

Gradation Analysis Report

Proj Name: Central Boca
 Sample: CBJP-01-02#TOP
 Date: 3/14/2001
 By: ID



2841 N. W. Boca Raton Blvd. Boca Raton FL 33428

Elevation: 0 Easting: 964331.00 NAD 1983
 Northing: 732373.00 FLA East Feet

USCS: SP Munsel Dry: 5Y 6/1 Munsel Wet: 5Y 7/1
 Comments:

Dry Wt. 84.24 Percent Silt: 1.80
 Wash Wt. 82.73

| Sieve Size | PHI Size | mm Size | Grams Retained | % Weight Retained | Cum. Grams Retained | C % Weight Retained |
|------------|----------|---------|----------------|-------------------|---------------------|---------------------|
| 3/4 | -4.250 | 19.027 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5/8 | -4.000 | 16.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5/16 | -3.250 | 9.514 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | -3.000 | 8.000 | 0.340 | 0.404 | 0.340 | 0.404 |
| 5 | -2.000 | 4.000 | 0.130 | 0.154 | 0.470 | 0.558 |
| 7 | -1.500 | 2.828 | 0.870 | 1.033 | 1.340 | 1.591 |
| 10 | -1.000 | 2.000 | 1.050 | 1.246 | 2.390 | 2.837 |
| 14 | -0.500 | 1.414 | 3.370 | 4.000 | 5.760 | 6.838 |
| 18 | 0.000 | 1.000 | 5.900 | 7.004 | 11.660 | 13.841 |
| 25 | 0.500 | 0.707 | 10.810 | 12.832 | 22.470 | 26.674 |
| 35 | 1.000 | 0.500 | 12.480 | 14.815 | 34.950 | 41.489 |
| 45 | 1.500 | 0.354 | 10.430 | 12.381 | 45.380 | 53.870 |
| 60 | 2.000 | 0.250 | 11.390 | 13.521 | 56.770 | 67.391 |
| 80 | 2.500 | 0.177 | 10.320 | 12.251 | 67.090 | 79.642 |
| 120 | 3.000 | 0.125 | 12.490 | 14.827 | 79.580 | 94.468 |
| 170 | 3.500 | 0.088 | 3.040 | 3.609 | 82.620 | 98.077 |
| 200 | 3.750 | 0.074 | 0.080 | 0.095 | 82.700 | 98.172 |
| 230 | 4.000 | 0.063 | 0.010 | 0.012 | 82.710 | 98.184 |
| Pan | Pan | 0.053 | 1.510 | 1.792 | 84.220 | 99.976 |

PHI 5 PHI 16 PHI 25 PHI 50 PHI 75 PHI 84 PHI 95
 -0.73 0.08 0.43 1.34 2.31 2.65 3.07

Median phi: 1.34 Median mm: 0.39

| | Mean phi | Mean mm | Sorting | Skewness | Kurtosis |
|---------|----------|---------|---------|----------|----------|
| Graphic | 1.28 | 0.41 | 1.22 | -0.07 | 0.83 |
| Moment | 1.31 | 0.40 | 1.43 | -0.12 | 1.34 |

Gradation Analysis Report

Proj Name: Central Boca
 Sample: CBJP-01-02#MID
 Date: 3/14/2001
 By: ID



2841 N. W. Boca Raton Blvd. Boca Raton FL 33428

Elevation: 5 Easting: 964331.00 NAD 1983
 Northing: 732373.00 FLA East Feet

USCS: SP Munsel Dry: 5Y 6/1 Munsel Wet: 5Y 7/1
 Comments:

