

**Onshore Grab Sample**

**Sample:** PB-04-BB  
**Sample Taken By:** D. Phelps  
**Sample Collected On:** 12/18/08  
**Splits?** N/A

**County:** Palm Beach  
**Latitude:** 26° 55' 28.2"  
**Longitude:** 80° 04' 0.7"  
**Datum:** WGS 84  
**Surf. Elev:** N/A  
**Datum:** N/A

**Fine Data Summary**

Total Sample Weight 59.922 grams  
Total Fines in Sample 0.077 grams  
Total Percent Fines 0.13 %

**Dry Sieving Summary**

Total Sample Weight 59.756 grams  
Total Digested Weight 23.802 grams  
Total Carbonate Weight 35.954 grams  
Total Silica % 39.83 %  
Total Carbonate % 60.17 %  
Carbonate/Silica Ratio 1.511

**General Comments:**

None

**Description**

Worked By: M. Ladle

# Pre-Digestion Grain Size Distribution

Onshore Grab Sample

Sample: PB-04-BB

Total Sample Mass: 59.756 grams

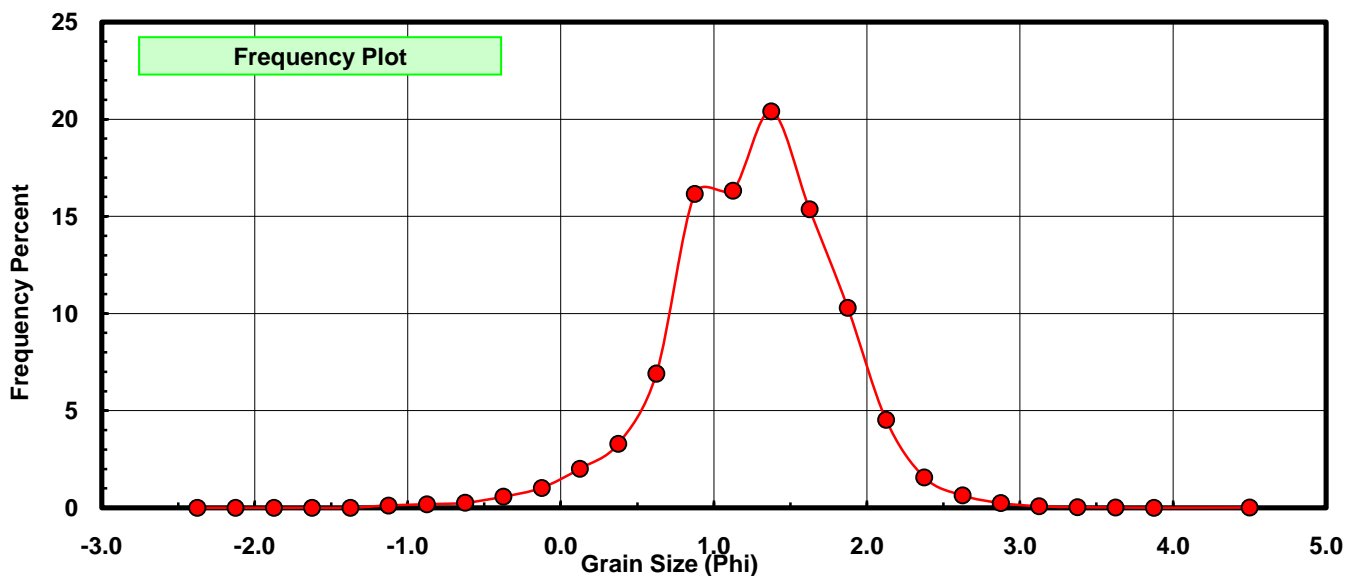
| Sieve Size (phi) | Sieve Midpt (phi) | Weight (grams) | Freq Weight % | Cumulative Weight % |
|------------------|-------------------|----------------|---------------|---------------------|
| -2.25            | -2.375            | 0.000          | 0.000         | 0.000               |
| -2.00            | -2.125            | 0.000          | 0.000         | 0.000               |
| -1.75            | -1.875            | 0.000          | 0.000         | 0.000               |
| -1.50            | -1.625            | 0.000          | 0.000         | 0.000               |
| -1.25            | -1.375            | 0.000          | 0.000         | 0.000               |
| -1.00            | -1.125            | 0.072          | 0.120         | 0.120               |
| -0.75            | -0.875            | 0.108          | 0.181         | 0.301               |
| -0.50            | -0.625            | 0.153          | 0.256         | 0.557               |
