

# Quality Control Statistical Summary

Onshore Grab Sample: PI-14-BB

Sample Taken By: D. Phelps  
 Sample Taken On: 10/07/09  
 County: Pinellas

Latitude: 27° 59' 17.9"  
 Longitude: 82° 49' 41.4"  
 Datum: WGS 84

Statistical Results: Pre-CaCO3				
	Duplicate		Original	
Mean:	2.2089	phi (0.2163 mm)	2.2255	phi (0.2138 mm)
Standard Dev:	0.7042	phi-units (0.6138 mm)	0.6198	phi-units (0.6508 mm)
Skewness:	-2.0140	dimensionless	-1.5164	dimensionless
Kurtosis:	9.5782	dimensionless	7.6401	dimensionless
5th Moment:	-41.4228	dimensionless	-30.2714	dimensionless
6th Moment:	201.9470	dimensionless	149.1568	dimensionless
RARD*:	0.3188	dimensionless	0.2785	dimensionless
Median:	2.2172	phi (0.2151 mm)	2.1900	phi (0.2191 mm)

Statistical Results: CaCO3				
	Duplicate		Original	
Mean:	2.3444	phi (0.1969 mm)	1.4055	phi (0.3775 mm)
Standard Dev:	1.1600	phi-units (0.4475 mm)	0.9379	phi-units (0.522 mm)
Skewness:	-1.9227	dimensionless	-0.9102	dimensionless
Kurtosis:	6.0372	dimensionless	3.4711	dimensionless
5th Moment:	-18.2307	dimensionless	-6.2087	dimensionless
6th Moment:	58.0202	dimensionless	20.8749	dimensionless
RARD*:	0.4948	dimensionless	0.6673	dimensionless
Median:	2.6870	phi (0.1553 mm)	1.4709	phi (0.3608 mm)

Statistical Results: Post-CaCO3				
	Duplicate		Original	
Mean:	2.0891	phi (0.235 mm)	2.3320	phi (0.1986 mm)
Standard Dev:	0.6315	phi-units (0.6455 mm)	0.4916	phi-units (0.7112 mm)
Skewness:	-1.5327	dimensionless	-0.5545	dimensionless
Kurtosis:	5.2856	dimensionless	3.4430	dimensionless
5th Moment:	-13.9860	dimensionless	-5.5530	dimensionless
6th Moment:	44.2602	dimensionless	25.3212	dimensionless
RARD*:	0.3023	dimensionless	0.2108	dimensionless
Median:	2.1118	phi (0.2314 mm)	2.2514	phi (0.21 mm)

Additional Data	
<b>Total Fines</b>	
Original:	0.03 %
Duplicate:	0.26 %
<b>Total Carbonates</b>	
Original:	10.31 %
Duplicate:	21.63 %

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 $mm = 2^{-(\phi)}$	
* 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)

