SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1341	A	1	H	1	1	1

Sediment/Rock Name	Diatom silt	Observer	

	Percent Texture		
	Sand	Silt	Clay
S	10	85	5

Comments:

Percent	Component
40	**SILICICLASTIC GRAINS/MINERAL**
	Framework minerals
15	Quartz
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
5	Fe-oxide
	Carbonates
	Calcite
	Dolomite
5	**VOLCANICLASTIC GRAINS**
	Crystal grain
15	Vitric grain
	Lithic grain

Percent	Component
55	**BIOGENIC GRAINS**
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
1	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
1	✓ Nassellaria
	Diatoms
18	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

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1341	A	1	H	1	39	39

Sediment/Rock Name	Foraminifer- and sponge-spicule-bearing diatom ooze	Observer	

Percent Texture		
Sand	Silt	Clay

Comments: Main lithology

Percent	Component
(18)	**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
2	Pyrite
	Magnetite
1	Fe-oxide
	Carbonates
	Calcite
	Dolomite
(15)	**VOLCANICLASTIC GRAINS**
	Crystal grain
15	Vitric grain
	Lithic grain

Percent	Component
(67)	**BIOGENIC GRAINS**
	Calcareous
8	Foraminifera fragments + whole
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
3	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
1	Nassellaria
	Diatoms
25	Centric
25	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	U1341	A	1	H	1	138	138

Sediment/Rock Name	Diatom-bearing foram ooze	Observer	

Percent Texture		
Sand	Silt	Clay

Comments: White sandy blob

Percent	Component
14	**SILICICLASTIC GRAINS/MINERAL**
	Framework minerals
7	✓Quartz
3	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
2	✓Pyrite
	Magnetite
	✓Fe-oxide
	Carbonates
	Calcite
	Dolomite
3	**VOLCANICLASTIC GRAINS**
	Crystal grain
3	Vitric grain
	Lithic grain

Percent	Component
83	**BIOGENIC GRAINS**
	Calcareous
	Foraminifera
63	Planktonic foraminifera
20	Benthic foraminifera
	Nannofossils
2	✓ Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
5	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	U1341	A	1	H	2	~~0~~ 13	~~0~~ 13

Sediment/Rock Name	Foram- and nanno-rich diatom ooze	Observer	

Percent Texture		
Sand	Silt	Clay

Comments: dark
~~Rare~~ laminae

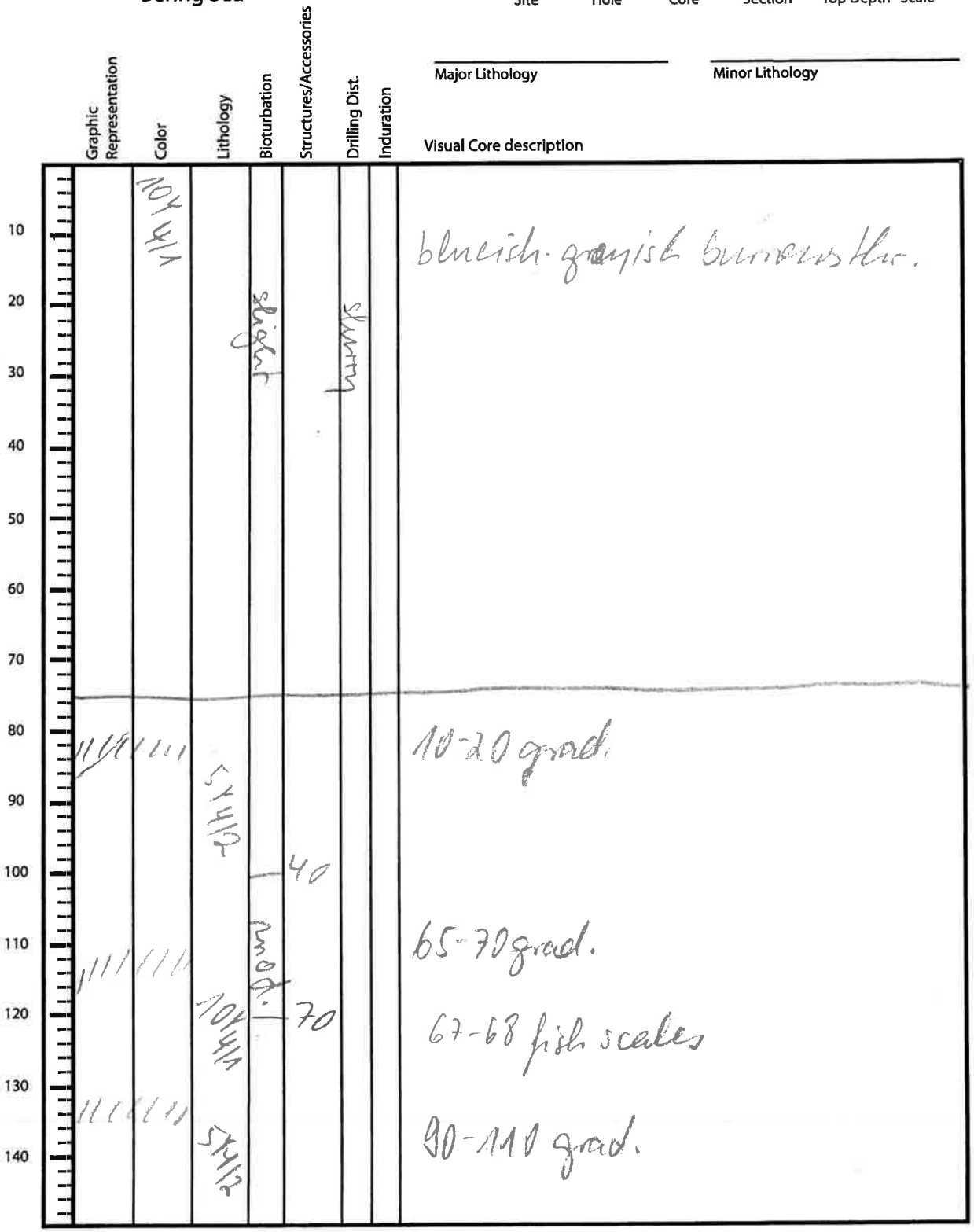
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
1.5	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals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

Percent	Component
	BIOGENIC GRAINS
	Calcareous
15	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
25	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
30	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

1341 A 2H 1+2 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____

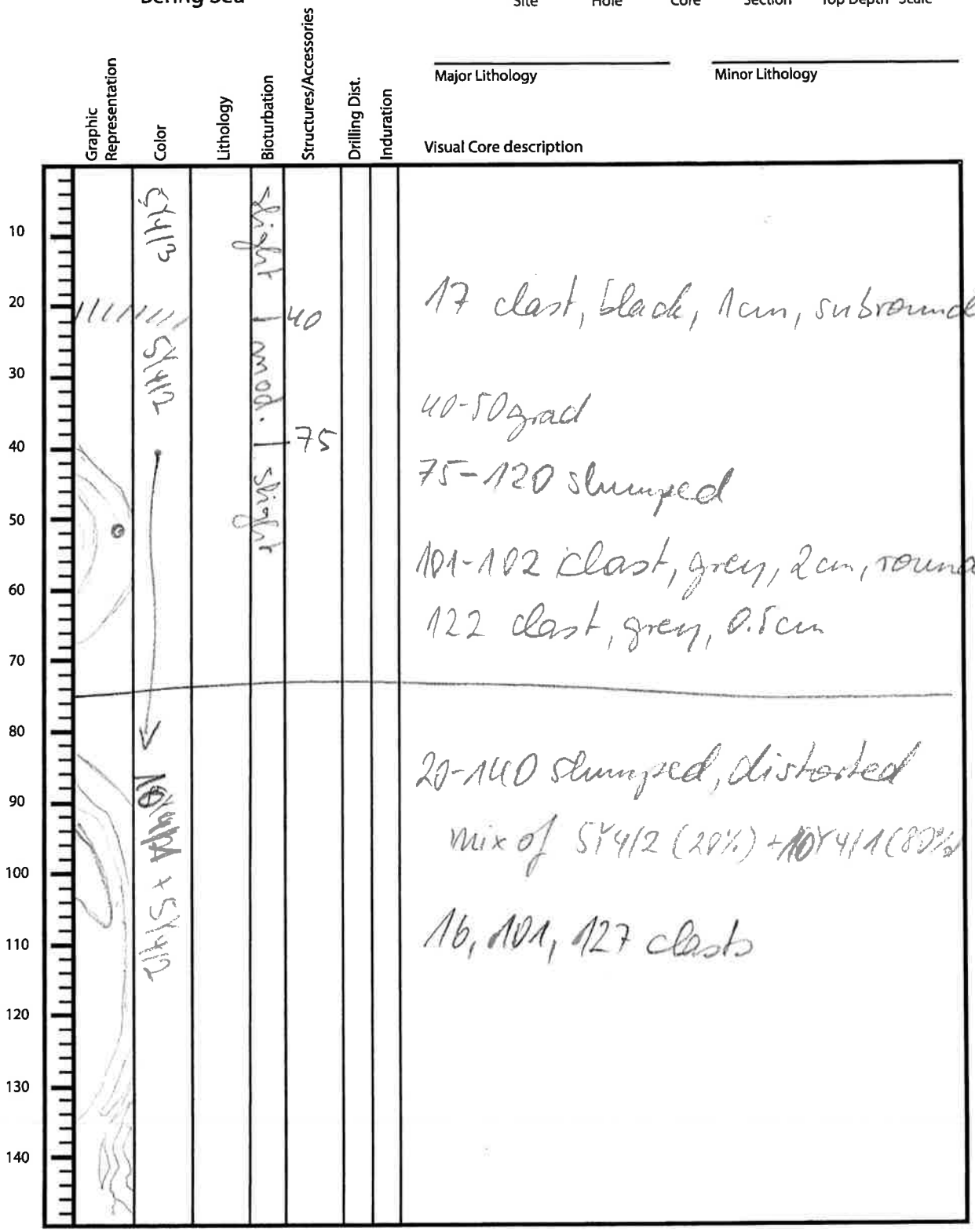


Observer: ____ Date: ____

Expedition 323
Bering Sea

1341 A 2H 3+4 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____

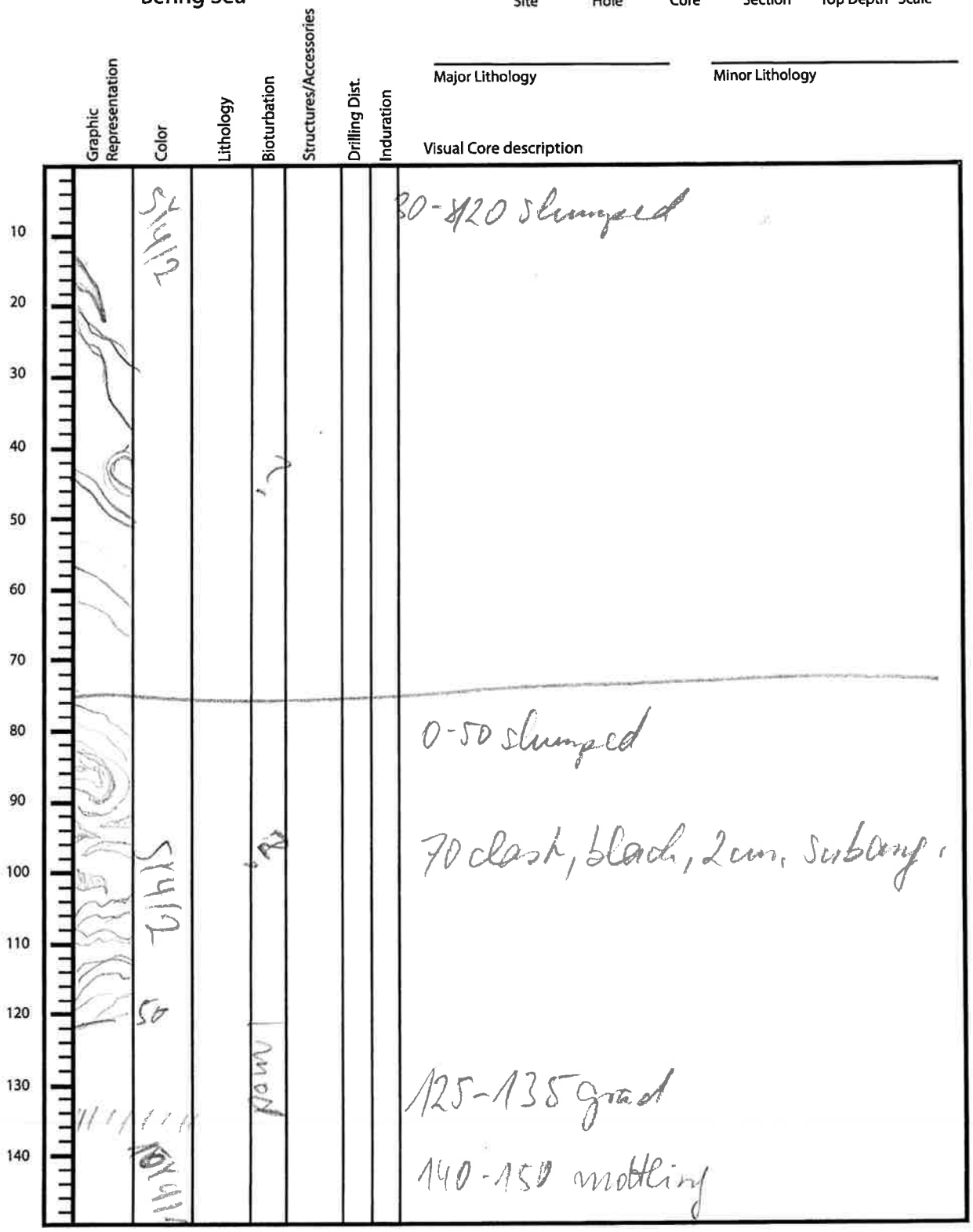


Observer: ____ Date: ____

Expedition 323
Bering Sea

1341 A 2H 5+6 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____



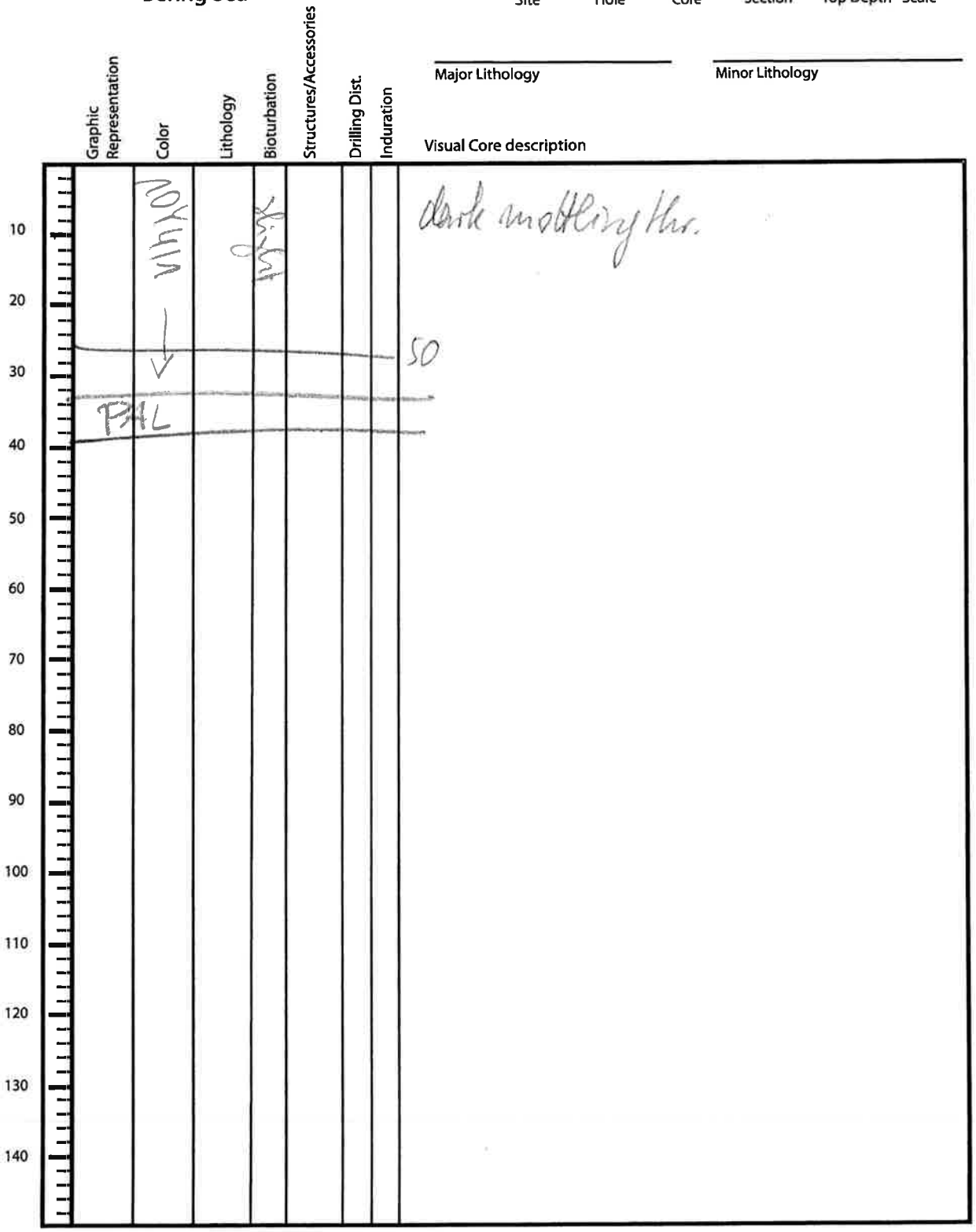
Observer: ____ Date: ____

Expedition 323
Bering Sea

1341 A 2H 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	Interval (cm) Bottom
323	U1341	A	7	H	2	90	90

Sediment/Rock Name	Diatom silt	Observer	MSC

S

Percent Texture		
Sand	Silt	Clay
0	95	5

Comments:

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

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

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1341	A	2	H	4	45	45

Sediment/Rock Name	Diatom ooze	Observer	MSC

Percent Texture		
Sand	Silt	Clay

Comments:

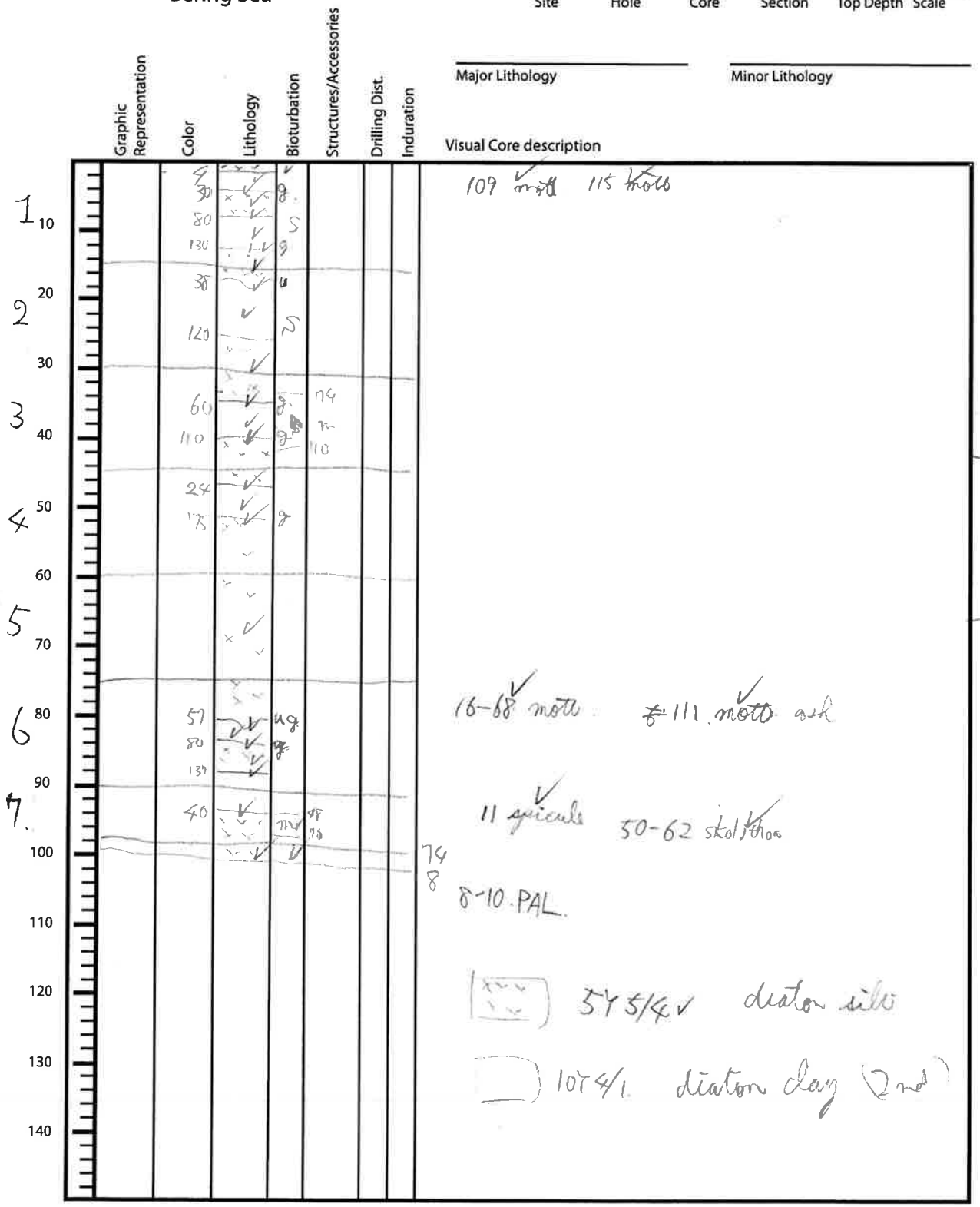
Percent	Component
55	**SILICICLASTIC GRAINS/MINERAL**
	Framework minerals
30	Quartz
12	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
5	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic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

Percent	Component
40	**BIOGENIC GRAINS**
	Calcareous
3	Foraminifera fragments
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
36	Diatoms
25	Centric
11	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

1341 A. 3 ____ ____ ____ ____
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
	1341	A	3		5	60cm	

Sediment/Rock Name	DIATOM CLAY

Observer	LM

Percent Texture		
Sand	Silt	Clay

Comments:

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

X.

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
	1341	A	3		3	100cm	

Sediment/Rock Name	DIATOM SILT	Observer	LWM

Percent Texture		
Sand	Silt	Clay

Comments: Major

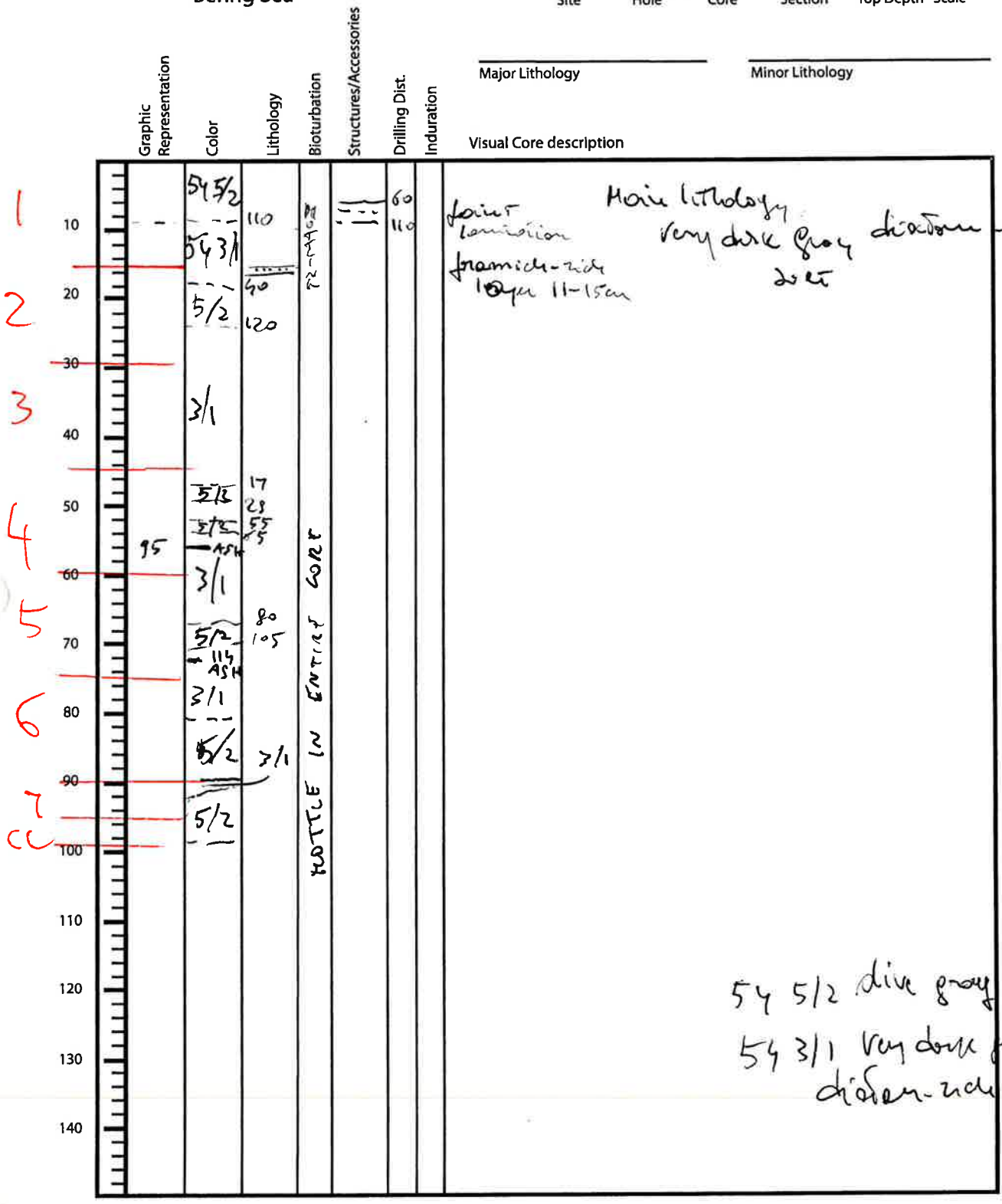
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
20%	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
20%	10 Micas
	Biotite
	Muscovite
20%	5 10 Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals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

Percent	Component
	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
50% 5 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

Expedition 323
Bering Sea

1341 | A | 5 | | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology



54 5/2 dive gray diatom ooze

54 3/1 very dark gray diatom-rich ooze

Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
323	1341	A	4	H	7A	79	

Sediment/Rock Name	diatom-rich silt	Observer	akira

Percent Texture		
Sand	Silt	Clay

Comments:

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

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	(Radiolarians
	Spumellaria
	Nassellaria
37	✓ Diatoms 7
	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

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	1341	A	4	H	6A	110	

Sediment/Rock Name	diatom ooze	Observer	akira

Percent Texture		
Sand	Silt	Clay

Comments:

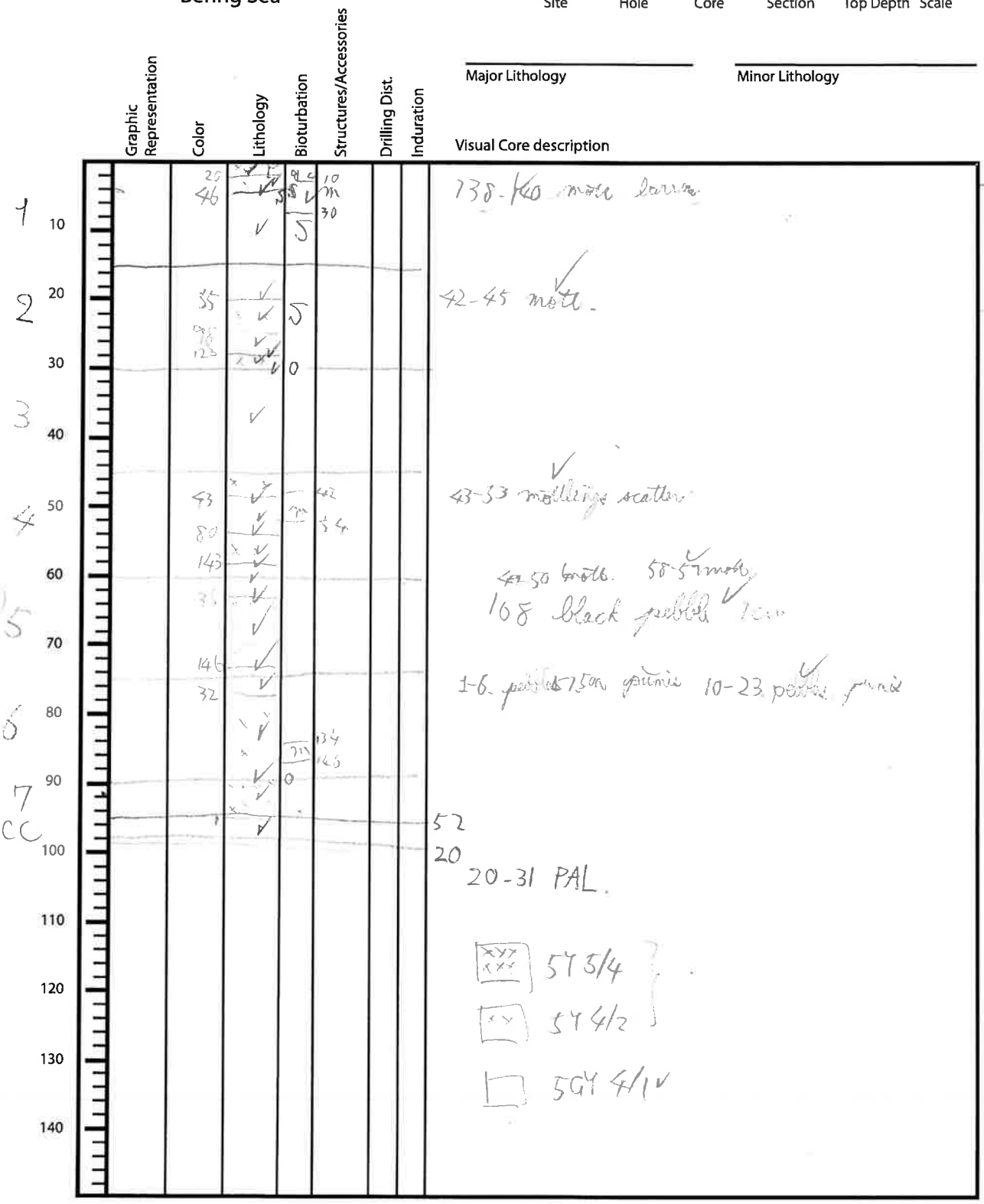
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
8	Quartz 2
4	Feldspar 1
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
2	Rock fragments 0.5
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic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

Percent	Component
	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	✓ Radiolarians
	Spumellaria
	Nassellaria
81	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

1341 A 5H ____ ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____



Observer: ____ Date: ____

.CSV

X

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
323	U1341	A	5	H	5	100 cm	

Sediment/Rock Name	clayey diatom ooze (Main lithology)	Observer	G.B

Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
5	Quartz X
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
20	Clay Minerals X
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
10	X Pyrite
	Magnetite
	Fe-oxide
5	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 X
55	80 Centric
5	20 Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
323	U1341	A	5	H	1	100 cm	

Sediment/Rock Name	Diatom Silt

Observer	G.B

(Main lithology)
2nd

Percent Texture		
Sand	Silt	Clay

Comments: Pleistocene + ~~Eocene~~ Diatom fragments

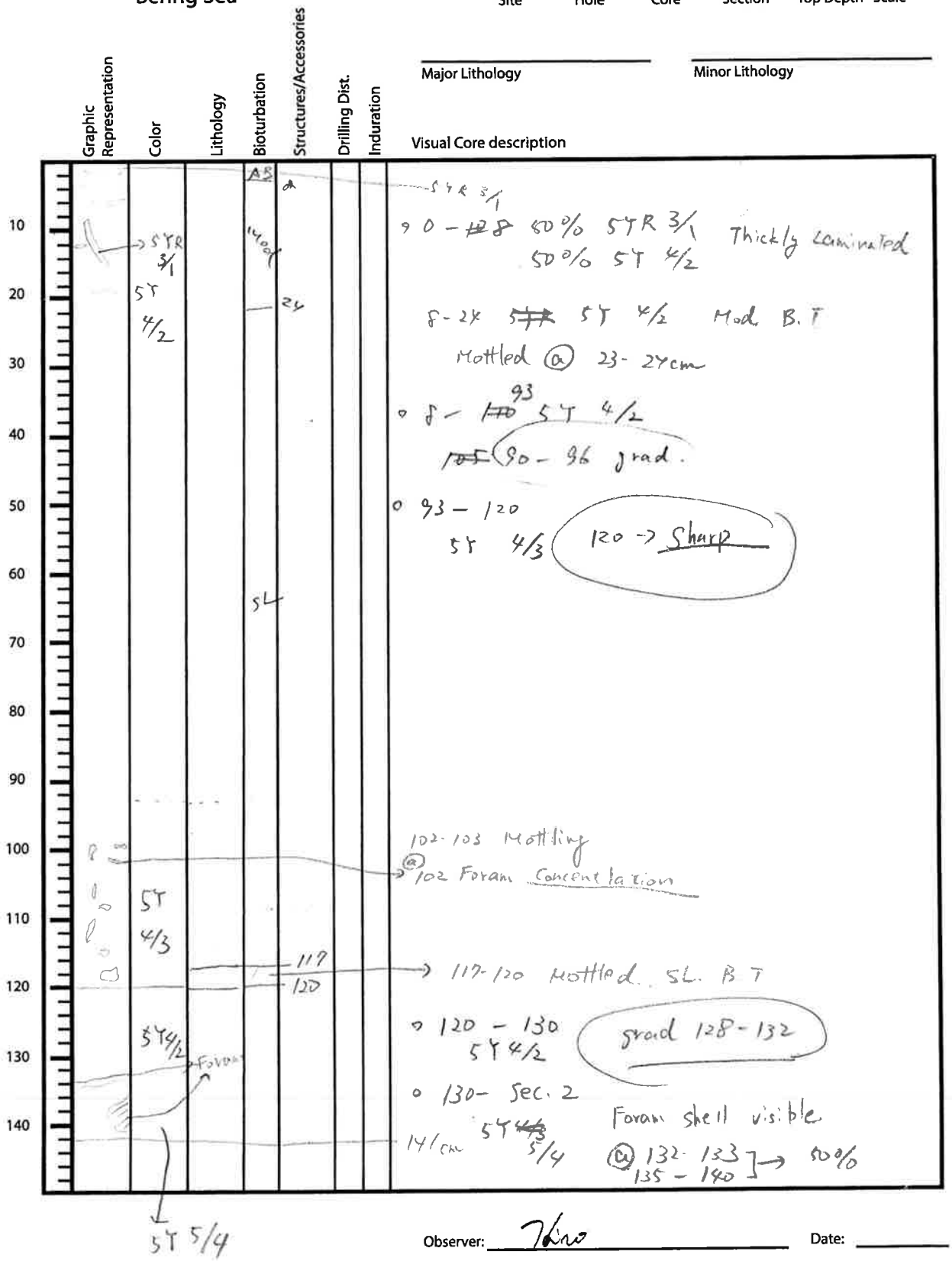
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
10	Quartz
5	X Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
5	X Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
10	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
5	Ferromagnesium minerals
	Authigenic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

1341 / A. / 11H / 1 / ____ / ____
Site / Hole / Core / Section / Top Depth / Scale

Major Lithology ____ Minor Lithology ____



Observer: Kino Date: ____

Expedition 323
Bering Sea

1341	A	11H	2		
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

5Y 5/4

5Y 4/3

10Y 4/1

SL

AB

SL

0 Cont. — ~~1~~ 1/2 cm 5Y 5/4

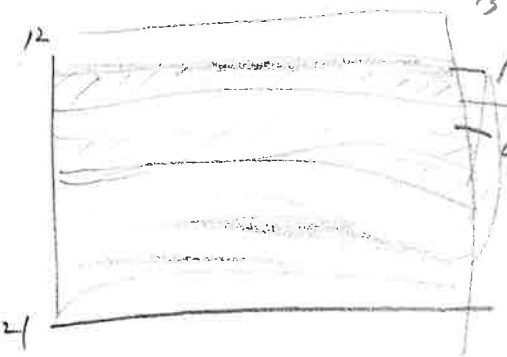
~~1 cm~~

0 12cm – 21 cm

Thickly laminated 4/3

iteration of 5Y ~~5/4~~ ↓

2.5Y ~~5/2~~ 4/3 (Foram)



0 21 – CC Bottom.

10Y 4/1

SL. R. 7.

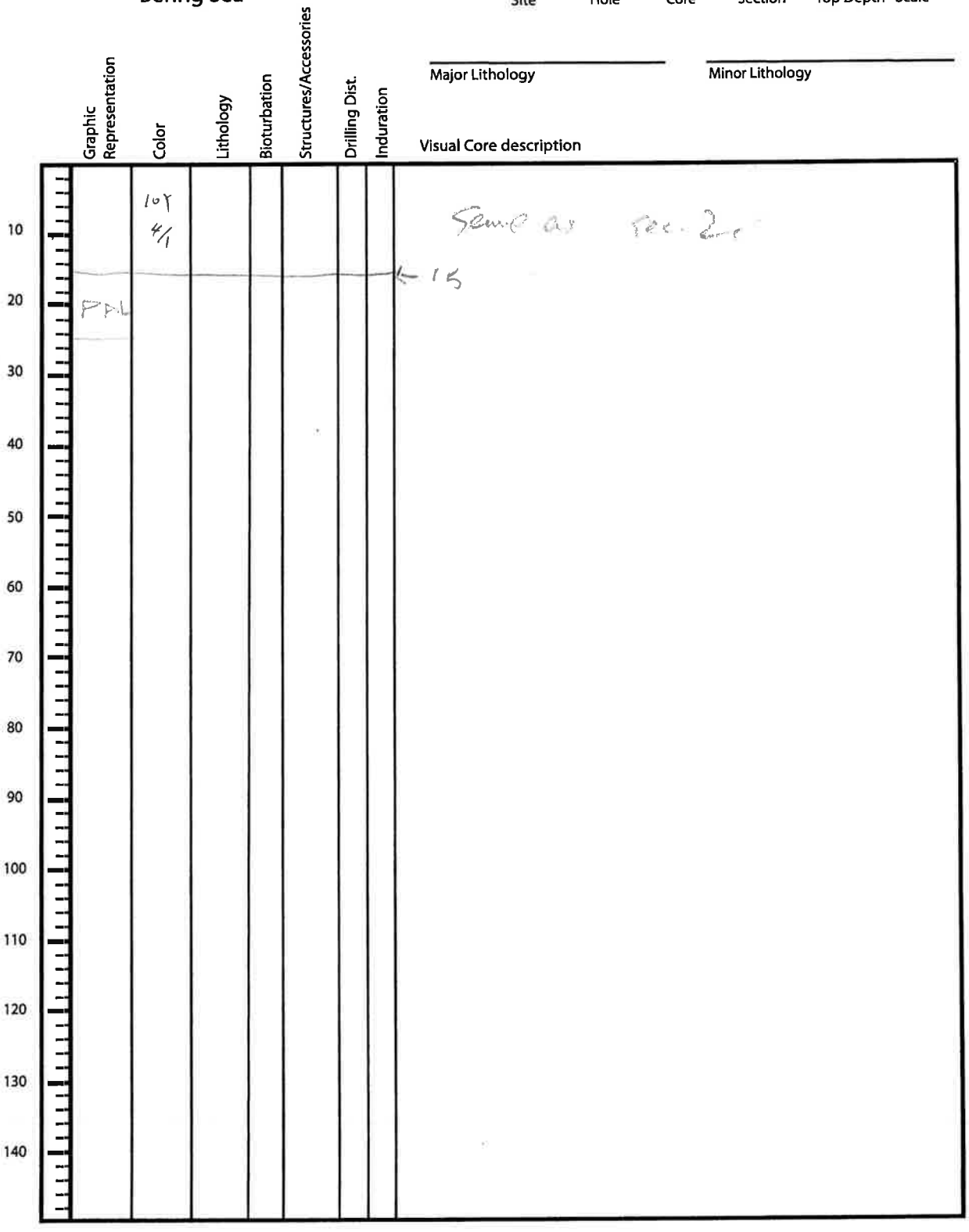
131

Observer: Kirsten Cu Date: _____

Expedition 323
Bering Sea

1341	A	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	Interval (cm) Bottom
323	U1341	A	1	H	2	18	18

Sediment/Rock Name	foraminifer- and nanno-rich diatom ooze

Observer	

Percent Texture		
Sand	Silt	Clay

Comments: light
~~Dark~~ banding

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
100	**BIOGENIC GRAINS**
	Calcareous
	Foraminifera
22	✓ Planktonic foraminifera
5	Benthic foraminifera
	Nannofossils
23	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	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	U1341	A	1	H	2	75	75

Sediment/Rock Name	foram and nanno bearing diatom rich clayey silt	Observer	

S

Percent Texture		
Sand	Silt	Clay
5	65	30

Comments: Main lithology

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

Percent	Component
(40)	**BIOGENIC GRAINS**
	Calcareous
6	Foraminifera
	✓ Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
6	✓ Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
1	✓ Spumellaria
1	✓ Nassellaria
	Diatoms
12	✓ Centric
12	✓ 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

1341 A 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

32-34 moth skeletons? ✓

1A-80 diatom clay

133-134 sandy ✓ lens. 136 green ✓ layer

70-74 pebbles ✓

134-137 black ash 2.5/N ✓

139-145 brown ash. 10YR 3/2 ✓

146-149 laminated dark ~~gray~~ ash 2.5Y ✓ 3/1

4A-70 diatom silt

48-52 ash ✓ brown 10YR 7/2

91-92 moth ash ✓

120-121 ✓ mot

75

9

5Y 5/4 diatom ooze

5Y 4/2 diatom clay

10Y 4/1 diatom silt

Observer: ____ Date: ____

X

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

SM

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
323	U1341	A	6	H	1	80 cm	

Sediment/Rock Name	Diatom Clay

Observer	G.B.