Dry Wt. 78.20 Percent Silt: 2.40
 Wash Wt. 76.34

| Sieve Size | PHI Size | mm Size | Grams Retained | % Weight Retained | Cum. Grams Retained | C % Weight Retained |
|------------|----------|---------|----------------|-------------------|---------------------|---------------------|
| 3/4 | -4.250 | 19.027 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5/8 | -4.000 | 16.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5/16 | -3.250 | 9.514 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | -3.000 | 8.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | -2.000 | 4.000 | 0.080 | 0.102 | 0.080 | 0.102 |
| 7 | -1.500 | 2.828 | 0.150 | 0.192 | 0.230 | 0.294 |
| 10 | -1.000 | 2.000 | 0.440 | 0.563 | 0.670 | 0.857 |
| 14 | -0.500 | 1.414 | 1.150 | 1.471 | 1.820 | 2.327 |
| 18 | 0.000 | 1.000 | 2.500 | 3.197 | 4.320 | 5.524 |
| 25 | 0.500 | 0.707 | 4.740 | 6.061 | 9.060 | 11.586 |
| 35 | 1.000 | 0.500 | 8.290 | 10.601 | 17.350 | 22.187 |
| 45 | 1.500 | 0.354 | 10.740 | 13.734 | 28.090 | 35.921 |
| 60 | 2.000 | 0.250 | 13.160 | 16.829 | 41.250 | 52.749 |
| 80 | 2.500 | 0.177 | 17.080 | 21.841 | 58.330 | 74.591 |
| 120 | 3.000 | 0.125 | 15.480 | 19.795 | 73.810 | 94.386 |
| 170 | 3.500 | 0.088 | 2.430 | 3.107 | 76.240 | 97.494 |
| 200 | 3.750 | 0.074 | 0.070 | 0.090 | 76.310 | 97.583 |
| 230 | 4.000 | 0.063 | 0.020 | 0.026 | 76.330 | 97.609 |
| Pan | Pan | 0.053 | 1.860 | 2.379 | 78.190 | 99.987 |

PHI 5 PHI 16 PHI 25 PHI 50 PHI 75 PHI 84 PHI 95
 -0.08 0.71 1.10 1.92 2.51 2.74 3.10

Median phi: 1.92 Median mm: 0.26

| | Mean phi | Mean mm | Sorting | Skewness | Kurtosis |
|---------|----------|---------|---------|----------|----------|
| Graphic | 1.68 | 0.31 | 0.99 | -0.34 | 0.93 |
| Moment | 1.71 | 0.31 | 1.17 | -0.29 | 1.47 |

Gradation Analysis Report

Proj Name: Central Boca
 Sample: CBJP-01-02#BOT
 Date: 3/14/2001
 By: ID



2841 N. W. Boca Raton Blvd. Boca Raton FL 33428

Elevation: 10 Easting: 964331.00 NAD 1983
 Northing: 732373.00 FLA East Feet

USCS: SW Munsel Dry: 5Y 6/1 Munsel Wet: 5Y 7/1
 Comments:

