

Expedition 323  
Bering Sea

1345 D 1 All  
Site Hole Core Section Top Depth

| Graphic Representation | Color             | Lithology                                    | Bioturbation Structures/Accessories                | Drilling Dist. Samples | Major Lithology | Minor Lithology | Visual Core description  |
|------------------------|-------------------|--|--|------------------------|-----------------|-----------------|--|
| 10                     | 5Y 3/2<br>10Y 3/1 | D. RICH SANDY SILT<br>D. BEARING CLAYEY SILT | 41<br>42   |                        |                 |                 | 50-59 cm shell fragments<br>4128-129                               |
| 20                     |                   | 65 Ø 11cm Pebble<br>125 Ø shell              | 15<br>19<br>20<br>25<br>26<br>27<br>28<br>29<br>30 |                        |                 |                 | 65cm tube, subangular<br>- 125 cm shell, transparent, large valve. |
| 30                     | 10Y 4/1           | D. RICH SANDY SILT                           | 131<br>18<br>30                                    |                        |                 |                 | CROSS LAMINATION @ 99-105 cm (POST SEDIMENT DEFORMATION)           |
| 40                     |                   |  | 143  |                        |                 |                 |  |
| 50                     | 75                | pebbles 78 cm<br>5mm<br>131 Ø<br>Ø 2.9 cm    |  |                        |                 |                 |  |
| 60                     | 10Y 3/1           |  |  |                        |                 |                 | shell  |
| 70                     |                   | D. BEARING CLAYEY SILT                       |  |                        |                 |                 |  |
| 80                     |                   |  |  |                        |                 |                 | shell  |
| 90                     |                   |  |  |                        |                 |                 |  |
| 100                    |                   |  |  |                        |                 |                 |  |
| 110                    |                   |  |  |                        |                 |                 |  |
| 120                    |                   |  |  |                        |                 |                 |  |
| 130                    |                   |  |  |                        |                 |                 |  |
| 140                    |                   |  |  |                        |                 |                 |  |

Observer: \_\_\_\_\_ Date: \_\_\_\_\_

IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | B45  | D    | 1    | H    | 5A  | 70            |        |

✓ SM

|                    |                            |          |  |
|--------------------|----------------------------|----------|--|
| Sediment/Rock Name | diatom-bearing clayey silt | Observer |  |
|--------------------|----------------------------|----------|--|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
| 10              | 60   | 30   |

Comments:

| Percent                             | Component                              |
|-------------------------------------|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> |  |
| Framework minerals                  |  |
| 22                                  | Quartz 7                               |
| 3                                   | Feldspar 1                             |
|                                     | K-feldspar (Orthoclase, Microcline...) |
|                                     | Plagioclase                            |
| 16                                  | Rock fragments 5                       |
| Accessory/trace minerals            |  |
|                                     | Micas                                  |
|                                     | Biotite                                |
|                                     | Muscovite                              |
| 31                                  | Clay Minerals 10                       |
|                                     | Chlorite                               |
|                                     | Glauconite                             |
|                                     | Chert                                  |
|                                     | Zircon                                 |
| 3                                   | Ferromagnesium minerals 1              |
| Authigenic minerals                 |  |
|                                     | Barite                                 |
|                                     | Phosphorite/Apatite                    |
|                                     | Zeolite                                |
| Opaque minerals                     |  |
| 6                                   | Pyrite 2                               |
|                                     | Magnetite                              |
|                                     | Fe-oxide                               |
| Carbonates                          |  |
| 6                                   | Calcite 2                              |
|                                     | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>        |  |
| Crystal grain                       |  |
|                                     |  |
| 3                                   | Vitric grain 1                         |
|                                     | Lithic grain                           |

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

IODP Expedition 323  
 SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1345 | D    | 1    | H1/A |     | 10            |        |

✓ SM

|                    |                         |          |         |
|--------------------|-------------------------|----------|---------|
| Sediment/Rock Name | diatom-rich sandy silt. | Observer | W. Kern |
|--------------------|-------------------------|----------|---------|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
| <del>30</del>   | 50   | 20   |

40

Comments:

| Percent                             | Component                              |
|-------------------------------------|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> |  |
| Framework minerals                  |  |
| 15 <del>#</del>                     | Quartz 5                               |
| 9 <del>#</del>                      | Feldspar 3                             |
|                                     | K-feldspar (Orthoclase, Microcline...) |
|                                     | Plagioclase                            |
| 21 <del>#</del>                     | Rock fragments 5 7                     |
| Accessory/trace minerals            |  |
|                                     | Micas                                  |
|                                     | Biotite                                |
|                                     | Muscovite                              |
| 9 <del>#</del>                      | Clay Minerals 3                        |
|                                     | Chlorite                               |
|                                     | Glauconite                             |
|                                     | Chert                                  |
|                                     | Zircon                                 |
|                                     | Ferromagnesium minerals ✓              |
| Authigenic minerals                 |  |
|                                     | Barite                                 |
|                                     | Phosphorite/Apatite                    |
|                                     | Zeolite                                |
| Opaque minerals                     |  |
| 3 <del>#</del>                      | Pyrite 1                               |
|                                     | Magnetite                              |
|                                     | Fe-oxide                               |
| Carbonates                          |  |
| 1 <del>#</del>                      | Calcite 0.5                            |
|                                     | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>        |  |
| Crystal grain                       |  |
|                                     |  |
| 6 <del>#</del>                      | Vitric grain 2                         |
|                                     | Lithic grain                           |

| Percent                     | Component                           |
|-----------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS</b>      |                                     |
| Calcareous                  |                                     |
| Foraminifera                |                                     |
|                             | Planktonic foraminifera             |
|                             | Benthic foraminifera                |
|                             | Nannofossils                        |
|                             | Coccoliths                          |
|                             | Discoasters                         |
|                             | Pteropods                           |
| Siliceous                   |                                     |
|                             | Radiolarians                        |
|                             | Spumellaria                         |
|                             | Nassellaria                         |
| <del>30</del> <del>30</del> | Diatoms 12                          |
|                             | 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

V134SD 2H All  
Site Hole Core Section Top Depth

4.5

| Graphic Representation | Color                            | Lithology             | Bioturbation Structures/Accessories               | Drilling Dist. Samples | Major Lithology | Minor Lithology | Visual Core description   |
|------------------------|----------------------------------|-----------------------|---|------------------------|-----------------|-----------------|---|
| 10                     |                                  | d-beary silt          | 31-3 P16<br>35-7 Swell<br>105-6 S.A.M.            |                        |                 |                 |   |
| 20                     |                                  |                       | 35-62<br>69-70 P10                                |                        |                 |                 |   |
| 30                     |                                  |                       | 7-10 Ch.  |                        |                 |                 |   |
| 40                     |                                  |                       | 105-110 S.A.M.                                    |                        |                 |                 |   |
| 50                     | 10y 3/1<br>v. dark greenish gray |                       | 8-56m<br>22 P10<br>110-112 S.A.M.                 |                        |                 |                 |   |
| 60                     |                                  |                       | 54-56<br>102-78 S.A.M.<br>99 S.A.M.<br>101 S.A.M. |                        |                 |                 |   |
| 70                     | 58- d-beary<br>109               | sandy silt<br>coarser | 45<br>50-58 P<br>SPERS                            |                        |                 |                 |   |
| 80                     |                                  |                       | 96m<br>2<br>13-54 S.A.M.                          |                        |                 |                 |   |
| 90                     |                                  |                       |   |                        |                 |                 |   |
| 100                    |                                  |                       |   |                        |                 |                 |   |
| 110                    | 14<br>41                         | LAM                   |   |                        |                 |                 | 40% Green 10y 4/1 dark greenish gray<br>diatom etc<br>60% Gray 10y 3/1 d-beary silt<br>Forams seen thru silt lam. |
| 120                    |                                  |                       |   |                        |                 |                 |   |
| 130                    |                                  |                       |   |                        |                 |                 |   |
| 140                    |                                  |                       |   |                        |                 |                 |   |

Observer: \_\_\_\_\_ Date: \_\_\_\_\_

IODP Expedition 323  
 SEDIMENT SMEAR SLIDE WORKSHEET

| Leg  | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|------|------|------|------|------|-----|---------------|--------|
|      |      |      |      |      |     | Top           | Bottom |
| 1345 | D    | ⊙    | 2    | H16A | 24  |               |        |

|                    |                      |          |       |
|--------------------|----------------------|----------|-------|
| Sediment/Rock Name | (pyrite) diatom ooze | Observer | akera |
|--------------------|----------------------|----------|-------|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments:

light laminae

| Percent                             | Component                              |
|-------------------------------------|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> |  |
| Framework minerals                  |  |
| 4                                   | Quartz /                               |
|                                     | Feldspar                               |
|                                     | K-feldspar (Orthoclase, Microcline...) |
|                                     | Plagioclase                            |
|                                     | Rock fragments                         |
| Accessory/trace minerals            |  |
|                                     | Micas                                  |
|                                     | Biotite                                |
|                                     | Muscovite                              |
|                                     | Clay Minerals                          |
|                                     | Chlorite                               |
|                                     | Glauconite                             |
|                                     | Chert                                  |
|                                     | Zircon                                 |
|                                     | Ferromagnesium minerals                |
| Authigenic minerals                 |  |
|                                     | Barite                                 |
|                                     | Phosphorite/Apatite                    |
|                                     | Zeolite                                |
| Opaque minerals                     |  |
| 38                                  | Pyrite 10                              |
|                                     | Magnetite                              |
|                                     | Fe-oxide                               |
| Carbonates                          |  |
|                                     | Calcite                                |
|                                     | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>        |  |
|                                     | Crystal grain                          |
|                                     | Vitric grain                           |
|                                     | Lithic grain                           |

| Percent                | Component                           |
|------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS</b> |                                     |
| Calcareous             |                                     |
|                        | Foraminifera                        |
|                        | Planktonic foraminifera             |
|                        | Benthic foraminifera                |
|                        | Nannofossils                        |
|                        | Coccoliths                          |
|                        | Discoasters                         |
|                        | Pteropods                           |
| Siliceous              |                                     |
|                        | Radiolarians                        |
|                        | Spumellaria                         |
|                        | Nassellaria                         |
| 58                     | Diatoms 15                          |
|                        | Centric                             |
|                        | Pennate                             |
|                        | Chaetoceros Resting Spores          |
|                        | Silicoflagellates                   |
|                        | Sponge spicules                     |
|                        | Dinoflagellates                     |
| Others                 |                                     |
|                        | Pollen                              |
|                        | Organic debris                      |
|                        | Plant debris                        |
|                        | Ebridians                           |
|                        | Echinoderm                          |
|                        | Fish remains (teeth, bones, scales) |
|                        | Bryozoans                           |
|                        | Bivalves                            |
|                        | Others                              |

IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1345 | D    | 2    | H    | 64  | 80            |        |

✓ SM

|                    |                     |          |  |
|--------------------|---------------------|----------|--|
| Sediment/Rock Name | diatom-bearing site | Observer |  |
|--------------------|---------------------|----------|--|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
| 20              | 50   | 20   |

30.

Comments:

| Percent                             | Component                              |
|-------------------------------------|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> |  |
|                                     | Framework minerals                     |
| 20                                  | Quartz 5                               |
| 4                                   | Feldspar 2                             |
|                                     | K-feldspar (Orthoclase, Microcline...) |
|                                     | Plagioclase                            |
| 41                                  | Rock fragments 10                      |
|                                     | Accessory/trace minerals               |
|                                     | Micas                                  |
|                                     | Biotite                                |
|                                     | Muscovite                              |
| 20                                  | Clay Minerals 5                        |
|                                     | Chlorite                               |
|                                     | Glauconite                             |
|                                     | Chert                                  |
|                                     | Zircon                                 |
|                                     | Ferromagnesium minerals                |
|                                     | Authigenic minerals                    |
|                                     | Barite                                 |
|                                     | Phosphorite/Apatite                    |
| 2                                   | Zeolite 0.5                            |
|                                     | Opaque minerals                        |
| 4                                   | Pyrite 1                               |
|                                     | Magnetite                              |
|                                     | Fe-oxide                               |
|                                     | Carbonates                             |
|                                     | Calcite                                |
|                                     | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>        |  |
|                                     | Crystal grain                          |
|                                     |  |
|                                     | Vitric grain                           |
|                                     | Lithic grain                           |

| Percent                | Component                           |
|------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS</b> |                                     |
|                        | Calcareous                          |
| 4                      | Foraminifera 1                      |
|                        | Planktonic foraminifera             |
|                        | Benthic foraminifera                |
|                        | Nannofossils                        |
|                        | Coccoliths                          |
|                        | Discoasters                         |
|                        | Pteropods                           |
|                        | Siliceous                           |
|                        | Radiolarians                        |
|                        | Spumellaria                         |
|                        | Nassellaria                         |
| 8                      | Diatoms 2                           |
|                        | Centric ~                           |
|                        | Pennate                             |
|                        | Chaetoceros Resting Spores          |
|                        | Silicoflagellates                   |
|                        | Sponge spicules                     |
|                        | Dinoflagellates                     |
|                        | Others                              |
|                        | Pollen                              |
|                        | Organic debris                      |
|                        | Plant debris                        |
|                        | Ebridians                           |
|                        | Echinoderm                          |
|                        | Fish remains (teeth, bones, scales) |
|                        | Bryozoans                           |
|                        | Bivalves                            |
|                        | Others                              |

Expedition 323  
Bering Sea

D

1345          3                             
 Site Hole Core Section Top Depth

| Depth (m) | Graphic Representation | Color                       | Lithology              | Bioturbation Structures/Accessories | Drilling Dist. Samples | Major Lithology         |  | Minor Lithology |  |
|-----------|------------------------|-----------------------------|------------------------|-------------------------------------|------------------------|-------------------------|--|-----------------|--|
|           |                        |                             |                        |                                     |                        | Visual Core description |  |                 |  |
| 10        |                        | 123<br>133<br>6             |                        | 5                                   | 10                     |                         |  |                 |  |
| 20        |                        |                             |                        |                                     |                        |                         |  |                 |  |
| 30        |                        |                             |                        |                                     |                        |                         |  |                 |  |
| 40        |                        | 125<br>138<br>142<br>5Y 3/1 | diatom-rich silty sand | 17<br>63                            | 18                     |                         |  |                 |  |
| 50        |                        | 8<br>37<br>40<br>57         |                        | 29                                  |                        |                         |  |                 |  |
| 60        |                        |                             |                        |                                     |                        |                         |  |                 |  |
| 70        |                        | 148                         |                        | 148                                 |                        |                         |  |                 |  |
| 80        |                        | 5                           | 10Y 3/1 silty sand     |                                     |                        |                         |  |                 |  |
| 90        |                        |                             |                        |                                     |                        |                         |  |                 |  |
| 100       |                        | 28                          |                        | 20                                  |                        |                         |  |                 |  |
| 110       |                        | 10                          |                        |                                     |                        |                         |  |                 |  |
| 120       |                        |                             |                        |                                     |                        |                         |  |                 |  |
| 130       |                        |                             |                        |                                     |                        |                         |  |                 |  |
| 140       |                        |                             |                        |                                     |                        |                         |  |                 |  |

~10 Soupy ✓  
 133 Sec 2.6 lam 5Y 4/2, 5Y 3/2  
 2A-90 silt  
 7-63 speck. pyrite ✓  
 106-107 sandy layer ✓  
 135-146 mott. sand ✓  
 Sec 3, 142 to Sec 30. shaly. ✓  
 18-37 lam 5Y 4/2 5Y 3/2 ✓  
 4A-38 Foram-bearing diatom-rich silt  
 Secs. 148-155 ✓  
 5-34 mott. sand ✓  
 76 mott. sand  
 28-cc. 10 lam 5Y 4/3 5Y 4/2  
 5Y 3/2  
 86  
 25 25-35 PAL.  
 10Y 4/1 ✓ foram-bearing diatom-rich silt  
 5Y 4/1 ✓ silt  
 Soupy silty sand

Observer: \_\_\_\_\_ Date: \_\_\_\_\_

IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site   | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|--------|------|------|------|-----|---------------|--------|
|     |        |      |      |      |     | Top           | Bottom |
|     | 1345 D |      | 3    | H-4  |     | 38            | cm     |

|                    |                              |          |     |
|--------------------|------------------------------|----------|-----|
| Sediment/Rock Name | TORN-BRAINW OLYTOM-RICH SILT | Observer | CWA |
|--------------------|------------------------------|----------|-----|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 | 80   | 20   |

Comments:

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

| Percent                | Component                           |
|------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS</b> |                                     |
|                        | Calcareous                          |
| ✓ 7%                   | 2 Foraminifera                      |
|                        | Planktonic foraminifera             |
|                        | Benthic foraminifera                |
|                        | Nannofossils                        |
|                        | Coccoliths                          |
|                        | Discoasters                         |
|                        | Pteropods                           |
|                        | Siliceous                           |
|                        | Radiolarians                        |
|                        | Spumellaria                         |
|                        | Nassellaria                         |
| 26%                    | 8 Diatoms                           |
| 23                     | 7 Centric                           |
| 3                      | 1 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 |
|     | 345D | 3    | 3    | A    | 2   | 90 cm         |        |

✓ SM

|                    |      |          |     |
|--------------------|------|----------|-----|
| Sediment/Rock Name | SILT | Observer | lwa |
|--------------------|------|----------|-----|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments:

| Percent                             | Component                              |
|-------------------------------------|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> |  |
|                                     | Framework minerals                     |
| <del>30%</del>                      | 5 Quartz                               |
| <del>4%</del>                       | 7 Feldspar                             |
|                                     | K-feldspar (Orthoclase, Microcline...) |
|                                     | Plagioclase                            |
| 18%                                 | 3 Rock fragments                       |
|                                     | Accessory/trace minerals               |
|                                     | Micas                                  |
|                                     | Biotite                                |
|                                     | Muscovite                              |
|                                     | Clay Minerals                          |
|                                     | Chlorite                               |
|                                     | Glauconite                             |
|                                     | Chert                                  |
|                                     | Zircon                                 |
|                                     | Ferromagnesium minerals                |
|                                     | Authigenic minerals                    |
|                                     | Barite                                 |
|                                     | Phosphorite/Apatite                    |
|                                     | Zeolite                                |
|                                     | Opaque minerals                        |
|                                     | Pyrite                                 |
|                                     | Magnetite                              |
|                                     | Fe-oxide                               |
|                                     | Carbonates                             |
| 6%                                  | 1 Calcite                              |
|                                     | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>        |  |
|                                     | Crystal grain                          |
|                                     |  |
|                                     | Vitric grain                           |
|                                     | Lithic grain                           |

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

IODP Expedition 323  
 SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
|     | 1345 | D    | A3   |      | 2   | 100           | 300    |

|                    |                  |          |     |
|--------------------|------------------|----------|-----|
| Sediment/Rock Name | DIATOM SILT CLAY | Observer | IWA |
|--------------------|------------------|----------|-----|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments:

| Percent                             | Component                              |
|-------------------------------------|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> |  |
| Framework minerals                  |  |
| 10%                                 | 5 Quartz                               |
| 13%                                 | 7 Feldspar                             |
|                                     | K-feldspar (Orthoclase, Microcline...) |
|                                     | Plagioclase                            |
| 6%                                  | 3 Rock fragments                       |
| Accessory/trace minerals            |  |
|                                     | Micas                                  |
|                                     | Biotite                                |
|                                     | Muscovite                              |
| 29%                                 | 15 Clay Minerals                       |
|                                     | Chlorite                               |
|                                     | Glauconite                             |
|                                     | Chert                                  |
|                                     | Zircon                                 |
|                                     | Ferromagnesium minerals                |
| Authigenic minerals                 |  |
|                                     | Barite                                 |
|                                     | Phosphorite/Apatite                    |
|                                     | Zeolite                                |
| Opaque minerals                     |  |
| 2%                                  | 1 Pyrite                               |
|                                     | Magnetite                              |
|                                     | Fe-oxide                               |
| Carbonates                          |  |
| 4%                                  | 2 Calcite                              |
|                                     | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>        |  |
| Crystal grain                       |  |
| Vitric grain                        |  |
| Lithic grain                        |  |

| Percent                | Component                           |
|------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS</b> |                                     |
| Calcareous             |                                     |
| 4%                     | 2 Foraminifera                      |
|                        | Planktonic foraminifera             |
|                        | Benthic foraminifera                |
|                        | Nannofossils                        |
|                        | Coccoliths                          |
|                        | Discoasters                         |
|                        | Pteropods                           |
| Siliceous              |                                     |
|                        | Radiolarians                        |
|                        | Spumellaria                         |
|                        | Nassellaria                         |
| 33%                    | — Diatoms                           |
| 29%                    | 15 Centric                          |
| 4%                     | 2 Pennate                           |
|                        | Chaetoceros Resting Spores          |
|                        | Silicoflagellates                   |
|                        | Sponge spicules                     |
|                        | Dinoflagellates                     |
| Others                 |                                     |
|                        | Pollen                              |
|                        | Organic debris                      |
|                        | Plant debris                        |
|                        | Ebridians                           |
|                        | Echinoderm                          |
|                        | Fish remains (teeth, bones, scales) |
|                        | Bryozoans                           |
|                        | Bivalves                            |
|                        | Others                              |

29%  
 { 10%  
 13%  
 6%

SM

AC/D non (2)  
 AC bear D-non (2)  
 D bear  
 clay

FID bear  
 clayey silt  
 sand ②

U1345 D 4A All  
 Site Hole Core Section Top Depth

Expedition 323  
 Bering Sea

| Graphic Representation | Color | Lithology                             | Bioturbation | Structures/Accessories                                  | Drilling Dist. | Samples | Major Lithology | Minor Lithology | Visual Core description   |
|------------------------|-------|---------------------------------------|--------------|---|----------------|---------|-----------------|-----------------|---|
| 1                      | 10    | Silt I                                |              | 74<br>Wiper<br>Tube<br>39-40<br>Sheet<br>135<br>135-110 |                |         |                 |                 | active<br>Sandy layer<br>Sand Mot.  |
| 2                      | 30    | Sand II                               |              | 2-20.5<br>M<br>103-112<br>Peb<br>93-111                 |                |         |                 |                 | Basalt subband<br>Art. carb mot. - visib/sup.<br>110-117 Plan - sand filled.  |
| 3                      | 40    | F-bearing<br>D-bearing<br>clayey silt |              | 131<br>M.P<br>134<br>134                                |                |         |                 |                 | Gastropod shell - broken<br>87-91 Sand Mot.<br>Peb<br>64-72 Plan.<br>51-64 Sand Mot. sand filled<br>Peb inside burrow!<br>rounded<br>Peb. subband.      |
| 4                      | 70    | silty clay                            |              | 2-5 Peb.<br>27-35<br>Sand Mot.<br>7-15<br>Sand Mot.     |                |         |                 |                 | light 30<br>DK 70<br>silty clay<br>F bear d-nich silty clay<br>diatom core<br>Lam - (subband) 100-110<br>AC bear d-nich silty clay<br>D-nich silty clay |
| 5                      | 90    | silty clay                            |              | 4-5 Peb.<br>Mot.<br>21-21.5<br>Sand Mot                 |                |         |                 |                 |   |
| 6                      | 110   | Silt                                  |              | Lam<br>Thin<br>25                                       |                |         |                 |                 | Frams!<br>Ls 30<br>DK 70<br>Lsilt.  |
| 7                      | 130   |                                       |              | Lam<br>Thin<br>52                                       |                |         |                 |                 | 50 diatom core<br>50 silt   |
| 8                      | 140   |                                       |              | Lam<br>Thin<br>83                                       |                |         |                 |                 | 50<br>50  |

Observer: Beth.

