

# Quality Control Statistical Summary

Onshore Grab Sample: DU-01-BB

Sample Taken By: J. Ladner  
 Sample Taken On: 12/04/02  
 County: Duval

Latitude: 30° 23' 29.8"  
 Longitude: 81° 23' 40.7"  
 Datum: WGS 84

| Statistical Results: Pre-CaCO3 |           |                       |          |                       |
|--------------------------------|-----------|-----------------------|----------|-----------------------|
|                                | Duplicate |                       | Original |                       |
| Mean:                          | 1.7257    | phi (0.3024 mm)       | 1.7308   | phi (0.3013 mm)       |
| Standard Dev:                  | 0.5658    | phi-units (0.6756 mm) | 0.5851   | phi-units (0.6666 mm) |
| Skewness:                      | 0.1764    | dimensionless         | 0.1489   | dimensionless         |
| Kurtosis:                      | 3.2670    | dimensionless         | 3.1978   | dimensionless         |
| 5th Moment:                    | 0.6828    | dimensionless         | 0.2979   | dimensionless         |
| 6th Moment:                    | 23.4844   | dimensionless         | 22.1592  | dimensionless         |
| RARD*:                         | 0.3279    | dimensionless         | 0.3381   | dimensionless         |
| Median:                        | 1.5729    | phi (0.3361 mm)       | 1.5737   | phi (0.336 mm)        |

| Statistical Results: CaCO3 |           |                       |          |                       |
|----------------------------|-----------|-----------------------|----------|-----------------------|
|                            | Duplicate |                       | Original |                       |
| Mean:                      | 1.1930    | phi (0.4374 mm)       | 1.4360   | phi (0.3696 mm)       |
| Standard Dev:              | 0.7474    | phi-units (0.5957 mm) | 0.8693   | phi-units (0.5474 mm) |
| Skewness:                  | 0.1707    | dimensionless         | -0.0145  | dimensionless         |
| Kurtosis:                  | 3.5499    | dimensionless         | 2.9100   | dimensionless         |
| 5th Moment:                | 2.0485    | dimensionless         | -0.4748  | dimensionless         |
| 6th Moment:                | 24.2218   | dimensionless         | 13.9062  | dimensionless         |
| RARD*:                     | 0.6265    | dimensionless         | 0.6053   | dimensionless         |
| Median:                    | 0.9677    | phi (0.5113 mm)       | 1.3858   | phi (0.3827 mm)       |

| Statistical Results: Post-CaCO3 |           |                       |          |                       |
|---------------------------------|-----------|-----------------------|----------|-----------------------|
|                                 | Duplicate |                       | Original |                       |
| Mean:                           | 1.7513    | phi (0.297 mm)        | 1.7469   | phi (0.2979 mm)       |
| Standard Dev:                   | 0.5456    | phi-units (0.6851 mm) | 0.5603   | phi-units (0.6782 mm) |
| Skewness:                       | 0.3721    | dimensionless         | 0.3068   | dimensionless         |
| Kurtosis:                       | 2.9679    | dimensionless         | 2.8238   | dimensionless         |
| 5th Moment:                     | 3.6557    | dimensionless         | 2.7936   | dimensionless         |
| 6th Moment:                     | 17.7423   | dimensionless         | 14.6298  | dimensionless         |
| RARD*:                          | 0.3115    | dimensionless         | 0.3207   | dimensionless         |
| Median:                         | 1.5868    | phi (0.3329 mm)       | 1.5917   | phi (0.3318 mm)       |

| Additional Data         |        |
|-------------------------|--------|
| <b>Total Fines</b>      |        |
| Original:               | 0.07 % |
| Duplicate:              | 0.25 % |
| <b>Total Carbonates</b> |        |
| Original:               | 4.61 % |
| Duplicate:              | 4.11 % |

| Statistical Explanation   |                                       |
|---|---------------------------------------|
| Calculations based on the Method of Moments<br>Skewness: 3rd Stand. Moment; Exact Gaussian = 0.0<br>Kurtosis: 4th Stand. Moment; Exact Gaussian = 3.0<br>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)      |

