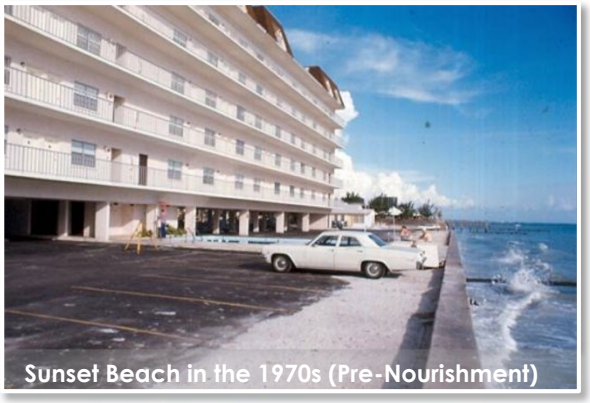
US Army Corps of Engineers ®
Jacksonville District

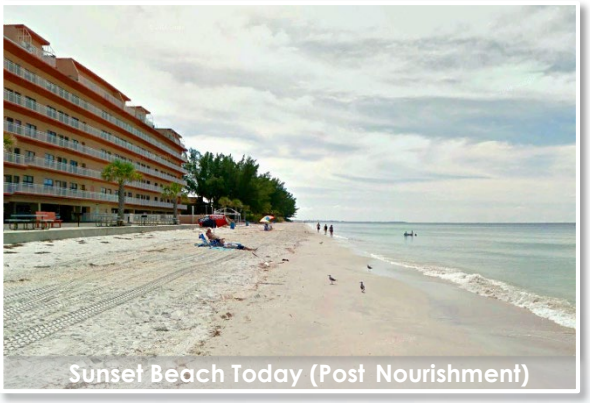
PINELLAS COUNTY, FLORIDA
COASTAL STORM RISK MANAGEMENT STUDY

TREASURE ISLAND AND LONG KEY SEGMENTS

Draft Integrated Feasibility Report and Environmental Assessment

APPENDIX C: GEOTECHNICAL ANALYSIS


Sunset Beach in the 1970s (Pre-Nourishment)


Sunset Beach Today (Post Nourishment)

August 2020

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1 GEOLOGY

1.1 REGIONAL GEOLOGY

The Florida Peninsula occupies a portion of the much larger geologic unit called the Florida Plateau. Deep water in the Gulf of Mexico is separated from deep water of the Atlantic Ocean by this partially submerged platform nearly 500 miles long and 450 miles wide. In the last 200 million years, the plateau has been alternately dry land or covered by shallow seas. During that time up to 20,000 feet of carbonate and marine sediments were deposited.

During the last million years, a series of four glacial periods, or ice ages, brought about significant changes in sea level. As a result of these sea level fluctuations, the Florida peninsula was again covered and uncovered by shallow seas. Following the first glacial period, sea level rose 270 ft. above its present level. Dry land on the Florida peninsula was then restricted to a few small islands along the central Florida ridge and in northeast Florida.

About 100,000 years ago, the last glacial period began. Sea level fell to 300 feet below its present level and the Florida Plateau emerged as dry land. Approximately 15,000 years ago, sea level began its most recent rise towards present sea level. Sea level rose at an average rate of 30 feet per 1,000 years. About 7,000 years ago, the rate of sea level rise slowed when the sea level was about 30 feet below its present level. It was at this most recent slowing of sea level rise that the modern barrier islands of southeast peninsular Florida formed.

1.2 LOCAL GEOLOGY

Pinellas County lies in the flat Gulf Coast Lowlands Province, which generally includes the area from the shoreline to the 100-foot contour line and is formed by recent marine deposits. The geology of Pinellas County consists of surficial Quaternary beach ridge and dune sediments overlaying a complex series of interbedded limestone, sand and clay units. The units range from Eocene to Holocene age.

Along the coast, quartz sand and shell sediment of four marine terraces of Pleistocene/Pliocene age with a thickness of approximately 30 to 80 feet are overlaying the Pliocene/Oligocene Hawthorne group. The Hawthorn group deposits are between 10 and 100 feet thick and are composed of sandy clays, silt and sand. Limestone of the Tampa Formation is present underneath.

2 NATIVE BEACH

2.1 GENERAL

Treasure Island and Long Key are barrier islands on Florida's gulf coast separated by Blind Pass Inlet. The barrier islands are sand bodies formed parallel to the coast line approximately 5000 years ago. They are separated from the main land through a back bay or lagoon. Gulf coast barrier island beaches naturally have a very low profile. The wet beach has a shallow gradient and extends thousands of feet into the Gulf of Mexico.

Treasure Island has three locally named beaches and Long key has four as listed in **Table 1** below. The individually named beaches transition into each other without any distinct landmark between them.

Table 1: Pinellas County Beaches

Location	Beach Designation	FDEP Reference Monument	Sample Profile Lines
Treasure Island	Sunshine beach	R-126 – R-132	R-128 and R-131
	Boca Ciega Beach	R-132 – R-137	R-135
	Sunset Beach	R-137 - R-143	R-139
Long Key	Upham Beach	R-144 – R-147	R-144 and 146
	St. Pete Beach North	R-147 – R-155	R-150 and R-154
	St. Pete Beach South	R-155 – R-160	R-158
	Pass-a-Grille Beach	R-160 – R-165	R-163

2.2 NATIVE BEACH SAMPLING AND ANALYSIS

The beaches along Treasure Island and Long Key were characterized through a comprehensive sampling program in April 2012. Sampling profile lines were approximately 3,000 to 4,000 feet apart and located at the following FDEP Range monuments: R-128, R-131, R-135, R-139, R-144, R-146, R-150, R-154, R-158 and R-163 **Figure 2-1**. Beach samples were collected at the toe of dune, berm, mid-tide, -3 ft., -5 ft., -10 ft., -15 ft, and -20ft. below Mean Sea Level as shown in **Figure 2-2**.

Figure 2-1. Beach Sampling Profile Lines Locations

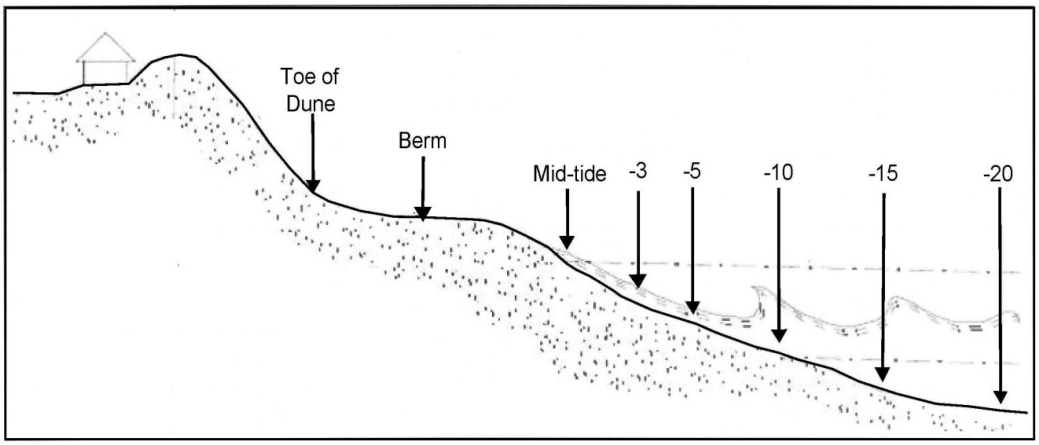


Figure 2-2. Beach Transect with Beach Sampling Locations

Grain size and visual shell analyses were performed on all sixty-eight (68) samples (**Table 2**). Carbonate analysis was performed on twenty (20) representative samples. Gradation curves and granularmetric reports are attached in Paragraph 7.1.

A representative arithmetic composite sample was calculated using all samples. The composite gradation curve and granularmetric report is included in section 6.

Pinellas county beaches have a lower profile than that shown in Figure 2 and in many locations buildings and roads were constructed at the location of the original dune. Toe of Dune samples could not be collected at those locations.

All samples were analyzed for grain size, visual shell and Munsell Color. Carbonate analysis was performed on representative samples. The associated gradation curves and granularmetric reports are presented in the Appendix.

An arithmetic composite sample was created from all samples. The granularmetric results using the method of moments for each sample and for the composite sample are summarized in **Table 2.**

The beach composite sample was classified as clean, poorly-graded, fine-grained quartz sand (SP) with a mean grain size of 2.01 phi, or 0.25 mm, and a standard deviation of 1.52 phi. The average percentage of fines passing the #230 sieve is 1.04 %, ranging from 0.02 % to 3.9 %. The average visual shell percentage is 20 %, with a range from 1.04 % through 72 %, and the average carbonate content is 24 %. The typical moist Munsell Color is 2.5YR 8/1 (white).

Table 2: Treasure Island/Long Key, Beach Sediment Analysis

FDEP-Monument	Location	Mean (mm)	Mean (phi)	Sorting (phi)	Retained on # 4 Sieve %	Silt Passing #230 Sieve %	Visual Shell in %*	CaCo3 in %	Moist Munsell Color
R-128	Dune	0.21	2.26	1.09	1.22	0.24	20.2		2.5Y 8/1
	Berm	0.18	2.44	0.99	0.74	0.23	13.8	14	2.5Y 8/1
	Mid-Tide	0.25	2.02	0.78	0.2	0.98	16.6		5Y 6/1
	-3	0.33	1.61	1.67	6.39	0.79	28.1		2.5Y 6/1
	-5	0.16	2.61	0.42	0	0.8	5.4		10Y 6/1
	-10	0.16	2.67	0.73	0.59	1.37	9.3	11.2	10Y 6/1
	-15	0.13	2.9	0.55	0	1.86	4.1		5Y 5/2
R-131	Dune	1.01	-0.02	2	15.39	0.23	66.3		2.5Y 8/2
	Berm	0.39	1.35	1.3	1.18	0.04	37.6	37.4	2.5Y 7/1
	Mid-Tide	0.25	1.98	1.08	0.69	1.09	27.3		5Y 6/1
	-3	0.18	2.45	0.83	0.3	1.16	13.3		5Y 7/1
	-5	0.22	2.16	1.21	1.08	0.75	20.5		5Y 7/2
	-10	0.14	2.83	0.76	0.62	1.85	6.6	9.7	5Y 6/2
	-15	0.13	2.92	0.51	0	2.68	4.7		5Y 5/2
R-135	Dune	0.62	0.68	1.11	0.93	0.29	54		2.5Y 8/2
	Berm	0.43	1.21	1.65	4.97	0.5	33.9	37.9	2.5Y 8/2
	Mid-Tide	0.36	1.46	1.23	0.43	0.73	31.2		2.5Y 8/1
	-3	0.25	2.02	1.12	0.64	0.69	19.2		2.5Y 8/1
	-5	0.17	2.55	0.49	0	1.24	2.6		2.5Y 8/1
	-10	0.23	2.11	1.83	6.16	1.46	16	19.3	10G 7/1
	-15	0.19	2.4	1.53	2.67	3.15	12.8		10G 8/1
R-139	Berm	0.26	1.92	1.41	4.07	0.08	14.6	14.7	2.5Y 7/1
	Mid-Tide	0.35	1.5	1.66	4.61	0.82	28.2		2.5Y 7/1
	-3	0.32	1.65	1.54	1.68	0.75	29.1		2.5Y 7/1
	-5	0.27	1.9	1.01	1.98	0.86	6		2.5Y 8/1
	-10	0.25	1.99	1.67	2.57	1.25	21.3	24.9	10G 7/1
	-15	0.54	0.88	2.48	17.62	1.4	41.9		2.5Y 7/2
R-144	Berm	0.56	0.83	1.91	7.38	0.37	47.6	51.2	2.5Y 7/2
	Mid-Tide	0.19	2.36	0.64	0	1.02	4.9		10G 8/1
	-3	0.22	2.17	1.25	2.96	1.08	11.6		10G 8/1
	-5	0.17	2.56	0.82	0.33	1.04	8.3		10G 8/1
	-10	0.13	2.94	0.38	0	2.13	3.8	6.2	2.5Y 7/1
	-15	0.12	3.06	0.52	0	2.12	2.5		10G 8/1
R-146	Dune	0.44	1.2	1.67	3.6	0.83	38.1		7.5YR 8/1
	Berm	0.16	2.63	0.63	0	0.16	7.3	9.1	7.5YR 8/1
	Mid-Tide	0.44	1.17	1.92	7.69	0.77	38.5		2.5YR 8/1

Table 2: Treasure Island/Long Key, Beach Sediment Analysis

FDEP-Monument	Location	Mean (mm)	Mean (phi)	Sorting (phi)	Retained on # 4 Sieve %	Silt Passing #230 Sieve %	Visual Shell in %*	CaCo3 in %	Moist Munsell Color
	-3	0.59	0.76	2.25	13.85	0.71	46.5		2.5YR 8/1
	-5	0.39	1.36	1.8	5.7	0.71	30.9		2.5YR 8/1
	-10	0.14	2.81	0.46	0	1.46	3.6	7.1	10G 8/1
	-15	0.12	3.05	0.41	0	2.06	1.7		10G 7/1
R-150	**Dune**	0.33	1.62	1.31	1.14	0.33	27.8		2.5Y 8/1
	Berm	0.54	0.89	1.71	4.25	0.36	47.8	51.6	2.5Y 8/1
	Mid-Tide	0.32	1.66	1.16	0.56	0.63	25.8		5Y 7/1
	-3	0.17	2.57	0.72	0.44	0.76	3.6		5Y 7/1
	-5	0.21	2.28	1.14	1.81	0.44	13.3		5Y 7/1
	-10	0.12	3.04	0.62	0	1.79	13.5	10.1	2.5Y 6/1
	-15	0.17	2.55	1.15	0.53	2.64	12.4		2.5Y 6/1
R-154	**Dune**	0.19	2.39	0.89	0.8	0.02	5.6		2.5Y 8/1
	Berm	0.19	2.43	0.71	0.38	0.15	5.3	8.6	2.5Y 8/1
	Mid-Tide	0.18	2.44	0.75	0.18	0	6.6		2.5Y 8/1
	-3	0.24	2.06	0.71	2.85	0.92	17.6		2.5Y 8/1
	-5	0.21	2.28	0.54	0.28	0.8	3.7		2.5Y 8/1
	-10	0.15	2.75	1.03	0.57	2.09	9.4	14.2	10G 6/1
	-15	0.15	2.76	0.99	0.1	3.26	10.2		10G 6/1
R-158	**Dune**	0.36	1.49	1.51	0.39	0.1	35.9		2.5Y 8/1
	Berm	0.31	1.69	1.73	4.93	0.34	23.9	26.3	2.5Y 8/1
	Mid-Tide	0.19	2.36	0.78	0.28	0.67	18.9		2.5Y 8/1
	-3	0.16	2.64	0.83	0.08	1.17	7.7		2.5Y 8/1
	-5	0.14	2.81	0.41	0	0.91	3.5		2.5Y 8/1
	-10	0.15	2.77	1.29	1.38	3.9	14	18.7	2.5Y 8/1
	-15	0.2	2.3	1.97	5.89	2.03	16.2		2.5Y 7/1
R-163	**Dune**	0.31	1.71	1.36	0.93	0.14	30.5		2.5Y 7/1
	Berm	0.36	1.47	1.41	1.61	0.02	39.3	40.1	2.5Y 8/1
	Mid-Tide	0.39	1.35	1.72	3.41	0.52	39.3		2.5Y 8/1
	-3	0.22	2.19	0.89	1.15	0.71	12.4		2.5Y 8/1
	-5	0.15	2.75	0.56	0.07	0.82	5.8		2.5Y 8/1
	-10	1.21	-0.28	2.16	15.79	1.36	72.9	73.9	2.5Y 8/1
	-15	0.19	2.43	1.77	4.21	2.32	16.9		2.5Y 8/1
Beach Composite		**0.25**	**2.01**	**1.52**	**2.53**	**1.04**	**20.14**	**24.31**	**Value 8**

3 SAND SOURCES

Treasure Island Long Key have been nourished in the past utilizing the following sand sources:

- Egmont Shoal Borrow Area East and West
- Johns Pass
- Blind Pass
- Pass-a-Grille Pass

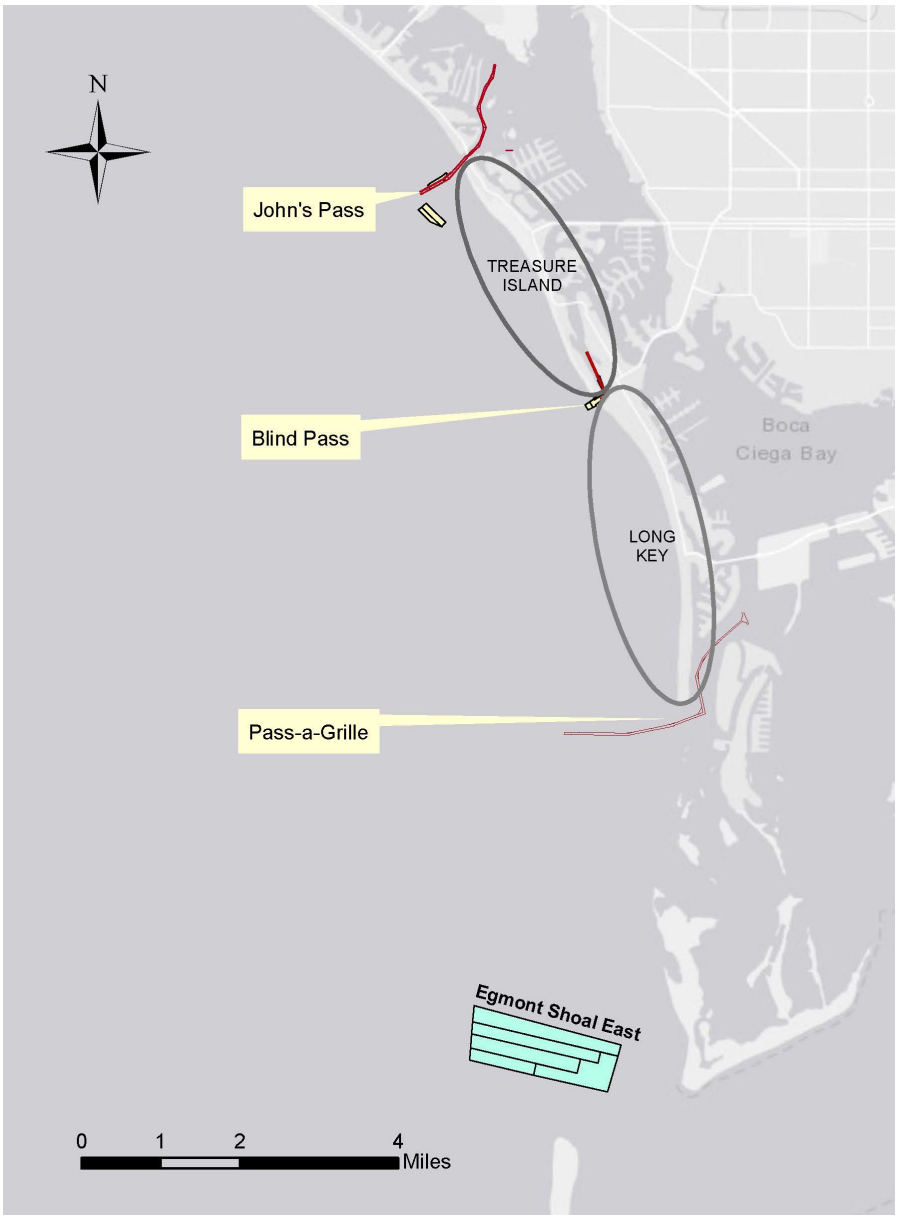


Figure 3-1. Overview of sand sources

Currently Egmont Shoal East, Johns Pass, and Blind Pass are permitted borrow areas for Treasure Island and Long Key. (FDEP Permit Nr. 0270453-003-JN and 0221569-016-JN). Pass-a-Grille was used to nourish Pass-a-Grille Beach in 2004 and is currently not permitted. Johns Pass and Pass-a Grille are federal navigation channels with federally provided maintenance dredging. Egmont Shoal East is a large borrow area with an estimated volume of 15 Million cubic yards (cy) and is also the permitted borrow area for Pinellas County Sand Key segment.

Sand sources must meet the requirements of the Florida Administrative Code 62B-41.007(2) to be used as beach fill as listed below:

- Carbonate or quartz with a particle size between 0.062 and 4.76mm
- <5% silt passing the #230 sieve
- <5% gravel sized shell retained on the #4 sieve
- Fill material must be free of foreign matter, debris, toxic material
- Fill material shall be similar in color and grain size distribution

3.1 NAVIGATION INLET SAND SOURCE

3.1.1 JOHNS PASS

Johns Pass is a permitted borrow area for Treasure Island Beaches since 2010. The Johns Pass borrow area consists of the Johns Pass federal channel with a design depth of 10 feet MLLW plus two feet overdepth, the channel side borrow area, and the ebb shoal borrow area. The dredged depth for the Channel Area is 13. 5 feet and includes 1.5 feet advanced maintenance within the federal channel. The Johns Pass Ebb shoal borrow area is located approximately 5000 feet south-southeast of the Johns Pass channel and includes two cuts with dredge depths of 12.1 and 13 feet MMLW, respectively. The Johns Pass borrow areas together with the vibracore boring locations are depicted in **Figure 3-2.** The boring locations for the borrow areas are listed in **Table 3.** Lab analysis for grain-size and carbonate content was performed on selected samples. The results of the analysis are discussed below. Logs, grain size graphs and granularmetric reports are attached in Paragraph 7.2.

Table 3. Available Vibracore Data

Designation	State Plane, FL-West, NAD83		Elevation NAVD88 (feet)	Elevation MLLW (feet)
	X	Y		
JP08-3	401454	1253013	-9.2	-7.77
JP08-4	401139	1252834	-6.9	-5.47
JP08-5	400832	1252664	-8.2	-6.77
JP08-6	401626	1253123	-11.8	-10.37
JP08-7	401390	1252852	-12.5	-11.07
JP08-8	400985	1252643	-8.2	-6.77
JP08-9	400669	1252423	-12.1	-10.67
JP08-10	401510	1253306	-5.7	-4.27
JP08-10-R	401519	1253296	-5.7	-4.27

Designation	State Plane, FL-West, NAD83		Elevation NAVD88 (feet)	Elevation MLLW (feet)
	X	Y		
JP08-11	401284	1253065	-6.2	-4.77
JP08-12-R	400968	1252754	-4.6	-3.17
JP08-13	401079	1250531	-9.5	-8.07
JP08-14	400533	1250888	-6.7	-5.27
JP08-15	400213	1251284	-6.6	-5.17
JP09-13R	401088	1250571	-9.8	-8.07
JP09-3	399967	1250831	-12.1	-10.67
JP09-4	400485	1250293	-11.8	-10.37
JP09-6	401230	1250167	-9.5	-8.07

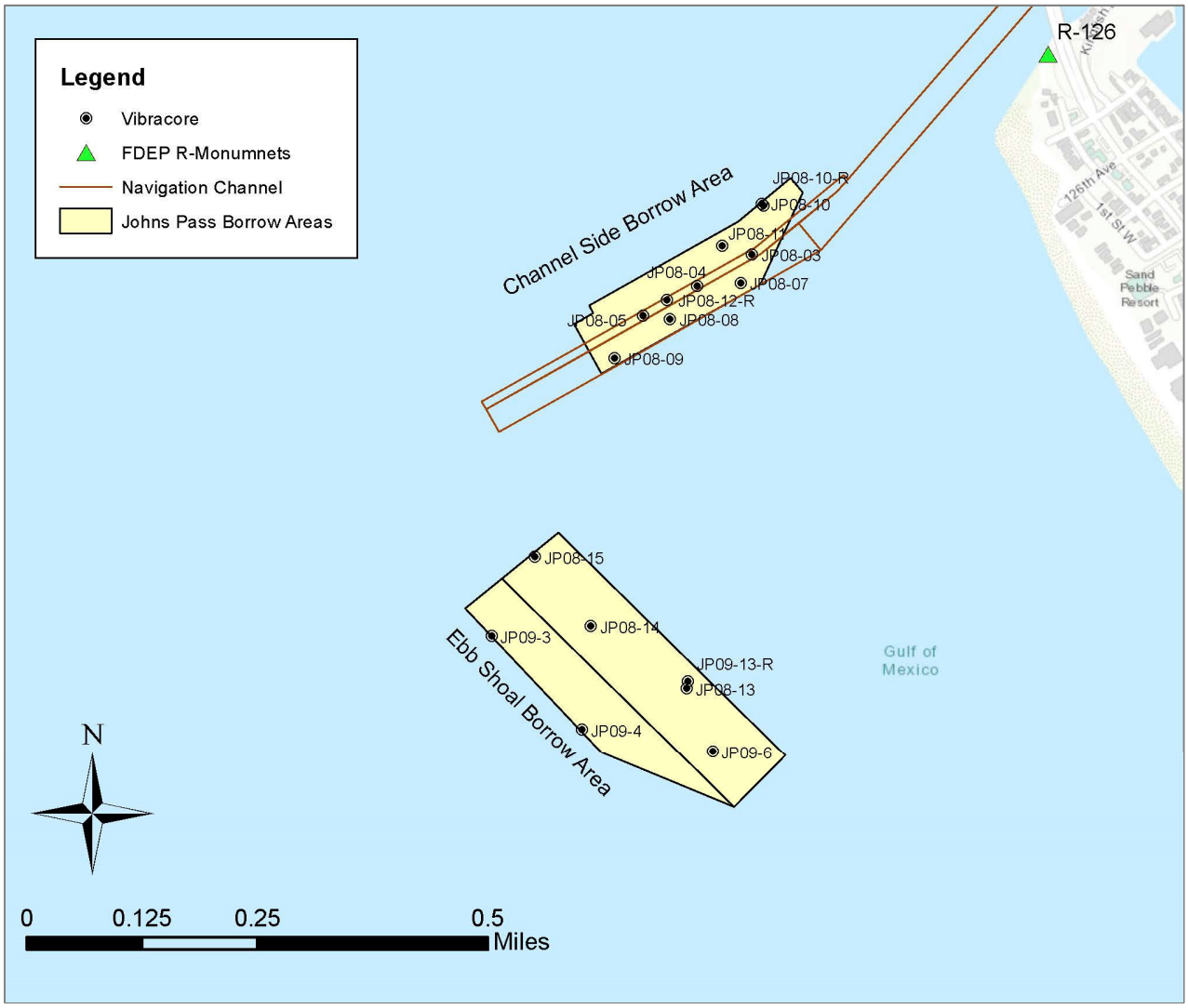


Figure 3-2. Johns Pass Borrow Areas with Vibracore Boring Locations.

Granularmetric Parameters Johns Pass Channel and Channel Side Borrow Area:
Laboratory testing and granularmetric analysis results of the samples within the dredge template are summarized in **Table 4**. An arithmetic composite sample was created using all samples. The granularmetric analysis results for the Johns Pass and Channel Side composite sample classifies the sediments as clean, poorly-graded, fine grained quartz sands with a mean grain size of 2.33 phi or 0.24 mm, with a standard deviation of 0.73 phi. The percentage of fines passing the #230 sieve is 0.86%, and the average carbonate content is 17.53%. The predominant dry Munsell colors of the sediments is 10Y 8/1 and 2.5Y 8/1.

Table 4. Grain size analysis results for the Johns Pass Channel Borrow Area

Boring Name	Sample Depth	USCS	Mean mm	Mean phi	Standard Deviation (phi)	% Passing #230 Sieve	CaCo3 in %	Munsell Color
JP08-03	0.7	SP	0.95	0.08	2.14	0.00	61.72	10Y 8/1
JP08-03	2.0	SP	0.26	1.94	1.10	0.02	26.61	10Y 8/1
JP08-03	2.8	SP	0.67	0.58	1.92	1.18	58.89	10Y 8/1
JP08-03	3.9	SP	0.22	2.18	0.79	0.02	14.22	10Y 8/1
JP08-04	0.7	SP	0.24	2.07	0.92	0.01	22.60	10Y 8/1
JP08-04	3.3	SP	0.18	2.44	0.47	0.01	11.38	10Y 8/1
JP08-04	6.1	SP	0.14	2.83	0.32	1.79	6.92	10Y 8/1
JP08-05	0.7	SP	0.17	2.56	0.58	0.07	17.07	2.5Y 8/1
JP08-05	3.3	SP	0.15	2.70	0.46	0.33	11.50	2.5Y 8/1
JP08-05	6.4	SP	0.15	2.75	0.35	0.27	9.01	2.5Y 8/1
JP08-05	6.6	ML-CL	0.15	2.73	0.43	55.01	11.42	2.5Y 8/1
JP08-05	8.9	SP	0.15	2.74	0.33	0.35	9.40	2.5Y 8/1
JP08-06	0.7	SP	0.33	1.59	1.55	0.07	39.11	10Y 8/1
JP08-06	1.3	SP	1.42	-0.51	2.26	0.04	69.99	10Y 8/1
JP08-06	3.3	SP	0.42	1.26	2.07	0.06	36.40	10Y 8/1
JP08-07	0.7	SP	0.43	1.22	1.78	0.04	42.84	10Y 8/1
JP08-07	3.3	SP	0.29	1.79	1.61	0.00	26.57	10Y 8/1
JP08-07	5.6	SP	0.71	0.50	1.92	0.19	70.22	10Y 8/1
JP08-07	6.9	SP	0.23	2.12	0.90	0.01	16.12	10Y 8/1
JP08-07	9.5	SM-SC	0.37	1.45	2.30	14.20	36.96	10Y 8/1
JP08-08	0.7	SP	0.18	2.45	0.50	0.04	10.15	10Y 8/1
JP08-08	5.6	SP	0.15	2.75	0.35	1.94	6.75	10Y 8/1
JP08-08	6.9	SM-SC	0.13	2.99	0.60	28.48	23.45	10Y 8/1
JP08-08	9.5	SP-SM	0.15	2.77	0.36	9.26	10.41	10Y 8/1
JP08-09	0.7	SP	0.17	2.54	0.76	0.09	11.95	10Y 8/1
JP08-09	3.9	SP	0.15	2.77	0.39	0.93	9.42	10Y 8/1
JP08-10	0.7	SP	0.48	1.06	1.63	0.01	46.21	10Y 8/1
JP08-10	2.3	SP	0.16	2.64	0.36	0.02	7.47	10Y 8/1
JP08-10	2.9	SP	0.96	0.06	1.95	0.10	63.17	10Y 8/1
JP08-10	3.3	SP	0.22	2.16	1.06	0.01	16.15	10Y 8/1

Boring Name	Sample Depth	USCS	Mean mm	Mean phi	Standard Deviation (phi)	% Passing #230 Sieve	CaCo3 in %	Munsell Color
JP08-10	4.3	SP	1.29	-0.37	2.01	0.83	69.38	10Y 8/1
JP08-10	5.6	SP	0.14	2.81	0.48	0.26	7.27	10Y 8/1
JP08-11	0.7	SP	0.31	1.70	1.26	0.02	34.04	10Y 8/1
JP08-11	2.9	SP	0.15	2.76	0.43	1.12	15.08	10Y 8/1
JP08-11	4.3	SP	0.15	2.77	0.51	3.92	13.40	10Y 8/1
JP08-11	7.5	SP	0.14	2.80	0.34	1.76	8.20	10Y 8/1
JP08-11	10.8	ML-CL	0.14	2.88	0.40	72.82	12.34	10Y 7/1
JP08-12-R	0.7	SP	0.18	2.45	0.39	0.00	9.60	10Y 8/1
JP08-12-R	3.3	SP	0.20	2.33	0.71	0.00	13.50	10Y 8/1
JP08-12-R	6.6	SP	0.17	2.55	0.70	1.07	16.97	10Y 8/1
Composite Sample			**0.24**	**2.33**	**0.73**	**0.86**	**17.53**	**10Y 8/1**

Granularmetric Parameters Johns Pass Ebb Shoal Borrow Area:

The seven vibracore borings of the Johns Pass Ebb Shoal are designated JP08-13 through JP08-15, JP09-3, JP09-4, JP09-6, and JP09-13R. The grain size analysis results for the Shoal composite sample classifies the sediments as clean, poorly-graded, fine grained quartz sands with a mean grain size of 2.72 phi or 0.16 mm, with a standard deviation of 0.56 phi. The percentage of fines passing the #230 sieve is 1.69%, and the average carbonate content is 9.60%. The predominant dry Munsell color of the sediments is 2.5Y 8/1 and the predominant moist Munsell color is 10YR 6/1 through 10YR 8/1. Laboratory testing and granularmetric analysis results of the samples within the dredge template are summarized in **Table 5**.

Table 5. Grain size analysis results for Johns Pass Ebb Shoal Borrow Area

Boring Name	Sample Depth	USCS	Mean mm	Mean phi	Standard Deviation (phi)	% Passing #230 Sieve	CaCo3 in %	Munsell Color
JP08-13	0.7	SP	0.17	2.59	0.62	0.01	8.14	10Y 8/1
JP08-13	2.3	SP	0.16	2.69	0.53	0.00	7.42	2.5Y 8/1
JP08-13	4.3	SP	0.13	2.91	0.33	1.51	5.90	2.5Y 8/1
JP08-14	0.7	SP	0.14	2.80	0.38	0.02	4.56	2.5Y 8/1
JP08-14	3.3	SP	0.17	2.58	0.53	0.03	9.03	2.5Y 8/1
JP08-14	6.6	SP	0.13	2.94	0.36	2.71	5.84	2.5Y 8/1
JP08-14	8.2	SP	0.12	3.01	0.44	4.52	7.26	2.5Y 8/1
JP08-14	10.8	SM-SC	0.77	0.37	2.13	21.08	63.02	2.5Y 8/1
JP08-14	17.1	SM-SC	0.21	2.27	1.70	27.81	30.62	2.5Y 8/1
JP08-15	0.7	SP	0.15	2.77	0.35	0.01	4.13	2.5Y 8/1
JP08-15	3.3	SP	0.17	2.56	0.70	0.05	13.94	2.5Y 8/1
JP08-15	6.6	SP	0.13	2.97	0.49	4.40	7.30	2.5Y 7/1
JP08-15	9.8	SP	0.44	1.18	1.94	3.60	41.27	2.5Y 8/1
JP08-15	11.5	SM-SC	0.24	2.04	1.79	20.76	25.99	2.5Y 7/2

Boring Name	Sample Depth	USCS	Mean mm	Mean phi	Standard Deviation (phi)	% Passing #230 Sieve	CaCo3 in %	Munsell Color
JP09-3	1.3	SP	0.17	2.60	1.06	0.87	25.08	10YR 6/1
JP09-3	4.1	SP-SM	0.11	3.17	0.87	9.66	10.84	10YR 6/1
JP09-3	6.6	SH	0.85	0.23	1.64	3.86	74.72	10YR 6/1
JP09-4	1.3	SP	0.10	3.26	0.37	1.17	9.62	10YR 6/1
JP09-4	3.3	SP	0.10	3.29	0.47	2.28	8.90	10YR 8/1
JP09-4	5.2	SP-SM	0.09	3.41	0.55	9.52	8.56	10YR 8/1
JP09-4	8.2	SM	0.32	1.63	1.98	20.32	47.62	10YR 8/1
JP09-6	1.6	SP	0.11	3.19	0.57	0.68	9.06	10YR 6/1
JP09-6	4.3	SP	0.10	3.32	0.35	1.78	7.01	10YR 8/1
JP09-6	6.6	SP	0.09	3.40	0.33	2.68	6.84	10YR 7/1
JP09-6	8.9	SM	0.20	2.36	1.34	18.07	30.58	10YR 7/1
JP09-13R	1.6	SP	0.11	3.15	0.57	0.58	9.32	10YR 8/1
JP09-13R	4.4	SP	0.11	3.18	0.94	4.16	11.90	10YR 6/1
JP09-13R	5.9	SP-SM	0.12	3.12	0.93	6.89	12.73	10YR 6/1
JP09-13R	8.0	SM	0.17	2.58	1.58	20.66	22.99	10YR 6/1
Composite Sample			**0.16**	**2.72**	**0.56**	**1.69**	**9.60**	**2.5Y 8/1**

3.1.2 *BLIND PASS

Blind Pass is non-federal man-made channel that separates the islands of Treasure Island and Long Key. The Blind pass channel and adjacent areas are permitted as sand sources to nourish Sunshine Beach to the north of the inlet and Upham beach to the south of the inlet. The borrow area has multiple dredged cuts with dredge depths between -10 and -18 feet MLLW. The borrow area design together with the vibracore locations are presented in **Figure 3-3**. The boring locations for the borrow areas are listed in **Table 6**. Lab analysis for grain-size and carbonate content was performed on selected samples. The results of the analysis are discussed below. Logs, grain size graphs and granularmetric reports are attached in Paragraph 7.3.

Table 6. Boring Locations for Blind Pass Channel Borrow Area

Boring Designation	State Plane, FL-West, NAD27		State Plane, FL-West, NAD83	
	X	Y	X	Y
12	255,022	1,237,782	411,251	1,237,945
13	254,834	1,237,681	411,063	1,237,844
18	254,895	1,237,601	411,124	1,237,764
24	255,590	1,238,142	411,819	1,238,305
27	255,754	1,238,311	411,983	1,238,474
31	255,525	1,238,080	411,754	1,238,243
34	255,589	1,239,322	411,818	1,239,485
35	255,669	1,239,191	411,898	1,239,354
44	255,493	1,238,343	411,722	1,238,506

Boring Designation	State Plane, FL-West, NAD27		State Plane, FL-West, NAD83	
	X	Y	X	Y
45	255,385	1,238,253	411,614	1,238,416
46	255,321	1,238,153	411,550	1,238,316
49	255,843	1,238,180	412,072	1,238,343
61	255,653	1,239,474	411,882	1,239,637
65	255,742	1,239,352	411,971	1,239,515
67	255,723	1,239,200	411,952	1,239,363
71	255,821	1,239,079	412,050	1,239,242
77	255,945	1,238,815	412,174	1,238,978
88	255,149	1,237,890	411,378	1,238,053
93	255,279	1,237,940	411,508	1,238,103
95	255,300	1,237,809	411,529	1,237,972
96	255,528	1,239,606	411,757	1,239,769

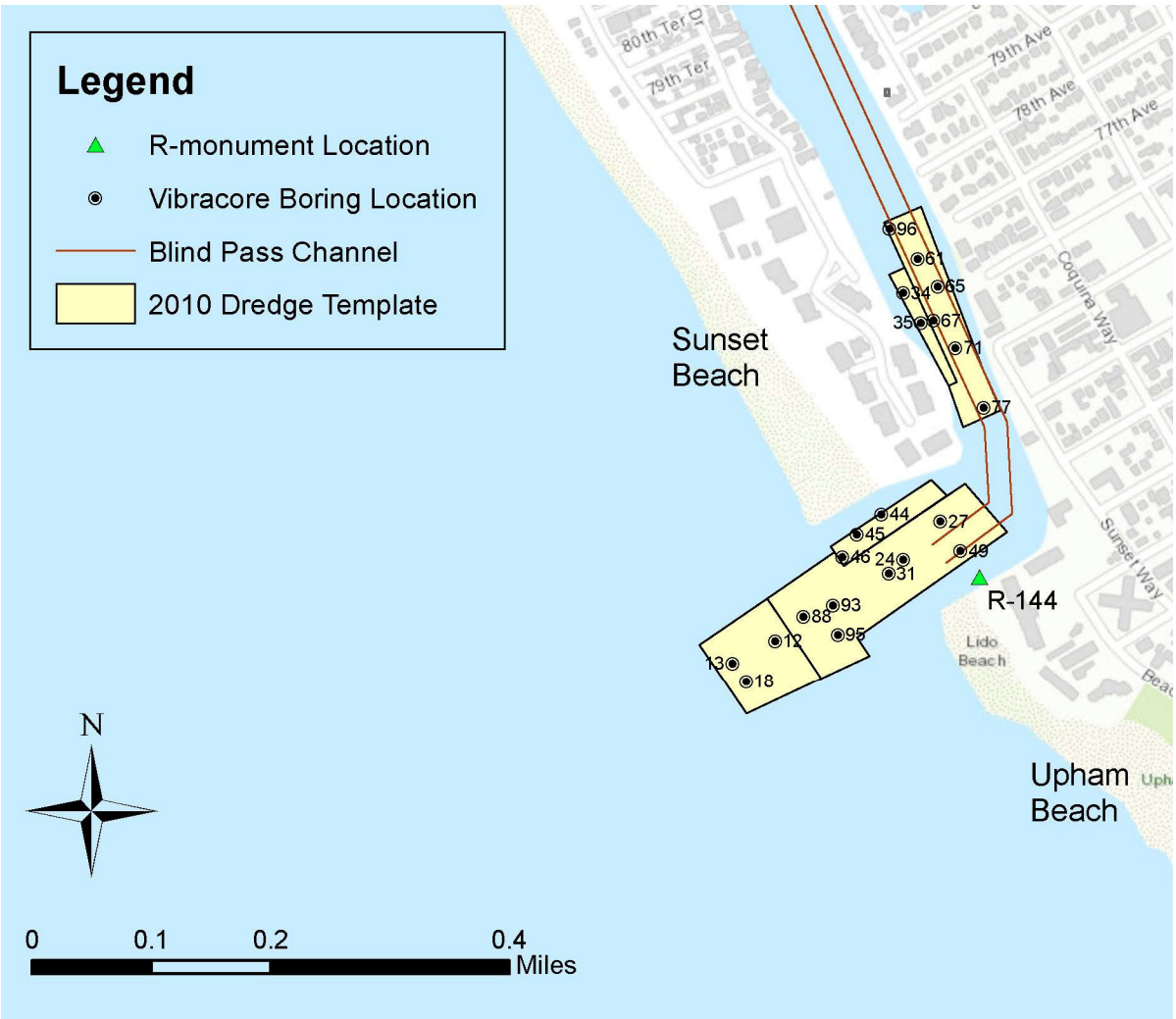


Figure 3-3. Blind Pass Borrow Areas with Vibracore Boring Locations.

Granularmetric Parameters Blind Pass Channel Borrow Area:

Laboratory testing and granularmetric analysis results of the samples within the dredge template are summarized in **Table 7.** An arithmetic composite sample was created using all samples. The granularmetric analysis results for the Blind Pass Channel borrow area composite sample classifies the sediments as clean, poorly-graded, fine grained quartz sands with a mean grain size of 1.78 phi or 0.29 mm, with a standard deviation of 1.79 phi. The percentage of fines passing the #230 sieve is 1.30%, and the average carbonate content is 26.05%. The predominant dry Munsell color of the sediments is 2.5Y 7/1.

Table 7. Grain size analysis results for Blind Pass Channel Borrow Area

Boring Name	Sample Depth	USCS	Mean mm	Mean phi	Standard Deviation (phi)	% Passing #230 sieve	CaCo3 in %	Munsell Color
12	1.3	SP	0.25	2.03	1.54	1.30	22.52	2.5Y 7/1
12	4.8	SP	0.56	0.84	2.1	1.02	46.04	2.5Y 7/1
12	8.2	SP	0.15	2.72	0.36	0.77	6.94	2.5Y 7/1
13	0.07	SP	0.18	2.49	1.16	2.48	19.66	2.5Y 7/1
13	3.3	SP	0.14	2.89	0.35	1.42	6.21	2.5Y 7/1
13	5.9	SM	0.14	2.83	0.37	13.64	6.83	2.5Y6/1
13	7.5	SP	0.14	2.87	0.38	0.03	6.36	2.5Y 8/1
18	1.6	SP	0.23	2.13	1.07	0.40	18.94	2.5Y 7/1
18	7.2	SP	0.17	2.60	0.44	0.51	9.72	2.5Y 7/1
24	1	SP	0.16	2.68	0.63	0.38	8.44	2.5Y 7/1
24	5.9	SP	0.15	2.77	0.39	0.43	6.91	2.5Y 7/1
24	9.5	SP-SM	0.14	2.89	0.37	5.30	9.79	2.5Y 6/1
27	0.7	SP-SM	0.25	2.00	1.37	5.38	26.06	2.5Y 8/1
27	3	SP	0.16	2.65	0.42	1.28	15.31	2.5Y 8/1
27	6.2	SP	0.13	2.99	0.37	3.84	9.99	2.5Y 8/1
27	11.3	SP-SM	0.13	2.92	0.37	5.49	10.99	2.5Y 8/1
31	1.6	SP	0.16	2.63	0.84	0.77	9.96	2.5Y 8/1
31	6.9	SP	0.16	2.68	0.42	0.34	6.91	2.5Y 8/1
34	1	SP	0.44	1.17	1.42	1.37	45.44	2.5Y 7/1
34	3.8	SP	0.15	2.78	0.44	3.71	8.23	2.5Y 7/1
34	8.7	SP	0.6	0.73	1.66	1.35	47.38	2.5Y 3/1
35	2	SP	0.25	2.03	1.07	1.22	24.37	2.5Y 7/1
35	7.1	SP	0.43	1.21	1.49	0.92	40.87	2.5Y 7/1
44	1.6	SP	0.28	1.84	1.44	1.37	33.04	2.5Y 7/1
44	5.2	SP	0.12	3.03	0.5	2.22	5.67	2.5Y 4/1
44	9.8	SM	0.12	3.12	0.31	15.49	8.12	2.5Y 4/1
45	1.6	SP	0.23	2.10	0.95	0.03	42.44	5Y 7/1
45	11.2	SP	0.63	0.66	1.47	0.53	51.73	5Y 7/1

Boring Name	Sample Depth	USCS	Mean mm	Mean phi	Standard Deviation (phi)	% Passing #230 sieve	CaCo3 in %	Munsell Color
45	12.5	SM	0.13	2.97	0.35	20.85	6.94	5Y 7/1
46	1.3	SP	0.23	2.13	1.32	0.71	22.69	2.5Y 7/1
46	5.6	SP	0.13	2.94	0.59	3.29	7.64	2.5Y 7/1
49	1.6	SP	0.2	2.29	0.87	0.50	18.69	2.5Y 7/1
49	4.9	SP	0.32	1.66	1.38	0.49	30.61	2.5Y 7/1
49	8.2	SP	0.16	2.67	0.45	0.50	8.61	2.5Y 7/1
49	10.5	SP	1.3	-0.38	2.06	0.83	72.53	2.5Y 7/1
49	12.8	SP-SM	0.42	1.26	2.13	10.09	38.93	2.5Y 5/1
61	1.3	SP	0.16	2.68	0.6	1.93	9.75	2.5Y 7/1
61	4.3	SP	0.33	1.60	1.21	2.23	19.46	2.5Y 7/1
61	7.9	SP-SM	0.22	2.17	1.57	8.65	21.79	2.5Y 7/1
61	9.2	SM	0.2	2.30	1.32	12.53	10.68	2.5Y 4/1
65	2	SP	1.03	-0.04	1.62	0.69	65.16	2.5Y 8/1
65	3.9	SP	0.23	2.11	1.04	1.65	18.35	2.5Y 8/1
67	1.3	SP	0.33	1.58	1.24	2.33	37.73	2.5Y 7/1
67	3.9	SP	0.2	2.29	0.75	1.82	26.03	2.5Y 7/1
67	6.9	SP	0.9	0.16	1.55	1.71	63.3	2.5Y 7/1
67	9.5	SM	0.14	2.86	0.35	11.92	5.07	5Y 5/1
71	2	SP	1.37	-0.45	1.71	1.39	70.95	2.5Y 8/1
77	0.7	SP	1.13	-0.18	2.2	1.54	67.33	2.5Y 6/1
77	3.3	SP	0.22	2.17	1.46	0.01	17.54	2.5Y 6/1
77	4.9	SP	0.99	0.01	2.24	1.67	47.6	2.5Y 6/1
77	5.9	ML	0.11	3.23	0.44	97.98	0	2.5Y 4/1
88	1.6	SP	0.18	2.49	0.85	1.12	10.49	2.5Y 8/1
88	6.6	SP	0.17	2.54	0.75	1.26	15.96	2.5Y 8/1
93	1	SP	0.15	2.70	0.52	0.49	6.3	2.5Y 8/1
93	4.3	SP	0.21	2.23	1.18	0.71	23.9	2.5Y 8/1
93	7.9	SP	0.17	2.52	0.98	0.65	12.83	2.5Y 8/1
95	2	SP	0.18	2.48	0.87	0.29	12.56	2.5Y 6/1
95	7.5	SP	0.42	1.27	2.09	0.67	40.31	2.5Y 5/1
96	1	SP	2.38	-1.25	1.64	0.59	79.27	2.5Y 7/1
96	1.6	SP	0.2	2.35	0.93	1.63	16.05	2.5Y 7/1
96	3	SP	0.15	2.78	0.51	0.67	7.09	2.5Y 7/1
96	5.1	SP	0.16	2.67	0.53	3.87	7.04	2.5Y 7/1
96	6.9	SP	0.3	1.72	1.48	2.16	27.15	2.5Y 5/1
96	7.4	SP-SM	0.31	1.68	1.63	8.91	20.96	2.5Y 7/1
Composite Sample			**0.29**	**1.78**	**1.79**	**1.3**	**26.8**	**2.5Y 8/1**

3.1.3 PASS-A-GRILLE

The Pass-a-Grille Channel has a design depth of -10 feet MLLW plus two (2) feet allowable overdepth and is 150 feet wide. The Pass-A-Grille Channel together with an approximately 150-foot wide area parallel to the channel was dredged last in 2004. The dredged material was used to nourish Pass-a-Grille beach directly north of the channel. The Pass-a-Grille Channel, the 2004 dredged template, and the vibracore boring locations are depicted in **Figure 3-4.** The boring locations for the borrow areas are listed in **Table 8**. Lab analysis for grain-size and visual shell was performed on selected samples. The results of the analysis are discussed below. Logs, grain size graphs and granularmetric reports are attached in Paragraph 7.2.

The Pass-a-Grille ebb shoal area, as shown in **Figure 3-4**, is directly derived from the FDEP Pass-a-Grille management plan (2019). The Ebb shoal has an excess growth of 50,000 cy annually which could also be utilized as a sand source *(Wang et al., 2018).* Furthermore, the entire Pass-a-Grille Ebb and Flood shoal complex is considered as an additional sand source for the Treasure Island / Long Key beaches.

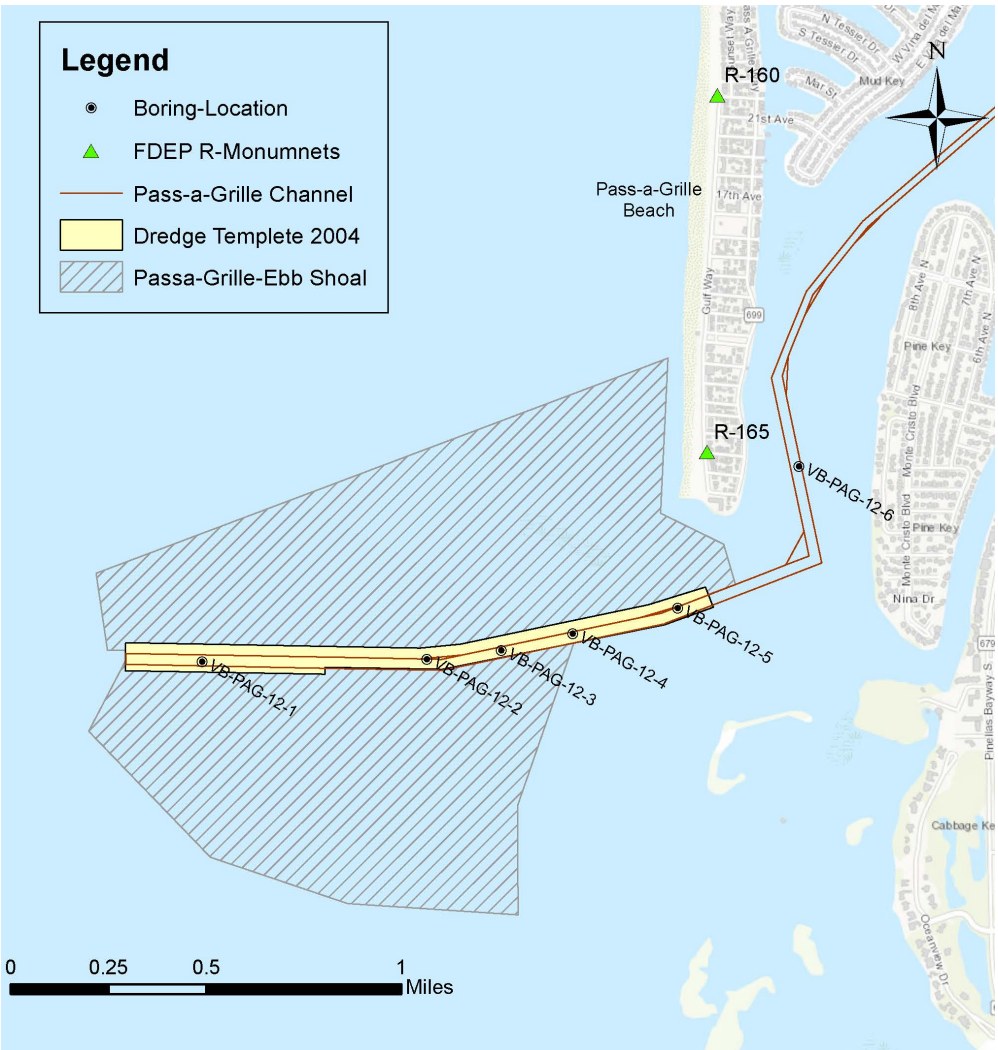


Figure 3-4. Pass-a-Grille with Vibracore Boring Locations.

Table 8: Pass-a-Grille Boring Locations

Designation	State Plane, FL-West, NAD83	
	X	Y
VB-PAG-12-1	410,582	1,215,980
VB-PAG-12-2	413,627	1,216,013
VB-PAG-12-3	414,633	1,216,135
VB-PAG-12-4	415,600	1,216,360
VB-PAG-12-5	417,016	1,216,708
VB-PAG-12-6	418,658	1,218,631

Granularmetric Parameters Pass-a-Grille Channel Area:

Laboratory testing and granularmetric analysis results of the samples within the dredge template are summarized in **Table 9**. An arithmetic composite sample was created using all samples. The granularmetric analysis results for the Pass-a-Grille channel area composite sample classifies the sediments as clean, poorly-graded, fine grained quartz sands with a mean grain size of 1.59 phi or 0.33 mm, with a standard deviation (sorting) of 1.92 phi. The percentage of fines passing the #230 sieve is 0.92%, and the average visual shell content is 26%. The predominant dry Munsell color of the sediments is 2.5Y 7/1.

Table 9: Grain Size Analysis Results for Pass-a-Grille Channel Sand Source

Boring Designation	Sample Elev. MLLW	USCS	Mean mm	Mean phi	PHI Sorting	Retained #4 Sieve %	Passing #230 Sieve %	Visual Shell %	Moist Munsell Color
VB-PAG-12-1	-11.40	SP	0.17	2.53	0.47	0.1	0.84	1	2.5Y 8/1
VB-PAG-12-2	-9.50	SP	0.14	2.82	0.29	0	1	0	2.5Y 8/1
VB-PAG-12-2	-11.50	SP	0.16	2.61	0.39	0	0.73	7	2.5Y 8/1
VB-PAG-12-3	-8.50	SP	0.24	2.04	1.08	1.23	0.84	17	2.5Y 7/1
VB-PAG-12-3	-10.50	SP	0.19	2.41	0.81	1.32	0.68	6	2.5Y 8/1
VB-PAG-12-4	-8.80	SH	1.15	-0.20	1.67	10.46	0.45	75	2.5Y 6/1
VB-PAG-12-4	-10.80	SP	0.33	1.62	1.75	5.56	1.12	28	2.5Y 6/1
VB-PAG-12-5	-9.90	SP	0.54	0.89	2.38	16.55	1.59	42	2.5Y 6/1
VB-PAG-12-5	-11.40	SP	1.17	-0.23	2.53	28.39	1.04	60	2.5Y 6/1
Composite Sample for Pass-a-Grille Channel			**0.33**	**1.59**	**1.92**	**9.09**	**0.92**	**26**	**2.5Y 7/1**

3.2 OFF-SHORE SAND SOURCE EGMONT SHOAL EAST

Egmont Shoal East sand source was utilized for the first time in 2014 for Treasure Island Beaches. The sand source provided beach compatible sand with no sediment compliance/compatibility issues, but the design was very shallow with dredge depths between -12 and -19 feet NAVD88. This caused not only difficulties for the dredgers to operate their barges, but also is an inefficient way of utilizing the sand source. Therefore the USACE collected twenty-nine (29) additional 20 foot long vibracores throughout the Egmont Shoal East sand source in 2015 and re-designed the sand source with deeper dredge cuts. The Egmont Shoal off-shore sand source vibracore boring locations are depicted in **Figure 3-5**. The boring locations for the borrow areas are listed in **Error! Reference source not found.**. Lab analysis for grain-size, visual shell, and carbonate content was performed on selected samples. The results of the analysis are discussed below. Logs, grain size graphs and granularmetric reports are attached in Paragraph 7.5.

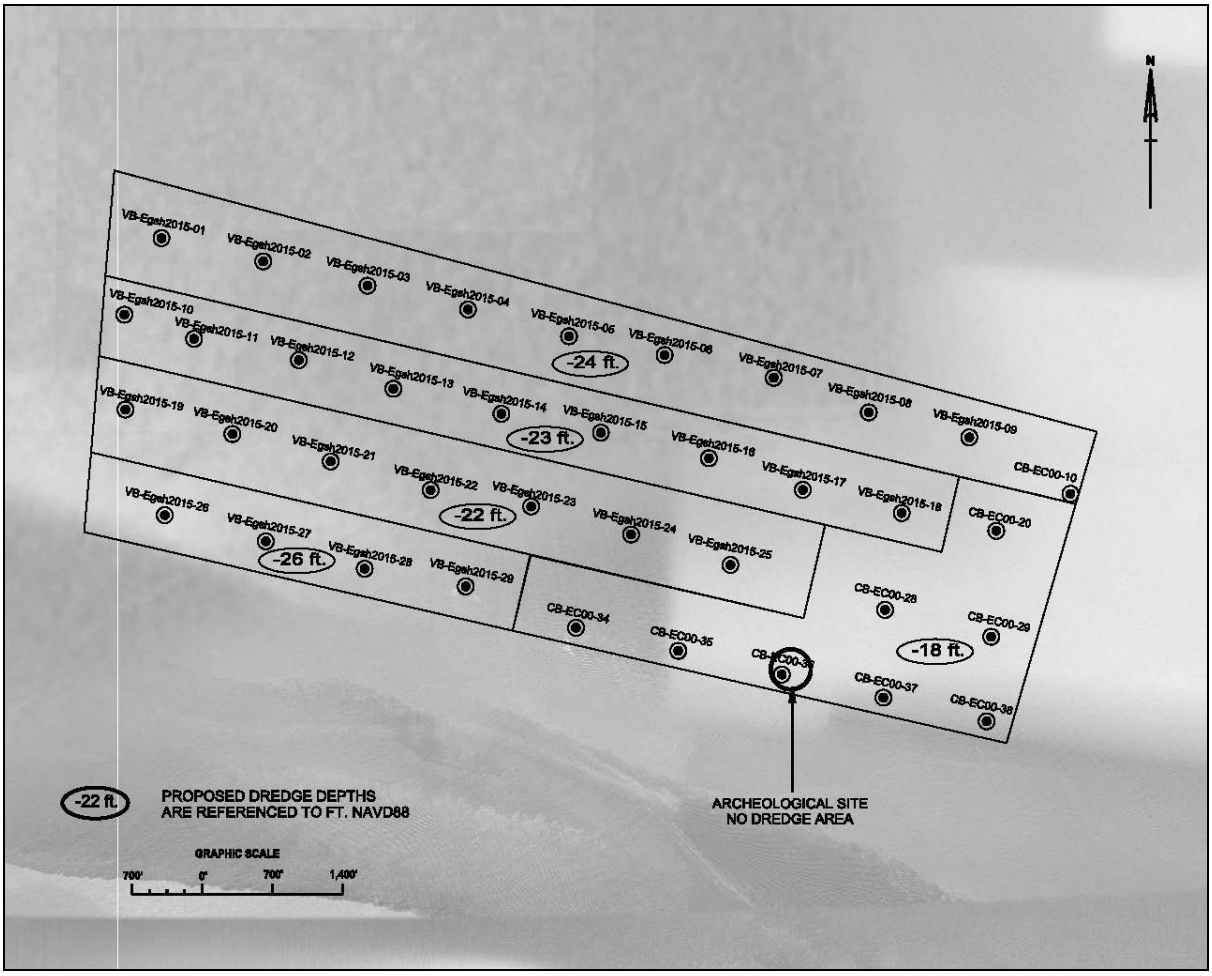


Figure 3-5. Egmont Shoal Vibracore Boring Locations.

Table 10: Egmont Shoal East Boring Locations

Designation	State Plane, FL-West, NAD83	
	X	Y
CB-EC00-10	413,070	1,194,540
CB-EC00-20	412,323	1,194,176
CB-EC00-28	411,214	1,193,408
CB-EC00-29	412,265	1,193,131
CB-EC00-34	408,109	1,193,215
CB-EC00-36	410,212	1,192,762
CB-EC00-37	411,201	1,192,519
CB-EC00-38A	412,225	1,192,282
VB-Egsh2015-01	403,981	1,197,077
VB-Egsh2015-02	405,016	1,196,858
VB-Egsh2015-03	406,056	1,196,616
VB-Egsh2015-04	407,058	1,196,379
VB-Egsh2015-05	408,066	1,196,112
VB-Egsh2015-06	409,020	1,195,925
VB-Egsh2015-07	410,109	1,195,700
VB-Egsh2015-08	411,057	1,195,355
VB-Egsh2015-09	412,059	1,195,106
VB-Egsh2015-10	403,631	1,196,328
VB-Egsh2015-11	404,325	1,196,087
VB-Egsh2015-12	405,371	1,195,875
VB-Egsh2015-13	406,314	1,195,590
VB-Egsh2015-14	407,392	1,195,341
VB-Egsh2015-15	408,384	1,195,153
VB-Egsh2015-16	409,462	1,194,898
VB-Egsh2015-17	410,399	1,194,583
VB-Egsh2015-18	411,385	1,194,353
VB-Egsh2015-19	403,641	1,195,383
VB-Egsh2015-20	404,708	1,195,139
VB-Egsh2015-21	405,689	1,194,867
VB-Egsh2015-22	406,685	1,194,582
VB-Egsh2015-23	407,688	1,194,418
VB-Egsh2015-24	408,685	1,194,139
VB-Egsh2015-25	409,676	1,193,836
VB-Egsh2015-26	404,034	1,194,332
VB-Egsh2015-27	405,041	1,194,071
VB-Egsh2015-28	406,027	1,193,798
VB-Egsh2015-29	407,036	1,193,622

Granularmetric Parameters Pass-a-Grille Channel Area:

Laboratory testing and granularmetric analysis results of the samples within the dredge template are summarized in **Table 11** and **Table 12.** A weighted arithmetic composite sample was calculated using all samples within the designed sand source. The composite sample was

classified as poorly-graded, fine-grained sand composed of quartz and shell fragments with a mean grain size of 0.22 mm, and a standard deviation (sorting) of 1.38 phi. The average percentage of fines passing the #230 sieve is 2.00 %. Material retained in the #4 sieve averages 1.99 %. The average visual shell percentage is 20.7 %, with a range from 0.6 % to 85 %. Eight samples were also analyzed for carbonate content (**Table 12**). The carbonate content in those samples ranged from 4.15% to 13.48%. The typical moist Munsell color is 2.5Y 7/1.

Table 11: Grain Size Analysis Results for Egmont Shoal East

Boring Designation	Sample Elev. NAVD88	USCS	Mean mm	Median phi	PHI Sorting	Retained #4 Sieve %	Passing #230 Sieve %	Visual Shell %	Moist Munsell Color
VB-Egsh2015-01	-12.8	SP	0.18	2.74	1.01	1.17	1.40	11.30	10Y 6/1
VB-Egsh2015-01	-15.3	SP	0.35	2.27	1.89	6.32	0.66	43.60	N 5/
VB-Egsh2015-01	-16.8	SP-SM	0.33	2.60	1.78	2.66	6.13	35.40	N 4/
VB-Egsh2015-01	-19.3	SP	0.76	0.29	1.61	3.89	1.81	67.80	N 5/
VB-Egsh2015-01	-23.8	SP	0.47	2.15	2.09	8.79	3.21	38.20	N 5/
VB-Egsh2015-02	-14.4	SP	0.15	2.80	0.65	0.05	3.50	6.70	2.5Y 8/1
VB-Egsh2015-02	-16.9	SP	0.47	1.62	1.76	2.87	0.59	50.00	2.5Y 8/1
VB-Egsh2015-02	-19.4	SP	0.15	2.77	0.47	0.00	1.77	7.30	2.5Y 5/2
VB-Egsh2015-02	-23.9	SP	0.56	1.65	2.03	7.37	1.76	51.90	2.5Y 7/2
VB-Egsh2015-03	-14.9	SP	0.14	2.82	0.44	0.00	2.15	14.53	2.5Y 7/2
VB-Egsh2015-03	-17.9	SP	0.13	2.95	0.41	0.01	2.04	9.70	2.5Y 7/2
VB-Egsh2015-03	-19.9	SP	0.14	2.86	0.48	0.09	1.50	8.00	2.5Y 7/2
VB-Egsh2015-03	-21.9	SP	0.42	2.56	2.15	8.50	3.90	47.00	10Y 5/1
VB-Egsh2015-03	-23.9	SP	0.37	2.56	1.95	5.39	3.34	42.30	10Y 5/1
VB-Egsh2015-04	-13.6	SP	0.17	2.75	0.81	0.45	1.53	15.20	2.5Y 6/2
VB-Egsh2015-04	-15.6	SP	0.22	2.79	1.62	2.42	3.88	23.50	2.5Y 5/1
VB-Egsh2015-04	-17.6	SP	0.19	2.48	0.70	0.35	0.94	13.80	2.5Y 6/2
VB-Egsh2015-04	-21.1	SP	0.20	2.46	1.00	1.92	2.31	17.00	2.5Y 5/1
VB-Egsh2015-05	-14.7	SP-SM	0.21	2.77	1.38	0.72	7.67	19.30	2.5Y 6/2
VB-Egsh2015-05	-17.2	SP	0.40	2.28	1.80	3.04	1.70	43.20	2.5Y 5/1
VB-Egsh2015-05	-19.7	SP	0.22	2.58	1.23	0.57	1.80	25.10	2.5Y 7/2
VB-Egsh2015-05	-22.2	SP	0.90		1.48	1.19	0.66	81.60	2.5Y 5/1
VB-Egsh2015-06	-13.4	SP	0.19	2.72	1.29	2.40	1.21	16.60	2.5Y 8/1
VB-Egsh2015-06	-16.4	SP	0.42	2.32	2.13	10.46	2.08	42.20	2.5Y 8/1
VB-Egsh2015-06	-19.4	SP	0.22	2.64	1.34	1.58	1.20	20.90	2.5Y 7/1
VB-Egsh2015-06	-22.4	SP	0.16	2.72	0.34	0.00	2.37	6.90	2.5Y 8/1
VB-Egsh2015-07	-12.8	SP	0.18	2.73	0.97	0.47	0.51	13.00	2.5Y 7/2
VB-Egsh2015-07	-15.8	SP	0.35	2.17	1.47	1.27	1.33	43.00	2.5Y 6/2
VB-Egsh2015-07	-18.8	SP	0.28	2.28	1.31	1.96	2.24	24.10	2.5Y 7/2
VB-Egsh2015-07	-21.8	SP	0.22	2.39	0.92	0.29	0.93	12.20	2.5Y 7/2
VB-Egsh2015-08	-11.8	SP	0.18	2.69	1.06	1.54	1.20	8.50	2.5Y 8/1
VB-Egsh2015-08	-14.8	SP	0.14	2.83	0.43	0.00	4.00	9.20	2.5Y 6/1
VB-Egsh2015-08	-17.8	SP	0.20	2.82	1.58	6.91	2.66	12.80	2.5Y 6/1
VB-Egsh2015-08	-20.8	SP	0.14	2.81	0.36	0.04	3.33	5.00	2.5Y 6/1
VB-Egsh2015-08	-23.8	SP	0.17	2.68	0.59	0.00	1.72	15.40	2.5Y 6/1
VB-Egsh2015-09	-12.4	SP	0.18	2.68	0.81	0.00	1.03	7.60	2.5Y 6/1

Table 11: Grain Size Analysis Results for Egmont Shoal East

Boring Designation	Sample Elev. NAVD88	USCS	Mean mm	Median phi	PHI Sorting	Retained #4 Sieve %	Passing #230 Sieve %	Visual Shell %	Moist Munsell Color
VB-Egsh2015-09	-15.4	SP	0.16	2.85	0.87	0.41	2.79	9.00	2.5Y 8/1
VB-Egsh2015-09	-18.4	SP	0.22	2.71	1.48	2.84	1.55	14.30	2.5Y 8/1
VB-Egsh2015-09	-21.4	SP	0.29	2.48	1.54	2.69	1.07	31.90	2.5Y 8/1
VB-Egsh2015-10	-12.9	SP	0.15	2.77	0.29	0.00	1.14	2.60	2.5Y 8/1
VB-Egsh2015-10	-15.9	SP	0.15	2.78	0.37	0.00	1.21	9.80	2.5Y 8/1
VB-Egsh2015-10	-18.9	SP-SM	0.33	2.30	1.56	0.83	5.62	51.80	2.5Y 6/1
VB-Egsh2015-10	-21.4	SP	0.73	0.38	1.70	5.18	2.28	73.60	2.5Y 6/1
VB-Egsh2015-10	-23.4	SM	0.26	2.61	1.60	5.32	14.32	23.00	2.5Y 6/1
VB-Egsh2015-11	-10.2	SP	0.20	2.67	1.18	1.21	0.32	14.50	2.5Y 7/1
VB-Egsh2015-11	-14.2	SP	0.14	2.80	0.29	0.03	1.02	0.60	2.5Y 8/1
VB-Egsh2015-11	-18.2	SP	0.19	2.76	1.24	1.09	2.27	22.10	N 5/
VB-Egsh2015-11	-19.7	SP-SM	0.29	2.60	1.60	1.00	5.73	38.40	10Y 5/1
VB-Egsh2015-11	-21.7	SP	0.70	0.49	1.89	7.18	1.57	63.70	10Y 5/1
VB-Egsh2015-12	-11.2	SP	0.24	2.64	1.54	2.69	0.50	20.30	2.5Y 7/1
VB-Egsh2015-12	-14.2	SP	0.15	2.73	0.31	0.00	1.22	1.20	2.5Y 8/1
VB-Egsh2015-12	-17.2	SP	0.15	2.74	0.33	0.00	0.89	2.10	2.5Y 8/1
VB-Egsh2015-12	-20.7	SP	0.20	2.66	0.98	0.32	1.77	29.00	2.5Y 6/1
VB-Egsh2015-12	-22.7	SP-SM	0.37	2.54	2.01	4.15	5.86	48.50	2.5Y 6/1
VB-Egsh2015-13	-13.7	SP	0.15	2.79	0.42	0.01	1.14	6.70	2.5Y 8/1
VB-Egsh2015-13	-16.7	SP	0.14	2.85	0.42	0.00	2.28	8.00	2.5Y 8/1
VB-Egsh2015-13	-19.7	SP	0.14	2.89	0.49	0.00	1.34	8.30	2.5Y 8/1
VB-Egsh2015-13	-22.7	SP	0.14	2.84	0.35	0.00	1.11	4.00	2.5Y 8/1
VB-Egsh2015-14	-13.8	SP	0.26	2.82	2.08	8.58	1.85	26.90	2.5Y 8/1
VB-Egsh2015-14	-16.8	SP-SM	0.13	3.07	0.48	0.00	5.32	7.00	2.5Y 8/1
VB-Egsh2015-14	-19.8	SP	0.14	2.83	0.40	0.00	1.58	6.80	2.5Y 8/1
VB-Egsh2015-14	-22.8	SP-SM	0.11	3.34	0.76	0.06	4.46	14.30	N 7/
VB-Egsh2015-15	-14.5	SP	0.19	2.82	1.61	5.66	1.62	26.60	2.5Y 6/2
VB-Egsh2015-15	-16	SP	0.24	2.78	1.87	6.55	4.26	30.00	2.5Y 7/2
VB-Egsh2015-15	-17	SP	0.31	2.55	1.80	5.65	2.72	30.50	2.5Y 7/2
VB-Egsh2015-15	-17.8	SP	0.35	2.37	1.75	4.00	1.68	45.10	2.5Y 7/1
VB-Egsh2015-15	-20.5	SP	0.33	2.14	1.43	2.92	0.87	39.80	2.5Y 7/1
VB-Egsh2015-16	-13.8	SP	0.16	2.76	0.82	0.21	1.47	11.00	2.5Y 7/1
VB-Egsh2015-16	-16.8	SP	0.32	2.52	1.67	1.35	1.67	35.70	2.5Y 7/1
VB-Egsh2015-16	-19.8	SP	0.53	1.11	1.72	3.92	1.81	62.52	2.5Y 6/1
VB-Egsh2015-16	-22.8	SP	1.31		1.60	9.78	1.37	85.29	2.5Y 6/1
VB-Egsh2015-17	-11.5	SP	0.29	2.59	1.61	2.36	0.93	34.13	2.5Y 7/1
VB-Egsh2015-17	-14.5	SW	1.48		1.63	13.10	1.85	84.20	2.5Y 7/1
VB-Egsh2015-17	-17.5	SP	0.38	2.52	1.99	5.84	2.36	38.90	2.5Y 7/1
VB-Egsh2015-17	-20.5	SP	0.38	2.51	2.09	10.37	2.02	33.60	2.5Y 7/1
VB-Egsh2015-18	-12.8	SP	0.57	2.01	2.17	9.67	1.43	50.40	2.5Y 5/1
VB-Egsh2015-18	-15.8	SP	0.45	2.49	2.23	12.78	2.67	39.40	2.5Y 6/1
VB-Egsh2015-18	-18.8	SP	0.33	2.69	2.12	8.65	2.28	32.10	2.5Y 6/1
VB-Egsh2015-18	-21.8	SP-SM	0.15	2.84	0.74	0.61	6.57	11.34	2.5Y 6/1

Table 11: Grain Size Analysis Results for Egmont Shoal East

Boring Designation	Sample Elev. NAVD88	USCS	Mean mm	Median phi	PHI Sorting	Retained #4 Sieve %	Passing #230 Sieve %	Visual Shell %	Moist Munsell Color
VB-Egsh2015-19	-13.4	SP	0.15	2.78	0.45	0.00	1.44	6.55	2.5Y 8/1
VB-Egsh2015-19	-16.4	SP	0.17	2.72	0.76	0.50	0.97	11.01	2.5Y 8/1
VB-Egsh2015-19	-19.9	SP	0.49	1.69	1.88	6.23	3.90	51.91	5GY 6/1
VB-Egsh2015-19	-21.4	SP	0.43	1.92	1.68	2.52	2.30	57.00	N 6/
VB-Egsh2015-20	-11.2	SP	0.16	2.75	0.65	0.58	0.79	7.30	2.5Y 8/1
VB-Egsh2015-20	-14.2	SP	0.16	2.69	0.40	0.01	1.09	9.00	2.5Y 8/1
VB-Egsh2015-20	-17.2	SP	0.16	2.71	0.41	0.00	1.34	5.83	2.5Y 8/1
VB-Egsh2015-20	-20.2	SP-SM	0.18	2.63	0.70	0.00	5.06	26.34	2.5Y 7/1
VB-Egsh2015-21	-10.8	SP	0.15	2.76	0.56	0.35	1.59	11.31	2.5Y 8/1
VB-Egsh2015-21	-13.8	SP	0.15	2.73	0.35	0.01	0.92	8.06	2.5Y 8/1
VB-Egsh2015-21	-16.8	SP	0.15	2.74	0.34	0.02	1.06	6.50	2.5Y 8/1
VB-Egsh2015-21	-19.8	SP	0.16	2.74	0.63	0.42	1.52	8.80	2.5Y 8/1
VB-Egsh2015-22	-11.1	SP	0.16	2.69	0.44	0.00	1.20	3.89	2.5Y 8/1
VB-Egsh2015-22	-14.1	SP	0.17	2.62	0.59	0.08	1.18	10.97	2.5Y 8/1
VB-Egsh2015-22	-17.3	SP	0.19	2.53	0.68	0.00	1.19	18.80	2.5Y 7/1
VB-Egsh2015-22	-20.6	SP	0.16	2.71	0.36	0.00	4.27	2.90	2.5Y 8/1
VB-Egsh2015-23	-12.4	SP	0.17	2.71	0.78	0.53	0.61	11.10	2.5Y 7/2
VB-Egsh2015-23	-15.4	SP	0.16	2.78	0.82	0.36	1.54	12.69	2.5Y 7/1
VB-Egsh2015-23	-18.4	SP	0.16	2.81	0.98	0.51	1.42	10.08	2.5Y 7/1
VB-Egsh2015-23	-21.4	SP	0.15	2.78	0.40	0.07	1.33	9.72	2.5Y 7/1
VB-Egsh2015-24	-12.5	SP	0.16	2.78	0.78	0.35	1.30	13.50	2.5Y 7/1
VB-Egsh2015-24	-16.5	SP	0.17	2.79	0.95	0.08	1.25	20.00	2.5Y 7/1
VB-Egsh2015-24	-19.5	SP	0.14	2.86	0.66	0.62	1.70	8.75	2.5Y 6/2
VB-Egsh2015-24	-22	SP	0.14	2.83	0.39	0.00	1.17	4.95	2.5Y 6/2
VB-Egsh2015-25	-12.6	SP	0.22	2.73	1.26	3.48	0.28	27.90	2.5Y 8/1
VB-Egsh2015-25	-15.6	SP	0.15	2.78	0.51	0.12	0.08	11.40	2.5Y 8/1
VB-Egsh2015-25	-18.6	SP	0.14	2.82	0.49	0.00	1.15	9.00	2.5Y 8/1
VB-Egsh2015-25	-21.6	SP	0.17	2.72	0.97	0.95	1.37	15.64	2.5Y 8/1
VB-Egsh2015-26	-15.3	SP	0.20	2.55	0.99	1.34	0.25	17.07	2.5Y 8/1
VB-Egsh2015-26	-18.3	SP	0.17	2.67	0.53	0.33	2.00	6.30	2.5Y 8/1
VB-Egsh2015-26	-21.3	SP	0.20	2.51	0.80	0.61	1.02	14.50	2.5Y 7/1
VB-Egsh2015-26	-24.3	SP	0.16	2.72	0.34	0.00	0.73	8.00	2.5Y 7/1
VB-Egsh2015-26	-25.8	SP	0.43	2.19	1.92	7.00	3.07	50.85	10Y 6/1
VB-Egsh2015-27	-15.3	SP	0.19	2.45	0.64	0.06	0.59	17.90	2.5Y 8/1
VB-Egsh2015-27	-18.3	SP	0.20	2.43	0.80	0.89	0.36	22.08	2.5Y 8/1
VB-Egsh2015-27	-21.3	SP	0.16	2.72	0.41	0.11	1.16	11.30	2.5Y 8/1
VB-Egsh2015-27	-24.3	SP	0.16	2.71	0.40	0.05	0.54	4.30	2.5Y 8/1
VB-Egsh2015-28	-16.5	SP	0.18	2.52	0.49	0.01	0.21	15.27	2.5Y 8/1
VB-Egsh2015-28	-19	SM	0.18	2.74	0.92	0.80	12.15	15.60	2.5Y 6/2
VB-Egsh2015-28	-22	SP-SM	0.17	2.75	0.80	0.59	5.64	13.59	2.5Y 8/1
VB-Egsh2015-28	-25	SP	0.18	2.72	1.00	0.70	4.40	13.70	2.5Y 8/1
VB-Egsh2015-29	-15.9	SP	0.17	2.59	0.48	0.07	0.68	10.10	2.5Y 8/1
VB-Egsh2015-29	-18.9	SP	0.16	2.65	0.39	0.06	0.83	3.87	2.5Y 8/1

Table 11: Grain Size Analysis Results for Egmont Shoal East

Boring Designation	Sample Elev. NAVD88	USCS	Mean mm	Median phi	PHI Sorting	Retained #4 Sieve %	Passing #230 Sieve %	Visual Shell %	Moist Munsell Color
VB-Egsh2015-29	-21.9	SP	0.40	2.07	1.86	8.68	2.57	39.18	2.5Y 6/1
VB-Egsh2015-29	-24.9	SP	0.17	2.72	0.69	0.18	1.17	9.80	2.5Y 7/1
CB-EC00-10	-10	SP	0.19	2.69	1.16	2.70	1.10	n/a	n/a
CB-EC00-10	-16.7	SP	0.26	2.71	1.22	10.00	1.90	n/a	n/a
CB-EC00-20	-10.3	SP	0.17	2.70	0.73	0.30	0.80	n/a	n/a
CB-EC00-20	-13.3	SP	0.15	2.81	0.54	1.00	4.50	n/a	n/a
CB-EC00-28	-9.3	SP	0.20	2.76	1.00	3.00	2.10	n/a	n/a
CB-EC00-28	-13	SP-SM	0.19	2.81	1.27	1.40	6.70	n/a	n/a
CB-EC00-29	-10.3	SP-SM	0.42	2.16	1.66	2.90	6.40	n/a	n/a
CB-EC00-29	-18	SP-SM	0.19	2.80	1.23	0.50	7.30	n/a	n/a
CB-EC00-34	-8.9	SP	0.32	2.29	1.38	1.20	1.10	n/a	n/a
CB-EC00-34	-12.9	SP	0.17	2.71	0.75	0.50	0.90	n/a	n/a
CB-EC00-36	-6.1	SP	0.56	0.86	1.61	3.70	1.20	n/a	n/a
CB-EC00-36	-13.8	SP	0.20	2.57	0.90	0.30	0.70	n/a	n/a
CB-EC00-37	-6.3	SP	0.79	0.03	1.68	6.90	0.40	n/a	n/a
CB-EC00-37	-13.3	SP	0.23	2.41	0.93	1.20	0.70	n/a	n/a
CB-EC00-38A	-9.3	SP	0.40	2.32	1.69	3.60	1.10	n/a	n/a
CB-EC00-38A	-18.3	SP	0.21	2.63	1.02	2.30	0.80	n/a	n/a
Weighted Composite for Egmont Shoal Sand Source			**0.22**	**2.66**	**1.38**	**1.99**	**2.00**	**20.7**	**2.5Y 7/1**

Table 12: Carbonate Content Analysis, Egmont Shoal East

Boring Designation	Sample Elevation NAVD88	Visual Percent Shell	Percent Carbonate
VB-Egsh2015-27	-24.3	4.3	4.15
VB-Egsh2015-25	-18.6	9	5.62
VB-Egsh2015-16	-13.8	11	7.31
VB-Egsh2015-22	-14.1	10.9	7.52
VB-Egsh2015-13	-19.7	8.3	9.05
VB-Egsh2015-09	-15.4	9	12.17
VB-Egsh2015-06	-13.4	16.6	13.48

4 COMPATIBILITY OF THE SAND SOURCES WITH THE BEACHES

The compatibility of the Treasure Island sand key beaches with the sand sources is summarized in the paragraphs below.

4.1 SUMMARY OF BEACH GRAIN-SIZE ANALYSIS

The beaches along Treasure Island and Long Key were characterized through a comprehensive sampling program as presented in Paragraph 2, Native Beach. An arithmetic beach composite sample was calculated for each of the seven beaches located within the Treasure Island – Long Key Segment and one composite including all beaches. The composite graphs for the Treasure Island beaches are shown on **Figure 4-1**, and for the Long Key beaches on **Figure 4-2**. The granularmetric parameters are summarized in **Table 13** below.

All composite samples classify the material on the beach as poorly-graded, fine-grained quartz sand with a mean grain size of 0.20 to 0.32 mm, and a standard deviation of 1.32 to 175 phi. The average percentage of fines passing the #230 sieve ranges from0.8 to 1.3%. The average carbonate content is 24 %, with a range from 8 through 29. The typical moist Munsell Color Value is 2.5Y 8/1.