Date: \_\_\_\_\_

d-bear silt 56y 3/1  
 n-bear d-bear lam  
 d-bear silt.  
 d-nich silty clay d-nich lam

IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
|     | 1345 | 4    | 4    |      | 5   | 70m           |        |

|                    |                        |          |     |
|--------------------|------------------------|----------|-----|
| Sediment/Rock Name | d-bear<br>SILTY CLAY D | Observer | lwa |
|--------------------|------------------------|----------|-----|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
| 10              | 30   | 60   |

Comments:

| Percent                             | Component                              |
|-------------------------------------|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> |  |
|                                     | Framework minerals                     |
| 14%                                 | 5 Quartz                               |
| 14%                                 | 5 Feldspar                             |
|                                     | K-feldspar (Orthoclase, Microcline...) |
|                                     | Plagioclase                            |
| 3%                                  | 1 Rock fragments                       |
|                                     | Accessory/trace minerals               |
|                                     | Micas                                  |
|                                     | Biotite                                |
|                                     | Muscovite                              |
| 56%                                 | 20 Clay Minerals                       |
|                                     | Chlorite                               |
|                                     | Glauconite                             |
|                                     | Chert                                  |
|                                     | Zircon                                 |
|                                     | Ferromagnesium minerals                |
|                                     | Authigenic minerals                    |
|                                     | Barite                                 |
|                                     | Phosphorite/Apatite                    |
|                                     | Zeolite                                |
|                                     | Opaque minerals                        |
| 6%                                  | 2 Pyrite                               |
|                                     | Magnetite                              |
|                                     | Fe-oxide                               |
|                                     | Carbonates                             |
| 3%                                  | 1 Calcite                              |
|                                     | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>        |  |
|                                     | Crystal grain                          |
|                                     |  |
|                                     | Vitric grain                           |
|                                     | Lithic grain                           |

| Percent                | Component                           |
|------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS</b> |                                     |
|                        | Calcareous                          |
|                        | Foraminifera                        |
|                        | Planktonic foraminifera             |
|                        | Benthic foraminifera                |
|                        | Nannofossils                        |
|                        | Coccoliths                          |
|                        | Discoasters                         |
|                        | Pteropods                           |
|                        | Siliceous                           |
|                        | Radiolarians                        |
|                        | Spumellaria                         |
|                        | Nassellaria                         |
| 6%                     | Diatoms                             |
| 3%                     | 1 Centric                           |
| 3%                     | 1 Pennate                           |
|                        | Chaetoceros Resting Spores          |
|                        | Silicoflagellates                   |
|                        | Sponge spicules                     |
|                        | Dinoflagellates                     |
|                        | Others                              |
|                        | Pollen                              |
|                        | Organic debris                      |
|                        | Plant debris                        |
|                        | Ebridians                           |
|                        | Echinoderm                          |
|                        | Fish remains (teeth, bones, scales) |
|                        | Bryozoans                           |
|                        | Bivalves                            |
|                        | Others                              |

✓ ✓ SM

IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
|     | 1345 | 4    | 4    |      | 2   | 125           | 125    |

|                    |  |          |     |
|--------------------|--|----------|-----|
| Sediment/Rock Name | FORM BENTONIC DIATOM <del>DIATOM</del> <i>diatom</i> | Observer | but |
|--------------------|--|----------|-----|

CLAY - SILT

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments:

| Percent                             | Component                              |
|-------------------------------------|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> |  |
|                                     | Framework minerals                     |
| 15%                                 | 7 Quartz                               |
| 10%                                 | 5 Feldspar                             |
|                                     | K-feldspar (Orthoclase, Microcline...) |
|                                     | Plagioclase                            |
| 6%                                  | 3 Rock fragments                       |
|                                     | Accessory/trace minerals               |
|                                     | Micas                                  |
|                                     | Biotite                                |
|                                     | Muscovite                              |
| 31%                                 | 15 Clay Minerals                       |
|                                     | Chlorite                               |
|                                     | Glauconite                             |
|                                     | Chert                                  |
|                                     | Zircon                                 |
|                                     | Ferromagnesium minerals                |
|                                     | Authigenic minerals                    |
|                                     | Barite                                 |
|                                     | Phosphorite/Apatite                    |
|                                     | Zeolite                                |
|                                     | Opaque minerals                        |
| 2%                                  | 1 Pyrite                               |
|                                     | Magnetite                              |
|                                     | Fe-oxide                               |
|                                     | Carbonates                             |
| 5%                                  | 2 Calcite                              |
|                                     | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>        |  |
|                                     | Crystal grain                          |
|                                     |  |
|                                     | Vitric grain                           |
|                                     | Lithic grain                           |

| Percent                | Component                           |
|------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS</b> |                                     |
|                        | Calcareous                          |
| 10%                    | 5 Foraminifera                      |
|                        | Planktonic foraminifera             |
|                        | Benthic foraminifera                |
|                        | Nannofossils                        |
|                        | Coccoliths                          |
|                        | Discoasters                         |
|                        | Pteropods                           |
|                        | Siliceous                           |
|                        | Radiolarians                        |
|                        | Spumellaria                         |
|                        | Nassellaria                         |
| 10%                    | Diatoms                             |
| 15%                    | 1 Centric                           |
| 6%                     | 3 Pennate                           |
|                        | Chaetoceros Resting Spores          |
|                        | Silicoflagellates                   |
|                        | Sponge spicules                     |
|                        | Dinoflagellates                     |
|                        | Others                              |
|                        | Pollen                              |
|                        | Organic debris                      |
|                        | Plant debris                        |
|                        | Ebridians                           |
|                        | Echinoderm                          |
|                        | Fish remains (teeth, bones, scales) |
|                        | Bryozoans                           |
|                        | Bivalves                            |
|                        | Others                              |

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SM

IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
|     | 1345 | 7    | 4    | 4    | 2   | 90cm          |        |

|                    |      |          |     |
|--------------------|------|----------|-----|
| Sediment/Rock Name | SAND | Observer | IWA |
|--------------------|------|----------|-----|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
| 80              | 20   |      |

Comments:

| Percent                             | Component                              |
|-------------------------------------|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> |  |
|                                     | Framework minerals                     |
| 26                                  | 5 Quartz                               |
| 37                                  | 7 Feldspar                             |
|                                     | K-feldspar (Orthoclase, Microcline...) |
|                                     | Plagioclase                            |
| 37                                  | 7 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                               |
| <b>VOLCANICLASTIC GRAINS</b>        |  |
|                                     | Crystal grain                          |
|                                     |  |
|                                     | Vitric grain                           |
|                                     | Lithic grain                           |

| Percent                | Component                           |
|------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS</b> |                                     |
|                        | 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                              |

Expedition 323  
Bering Sea

1345 D 5  
Site Hole Core Section Top Depth

| Depth (m) | Graphic Representation | Color            | Lithology | Bioturbation | Structures/Accessories | Drilling Dist. Samples | Major Lithology                   | Minor Lithology                |
|-----------|------------------------|------------------|-----------|--------------|------------------------|------------------------|-----------------------------------|--------------------------------|
|           |                        |                  |           |              |                        |                        | Visual Core description           |                                |
| 1         | ✓                      |                  |           |              |                        |                        |                                   |                                |
| 10        | ✓                      | 67               |           |              |                        |                        | 10-14 faint lam ✓                 | drilling disturbance           |
| 2         | ✓                      | 106              |           |              |                        |                        | 2-5 lam ✓ faint                   |                                |
| 20        | ✓                      | 10               |           |              |                        |                        | 67-106 lam. 57 3/2 57 4/2         |                                |
| 3         | ✓                      |                  |           | 5            |                        |                        | 4-10 lam ✓ faint                  | 2A-90 diatom-rich clayey silt. |
| 40        | ✓                      |                  |           |              |                        |                        |                                   | 4A-60 clay                     |
| 50        |                        |                  |           |              | 135                    |                        | Sec 4 133 ✓ Secs. 39 pyrite speck |                                |
| 60        |                        |                  |           |              |                        |                        | 74-89 pyrite speck ✓              |                                |
| 70        |                        |                  |           |              |                        |                        | 96 sponge ✓                       |                                |
| 80        | ✓                      | 70<br>105<br>124 | 107 3/1   |              |                        | 100                    | 53-90 moth pyrites ✓              | 6A-130 sandy silt.             |
| 90        | ✓                      |                  |           | 12           |                        | 87                     |                                   |                                |
| 100       |                        |                  |           |              |                        |                        | 1131                              |                                |
| 110       |                        |                  |           |              |                        |                        | 24 24-34 PAL                      |                                |
| 120       |                        |                  |           |              |                        |                        | 107 4/1                           |                                |
| 130       |                        |                  |           |              |                        |                        | diatom-rich clayey silt.          |                                |
| 140       |                        |                  |           |              |                        |                        | 131N                              |                                |
|           |                        |                  |           |              |                        |                        | clay.                             |                                |

Observer: \_\_\_\_\_ Date: \_\_\_\_\_

X

✓ SM

IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
|     | 1345 | D    | 5    | H    | 4   | 60cm          |        |

|                    |      |          |     |
|--------------------|------|----------|-----|
| Sediment/Rock Name | CLAY | Observer | IWA |
|--------------------|------|----------|-----|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments:

| Percent                             | Component                              |
|-------------------------------------|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> |  |
|                                     | Framework minerals                     |
| 3                                   | 1 Quartz                               |
| 9                                   | 2 Feldspar                             |
|                                     | K-feldspar (Orthoclase, Microcline...) |
|                                     | Plagioclase                            |
| 9                                   | 2 Rock fragments                       |
|                                     | Accessory/trace minerals               |
|                                     | Micas                                  |
|                                     | Biotite                                |
|                                     | Muscovite                              |
| 65%                                 | 15 Clay Minerals                       |
|                                     | Chlorite                               |
|                                     | Glauconite                             |
|                                     | Chert                                  |
|                                     | Zircon                                 |
|                                     | Ferromagnesium minerals                |
|                                     | Authigenic minerals                    |
|                                     | Barite                                 |
|                                     | Phosphorite/Apatite                    |
|                                     | Zeolite                                |
|                                     | Opaque minerals                        |
| 7                                   | 1 Pyrite                               |
|                                     | Magnetite                              |
|                                     | Fe-oxide                               |
|                                     | Carbonates                             |
| 4                                   | 1 Calcite                              |
|                                     | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>        |  |
|                                     | Crystal grain                          |
|                                     |  |
|                                     |  |
|                                     | Vitric grain                           |
|                                     | Lithic grain                           |

| Percent                | Component                           |
|------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS</b> |                                     |
|                        | Calcareous                          |
|                        | Foraminifera                        |
|                        | Planktonic foraminifera             |
|                        | Benthic foraminifera                |
|                        | Nannofossils                        |
|                        | Coccoliths                          |
|                        | Discoasters                         |
|                        | Pteropods                           |
|                        | Siliceous                           |
|                        | Radiolarians                        |
|                        | Spumellaria                         |
|                        | Nassellaria                         |
|                        | Diatoms                             |
|                        | Centric                             |
| 4                      | 1 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 |
|     | 1345 | 1    | 5    | #    | 2   | 90cm          |        |

|                    |                      |          |     |
|--------------------|----------------------|----------|-----|
| Sediment/Rock Name | CLAYE-RICH CLAY SILT | Observer | UMM |
|--------------------|----------------------|----------|-----|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments:

31

| Percent                             | Component                              |
|-------------------------------------|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> |  |
|                                     | Framework minerals                     |
| 7% 2                                | Quartz                                 |
| 17% 5                               | Feldspar                               |
|                                     | K-feldspar (Orthoclase, Microcline...) |
|                                     | Plagioclase                            |
| 7% 2                                | Rock fragments                         |
|                                     | Accessory/trace minerals               |
|                                     | Micas                                  |
|                                     | Biotite                                |
|                                     | Muscovite                              |
| 34% 10                              | Clay Minerals                          |
|                                     | Chlorite                               |
|                                     | Glauconite                             |
|                                     | Chert                                  |
|                                     | Zircon                                 |
|                                     | Ferromagnesium minerals                |
|                                     | Authigenic minerals                    |
|                                     | Barite                                 |
|                                     | Phosphorite/Apatite                    |
|                                     | Zeolite                                |
|                                     | Opaque minerals                        |
| 7% 2                                | Pyrite                                 |
|                                     | Magnetite                              |
|                                     | Fe-oxide                               |
|                                     | Carbonates                             |
| 3% 1                                | Calcite                                |
|                                     | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>        |  |
|                                     | Crystal grain                          |
|                                     | Vitric grain                           |
|                                     | Lithic grain                           |

| Percent                | Component                           |
|------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS</b> |                                     |
|                        | Calcareous                          |
| 8% 1                   | Foraminifera                        |
|                        | Planktonic foraminifera             |
|                        | Benthic foraminifera                |
|                        | Nannofossils                        |
|                        | Coccoliths                          |
|                        | Discoasters                         |
|                        | Pteropods                           |
|                        | Siliceous                           |
|                        | Radiolarians                        |
|                        | Spumellaria                         |
|                        | Nassellaria                         |
| 20                     | Diatoms                             |
| (17% 5)                | Centric                             |
| (3% 1)                 | 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 |
|     | 1345 | 8    | 5    |      | 6   | 130m          |        |

|                    |                   |          |     |
|--------------------|-------------------|----------|-----|
| Sediment/Rock Name | DASH-BEARING SILT | Observer | lwe |
|--------------------|-------------------|----------|-----|

Sandy

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
| 20              | 50   | 30   |

Comments:

58

| Percent                             | Component                              |
|-------------------------------------|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> |  |
|                                     | Framework minerals                     |
| 10                                  | 3 Quartz                               |
| 32                                  | 10 Feldspar                            |
|                                     | K-feldspar (Orthoclase, Microcline...) |
|                                     | Plagioclase                            |
| 16                                  | 5 Rock fragments                       |
|                                     | Accessory/trace minerals               |
|                                     | Micas                                  |
|                                     | Biotite                                |
|                                     | Muscovite                              |
| -23                                 | 7 Clay Minerals                        |
|                                     | Chlorite                               |
|                                     | Glaucanite                             |
|                                     | Chert                                  |
|                                     | Zircon                                 |
|                                     | Ferromagnesium minerals                |
|                                     | Authigenic minerals                    |
|                                     | Barite                                 |
|                                     | Phosphorite/Apatite                    |
|                                     | Zeolite                                |
|                                     | Opaque minerals                        |
| 3                                   | 1 Pyrite                               |
|                                     | Magnetite                              |
|                                     | Fe-oxide                               |
|                                     | Carbonates                             |
|                                     | Calcite                                |
|                                     | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>        |  |
|                                     | Crystal grain                          |
|                                     |  |
|                                     | Vitric grain                           |
|                                     | Lithic grain                           |

| Percent                | Component                           |
|------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS</b> |                                     |
|                        | Calcareous                          |
|                        | Foraminifera                        |
|                        | Planktonic foraminifera             |
|                        | Benthic foraminifera                |
|                        | Nannofossils                        |
|                        | Coccoliths                          |
|                        | Discoasters                         |
|                        | Pteropods                           |
|                        | Siliceous                           |
|                        | Radiolarians                        |
|                        | Spumellaria                         |
|                        | Nassellaria                         |
| 16                     | 5 Diatoms                           |
|                        | Centric                             |
| 10                     | 3 Pennate                           |
| 8                      | 2 <i>Chaetoceros</i> Resting Spores |
|                        | Silicoflagellates                   |
|                        | Sponge spicules                     |
|                        | Dinoflagellates                     |
|                        | Others                              |
|                        | Pollen                              |
|                        | Organic debris                      |
|                        | Plant debris                        |
|                        | Ebridians                           |
|                        | Echinoderm                          |
|                        | Fish remains (teeth, bones, scales) |
|                        | Bryozoans                           |
|                        | Bivalves                            |
|                        | Others                              |

Expedition 323  
Bering Sea

V1345 Site    D Hole    6H Core    AM Section    Top Depth

| Graphic Representation | Color     | Lithology         | Biorturbation | Structures/Accessories | Drilling Dist. Samples | Major Lithology                      | Minor Lithology |
|------------------------|-----------|-------------------|---------------|------------------------|------------------------|--------------------------------------|-----------------|
| 1                      | 10y 3/1   | d-bear silty sand |               | 20-30 Sand M           | M                      | Crack - 72                           |                 |
|                        | 70        |                   |               | 73-5                   | M                      | Sandy layer                          |                 |
| 2                      | 10y 3/1   |                   |               | 40-62                  | M                      | Sand mot                             |                 |
|                        | 70        |                   |               | 91                     | M                      | Sandy layer                          |                 |
| 3                      | 56y 2.5/N | d-bear silt       |               |                        | 14 Cr                  | Soft sed def - <u>Hard Lam</u>       |                 |
|                        | 85        |                   |               |                        | 28 Cr                  |                                      |                 |
| 4                      | 90        |                   |               |                        | 43 Cr                  |                                      |                 |
|                        | 56y 3/1   | d-bear silty clay |               | 119-122                |                        | Sand mot. Huge forams.               |                 |
| 5                      | 40        |                   |               | 143                    |                        | Cracks 3: 133-145                    |                 |
|                        | 48        |                   |               |                        |                        |                                      |                 |
| 6                      | 56y 3/1   | d-bear silty clay |               |                        |                        |                                      |                 |
|                        | 40        |                   |               |                        |                        |                                      |                 |
| 7                      | 48        |                   |               |                        |                        |                                      |                 |
|                        | 56y 3/1   | d-bear silty clay |               |                        |                        |                                      |                 |
| 8                      | 26        | A.C               |               | 90-92                  | 80 Cr                  | Sand pms                             |                 |
|                        | 33        | d-bear silty clay |               | 87-88                  |                        | Cracks 4: 115-6' end. Mod.           |                 |
| 9                      | 128       |                   |               | DLR. M.                |                        |                                      |                 |
|                        | 43        | Lam               |               | 15-77                  |                        | Large Lams 4/112 d-bear clayey silt. |                 |
| 10                     |           | d-bear silty clay |               | 38-41                  |                        | 10y 4/1 } D-rich clayey silt.        |                 |
|                        |           |                   |               | AC Layer               |                        |                                      |                 |
| 11                     | 80        |                   |               | 26 mm                  |                        |                                      |                 |
|                        | 126       | d-bear silty clay |               | 104-102                |                        | fishers                              |                 |
| 12                     |           |                   |               |                        |                        |                                      |                 |
|                        |           | d-bear silty clay |               |                        |                        |                                      |                 |

Observer: \_\_\_\_\_ Date: \_\_\_\_\_

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IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 393 | 1345 | D    | 6    | H3A  |     | 90            |        |

Sediment/Rock Name: (diatom-bearing) sily clay

Observer: Akera

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 | 40   | 60   |

Comments:

| Percent                             | Component                              |
|-------------------------------------|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> |  |
|                                     | Framework minerals                     |
| 19                                  | Quartz 3                               |
|                                     | Feldspar                               |
|                                     | K-feldspar (Orthoclase, Microcline...) |
|                                     | Plagioclase                            |
| 6                                   | Rock fragments 1                       |
|                                     | Accessory/trace minerals               |
|                                     | Micas                                  |
|                                     | Biotite                                |
|                                     | Muscovite                              |
| 45                                  | Clay Minerals 7                        |
|                                     | Chlorite                               |
|                                     | Glauconite                             |
|                                     | Chert                                  |
|                                     | Zircon                                 |
|                                     | Ferromagnesium minerals                |
|                                     | Authigenic minerals                    |
|                                     | Barite                                 |
|                                     | Phosphorite/Apatite                    |
|                                     | Zeolite                                |
|                                     | Opaque minerals                        |
| 13                                  | Pyrite 2                               |
|                                     | Magnetite                              |
|                                     | Fe-oxide                               |
|                                     | Carbonates                             |
| 3                                   | Calcite 0.5                            |
|                                     | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>        |  |
| 6                                   | Crystal grain 1                        |
|                                     | Vitric grain                           |
|                                     | Lithic grain                           |

| Percent                | Component                           |
|------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS</b> |                                     |
|                        | Calcareous                          |
|                        | Foraminifera                        |
|                        | Planktonic foraminifera             |
|                        | Benthic foraminifera                |
|                        | Nannofossils                        |
|                        | Coccoliths                          |
|                        | Discoasters                         |
|                        | Pteropods                           |
|                        | Siliceous                           |
|                        | Radiolarians                        |
|                        | Spumellaria                         |
|                        | Nassellaria                         |
| 6                      | Diatoms 7                           |
|                        | Centric                             |
|                        | Pennate                             |
|                        | Chaetoceros Resting Spores          |
|                        | Silicoflagellates                   |
|                        | Sponge spicules                     |
|                        | Dinoflagellates                     |
|                        | Others                              |
|                        | Pollen                              |
|                        | Organic debris                      |
|                        | Plant debris                        |
|                        | Ebridians                           |
|                        | Echinoderm                          |
|                        | Fish remains (teeth, bones, scales) |
|                        | Bryozoans                           |
|                        | Bivalves                            |
|                        | Others                              |

1345 D 7 ALL  
 Site Hole Core Section Top Depth

Expedition 323  
 Bering Sea

Core 1  
 EXTRUDED ON RIG FLOOR

| Graphic Representation | Color   | Lithology             | Biorturbation | Structures/Accessories | Drilling Dist. Samples | Major Lithology | Minor Lithology | Visual Core description         |
|------------------------|---------|-----------------------|---------------|------------------------|------------------------|-----------------|-----------------|---------------------------------|
| 10                     | 104 5/1 |                       |               |                        |                        |                 |                 | TORAN. BEARING STRAIN SECY clay |
| 20                     |         |                       |               |                        | 59                     |                 |                 | 40cm, SS shell                  |
| 30                     | 100     | ↓ SANDS<br>110<br>120 |               |                        | 72                     |                 |                 | 60-70 SANDS TURTLE shell        |
| 40                     | 20      | ↑                     |               |                        |                        |                 |                 | clay 1.5cm, subangular          |
| 50                     |         |                       |               |                        |                        |                 |                 |                                 |
| 60                     |         |                       |               |                        |                        |                 |                 |                                 |
| 70                     |         |                       |               |                        |                        |                 |                 |                                 |
| 80                     |         |                       |               |                        |                        |                 |                 |                                 |
| 90                     | 104 3/1 |                       |               |                        |                        |                 |                 | 30cm Doler. sandy sandy silt    |
| 100                    |         | 86                    |               |                        |                        |                 |                 | large pebble subangular         |
| 110                    |         | 132                   |               |                        |                        |                 |                 | SAND LAMINA, 7-1000             |
| 120                    |         |                       |               |                        |                        |                 |                 | PASTORY SANDS, bioturbated      |
| 130                    | 104 5/1 |                       |               |                        | 102                    |                 |                 | SAND LAYER                      |
| 140                    |         |                       |               |                        | 127                    |                 |                 | 37-31                           |
|                        |         |                       |               |                        |                        |                 |                 | 40cm, SS SILT                   |

Core 1  
 2  
 3  
 4  
 5  
 6  
 7  
 CC

Observer: \_\_\_\_\_ Date: \_\_\_\_\_

140 cm, pocket with several small pebble-size clasts.

IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | B45  | D    | 7    | H    | 2A  | 40            |        |

|                    |                                 |          |    |
|--------------------|---------------------------------|----------|----|
| Sediment/Rock Name | foram-bearing diatom silty clay | Observer | OK |
|--------------------|---------------------------------|----------|----|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
| 5               | 45   | 50   |

Comments:

| Percent                             | Component                              |
|-------------------------------------|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> |  |
| Framework minerals                  |  |
| 7                                   | Quartz 3                               |
| 2                                   | Feldspar 7                             |
|                                     | K-feldspar (Orthoclase, Microcline...) |
|                                     | Plagioclase                            |
| 7                                   | Rock fragments 3                       |
| Accessory/trace minerals            |  |
|                                     | Micas                                  |
|                                     | Biotite                                |
|                                     | Muscovite                              |
| 24                                  | Clay Minerals 10                       |
|                                     | Chlorite                               |
|                                     | Glaucinite                             |
|                                     | Chert                                  |
|                                     | Zircon                                 |
| 2                                   | Ferromagnesium minerals 1              |
| Authigenic minerals                 |  |
|                                     | Barite                                 |
|                                     | Phosphorite/Apatite                    |
|                                     | Zeolite                                |
| Opaque minerals                     |  |
| 7                                   | Pyrite 3                               |
|                                     | Magnetite                              |
| 2                                   | Fe-oxide 1                             |
| Carbonates                          |  |
| 2                                   | Calcite 1                              |
|                                     | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>        |  |
| 2                                   | Crystal grain 1                        |
|                                     |  |
|                                     | Vitric grain                           |
|                                     | Lithic grain                           |

| Percent                | Component                           |
|------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS</b> |                                     |
| Calcareous             |                                     |
| 5                      | Foraminifera 2 (forams)             |
|                        | Planktonic foraminifera             |
|                        | Benthic foraminifera                |
|                        | Nannofossils                        |
|                        | Coccoliths                          |
|                        | Discoasters                         |
|                        | Pteropods                           |
| Siliceous              |                                     |
|                        | Radiolarians                        |
|                        | Spumellaria                         |
|                        | Nassellaria                         |
| 37                     | Diatoms 15                          |
|                        | Centric                             |
|                        | Pennate                             |
|                        | Chaetoceros Resting Spores          |
|                        | Silicoflagellates                   |
|                        | Sponge spicules                     |
|                        | Dinoflagellates                     |
| Others                 |                                     |
|                        | Pollen                              |
|                        | Organic debris                      |
|                        | Plant debris                        |
|                        | Ebridians                           |
|                        | Echinoderm                          |
|                        | Fish remains (teeth, bones, scales) |
|                        | Bryozoans                           |
|                        | Bivalves                            |
|                        | Others                              |

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IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1345 | D    | 7    | H    | 5A  | 30            |        |

|                    |                           |          |        |
|--------------------|---------------------------|----------|--------|
| Sediment/Rock Name | diatom-bearing sandy silt | Observer | Akioza |
|--------------------|---------------------------|----------|--------|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
| 40              | 50   | 10   |

Comments:

| Percent                             | Component                              |
|-------------------------------------|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> |  |
|                                     | Framework minerals                     |
| 23                                  | Quartz 7                               |
| 3                                   | Feldspar 1                             |
|                                     | K-feldspar (Orthoclase, Microcline...) |
|                                     | Plagioclase                            |
| 33                                  | Rock fragments 10                      |
|                                     | Accessory/trace minerals               |
|                                     | Micas                                  |
|                                     | Biotite                                |
|                                     | Muscovite                              |
| 16                                  | Clay Minerals 5                        |
|                                     | Chlorite                               |
|                                     | Glauconite                             |
|                                     | Chert                                  |
|                                     | Zircon                                 |
|                                     | Ferromagnesium minerals                |
|                                     | Authigenic minerals                    |
|                                     | Barite                                 |
|                                     | Phosphorite/Apatite                    |
|                                     | Zeolite                                |
|                                     | Opaque minerals                        |
| 10                                  | Pyrite 3                               |
|                                     | Magnetite                              |
|                                     | Fe-oxide                               |
|                                     | Carbonates                             |
|                                     | Calcite                                |
|                                     | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>        |  |
|                                     | Crystal grain                          |
|                                     |  |
|                                     |  |
| 7                                   | Vitric grain 2                         |
|                                     | Lithic grain                           |

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

IODP Expedition 323  
 SEDIMENT SMEAR SLIDE WORKSHEET

C/S M

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1345 | D    | 7    | H    | 7A  | 40            |        |

Sediment/Rock Name: Silt

Observer: ARIVA

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
| 15              | 60   | 15   |

Comments:

| Percent                             | Component                              |
|-------------------------------------|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> |  |
|                                     | Framework minerals                     |
| 27                                  | Quartz 7                               |
| 12                                  | Feldspar 3                             |
|                                     | K-feldspar (Orthoclase, Microcline...) |
|                                     | Plagioclase                            |
| 38                                  | Rock fragments 10                      |
|                                     | Accessory/trace minerals               |
|                                     | Micas                                  |
|                                     | Biotite                                |
|                                     | Muscovite                              |
| 12                                  | Clay Minerals 3                        |
|                                     | Chlorite                               |
|                                     | Glaucanite                             |
|                                     | Chert                                  |
|                                     | Zircon                                 |
|                                     | Ferromagnesium minerals                |
|                                     | Authigenic minerals                    |
|                                     | Barite                                 |
|                                     | Phosphorite/Apatite                    |
|                                     | Zeolite                                |
|                                     | Opaque minerals                        |
| 4                                   | Pyrite 1                               |
|                                     | Magnetite                              |
|                                     | Fe-oxide                               |
|                                     | Carbonates ✓                           |
|                                     | Calcite                                |
|                                     | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>        |  |
|                                     | Crystal grain                          |
|                                     |  |
| 4                                   | Vitric grain 1                         |
|                                     | Lithic grain                           |

| Percent                | Component                           |
|------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS</b> |                                     |
|                        | Calcareous                          |
|                        | Foraminifera                        |
|                        | Planktonic foraminifera             |
|                        | Benthic foraminifera                |
|                        | Nannofossils                        |
|                        | Coccoliths                          |
|                        | Discoasters                         |
|                        | Pteropods                           |
|                        | Siliceous                           |
|                        | Radiolarians                        |
|                        | Spumellaria                         |
|                        | Nassellaria                         |
| 4                      | Diatoms 1                           |
|                        | 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                              |



1345 1 8H 1+2  
Site Hole Core Section Top Depth

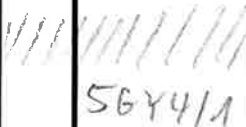


Expedition 323  
Bering Sea

|     | Graphic Representation | Color  | Lithology | Bioturbation | Structures/Accessories | Drilling Dist. Samples | Major Lithology | Minor Lithology | Visual Core description                     |
|-----|------------------------|--------|-----------|--------------|------------------------|------------------------|-----------------|-----------------|---|
| 10  |                        | 4/N    |           |              |                        |                        |                 |                 |   |
| 20  |                        |        |           |              |                        |                        |                 |                 | 20-50 soupy, "cottage cheese"               |
| 30  |                        |        |           |              |                        |                        |                 |                 |   |
| 40  |                        |        |           |              |                        |                        |                 |                 |   |
| 50  |                        |        |           |              |                        |                        |                 |                 |   |
| 60  |                        |        |           |              |                        |                        |                 |                 |   |
| 70  |                        |        |           |              |                        |                        |                 |                 |   |
| 80  | <br>104511<br>         |        |           |              |                        |                        |                 |                 | 2-4 mm diam. thick lam.                     |
| 90  |                        | 4/N    |           |              |                        |                        |                 |                 | 4-8 cm th. carb., yellowish, soft           |
| 100 |                        |        |           |              |                        |                        |                 |                 | 8-10 g rad.                                 |
| 110 |                        |        |           |              |                        |                        |                 |                 |   |
| 120 |                        |        |           |              |                        |                        |                 |                 | 98-100 g rad.                               |
| 130 | <br>104511<br>         |        |           |              |                        |                        |                 |                 | 100-106 cm th. carb., yellowish, semi-lite. |
| 140 |                        | 104511 |           |              |                        |                        |                 |                 | 106-108 g rad.                              |

Observer: \_\_\_\_\_ Date: \_\_\_\_\_

Expedition 323  
Bering Sea

1345 D 8H 3+4  
 Site Hole Core Section Top Depth

|                        |   | Major Lithology |   |                        |                | Minor Lithology |   |
|------------------------|---|-----------------|---|------------------------|----------------|-----------------|---|
| Graphic Representation | Color   | Lithology       | Bioturbation  | Structures/Accessories | Drilling Dist. | Samples         | Visual Core description                         |
|                        | 4/N   |                 | slits   |                        |                |                 | 90-100 grad.<br>97-121 (sect. 4) pyrite nodules |
|                        | <br>56Y4/1<br> |                 |  |                        |                |                 |   |

Observer: \_\_\_\_\_ Date: \_\_\_\_\_

1345 D 8H 5+CC  
Site Hole Core Section Top Depth

Expedition 323  
Bering Sea

| Graphic Representation | Color       | Lithology | Bioturbation | Structures/Accessories | Drilling Dist. | Samples | Major Lithology         | Minor Lithology |
|------------------------|-------------|-----------|--------------|------------------------|----------------|---------|-------------------------|-----------------|
|                        |             |           |              |                        |                |         | Visual Core description |                 |
|                        | 5614/1<br>↓ |           | slight       |                        |                |         |                         |                 |
| 10                     |             |           |              |                        |                |         |                         |                 |
| 20                     |             |           |              |                        |                |         |                         |                 |
| 30                     |             |           |              |                        |                |         |                         |                 |
| 40                     |             |           |              |                        |                |         | 6L                      |                 |
| 50                     |             |           |              |                        | 190m           |         | 1L                      |                 |
| 60                     |             |           |              |                        |                |         |                         |                 |
| 70                     |             |           |              |                        |                |         |                         |                 |
| 80                     |             |           |              |                        |                |         |                         |                 |
| 90                     |             |           |              |                        |                |         |                         |                 |
| 100                    |             |           |              |                        |                |         |                         |                 |
| 110                    |             |           |              |                        |                |         |                         |                 |
| 120                    |             |           |              |                        |                |         |                         |                 |
| 130                    |             |           |              |                        |                |         |                         |                 |
| 140                    |             |           |              |                        |                |         |                         |                 |

Observer: \_\_\_\_\_ Date: \_\_\_\_\_

SMV

IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1395 | P    | 8H   |      | 1A  | 60            |        |

|                    |                  |          |      |
|--------------------|------------------|----------|------|
| Sediment/Rock Name | Diatom-rich clay | Observer | Hino |
|--------------------|------------------|----------|------|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments:

| Percent                                | Component                              |
|--|--|
| <b>SILICICLASTIC GRAINS/MINERAL 85</b> |  |
| Framework minerals                     |  |
| 65                                     | Quartz 30 20                           |
| 6                                      | Feldspar 2                             |
|  | K-feldspar (Orthoclase, Microcline...) |
|  | Plagioclase                            |
| 3                                      | Rock fragments /                       |
| Accessory/trace minerals               |  |
| 11                                     | Micas                                  |
|  | Biotite                                |
|  | Muscovite                              |
| 6                                      | Clay Minerals 2                        |
| 3                                      | Chlorite /                             |
|  | Glaucanite                             |
|  | Chert                                  |
|  | Zircon                                 |
|  | Ferromagnesium minerals                |
| Authigenic minerals                    |  |
|  | Barite                                 |
|  | Phosphorite/Apatite                    |
|  | Zeolite                                |
| Opaque minerals                        |  |
| 6                                      | Pyrite 2                               |
|  | Magnetite                              |
|  | Fe-oxide                               |
| Carbonates                             |  |
|  | Calcite                                |
|  | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>           |  |
|  | Crystal grain                          |
|  |  |
|  | Vitric grain                           |
|  | Lithic grain                           |

| Percent                   | Component                           |
|---------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS //</b> |                                     |
| Calcareous                |                                     |
|                           | Foraminifera                        |
|                           | Planktonic foraminifera             |
|                           | Benthic foraminifera                |
|                           | Nannofossils                        |
|                           | Coccoliths                          |
|                           | Discoasters                         |
|                           | Pteropods                           |
| Siliceous                 |                                     |
|                           | Radiolarians                        |
|                           | Spumellaria                         |
|                           | Nassellaria                         |
| 11 3                      | 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

1345 Site    D Hole    9H Core    1+2 Section    \_\_\_\_\_ Top Depth

| Graphic Representation | Color             | Lithology | Bioturbation | Structures/Accessories | Drilling Dist. Samples | Major Lithology         | Minor Lithology         |
|------------------------|-------------------|-----------|--------------|------------------------|------------------------|-------------------------|-------------------------|
|                        |                   |           |              |                        |                        | Visual Core description |                         |
|                        | 4/N               |           | no obs.      |                        |                        |                         |                         |
|                        | 4/N+              |           | absent       |                        |                        |                         |                         |
|                        | 10Y4/1<br>(70/30) |           | 33           |                        |                        | 86                      |                         |
|                        | 4/N               |           |              |                        |                        |                         | σ-33 med. parallel lam. |

Observer: \_\_\_\_\_ Date: \_\_\_\_\_

Expedition 323  
Bering Sea

1345 D 9H 3+4  
 Site Hole Core Section Top Depth

| Graphic Representation | Color                | Lithology | Bioturbation | Structures/Accessories | Drilling Dist. | Samples | Major Lithology                                   | Minor Lithology                       |
|------------------------|----------------------|-----------|--------------|------------------------|----------------|---------|---|---------------------------------------|
|                        |                      |           |              |                        |                |         | Visual Core description                           |                                       |
|                        | 4/N                  |           | mod.         |                        |                |         |   |                                       |
|                        | 4/N + 10Y4/1 (60/40) | 97-106    | sh. coarse   |                        |                |         | 97-106 undul. thick lam.                          | 106-21 (section 4) med. parallel lam. |
|                        | 4/N + 10Y4/1 (50/50) | 21        | →            |                        |                |         | 21-27 thick parallel lam. with auth. carb. layers | 27-41 med. parallel lam.              |
|                        | 4/N + 10Y6/1 (50/50) | 27        |              |                        |                |         |   |                                       |
|                        | 4/N + 10Y4/1 (70/30) | 41        |              |                        |                |         |   |                                       |
|                        | 4/N                  |           | mod.         |                        |                |         |   | 65-143 pyrite nodules                 |

Observer: \_\_\_\_\_ Date: \_\_\_\_\_

1345 J 3H 5+6  
 Site Hole Core Section Top Depth

Expedition 323  
 Bering Sea

| Graphic Representation | Color                           | Lithology | Bioturbation | Structures/Accessories | Drilling Dist. | Samples | Major Lithology                      | Minor Lithology |
|------------------------|---------------------------------|-----------|--------------|------------------------|----------------|---------|--------------------------------------|-----------------|
|                        |                                 |           |              |                        |                |         | Visual Core description              |                 |
|                        | 5G4411                          |           |              |                        |                |         |                                      |                 |
| 10                     |                                 |           |              |                        |                |         | 22 pyrite speck                      |                 |
| 20                     |                                 |           | mod.         |                        | slight         |         | 40-44 strongly biot.<br>sandy layer  |                 |
| 30                     |                                 |           |              |                        |                |         | 93 fine pebbles, subang,<br>black    |                 |
| 40                     |                                 |           |              |                        |                |         |                                      |                 |
| 50                     |                                 |           |              |                        |                |         |                                      |                 |
| 60                     |                                 |           |              |                        |                |         |                                      |                 |
| 70                     |                                 |           |              |                        |                |         |                                      |                 |
| 80                     | ↓                               |           | 22           | ↓ slight               | ↓              |         | 2 shell                              |                 |
| 90                     | 41N+104411<br>(50150)<br>564411 |           | 33           |                        |                |         | 6-26 pyrite mottles +<br>streaks     |                 |
| 100                    | 41N                             |           | mod.         |                        |                |         | 25-33 undul. med. lam<br>33-39 grad. |                 |
| 110                    |                                 |           |              |                        |                |         |                                      |                 |
| 120                    |                                 |           |              |                        |                |         |                                      |                 |
| 130                    |                                 |           |              |                        |                |         |                                      |                 |
| 140                    |                                 |           |              |                        |                |         |                                      |                 |

Observer: \_\_\_\_\_ Date: \_\_\_\_\_

1345 D 9H 7+cc  
 Site Hole Core Section Top Depth

Expedition 323  
 Bering Sea

| Graphic Representation | Color  | Lithology | Bioturbation Structures/Accessories | Drilling Dist. Samples | Major Lithology         | Minor Lithology |
|------------------------|--------|-----------|-------------------------------------|------------------------|-------------------------|-----------------|
|                        |        |           |                                     |                        | Visual Core description |                 |
|                        | 10Y4/1 |           | mod                                 | slight                 |                         |                 |
|                        | ↓      |           | ↓                                   | mod                    | 84                      |                 |
|                        |        |           |                                     |                        | 39                      |                 |

Observer: \_\_\_\_\_ Date: \_\_\_\_\_



✓ SMV

IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1345 | D    | 911  |      | 2A  | 29            |        |

|                    |                           |          |      |
|--------------------|---------------------------|----------|------|
| Sediment/Rock Name | Diatom - rich clayey silt | Observer | Hiro |
|--------------------|---------------------------|----------|------|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments:

| Percent                                | Component                              |
|--|--|
| <b>SILICICLASTIC GRAINS/MINERAL 73</b> |  |
| Framework minerals                     |  |
| 38                                     | Quartz 10                              |
|  | Feldspar                               |
|  | K-feldspar (Orthoclase, Microcline...) |
|  | Plagioclase                            |
|  | Rock fragments                         |
| Accessory/trace minerals               |  |
|  | Micas                                  |
|  | Biotite                                |
|  | Muscovite                              |
| 4                                      | Clay Minerals 1                        |
|  | Chlorite                               |
|  | Glauconite                             |
|  | Chert                                  |
|  | Zircon                                 |
| 18                                     | Ferromagnesium minerals 5              |
|  |  |
| Authigenic minerals                    |  |
|  | Barite                                 |
|  | Phosphorite/Apatite                    |
|  | Zeolite                                |
| Opaque minerals                        |  |
| 12                                     | Pyrite 3                               |
|  | Magnetite                              |
|  | Fe-oxide                               |
| Carbonates                             |  |
|  | Calcite                                |
|  | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>           |  |
|  | Crystal grain                          |
|  |  |
|  | Vitric grain                           |
|  | Lithic grain                           |

| Percent                   | Component                           |
|---------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS 27</b> |                                     |
| Calcareous                |                                     |
|                           | Foraminifera                        |
|                           | Planktonic foraminifera             |
|                           | Benthic foraminifera                |
|                           | Nannofossils                        |
|                           | Coccoliths                          |
|                           | Discoasters                         |
|                           | Pteropods                           |
|                           |                                     |
| Siliceous                 |                                     |
|                           | Radiolarians                        |
|                           | Spumellaria                         |
|                           | Nassellaria                         |
|                           | Diatoms                             |
| 19                        | Centric 5                           |
| 8                         | Pennate 2                           |
|                           | Chaetoceros Resting Spores          |
|                           | Silicoflagellates                   |
|                           | Sponge spicules                     |
|                           | Dinoflagellates                     |
|                           |                                     |
| Others                    |                                     |
|                           | Pollen                              |
|                           | Organic debris                      |
|                           | Plant debris                        |
|                           | Ebridians                           |
|                           | Echinoderm                          |
|                           | Fish remains (teeth, bones, scales) |
|                           | Bryozoans                           |
|                           | Bivalves                            |
|                           | Others                              |
|                           |                                     |
|                           |                                     |
|                           |                                     |
|                           |                                     |