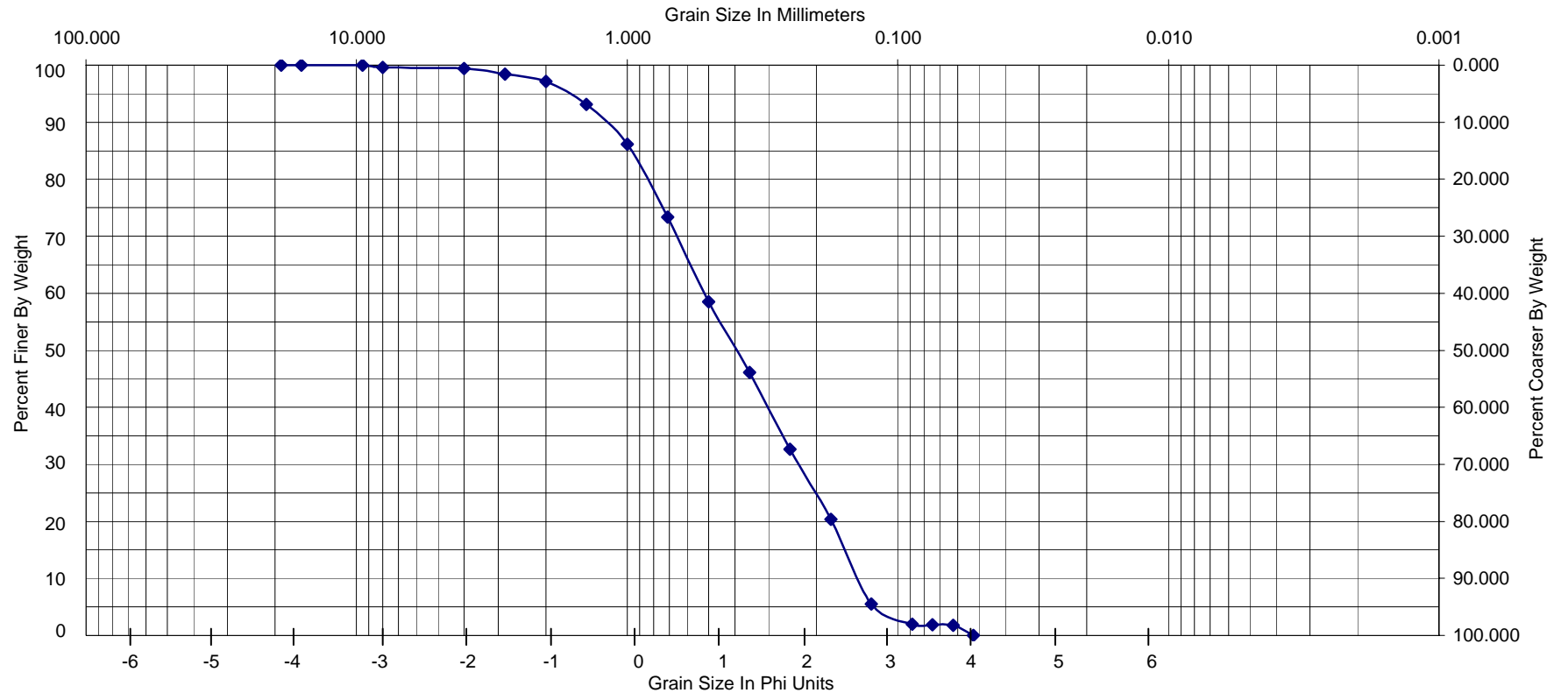
Dry Wt. 78.64 Percent Silt: 1.44
 Wash Wt. 77.52

| Sieve Size | PHI Size | mm Size | Grams Retained | % Weight Retained | Cum. Grams Retained | C % Weight Retained |
|------------|----------|---------|----------------|-------------------|---------------------|---------------------|
| 3/4 | -4.250 | 19.027 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5/8 | -4.000 | 16.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5/16 | -3.250 | 9.514 | 0.000 | 0.000 | 0.000 | 0.000 |
| 4 | -3.000 | 8.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | -2.000 | 4.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7 | -1.500 | 2.828 | 0.220 | 0.280 | 0.220 | 0.280 |
| 10 | -1.000 | 2.000 | 0.370 | 0.470 | 0.590 | 0.750 |
| 14 | -0.500 | 1.414 | 0.980 | 1.246 | 1.570 | 1.996 |
| 18 | 0.000 | 1.000 | 1.870 | 2.378 | 3.440 | 4.374 |
| 25 | 0.500 | 0.707 | 5.160 | 6.562 | 8.600 | 10.936 |
| 35 | 1.000 | 0.500 | 9.000 | 11.445 | 17.600 | 22.380 |
| 45 | 1.500 | 0.354 | 11.790 | 14.992 | 29.390 | 37.373 |
| 60 | 2.000 | 0.250 | 17.160 | 21.821 | 46.550 | 59.194 |
| 80 | 2.500 | 0.177 | 14.590 | 18.553 | 61.140 | 77.747 |
| 120 | 3.000 | 0.125 | 13.690 | 17.408 | 74.830 | 95.155 |
| 170 | 3.500 | 0.088 | 2.570 | 3.268 | 77.400 | 98.423 |
| 200 | 3.750 | 0.074 | 0.090 | 0.114 | 77.490 | 98.538 |
| 230 | 4.000 | 0.063 | 0.010 | 0.013 | 77.500 | 98.550 |
| Pan | Pan | 0.053 | 1.120 | 1.424 | 78.620 | 99.975 |

