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|--|------------------|------------------------------|-----------------|--|---------------------|----------------------|-------------|
| <b>Granularmetric Report</b><br>Depths and elevations based on measured values |                  |                              |                 |  <b>COASTAL TECH</b><br>Coastal Geology & Sediments Laboratory<br><br>1333 Gateway Dr., Suite 1004<br>Melbourne, FL 32901<br>Phone (321) 751-1135<br>Fax (321) 751-2343 |                     |                      |             |
| Project Name: Charlotte Co   |                  |                              |                 |  |                     |                      |             |
| Sample Name: CH-12-VC-12 #1  |                  |                              |                 |  |                     |                      |             |
| Analysis Date: 03-01-13  |                  |                              |                 |  |                     |                      |             |
| Analyzed By: MB  |                  |                              |                 |  |                     |                      |             |
| Easting (ft):  |                  | Northing (ft):               |                 | Coordinate System:   |                     | Elevation (ft):      |             |
| 523,079  |                  | 905,154.5                    |                 | Florida State Plane West   |                     | -38.3 NAVD 88        |             |
| USCS:  |                  | Munsell:                     |                 | Comments:  |                     |                      |             |
| SW   |                  | Wet - 5Y-6/1<br>Dry - 5Y-6/1 |                 |  |                     |                      |             |
| Dry Weight (g):  | Wash Weight (g): | Pan Retained (g):            | Sieve Loss (%): | Fines (%):   | Organics (%):       | Carbonates (%):      | Shells (%): |
| 171.16   | 171.16           | 0.17                         | 0.13            | #200 - 0.29<br>#230 - 0.24   | 1.10                | 47.70                |             |
| Sieve Number   | Sieve Size (Phi) | Sieve Size (Millimeters)     | Grams Retained  | % Weight Retained  | Cum. Grams Retained | C. % Weight Retained |             |
| 3/4"   | -4.25            | 19.03                        | 0.00            | 0.00   | 0.00                | 0.00                 |             |
| 5/8"   | -4.00            | 16.00                        | 0.00            | 0.00   | 0.00                | 0.00                 |             |
| 11/16"   | -3.50            | 11.31                        | 1.12            | 0.65   | 1.12                | 0.65                 |             |
| 5/16"  | -3.00            | 8.00                         | 0.31            | 0.18   | 1.43                | 0.83                 |             |
| 3.5  | -2.50            | 5.66                         | 0.74            | 0.43   | 2.17                | 1.26                 |             |
| 4  | -2.25            | 4.76                         | 0.84            | 0.49   | 3.01                | 1.75                 |             |
| 5  | -2.00            | 4.00                         | 1.03            | 0.60   | 4.04                | 2.35                 |             |
| 7  | -1.50            | 2.83                         | 3.87            | 2.26   | 7.91                | 4.61                 |             |
| 10   | -1.00            | 2.00                         | 7.03            | 4.11   | 14.94               | 8.72                 |             |
| 14   | -0.50            | 1.41                         | 12.75           | 7.45   | 27.69               | 16.17                |             |