Main lithology

Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
10	X Quartz
10	X 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
20	X Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	Vitric grain
	Lithic grain

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

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
323	U1341	A	6	H	4	70 cm	

Sediment/Rock Name	Diatom silt

Observer	GB

Percent Texture		
Sand	Silt	Clay

Comments: Main lithology (2nd)

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

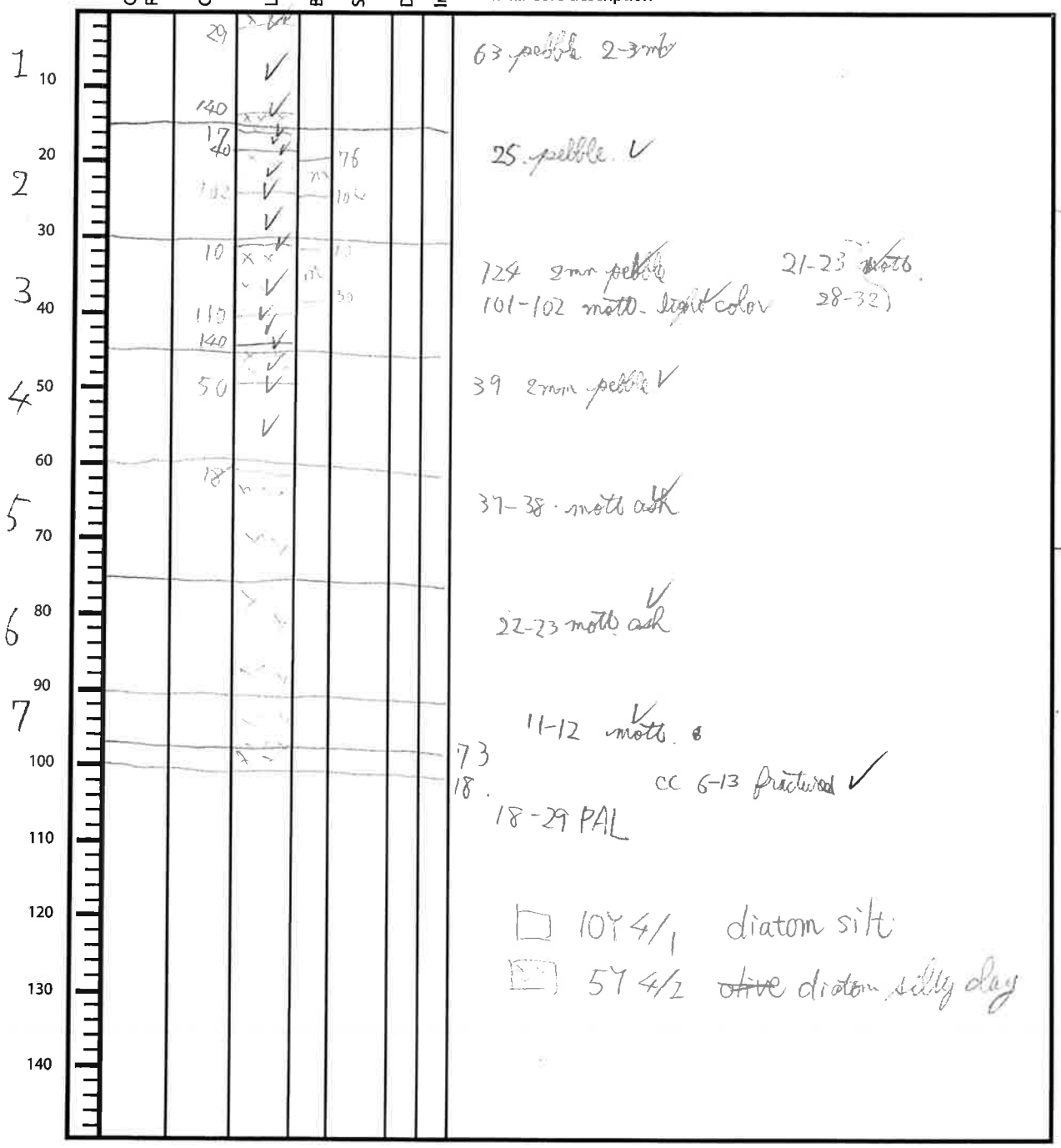
Percent	Component
	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
45	X Diatoms
	50 Centric
	50 Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge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

Expedition 323
Bering Sea

1341 | A | 7 | | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

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



63 pebble 2-3mm

25 pebble. ✓

124 2mm pebble
101-102 motto. light color
21-23 motto
28-32)

39 2mm pebble ✓

37-38 · motto ash

22-23 motto ash ✓

11-12 motto ✓

CC 6-13 fractured ✓

18-29 PAL

10Y 4/1 diatom silt

5Y 4/2 ~~olive~~ diatom silty clay

SS
2A-120
diatom silt

SS
5A-80
diatom silty clay

Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
	1341	A	7		2	120 cm	

Sediment/Rock Name	DIATOM SILT	Observer	IWA

Percent Texture		
Sand	Silt	Clay

Comments: 2nd

100 | 65
350 | 15

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
45% 20	Framework minerals
15	Quartz
15	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
5	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
10	Radiolarians
	Spumellaria
	Nassellaria
40% 20	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
	1341	A	7		5	80 cm	

Sediment/Rock Name	DIATOM CLAY SILTY CLAY	Observer	LMA

Percent Texture		
Sand	Silt	Clay

Comments:

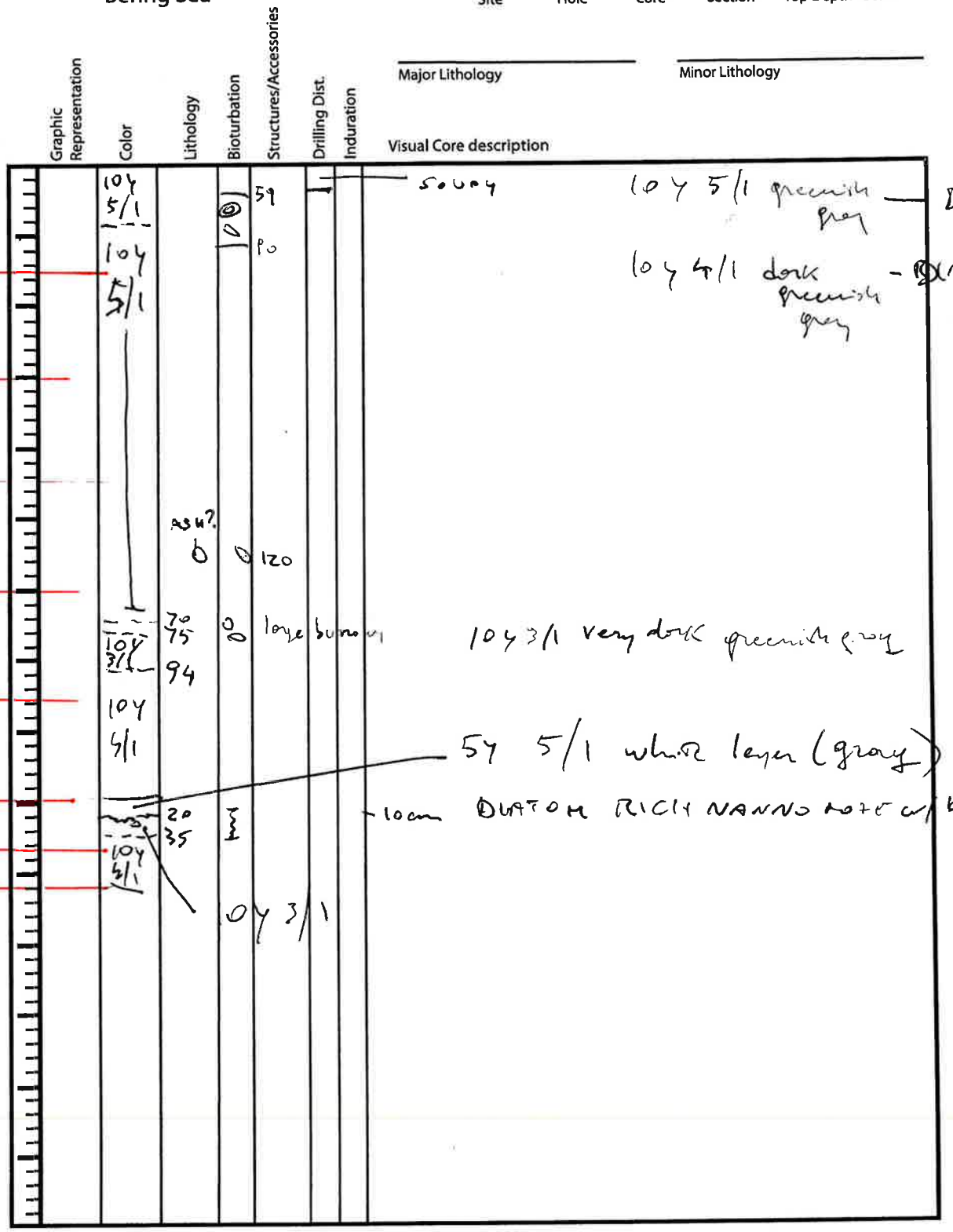
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
20%	Framework minerals
10 %	Quartz
10 %	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
35%	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic 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
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

Expedition 323
Bering Sea

1341 A 8 ____ ____ ____
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	U1341	A	8	H	7	10 cm	

Sediment/Rock Name	diatom. rich, [redacted] nanno ooze w/ a lot of dolomitic carbonate —	Observer	G.B.

Percent Texture		
Sand	Silt	Clay

Comments: Minor lithology -

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

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

3

Expedition 323
Bering Sea

Site: 1344 Hole: A Core: 9 Section: ____ Top Depth ____ Scale ____

Major Lithology ____ Minor Lithology ____

Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Visual Core description
	70	✓					
	3, 77, 130	✓	S				
	109	✓					
	5		M	70			70-25 many burrow
	48	✓	M				
	70	✓	M	135			20-70 gb
			S				90
							17
							17-27 PAL

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

Sections: 1, 2, 3, 4, 5, 6, 7, CC

Major [hatched] 5Y 4/2 diatom silt

[blank] 10Y 4/1 diatom silt

Minor [x] 5Y 4/4 diatom ooz

Second [dotted] 5Y 4/3 diatom clay

2A-40 nano-rich diatom ooze.

4A-40 diatom silt

7A-40 diatom clay.

Observer: ____ Date: ____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
323	U1341	A	9	H	4	40 cm	

Sediment/Rock Name	Diatom silt

Observer	GB.

Percent Texture		
Sand	Silt	Clay

Comments: Major lithology

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
10 X	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
20	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
10 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
10 X	Radiolarians
	Spumellaria
	Nassellaria
45 X	Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
5 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
323	U1341	A	9	H	2	40 cm	

Sediment/Rock Name	Nanno. rich diatom ooze

Observer	G.B.

Percent Texture		
Sand	Silt	Clay

Comments: Minor lithology -

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
1	Quartz
2	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
9	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
2	X Foraminifera broken
	Planktonic foraminifera
	Benthic foraminifera
20	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
5	X Radiolarians
	Spumellaria
	Nassellaria
50	X Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
5	X Silicoflagellates
5	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	U1341	A	9	H	7	40 cm	

Sediment/Rock Name	Diatom Clay foram-bearing. Nanno-"	Observer	GB

Percent Texture		
Sand	Silt	Clay

Comments:

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

Percent	Component
	BIOGENIC GRAINS
	Calcareous
10 X	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
10 X	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

Expedition 323
Bering Sea

1341 A 10 — Site / Hole / Core / Section / Top Depth / Scale

Major Lithology / Minor Lithology

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

1A-40 nano-bearing diatom ooze

42 ash mottling

104 blue pebble

30-31 pebble 1cm

90 thin ash

3A-140 diatom ooze

Sec 5 50 — CC

many barrow

75

28 28-39 PAL

Major
- 10Y 4/1
- 2nd 5Y 4/3 nano-bearing diatom ooze
- 5Y 4/4 nano-rich diatom ooze

Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
	1341	A	10		1	50 cm	

Sediment/Rock Name	NANNO-BEARING DIATOM OOZE	Observer	IWM

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
2	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
BIOGENIC GRAINS	
	Calcareous
2	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
C10%	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
70%	Diatoms
40	Centric
30	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
	1341	A	10	5		140	

Sediment/Rock Name	DIATOM SILT	Observer	LWA

Percent Texture		
Sand	Silt	Clay

Comments:

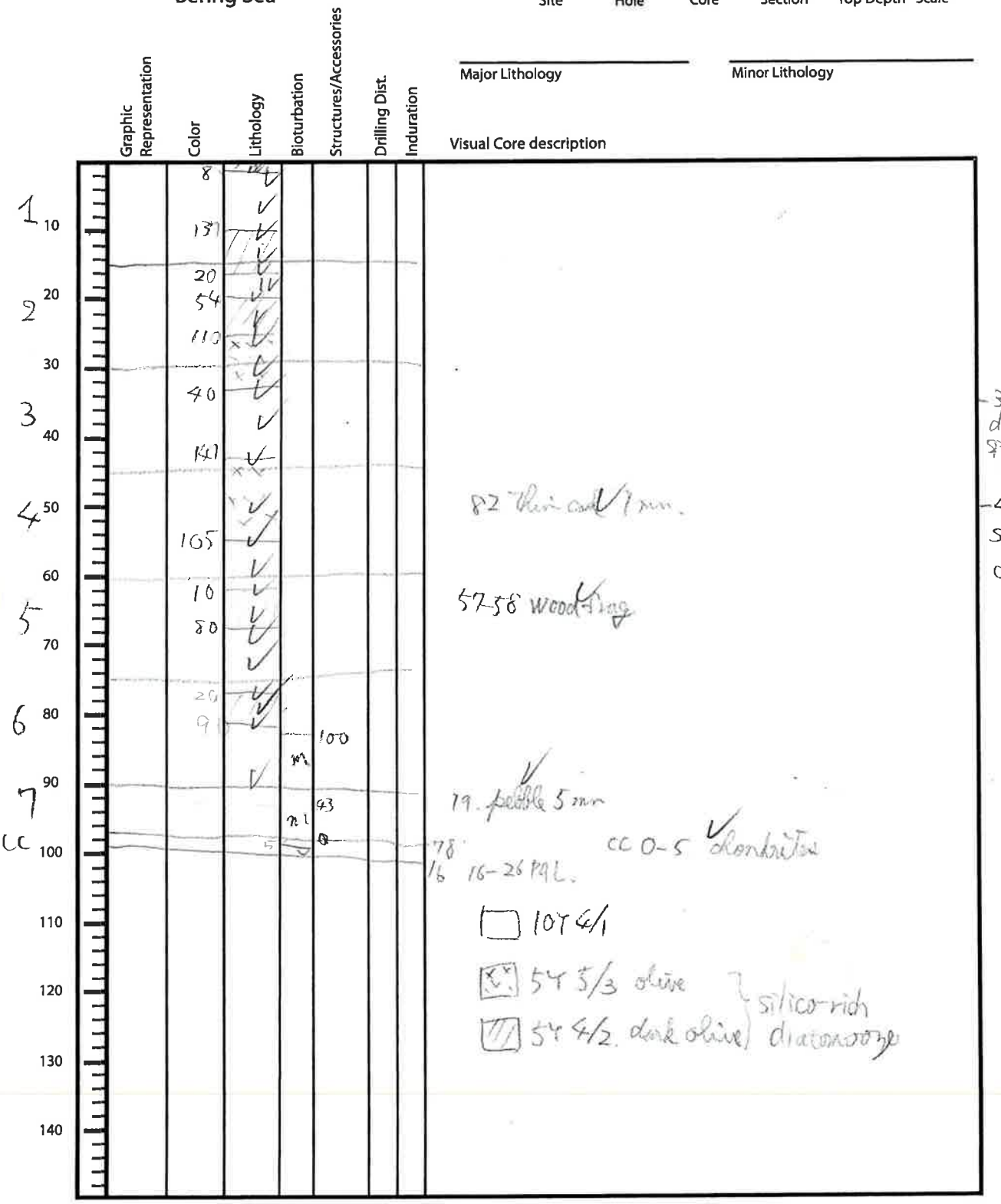
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
10%	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
2%	Rock fragments
	Accessory/trace minerals
3%	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
5% BM	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
<5%	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
~60%	Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1341 / 11 / ___ / ___ / ___ / ___
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	U1341	A	11	H	4	70 cm	

Sediment/Rock Name	Siliceous-rich diatom ooze	Observer	G.B.

Main lithology (interglacial?)

Percent Texture		
Sand	Silt	Clay

Comments:

100
25
75
90
10

30

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

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

35 39 + 46 = 85

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	D41	A	11	H	3	70 cm	

Sediment/Rock Name	diatom ~~silt~~ diatom-rich, spicule-rich, silt

Observer	G.B.

Percent Texture		
Sand	Silt	Clay

Comments: Rain lithology (glacial?)

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
80	X Quartz
	Feldspar
5	X K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
5	X Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
5	X Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
5	Pyrite
	Magnetite
5	X Fe-oxide
	Carbonates
5	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
25	X Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
25	X Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

Expedition 323
Bering Sea

1341 | A | 12 | 1-4 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

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

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

0-150 10Y 4/1

1

10Y 4/1

5P

0-150 5Y 4/3

150

2

5Y 4/3

5P

140 5Y 4/3

Sec 5

5Y4/3

- 140 5Y 4/3

3

5P

- 140 5Y 4/3

140 - 5Y 4/2

1

10Y 4/1 5Y4/2

5Y 4/2

4

5P

frad @ 50-60

10Y 4/1

Observer: _____ Date: _____

Expedition 323
Bering Sea

Site	Hole	Core	Section	Top Depth	Scale
1341	A	12	5-CC		

Major Lithology

Minor Lithology

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

Visual Core description

Depth	Color	Bioturbation	Drilling Dist.	Visual Core description
0–10	10Y 4/1			grad 36–44
10–30	5 ~~10~~Y 4/3; 10Y 4/1	SP		5 ° 40–110 5Y 4/3; 110–120 grad; ° 110– 10Y 4/1 sec.6 10
30–60	5Y 4/3; 10Y 4/1	SP		° sec. 6. 10 – 95 5Y 4/3; 6 ° 95–150 10Y 4/1; * 108-109 pinkish ash (5YR 6/1)
60–90	5Y 4/2; 5Y 3/2; ~~5Y 3/2~~	SP		° 0–60 5Y 4/2; ° 60–88 5Y 3/2) grad @ 58–62; 7
90–94		SP	SI	CC ← 17.6 cm ↑ crack SI

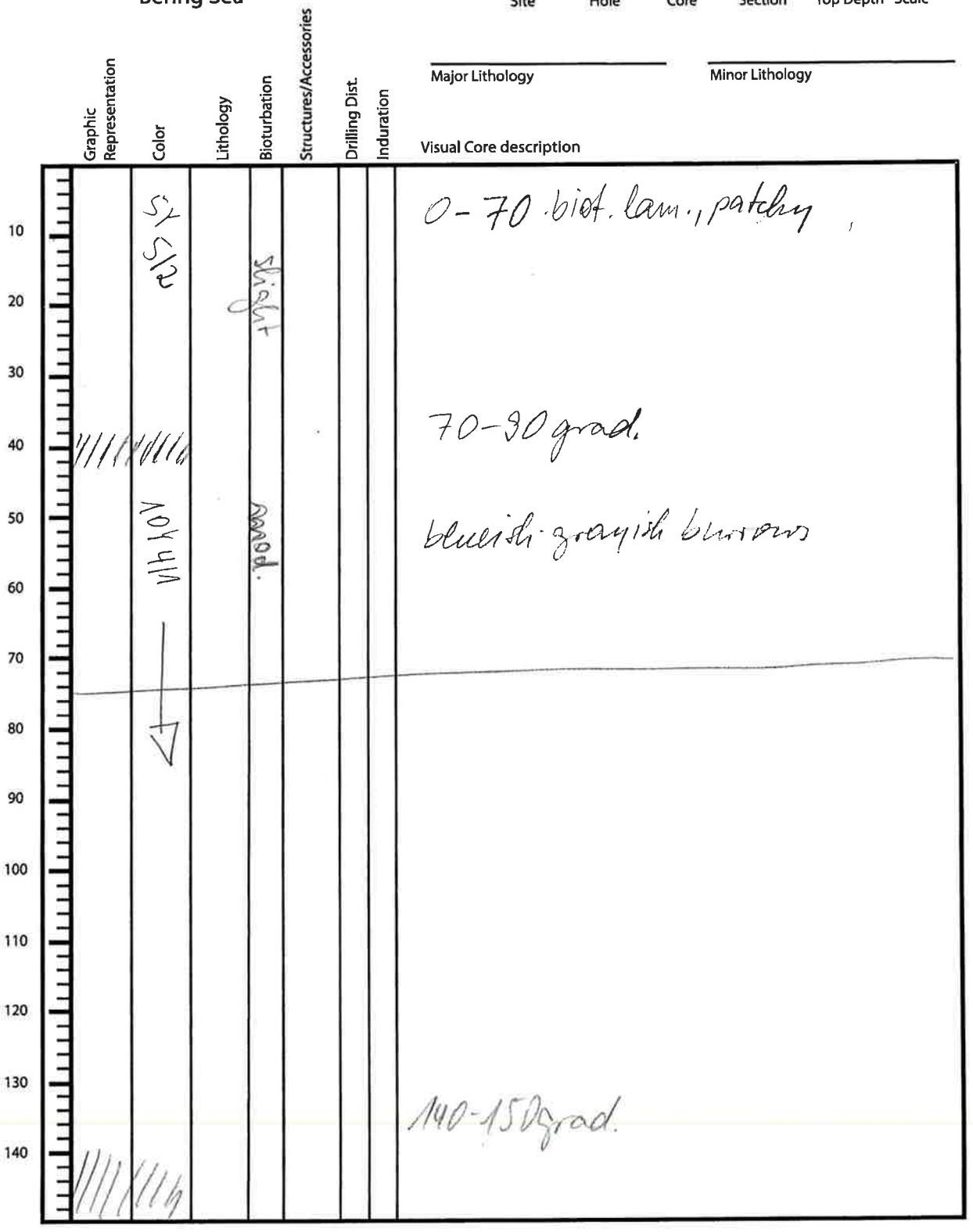
10 20 30 40 50 60 70 80 90 100 110 120 130 140

Observer: ______ Date: ______

Expedition 323
Bering Sea

1341 (Site) A (Hole) 13H (Core) 1+2 (Section) ____ (Top Depth) ____ (Scale)

Major Lithology ____ Minor Lithology ____

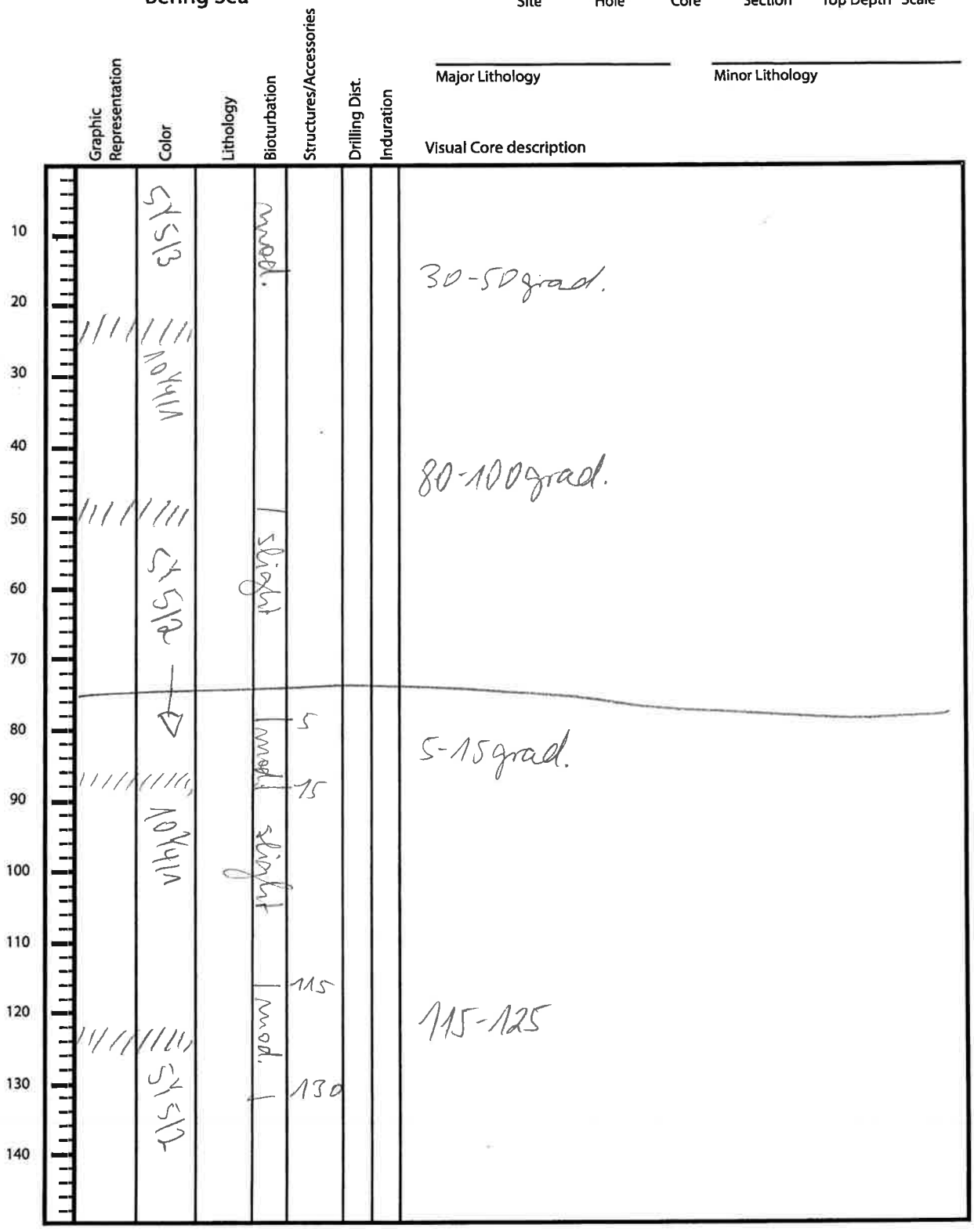


Observer: ____ Date: ____

Expedition 323
Bering Sea

1341 A 13H 3+4 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____

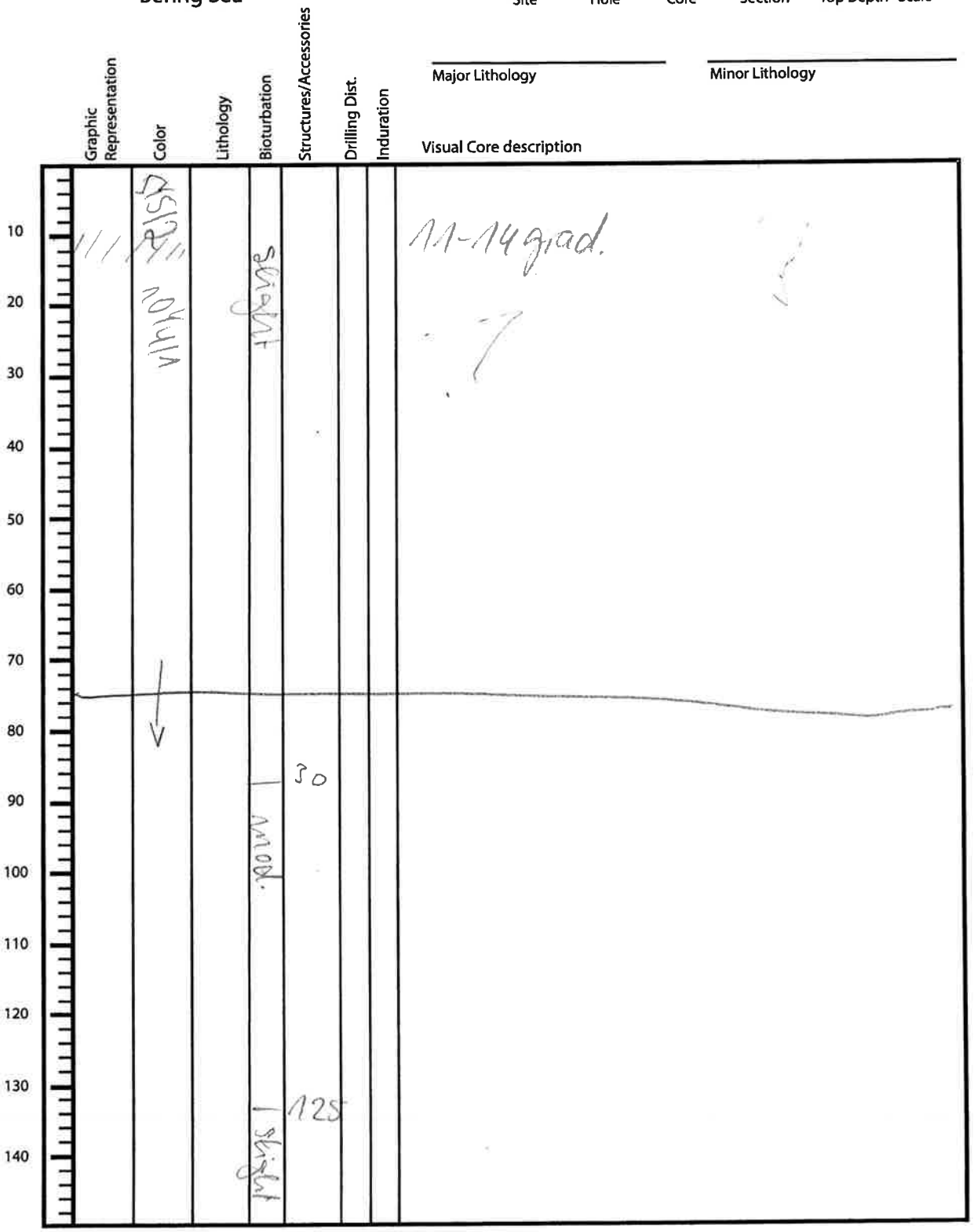


Observer: ____ Date: ____

Expedition 323
Bering Sea

1341 (Site) A (Hole) 13H (Core) 5+6 (Section) ____ (Top Depth) ____ (Scale)

Major Lithology ____ Minor Lithology ____

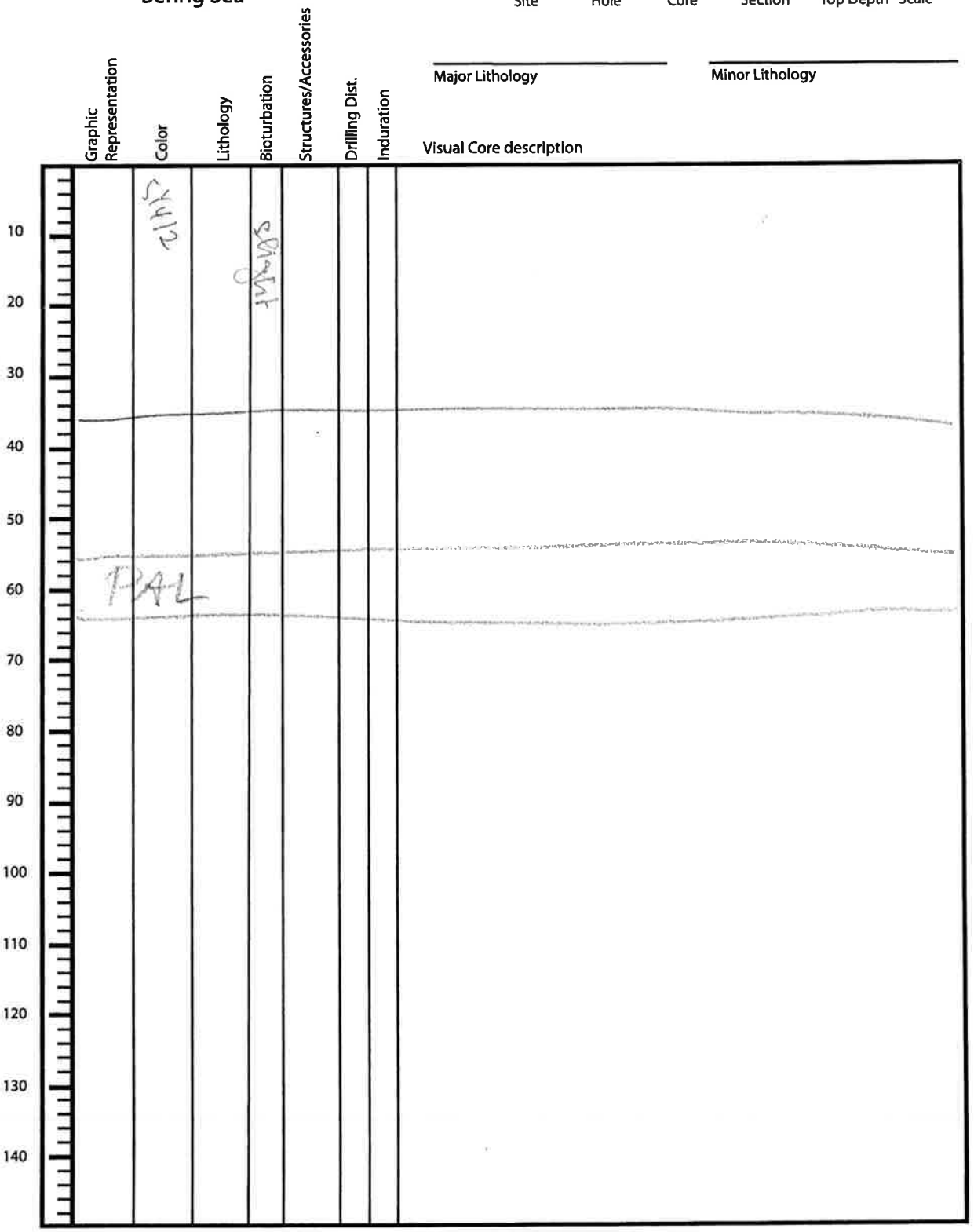


Observer: ____ Date: ____

Expedition 323
Bering Sea

1341 | A | 13H | 7+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
			13	H	5	70	70

Sediment/Rock Name	Diatom ooze

Observer	MSC

Percent Texture		
Sand	Silt	Clay

Comments: Main Lithology

Percent	Component
26	**SILICICLASTIC GRAINS/MINERAL**
20	Framework minerals
10	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
5	✓ Pyrite
	Magnetite
1	✓ Fe-oxide
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
74	**BIOGENIC GRAINS**
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
34	Centric
34	Pennate
	Chaetoceros Resting Spores
6	✓ 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
			13	H	2	100	100

Sediment/Rock Name	Diatom ooze

Observer	MSC

Percent Texture		
Sand	Silt	Clay

Comments: Main Lithology

Percent	Component
20	**SILICICLASTIC GRAINS/MINERAL**
	Framework minerals
9	Quartz
8	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
80	**BIOGENIC GRAINS**
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
37	Centric
40	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

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1341	A	13	H	6	17	17

Sediment/Rock Name	Diatom-bearing Sponge-Spicule ooze	Observer	

Percent Texture		
Sand	Silt	Clay

Comments: White spot

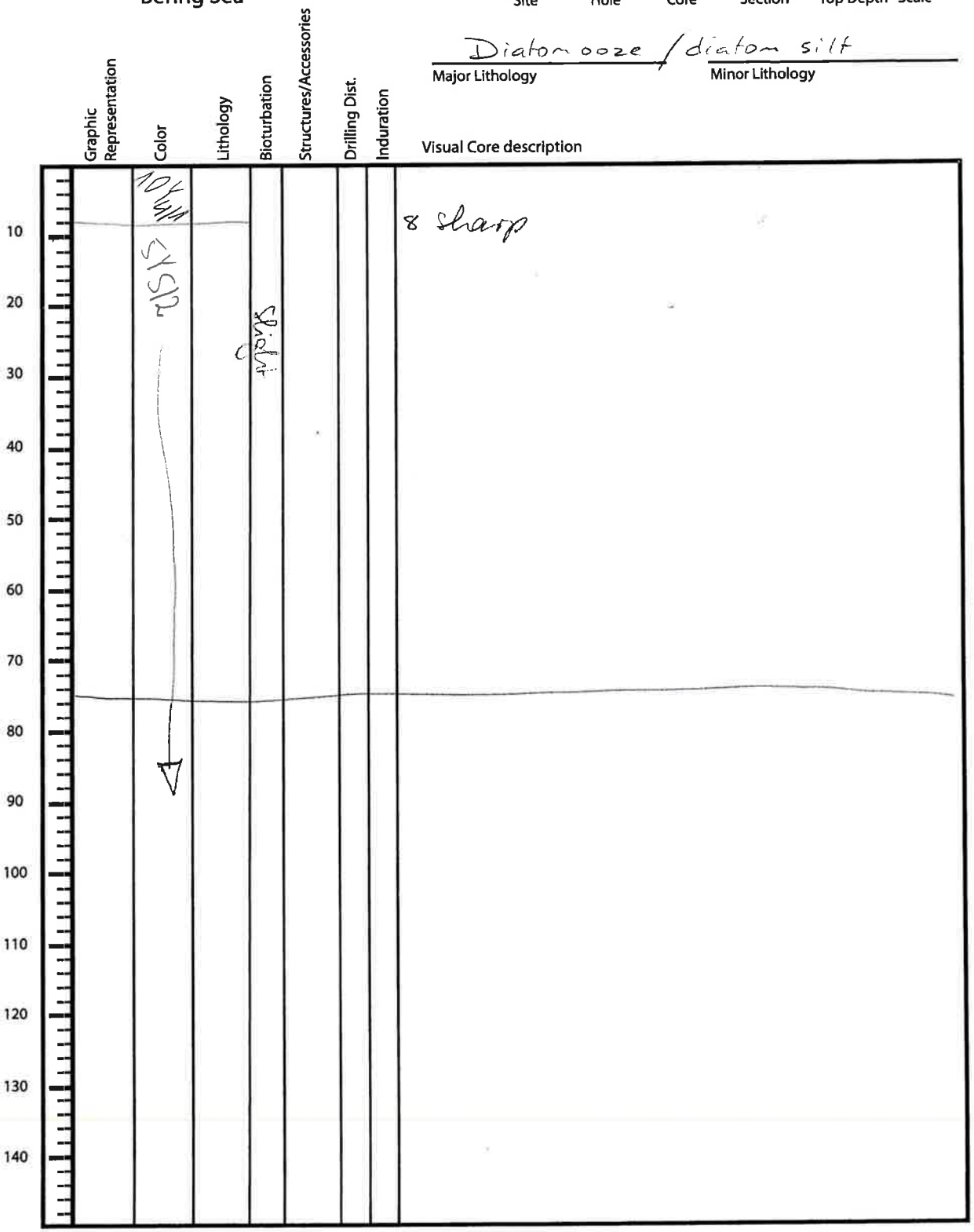
Percent	Component
20	**SILICICLASTIC GRAINS/MINERAL**
	Framework minerals
20	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic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

Expedition 323
Bering Sea

U1341 (Site) A (Hole) 14 (Core) 1+2 (Section) 0 (Top Depth) ____ (Scale)

Diatom ooze / diatom silt
Major Lithology / Minor Lithology

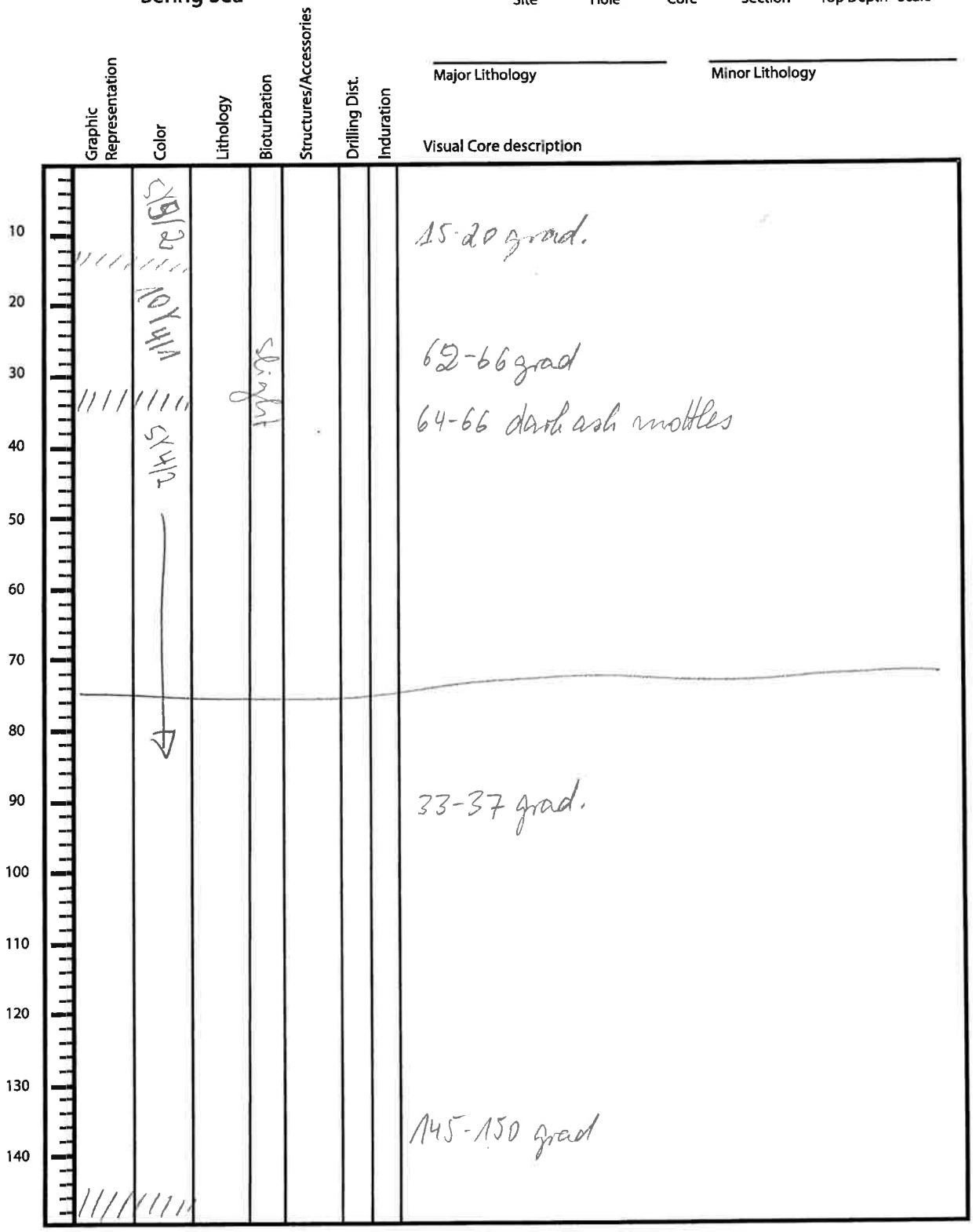


Observer: _____ Date: _____

Expedition 323
Bering Sea

1341 (Site) A (Hole) 14H (Core) 3+4 (Section) ____ (Top Depth) ____ (Scale)