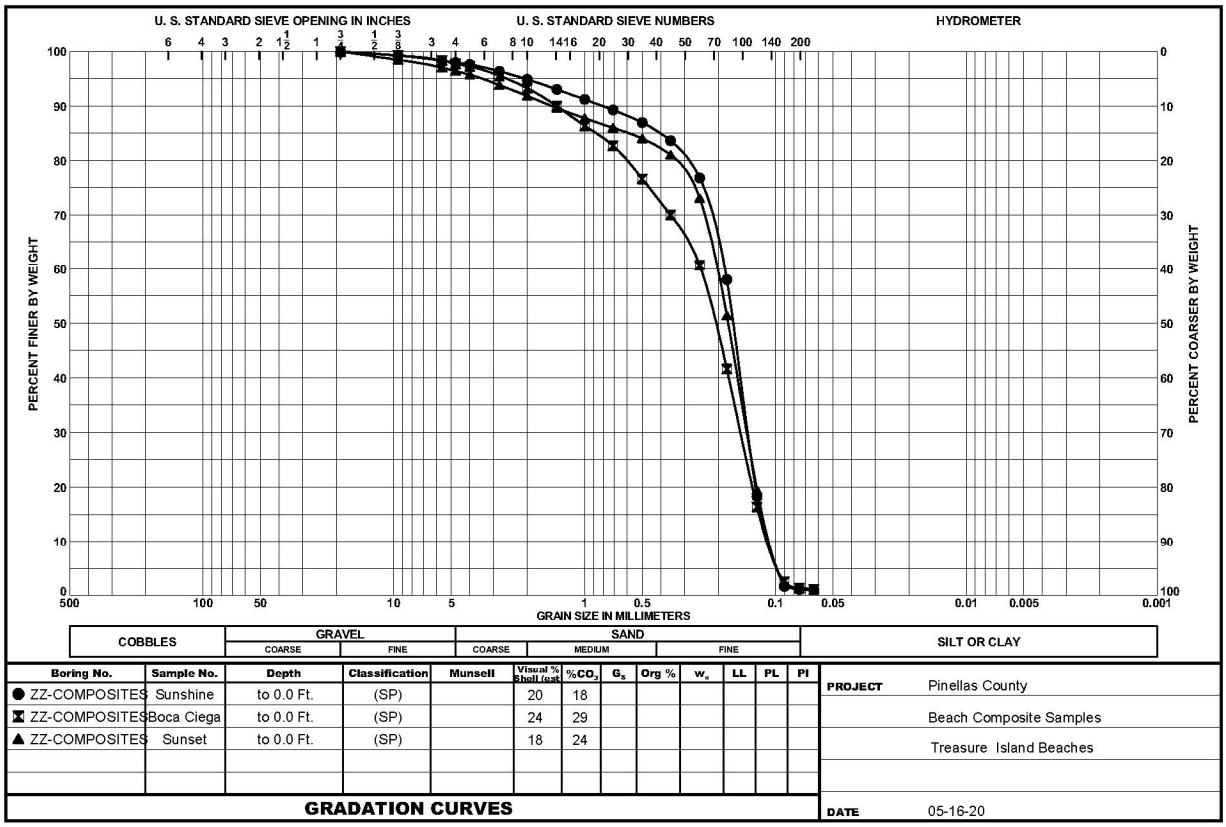


Figure 4-1. Gradation Curves Treasure Island Beaches Composite Samples

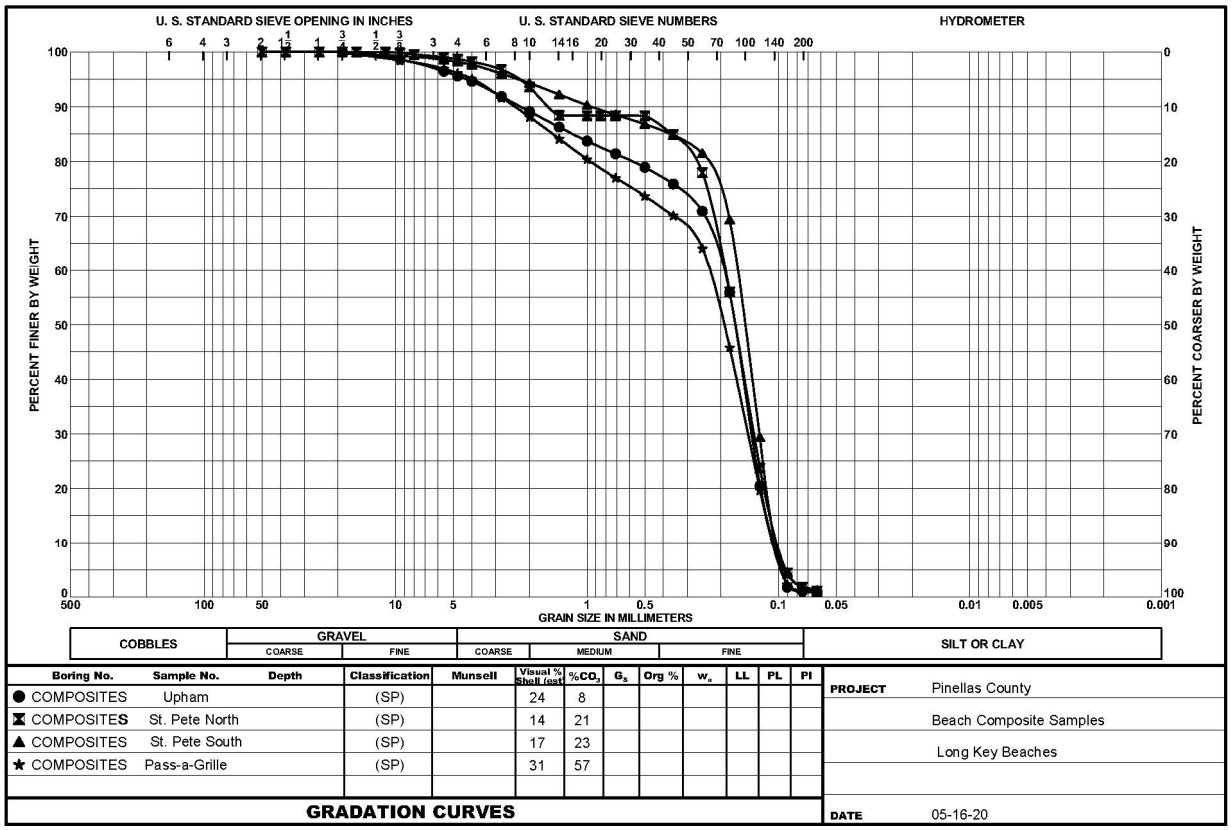


Figure 4-2. Gradation Curves Long Key Beaches Composite Samples

Table 13: Grain Size Summary Beaches

Beach Composite	Sample R-monuments	Mean (mm)	Sorting (phi)	Silt %	CaCo3 %	Munsell Color
Sunshine Beach	R-128 and R-131	0.23	1.32	1.0	18	2.5Y 8/1
Boca Ciega Beach	R-135	0.29	1.49	1.2	29	2.5Y 8/1
Sunset Beach	R-139	0.25	1.56	1.1	24	2.5Y 8/1
Upham Beach	R-144 and 146	0.28	1.73	1.0	8	2.5Y 8/1
North St. Pete Beach	R-150 and R-154	0.22	1.39	1.1	21	2.5Y 8/1
South St. Pete Beach	R-158	0.20	1.41	1.3	23	2.5Y 8/1
Pass-a-Grille Beach	R-163	0.32	1.75	0.8	57	2.5Y 8/1
Treasure Island Long Key Beaches		**0.28**	**1.16**	**1.0**	**24**	**2.5Y 8/1**

4.2 SUMMARY OF SAND SOURCE GRAIN-SIZE ANALYSIS AND BEACH COMPATIBILITY

The sand sources for Treasure Island – Long Key Beaches were characterized through comprehensive geotechnical investigations as presented in Paragraph 3. The composite gradation graphs of the navigation inlet sand sources together with the composite of Treasure Island – Long Key beaches are shown on **Figure 4-3**. The composite gradation graphs of the off-shore borrow area Egmont Shoal East together with the composite Treasure Island – Long Key beaches are shown on **Figure 4-4**. The arithmetic composite sample granularmetric parameters are summarized in **Table 14**.

The sand source sediments are classified as moderately well to poorly sorted, fine-grained quartz sand with a mean grain size of 0.16 to 0.33 mm, and a standard deviation of 0.56 to 1.92 phi. The average percentage of fines passing the #230 sieve ranges from 0.9 to 2.0%. The carbonate content ranges from 9.6 to 26.7 %. The typical moist Munsell Color Value is 2.5Y 7/1 and 10Y 8/1.

The sand source sediments are compatible with the existing Treasure Island – Long Key beaches. The material of the existing beach and of the sand sources are very similar and composed of poorly graded fine-grained sand consisting of quartz and shell fragments with a grain size of 0.16 and 0.33mm, respectively.

All sand sources meet the requirements of the Florida Administrative Code 62B-41.007(2) and were utilized and permitted as sand sources for Treasure Island Long Key beaches before.

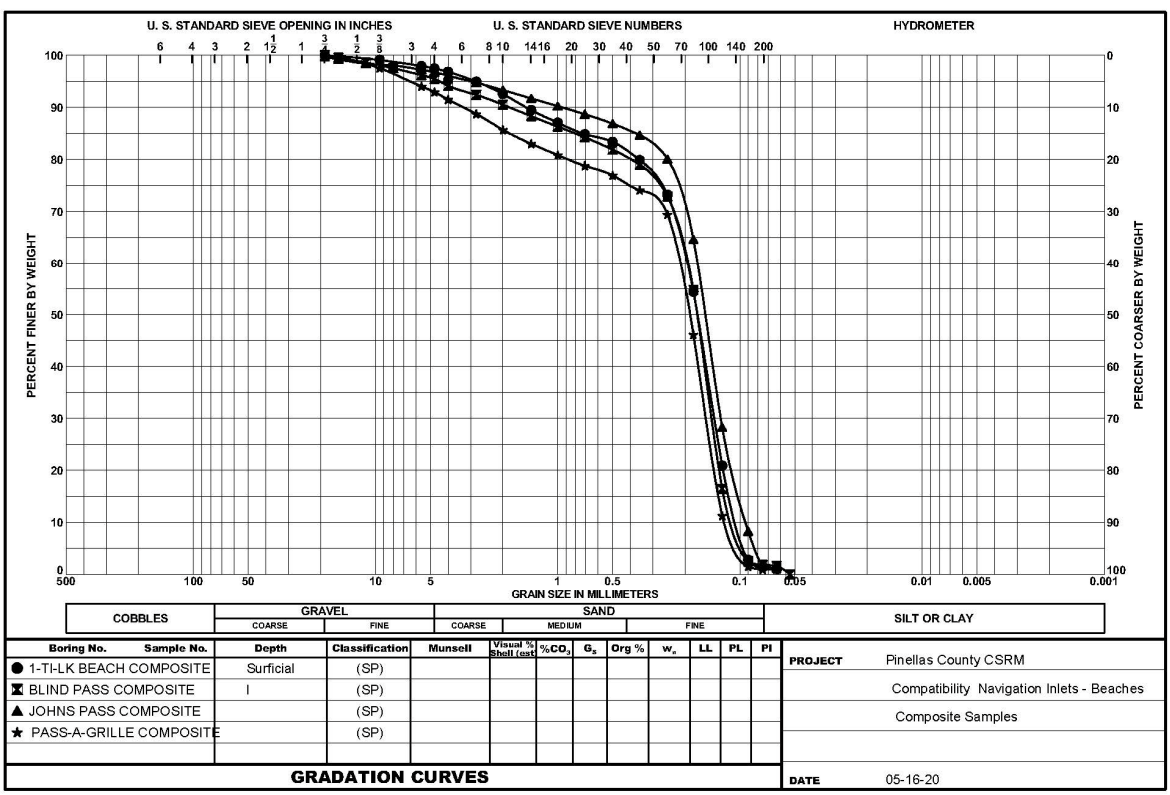


Figure 4-3. Composite Samples Gradation Curves of TI-LK Beaches and Inlet Sand Sources

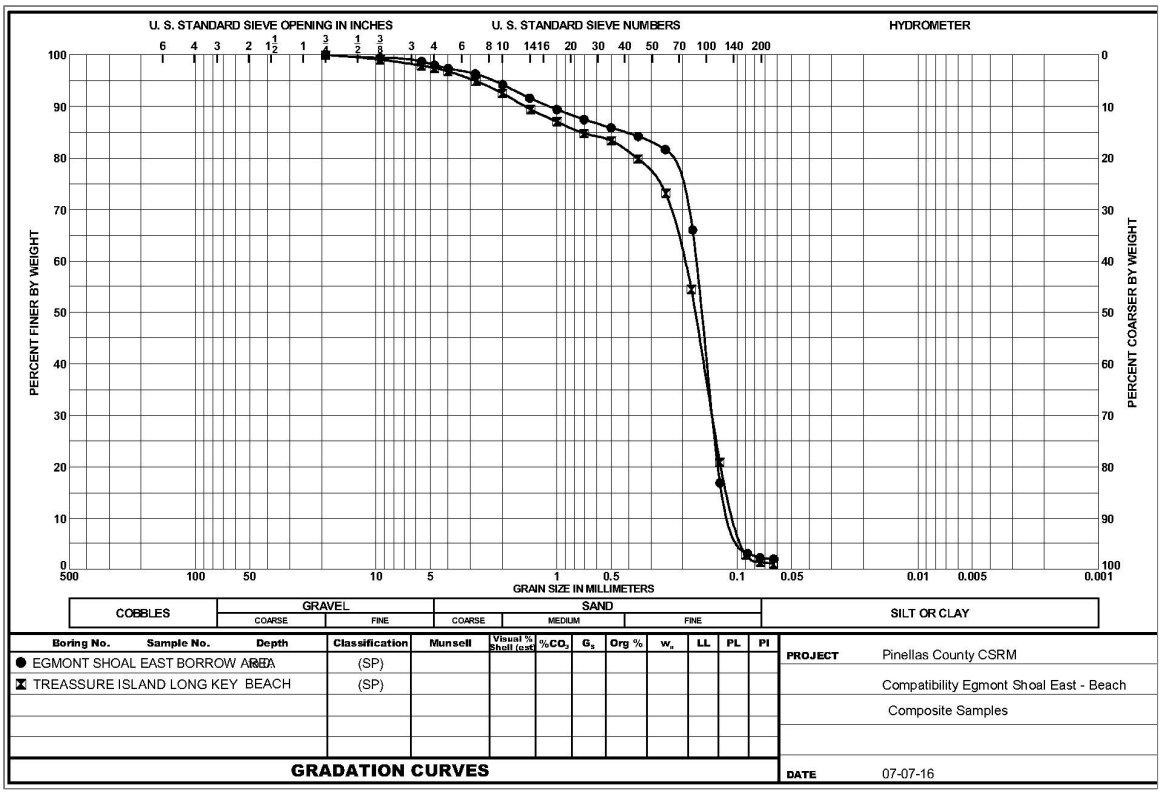


Figure 4-4. Composite Samples Gradation Curves of TI-LK Beaches and Egmont Shoal East

Table 14: Grain Size Summary Sand Sources

Composite	Mean (mm)	Sorting (phi)	Silt %	CaCo3 %	Munsell Color
John's Pass Channel	0.24	0.73	0.9	17.5	10Y 8/1
Johns Pass Ebb Shoal BA	0.16	0.56	1.7	9.6	2.5Y 8/1
Blind Pass Channel	0.29	1.79	1.3	26.8	2.5Y 8/1
Pass-a-Grille Channel	0.33	1.92	0.9	26.0	2.5Y 7/1
Egmont Shoal	0.22	1.38	2.0	20.7	2.5Y 7/1

5 VOLUMES

The navigation inlet sand sources are renewable sand sources. The three navigation inlets Johns Pass, Blind Pass, and Pass-a-Grille located within the project footprint were used in the past to nourish Treasure Island - Long Key beaches. The inlet management plans for the inlets included infill rates or recharge cycles and volumes for each of the dredge templates described in Paragraph 3, Sand Sources. The volumes and recharge cycles for all sand sources are summarized in **Table 15** below. The navigation inlet sand sources can provide a total of 5,750,000 cy of sand over the 50-year life of the project.

The off-shore borrow area Egmont Shoal East, described in Paragraph 3.2, is a permitted sand source for all federally sponsored Pinellas County beaches and has a total volume of 15,000,000 cy.

Additionally, the never-dredged Pass-a-Grille ebb shoal has an excess growth of 50,000 cy annually which could also be utilized as sand source *(Wang et al., 2018)* and provide 2,500,000 cy over the 50-year life of the project.

Table 15: Estimated Sand Volume Inlet Sand Sources

Sand Source Options	Volume (cuyd)	Recharge Cycle (years)	50-year volume (cuyd)
Johns Pass Navigation Channel, Channel Side Borrow Area, and Ebb Shoal Borrow Area	152,000	6	1,333,333
Blind Pass Navigation Channel Borrow Area	200,000	6	1,750,000
Pass-a-Grille Navigation Channel with Marginal Linear Shoals (Dredge Template 2004)	212,000	4	2,650,000
Total Sand Source Volume for 50-years			**5,730,000**

6 REFERENCES

Florida Department of Environmental Protection, 2018. John's Pass Inlet Management Plan, Division of Water Resource Management, 255 p.

Florida Department of Environmental Protection, 2017. Blind Pass Inlet Management Plan, Division of Water Resource Management, 255 p.

Florida Department of Environmental Protection, 2019. Pass-a-Grille Inlet Management Plan, Division of Water Resource Management, 255 p.

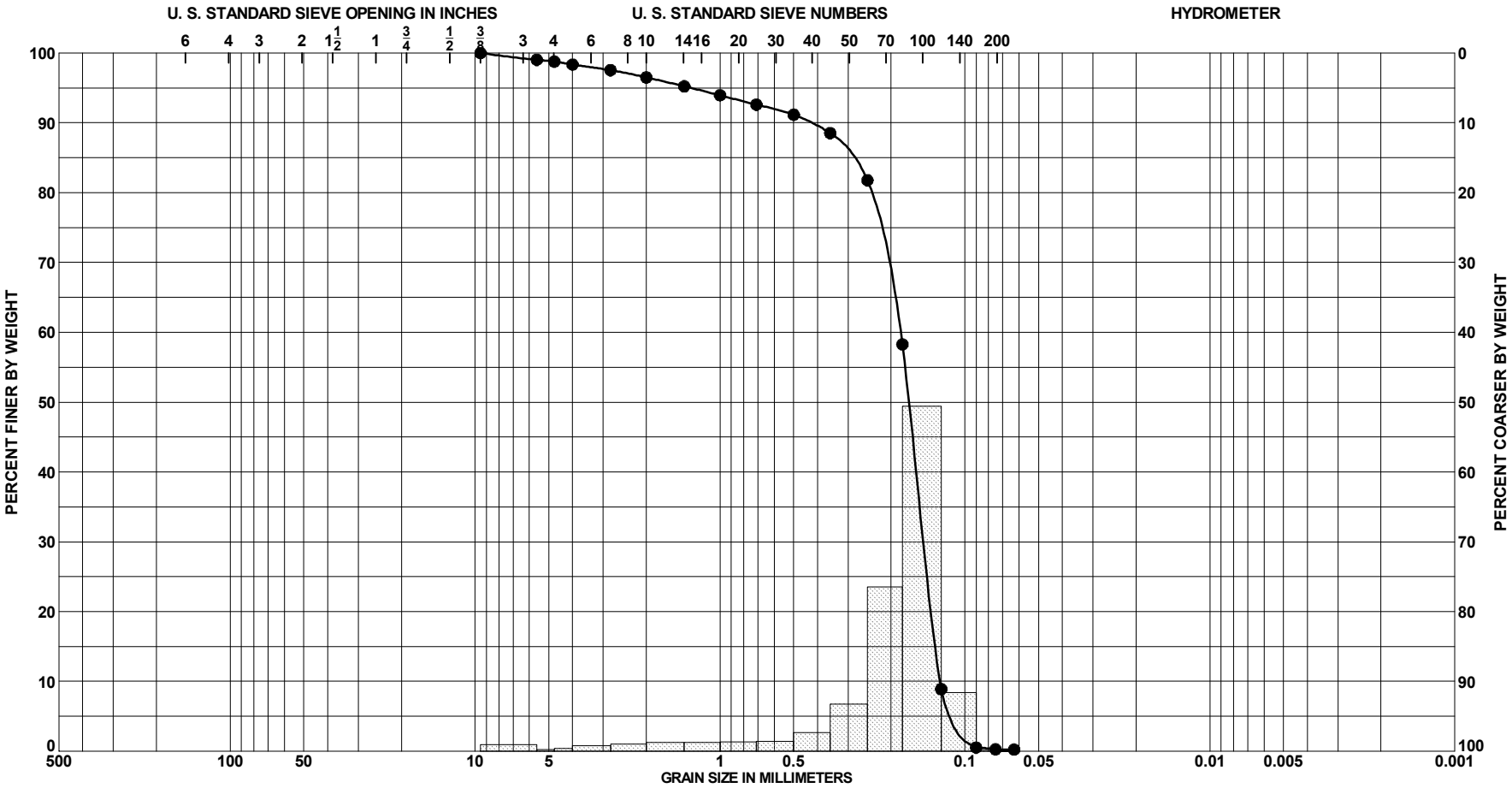
Florida Department of Environmental Protection, 2018. Strategic Beach Management Plan, Division of Water Resource Management, 365 p.

Wang, P., Cheng, J., Westfall, Z., and Vallee, M., 2018. Inlet Management Study for Pass-a-Grille and Bunces Pass, Pinellas County, Florida, University of South Florida, Coastal Research Laboratory, 313 p.

7 LOGS AND LAB DATA SHEETS

7.1 TREASURE ISLAND – LONG KEY BEACH SAMPLING DATA

- Gradation Graphs
- Granularmetric Reports



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● Dune	to 0.0 Ft.	SAND, poorly graded, mostly	2.5Y 8/1	20 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium-grained sand-sized								
		shell, white (SP)								

PROJECT Pinellas County SPP Beach Sampling

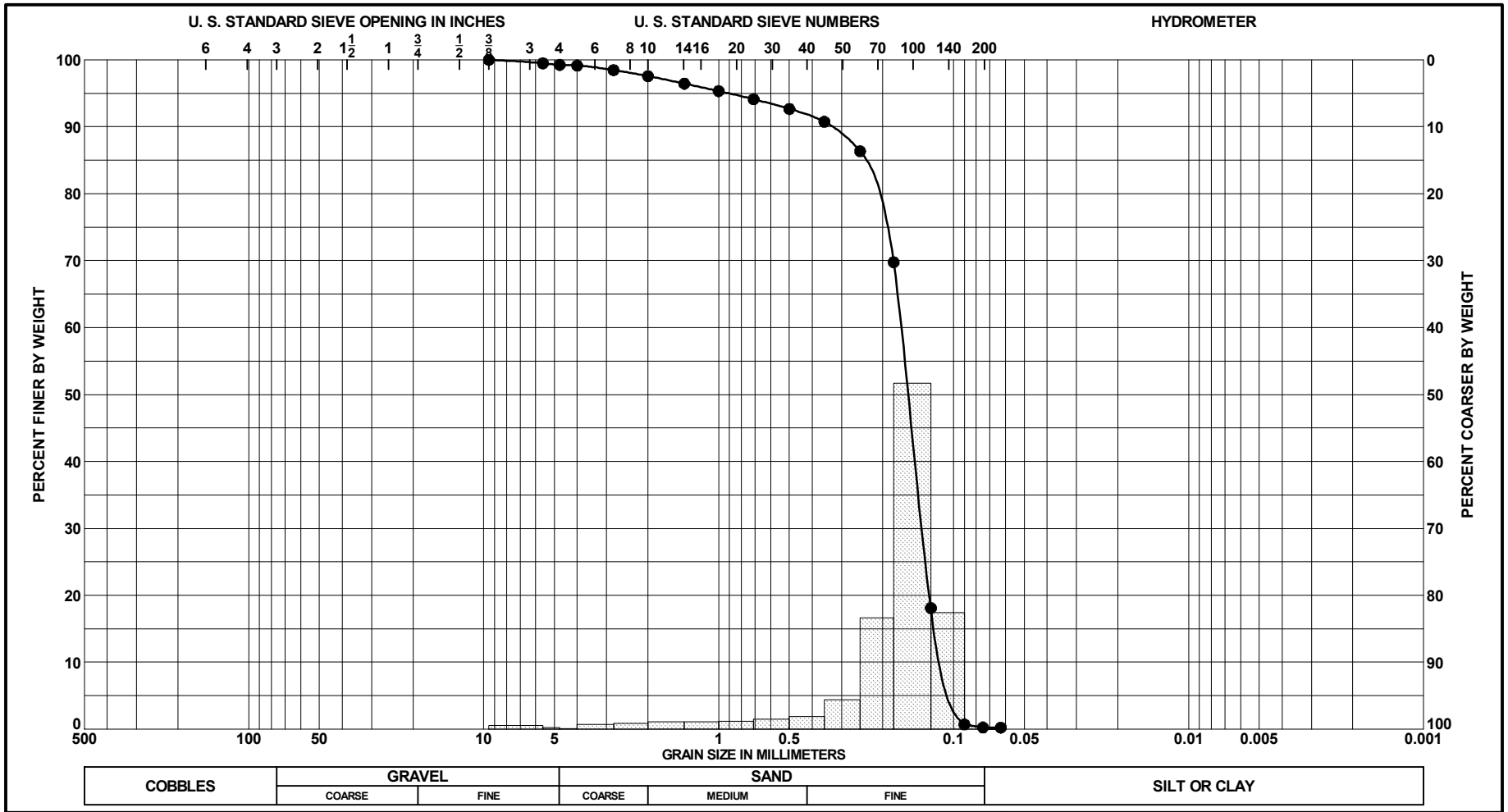
BORING NO. R-128

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● Berm	to 0.0 Ft.	SAND, poorly graded, mostly	2.5Y 8/1	14/14 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium-grained sand-sized								
		shell, white (SP)								

PROJECT Pinellas County SPP Beach Sampling

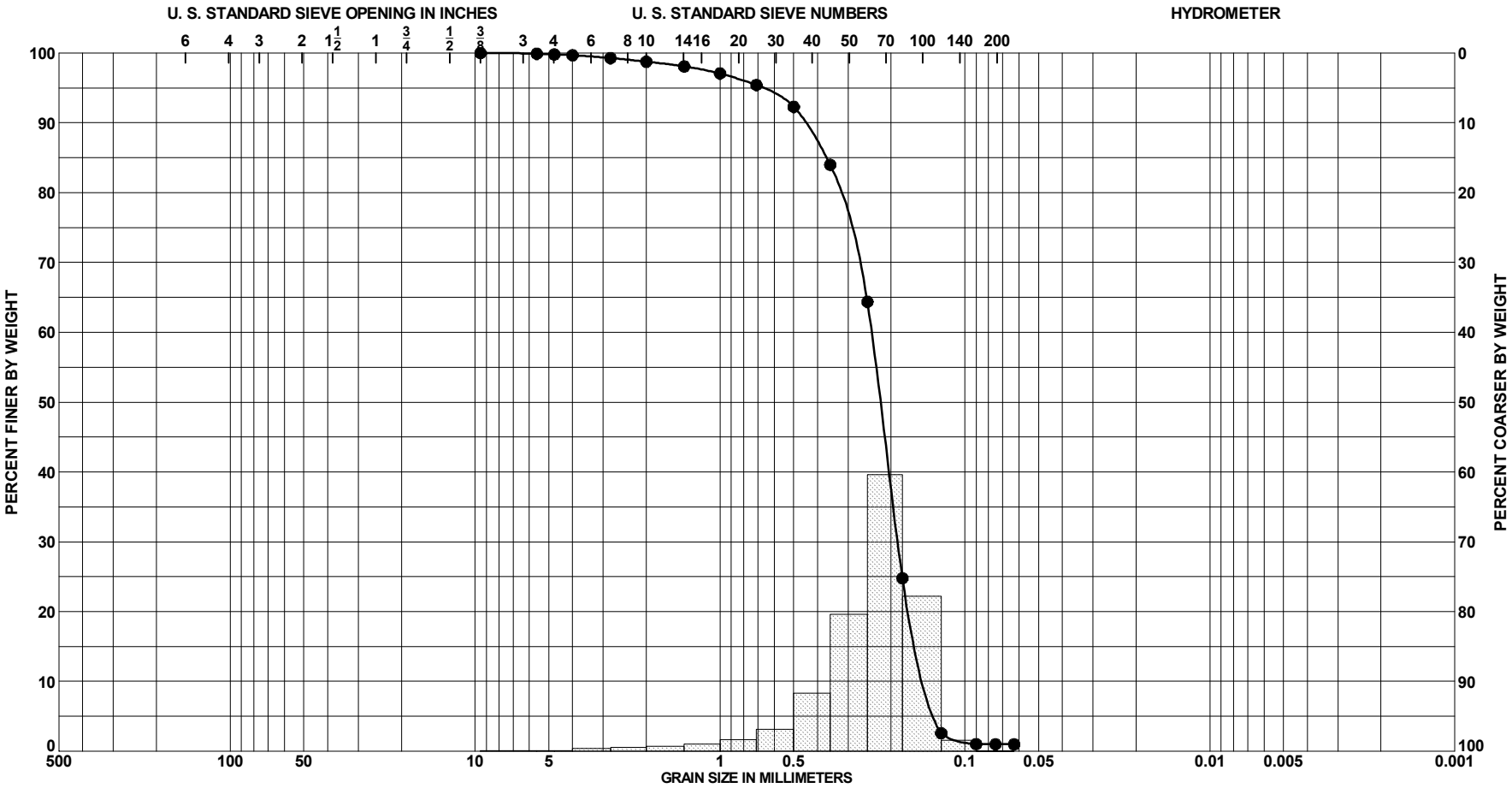
BORING NO. R-128

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● Mid-Tide	to 0.0 Ft.	SAND, poorly graded, mostly	5Y 6/1	17 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium-grained sand-sized								
		shell, gray (SP)								

PROJECT Pinellas County SPP Beach Sampling

BORING NO. R-128

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

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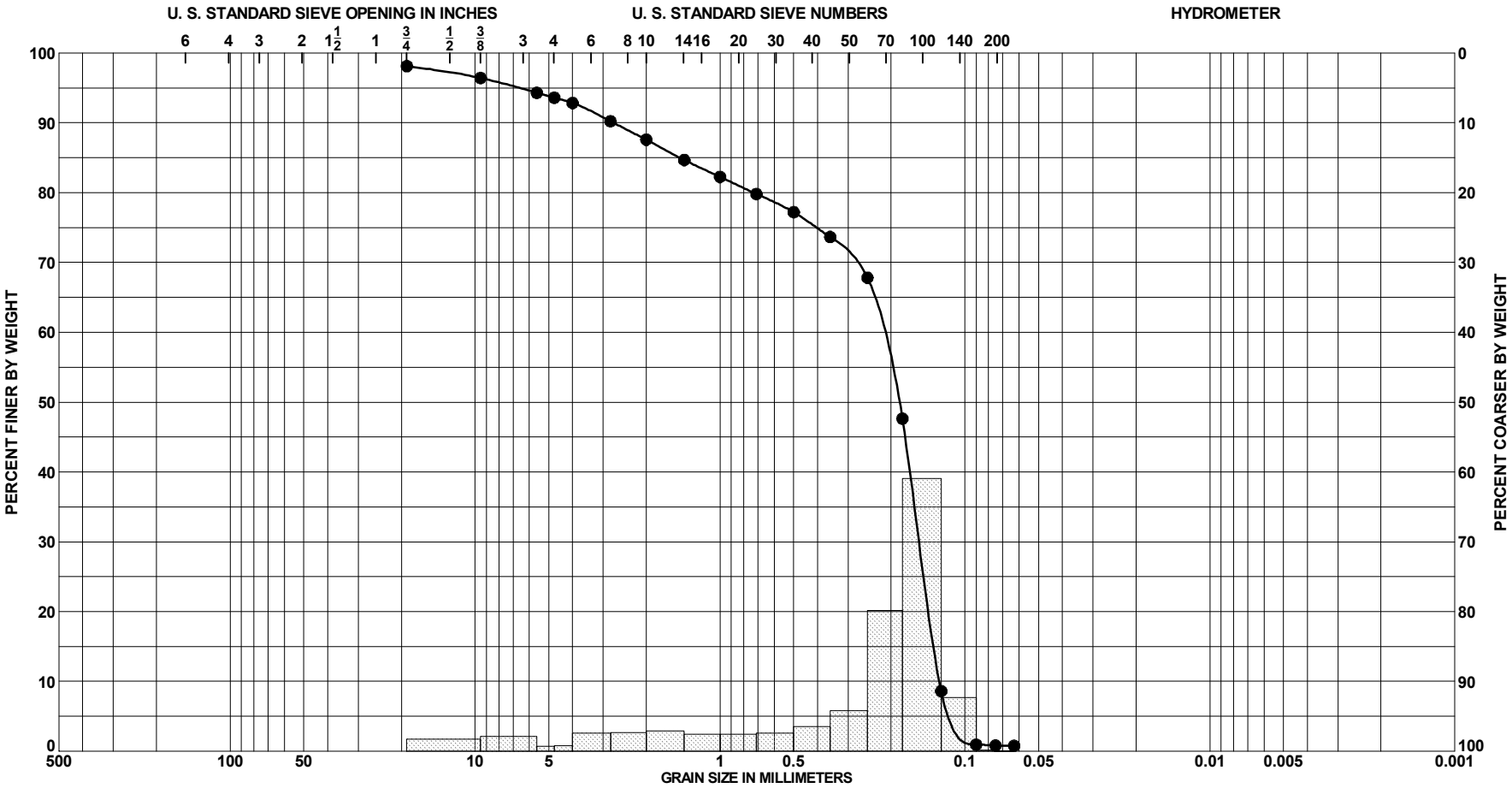
JUN 02

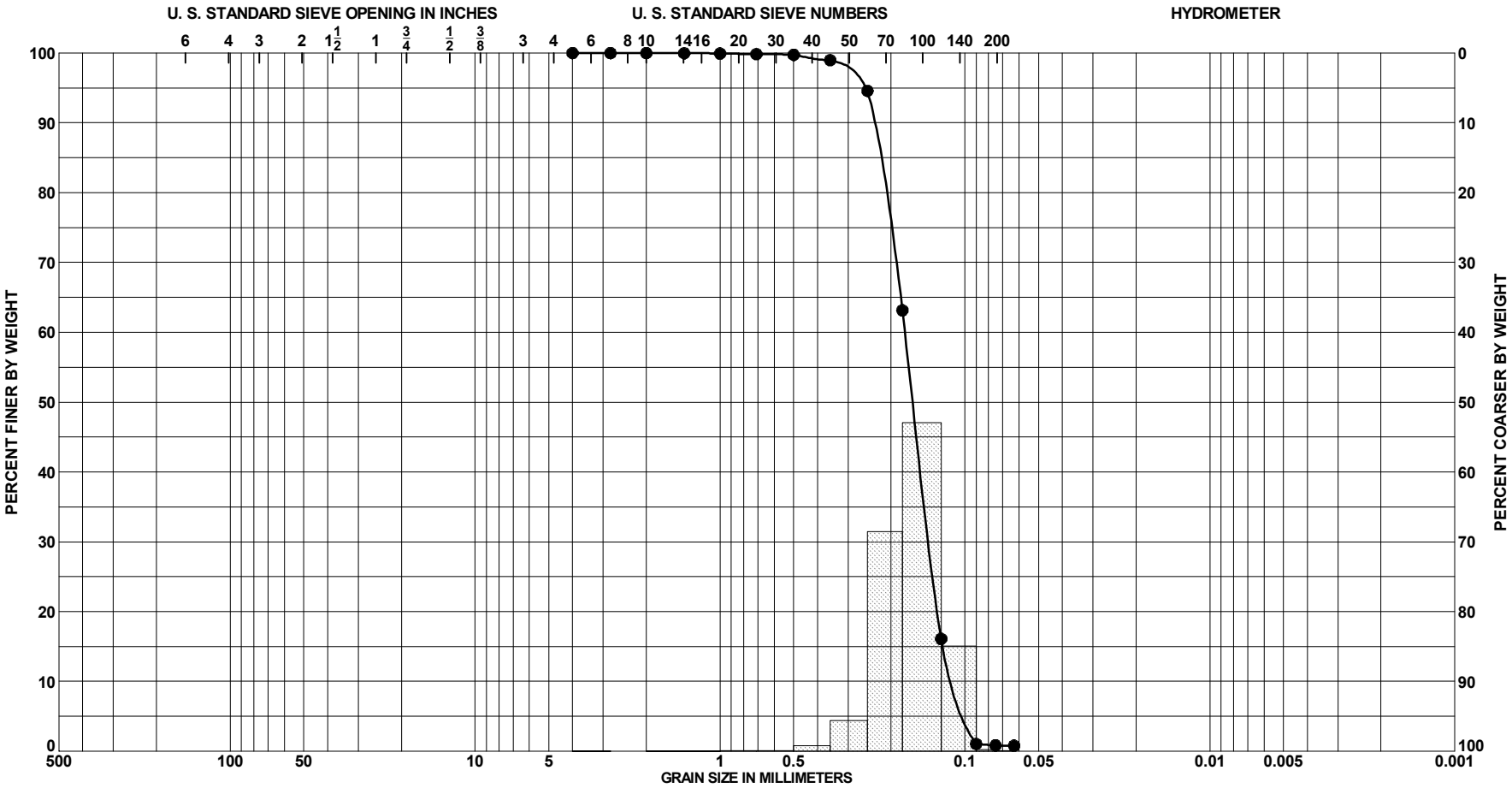


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● -3	to 0.0 Ft.	SAND, poorly graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, gray (SP)	2.5Y 6/1	28 (est)						

PROJECT	Pinellas County SPP Beach Sampling
BORING NO.	R-128
BORING ELEV.	Not Determined
DATE	9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02

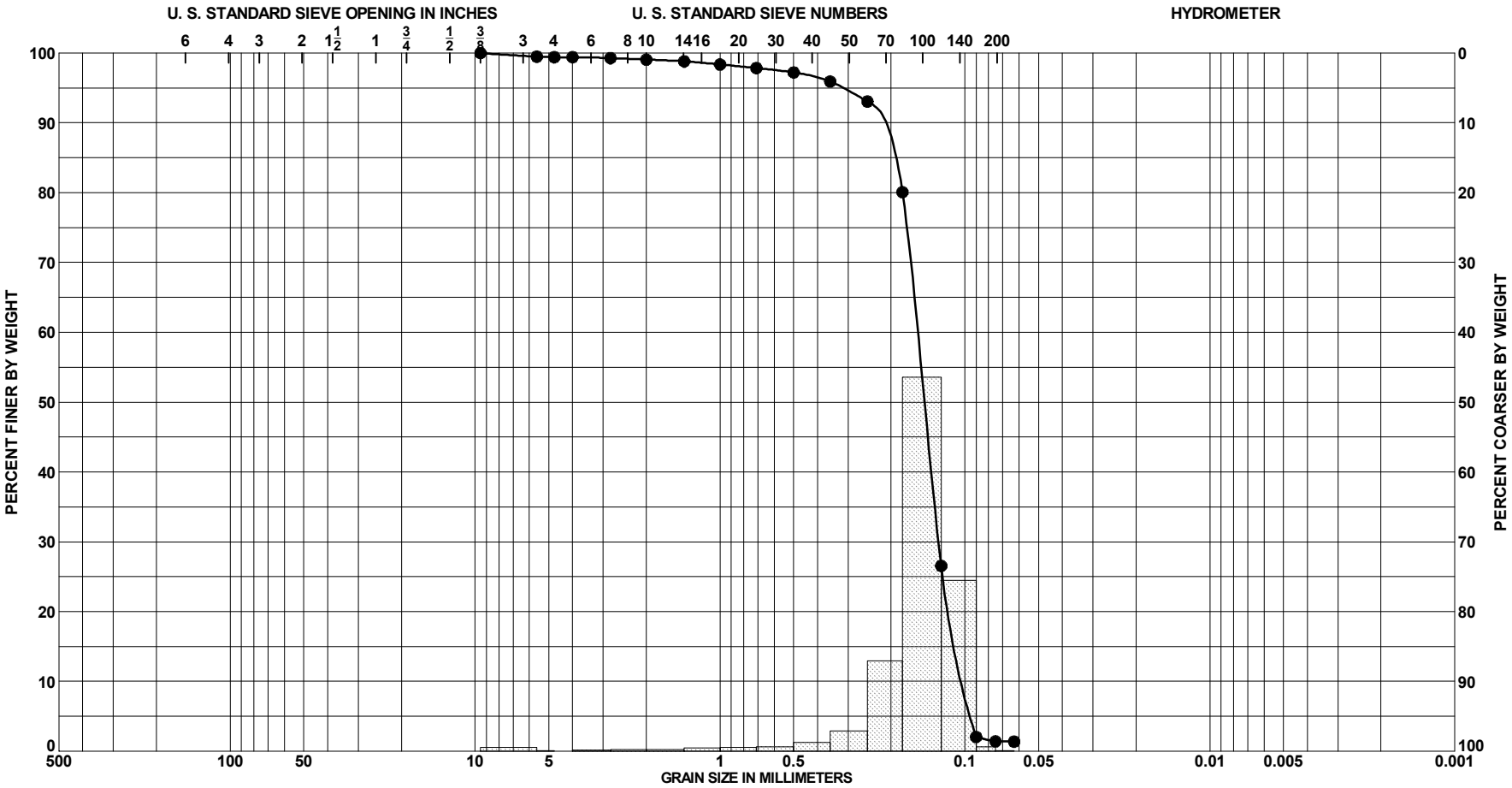


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● -5	to 0.0 Ft.	SAND, poorly graded, mostly	10Y 6/1	5 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, greenish								
		gray (SP)								

PROJECT	Pinellas County SPP Beach Sampling
BORING NO.	R-128
BORING ELEV.	Not Determined
DATE	9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● -10	to 0.0 Ft.	SAND, poorly graded, mostly	10Y 6/1	11/9 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, greenish								
		gray (SP)								

PROJECT Pinellas County SPP Beach Sampling

BORING NO. R-128

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

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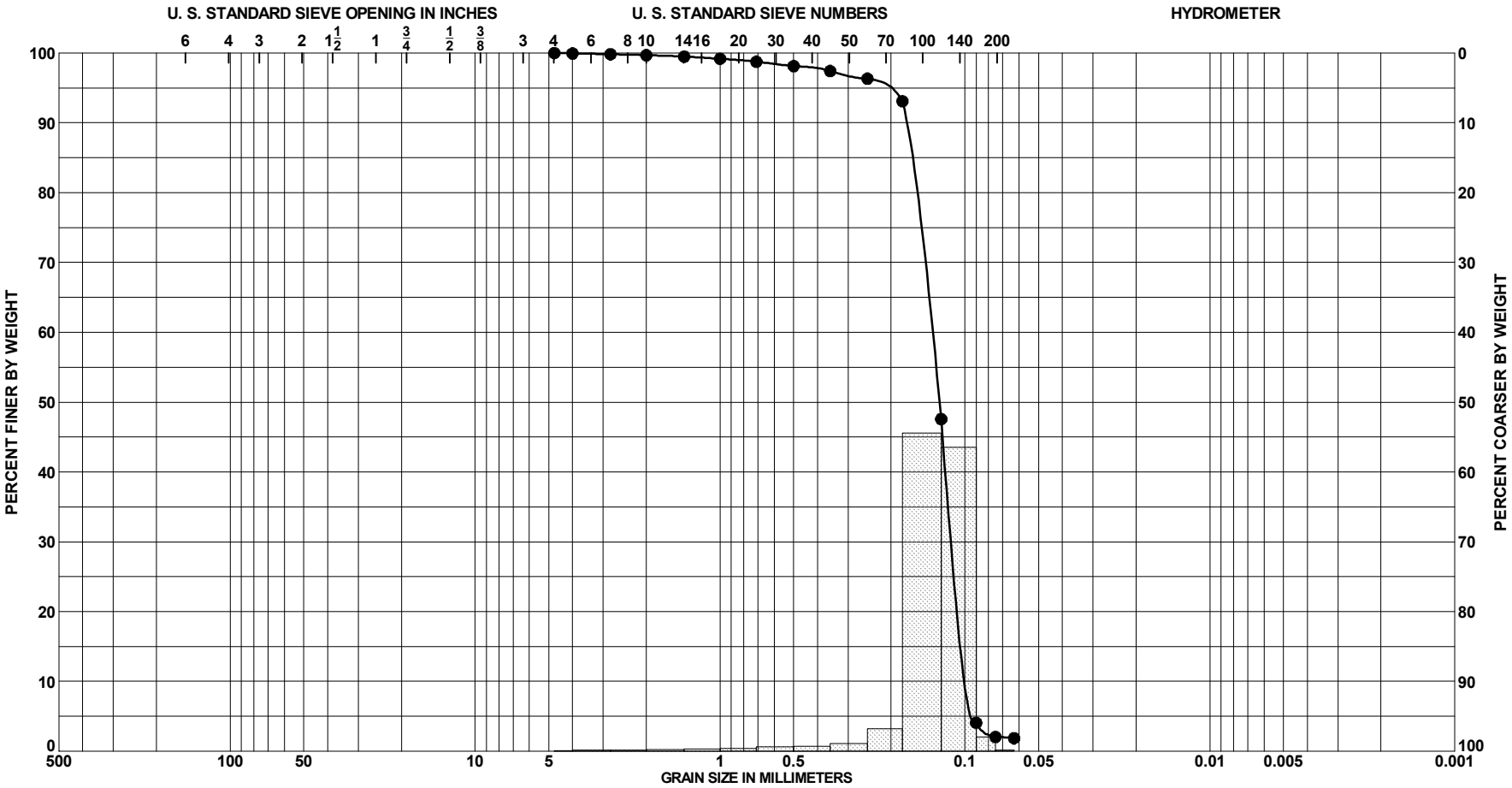

Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● -15	to 0.0 Ft.	SAND, poorly graded, mostly	5Y 5/2	4 (est)						
		fine-grained sand-sized quartz, trace								
		fine-grained sand-sized shell, olive								
		gray (SP)								

PROJECT Pinellas County SPP Beach Sampling

BORING NO. R-128

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

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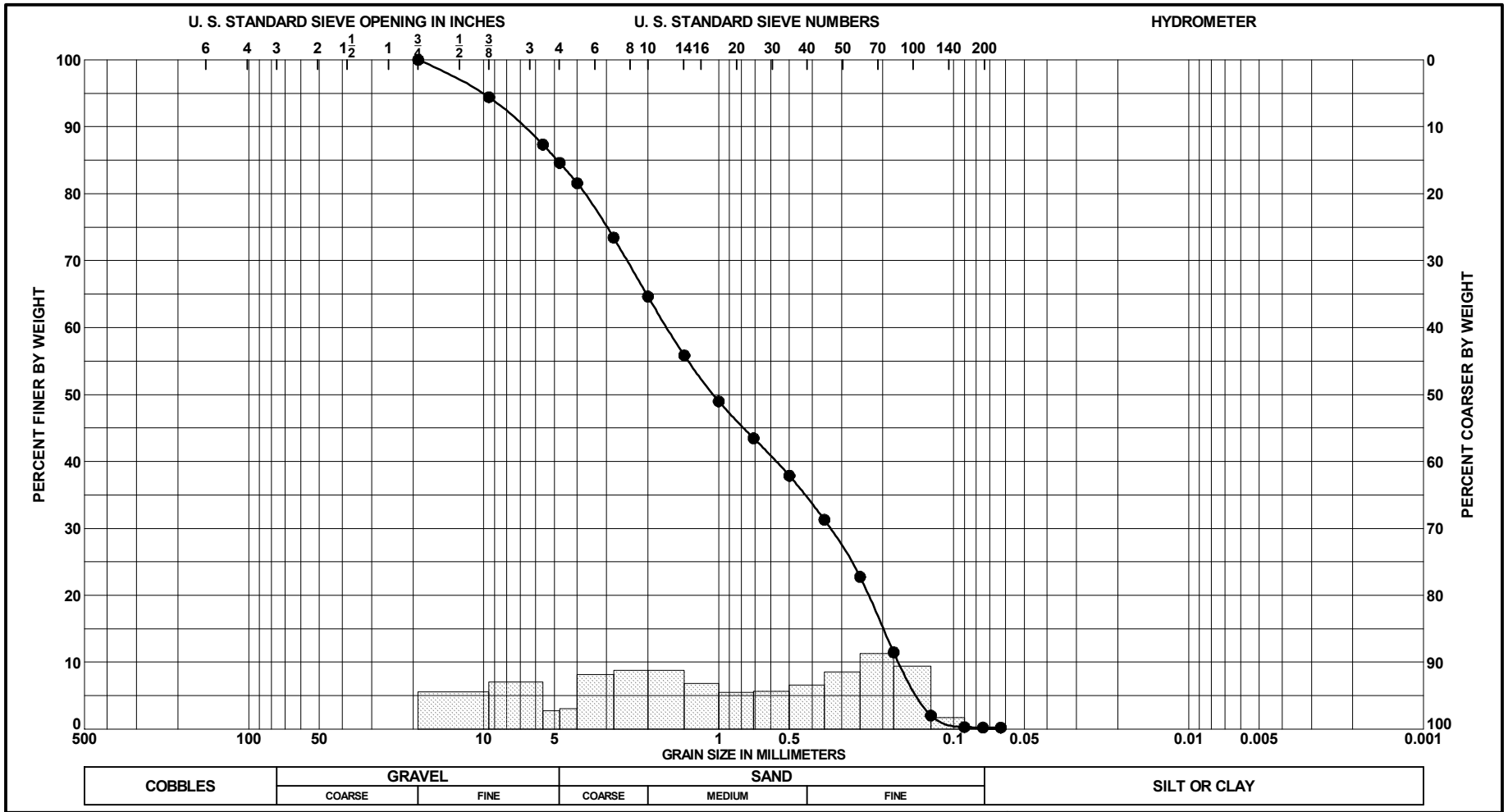

Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● Dune	to 0.0 Ft.	SAND, poorly graded, mostly	2.5Y 8/2	66 (est)						
		fine-grained sand-sized shell, some								
		fine-grained sand-sized quartz, pale								
		yellow (SP)								

PROJECT Pinellas County SPP Beach Sampling

BORING NO. R-131

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

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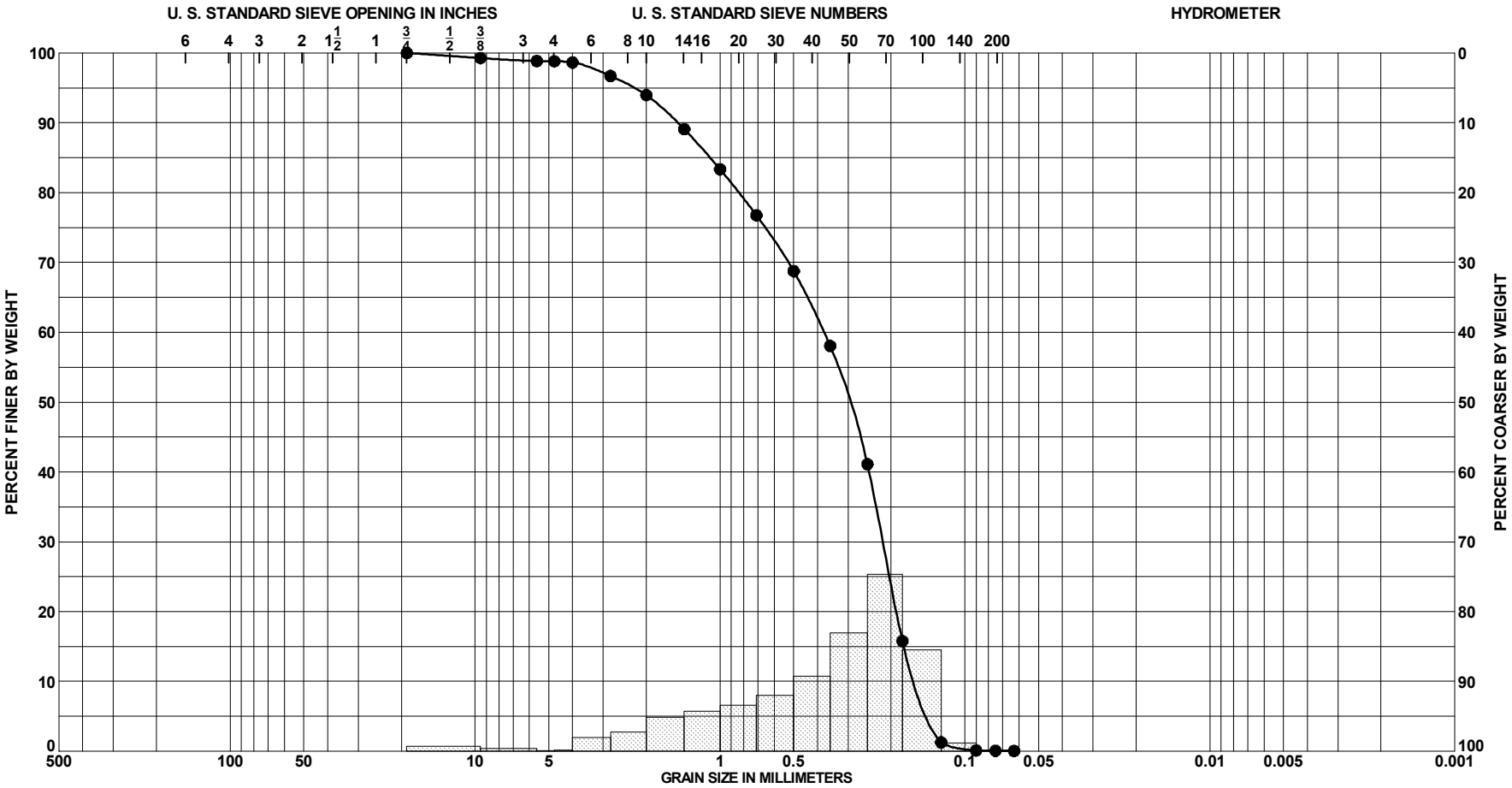

Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● Berm	to 0.0 Ft.	SAND, poorly graded, mostly	2.5Y 7/1	37/38 (est)						
		fine-grained sand-sized quartz, some								
		fine to medium-grained sand-sized								
		shell, light gray (SP)								

PROJECT Pinellas County SPP Beach Sampling

BORING NO. R-131

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

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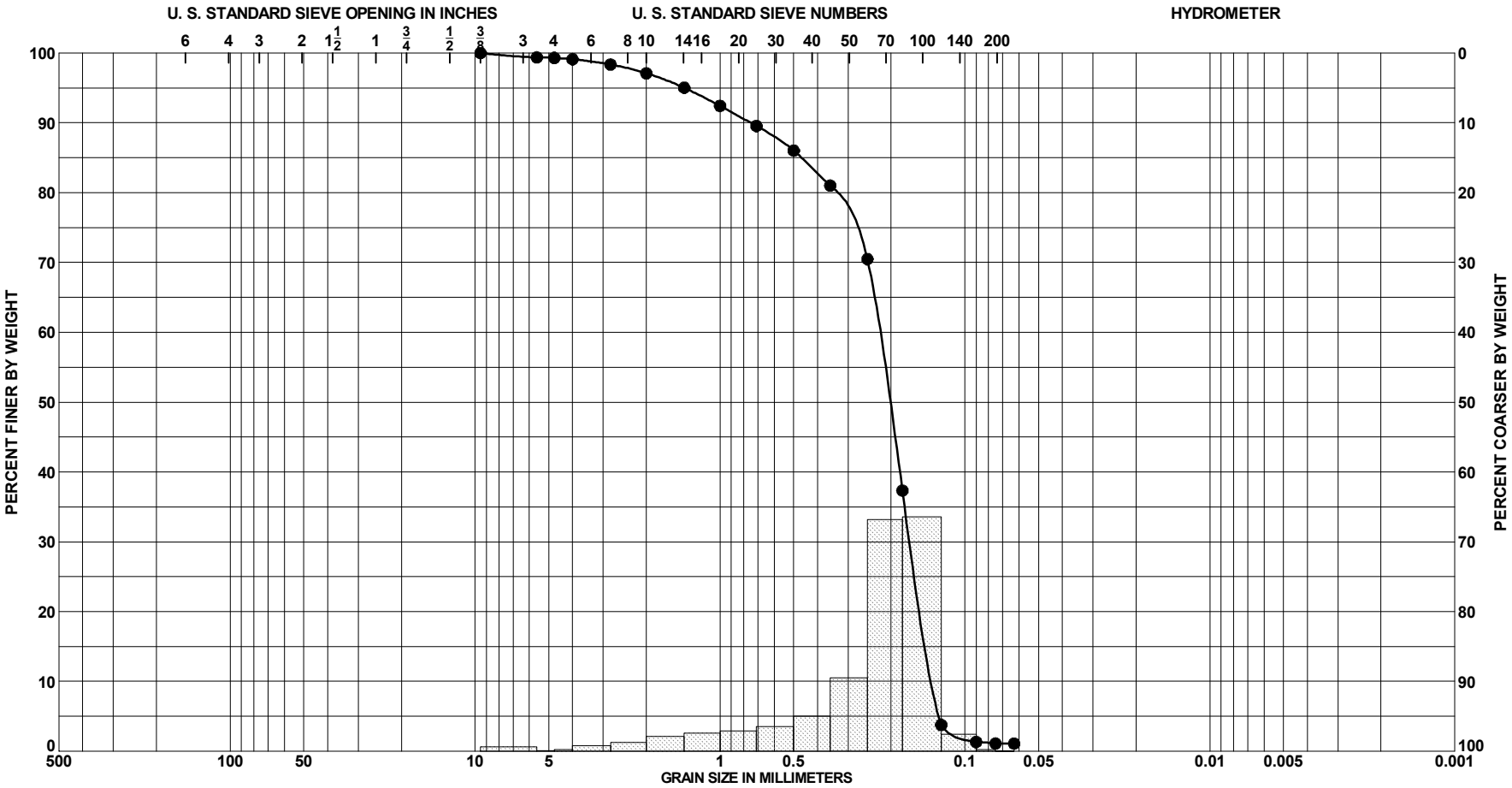

Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● Mid-Tide	to 0.0 Ft.	SAND, poorly graded, mostly	5Y 6/1	27 (est)						
		fine-grained sand-sized quartz, some								
		fine to medium-grained sand-sized								
		shell, gray (SP)								

PROJECT Pinellas County SPP Beach Sampling

BORING NO. R-131

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

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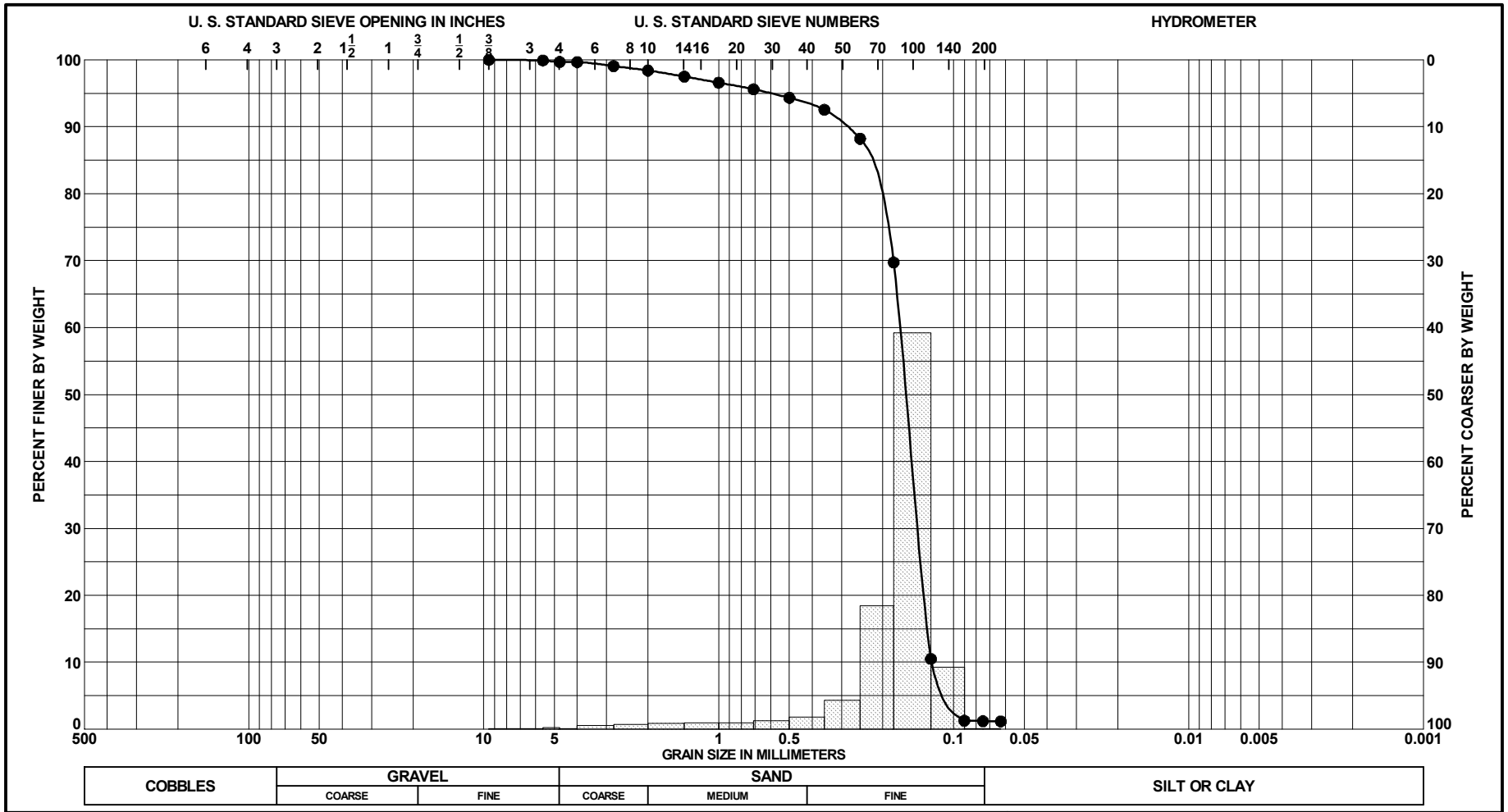

Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● -3	to 0.0 Ft.	SAND, poorly graded, mostly	5Y 7/1	13 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium-grained sand-sized								
		shell, light gray (SP)								

PROJECT Pinellas County SPP Beach Sampling

BORING NO. R-131

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

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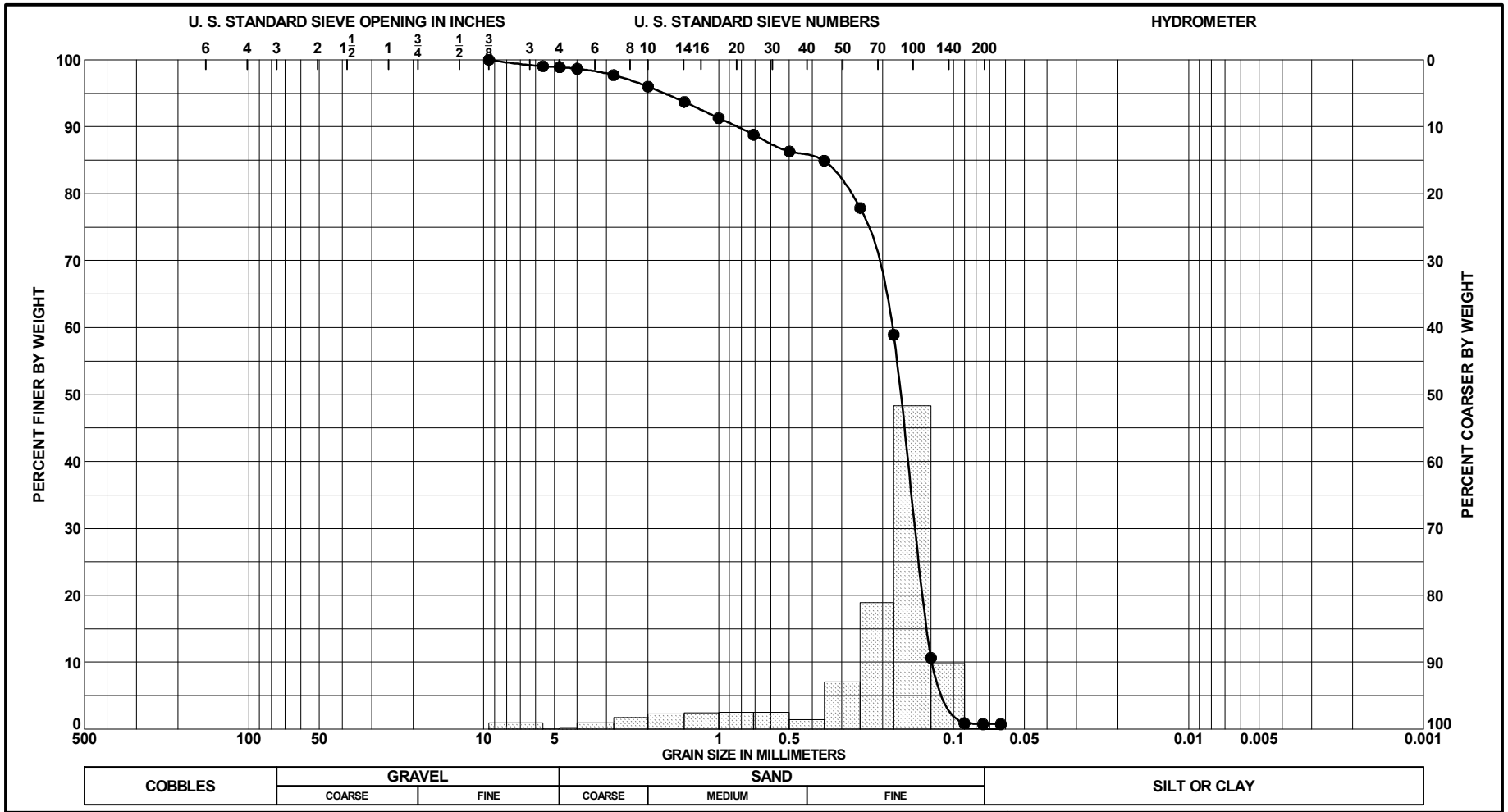

Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● -5	to 0.0 Ft.	SAND, poorly graded, mostly	5Y 7/2	21 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium-grained sand-sized								
		shell, light gray (SP)								

PROJECT Pinellas County SPP Beach Sampling

BORING NO. R-131

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

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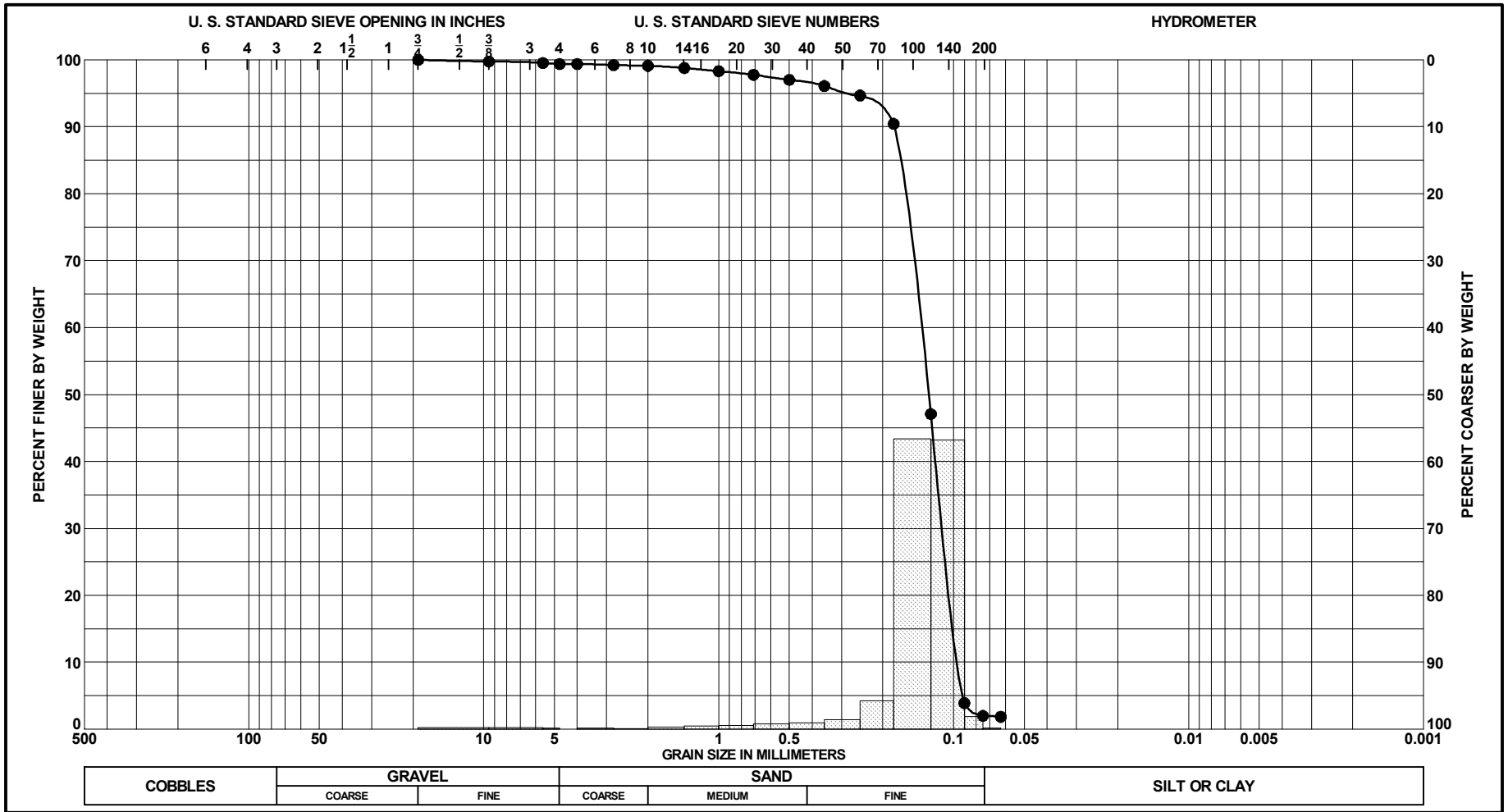

Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● -10	to 0.0 Ft.	SAND, poorly graded, mostly	5Y 6/2	10/7 (est)						
		fine-grained sand-sized quartz, few								
		fine to medium-grained sand-sized								
		shell, light olive gray (SP)								

PROJECT Pinellas County SPP Beach Sampling

BORING NO. R-131

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

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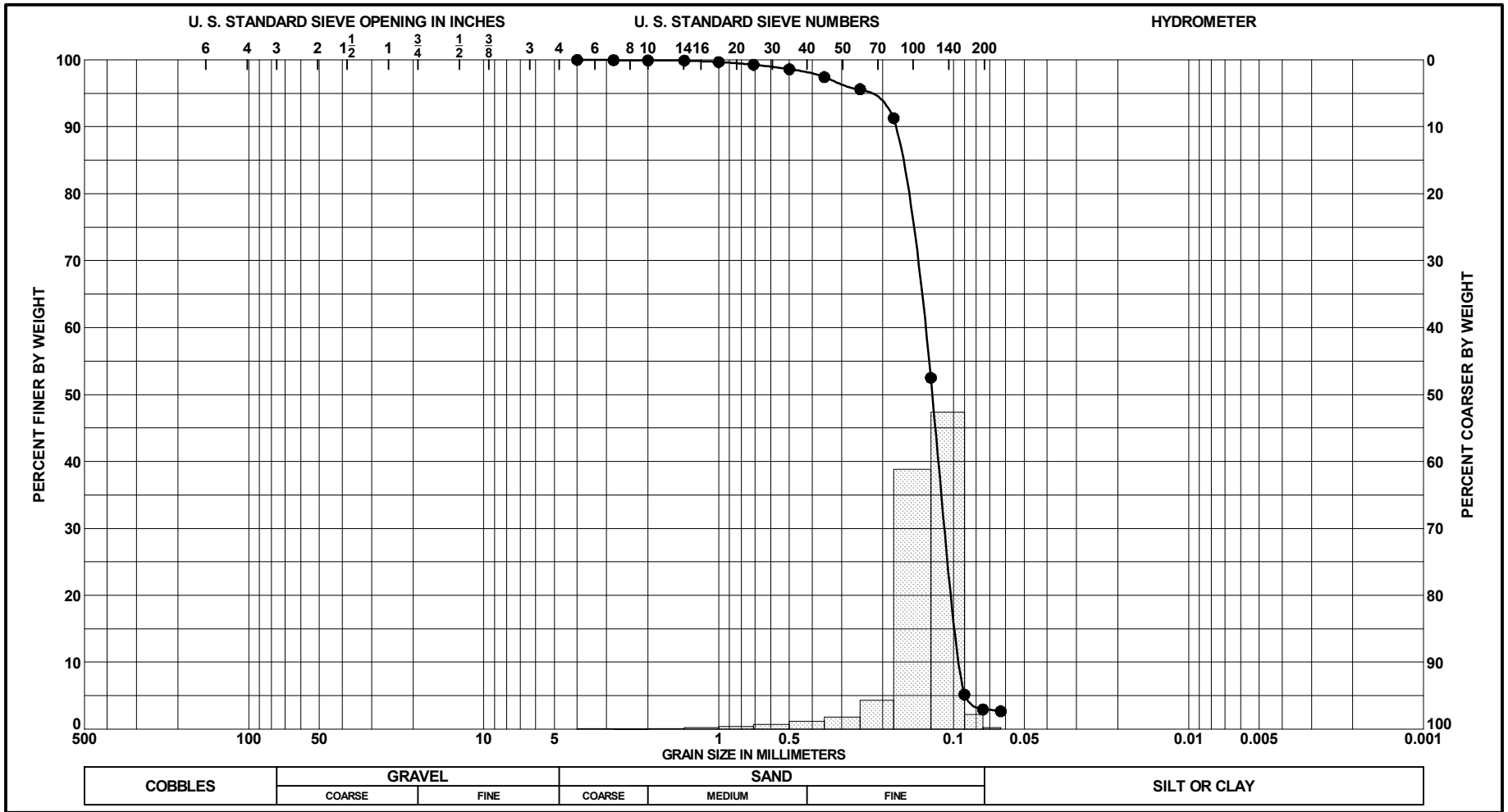

Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● -15	to 0.0 Ft.	SAND, poorly graded, mostly	5Y 5/2	5 (est)						
		fine-grained sand-sized quartz, few								
		fine to medium-grained sand-sized								
		shell, olive gray (SP)								

PROJECT Pinellas County SPP Beach Sampling

BORING NO. R-131

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

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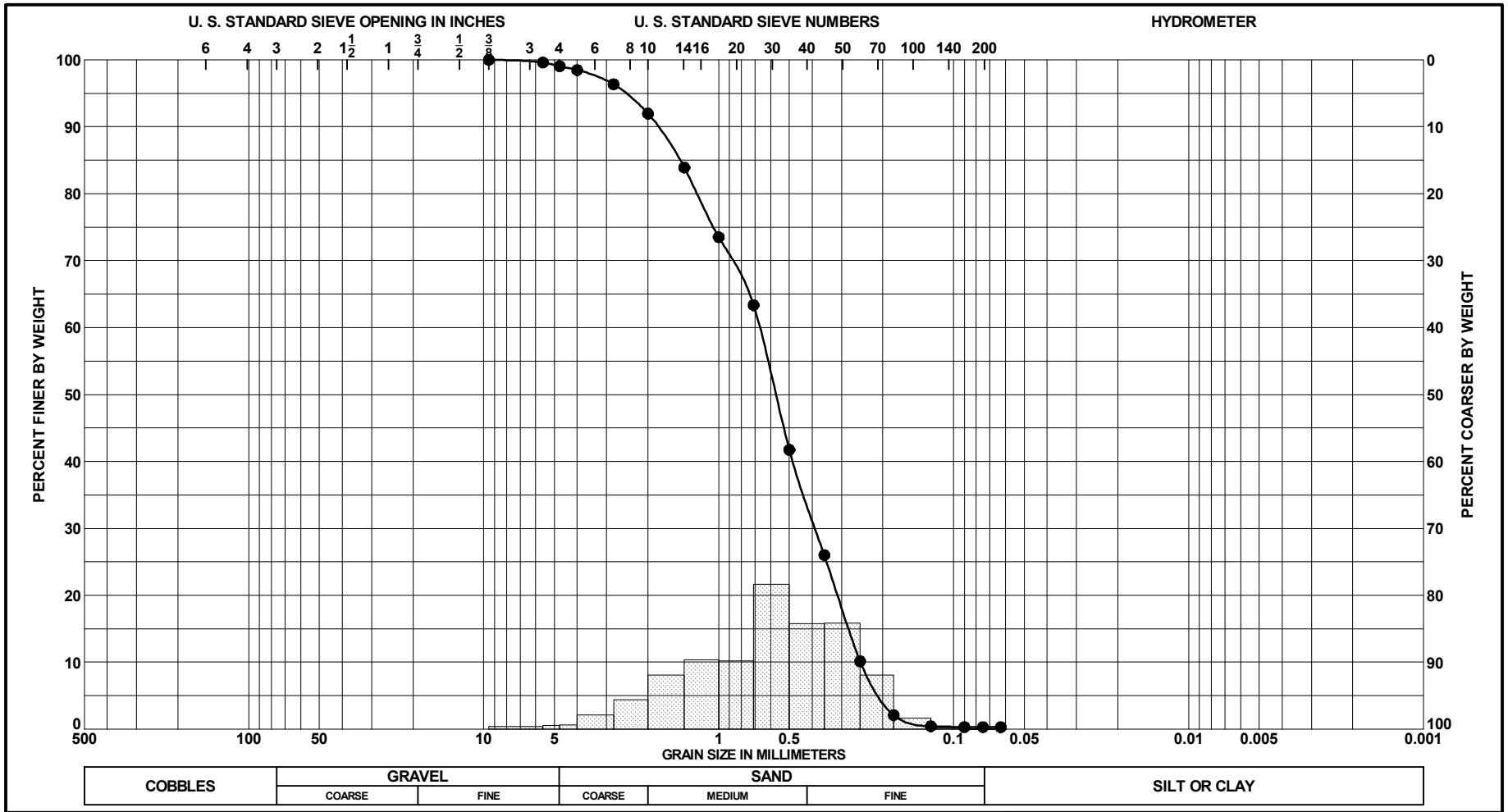
JUN 02

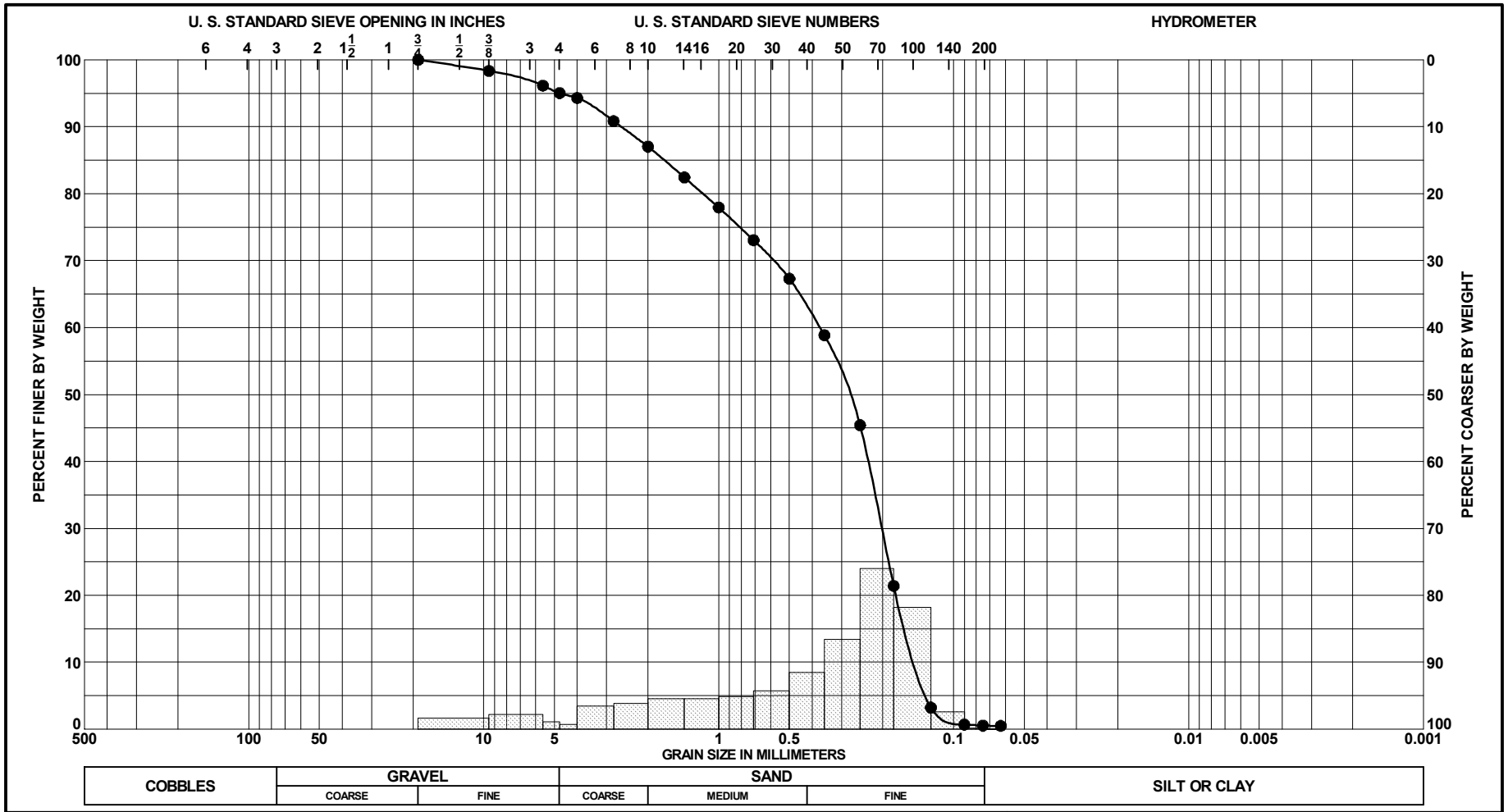


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● Dune	to 0.0 Ft.	SAND, poorly graded, mostly fine to medium-grained sand-sized shell, some fine to medium-grained sand-sized quartz, pale yellow (SP)	2.5Y 8/2	54 (est)						

PROJECT	Pinellas County SPP Beach Sampling
BORING NO.	R-135
BORING ELEV.	Not Determined
DATE	9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02

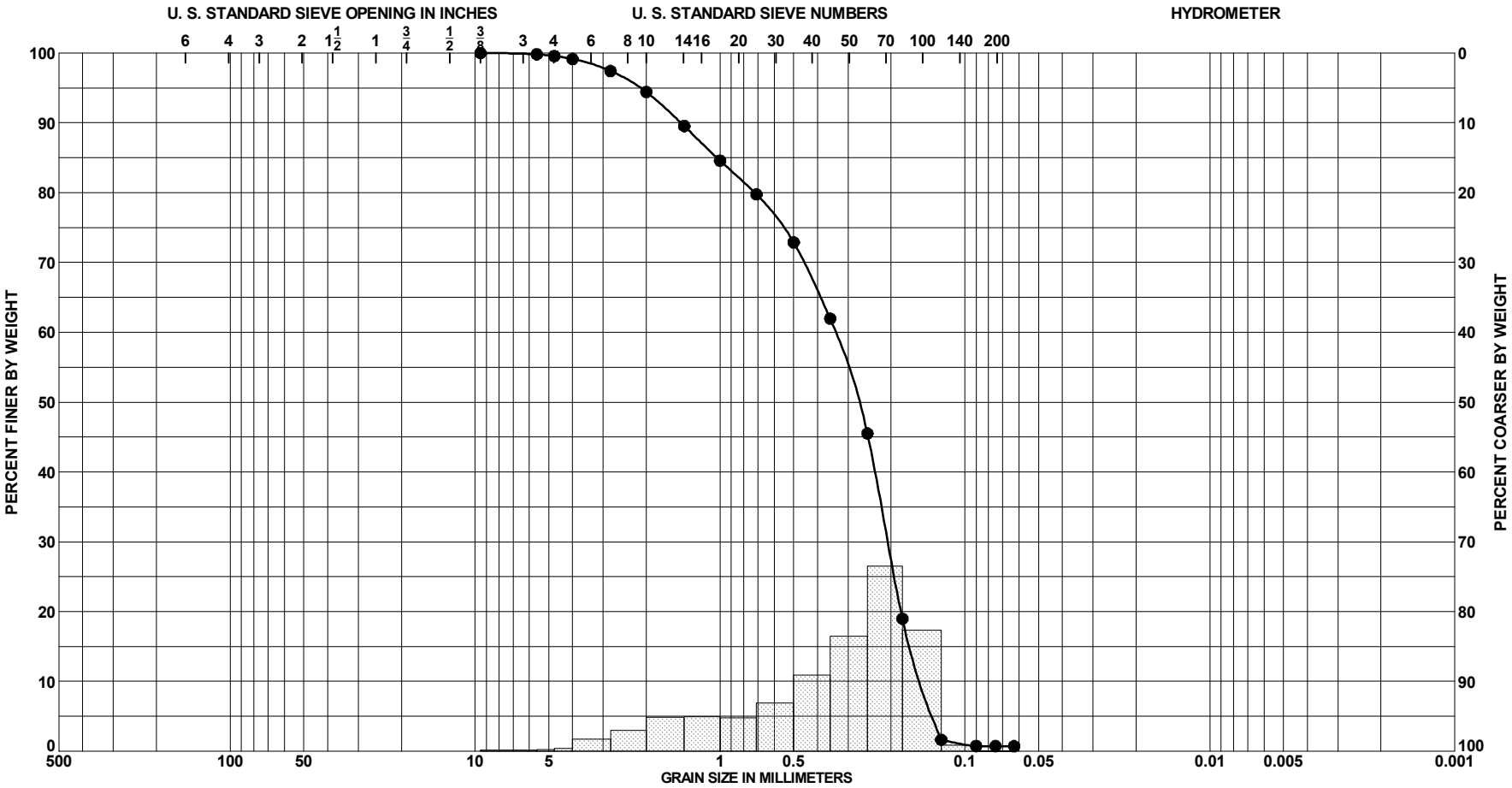


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● Berm	to 0.0 Ft.	SAND, poorly graded, mostly fine to medium-grained sand-sized quartz, some sand to gravel-sized shell, pale yellow (SP)	2.5Y 8/2	38/34 (est)						

PROJECT	Pinellas County SPP Beach Sampling
BORING NO.	R-135
BORING ELEV.	Not Determined
DATE	9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02

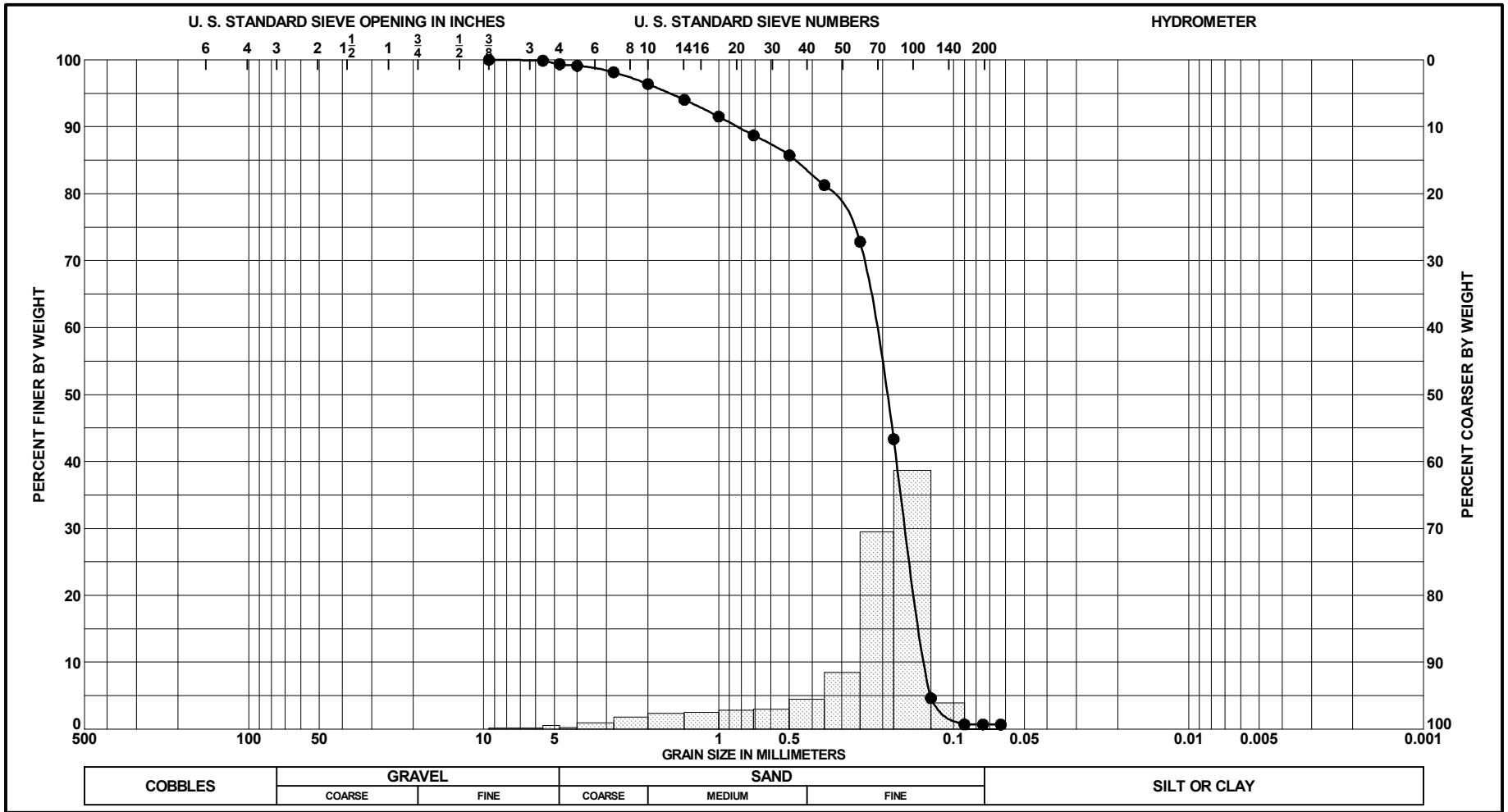


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● Mid-Tide	to 0.0 Ft.	SAND, poorly graded, mostly fine to medium-grained sand-sized quartz, some fine to medium-grained sand-sized shell, white (SP)	2.5Y 8/1	31 (est)						

PROJECT	Pinellas County SPP Beach Sampling
BORING NO.	R-135
BORING ELEV.	Not Determined
DATE	9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02