| 18   | 0.00             | 1.00                         | 17.82           | 10.41  | 45.51               | 26.58                |             |
| 25   | 0.50             | 0.71                         | 18.36           | 10.73  | 63.87               | 37.31                |             |
| 35   | 1.00             | 0.50                         | 18.34           | 10.72  | 82.21               | 48.03                |             |
| 45   | 1.50             | 0.35                         | 30.92           | 18.06  | 113.13              | 66.09                |             |
| 60   | 2.00             | 0.25                         | 37.23           | 21.75  | 150.36              | 87.84                |             |
| 80   | 2.50             | 0.18                         | 16.76           | 9.79   | 167.12              | 97.63                |             |
| 120  | 3.00             | 0.13                         | 3.20            | 1.87   | 170.32              | 99.50                |             |
| 170  | 3.50             | 0.09                         | 0.32            | 0.19   | 170.64              | 99.69                |             |
| 200  | 3.75             | 0.07                         | 0.04            | 0.02   | 170.68              | 99.71                |             |
| 230  | 4.00             | 0.06                         | 0.09            | 0.05   | 170.77              | 99.76                |             |
|  |                  |                              |                 |  |                     |                      |             |
| Phi 5  | Phi 16           | Phi 25                       | Phi 50          | Phi 75   | Phi 84              | Phi 95               |             |
| 2.37   | 1.91             | 1.70                         | 1.05            | -0.08  | -0.51               | -1.45                |             |
| Moment   | Mean Phi         | Mean mm                      | Sorting         | Skewness   | Kurtosis            |                      |             |
| Statistics   | 0.76             | 0.59                         | 1.22            | -0.82  | 3.54                |                      |             |

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| <b>Granularmetric Report</b><br>Depths and elevations based on measured values |                  |                                |                 |  <b>COASTAL TECH</b><br>Coastal Geology & Sediments Laboratory<br><br>1333 Gateway Dr., Suite 1004<br>Melbourne, FL 32901<br>Phone (321) 751-1135<br>Fax (321) 751-2343 |                     |                      |             |
| Project Name: Charlotte Co   |                  |                                |                 |  |                     |                      |             |
| Sample Name: CH-12-VC-12 #2  |                  |                                |                 |  |                     |                      |             |
| Analysis Date: 03-01-13  |                  |                                |                 |  |                     |                      |             |
| Analyzed By: MB  |                  |                                |                 |  |                     |                      |             |
| Easting (ft):  |                  | Northing (ft):                 |                 | Coordinate System:   |                     | Elevation (ft):      |             |
| 523,079  |                  | 905,154.5                      |                 | Florida State Plane West   |                     | -41.3 NAVD 88        |             |
| USCS:  |                  | Munsell:                       |                 | Comments:  |                     |                      |             |
| SP   |                  | Wet - 5Y-6/1<br>Dry - 2.5Y-7/1 |                 |  |                     |                      |             |
