

Quality Control Statistical Summary

Onshore Grab Sample: MN-06-BB

Sample Taken By: D. Phelps
 Sample Taken On: 12/02/09
 County: Manatee

Latitude: 27° 28' 58.8"
 Longitude: 82° 42' 21.4"
 Datum: WGS 84

Statistical Results: Pre-CaCO3		
	Duplicate	Original
Mean:	2.4530 phi (0.1826 mm)	2.1247 phi (0.2293 mm)
Standard Dev:	0.7201 phi-units (0.6071 mm)	0.9646 phi-units (0.5124 mm)
Skewness:	-3.4058 dimensionless	-2.1939 dimensionless
Kurtosis:	18.2211 dimensionless	8.1010 dimensionless
5th Moment:	-99.8186 dimensionless	-28.2458 dimensionless
6th Moment:	580.6861 dimensionless	105.5774 dimensionless
RARD*:	0.2936 dimensionless	0.4540 dimensionless
Median:	2.4797 phi (0.1793 mm)	2.2655 phi (0.208 mm)

Statistical Results: CaCO3		
	Duplicate	Original
Mean:	0.8619 phi (0.5502 mm)	0.4952 phi (0.7094 mm)
Standard Dev:	1.5828 phi-units (0.3338 mm)	1.5104 phi-units (0.351 mm)
Skewness:	-0.3964 dimensionless	-0.0252 dimensionless
Kurtosis:	1.9867 dimensionless	1.6470 dimensionless
5th Moment:	-2.0369 dimensionless	-0.1953 dimensionless
6th Moment:	5.5135 dimensionless	3.3542 dimensionless
RARD*:	1.8364 dimensionless	3.0498 dimensionless
Median:	0.7878 phi (0.5792 mm)	0.3770 phi (0.7701 mm)

Statistical Results: Post-CaCO3		
	Duplicate	Original
Mean:	2.5718 phi (0.1682 mm)	2.4044 phi (0.1889 mm)
Standard Dev:	0.4037 phi-units (0.7559 mm)	0.4771 phi-units (0.7184 mm)
Skewness:	-1.3273 dimensionless	-1.0155 dimensionless
Kurtosis:	7.8391 dimensionless	5.6909 dimensionless
5th Moment:	-30.4626 dimensionless	-20.3464 dimensionless
6th Moment:	178.1318 dimensionless	119.0160 dimensionless
RARD*:	0.1570 dimensionless	0.1984 dimensionless
Median:	2.4981 phi (0.177 mm)	2.3471 phi (0.1965 mm)

Additional Data	
Total Fines	
Original:	0.22 %
Duplicate:	0.17 %
Total Carbonates	
Original:	14.24 %
Duplicate:	6.93 %

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 Millimeter data calculated by $mm = 2^{\sqrt{-\phi}}$	
* 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)