| -0.25            | -0.375            | 0.340          | 0.569         | 1.126               |
| 0.00             | -0.125            | 0.613          | 1.026         | 2.152               |
| 0.25             | 0.125             | 1.204          | 2.015         | 4.167               |
| 0.50             | 0.375             | 1.964          | 3.287         | 7.454               |
| 0.75             | 0.625             | 4.128          | 6.908         | 14.362              |
| 1.00             | 0.875             | 9.651          | 16.151        | 30.512              |
| 1.25             | 1.125             | 9.753          | 16.321        | 46.834              |
| 1.50             | 1.375             | 12.191         | 20.401        | 67.235              |
| 1.75             | 1.625             | 9.178          | 15.359        | 82.594              |
| 2.00             | 1.875             | 6.151          | 10.294        | 92.888              |
| 2.25             | 2.125             | 2.707          | 4.530         | 97.418              |
| 2.50             | 2.375             | 0.936          | 1.566         | 98.984              |
| 2.75             | 2.625             | 0.379          | 0.634         | 99.618              |
| 3.00             | 2.875             | 0.145          | 0.243         | 99.861              |
| 3.25             | 3.125             | 0.047          | 0.079         | 99.940              |
| 3.50             | 3.375             | 0.018          | 0.030         | 99.970              |
| 3.75             | 3.625             | 0.009          | 0.015         | 99.985              |
| 4.00             | 3.875             | 0.002          | 0.003         | 99.988              |
| 5.00             | 4.50              | 0.007          | 0.012         | 100.000             |