| Dry Weight (g):  | Wash Weight (g): | Pan Retained (g):              | Sieve Loss (%): | Fines (%):   | Organics (%):       | Carbonates (%):      | Shells (%): |
| 185.30   | 185.30           | 0.64                           | 0.00            | #200 - 0.44<br>#230 - 0.35   | 0.70                | 20.83                |             |
| Sieve Number   | Sieve Size (Phi) | Sieve Size (Millimeters)       | Grams Retained  | % Weight Retained  | Cum. Grams Retained | C. % Weight Retained |             |
| 3/4"   | -4.25            | 19.03                          | 0.00            | 0.00   | 0.00                | 0.00                 |             |
| 5/8"   | -4.00            | 16.00                          | 0.00            | 0.00   | 0.00                | 0.00                 |             |
| 11/16"   | -3.50            | 11.31                          | 0.00            | 0.00   | 0.00                | 0.00                 |             |
| 5/16"  | -3.00            | 8.00                           | 0.00            | 0.00   | 0.00                | 0.00                 |             |
| 3.5  | -2.50            | 5.66                           | 0.18            | 0.10   | 0.18                | 0.10                 |             |
| 4  | -2.25            | 4.76                           | 0.00            | 0.00   | 0.18                | 0.10                 |             |
| 5  | -2.00            | 4.00                           | 0.06            | 0.03   | 0.24                | 0.13                 |             |
| 7  | -1.50            | 2.83                           | 0.49            | 0.26   | 0.73                | 0.39                 |             |
| 10   | -1.00            | 2.00                           | 0.96            | 0.52   | 1.69                | 0.91                 |             |
| 14   | -0.50            | 1.41                           | 3.35            | 1.81   | 5.04                | 2.72                 |             |
| 18   | 0.00             | 1.00                           | 5.00            | 2.70   | 10.04               | 5.42                 |             |
| 25   | 0.50             | 0.71                           | 5.88            | 3.17   | 15.92               | 8.59                 |             |
| 35   | 1.00             | 0.50                           | 8.32            | 4.49   | 24.24               | 13.08                |             |
| 45   | 1.50             | 0.35                           | 18.90           | 10.20  | 43.14               | 23.28                |             |
| 60   | 2.00             | 0.25                           | 53.21           | 28.72  | 96.35               | 52.00                |             |
| 80   | 2.50             | 0.18                           | 66.12           | 35.68  | 162.47              | 87.68                |             |
| 120  | 3.00             | 0.13                           | 19.65           | 10.60  | 182.12              | 98.28                |             |
| 170  | 3.50             | 0.09                           | 2.10            | 1.13   | 184.22              | 99.41                |             |
| 200  | 3.75             | 0.07                           | 0.27            | 0.15   | 184.49              | 99.56                |             |
| 230  | 4.00             | 0.06                           | 0.17            | 0.09   | 184.66              | 99.65                |             |
|  |                  |                                |                 |  |                     |                      |             |
| Phi 5  | Phi 16           | Phi 25                         | Phi 50          | Phi 75   | Phi 84              | Phi 95               |             |