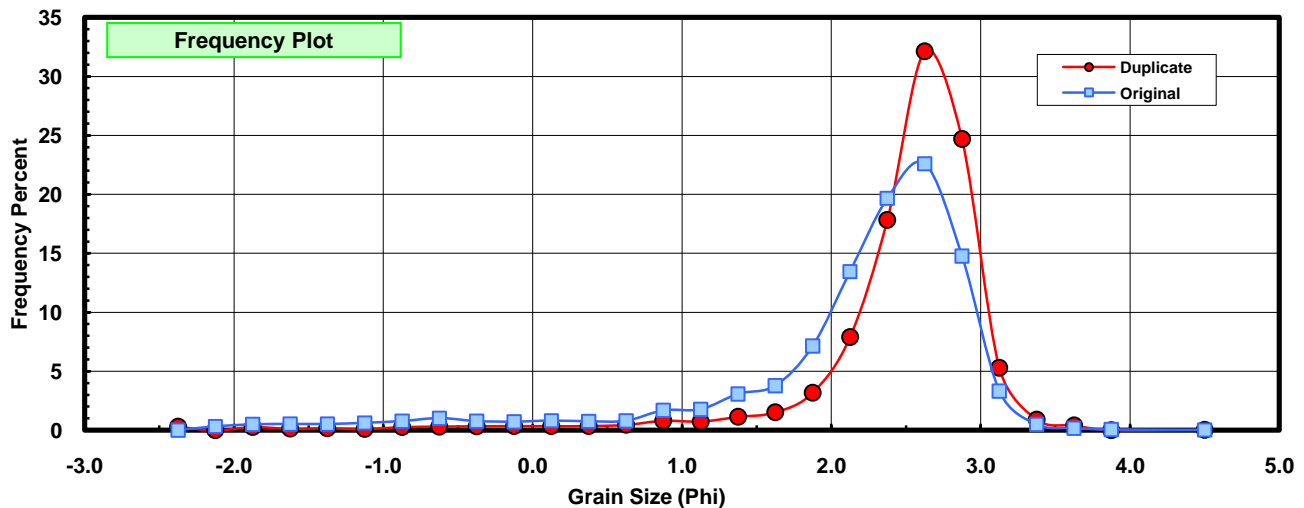
Pre-Digestion Grain Size Distribution

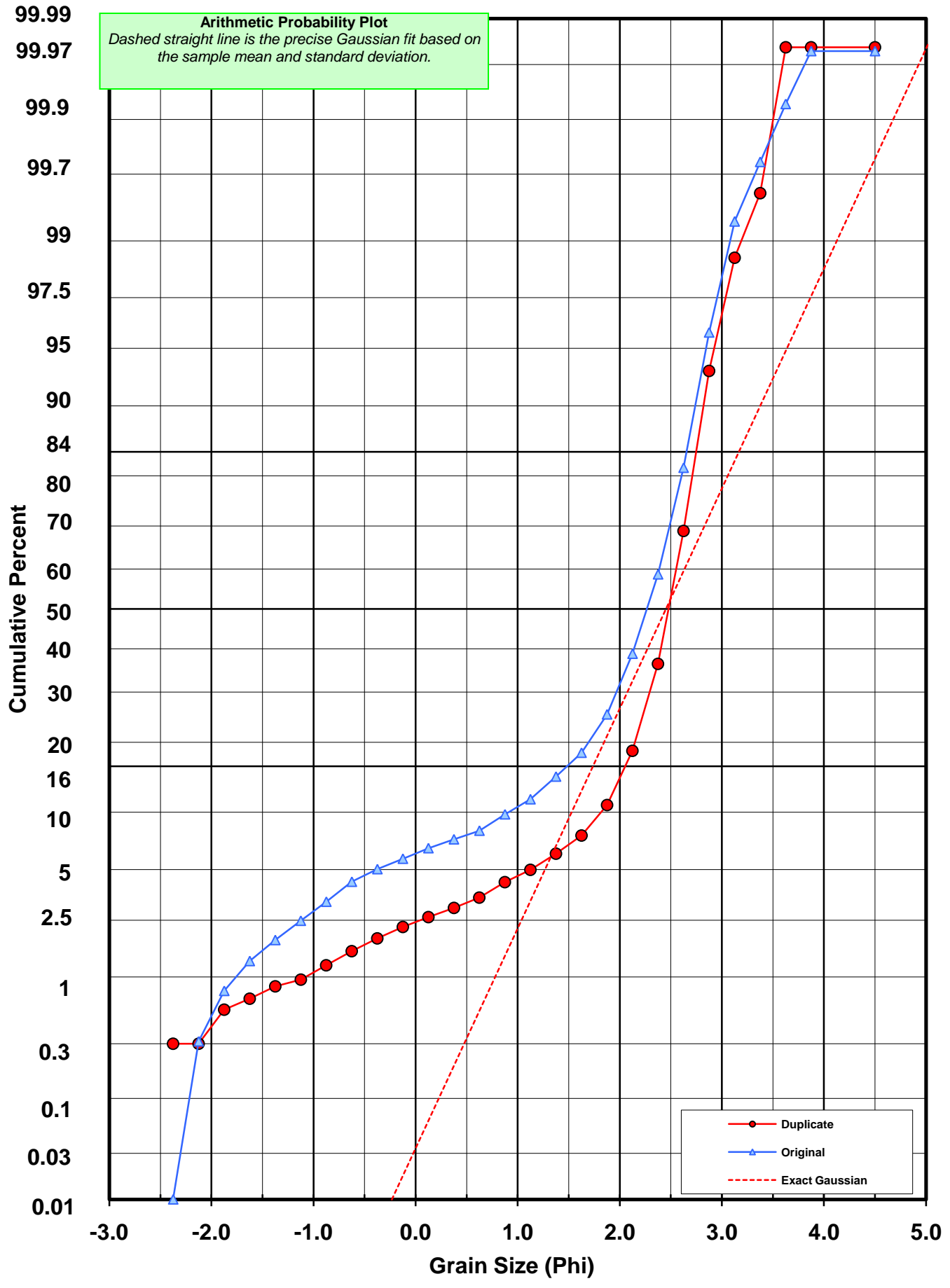
Onshore Grab Sample: MN-06-BB

Total Duplicate Sample Mass: 51.165 grams

Total Original Sample Mass: 55.062 grams

Sieve Size (phi)	Sieve Midpt (phi)	Weight of Dupl (grams)	Freq Weight %	Cumulative Weight %	Weight of Original (grams)	Freq Weight %	Cumulative Weight %
-2.25	-2.375	0.153	0.299	0.299	0.000	0.000	0.000
-2.00	-2.125	0.000	0.000	0.299	0.172	0.312	0.312
-1.75	-1.875	0.139	0.272	0.571	0.268	0.487	0.799
-1.50	-1.625	0.065	0.127	0.698	0.288	0.523	1.322
-1.25	-1.375	0.086	0.168	0.866	0.286	0.519	1.842
-1.00	-1.125	0.054	0.106	0.971	0.340	0.617	2.459
-0.75	-0.875	0.135	0.264	1.235	0.423	0.768	3.227
-0.50	-0.625	0.162	0.317	1.552	0.559	1.015	4.242
-0.25	-0.375	0.173	0.338	1.890	0.421	0.765	5.007
0.00	-0.125	0.183	0.358	2.248	0.394	0.716	5.723