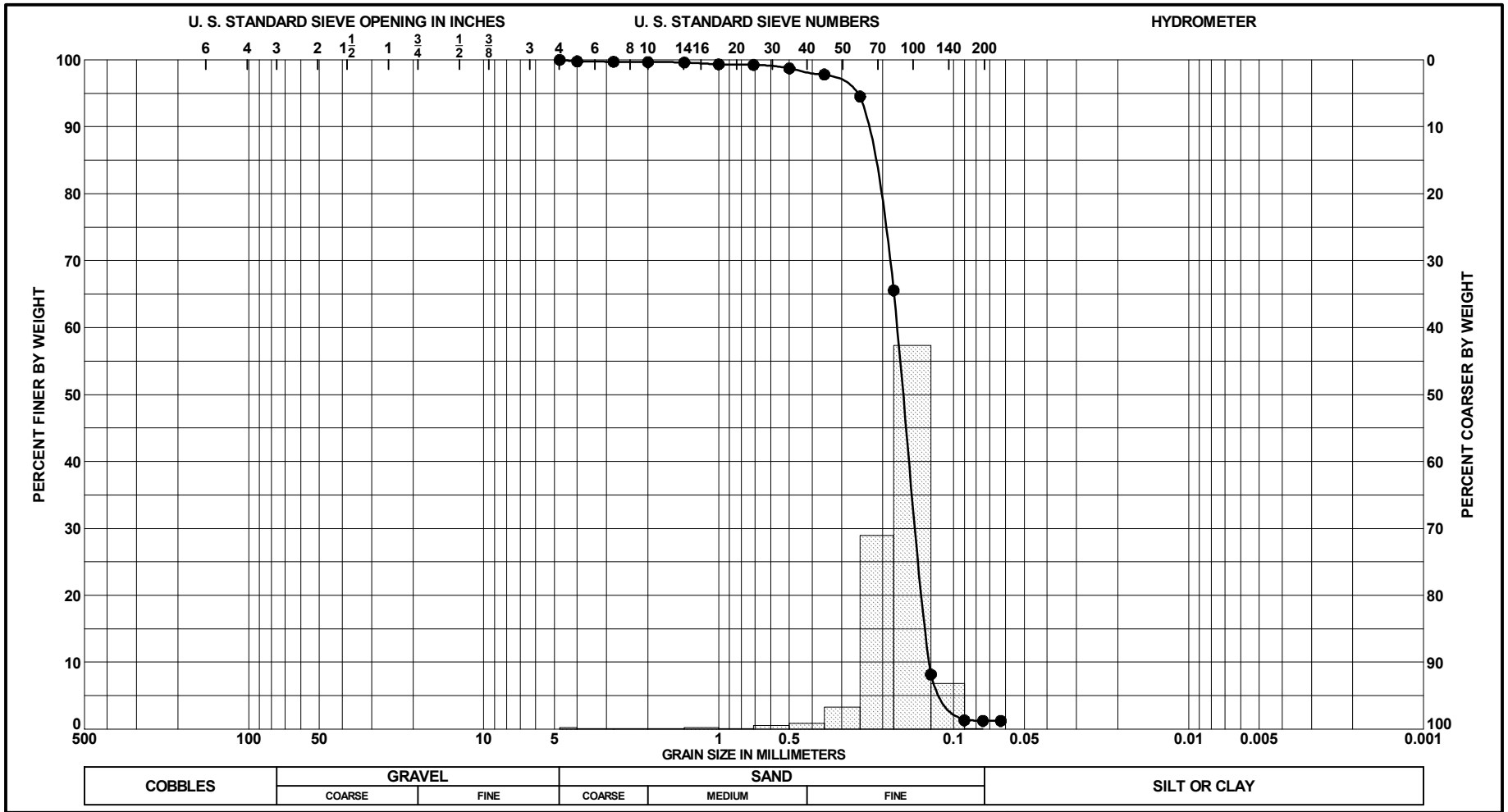


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● -3	to 0.0 Ft.	SAND, poorly graded, mostly fine to medium-grained sand-sized quartz, little fine to medium-grained sand-sized shell, white (SP)	2.5Y 8/1	19 (est)						

PROJECT	Pinellas County SPP Beach Sampling
BORING NO.	R-135
BORING ELEV.	Not Determined
DATE	9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● -5	to 0.0 Ft.	SAND, poorly graded, mostly	2.5Y 8/1	3 (est)						
		fine-grained sand-sized quartz, trace								
		fine to medium-grained sand-sized								
		shell, white (SP)								

PROJECT Pinellas County SPP Beach Sampling

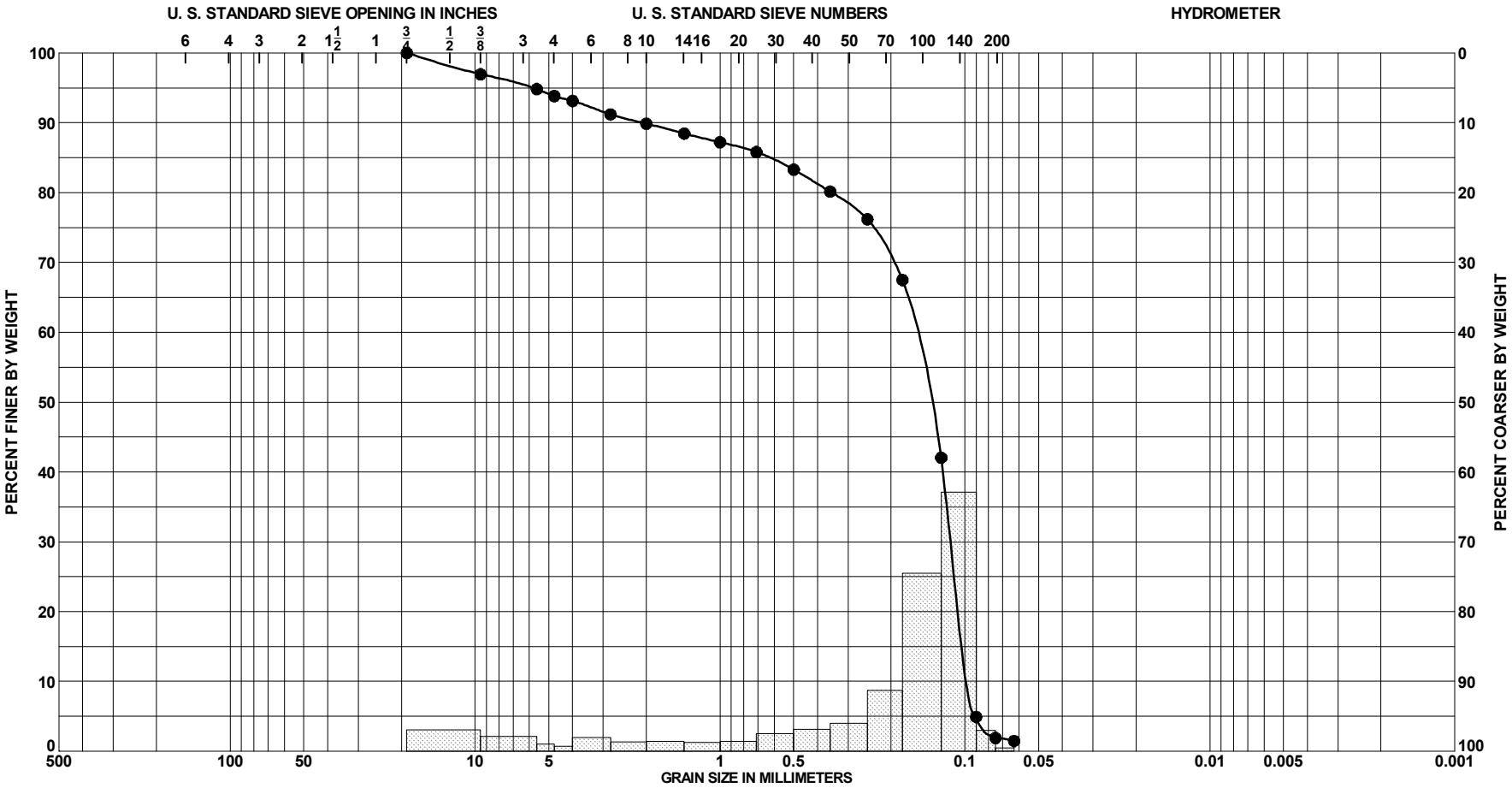
BORING NO. R-135

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● -10	to 0.0 Ft.	SAND, poorly graded, mostly	10G 7/1	19/16 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium-grained sand-sized								
		shell, light greenish gray (SP)								

PROJECT Pinellas County SPP Beach Sampling

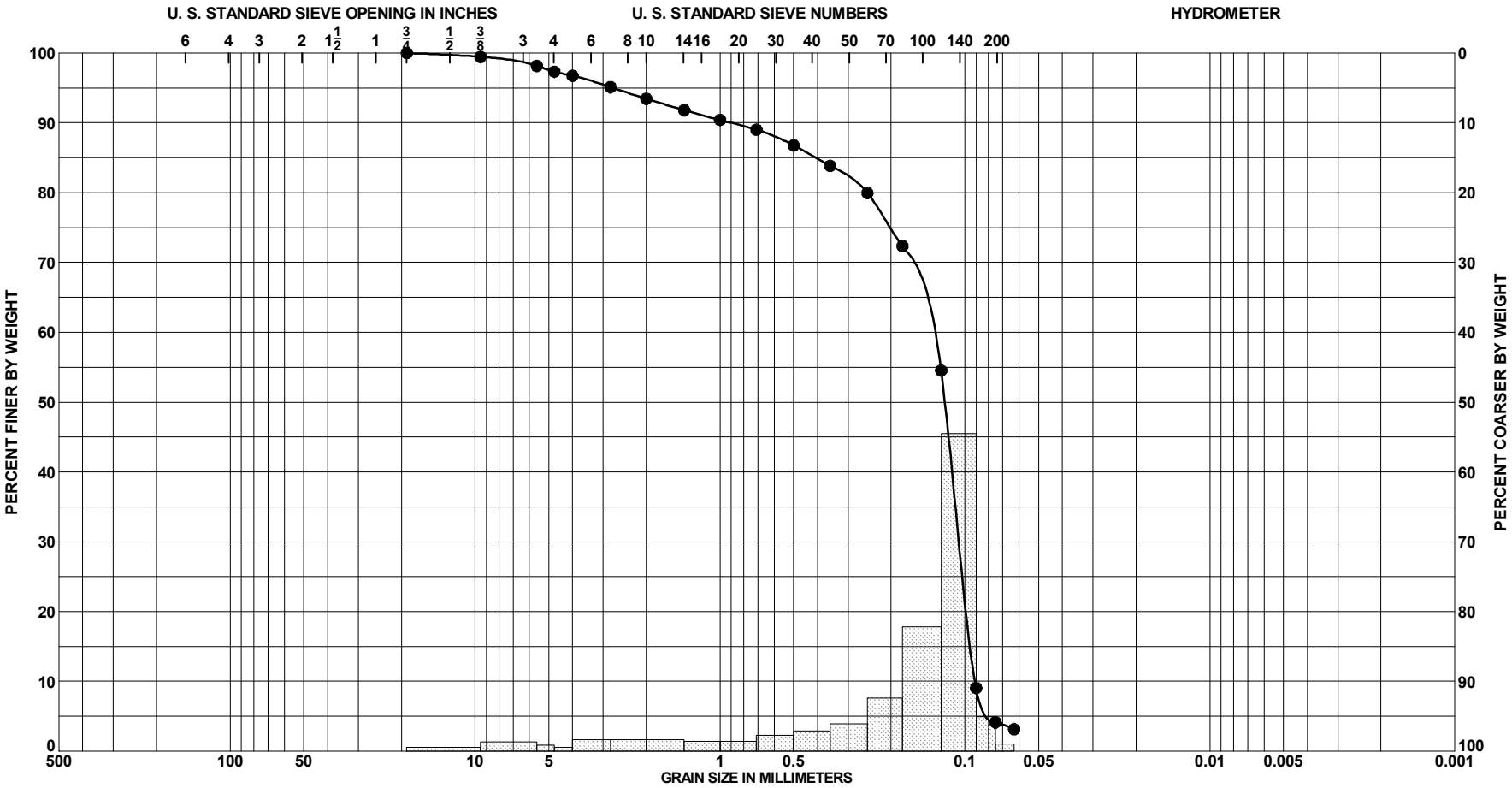
BORING NO. R-135

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02

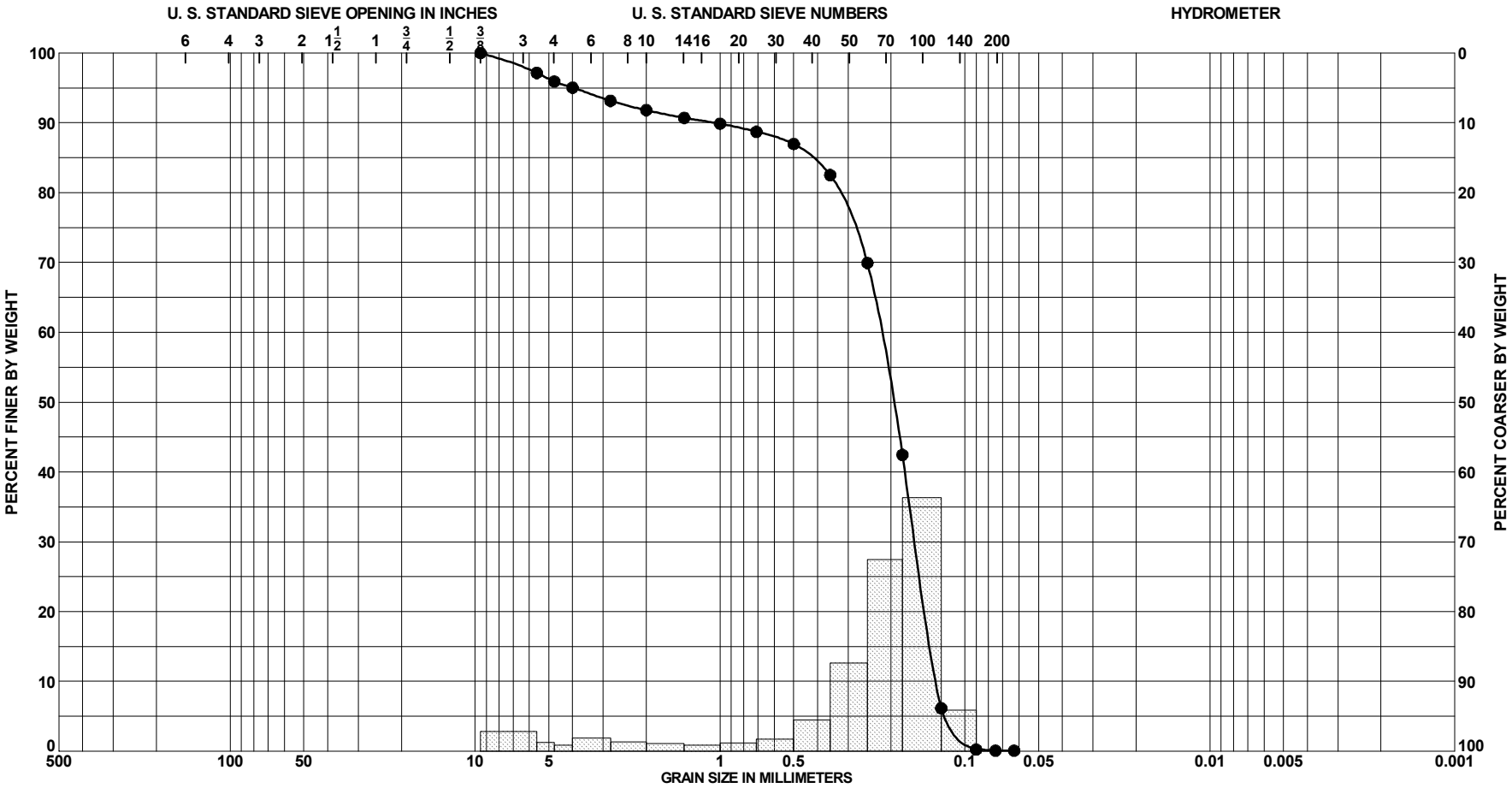


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● -15	to 0.0 Ft.	SAND, poorly graded, mostly	10G 8/1	13 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium-grained sand-sized								
		shell, light greenish gray (SP)								

PROJECT	Pinellas County SPP Beach Sampling
BORING NO.	R-135
BORING ELEV.	Not Determined
DATE	9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● Berm	to 0.0 Ft.	SAND, poorly graded, mostly	2.5Y 7/1	15/15 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium-grained sand-sized								
		shell, light gray (SP)								

PROJECT Pinellas County SPP Beach Sampling

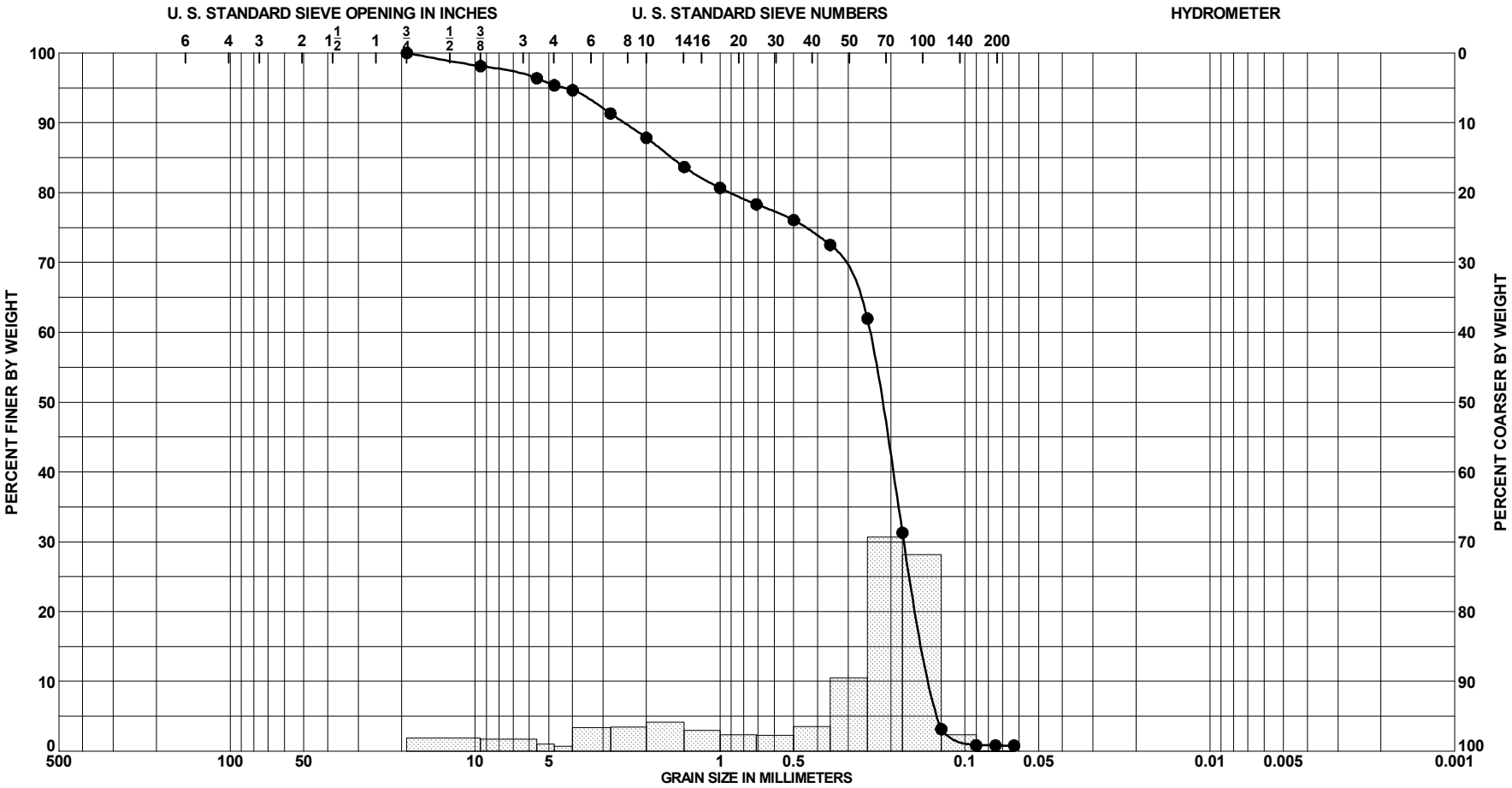
BORING NO. R-139

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02

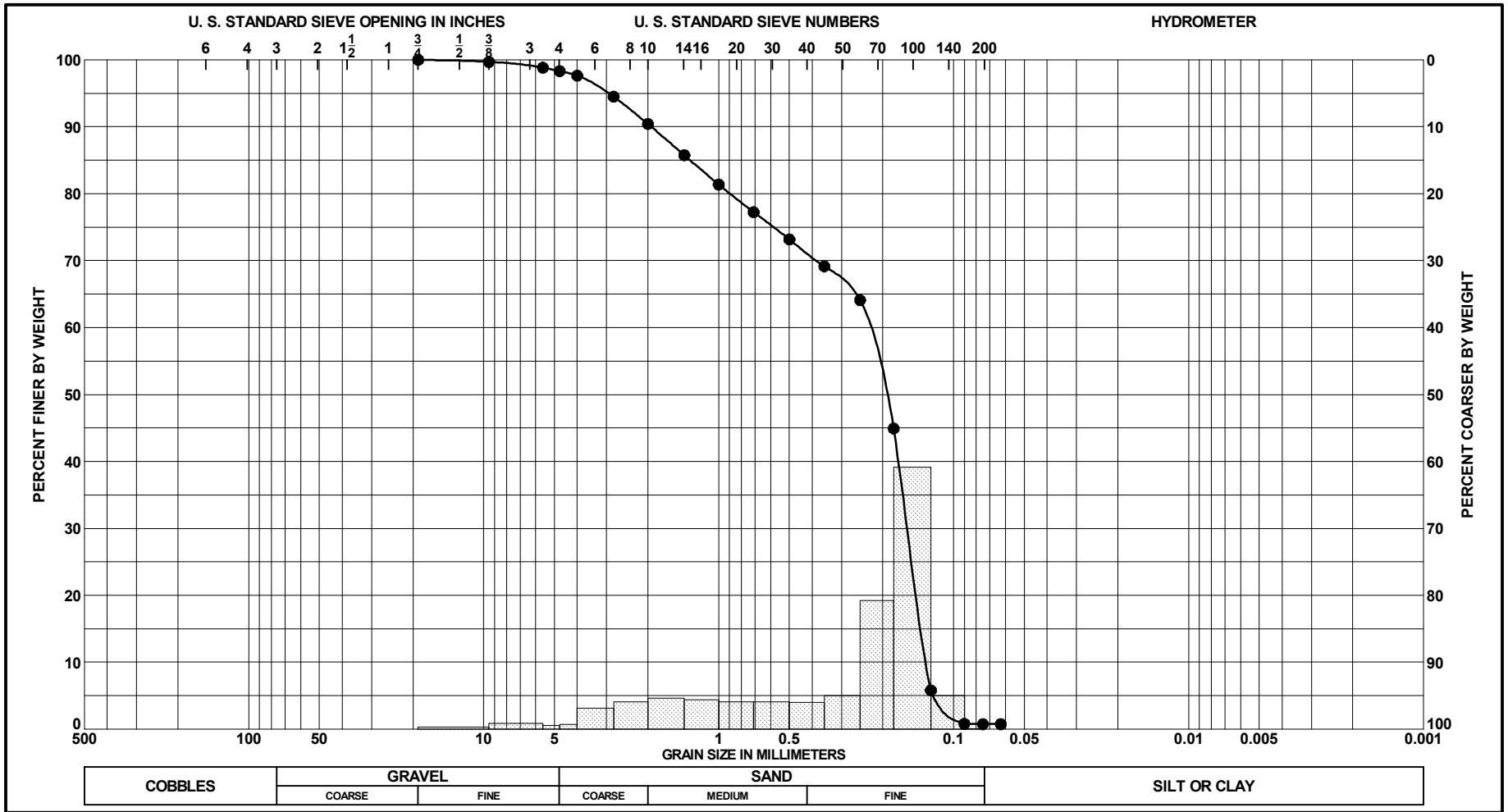


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● Mid-Tide	to 0.0 Ft.	SAND, poorly graded, mostly fine to medium-grained sand-sized quartz, some sand to gravel-sized shell, light gray (SP)	2.5Y 7/1	28 (est)						

PROJECT	Pinellas County SPP Beach Sampling
BORING NO.	R-139
BORING ELEV.	Not Determined
DATE	9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02

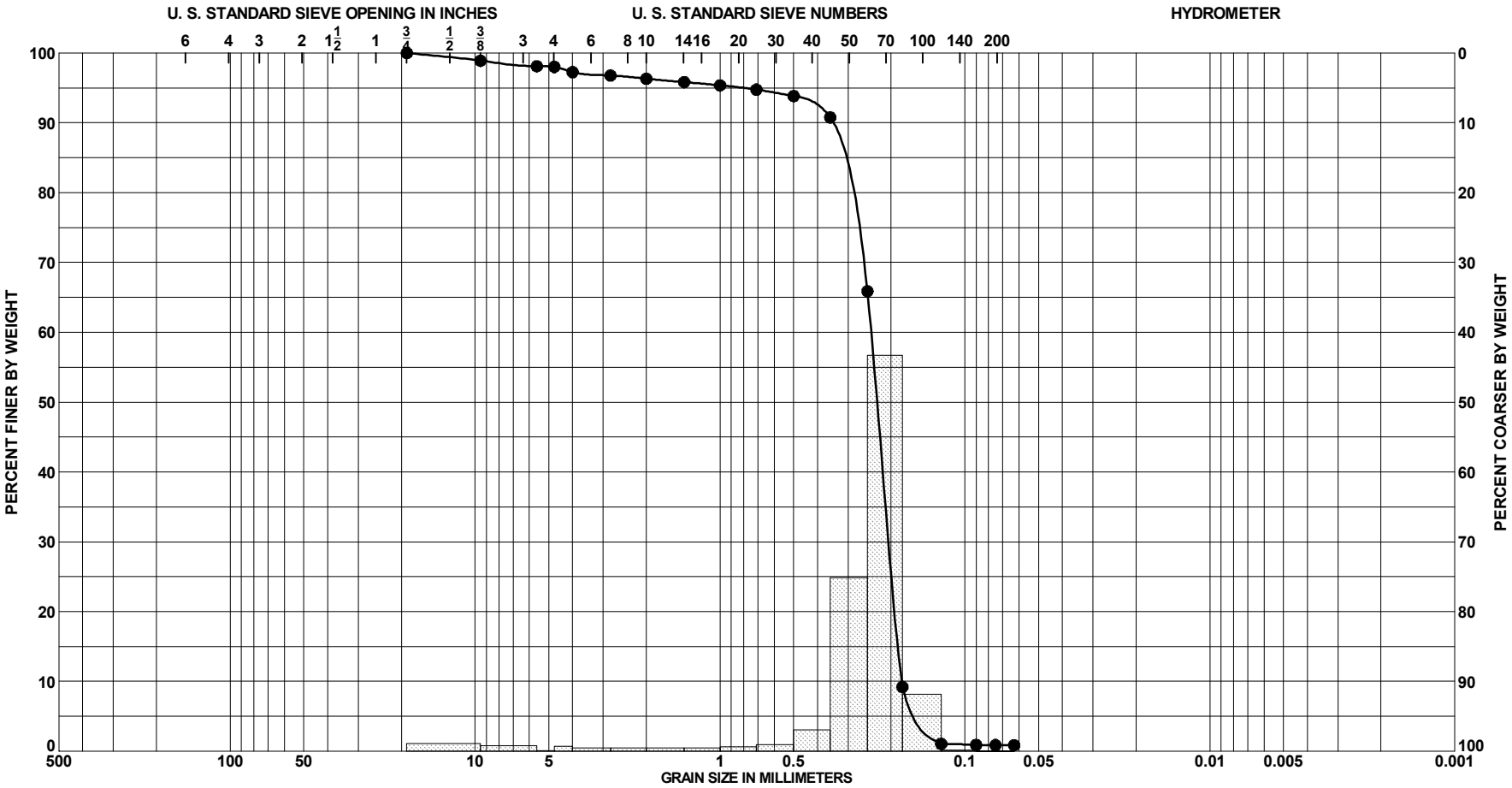


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● -3	to 0.0 Ft.	SAND, poorly graded, mostly fine-grained sand-sized quartz, some fine to medium-grained sand-sized shell, light gray (SP)	2.5Y 7/1	29 (est)						

PROJECT	Pinellas County SPP Beach Sampling
BORING NO.	R-139
BORING ELEV.	Not Determined
DATE	9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● -5	to 0.0 Ft.	SAND, poorly graded, mostly	2.5Y 8/1	6 (est)						
		fine-grained sand-sized quartz, few								
		fine to medium-grained sand-sized								
		shell, white (SP)								

PROJECT Pinellas County SPP Beach Sampling

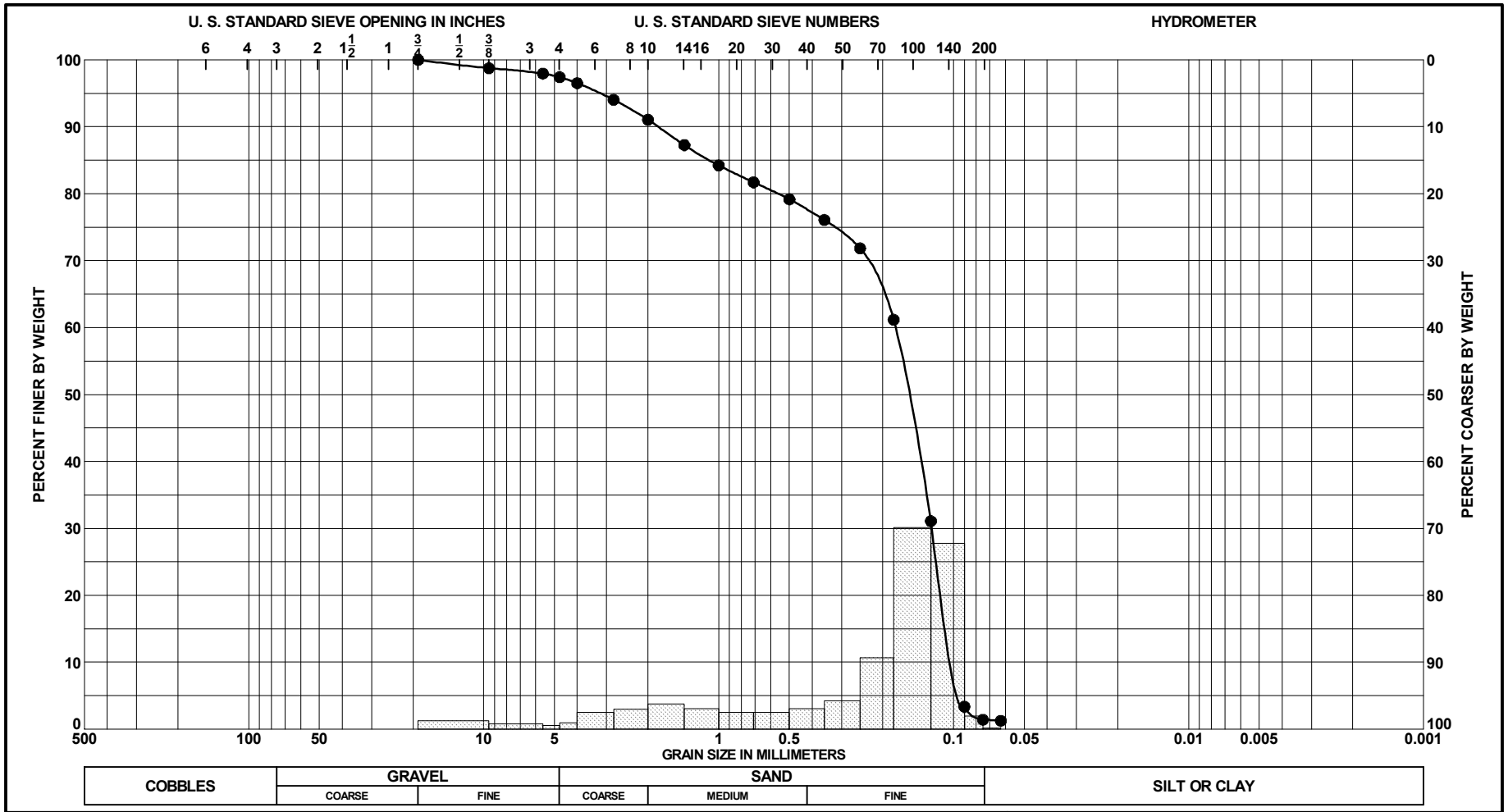
BORING NO. R-139

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● -10	to 0.0 Ft.	SAND, poorly graded, mostly	10G 7/1	25/21 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium-grained sand-sized								
		shell, light greenish gray (SP)								

PROJECT Pinellas County SPP Beach Sampling

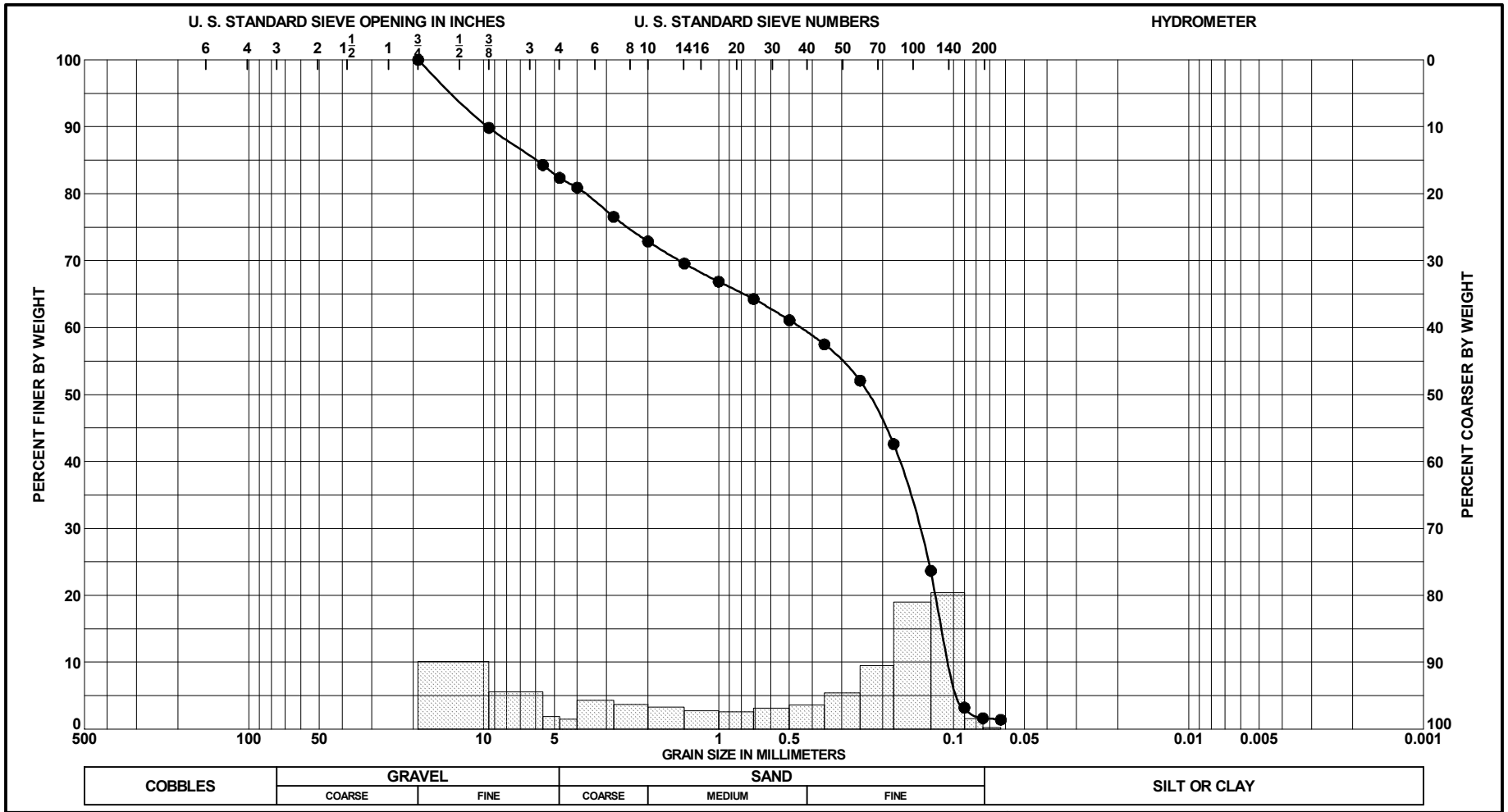
BORING NO. R-139

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● -15	to 0.0 Ft.	SAND, poorly graded, mostly	2.5Y 7/2	42 (est)						
		fine-grained sand-sized quartz, some								
		sand to gravel-sized shell, light gray								
		(SP)								

PROJECT Pinellas County SPP Beach Sampling

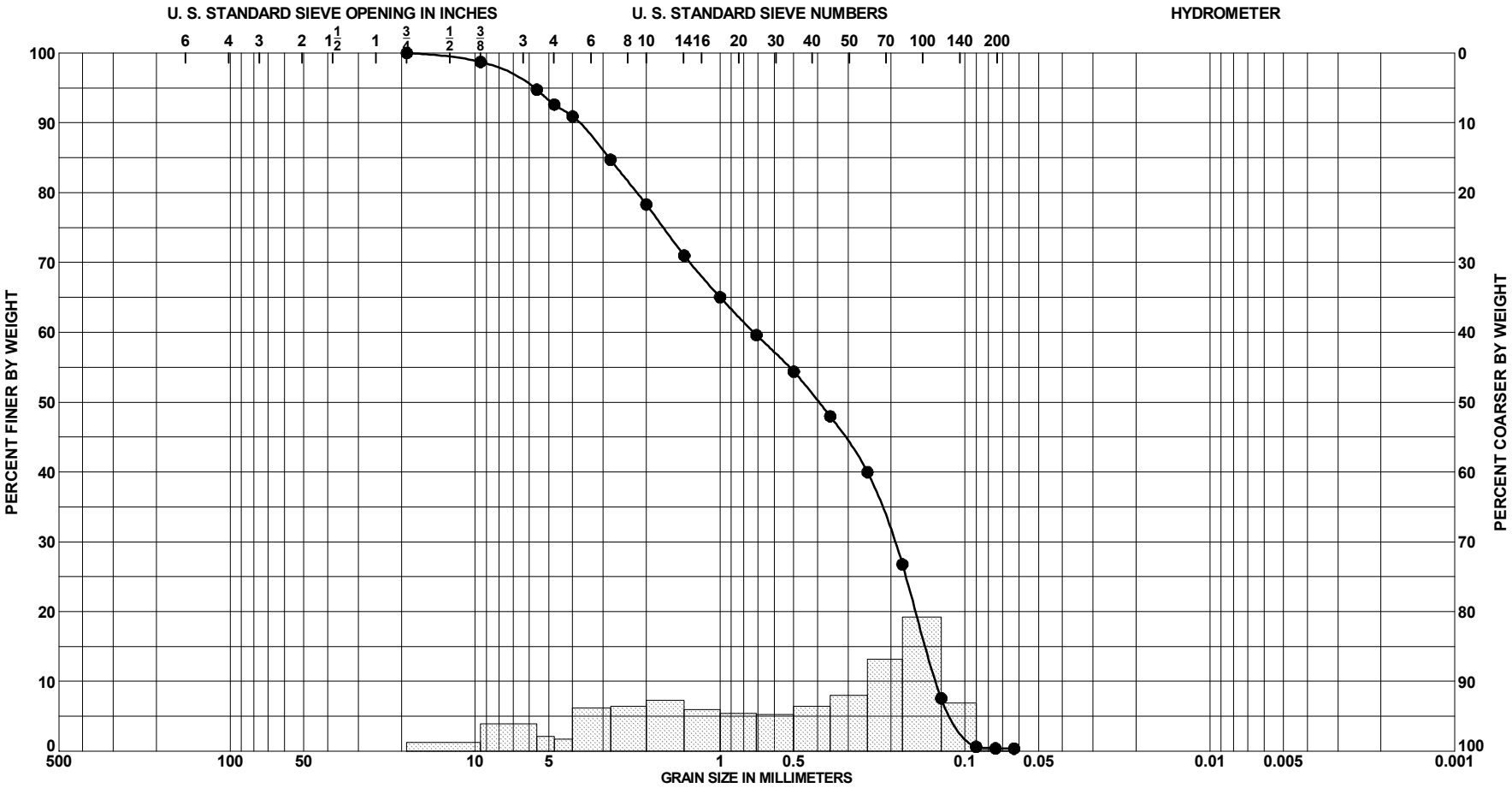
BORING NO. R-139

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02

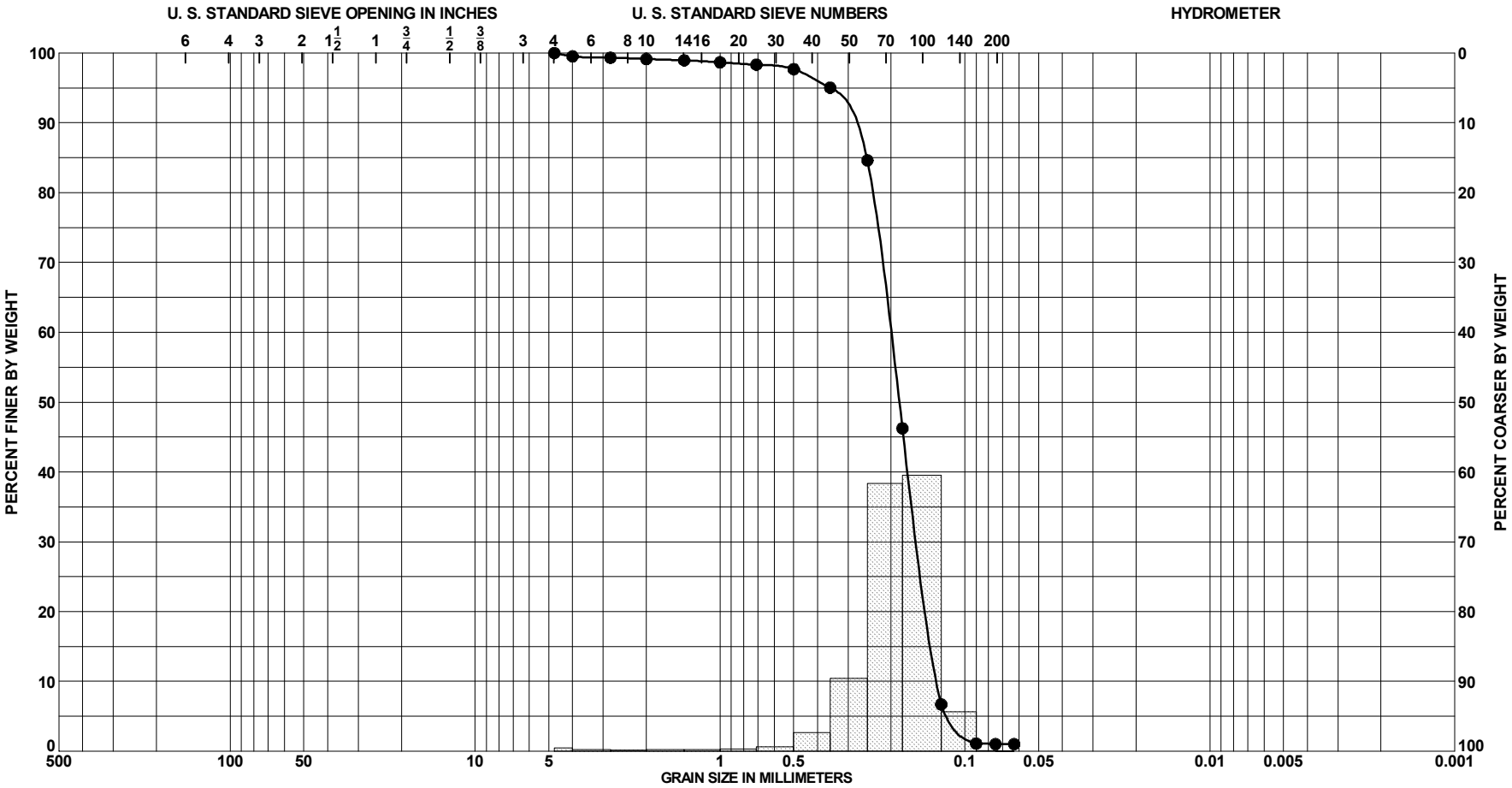


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● Berm	to 0.0 Ft.	SAND, poorly graded, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz, light gray (SP)	2.5Y 7/2	51/48 (est)						

PROJECT	Pinellas County SPP Beach Sampling
BORING NO.	R-144
BORING ELEV.	Not Determined
DATE	9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● Mid-Tide	to 0.0 Ft.	SAND, poorly graded, mostly	10G 8/1	5 (est)						
		fine-grained sand-sized quartz, trace								
		fine to medium-grained sand-sized								
		shell, light greenish gray (SP)								

PROJECT Pinellas County SPP Beach Sampling

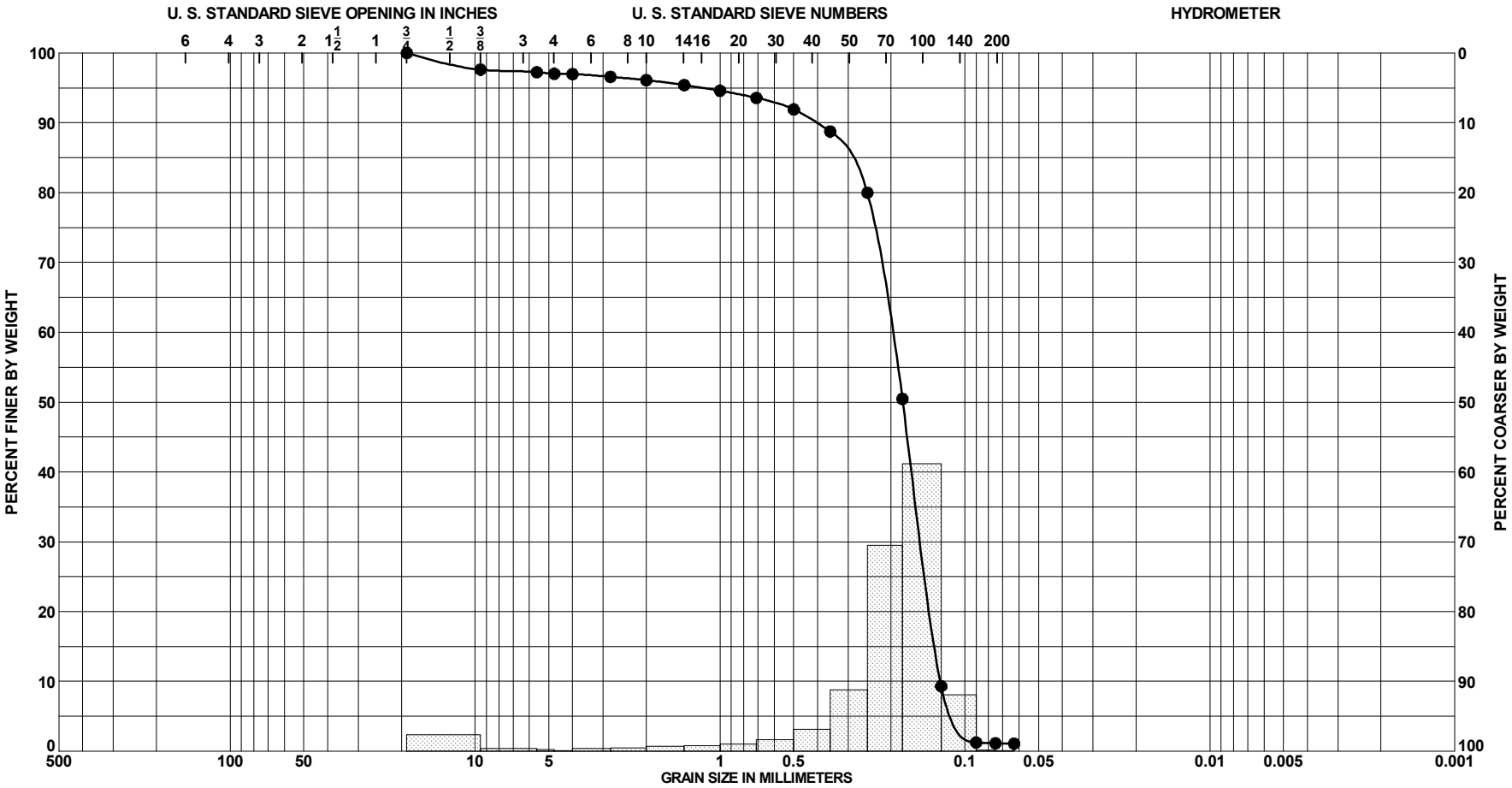
BORING NO. R-144

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02

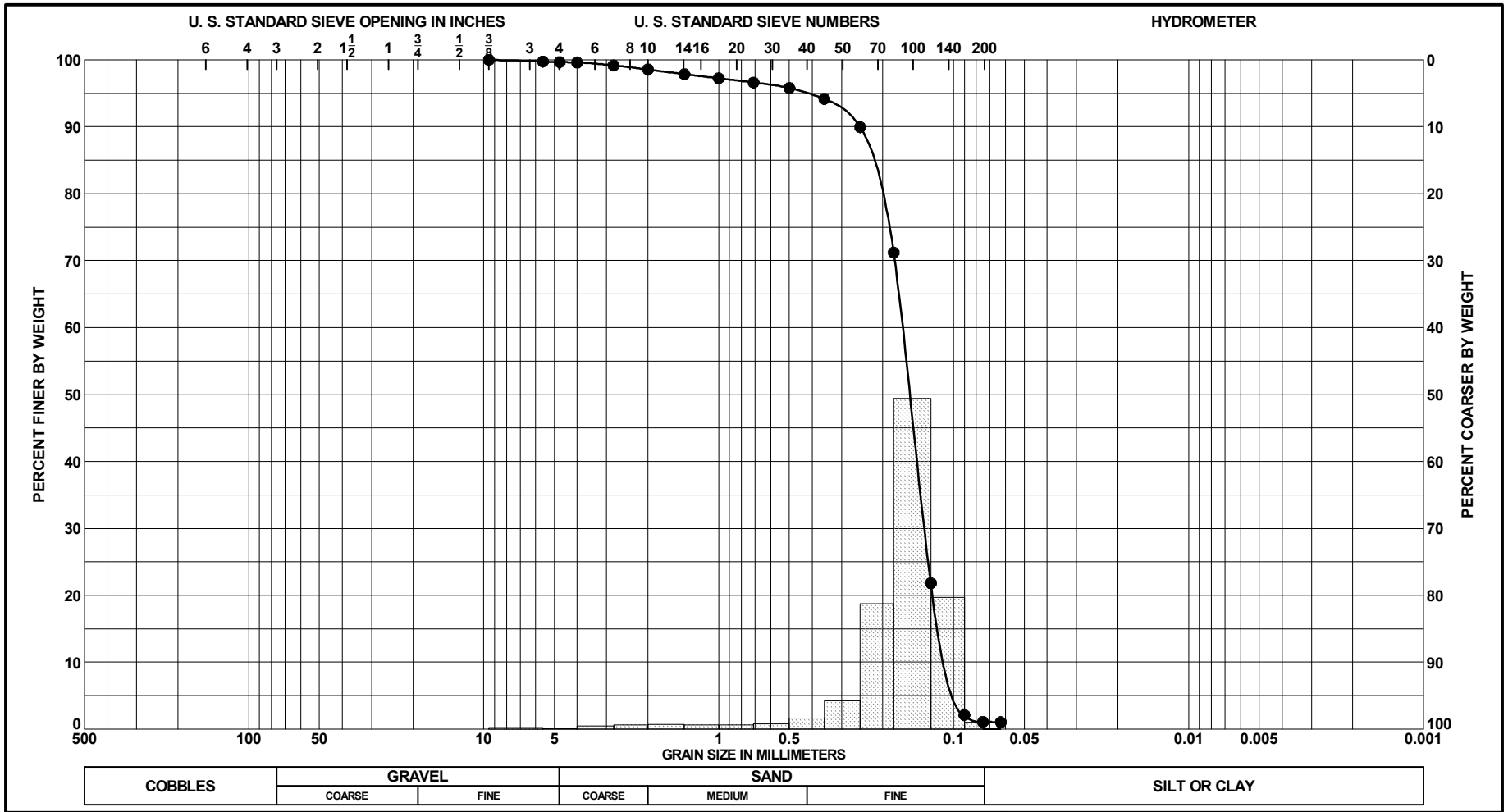


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● -3	to 0.0 Ft.	SAND, poorly graded, mostly fine-grained sand-sized quartz, few sand to gravel-sized shell, light greenish gray (SP)	10G 8/1	12 (est)						

PROJECT	Pinellas County SPP Beach Sampling
BORING NO.	R-144
BORING ELEV.	Not Determined
DATE	9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● -5	to 0.0 Ft.	SAND, poorly graded, mostly	10G 8/1	8 (est)						
		fine-grained sand-sized quartz, few								
		fine to medium-grained sand-sized								
		shell, light greenish gray (SP)								

PROJECT Pinellas County SPP Beach Sampling

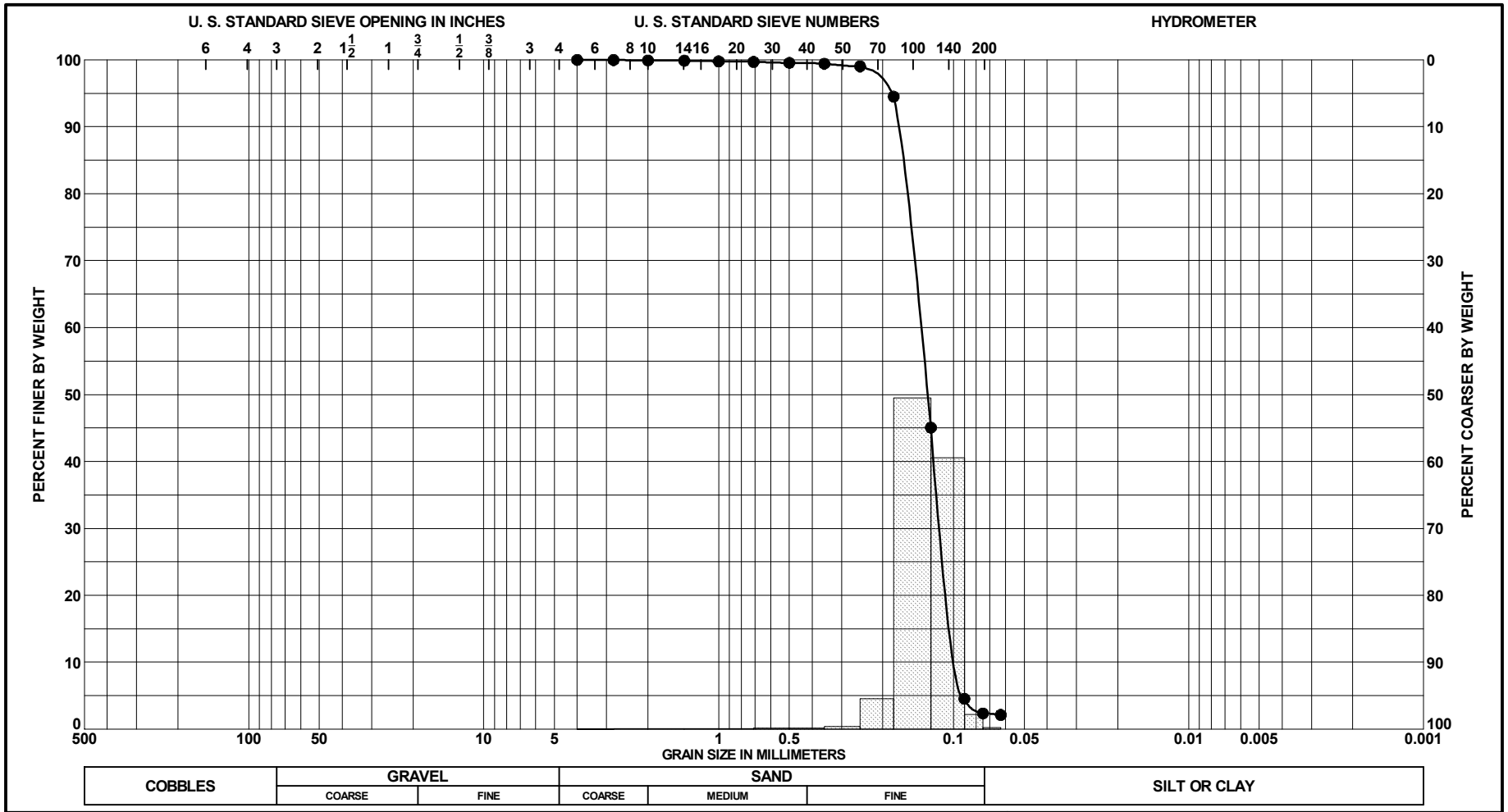
BORING NO. R-144

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● -10	to 0.0 Ft.	SAND, poorly graded, mostly	2.5Y 7/1	6/4 (est)						
		fine-grained sand-sized quartz, trace								
		fine-grained sand-sized shell, light								
		gray (SP)								

PROJECT Pinellas County SPP Beach Sampling

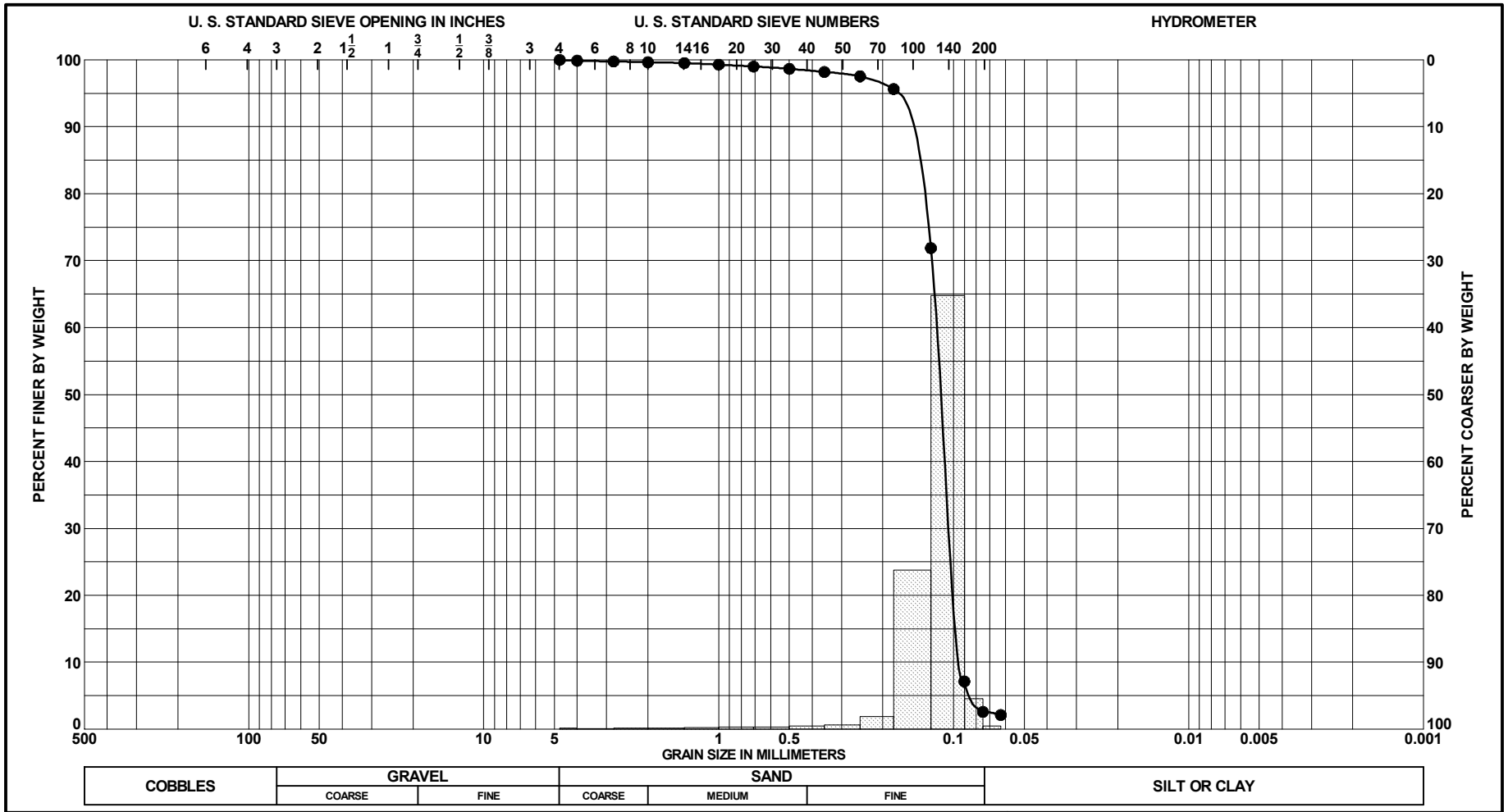
BORING NO. R-144

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02

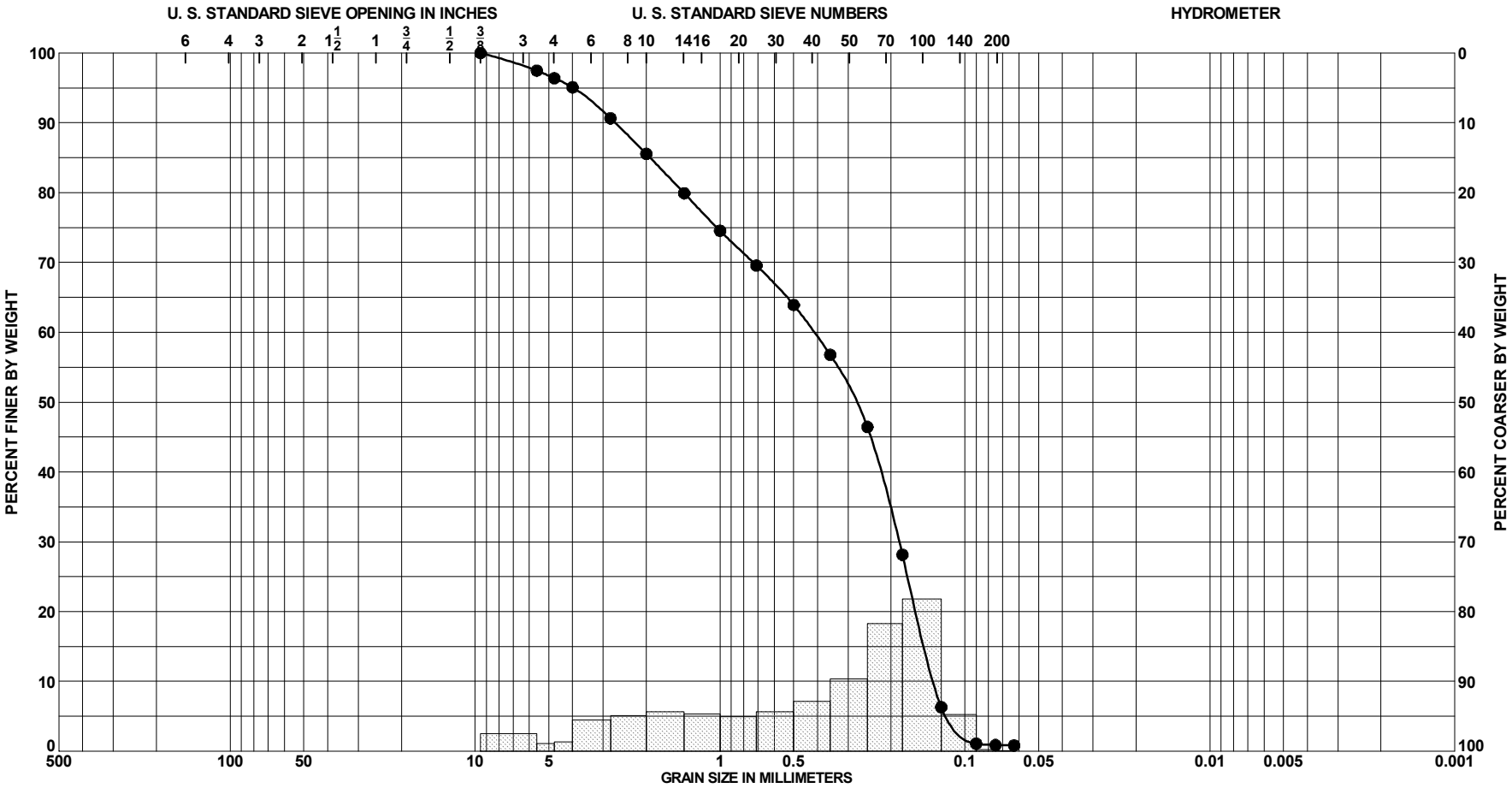


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● -15	to 0.0 Ft.	SAND, poorly graded, mostly	10G 8/1	3 (est)						
		fine-grained sand-sized quartz, trace								
		fine-grained sand-sized shell, light								
		greenish gray (SP)								

PROJECT	Pinellas County SPP Beach Sampling
BORING NO.	R-144
BORING ELEV.	Not Determined
DATE	9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● Dune	to 0.0 Ft.	SAND, poorly graded, mostly	7.5YR 8/1	38 (est)						
		fine-grained sand-sized qiartz, some								
		fine to medium-grained sand-sized								
		shell, white (SP)								

PROJECT Pinellas County SPP Beach Sampling

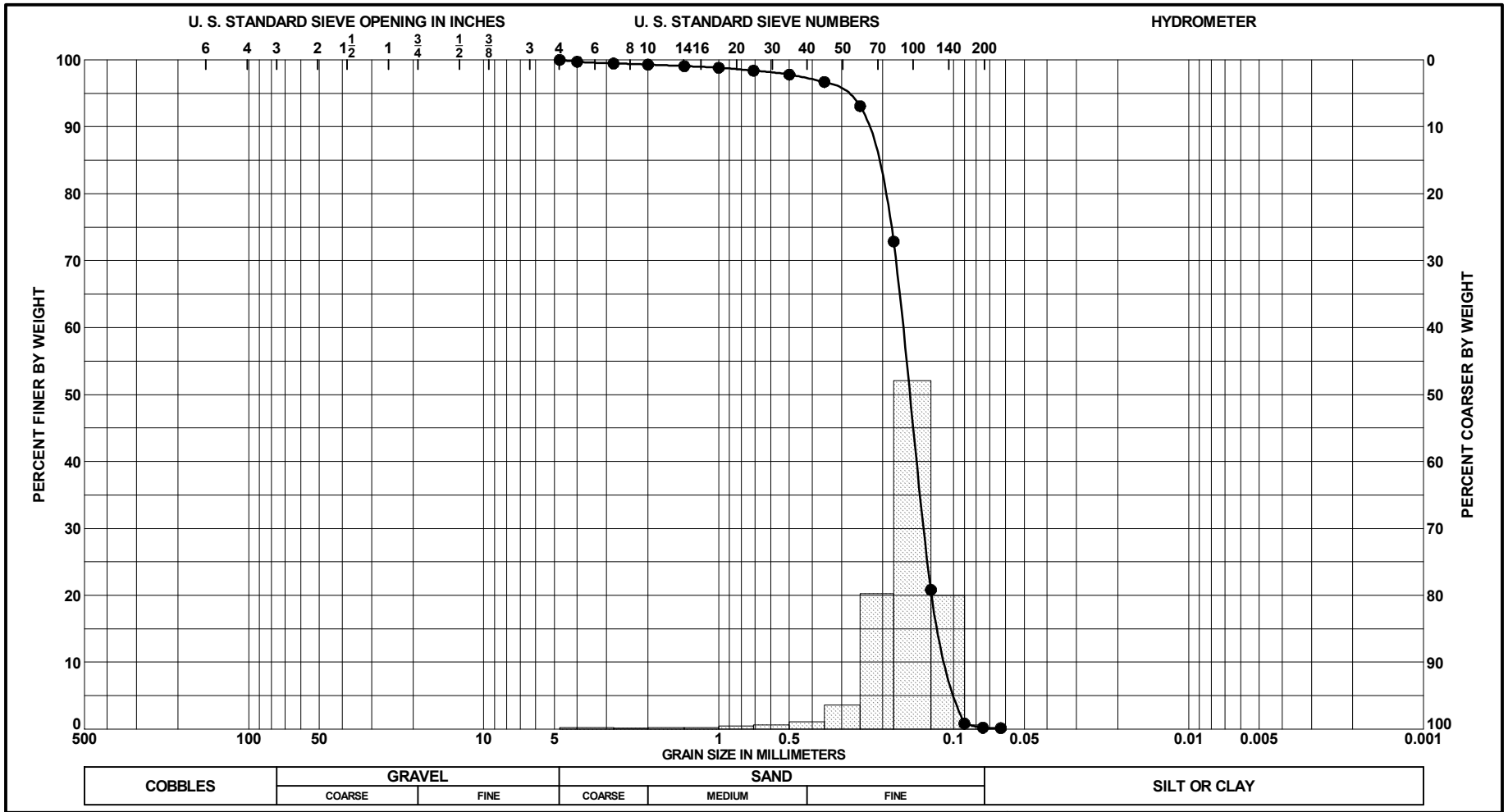
BORING NO. R-146

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● Berm	to 0.0 Ft.	SAND, poorly graded, mostly	7.5YR 8/1	9/7 (est)						
		fine-grained sand-sized quartz, few								
		fine to medium-grained sand-sized								
		quartz, white (SP)								

PROJECT Pinellas County SPP Beach Sampling

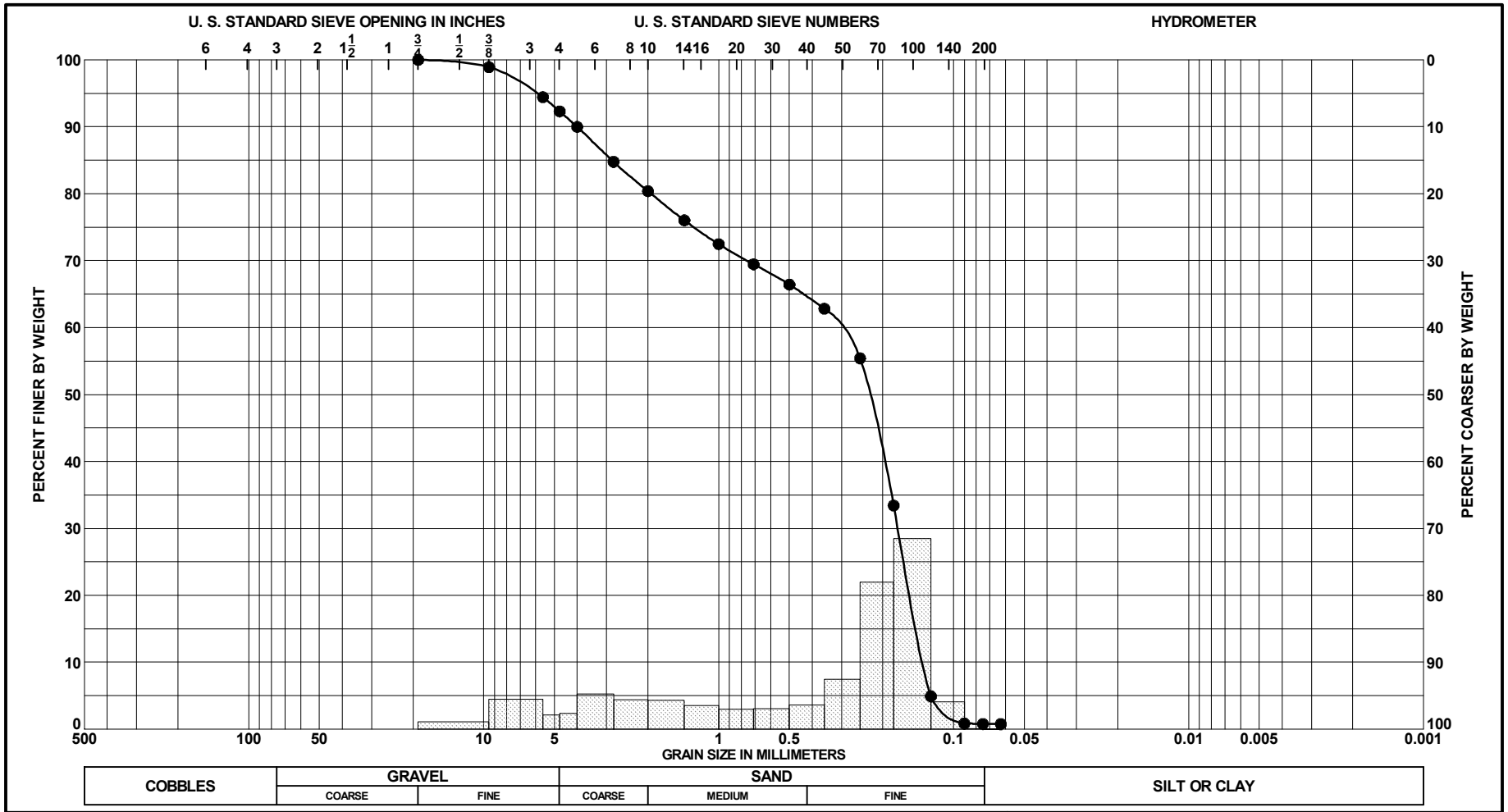
BORING NO. R-146

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02

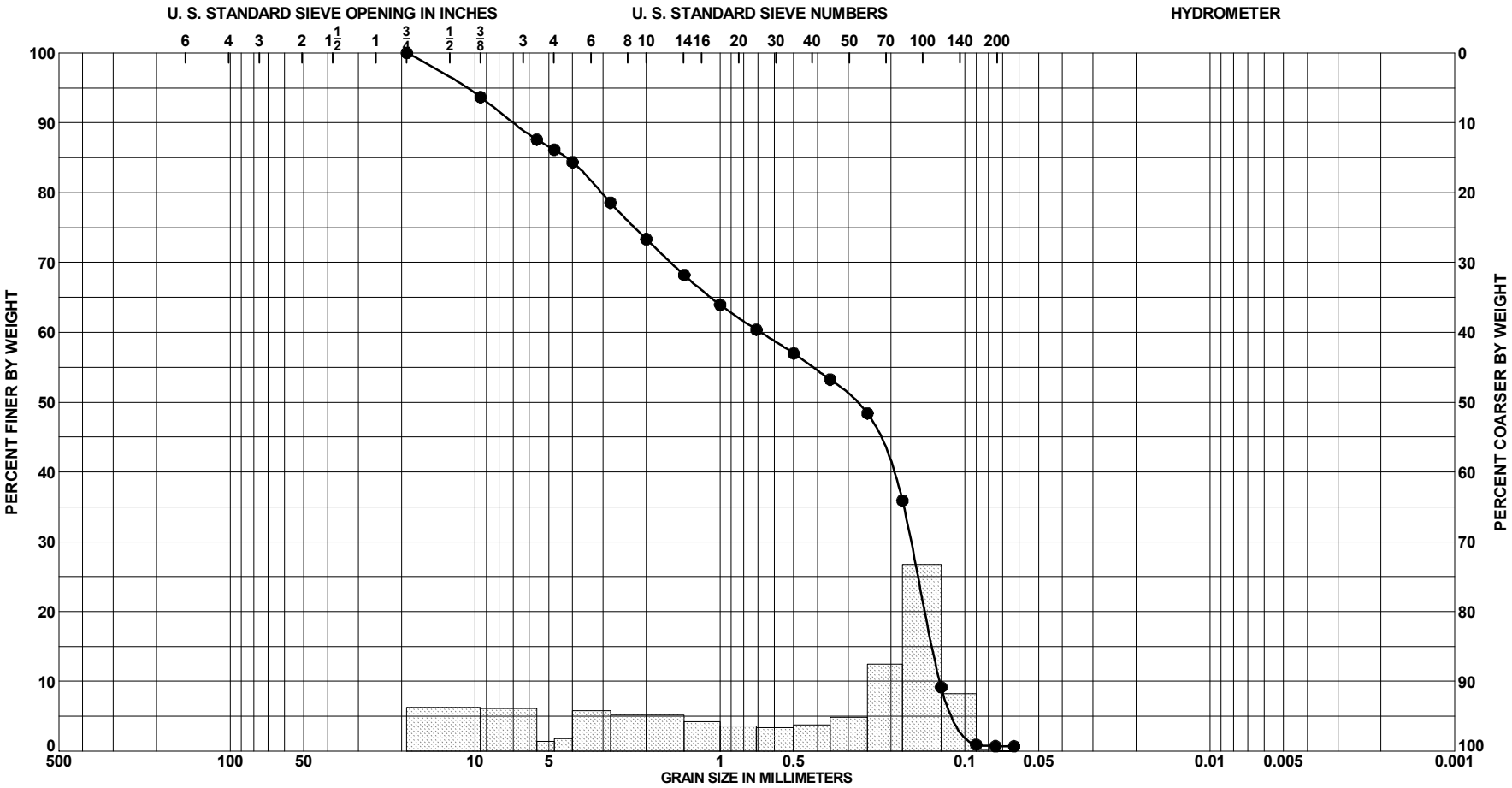


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● Mid-Tide	to 0.0 Ft.	SAND, poorly graded, mostly	2.5YR 8/1	39 (est)						
		fine-grained sand-sized quartz, some								
		sand to gravel-sized shell, white (SP)								

PROJECT	Pinellas County SPP Beach Sampling
BORING NO.	R-146
BORING ELEV.	Not Determined
DATE	9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● -3	to 0.0 Ft.	SAND, poorly graded, mostly	2.5YR 8/1	47 (est)						
		fine-grained sand-sized quartz, some								
		fine to medium-grained sand-sized								
		shell, white (SP)								

PROJECT Pinellas County SPP Beach Sampling

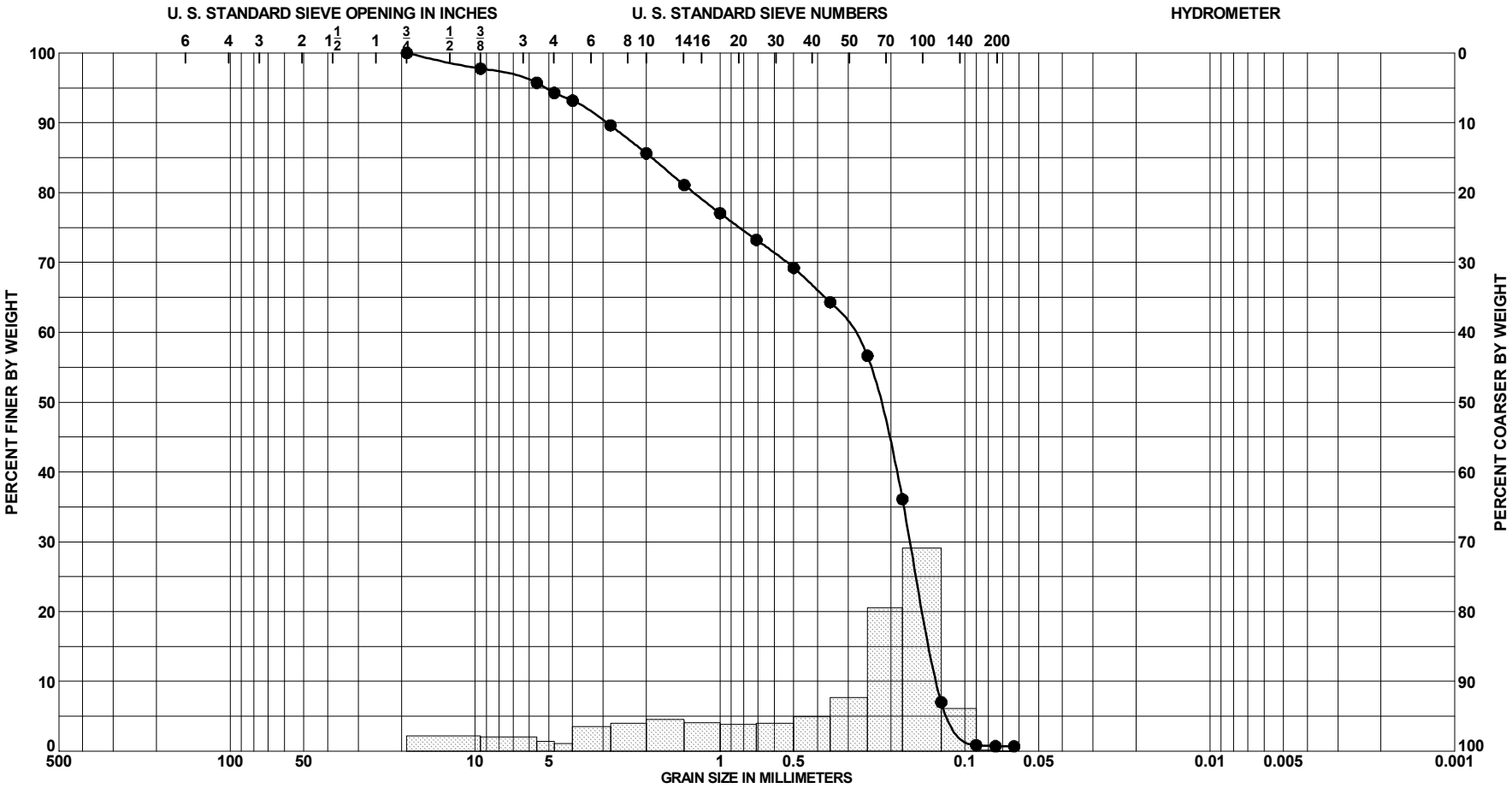
BORING NO. R-146

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02

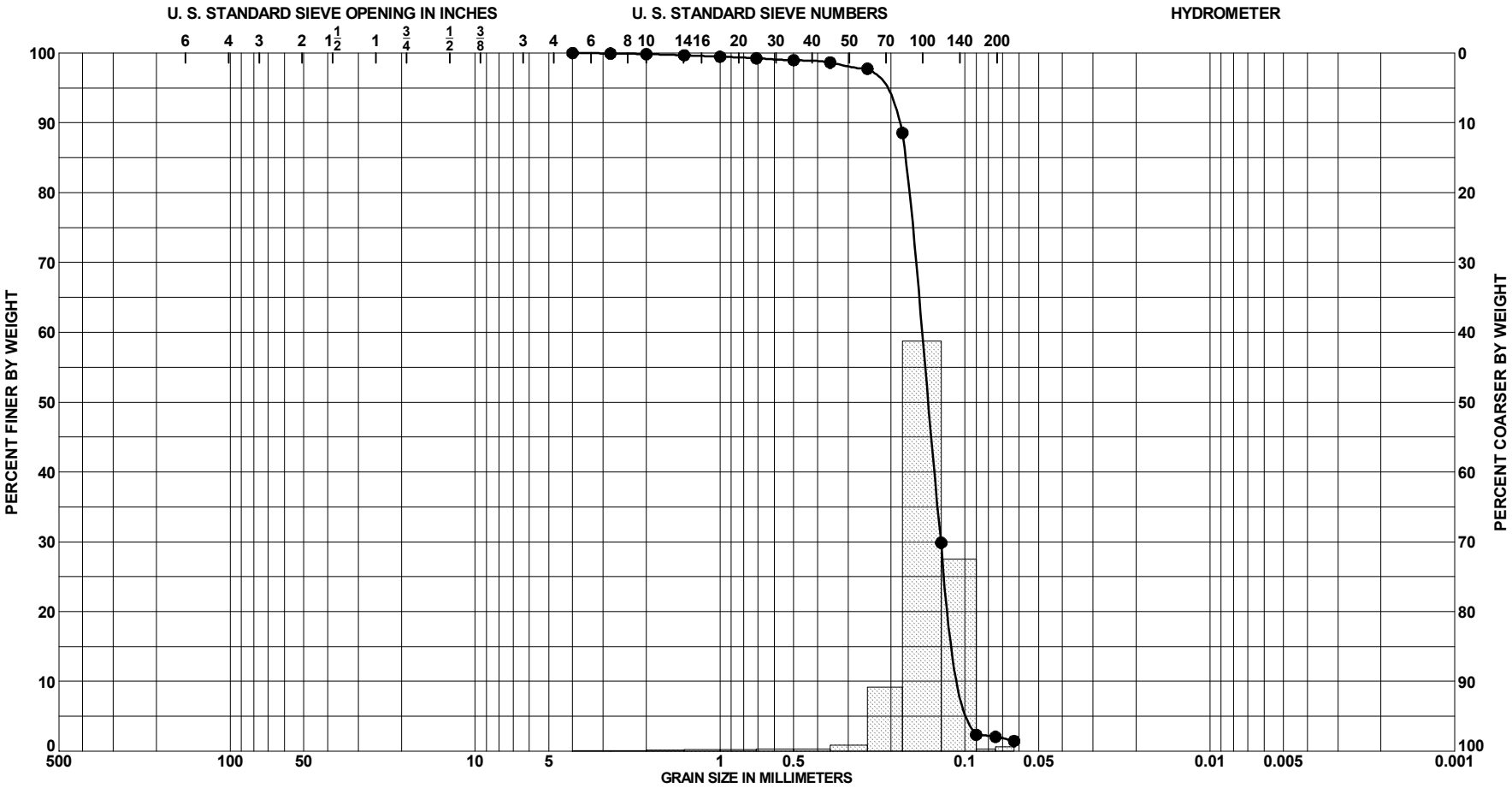


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● -5	to 0.0 Ft.	SAND, poorly graded, mostly	2.5YR 8/1	31 (est)						
		fine-grained sand-sized quartz, some								
		sand to gravel-sized shell, white (SP)								

PROJECT	Pinellas County SPP Beach Sampling
BORING NO.	R-146
BORING ELEV.	Not Determined
DATE	9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● -10	to 0.0 Ft.	SAND, poorly graded, mostly	10G 8/1	7/4 (est)						
		fine-grained sand-sized quartz, trace								
		fine to medium-grained sand-sized								
		shell, light greenish gray (SP)								