✓ SMV

IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 13YF | D    | 9H   |      | 3A  | 8Y            |        |

Sediment/Rock Name: Diatom-bearing s clay

Observer: Hiro

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments:

| Percent                                | Component                              |
|--|--|
| <b>SILICICLASTIC GRAINS/MINERAL 94</b> |  |
| Framework minerals                     |  |
| 30                                     | Quartz 10                              |
|  | Feldspar                               |
|  | K-feldspar (Orthoclase, Microcline...) |
|  | Plagioclase                            |
|  | Rock fragments                         |
| Accessory/trace minerals               |  |
|  | Micas                                  |
|  | Biotite                                |
|  | Muscovite                              |
| 61                                     | Clay Minerals 20                       |
|  | Chlorite                               |
|  | Glauconite                             |
|  | Chert                                  |
|  | Zircon                                 |
| 3                                      | Ferromagnesium minerals 1              |
| Authigenic minerals                    |  |
|  | Barite                                 |
|  | Phosphorite/Apatite                    |
|  | Zeolite                                |
| Opaque minerals                        |  |
|  | Pyrite                                 |
|  | Magnetite                              |
|  | Fe-oxide                               |
| Carbonates                             |  |
|  | Calcite                                |
|  | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>           |  |
|  | Crystal grain                          |
|  |  |
|  |  |
|  | Vitric grain                           |
|  | Lithic grain                           |

| Percent                  | Component                           |
|--------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS 6</b> |                                     |
| Calcareous               |                                     |
|                          | Foraminifera                        |
|                          | Planktonic foraminifera             |
|                          | Benthic foraminifera                |
|                          | Nannofossils                        |
|                          | Coccoliths                          |
|                          | Discoasters                         |
|                          | Pteropods                           |
| Siliceous                |                                     |
|                          | Radiolarians                        |
|                          | Spumellaria                         |
|                          | Nassellaria                         |
| 6                        | 2 Diatoms                           |
|                          | Centric                             |
|                          | Pennate                             |
|                          | <i>Chaetoceros</i> Resting Spores   |
|                          | Silicoflagellates                   |
|                          | Sponge spicules                     |
|                          | Dinoflagellates                     |
| Others                   |                                     |
|                          | Pollen                              |
|                          | Organic debris                      |
|                          | Plant debris                        |
|                          | Ebridians                           |
|                          | Echinoderm                          |
|                          | Fish remains (teeth, bones, scales) |
|                          | Bryozoans                           |
|                          | Bivalves                            |
|                          | Others                              |

v gmv

IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1395 | D    | 9H   |      | 4A  | 15            |        |

|                    |             |          |     |
|--------------------|-------------|----------|-----|
| Sediment/Rock Name | Diatom silt | Observer | Hin |
|--------------------|-------------|----------|-----|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments:

| Percent                                | Component                              |
|--|--|
| <b>SILICICLASTIC GRAINS/MINERAL 62</b> |  |
| Framework minerals                     |  |
| 35                                     | Quartz 30                              |
| 6                                      | Feldspar 5                             |
|  | K-feldspar (Orthoclase, Microcline...) |
|  | Plagioclase                            |
|  | Rock fragments                         |
| Accessory/trace minerals               |  |
|  | Micas                                  |
| 52                                     | Biotite                                |
|  | Muscovite                              |
| 11                                     | Clay Minerals 10                       |
|  | Chlorite                               |
|  | Glaucanite                             |
|  | Chert                                  |
| 12                                     | Zircon                                 |
| 6                                      | Ferromagnesium minerals 5              |
|  |  |
|  |  |
| Authigenic minerals                    |  |
|  | Barite                                 |
|  | Phosphorite/Apatite                    |
|  | Zeolite                                |
| Opaque minerals                        |  |
| 4                                      | Pyrite 3                               |
|  | Magnetite                              |
|  | Fe-oxide                               |
| Carbonates                             |  |
|  | Calcite                                |
|  | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>           |  |
|  | Crystal grain                          |
|  |  |
|  |  |
|  | Vitric grain                           |
|  | Lithic grain                           |

| Percent                   | Component                           |
|---------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS 28</b> |                                     |
| Calcareous                |                                     |
|                           | Foraminifera                        |
| 1                         | 0.5 Planktonic foraminifera         |
|                           | Benthic foraminifera                |
|                           | Nannofossils                        |
|                           | Coccoliths                          |
|                           | Discoasters                         |
|                           | Pteropods                           |
| Siliceous                 |                                     |
|                           | Radiolarians                        |
|                           | Spumellaria                         |
|                           | Nassellaria                         |
|                           | Diatoms                             |
| 24                        | 20 Centric                          |
| 12                        | 10 Pennate                          |
|                           | Chaetoceros Resting Spores          |
| 1                         | Silicoflagellates 0.5               |
|                           | Sponge spicules                     |
|                           | Dinoflagellates                     |
| Others                    |                                     |
|                           | Pollen                              |
|                           | Organic debris                      |
|                           | Plant debris                        |
|                           | Ebridians                           |
|                           | Echinoderm                          |
|                           | Fish remains (teeth, bones, scales) |
|                           | Bryozoans                           |
|                           | Bivalves                            |
|                           | Others                              |

✓ SMV

IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1345 | D    | 9H   |      | 7A  | 50            |        |

|                    |            |          |     |
|--------------------|------------|----------|-----|
| Sediment/Rock Name | silty clay | Observer | H:W |
|--------------------|------------|----------|-----|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments:

| Percent                                | Component                              |
|--|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> SP |  |
|  | Framework minerals                     |
| 56                                     | Quartz ≥ 35                            |
| 5                                      | Feldspar 3                             |
| 61                                     | K-feldspar (Orthoclase, Microcline...) |
|  | Plagioclase                            |
|  | Rock fragments                         |
|  | Accessory/trace minerals               |
| 63                                     | Micas                                  |
| 2                                      | Biotite 1                              |
| 57                                     | Muscovite                              |
| 24                                     | Clay Minerals 15                       |
|  | Chlorite                               |
|  | Glauconite                             |
|  | Chert                                  |
|  | Zircon                                 |
| 11                                     | Ferromagnesium minerals 7              |
|  | Authigenic minerals                    |
|  | Barite                                 |
|  | Phosphorite/Apatite                    |
|  | Zeolite                                |
|  | Opaque minerals                        |
|  | Pyrite                                 |
|  | Magnetite                              |
|  | Fe-oxide                               |
|  | Carbonates                             |
|  | Calcite                                |
|  | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>           |  |
|  | Crystal grain                          |
|  |  |
|  | Vitric grain                           |
|  | Lithic grain                           |

| Percent                  | Component                           |
|--------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS</b> 2 |                                     |
|                          | Calcareous                          |
|                          | Foraminifera                        |
|                          | Planktonic foraminifera             |
|                          | Benthic foraminifera                |
|                          | Nannofossils                        |
|                          | Coccoliths                          |
|                          | Discoasters                         |
|                          | Pteropods                           |
|                          |                                     |
|                          | Siliceous                           |
|                          | Radiolarians                        |
|                          | Spumellaria                         |
|                          | Nassellaria                         |
| 2                        | 2 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

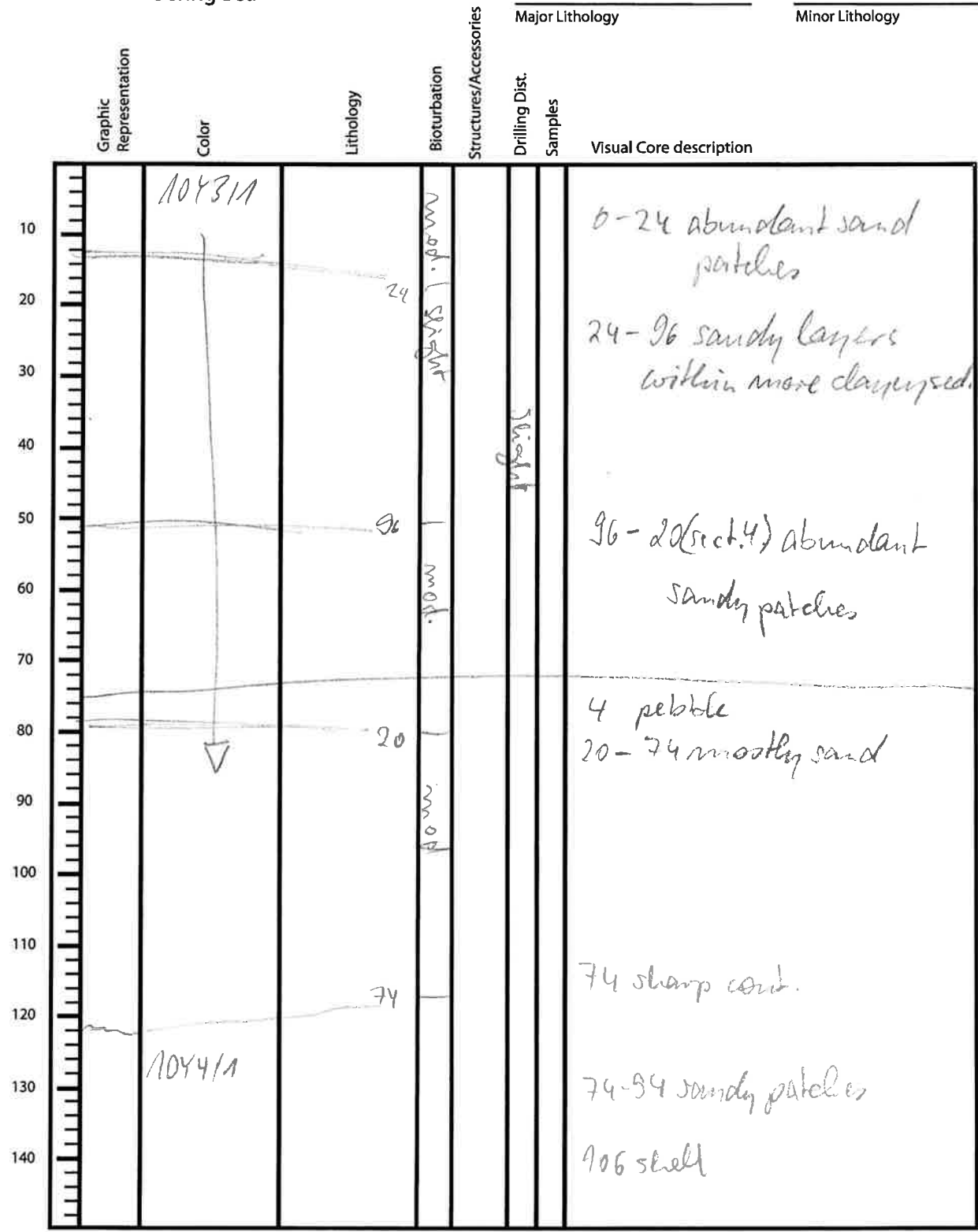
1345 Site    D Hole    10H Core    1+2 Section    \_\_\_\_\_ Top Depth

| Graphic Representation        | Color  | Lithology | Bioturbation | Structures/Accessories | Drilling Dist. Samples | Major Lithology         | Minor Lithology                             |
|-------------------------------|--------|-----------|--------------|------------------------|------------------------|-------------------------|---|
|                               |        |           |              |                        |                        | Visual Core description |   |
| 10-20 cm: Diagonal hatching   | 10Y4/1 |           | mod.         |                        | SPADT                  |                         | 15-25 grad                                  |
| 20-70 cm: Blank               | 4/N    |           |              | 42                     | 1                      |                         |   |
| 30-40 cm: Blank               |        |           |              |                        | 1                      |                         |   |
| 40-50 cm: Blank               |        |           |              |                        | 1                      |                         |   |
| 50-70 cm: Blank               |        |           |              |                        | 1                      |                         |   |
| 70-100 cm: Diagonal hatching  | 10Y4/1 |           |              |                        | SPADT                  |                         | 133   |
| 100-110 cm: Diagonal hatching | 10Y3/1 |           |              |                        |                        |                         | 45-65 abundant sandy patches<br>45-60 grad. |
| 110-140 cm: Blank             |        |           |              |                        |                        |                         |   |

Observer: \_\_\_\_\_ Date: \_\_\_\_\_

1345 Site    D Hole    10H Core    3+4 Section    Top Depth

Expedition 323  
Bering Sea



Observer: \_\_\_\_\_ Date: \_\_\_\_\_

Expedition 323  
Bering Sea

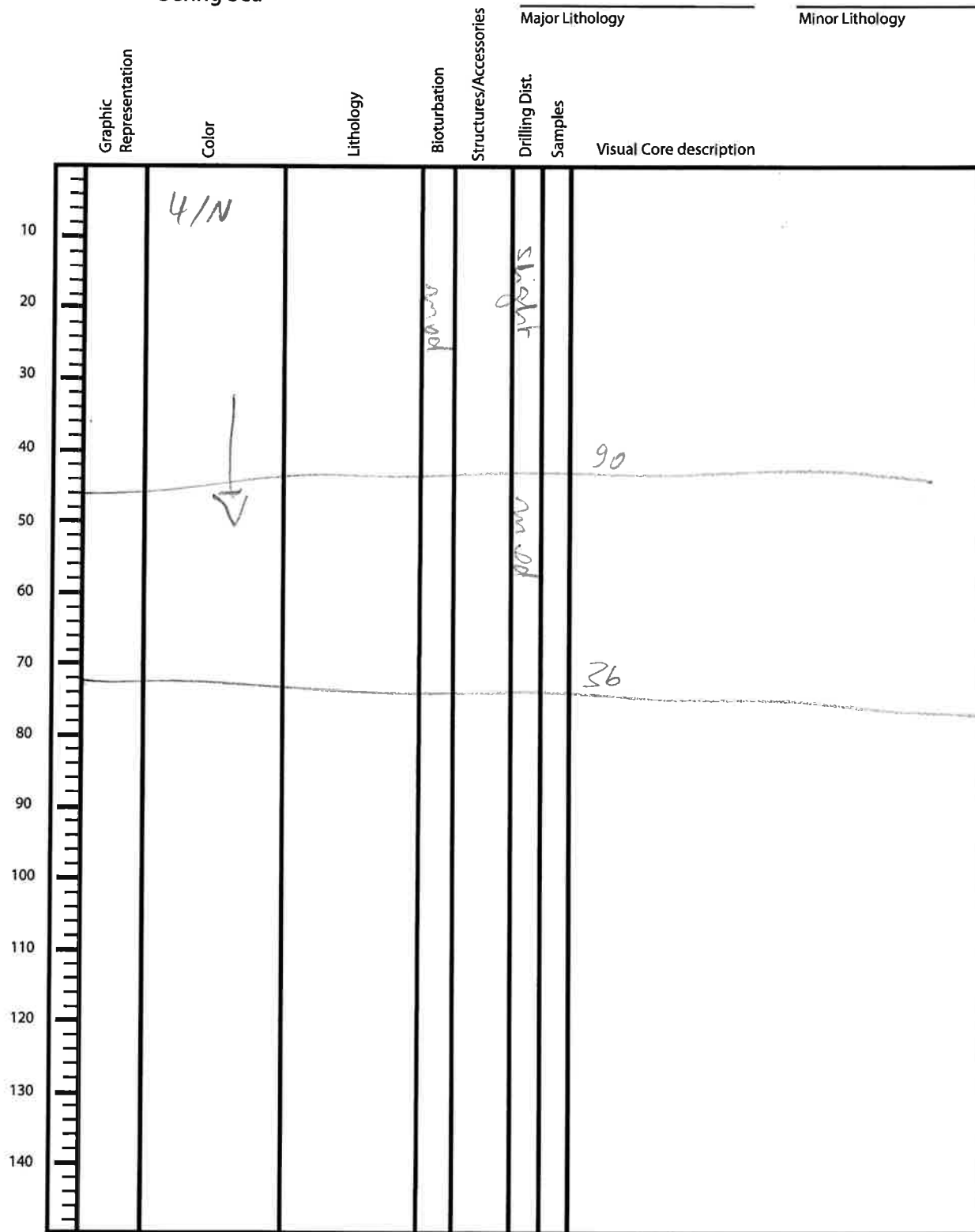
1345 D    10H    5+6  
Site    Hole    Core    Section    Top Depth

| Graphic Representation | Color  | Lithology | Bioturbation | Structures/Accessories | Drilling Dist. Samples | Major Lithology         | Minor Lithology |
|------------------------|--------|-----------|--------------|------------------------|------------------------|-------------------------|-----------------|
|                        |        |           |              |                        |                        | Visual Core description |                 |
|                        | 1044/1 |           |              |                        |                        |                         |                 |
|                        |        |           |              |                        |                        | 24-31 sandy mottles     |                 |
|                        |        |           |              |                        |                        | 56-68 " "               |                 |
|                        |        |           |              |                        |                        | 72-76 sand patch        |                 |
|                        |        |           |              |                        |                        |                         |                 |
|                        | 5644/1 |           |              |                        |                        | 90-110 grad             |                 |
|                        |        |           |              |                        |                        |                         |                 |
|                        |        |           |              |                        |                        | 19 shell                |                 |
|                        | 41N    |           |              |                        |                        | 30-50 grad.             |                 |
|                        |        |           |              |                        |                        |                         |                 |
|                        |        |           |              |                        |                        | 108 shell               |                 |

Observer: \_\_\_\_\_ Date: \_\_\_\_\_

Expedition 323  
Bering Sea

1345 Site    D Hole    10H Core    7+cc Section    Top Depth



Observer: \_\_\_\_\_ Date: \_\_\_\_\_



IODP Expedition 323  
 SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1345 | D    | 1011 |      | 2A  | 28            |        |

|                    |                                   |          |      |
|--------------------|-----------------------------------|----------|------|
| Sediment/Rock Name | Diatom <sup>with</sup> Sandy silt | Observer | Hiro |
|--------------------|-----------------------------------|----------|------|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments:

| Percent                                | Component                              |
|--|--|
| <b>SILICICLASTIC GRAINS/MINERAL 50</b> |  |
|  | Framework minerals                     |
| 59                                     | Quartz 20                              |
| 6                                      | Feldspar # 2                           |
|  | K-feldspar (Orthoclase, Microcline...) |
|  | Plagioclase                            |
| 9                                      | Rock fragments 3                       |
|  | Accessory/trace minerals               |
|  | Micas                                  |
|  | Biotite                                |
|  | Muscovite                              |
|  | Clay Minerals                          |
|  | Chlorite                               |
|  | Glaucanite                             |
|  | Chert                                  |
|  | Zircon                                 |
| 6                                      | Ferromagnesium minerals 2              |
|  | Authigenic minerals                    |
|  | Barite                                 |
|  | Phosphorite/Apatite                    |
|  | Zeolite                                |
|  | Opaque minerals                        |
|  | Pyrite 3                               |
|  | Magnetite                              |
|  | Fe-oxide                               |
|  | Carbonates                             |
|  | Calcite                                |
|  | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>           |  |
|  | Crystal grain                          |
|  | Vitric grain                           |
|  | Lithic grain                           |

| Percent                   | Component                           |
|---------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS 20</b> |                                     |
|                           | Calcareous                          |
|                           | Foraminifera                        |
|                           | Planktonic foraminifera             |
|                           | Benthic foraminifera                |
|                           | Nannofossils                        |
|                           | Coccoliths                          |
|                           | Discoasters                         |
|                           | Pteropods                           |
|                           | Siliceous                           |
|                           | Radiolarians                        |
|                           | Spumellaria                         |
|                           | Nassellaria                         |
| (20)                      | 7 Diatoms                           |
|                           | Centric                             |
|                           | Pennate                             |
|                           | Chaetoceros Resting Spores          |
|                           | Silicoflagellates                   |
|                           | Sponge spicules                     |
|                           | Dinoflagellates                     |
|                           | Others                              |
|                           | Pollen                              |
|                           | Organic debris                      |
|                           | Plant debris                        |
|                           | Ebridians                           |
|                           | Echinoderm                          |
|                           | Fish remains (teeth, bones, scales) |
|                           | Bryozoans                           |
|                           | Bivalves                            |
|                           | Others                              |

