

**Onshore Grab Sample**

**Sample:** FG-16-BB  
**Sample Taken By:** J. Ladner  
**Sample Collected On:** 12/3/03  
**Splits?** N/A

**County:** Flagler  
**Latitude:** 29° 28' 37.9"  
**Longitude:** 81° 07' 31.2"  
**Datum:** NAD 83  
**Surf. Elev:** N/A  
**Datum:** N/A

**Fine Data Summary**

Total Sample Weight 76.414 grams  
Total Fines in Sample 0.024 grams  
Total Percent Fines 0.03 %

**Dry Sieving Summary**

Total Sample Weight 76.283 grams  
Total Digested Weight 49.530 grams  
Total Carbonate Weight 26.753 grams  
Total Silica % 64.93 %  
Total Carbonate % 35.07 %  
Carbonate/Silica Ratio 0.540

**General Comments:**

None

**Description**

Worked By: M. Lachance

# Pre-Digestion Grain Size Distribution

Onshore Grab Sample

Sample: FG-16-BB

Total Sample Mass: 76.283 grams

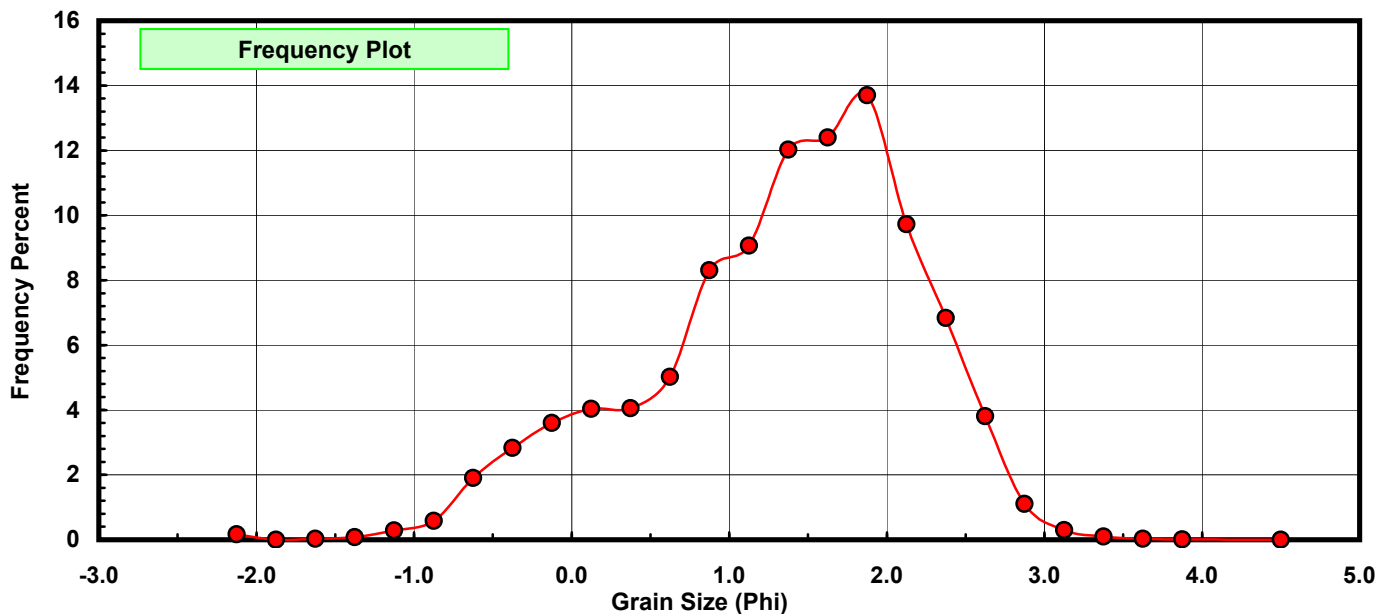
| Sieve Size (phi) | Sieve Midpt (phi) | Weight (grams) | Freq Weight % | Cumulative Weight % |
|------------------|-------------------|----------------|---------------|---------------------|
| -2.00            | -2.125            | 0.128          | 0.168         | 0.168               |
| -1.75            | -1.875            | 0.000          | 0.000         | 0.168               |
| -1.50            | -1.625            | 0.019          | 0.025         | 0.193               |
| -1.25            | -1.375            | 0.060          | 0.079         | 0.271               |
| -1.00            | -1.125            | 0.219          | 0.287         | 0.558               |
| -0.75            | -0.875            | 0.442          | 0.579         | 1.138               |
| -0.50            | -0.625            | 1.450          | 1.901         | 3.039               |
| -0.25            | -0.375            | 2.158          | 2.829         | 5.868               |