PROJECT Pinellas County SPP Beach Sampling

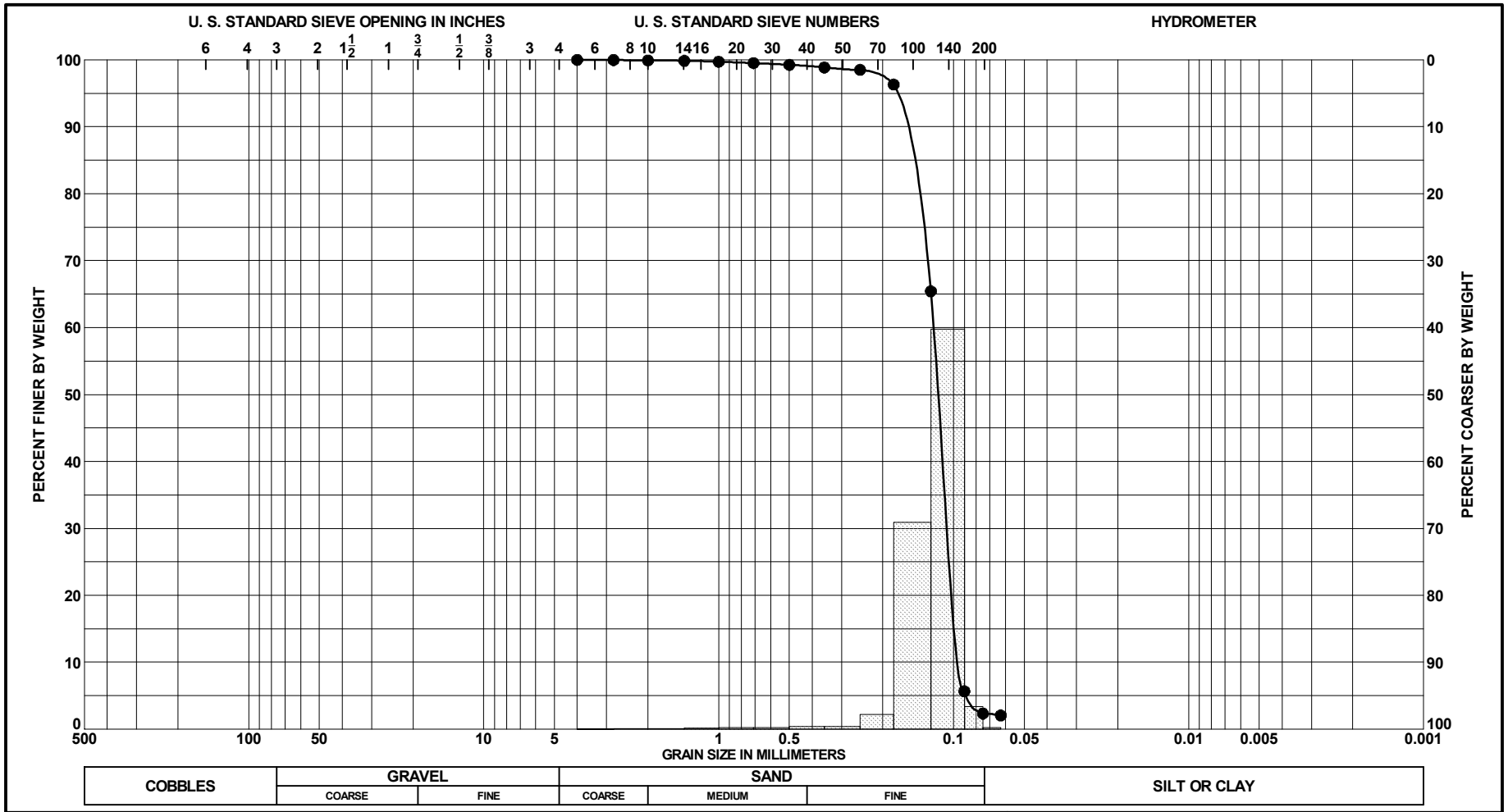
BORING NO. R-146

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● -15	to 0.0 Ft.	SAND, poorly graded, mostly	10G 7/1	2 (est)						
		fine-grained sand-sized quartz, trace								
		fine-grained sand-sized shell, light								
		greenish gray (SP)								

PROJECT Pinellas County SPP Beach Sampling

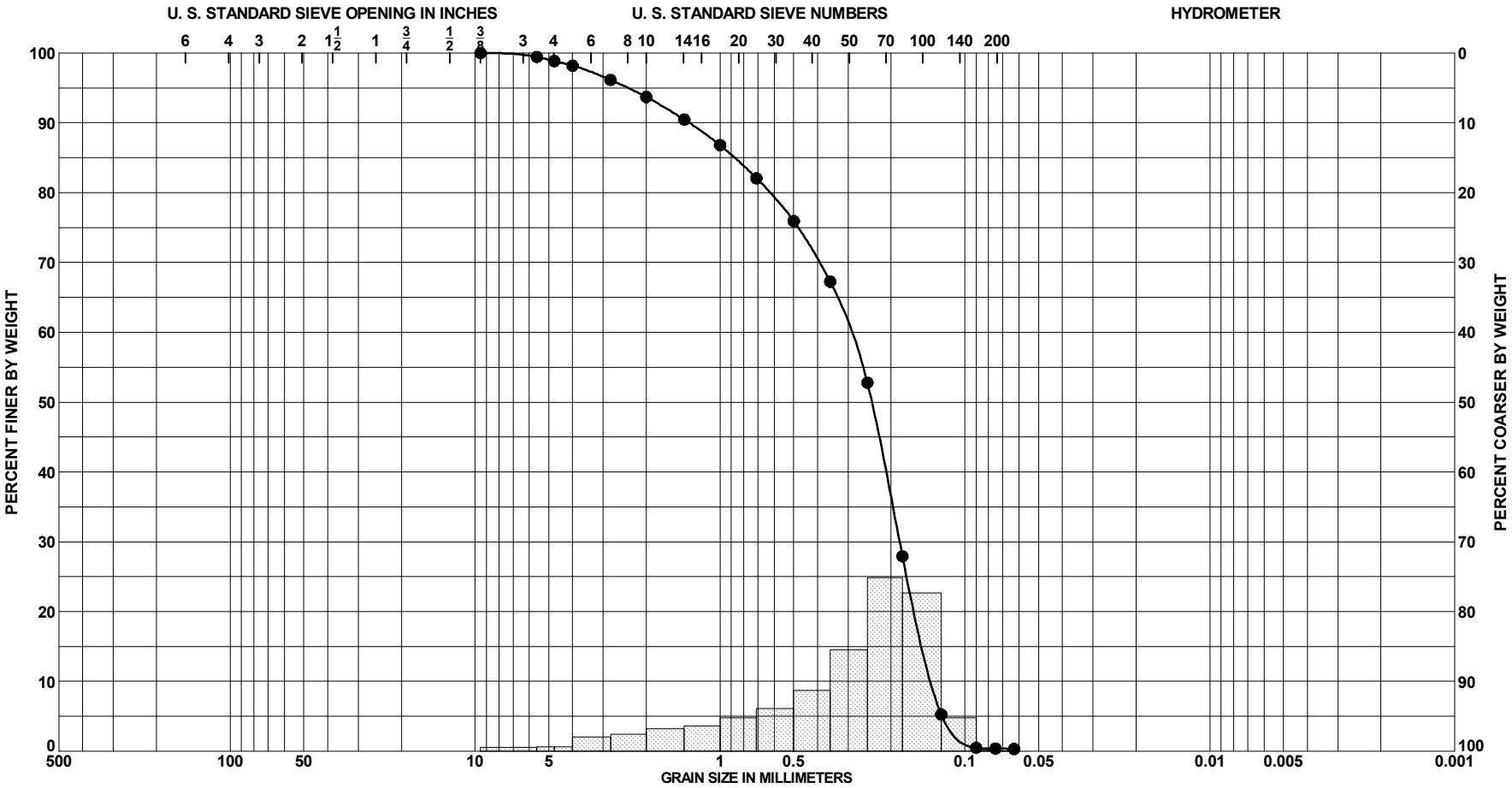
BORING NO. R-146

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● Dune	to 0.0 Ft.	SAND, poorly graded, mostly	2.5Y 8/1	28 (est)						
		fine-grained sand-sized quartz, some								
		fine to medium-grained sand-sized								
		shell, white (SP)								

PROJECT Pinellas County SPP Beach Sampling

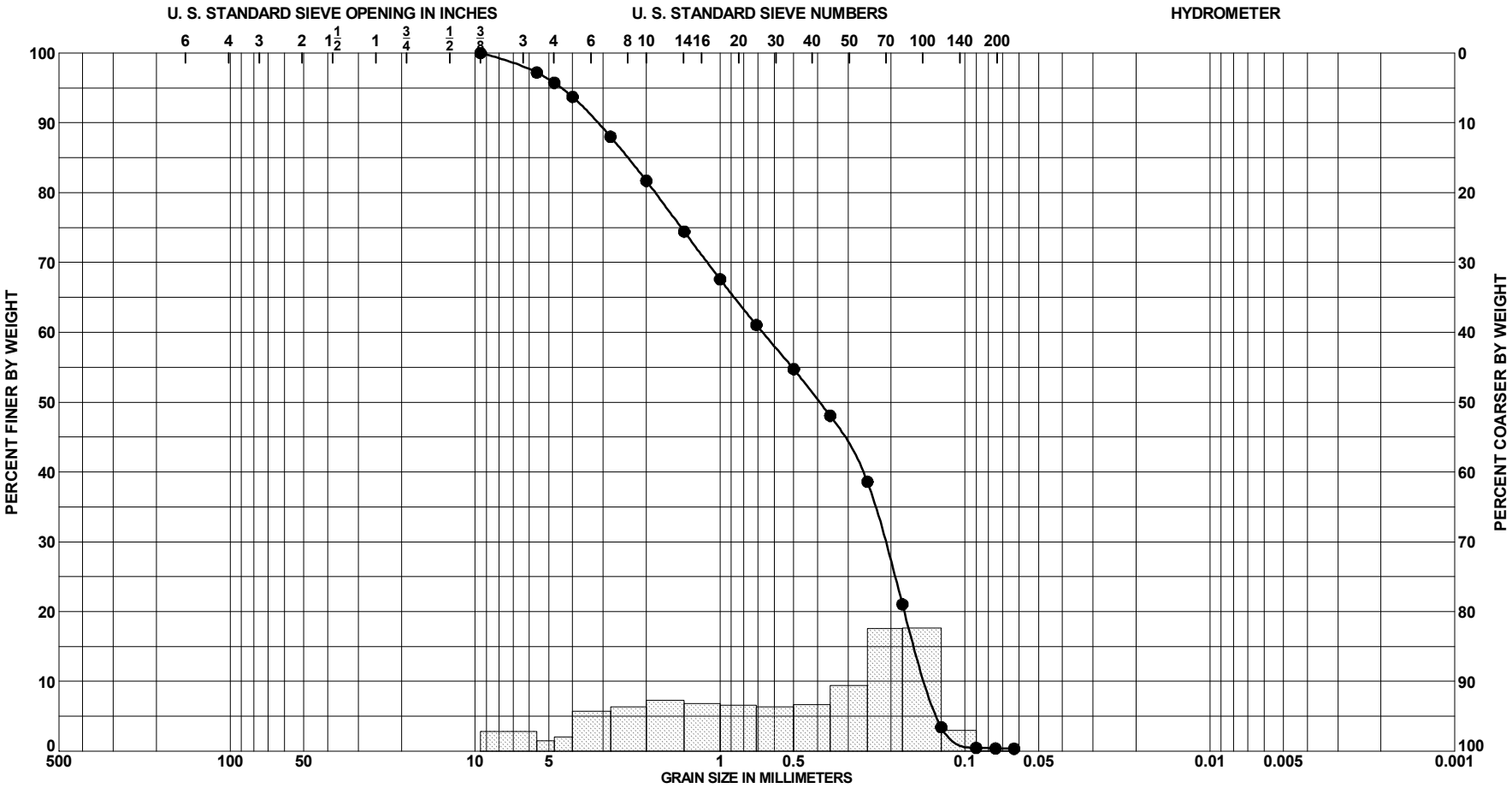
BORING NO. R-150

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02

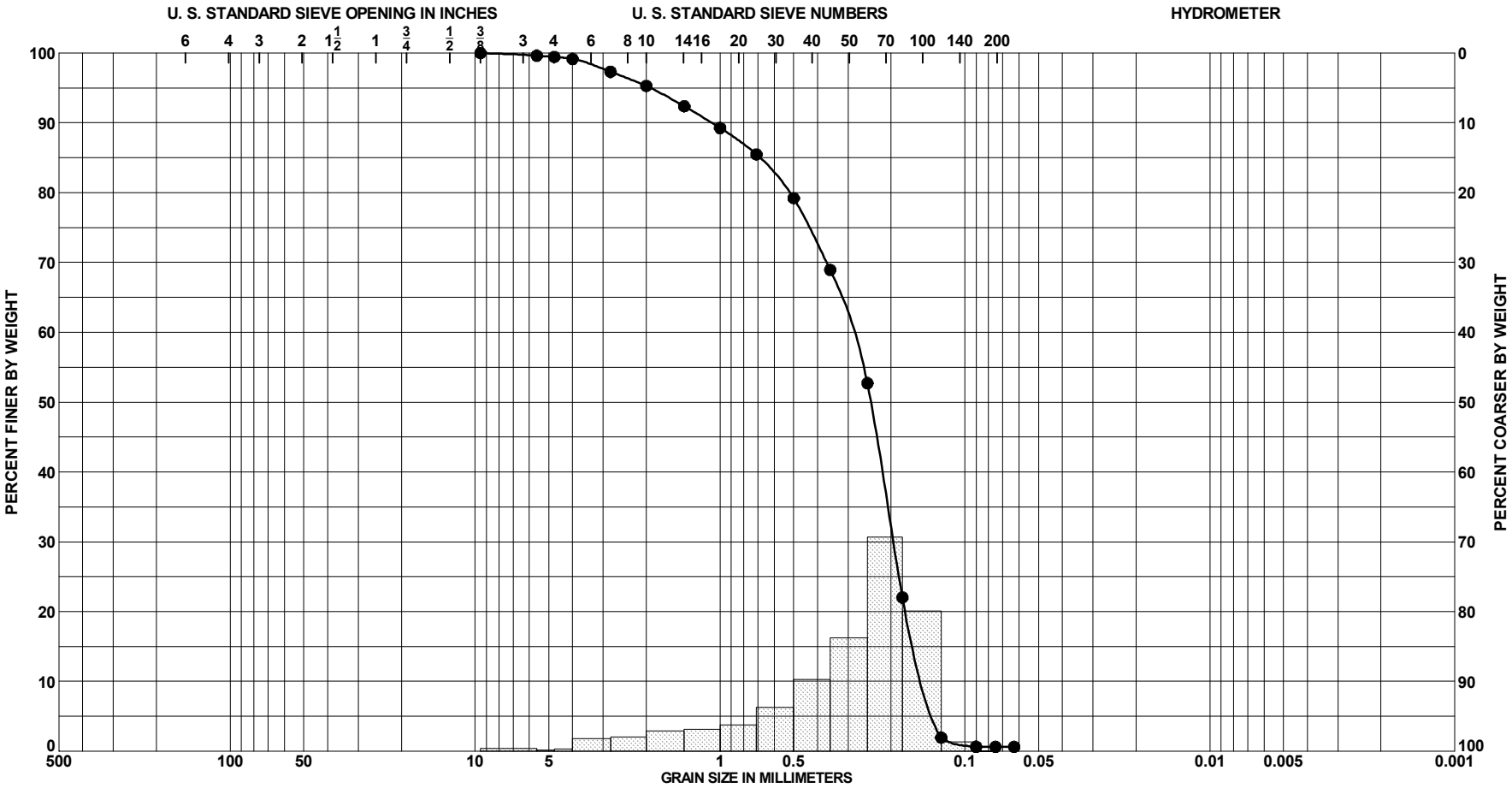


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● Berm	to 0.0 Ft.	SAND, poorly graded, mostly fine to medium-grained sand-sized quartz, some fine to medium-grained sand-sized shell, white (SP)	2.5Y 8/1	52/48 (est)						

PROJECT	Pinellas County SPP Beach Sampling
BORING NO.	R-150
BORING ELEV.	Not Determined
DATE	9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● Mid-Tide	to 0.0 Ft.	SAND, poorly graded, mostly	5Y 7/1	26 (est)						
		fine-grained sand-sized quartz, some								
		fine to medium-grained sand-sized								
		shell, light gray (SP)								

PROJECT Pinellas County SPP Beach Sampling

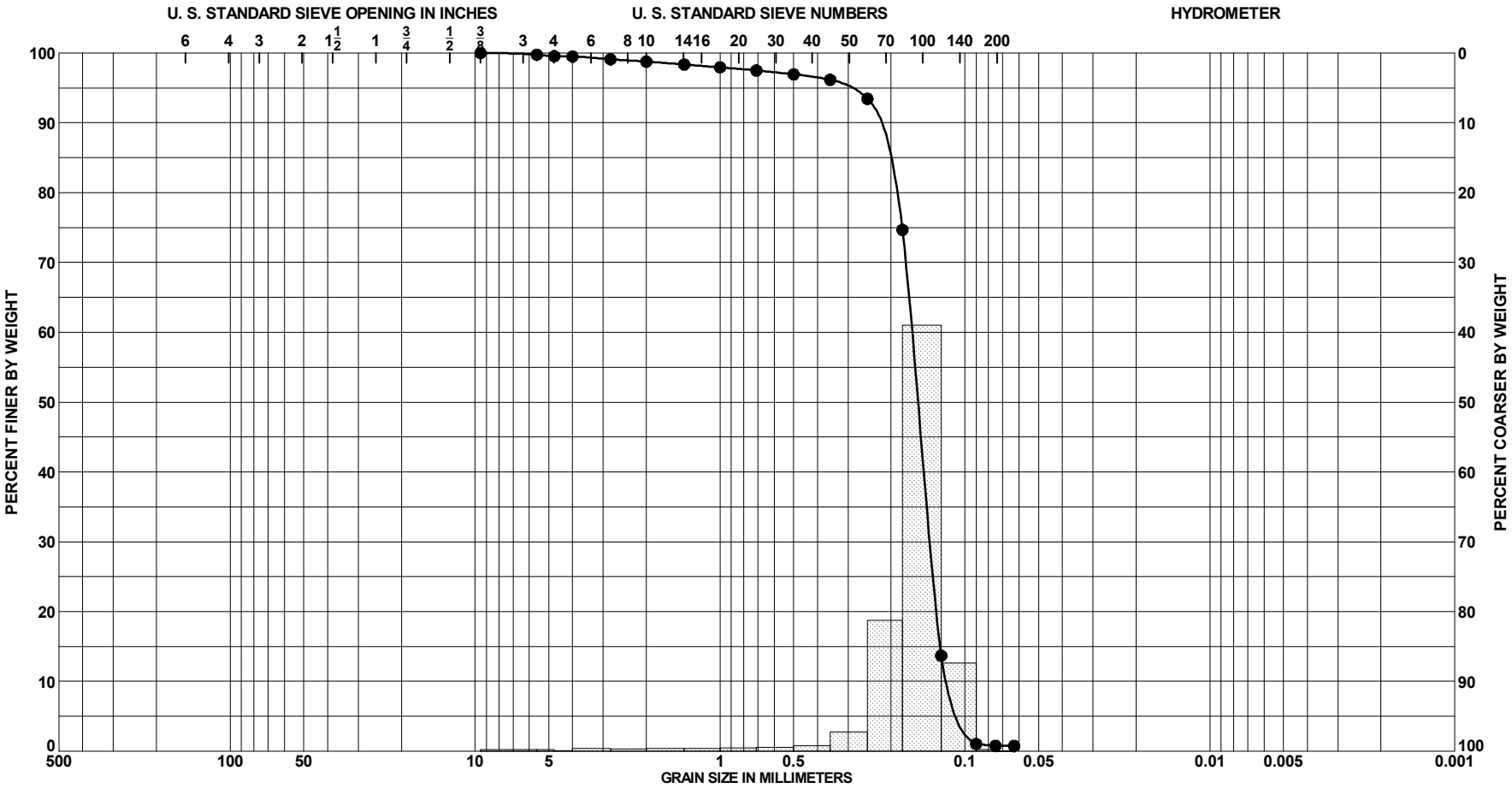
BORING NO. R-150

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02

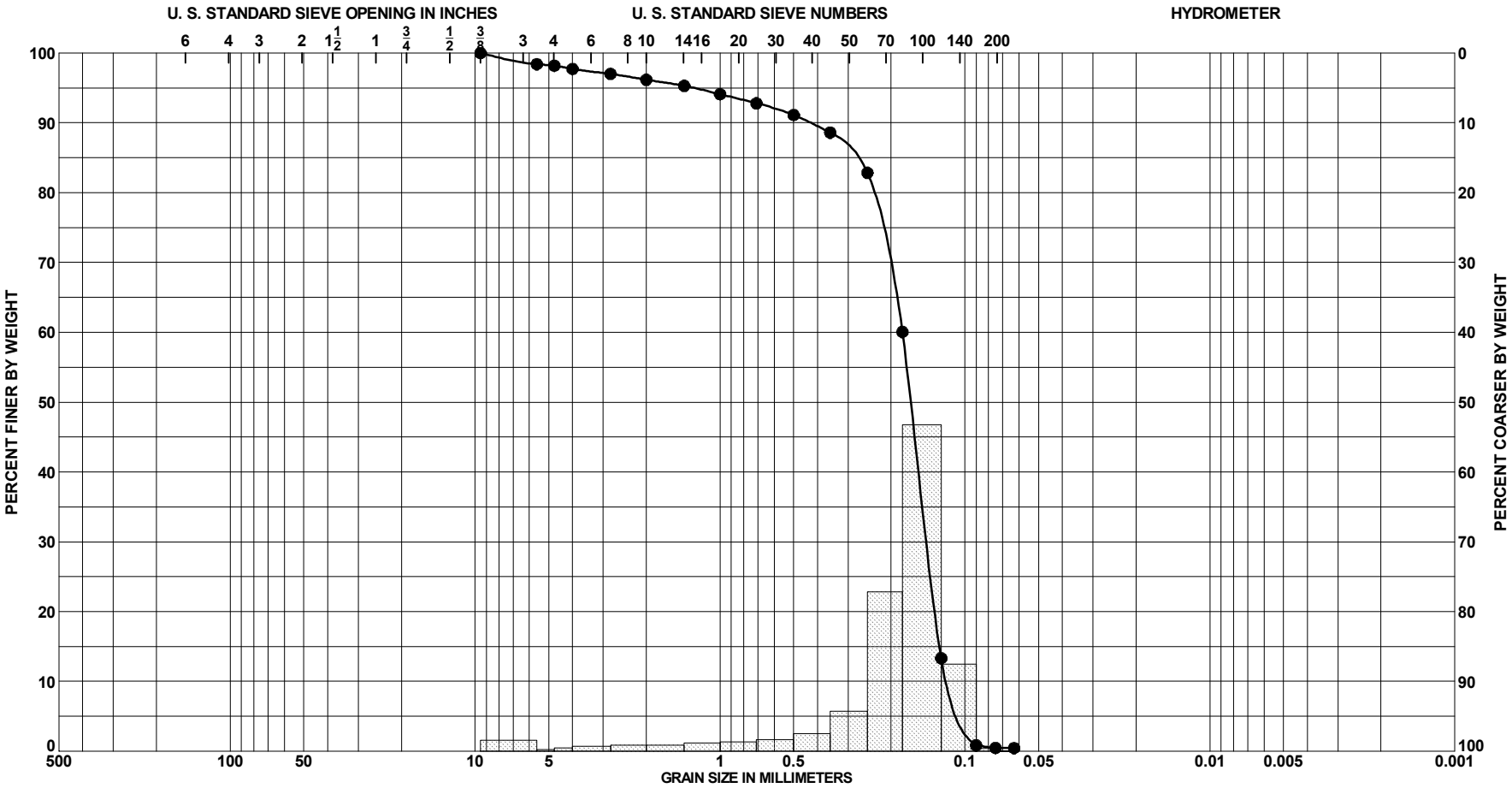


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● -3	to 0.0 Ft.	SAND, poorly graded, mostly	5Y 7/1	4 (est)						
		fine-grained sand-sized quartz, trace								
		fine to medium-grained sand-sized								
		shell, light gray (SP)								

PROJECT	Pinellas County SPP Beach Sampling
BORING NO.	R-150
BORING ELEV.	Not Determined
DATE	9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02

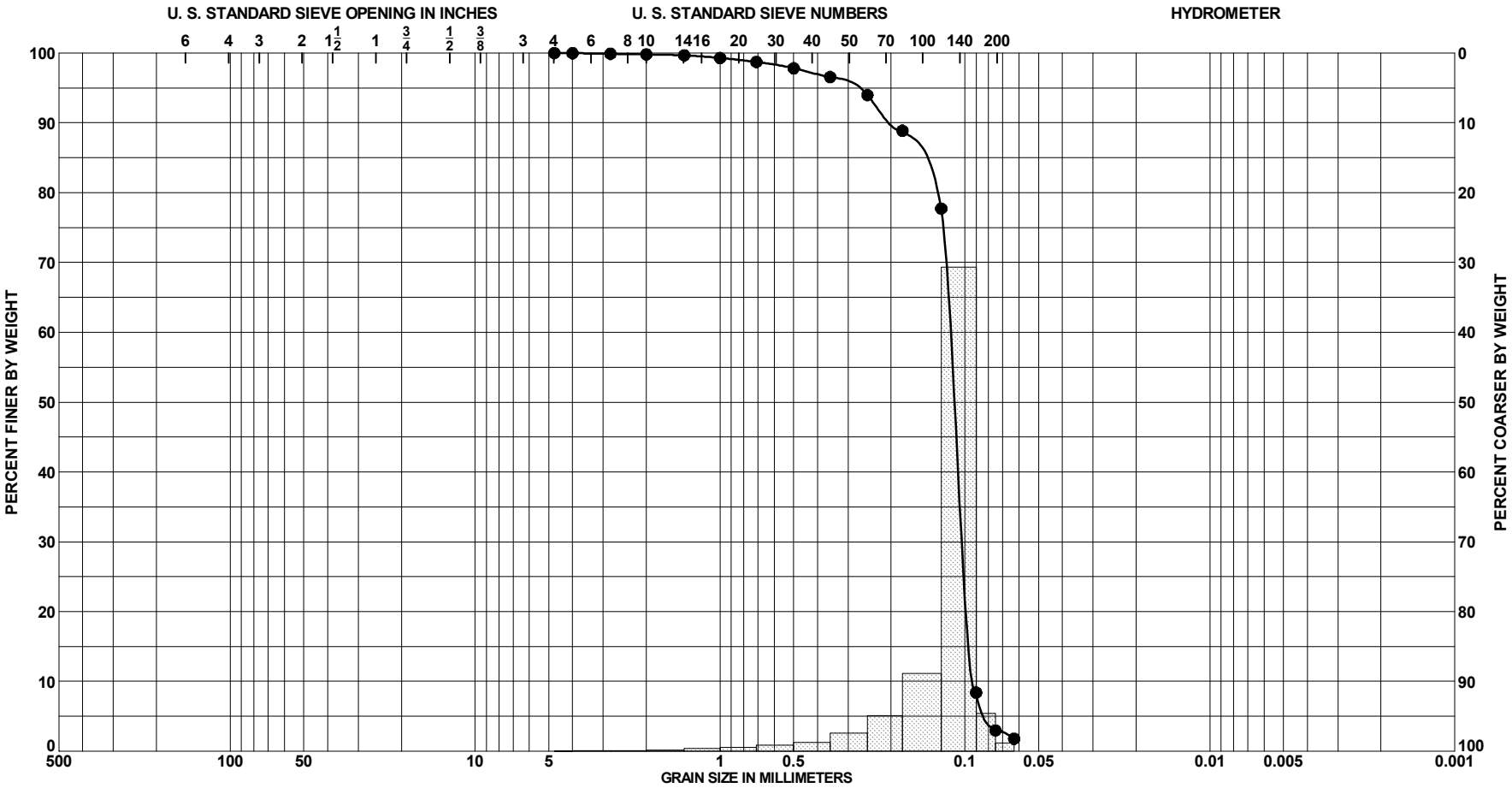


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● -5	to 0.0 Ft.	SAND, poorly graded, mostly fine to medium-grained sand-sized quartz, little fine to medium-grained sand-sized shell, light gray (SP)	5Y 7/1	13 (est)						

PROJECT	Pinellas County SPP Beach Sampling
BORING NO.	R-150
BORING ELEV.	Not Determined
DATE	9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● -10	to 0.0 Ft.	SAND, poorly graded, mostly	2.5Y 6/1	10/14 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium-grained sand-sized								
		shell, gray (SP)								

PROJECT Pinellas County SPP Beach Sampling

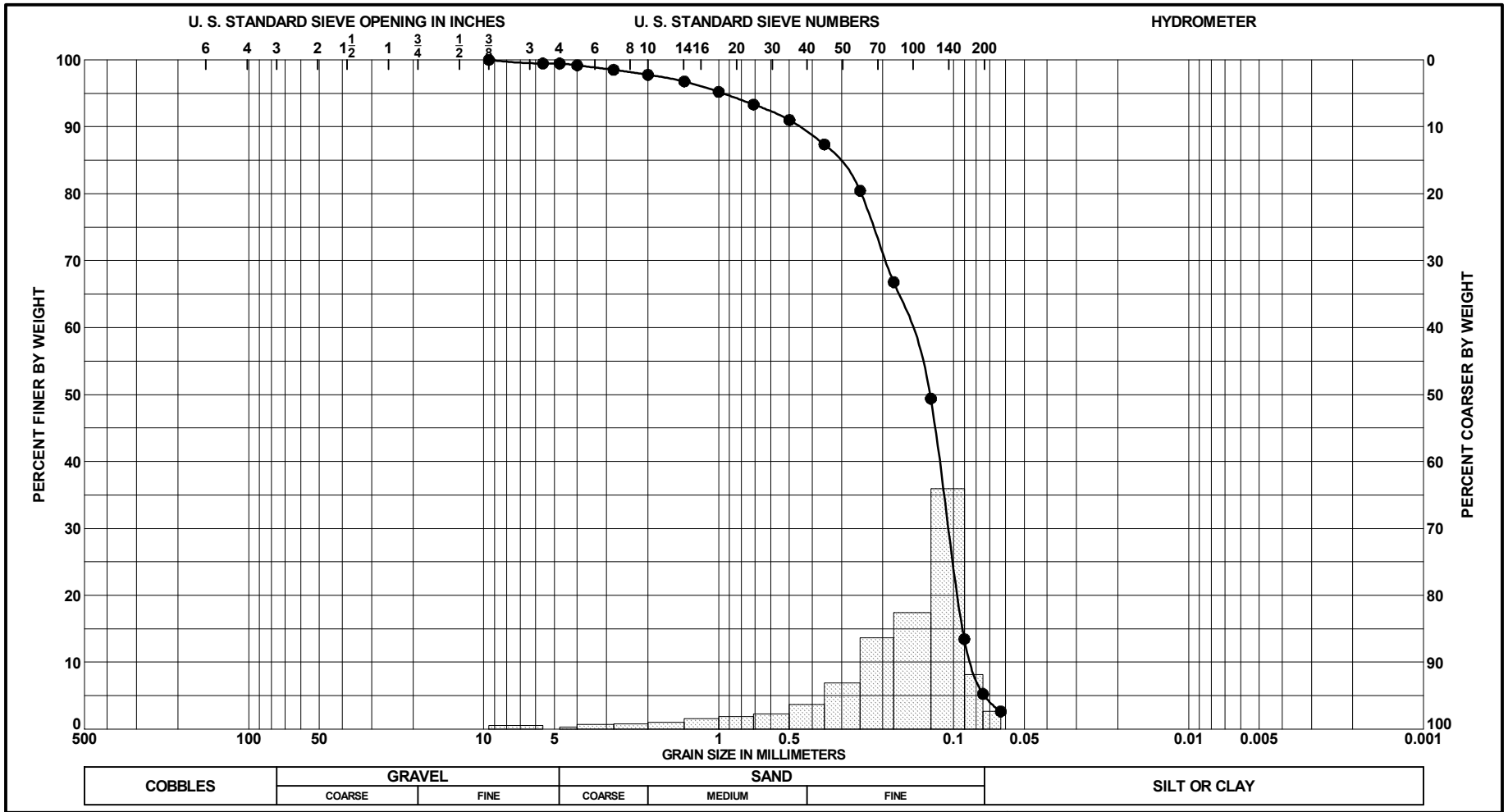
BORING NO. R-150

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● -15	to 0.0 Ft.	SAND, poorly graded, mostly	2.5Y 6/1	12 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium-grained sand-sized								
		shell, gray (SP)								

PROJECT Pinellas County SPP Beach Sampling

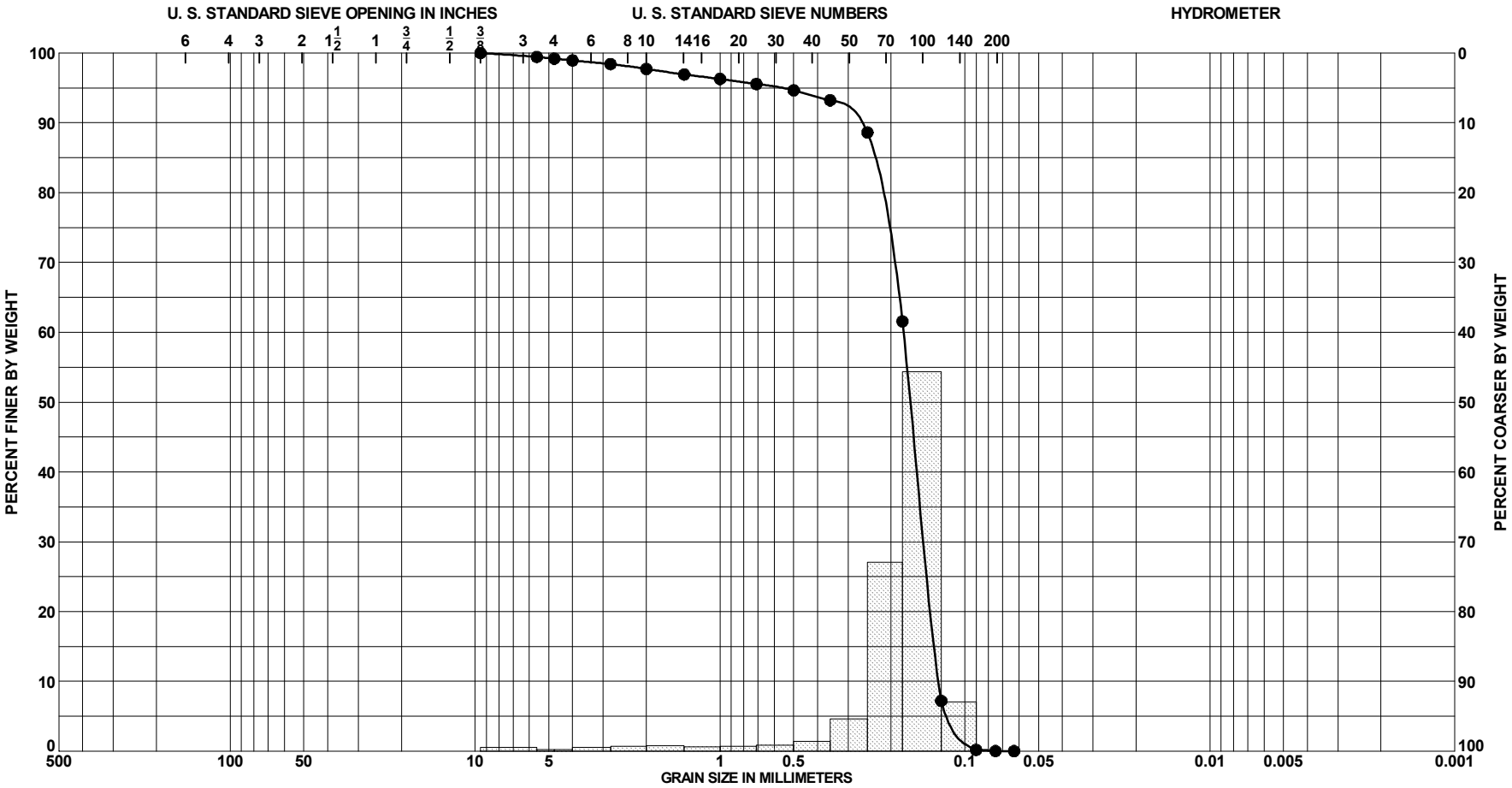
BORING NO. R-150

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● Dune	to 0.0 Ft.	SAND, poorly graded, mostly	2.5Y 8/1	6 (est)						
		fine-grained sand-sized quartz, few								
		fine to medium-grained sand-sized								
		shell, white (SP)								

PROJECT Pinellas County SPP Beach Sampling

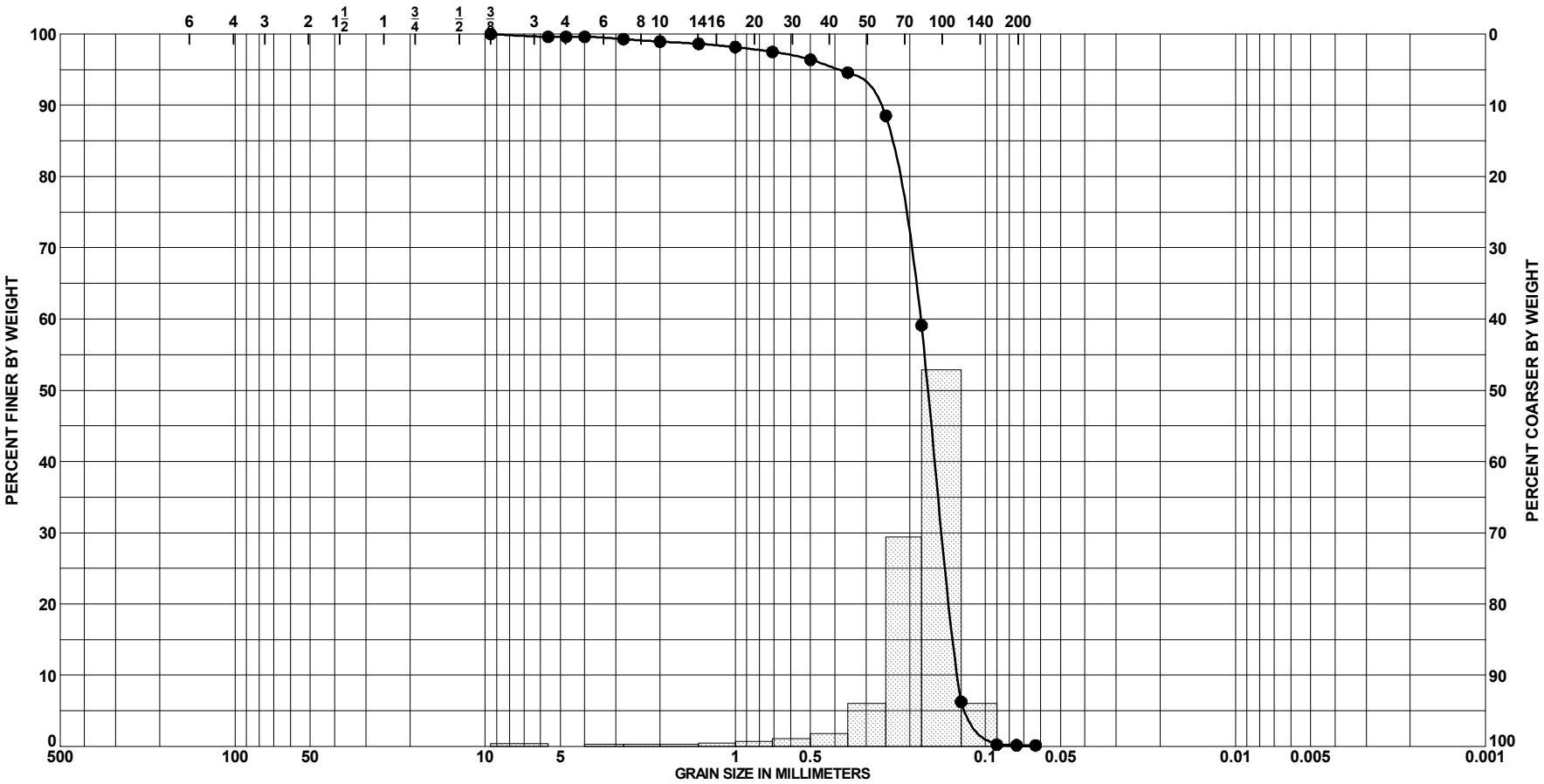
BORING NO. R-154

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● Berm	to 0.0 Ft.	SAND, poorly graded, mostly	2.5Y 8/1	9/5 (est)						
		fine-grained sand-sized quartz, few								
		fine to medium-grained sand-sized								
		shell, white (SP)								

PROJECT Pinellas County SPP Beach Sampling

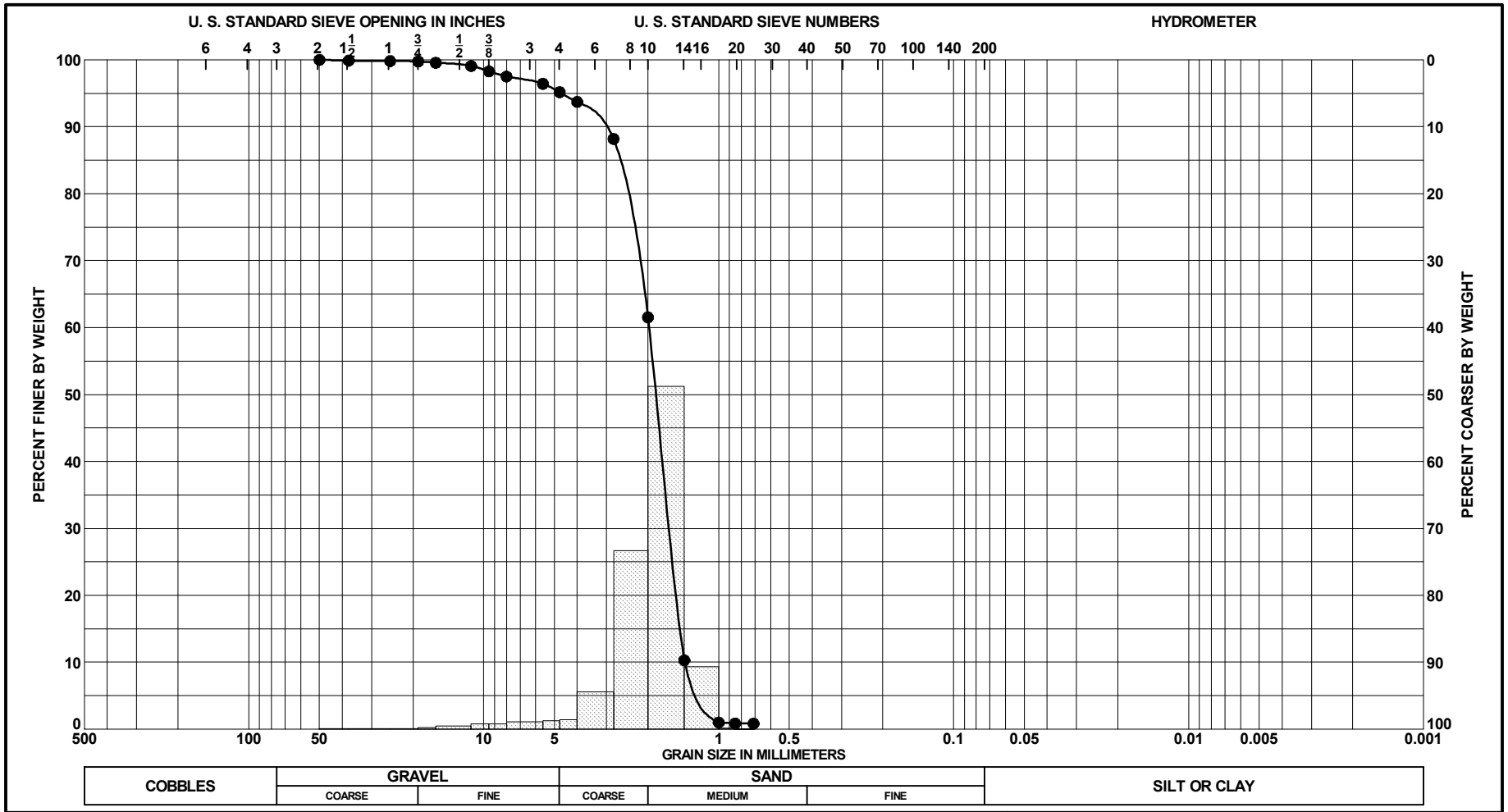
BORING NO. R-154

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● Mid-Tide	to 0.0 Ft.	SAND, poorly graded, mostly	2.5Y 8/1	7 (est)						
		fine-grained sand-sized quartz, few								
		fine to medium-grained sand-sized								
		shell, white (SP)								

PROJECT Pinellas County SPP Beach Sampling

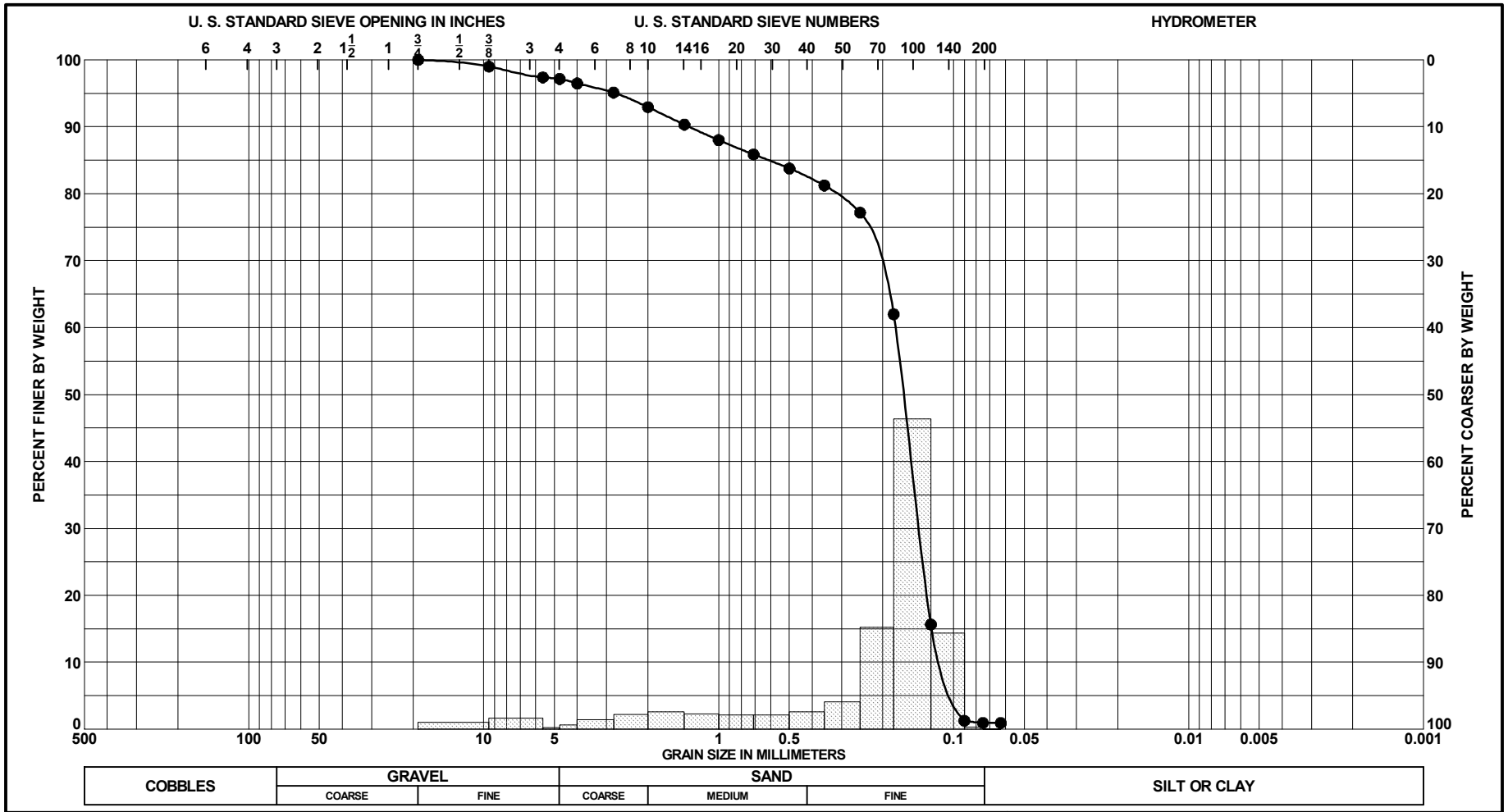
BORING NO. R-154

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02

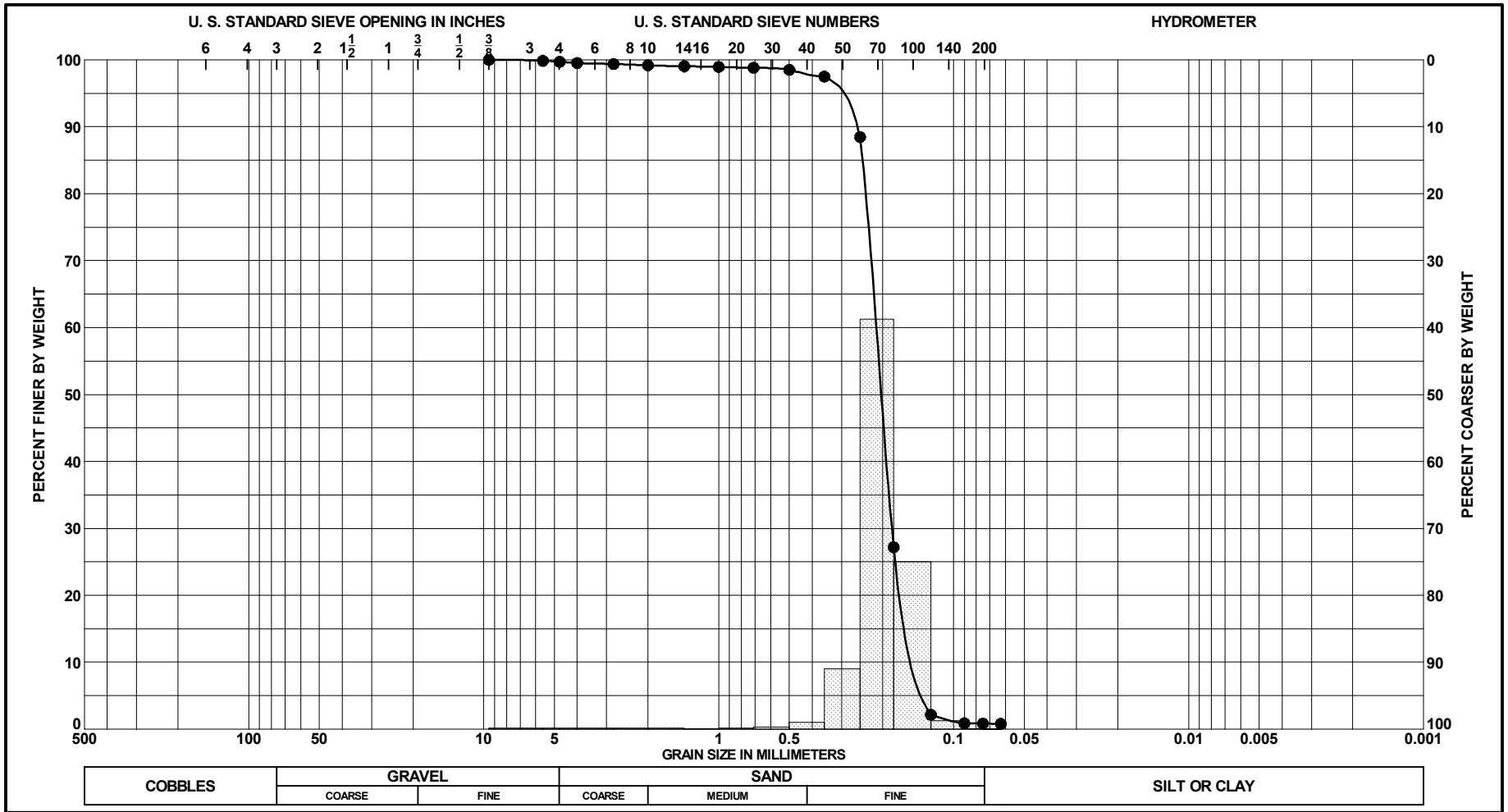


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● -3	to 0.0 Ft.	SAND, poorly graded, mostly fine to medium-grained sand-sized quartz, little fine to medium-grained sand-sized shell, white (SP)	2.5Y 8/1	18 (est)						

PROJECT	Pinellas County SPP Beach Sampling
BORING NO.	R-154
BORING ELEV.	Not Determined
DATE	9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● -5	to 0.0 Ft.	SAND, poorly graded, mostly	2.5Y 8/1	4 (est)						
		fine-grained sand-sized quartz, trace								
		fine to medium-grained sand-sized								
		shell, white (SP)								

PROJECT Pinellas County SPP Beach Sampling

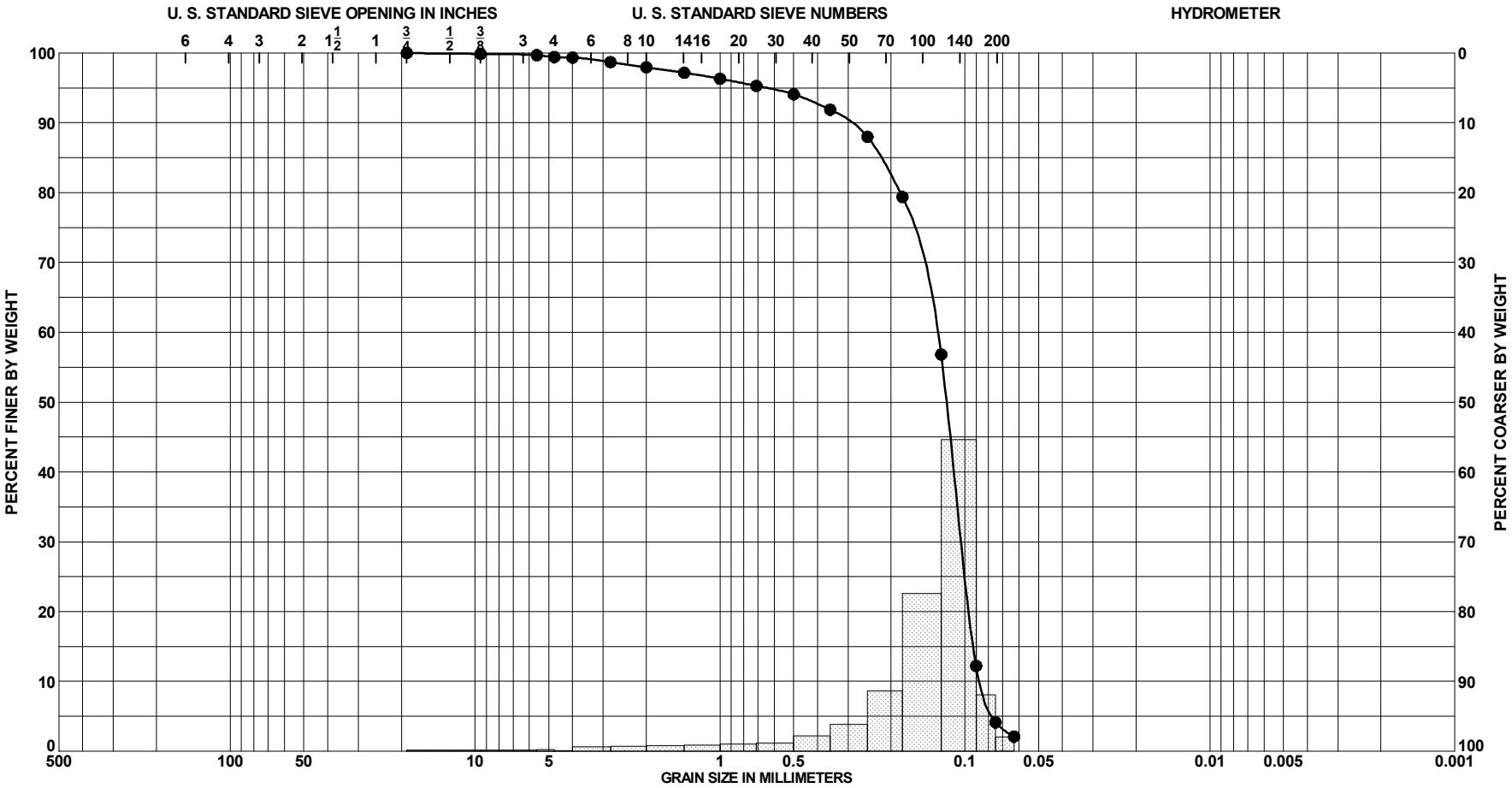
BORING NO. R-154

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● -10	to 0.0 Ft.	SAND, poorly graded, mostly	10G 6/1	14/9 (est)						
		fine-grained sand-sized quartz, few								
		fine to medium-grained sand-sized								
		shell, greenish gray (SP)								

PROJECT Pinellas County SPP Beach Sampling

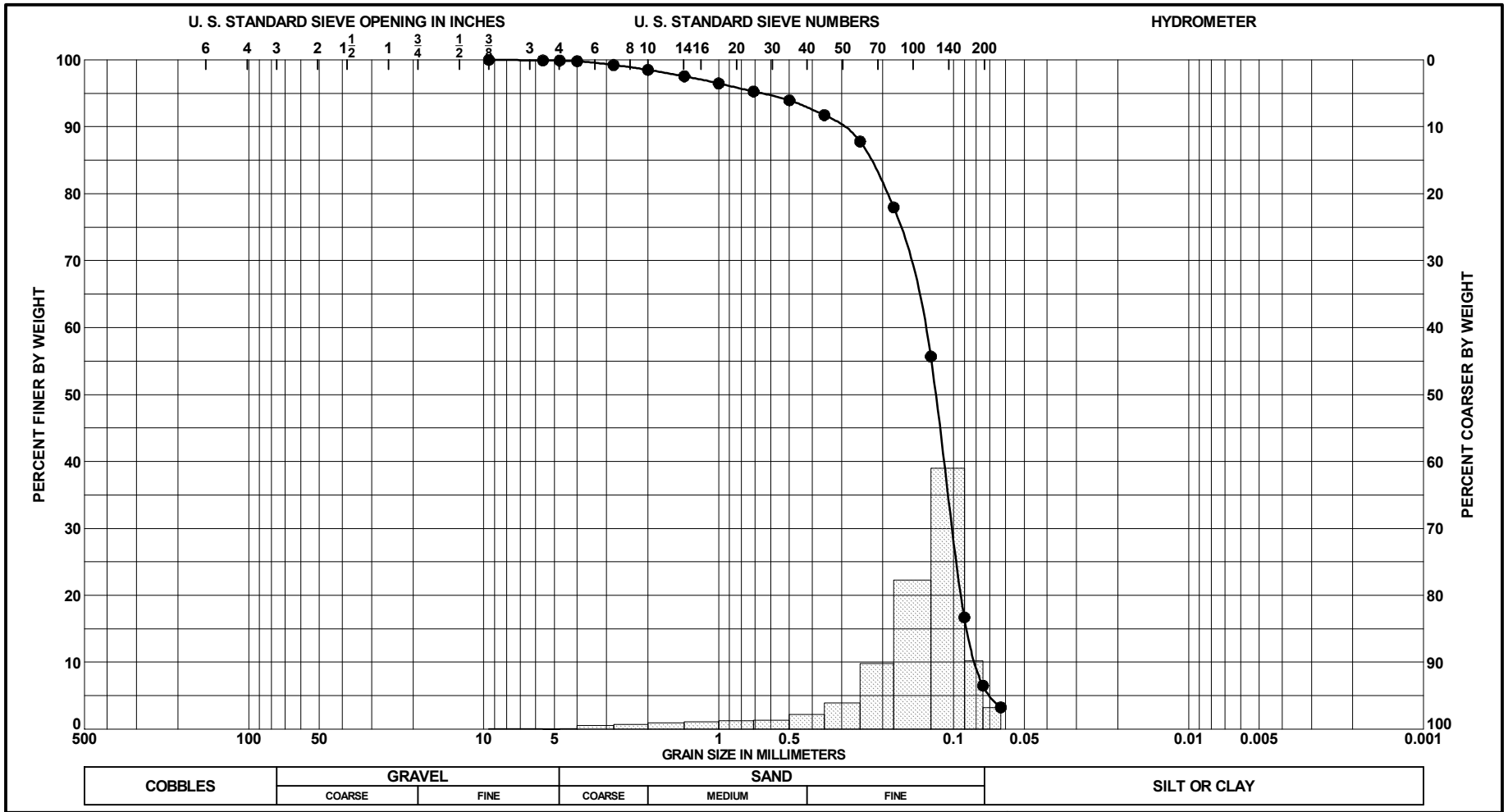
BORING NO. R-154

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● -15	to 0.0 Ft.	SAND, poorly graded, mostly	10G 6/1	10 (est)						
		fine-grained sand-sized quartz, few								
		fine to medium-grained sand-sized								
		shell, greenish gray (SP)								

PROJECT Pinellas County SPP Beach Sampling

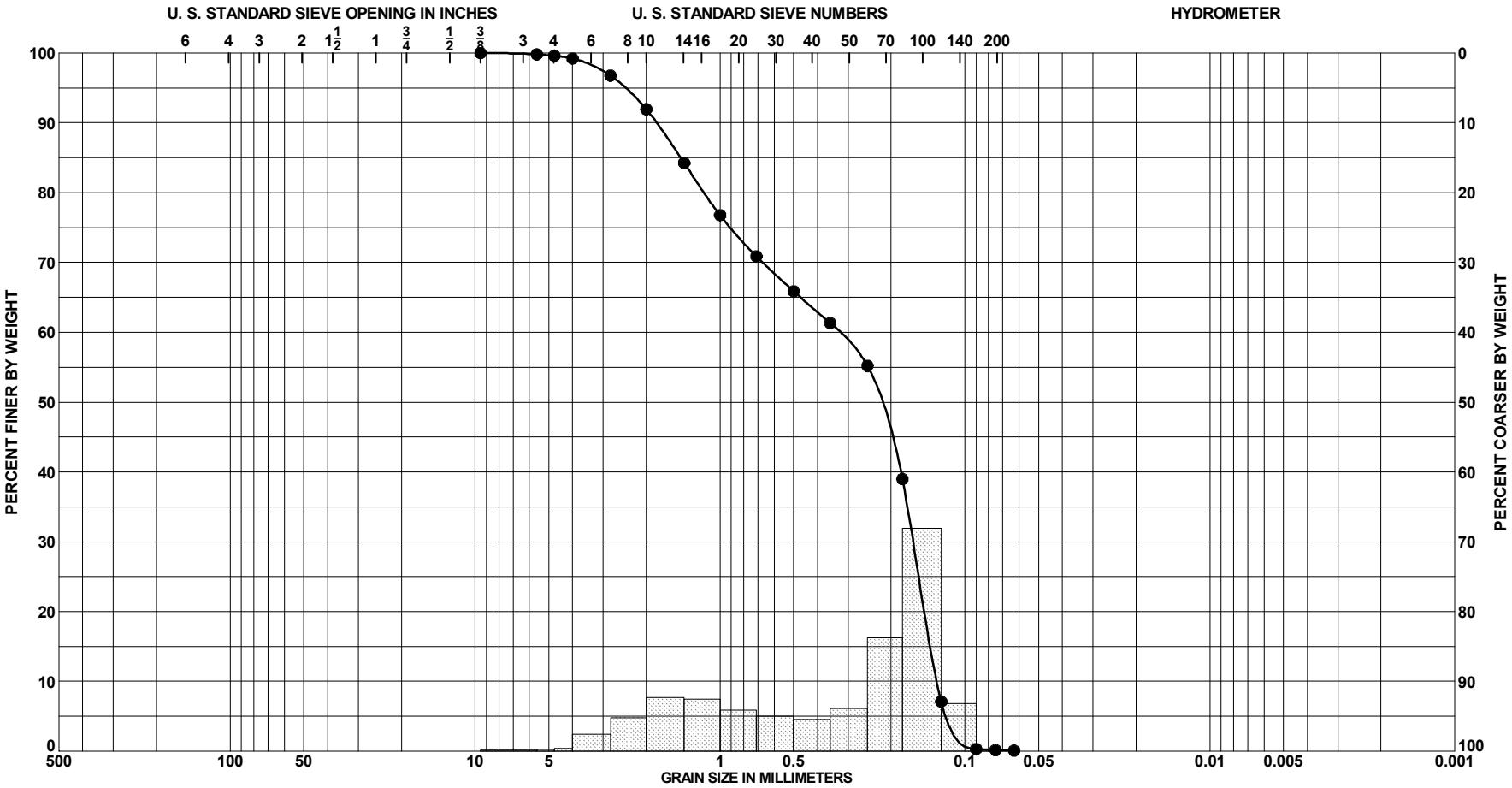
BORING NO. R-154

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02

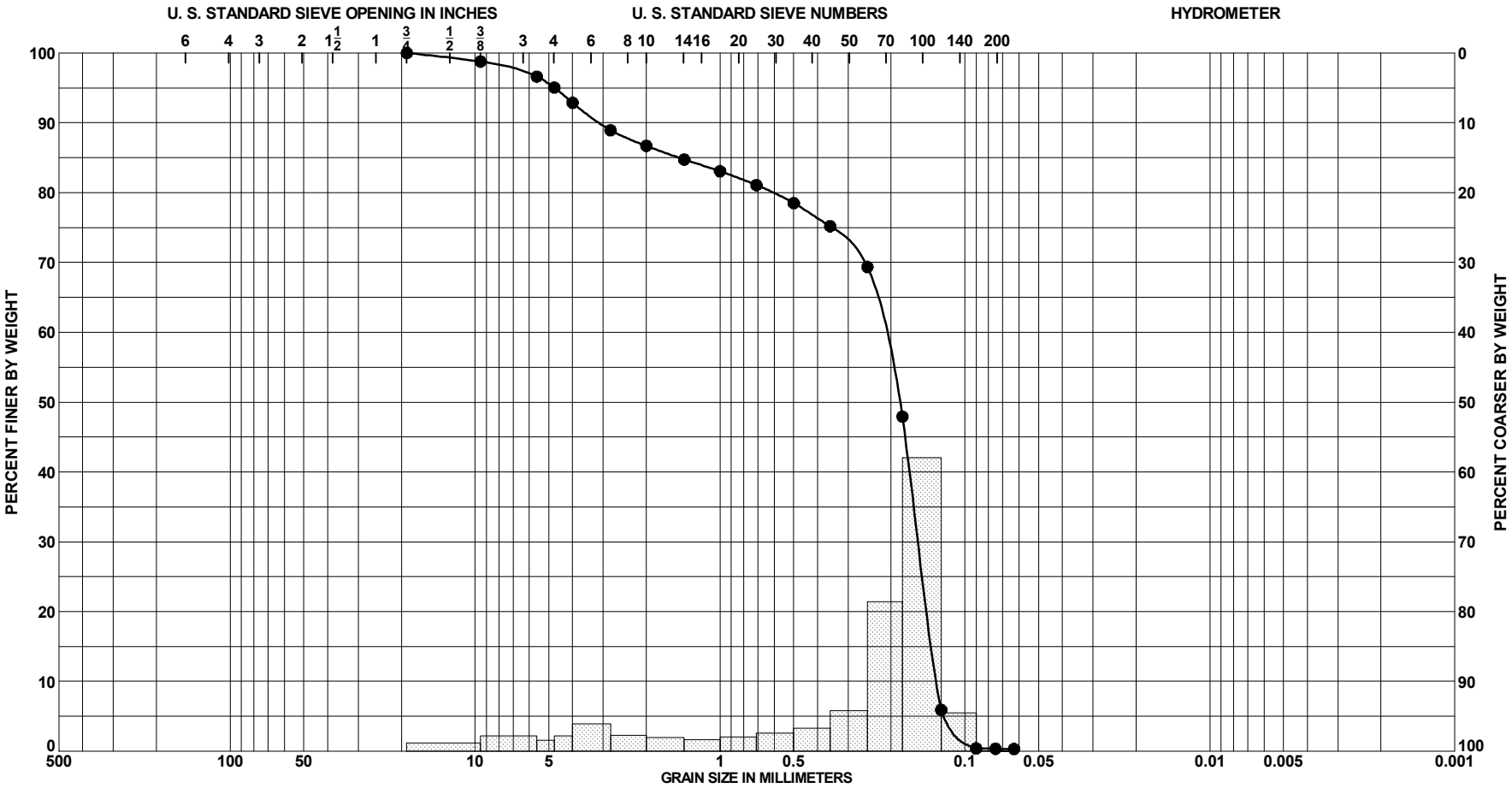


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● Dune	to 0.0 Ft.	SAND, poorly graded, mostly fine to medium-grained sand-sized shell, some fine to medium-grained sand-sized quartz (SP)		36 (est)						

PROJECT	Pinellas County SPP Beach Sampling
BORING NO.	R-158
BORING ELEV.	Not Determined
DATE	9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02

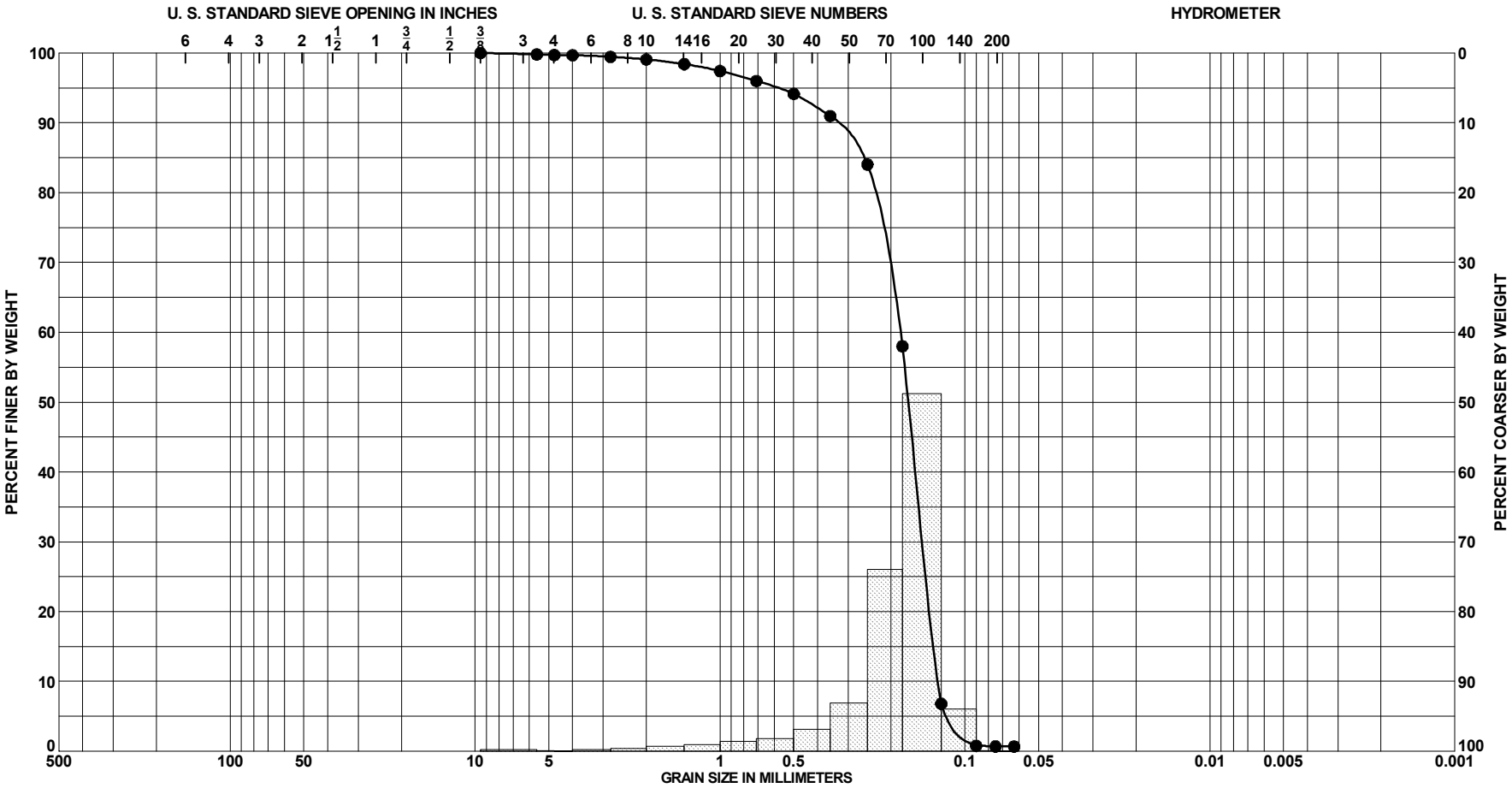


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● Berm	to 0.0 Ft.	SAND, poorly graded, mostly fine to medium-grained sand-sized quartz, some fine to medium-grained sand-sized shell (SP)		26/24 (est)						

PROJECT	Pinellas County SPP Beach Sampling
BORING NO.	R-158
BORING ELEV.	Not Determined
DATE	9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● Mid-Tide	to 0.0 Ft.	SAND, poorly graded, mostly		19 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium-grained sand-sized								
		shell (SP)								

PROJECT Pinellas County SPP Beach Sampling

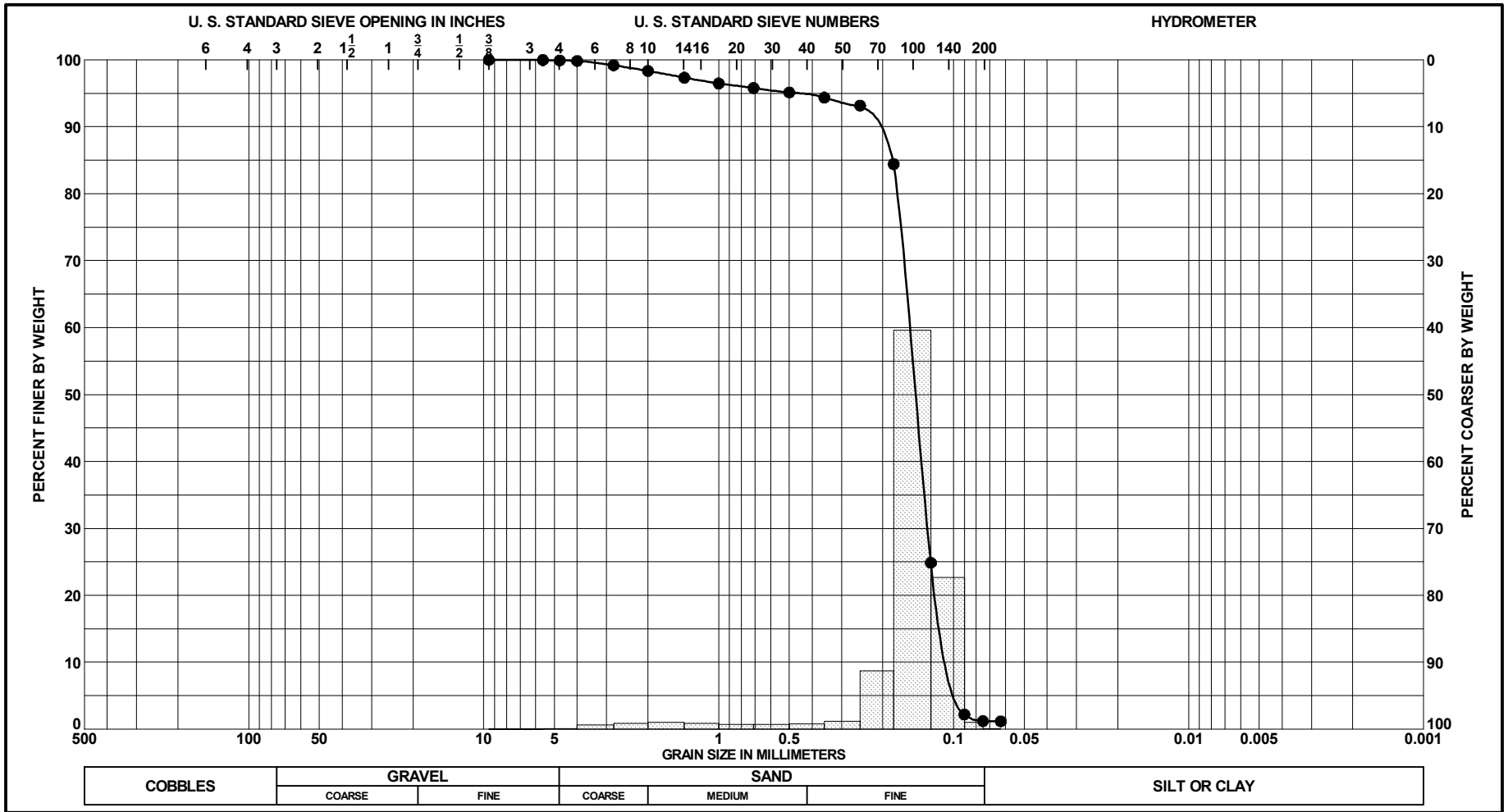
BORING NO. R-158

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● -3	to 0.0 Ft.	SAND, poorly graded, mostly		8 (est)						
		fine-grained sand-sized quartz, few								
		fine to medium-grained sand-sized								
		shell (SP)								

PROJECT Pinellas County SPP Beach Sampling

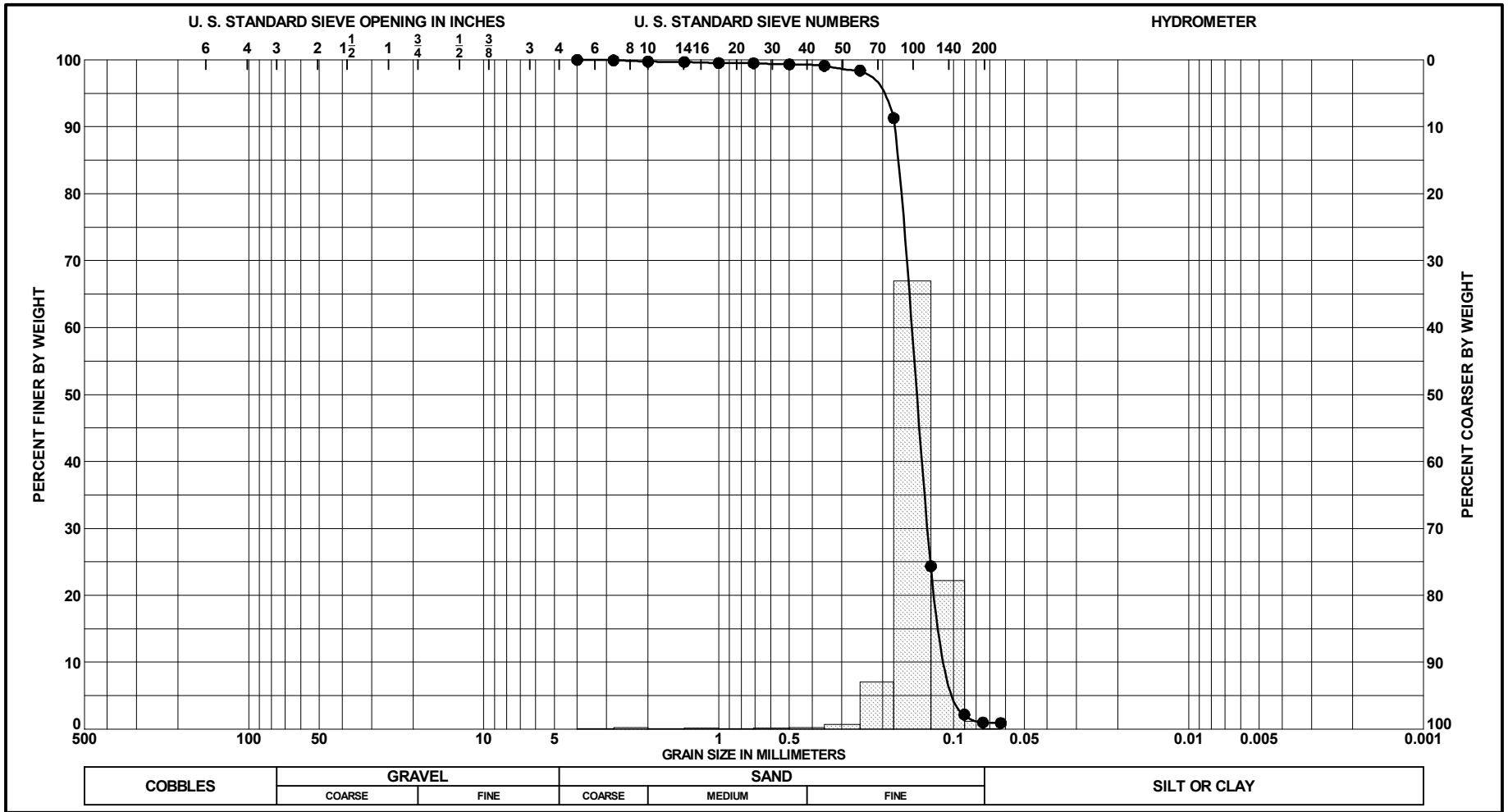
BORING NO. R-158

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02

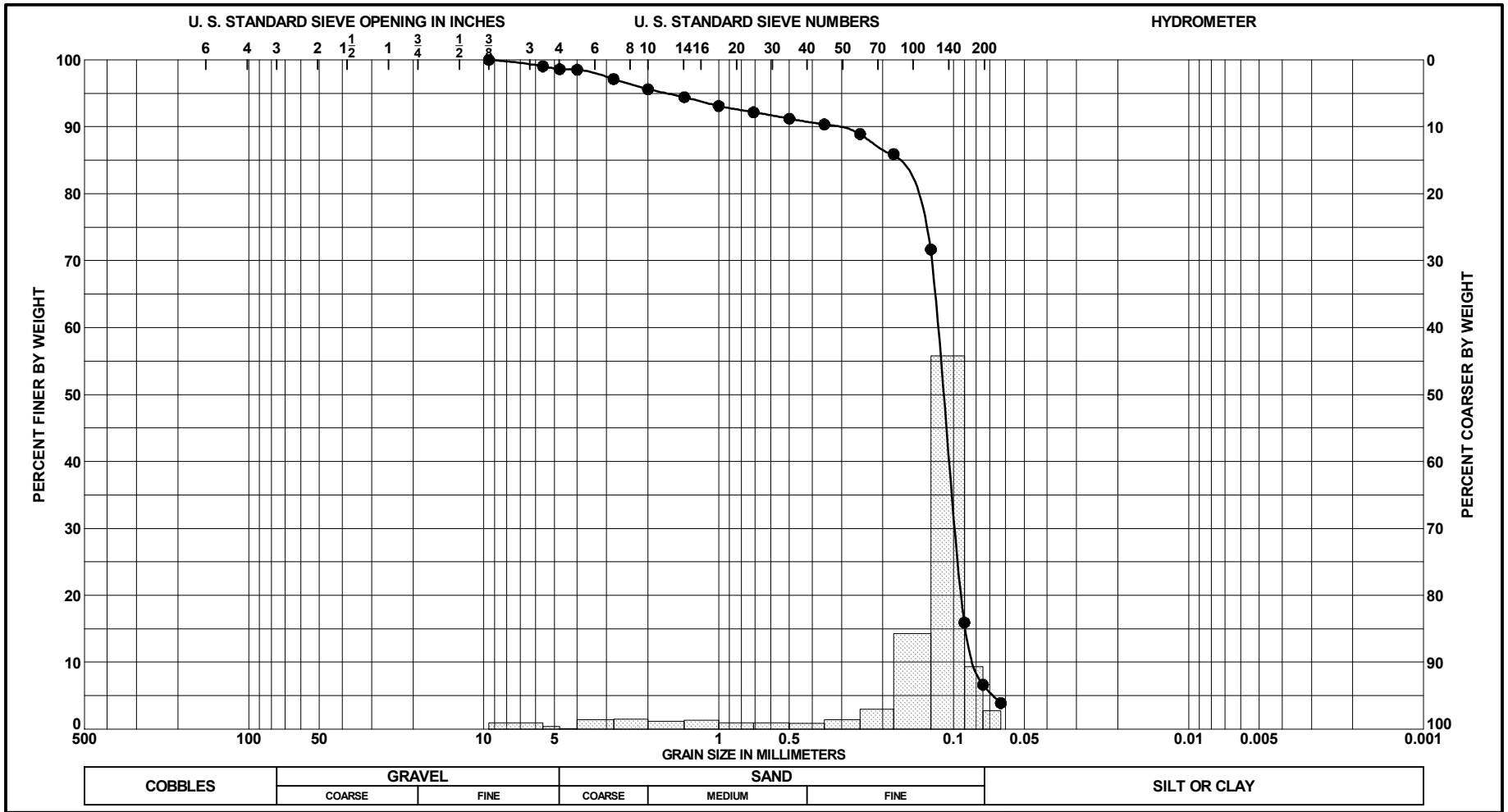


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● -5	to 0.0 Ft.	SAND, poorly graded, mostly		4 (est)						
		fine-grained sand-sized quartz, trace								
		fine-grained sand-sized shell (SP)								

PROJECT	Pinellas County SPP Beach Sampling
BORING NO.	R-158
BORING ELEV.	Not Determined
DATE	9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● -10	to 0.0 Ft.	SAND, poorly graded, mostly		19/14 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium-grained sand-sized								
		shell (SP)								

PROJECT Pinellas County SPP Beach Sampling

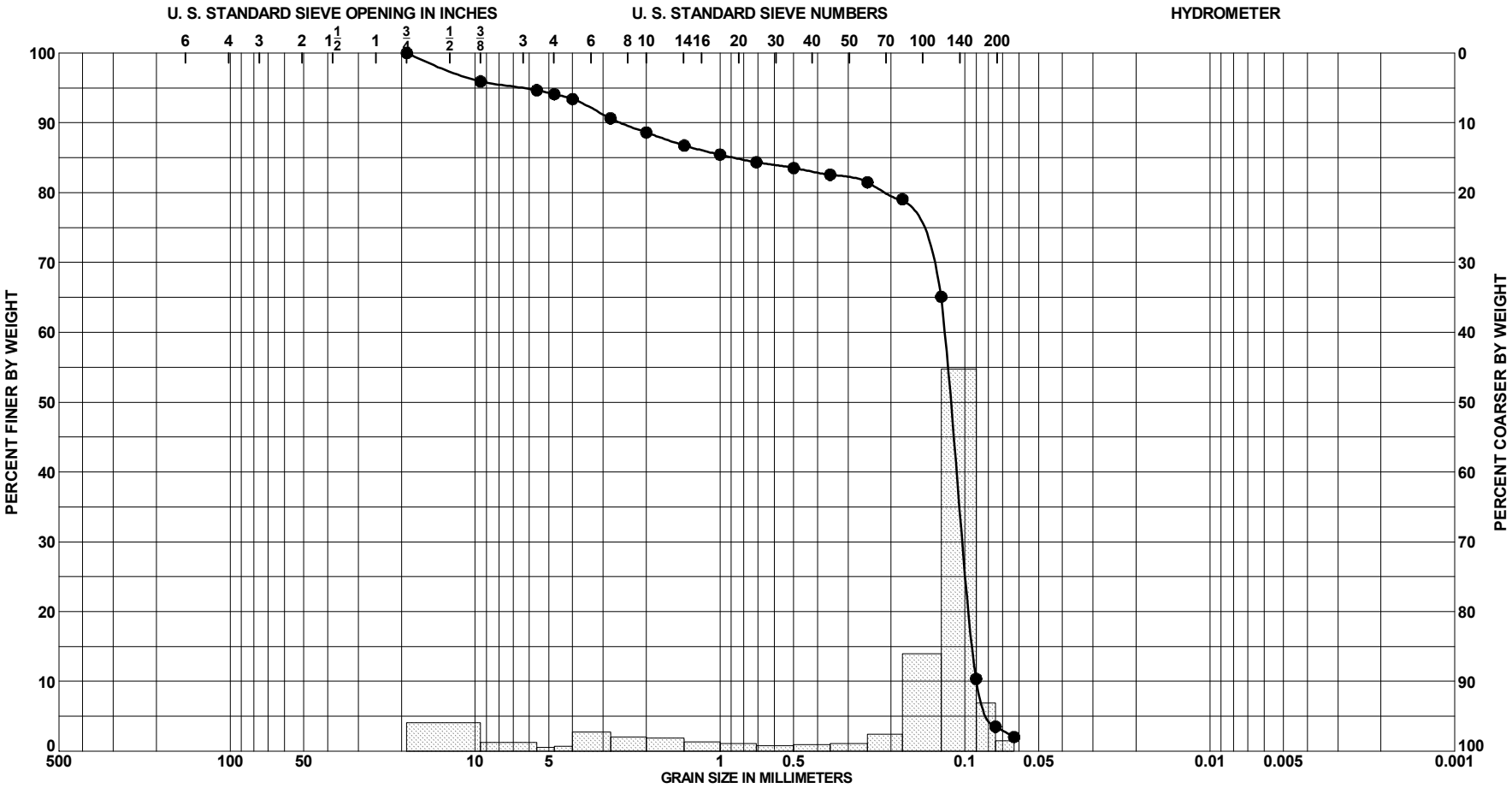
BORING NO. R-158

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● -15	to 0.0 Ft.	SAND, poorly graded, mostly		16 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium-grained sand-sized								
		shell (SP)								