SM

IODP Expedition 323  
 SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1345 | D    | 10H  |      | 2A  | 114           |        |

|                    |                            |          |       |
|--------------------|----------------------------|----------|-------|
| Sediment/Rock Name | Diatom bearing clayey sand | Observer | H. W. |
|--------------------|----------------------------|----------|-------|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments:

| Percent  | Component                              |
|--|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> <del>75</del> 93 |  |
|  | Framework minerals                     |
| 32   | Quartz 10 15                           |
|  | Feldspar                               |
|  | K-feldspar (Orthoclase, Microcline...) |
|  | Plagioclase                            |
| 11   | Rock fragments 5                       |
|  | Accessory/trace minerals               |
|  | Micas                                  |
|  | Biotite                                |
|  | Muscovite                              |
|  | Clay Minerals                          |
|  | Chlorite                               |
|  | Glaucanite                             |
|  | Chert                                  |
|  | Zircon                                 |
| 32   | Ferromagnesium minerals 20 10 15       |
|  | Authigenic minerals                    |
|  | Barite                                 |
|  | Phosphorite/Apatite                    |
|  | Zeolite                                |
|  | Opaque minerals                        |
| 12 15  | Pyrite 5                               |
|  | Magnetite                              |
|  | Fe-oxide                               |
|  | Carbonates                             |
| 6  | Calcite Auth. Carbonate                |
|  | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>                         |  |
|  | Crystal grain                          |
|  |  |
|  | Vitric grain                           |
|  | Lithic grain                           |

| Percent                     | Component                           |
|-----------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS</b> 10 7 |                                     |
|                             | Calcareous                          |
|                             | Foraminifera                        |
|                             | Planktonic foraminifera             |
|                             | Benthic foraminifera                |
|                             | Nannofossils                        |
|                             | Coccoliths                          |
|                             | Discoasters                         |
|                             | Pteropods                           |
|                             | Siliceous                           |
|                             | Radiolarians                        |
|                             | Spumellaria                         |
|                             | Nassellaria                         |
| 7 10 7                      | 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

✓ JM

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1345 | D    | 10H  |      | 4A  | 25            |        |

|                    |                           |          |      |
|--------------------|---------------------------|----------|------|
| Sediment/Rock Name | Diatom-bearing silty clay | Observer | Hino |
|--------------------|---------------------------|----------|------|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments:

| Percent                                | Component                              |
|--|--|
| <b>SILICICLASTIC GRAINS/MINERAL 92</b> |  |
| Framework minerals                     |  |
| 43                                     | Quartz 15                              |
| 6                                      | Feldspar 2                             |
|  | K-feldspar (Orthoclase, Microcline...) |
|  | Plagioclase                            |
|  | Rock fragments                         |
| Accessory/trace minerals               |  |
|  | Micas                                  |
|  | Biotite                                |
|  | Muscovite                              |
| 20                                     | Clay Minerals 7                        |
|  | Chlorite                               |
|  | Glaucinite                             |
|  | Chert                                  |
|  | Zircon                                 |
| 9                                      | Ferromagnesium minerals 3              |
| Authigenic minerals                    |  |
|  | Barite                                 |
|  | Phosphorite/Apatite                    |
|  | Zeolite                                |
| Opaque minerals                        |  |
| 14                                     | Pyrite 5                               |
|  | Magnetite                              |
|  | Fe-oxide                               |
| Carbonates                             |  |
|  | Calcite                                |
|  | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>           |  |
|  | Crystal grain                          |
|  |  |
|  | Vitric grain                           |
|  | Lithic grain                           |

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

IODP Expedition 323  
 SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | B45  | D    | 10H  |      | 7A  | 60            | 60     |

|                    |                  |          |      |
|--------------------|------------------|----------|------|
| Sediment/Rock Name | Diatom-rich silt | Observer | Hiro |
|--------------------|------------------|----------|------|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments:

| Percent                                | Component                              |
|--|--|
| <b>SILICICLASTIC GRAINS/MINERAL 90</b> |  |
|  | Framework minerals 15                  |
| 54                                     | Quartz 15                              |
|  | Feldspar                               |
|  | K-feldspar (Orthoclase, Microcline...) |
|  | Plagioclase                            |
|  | Rock fragments                         |
|  | Accessory/trace minerals               |
|  | Micas                                  |
|  | Biotite                                |
| φ                                      | Muscovite                              |
| 11                                     | Clay Minerals 3                        |
|  | Chlorite                               |
|  | Glauconite                             |
|  | Chert                                  |
|  | Zircon                                 |
| 27                                     | Ferromagnesium minerals 7              |
|  | Authigenic minerals                    |
|  | Barite                                 |
|  | Phosphorite/Apatite                    |
|  | Zeolite                                |
|  | Opaque minerals                        |
|  | Pyrite                                 |
|  | Magnetite                              |
|  | Fe-oxide                               |
|  | Carbonates                             |
|  | Calcite                                |
|  | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>           |  |
|  | Crystal grain                          |
|  |  |
|  | Vitric grain                           |
|  | Lithic grain                           |

| Percent                   | Component                           |
|---------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS 10</b> |                                     |
|                           | Calcareous                          |
|                           | Foraminifera                        |
|                           | Planktonic foraminifera             |
|                           | Benthic foraminifera                |
|                           | Nannofossils                        |
|                           | Coccoliths                          |
|                           | Discoasters                         |
|                           | Pteropods                           |
|                           | Siliceous                           |
|                           | Radiolarians                        |
|                           | Spumellaria                         |
|                           | Nassellaria                         |
| 11                        | Diatoms 3                           |
|                           | Centric                             |
|                           | Pennate                             |
|                           | <i>Chaetoceros</i> Resting Spores   |
|                           | Silicoflagellates                   |
|                           | Sponge spicules                     |
|                           | Dinoflagellates                     |
|                           | Others                              |
|                           | Pollen                              |
|                           | Organic debris                      |
|                           | Plant debris                        |
|                           | Ebridians                           |
|                           | Echinoderm                          |
|                           | Fish remains (teeth, bones, scales) |
|                           | Bryozoans                           |
|                           | Bivalves                            |
|                           | Others                              |

1345 D MH 142  
Site Hole Core Section Top Depth


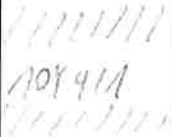
Expedition 323  
Bering Sea

|                        |         | Major Lithology |              |                        | Minor Lithology        |                         |
|------------------------|---------|-----------------|--------------|------------------------|------------------------|-------------------------|
| Graphic Representation | Color   | Lithology       | Bioturbation | Structures/Accessories | Drilling Dist. Samples | Visual Core description |
|                        | 4W<br>↓ |                 | 40 W         |                        | 102                    |                         |

Observer: \_\_\_\_\_ Date: \_\_\_\_\_

1345  $\emptyset$  MH 3+4  
 Site Hole Core Section Top Depth

Expedition 323  
 Bering Sea

|                        |   | Major Lithology |              | Minor Lithology        |                        |                                  |
|------------------------|---|-----------------|--------------|------------------------|------------------------|----------------------------------|
| Graphic Representation | Color   | Lithology       | Bioturbation | Structures/Accessories | Drilling Dist. Samples | Visual Core description          |
|                        | 4/N   |                 | low          |                        | 10-80                  | 4-6 coarse pebble, grey, angular |
|                        |   |                 |              |                        |                        | 55-60 grad.                      |
|                        |  |                 |              |                        | 62-88                  | 62-88 cradles                    |
|                        | 4/N   |                 |              |                        | 88                     | 72-83 grad.                      |

Observer: \_\_\_\_\_ Date: \_\_\_\_\_

Expedition 323  
Bering Sea

1345 Site    J Hole    114 Core    5+6 Section    Top Depth

| Major Lithology        |                      | Minor Lithology |              |                        |                        |                            |
|------------------------|----------------------|-----------------|--------------|------------------------|------------------------|----------------------------|
| Graphic Representation | Color                | Lithology       | Bioturbation | Structures/Accessories | Drilling Dist. Samples | Visual Core description    |
|                        | 4 / N                |                 |              |                        |                        |                            |
| 10                     |                      |                 |              |                        |                        |                            |
| 20                     |                      |                 |              |                        |                        |                            |
| 30                     |                      |                 |              |                        |                        |                            |
| 40                     |                      |                 |              |                        |                        |                            |
| 50                     |                      |                 |              |                        |                        |                            |
| 60                     |                      |                 |              |                        |                        |                            |
| 70                     |                      |                 |              |                        |                        |                            |
| 75                     |                      |                 |              |                        |                        |                            |
| 80                     | 10Y4/1               | 16              |              |                        |                        | 25-50 med. parallel lam.   |
| 90                     | 10Y4/1 + 4/N (40160) | 25              |              |                        |                        |                            |
| 100                    |                      | 50              |              |                        |                        |                            |
| 110                    | 4/N                  |                 |              |                        |                        |                            |
| 120                    |                      |                 |              |                        |                        |                            |
| 130                    |                      |                 |              |                        |                        |                            |
| 140                    | 10Y4/1 + 4/N (40160) |                 |              |                        |                        | 144-150 med. parallel lam. |

Observer: \_\_\_\_\_ Date: \_\_\_\_\_

1345 D MH 7+cc  
 Site Hole Core Section Top Depth

Expedition 323  
 Bering Sea

| Graphic Representation | Color                             | Lithology | Bioturbation   | Structures/Accessories | Drilling Dist. | Samples | Major Lithology  | Minor Lithology |
|------------------------|-----------------------------------|-----------|----------------|------------------------|----------------|---------|--|-----------------|
|                        |                                   |           |                |                        |                |         | Visual Core description  |                 |
|                        | 10Y4/1+<br>4/10 (40/80)<br>10Y4/1 |           | 100 m<br>100 m |                        |                |         | 0-12 med. parallel lam.<br><br>77 pebble, subrounded,<br>light |                 |
|                        | ↓                                 |           |                |                        |                |         | 34<br>0-10 disturbed and filled<br>w. med. parallel lam.<br>32 |                 |

Observer: \_\_\_\_\_ Date: \_\_\_\_\_



U V SM

IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1345 | D    | 11H  |      | 2A  | 23            |        |

|                    |      |          |      |
|--------------------|------|----------|------|
| Sediment/Rock Name | silt | Observer | Hiro |
|--------------------|------|----------|------|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments:

| Percent                                | Component                              |
|--|--|
| <b>SILICICLASTIC GRAINS/MINERAL 97</b> |  |
|  | Framework minerals                     |
|  | Quartz 80                              |
|  | Feldspar                               |
|  | K-feldspar (Orthoclase, Microcline...) |
|  | Plagioclase                            |
|  | Rock fragments 10 \$ 10                |
|  | Accessory/trace minerals               |
|  | Micas                                  |
|  | Biotite                                |
|  | Muscovite                              |
|  | Clay Minerals                          |
|  | Chlorite                               |
|  | Glaucanite                             |
|  | Chert                                  |
|  | Zircon                                 |
|  | Ferromagnesium minerals 2              |
|  | Authigenic minerals                    |
|  | Barite                                 |
|  | Phosphorite/Apatite                    |
|  | Zeolite                                |
|  | Opaque minerals                        |
|  | Pyrite 5                               |
|  | Magnetite                              |
|  | Fe-oxide                               |
|  | Carbonates                             |
|  | Calcite                                |
|  | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>           |  |
|  | Crystal grain                          |
|  |  |
|  | Vitric grain                           |
|  | Lithic grain                           |

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

IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

✓ ✓ SM

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | B415 | D    | 114  |      | 3A  | 60            | 60     |

|                    |                  |          |      |
|--------------------|------------------|----------|------|
| Sediment/Rock Name | Diatom-rich silt | Observer | Hiro |
|--------------------|------------------|----------|------|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments:

| Percent                                | Component                              |
|--|--|
| <b>SILICICLASTIC GRAINS/MINERAL 89</b> |  |
|  | Framework minerals                     |
| 60                                     | Quartz 10                              |
| 5                                      | Feldspar 1                             |
|  | K-feldspar (Orthoclase, Microcline...) |
|  | Plagioclase                            |
| 12                                     | Rock fragments 2                       |
|  | Accessory/trace minerals               |
|  | Micas                                  |
|  | Biotite                                |
|  | Muscovite                              |
|  | Clay Minerals                          |
|  | Chlorite                               |
|  | Glaucanite                             |
|  | Chert                                  |
|  | Zircon                                 |
| 6                                      | Ferromagnesium minerals 1              |
|  | Authigenic minerals                    |
|  | Barite                                 |
|  | Phosphorite/Apatite                    |
|  | Zeolite                                |
|  | Opaque minerals                        |
| 6                                      | Pyrite 1                               |
|  | Magnetite                              |
|  | Fe-oxide                               |
|  | Carbonates                             |
|  | Calcite                                |
|  | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>           |  |
|  | Crystal grain                          |
|  |  |
|  | Vitric grain                           |
|  | Lithic grain                           |

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

IODP Expedition 323  
 SEDIMENT SMEAR SLIDE WORKSHEET

✓ ✓ SM

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1345 | D    | 114  |      | 4A  | 67            |        |

|                    |   |          |      |
|--------------------|---|----------|------|
| Sediment/Rock Name | Authi. Carb. rich diatom rich<br>silty clay | Observer | Hiro |
|--------------------|---|----------|------|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments:

| Percent                             | Component                              |
|-------------------------------------|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> |  |
|                                     | Framework minerals                     |
| 14                                  | Quartz 3                               |
| 5                                   | Feldspar 1                             |
|                                     | K-feldspar (Orthoclase, Microcline...) |
| 5                                   | Plagioclase                            |
|                                     | Rock fragments 1                       |
|                                     | Accessory/trace minerals               |
|                                     | Micas                                  |
|                                     | Biotite                                |
|                                     | Muscovite                              |
| 14                                  | Clay Minerals 3                        |
|                                     | Chlorite                               |
|                                     | Glaucanite                             |
|                                     | Chert                                  |
|                                     | Zircon                                 |
| 5                                   | Ferromagnesium minerals 1              |
|                                     | Authigenic minerals                    |
|                                     | Barite                                 |
|                                     | Phosphorite/Apatite                    |
|                                     | Zeolite                                |
|                                     | Opaque minerals                        |
|                                     | Pyrite                                 |
|                                     | Magnetite                              |
|                                     | Fe-oxide                               |
|                                     | Carbonates                             |
| 48                                  | Calcite 10.                            |
|                                     | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>        |  |
|                                     | Crystal grain                          |
|                                     |  |
|                                     | Vitric grain                           |
|                                     | Lithic grain                           |

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

✓ ✓ SM

IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1345 | D    | 11H  |      | 7A  | 40            |        |

|                    |                  |          |       |
|--------------------|------------------|----------|-------|
| Sediment/Rock Name | Diatom-rich silt | Observer | H. W. |
|--------------------|------------------|----------|-------|

(Coarser than  
11H 3A - 60cm)

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments: Lamination

| Percent                                | Component                              |
|--|--|
| <b>SILICICLASTIC GRAINS/MINERAL 65</b> |  |
| Framework minerals                     |  |
| 43                                     | Quartz 10                              |
| 4                                      | Feldspar 1                             |
|  | K-feldspar (Orthoclase, Microcline...) |
|  | Plagioclase                            |
|  | Rock fragments                         |
| Accessory/trace minerals               |  |
|  | Micas                                  |
|  | Biotite                                |
|  | Muscovite                              |
|  | Clay Minerals                          |
|  | Chlorite                               |
|  | Glaucanite                             |
|  | Chert                                  |
|  | Zircon                                 |
| 9                                      | Ferromagnesium minerals 2              |
| Authigenic minerals                    |  |
|  | Barite                                 |
|  | Phosphorite/Apatite                    |
|  | Zeolite                                |
| Opaque minerals                        |  |
| 9                                      | Pyrite 2                               |
|  | Magnetite                              |
|  | Fe-oxide                               |
| Carbonates                             |  |
|  | Calcite                                |
|  | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>           |  |
|  | Crystal grain                          |
|  |  |
|  | Vitric grain                           |
|  | Lithic grain                           |

| Percent                   | Component                           |
|---------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS 35</b> |                                     |
| Calcareous                |                                     |
|                           | Foraminifera                        |
|                           | Planktonic foraminifera             |
|                           | Benthic foraminifera                |
|                           | Nannofossils                        |
|                           | Coccoliths                          |
|                           | Discoasters                         |
|                           | Pteropods                           |
| Siliceous                 |                                     |
|                           | Radiolarians                        |
|                           | Spumellaria                         |
|                           | Nassellaria                         |
| 35                        | 8 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

1345 Site    D Hole    12H Core    3+4 Section    \_\_\_\_\_ Top Depth

|                        |       | Major Lithology |              |                        | Minor Lithology |                             |
|------------------------|-------|-----------------|--------------|------------------------|-----------------|-----------------------------|
| Graphic Representation | Color | Lithology       | Bioturbation | Structures/Accessories | Drilling Dist.  | Samples                     |
|                        | 4/N   |                 |              |                        |                 | 0-97 sandy nodules          |
|                        |       |                 |              | 100W                   | Shelf           | 49 pebble, grey, subrounded |
|                        |       |                 |              |                        |                 | 97-100 Lith. sandy layer    |
|                        |       |                 |              |                        |                 | 85-107 cracks               |
|                        |       |                 |              | 85                     |                 |                             |
|                        |       |                 |              | 107                    | 1 post. 1       |                             |

Observer: \_\_\_\_\_ Date: \_\_\_\_\_

Expedition 323  
Bering Sea

1345 Site    D Hole    12H Core    5+6 Section    \_\_\_\_\_ Top Depth

| Graphic Representation | Color | Lithology | Bioturbation | Structures/Accessories | Drilling Dist. | Samples | Major Lithology         | Minor Lithology |
|------------------------|-------|-----------|--------------|------------------------|----------------|---------|-------------------------|-----------------|
|                        |       |           |              |                        |                |         | Visual Core description |                 |
|                        | 4/N   |           | Mod.         | shells                 |                |         | 44 $\phi$ 150 (sect. 5) | Sandy nodules   |
| 10                     |       |           |              |                        |                |         |                         |                 |
| 20                     |       |           |              |                        |                |         |                         |                 |
| 30                     |       |           |              |                        |                |         |                         |                 |
| 40                     |       |           |              |                        |                |         |                         |                 |
| 50                     |       |           |              |                        |                |         |                         |                 |
| 60                     |       |           |              |                        |                |         |                         |                 |
| 70                     |       |           |              |                        |                |         |                         |                 |
| 80                     |       |           |              |                        |                |         |                         |                 |
| 90                     |       |           |              |                        |                |         |                         |                 |
| 100                    |       |           |              |                        |                |         |                         |                 |
| 110                    |       |           |              |                        |                |         |                         |                 |
| 120                    |       |           |              |                        |                |         |                         |                 |
| 130                    |       |           |              |                        |                |         |                         |                 |
| 140                    |       |           |              |                        |                |         |                         |                 |

Observer: \_\_\_\_\_ Date: \_\_\_\_\_

Expedition 323  
Bering Sea

1845 D 12H 7+cc  
Site Hole Core Section Top Depth

| Graphic Representation | Color  | Lithology | Bioturbation | Structures/Accessories | Drilling Dist. | Samples | Major Lithology             | Minor Lithology |
|------------------------|--------|-----------|--------------|------------------------|----------------|---------|-----------------------------|-----------------|
|                        |        |           |              |                        |                |         | Visual Core description     |                 |
|                        | 10Y4/1 |           |              |                        |                |         |                             |                 |
|                        |        |           |              |                        |                |         |                             |                 |
|                        | 10Y3/1 |           |              |                        |                |         |                             |                 |
|                        | ↓      |           |              |                        |                |         |                             |                 |
|                        |        |           |              |                        |                |         | 45-60 grad.                 |                 |
|                        |        |           |              |                        |                |         | 0-75 abundant sandy patches |                 |
|                        |        |           |              |                        |                |         | 75                          |                 |
|                        |        |           |              |                        |                |         | 86                          |                 |
|                        |        |           |              |                        |                |         | ↓                           |                 |
|                        |        |           |              |                        |                |         | 12                          | ... 12 sandy    |

Observer: \_\_\_\_\_ Date: \_\_\_\_\_



IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1345 | D    | 12H  |      | 2   | 12.5          |        |

1A ✓ SM

|                    |                  |          |       |
|--------------------|------------------|----------|-------|
| Sediment/Rock Name | Diatom-rich clay | Observer | Hiro. |
|--------------------|------------------|----------|-------|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments:

| Percent                                | Component                              |
|--|--|
| <b>SILICICLASTIC GRAINS/MINERAL 24</b> |  |
|  | Framework minerals 20                  |
| 26                                     | Quartz 5                               |
|  | Feldspar                               |
|  | K-feldspar (Orthoclase, Microcline...) |
|  | Plagioclase                            |
|  | Rock fragments                         |
|  | Accessory/trace minerals               |
|  | Micas                                  |
|  | Biotite                                |
|  | Muscovite                              |
| 40 46 42                               | Clay Minerals 8                        |
|  | Chlorite                               |
|  | Glaucanite                             |
|  | Chert                                  |
|  | Zircon                                 |
| 16                                     | Ferromagnesium minerals 3              |
|  | Authigenic minerals                    |
|  | Barite                                 |
|  | Phosphorite/Apatite                    |
|  | Zeolite                                |
|  | Opaque minerals                        |
|  | Pyrite                                 |
|  | Magnetite                              |
|  | Fe-oxide                               |
| 2                                      | Carbonates Authi Carb                  |
|  | Calcite                                |
|  | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>           |  |
|  | Crystal grain                          |
|  |  |
|  | Vitric grain                           |
|  | Lithic grain                           |

| Percent                   | Component                           |
|---------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS 16</b> |                                     |
|                           | Calcareous                          |
|                           | Foraminifera                        |
|                           | Planktonic foraminifera             |
|                           | Benthic foraminifera                |
|                           | Nannofossils                        |
|                           | Coccoliths                          |
|                           | Discoasters                         |
|                           | Pteropods                           |
|                           | Siliceous                           |
|                           | Radiolarians                        |
|                           | Spumellaria                         |
|                           | Nassellaria                         |
| 16                        | 3 Diatoms 3                         |
|                           | Centric                             |
|                           | Pennate                             |
|                           | Chaetoceros Resting Spores          |
|                           | Silicoflagellates                   |
|                           | Sponge spicules                     |
|                           | Dinoflagellates                     |
|                           | Others                              |
|                           | Pollen                              |
|                           | Organic debris                      |
|                           | Plant debris                        |
|                           | Ebridians                           |
|                           | Echinoderm                          |
|                           | Fish remains (teeth, bones, scales) |
|                           | Bryozoans                           |
|                           | Bivalves                            |
|                           | Others                              |

IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1345 | D    | 124  |      | 3A  | 55            |        |

|                    |                        |          |      |
|--------------------|------------------------|----------|------|
| Sediment/Rock Name | Diatom-rich silty clay | Observer | Hiro |
|--------------------|------------------------|----------|------|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments:

| Percent                                | Component                              |
|--|--|
| <b>SILICICLASTIC GRAINS/MINERAL 69</b> |  |
| Framework minerals                     |  |
| 44                                     | Quartz 7                               |
| 13                                     | Feldspar 2                             |
|  | K-feldspar (Orthoclase, Microcline...) |
|  | Plagioclase                            |
| 6                                      | Rock fragments 1                       |
| Accessory/trace minerals               |  |
|  | Micas                                  |
|  | Biotite                                |
|  | Muscovite                              |
|  | Clay Minerals                          |
|  | Chlorite                               |
|  | Glaucanite                             |
|  | Chert                                  |
|  | Zircon                                 |
| 6                                      | Ferromagnesium minerals 1              |
| Authigenic minerals                    |  |
|  | Barite                                 |
|  | Phosphorite/Apatite                    |
|  | Zeolite                                |
| Opaque minerals                        |  |
|  | Pyrite                                 |
|  | Magnetite                              |
|  | Fe-oxide                               |
| Carbonates                             |  |
|  | Calcite                                |
|  | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>           |  |
|  | Crystal grain                          |
|  |  |
|  | Vitric grain                           |
|  | Lithic grain                           |

| Percent                   | Component                           |
|---------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS 31</b> |                                     |
| Calcareous                |                                     |
|                           | Foraminifera                        |
|                           | Planktonic foraminifera             |
|                           | Benthic foraminifera                |
|                           | Nannofossils                        |
|                           | Coccoliths                          |
|                           | Discoasters                         |
|                           | Pteropods                           |
| Siliceous                 |                                     |
|                           | Radiolarians                        |
|                           | Spumellaria                         |
|                           | Nassellaria                         |
| 31                        | Diatoms 4-5                         |
|                           | Centric                             |
|                           | Pennate                             |
|                           | Chaetoceros Resting Spores          |
|                           | Silicoflagellates                   |
|                           | Sponge spicules                     |
|                           | Dinoflagellates                     |
| Others                    |                                     |
|                           | Pollen                              |
|                           | Organic debris                      |
|                           | Plant debris                        |
|                           | Ebridians                           |
|                           | Echinoderm                          |
|                           | Fish remains (teeth, bones, scales) |
|                           | Bryozoans                           |
|                           | Bivalves                            |
|                           | Others                              |

IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 923 | 1345 | D    | 12H  |      | 5A  | 53            |        |

|                    |                  |          |      |
|--------------------|------------------|----------|------|
| Sediment/Rock Name | Diatom-rich silt | Observer | Hiro |
|--------------------|------------------|----------|------|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments:

| Percent                                | Component                              |
|--|--|
| <b>SILICICLASTIC GRAINS/MINERAL 86</b> |  |
| Framework minerals                     |  |
| 25                                     | Quartz 7                               |
| 11                                     | Feldspar 3                             |
|  | K-feldspar (Orthoclase, Microcline...) |
|  | Plagioclase                            |
|  | Rock fragments                         |
| Accessory/trace minerals               |  |
|  | Micas                                  |
|  | Biotite                                |
|  | Muscovite                              |
| 36                                     | Clay Minerals 10                       |
|  | Chlorite                               |
|  | Glaucanite                             |
|  | Chert                                  |
|  | Zircon                                 |
| 7                                      | Ferromagnesium minerals 2              |
| Authigenic minerals                    |  |
|  | Barite                                 |
|  | Phosphorite/Apatite                    |
|  | Zeolite                                |
| Opaque minerals                        |  |
| 7                                      | Pyrite 2                               |
|  | Magnetite                              |
|  | Fe-oxide                               |
| Carbonates                             |  |
|  | Calcite                                |
|  | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>           |  |
|  | Crystal grain                          |
|  |  |
|  | Vitric grain                           |
|  | Lithic grain                           |

| Percent                   | Component                           |
|---------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS 14</b> |                                     |
| Calcareous                |                                     |
|                           | Foraminifera                        |
|                           | Planktonic foraminifera             |
|                           | Benthic foraminifera                |
|                           | Nannofossils                        |
|                           | Coccoliths                          |
|                           | Discoasters                         |
|                           | Pteropods                           |
| Siliceous                 |                                     |
|                           | Radiolarians                        |
|                           | Spumellaria                         |
|                           | Nassellaria                         |
| 14                        | 4 Diatoms                           |
|                           | Centric                             |
|                           | Pennate                             |
|                           | Chaetoceros Resting Spores          |
|                           | Silicoflagellates                   |
|                           | Sponge spicules                     |
|                           | Dinoflagellates                     |
| Others                    |                                     |
|                           | Pollen                              |
|                           | Organic debris                      |
|                           | Plant debris                        |
|                           | Ebridians                           |
|                           | Echinoderm                          |
|                           | Fish remains (teeth, bones, scales) |
|                           | Bryozoans                           |
|                           | Bivalves                            |
|                           | Others                              |

SM

IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | B95  | D    | 12H  |      | 7A  | 80            |        |

|                    |                        |          |      |
|--------------------|------------------------|----------|------|
| Sediment/Rock Name | Diatom-rich silty sand | Observer | Hino |
|--------------------|------------------------|----------|------|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments:

| Percent                                | Component                              |
|--|--|
| <b>SILICICLASTIC GRAINS/MINERAL 72</b> |  |
|  | Framework minerals                     |
| 24                                     | Quartz 5                               |
| 5                                      | Feldspar 5 1                           |
|  | K-feldspar (Orthoclase, Microcline...) |
| 21                                     | Plagioclase                            |
| 5                                      | Rock fragments 1                       |
|  | Accessory/trace minerals               |
|  | Micas                                  |
|  | Biotite                                |
|  | Muscovite                              |
|  | Clay Minerals                          |
|  | Chlorite                               |
|  | Glaucanite                             |
|  | Chert                                  |
|  | Zircon                                 |
| 21                                     | Ferromagnesium minerals 5              |
|  | Authigenic minerals                    |
|  | Barite                                 |
|  | Phosphorite/Apatite                    |
|  | Zeolite                                |
|  | Opaque minerals                        |
| 14                                     | Pyrite 3                               |
|  | Magnetite                              |
|  | Fe-oxide                               |
|  | Carbonates                             |
|  | Calcite                                |
|  | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>           |  |
|  | Crystal grain                          |
|  |  |
|  | Vitric grain                           |
|  | Lithic grain                           |

| Percent                   | Component                           |
|---------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS 28</b> |                                     |
|                           | Calcareous                          |
|                           | Foraminifera                        |
| 34 1                      | Planktonic foraminifera             |
|                           | Benthic foraminifera                |
|                           | Nannofossils                        |
|                           | Coccoliths                          |
|                           | Discoasters                         |
|                           | Pteropods                           |
|                           | Siliceous                           |
|                           | Radiolarians                        |
|                           | Spumellaria                         |
|                           | Nassellaria                         |
| 24 5                      | Diatoms                             |
|                           | Centric                             |
|                           | Pennate                             |
|                           | <i>Chaetoceros</i> Resting Spores   |
|                           | Silicoflagellates                   |
|                           | Sponge spicules                     |
|                           | Dinoflagellates                     |
|                           | Others                              |
|                           | Pollen                              |
|                           | Organic debris                      |
|                           | Plant debris                        |
|                           | Ebridians                           |
|                           | Echinoderm                          |
|                           | Fish remains (teeth, bones, scales) |
|                           | Bryozoans                           |
|                           | Bivalves                            |
|                           | Others                              |

**Expedition 323  
Bering Sea**

|     | Graphic Representation | Color               | Lithology | Bioturbation | Structures/Accessories | Drilling Dist. | Samples | Major Lithology / Minor Lithology<br>Visual Core description |
|-----|------------------------|---------------------|-----------|--------------|------------------------|----------------|---------|--|
| 10  |                        | 104411              |           |              |                        |                |         |  |
| 20  |                        | ↓                   |           | slight       |                        | smooth         |         |  |
| 30  |                        |                     |           |              |                        |                |         | 73   |
| 40  |                        |                     |           |              |                        | slight         |         | 38-40 coarse pebble,<br>polyolith, subrounded                |
| 50  |                        | 104411+             | 47        |              | 48                     | mod.           |         | 44-107 med. parallel lam.                                    |
| 60  |                        | 4/N+                |           |              |                        | 72             |         |  |
| 70  |                        | 5YS/2<br>(50/40/10) |           | slight       |                        | slight         |         | 107-7 (sect. 3) thick<br>parallel lam.                       |
| 80  |                        | 104411+             | 107       |              |                        |                |         |  |
| 90  |                        | 4/N<br>(40/60)      |           |              |                        |                |         |  |
| 100 |                        |                     |           |              |                        |                |         |  |
| 110 |                        |                     |           |              |                        |                |         |  |
| 120 |                        |                     |           |              |                        |                |         |  |
| 130 |                        |                     |           |              |                        |                |         |  |
| 140 |                        |                     |           |              |                        |                |         |  |

Observer: \_\_\_\_\_ Date: \_\_\_\_\_

1345 D 13H 3+4  
 Site Hole Core Section Top Depth

Expedition 323  
 Bering Sea

| Graphic Representation | Color | Lithology                                     | Bioturbation | Structures/Accessories | Drilling Dist. | Samples | Major Lithology         | Minor Lithology   |
|------------------------|-------|---|--------------|------------------------|----------------|---------|-------------------------|---|
|                        |       |   |              |                        |                |         | Visual Core description |   |
|                        |       |   |              |                        |                |         |                         |   |
|                        | 7     | 10Y4/1+<br>4/1N+<br>5Y5/2<br>(50/40/10)       |              |                        |                |         |                         | 7-110 med. parallel lam.  |
|                        | 110   | 110   |              |                        |                |         |                         |   |
|                        | 145   | 5Y4/2+<br>4/1N+<br>5Y5/2<br>(50/30/20)        |              | Abundant               |                | Slight  |                         | 145 pebble, grey, angular<br>110-150 (sect. 4) sandy<br>mottles<br>110-52 (sect. 4) thin to<br>med. parallel lam. |
|                        | 80    | 10Y4/1+<br>4/1N+<br>5Y5/2<br>(50/40/30)<br>52 |              |                        |                |         |                         | 52-90 thin to med.<br>parallel lam.   |
|                        | 90    |   |              |                        |                |         |                         |   |
|                        | 120   | 90  |              |                        |                |         |                         |   |
|                        | 130   | 4/1N  |              | Slight                 |                |         |                         |   |
|                        | 140   |   |              |                        |                |         |                         |   |

Observer: \_\_\_\_\_ Date: \_\_\_\_\_

Expedition 323  
Bering Sea

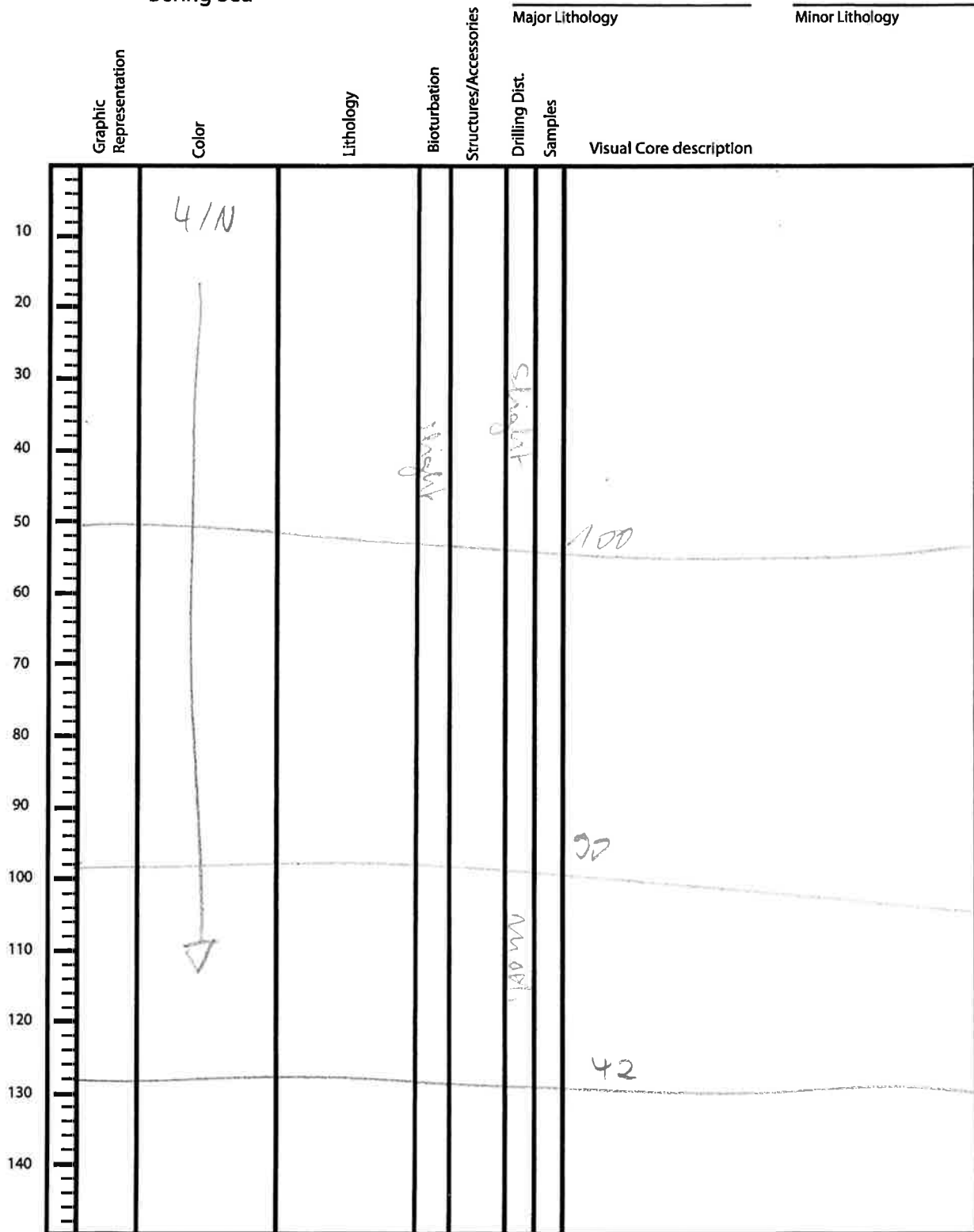
1345 D 13H 516  
Site Hole Core Section Top Depth

|     | Graphic Representation | Color   | Lithology | Bioturbation | Structures/Accessories | Drilling Dist. Samples | Major Lithology              | Minor Lithology |
|-----|------------------------|---------|-----------|--------------|------------------------|------------------------|------------------------------|-----------------|
| 10  |                        | 4/N     |           |              |                        |                        |                              |                 |
| 20  |                        | 10Y5/1M |           | slight       |                        |                        | 12-14 grad                   |                 |
| 30  |                        | 4/N     |           |              |                        |                        | 13-22 with carb. soft        |                 |
| 40  |                        |         |           |              |                        |                        | 21-23 grad                   |                 |
| 50  |                        |         |           |              |                        |                        | 24 pebble, black, subrounded |                 |
| 60  |                        |         |           |              |                        |                        |                              |                 |
| 70  |                        |         |           |              |                        |                        |                              |                 |
| 80  |                        |         |           |              |                        |                        | 133-134 sandy layer          |                 |
| 90  |                        |         |           |              |                        |                        |                              |                 |
| 100 |                        |         |           |              |                        |                        |                              |                 |
| 110 |                        |         |           |              |                        |                        |                              |                 |
| 120 |                        |         |           |              |                        |                        | 96 sandy layer               |                 |
| 130 |                        |         |           |              |                        |                        |                              |                 |
| 140 |                        |         |           |              |                        |                        |                              |                 |

Observer: \_\_\_\_\_ Date: \_\_\_\_\_

Expedition 323  
Bering Sea

1345 D Site Hole 13H 7+8+cc Core Section Top Depth



Observer: \_\_\_\_\_ Date: \_\_\_\_\_



IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

✓ JM

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1395 | D    | 13H  |      | 1A  | 36            |        |

|                    |                                 |          |      |
|--------------------|---------------------------------|----------|------|
| Sediment/Rock Name | Diatom bearing Sandy Silty Sand | Observer | Hino |
|--------------------|---------------------------------|----------|------|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments:

| Percent                                   | Component                              |
|---|--|
| <b>SILICICLASTIC GRAINS/MINERAL 24 93</b> |  |
| Framework minerals                        |  |
| 33 47                                     | Quartz 7                               |
| 7   | Feldspar 1                             |
|   | K-feldspar (Orthoclase, Microcline...) |
|   | Plagioclase                            |
| 7   | Rock fragments 1                       |
| Accessory/trace minerals                  |  |
|   | Micas                                  |
|   | Biotite                                |
|   | Muscovite                              |
|   | Clay Minerals                          |
|   | Chlorite                               |
|   | Glauconite                             |
|   | Chert                                  |
|   | Zircon                                 |
| 32 25 35                                  | Ferromagnesium minerals 5              |
| Authigenic minerals                       |  |
|   | Barite                                 |
|   | Phosphorite/Apatite                    |
|   | Zeolite                                |
| Opaque minerals                           |  |
|   | Pyrite                                 |
|   | Magnetite                              |
|   | Fe-oxide                               |
| Carbonates                                |  |
|   | Calcite                                |
|   | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>              |  |
|   | Crystal grain                          |
|   |  |
|   | Vitric grain                           |
|   | Lithic grain                           |

| Percent                  | Component                           |
|--------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS 7</b> |                                     |
| Calcareous               |                                     |
|                          | Foraminifera                        |
|                          | Planktonic foraminifera             |
|                          | Benthic foraminifera                |
|                          | Nannofossils                        |
|                          | Coccoliths                          |
|                          | Discoasters                         |
|                          | Pteropods                           |
| Siliceous                |                                     |
|                          | Radiolarians                        |
|                          | Spumellaria                         |
|                          | Nassellaria                         |
| 7 7                      | Diatoms 1                           |
|                          | 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 | B4T  | D    | BH   |      | 3A  | 4F            |        |

|                    |                        |          |      |
|--------------------|------------------------|----------|------|
| Sediment/Rock Name | Diatom-rich sandy silt | Observer | Hiro |
|--------------------|------------------------|----------|------|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments: Lamination

| Percent                                | Component                              |
|--|--|
| <b>SILICICLASTIC GRAINS/MINERAL 76</b> |  |
| Framework minerals                     |  |
| 52                                     | Quartz 15                              |
| 7                                      | Feldspar 2                             |
| 7                                      | K-feldspar (Orthoclase, Microcline...) |
|  | Plagioclase                            |
| 7                                      | Rock fragments 2                       |
| Accessory/trace minerals               |  |
|  | Micas                                  |
|  | Biotite                                |
|  | Muscovite                              |
|  | Clay Minerals                          |
|  | Chlorite                               |
|  | Glaucanite                             |
|  | Chert                                  |
|  | Zircon                                 |
| 8.3                                    | Ferromagnesium minerals 1              |
| Authigenic minerals                    |  |
|  | Barite                                 |
|  | Phosphorite/Apatite                    |
|  | Zeolite                                |
| Opaque minerals                        |  |
| 7                                      | Pyrite 2                               |
|  | Magnetite                              |
|  | Fe-oxide                               |
| Carbonates                             |  |
|  | Calcite                                |
|  | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>           |  |
|  | Crystal grain                          |
|  |  |
|  | Vitric grain                           |
|  | Lithic grain                           |

| Percent                   | Component                           |
|---------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS 24</b> |                                     |
| Calcareous                |                                     |
|                           | Foraminifera                        |
|                           | Planktonic foraminifera             |
|                           | Benthic foraminifera                |
|                           | Nannofossils                        |
|                           | Coccoliths                          |
|                           | Discoasters                         |
|                           | Pteropods                           |
| Siliceous                 |                                     |
|                           | Radiolarians                        |
|                           | Spumellaria                         |
|                           | Nassellaria                         |
| 24                        | 7 Diatoms                           |
|                           | Centric                             |
|                           | Pennate                             |
|                           | Chaetoceros Resting Spores          |
|                           | Silicoflagellates                   |
|                           | Sponge spicules                     |
|                           | Dinoflagellates                     |
| Others                    |                                     |
|                           | Pollen                              |
|                           | Organic debris                      |
|                           | Plant debris                        |
|                           | Ebridians                           |
|                           | Echinoderm                          |
|                           | Fish remains (teeth, bones, scales) |
|                           | Bryozoans                           |
|                           | Bivalves                            |
|                           | Others                              |

SM

IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | BH   | D    | BH   |      | 4A  | 45            |        |

|                    |             |          |      |
|--------------------|-------------|----------|------|
| Sediment/Rock Name | Diatom clay | Observer | Hino |
|--------------------|-------------|----------|------|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments: Lamination (Green)

| Percent                                | Component                              |
|--|--|
| <b>SILICICLASTIC GRAINS/MINERAL 45</b> |  |
|  | Framework minerals                     |
| 17                                     | Quartz 3                               |
|  | Feldspar                               |
|  | K-feldspar (Orthoclase, Microcline...) |
|  | Plagioclase                            |
|  | Rock fragments                         |
|  | Accessory/trace minerals               |
|  | Micas                                  |
|  | Biotite                                |
|  | Muscovite                              |
| 17                                     | Clay Minerals 3                        |
|  | Chlorite                               |
|  | Glaucanite                             |
|  | Chert                                  |
|  | Zircon                                 |
|  | Ferromagnesium minerals                |
|  | Authigenic minerals                    |
|  | Barite                                 |
|  | Phosphorite/Apatite                    |
|  | Zeolite                                |
|  | Opaque minerals                        |
| 11                                     | Pyrite 2                               |
|  | Magnetite                              |
|  | Fe-oxide                               |
|  | Carbonates                             |
|  | Calcite                                |
|  | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>           |  |
|  | Crystal grain                          |
|  | Vitric grain                           |
|  | Lithic grain                           |