| Statistical Results |         |               |             |
|---------------------|---------|---------------|-------------|
| Mean:               | 1.2599  | phi           | (0.4176 mm) |
| Standard Dev:       | 0.5574  | phi-units     | (0.6795 mm) |
| Skewness:           | -0.3464 | dimensionless |             |
| Kurtosis:           | 4.1708  | dimensionless |             |
| 5th Moment:         | -4.0368 | dimensionless |             |
| 6th Moment:         | 38.1117 | dimensionless |             |
| RARD *              | 0.4425  | dimensionless |             |
| Median              | 1.1638  | phi           | (0.4463 mm) |

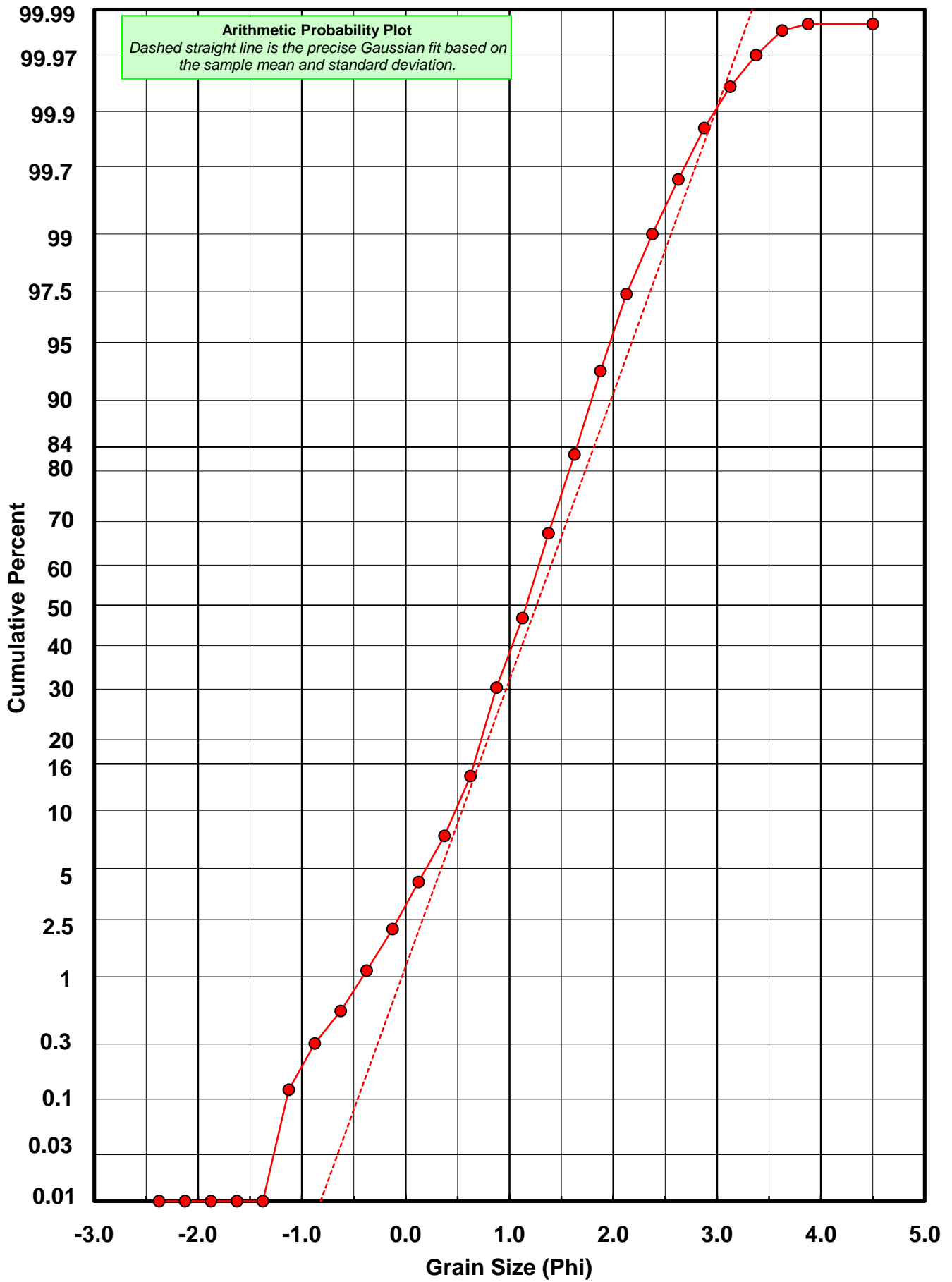
\* RARD = reciprocal absolute relative dispersion (see below)

| Statistical Explanation                           |  |
|---|--|
| Calculations based on the Method of Moments       |  |
| Skewness: 3rd Stand. Moment; Exact Gaussian = 0.0 |  |
| Kurtosis: 4th Stand. Moment; Exact Gaussian = 3.0 |  |
| For Further Explanation, See Basille et al. 2002  |  |
| Millimeter data calculated by $mm = 2^{(-\phi)}$  |  |

| Reciprocal Absolute Relative Dispersion (RARD) Scale |                                       |
|--|---------------------------------------|
| < 0.5  | Excellent homogeneity (e.g., beaches) |
| 0.5 to 1.0   | Good homogeneity                      |
| 1.0 to 1.33  | Fair homogeneity                      |
| > 1.33   | Poor homogeneity (e.g., glacial)      |



