

| CM Scale | SS+TS Sample | Drilling Disturbance | Lithology<br>c   st   sd   g | Bioturbation Index 0-4 | Sedimentary Structures | Pebble Counts<br>>4mm<br>less than #10 | Logged By:<br>Day shift | Date:<br>2-4-19              |
|----------|--------------|----------------------|------------------------------|------------------------|------------------------|--|-------------------------|------------------------------|
|          |              |                      |                              |                        |                        |  | Comments                |                              |
| 0        |              | heavy disturbed      |                              |                        |                        |  |                         |                              |
| 2        |              |                      |                              |                        |                        |  |                         |                              |
| 4        |              | fall in              |                              |                        |                        |  |                         |                              |
| 6        |              |                      |                              |                        |                        |  |                         |                              |
| 8        |              |                      |                              |                        |                        |  |                         |                              |
| 10       |              |                      |                              |                        |                        |  |                         |                              |
| 12       |              |                      |                              |                        |                        |  |                         |                              |
| 14       |              |                      |                              |                        |                        |  |                         |                              |
| 16       |              |                      |                              |                        |                        |  |                         |                              |
| 18       |              |                      |                              |                        |                        |  |                         |                              |
| 20       |              |                      |                              |                        |                        |  |                         |                              |
| 22       |              |                      |                              |                        |                        |  |                         |                              |
| 24       |              |                      |                              |                        |                        |  |                         |                              |
| 26       |              |                      |                              |                        |                        |  |                         |                              |
| 28       |              |                      |                              |                        |                        |  |                         |                              |
| 30       |              |                      |                              |                        |                        |  |                         |                              |
| 32       |              |                      |                              |                        |                        |  |                         |                              |
| 34       |              |                      |                              |                        |                        |  |                         |                              |
| 36       |              |                      |                              |                        |                        |  |                         |                              |
| 38       |              |                      |                              |                        |                        |  |                         |                              |
| 40       |              |                      |                              |                        |                        |  |                         |                              |
| 42       |              |                      |                              |                        |                        |  |                         |                              |
| 44       |              |                      |                              |                        |                        |  |                         | 2 granules at 48cm           |
| 46       |              |                      |                              |                        |                        |  |                         |                              |
| 48       |              |                      |                              |                        |                        |  |                         | 49 Discontinuous sand lamina |
| 50       |              |                      |                              |                        |                        |  |                         |                              |
| 52       |              |                      |                              |                        |                        |  |                         |                              |
| 54       |              |                      |                              |                        |                        |  |                         |                              |
| 56       |              |                      |                              |                        |                        |  |                         |                              |
| 58       |              | Slight bowed         |                              |                        |                        |  |                         | 59 Discontinuous sand lamina |
| 60       |              |                      |                              |                        |                        |  |                         |                              |
| 62       |              |                      |                              |                        |                        |  |                         |                              |
| 64       |              |                      |                              |                        |                        |  |                         | 148cm silt pod               |
| 66       |              |                      |                              |                        |                        |  |                         |                              |
| 68       |              |                      |                              |                        |                        |  |                         |                              |
| 70       |              |                      |                              |                        |                        |  |                         |                              |
| 72       |              |                      |                              |                        |                        |  |                         |                              |
| 74       |              |                      |                              |                        |                        |  |                         |                              |
| 76       |              |                      |                              |                        |                        |  |                         |                              |
| 78       |              |                      |                              |                        |                        |  |                         |                              |
| 80       |              |                      |                              |                        |                        |  |                         |                              |
| 82       |              |                      |                              |                        |                        |  |                         |                              |
| 84       |              |                      |                              |                        |                        |  |                         |                              |
| 86       |              |                      |                              |                        |                        |  |                         |                              |
| 88       |              |                      |                              |                        |                        |  |                         |                              |
| 90       |              |                      |                              |                        |                        |  |                         |                              |
| 92       |              |                      |                              |                        |                        |  |                         |                              |
| 94       |              |                      |                              |                        |                        |  |                         |                              |
| 96       |              |                      |                              |                        |                        |  |                         |                              |
| 98       |              |                      |                              |                        |                        |  |                         |                              |
| 100      |              |                      |                              |                        |                        |  |                         |                              |
| 102      | SS           |                      |                              |                        |                        |  |                         |                              |
| 104      | 102cm        |                      |                              |                        |                        |  |                         |                              |
| 106      | 15%          |                      |                              |                        |                        |  |                         |                              |
| 108      |              |                      |                              |                        |                        |  |                         |                              |
| 110      |              |                      |                              |                        |                        |  |                         |                              |
| 112      |              |                      |                              |                        |                        |  |                         |                              |
| 114      |              |                      |                              |                        |                        |  |                         |                              |
| 116      |              |                      |                              |                        |                        |  |                         |                              |
| 118      |              |                      |                              |                        |                        |  |                         |                              |
| 120      |              |                      |                              |                        |                        |  |                         |                              |
| 122      |              |                      |                              |                        |                        |  |                         |                              |
| 124      |              |                      |                              |                        |                        |  |                         |                              |
| 126      |              |                      |                              |                        |                        |  |                         |                              |
| 128      |              |                      |                              |                        |                        |  |                         |                              |
| 130      |              |                      |                              |                        |                        |  |                         |                              |
| 132      |              |                      |                              |                        |                        |  |                         |                              |
| 134      |              |                      |                              |                        |                        |  |                         |                              |
| 136      |              |                      |                              |                        |                        |  |                         |                              |
| 138      |              |                      |                              |                        |                        |  |                         |                              |
| 140      |              |                      |                              |                        |                        |  |                         |                              |
| 142      |              |                      |                              |                        |                        |  |                         |                              |
| 144      |              |                      |                              |                        |                        |  |                         |                              |
| 146      |              |                      |                              |                        |                        |  |                         |                              |
| 148      |              |                      |                              |                        |                        |  |                         |                              |
| 150      |              |                      |                              |                        |                        |  |                         |                              |
| 152      |              |                      |                              |                        |                        |  |                         |                              |