PROJECT Pinellas County SPP Beach Sampling

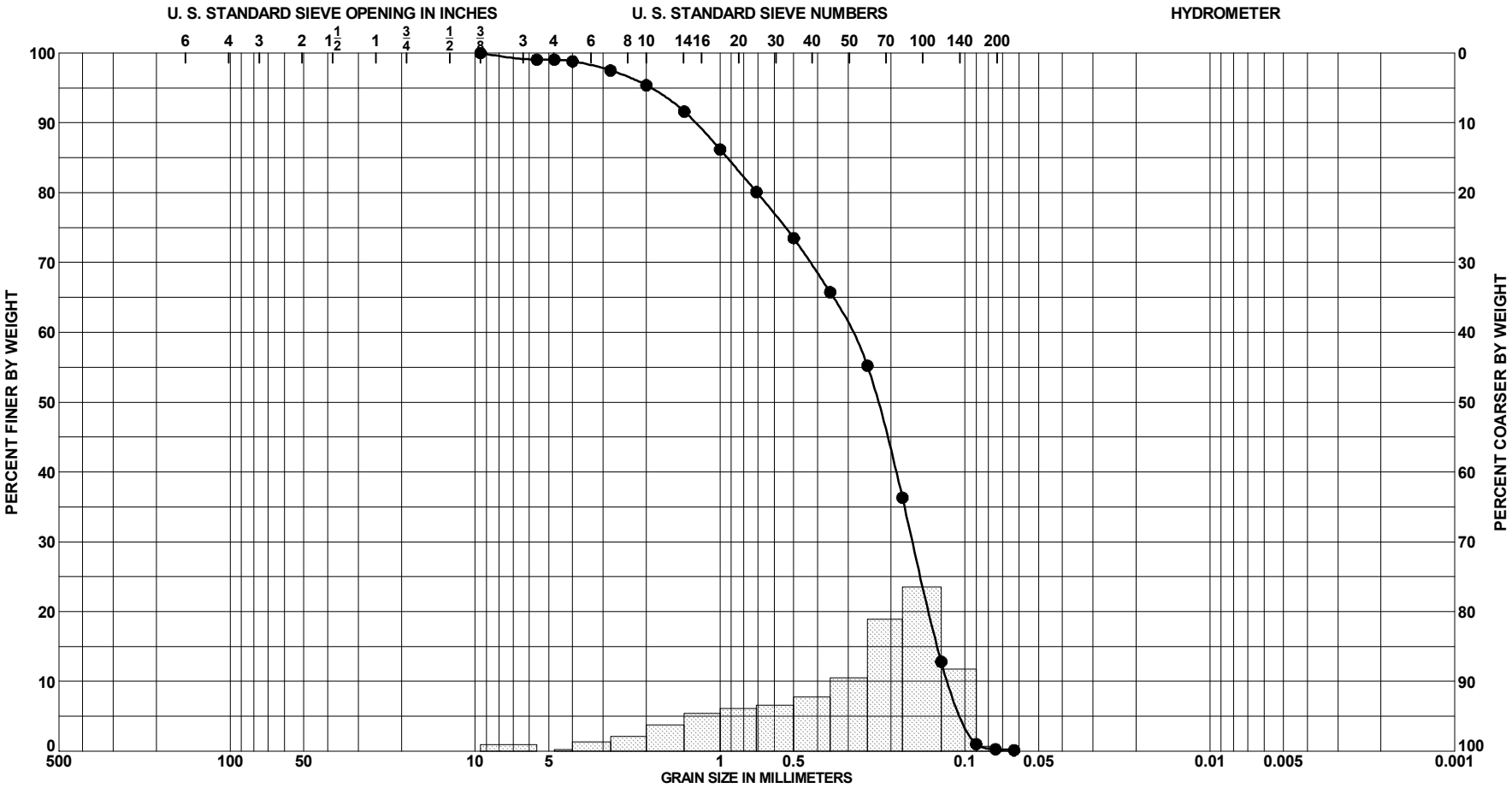
BORING NO. R-158

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● Dune	to 0.0 Ft.	SAND, poorly graded, mostly		31 (est)						
		fine-grained sand-sized quartz, some								
		fine to medium-grained sand-sized								
		shell (SP)								

PROJECT Pinellas County SPP Beach Sampling

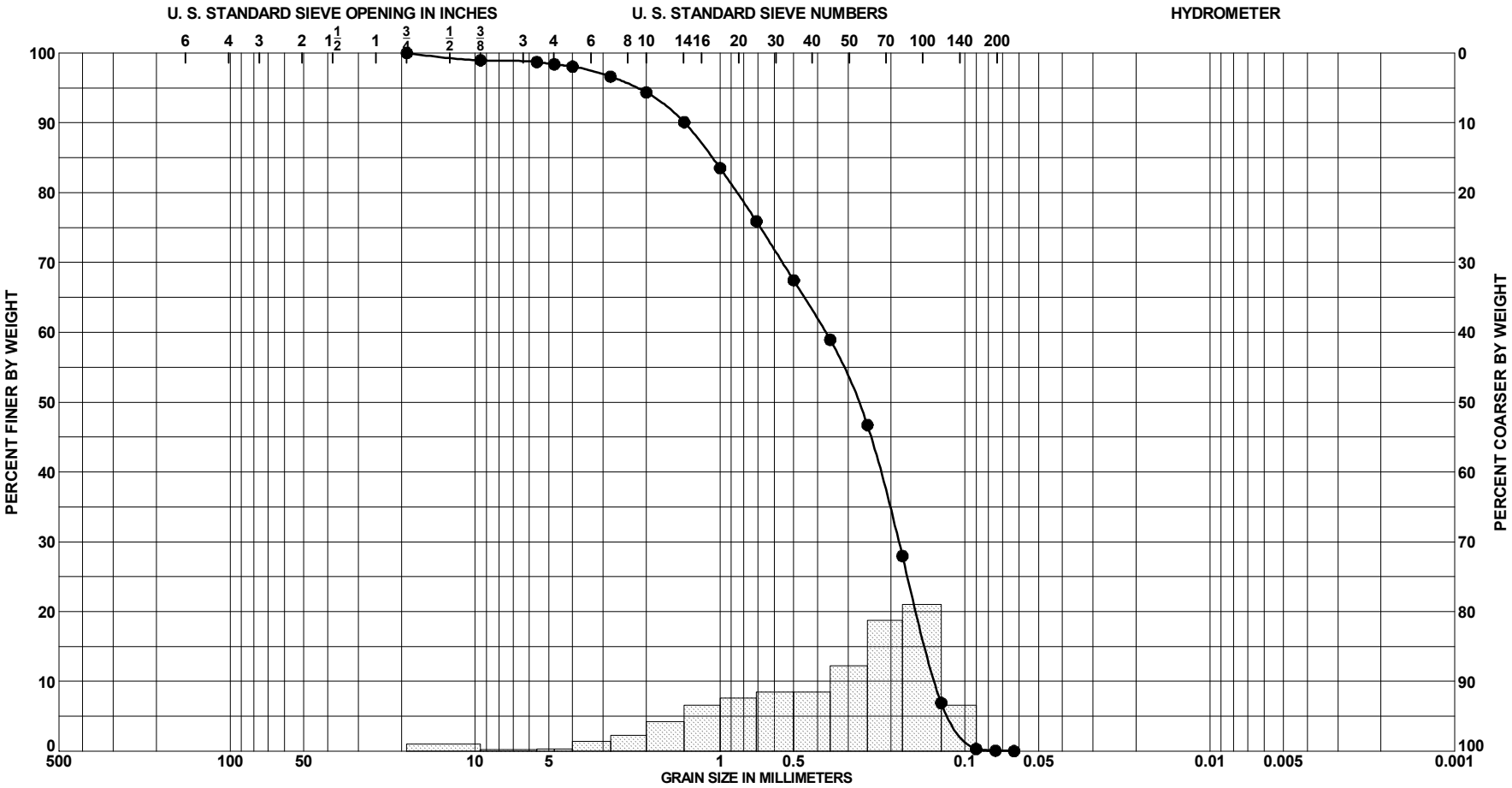
BORING NO. R-163

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02

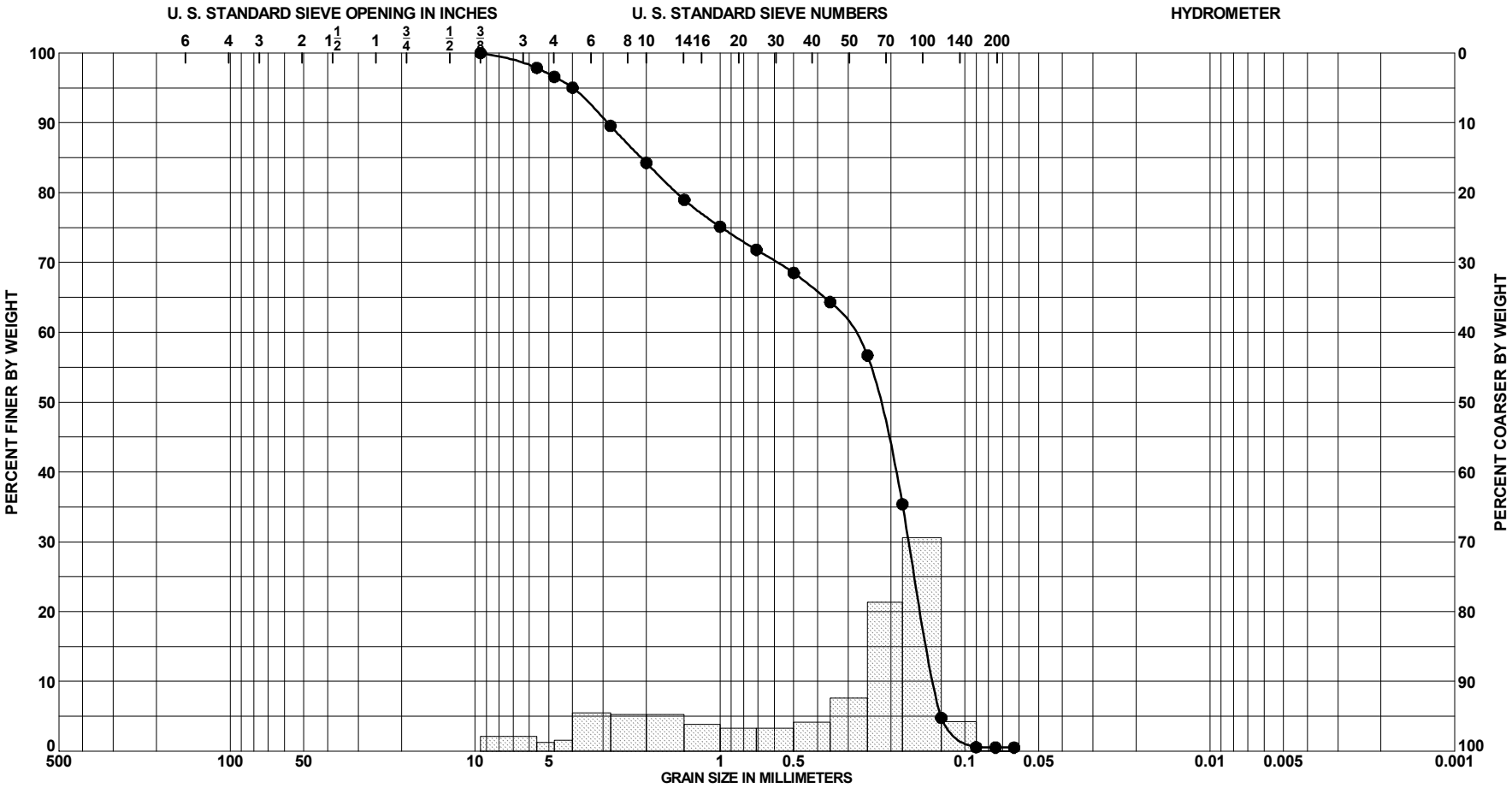


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● Berm	to 0.0 Ft.	SAND, poorly graded, mostly fine to medium-grained sand-sized quartz, some fine to medium-grained sand-sized shell (SP)		40/39 (est)						

PROJECT	Pinellas County SPP Beach Sampling
BORING NO.	R-163
BORING ELEV.	Not Determined
DATE	9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02

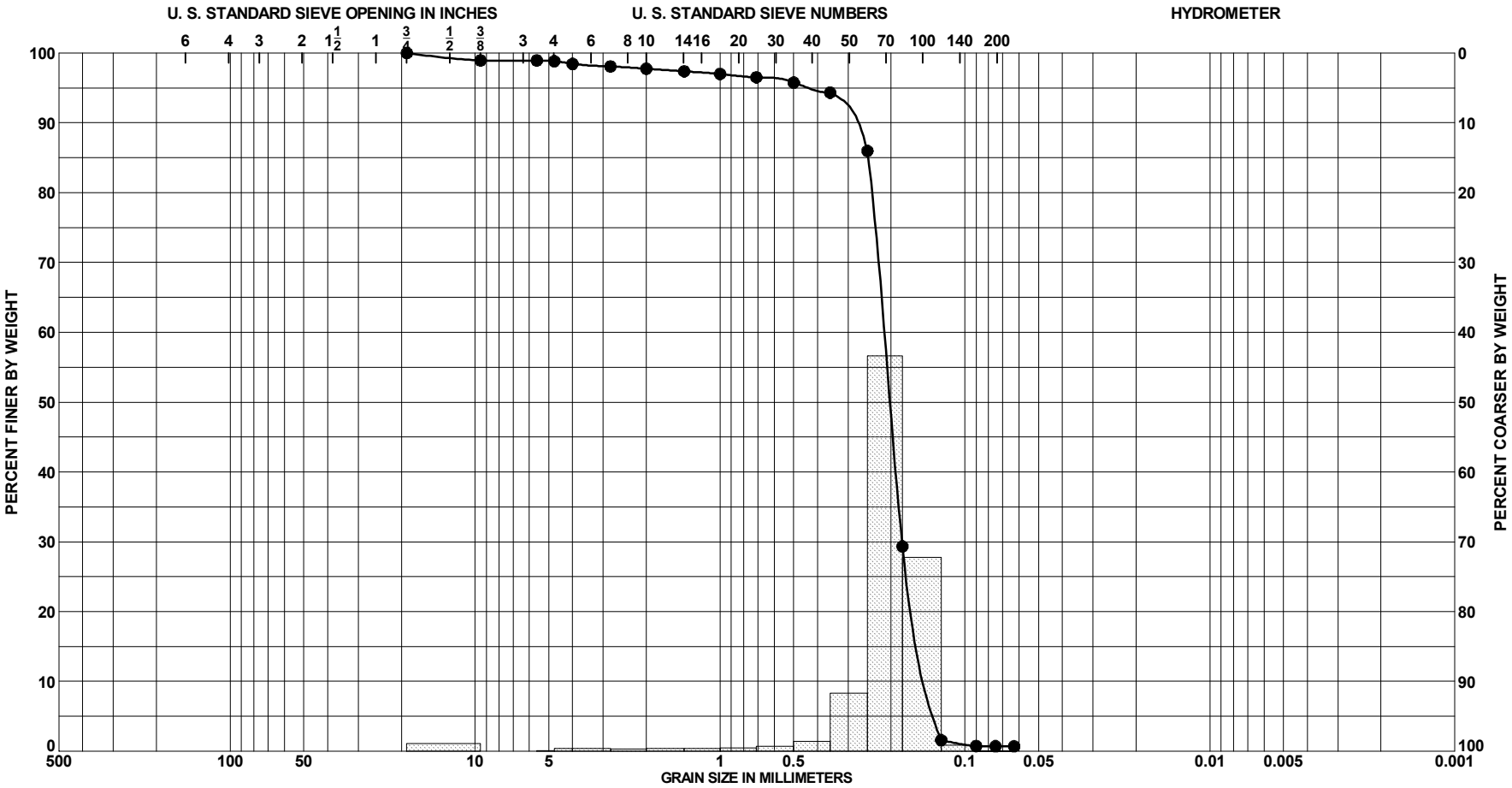


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● Mid-Tide	to 0.0 Ft.	SAND, poorly graded, mostly fine to medium-grained sand-sized quartz, some fine to medium-grained sand-sized shell (SP)		39 (est)						

PROJECT	Pinellas County SPP Beach Sampling
BORING NO.	R-163
BORING ELEV.	Not Determined
DATE	9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● -3	to 0.0 Ft.	SAND, poorly graded, mostly		12 (est)						
		fine-grained sand-sized quartz, few								
		fine to medium-grained sand-sized								
		shell (SP)								

PROJECT Pinellas County SPP Beach Sampling

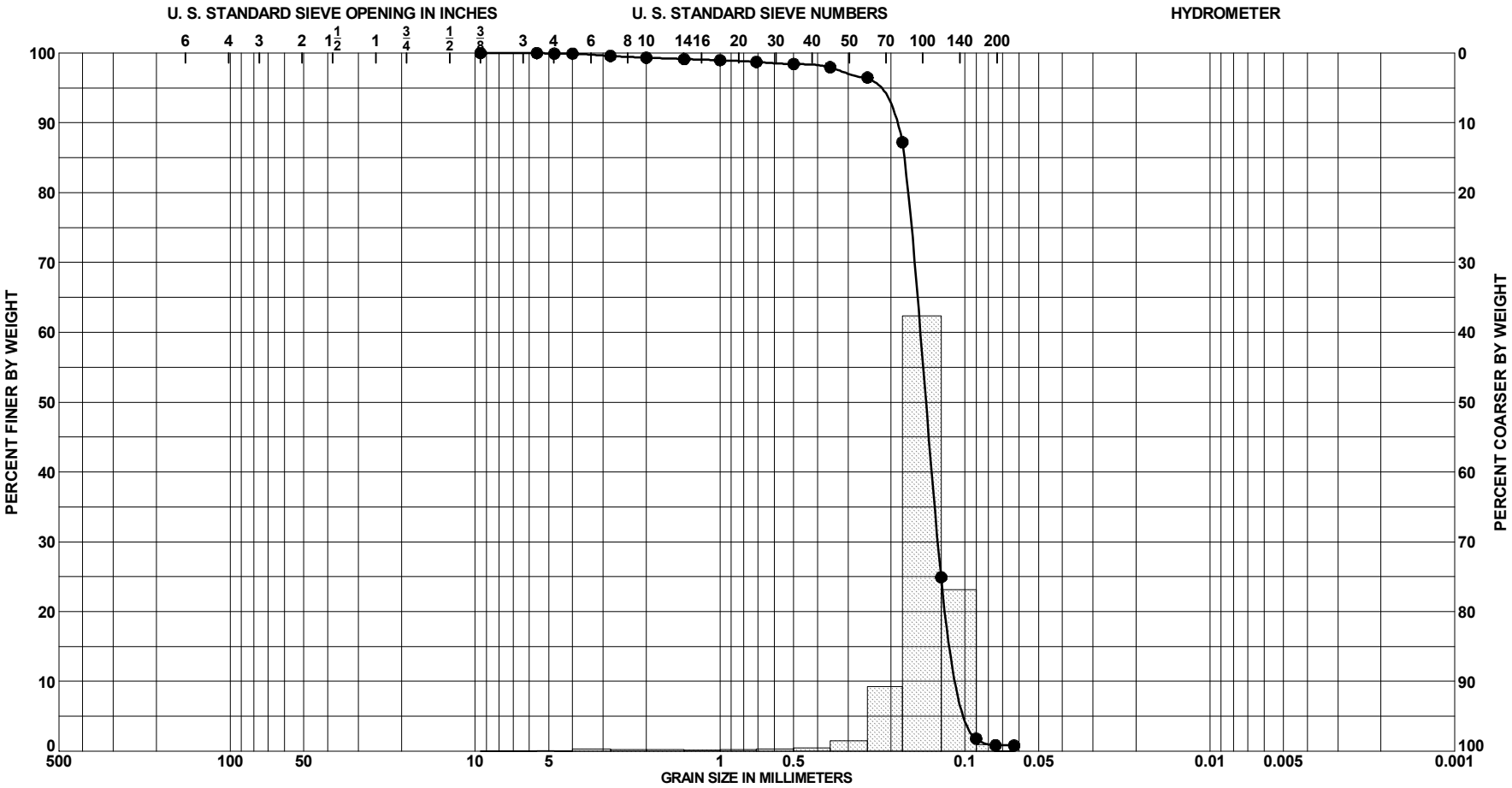
BORING NO. R-163

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● -5	to 0.0 Ft.	SAND, poorly graded, mostly		6 (est)						
		fine-grained sand-sized quartz, few								
		fine to medium-grained sand-sized								
		shell (SP)								

PROJECT Pinellas County SPP Beach Sampling

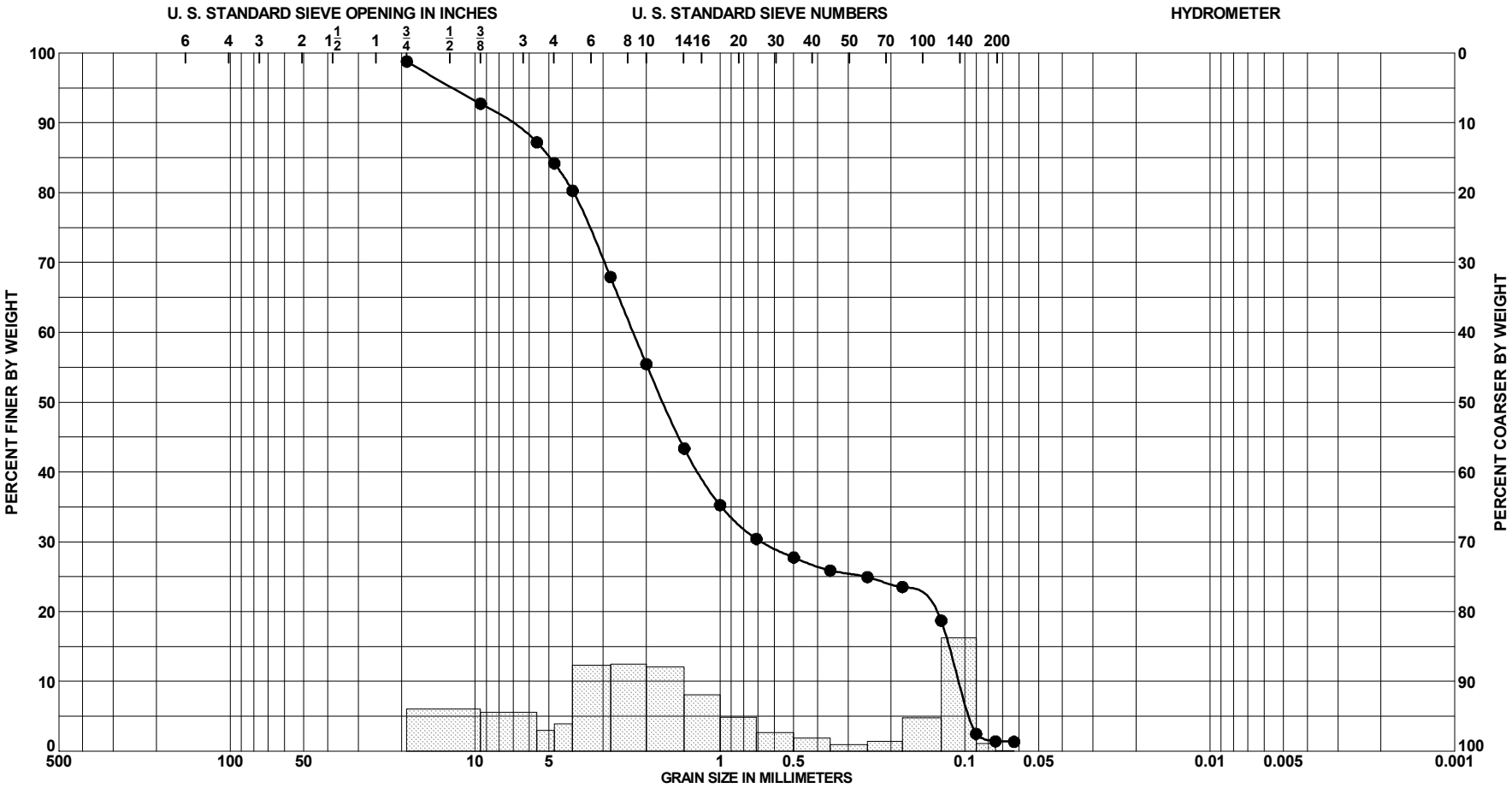
BORING NO. R-163

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02

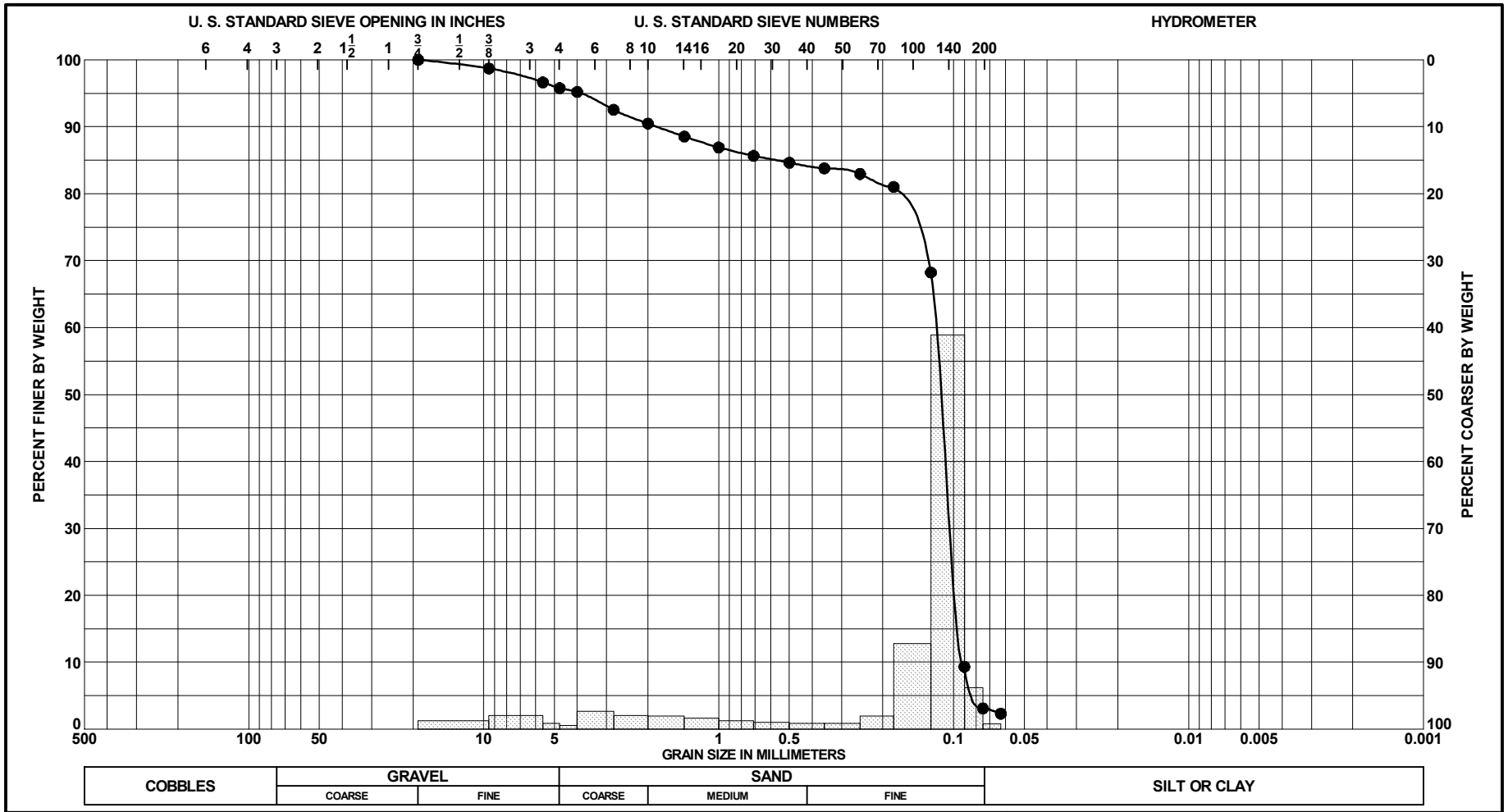


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● -10	to 0.0 Ft.	SAND, poorly graded, mostly fine to medium-grained sand-sized shell, some sand to gravel-sized shell (SP)		74/73 (est)						

PROJECT	Pinellas County SPP Beach Sampling
BORING NO.	R-163
BORING ELEV.	Not Determined
DATE	9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● -15	to 0.0 Ft.	SAND, poorly graded, mostly		17 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium-grained sand-sized								
		shell (SP)								

PROJECT Pinellas County SPP Beach Sampling

BORING NO. R-163

BORING ELEV. Not Determined

DATE 9/6/2012

GRADATION CURVES

SAJ FORM 2087
JUN 02

7.2 GRANULARMETRIC REPORTS: BEACH

Applicable granulometric reports are presented on the following pages.

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-128 @ Dune

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 8/1	#200 - 0.27 #230 - 0.24			20.2

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.97	0.97
#4	-2.25	4.75	0.25	1.22
#5	-2.00	4.00	0.43	1.65
#7	-1.50	2.80	0.80	2.45
#10	-1.00	2.00	1.04	3.49
#14	-0.50	1.40	1.27	4.76
#18	0.00	1.00	1.29	6.05
#25	0.50	0.71	1.34	7.39
#35	1.00	0.50	1.44	8.83
#45	1.50	0.36	2.64	11.47
#60	2.00	0.25	6.75	18.22
#80	2.50	0.18	23.50	41.72
#120	3.00	0.13	49.38	91.10
#170	3.50	0.09	8.38	99.48
#200	3.75	0.08	0.25	99.73
#230	4.00	0.06	0.03	99.76

SAND, poorly graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.23	2.93	2.84	2.58	2.14	1.84	-0.41

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.26	0.21	2.58	0.17	1.09	-2.7	10.76

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-128 @ Berm

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 8/1	#200 - 0.26 #230 - 0.23		14.00	13.8

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.51	0.51
#4	-2.25	4.75	0.23	0.74
#5	-2.00	4.00	0.11	0.85
#7	-1.50	2.80	0.68	1.53
#10	-1.00	2.00	0.89	2.42
#14	-0.50	1.40	1.13	3.55
#18	0.00	1.00	1.11	4.66
#25	0.50	0.71	1.21	5.87
#35	1.00	0.50	1.46	7.33
#45	1.50	0.36	1.90	9.23
#60	2.00	0.25	4.41	13.64
#80	2.50	0.18	16.59	30.23
#120	3.00	0.13	51.67	81.90
#170	3.50	0.09	17.38	99.28
#200	3.75	0.08	0.46	99.74
#230	4.00	0.06	0.03	99.77

SAND, poorly graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.38	3.06	2.93	2.69	2.34	2.07	0.14

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.44	0.18	2.69	0.15	0.99	-2.87	12.27

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-128 @ Mid-Tidet

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	5Y 6/1	#200 - 0.99 #230 - 0.98			16.6

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.10	0.10
#4	-2.25	4.75	0.10	0.20
#5	-2.00	4.00	0.11	0.31
#7	-1.50	2.80	0.41	0.72
#10	-1.00	2.00	0.51	1.23
#14	-0.50	1.40	0.69	1.92
#18	0.00	1.00	1.01	2.93
#25	0.50	0.71	1.65	4.58
#35	1.00	0.50	3.13	7.71
#45	1.50	0.36	8.29	16.00
#60	2.00	0.25	19.63	35.63
#80	2.50	0.18	39.58	75.21
#120	3.00	0.13	22.20	97.41
#170	3.50	0.09	1.58	98.99
#200	3.75	0.08	0.02	99.01
#230	4.00	0.06	0.01	99.02

SAND, poorly graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.95	2.70	2.50	2.18	1.73	1.50	0.57

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.02	0.25	2.18	0.22	0.78	-2.13	9.94

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-128 @ -3

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 6/1	#200 - 0.82 #230 - 0.79			28.1

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	1.86	1.86
3/8"	-3.25	9.50	1.71	3.57
#3.5	-2.50	5.60	2.12	5.69
#4	-2.25	4.75	0.70	6.39
#5	-2.00	4.00	0.76	7.15
#7	-1.50	2.80	2.62	9.77
#10	-1.00	2.00	2.64	12.41
#14	-0.50	1.40	2.91	15.32
#18	0.00	1.00	2.42	17.74
#25	0.50	0.71	2.45	20.19
#35	1.00	0.50	2.60	22.79
#45	1.50	0.36	3.55	26.34
#60	2.00	0.25	5.84	32.18
#80	2.50	0.18	20.18	52.36
#120	3.00	0.13	39.03	91.39
#170	3.50	0.09	7.66	99.05
#200	3.75	0.08	0.13	99.18
#230	4.00	0.06	0.03	99.21

SAND, poorly graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.24	2.91	2.79	2.44	1.31	-0.36	-2.74

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.61	0.33	2.44	0.18	1.67	-1.44	4.38

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-128 @ -5

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	10Y 6/1	#200 - 0.84 #230 - 0.80			5.4

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.01	0.01
#10	-1.00	2.00	0.00	0.01
#14	-0.50	1.40	0.02	0.03
#18	0.00	1.00	0.03	0.06
#25	0.50	0.71	0.09	0.15
#35	1.00	0.50	0.11	0.26
#45	1.50	0.36	0.75	1.01
#60	2.00	0.25	4.41	5.42
#80	2.50	0.18	31.42	36.84
#120	3.00	0.13	47.06	83.90
#170	3.50	0.09	15.05	98.95
#200	3.75	0.08	0.21	99.16
#230	4.00	0.06	0.04	99.20

SAND, poorly graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.37	3.00	2.91	2.64	2.31	2.17	1.95

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.61	0.16	2.64	0.16	0.42	-0.78	6.57

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-128 @ -10

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	10Y 6/1	#200 - 1.42 #230 - 1.37		11.20	9.3

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.51	0.51
#4	-2.25	4.75	0.08	0.59
#5	-2.00	4.00	0.00	0.59
#7	-1.50	2.80	0.13	0.72
#10	-1.00	2.00	0.21	0.93
#14	-0.50	1.40	0.26	1.19
#18	0.00	1.00	0.44	1.63
#25	0.50	0.71	0.52	2.15
#35	1.00	0.50	0.63	2.78
#45	1.50	0.36	1.29	4.07
#60	2.00	0.25	2.87	6.94
#80	2.50	0.18	12.98	19.92
#120	3.00	0.13	53.53	73.45
#170	3.50	0.09	24.50	97.95
#200	3.75	0.08	0.63	98.58
#230	4.00	0.06	0.05	98.63

SAND, poorly graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.44	3.22	3.03	2.78	2.55	2.35	1.66

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.67	0.16	2.78	0.15	0.73	-4.1	26.72

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-128 @ -15

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	5Y 5/2	#200 - 2.05 #230 - 1.86			4.1

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.05	0.05
#7	-1.50	2.80	0.12	0.17
#10	-1.00	2.00	0.13	0.30
#14	-0.50	1.40	0.21	0.51
#18	0.00	1.00	0.31	0.82
#25	0.50	0.71	0.42	1.24
#35	1.00	0.50	0.62	1.86
#45	1.50	0.36	0.71	2.57
#60	2.00	0.25	1.09	3.66
#80	2.50	0.18	3.23	6.89
#120	3.00	0.13	45.54	52.43
#170	3.50	0.09	43.50	95.93
#200	3.75	0.08	2.02	97.95
#230	4.00	0.06	0.19	98.14

SAND, poorly graded, mostly fine-grained sand-sized quartz, trace fine-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.49	3.36	3.26	2.97	2.70	2.60	2.21

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.90	0.13	2.97	0.13	0.55	-3.87	25.68

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-131 @ Dune

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 8/2	#200 - 0.24 #230 - 0.23			66.3

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	5.57	5.57
#3.5	-2.50	5.60	7.08	12.65
#4	-2.25	4.75	2.74	15.39
#5	-2.00	4.00	3.03	18.42
#7	-1.50	2.80	8.13	26.55
#10	-1.00	2.00	8.80	35.35
#14	-0.50	1.40	8.80	44.15
#18	0.00	1.00	6.86	51.01
#25	0.50	0.71	5.51	56.52
#35	1.00	0.50	5.61	62.13
#45	1.50	0.36	6.57	68.70
#60	2.00	0.25	8.54	77.24
#80	2.50	0.18	11.27	88.51
#120	3.00	0.13	9.45	97.96
#170	3.50	0.09	1.73	99.69
#200	3.75	0.08	0.07	99.76
#230	4.00	0.06	0.01	99.77

SAND, poorly graded, mostly fine-grained sand-sized shell, some fine-grained sand-sized quartz

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.84	2.30	1.87	-0.07	-1.60	-2.20	-3.35

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	-0.02	1.01			2	-0.15	1.87

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-131 @ Berm

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/1	#200 - 0.06 #230 - 0.04		37.40	37.6

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.71	0.71
#3.5	-2.50	5.60	0.43	1.14
#4	-2.25	4.75	0.04	1.18
#5	-2.00	4.00	0.17	1.35
#7	-1.50	2.80	1.93	3.28
#10	-1.00	2.00	2.73	6.01
#14	-0.50	1.40	4.88	10.89
#18	0.00	1.00	5.75	16.64
#25	0.50	0.71	6.59	23.23
#35	1.00	0.50	8.00	31.23
#45	1.50	0.36	10.71	41.94
#60	2.00	0.25	16.94	58.88
#80	2.50	0.18	25.33	84.21
#120	3.00	0.13	14.52	98.73
#170	3.50	0.09	1.15	99.88
#200	3.75	0.08	0.06	99.94
#230	4.00	0.06	0.02	99.96

SAND, poorly graded, mostly fine-grained sand-sized quartz, some fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.87	2.50	2.32	1.74	0.61	-0.06	-1.18

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.35	0.39	1.74	0.30	1.3	-1.16	4.16

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-131 @ Mid-Tide

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	5Y 6/1	#200 - 1.11 #230 - 1.09			27.3

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.62	0.62
#4	-2.25	4.75	0.07	0.69
#5	-2.00	4.00	0.20	0.89
#7	-1.50	2.80	0.75	1.64
#10	-1.00	2.00	1.25	2.89
#14	-0.50	1.40	2.08	4.97
#18	0.00	1.00	2.60	7.57
#25	0.50	0.71	2.88	10.45
#35	1.00	0.50	3.52	13.97
#45	1.50	0.36	5.00	18.97
#60	2.00	0.25	10.54	29.51
#80	2.50	0.18	33.16	62.67
#120	3.00	0.13	33.55	96.22
#170	3.50	0.09	2.46	98.68
#200	3.75	0.08	0.21	98.89
#230	4.00	0.06	0.02	98.91

SAND, poorly graded, mostly fine-grained sand-sized quartz, some fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.98	2.82	2.68	2.31	1.79	1.20	-0.49

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.98	0.25	2.31	0.20	1.08	-1.97	7.05

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-131 @ -3

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	5Y 7/1	#200 - 1.20 #230 - 1.16			13.3

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.09	0.09
#4	-2.25	4.75	0.21	0.30
#5	-2.00	4.00	0.04	0.34
#7	-1.50	2.80	0.58	0.92
#10	-1.00	2.00	0.67	1.59
#14	-0.50	1.40	0.90	2.49
#18	0.00	1.00	0.92	3.41
#25	0.50	0.71	0.98	4.39
#35	1.00	0.50	1.27	5.66
#45	1.50	0.36	1.79	7.45
#60	2.00	0.25	4.33	11.78
#80	2.50	0.18	18.47	30.25
#120	3.00	0.13	59.25	89.50
#170	3.50	0.09	9.22	98.72
#200	3.75	0.08	0.08	98.80
#230	4.00	0.06	0.04	98.84

SAND, poorly graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.30	2.95	2.88	2.67	2.36	2.11	0.74

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.45	0.18	2.67	0.16	0.83	-3.14	14.52

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-131 @ -5

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	5Y 7/2	#200 - 0.77 #230 - 0.75			20.5

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.94	0.94
#4	-2.25	4.75	0.14	1.08
#5	-2.00	4.00	0.24	1.32
#7	-1.50	2.80	0.95	2.27
#10	-1.00	2.00	1.73	4.00
#14	-0.50	1.40	2.28	6.28
#18	0.00	1.00	2.41	8.69
#25	0.50	0.71	2.49	11.18
#35	1.00	0.50	2.50	13.68
#45	1.50	0.36	1.40	15.08
#60	2.00	0.25	7.05	22.13
#80	2.50	0.18	18.93	41.06
#120	3.00	0.13	48.29	89.35
#170	3.50	0.09	9.77	99.12
#200	3.75	0.08	0.11	99.23
#230	4.00	0.06	0.02	99.25

SAND, poorly graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.29	2.94	2.85	2.59	2.08	1.57	-0.78

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.16	0.22	2.59	0.17	1.21	-2.13	7.2

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-131 @ -10

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	5Y 6/2	#200 - 1.99 #230 - 1.85		9.70	6.6

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.24	0.24
#3.5	-2.50	5.60	0.22	0.46
#4	-2.25	4.75	0.16	0.62
#5	-2.00	4.00	0.00	0.62
#7	-1.50	2.80	0.16	0.78
#10	-1.00	2.00	0.11	0.89
#14	-0.50	1.40	0.33	1.22
#18	0.00	1.00	0.47	1.69
#25	0.50	0.71	0.54	2.23
#35	1.00	0.50	0.76	2.99
#45	1.50	0.36	0.91	3.90
#60	2.00	0.25	1.41	5.31
#80	2.50	0.18	4.24	9.55
#120	3.00	0.13	43.36	52.91
#170	3.50	0.09	43.19	96.10
#200	3.75	0.08	1.91	98.01
#230	4.00	0.06	0.14	98.15

SAND, poorly graded, mostly fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.49	3.36	3.26	2.97	2.68	2.57	1.89

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.83	0.14	2.97	0.13	0.76	-4.63	31.46

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-131 @ -15

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	5Y 5/2	#200 - 2.94 #230 - 2.68			4.7

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.04	0.04
#10	-1.00	2.00	0.03	0.07
#14	-0.50	1.40	0.04	0.11
#18	0.00	1.00	0.22	0.33
#25	0.50	0.71	0.39	0.72
#35	1.00	0.50	0.67	1.39
#45	1.50	0.36	1.18	2.57
#60	2.00	0.25	1.80	4.37
#80	2.50	0.18	4.34	8.71
#120	3.00	0.13	38.79	47.50
#170	3.50	0.09	47.34	94.84
#200	3.75	0.08	2.22	97.06
#230	4.00	0.06	0.26	97.32

SAND, poorly graded, mostly fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.52	3.39	3.29	3.03	2.71	2.59	2.07

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.92	0.13	3.03	0.12	0.51	-2.84	16.19

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-135 @ Dune

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 8/2	#200 - 0.31 #230 - 0.29			54

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.39	0.39
#4	-2.25	4.75	0.54	0.93
#5	-2.00	4.00	0.59	1.52
#7	-1.50	2.80	2.13	3.65
#10	-1.00	2.00	4.37	8.02
#14	-0.50	1.40	8.07	16.09
#18	0.00	1.00	10.39	26.48
#25	0.50	0.71	10.16	36.64
#35	1.00	0.50	21.62	58.26
#45	1.50	0.36	15.73	73.99
#60	2.00	0.25	15.85	89.84
#80	2.50	0.18	8.06	97.90
#120	3.00	0.13	1.66	99.56
#170	3.50	0.09	0.12	99.68
#200	3.75	0.08	0.01	99.69
#230	4.00	0.06	0.02	99.71

SAND, poorly graded, mostly fine to medium-grained sand-sized shell, some fine to medium-grained sand-sized quartz

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.32	1.82	1.53	0.81	-0.07	-0.51	-1.35

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.68	0.62	0.81	0.57	1.11	-0.51	2.89

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-135 @ Berm

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 8/2	#200 - 0.53 #230 - 0.50		37.90	33.9

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	1.64	1.64
#3.5	-2.50	5.60	2.21	3.85
#4	-2.25	4.75	1.12	4.97
#5	-2.00	4.00	0.72	5.69
#7	-1.50	2.80	3.46	9.15
#10	-1.00	2.00	3.81	12.96
#14	-0.50	1.40	4.58	17.54
#18	0.00	1.00	4.51	22.05
#25	0.50	0.71	4.89	26.94
#35	1.00	0.50	5.75	32.69
#45	1.50	0.36	8.44	41.13
#60	2.00	0.25	13.44	54.57
#80	2.50	0.18	24.03	78.60
#120	3.00	0.13	18.17	96.77
#170	3.50	0.09	2.55	99.32
#200	3.75	0.08	0.15	99.47
#230	4.00	0.06	0.03	99.50

SAND, poorly graded, mostly fine to medium-grained sand-sized quartz, some sand to gravel-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.95	2.65	2.43	1.83	0.30	-0.67	-2.24

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.21	0.43	1.83	0.28	1.65	-1.14	3.48

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-135 @ Mid-Tide

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 8/1	#200 - 0.74 #230 - 0.73			31.2

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.18	0.18
#4	-2.25	4.75	0.25	0.43
#5	-2.00	4.00	0.42	0.85
#7	-1.50	2.80	1.71	2.56
#10	-1.00	2.00	3.00	5.56
#14	-0.50	1.40	4.90	10.46
#18	0.00	1.00	4.95	15.41
#25	0.50	0.71	4.82	20.23
#35	1.00	0.50	6.88	27.11
#45	1.50	0.36	10.92	38.03
#60	2.00	0.25	16.45	54.48
#80	2.50	0.18	26.54	81.02
#120	3.00	0.13	17.34	98.36
#170	3.50	0.09	0.89	99.25
#200	3.75	0.08	0.01	99.26
#230	4.00	0.06	0.01	99.27

SAND, poorly graded, mostly fine to medium-grained sand-sized quartz, some fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.90	2.59	2.39	1.86	0.85	0.06	-1.09

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.47	0.36	1.86	0.28	1.23	-1.07	3.36

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-135 @ -3

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 8/1	#200 - 0.70 #230 - 0.69			19.2

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.12	0.12
#4	-2.25	4.75	0.52	0.64
#5	-2.00	4.00	0.24	0.88
#7	-1.50	2.80	0.97	1.85
#10	-1.00	2.00	1.77	3.62
#14	-0.50	1.40	2.34	5.96
#18	0.00	1.00	2.51	8.47
#25	0.50	0.71	2.80	11.27
#35	1.00	0.50	2.98	14.25
#45	1.50	0.36	4.46	18.71
#60	2.00	0.25	8.47	27.18
#80	2.50	0.18	29.48	56.66
#120	3.00	0.13	38.70	95.36
#170	3.50	0.09	3.92	99.28
#200	3.75	0.08	0.02	99.30
#230	4.00	0.06	0.01	99.31

SAND, poorly graded, mostly fine to medium-grained sand-sized quartz, little fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.00	2.85	2.74	2.39	1.87	1.20	-0.71

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.02	0.25	2.39	0.19	1.12	-1.9	6.24

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-135 @ -5

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 1.24 #230 - 1.24			2.6

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.22	0.22
#7	-1.50	2.80	0.06	0.28
#10	-1.00	2.00	0.06	0.34
#14	-0.50	1.40	0.05	0.39
#18	0.00	1.00	0.27	0.66
#25	0.50	0.71	0.09	0.75
#35	1.00	0.50	0.53	1.28
#45	1.50	0.36	0.90	2.18
#60	2.00	0.25	3.29	5.47
#80	2.50	0.18	28.98	34.45
#120	3.00	0.13	57.37	91.82
#170	3.50	0.09	6.86	98.68
#200	3.75	0.08	0.08	98.76
#230	4.00	0.06	0.00	98.76

SAND, poorly graded, mostly fine-grained sand-sized quartz, trace fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.23	2.93	2.85	2.64	2.34	2.18	1.93

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.55	0.17	2.64	0.16	0.49	-3.82	31.01

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-135 @ -10

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	10G 7/1	#200 - 1.91 #230 - 1.46		19.30	16

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	3.03	3.03
#3.5	-2.50	5.60	2.13	5.16
#4	-2.25	4.75	1.00	6.16
#5	-2.00	4.00	0.70	6.86
#7	-1.50	2.80	1.93	8.79
#10	-1.00	2.00	1.32	10.11
#14	-0.50	1.40	1.42	11.53
#18	0.00	1.00	1.24	12.77
#25	0.50	0.71	1.41	14.18
#35	1.00	0.50	2.50	16.68
#45	1.50	0.36	3.16	19.84
#60	2.00	0.25	3.97	23.81
#80	2.50	0.18	8.69	32.50
#120	3.00	0.13	25.46	57.96
#170	3.50	0.09	37.13	95.09
#200	3.75	0.08	3.00	98.09
#230	4.00	0.06	0.45	98.54

SAND, poorly graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.50	3.35	3.23	2.84	2.07	0.86	-2.56

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.11	0.23	2.84	0.14	1.83	-1.93	5.72

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-135 @ -15

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	10G 8/1	#200 - 4.14 #230 - 3.15			12.8

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.54	0.54
#3.5	-2.50	5.60	1.30	1.84
#4	-2.25	4.75	0.83	2.67
#5	-2.00	4.00	0.58	3.25
#7	-1.50	2.80	1.63	4.88
#10	-1.00	2.00	1.66	6.54
#14	-0.50	1.40	1.63	8.17
#18	0.00	1.00	1.41	9.58
#25	0.50	0.71	1.39	10.97
#35	1.00	0.50	2.25	13.22
#45	1.50	0.36	2.93	16.15
#60	2.00	0.25	3.89	20.04
#80	2.50	0.18	7.60	27.64
#120	3.00	0.13	17.82	45.46
#170	3.50	0.09	45.48	90.94
#200	3.75	0.08	4.92	95.86
#230	4.00	0.06	0.99	96.85

SAND, poorly graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.71	3.42	3.32	3.05	2.33	1.47	-1.46

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.40	0.19	3.05	0.12	1.53	-2.09	6.72

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-139 @ Berm

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/1	#200 - 0.08 #230 - 0.08		14.70	14.6

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	2.85	2.85
#4	-2.25	4.75	1.22	4.07
#5	-2.00	4.00	0.89	4.96
#7	-1.50	2.80	1.89	6.85
#10	-1.00	2.00	1.33	8.18
#14	-0.50	1.40	1.11	9.29
#18	0.00	1.00	0.83	10.12
#25	0.50	0.71	1.15	11.27
#35	1.00	0.50	1.76	13.03
#45	1.50	0.36	4.44	17.47
#60	2.00	0.25	12.60	30.07
#80	2.50	0.18	27.47	57.54
#120	3.00	0.13	36.31	93.85
#170	3.50	0.09	5.91	99.76
#200	3.75	0.08	0.16	99.92
#230	4.00	0.06	0.00	99.92

SAND, poorly graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.10	2.86	2.74	2.36	1.80	1.33	-1.99

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.92	0.26	2.36	0.19	1.42	-2.14	6.88

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-139 @ Mid-Tide

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/1	#200 - 0.83 #230 - 0.82			28.2

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	1.86	1.86
#3.5	-2.50	5.60	1.74	3.60
#4	-2.25	4.75	1.01	4.61
#5	-2.00	4.00	0.70	5.31
#7	-1.50	2.80	3.35	8.66
#10	-1.00	2.00	3.47	12.13
#14	-0.50	1.40	4.19	16.32
#18	0.00	1.00	3.00	19.32
#25	0.50	0.71	2.35	21.67
#35	1.00	0.50	2.26	23.93
#45	1.50	0.36	3.55	27.48
#60	2.00	0.25	10.54	38.02
#80	2.50	0.18	30.68	68.70
#120	3.00	0.13	28.13	96.83
#170	3.50	0.09	2.33	99.16
#200	3.75	0.08	0.01	99.17
#230	4.00	0.06	0.01	99.18

SAND, poorly graded, mostly fine to medium-grained sand-sized quartz, some sand to gravel-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.97	2.77	2.61	2.20	1.15	-0.54	-2.11

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.50	0.35	2.20	0.22	1.67	-1.5	4.23

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-139 @ -3

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/1	#200 - 0.75 #230 - 0.75			29.1

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.29	0.29
#3.5	-2.50	5.60	0.87	1.16
#4	-2.25	4.75	0.52	1.68
#5	-2.00	4.00	0.67	2.35
#7	-1.50	2.80	3.14	5.49
#10	-1.00	2.00	4.09	9.58
#14	-0.50	1.40	4.66	14.24
#18	0.00	1.00	4.39	18.63
#25	0.50	0.71	4.11	22.74
#35	1.00	0.50	4.08	26.82
#45	1.50	0.36	4.03	30.85
#60	2.00	0.25	5.05	35.90
#80	2.50	0.18	19.18	55.08
#120	3.00	0.13	39.12	94.20
#170	3.50	0.09	4.99	99.19
#200	3.75	0.08	0.06	99.25
#230	4.00	0.06	0.00	99.25

SAND, poorly graded, mostly fine-grained sand-sized quartz, some fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.08	2.87	2.75	2.37	0.78	-0.30	-1.58

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.65	0.32	2.37	0.19	1.55	-1.23	3.39

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-139 @ -5

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 8/1	#200 - 0.88 #230 - 0.86			6

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	1.10	1.10
#3.5	-2.50	5.60	0.79	1.89
#4	-2.25	4.75	0.09	1.98
#5	-2.00	4.00	0.74	2.72
#7	-1.50	2.80	0.49	3.21
#10	-1.00	2.00	0.47	3.68
#14	-0.50	1.40	0.48	4.16
#18	0.00	1.00	0.47	4.63
#25	0.50	0.71	0.60	5.23
#35	1.00	0.50	0.93	6.16
#45	1.50	0.36	3.05	9.21
#60	2.00	0.25	24.90	34.11
#80	2.50	0.18	56.68	90.79
#120	3.00	0.13	8.15	98.94
#170	3.50	0.09	0.16	99.10
#200	3.75	0.08	0.02	99.12
#230	4.00	0.06	0.02	99.14

SAND, poorly graded, mostly fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.76	2.44	2.36	2.14	1.82	1.64	0.31

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.90	0.27	2.14	0.23	1.01	-3.8	18.7

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-139 @ -10

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	10G 7/1	#200 - 1.40 #230 - 1.25		24.90	21.3

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	1.23	1.23
#3.5	-2.50	5.60	0.82	2.05
#4	-2.25	4.75	0.52	2.57
#5	-2.00	4.00	0.91	3.48
#7	-1.50	2.80	2.48	5.96
#10	-1.00	2.00	2.97	8.93
#14	-0.50	1.40	3.80	12.73
#18	0.00	1.00	3.03	15.76
#25	0.50	0.71	2.53	18.29
#35	1.00	0.50	2.54	20.83
#45	1.50	0.36	3.08	23.91
#60	2.00	0.25	4.24	28.15
#80	2.50	0.18	10.67	38.82
#120	3.00	0.13	30.09	68.91
#170	3.50	0.09	27.73	96.64
#200	3.75	0.08	1.96	98.60
#230	4.00	0.06	0.15	98.75

SAND, poorly graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.47	3.27	3.11	2.69	1.63	0.05	-1.69

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.99	0.25	2.69	0.15	1.67	-1.55	4.5

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-139 @ -15

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/2	#200 - 1.63 #230 - 1.40			41.9

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	10.15	10.15
#3.5	-2.50	5.60	5.56	15.71
#4	-2.25	4.75	1.91	17.62
#5	-2.00	4.00	1.47	19.09
#7	-1.50	2.80	4.35	23.44
#10	-1.00	2.00	3.68	27.12
#14	-0.50	1.40	3.30	30.42
#18	0.00	1.00	2.72	33.14
#25	0.50	0.71	2.59	35.73
#35	1.00	0.50	3.15	38.88
#45	1.50	0.36	3.62	42.50
#60	2.00	0.25	5.43	47.93
#80	2.50	0.18	9.46	57.39
#120	3.00	0.13	18.95	76.34
#170	3.50	0.09	20.43	96.77
#200	3.75	0.08	1.60	98.37
#230	4.00	0.06	0.23	98.60

SAND, poorly graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.46	3.19	2.96	2.11	-1.29	-2.46	-3.76

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.88	0.54	2.11	0.23	2.48	-0.71	1.99

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-144 @ Berm

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/2	#200 - 0.41 #230 - 0.37		51.20	47.6

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	1.28	1.28
#3.5	-2.50	5.60	3.95	5.23
#4	-2.25	4.75	2.15	7.38
#5	-2.00	4.00	1.69	9.07
#7	-1.50	2.80	6.20	15.27
#10	-1.00	2.00	6.42	21.69
#14	-0.50	1.40	7.31	29.00
#18	0.00	1.00	5.96	34.96
#25	0.50	0.71	5.43	40.39
#35	1.00	0.50	5.23	45.62
#45	1.50	0.36	6.41	52.03
#60	2.00	0.25	7.99	60.02
#80	2.50	0.18	13.21	73.23
#120	3.00	0.13	19.19	92.42
#170	3.50	0.09	6.94	99.36
#200	3.75	0.08	0.23	99.59
#230	4.00	0.06	0.04	99.63

SAND, poorly graded, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.19	2.78	2.55	1.34	-0.77	-1.44	-2.54

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.83	0.56	1.34	0.40	1.91	-0.51	2.04

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-144 @ Mid-Tide

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	10G 8/1	#200 - 1.03 #230 - 1.02			4.9

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.47	0.47
#7	-1.50	2.80	0.20	0.67
#10	-1.00	2.00	0.18	0.85
#14	-0.50	1.40	0.20	1.05
#18	0.00	1.00	0.27	1.32
#25	0.50	0.71	0.35	1.67
#35	1.00	0.50	0.64	2.31
#45	1.50	0.36	2.66	4.97
#60	2.00	0.25	10.40	15.37
#80	2.50	0.18	38.39	53.76
#120	3.00	0.13	39.53	93.29
#170	3.50	0.09	5.62	98.91
#200	3.75	0.08	0.06	98.97
#230	4.00	0.06	0.01	98.98

SAND, poorly graded, mostly fine-grained sand-sized quartz, trace fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.15	2.88	2.77	2.45	2.13	2.01	1.50

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.36	0.19	2.45	0.18	0.64	-3.16	20.14

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-144 @ -3

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	10G 8/1	#200 - 1.14 #230 - 1.08			11.6

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	2.38	2.38
#3.5	-2.50	5.60	0.36	2.74
#4	-2.25	4.75	0.22	2.96
#5	-2.00	4.00	0.06	3.02
#7	-1.50	2.80	0.39	3.41
#10	-1.00	2.00	0.47	3.88
#14	-0.50	1.40	0.71	4.59
#18	0.00	1.00	0.80	5.39
#25	0.50	0.71	1.03	6.42
#35	1.00	0.50	1.64	8.06
#45	1.50	0.36	3.17	11.23
#60	2.00	0.25	8.78	20.01
#80	2.50	0.18	29.52	49.53
#120	3.00	0.13	41.16	90.69
#170	3.50	0.09	8.05	98.74
#200	3.75	0.08	0.12	98.86
#230	4.00	0.06	0.06	98.92

SAND, poorly graded, mostly fine-grained sand-sized quartz, few sand to gravel-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.27	2.92	2.81	2.51	2.08	1.77	-0.24

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.17	0.22	2.51	0.18	1.25	-3.24	14.48

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-144 @ -5

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	10G 8/1	#200 - 1.07 #230 - 1.04			8.3

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.24	0.24
#4	-2.25	4.75	0.09	0.33
#5	-2.00	4.00	0.06	0.39
#7	-1.50	2.80	0.44	0.83
#10	-1.00	2.00	0.60	1.43
#14	-0.50	1.40	0.71	2.14
#18	0.00	1.00	0.60	2.74
#25	0.50	0.71	0.65	3.39
#35	1.00	0.50	0.81	4.20
#45	1.50	0.36	1.63	5.83
#60	2.00	0.25	4.21	10.04
#80	2.50	0.18	18.74	28.78
#120	3.00	0.13	49.39	78.17
#170	3.50	0.09	19.71	97.88
#200	3.75	0.08	1.05	98.93
#230	4.00	0.06	0.03	98.96

SAND, poorly graded, mostly fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.43	3.15	2.97	2.71	2.40	2.16	1.25

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.56	0.17	2.71	0.15	0.82	-3.22	16.63

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-144 @ -10t

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/1	#200 - 2.35 #230 - 2.13		6.20	3.8

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.02	0.02
#10	-1.00	2.00	0.06	0.08
#14	-0.50	1.40	0.04	0.12
#18	0.00	1.00	0.09	0.21
#25	0.50	0.71	0.08	0.29
#35	1.00	0.50	0.15	0.44
#45	1.50	0.36	0.14	0.58
#60	2.00	0.25	0.38	0.96
#80	2.50	0.18	4.52	5.48
#120	3.00	0.13	49.46	54.94
#170	3.50	0.09	40.51	95.45
#200	3.75	0.08	2.20	97.65
#230	4.00	0.06	0.22	97.87

SAND, poorly graded, mostly fine-grained sand-sized quartz, trace fine-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.49	3.36	3.25	2.95	2.70	2.61	2.45

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.94	0.13	2.95	0.13	0.38	-2.85	27.2

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-144 @ -15

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	10G 8/1	#200 - 2.59 #230 - 2.12			2.5

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.12	0.12
#7	-1.50	2.80	0.11	0.23
#10	-1.00	2.00	0.12	0.35
#14	-0.50	1.40	0.13	0.48
#18	0.00	1.00	0.23	0.71
#25	0.50	0.71	0.28	0.99
#35	1.00	0.50	0.35	1.34
#45	1.50	0.36	0.46	1.80
#60	2.00	0.25	0.66	2.46
#80	2.50	0.18	1.90	4.36
#120	3.00	0.13	23.76	28.12
#170	3.50	0.09	64.76	92.88
#200	3.75	0.08	4.53	97.41
#230	4.00	0.06	0.47	97.88

SAND, poorly graded, mostly fine-grained sand-sized quartz, trace fine-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.62	3.43	3.36	3.17	2.93	2.74	2.51

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	3.06	0.12	3.17	0.11	0.52	-4.94	38.09

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-146 @ Dune

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	7.5YR 8/1	#200 - 0.88 #230 - 0.83			38.1

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	2.52	2.52
#4	-2.25	4.75	1.08	3.60
#5	-2.00	4.00	1.30	4.90
#7	-1.50	2.80	4.45	9.35
#10	-1.00	2.00	5.08	14.43
#14	-0.50	1.40	5.65	20.08
#18	0.00	1.00	5.37	25.45
#25	0.50	0.71	4.98	30.43
#35	1.00	0.50	5.66	36.09
#45	1.50	0.36	7.12	43.21
#60	2.00	0.25	10.34	53.55
#80	2.50	0.18	18.31	71.86
#120	3.00	0.13	21.82	93.68
#170	3.50	0.09	5.24	98.92
#200	3.75	0.08	0.20	99.12
#230	4.00	0.06	0.05	99.17

SAND, poorly graded, mostly fine-grained sand-sized qiartz, some fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.13	2.78	2.57	1.83	-0.04	-0.86	-1.99

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.20	0.44	1.83	0.28	1.67	-0.8	2.48

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-146 @ Berm

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	7.5YR 8/1	#200 - 0.22 #230 - 0.16		9.10	7.3

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.27	0.27
#7	-1.50	2.80	0.26	0.53
#10	-1.00	2.00	0.17	0.70
#14	-0.50	1.40	0.23	0.93
#18	0.00	1.00	0.24	1.17
#25	0.50	0.71	0.44	1.61
#35	1.00	0.50	0.59	2.20
#45	1.50	0.36	1.10	3.30
#60	2.00	0.25	3.61	6.91
#80	2.50	0.18	20.23	27.14
#120	3.00	0.13	52.04	79.18
#170	3.50	0.09	19.98	99.16
#200	3.75	0.08	0.62	99.78
#230	4.00	0.06	0.06	99.84

SAND, poorly graded, mostly fine-grained sand-sized quartz, few fine to medium-grained sand-sized quartz

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.40	3.12	2.96	2.72	2.45	2.22	1.74

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.63	0.16	2.72	0.15	0.63	-3.44	22.15

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-146 @Mid-Tide

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5YR 8/1	#200 - 0.78 #230 - 0.77			38.5

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	1.07	1.07
#3.5	-2.50	5.60	4.49	5.56
#4	-2.25	4.75	2.13	7.69
#5	-2.00	4.00	2.32	10.01
#7	-1.50	2.80	5.22	15.23
#10	-1.00	2.00	4.39	19.62
#14	-0.50	1.40	4.35	23.97
#18	0.00	1.00	3.56	27.53
#25	0.50	0.71	3.01	30.54
#35	1.00	0.50	3.03	33.57
#45	1.50	0.36	3.60	37.17
#60	2.00	0.25	7.42	44.59
#80	2.50	0.18	21.99	66.58
#120	3.00	0.13	28.50	95.08
#170	3.50	0.09	4.08	99.16
#200	3.75	0.08	0.06	99.22
#230	4.00	0.06	0.01	99.23

SAND, poorly graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.00	2.81	2.65	2.12	-0.36	-1.41	-2.59

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.17	0.44	2.12	0.23	1.92	-0.94	2.48

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-146 @ -3

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5YR 8/1	#200 - 0.73 #230 - 0.71			46.5

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	6.31	6.31
#3.5	-2.50	5.60	6.09	12.40
#4	-2.25	4.75	1.45	13.85
#5	-2.00	4.00	1.78	15.63
#7	-1.50	2.80	5.81	21.44
#10	-1.00	2.00	5.21	26.65
#14	-0.50	1.40	5.14	31.79
#18	0.00	1.00	4.26	36.05
#25	0.50	0.71	3.57	39.62
#35	1.00	0.50	3.40	43.02
#45	1.50	0.36	3.74	46.76
#60	2.00	0.25	4.85	51.61
#80	2.50	0.18	12.49	64.10
#120	3.00	0.13	26.72	90.82
#170	3.50	0.09	8.24	99.06
#200	3.75	0.08	0.21	99.27
#230	4.00	0.06	0.02	99.29

SAND, poorly graded, mostly fine-grained sand-sized quartz, some fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.25	2.87	2.70	1.83	-1.16	-1.97	-3.46

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.76	0.59	1.83	0.28	2.25	-0.64	1.99

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-146 @ -5

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5YR 8/1	#200 - 0.73 #230 - 0.71			30.9

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	2.23	2.23
#3.5	-2.50	5.60	2.03	4.26
#4	-2.25	4.75	1.44	5.70
#5	-2.00	4.00	1.10	6.80
#7	-1.50	2.80	3.56	10.36
#10	-1.00	2.00	4.01	14.37
#14	-0.50	1.40	4.52	18.89
#18	0.00	1.00	4.05	22.94
#25	0.50	0.71	3.83	26.77
#35	1.00	0.50	4.00	30.77
#45	1.50	0.36	4.92	35.69
#60	2.00	0.25	7.67	43.36
#80	2.50	0.18	20.53	63.89
#120	3.00	0.13	29.09	92.98
#170	3.50	0.09	6.15	99.13
#200	3.75	0.08	0.14	99.27
#230	4.00	0.06	0.02	99.29

SAND, poorly graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.16	2.85	2.69	2.16	0.27	-0.82	-2.37

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.36	0.39	2.16	0.22	1.8	-1.16	3.28

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-146 @ -10

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	10G 8/1	#200 - 2.07 #230 - 1.46		7.10	3.6

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.06	0.06
#10	-1.00	2.00	0.09	0.15
#14	-0.50	1.40	0.17	0.32
#18	0.00	1.00	0.20	0.52
#25	0.50	0.71	0.23	0.75
#35	1.00	0.50	0.28	1.03
#45	1.50	0.36	0.32	1.35
#60	2.00	0.25	0.89	2.24
#80	2.50	0.18	9.19	11.43
#120	3.00	0.13	58.71	70.14
#170	3.50	0.09	27.51	97.65
#200	3.75	0.08	0.28	97.93
#230	4.00	0.06	0.61	98.54

SAND, poorly graded, mostly fine-grained sand-sized quartz, trace fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.45	3.25	3.09	2.83	2.62	2.54	2.15

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.81	0.14	2.83	0.14	0.46	-3.41	27.08

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-146 @ -15

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	10G 7/1	#200 - 2.33 #230 - 2.06			1.7

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.02	0.02
#10	-1.00	2.00	0.07	0.09
#14	-0.50	1.40	0.04	0.13
#18	0.00	1.00	0.14	0.27
#25	0.50	0.71	0.21	0.48
#35	1.00	0.50	0.26	0.74
#45	1.50	0.36	0.39	1.13
#60	2.00	0.25	0.36	1.49
#80	2.50	0.18	2.19	3.68
#120	3.00	0.13	30.88	34.56
#170	3.50	0.09	59.77	94.33
#200	3.75	0.08	3.34	97.67
#230	4.00	0.06	0.27	97.94

SAND, poorly graded, mostly fine-grained sand-sized quartz, trace fine-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.55	3.41	3.34	3.13	2.85	2.70	2.52

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	3.05	0.12	3.13	0.11	0.41	-3.86	30.61

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-150 @ Dune

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 8/1	#200 - 0.38 #230 - 0.33			27.8

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.55	0.55
#4	-2.25	4.75	0.59	1.14
#5	-2.00	4.00	0.66	1.80
#7	-1.50	2.80	2.05	3.85
#10	-1.00	2.00	2.45	6.30
#14	-0.50	1.40	3.23	9.53
#18	0.00	1.00	3.64	13.17
#25	0.50	0.71	4.76	17.93
#35	1.00	0.50	6.13	24.06
#45	1.50	0.36	8.67	32.73
#60	2.00	0.25	14.49	47.22
#80	2.50	0.18	24.86	72.08
#120	3.00	0.13	22.65	94.73
#170	3.50	0.09	4.77	99.50
#200	3.75	0.08	0.12	99.62
#230	4.00	0.06	0.05	99.67

SAND, poorly graded, mostly fine-grained sand-sized quartz, some fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.03	2.76	2.56	2.06	1.05	0.30	-1.27

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.63	0.32	2.06	0.24	1.31	-1.26	4.03

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-150 Berm

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 8/1	#200 - 0.40 #230 - 0.36		51.60	47.8

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	2.79	2.79
#4	-2.25	4.75	1.46	4.25
#5	-2.00	4.00	2.03	6.28
#7	-1.50	2.80	5.70	11.98
#10	-1.00	2.00	6.32	18.30
#14	-0.50	1.40	7.28	25.58
#18	0.00	1.00	6.81	32.39
#25	0.50	0.71	6.56	38.95
#35	1.00	0.50	6.33	45.28
#45	1.50	0.36	6.67	51.95
#60	2.00	0.25	9.45	61.40
#80	2.50	0.18	17.55	78.95
#120	3.00	0.13	17.61	96.56
#170	3.50	0.09	2.96	99.52
#200	3.75	0.08	0.08	99.60
#230	4.00	0.06	0.04	99.64

SAND, poorly graded, mostly fine to medium-grained sand-sized quartz, some fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.96	2.64	2.39	1.35	-0.54	-1.18	-2.16

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.89	0.54	1.35	0.39	1.71	-0.52	2.03

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-150 @ Mid-Tide

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	5Y 7/1	#200 - 0.63 #230 - 0.63			25.8

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.37	0.37
#4	-2.25	4.75	0.19	0.56
#5	-2.00	4.00	0.28	0.84
#7	-1.50	2.80	1.84	2.68
#10	-1.00	2.00	2.03	4.71
#14	-0.50	1.40	2.91	7.62
#18	0.00	1.00	3.10	10.72
#25	0.50	0.71	3.79	14.51
#35	1.00	0.50	6.28	20.79
#45	1.50	0.36	10.26	31.05
#60	2.00	0.25	16.23	47.28
#80	2.50	0.18	30.70	77.98
#120	3.00	0.13	20.07	98.05
#170	3.50	0.09	1.31	99.36
#200	3.75	0.08	0.01	99.37
#230	4.00	0.06	0.00	99.37

SAND, poorly graded, mostly fine-grained sand-sized quartz, some fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.92	2.65	2.45	2.04	1.21	0.62	-0.95

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.66	0.32	2.04	0.24	1.16	-1.44	4.73

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-150 @ -3

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	5Y 7/1	#200 - 0.78 #230 - 0.76			3.6

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.24	0.24
#4	-2.25	4.75	0.20	0.44
#5	-2.00	4.00	0.06	0.50
#7	-1.50	2.80	0.39	0.89
#10	-1.00	2.00	0.33	1.22
#14	-0.50	1.40	0.42	1.64
#18	0.00	1.00	0.41	2.05
#25	0.50	0.71	0.44	2.49
#35	1.00	0.50	0.56	3.05
#45	1.50	0.36	0.77	3.82
#60	2.00	0.25	2.73	6.55
#80	2.50	0.18	18.76	25.31
#120	3.00	0.13	61.01	86.32
#170	3.50	0.09	12.63	98.95
#200	3.75	0.08	0.27	99.22
#230	4.00	0.06	0.02	99.24

SAND, poorly graded, mostly fine-grained sand-sized quartz, trace fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.34	2.98	2.91	2.70	2.49	2.25	1.72

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.58	0.17	2.70	0.15	0.72	-4.2	25.85

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-150 @ -5

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	5Y 7/1	#200 - 0.47 #230 - 0.44			13.3

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	1.60	1.60
#4	-2.25	4.75	0.21	1.81
#5	-2.00	4.00	0.47	2.28
#7	-1.50	2.80	0.70	2.98
#10	-1.00	2.00	0.84	3.82
#14	-0.50	1.40	0.87	4.69
#18	0.00	1.00	1.20	5.89
#25	0.50	0.71	1.30	7.19
#35	1.00	0.50	1.68	8.87
#45	1.50	0.36	2.52	11.39
#60	2.00	0.25	5.76	17.15
#80	2.50	0.18	22.80	39.95
#120	3.00	0.13	46.73	86.68
#170	3.50	0.09	12.48	99.16
#200	3.75	0.08	0.37	99.53
#230	4.00	0.06	0.03	99.56

SAND, poorly graded, mostly fine to medium-grained sand-sized quartz, little fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.33	2.97	2.88	2.61	2.17	1.90	-0.37

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.28	0.21	2.61	0.16	1.14	-2.77	11.16

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-150 @ -10

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 6/1	#200 - 2.97 #230 - 1.79		10.10	13.5

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.02	0.02
#7	-1.50	2.80	0.08	0.10
#10	-1.00	2.00	0.09	0.19
#14	-0.50	1.40	0.14	0.33
#18	0.00	1.00	0.37	0.70
#25	0.50	0.71	0.58	1.28
#35	1.00	0.50	0.89	2.17
#45	1.50	0.36	1.26	3.43
#60	2.00	0.25	2.58	6.01
#80	2.50	0.18	5.10	11.11
#120	3.00	0.13	11.17	22.28
#170	3.50	0.09	69.31	91.59
#200	3.75	0.08	5.44	97.03
#230	4.00	0.06	1.18	98.21

SAND, poorly graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.66	3.45	3.38	3.20	3.02	2.72	1.80

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	3.04	0.12	3.20	0.11	0.62	-3.27	16.9

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-150 @ -15

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 6/1	#200 - 5.27 #230 - 2.64			12.4

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.53	0.53
#4	-2.25	4.75	0.00	0.53
#5	-2.00	4.00	0.28	0.81
#7	-1.50	2.80	0.67	1.48
#10	-1.00	2.00	0.75	2.23
#14	-0.50	1.40	0.99	3.22
#18	0.00	1.00	1.56	4.78
#25	0.50	0.71	1.89	6.67
#35	1.00	0.50	2.31	8.98
#45	1.50	0.36	3.65	12.63
#60	2.00	0.25	6.92	19.55
#80	2.50	0.18	13.65	33.20
#120	3.00	0.13	17.41	50.61
#170	3.50	0.09	35.93	86.54
#200	3.75	0.08	8.19	94.73
#230	4.00	0.06	2.63	97.36

SAND, poorly graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.78	3.46	3.34	2.98	2.20	1.74	0.06

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.56	0.17	2.98	0.13	1.15	-2	7.62

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-154 @ Dune

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 8/1	#200 - 0.03 #230 - 0.02			5.6

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.56	0.56
#4	-2.25	4.75	0.24	0.80
#5	-2.00	4.00	0.26	1.06
#7	-1.50	2.80	0.52	1.58
#10	-1.00	2.00	0.69	2.27
#14	-0.50	1.40	0.80	3.07
#18	0.00	1.00	0.64	3.71
#25	0.50	0.71	0.72	4.43
#35	1.00	0.50	0.90	5.33
#45	1.50	0.36	1.44	6.77
#60	2.00	0.25	4.60	11.37
#80	2.50	0.18	27.05	38.42
#120	3.00	0.13	54.36	92.78
#170	3.50	0.09	7.03	99.81
#200	3.75	0.08	0.16	99.97
#230	4.00	0.06	0.01	99.98

SAND, poorly graded, mostly fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.16	2.92	2.84	2.61	2.25	2.09	0.82

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.39	0.19	2.61	0.16	0.89	-3.49	17.18

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-154 @ Berm

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 0.18 #230 - 0.15		8.60	5.3

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.38	0.38
#4	-2.25	4.75	0.00	0.38
#5	-2.00	4.00	0.00	0.38
#7	-1.50	2.80	0.33	0.71
#10	-1.00	2.00	0.35	1.06
#14	-0.50	1.40	0.31	1.37
#18	0.00	1.00	0.46	1.83
#25	0.50	0.71	0.67	2.50
#35	1.00	0.50	1.09	3.59
#45	1.50	0.36	1.83	5.42
#60	2.00	0.25	6.05	11.47
#80	2.50	0.18	29.42	40.89
#120	3.00	0.13	52.83	93.72
#170	3.50	0.09	6.02	99.74
#200	3.75	0.08	0.08	99.82
#230	4.00	0.06	0.03	99.85

SAND, poorly graded, mostly fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.11	2.91	2.82	2.59	2.23	2.08	1.39

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.43	0.19	2.59	0.17	0.71	-3.67	22.31

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-154 @ Mid-Tide

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 8/1				6.6

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
2"	-5.75	50.00	0.00	0.00
1-1/2"	-5.25	37.50	0.10	0.10
1"	-4.75	25.00	0.08	0.18
3/4"	-4.25	19.00	0.04	0.22
5/8"	-4.00	16.00	0.21	0.43
11/16"	-3.50	11.31	0.48	0.91
3/8"	-3.25	9.50	0.79	1.70
5/16"	-3.00	8.00	0.78	2.48
#3.5	-2.50	5.60	1.09	3.57
#4	-2.25	4.75	1.25	4.82
#5	-2.00	4.00	1.45	6.27
#7	-1.50	2.80	5.54	11.81
#10	-1.00	2.00	26.66	38.47
#14	-0.50	1.40	51.23	89.70
#18	0.00	1.00	9.31	99.01
#20	0.25	0.85	0.14	99.15
#25	0.50	0.71	0.02	99.17

SAND, poorly graded, mostly fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
-0.22	-0.56	-0.64	-0.89	-1.25	-1.42	-2.22

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	-1.03	2.04			0.62	-2.36	11.62

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-154 @ -3

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 8/1	#200 - 0.93 #230 - 0.92			17.6

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.99	0.99
#3.5	-2.50	5.60	1.63	2.62
#4	-2.25	4.75	0.23	2.85
#5	-2.00	4.00	0.66	3.51
#7	-1.50	2.80	1.38	4.89
#10	-1.00	2.00	2.18	7.07
#14	-0.50	1.40	2.60	9.67
#18	0.00	1.00	2.31	11.98
#25	0.50	0.71	2.15	14.13
#35	1.00	0.50	2.08	16.21
#45	1.50	0.36	2.55	18.76
#60	2.00	0.25	4.06	22.82
#80	2.50	0.18	15.18	38.00
#120	3.00	0.13	46.36	84.36
#170	3.50	0.09	14.39	98.75
#200	3.75	0.08	0.32	99.07
#230	4.00	0.06	0.01	99.08

SAND, poorly graded, mostly fine to medium-grained sand-sized quartz, little fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.37	3.00	2.90	2.63	2.07	0.95	-1.47

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.06	0.24	2.63	0.16	1.5	-2.03	6.48

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-154 @ -5

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 0.83 #230 - 0.80			3.7

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.13	0.13
#4	-2.25	4.75	0.15	0.28
#5	-2.00	4.00	0.18	0.46
#7	-1.50	2.80	0.16	0.62
#10	-1.00	2.00	0.19	0.81
#14	-0.50	1.40	0.15	0.96
#18	0.00	1.00	0.09	1.05
#25	0.50	0.71	0.12	1.17
#35	1.00	0.50	0.32	1.49
#45	1.50	0.36	0.99	2.48
#60	2.00	0.25	9.05	11.53
#80	2.50	0.18	61.29	72.82
#120	3.00	0.13	25.03	97.85
#170	3.50	0.09	1.27	99.12
#200	3.75	0.08	0.05	99.17
#230	4.00	0.06	0.03	99.20

SAND, poorly graded, mostly fine-grained sand-sized quartz, trace fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.94	2.72	2.54	2.31	2.11	2.04	1.64

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.29	0.20	2.31	0.20	0.54	-4.74	38.97

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-154 @ -10

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	10G 6/1	#200 - 4.14 #230 - 2.09		14.20	9.4

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.12	0.12
#3.5	-2.50	5.60	0.18	0.30
#4	-2.25	4.75	0.27	0.57
#5	-2.00	4.00	0.08	0.65
#7	-1.50	2.80	0.65	1.30
#10	-1.00	2.00	0.74	2.04
#14	-0.50	1.40	0.78	2.82
#18	0.00	1.00	0.86	3.68
#25	0.50	0.71	1.02	4.70
#35	1.00	0.50	1.21	5.91
#45	1.50	0.36	2.20	8.11
#60	2.00	0.25	3.88	11.99
#80	2.50	0.18	8.61	20.60
#120	3.00	0.13	22.57	43.17
#170	3.50	0.09	44.61	87.78
#200	3.75	0.08	8.08	95.86
#230	4.00	0.06	2.05	97.91

SAND, poorly graded, mostly fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.72	3.46	3.36	3.08	2.60	2.23	0.62

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.75	0.15	3.08	0.12	1.03	-2.79	12.27

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-154 @ -15

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	10G 6/1	#200 - 6.50 #230 - 3.26			10.2

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.07	0.07
#4	-2.25	4.75	0.03	0.10
#5	-2.00	4.00	0.10	0.20
#7	-1.50	2.80	0.56	0.76
#10	-1.00	2.00	0.74	1.50
#14	-0.50	1.40	0.95	2.45
#18	0.00	1.00	1.06	3.51
#25	0.50	0.71	1.22	4.73
#35	1.00	0.50	1.31	6.04
#45	1.50	0.36	2.21	8.25
#60	2.00	0.25	3.94	12.19
#80	2.50	0.18	9.84	22.03
#120	3.00	0.13	22.28	44.31
#170	3.50	0.09	38.99	83.30
#200	3.75	0.08	10.20	93.50
#230	4.00	0.06	3.24	96.74

SAND, poorly graded, mostly fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.87	3.52	3.39	3.07	2.57	2.19	0.60

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.76	0.15	3.07	0.12	0.99	-2.37	9.56

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-158 @ Dune

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW		#200 - 0.18 #230 - 0.10			35.9

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.19	0.19
#4	-2.25	4.75	0.20	0.39
#5	-2.00	4.00	0.40	0.79
#7	-1.50	2.80	2.45	3.24
#10	-1.00	2.00	4.80	8.04
#14	-0.50	1.40	7.70	15.74
#18	0.00	1.00	7.48	23.22
#25	0.50	0.71	5.89	29.11
#35	1.00	0.50	5.01	34.12
#45	1.50	0.36	4.54	38.66
#60	2.00	0.25	6.14	44.80
#80	2.50	0.18	16.20	61.00
#120	3.00	0.13	31.89	92.89
#170	3.50	0.09	6.80	99.69
#200	3.75	0.08	0.13	99.82
#230	4.00	0.06	0.08	99.90

SAND, poorly graded, mostly fine to medium-grained sand-sized shell, some fine to medium-grained sand-sized quartz

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.16	2.86	2.72	2.16	0.15	-0.48	-1.32

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.49	0.36	2.16	0.22	1.52	-0.74	2.2

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-158 @ Berm

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW		#200 - 0.36 #230 - 0.34		26.30	23.9

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	1.21	1.21
#3.5	-2.50	5.60	2.17	3.38
#4	-2.25	4.75	1.55	4.93
#5	-2.00	4.00	2.18	7.11
#7	-1.50	2.80	3.94	11.05
#10	-1.00	2.00	2.24	13.29
#14	-0.50	1.40	1.96	15.25
#18	0.00	1.00	1.67	16.92
#25	0.50	0.71	2.00	18.92
#35	1.00	0.50	2.57	21.49
#45	1.50	0.36	3.32	24.81
#60	2.00	0.25	5.83	30.64
#80	2.50	0.18	21.43	52.07
#120	3.00	0.13	42.01	94.08
#170	3.50	0.09	5.51	99.59
#200	3.75	0.08	0.05	99.64
#230	4.00	0.06	0.02	99.66

SAND, poorly graded, mostly fine to medium-grained sand-sized quartz, some fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.08	2.88	2.77	2.45	1.52	-0.28	-2.24

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.69	0.31	2.45	0.18	1.73	-1.59	4.28

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-158 @ Mid-Tide

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 0.68 #230 - 0.67			18.9

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.20	0.20
#4	-2.25	4.75	0.08	0.28
#5	-2.00	4.00	0.03	0.31
#7	-1.50	2.80	0.23	0.54
#10	-1.00	2.00	0.37	0.91
#14	-0.50	1.40	0.68	1.59
#18	0.00	1.00	0.98	2.57
#25	0.50	0.71	1.44	4.01
#35	1.00	0.50	1.84	5.85
#45	1.50	0.36	3.17	9.02
#60	2.00	0.25	6.94	15.96
#80	2.50	0.18	26.04	42.00
#120	3.00	0.13	51.20	93.20
#170	3.50	0.09	6.02	99.22
#200	3.75	0.08	0.10	99.32
#230	4.00	0.06	0.01	99.33

SAND, poorly graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.15	2.91	2.82	2.58	2.17	2.00	0.77

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.36	0.19	2.58	0.17	0.78	-2.78	13.38

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-158 @ -3

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 1.21 #230 - 1.17			7.7

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.02	0.02
#4	-2.25	4.75	0.06	0.08
#5	-2.00	4.00	0.08	0.16
#7	-1.50	2.80	0.65	0.81
#10	-1.00	2.00	0.83	1.64
#14	-0.50	1.40	1.01	2.65
#18	0.00	1.00	0.86	3.51
#25	0.50	0.71	0.69	4.20
#35	1.00	0.50	0.67	4.87
#45	1.50	0.36	0.76	5.63
#60	2.00	0.25	1.20	6.83
#80	2.50	0.18	8.74	15.57
#120	3.00	0.13	59.57	75.14
#170	3.50	0.09	22.66	97.80
#200	3.75	0.08	0.99	98.79
#230	4.00	0.06	0.04	98.83

SAND, poorly graded, mostly fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.44	3.20	3.00	2.79	2.58	2.50	1.09

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.64	0.16	2.79	0.14	0.83	-3.45	16.27

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-158 @ -5

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 0.99 #230 - 0.91			3.5

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.05	0.05
#10	-1.00	2.00	0.20	0.25
#14	-0.50	1.40	0.07	0.32
#18	0.00	1.00	0.14	0.46
#25	0.50	0.71	0.04	0.50
#35	1.00	0.50	0.17	0.67
#45	1.50	0.36	0.22	0.89
#60	2.00	0.25	0.70	1.59
#80	2.50	0.18	7.09	8.68
#120	3.00	0.13	66.97	75.65
#170	3.50	0.09	22.18	97.83
#200	3.75	0.08	1.18	99.01
#230	4.00	0.06	0.08	99.09