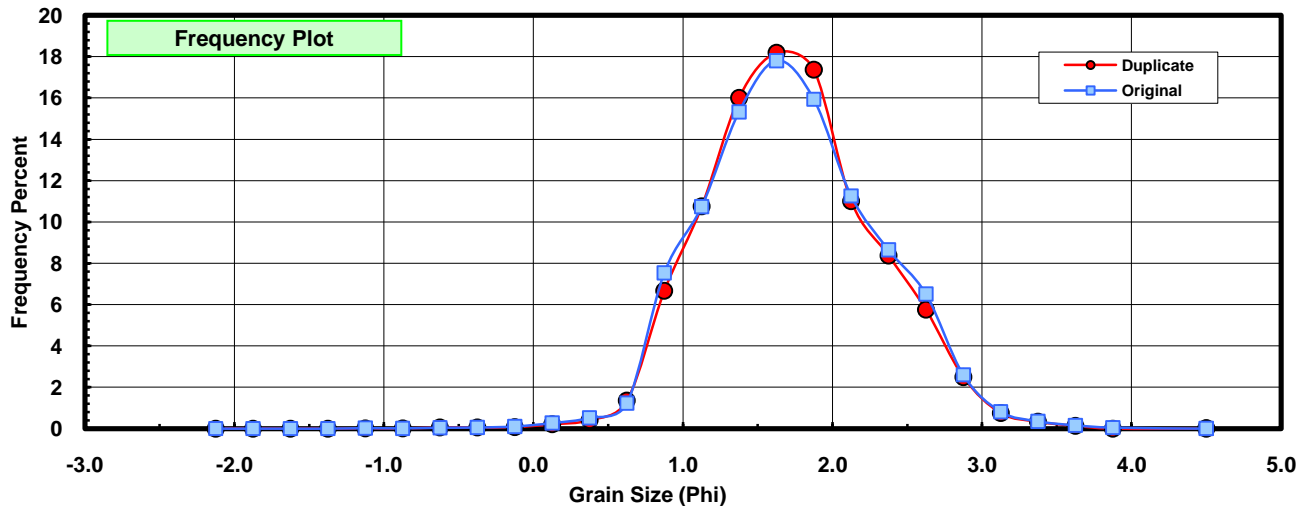
# Pre-Digestion Grain Size Distribution

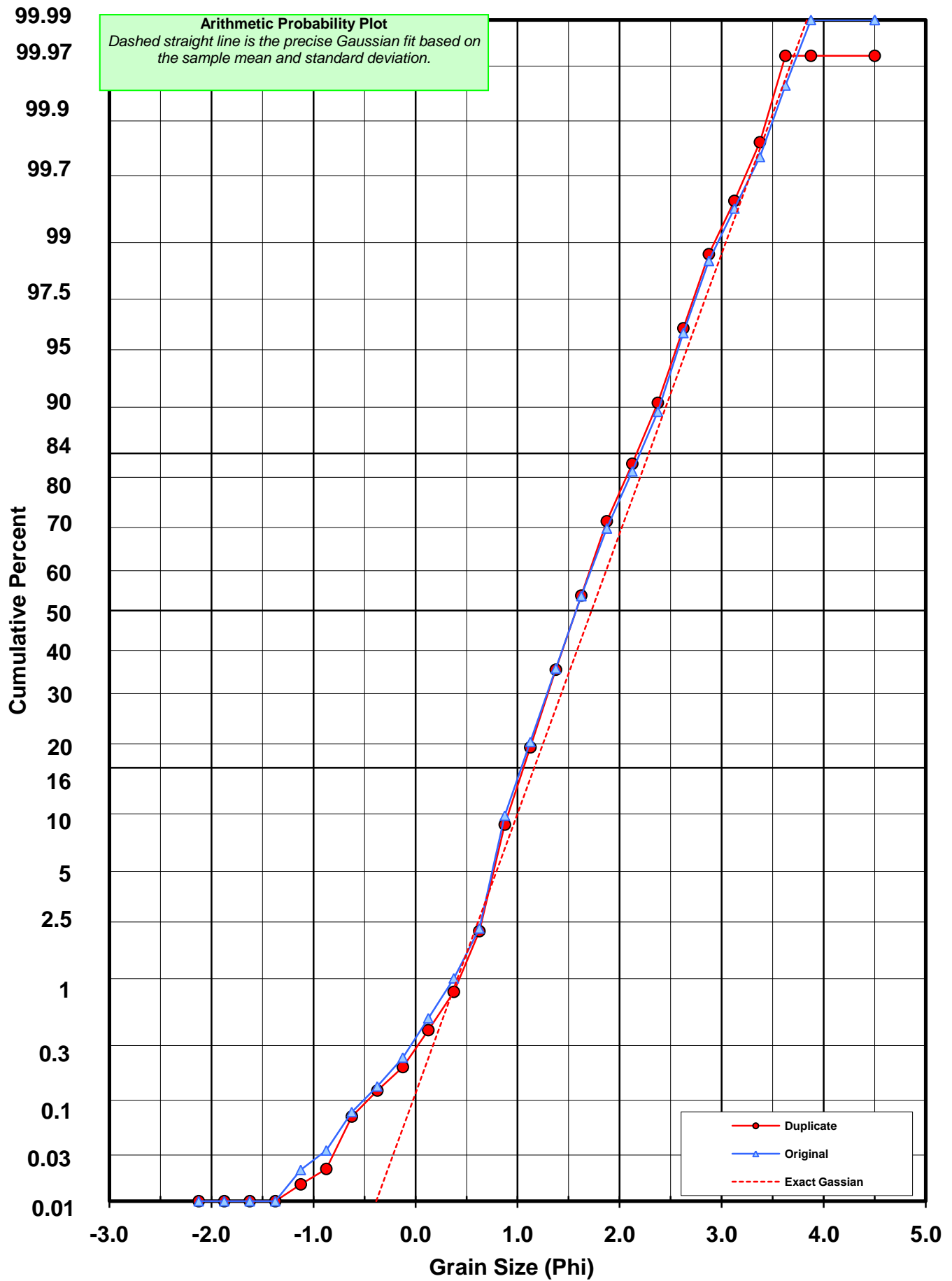
Onshore Grab Sample: DU-01-BB

Total Duplicate Sample Mass: 46.251 grams

Total Original Sample Mass: 52.344 grams

| Sieve Size (phi) | Sieve Midpt (phi) | Weight of Dupl (grams) | Freq Weight % | Cumulative Weight % | Weight of Original (grams) | Freq Weight % | Cumulative Weight % |
|------------------|-------------------|------------------------|---------------|---------------------|----------------------------|---------------|---------------------|
| -2.00            | -2.125            | 0.000                  | 0.000         | 0.000               | 0.000                      | 0.000         | 0.000               |
| -1.75            | -1.875            | 0.000                  | 0.000         | 0.000               | 0.000                      | 0.000         | 0.000               |
| -1.50            | -1.625            | 0.000                  | 0.000         | 0.000               | 0.000                      | 0.000         | 0.000               |
| -1.25            | -1.375            | 0.000                  | 0.000         | 0.000               | 0.000                      | 0.000         | 0.000               |
| -1.00            | -1.125            | 0.006                  | 0.013         | 0.013               | 0.011                      | 0.021         | 0.021               |
| -0.75            | -0.875            | 0.004                  | 0.009         | 0.022               | 0.007                      | 0.013         | 0.034               |
| -0.50            | -0.625            | 0.023                  | 0.050         | 0.071               | 0.023                      | 0.044         | 0.078               |
| -0.25            | -0.375            | 0.023                  | 0.050         | 0.121               | 0.028                      | 0.054         | 0.132               |
| 0.00             | -0.125            | 0.034                  | 0.074         | 0.195               | 0.054                      | 0.103         | 0.235               |
| 0.25             | 0.125             | 0.096                  | 0.208         | 0.402               | 0.140                      | 0.268         | 0.503               |
| 0.50             | 0.375             | 0.189                  | 0.409         | 0.811               | 0.272                      | 0.520         | 1.022               |
| 0.75             | 0.625             | 0.626                  | 1.353         | 2.164               | 0.644                      | 1.231         | 2.253               |