| 0.00             | -0.125            | 2.746          | 3.600         | 9.467               |
| 0.25             | 0.125             | 3.075          | 4.031         | 13.498              |
| 0.50             | 0.375             | 3.091          | 4.052         | 17.550              |
| 0.75             | 0.625             | 3.832          | 5.023         | 22.574              |
| 1.00             | 0.875             | 6.336          | 8.306         | 30.880              |
| 1.25             | 1.125             | 6.914          | 9.064         | 39.943              |
| 1.50             | 1.375             | 9.172          | 12.024        | 51.967              |
| 1.75             | 1.625             | 9.460          | 12.401        | 64.368              |
| 2.00             | 1.875             | 10.452         | 13.702        | 78.070              |
| 2.25             | 2.125             | 7.422          | 9.730         | 87.799              |
| 2.50             | 2.375             | 5.215          | 6.836         | 94.636              |
| 2.75             | 2.625             | 2.908          | 3.812         | 98.448              |
| 3.00             | 2.875             | 0.843          | 1.105         | 99.553              |
| 3.25             | 3.125             | 0.228          | 0.299         | 99.852              |
| 3.50             | 3.375             | 0.079          | 0.104         | 99.955              |
| 3.75             | 3.625             | 0.024          | 0.031         | 99.987              |
| 4.00             | 3.875             | 0.009          | 0.012         | 99.999              |
| 5.00             | 4.500             | 0.001          | 0.001         | 100.000             |