Major Lithology ____ Minor Lithology ____

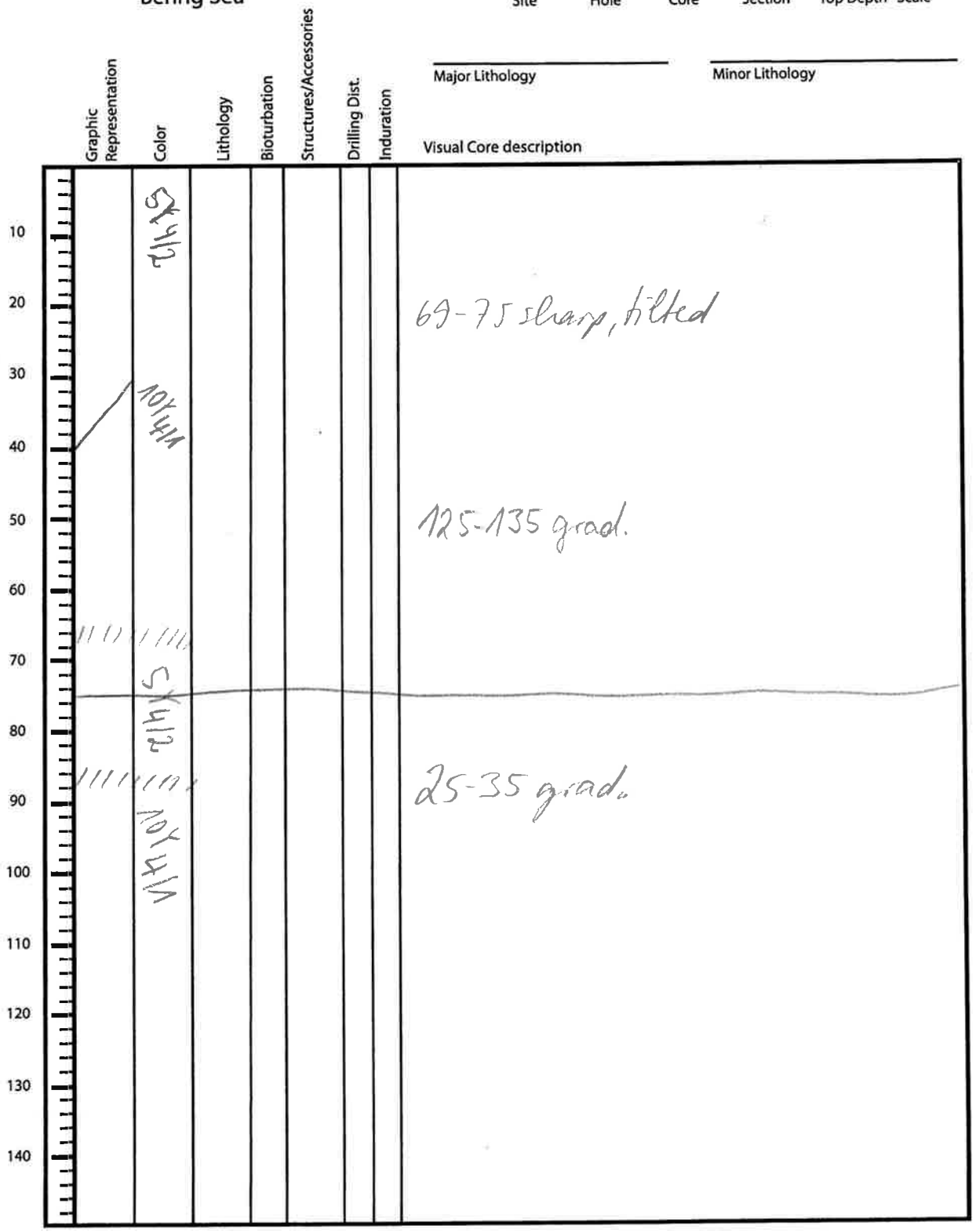


Observer: ____ Date: ____

Expedition 323
Bering Sea

1341 / Site | A / Hole | 14H / Core | 5+6 / Section | ____ / Top Depth | ____ / Scale

Major Lithology ____ Minor Lithology ____



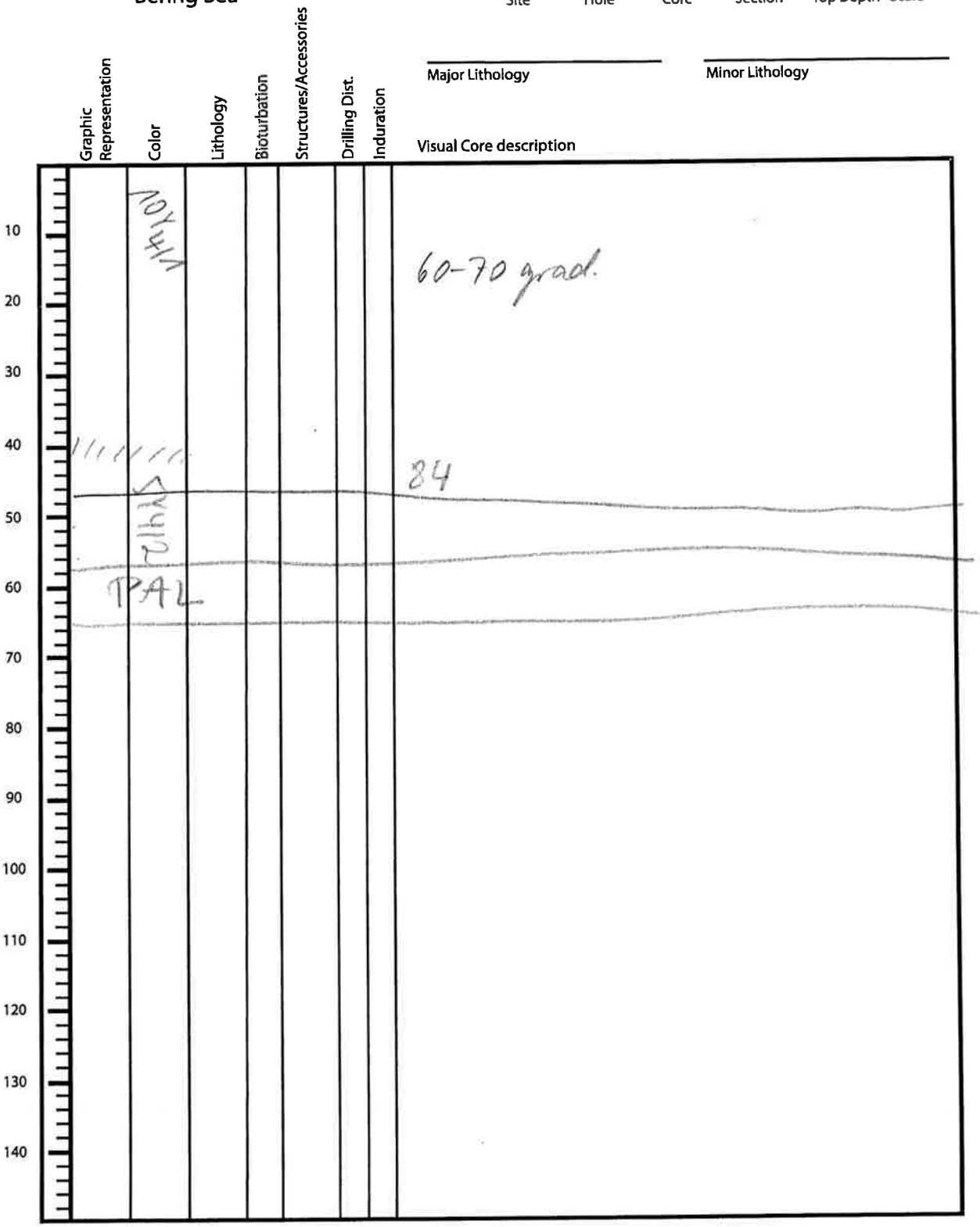
Observer: _____ Date: _____

Expedition 323
Bering Sea

1341 A 14H 7+CC
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	U1341	A	14	H	1	55	55

Sediment/Rock Name	Diatom ooze	Observer	MSC

Percent Texture		
Sand	Silt	Clay

Comments: Main Lithology

Percent	Component
(9)	**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
3	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	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
38	Centric
37	Pennate
	Chaetoceros Resting Spores
3	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	Interval (cm) Bottom
323	U1341	A	14	H	4	65	65

Sediment/Rock Name	Silicoflagellate-bearing diatom ooze

Observer	MSC

Percent Texture		
Sand	Silt	Clay

Comments: Main lithology

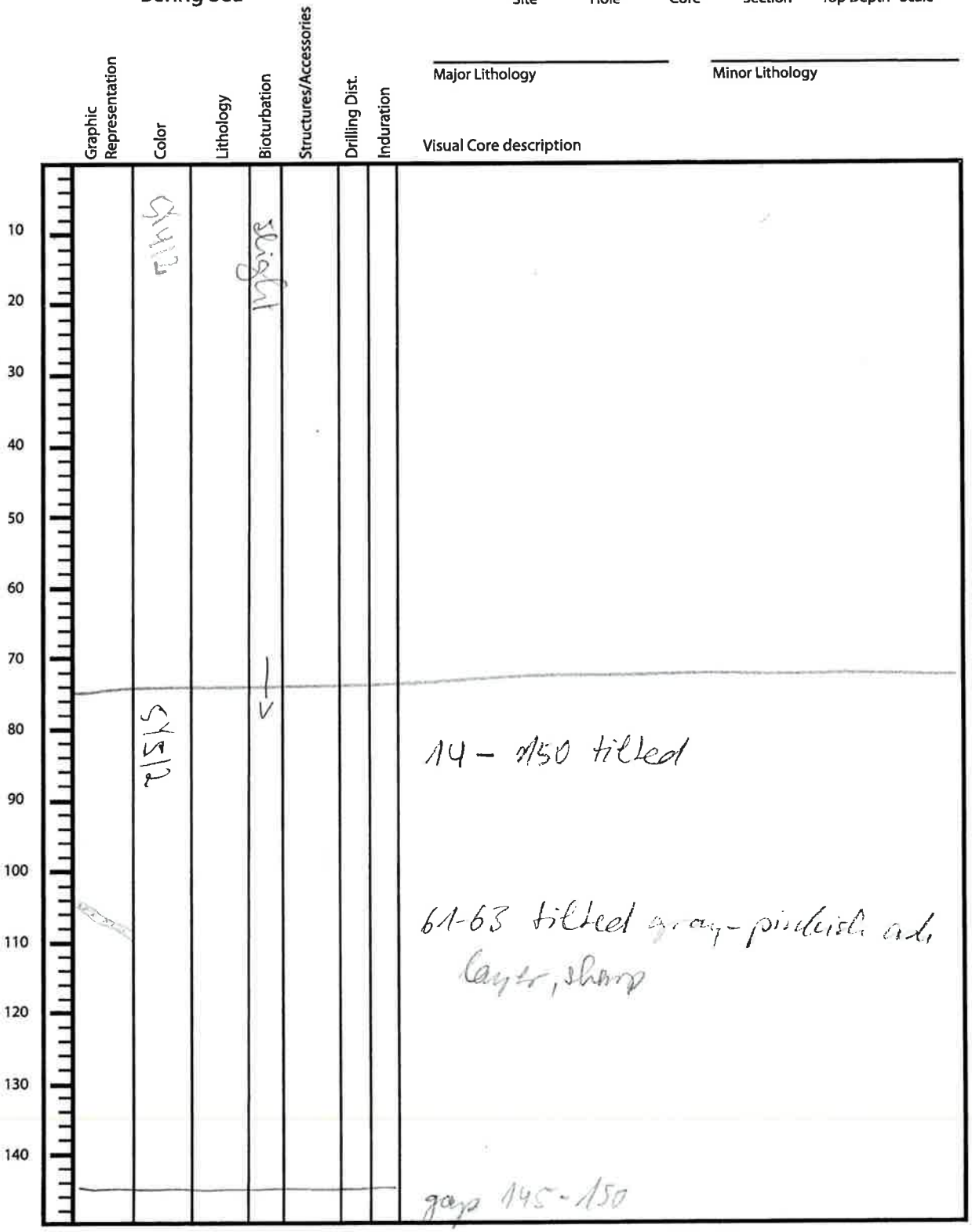
Percent	Component
29	**SILICICLASTIC GRAINS/MINERAL**
	Framework minerals
15	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic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

Percent	Component
66	**BIOGENIC GRAINS**
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
30	Centric
29	Pennate
	Chaetoceros Resting Spores
5	✓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

1341 A 15H 1+2 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____

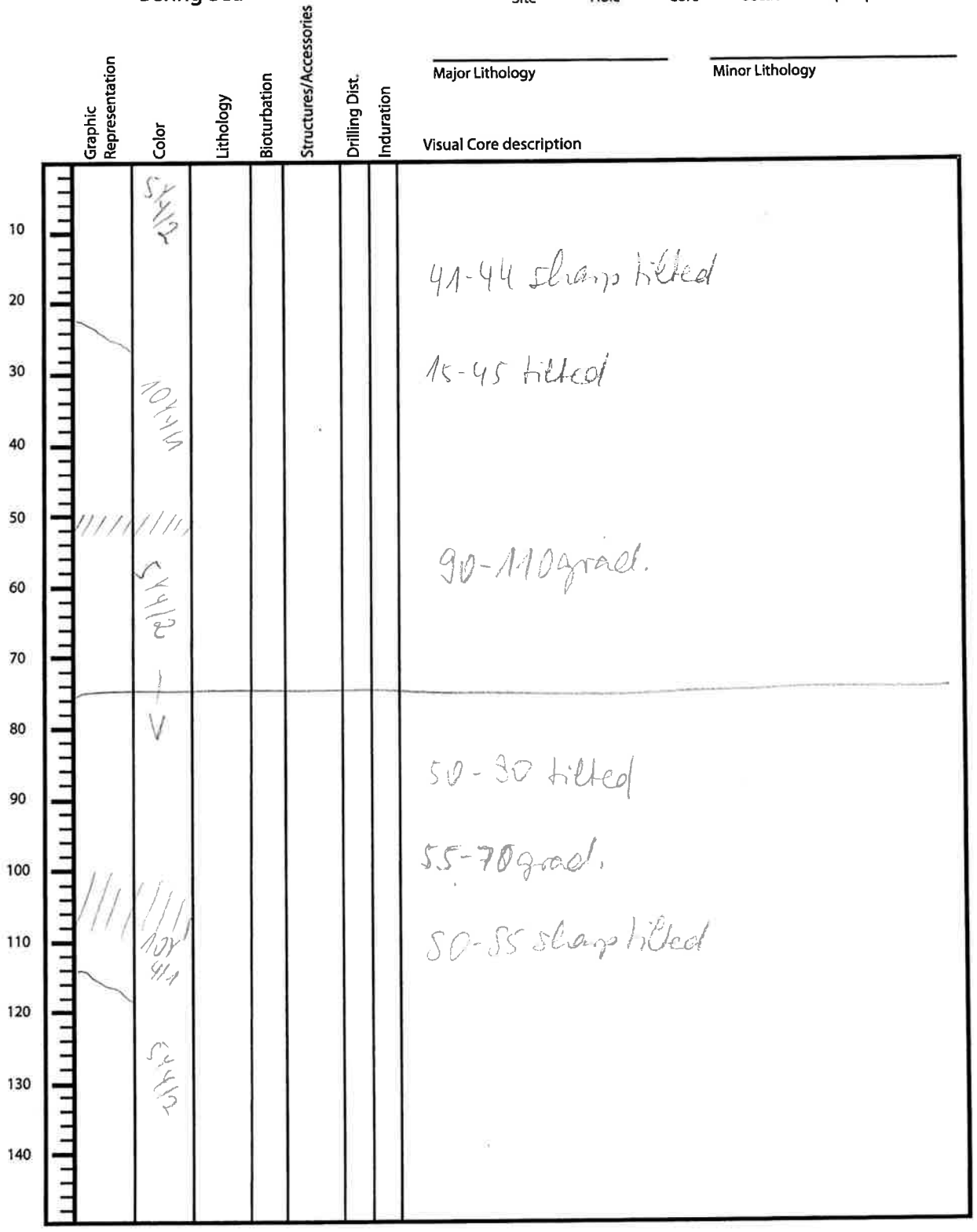


Observer: ____ Date: ____

Expedition 323
Bering Sea

1341 A 15H 3#4 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____

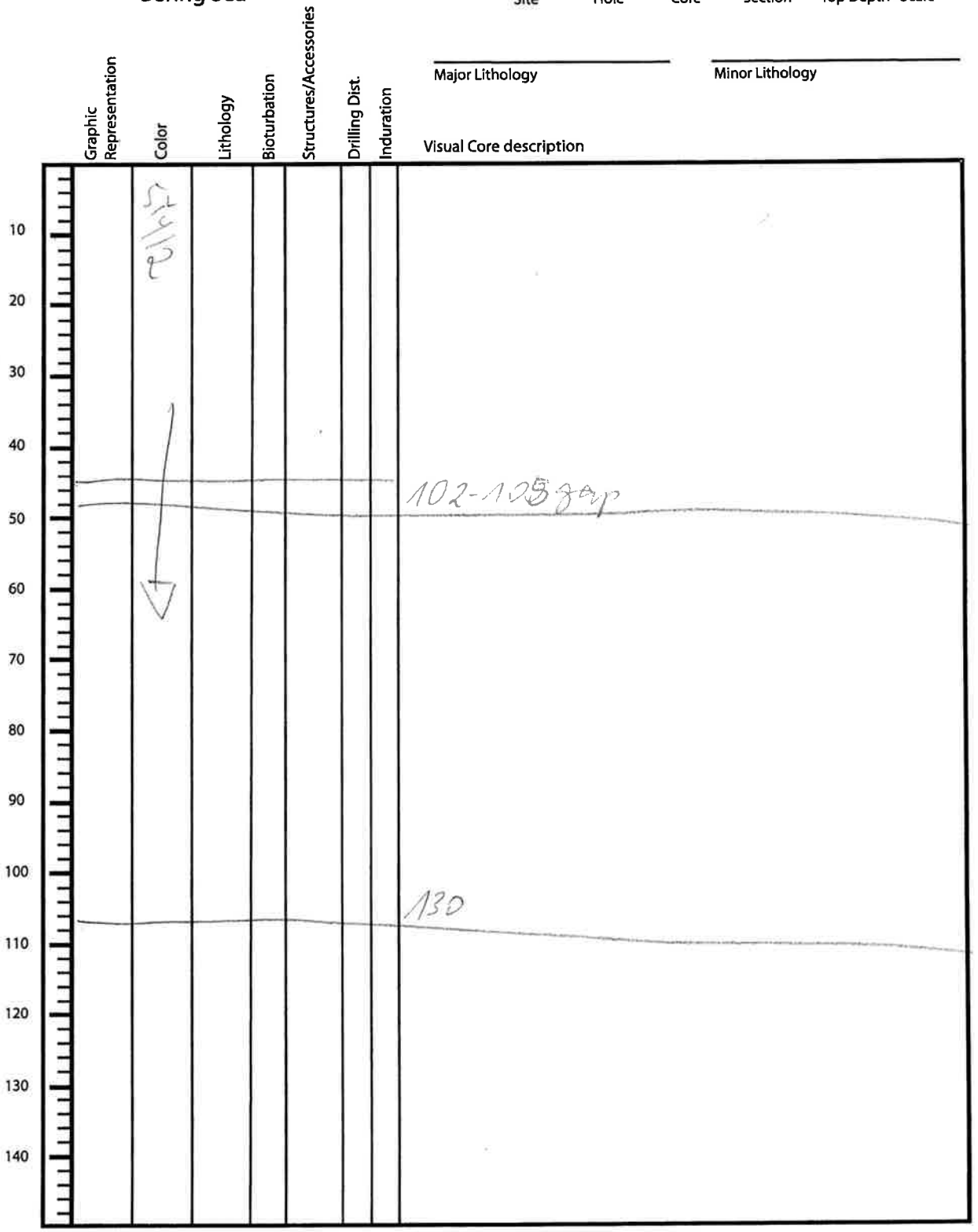


Observer: ____ Date: ____

Expedition 323
Bering Sea

1341 A 15H 5+6 _____ _____
Site Hole Core Section Top Depth Scale

Major Lithology _____ Minor Lithology _____



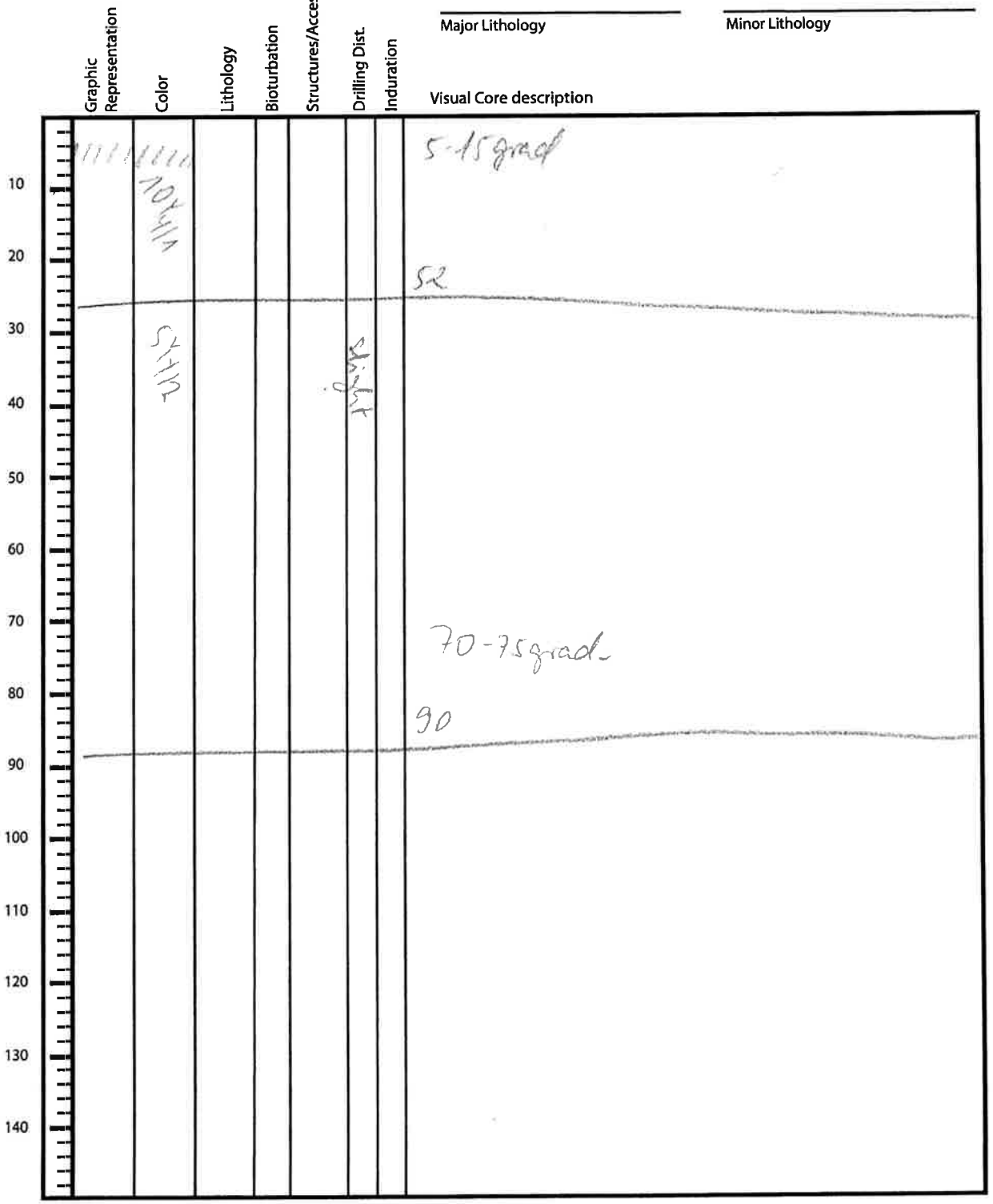
Observer: _____ Date: _____

Expedition 323
Bering Sea

1341 A 15H 7+CC
Site Hole Core Section Top Depth Scale

Major Lithology

Minor Lithology

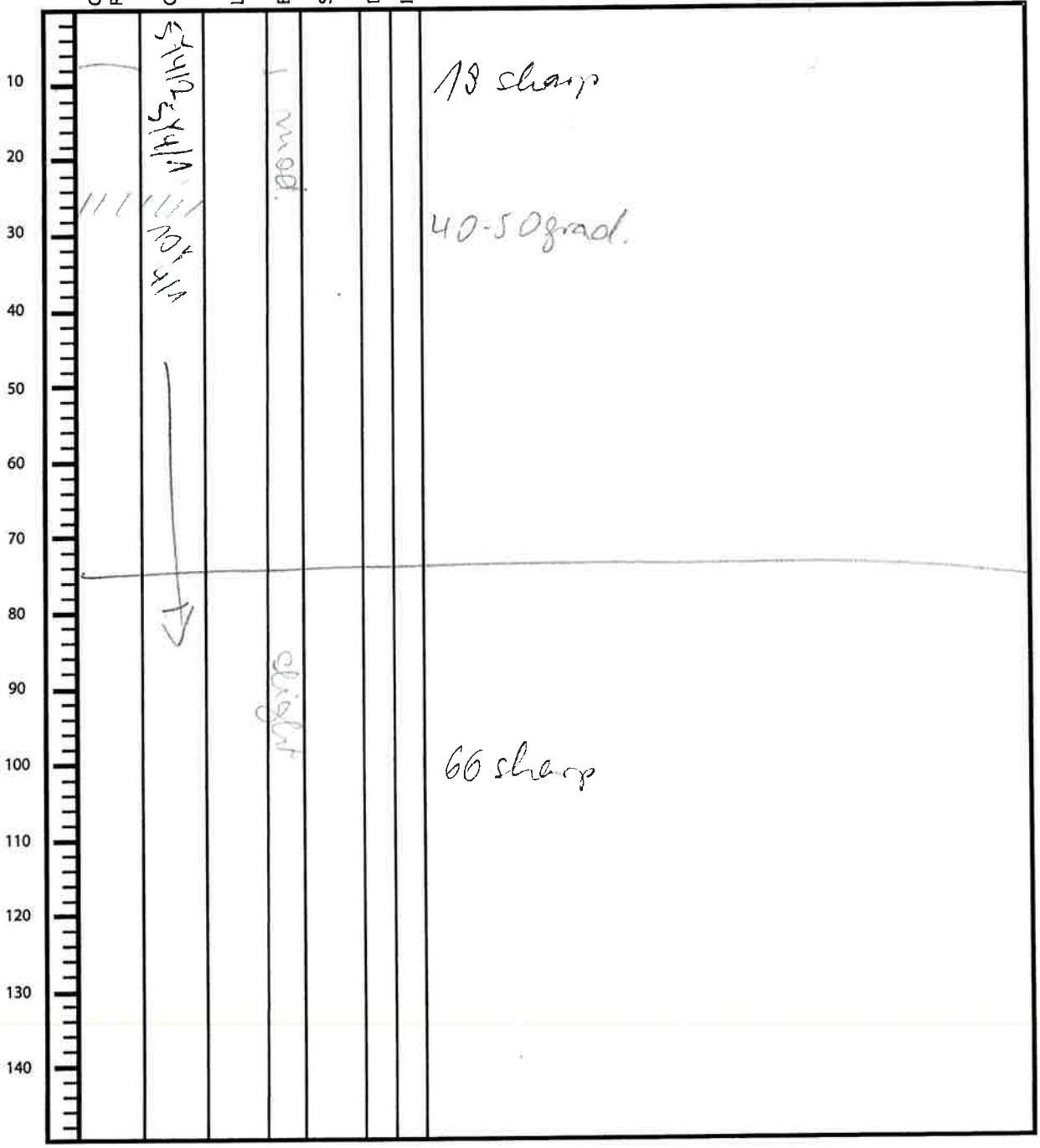


Observer: _____ Date: _____

Expedition 323
Bering Sea

1341 | A | 16H | 1+2 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

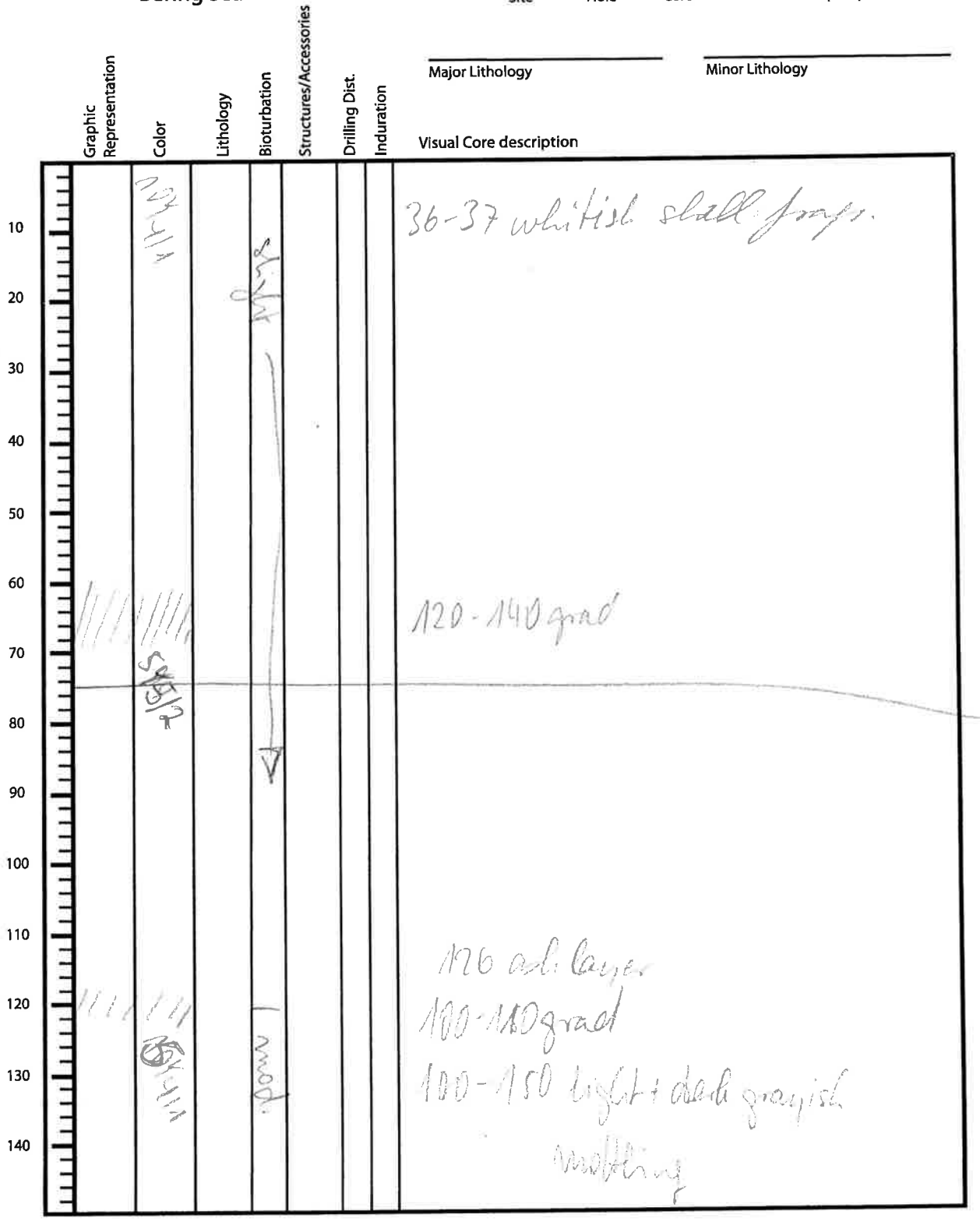


Observer: _____ Date: _____

Expedition 323
Bering Sea

1341 | A | 16H | 3+4 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

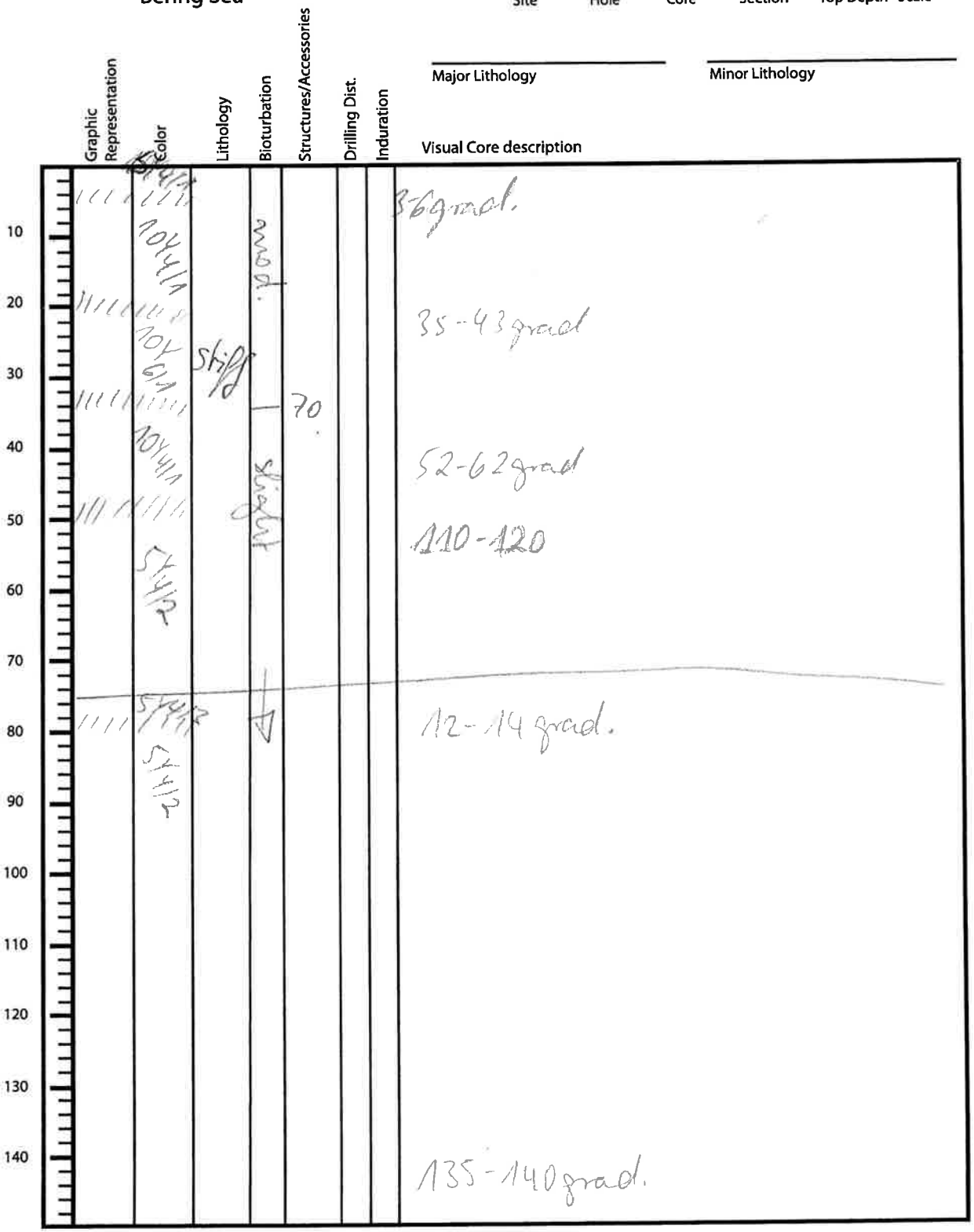


Observer: _____ Date: _____

Expedition 323
Bering Sea

1341 Site | A Hole | 16H Core | 5+6 Section | _____ Top Depth | _____ Scale

Major Lithology _____ Minor Lithology _____

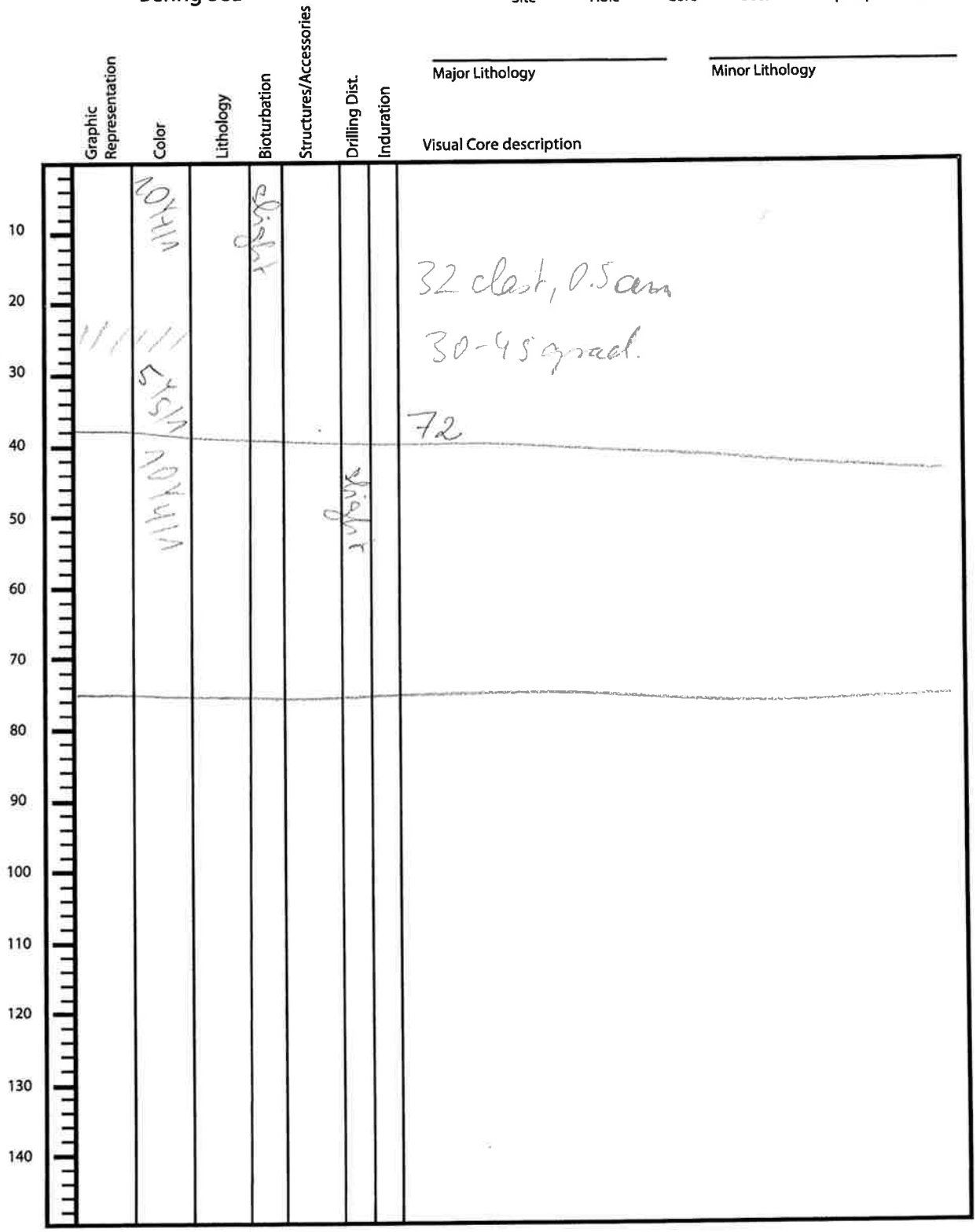


Observer: _____ Date: _____

Expedition 323
Bering Sea

1341 (Site) A (Hole) 16H (Core) 7+CC (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	U1341	A	16	H	1	80	80

Sediment/Rock Name	Diatom ooze	Observer	MSC

Percent Texture		
Sand	Silt	Clay

Comments: Main Lith (green-grey ooze)

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
1	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
45	Centric
33	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	U1341	A	16	H	3	85	85

Sediment/Rock Name	Diatom ooze

Observer	MSC

Percent Texture		
Sand	Silt	Clay
5	90	5

Comments: Main lith (silty grey)

Percent	Component
40	**SILICICLASTIC GRAINS/MINERAL**
	Framework minerals
18	Quartz
17	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
1	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
60	**BIOGENIC GRAINS**
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
30	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

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IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1341	A	16	H	4	120	120

Sediment/Rock Name	Diatom ooze

Observer	MSC

Percent Texture		
Sand	Silt	Clay

Comments: Mn nodule (purple)

Percent	Component
22	**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
4	Pyrite
	Magnetite
3	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

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

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IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1341	A	16	H	5	48	48

Sediment/Rock Name	Diatom ooze (with calc. rich)	Observer	MSC

Percent Texture		
Sand	Silt	Clay

Comments: Main lith (white/grey hard)

Percent	Component
65	**SILICICLASTIC GRAINS/MINERAL**
	Framework minerals
5	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
5	Pyrite
	Magnetite
2	Fe-oxide
50	Carbonates authigenic - rounded
	Calcite irregular
	Dolomite crystals
	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
45	**BIOGENIC GRAINS**
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
20	Centric
21	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

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1341	A	16	H	6	95	95

Sediment/Rock Name	Diatom ooze	Observer	MSC

Percent Texture		
Sand	Silt	Clay

Comments: Main 0.7% (green ooze)

Percent	Component
35	**SILICICLASTIC GRAINS/MINERAL**
	Framework minerals
22	Quartz
8	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
65	**BIOGENIC GRAINS**
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
40	Centric
23	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

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IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1341	A	17	H	5	100	100

Sediment/Rock Name	Diatom ooze

Observer	MSC

Percent Texture		
Sand	Silt	Clay

Comments: Grey Main Lith @ MS anomaly

Percent	Component
30	**SILICICLASTIC GRAINS/MINERAL**
	Framework minerals
10	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
5	Pyrite
	Magnetite
	Fe-oxide
5	Carbonates ?
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
70	**BIOGENIC GRAINS**
	Calcareous
1	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
3	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
21	Centric
40	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

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1341	A	17	H	5	82	82

Sediment/Rock Name	Diatom ooze	Observer	MSC

Percent Texture		
Sand	Silt	Clay

Comments: Grey main lith @ MS anomaly

Percent	Component
(13)	**SILICICLASTIC GRAINS/MINERAL**
	Framework minerals
1	Quartz
2	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
1	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
5	Pyrite
	Magnetite
1	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
	Vitric grain
	Lithic grain

Percent	Component
(87)	**BIOGENIC GRAINS**
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
26	Centric
60	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

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IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1341	A	17	H	4A	95	95

Sediment/Rock Name	Diatom ooze

Observer	MSC

Percent Texture		
Sand	Silt	Clay

Comments: Main lithology (green)

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

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

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IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1341	A	17	H	6A	20	20

Sediment/Rock Name	Diatom clay	Observer	MSc

Percent Texture		
Sand	Silt	Clay
0	15	85

S

Comments: Main lithology (grey)

Percent	Component
38	**SILICICLASTIC GRAINS/MINERAL**
	Framework minerals
15	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
8	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
10	**VOLCANICLASTIC GRAINS**
	Crystal grain
10	Vitric grain
	Lithic grain