| 1.00             | 0.875             | 3.084                  | 6.668         | 8.832               | 3.942                      | 7.532         | 9.785               |
| 1.25             | 1.125             | 4.972                  | 10.750        | 19.582              | 5.620                      | 10.738        | 20.523              |
| 1.50             | 1.375             | 7.406                  | 16.013        | 35.595              | 8.021                      | 15.326        | 35.849              |
| 1.75             | 1.625             | 8.415                  | 18.194        | 53.789              | 9.319                      | 17.806        | 53.655              |
| 2.00             | 1.875             | 8.030                  | 17.362        | 71.151              | 8.341                      | 15.937        | 69.593              |
| 2.25             | 2.125             | 5.087                  | 10.999        | 82.150              | 5.892                      | 11.258        | 80.851              |
| 2.50             | 2.375             | 3.871                  | 8.370         | 90.519              | 4.527                      | 8.650         | 89.501              |
| 2.75             | 2.625             | 2.660                  | 5.751         | 96.270              | 3.411                      | 6.518         | 96.018              |
| 3.00             | 2.875             | 1.154                  | 2.495         | 98.765              | 1.363                      | 2.604         | 98.622              |
| 3.25             | 3.125             | 0.347                  | 0.750         | 99.516              | 0.429                      | 0.820         | 99.442              |
| 3.50             | 3.375             | 0.153                  | 0.331         | 99.846              | 0.184                      | 0.352         | 99.794              |
| 3.75             | 3.625             | 0.060                  | 0.130         | 99.976              | 0.083                      | 0.159         | 99.952              |
| 4.00             | 3.875             | 0.000                  | 0.000         | 99.976              | 0.025                      | 0.048         | 100.000             |
| 5.00             | 4.500             | 0.000                  | 0.000         | 99.976              | 0.000                      | 0.000         | 100.000             |
| 5.00             | 4.500             | 0.011                  | 0.024         | 100.000             | 0.008                      | 0.015         | 100.015             |