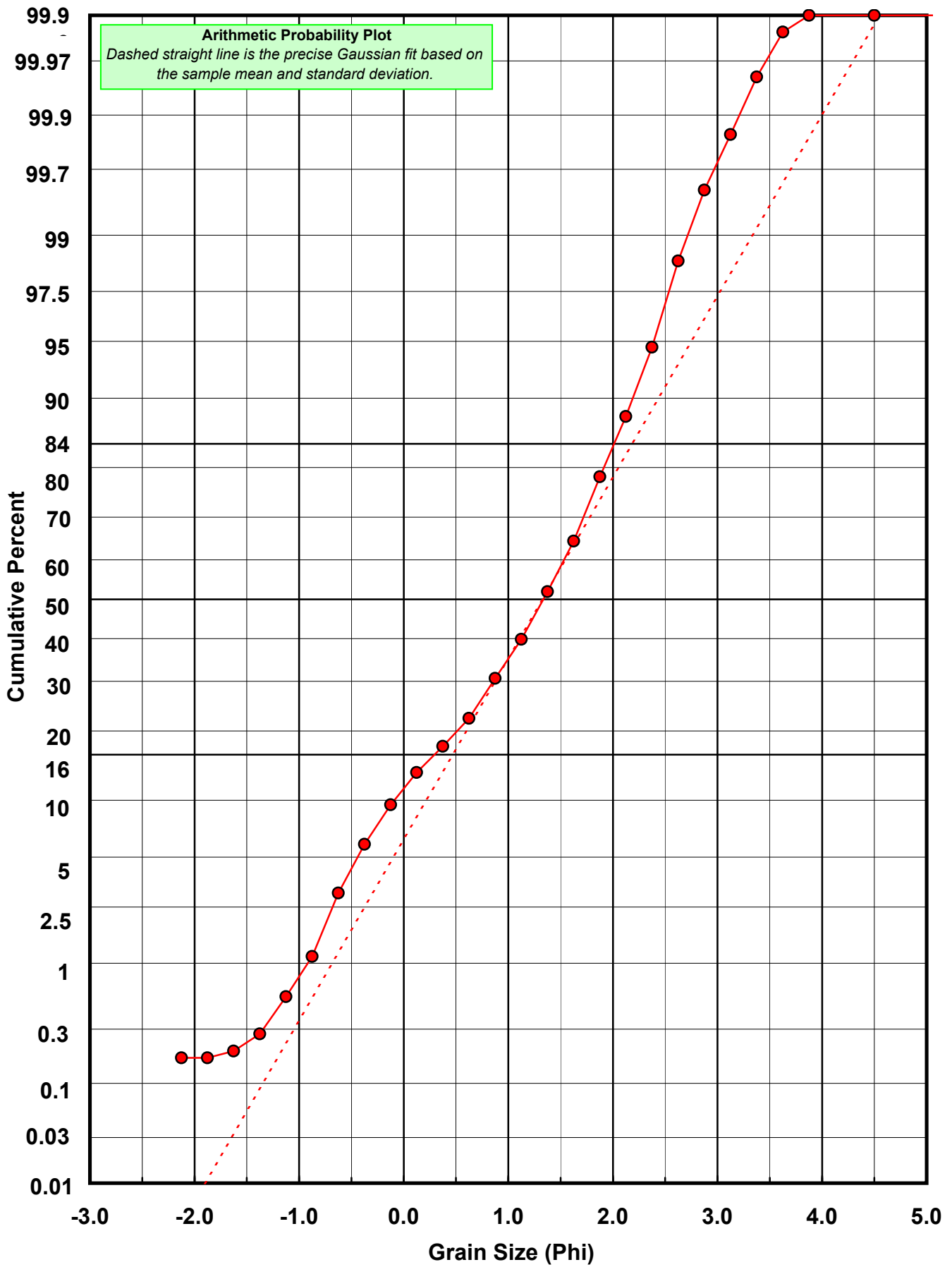
| Statistical Results |         |               |             |
|---------------------|---------|---------------|-------------|
| Mean:               | 1.3251  | phi           | (0.3991 mm) |
| Standard Dev:       | 0.8663  | phi-units     | (0.5485 mm) |
| Skewness:           | -0.6265 | dimensionless |             |
| Kurtosis:           | 3.0837  | dimensionless |             |
| 5th Moment:         | -4.8880 | dimensionless |             |
| 6th Moment:         | 18.0407 | dimensionless |             |
| RARD *              | 0.6538  | dimensionless |             |
| Median              | 1.3341  | phi           | (0.3966 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 Calculation Sheets   |
| 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)      |