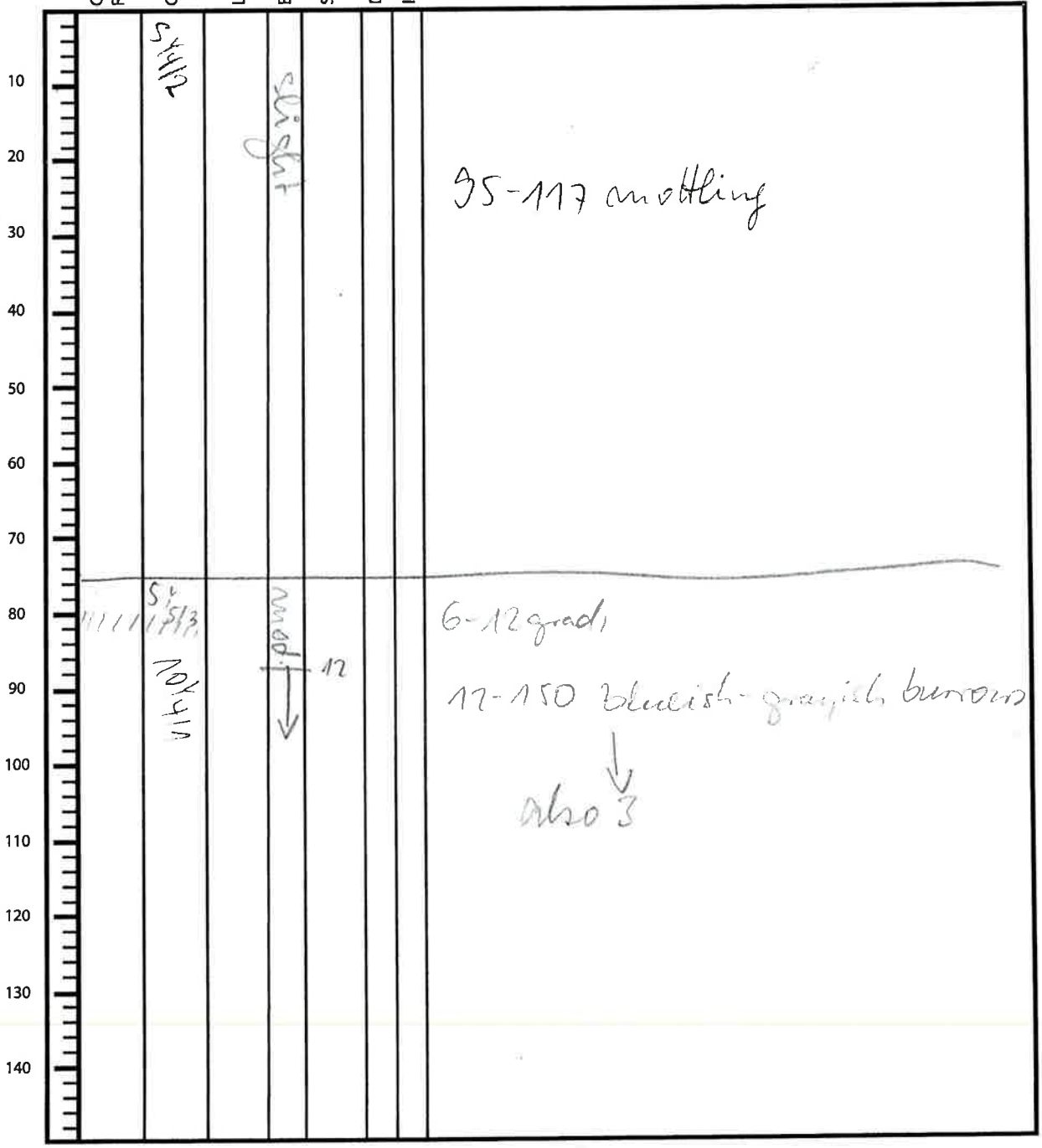
Percent	Component
52	**BIOGENIC GRAINS**
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
28	Centric
20	Pennate
	Chaetoceros Resting Spores
1	Silicoflagellates
3	Sponge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

Expedition 323
Bering Sea

1341 | A | 17H | 1H2 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

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

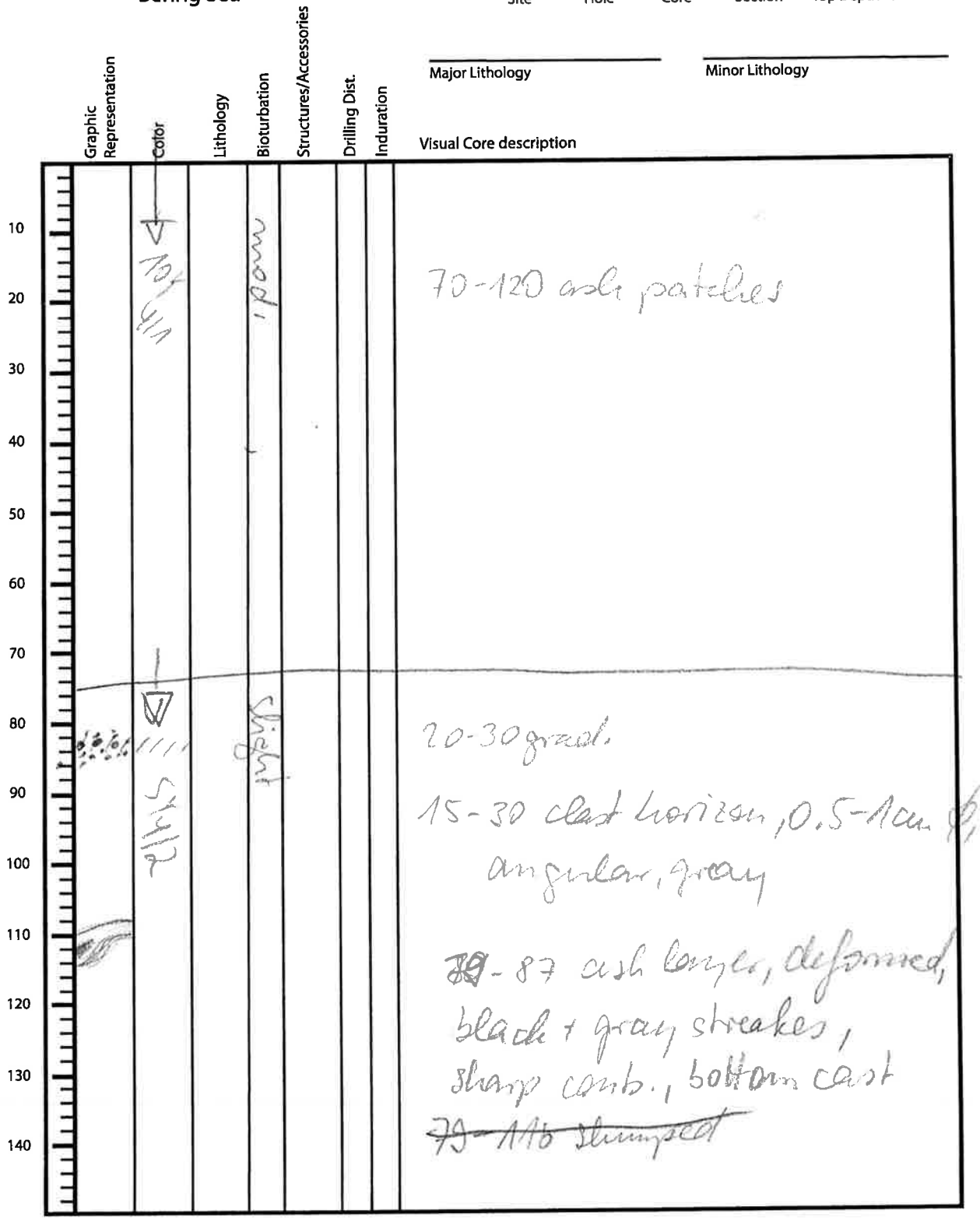


Observer: _____ Date: _____

Expedition 323
Bering Sea

1340 / A / 17H / 3+4 / ____ / ____
Site / Hole / Core / Section / Top Depth / Scale

Major Lithology ____ Minor Lithology ____

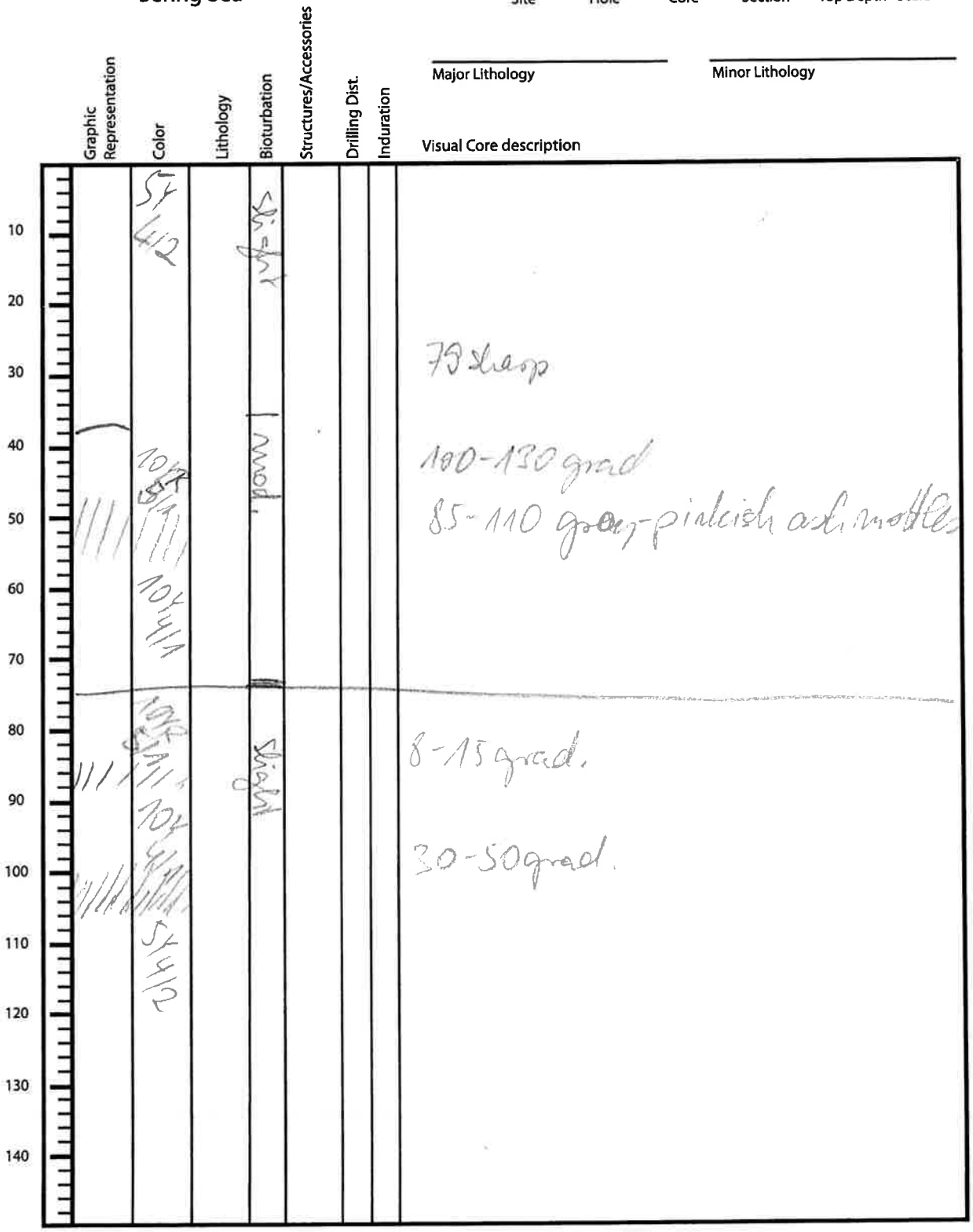


Observer: ____ Date: ____

Expedition 323
Bering Sea

1341 / Site | A / Hole | 17H / Core | 5+6 / Section | _____ / Top Depth | _____ / Scale

Major Lithology _____ Minor Lithology _____

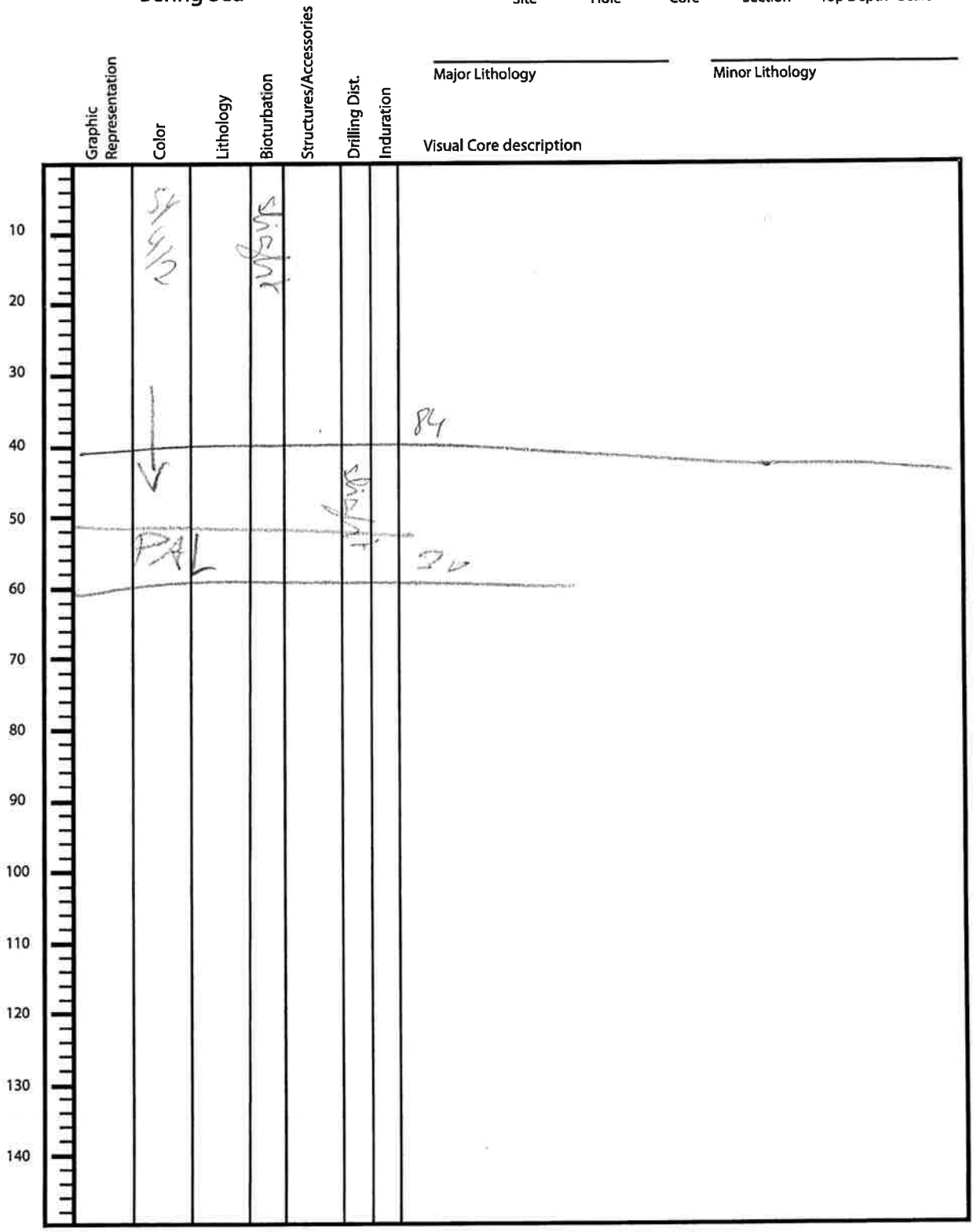


Observer: _____ Date: _____

Expedition 323
Bering Sea

1341 / A / 17H / 7+CC / ____ / ____
Site / Hole / Core / Section / Top Depth / Scale

Major Lithology ____ Minor Lithology ____

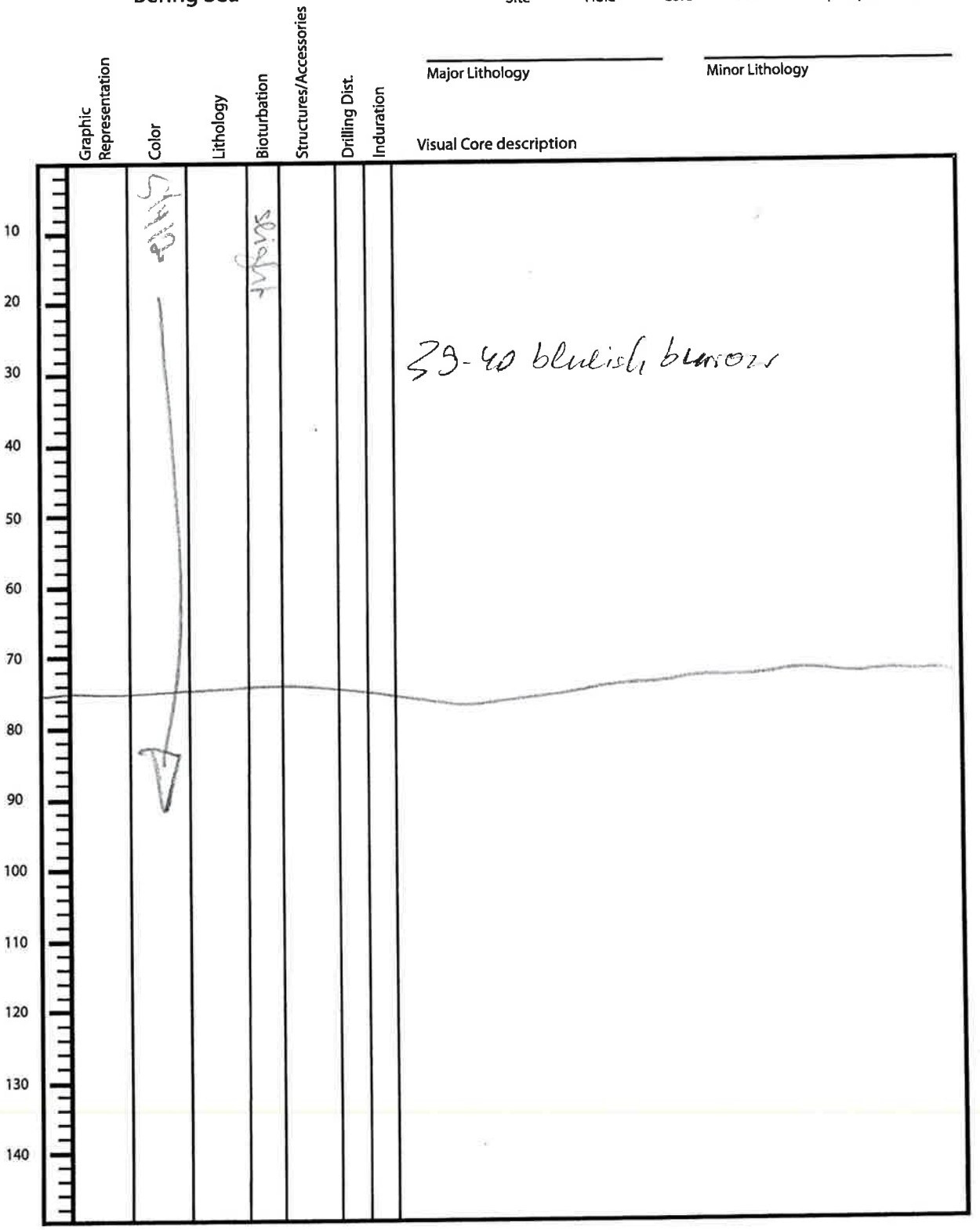


Observer: ____ Date: ____

Expedition 323
Bering Sea

1341 A 18H 1+2 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____

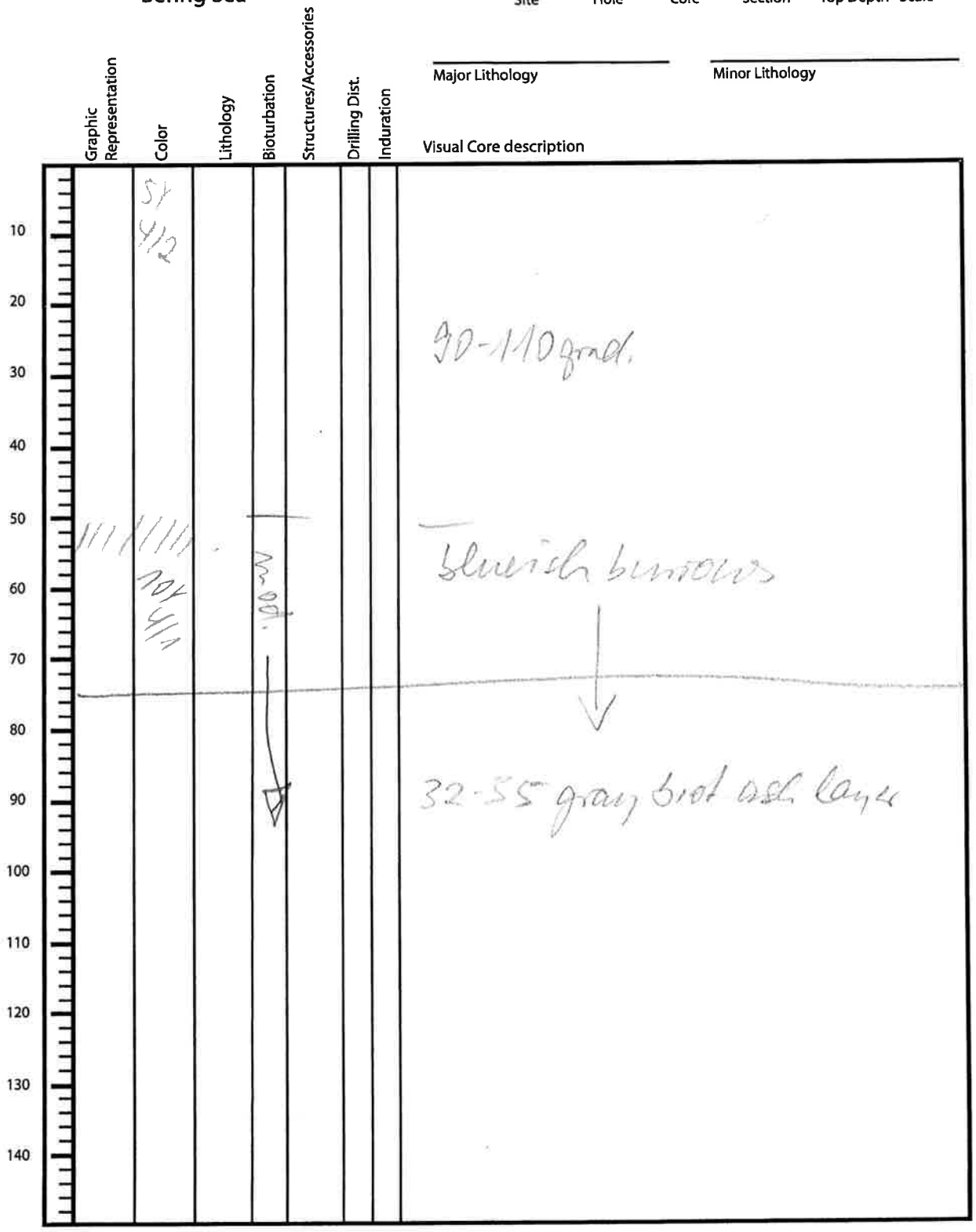


Observer: ____ Date: ____

Expedition 323
Bering Sea

1341 | A | 18H | 3+4 | | |
Site | Hole | Core | Section | Top Depth | Scale

Major Lithology | Minor Lithology

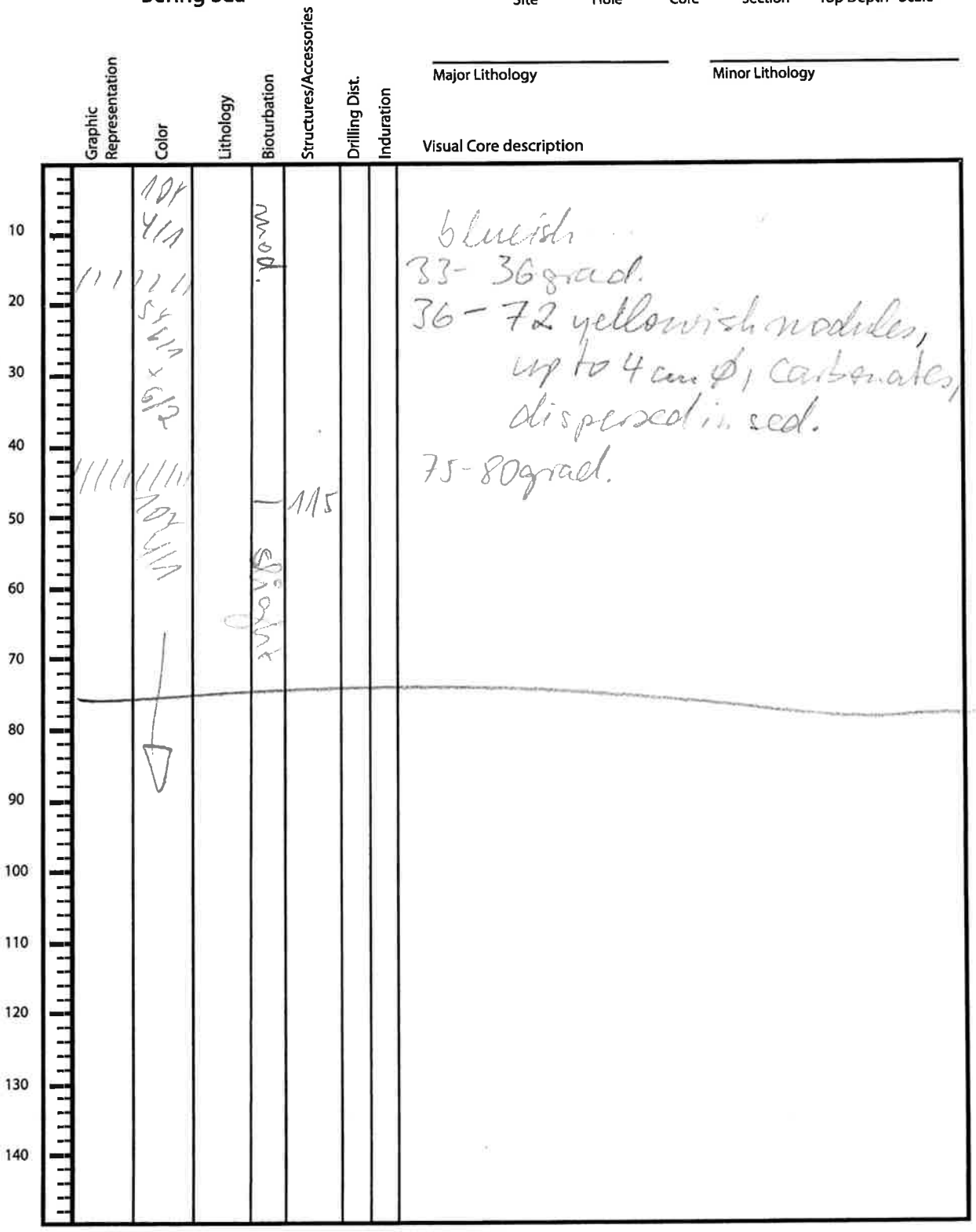


Observer: _____ Date: _____

Expedition 323
Bering Sea

1341 A 18H 5+6 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____



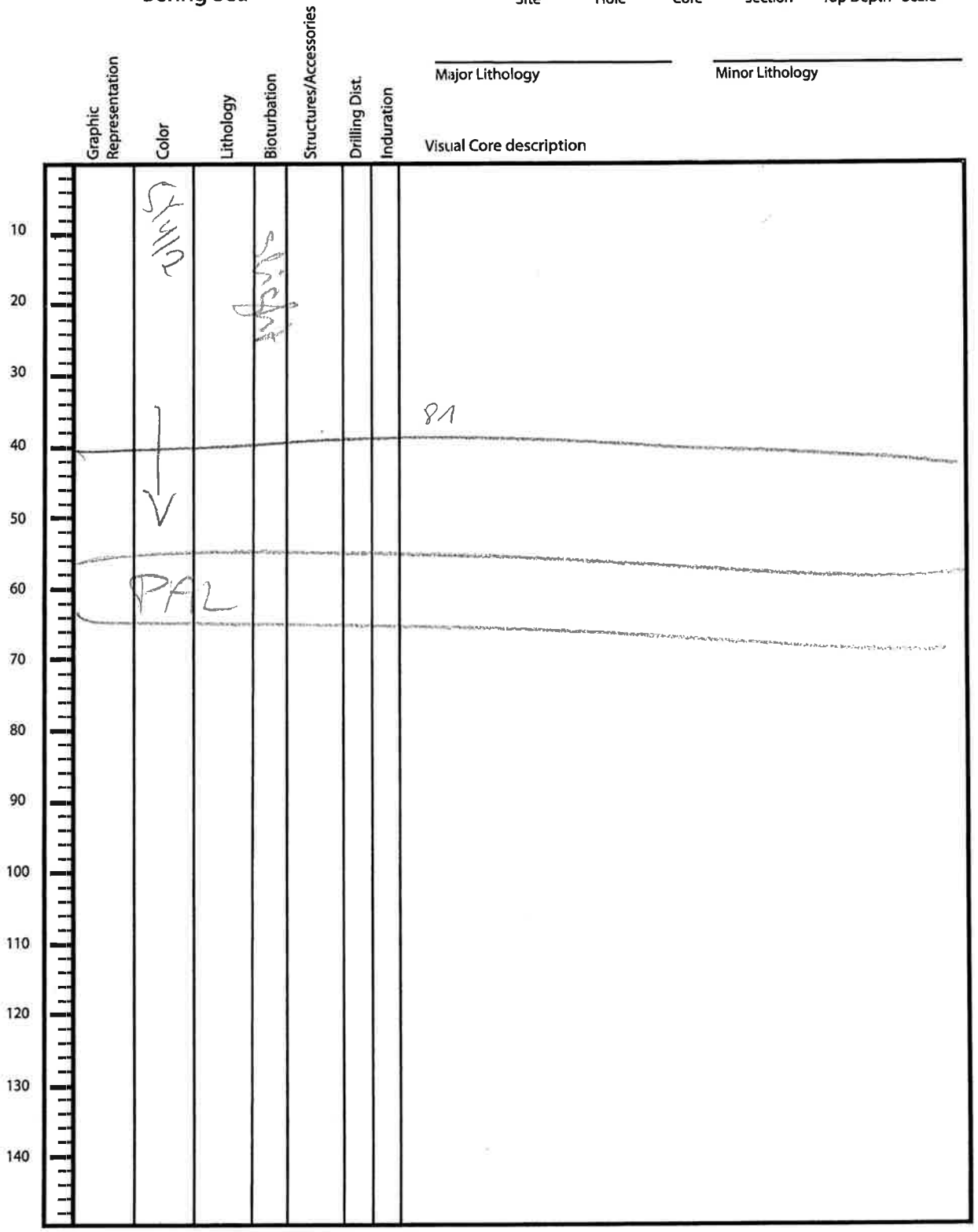
Observer: ____ Date: ____

Expedition 323
Bering Sea

1341 A 18H 7+CC
Site Hole Core Section Top Depth Scale

Major Lithology

Minor Lithology



Observer: _____ Date: _____

Expedition 323
Bering Sea

1341 Site | A Hole | 194 Core | 1-4 Section | Top Depth | Scale

Major Lithology

Minor Lithology

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

Visual Core description

1
- 0-20 10Y 4/1
  - grad 20-22
- 20-74 5Y 5/2
- 74-110 10Y 4/1
  - grad 90-120
- 110-150 5Y 4/2 diatom ooze

2
- 0-20 5Y 5/2
- 20-60 10Y 4/1
  - 50-70 grad
- 70-130 5Y 4/2
- 130-139 5Y 3/2
- 139-140 ash N 3/
- 140-142 ash
  - 142 sharp

3
- 142- Sec. 3,10
  - Mottled. Mod. B.T
  - 90% 10Y 3/1 + 5Y 3/2 (10%)
- 10-109 10Y 3/1
- 109-150 10Y 4/1
  - sharp 109

4
- 0-16 60% 10Y 4/1, 40% 10Y 5/1
  - Tilted Bed Mottling grad
- 16-112 10Y 5/1
  - Tilted
- 112-128 5GY 4/1
  - tilted
  - 112 sharp
  - Sharp 128
- 128-130 5Y 4/3
- 130-133 10Y 4/1
- 133-136 5Y 5/2
- 136-Bottom 10Y 4/1 (Darker)

BT, sl, Ab, sl, mottled

Color column: 10Y 4/1, 5Y 5/2, 5Y 5/2, 10Y 4/1, 5Y 4/2, 5Y 3/2, N 3/, 10Y 4/1, 10Y 4/1, 10Y 4/1, 10Y 5/1, 5Y 4/1, 5Y 5/2; margin: 5Y 4/3, 10Y 4/1

Bioturbation column: sl, sl, Mod

Observer: [signature] Date: ______

Expedition 323
Bering Sea

323 | 1341 | 19H | 5- 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

0 0 - ~~65~~ 65 5Y 4/2
4/-4/2 10Y 4/1 Mottling ← 65 sharp

5 0 65 - sec ~~5~~ 50 10Y 5/1
Bi-132 Pebble (F) Subround N 4/

0 0- ~~82~~ 82 10Y 5/1
82 - 107 5Y 3/2
107- 150 10Y 5/1
White Matte (A) 1/2 cm

6

0 0- 35 5Y 5/2
35- 50 10Y 4/1
50- 57 5Y 5/2
57- 78 10Y 4/1

7

CC 0 - Bottom
5Y 5/2

Observer: _____ Date: _____

X

S.R.

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1341	A	19	H	5	64	64

Sediment/Rock Name	Dolostone

Observer	KD

Percent Texture		
Sand	Silt	Clay

Comments: Lumpy white sections

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
50	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
1	Nassellaria
30	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

(9)

Expedition 323
Bering Sea

1341	A	20H	1-4		
Site	Hole	Core	Section	Top Depth	Scale

Major Lithology

Minor Lithology

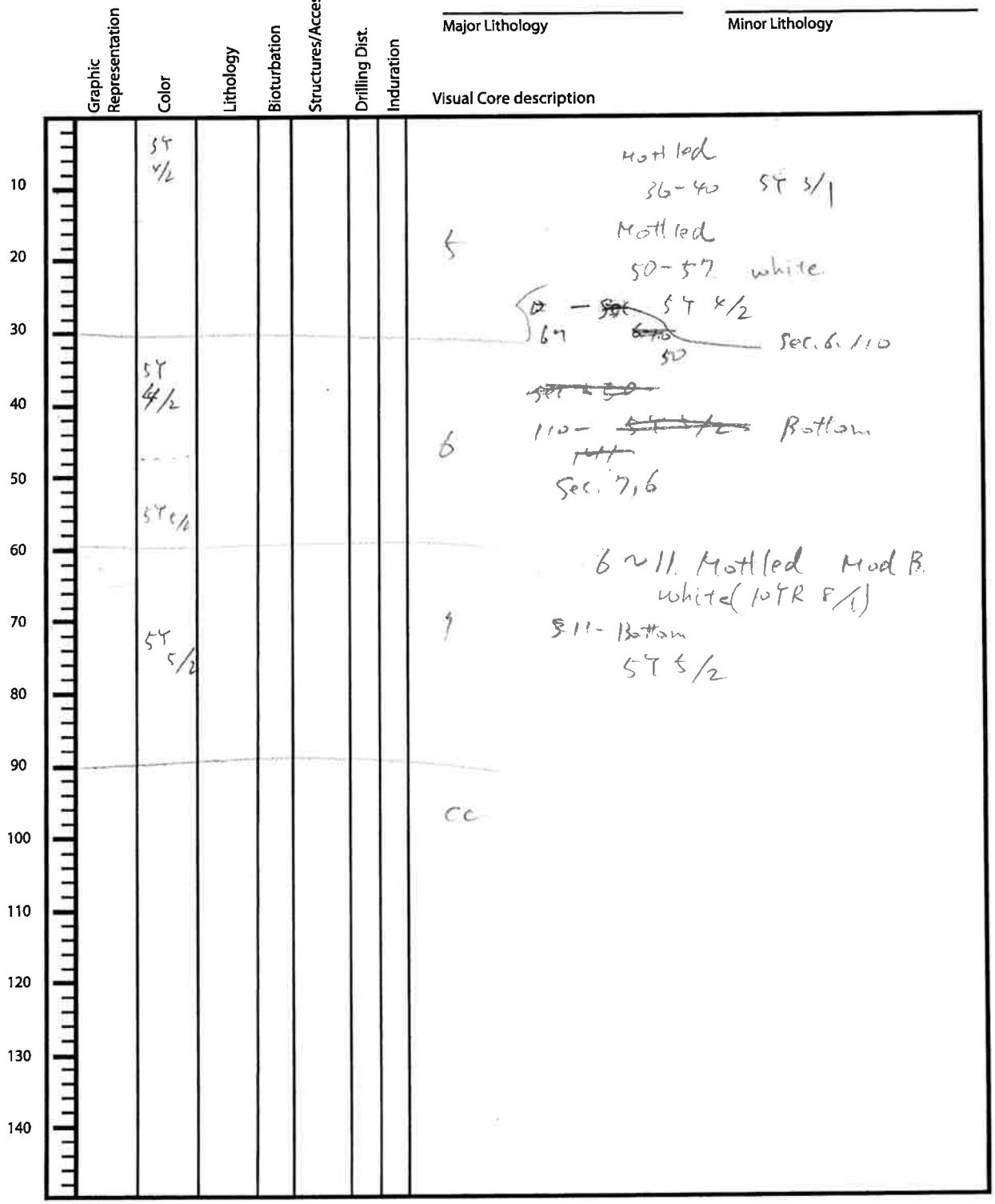
	Graphic Representation	Color	Lithology	Bioturbation	Structures/Accessories	Drilling Dist.	Induration	Visual Core description
10		5Y 4/2						0 0 - sec 2, 62 ~~3,~~ 5Y 4/2; 3, 120
20								1
30								~~sec 3, 70~~
40		5Y 4/2		SQ				2 120 — ~~150~~ sec. 4 ~~=~~ 30 5GY 4/1 Mottled with 5Y 4/2 Gradsec. 4 0 - 40 Mod. B.T condrites.
50				Md	120			46-48 ashy patch (Black)
60		5Y 4/2						62 — ~~sec 3~~ 4 120
70								3 10Y 4/1
80		10Y 4/1						Sec. 4 30 - 50 10Y. ~~3~~4/1
90								70 - sec. 5 67 5Y 4/2
100								4 Mottled 127- 131 white
110		5Y 4/2						
120								
130								
140								

Observer: HA Date: ______

Expedition 323
Bering Sea

Site ____ Hole ____ Core ____ Section ____ Top Depth ____ Scale ____

Major Lithology ____ Minor Lithology ____



Observer: ____ Date: ____

Expedition 323
Bering Sea

1341 / A / 21 / ___ / ___ / ___
Site / Hole / Core / Section / Top Depth / Scale

Major Lithology ___ Minor Lithology ___

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

1 10
2 20
30
3 40
4 50
60
5 70
6 80
90
7 100
CC
110
120
130
140

2 pebble black. 2mm

10YR 4/4

5Y 4/2

Sec 4
135- moth ash

96. moth ash

26- pebble 2mm

57-54. light tan.

69
8
8-18 PAL

5Y 4/4 diatom ooze

10Y 4/1 diatom rich silt

5Y 4/2 diatom-rich clayey silt

2440 diatom-rich silt

3A-100 diatom silt

7A-20 diatom-rich clayey silt

Observer: ___ Date: ___

S.O.

X

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
	(34(	A	21	A	2	48cm	

Sediment/Rock Name	DIATOM-RICH SILT (MUD)	Observer	Lisa

Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
~~10%~~	Framework minerals
15%	Quartz
20%	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
5%	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
5%	Muscovite
10%	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
10%	Pyrite
	Magnetite
R	Fe-oxide hematite?
	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
35%	Diatoms
70%	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

gray grey

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
323	1341	A	2C	H	7	20 cm	

Sediment/Rock Name	DIATOM-RICH CLAYEY SILT

Observer	IWA

Percent Texture		
Sand	Silt	Clay

(2nd) dark gray

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
35%	Framework minerals
15%	Quartz
20%	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
	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
30%	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

S.M.

X

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
	1341	A	21	H	3	100 cm	

Sediment/Rock Name	DIATOM SILT

Observer	IWA

Percent Texture		
Sand	Silt	Clay

Comments: Major

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
30 %	Framework minerals
10%	Quartz
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
<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
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

1441 A 22 1-CC
Site Hole Core Section Top Depth Scale

Major Lithology _____ Minor Lithology _____

Tilted boundary

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

1
10
2
20
30
3
40
4
50
60
5
70
6
80
90
7 85
100
CC 17
110
120
130
140

10Y 4/1
5Y 4/1

10Y 4/1

10Y 5/2

- 116 cm SS DIATOM-RICH SILT
- 110 cm, SS DIATOM SILT
lam
opaque mottle
- dolomite 80-88 cm
- dolomite 111-117 cm
88-93 = hard part

10Y 7/1
light greenish gray

10Y 4/1
dark greenish gray

10Y 5/1
greenish gray

5Y 4/1 DARK GRAY

Observer: _____ Date: _____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
	1341	A	22	H	1	110 cm	

Sediment/Rock Name	DIATOM-RICH SILT

Observer	CMK

Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
45%	Framework minerals
15%	Quartz
30%	Feldspar
X	K-feldspar (Orthoclase, Microcline...)
X	Plagioclase
R	Rock fragments
	Accessory/trace minerals
5%	Micas
X	Biotite
5%	Muscovite
10%	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
X	Lithic grain

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

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
	1341	A	22		4	110cm	

Sediment/Rock Name	DIATOM SILT	Observer	IW+

Percent Texture		
Sand	Silt	Clay

Comments:

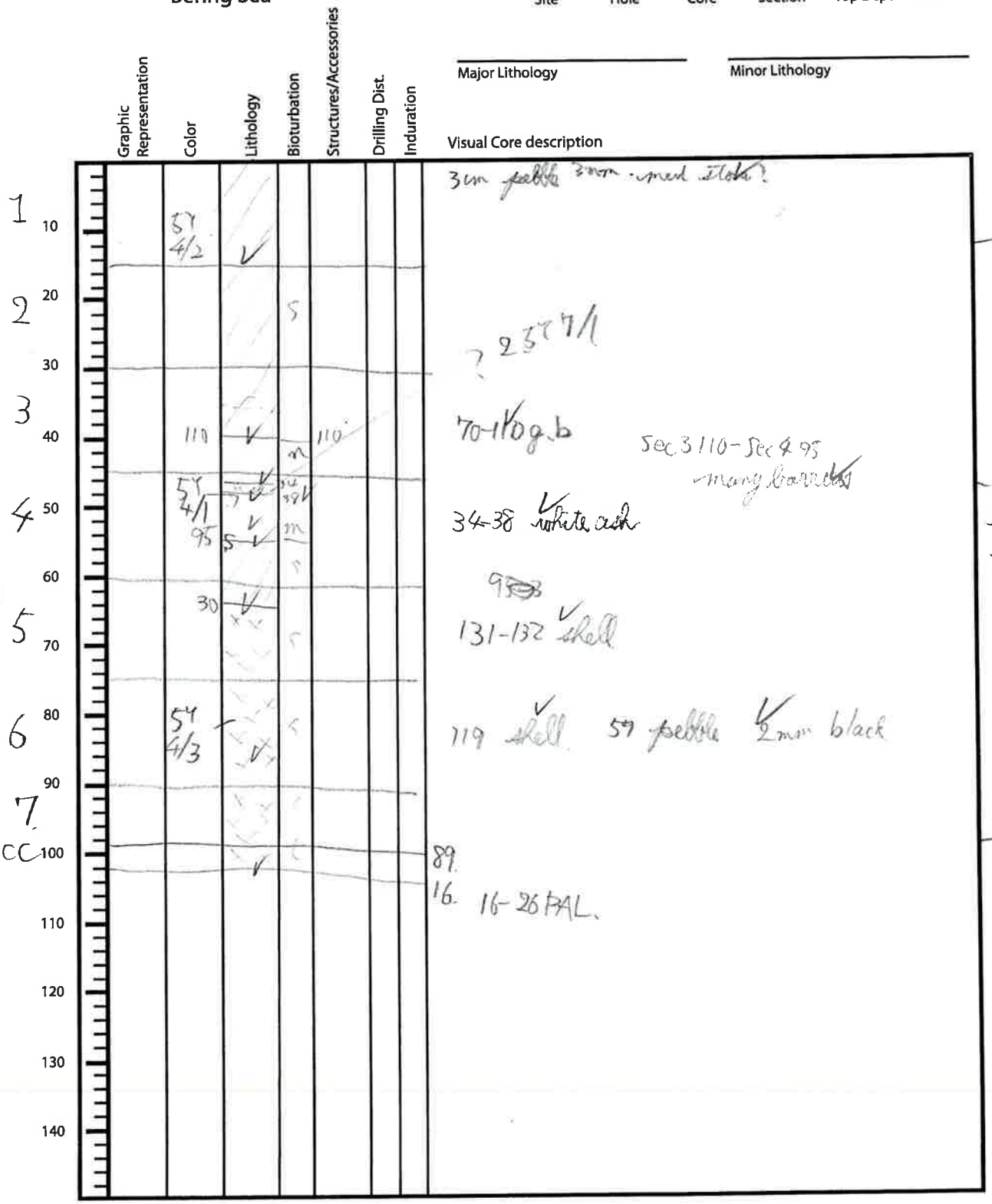
Percent	Component
SILICICLASTIC GRAINS/MINERAL	
35%	Framework minerals
10%	Quartz
25%	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
5%	Micas
	Biotite
	Muscovite
15%	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
	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
30%	Centric
14%	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

1341 A 23 ____ ____ ____
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	U1341	A	23	H	1	90 cm	

Sediment/Rock Name	diatom ooze

Observer	G B.