| 2.85   | 2.45             | 2.32                           | 1.97            | 1.53   | 1.14                | -0.08                |             |
| Moment   | Mean Phi         | Mean mm                        | Sorting         | Skewness   | Kurtosis            |                      |             |
| Statistics   | 1.78             | 0.29                           | 0.84            | -1.53  | 6.13                |                      |             |

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| <b>Granularmetric Report</b><br>Depths and elevations based on measured values |   |  |  |  <b>COASTAL TECH</b><br>Coastal Geology & Sediments Laboratory<br><br>1333 Gateway Dr., Suite 1004<br>Melbourne, FL 32901<br>Phone (321) 751-1135<br>Fax (321) 751-2343 |  |   |             |
| Project Name: Charlotte Co   |   |  |  |  |  |   |             |
| Sample Name: CH-12-VC-12 #3  |   |  |  |  |  |   |             |
| Analysis Date: 03-01-13  |   |  |  |  |  |   |             |
| Analyzed By: MB  |   |  |  |  |  |   |             |
| Easting (ft):<br><div style="text-align: center;">523,079</div>                |   | Northing (ft):<br><div style="text-align: center;">905,154.5</div> |  | Coordinate System:<br><div style="text-align: center;">Florida State Plane West</div>  |  | Elevation (ft):<br><div style="text-align: center;">-42.8 NAVD 88</div> |             |
| USCS:<br><div style="text-align: center;">SW</div>                             |   | Munsell:<br>Wet - 5Y-6/1<br>Dry - 5Y-7/1                           |  | Comments:  |  |   |             |
| Dry Weight (g):<br><div style="text-align: center;">182.28</div>               | Wash Weight (g):<br><div style="text-align: center;">182.28</div> | Pan Retained (g):<br><div style="text-align: center;">2.04</div>   | Sieve Loss (%):<br><div style="text-align: center;">0.01</div> | Fines (%):<br>#200 - 1.48<br>#230 - 1.12   | Organics (%):<br><div style="text-align: center;">1.14</div> | Carbonates (%):<br><div style="text-align: center;">41.97</div>         | Shells (%): |
| Sieve Number   | Sieve Size (Phi)  | Sieve Size (Millimeters)   | Grams Retained   | % Weight Retained  | Cum. Grams Retained  | C. % Weight Retained  |             |
| 3/4"   | -4.25   | 19.03  | 0.00   | 0.00   | 0.00   | 0.00  |             |
| 5/8"   | -4.00   | 16.00  | 0.00   | 0.00   | 0.00   | 0.00  |             |
| 11/16"   | -3.50   | 11.31  | 0.00   | 0.00   | 0.00   | 0.00  |             |
| 5/16"  | -3.00   | 8.00   | 0.50   | 0.27   | 0.50   | 0.27  |             |
| 3.5  | -2.50   | 5.66   | 1.56   | 0.86   | 2.06   | 1.13  |             |
| 4  | -2.25   | 4.76   | 0.40   | 0.22   | 2.46   | 1.35  |             |
| 5  | -2.00   | 4.00   | 1.20   | 0.66   | 3.66   | 2.01  |             |
| 7  | -1.50   | 2.83   | 3.28   | 1.80   | 6.94   | 3.81  |             |
| 10   | -1.00   | 2.00   | 4.87   | 2.67   | 11.81  | 6.48  |             |
| 14   | -0.50   | 1.41   | 9.22   | 5.06   | 21.03  | 11.54   |             |
| 18   | 0.00  | 1.00   | 13.12  | 7.20   | 34.15  | 18.74   |             |
| 25   | 0.50  | 0.71   | 14.85  | 8.15   | 49.00  | 26.89   |             |
| 35   | 1.00  | 0.50   | 16.47  | 9.04   | 65.47  | 35.93   |             |
| 45   | 1.50  | 0.35   | 24.30  | 13.33  | 89.77  | 49.26   |             |
| 60   | 2.00  | 0.25   | 36.79  | 20.18  | 126.56   | 69.44   |             |
| 80   | 2.50  | 0.18   | 31.59  | 17.33  | 158.15   | 86.77   |             |
| 120  | 3.00  | 0.13   | 16.00  | 8.78   | 174.15   | 95.55   |             |
| 170  | 3.50  | 0.09   | 4.36   | 2.39   | 178.51   | 97.94   |             |
| 200  | 3.75  | 0.07   | 1.06   | 0.58   | 179.57   | 98.52   |             |
| 230  | 4.00  | 0.06   | 0.65   | 0.36   | 180.22   | 98.88   |             |
|  |   |  |  |  |  |   |             |
| Phi 5  | Phi 16  | Phi 25   | Phi 50   | Phi 75   | Phi 84   | Phi 95  |             |