# PB-04-BB



# Carbonate Grain Size Distribution

Onshore Grab Sample

Sample: PB-04-BB

Total Carbonate Mass: 36.087 grams

% Carbonate: 60.2 %

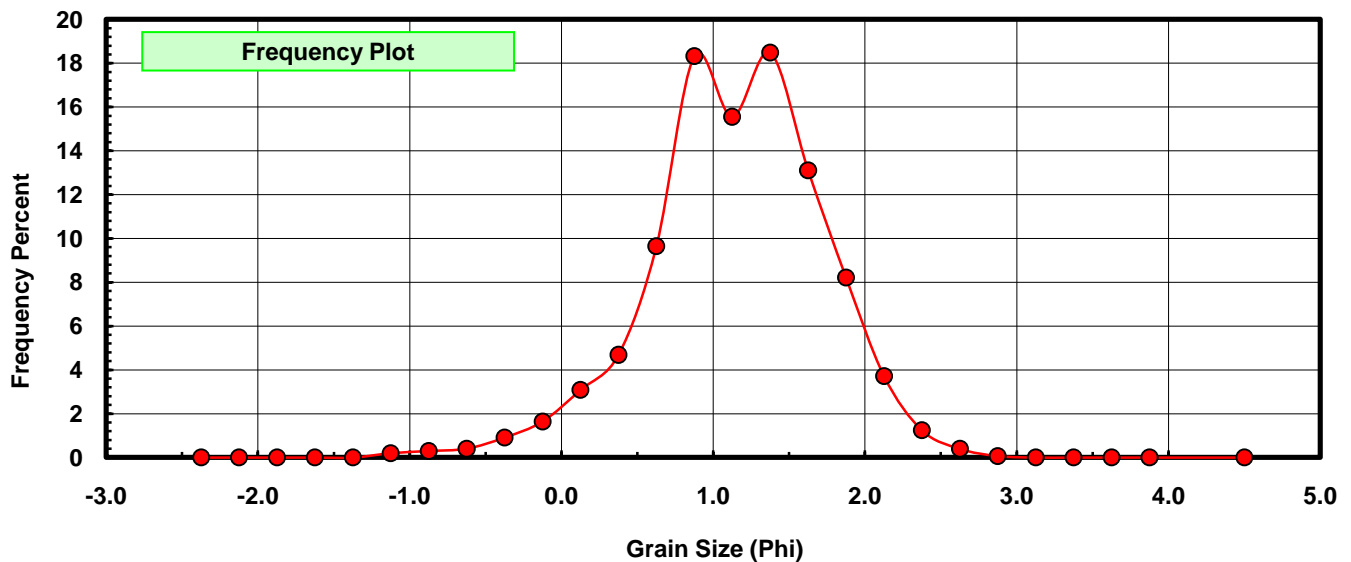
| Sieve Size (phi) | Sieve Midpt (phi) | Weight (grams) | Freq Weight % | Cumulative Weight % |
|------------------|-------------------|----------------|---------------|---------------------|
| -2.25            | -2.375            | 0.000          | 0.000         | 0.000               |
| -2.00            | -2.125            | 0.000          | 0.000         | 0.000               |
| -1.75            | -1.875            | 0.000          | 0.000         | 0.000               |
| -1.50            | -1.625            | 0.000          | 0.000         | 0.000               |
| -1.25            | -1.375            | 0.000          | 0.000         | 0.000               |
| -1.00            | -1.125            | 0.072          | 0.200         | 0.200               |
| -0.75            | -0.875            | 0.108          | 0.299         | 0.499               |
| -0.50            | -0.625            | 0.147          | 0.407         | 0.906               |
| -0.25            | -0.375            | 0.330          | 0.914         | 1.821               |
| 0.00             | -0.125            | 0.594          | 1.646         | 3.467               |
| 0.25             | 0.125             | 1.114          | 3.087         | 6.554               |
| 0.50             | 0.375             | 1.692          | 4.689         | 11.242              |
| 0.75             | 0.625             | 3.480          | 9.643         | 20.886              |
| 1.00             | 0.875             | 6.612          | 18.322        | 39.208              |
| 1.25             | 1.125             | 5.614          | 15.557        | 54.765              |
| 1.50             | 1.375             | 6.669          | 18.480        | 73.245              |
| 1.75             | 1.625             | 4.731          | 13.110        | 86.355              |
| 2.00             | 1.875             | 2.964          | 8.213         | 94.569              |
| 2.25             | 2.125             | 1.343          | 3.722         | 98.290              |
| 2.50             | 2.375             | 0.449          | 1.244         | 99.534              |
| 2.75             | 2.625             | 0.143          | 0.396         | 99.931              |
| 3.00             | 2.875             | 0.025          | 0.069         | 100.000             |
| 3.25             | 3.125             | 0.000          | 0.000         | 100.000             |
| 3.50             | 3.375             | 0.000          | 0.000         | 100.000             |
| 3.75             | 3.625             | 0.000          | 0.000         | 100.000             |
| 4.00             | 3.875             | 0.000          | 0.000         | 100.000             |
| 5.00             | 4.500             | 0.000          | 0.000         | 100.000             |