Very dark gray biosilicious - bearing mud  
thinly laminated

2 granules at 48cm  
49 Discontinuous sand lamina  
59 Discontinuous sand lamina  
148cm silt pod

Smear slide - diatoms, sponge spicules as broken bits

SS  
102cm  
15%

| CM Scale | SS+TS Sample | Drilling Disturbance | Lithology |    |    |   | Bioturbation Index 0-4 | Sedimentary Structures | Pebble Counts<br>>4mm<br>less than #10                     | Logged By: | Date:  |
|----------|--------------|----------------------|-----------|----|----|---|------------------------|------------------------|--|------------|--------|
|          |              |                      | C         | ST | SD | G |                        |                        |  | Day Shift  | 2-4-19 |
| 0        |              |                      |           |    |    |   |                        |                        | Overlaps with Hole B Core 11F                              |            |        |
| 2        |              |                      |           |    |    |   |                        |                        | Section 3A, 4A, CC   |            |        |
| 4        |              |                      |           |    |    |   |                        | 0                      | 0-22 cm  |            |        |
| 6        |              |                      |           |    |    |   |                        |                        | Very dark gray   |            |        |
| 8        |              |                      |           |    |    |   |                        |                        | biosiliceous-bearing mud                                   |            |        |
| 10       | slight       |                      |           |    |    |   |                        |                        | thinly laminated   |            |        |
| 12       | bowing       |                      |           |    |    |   |                        | 0                      | sharp basal boundary                                       |            |        |
| 14       |              |                      |           |    |    |   |                        |                        | 22-44 cm dark gray   |            |        |
| 16       |              |                      |           |    |    |   |                        |                        | biosiliceous bearing mud                                   |            |        |
| 18       |              |                      |           |    |    |   |                        |                        | 22-30 cm   |            |        |
| 20       |              |                      |           |    |    |   |                        |                        | faint laminae moderate bioturbation                        |            |        |
| 22       |              |                      |           |    |    |   |                        | 0                      |  |            |        |
| 24       |              |                      |           |    |    |   |                        |                        | 44 cm gradational contact                                  |            |        |
| 26       |              |                      |           |    |    |   |                        | 0                      | 44-88 cm   |            |        |
| 28       |              |                      |           |    |    |   |                        |                        | Dark greenish gray   |            |        |
| 30       |              |                      |           |    |    |   |                        |                        | biosiliceous-rich mud                                      |            |        |
| 32       |              |                      |           |    |    |   |                        |                        | with sand grains + granules throughout                     |            |        |
| 34       |              |                      |           |    |    |   |                        | 0                      |  |            |        |
| 36       |              |                      |           |    |    |   |                        |                        | 72 cm  |            |        |
| 38       |              |                      |           |    |    |   |                        |                        | - granite pebble   |            |        |
| 40       |              |                      |           |    |    |   |                        |                        | distinctive  |            |        |
| 42       | slight       |                      |           |    |    |   |                        | 1                      | 113-136 cm - dark greenish gray color banding (thin < 3mm) |            |        |
| 44       | bowing       |                      |           |    |    |   |                        |                        | gradational contact  |            |        |
| 46       |              |                      |           |    |    |   |                        |                        | 88-124 cm  |            |        |
| 48       |              |                      |           |    |    |   |                        |                        | Dark gray biosiliceous-rich mud                            |            |        |
| 50       |              |                      |           |    |    |   |                        |                        | tilted 104-105 cm silt layer (lt. gray)                    |            |        |
| 52       |              |                      |           |    |    |   |                        |                        | 108.5-109.5 cm silt pod                                    |            |        |
| 54       |              |                      |           |    |    |   |                        |                        | gradational  |            |        |
| 56       |              |                      |           |    |    |   |                        |                        | 124 cm - 144 cm  |            |        |
| 58       |              |                      |           |    |    |   |                        |                        | very dark gray biosiliceous-bearing mud                    |            |        |
| 60       |              |                      |           |    |    |   |                        |                        | 144 cm - 150 cm  |            |        |
| 62       |              |                      |           |    |    |   |                        |                        | dark gray biosiliceous-bearing mud                         |            |        |
| 64       |              |                      |           |    |    |   |                        |                        |  |            |        |