0.25	0.125	0.179	0.350	2.597	0.444	0.806	6.529
0.50	0.375	0.184	0.360	2.957	0.412	0.748	7.277
0.75	0.625	0.235	0.459	3.416	0.434	0.788	8.065
1.00	0.875	0.414	0.809	4.226	0.924	1.678	9.744
1.25	1.125	0.382	0.747	4.972	0.974	1.769	11.512
1.50	1.375	0.580	1.134	6.106	1.691	3.071	14.584
1.75	1.625	0.777	1.519	7.624	2.076	3.770	18.354
2.00	1.875	1.628	3.182	10.806	3.933	7.143	25.497
2.25	2.125	4.042	7.900	18.706	7.407	13.452	38.949
2.50	2.375	9.127	17.838	36.545	10.827	19.663	58.612
2.75	2.625	16.444	32.139	68.684	12.440	22.593	81.205
3.00	2.875	12.632	24.689	93.372	8.126	14.758	95.963
3.25	3.125	2.705	5.287	98.659	1.824	3.313	99.275
3.50	3.375	0.466	0.911	99.570	0.270	0.490	99.766
3.75	3.625	0.210	0.410	99.980	0.089	0.162	99.927
4.00	3.875	0.000	0.000	99.980	0.028	0.051	99.978
5.00	4.500	0.010	0.020	100.000	0.012	0.022	100.000