# Carbonate Grain Size Distribution

Onshore Grab Sample

Sample: FG-16-BB

Total Carbonate Mass: 27.010 grams

% Carbonate: 35.1 %

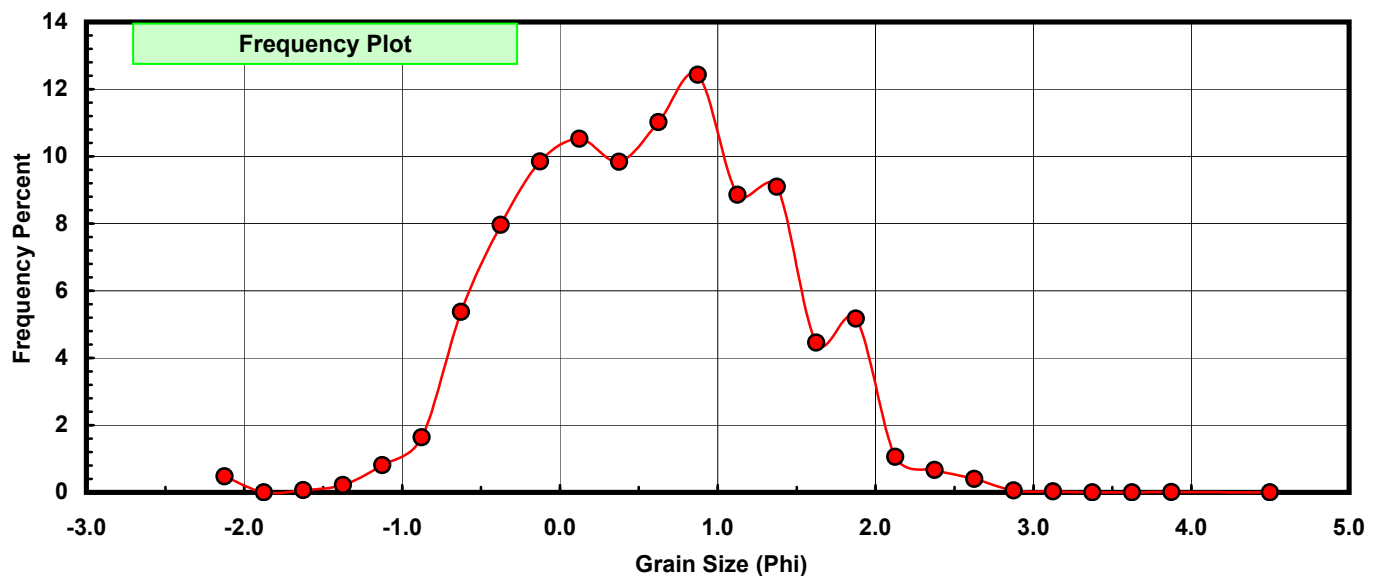
| Sieve Size (phi) | Sieve Midpt (phi) | Weight (grams) | Freq Weight % | Cumulative Weight % |
|------------------|-------------------|----------------|---------------|---------------------|
| -2.00            | -2.125            | 0.128          | 0.474         | 0.474               |
| -1.75            | -1.875            | 0.000          | 0.000         | 0.474               |
| -1.50            | -1.625            | 0.019          | 0.070         | 0.544               |
| -1.25            | -1.375            | 0.060          | 0.222         | 0.766               |
| -1.00            | -1.125            | 0.219          | 0.811         | 1.577               |
| -0.75            | -0.875            | 0.442          | 1.636         | 3.214               |
| -0.50            | -0.625            | 1.450          | 5.368         | 8.582               |
| -0.25            | -0.375            | 2.150          | 7.960         | 16.542              |
| 0.00             | -0.125            | 2.660          | 9.848         | 26.390              |
| 0.25             | 0.125             | 2.843          | 10.526        | 36.916              |
| 0.50             | 0.375             | 2.658          | 9.841         | 46.757              |
| 0.75             | 0.625             | 2.976          | 11.018        | 57.775              |
| 1.00             | 0.875             | 3.358          | 12.432        | 70.207              |
| 1.25             | 1.125             | 2.392          | 8.856         | 79.063              |
| 1.50             | 1.375             | 2.457          | 9.097         | 88.160              |
| 1.75             | 1.625             | 1.203          | 4.454         | 92.614              |
| 2.00             | 1.875             | 1.397          | 5.172         | 97.786              |
| 2.25             | 2.125             | 0.286          | 1.059         | 98.845              |
| 2.50             | 2.375             | 0.179          | 0.663         | 99.508              |
| 2.75             | 2.625             | 0.107          | 0.396         | 99.904              |
| 3.00             | 2.875             | 0.015          | 0.056         | 99.959              |
| 3.25             | 3.125             | 0.009          | 0.033         | 99.993              |
| 3.50             | 3.375             | 0.000          | 0.000         | 99.993              |
| 3.75             | 3.625             | 0.000          | 0.000         | 99.993              |
| 4.00             | 3.875             | 0.002          | 0.007         | 100.000             |
| 5.00             | 4.500             | 0.000          | 0.000         | 100.000             |