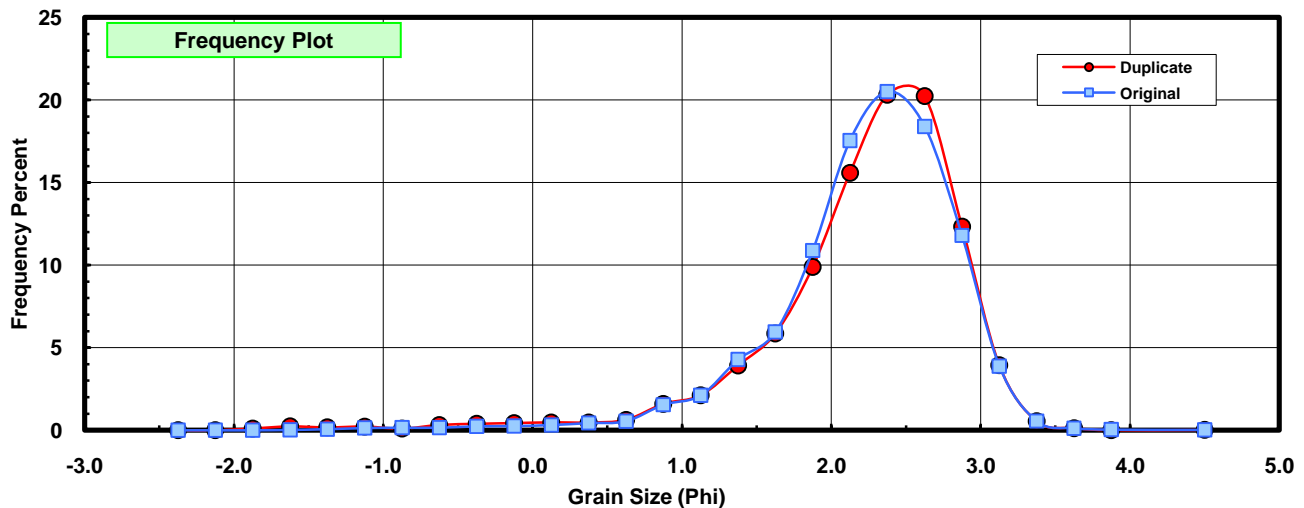
# Pre-Digestion Grain Size Distribution

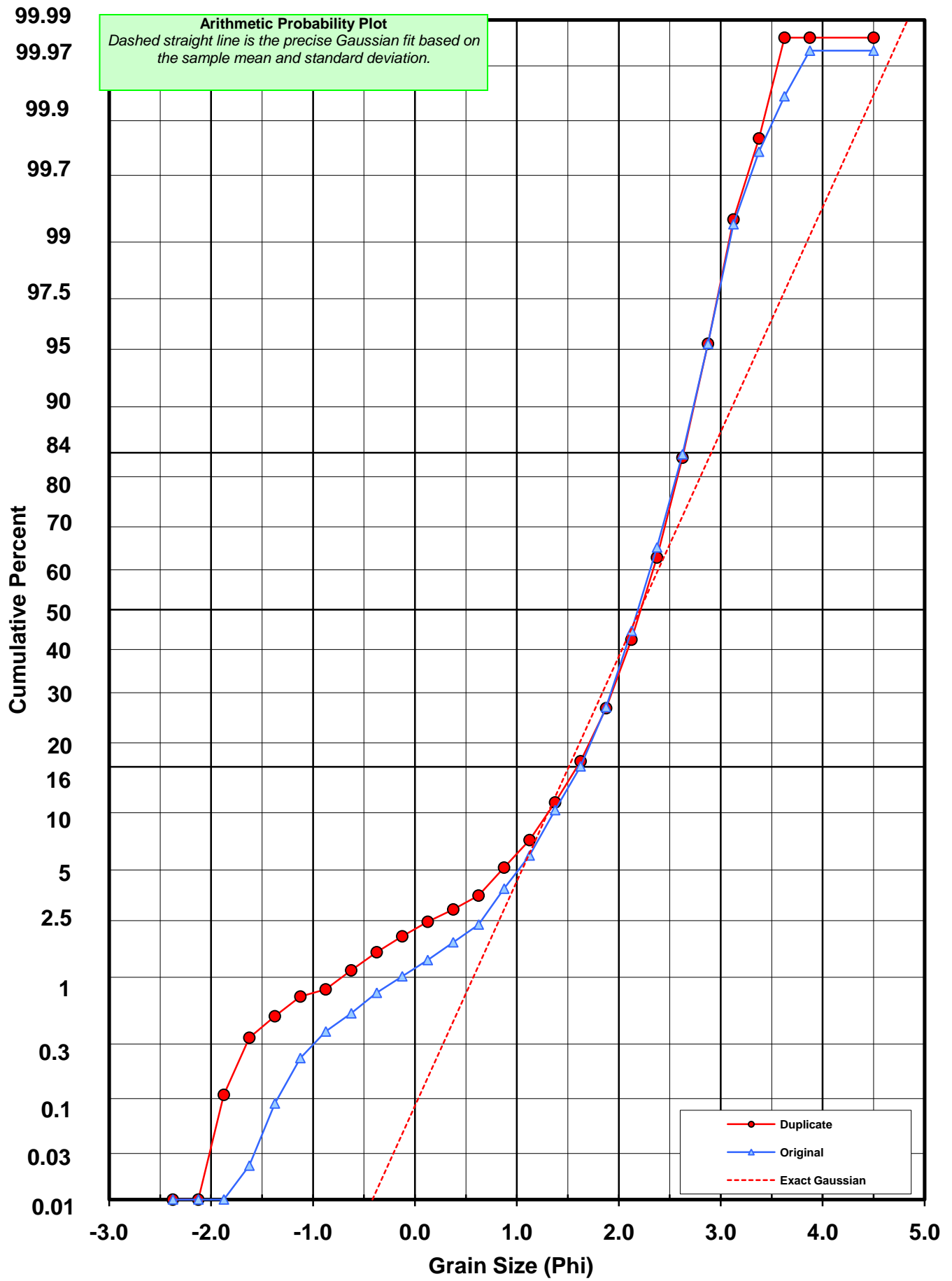
Onshore Grab Sample: PI-14-BB

Total Duplicate Sample Mass: 51.842 grams

Total Original Sample Mass: 53.134 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	0.000	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	0.056	0.108	0.108	0.000	0.000	0.000
-1.50	-1.625	0.119	0.230	0.338	0.012	0.023	0.023
-1.25	-1.375	0.088	0.170	0.507	0.036	0.068	0.090
-1.00	-1.125	0.114	0.220	0.727	0.072	0.136	0.226
-0.75	-0.875	0.051	0.098	0.826	0.082	0.154	0.380
-0.50	-0.625	0.165	0.318	1.144	0.083	0.156	0.536
-0.25	-0.375	0.201	0.388	1.532	0.128	0.241	0.777
0.00	-0.125	0.224	0.432	1.964	0.136	0.256	1.033
0.25	0.125	0.247	0.476	2.440	0.169	0.318	1.351