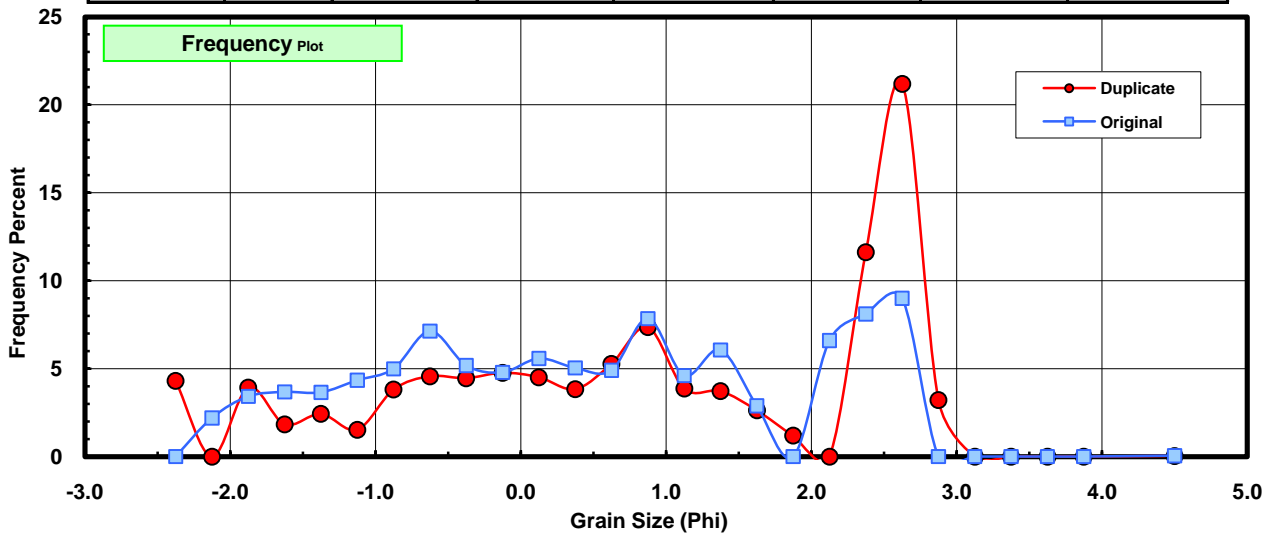


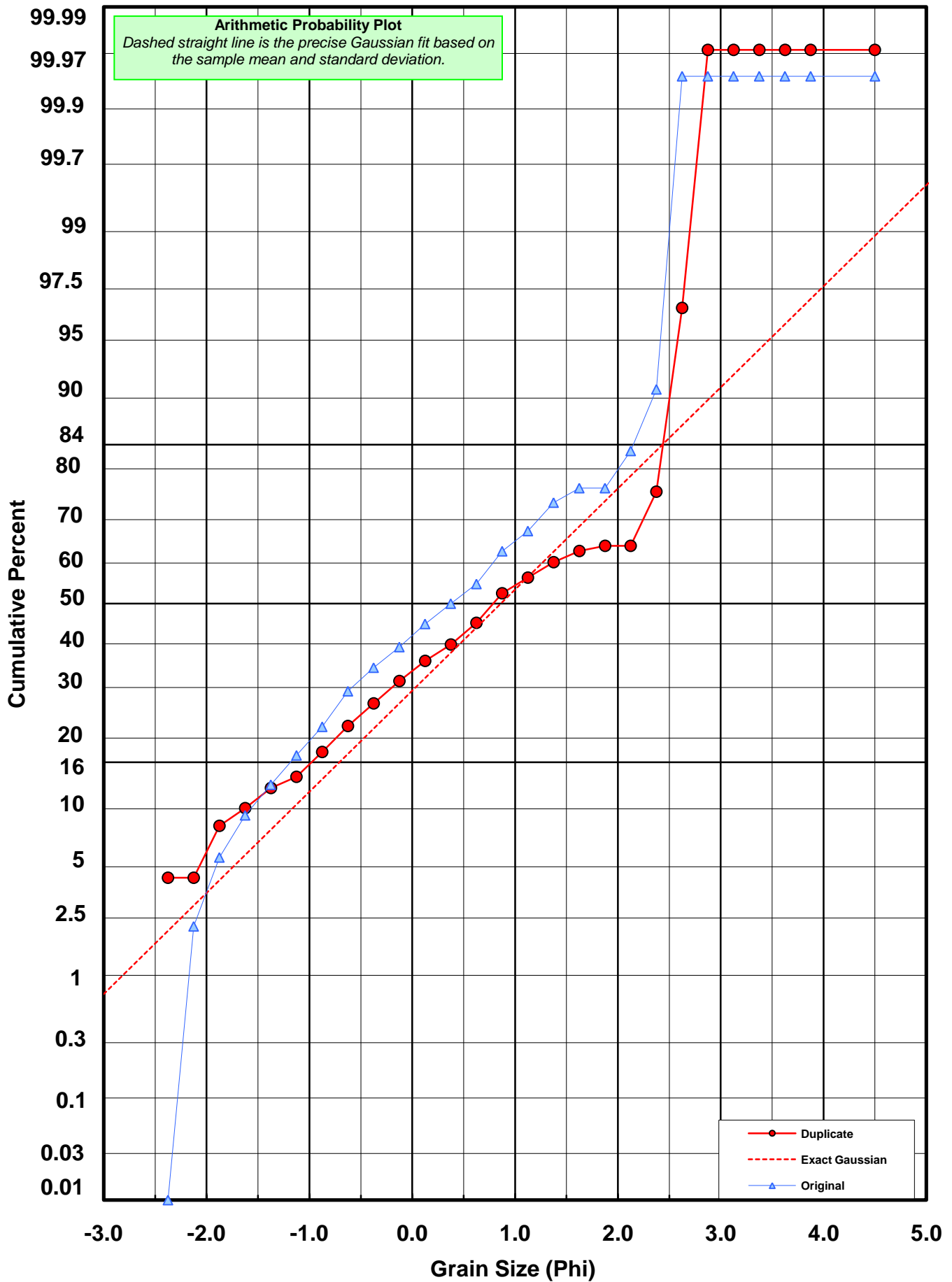
Carbonate Grain Size Distribution

Onshore Grab Sample: MN-06-BB

Total Duplicate Carbonate Mass: 3.548 grams
% Carbonate in Duplicate: 6.9 %
Total Original Carbonate Mass: 7.840 grams
% Carbonate in Original: 14.2 %