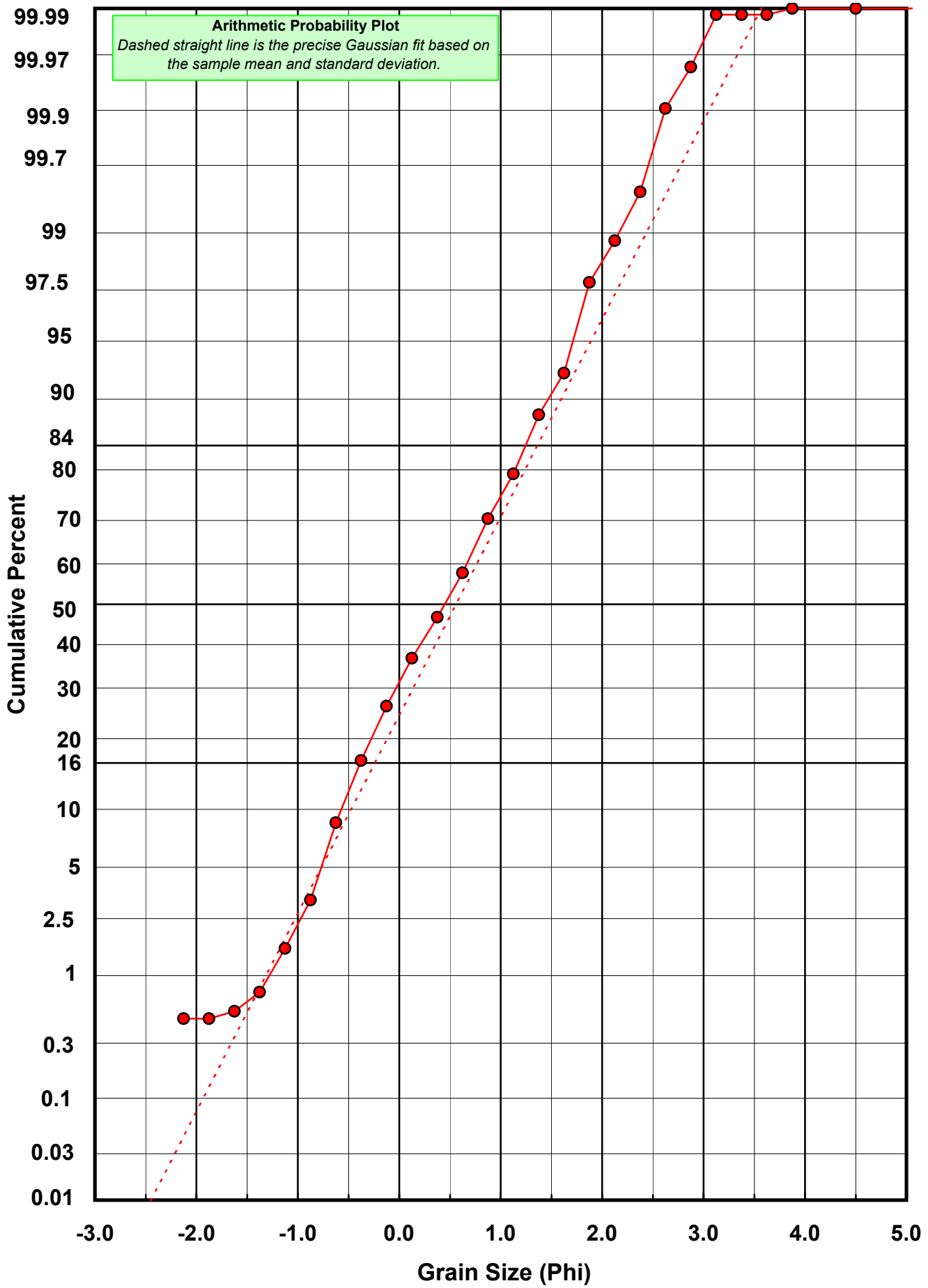
| Statistical Results |         |               |             |
|---------------------|---------|---------------|-------------|
| Mean:               | 0.5599  | phi           | (0.6783 mm) |
| Standard Dev:       | 0.8083  | phi-units     | (0.5711 mm) |
| Skewness:           | -0.0524 | dimensionless |             |
| Kurtosis:           | 2.7484  | dimensionless |             |
| 5th Moment:         | -1.1433 | dimensionless |             |
| 6th Moment:         | 14.3389 | dimensionless |             |
| RARD *              | 1.4436  | dimensionless |             |
| Median              | 0.4486  | phi           | (0.7328 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 Calculation Sheets   |  |
| 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)      |