0.50	0.375	0.243	0.469	2.909	0.233	0.439	1.790
0.75	0.625	0.327	0.631	3.540	0.292	0.550	2.339
1.00	0.875	0.828	1.597	5.137	0.822	1.547	3.886
1.25	1.125	1.098	2.118	7.255	1.121	2.110	5.996
1.50	1.375	2.035	3.925	11.180	2.275	4.282	10.278
1.75	1.625	3.036	5.856	17.036	3.162	5.951	16.229
2.00	1.875	5.123	9.882	26.918	5.784	10.886	27.114
2.25	2.125	8.081	15.588	42.506	9.325	17.550	44.664
2.50	2.375	10.532	20.316	62.822	10.896	20.507	65.171
2.75	2.625	10.489	20.233	83.054	9.778	18.403	83.574
3.00	2.875	6.389	12.324	95.378	6.268	11.797	95.370
3.25	3.125	2.041	3.937	99.315	2.064	3.885	99.255
3.50	3.375	0.281	0.542	99.857	0.297	0.559	99.814
3.75	3.625	0.067	0.129	99.986	0.067	0.126	99.940
4.00	3.875	0.000	0.000	99.986	0.021	0.040	99.979
5.00	4.500	0.007	0.014	100.000	0.011	0.021	100.000