PHI 5 PHI 16 PHI 25 PHI 50 PHI 75 PHI 84 PHI 95
 0.05 0.72 1.09 1.79 2.43 2.68 2.99


Median phi: 1.79 Median mm: 0.29

| | Mean phi | Mean mm | Sorting | Skewness | Kurtosis |
|---------|----------|---------|---------|----------|----------|
| Graphic | 1.65 | 0.32 | 0.94 | -0.21 | 0.90 |
| Moment | 1.68 | 0.31 | 1.10 | -0.21 | 1.42 |



| Gravel | | Sand | | | Silt or Clay |
|--------|------|--------|--------|------|--------------|
| Coarse | Fine | Coarse | Medium | Fine | |

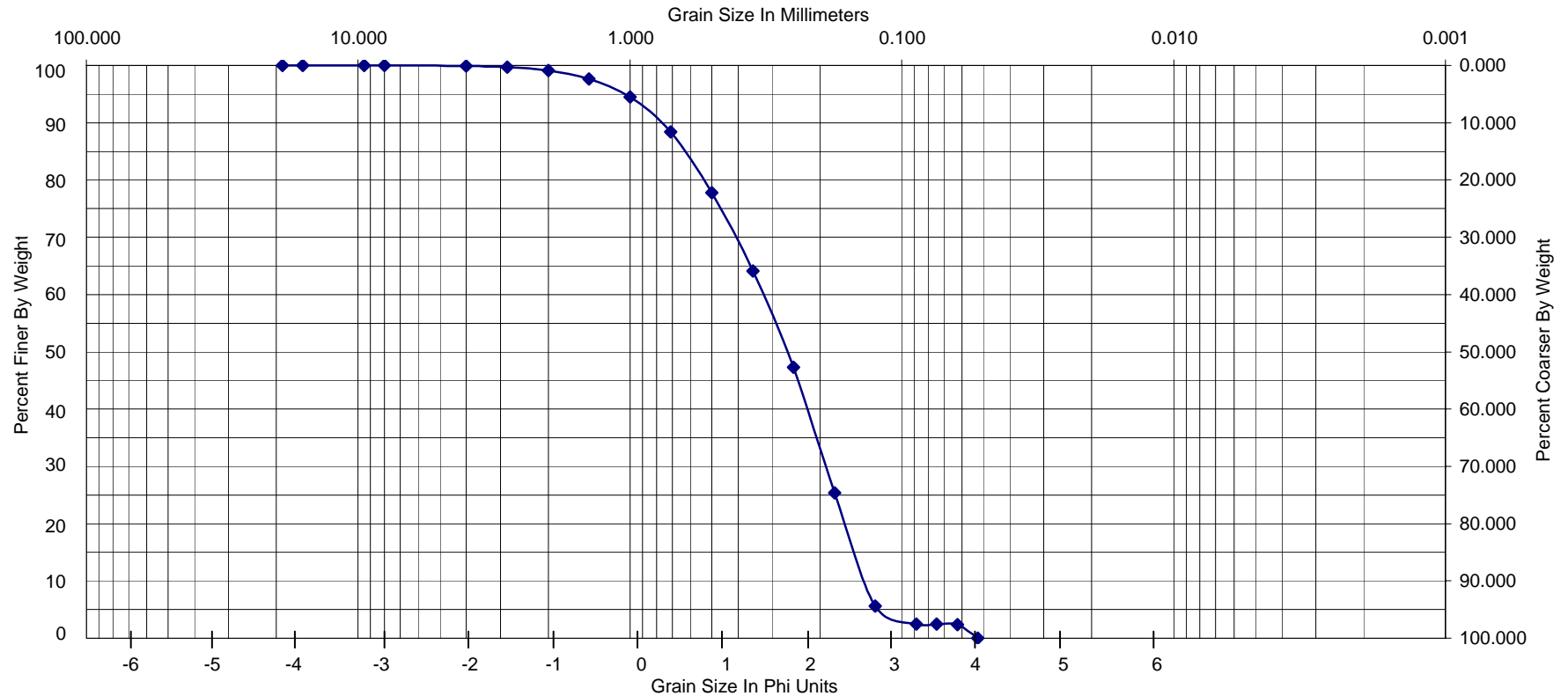
| Sample No. | Depth | Description | USCS | % Silt | Median | Mean | Skew | Kurt | Sort | PL | LL | PI | Sample Information |
|------------------|-------|-------------|------|--------|--------|------|-------|------|------|----|----|----|----------------------------|
| — CBJP-01-02#TOP | 0.0 | | SP | 1.80 | 0.4 | 0.4 | -0.12 | 1.34 | 1.43 | NA | NA | NA | Project Name: Central Boca |
| | | | | | | | | | | | | | Sample Type: JET PROBES |
| | | | | | | | | | | | | | Collection Date: 3/14/01 |
| | | | | | | | | | | | | | Analysis By: ID |