# Post-Digestion Grain Size Distribution

Onshore Grab Sample

Sample: FG-16-BB

Total Digested Mass: 49.529 grams

% Silica: 64.9 %

| Sieve Size (phi) | Sieve Midpt (phi) | Weight (grams) | Freq Weight % | Cumulative Weight % |
|------------------|-------------------|----------------|---------------|---------------------|
| -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            | 0.000          | 0.000         | 0.000               |
| -0.25            | -0.375            | 0.008          | 0.016         | 0.016               |
| 0.00             | -0.125            | 0.086          | 0.174         | 0.190               |
| 0.25             | 0.125             | 0.232          | 0.468         | 0.658               |
| 0.50             | 0.375             | 0.433          | 0.874         | 1.532               |
| 0.75             | 0.625             | 0.856          | 1.728         | 3.261               |
| 1.00             | 0.875             | 2.978          | 6.013         | 9.273               |
| 1.25             | 1.125             | 4.522          | 9.130         | 18.403              |
| 1.50             | 1.375             | 6.715          | 13.558        | 31.961              |
| 1.75             | 1.625             | 8.257          | 16.671        | 48.632              |
| 2.00             | 1.875             | 9.055          | 18.282        | 66.914              |
| 2.25             | 2.125             | 7.136          | 14.408        | 81.322              |
| 2.50             | 2.375             | 5.036          | 10.168        | 91.490              |
| 2.75             | 2.625             | 2.801          | 5.655         | 97.145              |
| 3.00             | 2.875             | 0.828          | 1.672         | 98.817              |
| 3.25             | 3.125             | 0.219          | 0.442         | 99.259              |
| 3.50             | 3.375             | 0.080          | 0.162         | 99.421              |
| 3.75             | 3.625             | 0.280          | 0.565         | 99.986              |
| 4.00             | 3.875             | 0.007          | 0.014         | 100.000             |
| 5.00             | 4.500             | 0.000          | 0.000         | 100.000             |

| Statistical Results |         |               |             |
|---------------------|---------|---------------|-------------|
| Mean:               | 1.7543  | phi           | (0.2964 mm) |
| Standard Dev:       | 0.5727  | phi-units     | (0.6723 mm) |
| Skewness:           | -0.0169 | dimensionless |             |
| Kurtosis:           | 3.2862  | dimensionless |             |
| 5th Moment:         | 0.4082  | dimensionless |             |
| 6th Moment:         | 19.8619 | dimensionless |             |
| RARD *              | 0.3265  | dimensionless |             |
| Median              | 1.6437  | phi           | (0.32 mm)   |

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

| Statistical Explanation                           |
|---|
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| Skewness: 3rd Stand. Moment; Exact Gaussian = 0.0 |
| Kurtosis: 4th Stand. Moment; Exact Gaussian = 3.0 |
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| Reciprocal Absolute Relative Dispersion (RARD) Scale |                                       |
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