Sieve Size (phi)	Sieve Midpt (phi)	Weight of Dupl (grams)	Freq Weight %	Cumulative Weight %	Weight of Original (grams)	Freq Weight %	Cumulative Weight %
-2.25	-2.375	0.153	4.312	4.312	0.000	0.000	0.000
-2.00	-2.125	0.000	0.000	4.312	0.172	2.194	2.194
-1.75	-1.875	0.139	3.918	8.230	0.268	3.418	5.612
-1.50	-1.625	0.065	1.832	10.062	0.288	3.673	9.286
-1.25	-1.375	0.086	2.424	12.486	0.286	3.648	12.934
-1.00	-1.125	0.054	1.522	14.008	0.340	4.337	17.270
-0.75	-0.875	0.135	3.805	17.813	0.391	4.987	22.258
-0.50	-0.625	0.162	4.566	22.379	0.559	7.130	29.388
-0.25	-0.375	0.158	4.453	26.832	0.406	5.179	34.566
0.00	-0.125	0.169	4.763	31.595	0.375	4.783	39.349
0.25	0.125	0.160	4.510	36.105	0.437	5.574	44.923
0.50	0.375	0.136	3.833	39.938	0.395	5.038	49.962
0.75	0.625	0.187	5.271	45.209	0.384	4.898	54.860
1.00	0.875	0.261	7.356	52.565	0.615	7.844	62.704
1.25	1.125	0.137	3.861	56.426	0.361	4.605	67.309
1.50	1.375	0.132	3.720	60.147	0.475	6.059	73.367
1.75	1.625	0.093	2.621	62.768	0.226	2.883	76.250
2.00	1.875	0.042	1.184	63.952	0.000	0.000	76.250
2.25	2.125	0.000	0.000	63.952	0.517	6.594	82.844
2.50	2.375	0.412	11.612	75.564	0.636	8.112	90.957
2.75	2.625	0.752	21.195	96.759	0.705	8.992	99.949
3.00	2.875	0.114	3.213	99.972	0.000	0.000	99.949
3.25	3.125	0.000	0.000	99.972	0.000	0.000	99.949
3.50	3.375	0.000	0.000	99.972	0.000	0.000	99.949
3.75	3.625	0.000	0.000	99.972	0.000	0.000	99.949
4.00	3.875	0.000	0.000	99.972	0.000	0.000	99.949
5.00	4.500	0.001	0.028	100.000	0.004	0.051	100.000





Post-Digestion Grain Size Distribution

Onshore Grab Sample: MN-06-BB

Total Duplicate Digested Mass: 48.234 grams
% Silica in Duplicate: 94.2 %
Total Original Digested Mass: 48.030 grams
% Silica in Original: 87.2 %

Sieve Size (phi)	Sieve Midpt (phi)	Weight (grams)	Freq Weight %	Cumulative Weight %	Weight of Original (grams)	Freq Weight %	Cumulative Weight %
-2.25	-2.375	0.000	0.000	0.000	0.000	0.000	0.000
-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	0.032	0.067	0.067
-0.50	-0.625	0.000	0.000	0.000	0.000	0.000	0.067
-0.25	-0.375	0.015	0.031	0.031	0.015	0.031	0.098
0.00	-0.125	0.014	0.029	0.060	0.019	0.040	0.137
0.25	0.125	0.019	0.039	0.100	0.007	0.015	0.152
0.50	0.375	0.048	0.100	0.199	0.017	0.035	0.187
0.75	0.625	0.048	0.100	0.299	0.050	0.104	0.291
1.00	0.875	0.153	0.317	0.616	0.309	0.643	0.935
1.25	1.125	0.245	0.508	1.124	0.613	1.276	2.211
1.50	1.375	0.448	0.929	2.052	1.216	2.532	4.743
1.75	1.625	0.684	1.418	3.471	1.850	3.852	8.595
2.00	1.875	1.586	3.288	6.759	3.944	8.212	16.806
2.25	2.125	4.414	9.151	15.910	6.890	14.345	31.151
2.50	2.375	8.715	18.068	33.978	10.191	21.218	52.369
2.75	2.625	15.692	32.533	66.511	11.735	24.433	76.802
3.00	2.875	12.518	25.953	92.464	8.735	18.187	94.989
3.25	3.125	2.885	5.981	98.445	1.946	4.052	99.040
3.50	3.375	0.466	0.966	99.411	0.328	0.683	99.723
3.75	3.625	0.234	0.485	99.896	0.095	0.198	99.921
4.00	3.875	0.041	0.085	99.981	0.030	0.062	99.983
5.00	4.500	0.009	0.019	100.000	0.008	0.017	100.000