Percent Texture		
Sand	Silt	Clay

Comments:

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

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

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
323	U1341	A	23	H	7	60 cm	

Sediment/Rock Name	Spicule - rich diatom Clay

Observer	G.D.

Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
3	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
5	X Plagioclase
2	X Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
~~25~~ 15	x Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
5	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
40	X Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
~~30~~ 20	X Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

15
11
60

PS

X

S.S.

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
323	U1341	A	23	H	4	10 cm	

Sediment/Rock Name	Sponge spicule silt (diatom-bearing)	Observer	G.B.

Minor lithology (purple layer)

Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
30	X Quartz
	Feldspar
5	X K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
5	X Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
10	X Pyrite
	Magnetite
5	X 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
5 X	Radiolarians
	Spumellaria
	Nassellaria
5 ~~10~~ X	Diatoms
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
25 ~~30~~ X	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

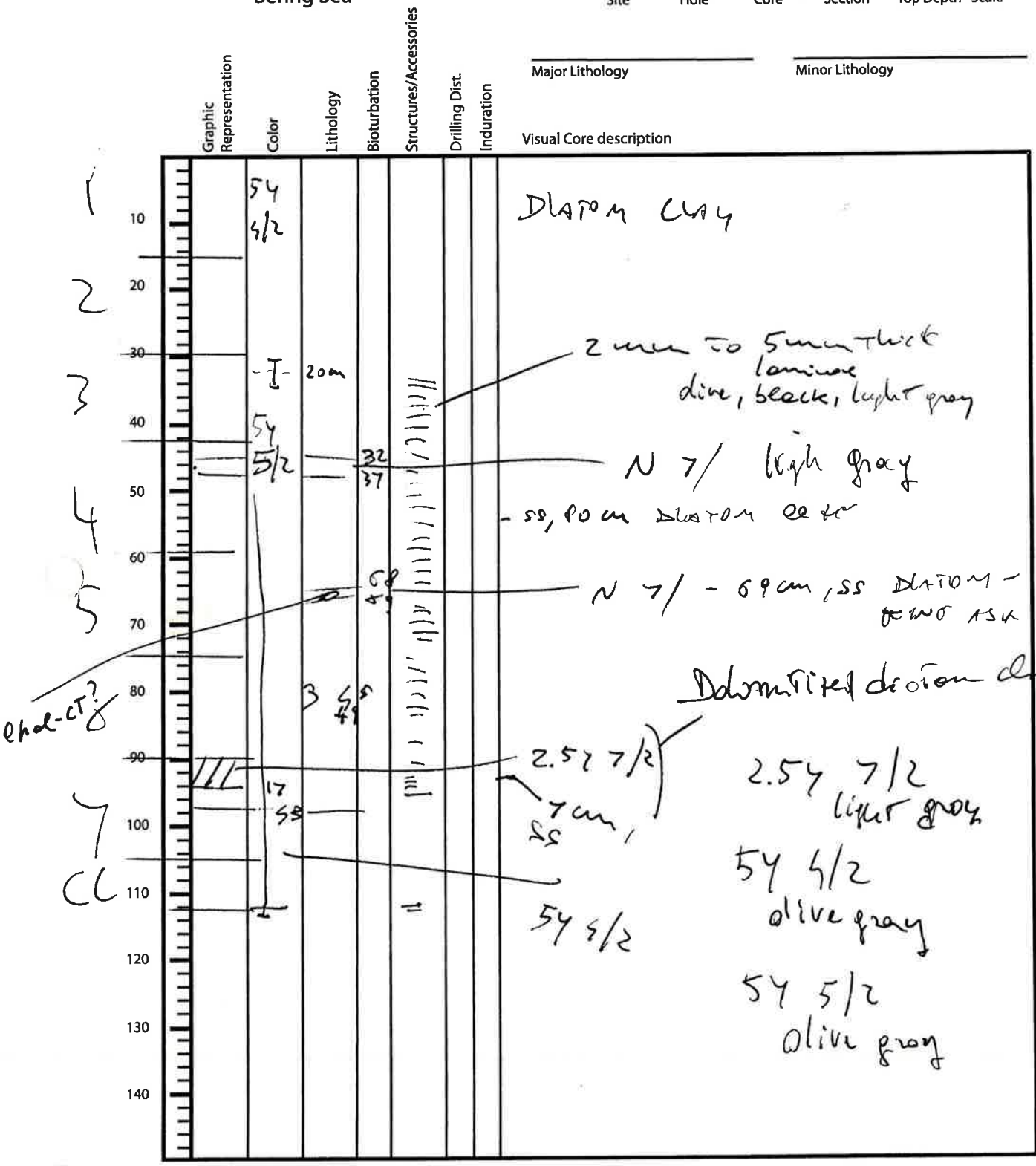
~~60~~ 65-70

Expedition 323
Bering Sea

Site	Hole	Core	Section	Top Depth	Scale
	1441-A	24			

Major Lithology

Minor Lithology



Observer: _____ Date: _____

X

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
	1341	A	24		5	6 Pm	

Sediment/Rock Name	DIATOM-BEARING FINE ASH	Observer	LWA

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
5%	Muscovite
	Clay Minerals
R	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
5%	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
80%	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

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
	1341	A	24		7	9cm	

Sediment/Rock Name	DOLOMITIZED DIATOM CLAY	Observer	IWR

Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
5%	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
<2%	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite Method = 80% of sediment
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
40%	Diatoms
20%	Centric
20%	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
323	U1341	A	26	H	1A	81cm	

Sediment/Rock Name	Spicule - Diatom ooze	Observer	BCM

B - 25
S - 75
V - 0

Percent Texture		
Sand	Silt	Clay

Comments: Main lithology

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
15	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
5	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
10	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

X

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
	1341		24		4	80 cm	

Sediment/Rock Name	DIATOM OOZE

Observer	Kut

Percent Texture		
Sand	Silt	Clay

Comments:

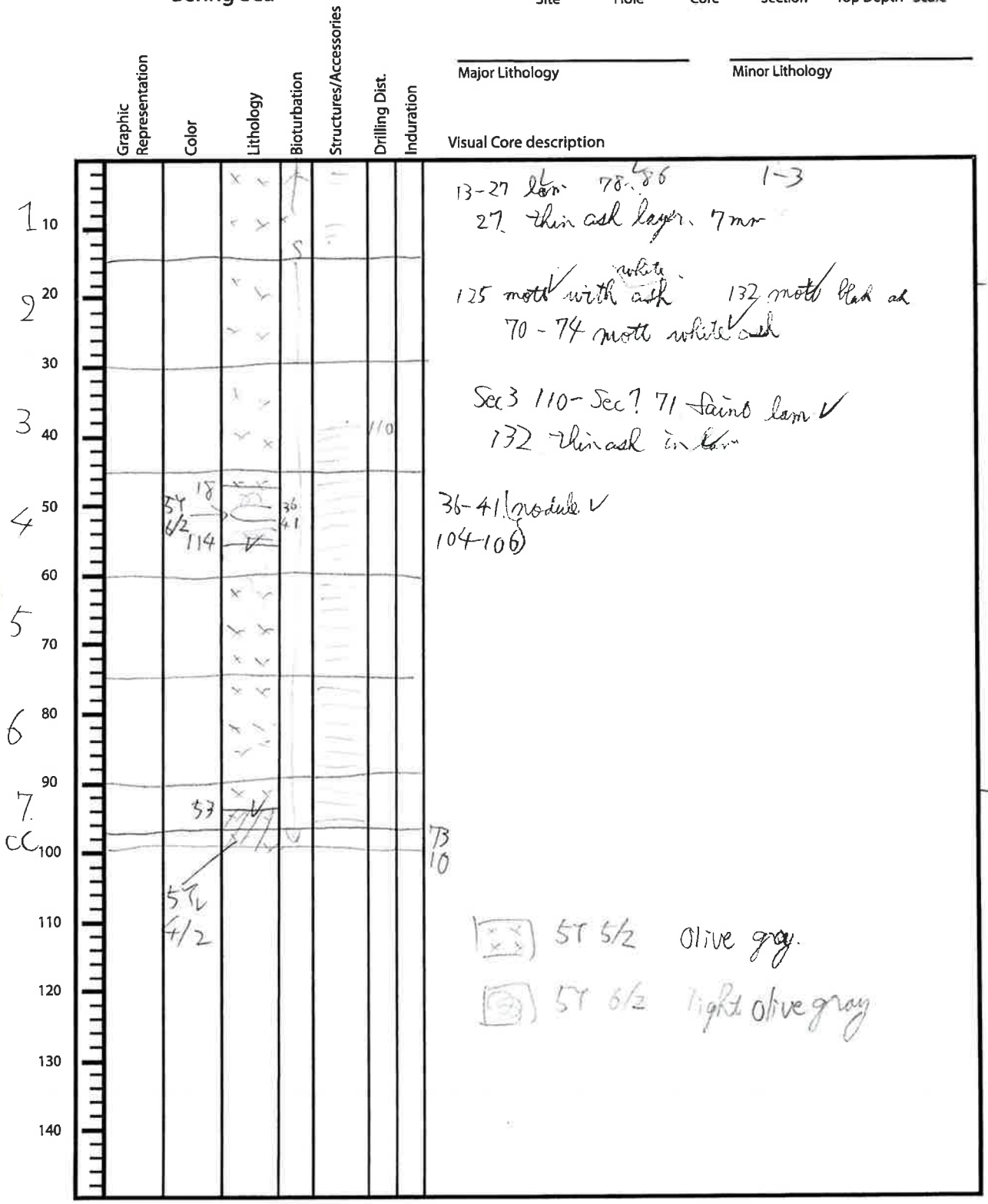
Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
5%	Micas
	Biotite
	Muscovite
60%	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
<2%	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	Crystal grain
10%	Vitric grain
	Lithic grain

Percent	Component
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
75%	Diatoms
40%	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

Expedition 323
Bering Sea

1341 / A / 25 / ___ / ___ / ___
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	U1341	A	25	H	2A	30cm	

Sediment/Rock Name	Diatom ooze

Observer	

Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
2	Quartz
2	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
3	Zeolite
	Opaque minerals
3	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
50	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	U1341	A	25	H	7A	30	

Sediment/Rock Name	DIATOM OOZE

B - 67
S - 28
V - S

Comments:

Observer	Beth

Percent Texture		
Sand	Silt	Clay

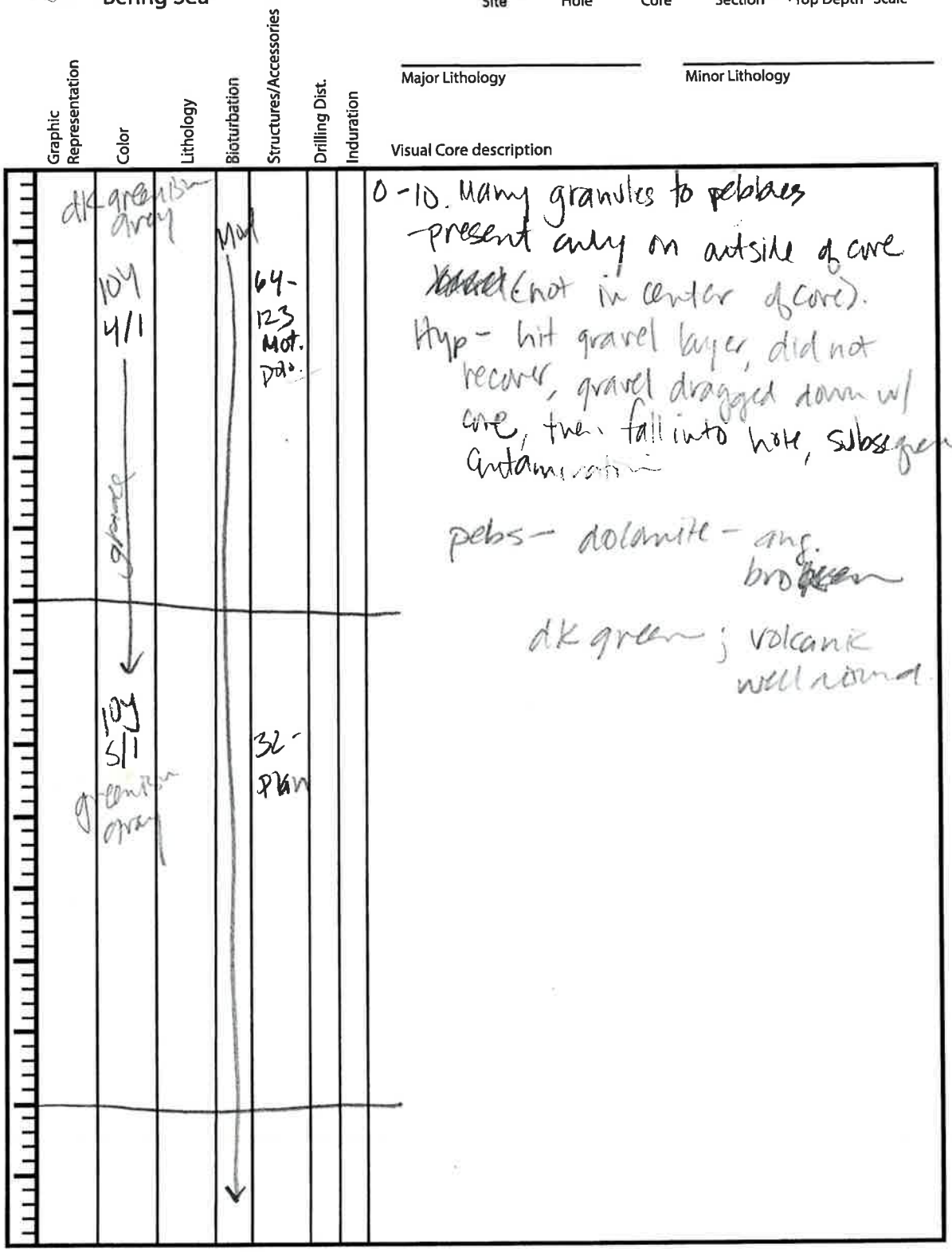
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
3	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
15	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
2	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
2	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
1	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
45	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

Expedition 323
Bering Sea

U1341 A 26H 1, 2, CC
Site Hole Core Section Top Depth Scale

Major Lithology _____ Minor Lithology _____

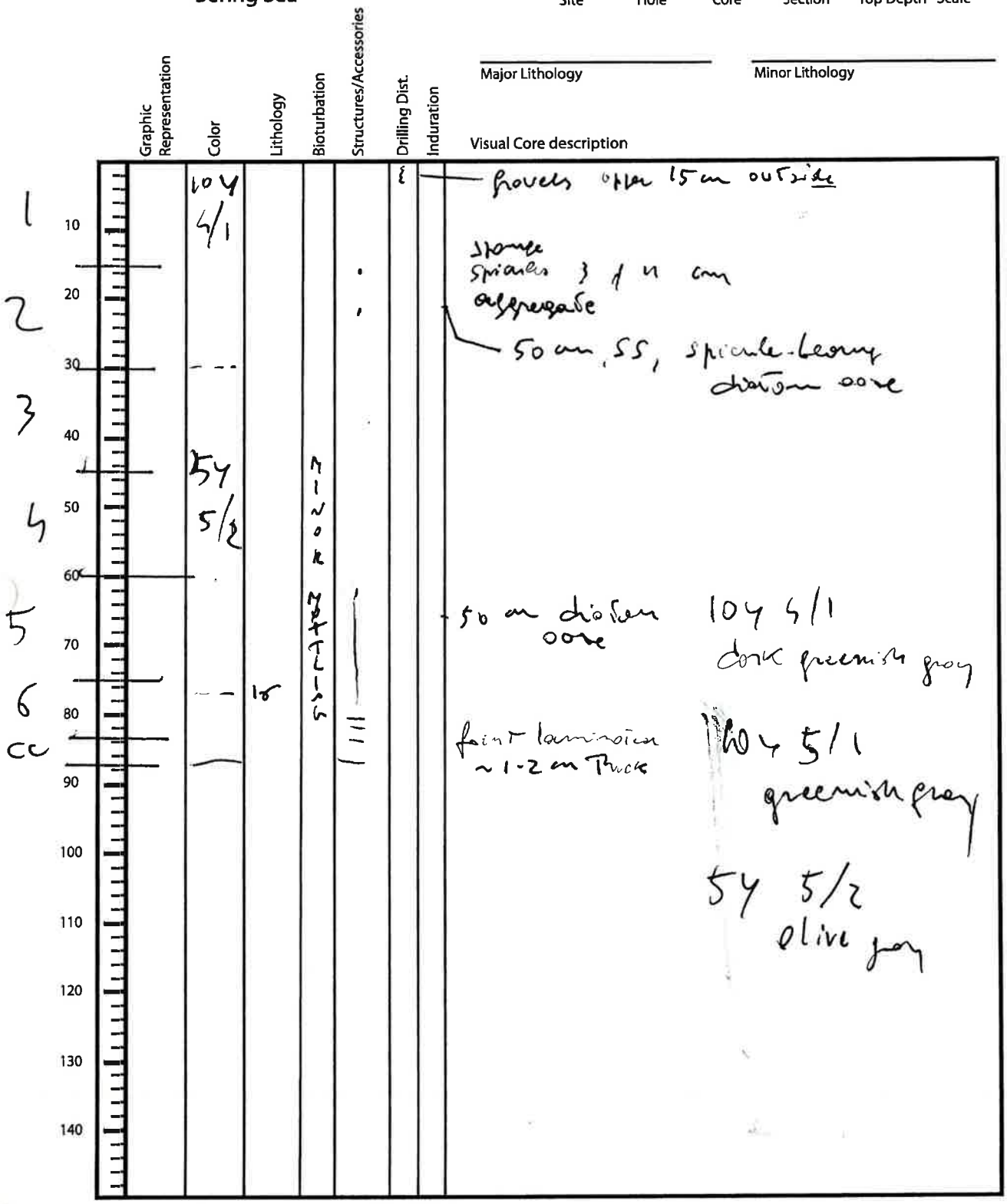


Observer: _____ Date: _____

Expedition 323
Bering Sea

1441A-27
Site / Hole / Core / Section / Top Depth / Scale

Major Lithology / Minor Lithology



Observer: _____ Date: _____

X.

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

SM

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1341	A	27	H	SA	50cm	

Sediment/Rock Name	Diatom ooze

Observer	BETH

B-78
S-12
V-10

Comments:

Percent Texture		
Sand	Silt	Clay

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
3	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	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
2	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
40	Centric
18	Pennate
	Chaetoceros Resting Spores
10	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	U1341	A	27	H	2A	50cm	

Sediment/Rock Name	Spicule-bearing diatom ooze

Observer	Beth

B-67
S-33
V-0

Comments:

Percent Texture		
Sand	Silt	Clay

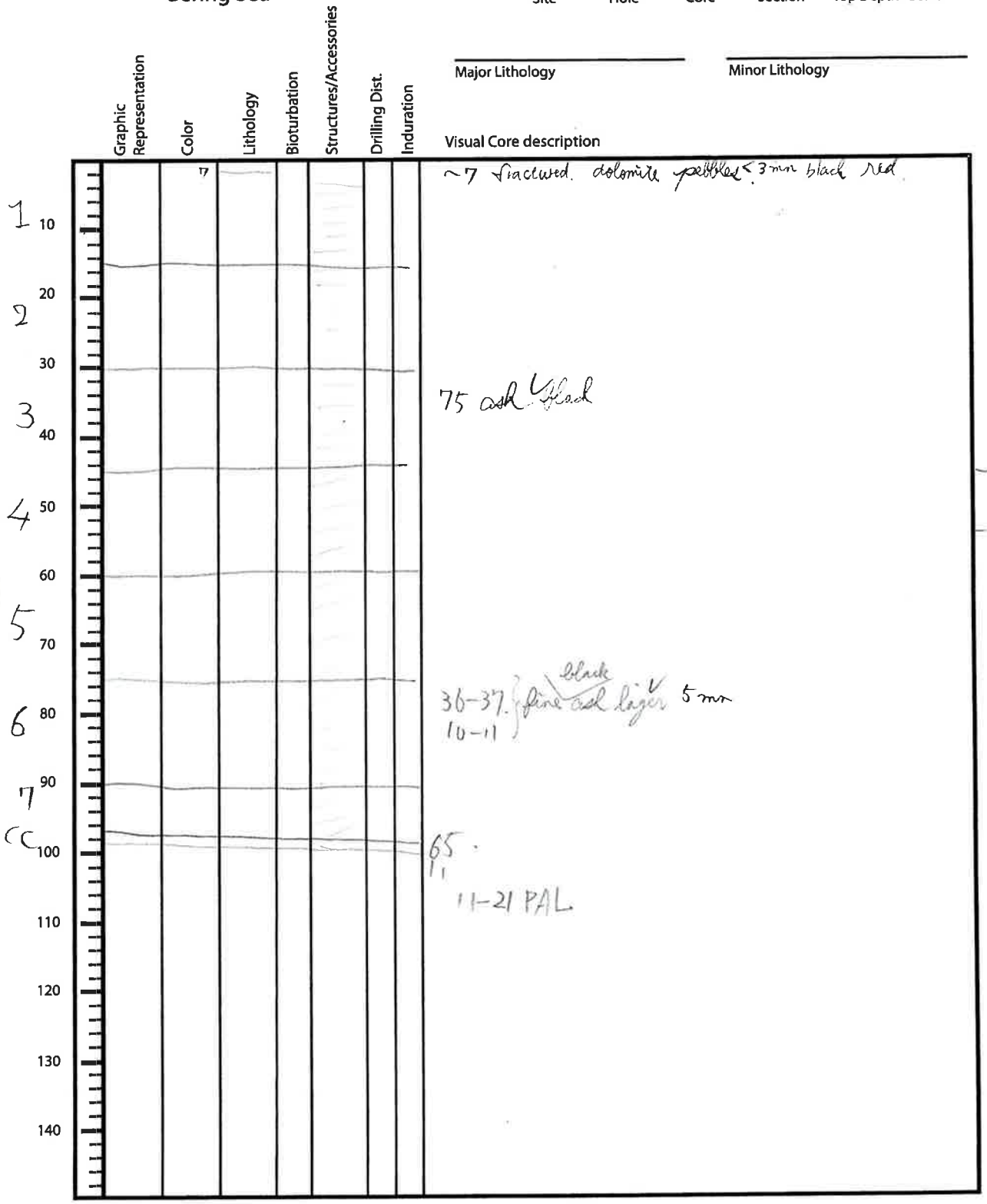
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
5	Quartz
10	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
10	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
3	Ferromagnesium minerals
	Authigenic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

Expedition 323
Bering Sea

1341 28 ____ ____ ____ ____
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	1341	A	28	H	4	24.5	

Sediment/Rock Name	diatom ooze.	Observer	akira

light laminas

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 < phillipsite.
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
5	Vitric grain 2.
	Lithic grain

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

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	1341	A	28	H	4	27	

Sediment/Rock Name	diatom ooze. dark (olive) laminae	Observer	

Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
6	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
1	Pyrite 0.5
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
	Crystal grain
6	Vitric grain 2
	Lithic grain

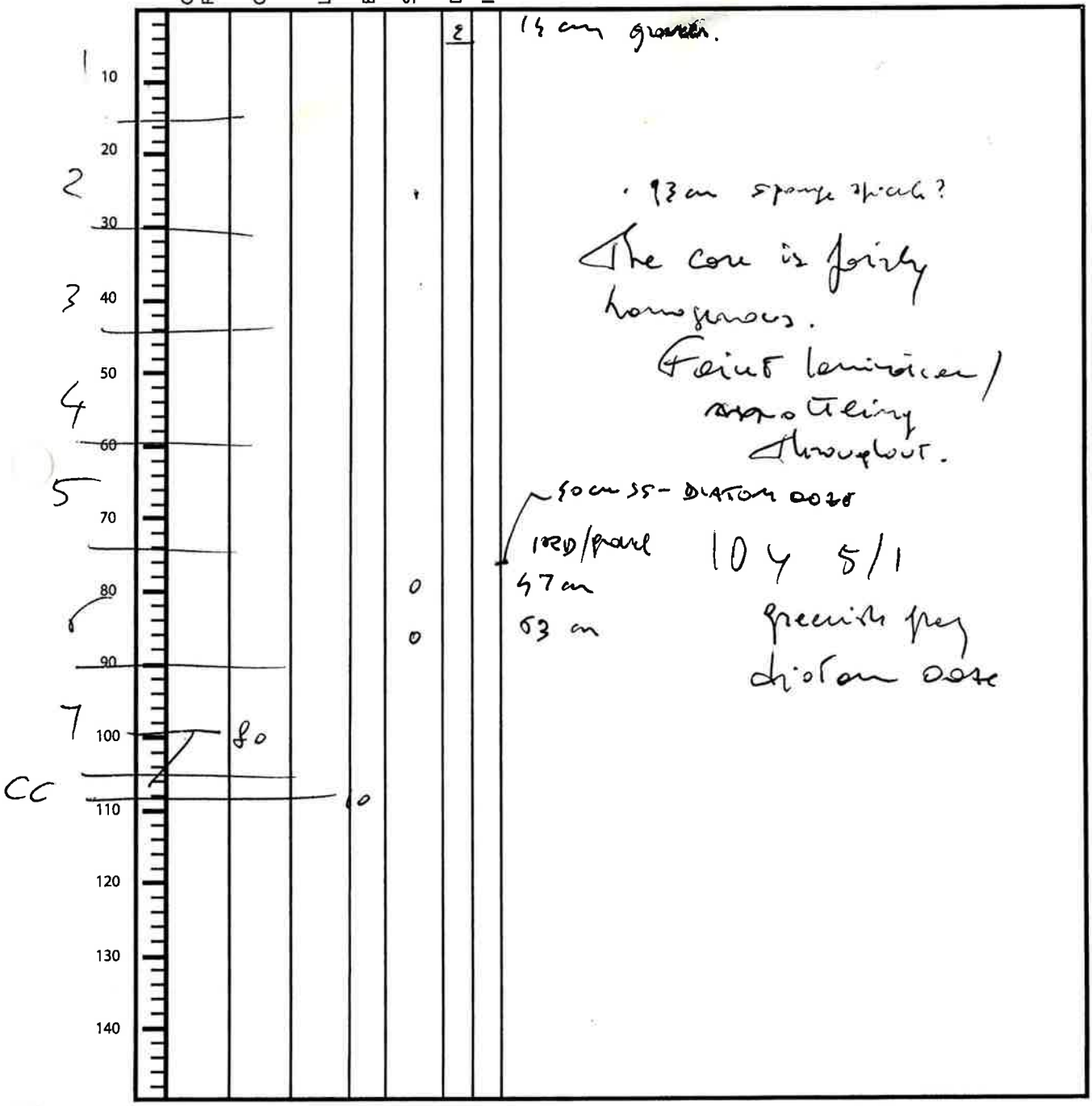
Percent	Component
	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
86	Diatoms 30
	Centric
	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules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

Expedition 323
Bering Sea

1341 A 29 ____ ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____

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



14 cm gravel.

93 cm sponge spicule?

The core is fairly homogenous.

Faint lamination/mottling throughout.

50 cm SS - DIATOM OOZE

10YR 5/1 greenish gray diatom ooze

IRD/pebble 47 cm

53 cm

Observer: ____ Date: ____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
323	1341	A	29	H	6	80	

Sediment/Rock Name	diatom ooze.	Observer	Okura

Percent Texture		
Sand	Silt	Clay

Comments:

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
9	Quartz 3
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 3
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
	VOLCANICLASTIC GRAINS
3	Crystal grain 1
9	✓ Vitric grain 3
	Lithic grain

Percent	Component
	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	✓ Radiolarians
	Spumellaria
	Nassellaria
62	Diatoms ~~30~~ ~~75~~ 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

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
	1341	A	2P	2		93 cm	

Sediment/Rock Name	SPONGE SPICULE OOZE

Observer	LUM

Percent Texture		
Sand	Silt	Clay

white spot.

Comments:

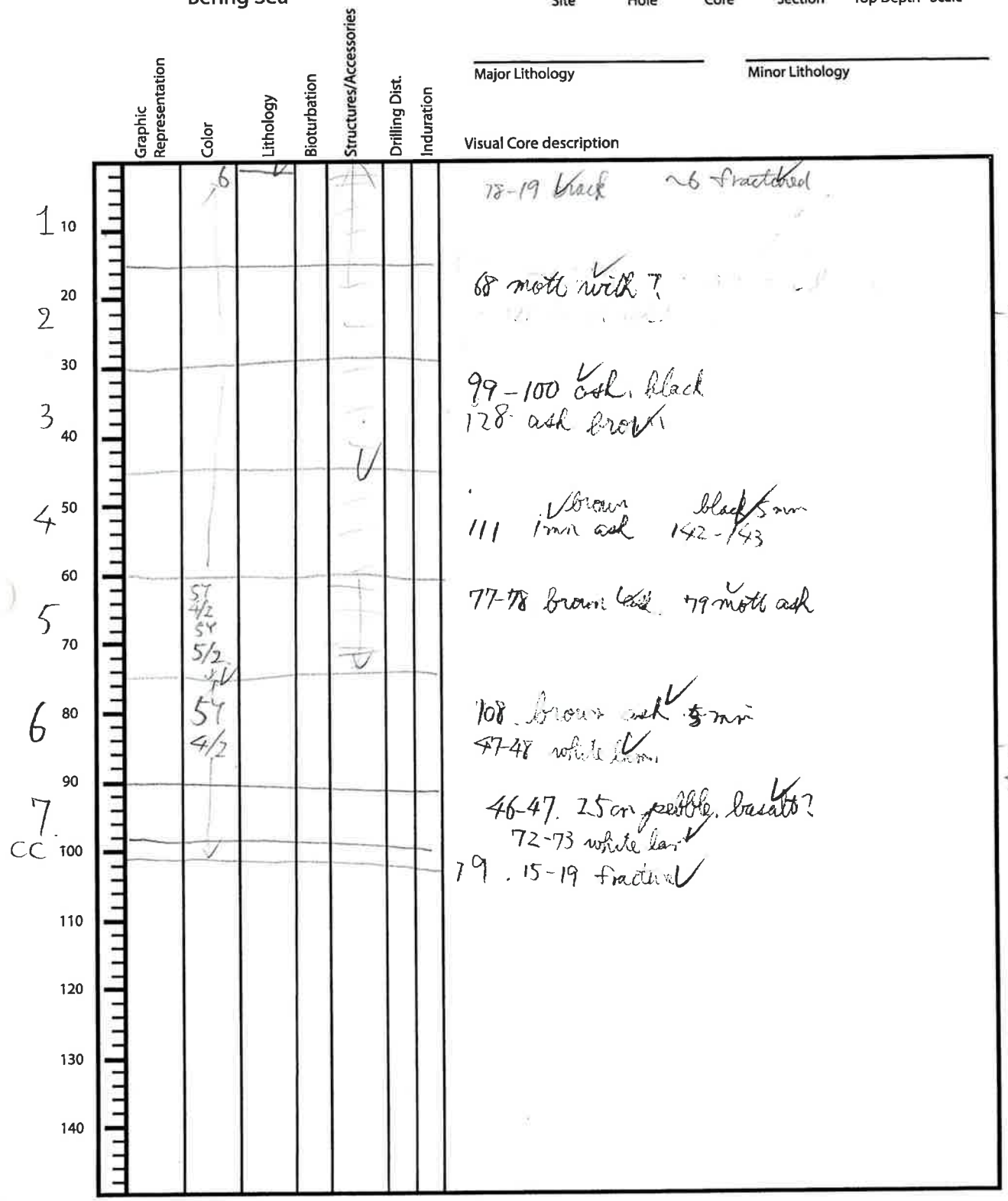
Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals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

Expedition 323
Bering Sea

1341 30. ____ ____ ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____



6A-90 sponge-bearing diatom ooze

Observer: ____ Date: ____

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Bottom
323	U1341	A	30	H	6A	90cm	

Sediment/Rock Name	Spicule-bearing diatom ooze	Observer	Beth

Percent Texture		
Sand	Silt	Clay

Comments:

Major lithology

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
3	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
10	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
2	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
10	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

X

SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1341	A	30	H	2A	90cm	

Sediment/Rock Name	Diatom ooze	Observer	Beth

Percent Texture		
Sand	Silt	Clay

Comments:

Major Lithology

Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
5	Quartz
	Feldspar
10	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
5	Rock fragments Polycrystaline Quartz
	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
BIOGENIC GRAINS	
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
57	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	U1341	A	30	H	SA	77	

Sediment/Rock Name	Fine Ash	Observer	

Percent Texture		
Sand	Silt	Clay

Comments: Ash layer 1cm

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

Percent	Component
	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
	Centric
	Pennate
	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	1341	~~B~~ A	30H		2	138	138

Sediment/Rock Name	Pennate Diatom Ooze	Observer	Zhao A

Percent Texture		
Sand	Silt	Clay

Comments: clayey. white spot

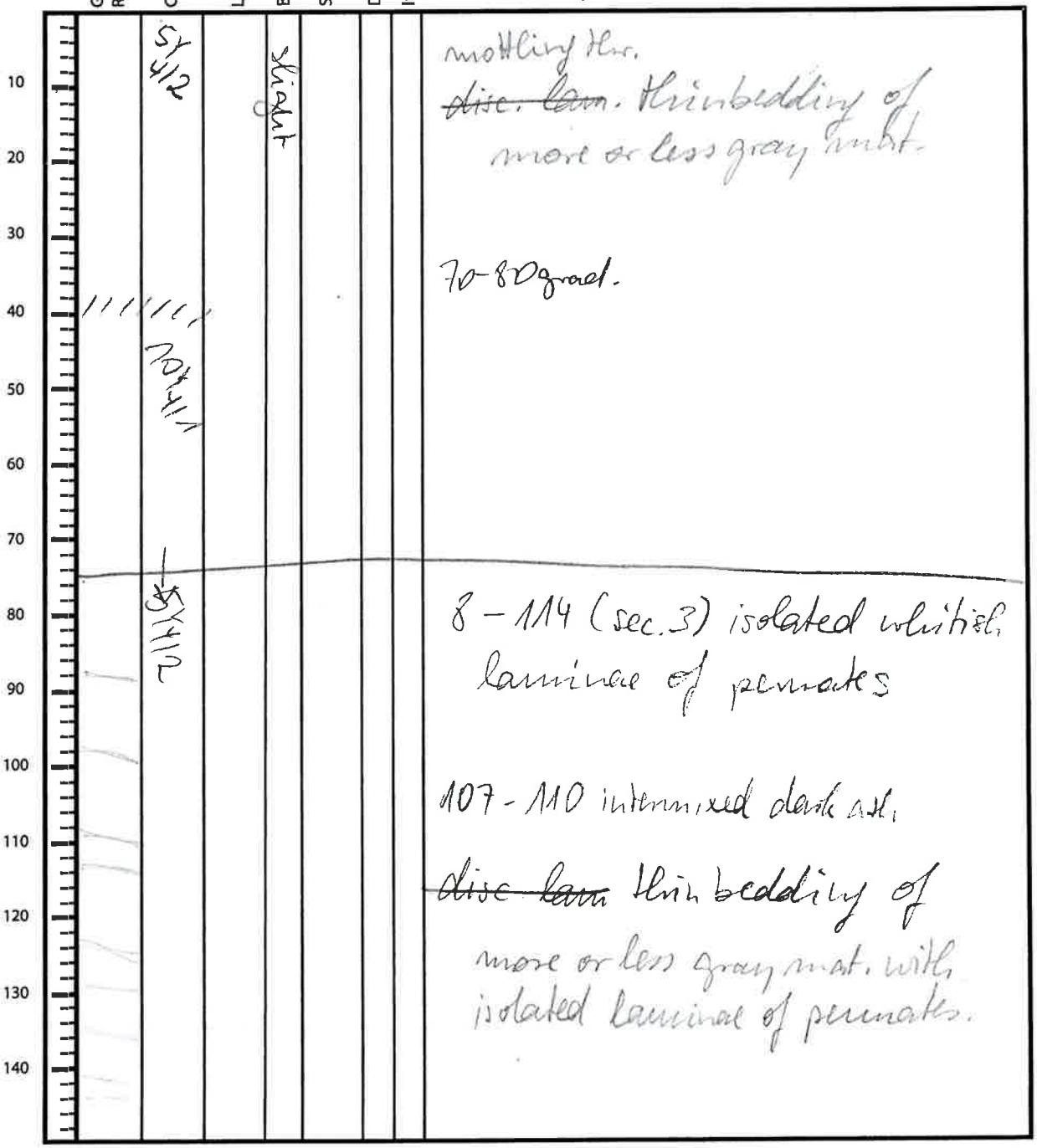
Percent	Component
SILICICLASTIC GRAINS/MINERAL	
	Framework minerals
20%	Quartz 0.5
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
	Carbonates
	Calcite
	Dolomite
VOLCANICLASTIC GRAINS	
	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 7
73%	Pennate 20
	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

1341 A 31H 1+2 _____ _____
Site Hole Core Section Top Depth Scale

Major Lithology _____ Minor Lithology _____

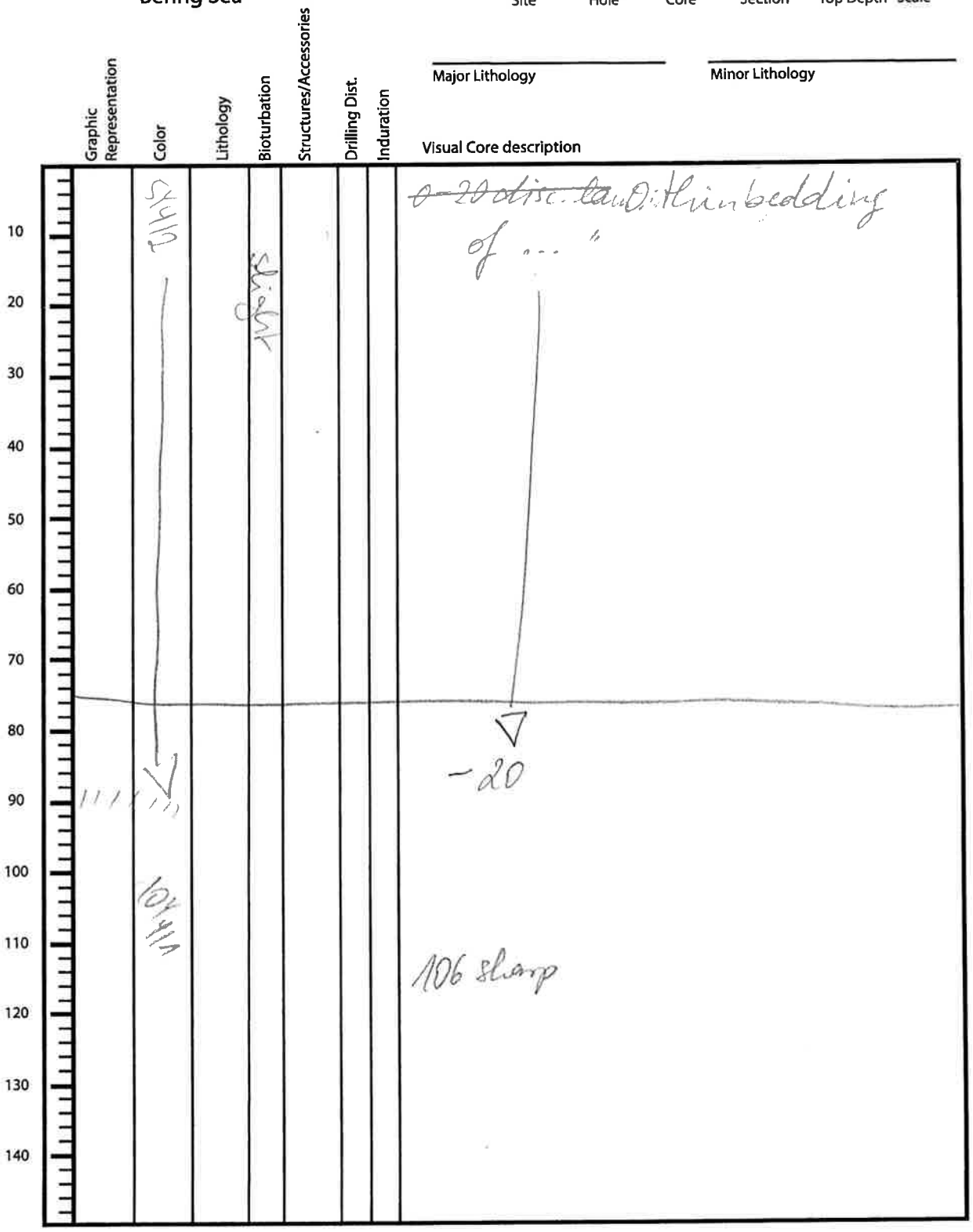


Observer: _____ Date: _____

Expedition 323
Bering Sea

1341 A 31H 3+4 ____ ____
Site Hole Core Section Top Depth Scale

Major Lithology ____ Minor Lithology ____

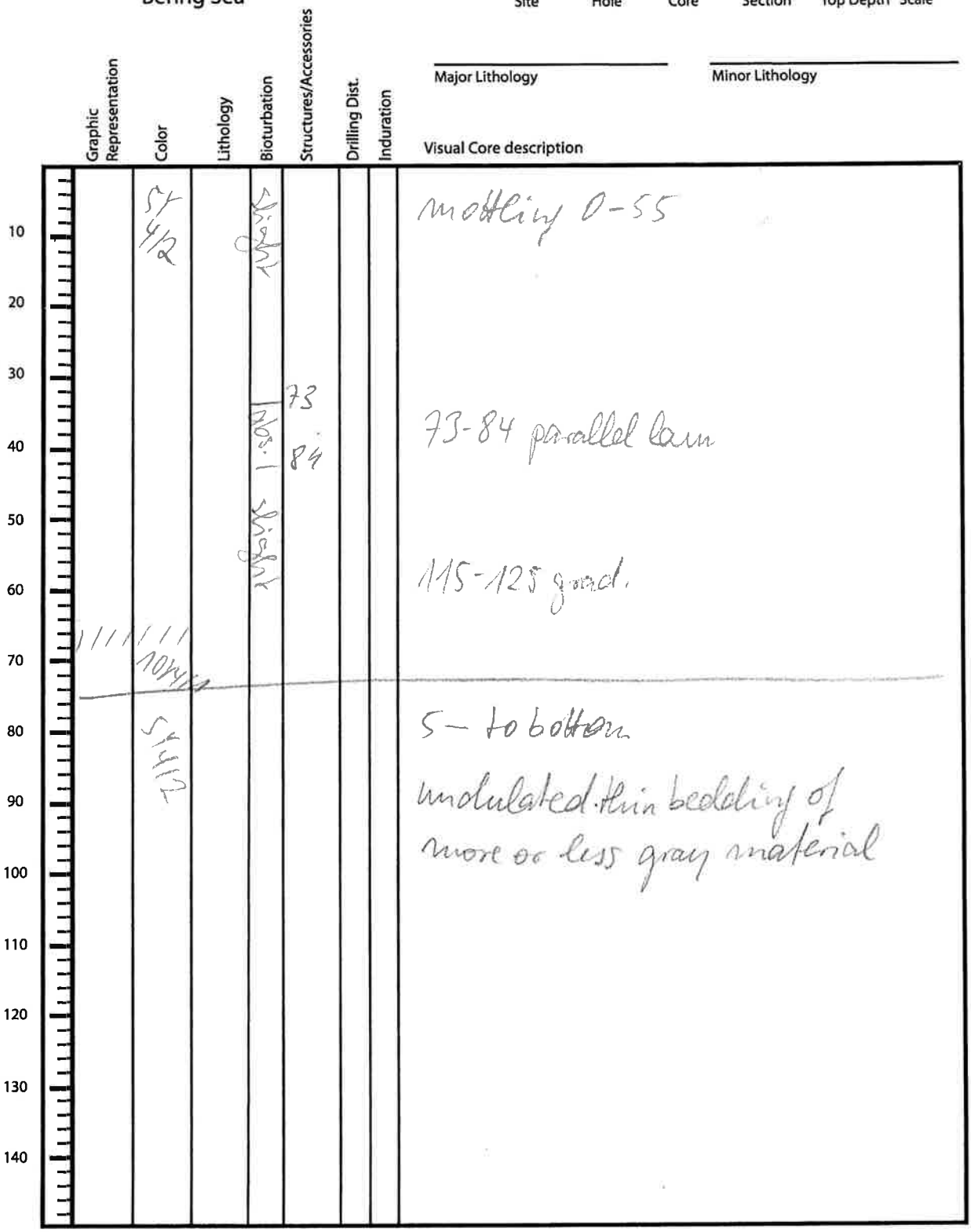


Observer: ____ Date: ____

Expedition 323
Bering Sea

1341 (Site) A (Hole) 31H (Core) 5+6 (Section) ____ (Top Depth) ____ (Scale)