| 66       |              |                      |           |    |    |   |                        |                        |  |            |        |
| 68       |              |                      |           |    |    |   |                        |                        |  |            |        |
| 70       |              |                      |           |    |    |   |                        |                        |  |            |        |
| 72       | SS           |                      |           |    |    |   |                        |                        |  |            |        |
| 74       | 72 cm        |                      |           |    |    |   |                        |                        |  |            |        |
| 76       |              |                      |           |    |    |   |                        |                        |  |            |        |
| 78       |              |                      |           |    |    |   |                        |                        |  |            |        |
| 80       |              |                      |           |    |    |   |                        |                        |  |            |        |
| 82       |              |                      |           |    |    |   |                        |                        |  |            |        |
| 84       |              |                      |           |    |    |   |                        |                        |  |            |        |
| 86       |              |                      |           |    |    |   |                        |                        |  |            |        |
| 88       |              |                      |           |    |    |   |                        |                        |  |            |        |
| 90       |              |                      |           |    |    |   |                        |                        |  |            |        |
| 92       |              |                      |           |    |    |   |                        |                        |  |            |        |
| 94       |              |                      |           |    |    |   |                        |                        |  |            |        |
| 96       |              |                      |           |    |    |   |                        |                        |  |            |        |
| 98       |              |                      |           |    |    |   |                        |                        |  |            |        |
| 100      |              |                      |           |    |    |   |                        |                        |  |            |        |
| 102      |              |                      |           |    |    |   |                        |                        |  |            |        |
| 104      |              |                      |           |    |    |   |                        |                        |  |            |        |
| 106      |              |                      |           |    |    |   |                        |                        |  |            |        |
| 108      |              |                      |           |    |    |   |                        |                        |  |            |        |
| 110      |              |                      |           |    |    |   |                        |                        |  |            |        |
| 112      |              |                      |           |    |    |   |                        |                        |  |            |        |
| 114      |              |                      |           |    |    |   |                        |                        |  |            |        |
| 116      |              |                      |           |    |    |   |                        |                        |  |            |        |
| 118      |              |                      |           |    |    |   |                        |                        |  |            |        |
| 120      |              |                      |           |    |    |   |                        |                        |  |            |        |
| 122      |              |                      |           |    |    |   |                        |                        |  |            |        |
| 124      |              |                      |           |    |    |   |                        |                        |  |            |        |
| 126      |              |                      |           |    |    |   |                        |                        |  |            |        |
| 128      |              |                      |           |    |    |   |                        |                        |  |            |        |
| 130      |              |                      |           |    |    |   |                        |                        |  |            |        |
| 132      |              |                      |           |    |    |   |                        |                        |  |            |        |
| 134      |              |                      |           |    |    |   |                        |                        |  |            |        |
| 136      |              |                      |           |    |    |   |                        |                        |  |            |        |
| 138      |              |                      |           |    |    |   |                        |                        |  |            |        |
| 140      |              |                      |           |    |    |   |                        |                        |  |            |        |
| 142      |              |                      |           |    |    |   |                        |                        |  |            |        |
| 144      |              |                      |           |    |    |   |                        |                        |  |            |        |
| 146      |              |                      |           |    |    |   |                        |                        |  |            |        |
| 148      |              |                      |           |    |    |   |                        |                        |  |            |        |
| 150      |              |                      |           |    |    |   |                        |                        |  |            |        |
| 152      |              |                      |           |    |    |   |                        |                        |  |            |        |