SAND, poorly graded, mostly fine-grained sand-sized quartz, trace fine-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.44	3.19	3.00	2.81	2.62	2.55	2.24

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.81	0.14	2.81	0.14	0.41	-4.1	39.49

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-158 @ -10

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 6.64 #230 - 3.90		18.70	14

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.96	0.96
#4	-2.25	4.75	0.42	1.38
#5	-2.00	4.00	0.09	1.47
#7	-1.50	2.80	1.39	2.86
#10	-1.00	2.00	1.52	4.38
#14	-0.50	1.40	1.20	5.58
#18	0.00	1.00	1.30	6.88
#25	0.50	0.71	0.94	7.82
#35	1.00	0.50	0.97	8.79
#45	1.50	0.36	0.84	9.63
#60	2.00	0.25	1.45	11.08
#80	2.50	0.18	3.00	14.08
#120	3.00	0.13	14.25	28.33
#170	3.50	0.09	55.73	84.06
#200	3.75	0.08	9.30	93.36
#230	4.00	0.06	2.74	96.10

SAND, poorly graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.90	3.50	3.42	3.19	2.88	2.57	-0.74

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.77	0.15	3.19	0.11	1.29	-2.74	9.93

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-158 @ -15

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW		#200 - 3.51 #230 - 2.03			16.2

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	4.06	4.06
#3.5	-2.50	5.60	1.26	5.32
#4	-2.25	4.75	0.57	5.89
#5	-2.00	4.00	0.70	6.59
#7	-1.50	2.80	2.76	9.35
#10	-1.00	2.00	2.03	11.38
#14	-0.50	1.40	1.86	13.24
#18	0.00	1.00	1.31	14.55
#25	0.50	0.71	1.09	15.64
#35	1.00	0.50	0.82	16.46
#45	1.50	0.36	0.97	17.43
#60	2.00	0.25	1.08	18.51
#80	2.50	0.18	2.41	20.92
#120	3.00	0.13	13.99	34.91
#170	3.50	0.09	54.71	89.62
#200	3.75	0.08	6.87	96.49
#230	4.00	0.06	1.48	97.97

SAND, poorly graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.70	3.45	3.37	3.14	2.65	0.72	-2.69

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.30	0.20	3.14	0.11	1.97	-1.98	5.59

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-163 @ Dunet

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW		#200 - 0.28 #230 - 0.14			30.5

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.93	0.93
#4	-2.25	4.75	0.00	0.93
#5	-2.00	4.00	0.26	1.19
#7	-1.50	2.80	1.30	2.49
#10	-1.00	2.00	2.11	4.60
#14	-0.50	1.40	3.77	8.37
#18	0.00	1.00	5.43	13.80
#25	0.50	0.71	6.10	19.90
#35	1.00	0.50	6.62	26.52
#45	1.50	0.36	7.73	34.25
#60	2.00	0.25	10.53	44.78
#80	2.50	0.18	18.90	63.68
#120	3.00	0.13	23.50	87.18
#170	3.50	0.09	11.80	98.98
#200	3.75	0.08	0.74	99.72
#230	4.00	0.06	0.14	99.86

SAND, poorly graded, mostly fine-grained sand-sized quartz, some fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.33	2.93	2.74	2.14	0.89	0.18	-0.95

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.71	0.31	2.14	0.23	1.36	-1.03	3.47

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-163 @ Berm

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW		#200 - 0.07 #230 - 0.02		40.10	39.3

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	1.04	1.04
#3.5	-2.50	5.60	0.25	1.29
#4	-2.25	4.75	0.32	1.61
#5	-2.00	4.00	0.33	1.94
#7	-1.50	2.80	1.44	3.38
#10	-1.00	2.00	2.26	5.64
#14	-0.50	1.40	4.27	9.91
#18	0.00	1.00	6.56	16.47
#25	0.50	0.71	7.63	24.10
#35	1.00	0.50	8.46	32.56
#45	1.50	0.36	8.50	41.06
#60	2.00	0.25	12.22	53.28
#80	2.50	0.18	18.76	72.04
#120	3.00	0.13	21.03	93.07
#170	3.50	0.09	6.60	99.67
#200	3.75	0.08	0.26	99.93
#230	4.00	0.06	0.05	99.98

SAND, poorly graded, mostly fine to medium-grained sand-sized quartz, some fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.15	2.78	2.57	1.87	0.55	-0.04	-1.14

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.47	0.36	1.87	0.27	1.41	-1.05	3.96

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-163 @ Mid-Tide

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW		#200 - 0.53 #230 - 0.52			39.3

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	2.13	2.13
#4	-2.25	4.75	1.28	3.41
#5	-2.00	4.00	1.56	4.97
#7	-1.50	2.80	5.46	10.43
#10	-1.00	2.00	5.29	15.72
#14	-0.50	1.40	5.29	21.01
#18	0.00	1.00	3.86	24.87
#25	0.50	0.71	3.31	28.18
#35	1.00	0.50	3.31	31.49
#45	1.50	0.36	4.18	35.67
#60	2.00	0.25	7.64	43.31
#80	2.50	0.18	21.31	64.62
#120	3.00	0.13	30.60	95.22
#170	3.50	0.09	4.20	99.42
#200	3.75	0.08	0.05	99.47
#230	4.00	0.06	0.01	99.48

SAND, poorly graded, mostly fine to medium-grained sand-sized quartz, some fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.00	2.82	2.67	2.16	0.02	-0.97	-2.00

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.35	0.39	2.16	0.22	1.72	-0.96	2.53

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-163 @ -3

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW		#200 - 0.72 #230 - 0.71			12.4

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	1.06	1.06
#3.5	-2.50	5.60	0.00	1.06
#4	-2.25	4.75	0.09	1.15
#5	-2.00	4.00	0.39	1.54
#7	-1.50	2.80	0.38	1.92
#10	-1.00	2.00	0.32	2.24
#14	-0.50	1.40	0.38	2.62
#18	0.00	1.00	0.38	3.00
#25	0.50	0.71	0.48	3.48
#35	1.00	0.50	0.74	4.22
#45	1.50	0.36	1.45	5.67
#60	2.00	0.25	8.34	14.01
#80	2.50	0.18	56.64	70.65
#120	3.00	0.13	27.76	98.41
#170	3.50	0.09	0.85	99.26
#200	3.75	0.08	0.02	99.28
#230	4.00	0.06	0.01	99.29

SAND, poorly graded, mostly fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.94	2.74	2.58	2.32	2.10	2.02	1.27

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.19	0.22	2.32	0.20	0.89	-4.56	27.55

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-163 @ -5t

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 0.84 #230 - 0.82			5.8

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.01	0.01
#4	-2.25	4.75	0.06	0.07
#5	-2.00	4.00	0.02	0.09
#7	-1.50	2.80	0.33	0.42
#10	-1.00	2.00	0.24	0.66
#14	-0.50	1.40	0.20	0.86
#18	0.00	1.00	0.17	1.03
#25	0.50	0.71	0.25	1.28
#35	1.00	0.50	0.28	1.56
#45	1.50	0.36	0.46	2.02
#60	2.00	0.25	1.48	3.50
#80	2.50	0.18	9.26	12.76
#120	3.00	0.13	62.33	75.09
#170	3.50	0.09	23.10	98.19
#200	3.75	0.08	0.97	99.16
#230	4.00	0.06	0.02	99.18

SAND, poorly graded, mostly fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.43	3.19	3.00	2.80	2.60	2.53	2.08

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.75	0.15	2.80	0.14	0.56	-4.51	33.7

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-163 @ -10

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 1.41 #230 - 1.36		73.90	72.9

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	1.21	1.21
3/8"	-3.25	9.50	6.04	7.25
#3.5	-2.50	5.60	5.53	12.78
#4	-2.25	4.75	3.01	15.79
#5	-2.00	4.00	3.94	19.73
#7	-1.50	2.80	12.34	32.07
#10	-1.00	2.00	12.48	44.55
#14	-0.50	1.40	12.09	56.64
#18	0.00	1.00	8.11	64.75
#25	0.50	0.71	4.85	69.60
#35	1.00	0.50	2.66	72.26
#45	1.50	0.36	1.86	74.12
#60	2.00	0.25	0.94	75.06
#80	2.50	0.18	1.42	76.48
#120	3.00	0.13	4.81	81.29
#170	3.50	0.09	16.23	97.52
#200	3.75	0.08	1.07	98.59
#230	4.00	0.06	0.05	98.64

SAND, poorly graded, mostly fine to medium-grained sand-sized shell, some sand to gravel-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.42	3.08	1.97	-0.77	-1.79	-2.24	-3.62

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	-0.28	1.21			2.17	0.5	2.11

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

Granularmetric Report

Project Name: Pinellas County SPP Beach Sampling

Sample Name: R-163 @ -15

Analysis Date: 9/6/2012

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW		#200 - 3.10 #230 - 2.32			16.9

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	1.29	1.29
#3.5	-2.50	5.60	2.06	3.35
#4	-2.25	4.75	0.86	4.21
#5	-2.00	4.00	0.57	4.78
#7	-1.50	2.80	2.67	7.45
#10	-1.00	2.00	2.07	9.52
#14	-0.50	1.40	1.93	11.45
#18	0.00	1.00	1.62	13.07
#25	0.50	0.71	1.26	14.33
#35	1.00	0.50	1.02	15.35
#45	1.50	0.36	0.85	16.20
#60	2.00	0.25	0.84	17.04
#80	2.50	0.18	1.94	18.98
#120	3.00	0.13	12.79	31.77
#170	3.50	0.09	58.91	90.68
#200	3.75	0.08	6.22	96.90
#230	4.00	0.06	0.78	97.68

SAND, poorly graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.67	3.44	3.37	3.15	2.74	1.38	-1.96

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.43	0.19	3.15	0.11	1.77	-2.07	5.98

GRANULARMETRIC REPORT % PINELLAS_BEACH_TRESI-LONGK_PREFILL_2012_COMPAT.GPJ CESAJ3.GDT 7/6/16

7.2 JOHNS PASS

- Boring Logs
- Gradation Graphs
- Granularmetric Reports

Boring Designation JP08-03

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County SPP Treasure Island/Johns Pass
2. BORING DESIGNATION	JP08-03
LOCATION COORDINATES	X = 401,454 Y = 1,253,013
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	10.0 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 4 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 10-04-08 / COMPLETED 10-04-08
16. ELEVATION TOP OF BORING	-9.2 Ft.
17. TOTAL RECOVERY FOR BORING	59 %
18. SIGNATURE AND TITLE OF INSPECTOR	Jase Ousley, Geologist

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-9.2	0.0						-9.2		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, 10Y 8/1 light greenish gray (SP)	100			-9.9 Vibracore		
			At El. -9.7 Ft., some shell, some angular shell up to 1/4"	100	1		-11.2 Vibracore		
			At El. -10.9 Ft., discontinue shell	100	2		-12.0 Vibracore		
			At El. -11.8 Ft., some angular shell up to 1/4"	100	3		-13.1 Vibracore		
			At El. -12.6 Ft., discontinue shell	100	4		-15.1 Vibracore		
-15.1	5.9						-15.1		
		NO RECOVERY		0			Vibracore		
-19.2	10.0						-19.2		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	0.7/0.9	SP*
2	2.0/2.2	SP*

(Continued)

Boring Designation JP08-03

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County SPP	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 401,454 Y = 1,253,013	ELEVATION TOP OF BORING -9.2 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			3 2.8/3.0 SP* 4 3.9/4.1 SP* *Lab visual classification based on gradation curve						

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SAJ FORM 1836-A
JUN 02

Boring Designation JP08-04

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County SPP Treasure Island/Johns Pass
2. BORING DESIGNATION	JP08-04
LOCATION COORDINATES	X = 401,139 Y = 1,252,834
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	11.8 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 3 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 10-04-08 / COMPLETED 10-04-08
16. ELEVATION TOP OF BORING	-6.9 Ft.
17. TOTAL RECOVERY FOR BORING	69 %
18. SIGNATURE AND TITLE OF INSPECTOR	Barbara Nist, Geologist

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-6.9	0.0						-6.9		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little subangular medium to coarse-grained sand-sized shell, 10Y 8/1 light greenish gray (SP)	100			Vibracore -7.6		
				100	1		Vibracore -10.2		
			At El. -8.9 Ft., some subangular fine to medium-grained sand-sized shell, 10Y 8/1 light greenish gray At El. -9.8 Ft., trace subangular medium to coarse-grained sand-sized shell, 5GY 8/1 light greenish gray	100	2		Vibracore -13.0		
-15.0	8.1			100	3		Vibracore -15.0		
-18.7	11.8	NO RECOVERY		0			Vibracore -18.7		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County SPP	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 401,139 Y = 1,252,834	ELEVATION TOP OF BORING -6.9 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			3. Laboratory Testing Results						

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	0.7/0.9	SP*
2	3.3/3.5	SP*
3	6.1/6.3	SP*

*Lab visual classification based on gradation curve

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SAJ FORM 1836-A
JUN 02

Boring Designation JP08-05

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County SPP Treasure Island/Johns Pass
2. BORING DESIGNATION	JP08-05
LOCATION COORDINATES	X = 400,832 Y = 1,252,664
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	11.6 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 5 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 10-03-08 / COMPLETED 10-03-08
16. ELEVATION TOP OF BORING	-8.2 Ft.
17. TOTAL RECOVERY FOR BORING	79 %
18. SIGNATURE AND TITLE OF INSPECTOR	Jase Ousley, Geologist

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-8.2	0.0						-8.2		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, 2.5Y 8/1 white (SP)	100			-8.9 Vibracore		
				100	1		-11.5 Vibracore		
			At El. -13.2 Ft., trace shell up to 1/2"	100	2		-14.6 Vibracore		
			From El. -14.0 to -14.1 Ft., layer of silt From El. -14.4 to -14.5 Ft., layer of silt From El. -14.8 to -14.9 Ft., layer of silt From El. -15.1 to -15.2 Ft., layer of silt From El. -15.4 to -15.5 Ft., layer of silt	100	3		-14.8 Vibracore		
				100	4		-17.1 Vibracore		
			From El. -16.5 to -16.6 Ft., layer of silt						
-17.4	9.2			100	5		-17.4 Vibracore		
-19.8	11.6	NR		0			-19.8 Vibracore		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

(Continued)

Boring Designation JP08-05

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County SPP	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 400,832 Y = 1,252,664	ELEVATION TOP OF BORING -8.2 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			SAMPLE ID / SAMPLE DEPTH / LABORATORY CLASSIFICATION 1 0.7/0.9 SP* 2 3.3/3.5 SP* 3 6.4/6.6 SP* 4 6.6/6.8 ML-CL* 5 8.9/9.1 SP* *Lab visual classification based on gradation curve						

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SAJ FORM 1836-A
JUN 02

Boring Designation JP08-06

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 1 SHEETS

1. PROJECT	Pinellas County SPP Treasure Island/Johns Pass
2. BORING DESIGNATION	JP08-06
LOCATION COORDINATES	X = 401,626 Y = 1,253,123
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	6.9 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 3 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 10-04-08 / COMPLETED 10-04-08
16. ELEVATION TOP OF BORING	-11.8 Ft.
17. TOTAL RECOVERY FOR BORING	90 %
18. SIGNATURE AND TITLE OF INSPECTOR	Barbara Nist, Geologist

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-11.8	0.0						-11.8		
			SAND, poorly-graded, mostly rounded fine-grained sand-sized quartz, some shell, few angular shell, 10Y 8/1 light greenish gray (SP)	100			-12.5 Vibracore		
			At El. -12.7 Ft., mostly rounded fine to coarse-grained sand-sized quartz, some subangular medium to coarse-grained sand-sized shell, few subangular fine gravel-sized shell, 5YR 7/1 light gray	100	1		-13.1 Vibracore		
			At El. -14.0 Ft., mostly rounded fine-grained sand-sized quartz, little subangular medium to coarse-grained sand-sized shell, 10Y 8/1 light greenish gray	100	2		-15.1 Vibracore		
			At El. -16.9 Ft., mostly rounded fine to coarse-grained sand-sized quartz, some subangular shell, trace subangular medium to coarse-grained sand-sized shell, 10YR 7/1 light gray	100	3		-18.0 Vibracore		
-18.0	6.2								
-18.7	6.9	NR	At El. -17.3 Ft., mostly rounded fine-grained sand-sized quartz, few subangular medium to coarse-grained sand-sized shell, 10Y 8/1 light greenish gray	0			-18.7 Vibracore		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	0.7/0.9	SP*
2	1.3/1.5	SP*
3	3.3/3.5	SP*

*Lab visual classification based on gradation curve

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SAJ FORM 1836
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Boring Designation JP08-07

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County SPP Treasure Island/Johns Pass
2. BORING DESIGNATION	JP08-07
LOCATION COORDINATES	X = 401,390 Y = 1,252,852
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	13.2 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 5 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 10-04-08 / COMPLETED 10-04-08
16. ELEVATION TOP OF BORING	-12.5 Ft.
17. TOTAL RECOVERY FOR BORING	84 %
18. SIGNATURE AND TITLE OF INSPECTOR	Jase Ousley, Geologist

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-12.5	0.0						-12.5		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, some coarse-grained sand-sized shell, trace shell up to 1", 10Y 8/1 light greenish gray (SP)	100			Vibracore -13.2		
				100	1		Vibracore -15.8		
-16.7	4.2				2				
-17.1	4.6		SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt, 10YR 7/1 light gray (SP-SM)	100			Vibracore -18.1		
			SAND, poorly-graded, mostly sand to gravel-sized quartz, mostly angular shell, 2.5Y 8/1 white (SP)		3				
			At El. -18.8 Ft., mostly fine-grained sand-sized quartz, little angular fine gravel-sized shell, 10YR 8/1 white	100			Vibracore -19.4		
				100	4		Vibracore -22.0		
-21.7	9.2		At El. -21.4 Ft., discontinue shell						
			SAND, silty, mostly fine-grained sand-sized quartz, little silt, few angular fine gravel-sized shell, 2.5Y 6/1 gray (SM)	100	5		Vibracore -23.5		
-23.5	11.0								
-25.6	13.2	NR		NR			Vibracore -25.6		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

Abbreviations:

(Continued)

SAJ FORM 1836
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DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County SPP	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 401,390 Y = 1,252,852	ELEVATION TOP OF BORING -12.5 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			2. Soils are field visually classified in accordance with the Unified Soils Classification System.						
			3. Laboratory Testing Results						

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	0.7/0.9	SP*
2	3.3/3.5	SP*
3	5.6/5.8	SP*
4	6.9/7.1	SP*
5	9.5/9.7	SM-SC*

*Lab visual classification based on gradation curve

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Boring Designation JP08-08

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County SPP Treasure Island/Johns Pass
2. BORING DESIGNATION	JP08-08
LOCATION COORDINATES	X = 400,985 Y = 1,252,643
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	15.0 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 4 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 10-03-08 / COMPLETED 10-03-08
16. ELEVATION TOP OF BORING	-8.2 Ft.
17. TOTAL RECOVERY FOR BORING	74 %
18. SIGNATURE AND TITLE OF INSPECTOR	Barbara Nist, Geologist

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-8.2	0.0						-8.2		
			SAND, poorly-graded, mostly rounded fine-grained sand-sized quartz, few subangular medium to coarse-grained sand-sized shell, 10Y 8/1 light greenish gray (SP)	100			-8.8 Vibracore		
			At El. -9.6 Ft., mostly rounded fine to coarse-grained sand-sized quartz, some subangular fine to coarse-grained sand-sized shell, 5PB 6/1 bluish gray		1				
			At El. -10.2 Ft., mostly rounded fine-grained sand-sized quartz, few subangular medium to coarse-grained sand-sized shell, 10Y 8/1 light greenish gray	100			Vibracore		
			At El. -11.8 Ft., mostly rounded fine to coarse-grained sand-sized quartz, some subangular fine to coarse-grained sand-sized shell						
			At El. -12.2 Ft., mostly rounded fine-grained sand-sized quartz, trace subangular medium to coarse-grained sand-sized shell, 10Y 8/1 light greenish gray				-13.8		
				100	2		Vibracore		
			From El. -15.2 to -15.3 Ft., layer of silt				-15.7		
			From El. -15.7 to -15.8 Ft., layer of silt		3				
			From El. -16.4 to -16.6 Ft., layer of silt	100			Vibracore		
			From El. -17.3 to -17.5 Ft., layer of silt				-17.7		
			From El. -17.7 to -17.8 Ft., layer of silt		4				
			From El. -18.1 to -18.3 Ft., layer of silt						
			At El. -18.3 Ft., some subangular medium to coarse-grained sand-sized shell	100			Vibracore		
-19.3	11.1		From El. -18.7 to -18.9 Ft., layer of silt				-19.3		
			At El. -18.9 Ft., little subangular medium to coarse-grained sand-sized shell, 10Y 8/1 light greenish gray						
		NO RECOVERY		0			Vibracore		
-23.2	15.0						-23.2		

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(Continued)

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DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County SPP	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 400,985 Y = 1,252,643	ELEVATION TOP OF BORING -8.2 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	0.6/0.8	SP*
2	5.6/5.8	SP*
3	7.5/7.7	SM-SC*
4	9.5/9.7	SP-SM*

*Lab visual classification based on gradation curve

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SAJ FORM 1836-A
JUN 02

Boring Designation JP08-09

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 1 SHEETS

1. PROJECT	Pinellas County SPP Treasure Island/Johns Pass
2. BORING DESIGNATION	JP08-09
LOCATION COORDINATES	X = 400,669 Y = 1,252,423
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	6.1 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 2 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 10-04-08 / COMPLETED 10-04-08
16. ELEVATION TOP OF BORING	-12.1 Ft.
17. TOTAL RECOVERY FOR BORING	80 %
18. SIGNATURE AND TITLE OF INSPECTOR	Jase Ousley, Geologist

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-12.1	0.0						-12.1		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few coarse-grained sand-sized shell, 10Y 8/1 light greenish gray (SP)	100			Vibracore -12.8		
					1				
			At El. -13.8 Ft., trace angular shell up to 2"	100			Vibracore		
			At El. -14.9 Ft., some angular shell up to 1-1/2"						
			At El. -15.6 Ft., some angular shell up to 1/2"				-16.0		
					2				
-17.0	4.9		At El. -16.4 Ft., some angular shell up to 1"	100			Vibracore -17.0		
-18.2	6.1	NR		NR			Vibracore -18.2		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	0.7/0.9	SP*
2	3.9/4.1	SP*

*Lab visual classification based on gradation curve

Abbreviations:

SAJ FORM 1836
JUN 02

Boring Designation JP08-10

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County SPP Treasure Island/Johns Pass
2. BORING DESIGNATION	JP08-10
LOCATION COORDINATES	X = 401,510 Y = 1,253,306
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	10.6 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 6 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 10-03-08 / COMPLETED 10-03-08
16. ELEVATION TOP OF BORING	-5.7 Ft.
17. TOTAL RECOVERY FOR BORING	62 %
18. SIGNATURE AND TITLE OF INSPECTOR	Jase Ousley, Geologist

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-5.7	0.0						-5.7		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, some fine to coarse-grained sand-sized shell, trace angular shell up to 1-1/2", 10Y 8/1 light greenish gray (SP)	100			Vibracore -6.4		
				100	1		Vibracore -8.0		
			At El. -7.5 Ft., discontinue shell						
				100	2		Vibracore -8.6		
			From El. -8.5 to -8.7 Ft., little angular sand to gravel-sized shell	100	3		Vibracore -9.0		
			At El. -9.1 Ft., some angular fine to coarse gravel-sized shell up to 2"	100	4		Vibracore -10.0		
				100	5		Vibracore -11.3		
			At El. -10.9 Ft., discontinue shell						
-12.3	6.6			100	6		Vibracore -12.3		
			At El. -12.3 Ft.						
		NO RECOVERY		NR			Vibracore -16.4		
-16.4	10.6								

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION

Abbreviations:

(Continued)

Boring Designation JP08-10

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County SPP	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 401,510 Y = 1,253,306	ELEVATION TOP OF BORING -5.7 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			1 0.7/0.9 SP*						
			2 2.3/2.5 SP*						
			3 2.9/3.1 SP*						
			4 3.3/3.5 SP*						
			5 4.3/4.5 SP*						
			6 5.6/5.8 SP*						
			*Lab visual classification based on gradation curve						

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SAJ FORM 1836-A
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Boring Designation JP08-10-R

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 1 SHEETS

1. PROJECT	Pinellas County SPP Treasure Island/Johns Pass
2. BORING DESIGNATION	JP08-10-R
LOCATION COORDINATES	X = 401,519 Y = 1,253,296
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	10.6 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 0 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 10-03-08 / COMPLETED 10-03-08
16. ELEVATION TOP OF BORING	-5.7 Ft.
17. TOTAL RECOVERY FOR BORING	100 %
18. SIGNATURE AND TITLE OF INSPECTOR	Barbara Nist, Geologist

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-5.7	0.0						-5.7		
			SAND, poorly-graded, mostly rounded fine-grained sand-sized quartz, some subangular fine to coarse gravel-sized shell up to 1-1/2", 10Y 8/1 light greenish gray (SP)						
			At El. -7.5 Ft., discontinue shell						
			At El. -9.3 Ft., little angular fine to coarse gravel-sized shell At El. -9.5 Ft., trace subangular medium to coarse-grained sand-sized shell						
				100					
			From El. -11.7 to -12.8 Ft., mostly rounded fine to coarse-grained sand-sized quartz, some subangular fine to coarse-grained sand-sized shell, little fine gravel-sized shell up to 1", 10R 2.5/1 reddish black At El. -12.8 Ft., mostly rounded fine-grained sand-sized quartz, few subangular medium to coarse-grained sand-sized shell, 10Y 8/1 light greenish gray At El. -13.9 Ft., mostly rounded fine to coarse-grained sand-sized quartz, some subangular medium to coarse-grained sand-sized shell up to 1-1/2", 10Y 8/1 light greenish gray						
-16.1	10.4								
-16.3	10.6		SILT, inorganic-L, nonplastic, hard, little medium to coarse-grained sand-sized shell, 10R 5/1 reddish gray (ML)				-16.3		
			NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System.				Abbreviations:		

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Boring Designation JP08-11

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County SPP Treasure Island/Johns Pass
2. BORING DESIGNATION	JP08-11
LOCATION COORDINATES	X = 401,284 Y = 1,253,065
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	14.3 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 5 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 10-04-08 / COMPLETED 10-04-08
16. ELEVATION TOP OF BORING	-6.2 Ft.
17. TOTAL RECOVERY FOR BORING	77 %
18. SIGNATURE AND TITLE OF INSPECTOR	Jase Ousley, Geologist

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-6.2	0.0						-6.2		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little angular coarse-grained sand-sized shell, 10Y 8/1 light greenish gray (SP)	100			Vibracore -6.9		
			At El. -7.4 Ft., trace shell up to 1-1/2", discontinue shell	100	1		Vibracore -9.1		
				100	2		Vibracore -10.5		
			From El. -11.1 to -11.3 Ft., few angular fine-grained sand-sized shell	100	3		Vibracore -13.7		
			At El. -13.3 Ft., trace wood debris	100	4		Vibracore		
-16.9	10.7								
-17.2	11.0		SILT, inorganic-L, low plasticity, hard, mostly silt, trace coarse-grained sand-sized shell, 10Y 7/1 light greenish gray (ML)				-17.2		
		NO RECOVERY		NR	5		Vibracore		
-20.5	14.3						-20.5		
			NOTES:				Abbreviations:		

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SAJ FORM 1836
JUN 02

(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County SPP	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 401,284 Y = 1,253,065	ELEVATION TOP OF BORING -6.2 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	0.7/0.9	SP*
2	2.9/3.1	SP*
3	4.3/4.5	SP*
4	7.5/7.7	SP*
5	11.0/11.2	ML-CL*

*Lab visual classification based on gradation curve

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SAJ FORM 1836-A
JUN 02

Boring Designation JP08-12-R

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County SPP Treasure Island/Johns Pass
2. BORING DESIGNATION	JP08-12-R
LOCATION COORDINATES	X = 400,968 Y = 1,252,754
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	10.4 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 3 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 10-03-08 / COMPLETED 10-03-08
16. ELEVATION TOP OF BORING	-4.6 Ft.
17. TOTAL RECOVERY FOR BORING	100 %
18. SIGNATURE AND TITLE OF INSPECTOR	Troy Mayhew, Geologist

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-4.6	0.0						-4.6		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace subangular medium-grained sand-sized shell, 10Y 8/1 light greenish gray (SP)	100			Vibracore -5.3		
				100	1		Vibracore -7.9		
				100	2		Vibracore -11.2		
				100	3		Vibracore -15.0		
-13.1	8.5		SAND, poorly-graded, mostly silt (SP)						
-15.0	10.4		From El. -14.6 to -14.7 Ft., mostly silt From El. -14.8 to -14.9 Ft., mostly silt						

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION

Abbreviations:

0 5 10 15

(Continued)

Boring Designation JP08-12-R

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County SPP	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 400,968 Y = 1,252,754	ELEVATION TOP OF BORING -4.6 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			1 0.7/0.9 SP* 2 3.3/3.5 SP* 3 6.6/6.8 SP* *Lab visual classification based on gradation curve						

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SAJ FORM 1836-A
JUN 02

Boring Designation JP08-13

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 1 SHEETS

1. PROJECT	Pinellas County SPP Treasure Island/Johns Pass
2. BORING DESIGNATION	JP08-13
LOCATION COORDINATES	X = 401,079 Y = 1,250,531
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	6.1 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 3 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 10-04-08 / COMPLETED 10-04-08
16. ELEVATION TOP OF BORING	-9.5 Ft.
17. TOTAL RECOVERY FOR BORING	81 %
18. SIGNATURE AND TITLE OF INSPECTOR	Jase Ousley, Geologist

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-9.5	0.0						-9.5		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace medium to coarse-grained sand-sized shell, 2.5Y 8/1 white (SP)	100			-10.2 Vibracore		
				100	1		-11.8 Vibracore		
				100	2		-13.8 Vibracore		
-14.5	5.0			100	3		-14.5 Vibracore		
-15.7	6.1	NR		NR			-15.7 Vibracore		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	0.7/0.9	SP*
2	2.3/2.5	SP*
3	4.3/4.5	SP*

*Lab visual classification based on gradation curve

Abbreviations:

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SAJ FORM 1836
JUN 02

Boring Designation JP08-14

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County SPP Treasure Island/Johns Pass
2. BORING DESIGNATION	JP08-14
LOCATION COORDINATES	X = 400,533 Y = 1,250,888
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	17.8 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 6 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 10-03-08 / COMPLETED 10-03-08
16. ELEVATION TOP OF BORING	-6.7 Ft.
17. TOTAL RECOVERY FOR BORING	96 %
18. SIGNATURE AND TITLE OF INSPECTOR	Barbara Nist, Geologist

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-6.7	0.0						-6.7		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace subangular medium-grained sand-sized shell, 2.5Y 8/1 white (SP)	100			Vibracore -7.4		
				100	1		Vibracore -10.0		
				100	2		Vibracore -13.3		
				100	3		Vibracore -14.9		
-16.4	9.7		From El. -15.8 to -16.4 Ft., mostly fine-grained sand-sized quartz, few subangular coarse-grained sand-sized shell, 2.5Y 8/1 white	100	4		Vibracore -17.5		
			SAND, silty, mostly fine-grained sand-sized quartz, some angular coarse-grained sand-sized shell, little silt, 2.5Y 7/1 light gray (SM)	100	5		Vibracore		

0 5 10 15

(Continued)

SAJ FORM 1836
JUN 02

DRILLING LOG (Cont. Sheet)	INSTALLATION: Jacksonville District	SHEET 2 OF 2 SHEETS

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County SPP	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 400,533 Y = 1,250,888	-6.7 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-22.5	15.8								
-23.8	17.1	Highly Weathered	LIMESTONE, sparsely fossiliferous, soft, highly weathered, very fine grained, ferous, 5GY 8/1 light greenish gray	100			Vibracore -23.8		
-24.5	17.8	NR		0	6		Vibracore -24.5		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	0.7/0.9	SP*
2	3.3/3.5	SP*
3	6.6/6.8	SP*
4	8.2/8.4	SP*
5	10.8/11.0	SM-SC*
6	17.1/17.3	SM-SC*

*Lab visual classification based on gradation curve

15 20 25 30 35

SAJ FORM 1836-A
JUN 02

Boring Designation JP08-15

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County SPP Treasure Island/Johns Pass
2. BORING DESIGNATION	JP08-15
LOCATION COORDINATES	X = 400,213 Y = 1,251,284
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	17.2 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 5 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 10-04-08 / COMPLETED 10-04-08
16. ELEVATION TOP OF BORING	-6.6 Ft.
17. TOTAL RECOVERY FOR BORING	88 %
18. SIGNATURE AND TITLE OF INSPECTOR	Jase Ousley, Geologist

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-6.6	0.0						-6.6		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace subangular medium-grained sand-sized shell, 2.5Y 8/1 white (SP)	100			Vibracore -7.3		
				100	1		Vibracore -9.9		
			At El. -11.3 Ft., mostly fine-grained sand-sized quartz, few subangular coarse-grained sand-sized shell, 2.5Y 8/1 white At El. -12.2 Ft., mostly fine-grained sand-sized quartz, trace subangular coarse-grained sand-sized shell, 2.5Y 7/1 light gray	100	2		Vibracore -13.2		
-16.5	9.9			100	3		Vibracore -16.4		
			SAND, silty, mostly fine-grained sand-sized quartz, some angular coarse-grained sand-sized shell, little silt, 2.5Y 7/1 light gray (SM)	100	4		Vibracore -18.1		
-19.5	12.9			100	5		Vibracore		
			SILT, inorganic-L, low plasticity, trace medium-grained sand-sized shell, 5GY 6/1 greenish gray (ML) At El. -20.1 Ft., low plasticity, few angular coarse-grained sand-sized shell, 5GY 6/1 greenish gray						

0 5 10 15

(Continued)

SAJ FORM 1836
JUN 02

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County SPP	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 400,213 Y = 1,251,284	ELEVATION TOP OF BORING -6.6 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
~~-21.8~~	~~15.2~~						~~-21.8~~		
		NR		NR			Vibracore		
-23.8	17.2						-23.8		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	0.7/0.9	SP*
2	3.3/3.5	SP*
3	6.6/6.8	SP*
4	9.8/10.0	SP*
5	11.5/11.7	SM-SC*

*Lab visual classification based on gradation curve

Abbreviations:

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SAJ FORM 1836-A
JUN 02

Boring Designation JP09-03

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County SPP Treasure Island/Johns Pass
2. BORING DESIGNATION	JP09-03
LOCATION COORDINATES	X = 399,967 Y = 1,250,831
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	8.9 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 3 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	N/A
15. DATE BORING	STARTED 04-17-09 / COMPLETED 04-17-09
16. ELEVATION TOP OF BORING	-12.1 Ft.
17. TOTAL RECOVERY FOR BORING	98 %
18. SIGNATURE AND TITLE OF INSPECTOR	Barbara Nist, Geologist

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-12.1	0.0						-12.1		
			SAND, poorly-graded with silt, mostly rounded fine-grained sand-sized quartz, some fine to coarse-grained sand-sized shell, few silt, moist, 10YR 7/1 light gray (SP-SM)	100			Vibracore		
							-13.4		
					1				
			From El. -14.8 to -15.1 Ft., discontinue silt	100			Vibracore		
-15.5	3.4								
			SAND, silty, mostly rounded fine-grained sand-sized quartz, little silt, few fine to coarse-grained sand-sized shell, moist, 10YR 6/1 gray (SM)				-16.2		
					2				
				100			Vibracore		
-18.1	6.0								
			SHELL, mostly subangular sand to gravel-sized shell, little rounded fine-grained sand-sized quartz, few silt, moist, 10YR 6/1 gray				-18.7		
					3				
			From El. -19.9 to -20.9 Ft., layer of silt	100			Vibracore		
-20.8	8.7						-20.8		
-21.0	8.9	NO REC		NR			-21.0 Vibracore		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.3/1.5	SP*
2	4.1/4.3	SP-SM*
3	6.6/6.8	SH*

*Lab visual classification based on gradation

Abbreviations:

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(Continued)

SAJ FORM 1836
JUN 02

Boring Designation JP09-03

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County SPP	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 399,967 Y = 1,250,831	ELEVATION TOP OF BORING -12.1 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			curve						

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SAJ FORM 1836-A
JUN 02

Boring Designation JP09-04

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County SPP Treasure Island/Johns Pass
2. BORING DESIGNATION	JP09-04
LOCATION COORDINATES	X = 400,485 Y = 1,250,293
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	11.3 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 4 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	N/A
15. DATE BORING	STARTED 04-17-09 / COMPLETED 04-17-09
16. ELEVATION TOP OF BORING	-11.8 Ft.
17. TOTAL RECOVERY FOR BORING	100 %
18. SIGNATURE AND TITLE OF INSPECTOR	Barbara Nist, Geologist

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-11.8	0.0						-11.8		
			SAND, poorly-graded with silt, mostly rounded fine-grained sand-sized quartz, some fine to medium-grained sand-sized shell, few silt, moist, 10YR 8/1 white (SP-SM) From El. -13.7 to -13.9 Ft., discontinue silt From El. -14.5 to -14.7 Ft., discontinue silt	100			Vibracore -13.1		
				100	1		Vibracore -15.1		
-15.7	3.9			100	2		Vibracore -17.0		
			SAND, silty, mostly rounded fine-grained sand-sized quartz, some silt, little fine to medium-grained sand-sized shell, moist, 10YR 6/1 gray (SM)						
-18.5	6.7			100	3		Vibracore -20.0		
			SHELL, mostly subangular sand to gravel-sized shell, some silt, little rounded fine-grained sand-sized quartz, 10YR 6/1 gray						
-21.3	9.5			100	4		Vibracore -23.1		
			SAND, silty, mostly rounded fine-grained sand-sized quartz, some silt, little fine to medium-grained sand-sized shell, 10YR 6/1 gray (SM)						
-23.1	11.3								
			NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results	NR			Vibracore Abbreviations:		

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(Continued)

SAJ FORM 1836
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DRILLING LOG (Cont. Sheet)	INSTALLATION	SHEET 2 OF 2 SHEETS
	Jacksonville District	

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County SPP	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 400,485 Y = 1,250,293	-11.8 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			SAMPLE ID / SAMPLE DEPTH / LABORATORY CLASSIFICATION 1 — 1.3/1.5 — SP* 2 — 3.3/3.5 — SP* 3 — 5.2/5.4 — SP-SM* 4 — 8.2/8.4 — SM* *Lab visual classification based on gradation curve						

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SAJ FORM 1836-A
JUN 02

Boring Designation JP09-06

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County SPP Treasure Island/Johns Pass
2. BORING DESIGNATION	JP09-06
LOCATION COORDINATES	X = 401,230 Y = 1,250,167
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	9.1 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 4 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	N/A
15. DATE BORING	STARTED 04-17-09 / COMPLETED 04-17-09
16. ELEVATION TOP OF BORING	-9.5 Ft.
17. TOTAL RECOVERY FOR BORING	100 %
18. SIGNATURE AND TITLE OF INSPECTOR	Barbara Nist, Geologist

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-9.5	0.0						-9.5		
			SAND, poorly-graded, mostly rounded fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt, 10YR 8/1 white (SP)	100			Vibracore		
							-11.1		
			From El. -11.1 to -11.9 Ft., some fine to coarse-grained sand-sized shell	100	1		Vibracore		
-12.6	3.1						-13.8		
			SAND, poorly-graded with silt, nonplastic, mostly rounded fine-grained sand-sized quartz, few silt, 10YR 7/1 light gray (SP-SM)	100	2		Vibracore		
							-16.1		
				100	3		Vibracore		
-17.7	8.2						-18.4		
-18.6	9.1		SILT, inorganic-L, medium plasticity, soft, some rounded fine-grained sand-sized quartz, 10YR 6/1 gray (ML)	100	4		-18.6 Vibracore		
			At El. -18.6 Ft., some rounded fine-grained sand-sized quartz, 10YR 6/1 gray						

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.6/1.8	SP*
2	4.3/4.5	SP*

0 5 10 15

(Continued)

SAJ FORM 1836
JUN 02

Boring Designation JP09-06

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County SPP	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 401,230 Y = 1,250,167	ELEVATION TOP OF BORING -9.5 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			3 6.6/6.8 SP*						
			4 8.9/9.1 SM*						
			*Lab visual classification based on gradation curve						

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SAJ FORM 1836-A
JUN 02

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	Pinellas County SPP Treasure Island/Johns Pass
2. BORING DESIGNATION	JP09-13R
LOCATION COORDINATES	X = 401,088 Y = 1,250,571
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	9.5 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 4 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	N/A
15. DATE BORING	STARTED 04-17-09 / COMPLETED 04-17-09
16. ELEVATION TOP OF BORING	-9.8 Ft.
17. TOTAL RECOVERY FOR BORING	97 %
18. SIGNATURE AND TITLE OF INSPECTOR	Barbara Nist, Geologist

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-9.8	0.0						-9.8		
			SAND, poorly-graded, mostly rounded fine-grained sand-sized quartz, little silt, few rounded sand to gravel-sized shell, 10YR 8/1 white (SP)	100			Vibracore -11.4		
				100	1		Vibracore -14.2		
-13.2	3.4								
			SAND, poorly-graded with silt, mostly rounded fine-grained sand-sized quartz, few silt, 10YR 6/1 gray (SP-SM) From El. -14.5 to -16.1 Ft., some silt	100	2		Vibracore -15.7		
-16.1	6.3								
			SHELL, mostly sand to gravel-sized shell, some silt, little rounded fine-grained sand-sized quartz, 10YR 6/1 gray From El. -16.5 to -17.1 Ft., layer of sand-sized shell	100	3		Vibracore -17.8		
				100	4		Vibracore -19.0		
-19.0	9.2								
-19.3	9.5	NO REC		NR			-19.3 Vibracore		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.6/1.8	SP*
2	4.4/4.6	SP*
3	5.9/6.1	SP-SM*

Abbreviations:

0 5 10 15

(Continued)

Boring Designation JP09-13R

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County SPP	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 401,088 Y = 1,250,571	ELEVATION TOP OF BORING -9.8 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			4 8.0/8.2 SM*						
			*Lab visual classification based on gradation curve						

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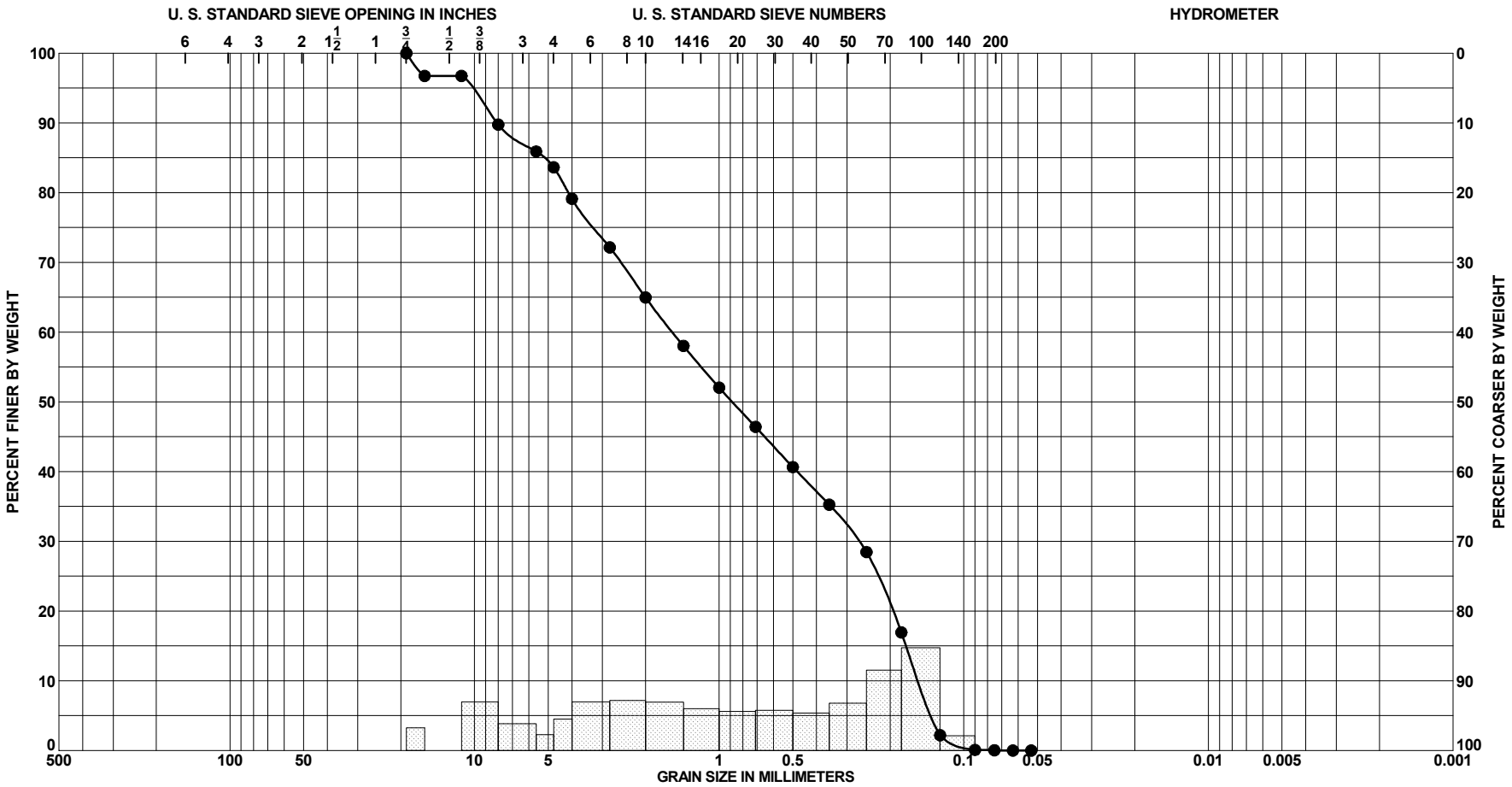
SAJ FORM 1836-A
JUN 02

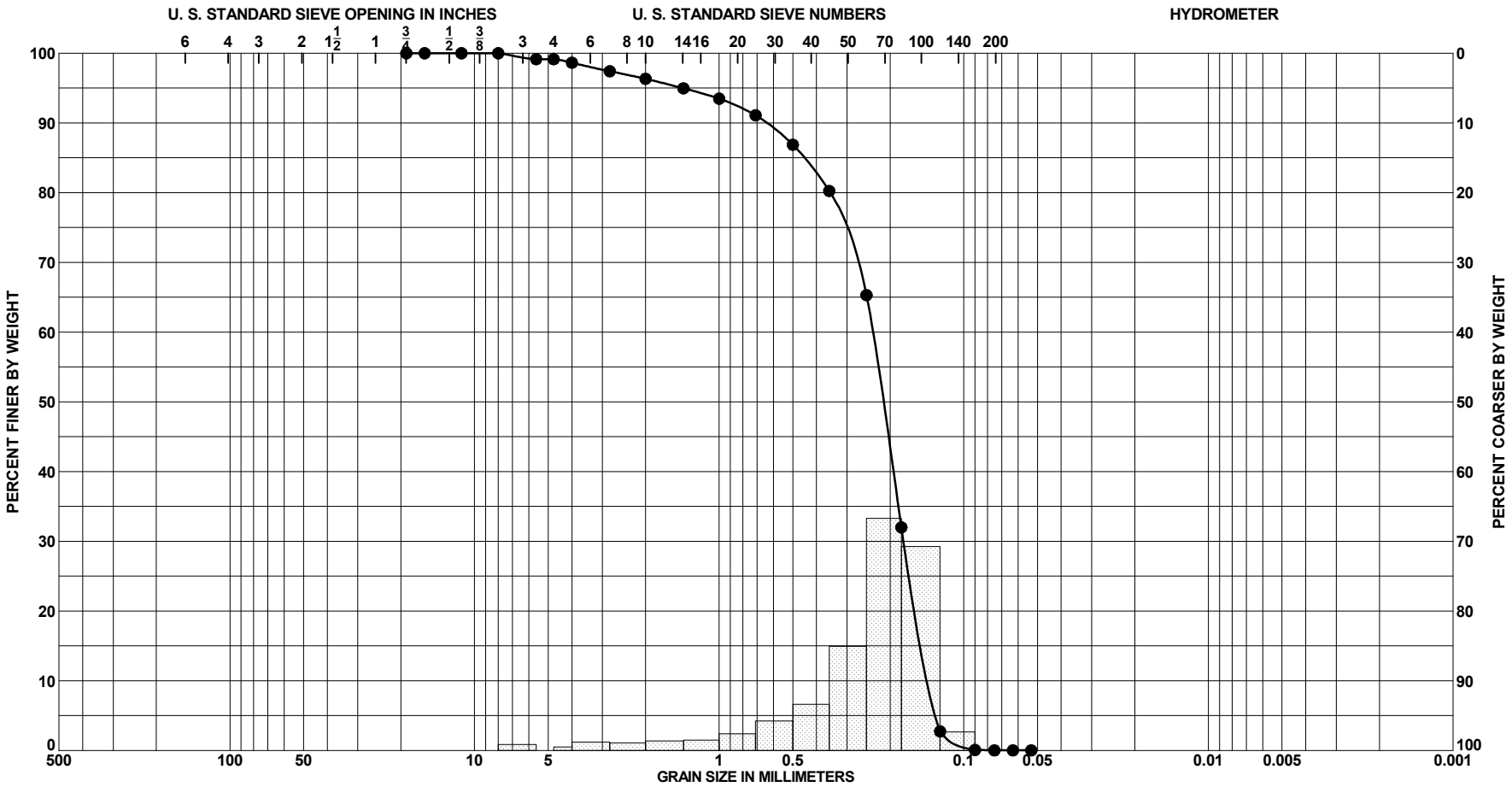


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	0.7 to 0.9 Ft.	SAND, poorly-graded (SP)			62		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-03
BORING ELEV.	-9.2 Ft., NAVD88
DATE	10/20/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

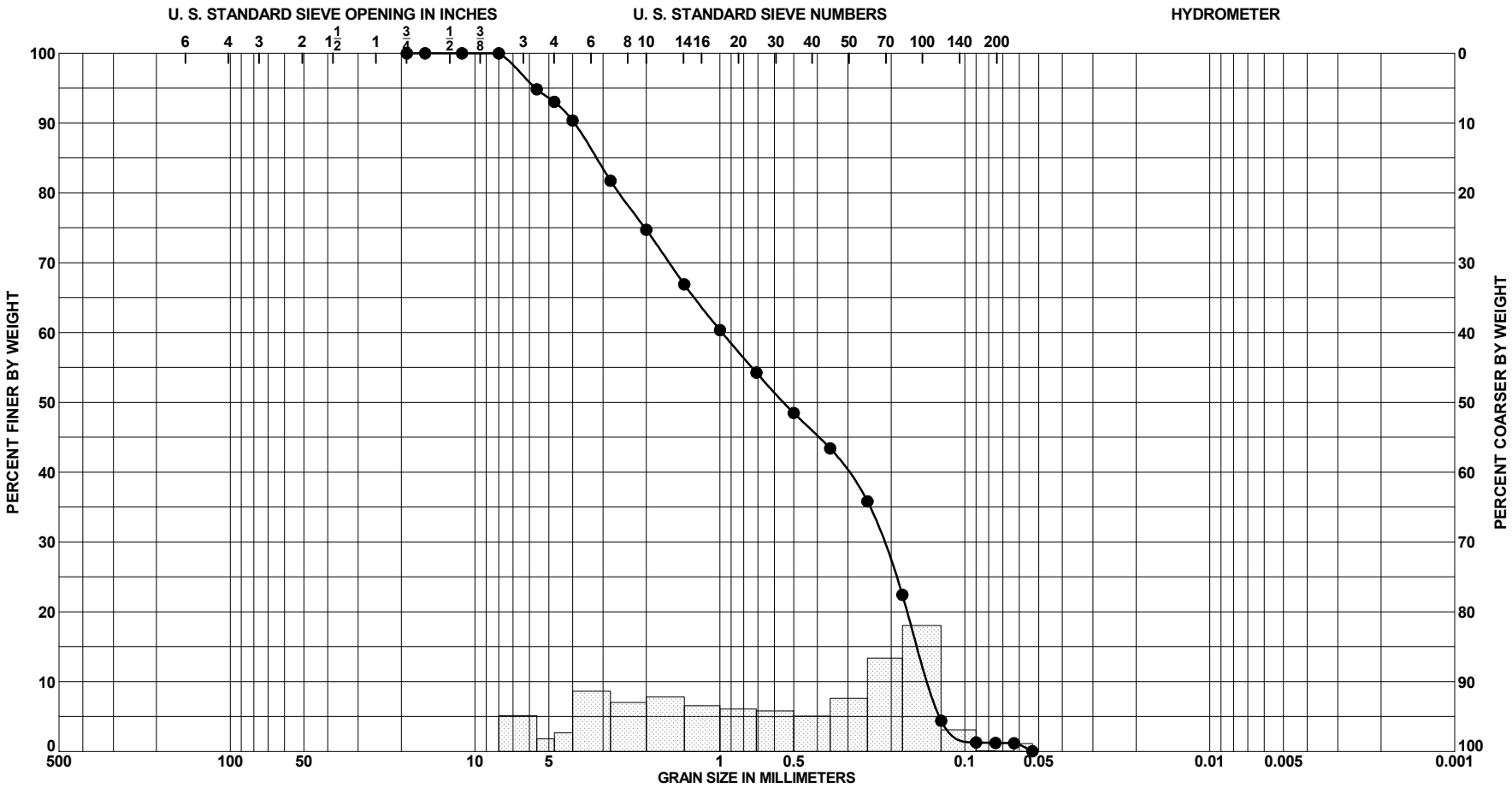


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	2.0 to 2.2 Ft.	SAND, poorly-graded (SP)			27		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-03
BORING ELEV.	-9.2 Ft., NAVD88
DATE	10/23/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

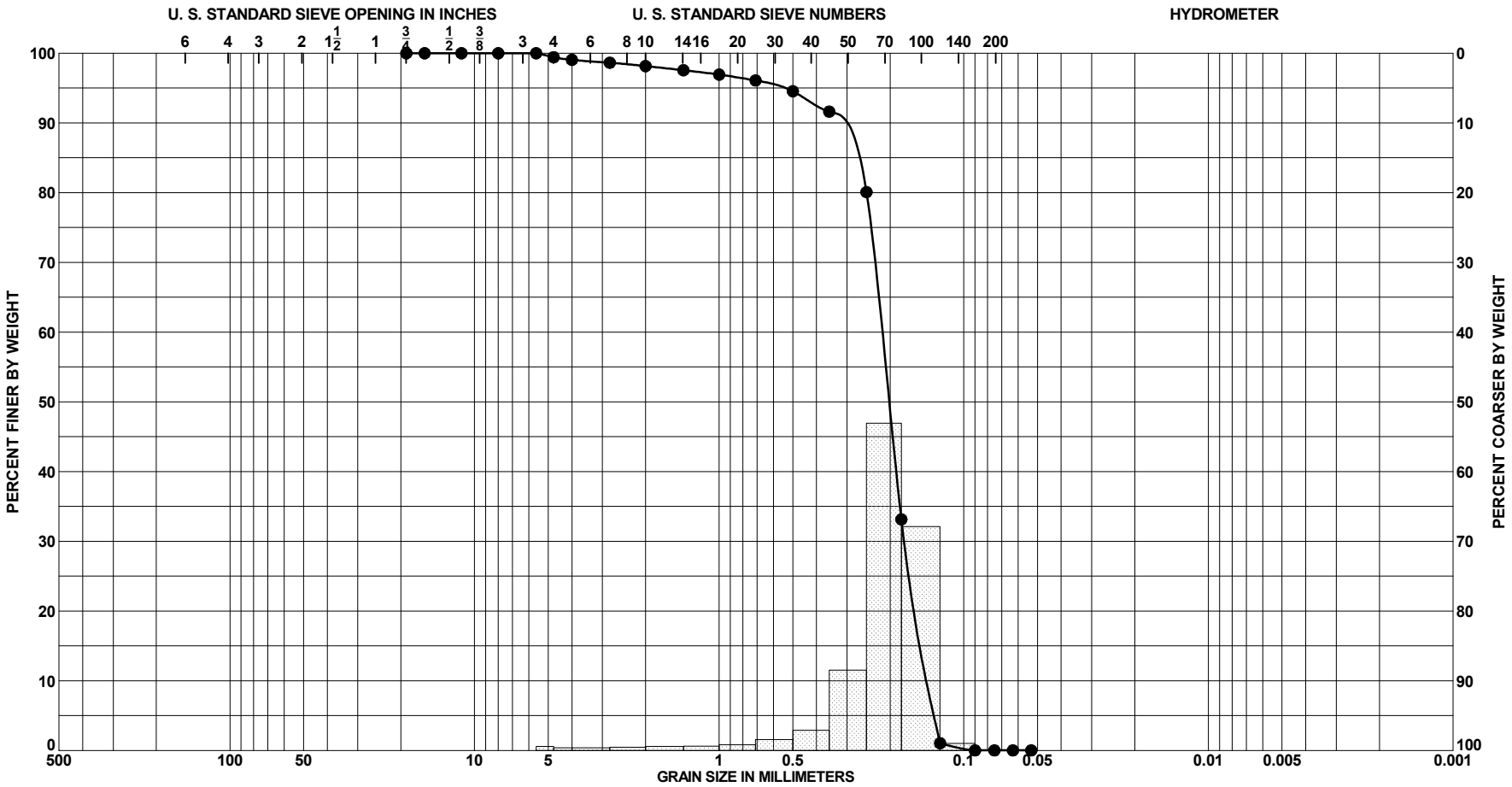


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	2.8 to 3.0 Ft.	SAND, poorly-graded (SP)			59		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-03
BORING ELEV.	-9.2 Ft., NAVD88
DATE	10/20/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

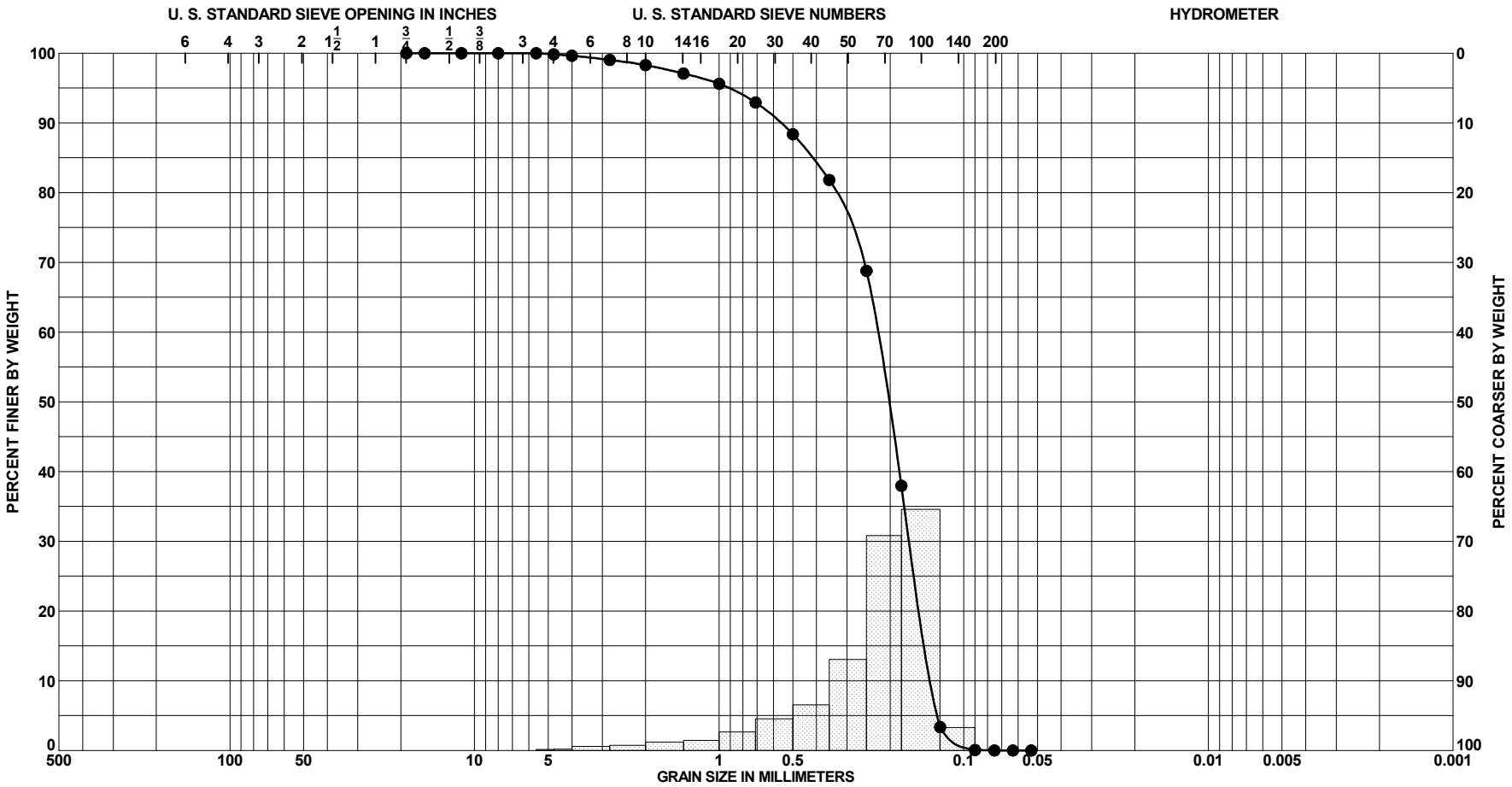


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 4	3.9 to 4.1 Ft.	SAND, poorly-graded (SP)			14		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-03
BORING ELEV.	-9.2 Ft., NAVD88
DATE	10/23/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

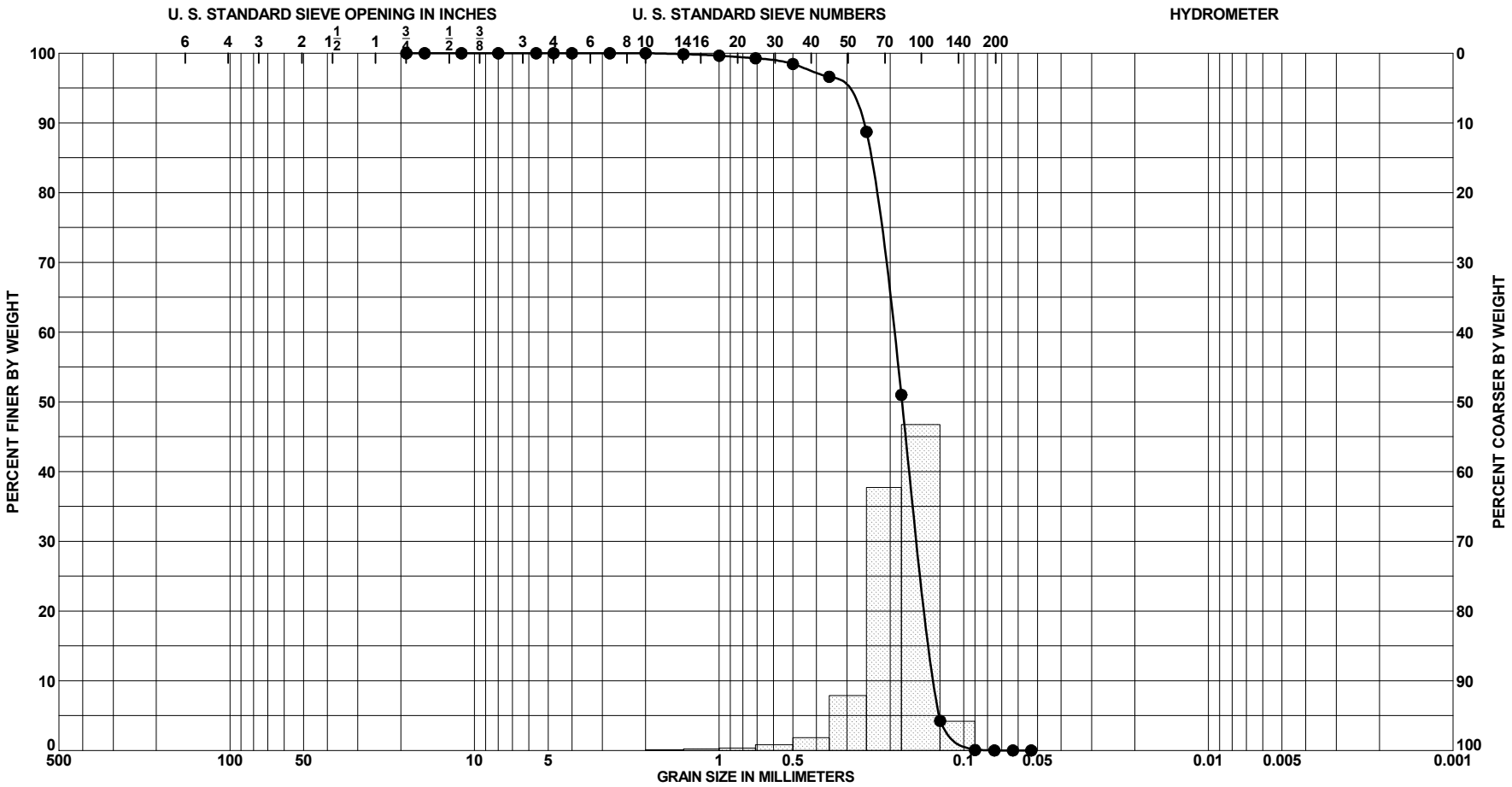


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	0.7 to 0.9 Ft.	SAND, poorly-graded (SP)			23		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-04
BORING ELEV.	-6.9 Ft., NAVD88
DATE	10/23/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

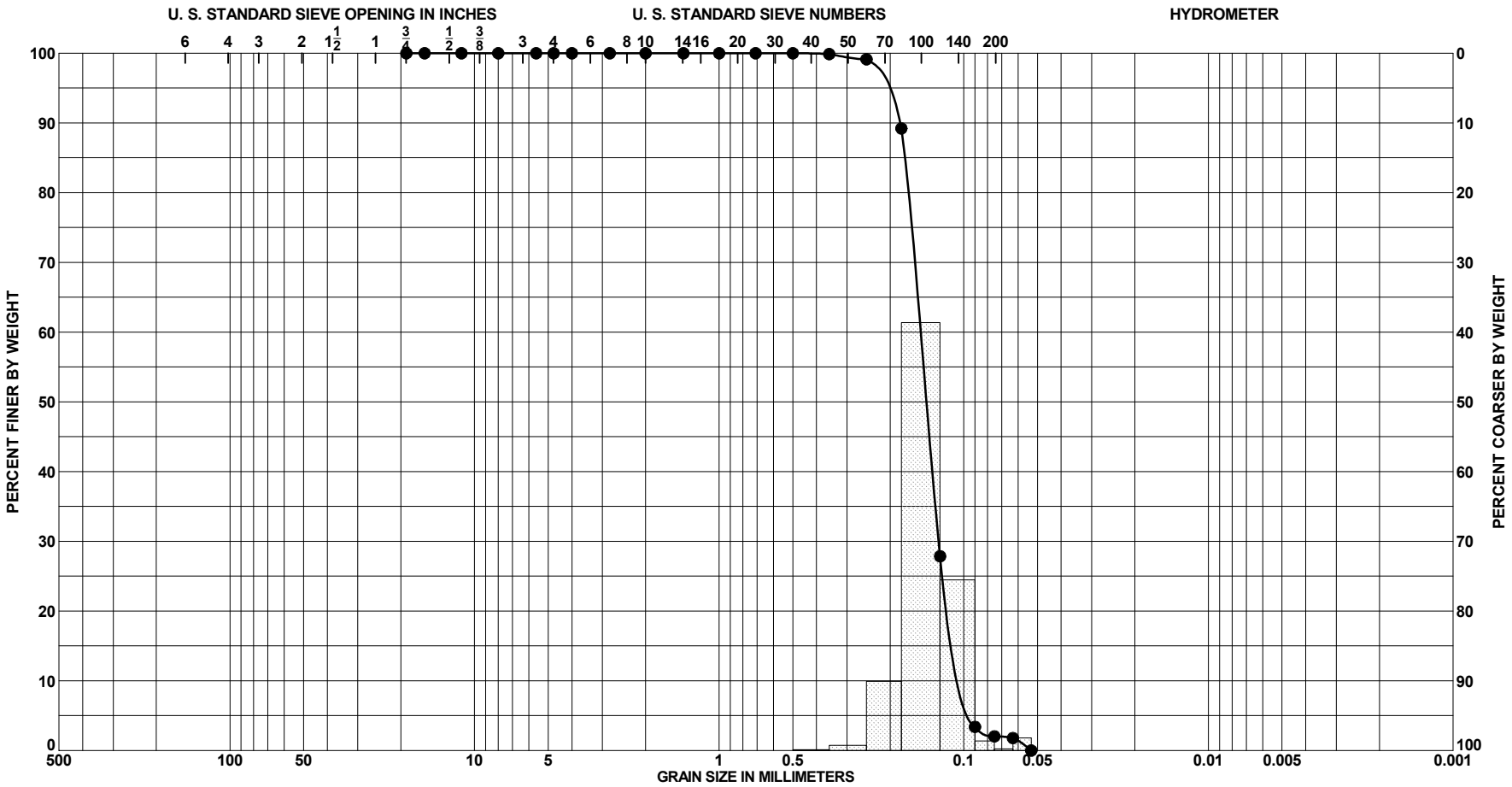


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	3.3 to 3.5 Ft.	SAND, poorly-graded (SP)			11		0				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-04
BORING ELEV.	-6.9 Ft., NAVD88
DATE	10/23/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

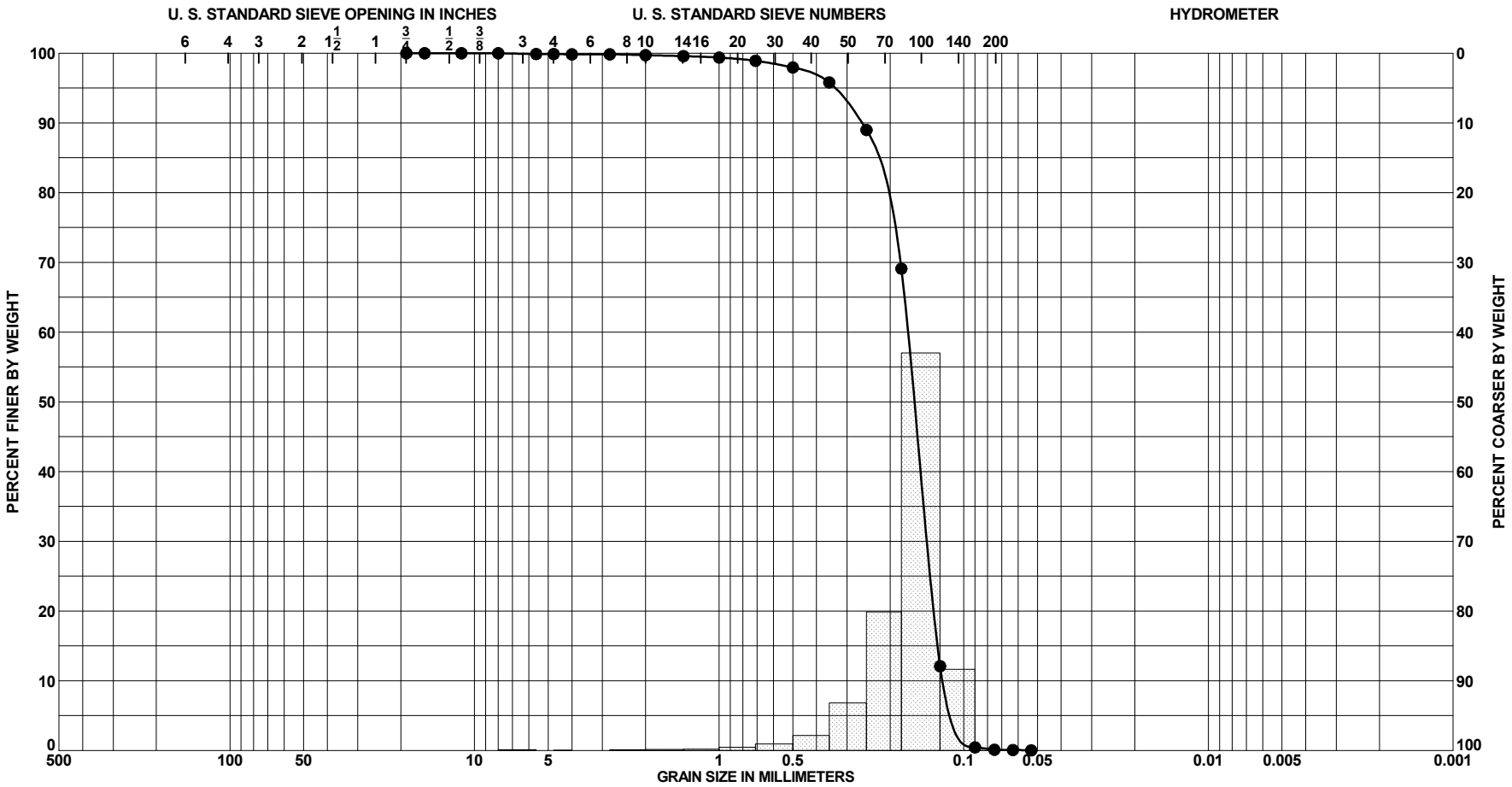


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	6.1 to 6.3 Ft.	SAND, poorly-graded (SP)			7		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-04
BORING ELEV.	-6.9 Ft., NAVD88
DATE	10/23/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

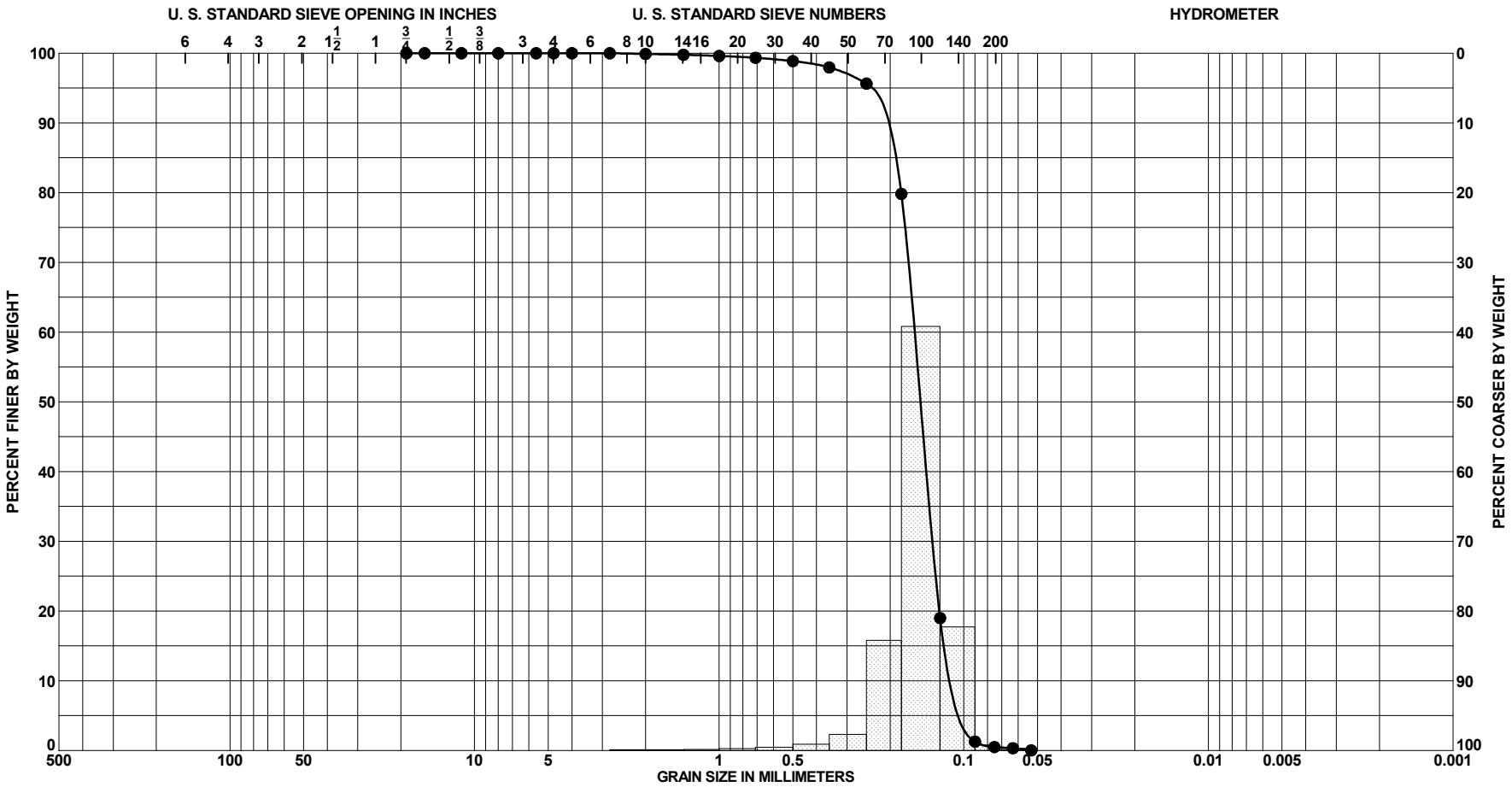


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	0.7 to 0.9 Ft.	SAND, poorly-graded (SP)			17		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-05
BORING ELEV.	-8.2 Ft., NAVD88
DATE	10/23/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

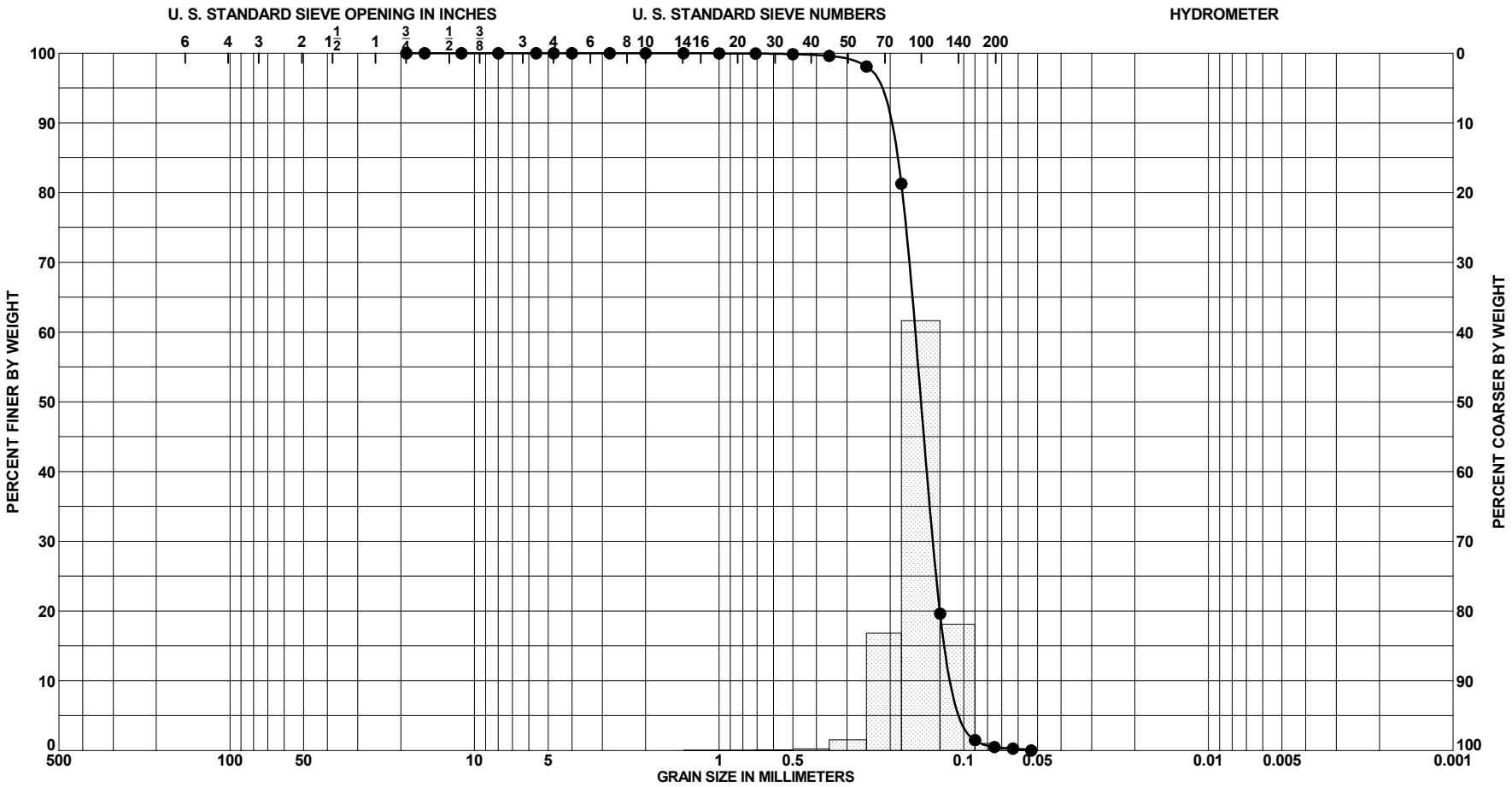


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	3.3 to 3.5 Ft.	SAND, poorly-graded (SP)			12		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-05
BORING ELEV.	-8.2 Ft., NAVD88
DATE	10/18/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

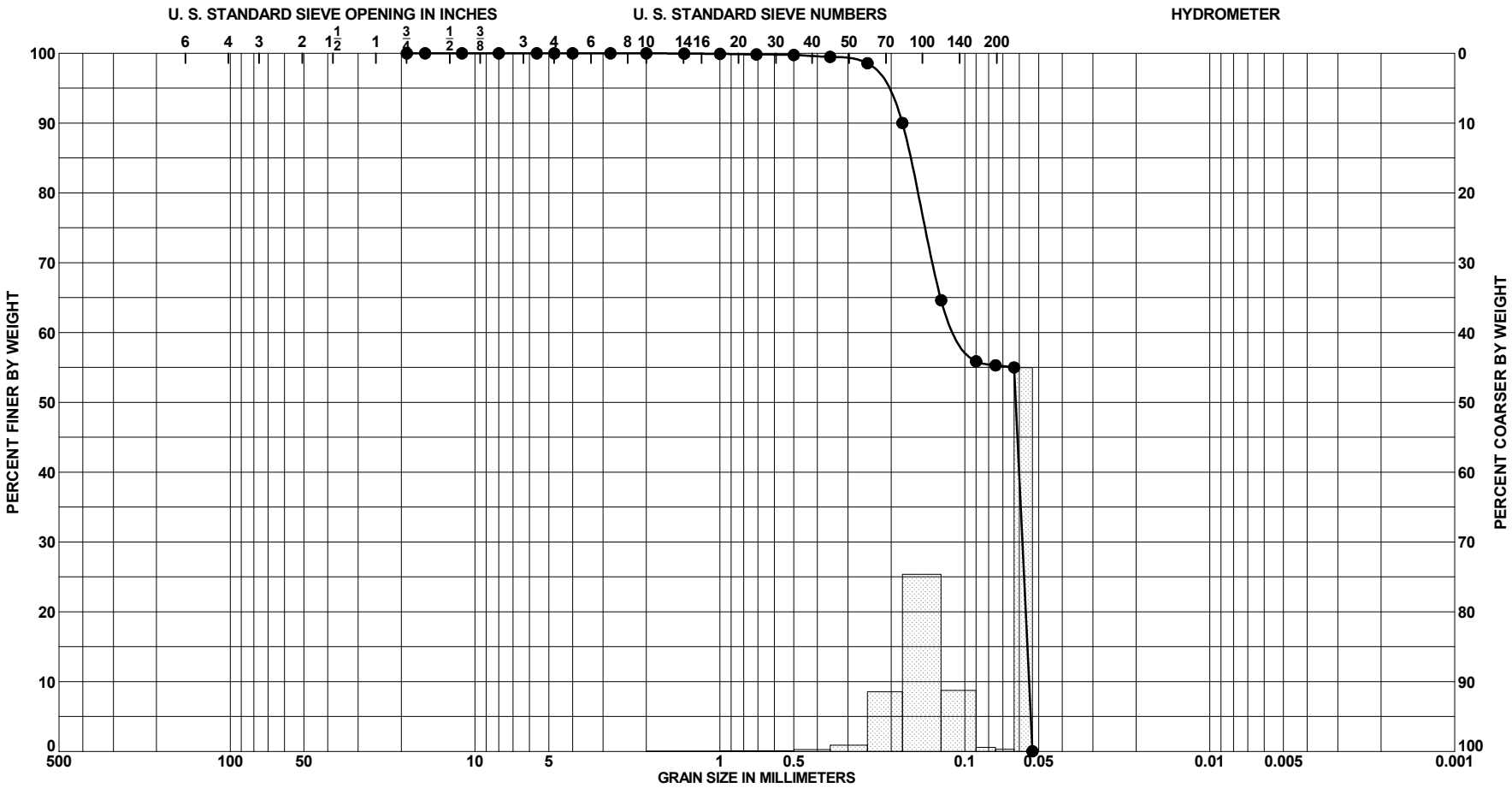


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	6.4 to 6.6 Ft.	SAND, poorly-graded (SP)			9		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-05
BORING ELEV.	-8.2 Ft., NAVD88
DATE	10/18/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

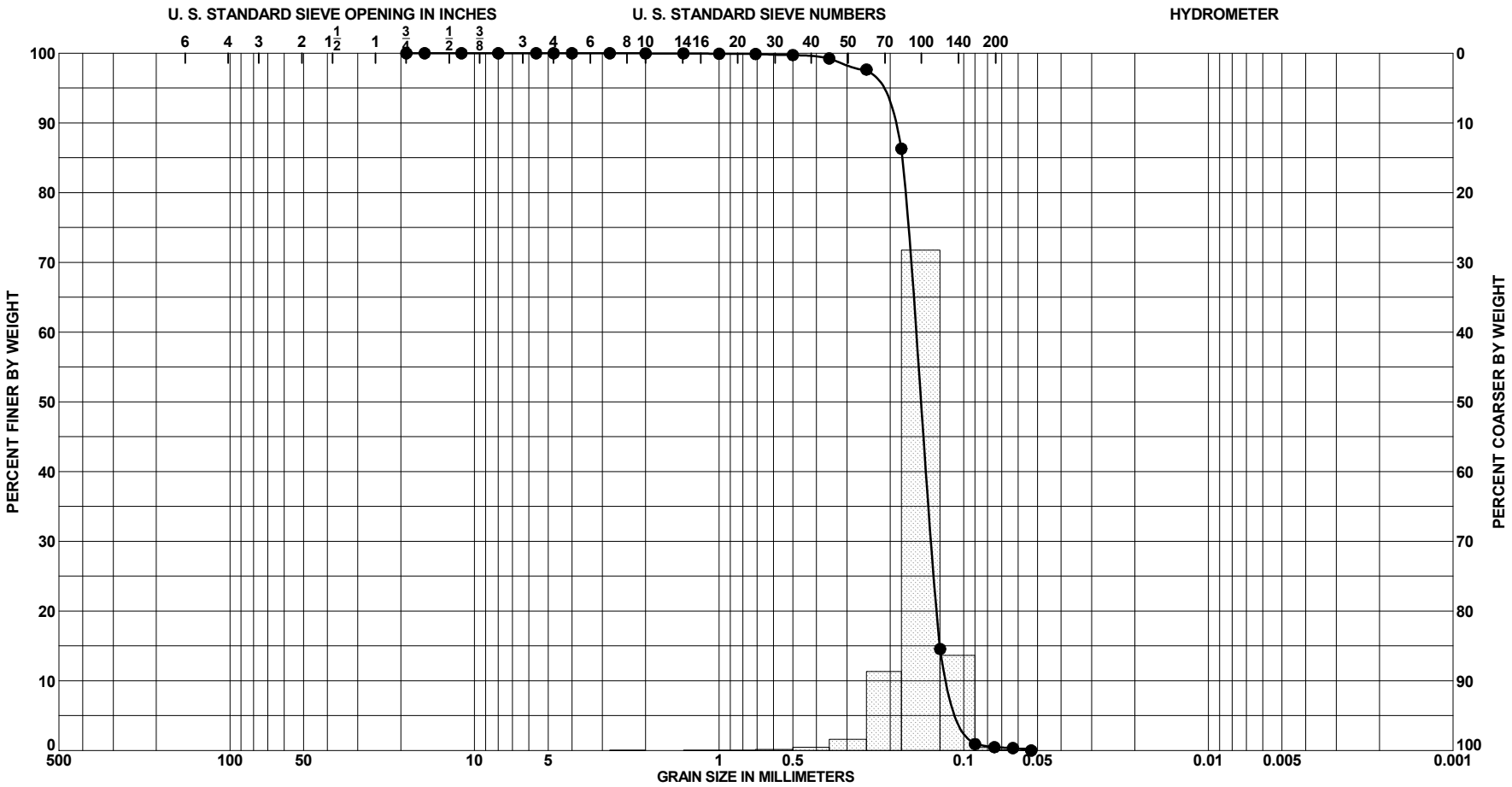


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 4	6.6 to 6.8 Ft.	(ML-CL)			11		18				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-05
BORING ELEV.	-8.2 Ft., NAVD88
DATE	10/18/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