Major Lithology ____ Minor Lithology ____



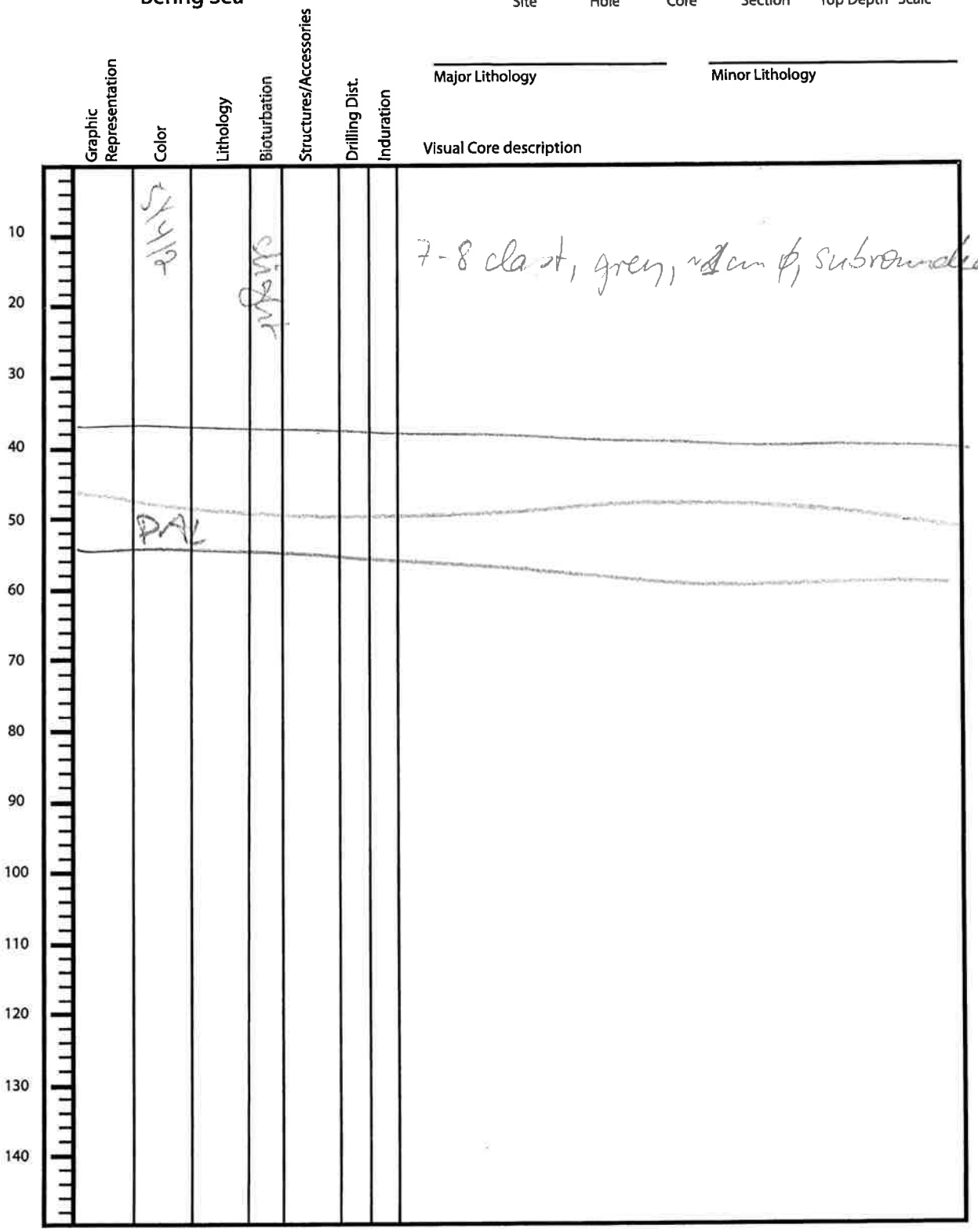
Observer: ____ Date: ____

Expedition 323
Bering Sea

1341 A 81H 7+CC
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	U1341	A	31	H	7	63	

Sediment/Rock Name	Diatom ooze	Observer	KD

(equal centric + p)

Percent Texture		
Sand	Silt	Clay

Comments: Light coloured mottley lamina

Percent	Component
	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
1	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
1	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
40	Centric
40	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

5m

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1341	A	31	H	7	75	

Sediment/Rock Name	Diatom ooze	Observer	KD

(more centric)

Percent Texture		
Sand	Silt	Clay

Comments: Darker - col mottled laminae

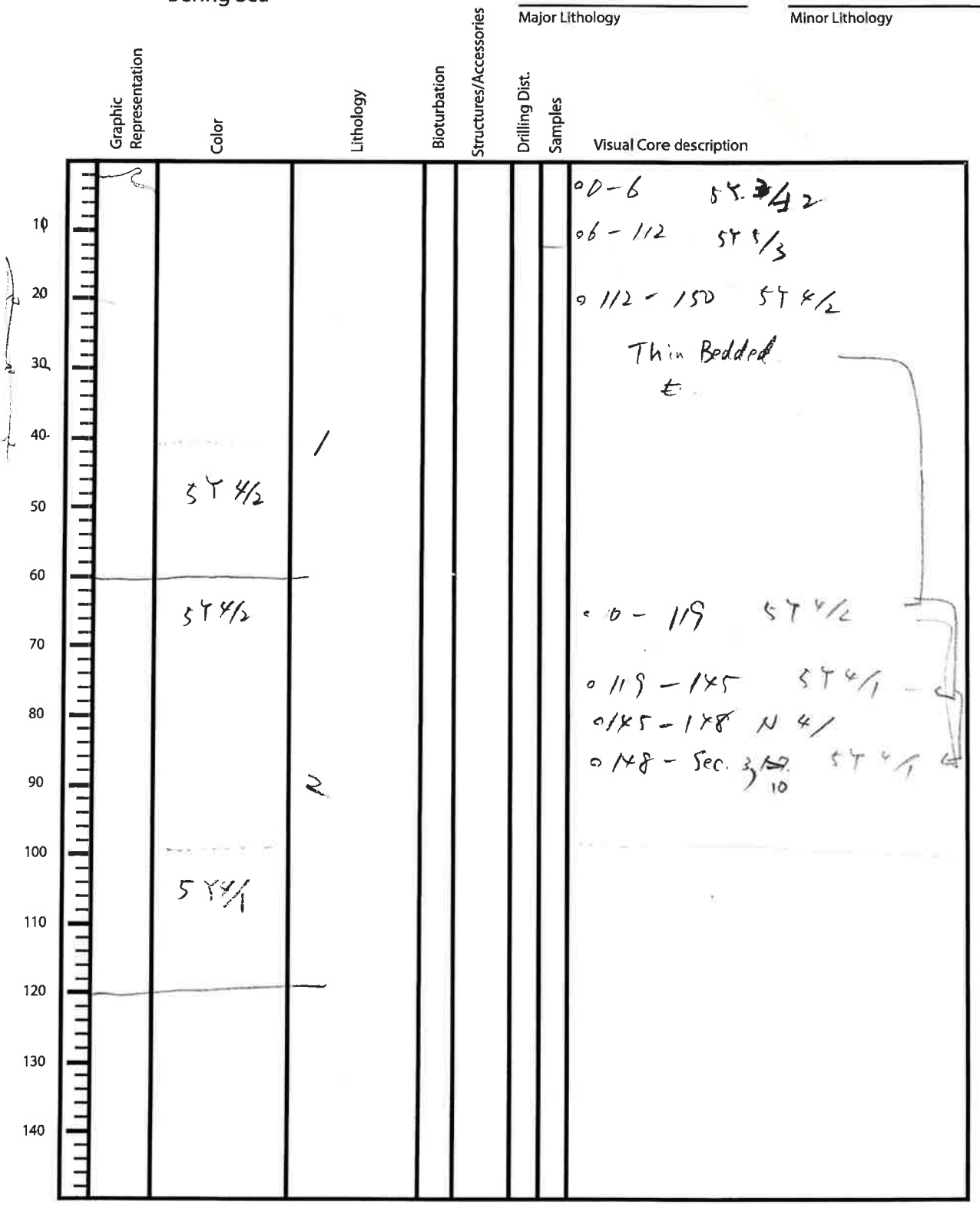
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
5	Quartz
3	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
1	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	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
1	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
50	Centric
30	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
4	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

1341 / A / 3214 / 1H2 / ____
Site / Hole / Core / Section / Top Depth

Expedition 323
Bering Sea

Major Lithology ____ Minor Lithology ____



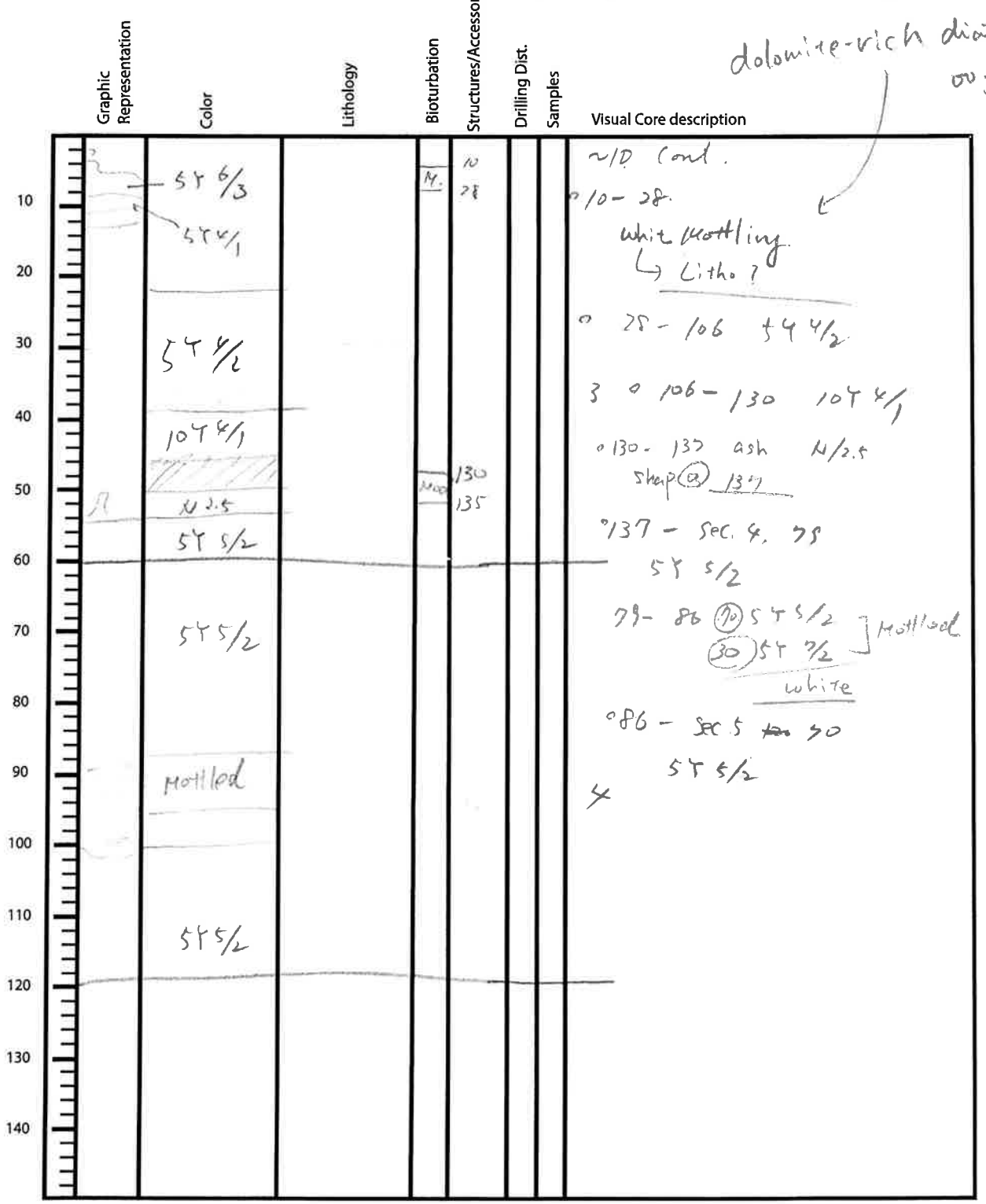
Observer: Alex Date: ____

Site 1341 Hole A Core 32X Section 3 Top Depth

Expedition 323
Bering Sea

Major Lithology

Minor Lithology

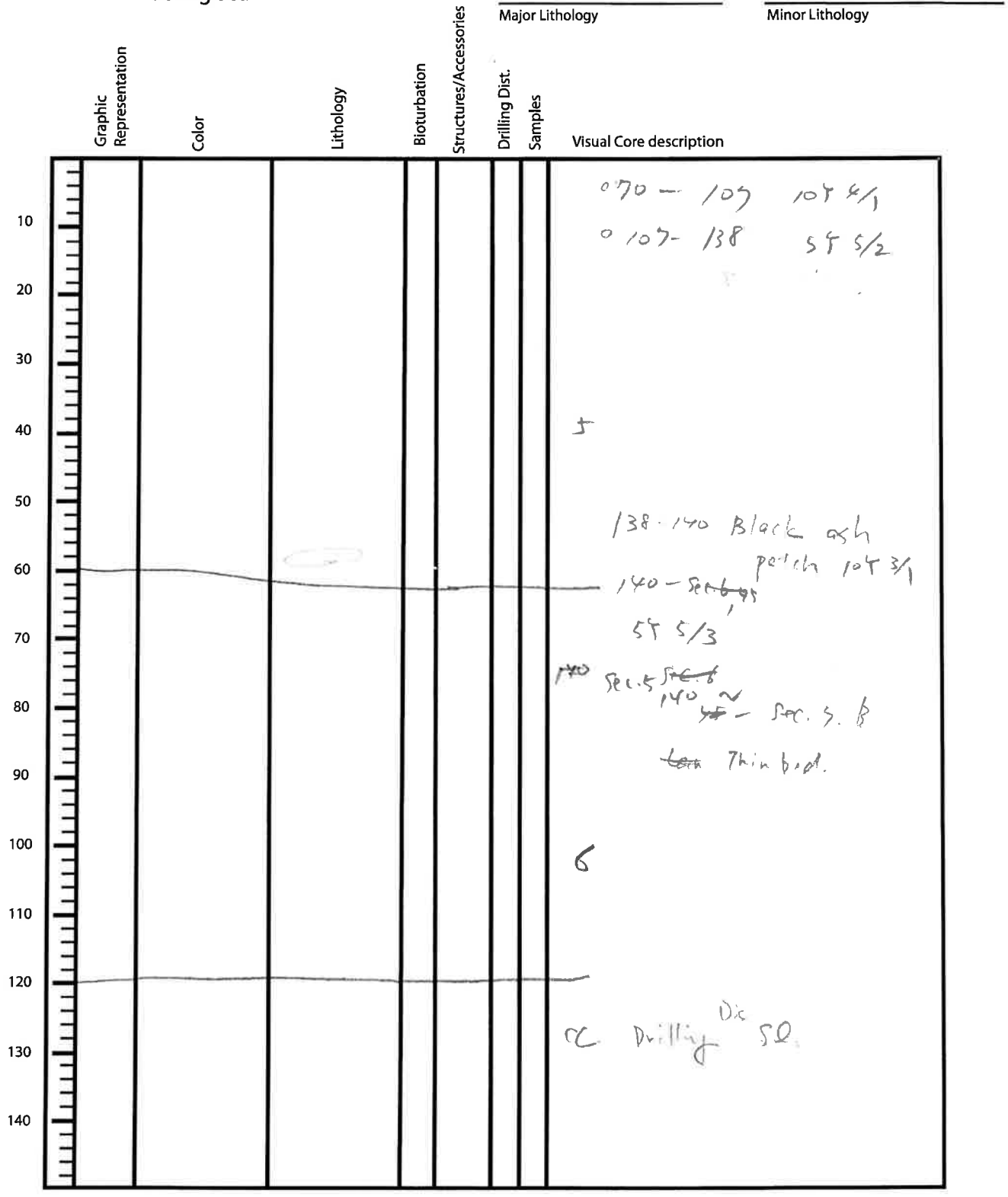


Observer: _____ Date: _____

1341 | A | 324 | 4(6 | _____
Site | Hole | Core | Section | Top Depth

Expedition 323
Bering Sea

Major Lithology _____ Minor Lithology _____



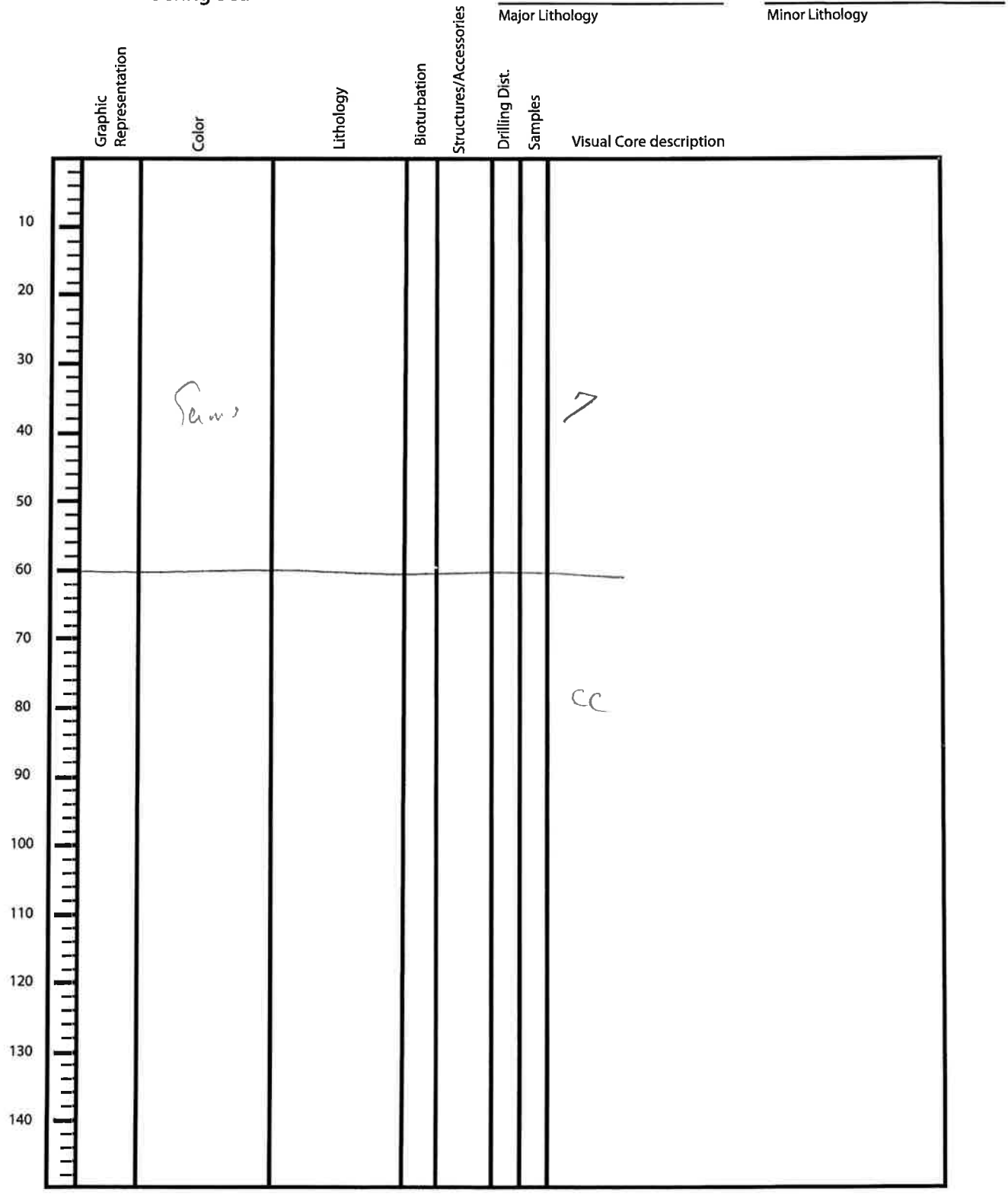
Observer: _____ Date: _____

1346 A 3214 7 x CC
Site Hole Core Section Top Depth

Expedition 323
Bering Sea

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	1341	A	32	H	3	24	24

Sediment/Rock Name	dolomite-rich diatom ooze	Observer	Marz

Percent Texture		
Sand	Silt	Clay
40	60	

Comments:

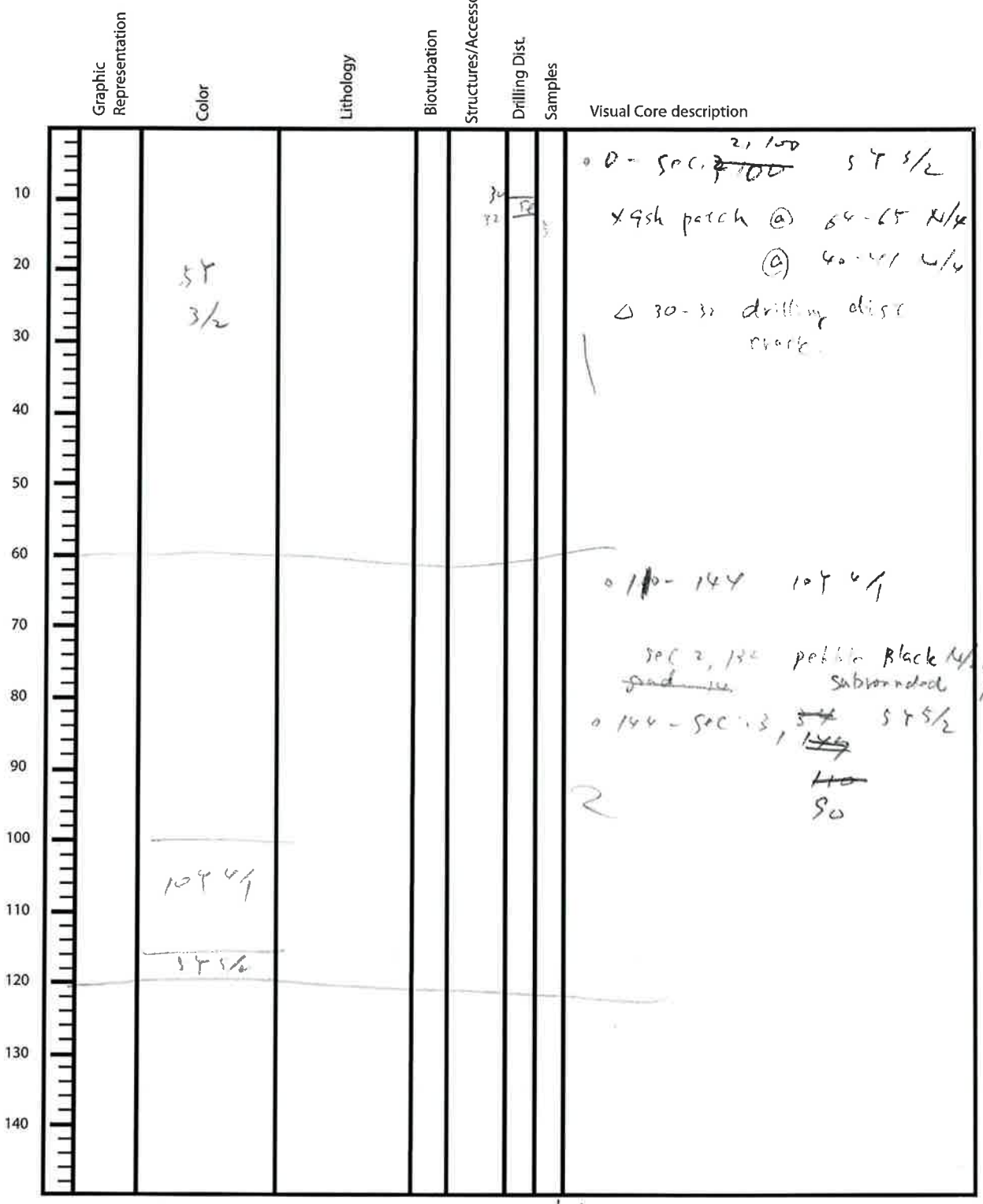
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
	Quartz
	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
	Pyrite
	Magnetite
	Fe-oxide
50%	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
15	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

1371 | A | 33H | 1-2 | ____
Site | Hole | Core | Section | Top Depth

Expedition 323
Bering Sea

Diatom ooze | ____
Major Lithology | Minor Lithology



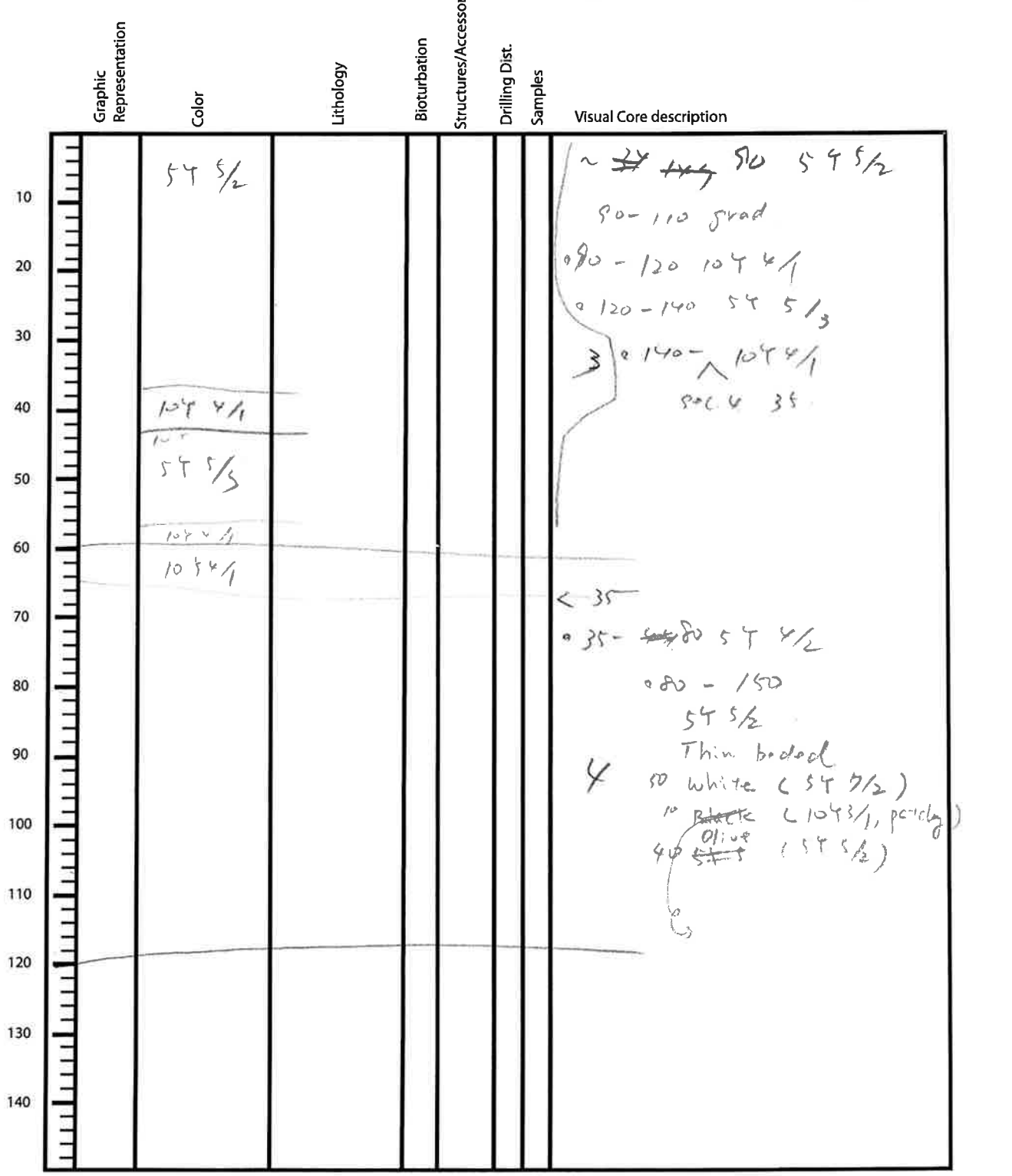
Observer: Hinz | Date: ____

1341 | A | 33H | 3 | 4

Site | Hole | Core | Section | Top Depth

Expedition 323
Bering Sea

Major Lithology | Minor Lithology



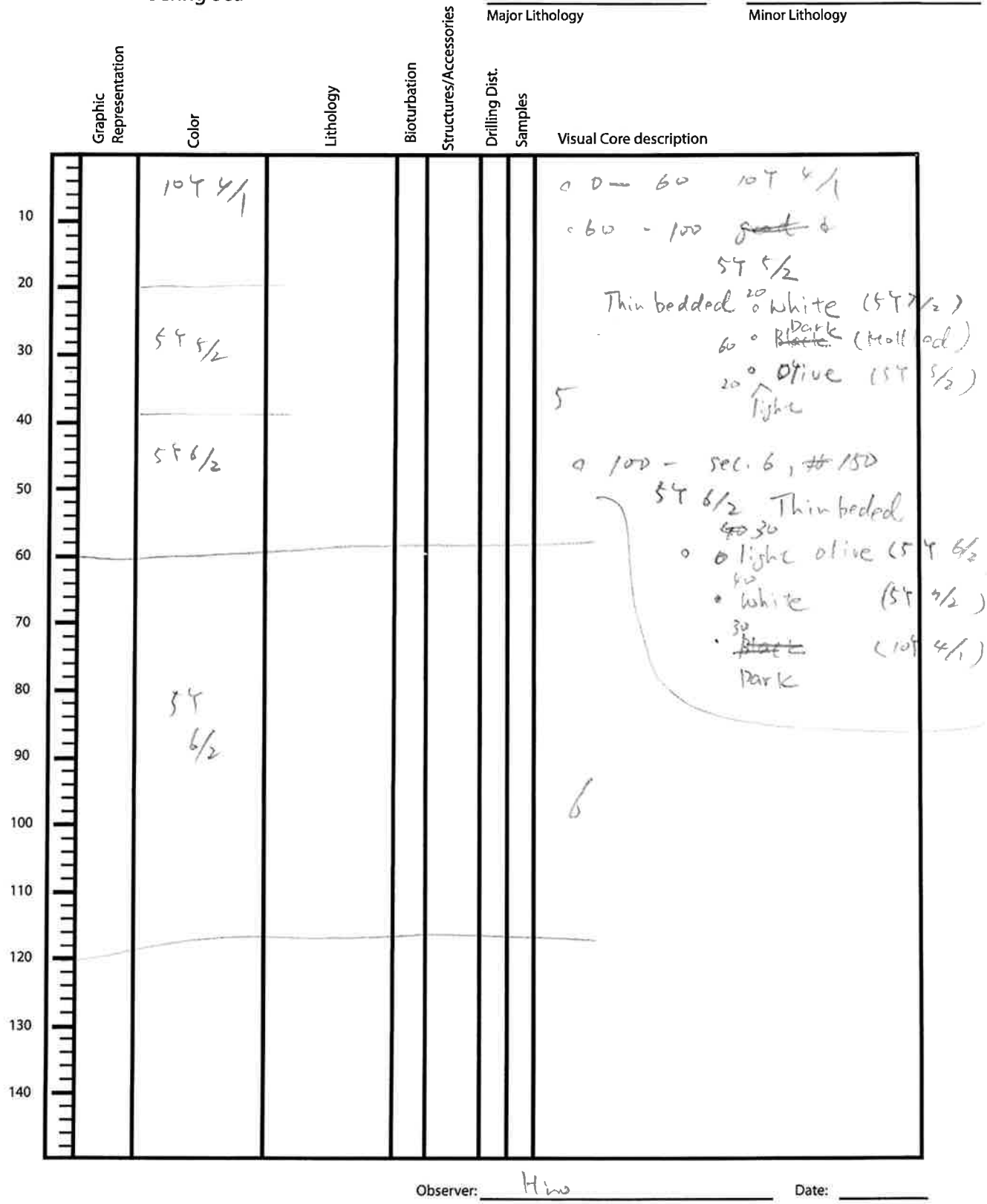
Observer: Lim

Date:

1341 | A | 3317 | 5+6 | ____
Site | Hole | Core | Section | Top Depth

Expedition 323
Bering Sea

Major Lithology ____ Minor Lithology ____



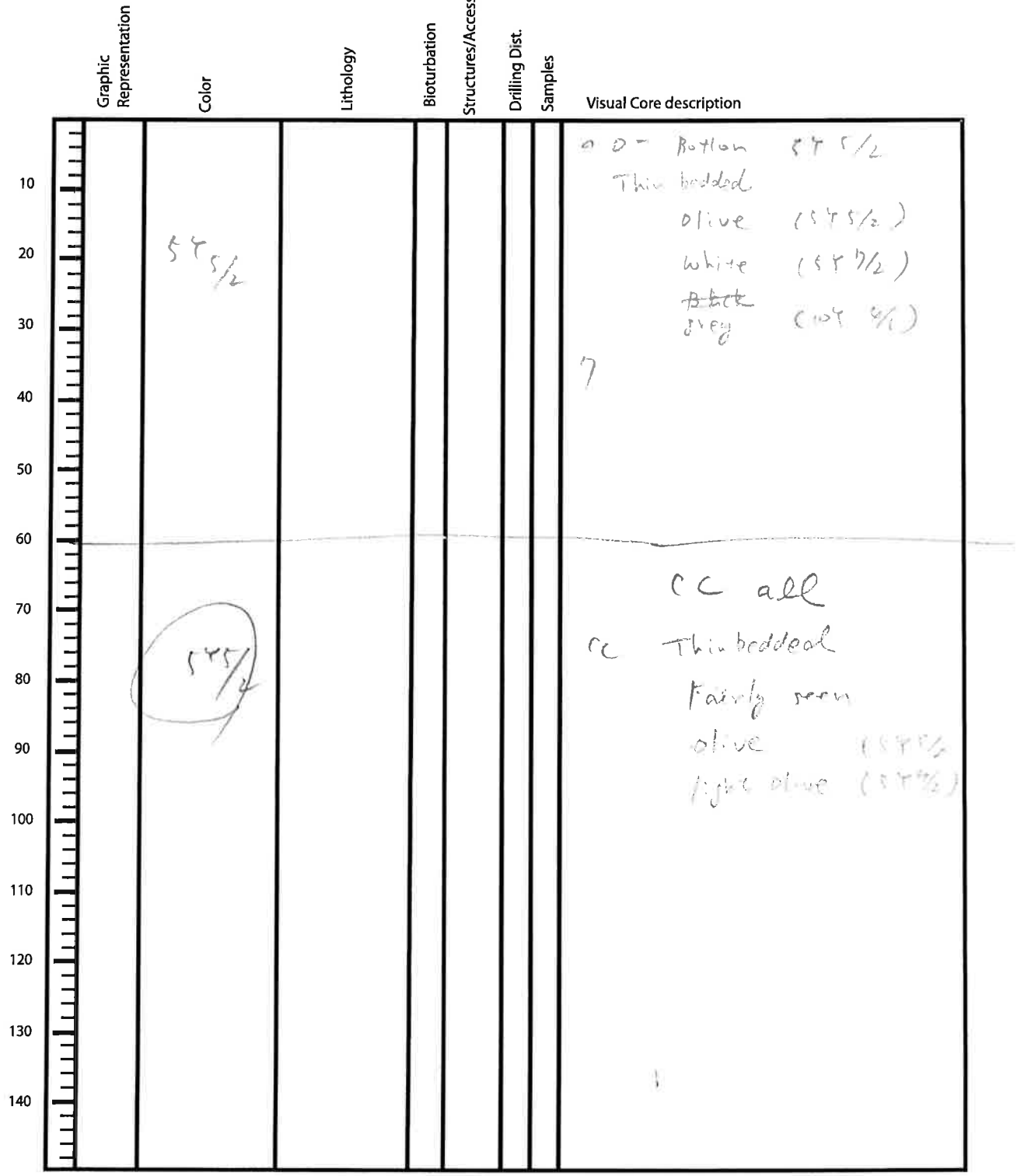
Observer: Hino Date: ____

1314 A 35H 7 CC
Site Hole Core Section Top Depth

Expedition 323
Bering Sea

Major Lithology

Minor Lithology



Observer: Hino Date:

✓ SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1341	A	33	H	6	59	59

Sediment/Rock Name	Diatom ooze	Observer	KD

Percent Texture		
Sand	Silt	Clay

Comments: Green laminae.

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
3	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
	Zeolite
	Opaque minerals
2	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
50	Centric
40	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	Interval (cm) Bottom
323	1341	A	33	H	6	50	

Sediment/Rock Name	Diatom ooze	Observer	KD

Percent Texture		
Sand	Silt	Clay

Comments: White laminae

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

Percent	Component
	BIOGENIC GRAINS
	Calcareous
	Foraminifera
	Planktonic foraminifera
	Benthic foraminifera
	Nannofossils
	Coccoliths
	Discoasters
	Pteropods
	Siliceous
	Radiolarians
	Spumellaria
	Nassellaria
	Diatoms
70	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
323	U1341	A	33	H	6	58	

Sediment/Rock Name	Diatom ooze	Observer	KD

Percent Texture		
Sand	Silt	Clay

Comments: Black, ~~[illegible]~~ coloured laminae.