| 2.97   | 2.42  | 2.16   | 1.52   | 0.38   | -0.19  | -1.28   |             |
| Moment   | Mean Phi  | Mean mm  | Sorting  | Skewness   | Kurtosis   |   |             |
| Statistics   | 1.19  | 0.44   | 1.3  | -0.78  | 3.3  |   |             |

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| <b>Granularmetric Report</b><br>Depths and elevations based on measured values |   |  |  |  <b>COASTAL TECH</b><br>Coastal Geology & Sediments Laboratory<br><br>1333 Gateway Dr., Suite 1004<br>Melbourne, FL 32901<br>Phone (321) 751-1135<br>Fax (321) 751-2343 |  |   |             |
| Project Name: Charlotte Co   |   |  |  |  |  |   |             |
| Sample Name: CH-12-VC-12 #4  |   |  |  |  |  |   |             |
| Analysis Date: 03-01-13  |   |  |  |  |  |   |             |
| Analyzed By: MB  |   |  |  |  |  |   |             |
| Easting (ft):<br><div style="text-align: center;">523,079</div>                |   | Northing (ft):<br><div style="text-align: center;">905,154.5</div> |  | Coordinate System:<br><div style="text-align: center;">Florida State Plane West</div>  |  | Elevation (ft):<br><div style="text-align: center;">-44.3 NAVD 88</div> |             |
| USCS:<br><b>SW-SM W/ GRAVEL</b>  |   | Munsell:<br>Wet - 5Y-6/1<br>Dry - 2.5Y-7/1                         |  | Comments:  |  |   |             |
| Dry Weight (g):<br><div style="text-align: center;">168.13</div>               | Wash Weight (g):<br><div style="text-align: center;">154.17</div> | Pan Retained (g):<br><div style="text-align: center;">0.98</div>   | Sieve Loss (%):<br><div style="text-align: center;">0.00</div> | Fines (%):<br>#200 - 9.93<br>#230 - 8.88   | Organics (%):<br><div style="text-align: center;">1.43</div> | Carbonates (%):<br><div style="text-align: center;">56.10</div>         | Shells (%): |
| Sieve Number   | Sieve Size (Phi)  | Sieve Size (Millimeters)   | Grams Retained   | % Weight Retained  | Cum. Grams Retained  | C. % Weight Retained  |             |
| 3/4"   | -4.25   | 19.03  | 0.00   | 0.00   | 0.00   | 0.00  |             |
| 5/8"   | -4.00   | 16.00  | 0.00   | 0.00   | 0.00   | 0.00  |             |
| 11/16"   | -3.50   | 11.31  | 2.43   | 1.45   | 2.43   | 1.45  |             |
| 5/16"  | -3.00   | 8.00   | 10.38  | 6.17   | 12.81  | 7.62  |             |
| 3.5  | -2.50   | 5.66   | 9.96   | 5.92   | 22.77  | 13.54   |             |
| 4  | -2.25   | 4.76   | 3.54   | 2.11   | 26.31  | 15.65   |             |
| 5  | -2.00   | 4.00   | 3.94   | 2.34   | 30.25  | 17.99   |             |
| 7  | -1.50   | 2.83   | 8.06   | 4.79   | 38.31  | 22.78   |             |
| 10   | -1.00   | 2.00   | 8.01   | 4.76   | 46.32  | 27.54   |             |
| 14   | -0.50   | 1.41   | 8.66   | 5.15   | 54.98  | 32.69   |             |
| 18   | 0.00  | 1.00   | 7.93   | 4.72   | 62.91  | 37.41   |             |
| 25   | 0.50  | 0.71   | 7.68   | 4.57   | 70.59  | 41.98   |             |
| 35   | 1.00  | 0.50   | 7.63   | 4.54   | 78.22  | 46.52   |             |
| 45   | 1.50  | 0.35   | 10.67  | 6.35   | 88.89  | 52.87   |             |
| 60   | 2.00  | 0.25   | 16.39  | 9.75   | 105.28   | 62.62   |             |
| 80   | 2.50  | 0.18   | 18.14  | 10.79  | 123.42   | 73.41   |             |
| 120  | 3.00  | 0.13   | 17.29  | 10.28  | 140.71   | 83.69   |             |
| 170  | 3.50  | 0.09   | 8.35   | 4.97   | 149.06   | 88.66   |             |
| 200  | 3.75  | 0.07   | 2.37   | 1.41   | 151.43   | 90.07   |             |
| 230  | 4.00  | 0.06   | 1.76   | 1.05   | 153.19   | 91.12   |             |
|  |   |  |  |  |  |   |             |
| Phi 5  | Phi 16  | Phi 25   | Phi 50   | Phi 75   | Phi 84   | Phi 95  |             |
|  | 3.03  | 2.58   | 1.27   | -1.27  | -2.21  | -3.21   |             |