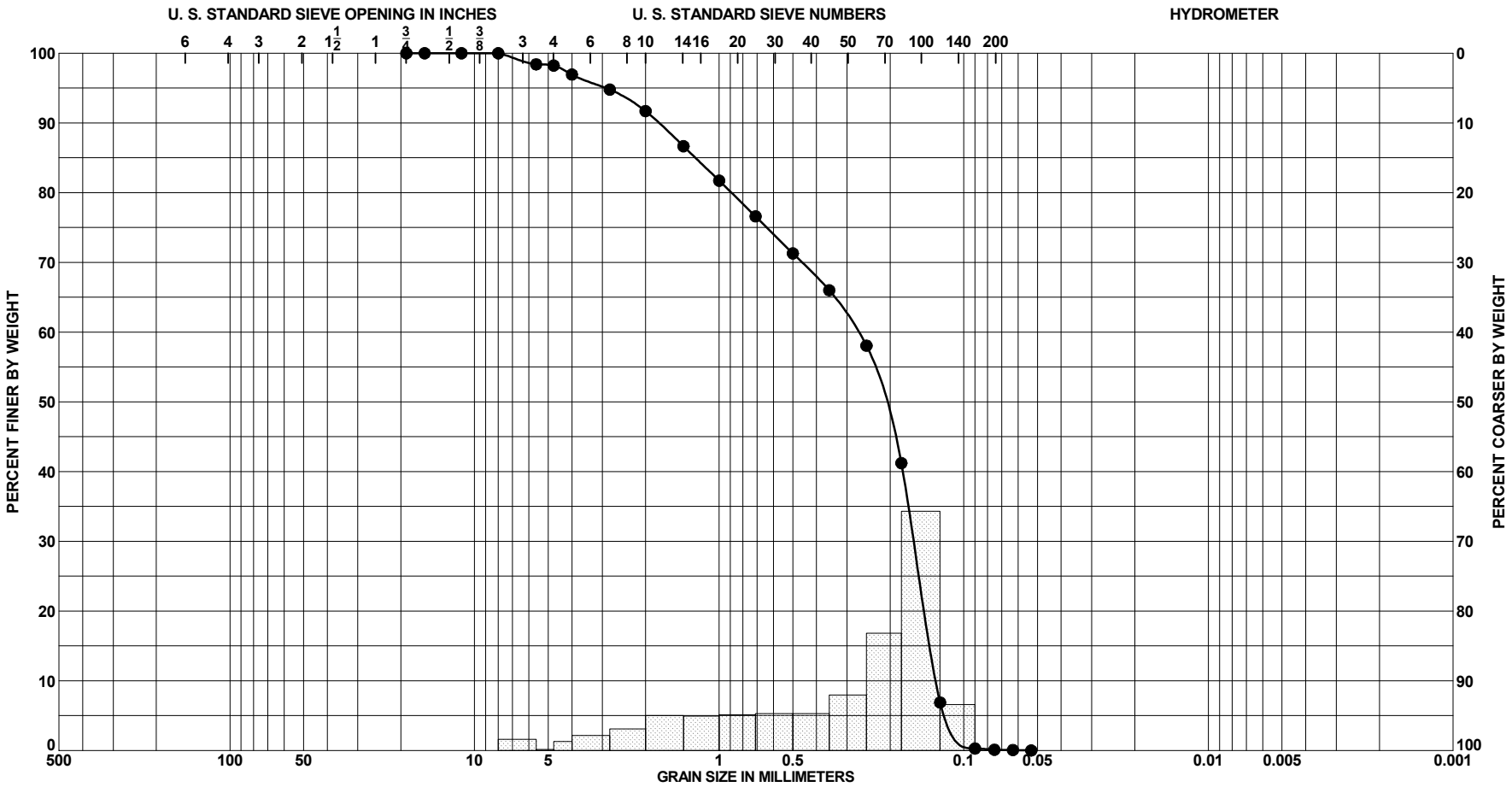


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 5	8.9 to 9.1 Ft.	SAND, poorly-graded (SP)			9		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-05
BORING ELEV.	-8.2 Ft., NAVD88
DATE	10/23/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

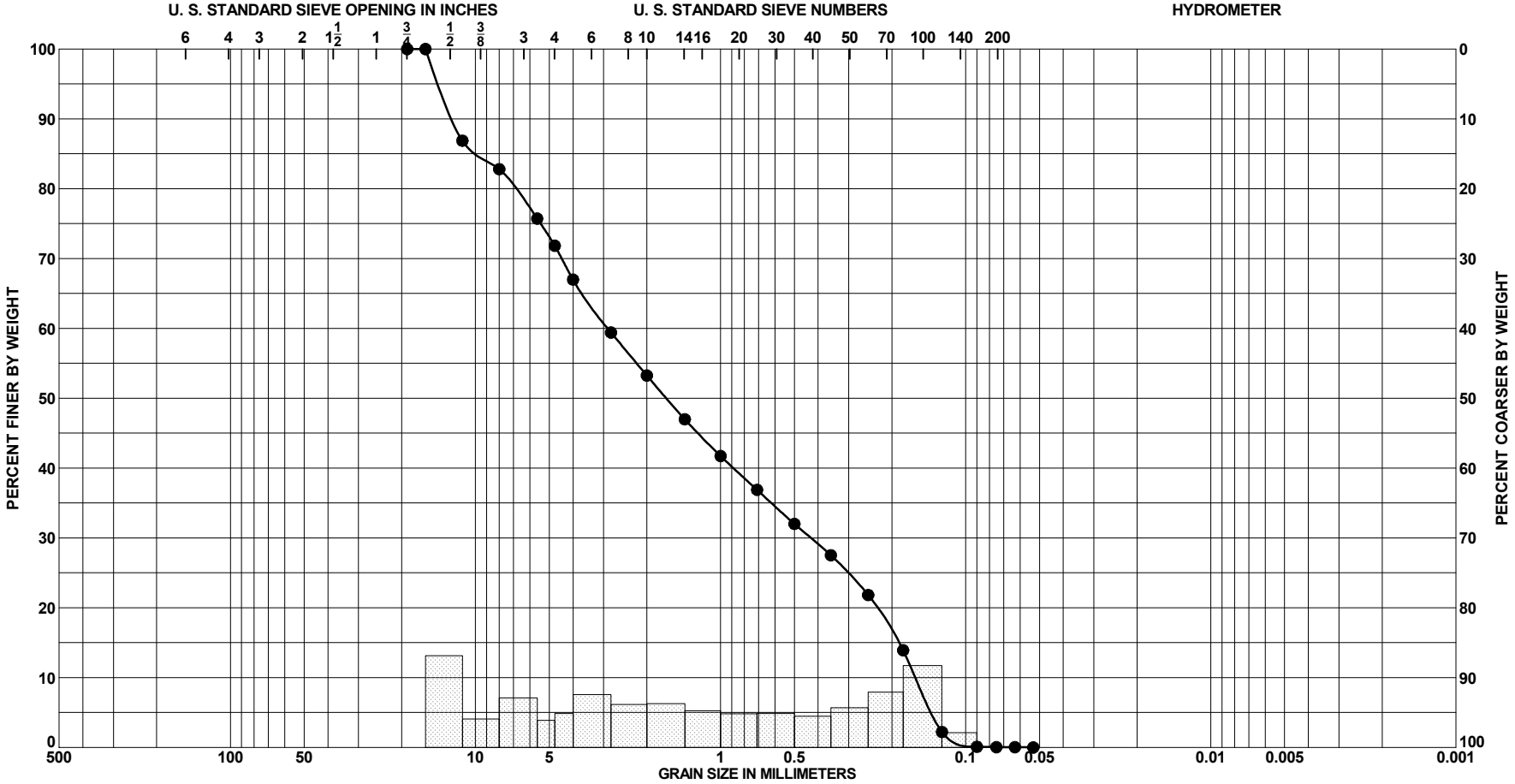


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	0.7 to 0.9 Ft.	SAND, poorly-graded (SP)			39		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-06
BORING ELEV.	-11.8 Ft., NAVD88
DATE	10/20/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

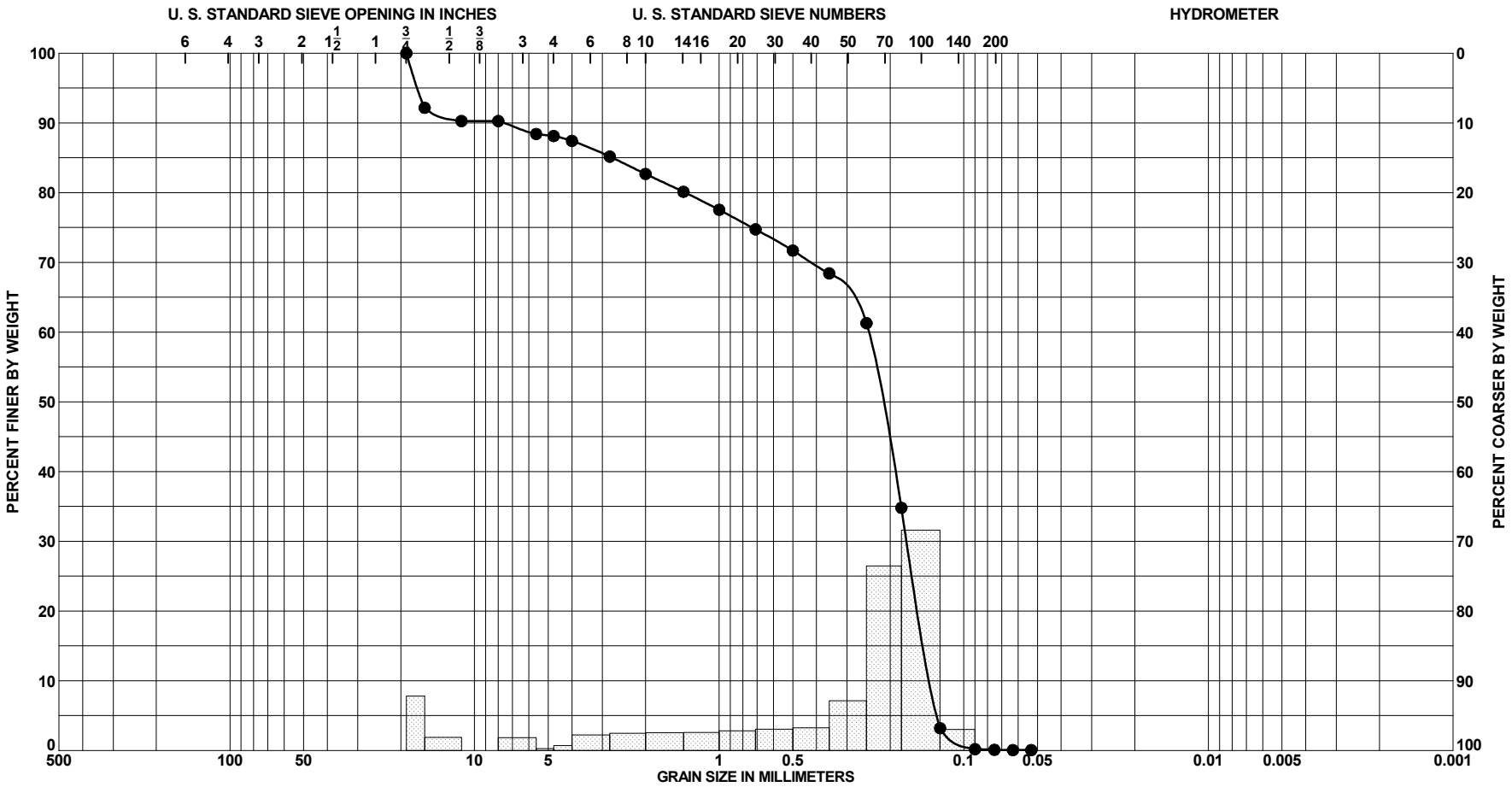


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	1.3 to 1.5 Ft.	SAND, poorly-graded (SP)			70		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-06
BORING ELEV.	-11.8 Ft., NAVD88
DATE	10/20/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

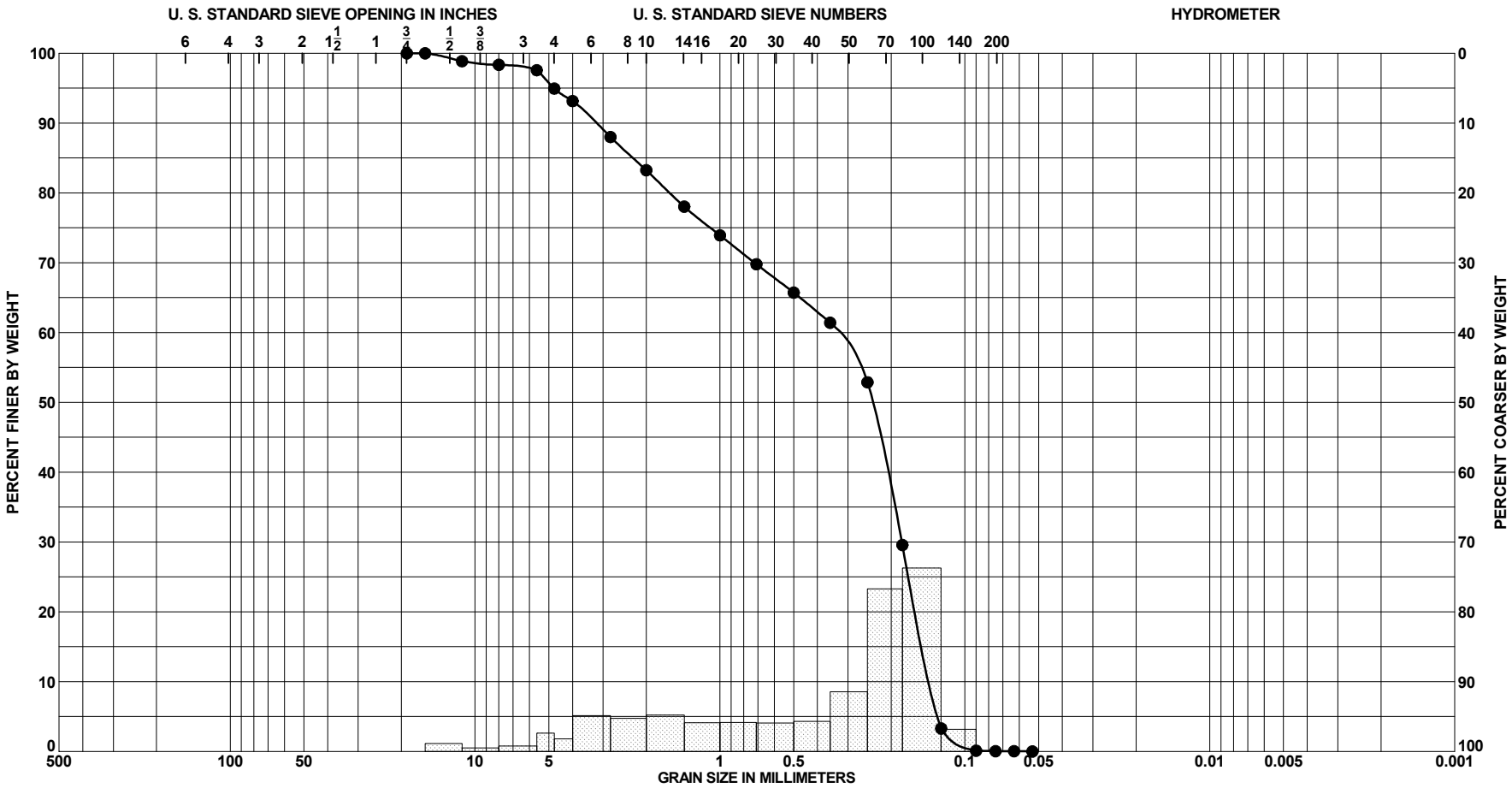


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	3.3 to 3.5 Ft.	SAND, poorly-graded (SP)			36		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-06
BORING ELEV.	-11.8 Ft., NAVD88
DATE	10/20/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

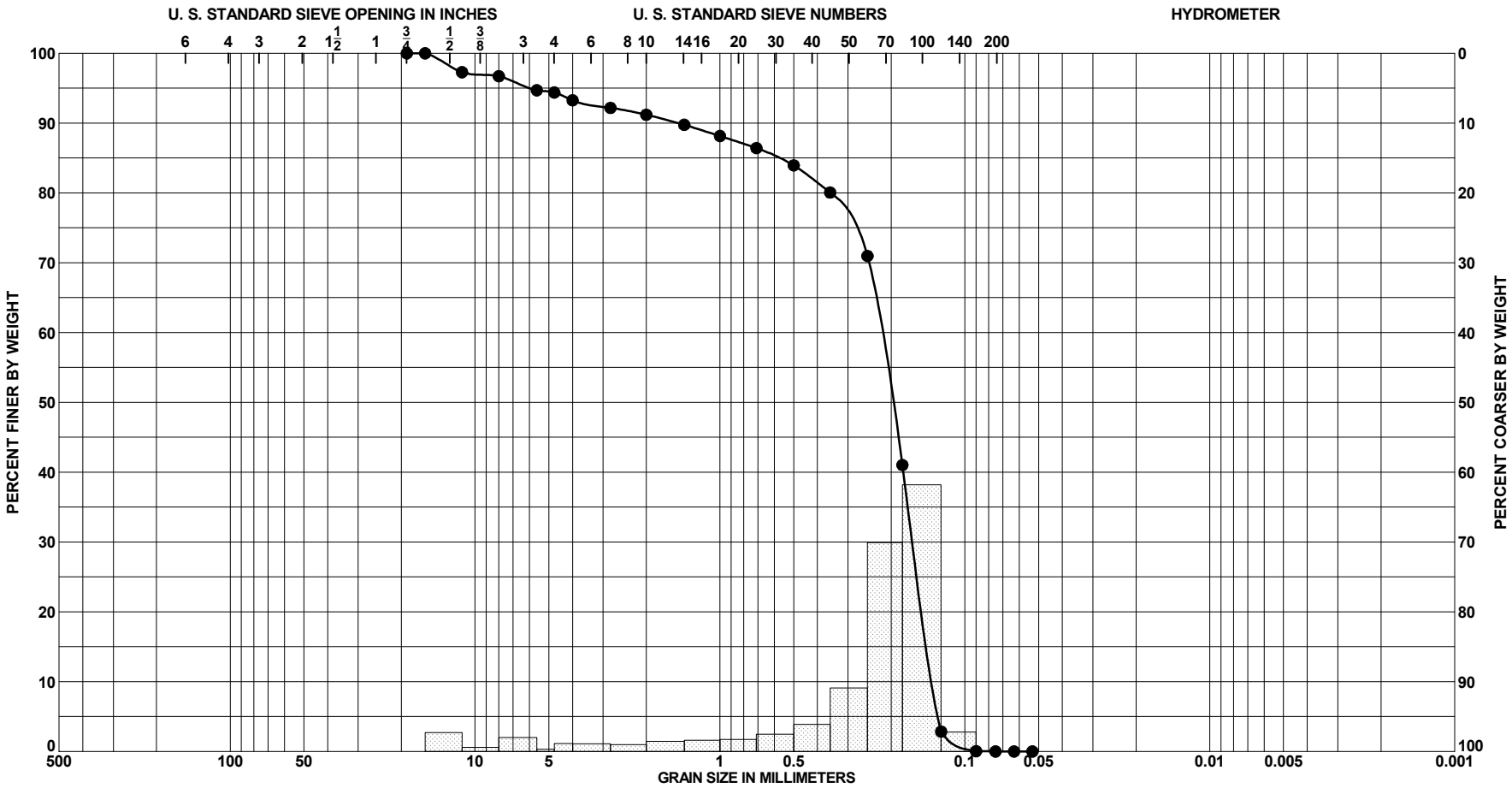


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	0.7 to 0.9 Ft.	SAND, poorly-graded (SP)			43		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-07
BORING ELEV.	-12.5 Ft., NAVD88
DATE	10/20/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

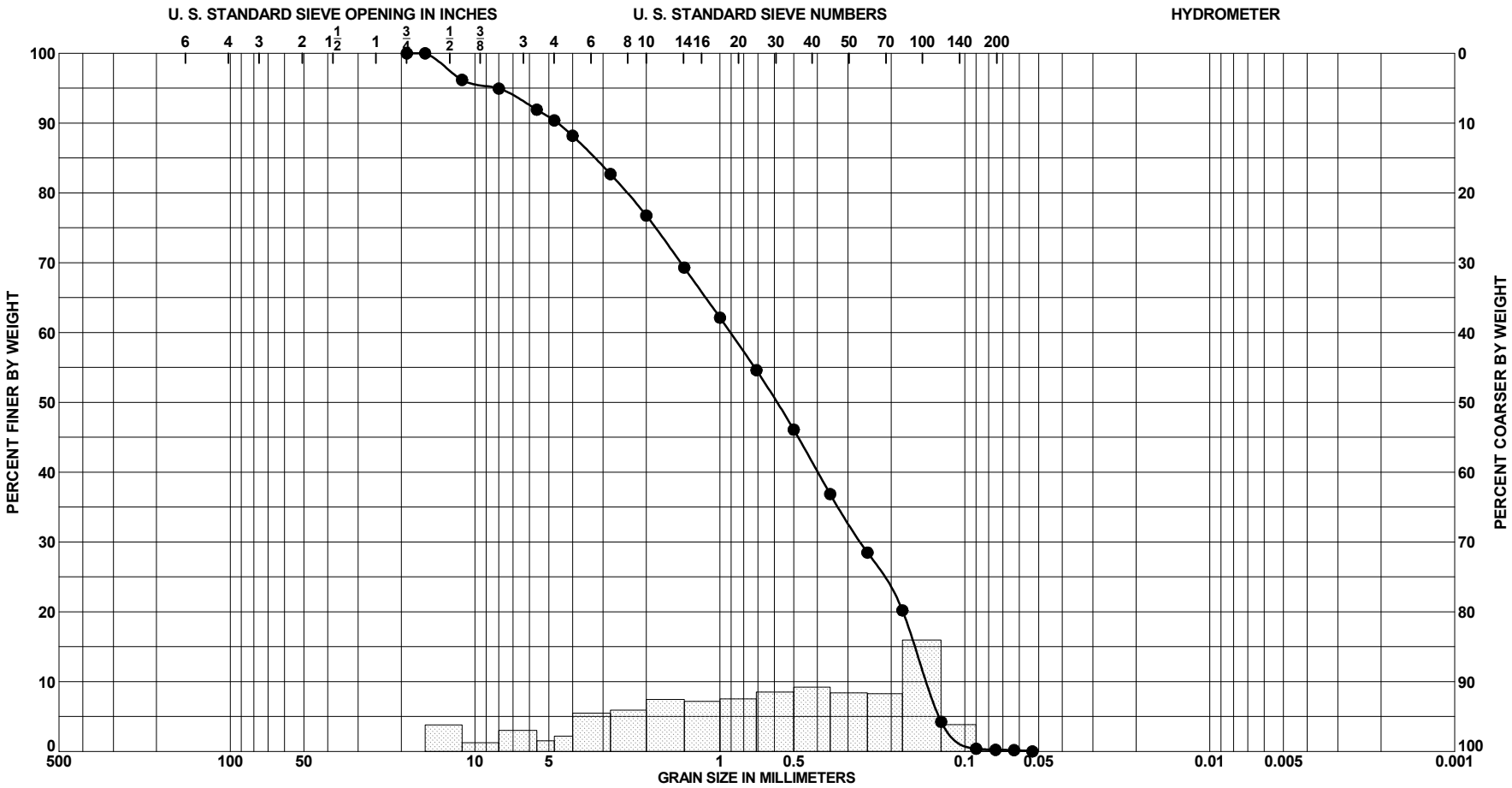


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	3.3 to 3.5 Ft.	SAND, poorly-graded (SP)			27		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-07
BORING ELEV.	-12.5 Ft., NAVD88
DATE	10/18/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

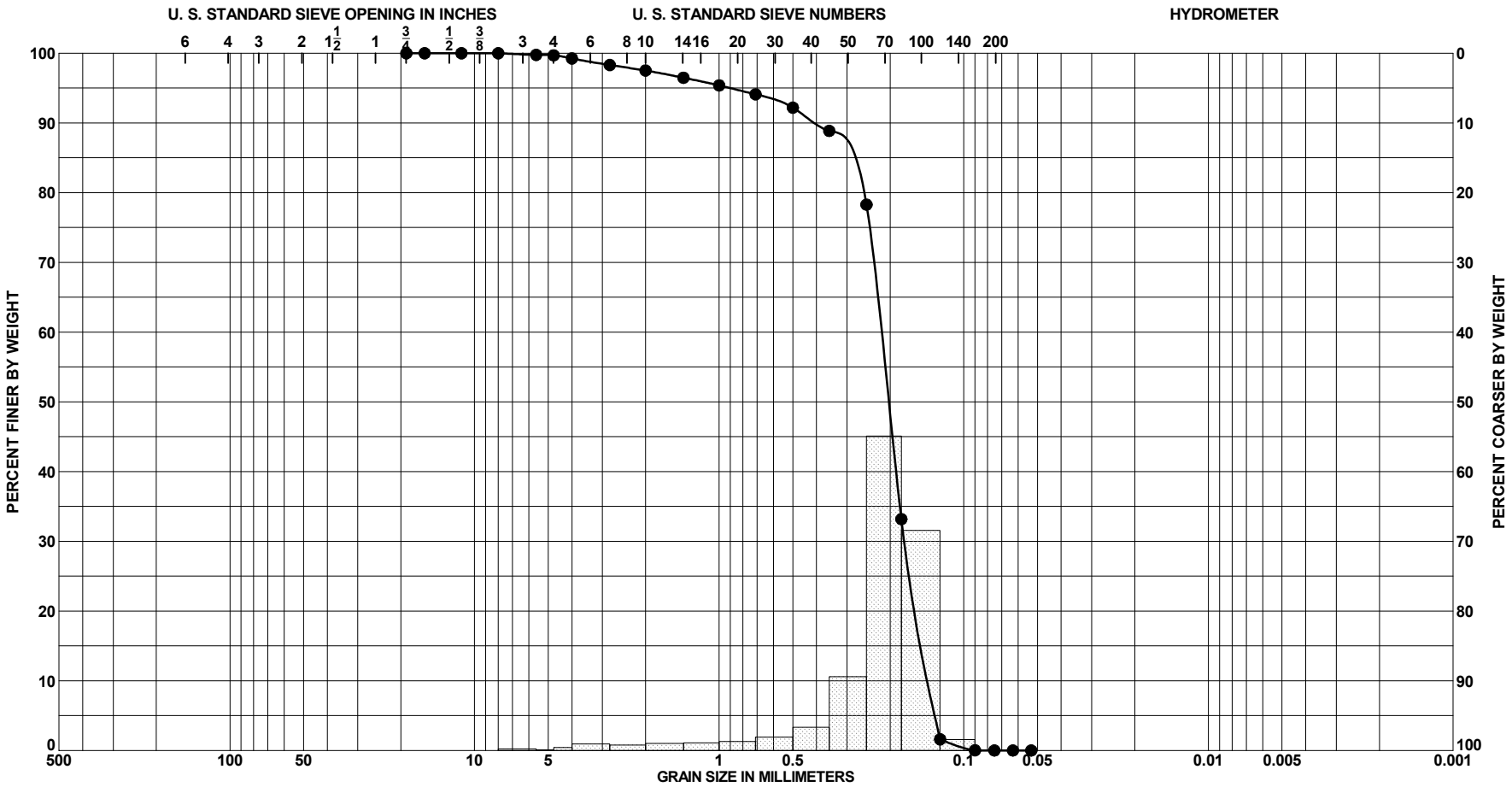


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	5.6 to 5.8 Ft.	SAND, poorly-graded (SP)			70		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-07
BORING ELEV.	-12.5 Ft., NAVD88
DATE	10/20/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

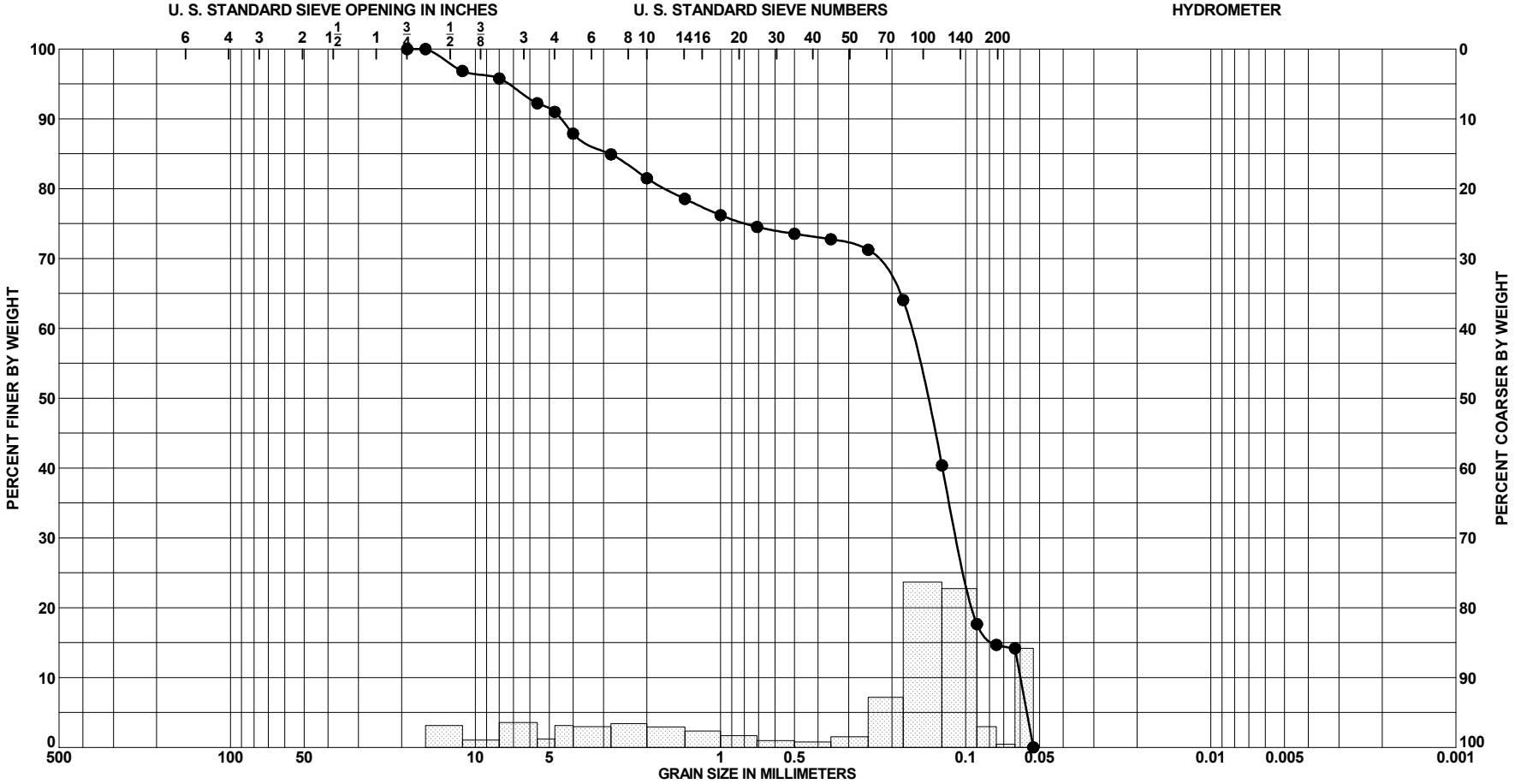


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 4	6.9 to 7.1 Ft.	SAND, poorly-graded (SP)			16		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-07
BORING ELEV.	-12.5 Ft., NAVD88
DATE	10/23/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

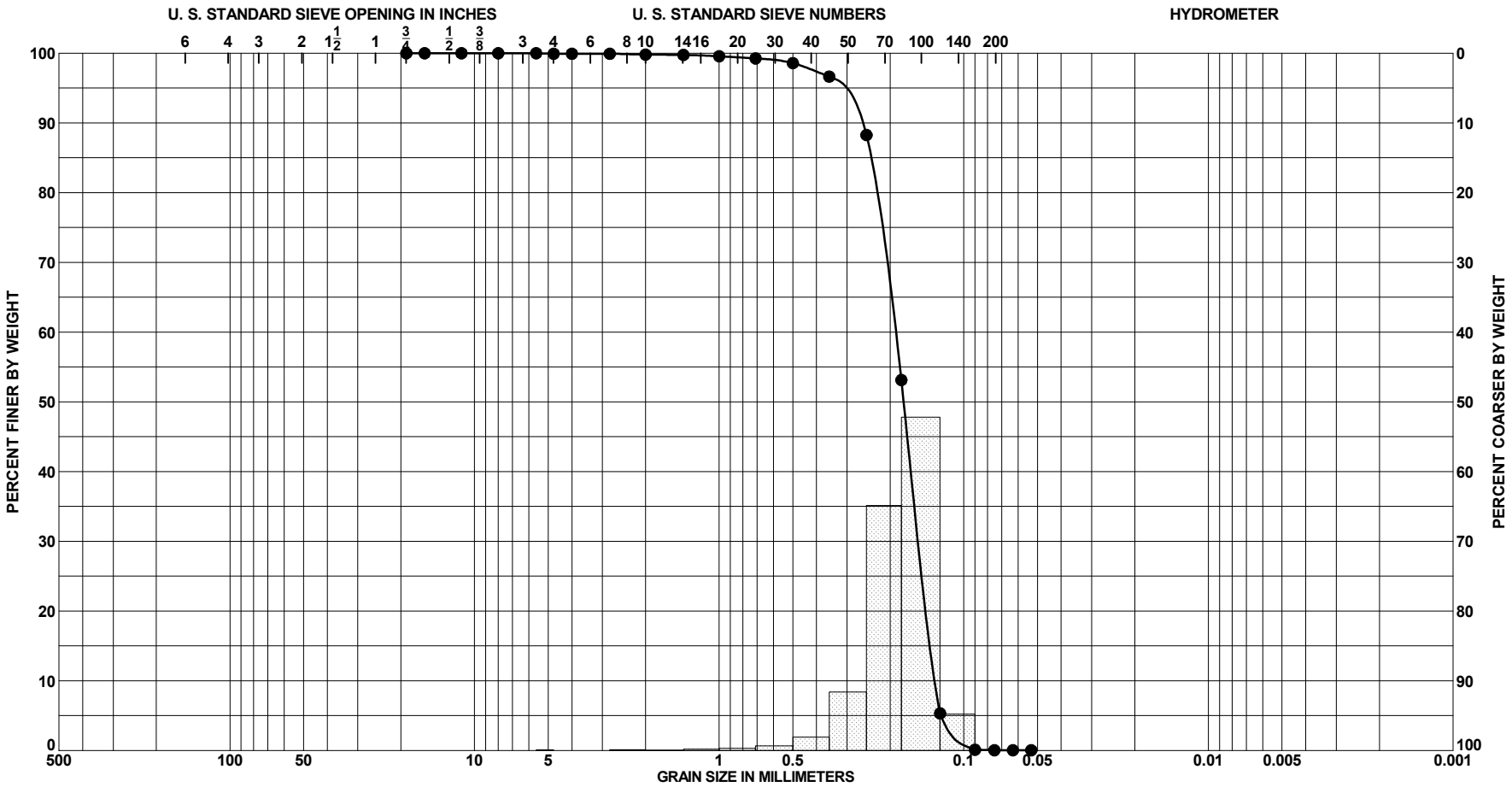


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 5	9.5 to 9.7 Ft.	(SM-SC)			37		3				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-07
BORING ELEV.	-12.5 Ft., NAVD88
DATE	10/20/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

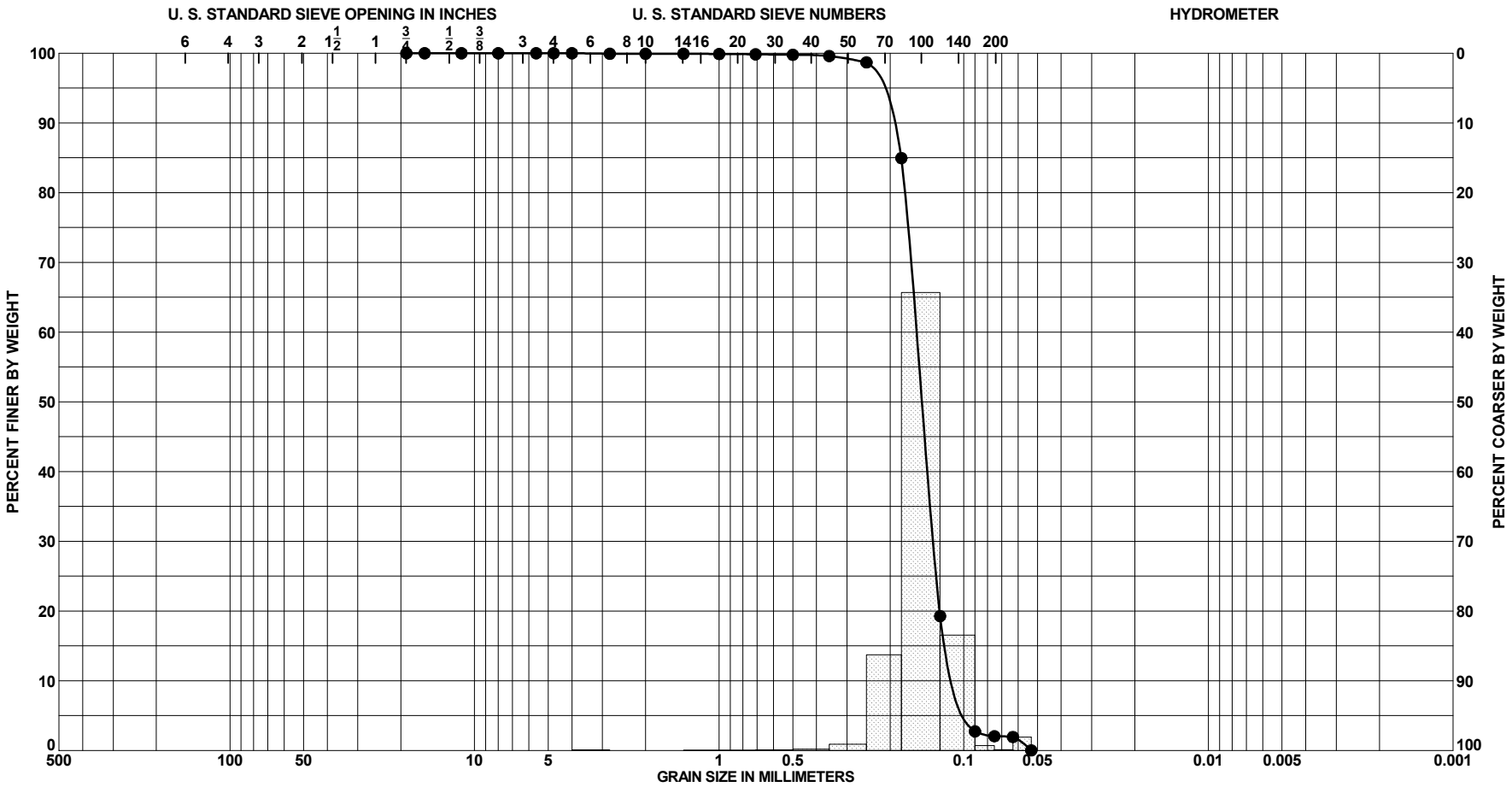


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	0.6 to 0.8 Ft.	SAND, poorly-graded (SP)			10		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-08
BORING ELEV.	-8.2 Ft., NAVD88
DATE	10/18/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

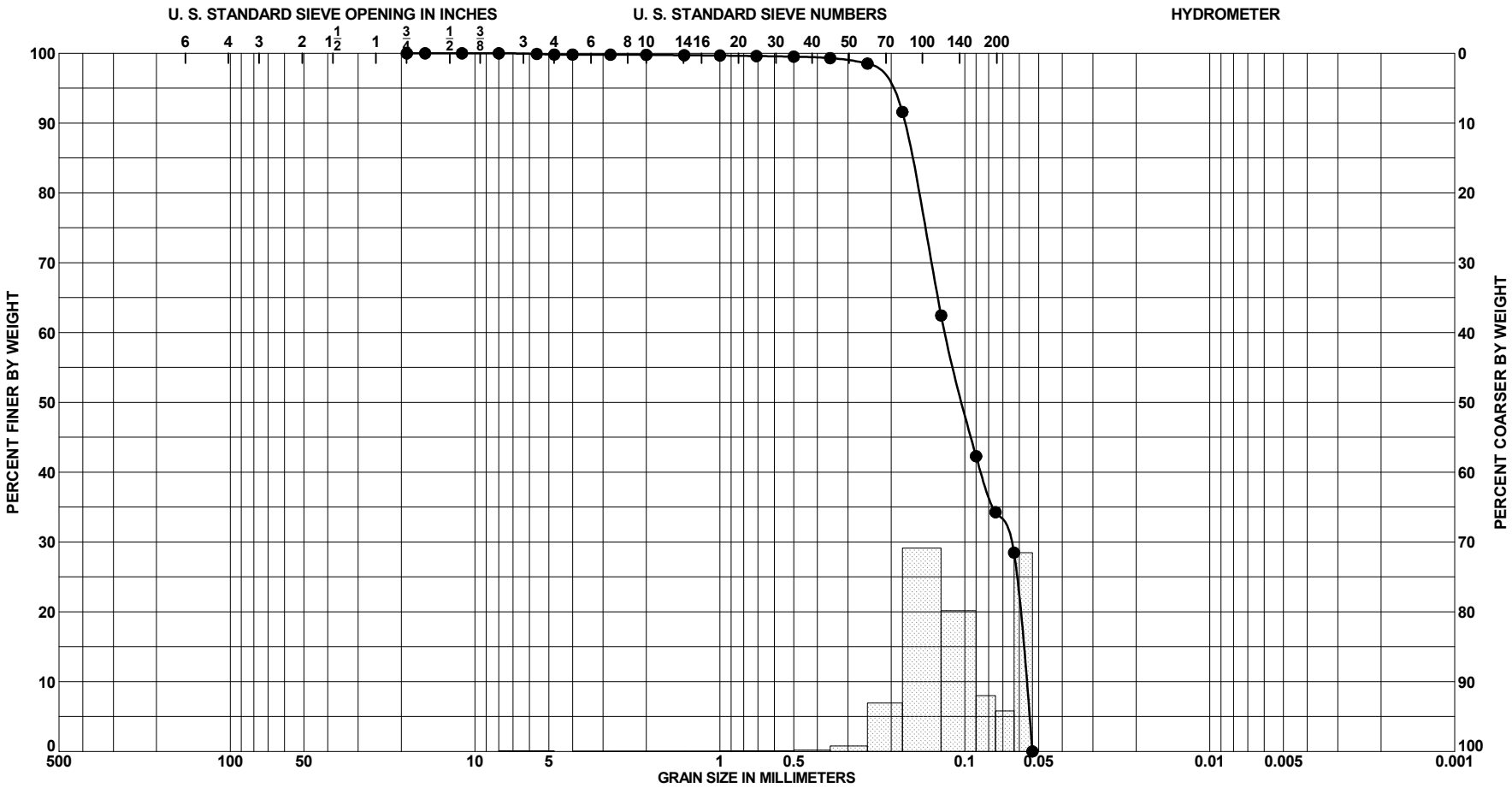


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	5.6 to 5.8 Ft.	SAND, poorly-graded (SP)			7		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-08
BORING ELEV.	-8.2 Ft., NAVD88
DATE	10/18/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

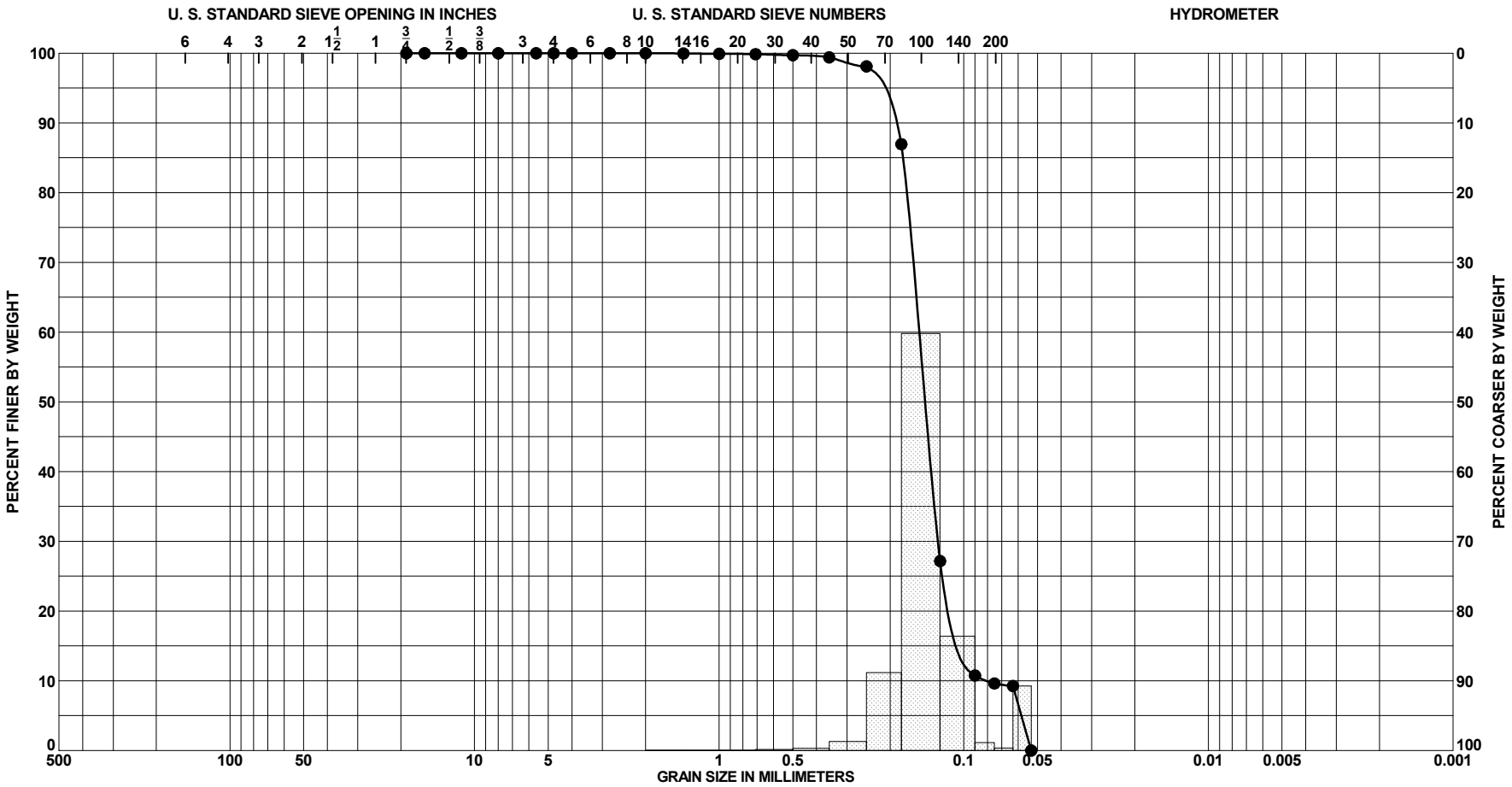


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	7.5 to 7.7 Ft.	(SM-SC)			23		3				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-08
BORING ELEV.	-8.2 Ft., NAVD88
DATE	10/23/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

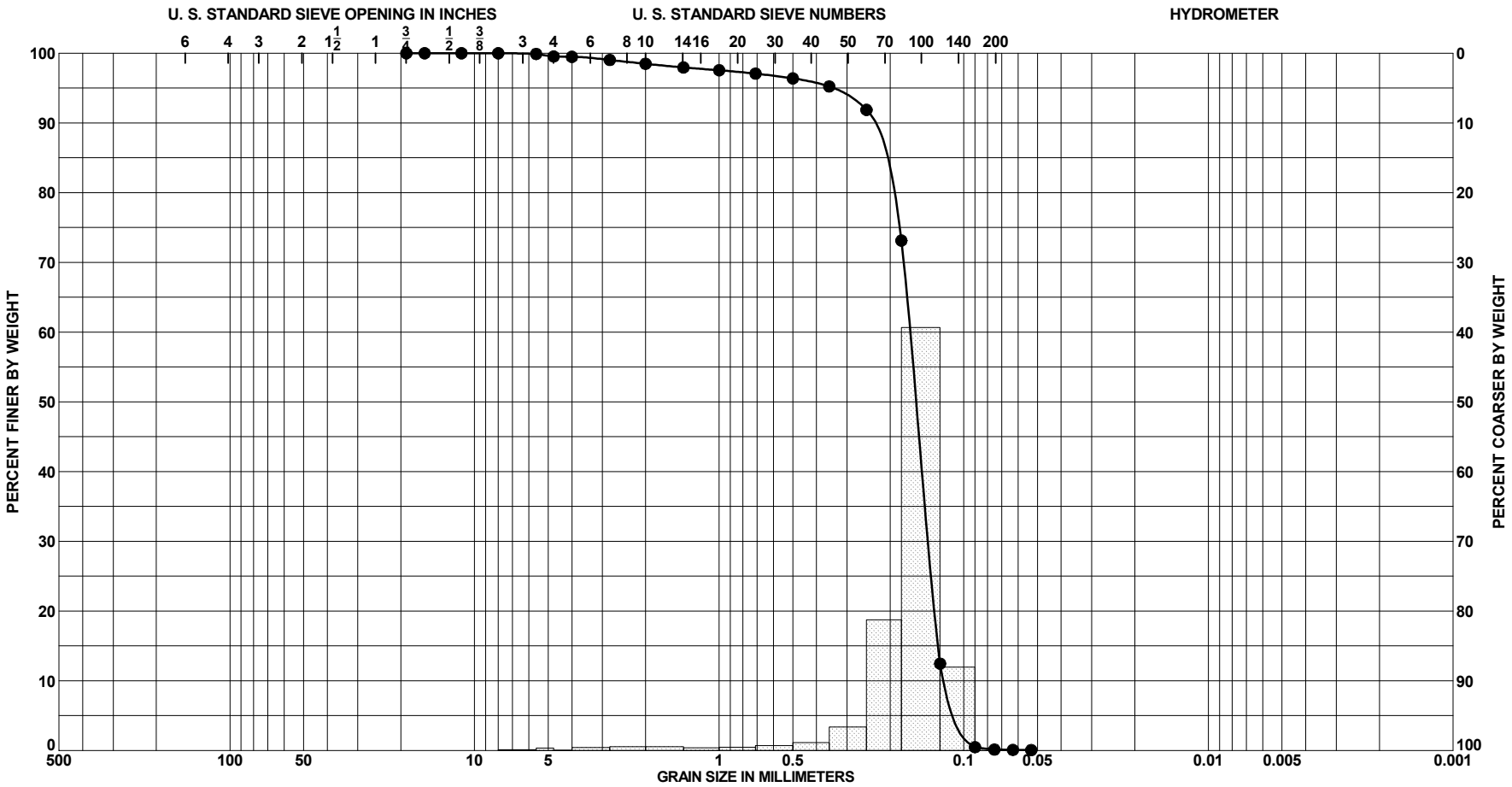


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 4	9.5 to 9.7 Ft.	(SP-SM)			10		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-08
BORING ELEV.	-8.2 Ft., NAVD88
DATE	10/23/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

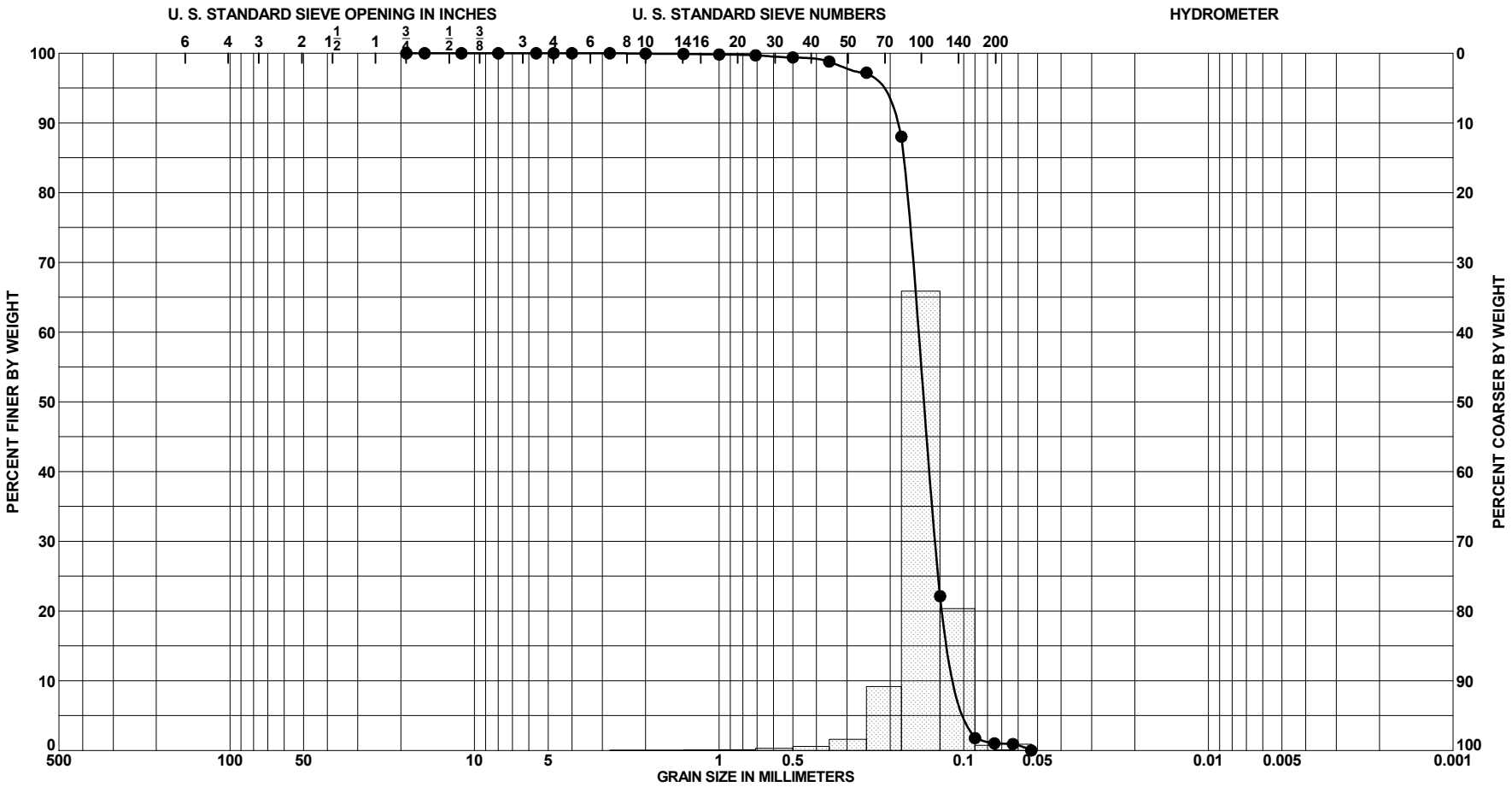


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	0.7 to 0.9 Ft.	SAND, poorly-graded (SP)			12		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-09
BORING ELEV.	-12.1 Ft., NAVD88
DATE	10/23/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

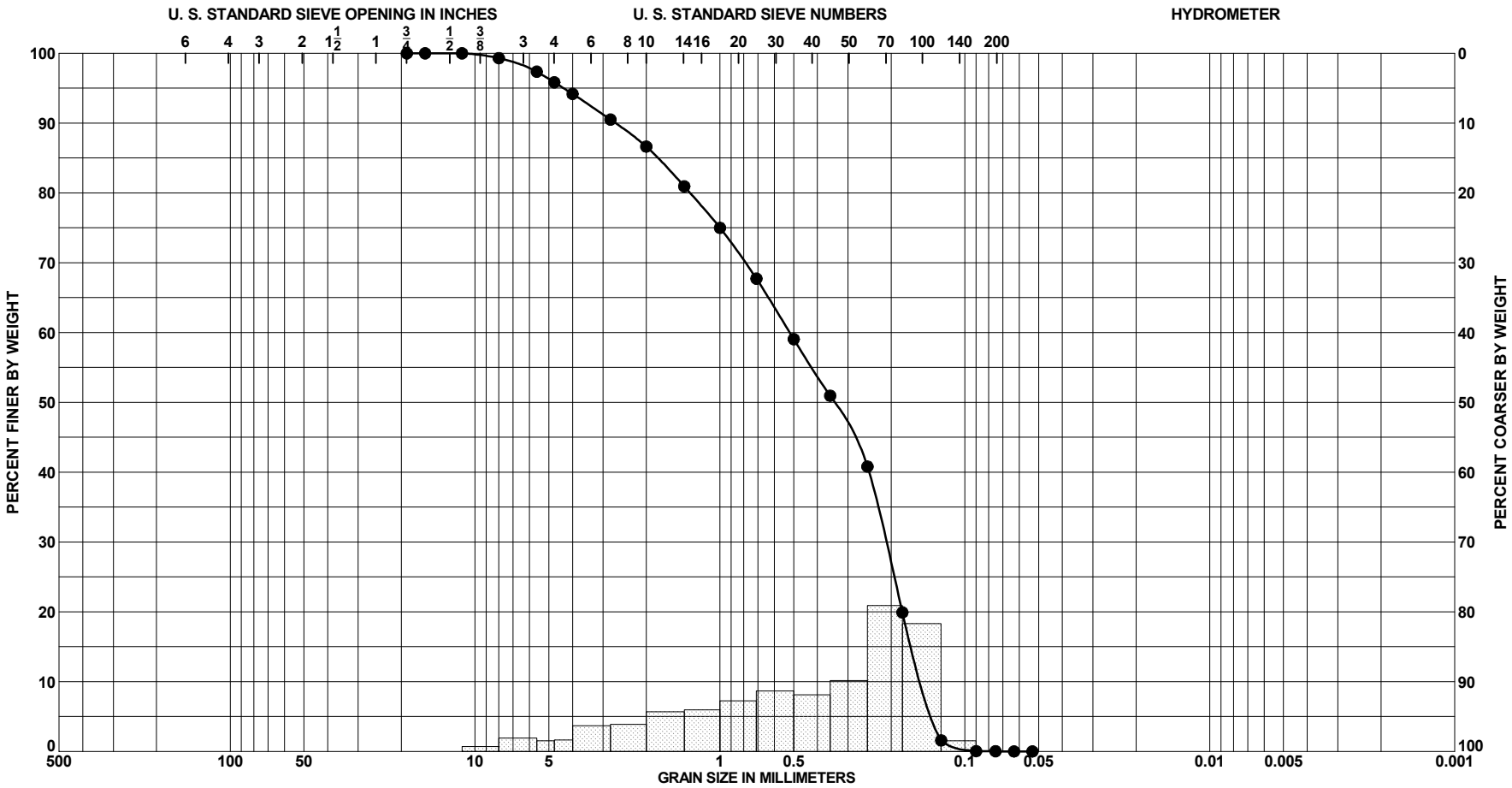


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	3.9 to 4.1 Ft.	SAND, poorly-graded (SP)			9		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-09
BORING ELEV.	-12.1 Ft., NAVD88
DATE	10/18/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

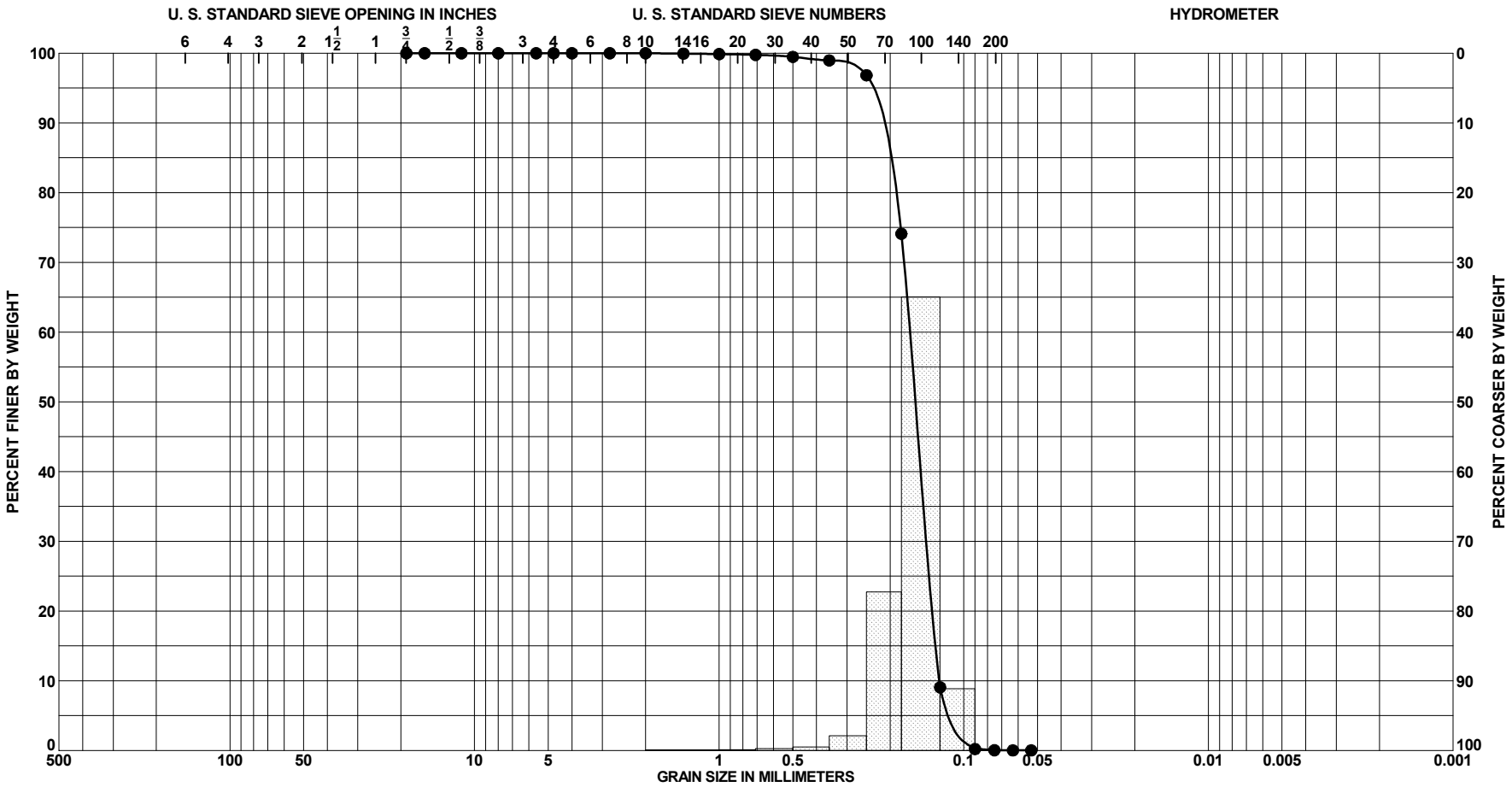


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	0.7 to 0.9 Ft.	SAND, poorly-graded (SP)			46		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-10
BORING ELEV.	-5.7 Ft., NAVD88
DATE	10/20/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

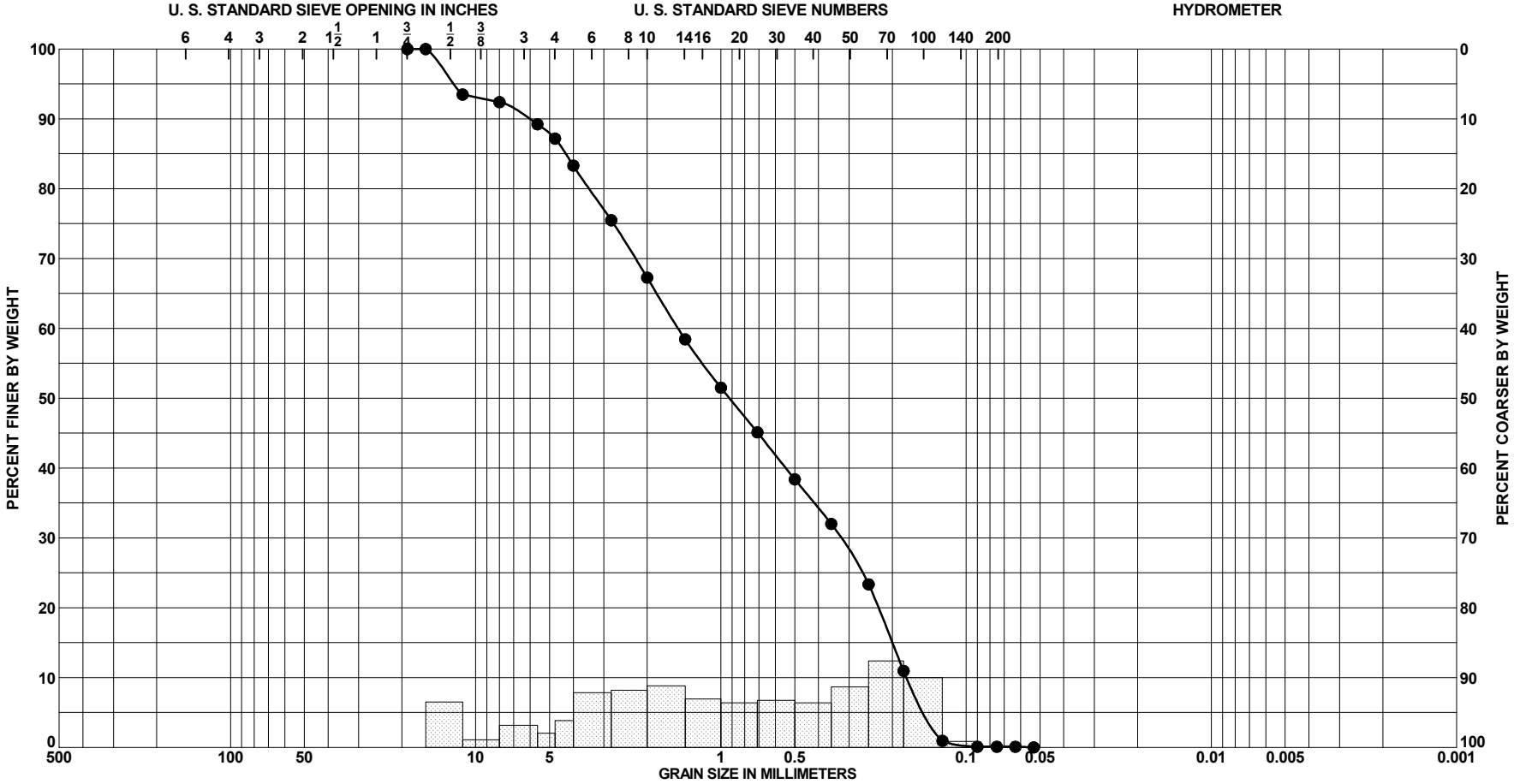


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	2.3 to 2.5 Ft.	SAND, poorly-graded (SP)			7		0				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-10
BORING ELEV.	-5.7 Ft., NAVD88
DATE	10/18/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

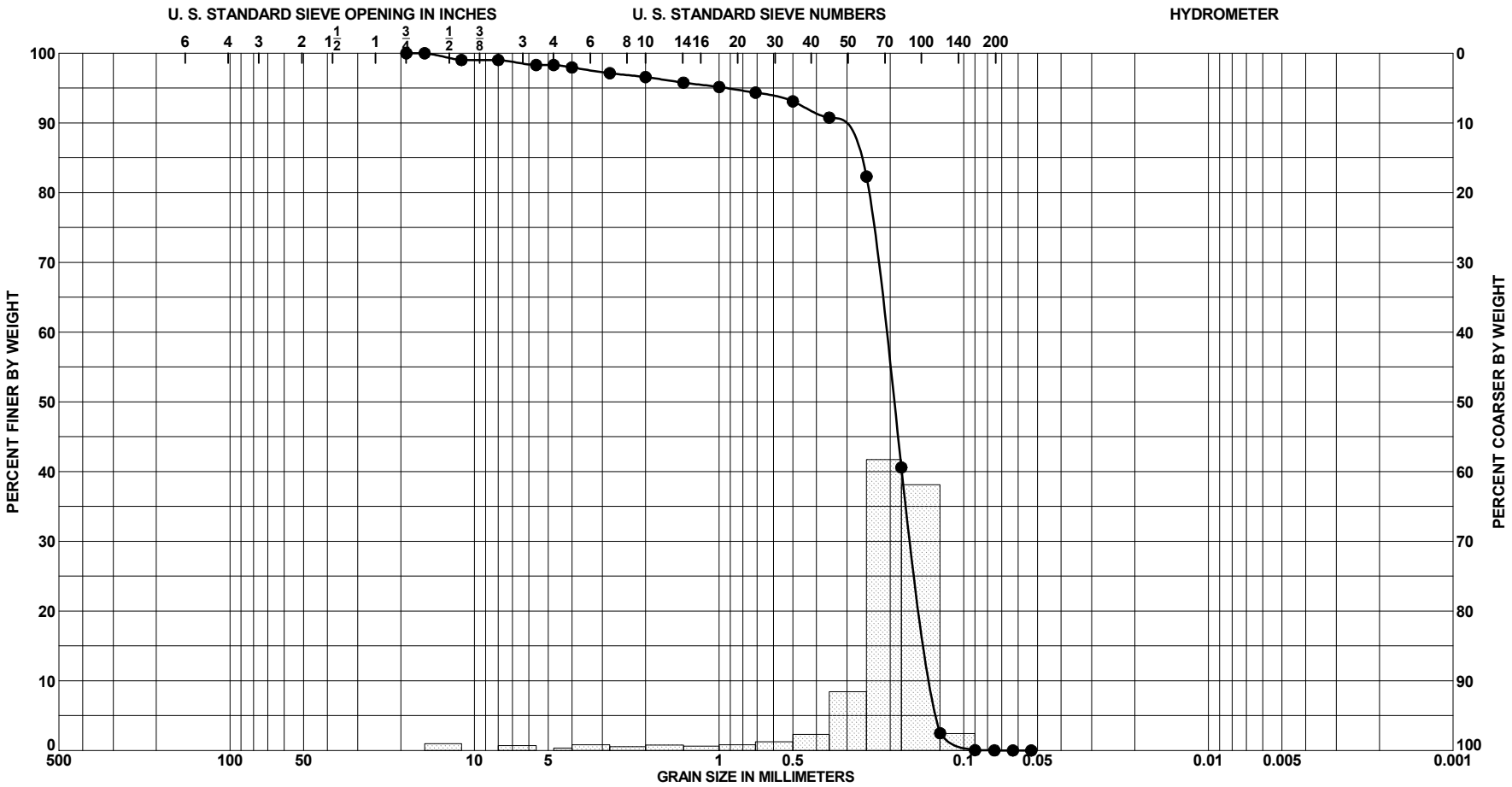


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	2.9 to 3.1 Ft.	SAND, poorly-graded (SP)			63		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-10
BORING ELEV.	-5.7 Ft., NAVD88
DATE	10/18/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

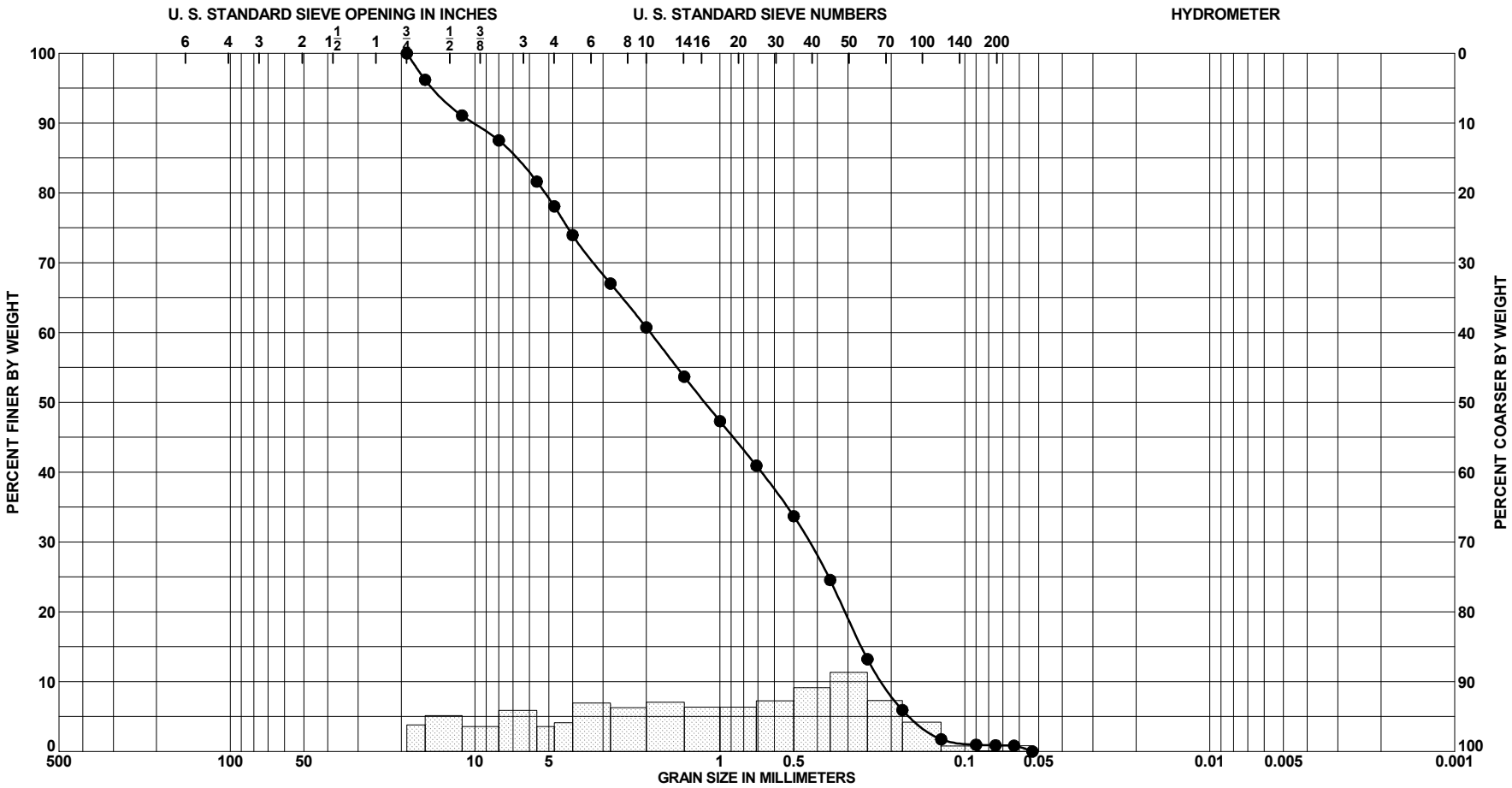


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 4	3.3 to 3.5 Ft.	SAND, poorly-graded (SP)			16		0				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-10
BORING ELEV.	-5.7 Ft., NAVD88
DATE	10/20/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

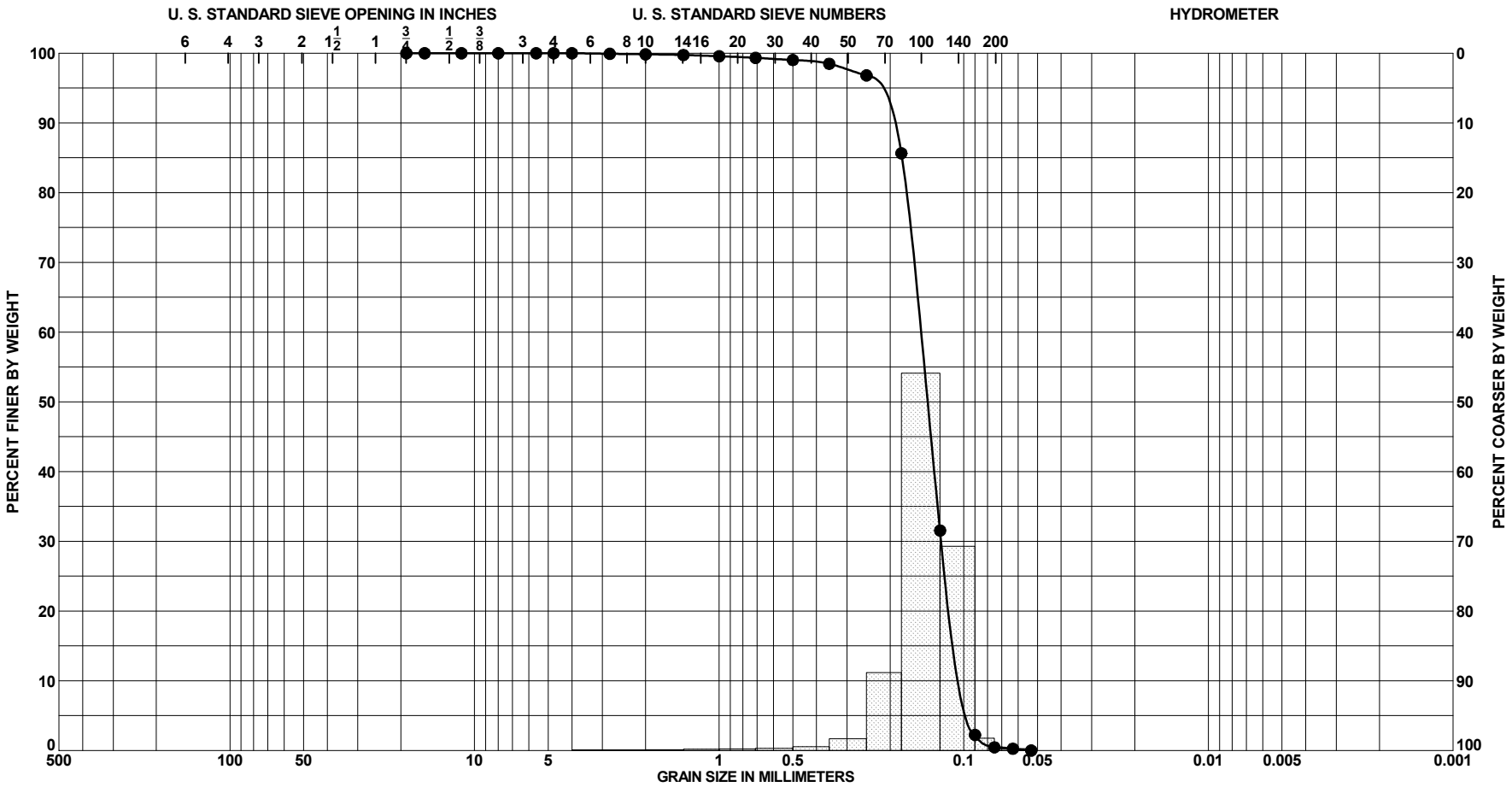


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 5	4.3 to 4.5 Ft.	SAND, poorly-graded (SP)			69		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-10
BORING ELEV.	-5.7 Ft., NAVD88
DATE	10/20/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

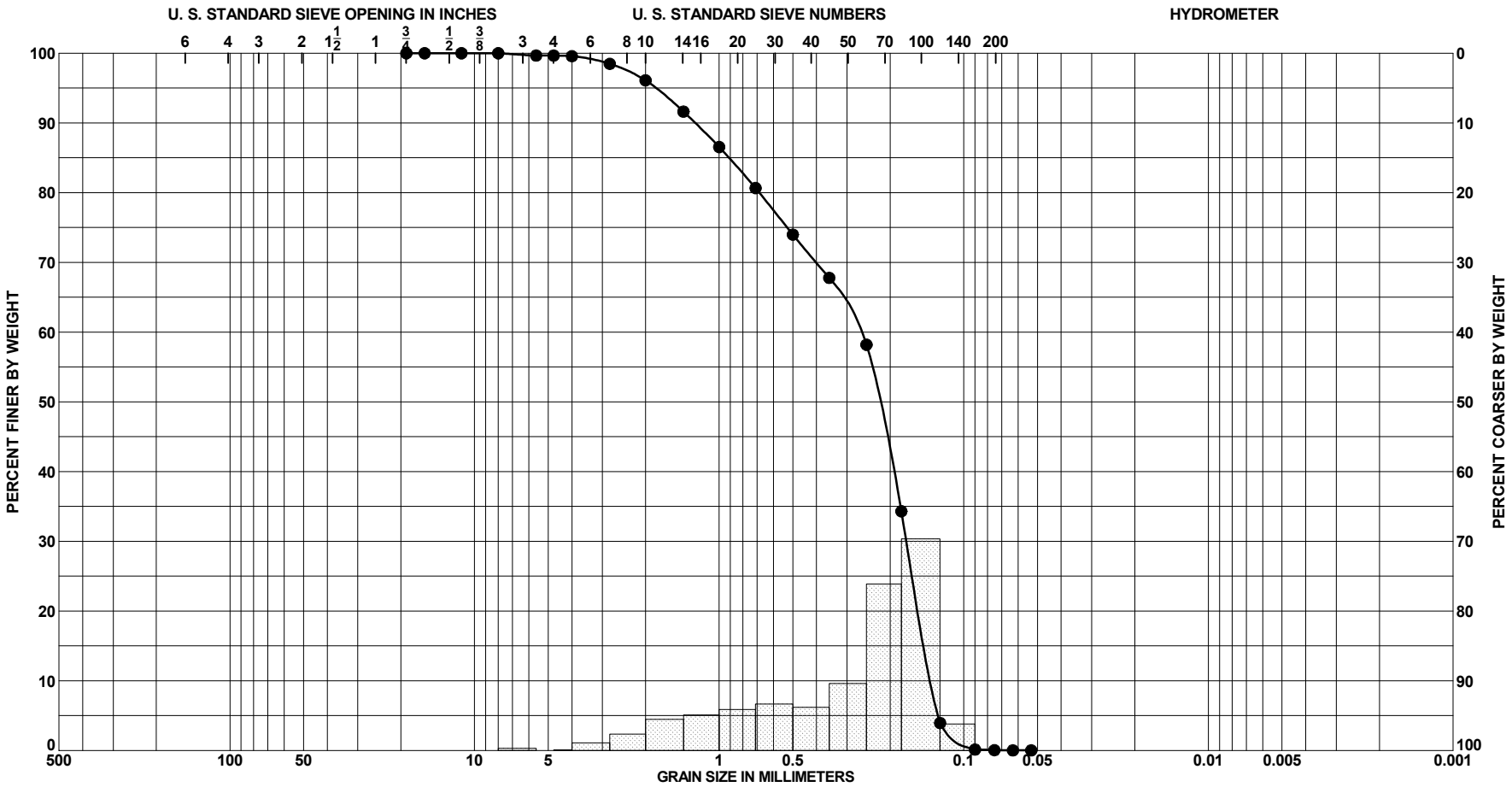


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 6	5.6 to 5.8 Ft.	SAND, poorly-graded (SP)			7		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-10
BORING ELEV.	-5.7 Ft., NAVD88
DATE	10/18/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

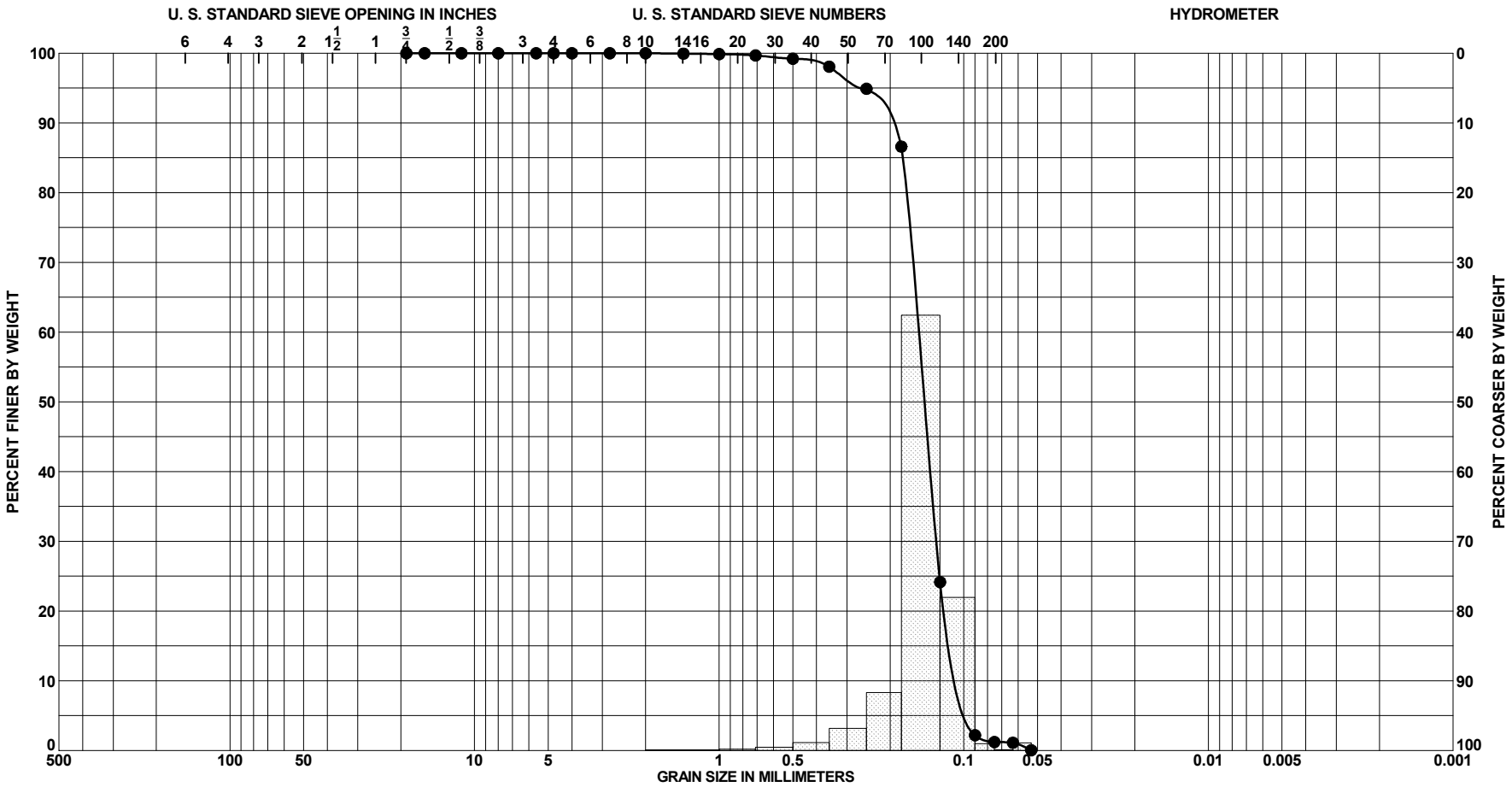


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	0.7 to 0.9 Ft.	SAND, poorly-graded (SP)			34		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-11
BORING ELEV.	-6.2 Ft., NAVD88
DATE	10/20/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