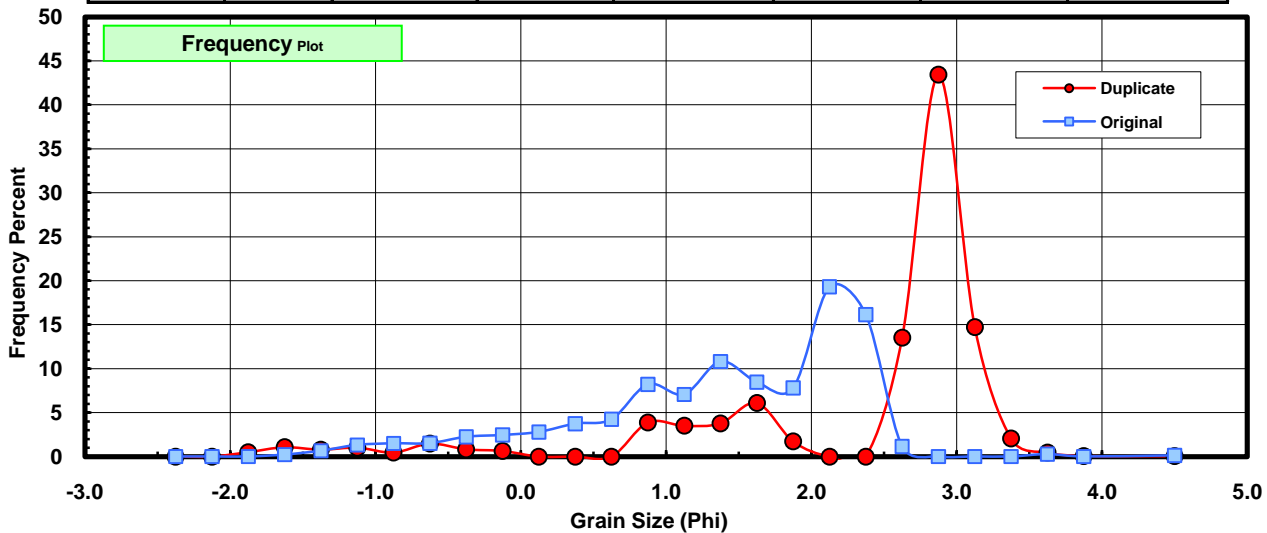


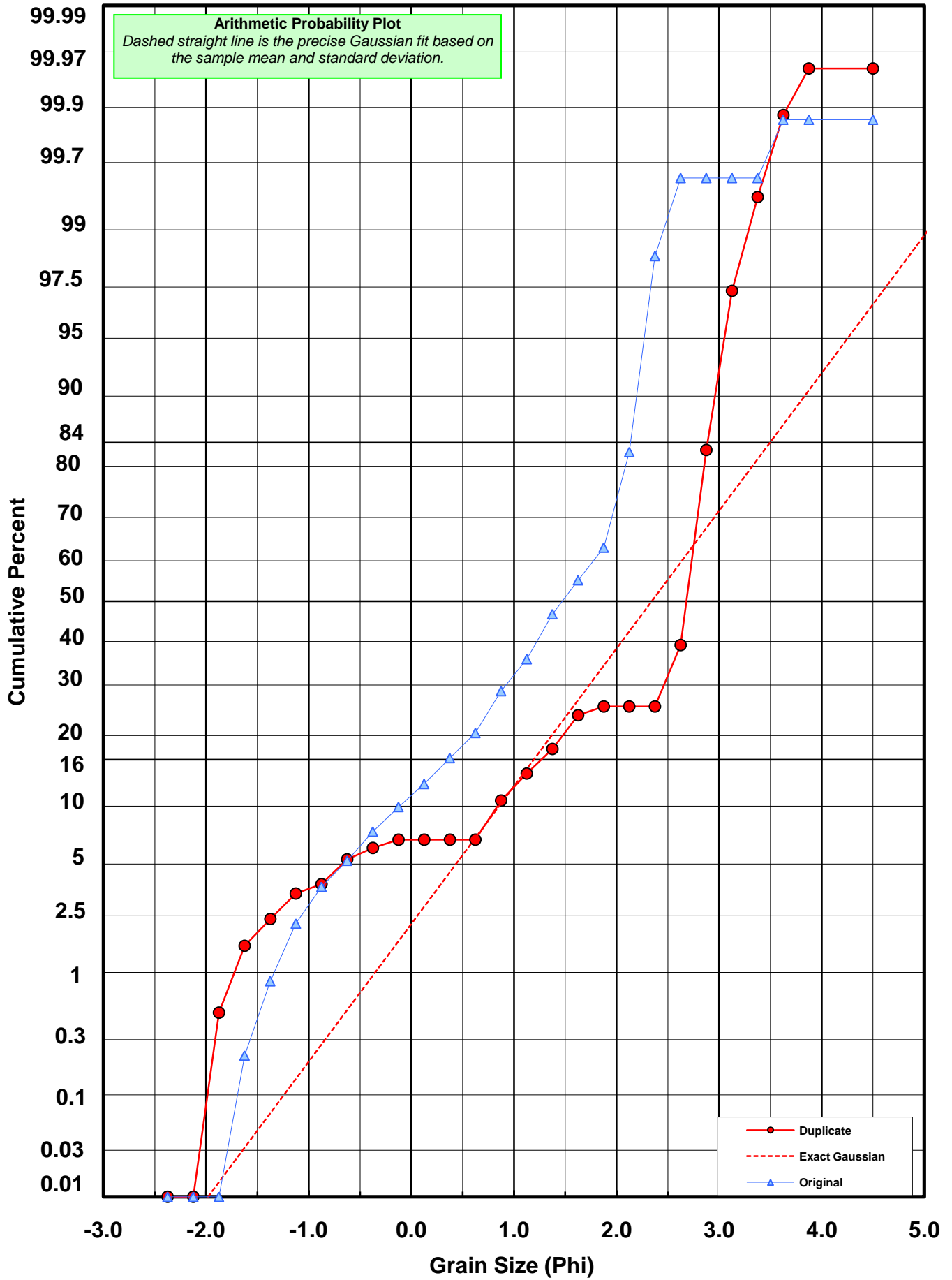
# Carbonate Grain Size Distribution

Onshore Grab Sample: PI-14-BB

**Total Duplicate Carbonate Mass:** 11.215 grams  
**% Carbonate in Duplicate:** 21.6 %  
**Total Original Carbonate Mass:** 5.478 grams  
**% Carbonate in Original:** 10.3 %