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

SM

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IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1345 | D    | #171 |      | 4A  | 68            |        |

|                    |             |          |     |
|--------------------|-------------|----------|-----|
| Sediment/Rock Name | Diatom Qage | Observer | Hin |
|--------------------|-------------|----------|-----|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments:

| Percent | Component                              |
|---------|--|
|         | <b>SILICICLASTIC GRAINS/MINERAL 40</b> |
|         | Framework minerals                     |
| 12      | Quartz 3                               |
| 4       | Feldspar 1                             |
|         | K-feldspar (Orthoclase, Microcline...) |
|         | Plagioclase                            |
|         | Rock fragments                         |
|         | Accessory/trace minerals               |
|         | Micas                                  |
|         | Biotite                                |
|         | Muscovite                              |
| 20      | Clay Minerals 5                        |
|         | Chlorite                               |
|         | Glauconite                             |
|         | Chert                                  |
|         | Zircon                                 |
| 4       | Ferromagnesium minerals 1              |
|         | Authigenic minerals                    |
|         | Barite                                 |
|         | Phosphorite/Apatite                    |
|         | Zeolite                                |
|         | Opaque minerals                        |
|         | Pyrite                                 |
|         | Magnetite                              |
|         | Fe-oxide                               |
|         | Carbonates                             |
|         | Calcite                                |
|         | Dolomite                               |
|         | <b>VOLCANICLASTIC GRAINS</b>           |
|         | Crystal grain                          |
|         | Vitric grain                           |
|         | Lithic grain                           |

| Percent | Component                           |
|---------|-------------------------------------|
|         | <b>BIOGENIC GRAINS 60</b>           |
|         | Calcareous                          |
|         | Foraminifera                        |
|         | Planktonic foraminifera             |
|         | Benthic foraminifera                |
|         | Nannofossils                        |
|         | Coccoliths                          |
|         | Discoasters                         |
|         | Pteropods                           |
|         | Siliceous                           |
|         | Radiolarians                        |
|         | Spumellaria                         |
|         | Nassellaria                         |
| 57      | Diatoms 13 15                       |
|         | Centric                             |
|         | Pennate                             |
|         | Chaetoceros Resting Spores          |
|         | Silicoflagellates                   |
|         | Sponge spicules                     |
|         | Dinoflagellates                     |
|         | Others                              |
|         | Pollen                              |
|         | Organic debris                      |
|         | Plant debris                        |
|         | Ebridians                           |
|         | Echinoderm                          |
|         | Fish remains (teeth, bones, scales) |
|         | Bryozoans                           |
|         | Bivalves                            |
|         | Others                              |

IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1345 | D    | 134  |      | 6A  | 108           |        |

|                    |             |          |       |
|--------------------|-------------|----------|-------|
| Sediment/Rock Name | clayey silt | Observer | A. W. |
|--------------------|-------------|----------|-------|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments:

| Percent                                | Component                              |
|--|--|
| <b>SILICICLASTIC GRAINS/MINERAL 98</b> |  |
|  | Framework minerals                     |
| 53                                     | Quartz 20                              |
| 3                                      | Feldspar 1                             |
|  | K-feldspar (Orthoclase, Microcline...) |
|  | Plagioclase                            |
|  | Rock fragments                         |
|  | Accessory/trace minerals               |
|  | Micas                                  |
|  | Biotite                                |
|  | Muscovite                              |
| 26                                     | Clay Minerals 10                       |
|  | Chlorite                               |
|  | Glaucinite                             |
|  | Chert                                  |
|  | Zircon                                 |
| 8                                      | Ferromagnesium minerals 3              |
|  | Authigenic minerals                    |
|  | Barite                                 |
|  | Phosphorite/Apatite                    |
|  | Zeolite                                |
|  | Opaque minerals                        |
| 8                                      | Pyrite 3                               |
|  | Magnetite                              |
|  | Fe-oxide                               |
|  | Carbonates                             |
|  | Calcite                                |
|  | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>           |  |
|  | Crystal grain                          |
|  |  |
|  | Vitric grain                           |
|  | Lithic grain                           |

| Percent                  | Component                           |
|--------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS 2</b> |                                     |
|                          | Calcareous                          |
|                          | Foraminifera                        |
|                          | Planktonic foraminifera             |
|                          | Benthic foraminifera                |
|                          | Nannofossils                        |
|                          | Coccoliths                          |
|                          | Discoasters                         |
|                          | Pteropods                           |
|                          | Siliceous                           |
|                          | Radiolarians                        |
|                          | Spumellaria                         |
|                          | Nassellaria                         |
| 23 29%                   | Diatoms 1                           |
|                          | 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

1345-D 14H A-2 1-5  
Site Hole Core Section Top Depth

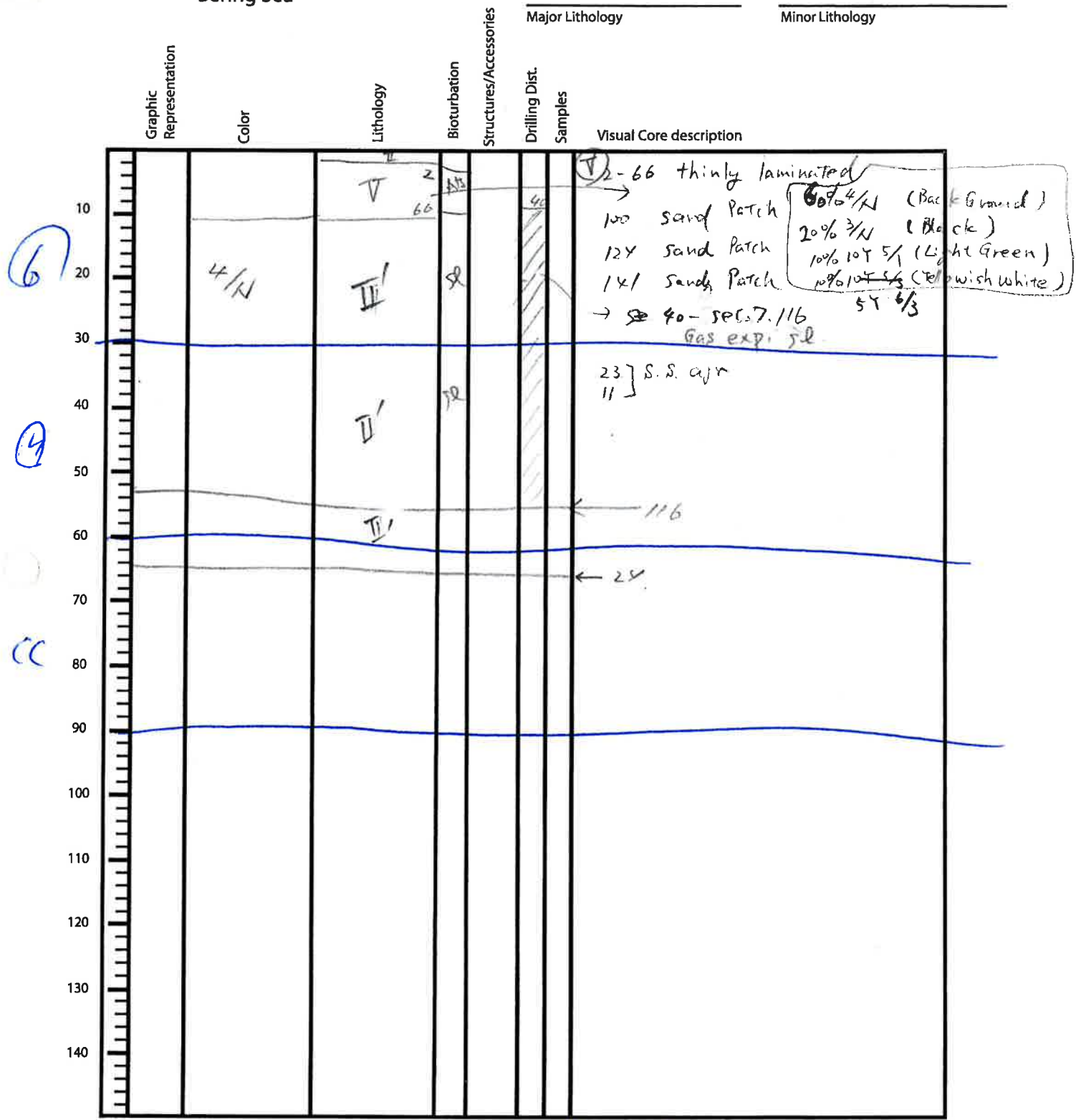
| Graphic Representation | Color   | Lithology | Bioturbation | Structures/Accessories | Drilling Dist. | Samples | Major Lithology   | Minor Lithology  |
|------------------------|---------|-----------|--------------|------------------------|----------------|---------|---|--|
|                        |         |           |              |                        |                |         | Visual Core description   |  |
|                        |         |           |              |                        |                |         |   | I: clayey silt   |
|                        |         |           |              |                        |                |         |   | II: bearing sandy silt                                 |
| 10                     |         |           |              |                        |                |         |   |  |
| 20                     | 10Y 4/1 | I         |              |                        |                |         | D-133 Gas exp. Mod stuffed in / fall out                          |  |
| 30                     |         |           |              |                        |                |         | D-34 Sandy Matting  |  |
| 40                     | 10Y 4/1 | II        |              |                        |                |         | 133   |  |
| 50                     | 10Y 4/1 | II        |              |                        |                |         | 17- SEC. 3, 100 G.F. to SL  |  |
| 60                     | 10Y 4/1 | II        |              |                        |                |         | ash 80% (10Y 8/4) 5<br>10Y 4/1 20% 2                              |  |
| 70                     | 10Y 4/1 | II        |              |                        |                |         | SS 142 Fine ash   |  |
| 80                     | 10Y 4/1 | III       |              |                        |                |         | 1x2-1x3 -> Mottle / layer white Spongy                            |  |
| 90                     | 10Y 4/1 | III       |              |                        |                |         | Mottles 24-32 (Pyrite)  | 60% 10Y 4/1 (Background)<br>30% 10Y 3/1<br>10% 10Y 5/1 |
| 100                    | 10Y 4/1 | III       |              |                        |                |         | 56 -> shell   |  |
| 110                    | 10Y 4/1 | III       |              |                        |                |         | 93-131 -> thinly laminated very lighter color to bottom (128-131) |  |
| 120                    | 10Y 4/1 | III       |              |                        |                |         | 32-35 shell fragment  |  |
| 130                    | 10Y 4/1 | III       |              |                        |                |         | 76-80 Pebble subrounded Black to Dark gray 4.5cm                  | Sp. Sp. Agr. 99 SS. 102                                |
| 140                    | 4/N     | III       |              |                        |                |         | VOID 79-86 81. shell  |  |
|                        |         |           |              |                        |                |         | 33-58 thinly laminated 90% 10Y 4/1 90% 10Y 5/1 100%               |  |
|                        |         |           |              |                        |                |         | 53-109 Gas exp. SL  |  |

Observer: H. A.

Date:

Expedition 323  
Bering Sea

1345 D 14H ~~3H~~ 5-CC  
 Site Hole Core Section Top Depth



Observer: H. D. B Date: \_\_\_\_\_

IODP Expedition 323  
 SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1345 | D    | 14   | H    | 2   | 43            | 43     |

|                    |                           |          |  |
|--------------------|---------------------------|----------|--|
| Sediment/Rock Name | Diatom-bearing sandy silt | Observer |  |
|--------------------|---------------------------|----------|--|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
| 25              | 70   | 5    |

Comments: Main lith., sandy

| Percent                             | Component                              |
|-------------------------------------|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> |  |
| 50                                  | Framework minerals                     |
| 10                                  | Quartz                                 |
|                                     | Feldspar                               |
|                                     | K-feldspar (Orthoclase, Microcline...) |
|                                     | Plagioclase                            |
| 15                                  | Rock fragments                         |
|                                     | Accessory/trace minerals               |
|                                     | Micas                                  |
|                                     | Biotite                                |
|                                     | Muscovite                              |
| 5                                   | Clay Minerals                          |
|                                     | Chlorite                               |
|                                     | Glauconite                             |
|                                     | Chert                                  |
|                                     | Zircon                                 |
|                                     | Ferromagnesium minerals                |
|                                     | Authigenic minerals                    |
|                                     | Barite                                 |
|                                     | Phosphorite/Apatite                    |
|                                     | Zeolite                                |
| 10                                  | Opaque minerals                        |
|                                     | Pyrite                                 |
|                                     | Magnetite                              |
|                                     | Fe-oxide                               |
|                                     | Carbonates                             |
|                                     | Calcite                                |
|                                     | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>        |  |
|                                     | Crystal grain                          |
|                                     |  |
|                                     | Vitric grain                           |
|                                     | Lithic grain                           |

| Percent                | Component                           |
|------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS</b> |                                     |
|                        | Calcareous                          |
|                        | Foraminifera                        |
|                        | Planktonic foraminifera             |
|                        | Benthic foraminifera                |
|                        | Nannofossils                        |
|                        | Coccoliths                          |
|                        | Discoasters                         |
|                        | Pteropods                           |
|                        | Siliceous                           |
|                        | Radiolarians                        |
|                        | Spumellaria                         |
|                        | Nassellaria                         |
| 10                     | Diatoms                             |
| 8                      | Centric                             |
| 2                      | Pennate                             |
|                        | Chaetoceros Resting Spores          |
|                        | Silicoflagellates                   |
|                        | Sponge spicules                     |
|                        | Dinoflagellates                     |
|                        | Others                              |
|                        | Pollen                              |
|                        | Organic debris                      |
|                        | Plant debris                        |
|                        | Ebridians                           |
|                        | Echinoderm                          |
|                        | Fish remains (teeth, bones, scales) |
|                        | Bryozoans                           |
|                        | Bivalves                            |
|                        | Others                              |



IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1345 | D    | 14   | H    | 2   | 142           | 142    |

|                    |          |          |  |
|--------------------|----------|----------|--|
| Sediment/Rock Name | Fine ash | Observer |  |
|--------------------|----------|----------|--|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments: White spot

| Percent                             | Component                              |
|-------------------------------------|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> |  |
|                                     | Framework minerals                     |
| 5                                   | Quartz                                 |
|                                     | Feldspar                               |
|                                     | K-feldspar (Orthoclase, Microcline...) |
|                                     | Plagioclase                            |
|                                     | Rock fragments                         |
|                                     | Accessory/trace minerals               |
|                                     | Micas                                  |
|                                     | Biotite                                |
|                                     | Muscovite                              |
|                                     | Clay Minerals                          |
|                                     | Chlorite                               |
|                                     | Glauconite                             |
|                                     | Chert                                  |
|                                     | Zircon                                 |
|                                     | Ferromagnesium minerals                |
|                                     | Authigenic minerals                    |
|                                     | Barite                                 |
|                                     | Phosphorite/Apatite                    |
|                                     | Zeolite                                |
|                                     | Opaque minerals                        |
|                                     | Pyrite                                 |
|                                     | Magnetite                              |
|                                     | Fe-oxide                               |
|                                     | Carbonates                             |
|                                     | Calcite                                |
|                                     | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>        |  |
|                                     | Crystal grain                          |
|                                     |  |
| 95                                  | Vitric grain                           |
|                                     | Lithic grain                           |

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

IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1345 | D    | 14   | H    | 3   | 115           | 115    |

|                    |                               |          |  |
|--------------------|-------------------------------|----------|--|
| Sediment/Rock Name | Diatom silty clay clayey silt | Observer |  |
|--------------------|-------------------------------|----------|--|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
| -               | 70   | 30   |

Comments: Greyish lamina,

| Percent                             | Component                              |
|-------------------------------------|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> |  |
|                                     | Framework minerals                     |
| 40                                  | Quartz                                 |
| 5                                   | Feldspar                               |
|                                     | K-feldspar (Orthoclase, Microcline...) |
|                                     | Plagioclase                            |
| 5                                   | Rock fragments                         |
|                                     | Accessory/trace minerals               |
|                                     | Micas                                  |
|                                     | Biotite                                |
|                                     | Muscovite                              |
|                                     | Clay Minerals                          |
|                                     | Chlorite                               |
|                                     | Glaucanite                             |
|                                     | Chert                                  |
|                                     | Zircon                                 |
|                                     | Ferromagnesium minerals                |
|                                     | Authigenic minerals                    |
|                                     | Barite                                 |
|                                     | Phosphorite/Apatite                    |
|                                     | Zeolite                                |
| 5                                   | Opaque minerals                        |
| 5                                   | Pyrite                                 |
|                                     | Magnetite                              |
|                                     | Fe-oxide                               |
|                                     | Carbonates                             |
|                                     | Calcite                                |
|                                     | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>        |  |
|                                     | Crystal grain                          |
|                                     |  |
|                                     | Vitric grain                           |
|                                     | Lithic grain                           |

| Percent                | Component                           |
|------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS</b> |                                     |
|                        | Calcareous                          |
|                        | Foraminifera                        |
|                        | Planktonic foraminifera             |
|                        | Benthic foraminifera                |
|                        | Nannofossils                        |
|                        | Coccoliths                          |
|                        | Discoasters                         |
|                        | Pteropods                           |
|                        | Siliceous                           |
|                        | Radiolarians                        |
|                        | Spumellaria                         |
|                        | Nassellaria                         |
| 45                     | Diatoms                             |
| 35                     | Centric                             |
| 10                     | Pennate                             |
|                        | <i>Chaetoceros</i> Resting Spores   |
|                        | Silicoflagellates                   |
|                        | Sponge spicules                     |
|                        | Dinoflagellates                     |
|                        | Others                              |
|                        | Pollen                              |
|                        | Organic debris                      |
|                        | Plant debris                        |
|                        | Ebridians                           |
|                        | Echinoderm                          |
|                        | Fish remains (teeth, bones, scales) |
|                        | Bryozoans                           |
|                        | Bivalves                            |
|                        | Others                              |

IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1345 | D    | 14   | H    | 3   | 132           |        |

|                    |   |          |  |
|--------------------|---|----------|--|
| Sediment/Rock Name | Auth. carb.-rich diatom-rich silty clay | Observer |  |
|--------------------|---|----------|--|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
| -               | 40   | 60   |

Comments: Lighter layer

| Percent                             | Component                              |
|-------------------------------------|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> |  |
|                                     | Framework minerals                     |
| 15                                  | Quartz                                 |
|                                     | Feldspar                               |
|                                     | K-feldspar (Orthoclase, Microcline...) |
|                                     | Plagioclase                            |
|                                     | Rock fragments                         |
|                                     | Accessory/trace minerals               |
|                                     | Micas                                  |
|                                     | Biotite                                |
|                                     | Muscovite                              |
| 15                                  | Clay Minerals                          |
|                                     | Chlorite                               |
|                                     | Glauconite                             |
|                                     | Chert                                  |
|                                     | Zircon                                 |
|                                     | Ferromagnesium minerals                |
|                                     |  |
|                                     | Authigenic minerals                    |
|                                     | Barite                                 |
|                                     | Phosphorite/Apatite                    |
|                                     | Zeolite                                |
|                                     |  |
|                                     | Opaque minerals                        |
| 5                                   | Pyrite                                 |
|                                     | Magnetite                              |
|                                     | Fe-oxide                               |
|                                     |  |
|                                     | Carbonates                             |
|                                     | Calcite                                |
|                                     | Dolomite                               |
| 40                                  | Auth. carb.                            |
| <b>VOLCANICLASTIC GRAINS</b>        |  |
|                                     | Crystal grain                          |
|                                     |  |
|                                     |  |
|                                     | Vitric grain                           |
|                                     | Lithic grain                           |

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

IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1345 | D    | 14   | H    | 5   | 120           | 120    |

SM

|                    |                         |          |  |
|--------------------|-------------------------|----------|--|
| Sediment/Rock Name | Diatomaceous silty clay | Observer |  |
|--------------------|-------------------------|----------|--|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
| -               | 30   | 70   |

Comments:

Main lith. grey

| Percent                             | Component                              |
|-------------------------------------|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> |  |
|                                     | Framework minerals                     |
| 5                                   | Quartz                                 |
|                                     | Feldspar                               |
|                                     | K-feldspar (Orthoclase, Microcline...) |
|                                     | Plagioclase                            |
|                                     | Rock fragments                         |
|                                     | Accessory/trace minerals               |
|                                     | Micas                                  |
|                                     | Biotite                                |
|                                     | Muscovite                              |
| 40                                  | Clay Minerals                          |
|                                     | Chlorite                               |
|                                     | Glauconite                             |
|                                     | Chert                                  |
|                                     | Zircon                                 |
|                                     | Ferromagnesium minerals                |
|                                     | Authigenic minerals                    |
|                                     | Barite                                 |
|                                     | Phosphorite/Apatite                    |
|                                     | Zeolite                                |
|                                     | Opaque minerals                        |
| 5                                   | Pyrite                                 |
|                                     | Magnetite                              |
|                                     | Fe-oxide                               |
|                                     | Carbonates                             |
|                                     | Calcite                                |
|                                     | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>        |  |
|                                     | Crystal grain                          |
|                                     | Vitric grain                           |
|                                     | Lithic grain                           |

| Percent                | Component                           |
|------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS</b> |                                     |
|                        | Calcareous                          |
|                        | Foraminifera                        |
|                        | Planktonic foraminifera             |
|                        | Benthic foraminifera                |
|                        | Nannofossils                        |
|                        | Coccoliths                          |
|                        | Discoasters                         |
|                        | Pteropods                           |
|                        | Siliceous                           |
|                        | Radiolarians                        |
|                        | Spumellaria                         |
|                        | Nassellaria                         |
| 50                     | Diatoms                             |
| 45                     | Centric                             |
| 5                      | Pennate                             |
|                        | <i>Chaetoceros</i> Resting Spores   |
|                        | Silicoflagellates                   |
|                        | Sponge spicules                     |
|                        | Dinoflagellates                     |
|                        | Others                              |
|                        | Pollen                              |
|                        | Organic debris                      |
|                        | Plant debris                        |
|                        | Ebridians                           |
|                        | Echinoderm                          |
|                        | Fish remains (teeth, bones, scales) |
|                        | Bryozoans                           |
|                        | Bivalves                            |
|                        | Others                              |

IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1345 | D    | 14   | H    | G   | 50            | 50     |

|                    |                    |          |  |
|--------------------|--------------------|----------|--|
| Sediment/Rock Name | Diatom clayey silt | Observer |  |
|--------------------|--------------------|----------|--|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
| —               | 60   | 40   |

Comments:

Lamina

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

| Percent                | Component                           |
|------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS</b> |                                     |
| Calcareous             |                                     |
|                        | Foraminifera                        |
|                        | Planktonic foraminifera             |
|                        | Benthic foraminifera                |
|                        | Nannofossils                        |
|                        | Coccoliths                          |
|                        | Discoasters                         |
|                        | Pteropods                           |
| Siliceous              |                                     |
|                        | Radiolarians                        |
|                        | Spumellaria                         |
|                        | Nassellaria                         |
| 60                     | Diatoms                             |
| 50                     | Centric                             |
| 10                     | Pennate                             |
|                        | Chaetoceros Resting Spores          |
| 1                      | Silicoflagellates                   |
|                        | Sponge spicules                     |
|                        | Dinoflagellates                     |
| Others                 |                                     |
|                        | Pollen                              |
|                        | Organic debris                      |
|                        | Plant debris                        |
|                        | Ebridians                           |
|                        | Echinoderm                          |
|                        | Fish remains (teeth, bones, scales) |
|                        | Bryozoans                           |
|                        | Bivalves                            |
|                        | Others                              |

Expedition 323  
Bering Sea

1345 D 1T 1-5  
Site Hole Core Section Top Depth

| Graphic Representation | Color                   | Lithology               | Bioturbation Structures/Accessories | Drilling Dist. Samples | Major Lithology | Minor Lithology   |
|------------------------|-------------------------|-------------------------|-------------------------------------|------------------------|-----------------|---|
|                        | 4/N                     |                         |                                     |                        |                 | all Mottles Pyrites<br>Fall out of the liner<br>Gas exp Mod.        |
| ①                      |                         |                         |                                     |                        |                 | Sec. 2 - rc<br>Gas. exp. slight                                     |
| ②                      |                         | I                       | SL                                  |                        |                 |   |
| ③                      |                         | SS 74<br>Clayey<br>site | SL 78<br>SL 81                      |                        |                 | 78 - 84 Mod. B.T.<br>Mottles Pyrite                                 |
| ④                      |                         |                         | SL                                  |                        |                 | 87 - 88 Mottles Pyrite<br>121 - 123 Mottles Carbonate<br>Authigenic |
| ⑤                      | 4/N<br><del>SS 74</del> | II<br>sandy             | SL 101<br>SL 102                    |                        |                 | 101 - 112 Mottles Pyrite<br>Mod. B.T.                               |

Observer: H/A

Date:

SS 74 Diatom-bearing  
Clayey site

1345 D 15 1-11  
 Site Hole Core Section Top Depth

Expedition 323  
 Bering Sea

| Graphic Representation | Color | Lithology | Bioturbation Structures/Accessories | Drilling Dist. Samples | Major Lithology         | Minor Lithology   |
|------------------------|-------|-----------|-------------------------------------|------------------------|-------------------------|---|
|                        |       |           |                                     |                        | Visual Core description |   |
| ⑥                      | 4/N   |           | 60                                  |                        |                         | 66-69 Mottles pyrite  |
|                        | II    |           | 66                                  |                        |                         | 68  |
| ⑦                      | 4/N   |           | 55                                  |                        |                         | 121-125 Mottles pyrite  |
|                        | 33    | 33        | 50                                  |                        |                         |   |
|                        | 68    | 42-III    | 121                                 |                        |                         |   |
|                        | II    | IV        | 145                                 |                        |                         |   |
|                        |       |           | 50                                  |                        |                         | 33-68 Thinly laminated  |
|                        |       |           | AB                                  |                        |                         | III   |
|                        |       |           | 68                                  |                        |                         | 4/N 40% (B.G.)<br>- 10% 30% (white)<br>50% 5% 20% (Green)<br>3/N 100% (Black) |
|                        |       |           | 50                                  |                        |                         | ← 24  |
|                        |       |           |                                     |                        |                         | IV  |
|                        |       |           |                                     |                        |                         | 4/N 80<br>- 50% 5% 10<br>3/N 10   |

Observer: HA Date: \_\_\_\_\_

IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1345 | D    | 15   | H    | 3   | 74            | 74     |

|                    |             |          |  |
|--------------------|-------------|----------|--|
| Sediment/Rock Name | Clayey silt | Observer |  |
|--------------------|-------------|----------|--|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
| —               | 80   | 20   |

Comments: Main lith. grey

| Percent                             | Component                              |
|-------------------------------------|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> |  |
|                                     | Framework minerals                     |
| 70                                  | Quartz                                 |
| 3                                   | Feldspar                               |
|                                     | K-feldspar (Orthoclase, Microcline...) |
|                                     | Plagioclase                            |
| 10                                  | Rock fragments                         |
|                                     | Accessory/trace minerals               |
|                                     | Micas                                  |
|                                     | Biotite                                |
|                                     | Muscovite                              |
| 10                                  | Clay Minerals                          |
|                                     | Chlorite                               |
|                                     | Glauconite                             |
|                                     | Chert                                  |
|                                     | Zircon                                 |
|                                     | Ferromagnesium minerals                |
|                                     | Authigenic minerals                    |
|                                     | Barite                                 |
|                                     | Phosphorite/Apatite                    |
|                                     | Zeolite                                |
|                                     | Opaque minerals                        |
|                                     | Pyrite                                 |
|                                     | Magnetite                              |
|                                     | Fe-oxide                               |
|                                     | Carbonates                             |
|                                     | Calcite                                |
|                                     | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>        |  |
|                                     | Crystal grain                          |
|                                     |  |
|                                     | Vitric grain                           |
|                                     | Lithic grain                           |

| Percent                | Component                           |
|------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS</b> |                                     |
|                        | Calcareous                          |
|                        | Foraminifera                        |
|                        | Planktonic foraminifera             |
|                        | Benthic foraminifera                |
|                        | Nannofossils                        |
|                        | Coccoliths                          |
|                        | Discoasters                         |
|                        | Pteropods                           |
|                        | Siliceous                           |
|                        | Radiolarians                        |
|                        | Spumellaria                         |
|                        | Nassellaria                         |
| 2                      | 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 | 1345 | D    | 15   | H    | 5   | 75            | 75     |

|                    |                            |          |  |
|--------------------|----------------------------|----------|--|
| Sediment/Rock Name | Diatom-bearing clayey silt | Observer |  |
|--------------------|----------------------------|----------|--|

| Sand | Percent Texture |      |
|------|-----------------|------|
|      | Silt            | Clay |
| -    | 60              | 40   |

Comments: Main lith., coarser

| Percent                             | Component                              |
|-------------------------------------|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> |  |
|                                     | Framework minerals                     |
| 40                                  | Quartz                                 |
|                                     | Feldspar                               |
|                                     | K-feldspar (Orthoclase, Microcline...) |
|                                     | Plagioclase                            |
|                                     | Rock fragments                         |
|                                     | Accessory/trace minerals               |
|                                     | Micas                                  |
|                                     | Biotite                                |
|                                     | Muscovite                              |
| 30                                  | Clay Minerals                          |
|                                     | Chlorite                               |
|                                     | Glaucanite                             |
|                                     | Chert                                  |
|                                     | Zircon                                 |
|                                     | Ferromagnesium minerals                |
|                                     | Authigenic minerals                    |
|                                     | Barite                                 |
|                                     | Phosphorite/Apatite                    |
|                                     | Zeolite                                |
| 15                                  | Opaque minerals                        |
|                                     | Pyrite                                 |
|                                     | Magnetite                              |
|                                     | Fe-oxide                               |
|                                     | Carbonates                             |
|                                     | Calcite                                |
|                                     | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>        |  |
|                                     | Crystal grain                          |
|                                     |  |
|                                     | Vitric grain                           |
|                                     | Lithic grain                           |

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

IODP Expedition 323  
 SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1345 | D    | 15   | H    | 7   | 40            | 40     |

|                    |                                     |          |  |
|--------------------|-------------------------------------|----------|--|
| Sediment/Rock Name | Auth. carb.-rich diatom clayey silt | Observer |  |
|--------------------|-------------------------------------|----------|--|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
| -               | 70   | 30   |

Comments: Light laminae

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

| Percent                | Component                           |
|------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS</b> |                                     |
|                        | Calcareous                          |
|                        | Foraminifera                        |
|                        | Planktonic foraminifera             |
|                        | Benthic foraminifera                |
|                        | Nannofossils                        |
|                        | Coccoliths                          |
|                        | Discoasters                         |
|                        | Pteropods                           |
|                        | Siliceous                           |
|                        | Radiolarians                        |
|                        | Spumellaria                         |
|                        | Nassellaria                         |
| 50                     | Diatoms                             |
| 25                     | 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           | Bottom |
| 323 | 1345 | D    | 15H  |      | 7   | 66            | 66     |

|                    |                               |          |  |
|--------------------|-------------------------------|----------|--|
| Sediment/Rock Name | Diatom silty clay clayey silt | Observer |  |
|--------------------|-------------------------------|----------|--|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
| —               | 60   | 40   |

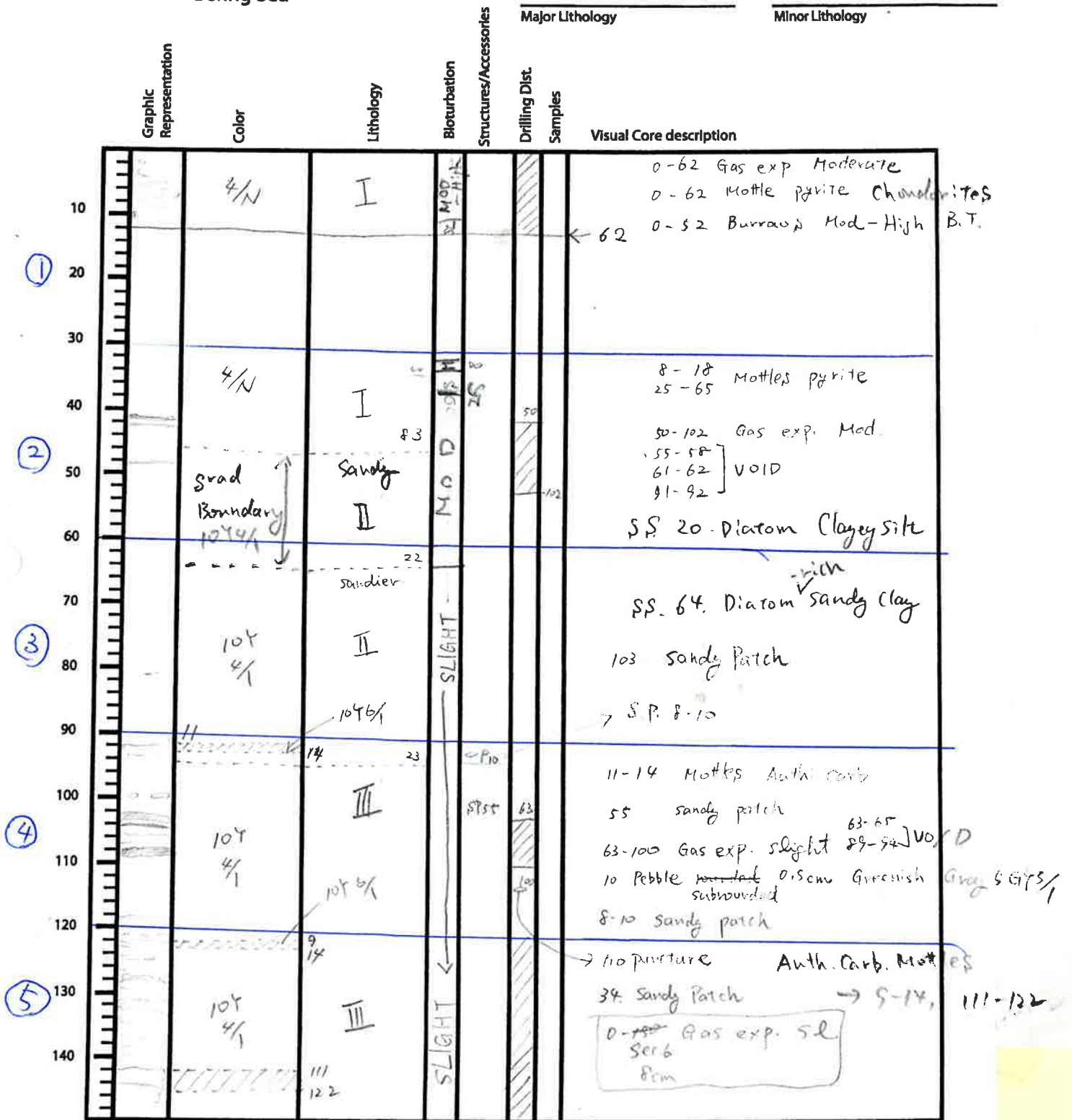
Comments: Greenish laminar

| Percent                             | Component                              |
|-------------------------------------|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> |  |
|                                     | Framework minerals                     |
| 35                                  | Quartz                                 |
|                                     | Feldspar                               |
|                                     | K-feldspar (Orthoclase, Microcline...) |
|                                     | Plagioclase                            |
| 4                                   | Rock fragments                         |
|                                     | Accessory/trace minerals               |
|                                     | Micas                                  |
|                                     | Biotite                                |
|                                     | Muscovite                              |
| 10                                  | Clay Minerals                          |
|                                     | Chlorite                               |
|                                     | Glaucanite                             |
|                                     | Chert                                  |
|                                     | Zircon                                 |
|                                     | Ferromagnesium minerals                |
|                                     | Authigenic minerals                    |
|                                     | Barite                                 |
|                                     | Phosphorite/Apatite                    |
|                                     | Zeolite                                |
|                                     | Opaque minerals                        |
| 5                                   | Pyrite                                 |
|                                     | Magnetite                              |
|                                     | Fe-oxide                               |
|                                     | Carbonates                             |
|                                     | Calcite                                |
|                                     | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>        |  |
|                                     | Crystal grain                          |
|                                     |  |
|                                     | Vitric grain                           |
|                                     | Lithic grain                           |

| Percent                | Component                           |
|------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS</b> |                                     |
|                        | Calcareous                          |
|                        | Foraminifera                        |
|                        | Planktonic foraminifera             |
|                        | Benthic foraminifera                |
|                        | Nannofossils                        |
|                        | Coccoliths                          |
|                        | Discoasters                         |
|                        | Pteropods                           |
|                        | Siliceous                           |
|                        | Radiolarians                        |
|                        | Spumellaria                         |
|                        | Nassellaria                         |
| 50                     | Diatoms                             |
| 30                     | 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                              |

Expedition 323  
Bering Sea

1345 Site    ~~14~~ D Hole    1614 Core    1-5 Section    Top Depth



Observer: \_\_\_\_\_ Date: \_\_\_\_\_

Expedition 323  
Bering Sea

Site      Hole      Core      Section      Top Depth

| Graphic Representation | Color      | Lithology | Bioturbation | Structures/Accessories | Drilling Dist. Samples | Major Lithology         | Minor Lithology |
|------------------------|------------|-----------|--------------|------------------------|------------------------|-------------------------|-----------------|
|                        |            |           |              |                        |                        | Visual Core description |                 |
| ⑥                      | 10Y<br>4/1 | III       | SLIGHT       |                        | 70                     | 2. Sp. Agr              |                 |
|                        |            |           |              |                        | 143                    | 70-143 Gas exp slight   |                 |
|                        |            |           |              |                        |                        | 50-55 Diatom silty clay |                 |
| ⑦                      | 10Y<br>4/1 | III       | SLIGHT       |                        | 50                     | 10-11 shell             |                 |
|                        |            |           |              |                        |                        | 50-140 Gas exp slight   |                 |
| CC                     | 10Y<br>4/1 |           | AB           |                        | 14                     | 0-30 Gas exp mod        |                 |
|                        |            |           |              |                        | 30                     |                         |                 |

Observer: \_\_\_\_\_ Date: \_\_\_\_\_

SMU ✓

IODP Expedition 323  
SEDIMENT SMEAR SLIDE WORKSHEET

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1345 | D    | 16   | H    | 3   | 64            | 64     |

|                    |                   |          |  |
|--------------------|-------------------|----------|--|
| Sediment/Rock Name | Diatom sandy clay | Observer |  |
|--------------------|-------------------|----------|--|

rich

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
| 30              | 10   | 60   |

Comments:

| Percent                             | Component                              |
|-------------------------------------|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> |  |
|                                     | Framework minerals                     |
| 15                                  | Quartz                                 |
|                                     | Feldspar                               |
|                                     | K-feldspar (Orthoclase, Microcline...) |
|                                     | Plagioclase                            |
| 7                                   | Rock fragments                         |
|                                     | Accessory/trace minerals               |
|                                     | Micas                                  |
|                                     | Biotite                                |
|                                     | Muscovite                              |
| 30                                  | Clay Minerals                          |
|                                     | Chlorite                               |
| 9 8                                 | Glaucanite                             |
|                                     | Chert                                  |
|                                     | Zircon                                 |
|                                     | Ferromagnesium minerals                |
|                                     | Authigenic minerals                    |
|                                     | Barite                                 |
|                                     | Phosphorite/Apatite                    |
|                                     | Zeolite                                |
|                                     | Opaque minerals                        |
|                                     | Pyrite                                 |
|                                     | Magnetite                              |
|                                     | Fe-oxide                               |
|                                     | Carbonates                             |
|                                     | Calcite                                |
|                                     | Dolomite                               |
| <b>VOLCANICLASTIC GRAINS</b>        |  |
|                                     | Crystal grain                          |
|                                     | Vitric grain                           |
|                                     | Lithic grain                           |

| Percent                | Component                           |
|------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS</b> |                                     |
|                        | Calcareous                          |
|                        | Foraminifera                        |
|                        | Planktonic foraminifera             |
|                        | Benthic foraminifera                |
|                        | Nannofossils                        |
|                        | Coccoliths                          |
|                        | Discoasters                         |
|                        | Pteropods                           |
|                        | Siliceous                           |
|                        | Radiolarians                        |
|                        | Spumellaria                         |
|                        | Nassellaria                         |
|                        | Diatoms                             |
| 40                     | Centric                             |
| 39                     | 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 | 1345 | D    | 16   | H    | 2   | 20            | 20     |

|                    |                    |          |  |
|--------------------|--------------------|----------|--|
| Sediment/Rock Name | Diatom clayey silt | Observer |  |
|--------------------|--------------------|----------|--|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
| —               | 70   | 30   |

Comments:

| Percent                             | Component                              |
|-------------------------------------|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> |  |
|                                     | Framework minerals                     |
| 30                                  | Quartz                                 |
| 5                                   | Feldspar                               |
|                                     | K-feldspar (Orthoclase, Microcline...) |
|                                     | Plagioclase                            |
| 12                                  | 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                               |
|                                     |  |
| <b>VOLCANICLASTIC GRAINS</b>        |  |
|                                     | Crystal grain                          |
|                                     |  |
|                                     |  |
|                                     | Vitric grain                           |
|                                     | Lithic grain                           |

| Percent                | Component                           |
|------------------------|-------------------------------------|
| <b>BIOGENIC GRAINS</b> |                                     |
|                        | Calcareous                          |
|                        | Foraminifera                        |
|                        | Planktonic foraminifera             |
|                        | Benthic foraminifera                |
|                        | Nannofossils                        |
|                        | Coccoliths                          |
|                        | Discoasters                         |
|                        | Pteropods                           |
|                        |                                     |
|                        | Siliceous                           |
|                        | Radiolarians                        |
|                        | Spumellaria                         |
|                        | Nassellaria                         |
|                        | Diatoms                             |
| 30                     | 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

SMU ✓

| Leg | Site | Hole | Core | Type | Sec | Interval (cm) |        |
|-----|------|------|------|------|-----|---------------|--------|
|     |      |      |      |      |     | Top           | Bottom |
| 323 | 1845 | D    | 16   | H    | 6   | 50            | 50     |

|                    |                   |          |  |
|--------------------|-------------------|----------|--|
| Sediment/Rock Name | Diatom silty clay | Observer |  |
|--------------------|-------------------|----------|--|

| Percent Texture |      |      |
|-----------------|------|------|
| Sand            | Silt | Clay |
|                 |      |      |

Comments:

| Percent                             | Component                              |
|-------------------------------------|--|
| <b>SILICICLASTIC GRAINS/MINERAL</b> |  |
|                                     | Framework minerals                     |
| 10                                  | Quartz                                 |
|                                     | Feldspar                               |
|                                     | K-feldspar (Orthoclase, Microcline...) |
|                                     | Plagioclase                            |
| 5                                   | 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                               |
| <b>VOLCANICLASTIC GRAINS</b>        |  |
|                                     | Crystal grain                          |
|                                     |  |
|                                     | Vitric grain                           |
|                                     | Lithic grain                           |

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