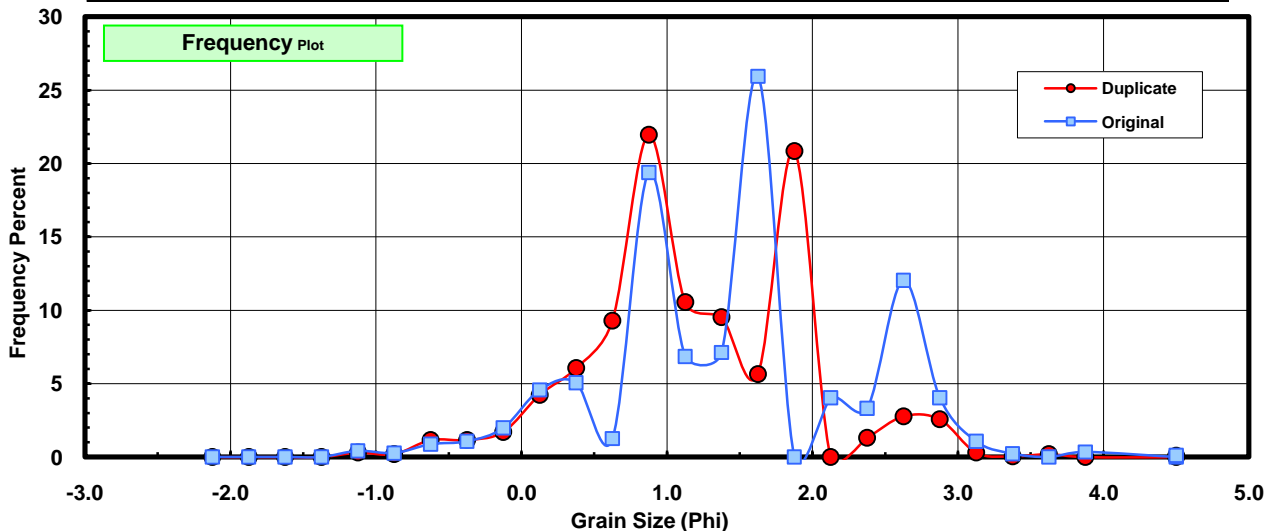


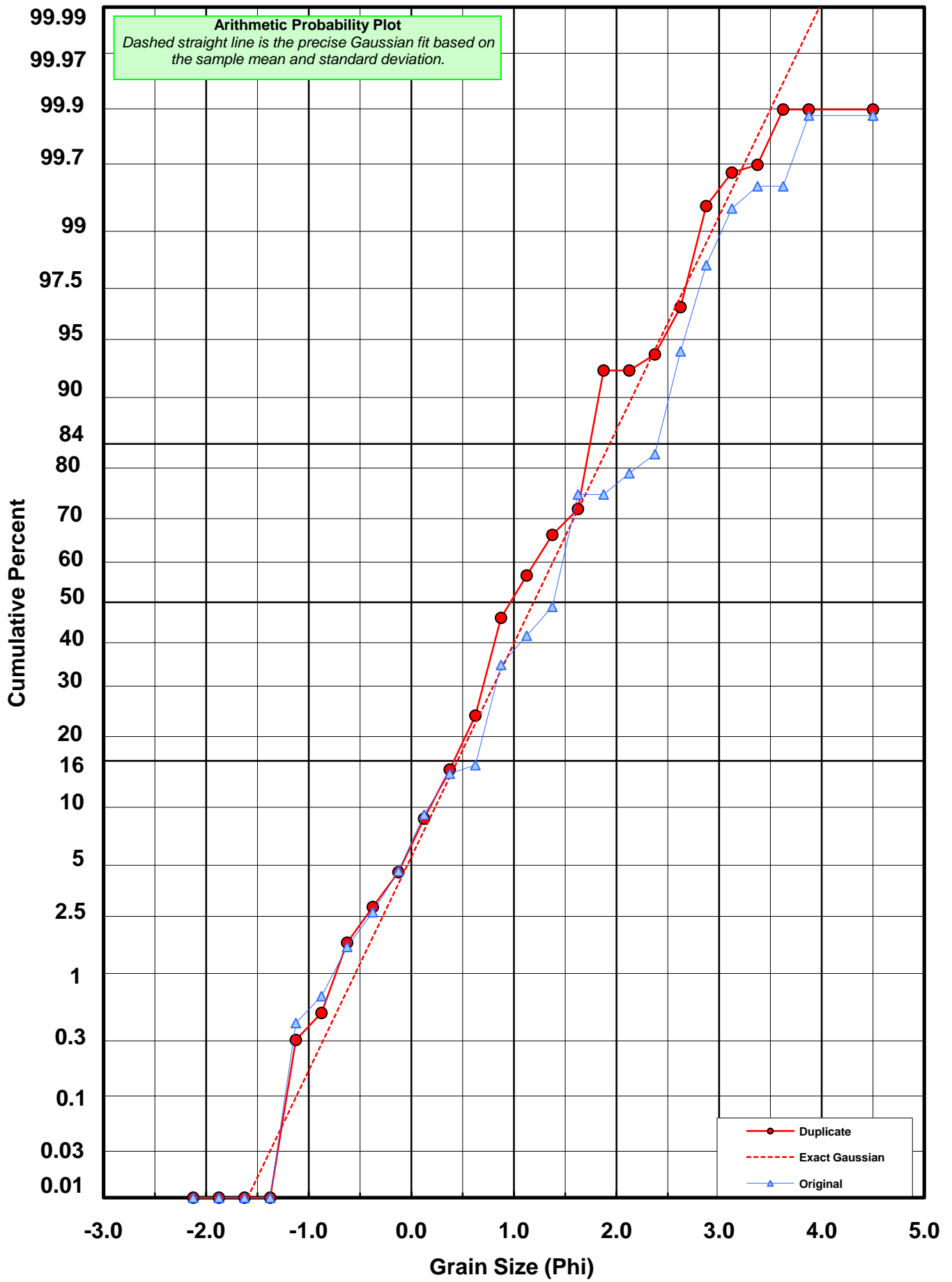
# Carbonate Grain Size Distribution

Onshore Grab Sample: DU-01-BB

**Total Duplicate Carbonate Mass:** 1.981 grams  
**% Carbonate in Duplicate:** 4.1 %  
**Total Original Carbonate Mass:** 2.625 grams  
**% Carbonate in Original:** 4.6 %