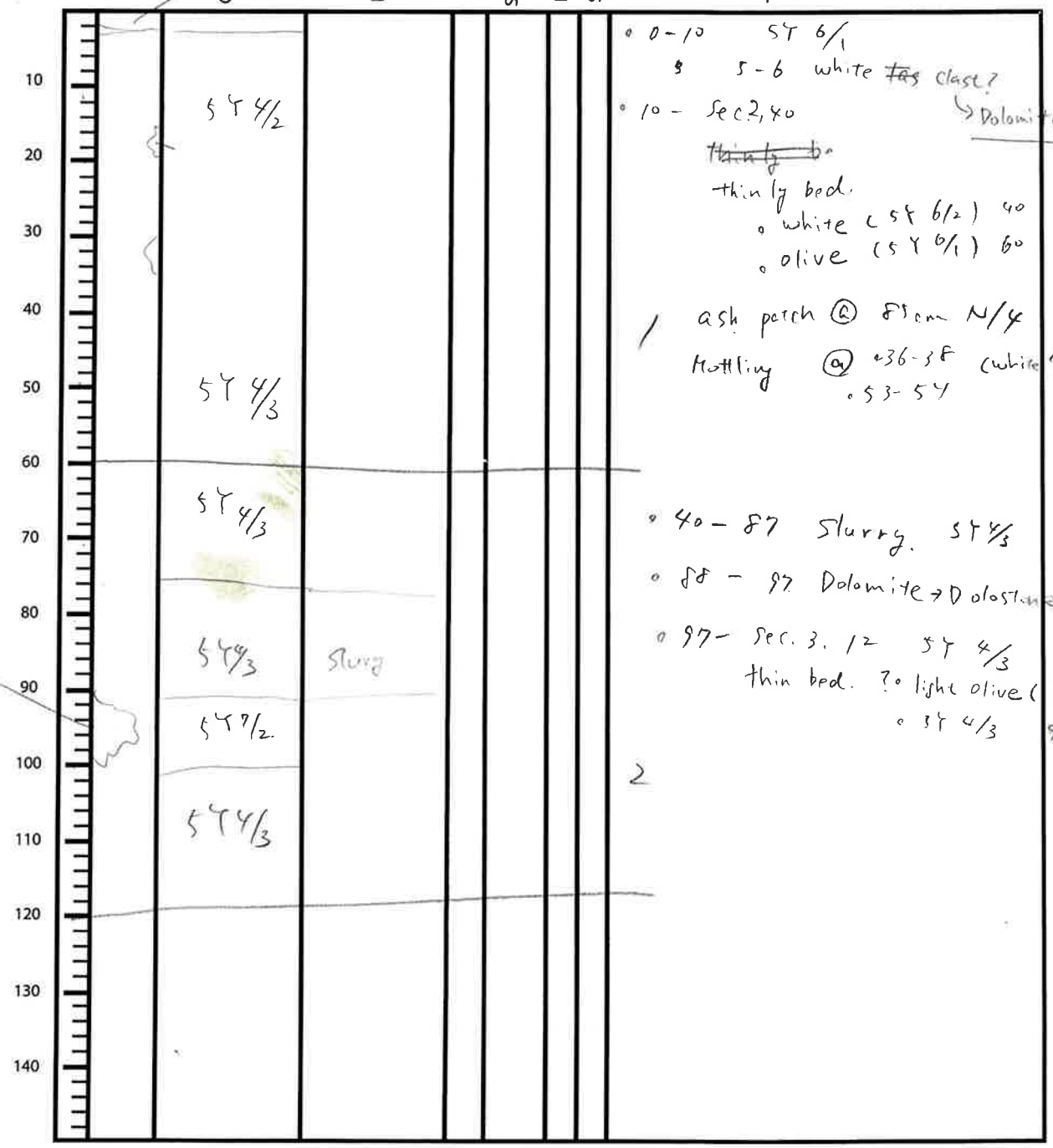
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
10	Quartz
5	Feldspar
	K-feldspar (Orthoclase, Microcline,..)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
7	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
30	Centric
50	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

1341 | A | 34H | 1 +2 | _____
Site | Hole | Core | Section | Top Depth

Expedition 323
Bering Sea

Major Lithology _____ Minor Lithology _____



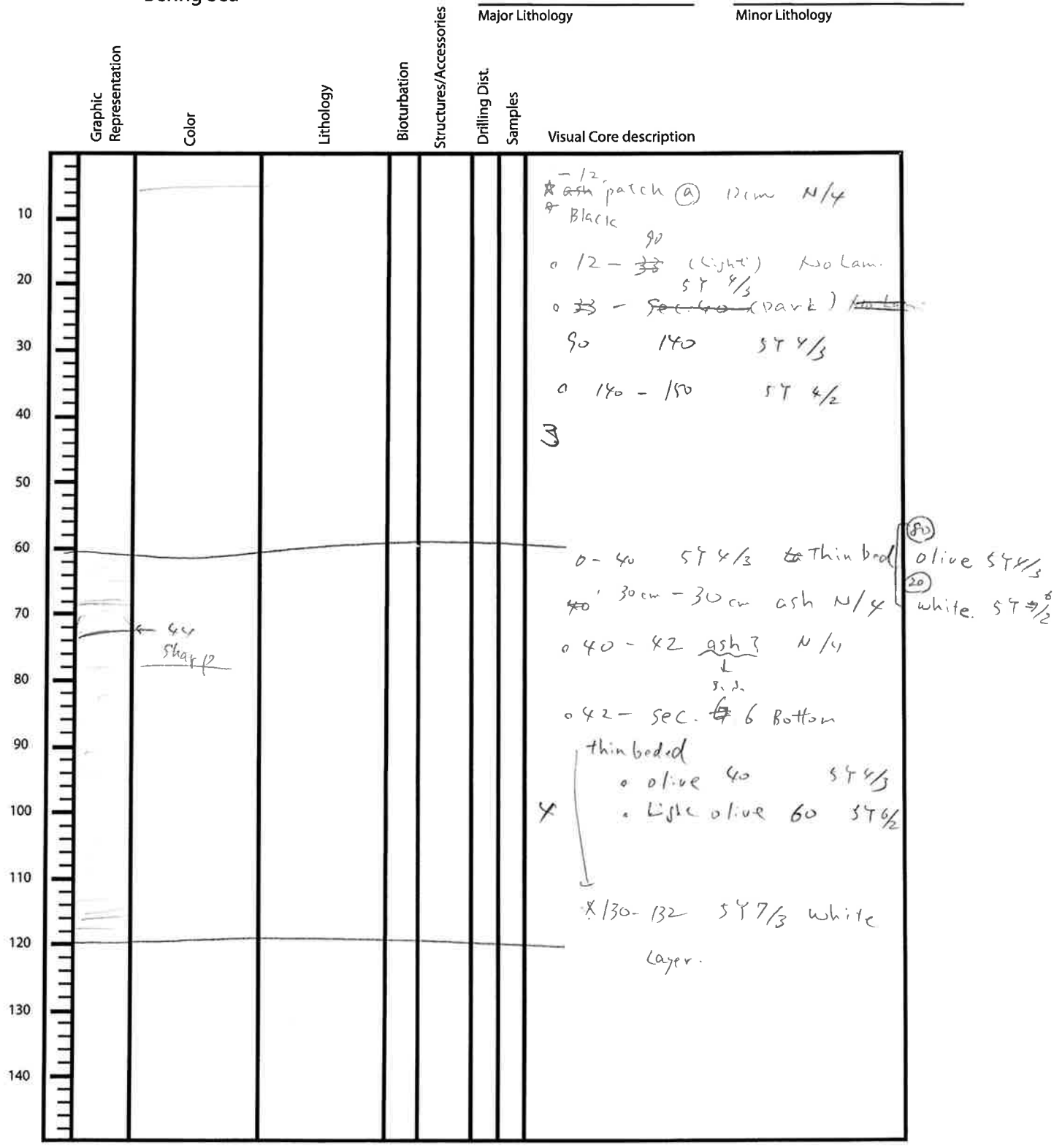
Observer: Hina Date: _____

13x1	A	34H	3+4	
Site	Hole	Core	Section	Top Depth

Expedition 323
Bering Sea

Major Lithology

Minor Lithology

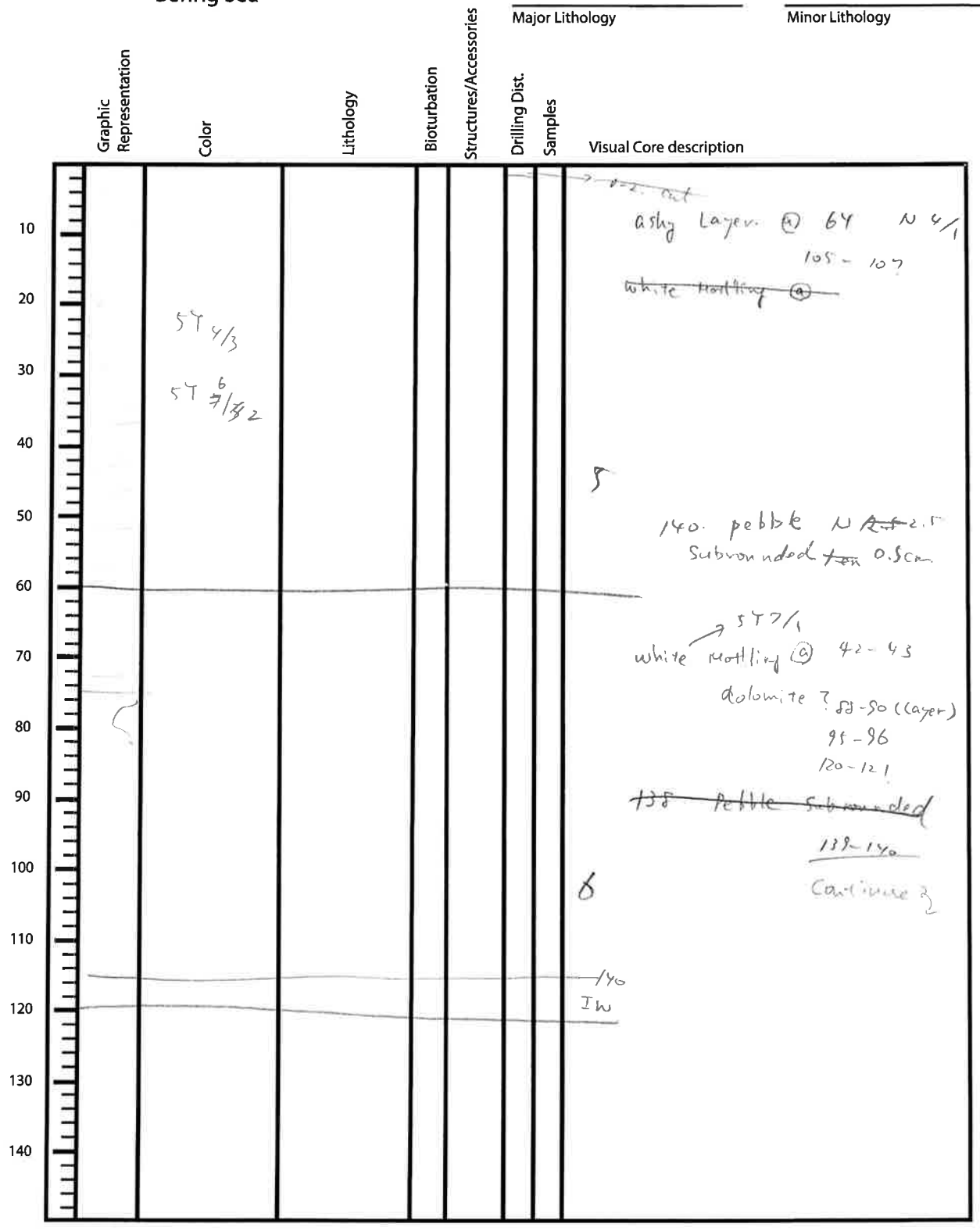


Observer: Hiv. Date:

1341 | A | 3H | 5+6 | _____
Site | Hole | Core | Section | Top Depth

Expedition 323
Bering Sea

Major Lithology _____ Minor Lithology _____

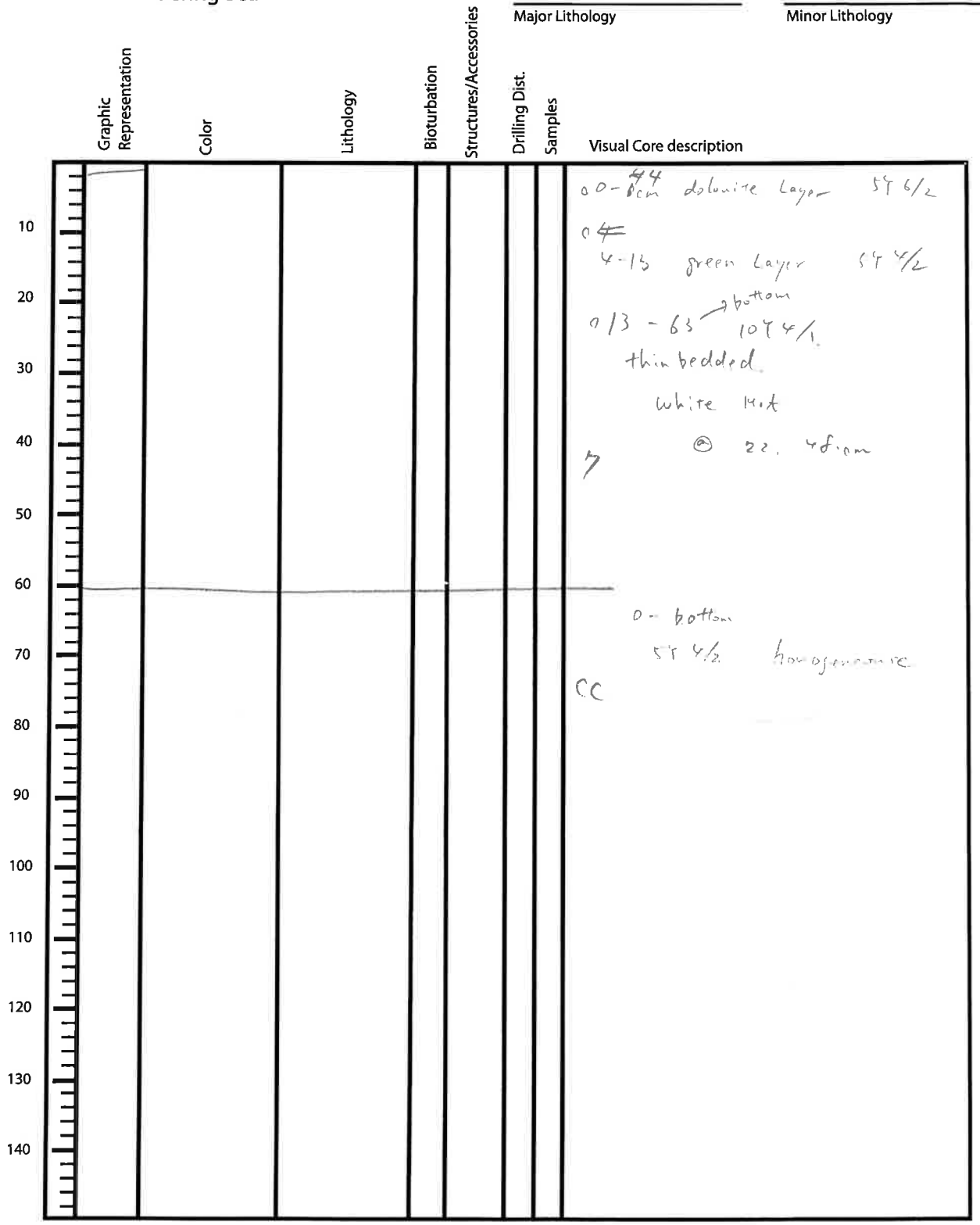


Observer: Hiw Date: _____

1341 | A | 3H | 7+CC | ____
Site | Hole | Core | Section | Top Depth

Expedition 323
Bering Sea

Major Lithology | Minor Lithology



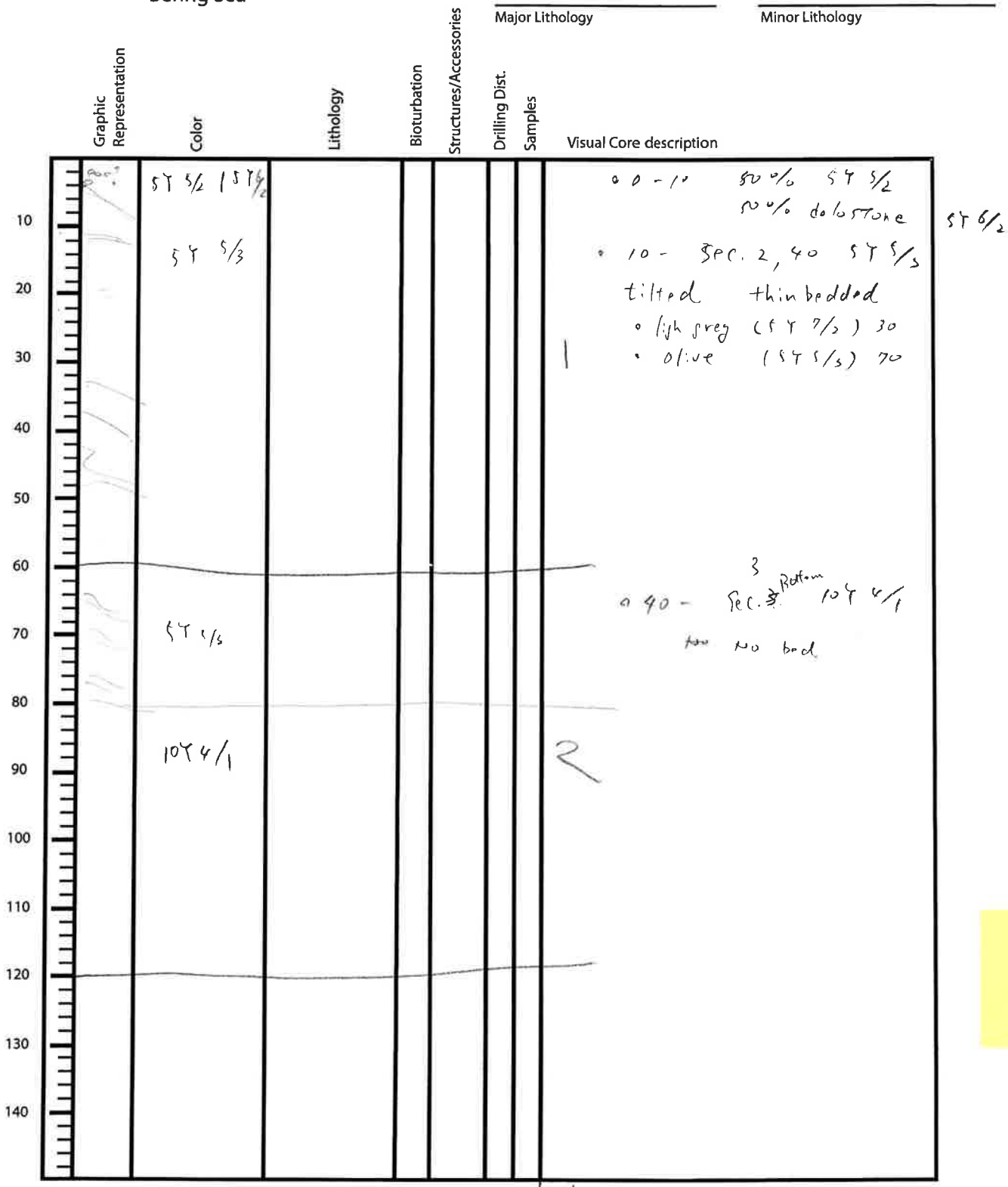
Observer: Hi Date: ____

New Lith
tell Jamie.

1341 (Site) A (Hole) 35H (Core) 1-2 (Section) ____ (Top Depth)

Expedition 323
Bering Sea

Major Lithology ____ Minor Lithology ____



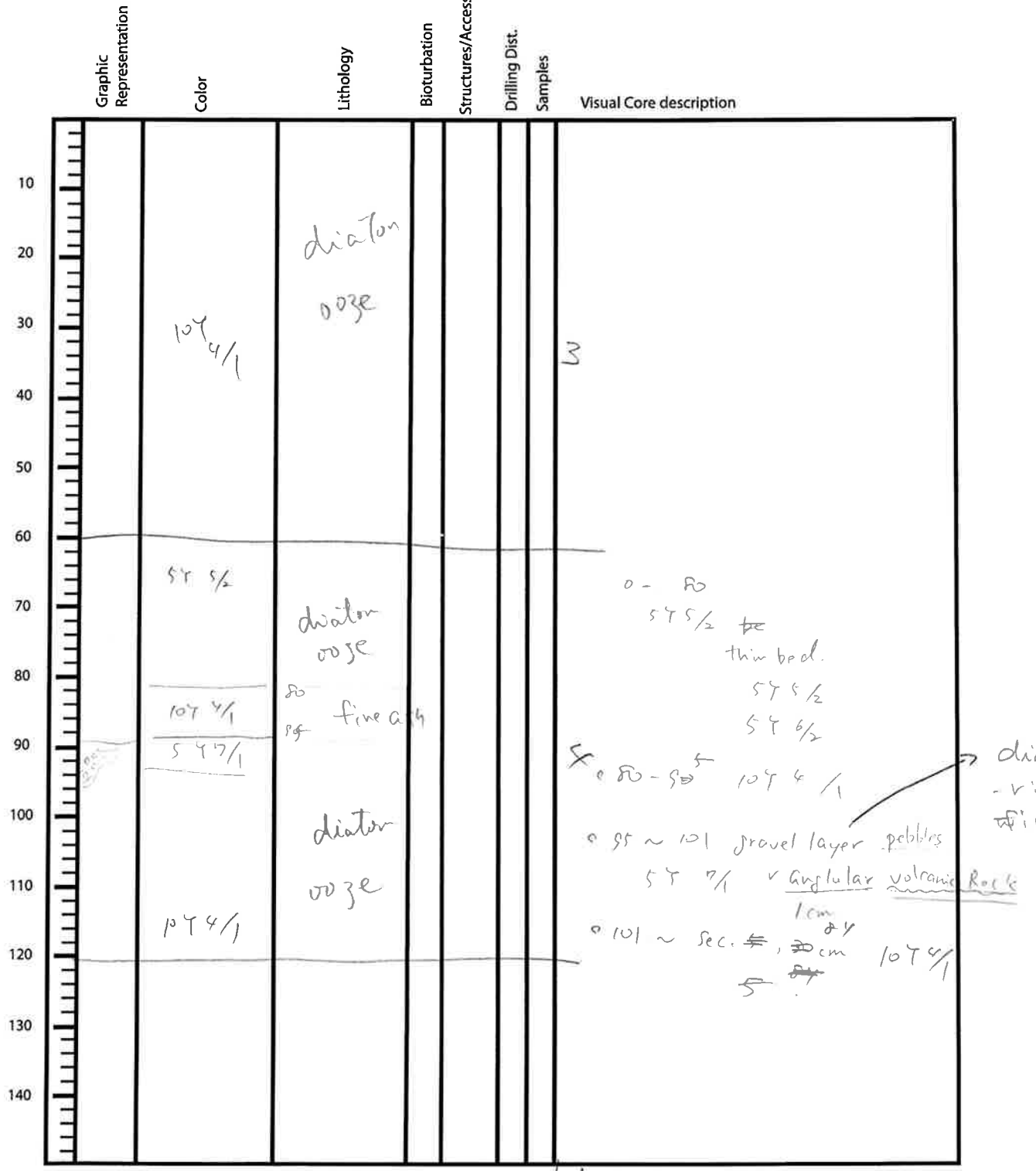
Observer: HA Date: ____

1341 | A | 3514 | 3-4 | _____
Site | Hole | Core | Section | Top Depth

Expedition 323
Bering Sea

diatom ooze
Major Lithology

_____
Minor Lithology



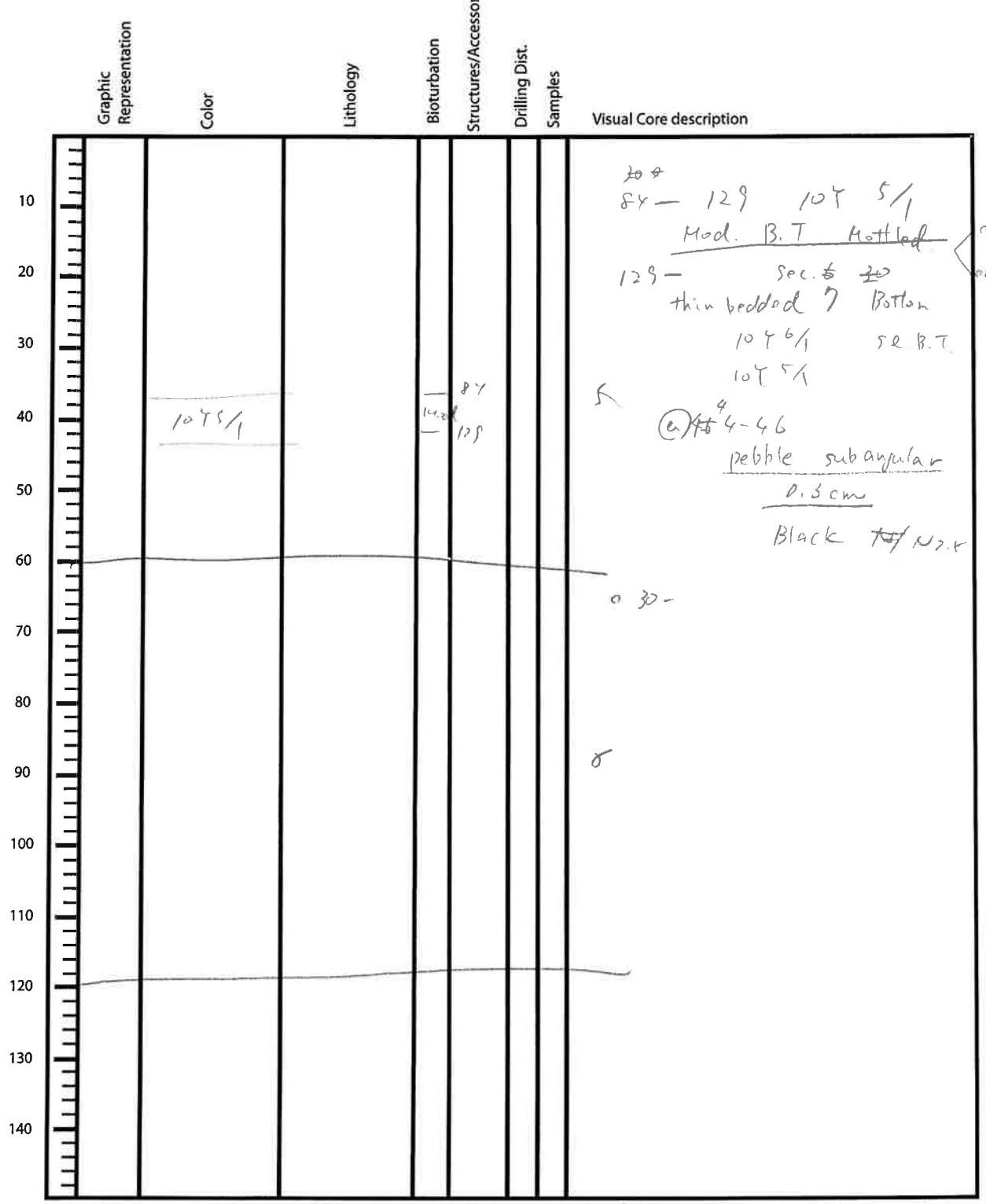
Observer: HA Date: _____

341	A	34H	5-6	
Site	Hole	Core	Section	Top Depth

Expedition 323
Bering Sea

Major Lithology

Minor Lithology

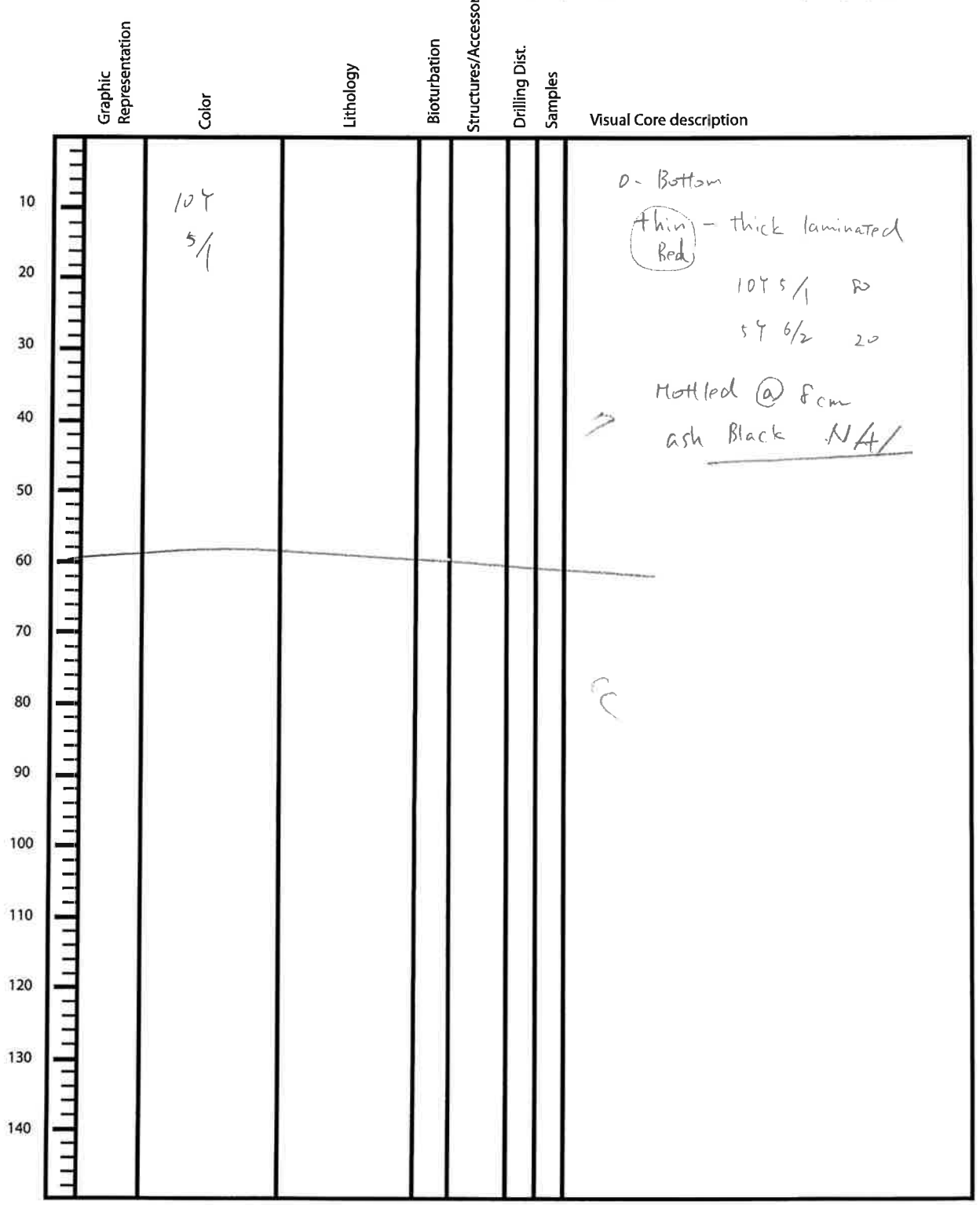


Observer: H/A Date: _____

1371 | A | 3H | 7CC | _____
Site | Hole | Core | Section | Top Depth

Expedition 323
Bering Sea

Major Lithology _____ Minor Lithology _____



Observer: HA Date: _____

✓SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1341	A	35	H	2	129	129

Sediment/Rock Name	Diatom ooze

Observer	KD

Percent Texture		
Sand	Silt	Clay

Comments: Main lithology - section 2

Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
15	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
5	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
20	Pennate
	Chaetoceros Resting Spores
	Silicoflagellates
1	Sponge spicules
	Dinoflagellates
	Others
	Pollen
	Organic debris
	Plant debris
	Ebridians
	Echinoderm
	Fish remains (teeth, bones, scales)
	Bryozoans
	Bivalves
	Others

✓ SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	U1341	A	35	H	4	98	98

Sediment/Rock Name	Diatom-rich Fine ash

Observer	KD

	Percent Texture		
	Sand	Silt	Clay
V	30	70	

Comments: White patches near gravel.

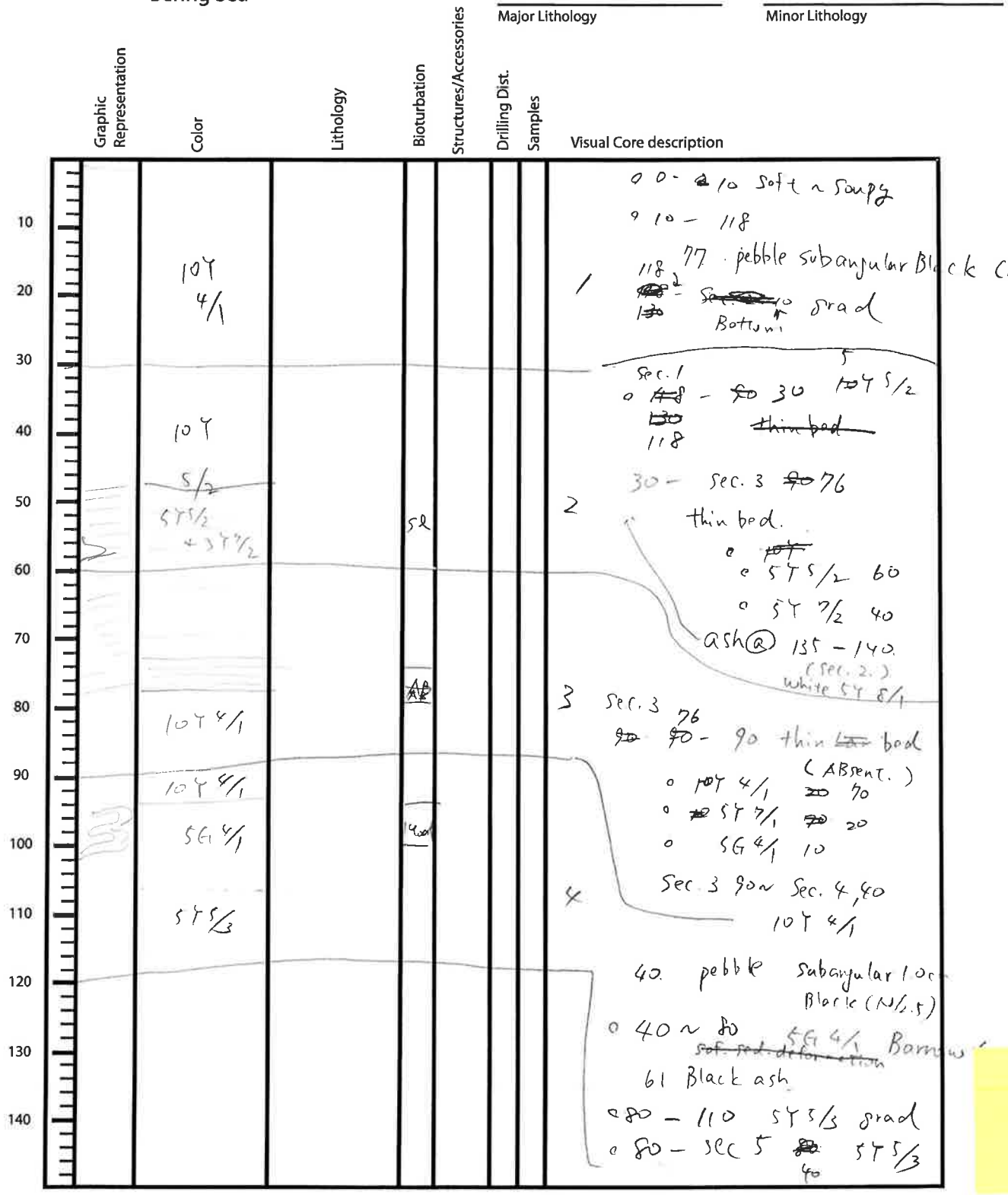
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
	Quartz
10	Feldspar
5	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals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

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

1341 | A | 36H | 1-4 | _____
Site | Hole | Core | Section | Top Depth

Expedition 323
Bering Sea

Major Lithology _____ Minor Lithology _____



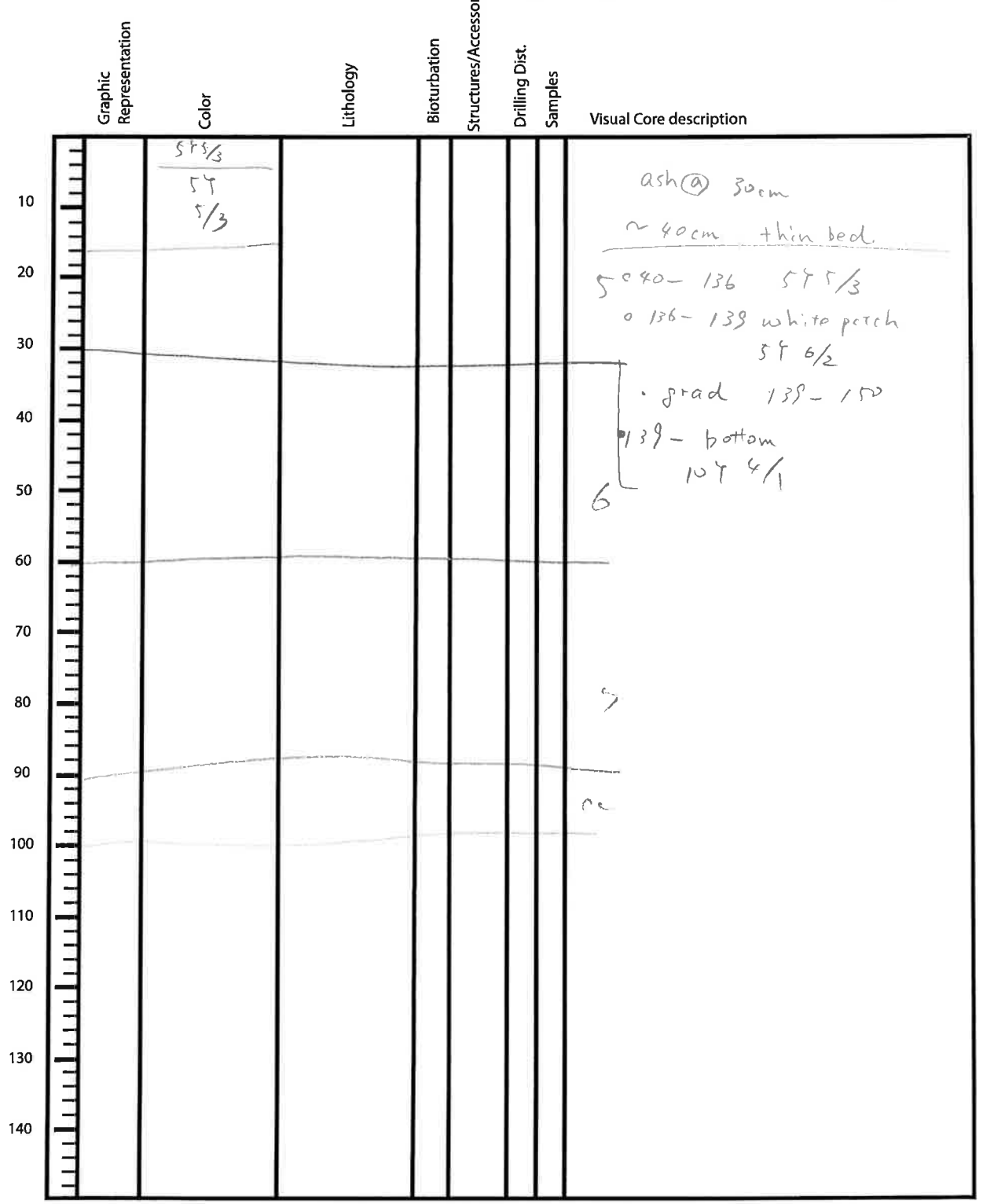
Observer: 71:20 · A Date: _____

1341 / A / 36H / 5-CC / Site / Hole / Core / Section / Top Depth

Expedition 323
Bering Sea

Major Lithology

Minor Lithology



Observer: [illegible] Date: _____

✓SM

IODP Expedition 323
SEDIMENT SMEAR SLIDE WORKSHEET

A

Leg	Site	Hole	Core	Type	Sec	Interval (cm) Top	Interval (cm) Bottom
323	1341	[redacted]	34	H	4	34	

Sediment/Rock Name	Diatom bearing fine-rich silt	Observer	KD

Percent Texture		
Sand	Silt ✓	Clay

Comments: Dark laminae

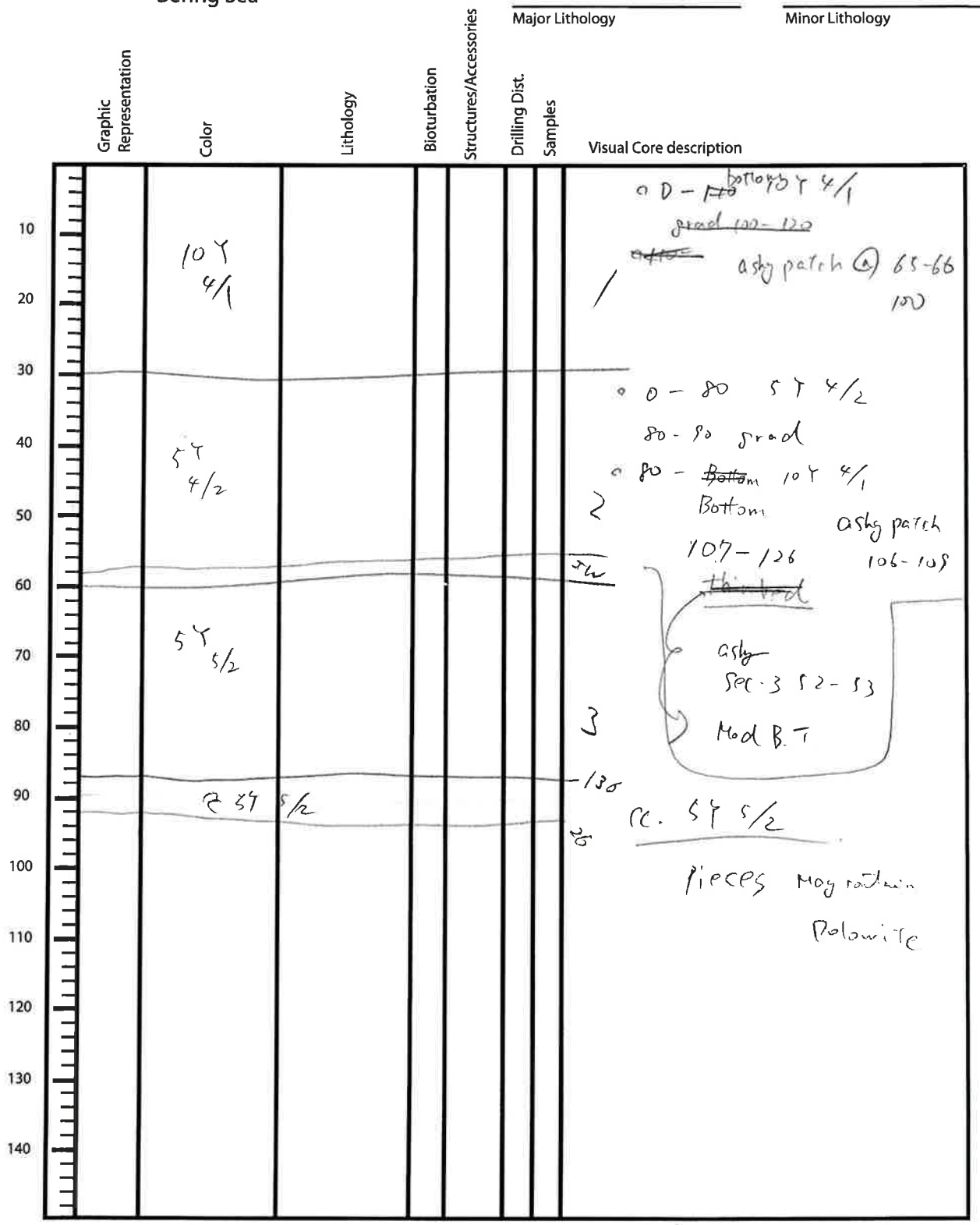
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
25-30	Quartz
25-30	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
5	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
5	Ferromagnesium minerals
	Authigenic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