| Statistical Results |         |               |             |
|---------------------|---------|---------------|-------------|
| Mean:               | 1.1463  | phi           | (0.4518 mm) |
| Standard Dev:       | 0.5838  | phi-units     | (0.6672 mm) |
| Skewness:           | -0.4432 | dimensionless |             |
| Kurtosis:           | 3.6438  | dimensionless |             |
| 5th Moment:         | -5.2411 | dimensionless |             |
| 6th Moment:         | 25.5294 | dimensionless |             |
| RARD *              | 0.5093  | dimensionless |             |
| Median              | 1.0484  | phi           | (0.4835 mm) |

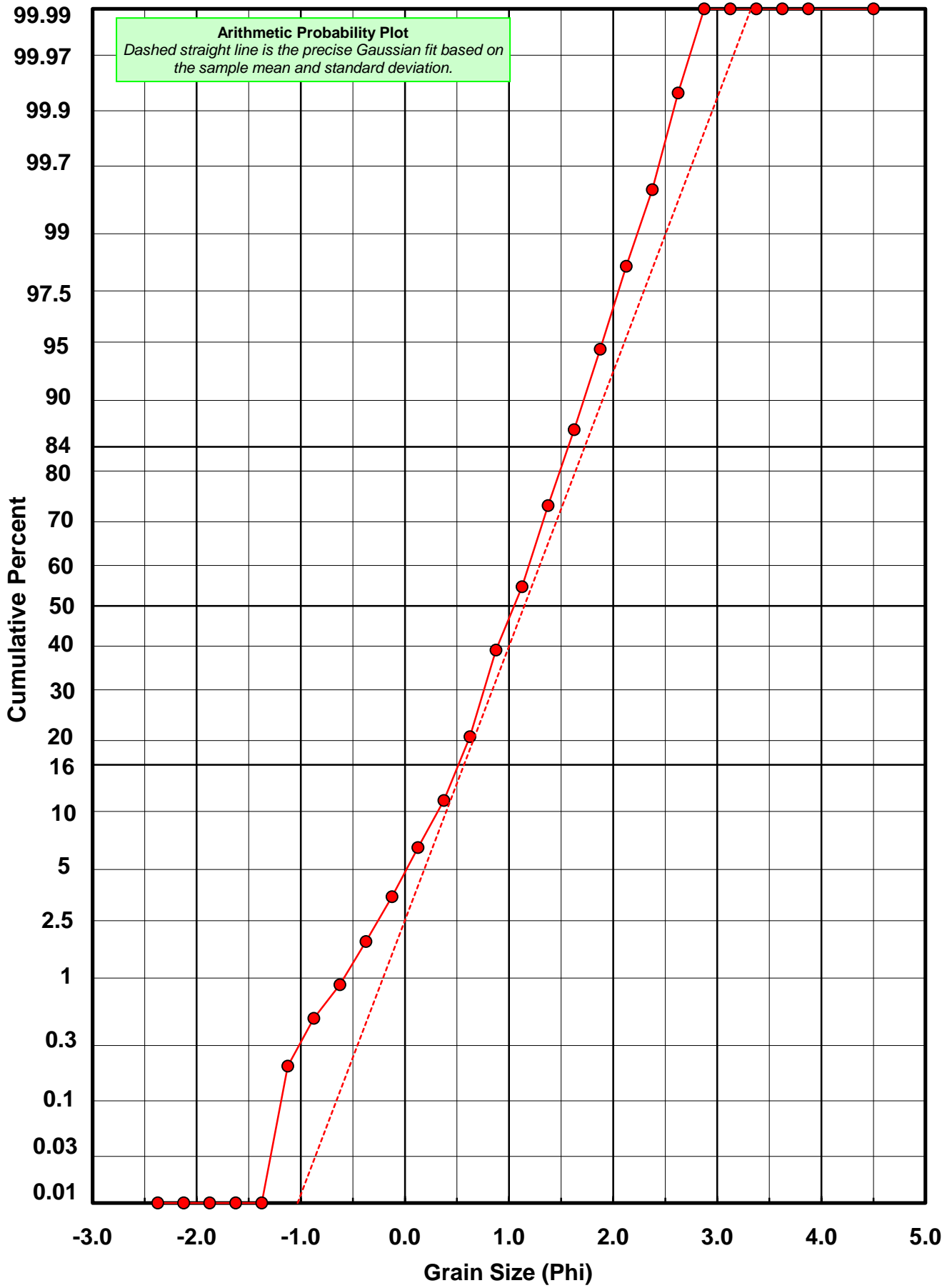
\* RARD = reciprocal absolute relative dispersion (see below)