CM Scale

slight bowing

slight bowing

SS 72 cm

oval burrows

green

gr

gr

gr

gr

mod

heavy

color banding

slight

40

50

80

0-22 cm  
Very dark gray biosiliceous-bearing mud  
thinly laminated  
sharp basal boundary

22-44 cm dark gray biosiliceous bearing mud

22-30 cm faint laminae moderate bioturbation

44 cm gradational contact

44-88 cm Dark greenish gray biosiliceous-rich mud  
with sand grains + granules throughout

- granite pebble

113-136 cm - dark greenish gray color banding (thin < 3mm)

gradational contact

88-124 cm Dark gray biosiliceous-rich mud

tilted 104-105 cm silt layer (lt. gray)

108.5-109.5 cm silt pod

gradational

124 cm - 144 cm very dark gray biosiliceous-bearing mud

144 cm - 150 cm dark gray biosiliceous-bearing mud

CM Scale

- 0
- 2
- 4
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- 148
- 150
- 152

| SS+TS Sample | Drilling Disturbance | Lithology<br>C ST SD G | Bioturbation Index 0 - 4 | Sedimentary Structures | Pebble Counts<br>>4mm<br>less than #10 | Logged By:<br>Day shift  | Date:<br>2-4-19 |
|--------------|----------------------|------------------------|--------------------------|------------------------|--|--|-----------------|
|              |                      |                        |                          |                        |  | Comments   |                 |
|              |                      |                        |                          |                        |  | 0-116cm<br>very dark gray biosiliceous-bearing mud<br>(thinly laminated) |                 |
|              |                      |                        |                          |                        |  | 1 gravel @ 106cm   |                 |
|              | slight bowing        |                        |                          |                        |  | microfaulting present due to drilling disturbance throughout             |                 |