COASTAL PLANNING & ENGINEERING, INC.

COASTAL PLANNING & ENGINEERING, INC.
2481 N. W. BOCA RATON BLVD.
BOCA RATON, FLORIDA 33431

| | |
|-------------------|-------------------|
| Easting (X): | 964331.00 Feet |
| Northing (Y): | 732373.00 Feet |
| Sample Elevation: | -66.20 NGVD 29 |
| Coord. System: | NAD 1983 FLA East |



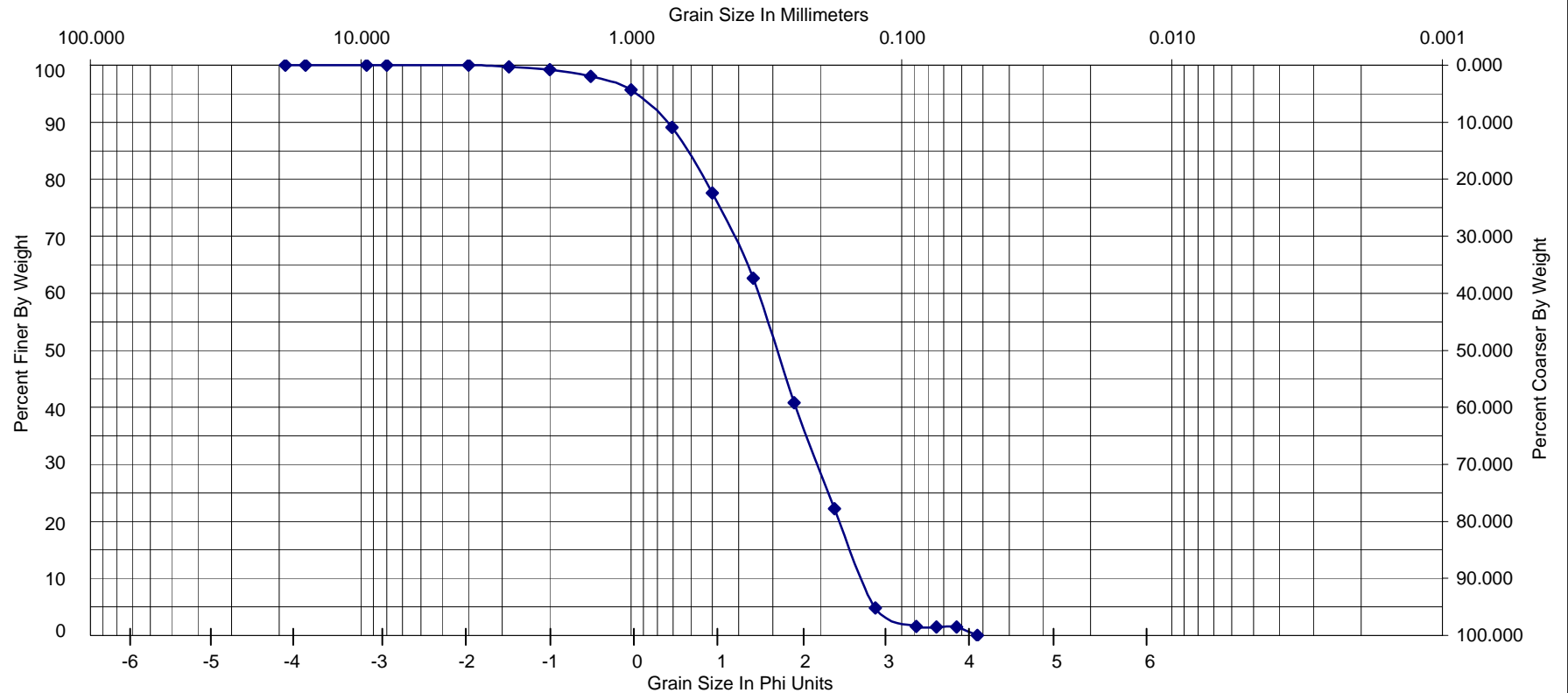
| Gravel | | Sand | | | Silt or Clay |
|--------|------|--------|--------|------|--------------|
| Coarse | Fine | Coarse | Medium | Fine | |

| Sample No. | Depth | Description | USCS | % Silt | Median | Mean | Skew | Kurt | Sort | PL | LL | PI | Sample Information |
|--------------------|-------|-------------|------|--------|--------|------|-------|------|------|----|----|----|----------------------------|
| —◆— CBJP-01-02#MID | 5.0 | | SP | 2.40 | 0.26 | 0.31 | -0.29 | 1.47 | 1.17 | NA | NA | NA | Project Name: Central Boca |
| | | | | | | | | | | | | | Sample Type: JET PROBES |
| | | | | | | | | | | | | | Collection Date: 3/14/01 |
| | | | | | | | | | | | | | Analysis By: ID |




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|-------------------|-------------------|