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	0.000	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	0.056	0.499	0.499	0.000	0.000	0.000
-1.50	-1.625	0.119	1.061	1.560	0.012	0.219	0.219
-1.25	-1.375	0.088	0.785	2.345	0.036	0.657	0.876
-1.00	-1.125	0.114	1.016	3.362	0.072	1.314	2.191
-0.75	-0.875	0.051	0.455	3.816	0.082	1.497	3.687
-0.50	-0.625	0.165	1.471	5.288	0.083	1.515	5.203
-0.25	-0.375	0.092	0.820	6.108	0.123	2.245	7.448
0.00	-0.125	0.072	0.642	6.750	0.134	2.446	9.894
0.25	0.125	0.000	0.000	6.750	0.153	2.793	12.687
0.50	0.375	0.000	0.000	6.750	0.205	3.742	16.429
0.75	0.625	0.000	0.000	6.750	0.232	4.235	20.664
1.00	0.875	0.435	3.879	10.629	0.450	8.215	28.879
1.25	1.125	0.392	3.495	14.124	0.387	7.065	35.944
1.50	1.375	0.423	3.772	17.896	0.592	10.807	46.751
1.75	1.625	0.684	6.099	23.995	0.464	8.470	55.221
2.00	1.875	0.193	1.721	25.716	0.427	7.795	63.016
2.25	2.125	0.000	0.000	25.716	1.057	19.295	82.311
2.50	2.375	0.000	0.000	25.716	0.884	16.137	98.448
2.75	2.625	1.516	13.518	39.233	0.063	1.150	99.598
3.00	2.875	4.870	43.424	82.657	0.000	0.000	99.598
3.25	3.125	1.652	14.730	97.387	0.000	0.000	99.598
3.50	3.375	0.229	2.042	99.429	0.000	0.000	99.598
3.75	3.625	0.051	0.455	99.884	0.015	0.274	99.872
4.00	3.875	0.008	0.071	99.955	0.000	0.000	99.872
5.00	4.500	0.005	0.045	100.000	0.007	0.128	100.000





# Post-Digestion Grain Size Distribution

Onshore Grab Sample: PI-14-BB

**Total Duplicate Digested Mass:** 46.158 grams  
**% Silica in Duplicate:** 89.0 %  
**Total Original Digested Mass:** 48.568 grams  
**% Silica in Original:** 91.4 %

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	0.000	0.000	0.000
-0.50	-0.625	0.000	0.000	0.000	0.000	0.000	0.000
-0.25	-0.375	0.109	0.236	0.236	0.005	0.010	0.010
0.00	-0.125	0.152	0.329	0.565	0.002	0.004	0.014
0.25	0.125	0.487	1.055	1.621	0.016	0.033	0.047
0.50	0.375	1.737	3.763	5.384	0.028	0.058	0.105
0.75	0.625	0.824	1.785	7.169	0.060	0.124	0.229
1.00	0.875	0.393	0.851	8.020	0.372	0.766	0.994
1.25	1.125	0.706	1.530	9.550	0.734	1.511	2.506
1.50	1.375	1.612	3.492	13.042	1.683	3.465	5.971
1.75	1.625	2.352	5.096	18.138	2.698	5.555	11.526
2.00	1.875	4.930	10.681	28.818	5.357	11.030	22.556
2.25	2.125	10.321	22.360	51.179	8.268	17.024	39.580
2.50	2.375	11.573	25.073	76.251	10.012	20.614	60.194
2.75	2.625	8.973	19.440	95.691	9.715	20.003	80.197
3.00	2.875	1.519	3.291	98.982	6.904	14.215	94.412
3.25	3.125	0.389	0.843	99.825	2.289	4.713	99.125
3.50	3.375	0.052	0.113	99.937	0.344	0.708	99.833
3.75	3.625	0.016	0.035	99.972	0.052	0.107	99.940
4.00	3.875	0.011	0.024	99.996	0.025	0.051	99.992
5.00	4.500	0.002	0.004	100.000	0.004	0.008	100.000

