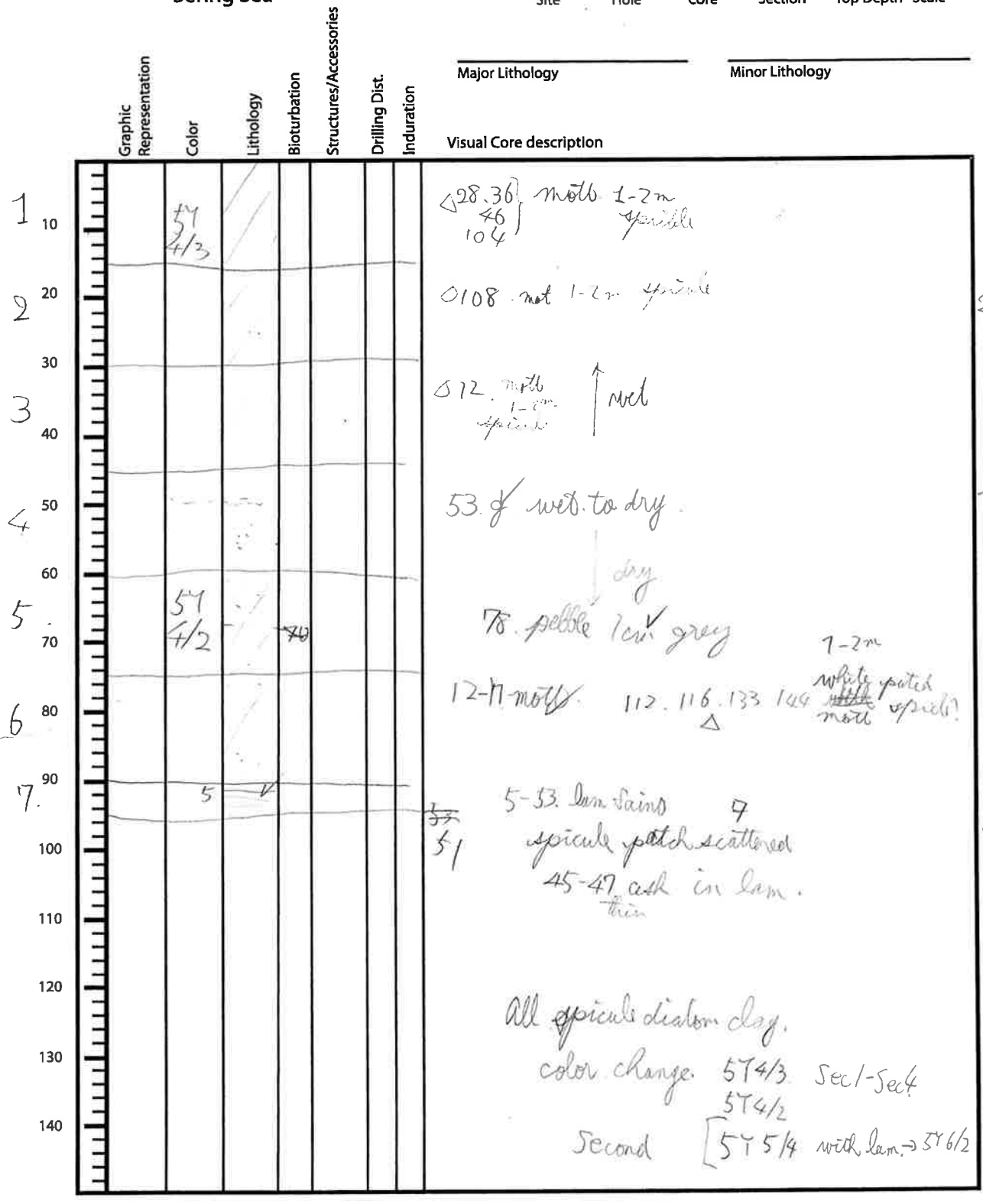
Percent	Component
6	**SILICICLASTIC GRAINS/MINERAL**
	Framework minerals
3	Quartz
3	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic 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

B40 | A | 7/ | | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology



Observer: _____ Date: _____

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IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
U1339	A	71	X	7A		150m	

Sediment/Rock Name	Spicule-diatom ooze light tan

Observer	Beth

Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
2	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
5	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
	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
35	Centric
5	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
40	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

X

514

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1340	A	71	X	7	A 20	cm

Sediment/Rock Name: Spicule diatom clay
B-50
S-35
V-15

Observer: Both

Comments:

Percent Texture		
Sand	Silt	Clay
10	10	80

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
	Barite
	Phosphorite/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