

| 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>02/05/2019 |
|----------|--------------|----------------------|------------------------|--------------------------|------------------------|----------------------------------------|--------------------------------------------------------------------------------------------------------------|---------------------|
|          |              |                      |                        |                          |                        |                                        | Comments                                                                                                     |                     |
| 0        |              |                      |                        |                          |                        |                                        | 0-15A: Very dark gray silty clay moderately disturbed by flow-in<br><br>thinly laminated from 17 into bottom |                     |
| 2        |              |                      |                        |                          |                        |                                        |                                                                                                              |                     |
| 4        |              |                      |                        |                          |                        |                                        |                                                                                                              |                     |
| 6        |              |                      |                        |                          |                        |                                        |                                                                                                              |                     |
| 8        |              |                      |                        |                          |                        |                                        |                                                                                                              |                     |
| 10       |              |                      |                        |                          |                        |                                        |                                                                                                              |                     |
| 12       |              |                      |                        |                          |                        |                                        |                                                                                                              |                     |
| 14       |              |                      |                        |                          |                        |                                        |                                                                                                              |                     |
| 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      |              |                      |                        |                          |                        |                                        |                                                                                                              |                     |



| CM Scale | SS+TS Sample | Drilling Disturbance | Lithology<br>c st sd o | Bioturbation Index 0-4 | Sedimentary Structures | Pebble Counts<br>>4mm<br>less than #10 | Logged By: | Date:    |
|----------|--------------|----------------------|------------------------|------------------------|------------------------|----------------------------------------|------------|----------|
|          |              |                      |                        |                        |                        |                                        | Day shift  | 2/5/2019 |
| Comments |              |                      |                        |                        |                        |                                        |            |          |
| 0        |              |                      |                        |                        |                        |                                        |            |          |
| 2        |              |                      |                        |                        |                        |                                        |            |          |
| 4        |              |                      |                        |                        |                        |                                        |            |          |
| 6        |              |                      |                        |                        |                        |                                        |            |          |
| 8        |              |                      |                        |                        |                        |                                        |            |          |
| 10       |              |                      |                        |                        |                        |                                        |            |          |
| 12       |              |                      |                        |                        |                        |                                        |            |          |
| 14       |              |                      |                        |                        |                        |                                        |            |          |
| 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      |              |                      |                        |                        |                        |                                        |            |          |

0-1cm very dark gray silty clay  
 1cm - bottom: dark gray silty clay  
 1-59cm: thinly laminated  
 At 12cm: dark greenish gray color band



| 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                                                                                    | 02/05/2019 |
| 0        |              | ↑<br> <br>•<br> <br>↓ |           |    |    |   | 0                        |                        | ↑                                      | 0-32 cm : Dark gray silty clay<br>thinly laminated<br>Moderately disturbed<br>due to flow in |            |
| 2        |              |                       |           |    |    |   |                          |                        | 0                                      |                                                                                              |            |
| 4        |              |                       |           |    |    |   |                          |                        | ↓                                      |                                                                                              |            |
| 6        |              |                       |           |    |    |   |                          |                        |                                        |                                                                                              |            |
| 8        |              |                       |           |    |    |   |                          |                        |                                        |                                                                                              |            |
| 10       |              |                       |           |    |    |   |                          |                        |                                        |                                                                                              |            |
| 12       |              |                       |           |    |    |   |                          |                        |                                        |                                                                                              |            |
| 14       |              |                       |           |    |    |   |                          |                        |                                        |                                                                                              |            |
| 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