1341 / A / 37H / all / ____
Site / Hole / Core / Section / Top Depth

Expedition 323
Bering Sea

Major Lithology ____ Minor Lithology ____



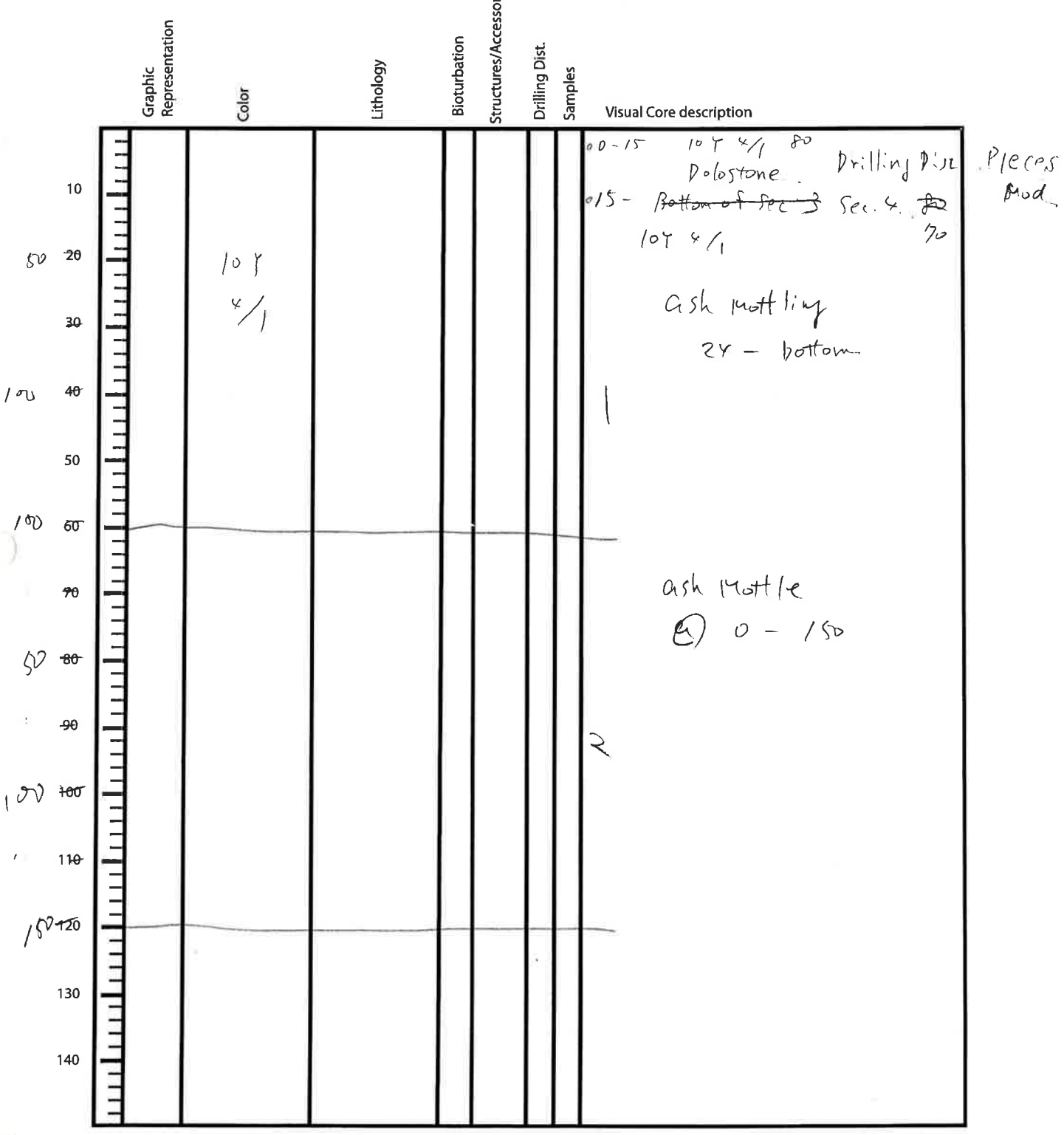
Observer: K. A. Date: ____

1341	~~3E17~~ A	3B1H	1-2	
Site	Hole	Core	Section	Top Depth

Expedition 323
Bering Sea

Diatom Ooze
Major Lithology

Minor Lithology



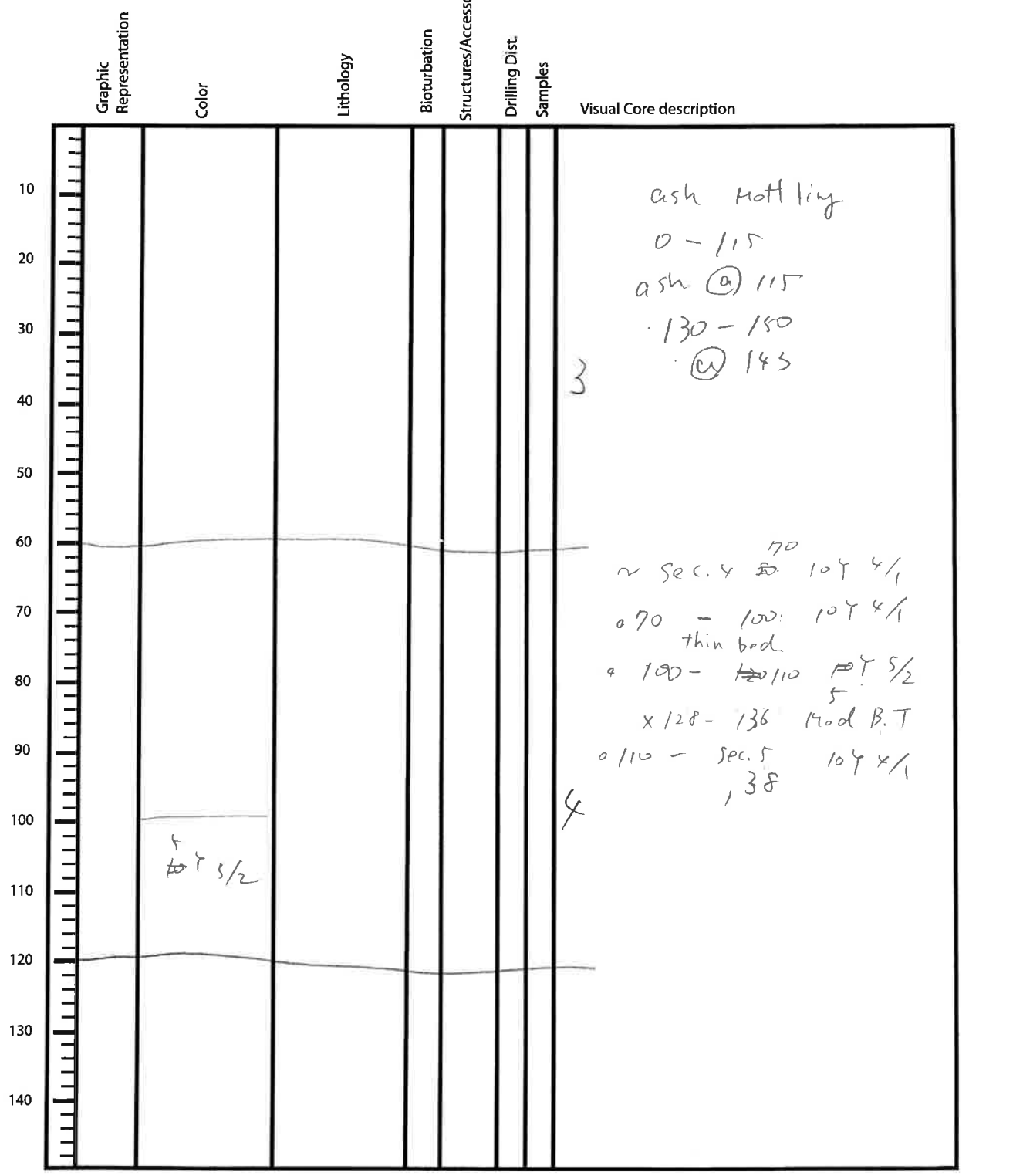
Observer: _____ Date: _____

1341	A	35H	3+4	
Site	Hole	Core	Section	Top Depth

Expedition 323
Bering Sea

Diatom Ooze

Major Lithology | Minor Lithology



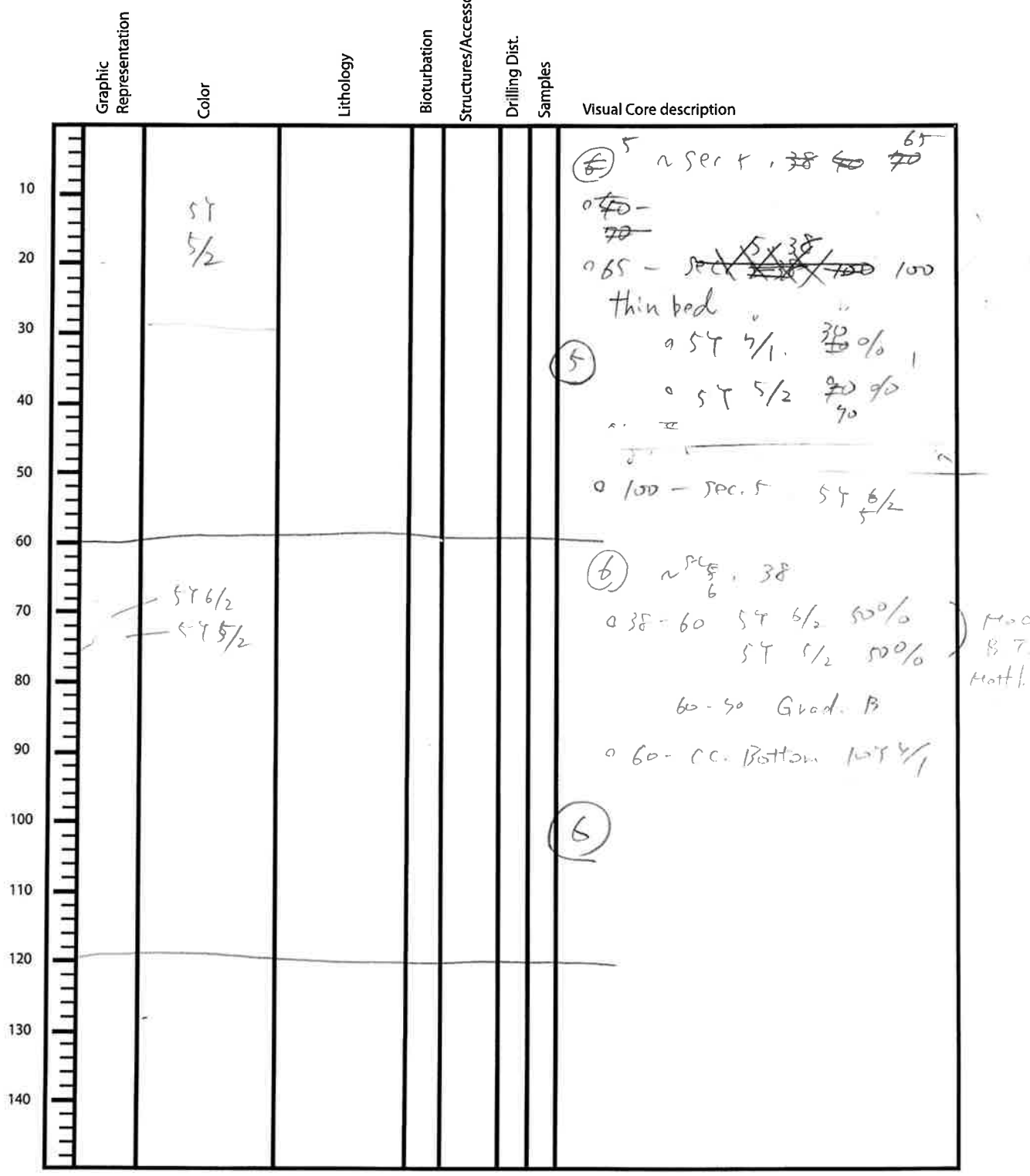
Observer: _____ Date: _____

1341 | 38H | 5-6 | |
Site | Hole | Core | Section | Top Depth

Expedition 323
Bering Sea

Diatom Ooze
Major Lithology

Minor Lithology



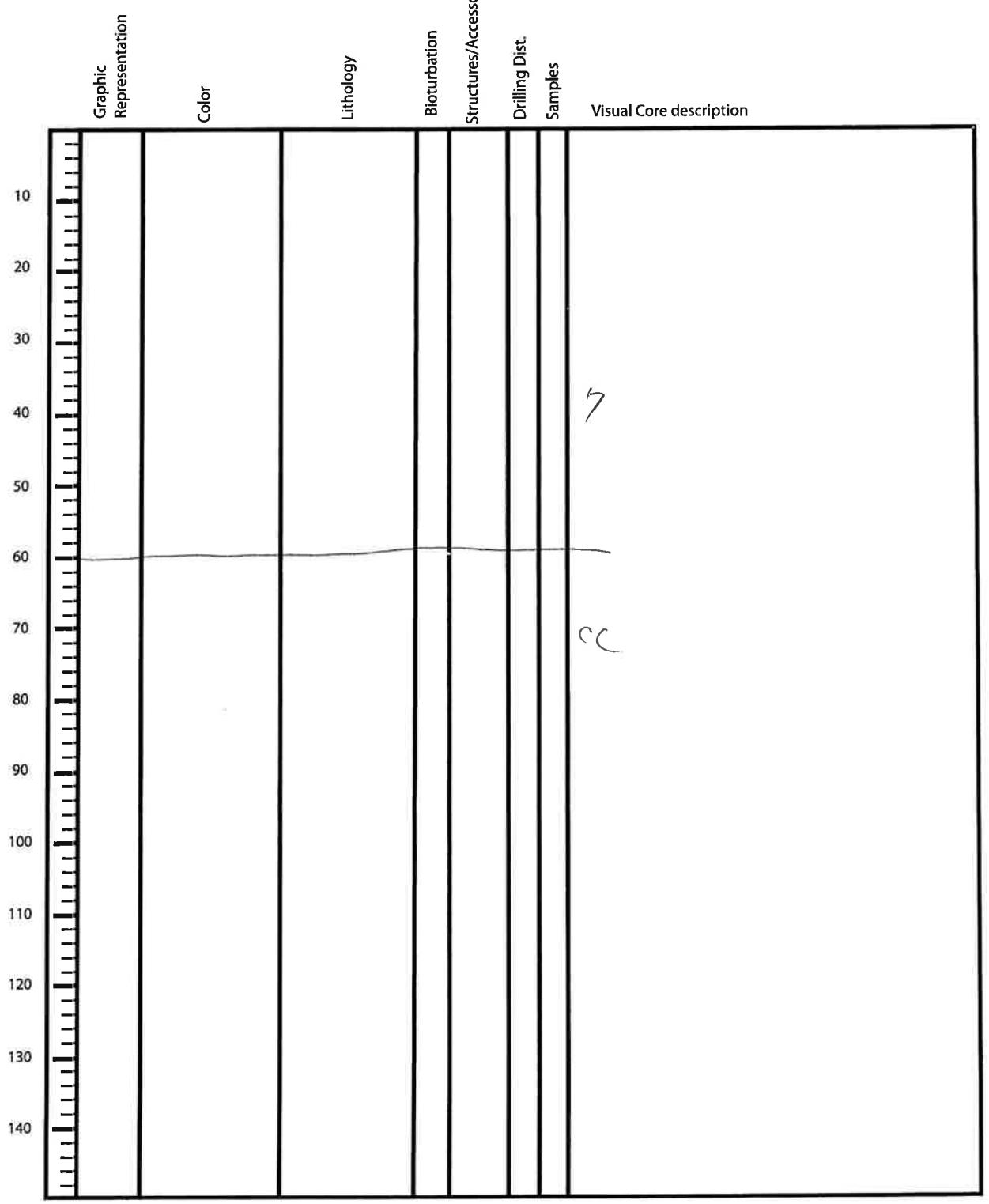
Observer: _____ Date: _____

Expedition 323
Bering Sea

1341	A	35H	7	CC	
Site	Hole	Core	Section		Top Depth

Major Lithology: Diatom ooze

Minor Lithology:

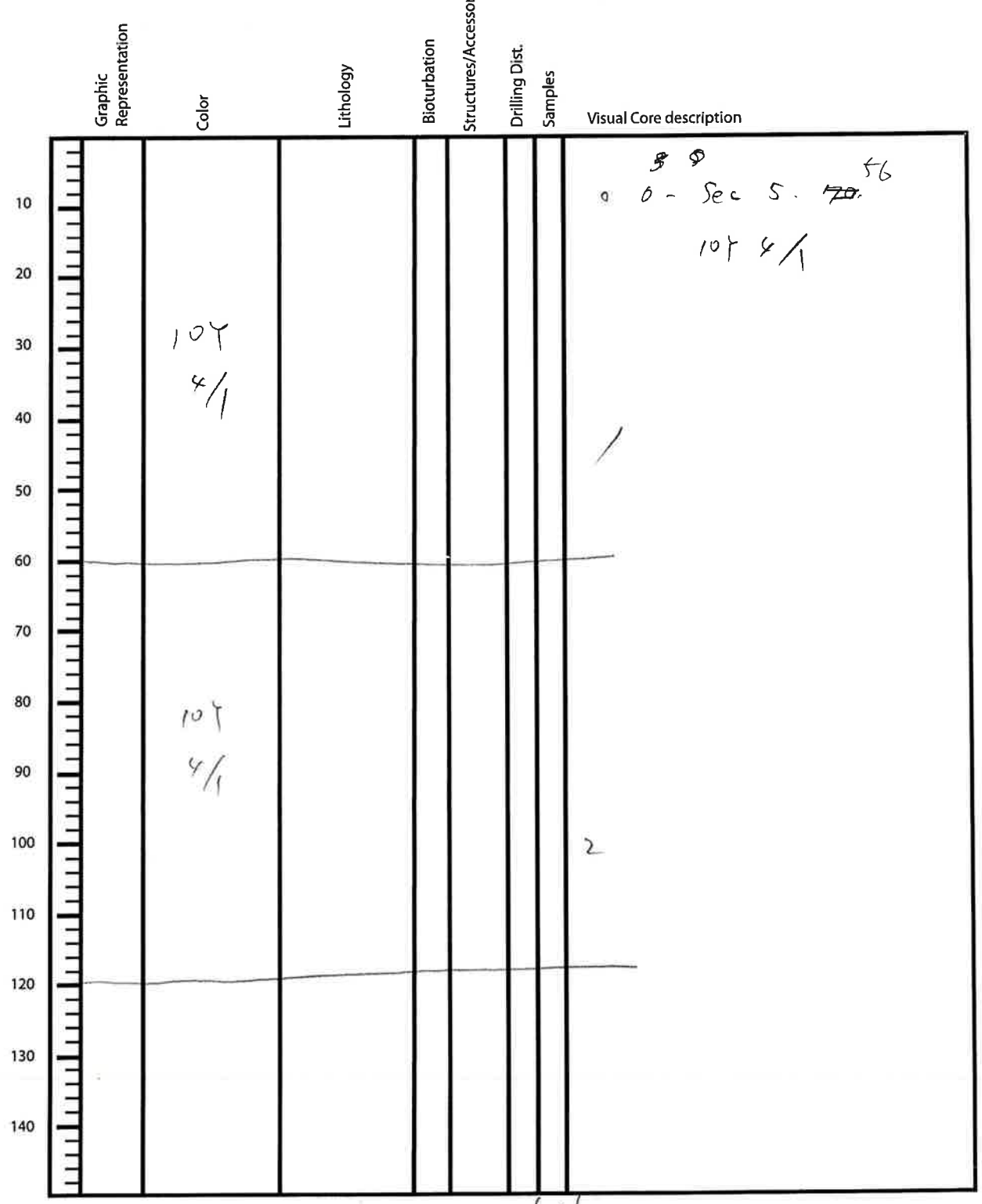


Observer: _____ Date: _____

1341 Site | A Hole | 3917 Core | 1+2 Section | _____ Top Depth

Expedition 323
Bering Sea

Major Lithology _____ Minor Lithology _____



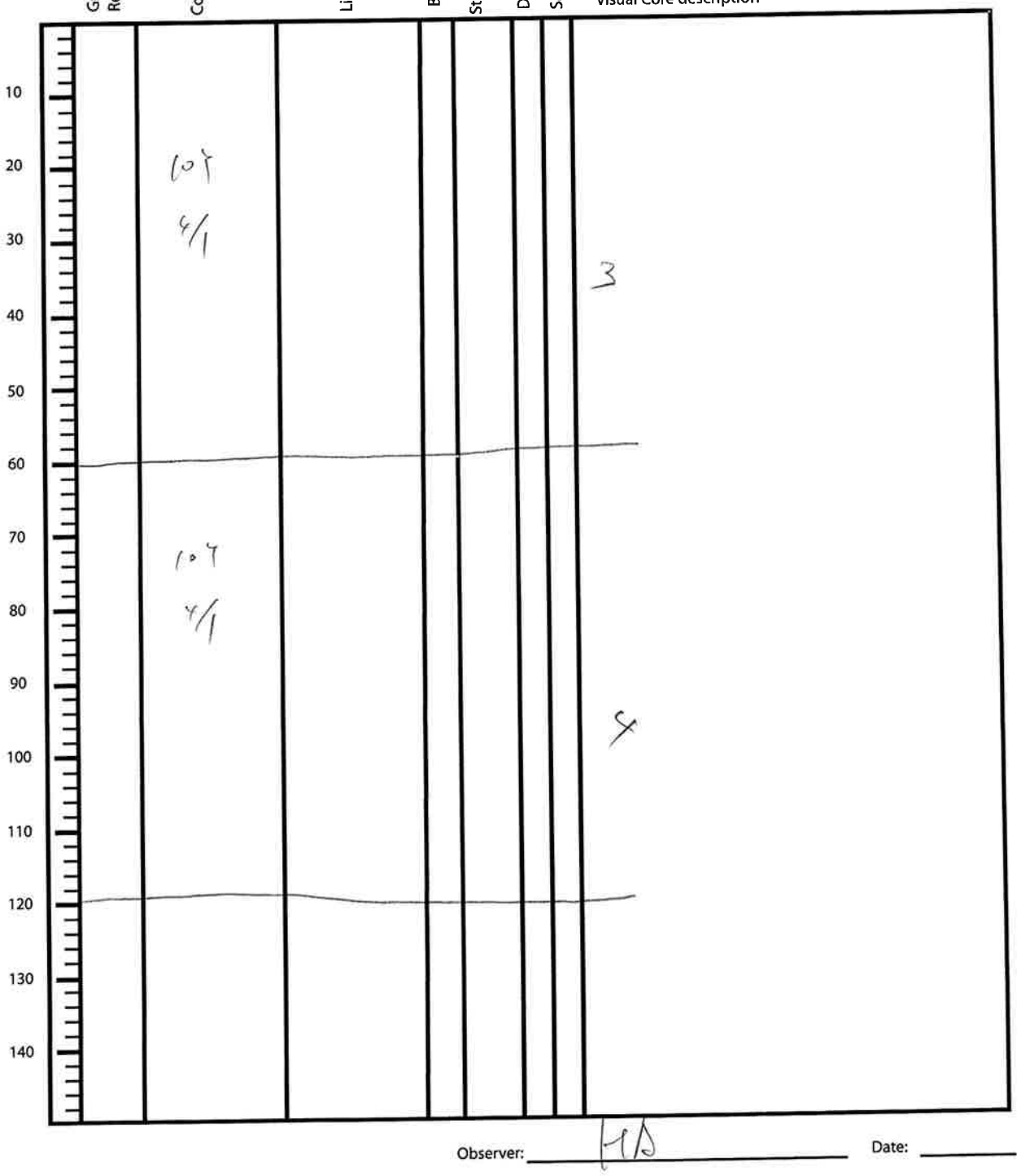
Observer: LH Date: _____

1394	A	39H	3+Y	
Site	Hole	Core	Section	Top Depth

Expedition 323
Bering Sea

Major Lithology

Minor Lithology



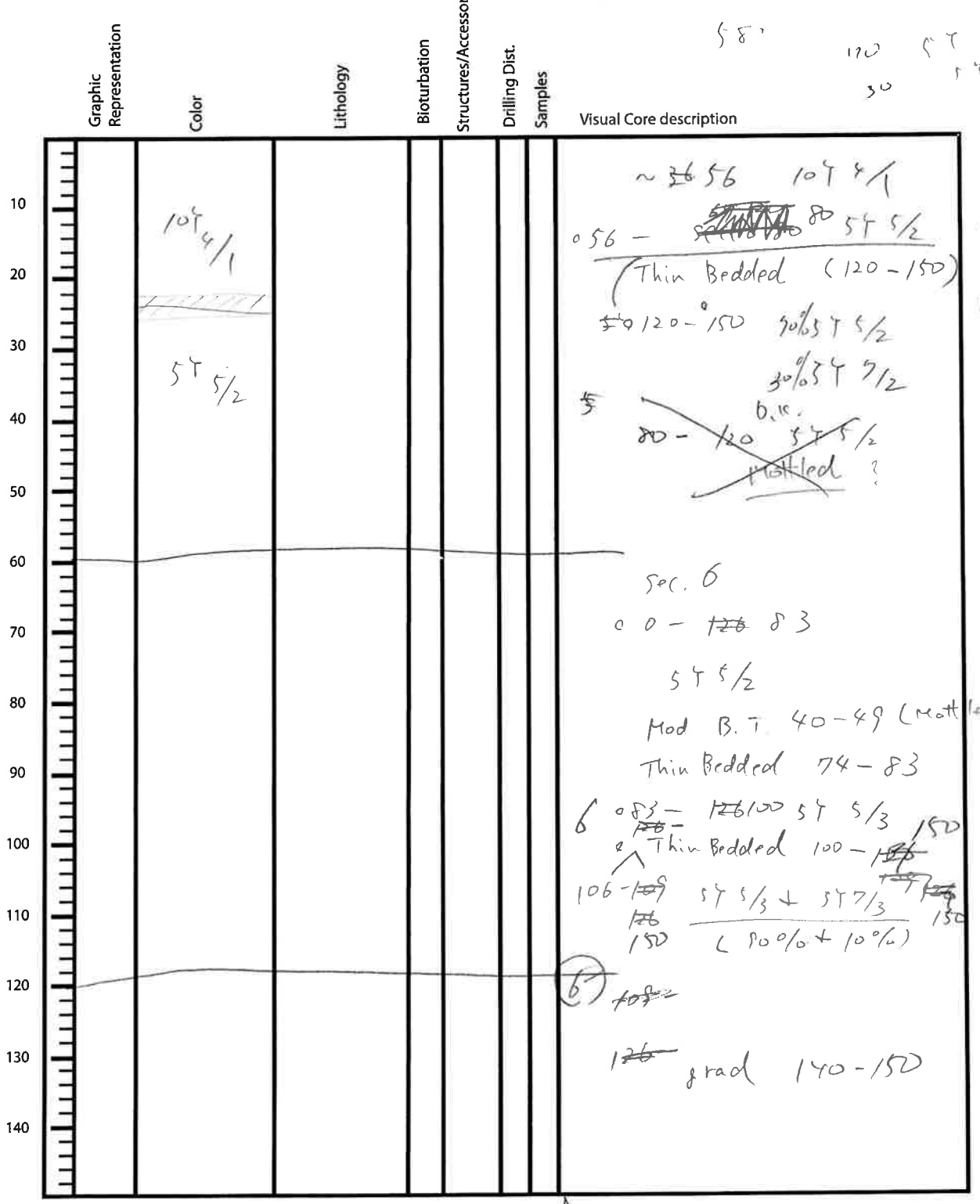
Observer: HD

Date:

1341 / A / 31H / 5+6 / ____
Site / Hole / Core / Section / Top Depth

Expedition 323
Bering Sea

Major Lithology ____ Minor Lithology ____



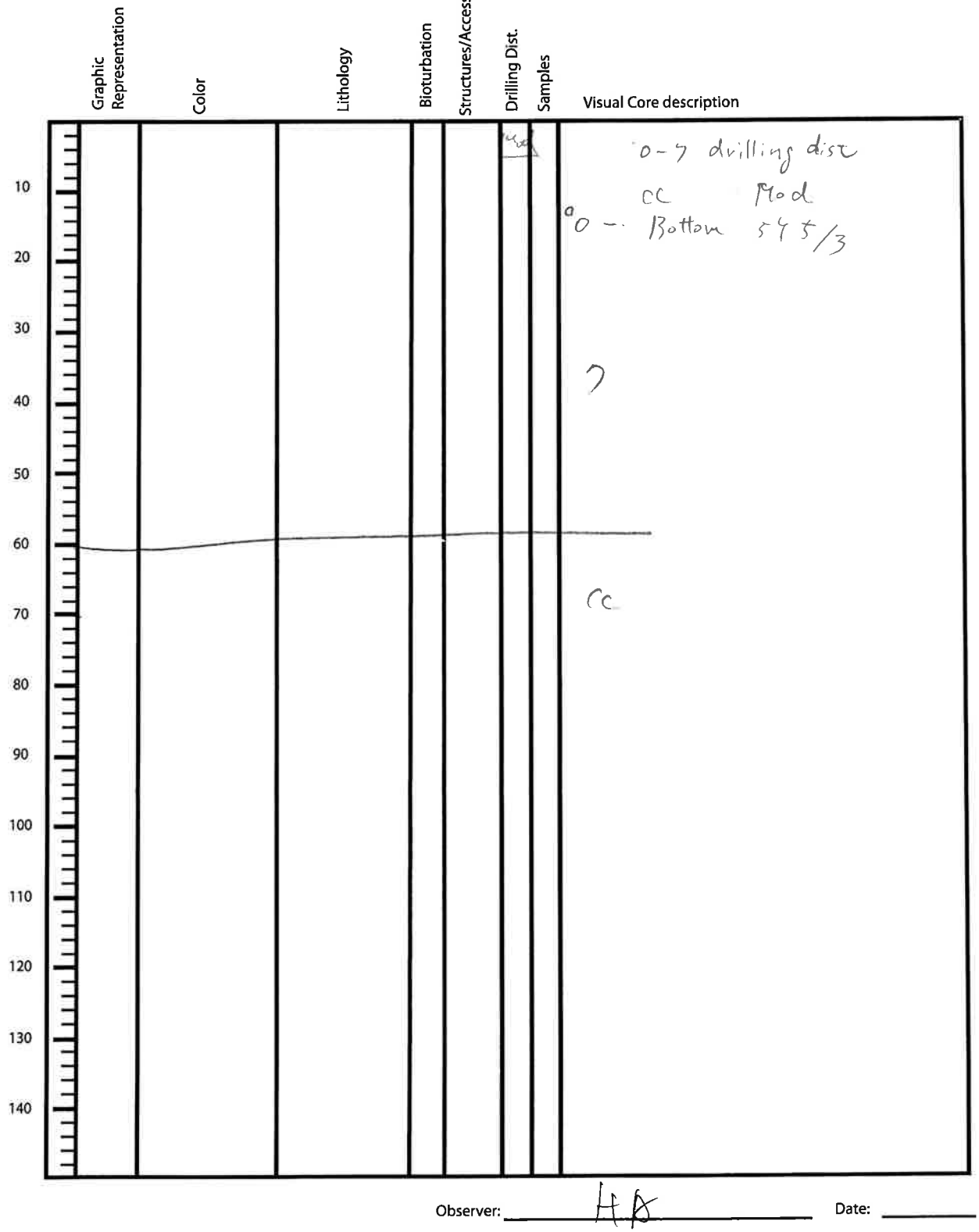
Observer: HR Date: ____

1341 A 3F 7+CC
Site Hole Core Section Top Depth

Expedition 323
Bering Sea

Major Lithology

Minor Lithology

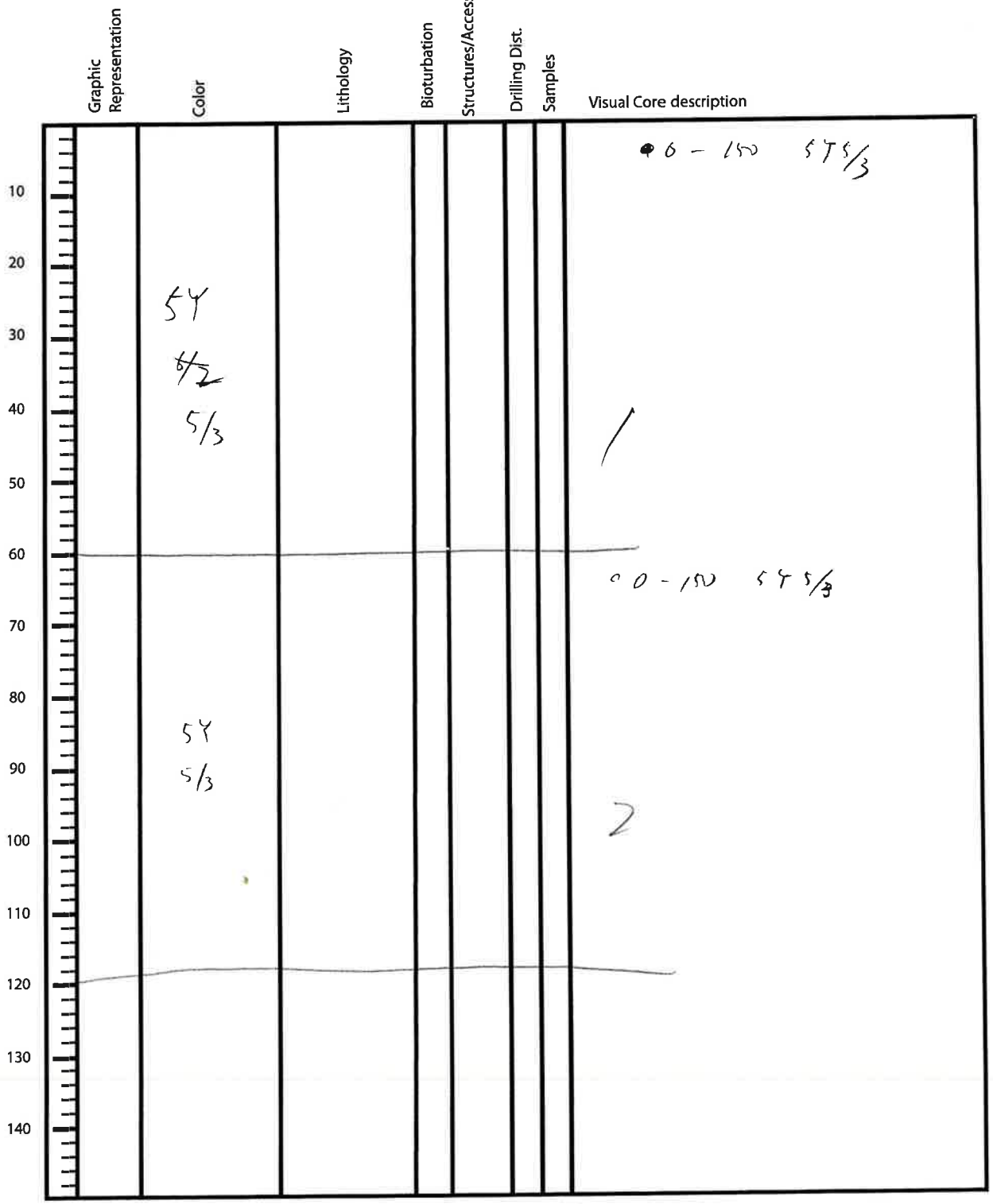


Observer: HA Date:

1141	A	40H	1H2	
Site	Hole	Core	Section	Top Depth

Expedition 323
Bering Sea

Major Lithology _____ Minor Lithology _____



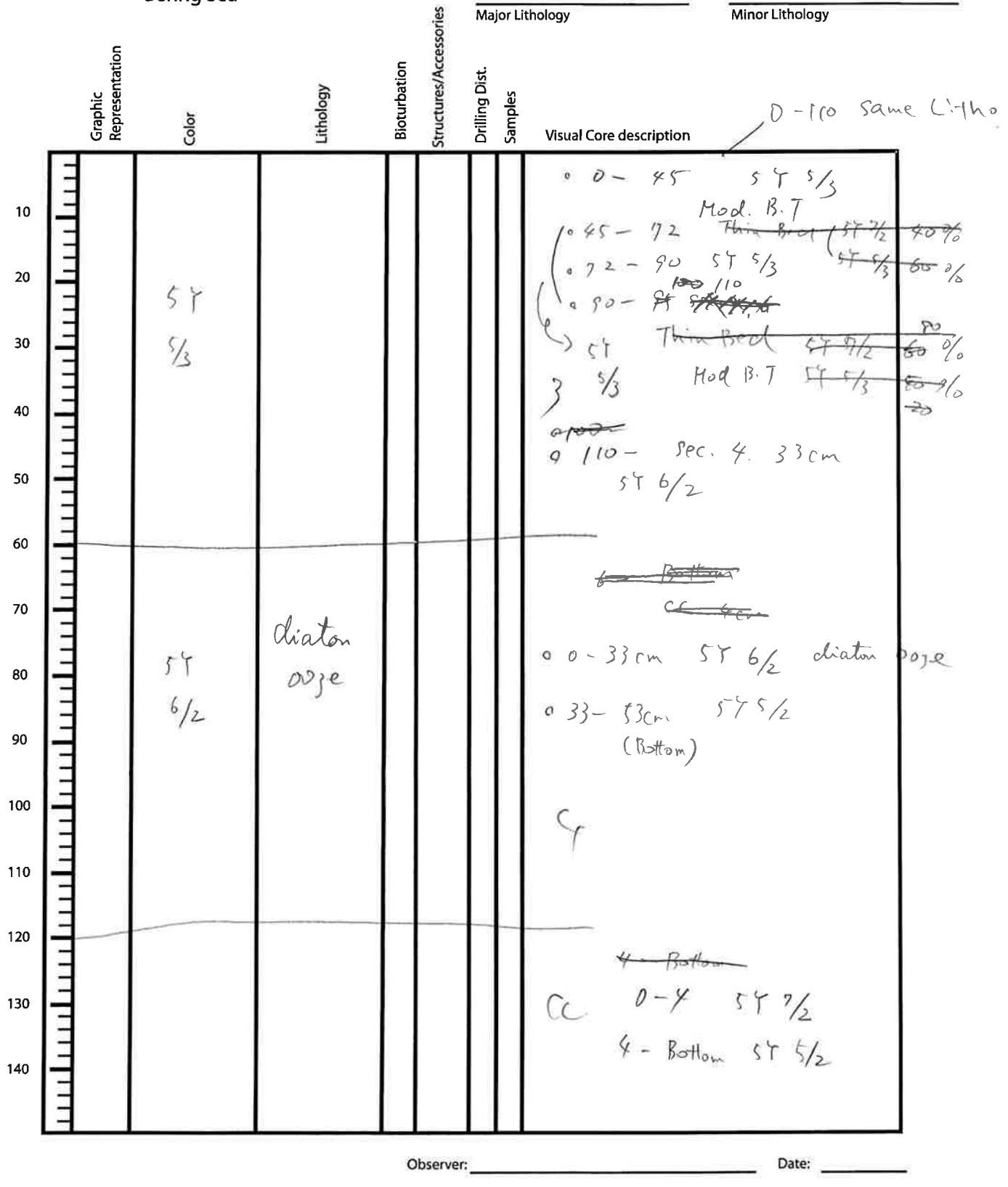
Observer: HW Date: _____

1341 A 40H 3+4 rc
Site Hole Core Section Top Depth

Expedition 323
Bering Sea

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	40	H	4	31	

Sediment/Rock Name	Diatom ooze

Observer	KD

Percent Texture		
Sand	Silt	Clay

Comments: Lighter green section - main lithology

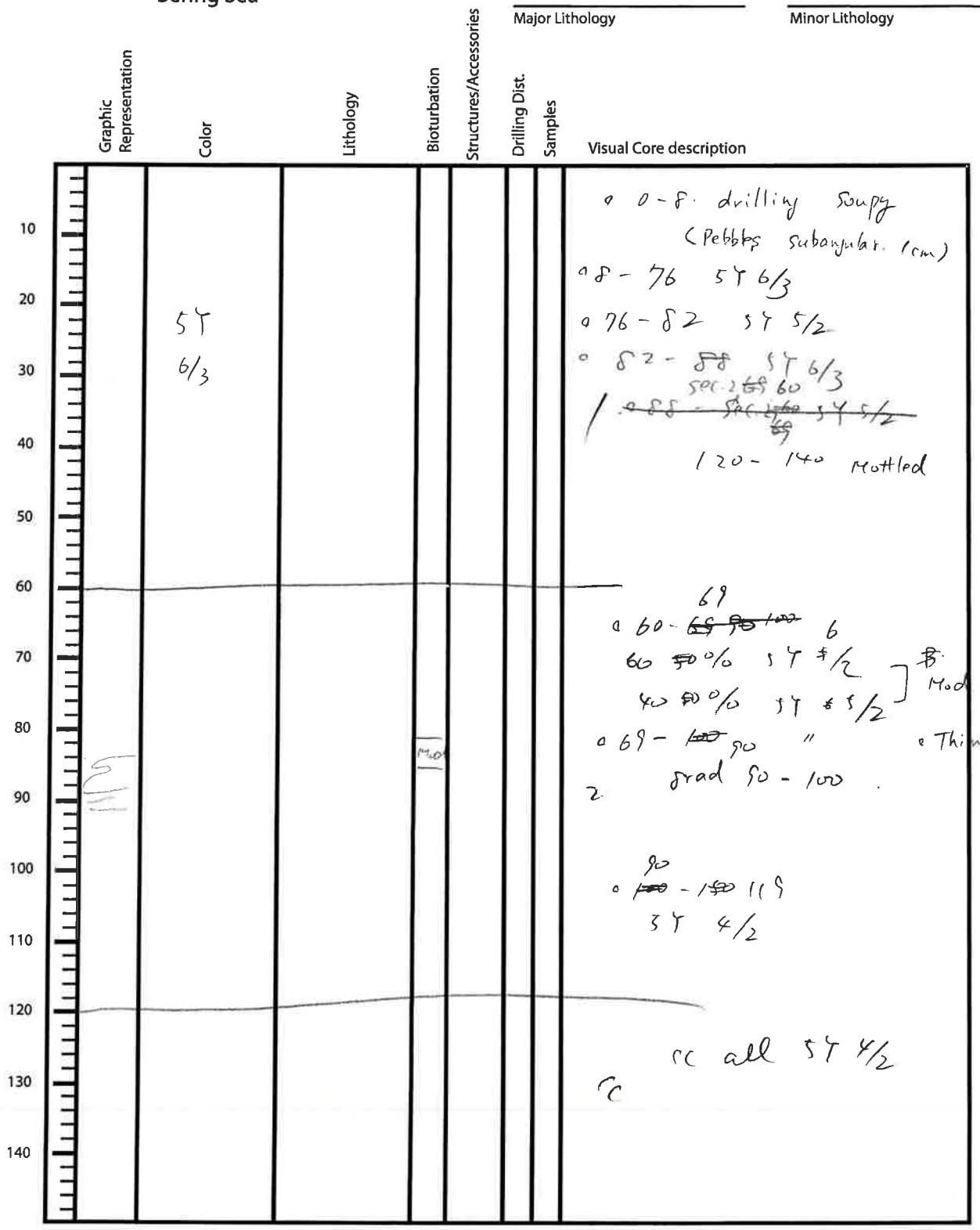
Percent	Component
	SILICICLASTIC GRAINS/MINERAL
	Framework minerals
1	Quartz
1	Feldspar
	K-feldspar (Orthoclase, Microcline...)
	Plagioclase
1	Rock fragments
	Accessory/trace minerals
	Micas
	Biotite
	Muscovite
	Clay Minerals
	Chlorite
	Glauconite
	Chert
	Zircon
	Ferromagnesium minerals
	Authigenic minerals
	Barite
	Phosphorite/Apatite
	Zeolite
	Opaque minerals
1	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
95	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

1341 | A | 4/H | 1-CC | ____
Site | Hole | Core | Section | Top Depth

Expedition 323
Bering Sea

Major Lithology ____ Minor Lithology ____



Observer: Tim Date: ____