| Statistical Explanation                           |  |
|---|--|
| Calculations based on the Method of Moments       |  |
| Skewness: 3rd Stand. Moment; Exact Gaussian = 0.0 |  |
| Kurtosis: 4th Stand. Moment; Exact Gaussian = 3.0 |  |
| For Further Explanation, See Basille et al. 2002  |  |
| Millimeter data calculated by $mm = 2^{(-\phi)}$  |  |

| Reciprocal Absolute Relative Dispersion (RARD) Scale |                                       |
|--|---------------------------------------|
| < 0.5  | Excellent homogeneity (e.g., beaches) |
| 0.5 to 1.0   | Good homogeneity                      |
| 1.0 to 1.33  | Fair homogeneity                      |
| > 1.33   | Poor homogeneity (e.g., glacial)      |



# PB-04-BB



# Post-Digestion Grain Size Distribution

Onshore Grab Sample

Sample: PB-04-BB

Total Digested Mass: 23.802 grams

% Silica: 39.8 %

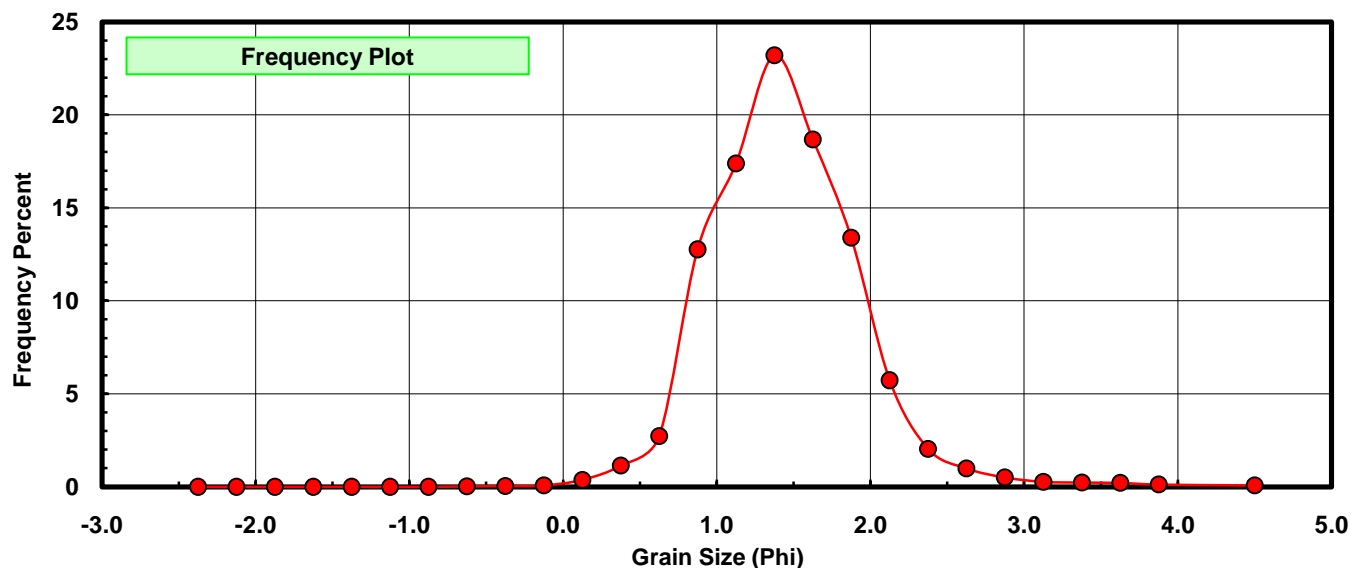
| Sieve Size (phi) | Sieve Midpt (phi) | Weight (grams) | Freq Weight % | Cumulative Weight % |
|------------------|-------------------|----------------|---------------|---------------------|
| -2.25            | -2.375            | 0.000          | 0.000         | 0.000               |
| -2.00            | -2.125            | 0.000          | 0.000         | 0.000               |
| -1.75            | -1.875            | 0.000          | 0.000         | 0.000               |
| -1.50            | -1.625            | 0.000          | 0.000         | 0.000               |
| -1.25            | -1.375            | 0.000          | 0.000         | 0.000               |
| -1.00            | -1.125            | 0.000          | 0.000         | 0.000               |
| -0.75            | -0.875            | 0.000          | 0.000         | 0.000               |
| -0.50            | -0.625            | 0.006          | 0.025         | 0.025               |
| -0.25            | -0.375            | 0.010          | 0.042         | 0.067               |
| 0.00             | -0.125            | 0.019          | 0.080         | 0.147               |
| 0.25             | 0.125             | 0.090          | 0.378         | 0.525               |
| 0.50             | 0.375             | 0.272          | 1.143         | 1.668               |