| Sieve Size (phi) | Sieve Midpt (phi) | Weight of Dupl (grams) | Freq Weight % | Cumulative Weight % | Weight of Original (grams) | Freq Weight % | Cumulative Weight % |
|------------------|-------------------|------------------------|---------------|---------------------|----------------------------|---------------|---------------------|
| -2.00            | -2.125            | 0.000                  | 0.000         | 0.000               | 0.000                      | 0.000         | 0.000               |
| -1.75            | -1.875            | 0.000                  | 0.000         | 0.000               | 0.000                      | 0.000         | 0.000               |
| -1.50            | -1.625            | 0.000                  | 0.000         | 0.000               | 0.000                      | 0.000         | 0.000               |
| -1.25            | -1.375            | 0.000                  | 0.000         | 0.000               | 0.000                      | 0.000         | 0.000               |
| -1.00            | -1.125            | 0.006                  | 0.303         | 0.303               | 0.011                      | 0.419         | 0.419               |
| -0.75            | -0.875            | 0.004                  | 0.202         | 0.505               | 0.007                      | 0.267         | 0.686               |
| -0.50            | -0.625            | 0.023                  | 1.161         | 1.666               | 0.023                      | 0.876         | 1.562               |
| -0.25            | -0.375            | 0.023                  | 1.161         | 2.827               | 0.028                      | 1.067         | 2.629               |
| 0.00             | -0.125            | 0.034                  | 1.716         | 4.543               | 0.052                      | 1.981         | 4.610               |
| 0.25             | 0.125             | 0.084                  | 4.240         | 8.783               | 0.120                      | 4.571         | 9.181               |
| 0.50             | 0.375             | 0.120                  | 6.058         | 14.841              | 0.133                      | 5.067         | 14.248              |
| 0.75             | 0.625             | 0.184                  | 9.288         | 24.129              | 0.033                      | 1.257         | 15.505              |
| 1.00             | 0.875             | 0.435                  | 21.959        | 46.088              | 0.509                      | 19.390        | 34.895              |
| 1.25             | 1.125             | 0.209                  | 10.550        | 56.638              | 0.180                      | 6.857         | 41.752              |
| 1.50             | 1.375             | 0.189                  | 9.541         | 66.179              | 0.187                      | 7.124         | 48.876              |
| 1.75             | 1.625             | 0.112                  | 5.654         | 71.832              | 0.681                      | 25.943        | 74.819              |
| 2.00             | 1.875             | 0.413                  | 20.848        | 92.680              | 0.000                      | 0.000         | 74.819              |
| 2.25             | 2.125             | 0.000                  | 0.000         | 92.680              | 0.106                      | 4.038         | 78.857              |
| 2.50             | 2.375             | 0.026                  | 1.312         | 93.993              | 0.087                      | 3.314         | 82.171              |
| 2.75             | 2.625             | 0.055                  | 2.776         | 96.769              | 0.316                      | 12.038        | 94.210              |
| 3.00             | 2.875             | 0.051                  | 2.574         | 99.344              | 0.106                      | 4.038         | 98.248              |
| 3.25             | 3.125             | 0.006                  | 0.303         | 99.647              | 0.028                      | 1.067         | 99.314              |
| 3.50             | 3.375             | 0.001                  | 0.050         | 99.697              | 0.006                      | 0.229         | 99.543              |
| 3.75             | 3.625             | 0.004                  | 0.202         | 99.899              | 0.000                      | 0.000         | 99.543              |
| 4.00             | 3.875             | 0.000                  | 0.000         | 99.899              | 0.009                      | 0.343         | 99.886              |
| 5.00             | 4.500             | 0.000                  | 0.000         | 99.899              | 0.000                      | 0.000         | 99.886              |
| 5.00             | 4.500             | 0.002                  | 0.101         | 100.000             | 0.003                      | 0.114         | 100.000             |