| Moment   | Mean Phi  | Mean mm  | Sorting  | Skewness   | Kurtosis   |   |             |
| Statistics   | 0.4   | 0.76   | 2.16   | -0.34  | 1.8  |   |             |

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| <b>Granularmetric Report</b><br>Depths and elevations based on measured values |   |  |  | <br><b>COASTAL TECH</b><br>Coastal Geology & Sediments Laboratory<br><br>1333 Gateway Dr., Suite 1004<br>Melbourne, FL 32901<br>Phone (321) 751-1135<br>Fax (321) 751-2343 |  |   |             |
| Project Name: Charlotte Co   |   |  |  |  |  |   |             |
| Sample Name: CH-12-VC-12 #5  |   |  |  |  |  |   |             |
| Analysis Date: 03-01-13  |   |  |  |  |  |   |             |
| Analyzed By: MB  |   |  |  |  |  |   |             |
| Easting (ft):<br><div style="text-align: center;">523,079</div>                |   | Northing (ft):<br><div style="text-align: center;">905,154.5</div> |  | Coordinate System:<br><div style="text-align: center;">Florida State Plane West</div>  |  | Elevation (ft):<br><div style="text-align: center;">-44.8 NAVD 88</div> |             |
| USCS:<br><div style="text-align: center;">SM</div>                             |   | Munsell:<br>Wet - 5Y-6/1<br>Dry - 5Y-7/1                           |  | Comments:  |  |   |             |
| Dry Weight (g):<br><div style="text-align: center;">158.79</div>               | Wash Weight (g):<br><div style="text-align: center;">137.89</div> | Pan Retained (g):<br><div style="text-align: center;">0.69</div>   | Sieve Loss (%):<br><div style="text-align: center;">0.00</div> | Fines (%):<br>#200 - 14.37<br>#230 - 13.59   | Organics (%):<br><div style="text-align: center;">1.54</div> | Carbonates (%):<br><div style="text-align: center;">41.69</div>         | Shells (%): |
| Sieve Number   | Sieve Size (Phi)  | Sieve Size (Millimeters)   | Grams Retained   | % Weight Retained  | Cum. Grams Retained  | C. % Weight Retained  |             |
| 3/4"   | -4.25   | 19.03  | 0.00   | 0.00   | 0.00   | 0.00  |             |
| 5/8"   | -4.00   | 16.00  | 0.00   | 0.00   | 0.00   | 0.00  |             |
| 11/16"   | -3.50   | 11.31  | 0.00   | 0.00   | 0.00   | 0.00  |             |
| 5/16"  | -3.00   | 8.00   | 0.80   | 0.50   | 0.80   | 0.50  |             |
| 3.5  | -2.50   | 5.66   | 4.89   | 3.08   | 5.69   | 3.58  |             |
| 4  | -2.25   | 4.76   | 1.61   | 1.01   | 7.30   | 4.59  |             |
| 5  | -2.00   | 4.00   | 2.98   | 1.88   | 10.28  | 6.47  |             |
| 7  | -1.50   | 2.83   | 4.74   | 2.99   | 15.02  | 9.46  |             |
| 10   | -1.00   | 2.00   | 4.13   | 2.60   | 19.15  | 12.06   |             |
| 14   | -0.50   | 1.41   | 5.64   | 3.55   | 24.79  | 15.61   |             |
| 18   | 0.00  | 1.00   | 5.87   | 3.70   | 30.66  | 19.31   |             |
| 25   | 0.50  | 0.71   | 5.92   | 3.73   | 36.58  | 23.04   |             |
| 35   | 1.00  | 0.50   | 7.87   | 4.96   | 44.45  | 28.00   |             |
| 45   | 1.50  | 0.35   | 12.63  | 7.95   | 57.08  | 35.95   |             |
| 60   | 2.00  | 0.25   | 20.38  | 12.83  | 77.46  | 48.78   |             |
| 80   | 2.50  | 0.18   | 21.35  | 13.45  | 98.81  | 62.23   |             |
| 120  | 3.00  | 0.13   | 21.71  | 13.67  | 120.52   | 75.90   |             |
| 170  | 3.50  | 0.09   | 12.38  | 7.80   | 132.90   | 83.70   |             |
| 200  | 3.75  | 0.07   | 3.06   | 1.93   | 135.96   | 85.63   |             |
| 230  | 4.00  | 0.06   | 1.24   | 0.78   | 137.20   | 86.41   |             |
|  |   |  |  |  |  |   |             |
| Phi 5  | Phi 16  | Phi 25   | Phi 50   | Phi 75   | Phi 84   | Phi 95  |             |
|  | 3.54  | 2.97   | 2.05   | 0.70   | -0.45  | -2.20   |             |
| Moment   | Mean Phi  | Mean mm  | Sorting  | Skewness   | Kurtosis   |   |             |
| Statistics   | 1.29  | 0.41   | 1.73   | -0.89  | 2.83   |   |             |