| CM Scale | SS+TS Sample | Drilling Disturbance | Lithology<br>C ST SD G | Bioturbation Index 0 - 4 | Sedimentary Structures | Pebble Counts<br>>4mm<br>less than #10 | Logged By:  | Date:   |
|----------|--------------|----------------------|------------------------|--------------------------|------------------------|--|---|---------|
|          |              |                      |                        |                          |                        |  | Day Shift   | 2-14-19 |
| 0        |              |                      |                        |                          |                        |  | 0-28cm<br>very dark gray<br>biosiliceous - bedding mud<br>thinly laminated<br>gravel at 13cm<br>micro faulting due to<br>drilling |         |
| 2        |              |                      |                        |                          |                        |  |   |         |
| 4        |              |                      |                        |                          |                        |  |   |         |
| 6        |              |                      |                        |                          |                        |  |   |         |
| 8        |              |                      |                        |                          |                        |  |   |         |
| 10       |              |                      |                        |                          |                        |  |   |         |
| 12       |              |                      |                        |                          |                        |  |   |         |
| 14       |              | moderate             |                        | 0                        |                        |  |   |         |
| 16       |              |                      |                        |                          |                        |  |   |         |
| 18       |              |                      |                        |                          |                        |  |   |         |
| 20       |              |                      |                        |                          |                        |  |   |         |
| 22       |              |                      |                        |                          |                        |  |   |         |
| 24       |              |                      |                        |                          |                        |  |   |         |
| 26       |              |                      |                        |                          |                        |  |   |         |
| 28       |              |                      |                        |                          |                        |  |   |         |
| 30       |              |                      |                        |                          |                        |  |   |         |
| 32       |              |                      |                        |                          |                        |  |   |         |
| 34       |              |                      |                        |                          |                        |  |   |         |
| 36       |              |                      |                        |                          |                        |  |   |         |
| 38       |              |                      |                        |                          |                        |  |   |         |
| 40       |              |                      |                        |                          |                        |  |   |         |
| 42       |              |                      |                        |                          |                        |  |   |         |
| 44       |              |                      |                        |                          |                        |  |   |         |
| 46       |              |                      |                        |                          |                        |  |   |         |
| 48       |              |                      |                        |                          |                        |  |   |         |
| 50       |              |                      |                        |                          |                        |  |   |         |
| 52       |              |                      |                        |                          |                        |  |   |         |
| 54       |              |                      |                        |                          |                        |  |   |         |
| 56       |              |                      |                        |                          |                        |  |   |         |
| 58       |              |                      |                        |                          |                        |  |   |         |
| 60       |              |                      |                        |                          |                        |  |   |         |
| 62       |              |                      |                        |                          |                        |  |   |         |
| 64       |              |                      |                        |                          |                        |  |   |         |
| 66       |              |                      |                        |                          |                        |  |   |         |
| 68       |              |                      |                        |                          |                        |  |   |         |
| 70       |              |                      |                        |                          |                        |  |   |         |
| 72       |              |                      |                        |                          |                        |  |   |         |
| 74       |              |                      |                        |                          |                        |  |   |         |
| 76       |              |                      |                        |                          |                        |  |   |         |
| 78       |              |                      |                        |                          |                        |  |   |         |
| 80       |              |                      |                        |                          |                        |  |   |         |
| 82       |              |                      |                        |                          |                        |  |   |         |
| 84       |              |                      |                        |                          |                        |  |   |         |
| 86       |              |                      |                        |                          |                        |  |   |         |
| 88       |              |                      |                        |                          |                        |  |   |         |
| 90       |              |                      |                        |                          |                        |  |   |         |
| 92       |              |                      |                        |                          |                        |  |   |         |
| 94       |              |                      |                        |                          |                        |  |   |         |
| 96       |              |                      |                        |                          |                        |  |   |         |
| 98       |              |                      |                        |                          |                        |  |   |         |
| 100      |              |                      |                        |                          |                        |  |   |         |
| 102      |              |                      |                        |                          |                        |  |   |         |
| 104      |              |                      |                        |                          |                        |  |   |         |
| 106      |              |                      |                        |                          |                        |  |   |         |
| 108      |              |                      |                        |                          |                        |  |   |         |
| 110      |              |                      |                        |                          |                        |  |   |         |
| 112      |              |                      |                        |                          |                        |  |   |         |
| 114      |              |                      |                        |                          |                        |  |   |         |
| 116      |              |                      |                        |                          |                        |  |   |         |
| 118      |              |                      |                        |                          |                        |  |   |         |
| 120      |              |                      |                        |                          |                        |  |   |         |
| 122      |              |                      |                        |                          |                        |  |   |         |
| 124      |              |                      |                        |                          |                        |  |   |         |
| 126      |              |                      |                        |                          |                        |  |   |         |
| 128      |              |                      |                        |                          |                        |  |   |         |
| 130      |              |                      |                        |                          |                        |  |   |         |
| 132      |              |                      |                        |                          |                        |  |   |         |
| 134      |              |                      |                        |                          |                        |  |   |         |
| 136      |              |                      |                        |                          |                        |  |   |         |
| 138      |              |                      |                        |                          |                        |  |   |         |
| 140      |              |                      |                        |                          |                        |  |   |         |
| 142      |              |                      |                        |                          |                        |  |   |         |
| 144      |              |                      |                        |                          |                        |  |   |         |
| 146      |              |                      |                        |                          |                        |  |   |         |
| 148      |              |                      |                        |                          |                        |  |   |         |
| 150      |              |                      |                        |                          |                        |  |   |         |
| 152      |              |                      |                        |                          |                        |  |   |         |

PAL