| 0.75             | 0.625             | 0.648          | 2.722         | 4.390               |
| 1.00             | 0.875             | 3.039          | 12.768        | 17.158              |
| 1.25             | 1.125             | 4.139          | 17.389        | 34.548              |
| 1.50             | 1.375             | 5.522          | 23.200        | 57.747              |
| 1.75             | 1.625             | 4.447          | 18.683        | 76.431              |
| 2.00             | 1.875             | 3.187          | 13.390        | 89.820              |
| 2.25             | 2.125             | 1.364          | 5.731         | 95.551              |
| 2.50             | 2.375             | 0.487          | 2.046         | 97.597              |
| 2.75             | 2.625             | 0.236          | 0.992         | 98.588              |
| 3.00             | 2.875             | 0.120          | 0.504         | 99.093              |
| 3.25             | 3.125             | 0.064          | 0.269         | 99.361              |
| 3.50             | 3.375             | 0.055          | 0.231         | 99.592              |
| 3.75             | 3.625             | 0.050          | 0.210         | 99.803              |
| 4.00             | 3.875             | 0.029          | 0.122         | 99.924              |
| 5.00             | 4.500             | 0.018          | 0.076         | 100.000             |

| Statistical Results |         |               |             |
|---------------------|---------|---------------|-------------|
| Mean:               | 1.4452  | phi           | (0.3672 mm) |
| Standard Dev:       | 0.5030  | phi-units     | (0.7056 mm) |
| Skewness:           | 0.7569  | dimensionless |             |
| Kurtosis:           | 5.7067  | dimensionless |             |
| 5th Moment:         | 16.4563 | dimensionless |             |
| 6th Moment:         | 93.8922 | dimensionless |             |
| RARD *              | 0.3481  | dimensionless |             |
| Median              | 1.2915  | phi           | (0.4085 mm) |

\* RARD = reciprocal absolute relative dispersion (see below)

| Statistical Explanation                           |  |
|---|--|
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# PB-04-BB