# Post-Digestion Grain Size Distribution

Onshore Grab Sample: DU-01-BB

**Total Duplicate Digested Mass:** 44.372 grams  
**% Silica in Duplicate:** 95.9 %  
**Total Original Digested Mass:** 49.930 grams  
**% Silica in Original:** 95.4 %

| Sieve Size (phi) | Sieve Midpt (phi) | Weight (grams) | Freq Weight % | Cumulative Weight % | Weight of Original (grams) | Freq Weight % | Cumulative Weight % |
|------------------|-------------------|----------------|---------------|---------------------|----------------------------|---------------|---------------------|
| -2.00            | -2.125            | 0.000          | 0.000         | 0.000               | 0.000                      | 0.000         | 0.000               |
| -1.75            | -1.875            | 0.000          | 0.000         | 0.000               | 0.000                      | 0.000         | 0.000               |
| -1.50            | -1.625            | 0.000          | 0.000         | 0.000               | 0.000                      | 0.000         | 0.000               |
| -1.25            | -1.375            | 0.000          | 0.000         | 0.000               | 0.000                      | 0.000         | 0.000               |
| -1.00            | -1.125            | 0.000          | 0.000         | 0.000               | 0.000                      | 0.000         | 0.000               |
| -0.75            | -0.875            | 0.000          | 0.000         | 0.000               | 0.000                      | 0.000         | 0.000               |
| -0.50            | -0.625            | 0.000          | 0.000         | 0.000               | 0.000                      | 0.000         | 0.000               |
| -0.25            | -0.375            | 0.000          | 0.000         | 0.000               | 0.000                      | 0.000         | 0.000               |
| 0.00             | -0.125            | 0.000          | 0.000         | 0.000               | 0.002                      | 0.004         | 0.004               |
| 0.25             | 0.125             | 0.012          | 0.027         | 0.027               | 0.020                      | 0.040         | 0.044               |
| 0.50             | 0.375             | 0.069          | 0.156         | 0.183               | 0.139                      | 0.278         | 0.322               |
| 0.75             | 0.625             | 0.442          | 0.996         | 1.179               | 0.611                      | 1.224         | 1.546               |
| 1.00             | 0.875             | 2.649          | 5.970         | 7.149               | 3.433                      | 6.876         | 8.422               |
| 1.25             | 1.125             | 4.763          | 10.734        | 17.883              | 5.440                      | 10.895        | 19.317              |
| 1.50             | 1.375             | 7.217          | 16.265        | 34.148              | 7.834                      | 15.690        | 35.007              |
| 1.75             | 1.625             | 8.303          | 18.712        | 52.860              | 8.638                      | 17.300        | 52.307              |
| 2.00             | 1.875             | 7.617          | 17.166        | 70.026              | 8.551                      | 17.126        | 69.433              |
| 2.25             | 2.125             | 5.165          | 11.640        | 81.666              | 5.786                      | 11.588        | 81.021              |
| 2.50             | 2.375             | 3.845          | 8.665         | 90.332              | 4.440                      | 8.892         | 89.914              |
| 2.75             | 2.625             | 2.605          | 5.871         | 96.203              | 3.095                      | 6.199         | 96.113              |
| 3.00             | 2.875             | 1.103          | 2.486         | 98.688              | 1.257                      | 2.518         | 98.630              |
| 3.25             | 3.125             | 0.341          | 0.769         | 99.457              | 0.401                      | 0.803         | 99.433              |
| 3.50             | 3.375             | 0.152          | 0.343         | 99.799              | 0.178                      | 0.356         | 99.790              |
| 3.75             | 3.625             | 0.056          | 0.126         | 99.926              | 0.084                      | 0.168         | 99.958              |
| 4.00             | 3.875             | 0.024          | 0.054         | 99.980              | 0.016                      | 0.032         | 99.990              |
| 5.00             | 4.500             | 0.000          | 0.000         | 99.980              | 0.000                      | 0.000         | 99.990              |
| 5.00             | 4.500             | 0.009          | 0.020         | 100.000             | 0.005                      | 0.010         | 100.000             |