| Easting (X): | 964331.00 Feet |
| Northing (Y): | 732373.00 Feet |
| Sample Elevation: | -66.20 NGVD 29 |
| Coord. System: | NAD 1983 FLA East |



| Gravel | | Sand | | | Silt or Clay |
|--------|------|--------|--------|------|--------------|
| Coarse | Fine | Coarse | Medium | Fine | |

| Sample No. | Depth | Description | USCS | % Silt | Median | Mean | Skew | Kurt | Sort | PL | LL | PI | Sample Information |
|------------------|-------|-------------|------|--------|--------|------|-------|------|------|----|----|----|----------------------------|
| ◆ CBJP-01-02#BOT | 10.0 | | SW | 1.44 | 0.29 | 0.31 | -0.21 | 1.42 | 1.1 | NA | NA | NA | Project Name: Central Boca |
| | | | | | | | | | | | | | Sample Type: JET PROBES |
| | | | | | | | | | | | | | Collection Date: 3/14/01 |
| | | | | | | | | | | | | | Analysis By: ID |



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|-------------------|-------------------|
| Easting (X): | 964331.00 Feet |
| Northing (Y): | 732373.00 Feet |
| Sample Elevation: | -66.20 NGVD 29 |
| Coord. System: | NAD 1983 FLA East |