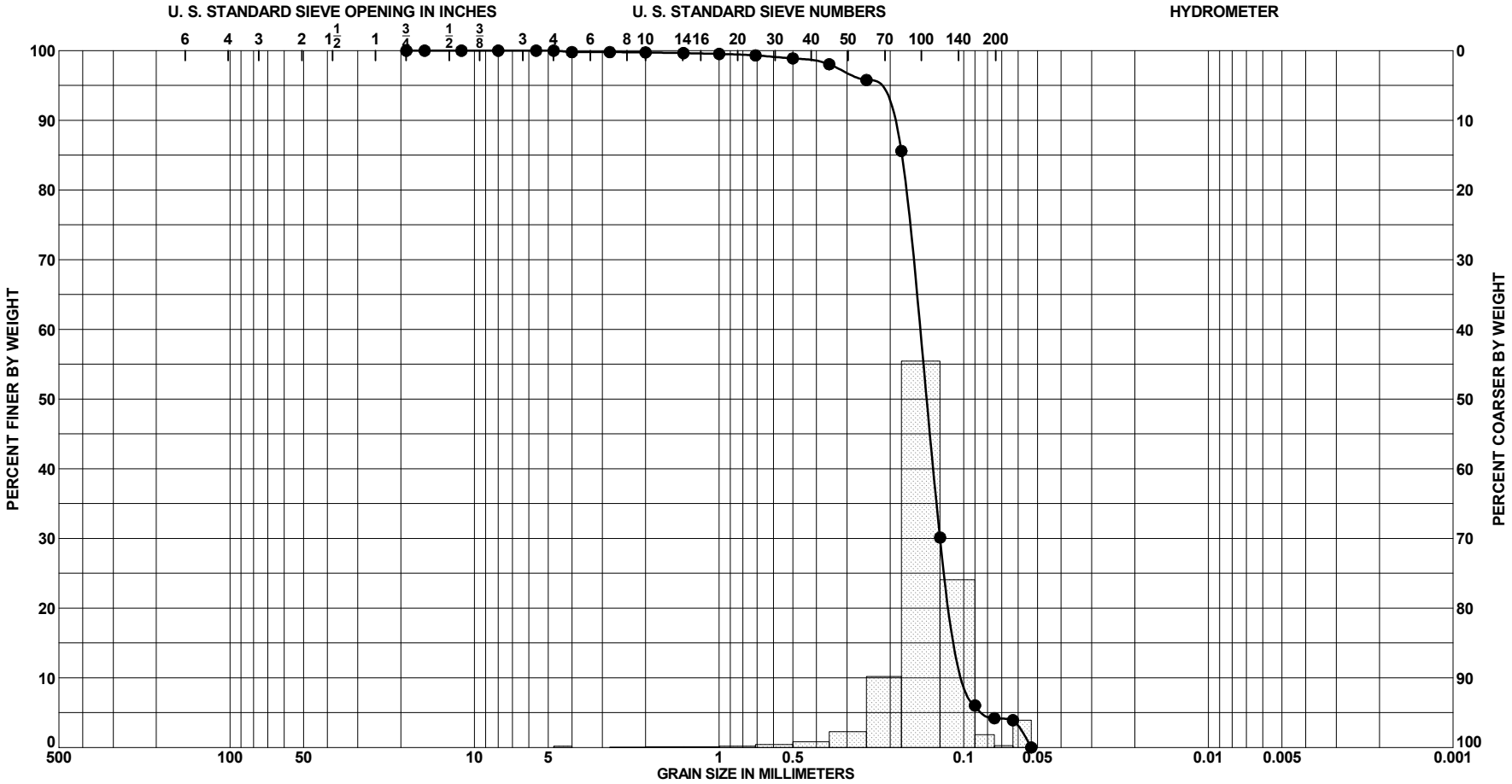


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	2.9 to 3.1 Ft.	SAND, poorly-graded (SP)			15		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-11
BORING ELEV.	-6.2 Ft., NAVD88
DATE	10/23/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

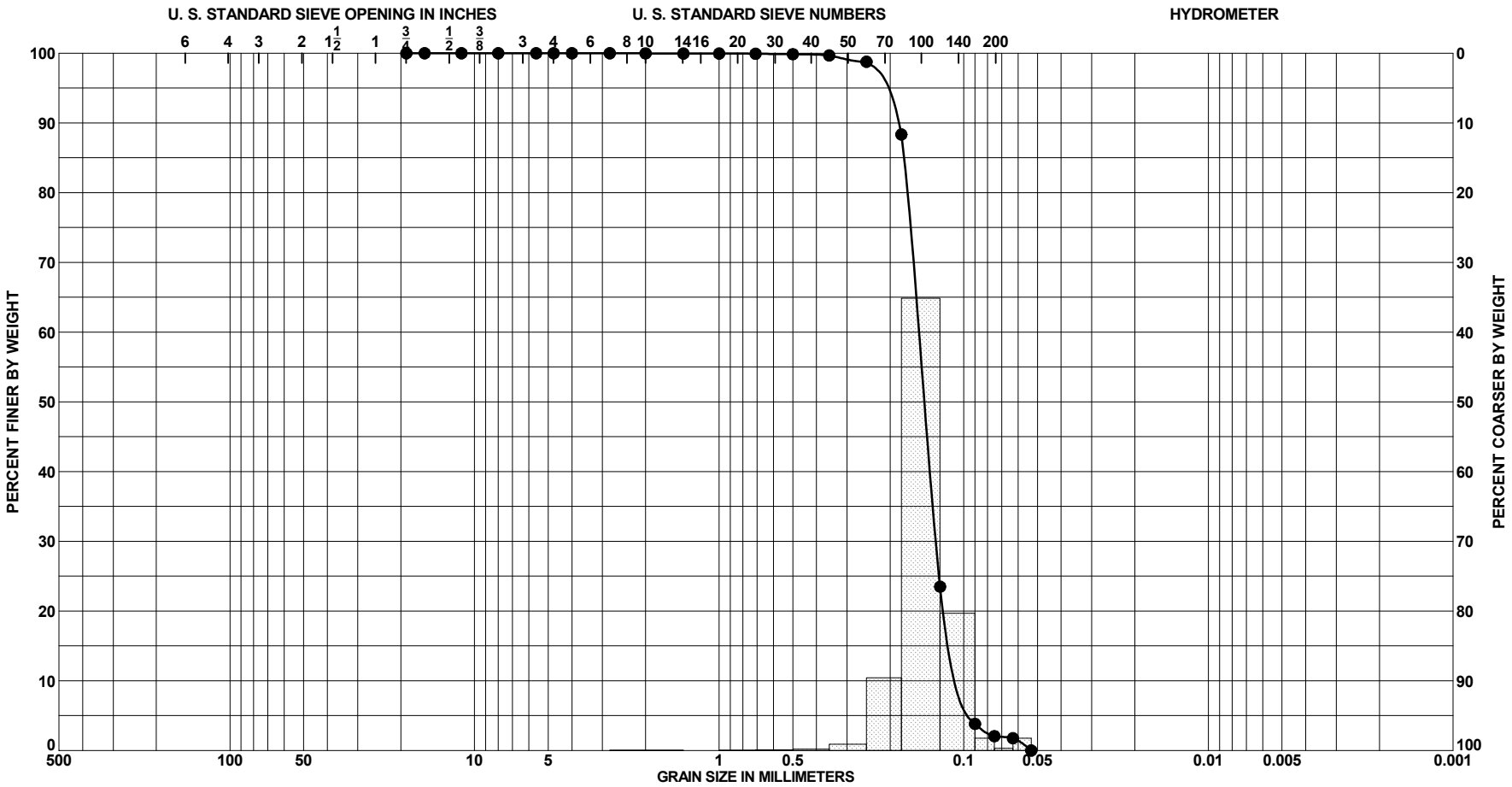


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	4.3 to 4.5 Ft.	SAND, poorly-graded (SP)			13		2				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-11
BORING ELEV.	-6.2 Ft., NAVD88
DATE	10/23/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

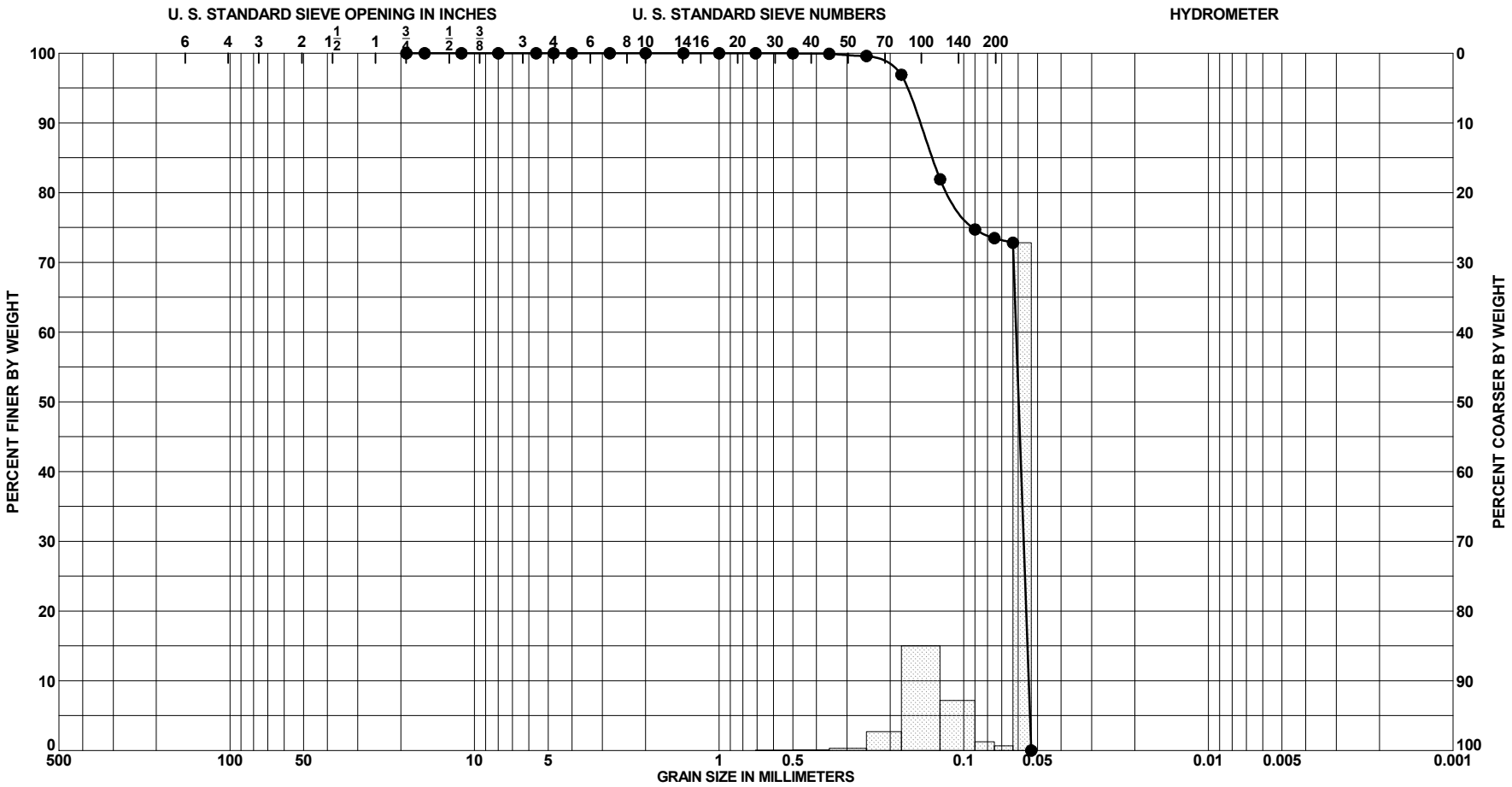


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 4	7.5 to 7.7 Ft.	SAND, poorly-graded (SP)			8		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-11
BORING ELEV.	-6.2 Ft., NAVD88
DATE	10/23/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

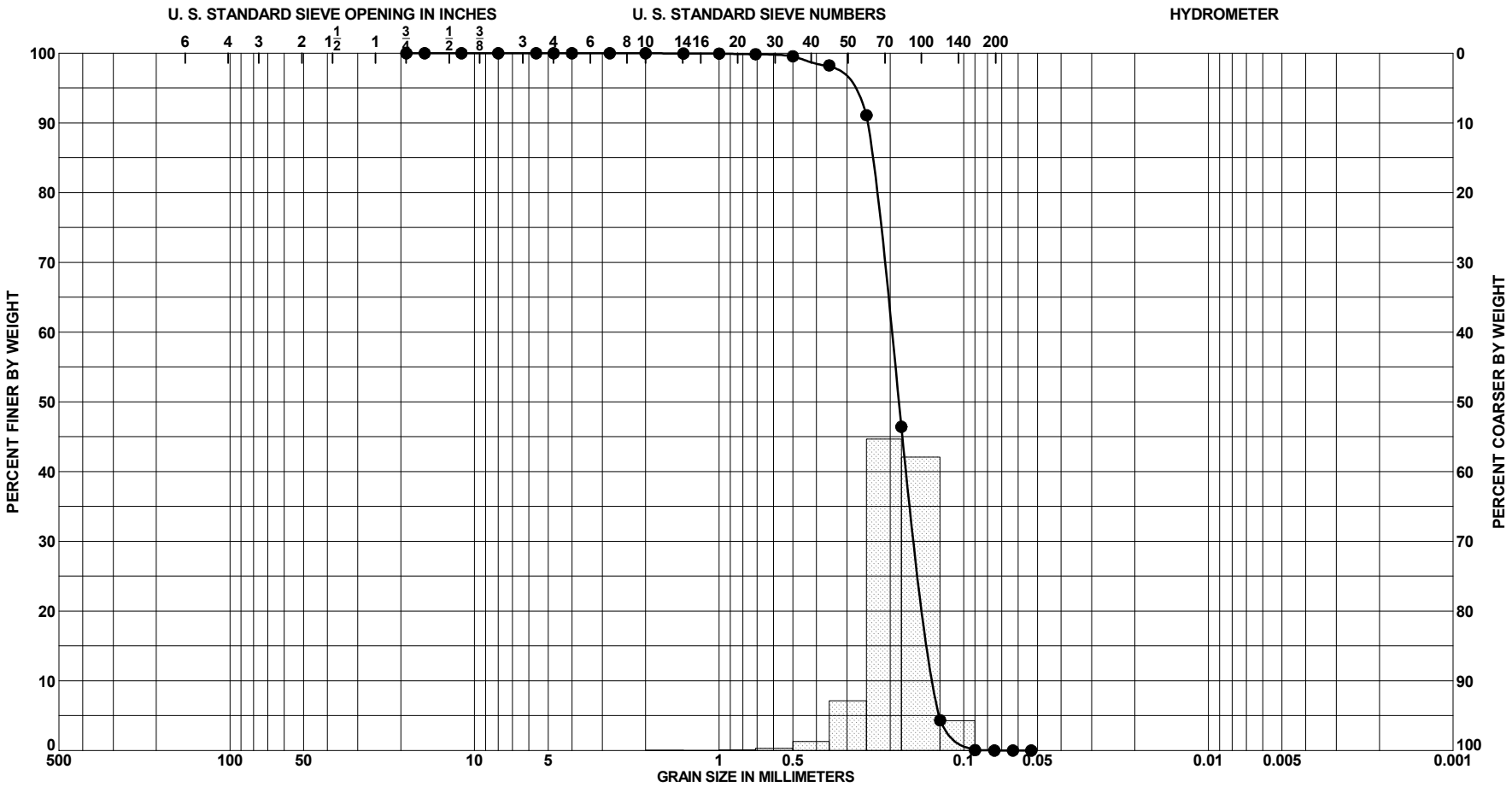


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 5	11.0 to 11.2 Ft.	(ML-CL)			12		5				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-11
BORING ELEV.	-6.2 Ft., NAVD88
DATE	10/20/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

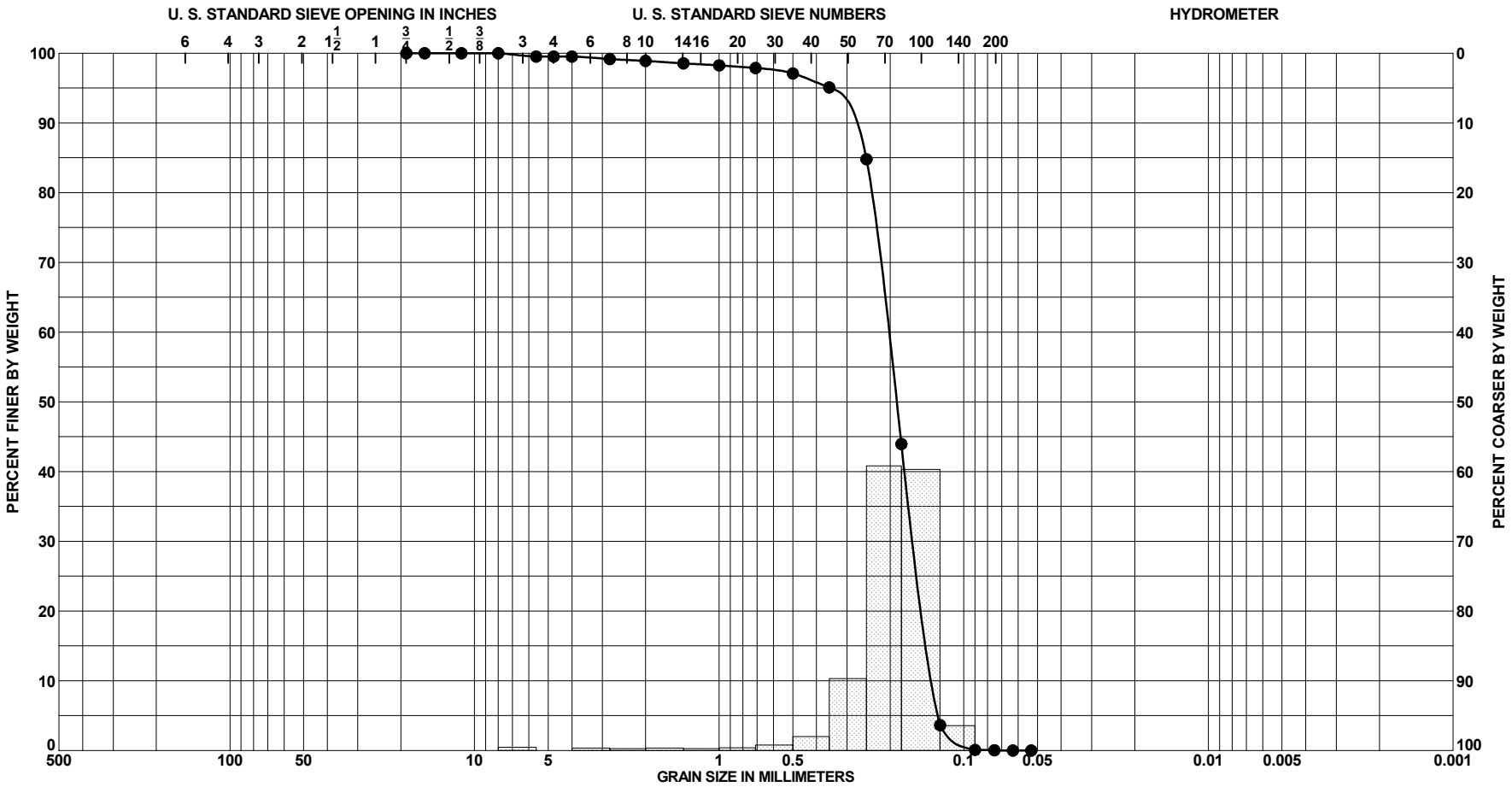


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	0.7 to 0.9 Ft.	SAND, poorly-graded (SP)			10		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-12-R
BORING ELEV.	-4.6 Ft., NAVD88
DATE	10/23/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

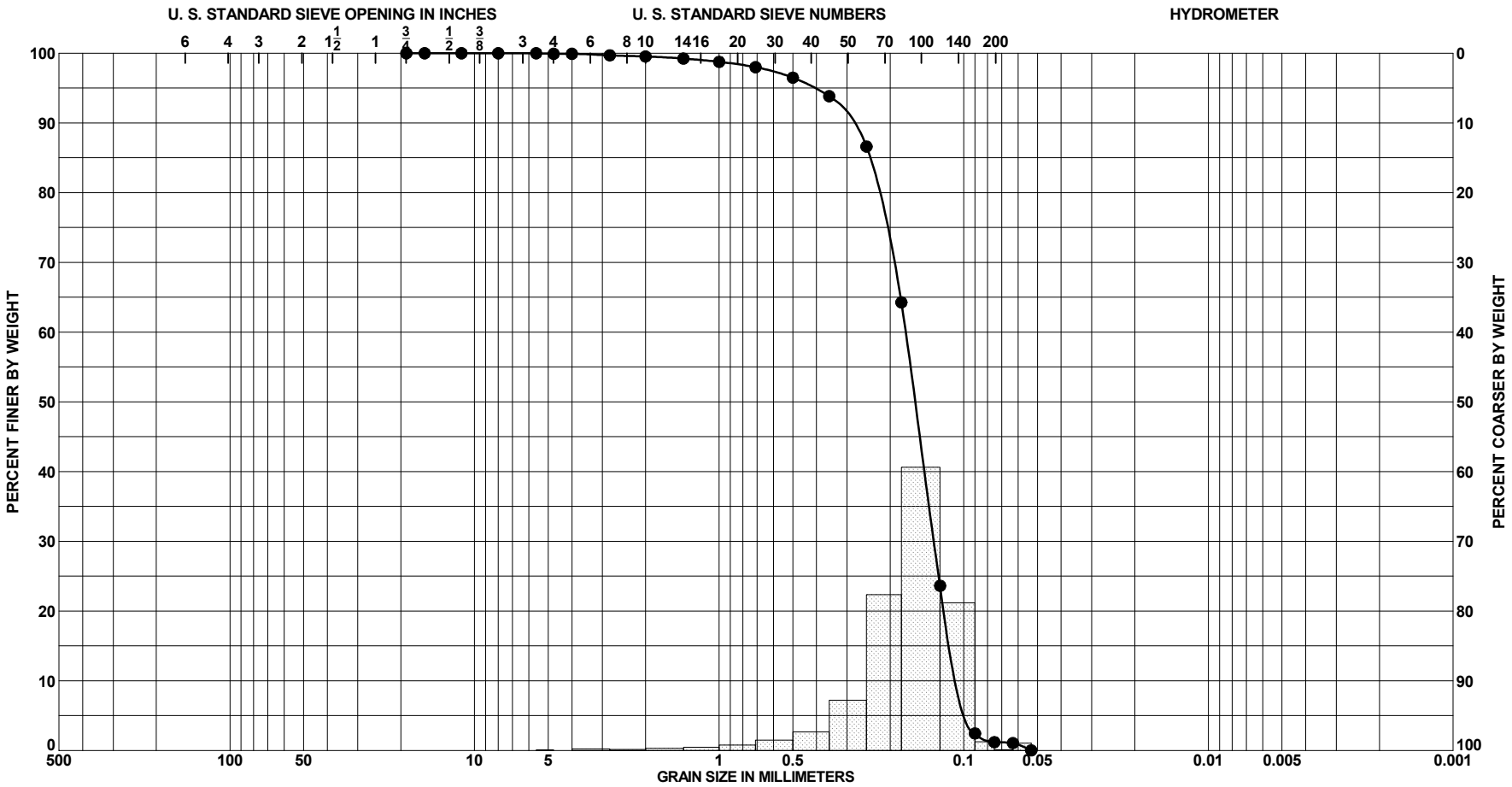


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	3.3 to 3.5 Ft.	SAND, poorly-graded (SP)			14		0				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-12-R
BORING ELEV.	-4.6 Ft., NAVD88
DATE	10/23/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

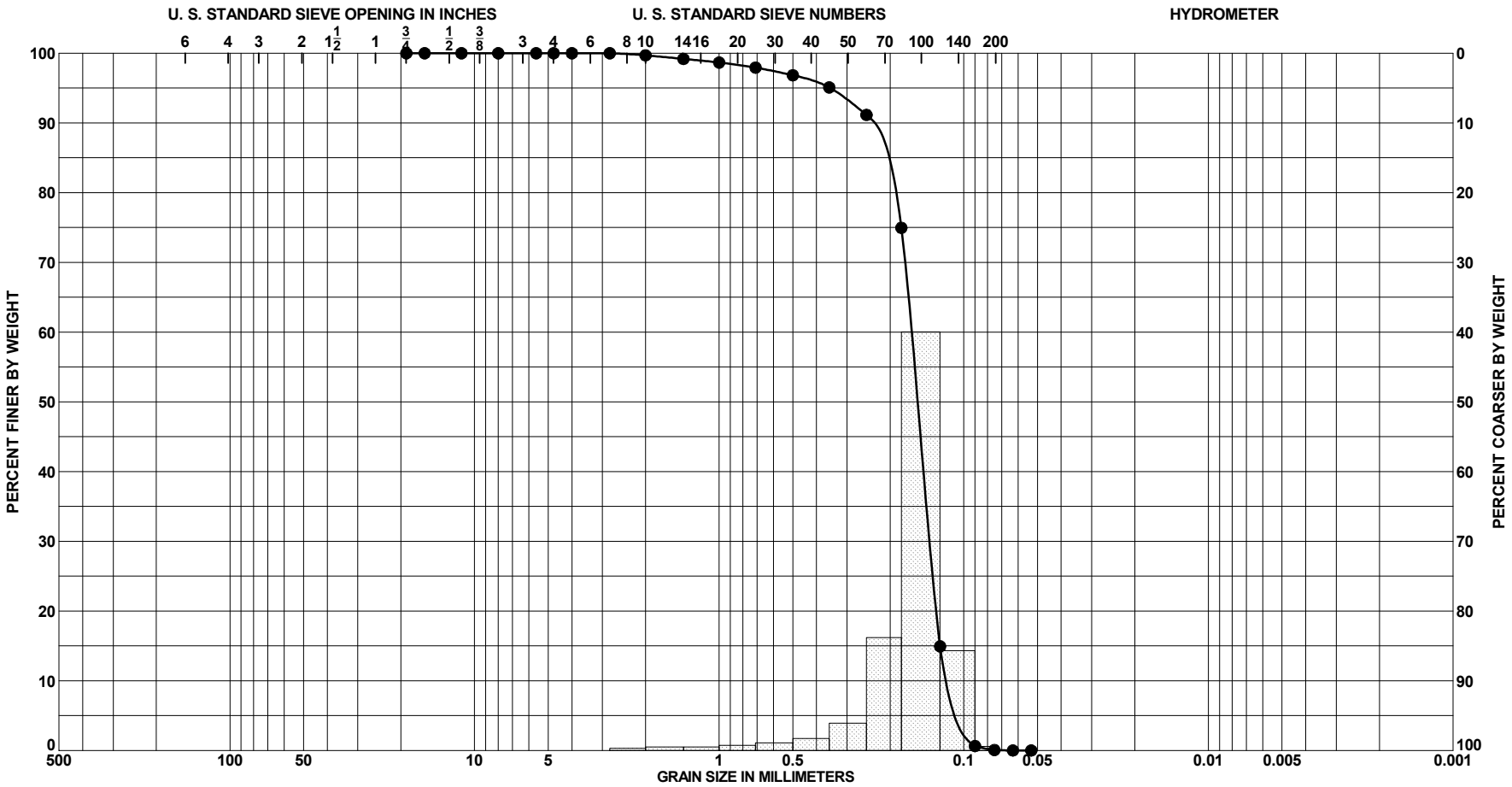


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	6.6 to 6.8 Ft.	SAND, poorly-graded (SP)			17		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-12-R
BORING ELEV.	-4.6 Ft., NAVD88
DATE	10/18/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

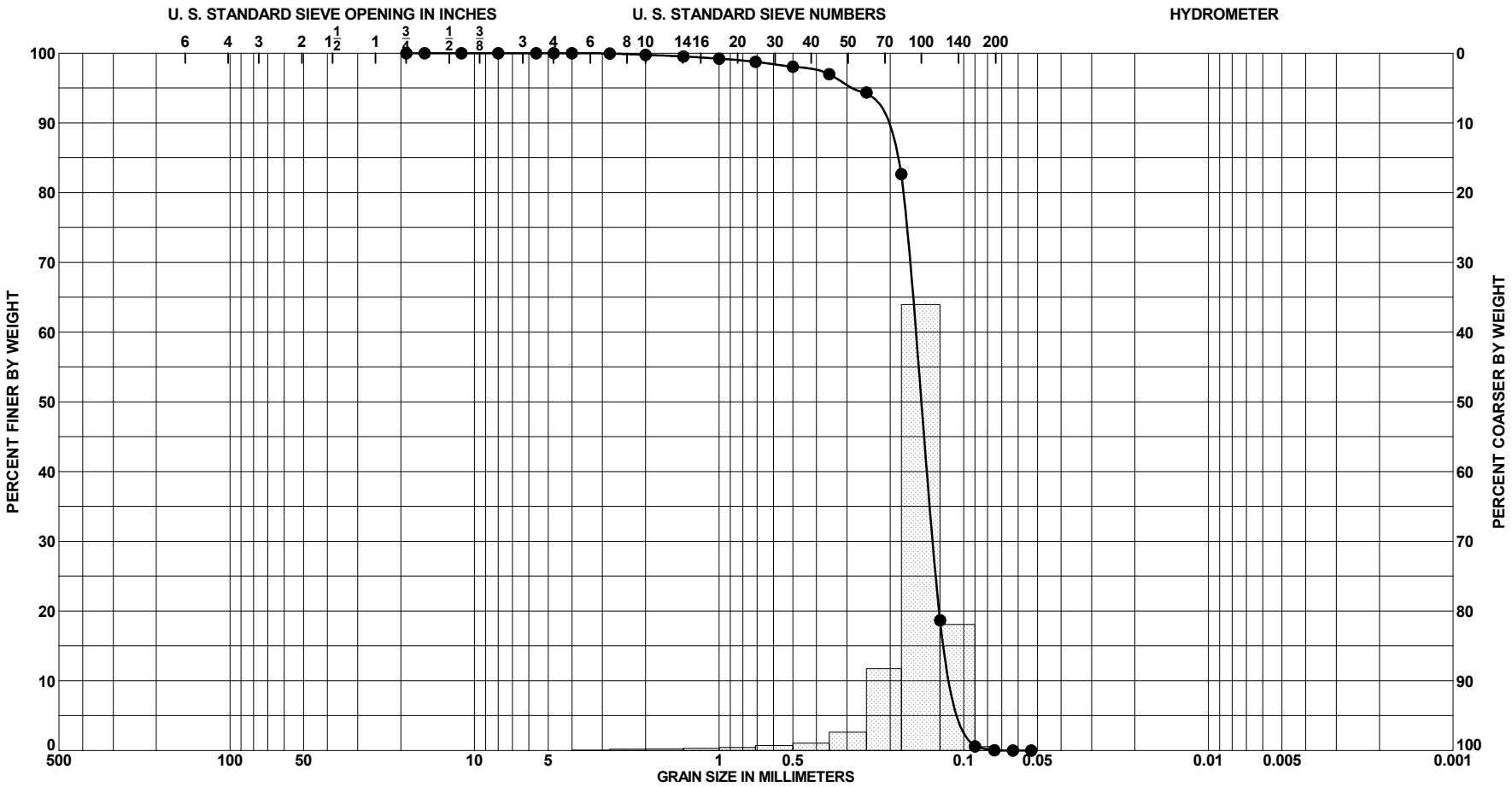


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	0.7 to 0.9 Ft.	SAND, poorly-graded (SP)			8		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-13
BORING ELEV.	-9.5 Ft., NAVD88
DATE	10/23/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

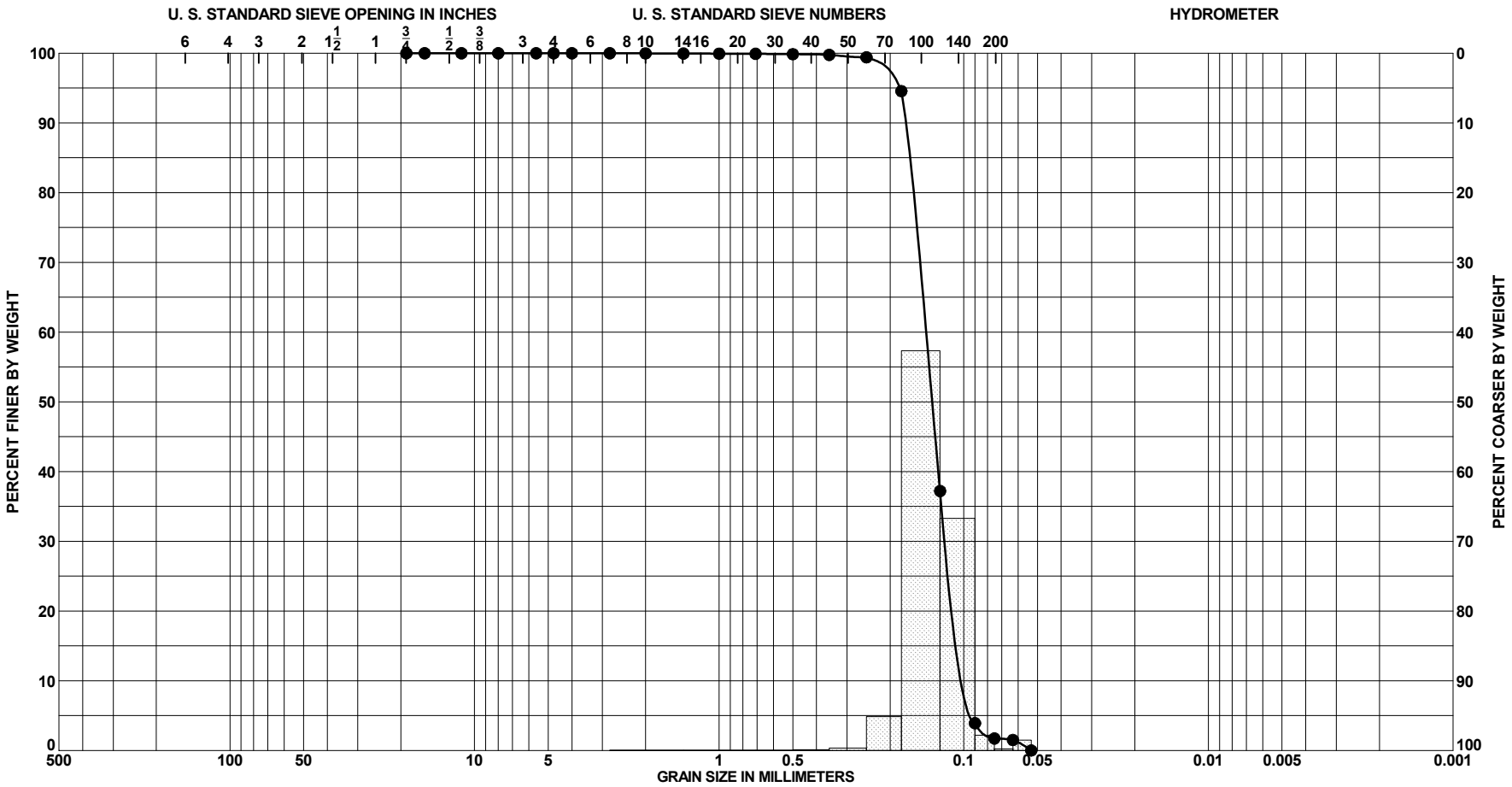


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	2.3 to 2.5 Ft.	SAND, poorly-graded (SP)			7		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-13
BORING ELEV.	-9.5 Ft., NAVD88
DATE	10/20/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

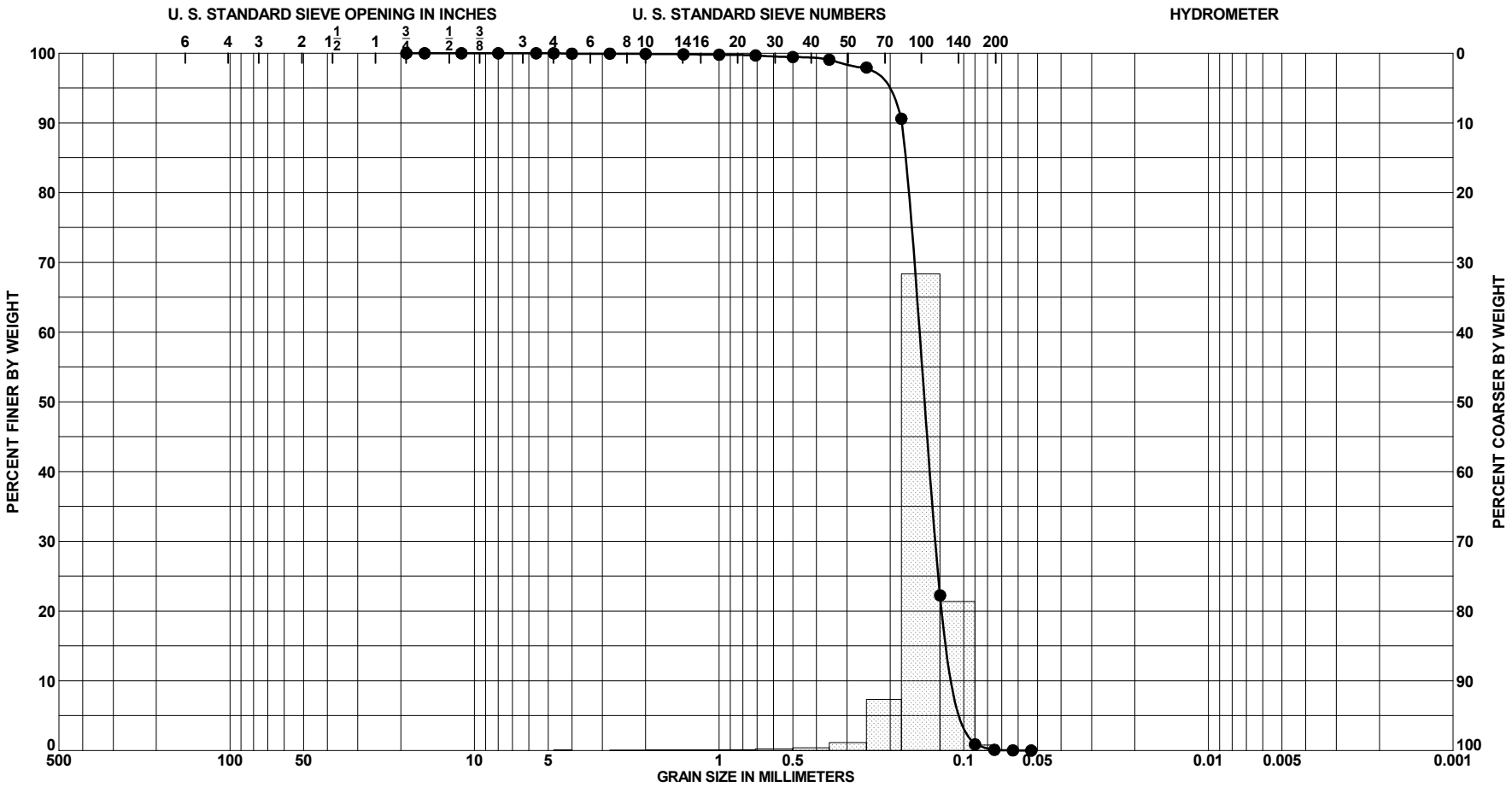


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	4.3 to 4.5 Ft.	SAND, poorly-graded (SP)			6		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-13
BORING ELEV.	-9.5 Ft., NAVD88
DATE	10/23/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

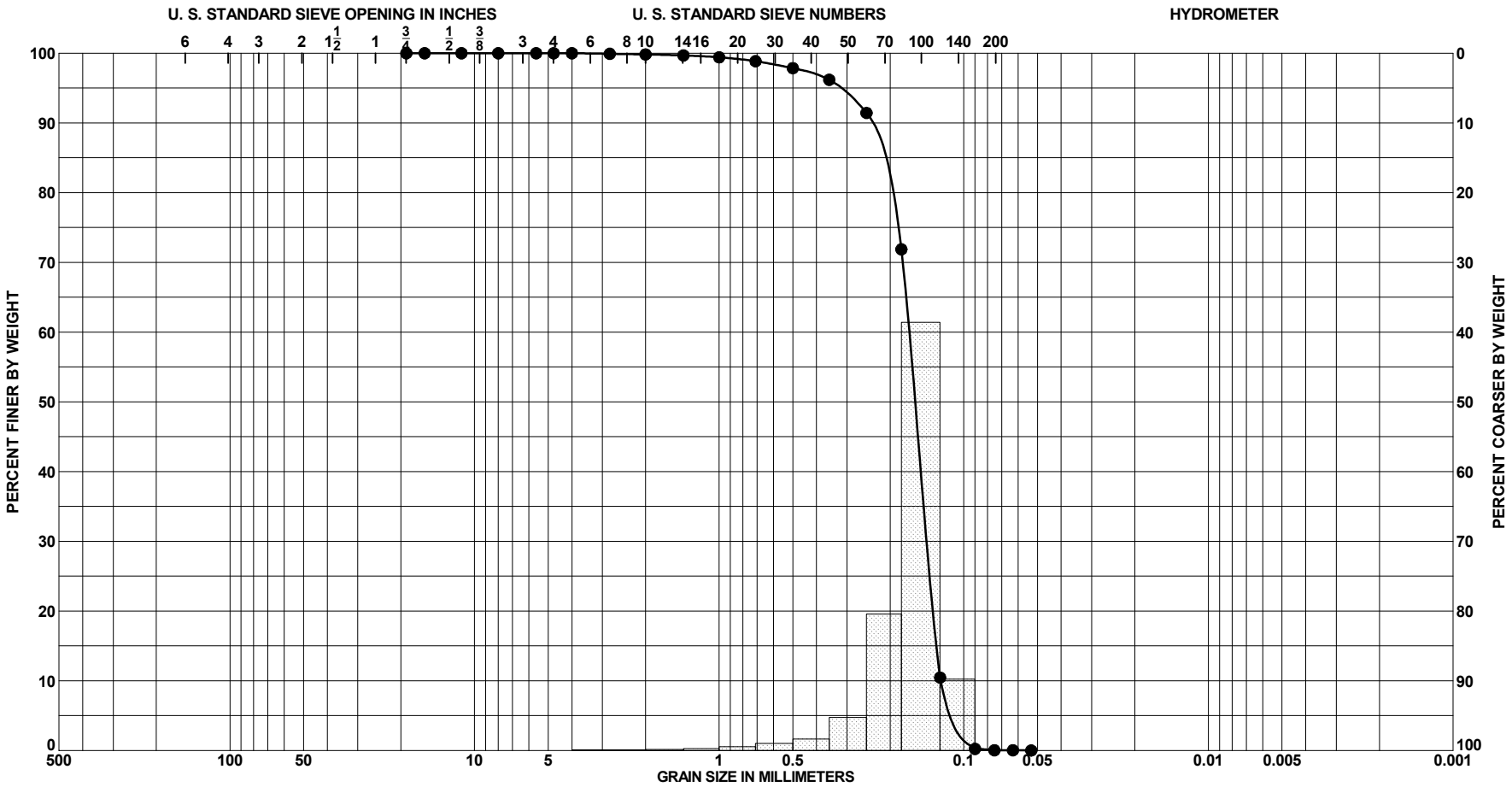


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	0.7 to 0.9 Ft.	SAND, poorly-graded (SP)			5		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-14
BORING ELEV.	-6.7 Ft., NAVD88
DATE	10/23/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

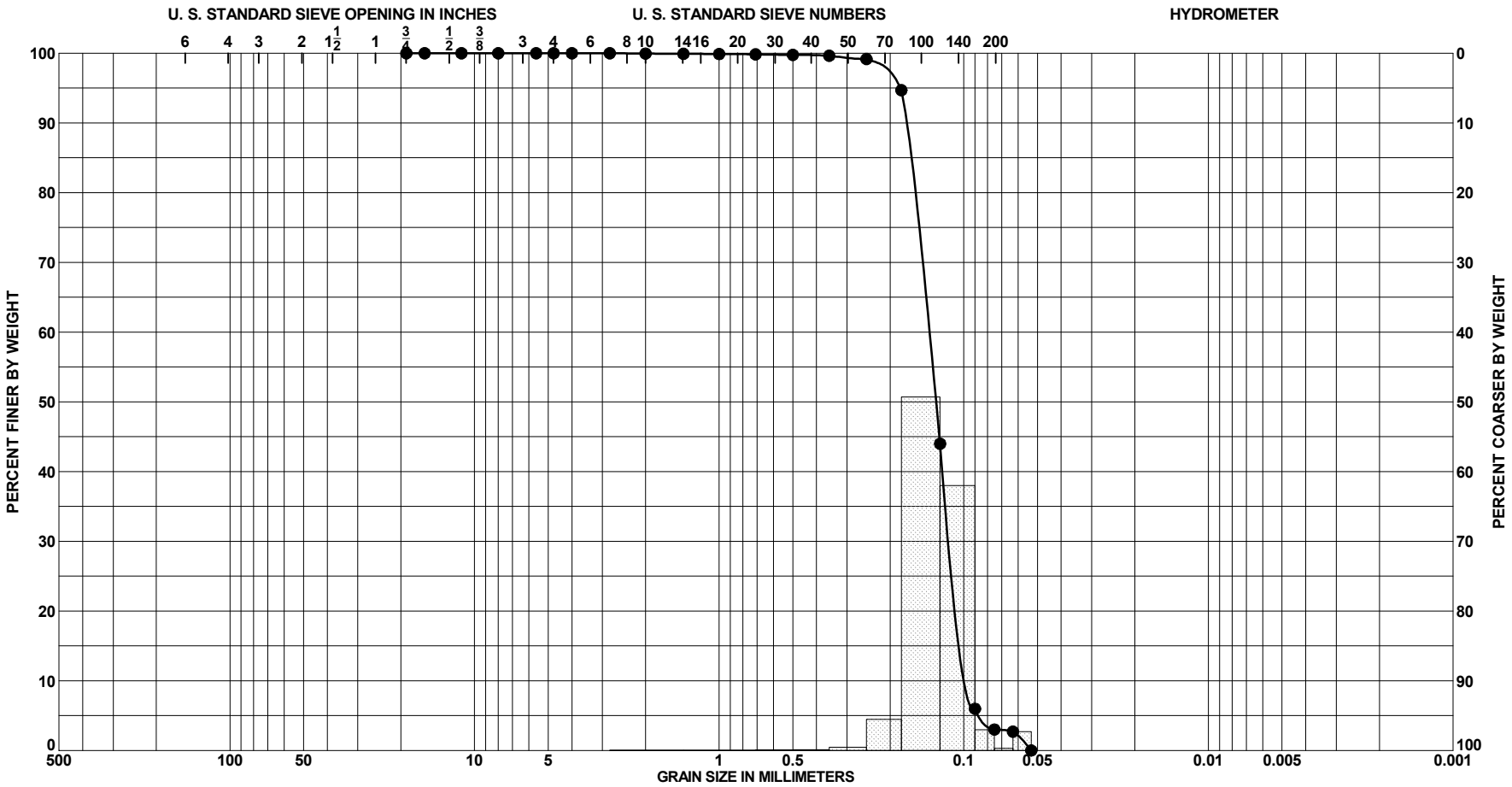


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	3.3 to 3.5 Ft.	SAND, poorly-graded (SP)			9		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-14
BORING ELEV.	-6.7 Ft., NAVD88
DATE	10/18/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

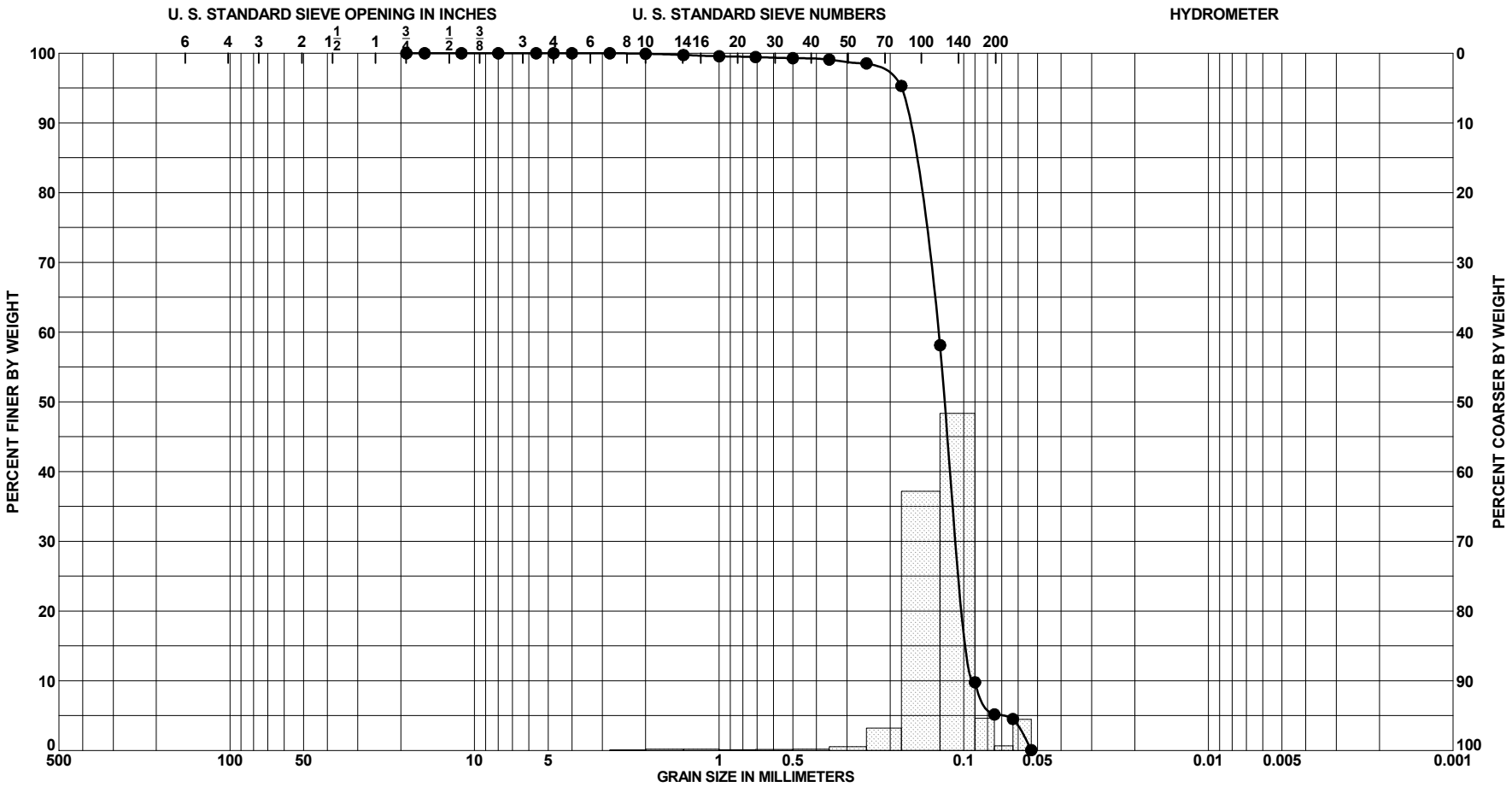


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	6.6 to 6.8 Ft.	SAND, poorly-graded (SP)			6		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-14
BORING ELEV.	-6.7 Ft., NAVD88
DATE	10/23/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

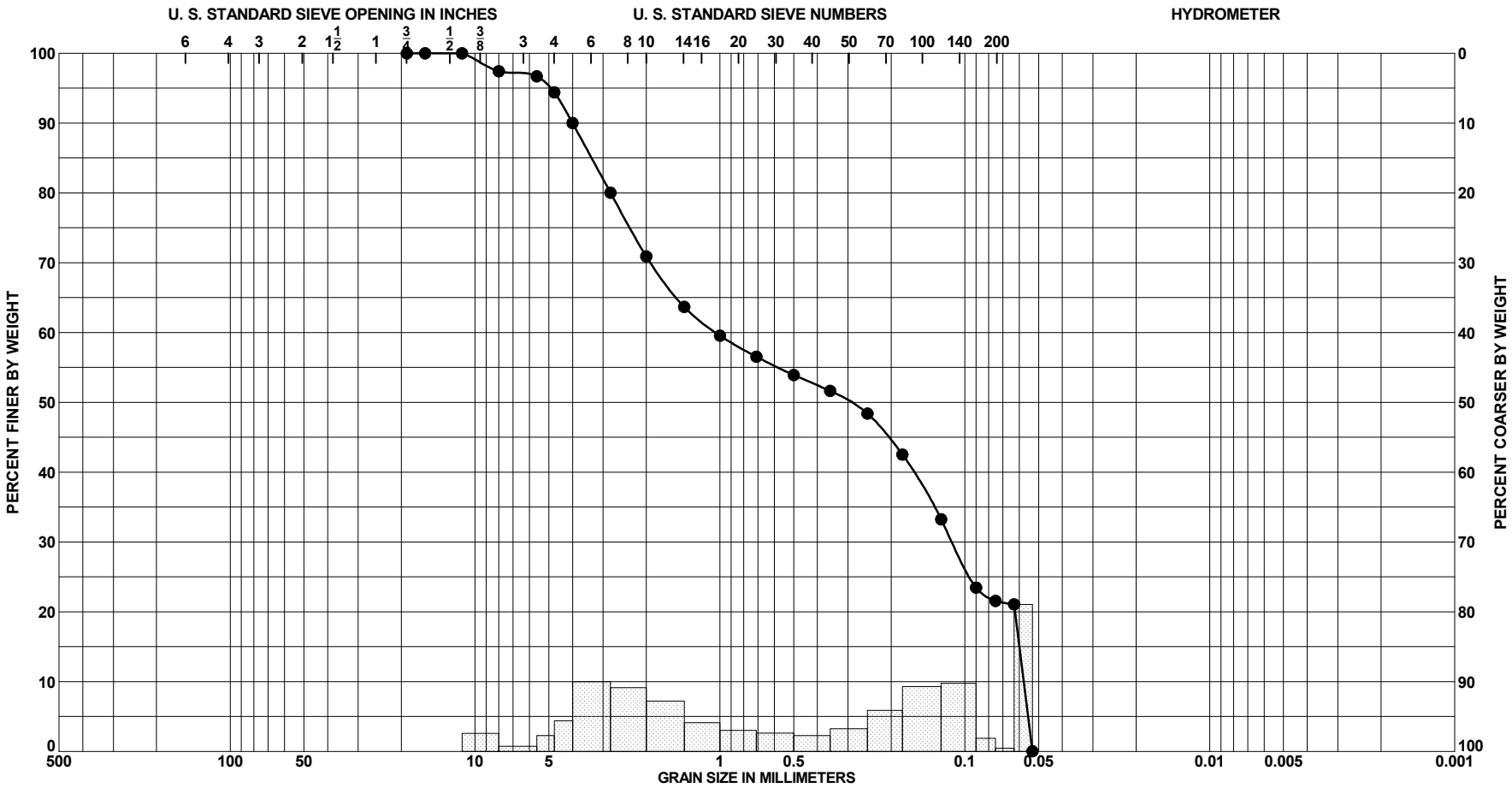


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 4	8.2 to 8.4 Ft.	(SP)			7		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-14
BORING ELEV.	-6.7 Ft., NAVD88
DATE	10/18/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

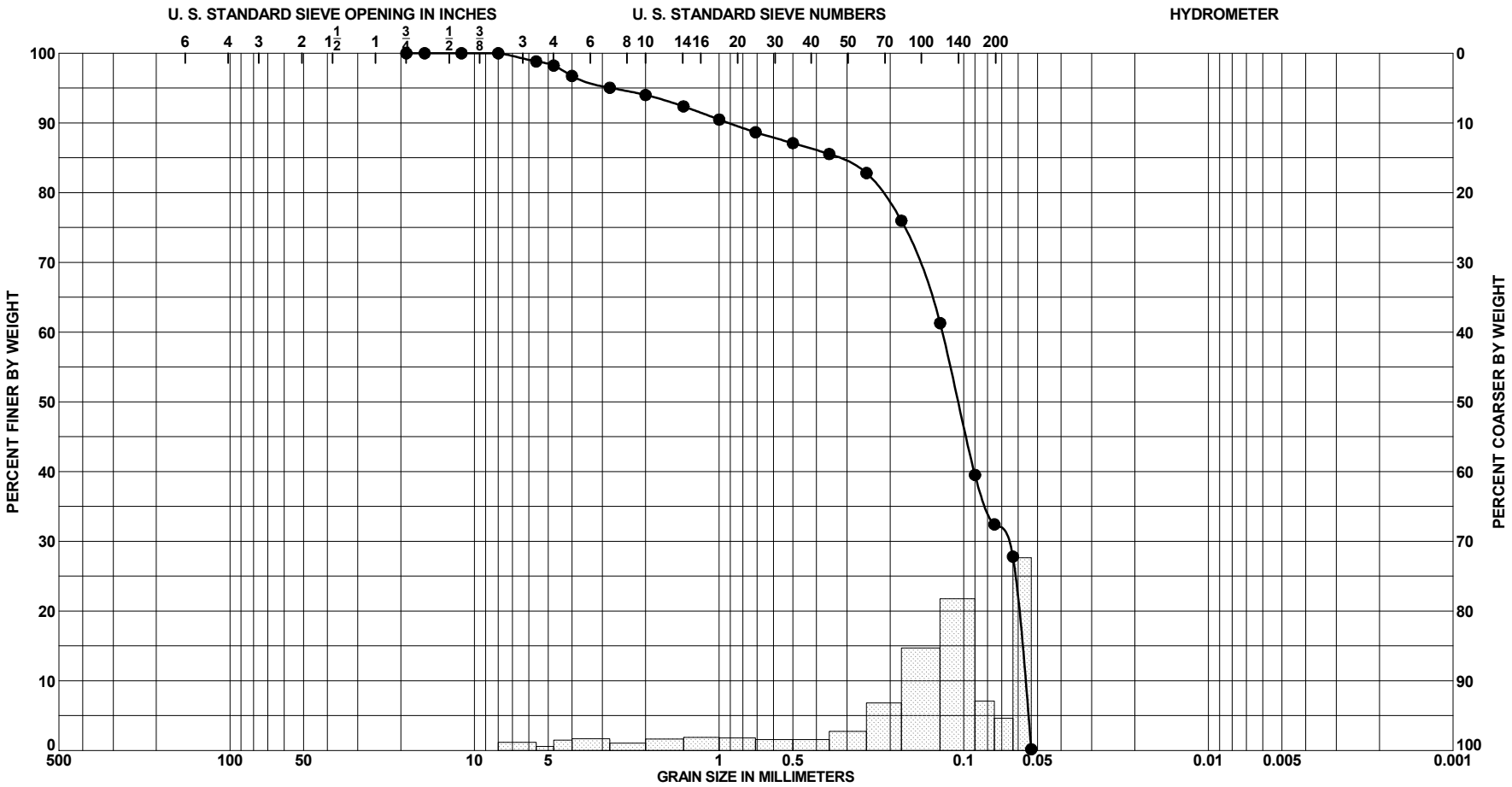


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 5	10.8 to 11.0 Ft.	(SM-SC)			63		4				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-14
BORING ELEV.	-6.7 Ft., NAVD88
DATE	10/20/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

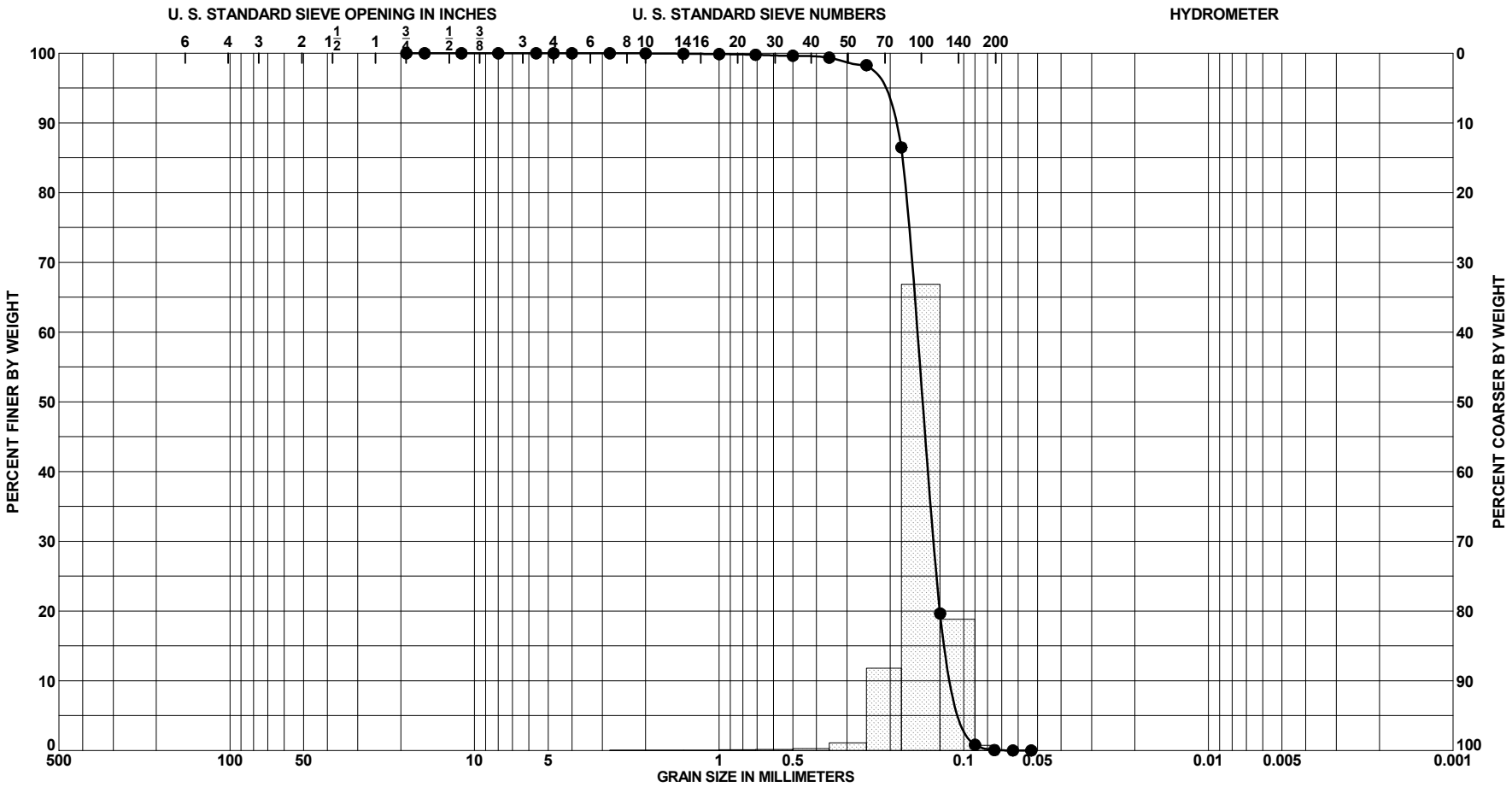


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 6	17.1 to 17.3 Ft.	(SM-SC)			31		3				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-14
BORING ELEV.	-6.7 Ft., NAVD88
DATE	10/18/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

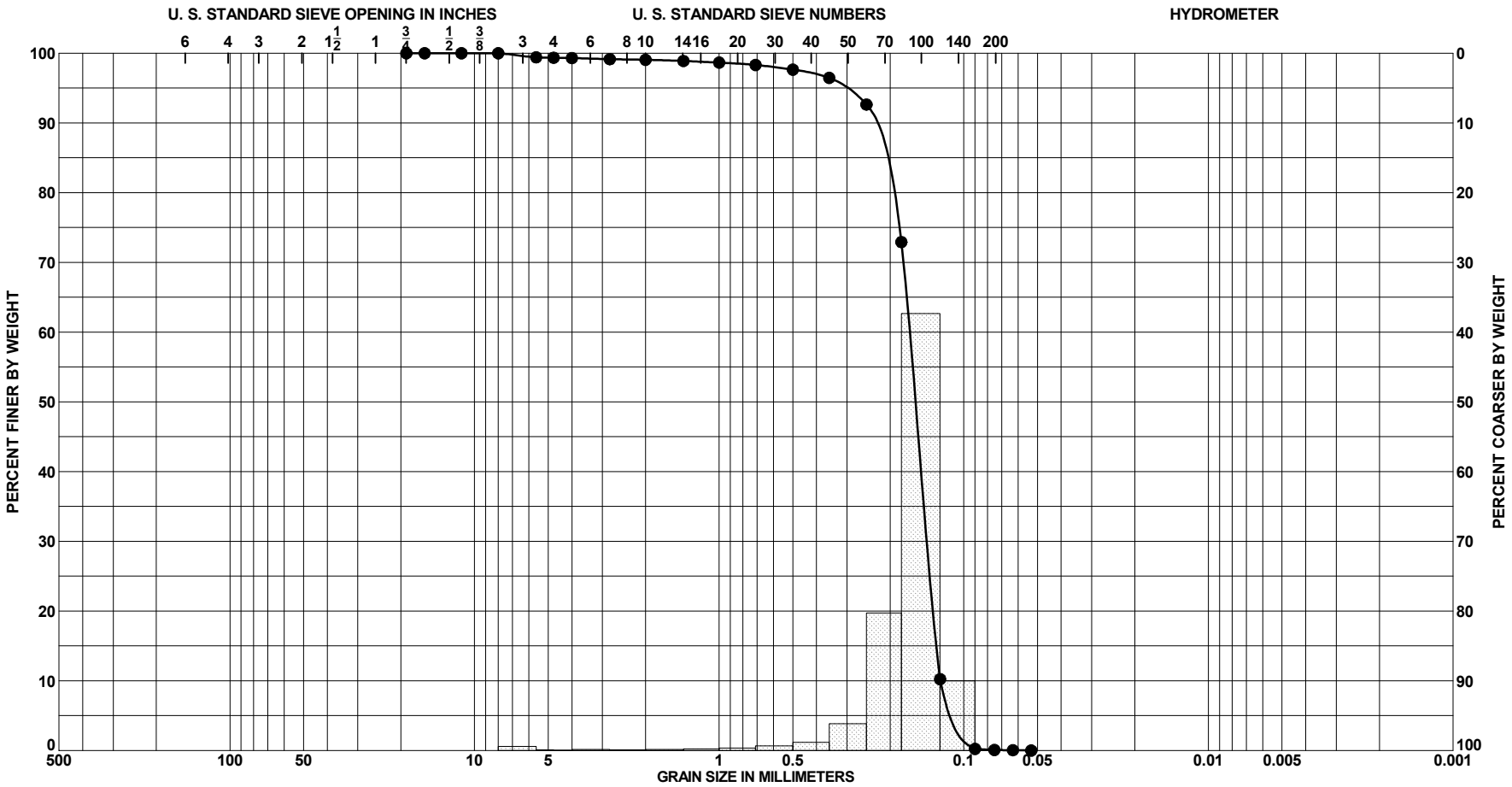


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	0.7 to 0.9 Ft.	SAND, poorly-graded (SP)			4		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-15
BORING ELEV.	-6.6 Ft., NAVD88
DATE	10/23/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

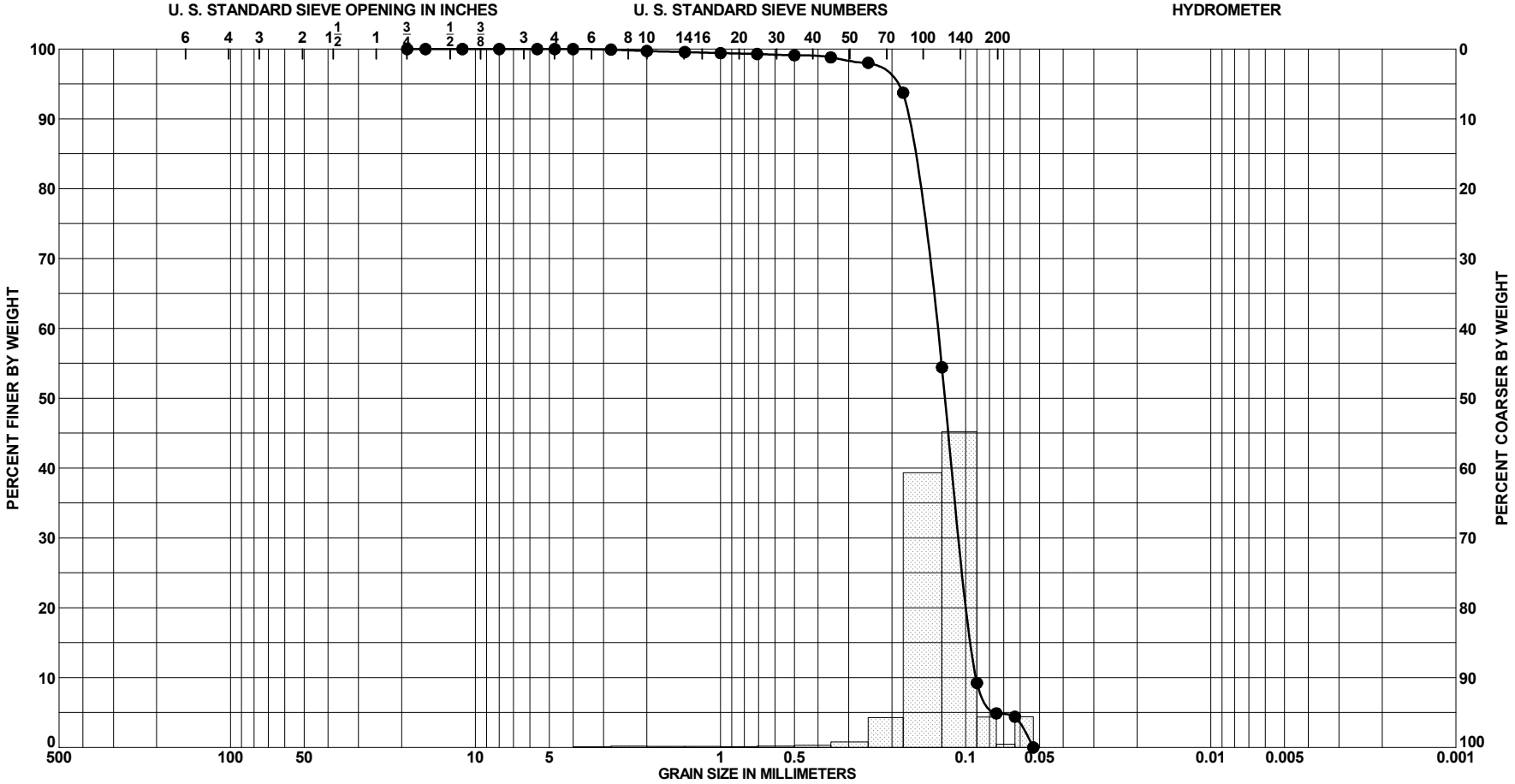


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	3.3 to 3.5 Ft.	SAND, poorly-graded (SP)			14		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-15
BORING ELEV.	-6.6 Ft., NAVD88
DATE	10/23/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

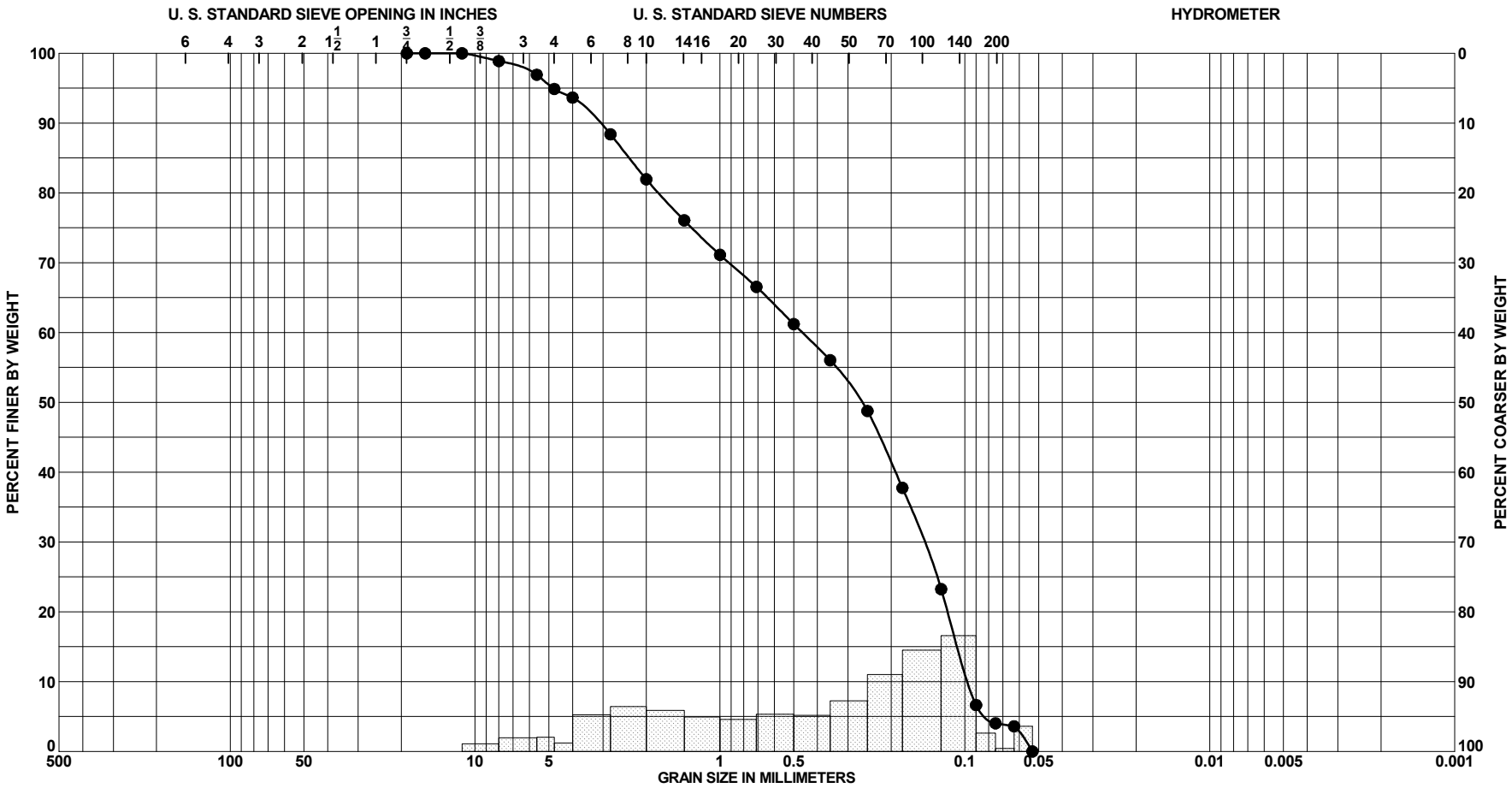


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	6.6 to 6.8 Ft.	SAND, poorly-graded (SP)			7		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-15
BORING ELEV.	-6.6 Ft., NAVD88
DATE	10/23/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

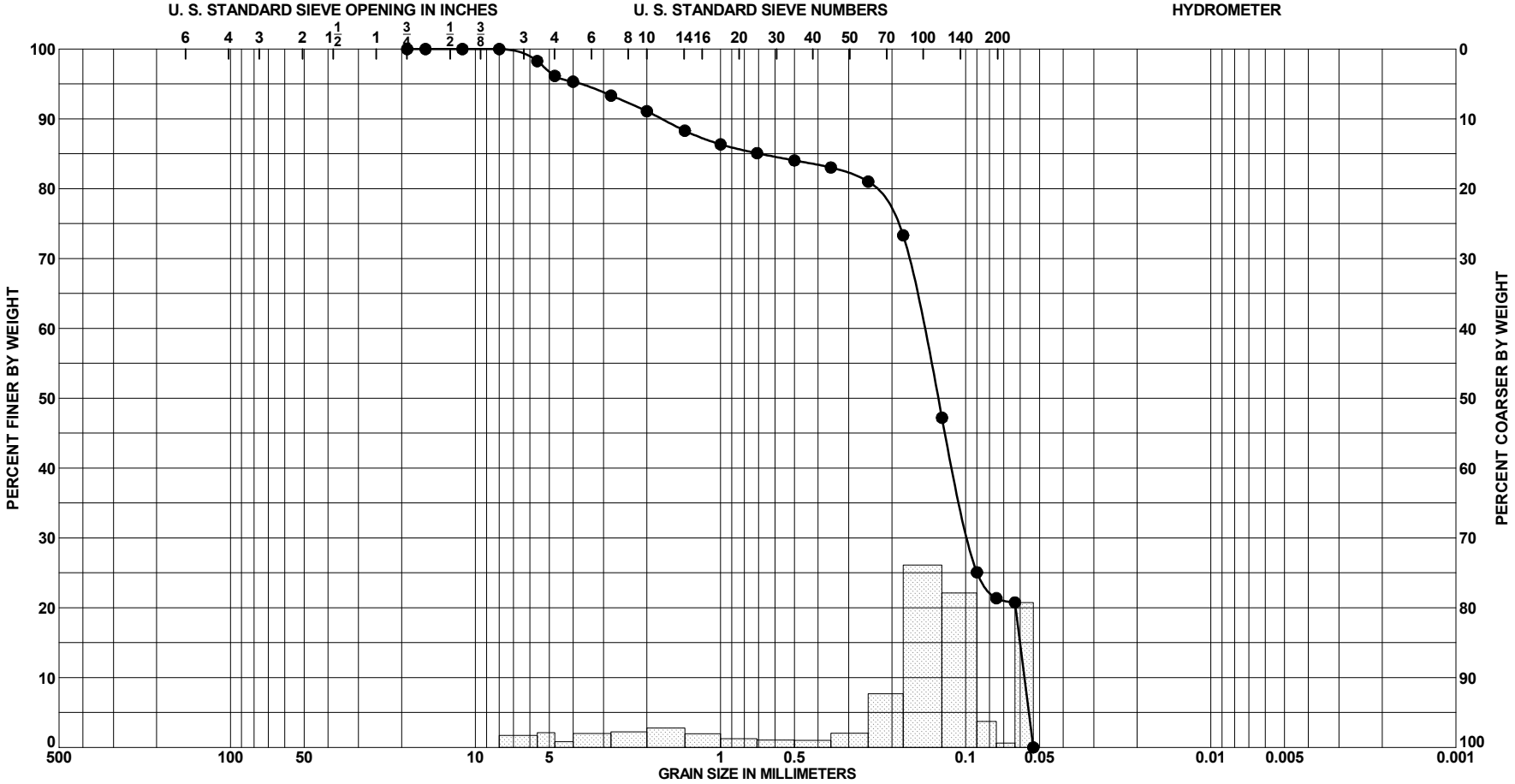


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 4	9.8 to 10.0 Ft.	SAND, poorly-graded (SP)			41		2				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-15
BORING ELEV.	-6.6 Ft., NAVD88
DATE	10/23/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

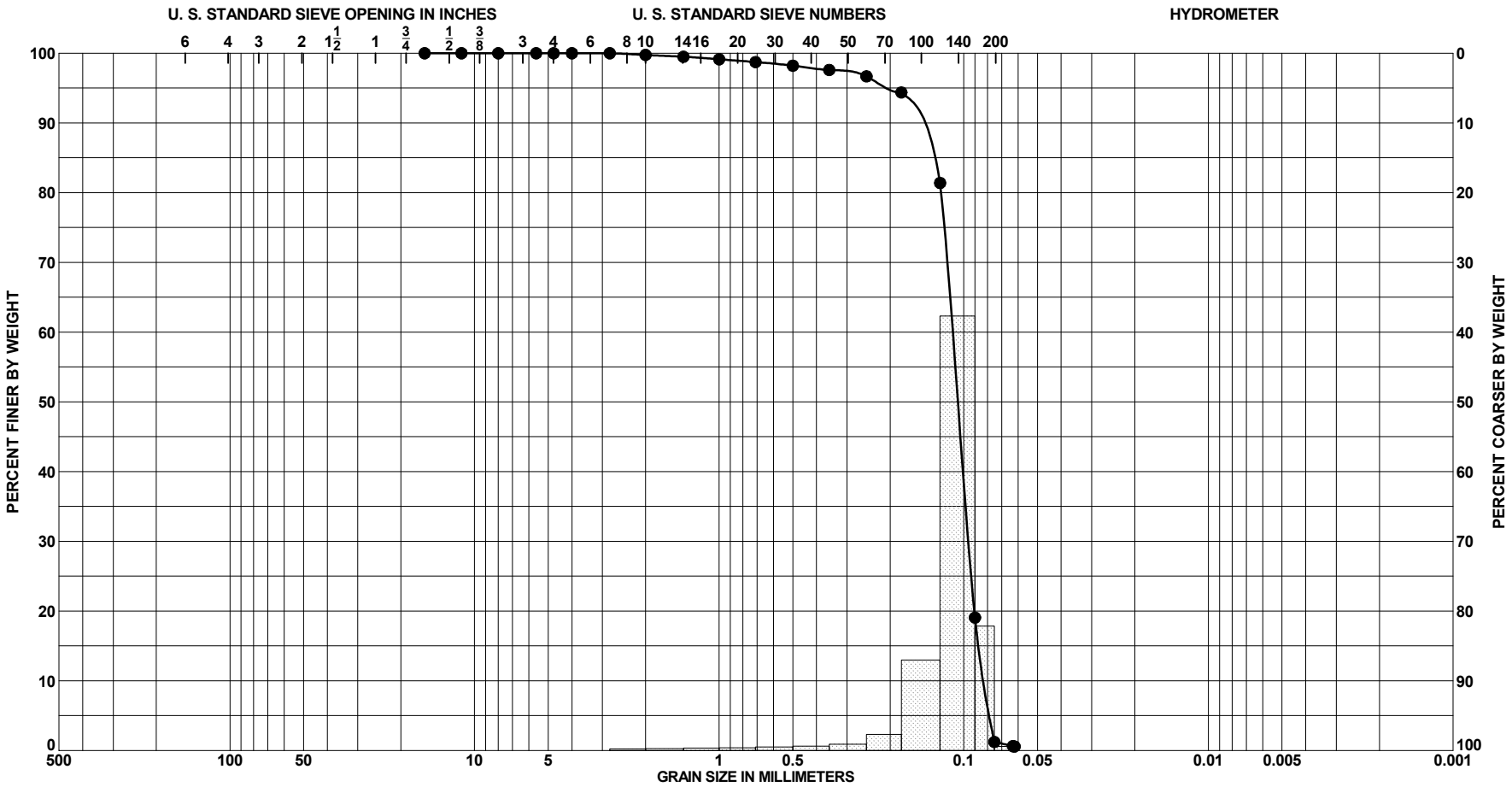


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 5	11.5 to 11.7 Ft.	(SM-SC)			26		2				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP08-15
BORING ELEV.	-6.6 Ft., NAVD88
DATE	10/20/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

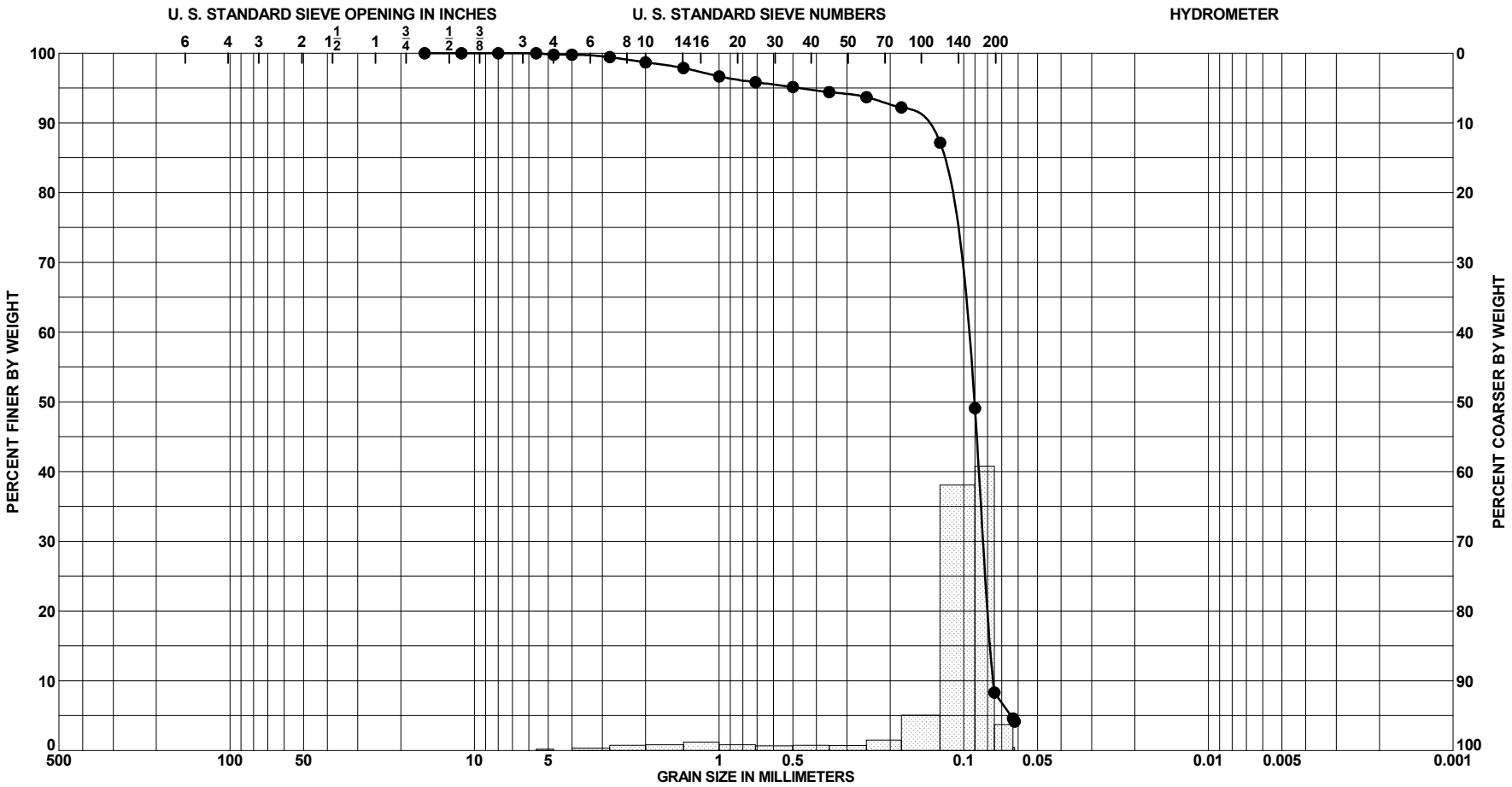


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	1.6 to 1.8 Ft.	SAND, poorly-graded (SP)			9		0				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP09-13R
BORING ELEV.	-9.8 Ft., NAVD88
DATE	4/17/2009

GRADATION CURVES

SAJ FORM 2087
JUN 02

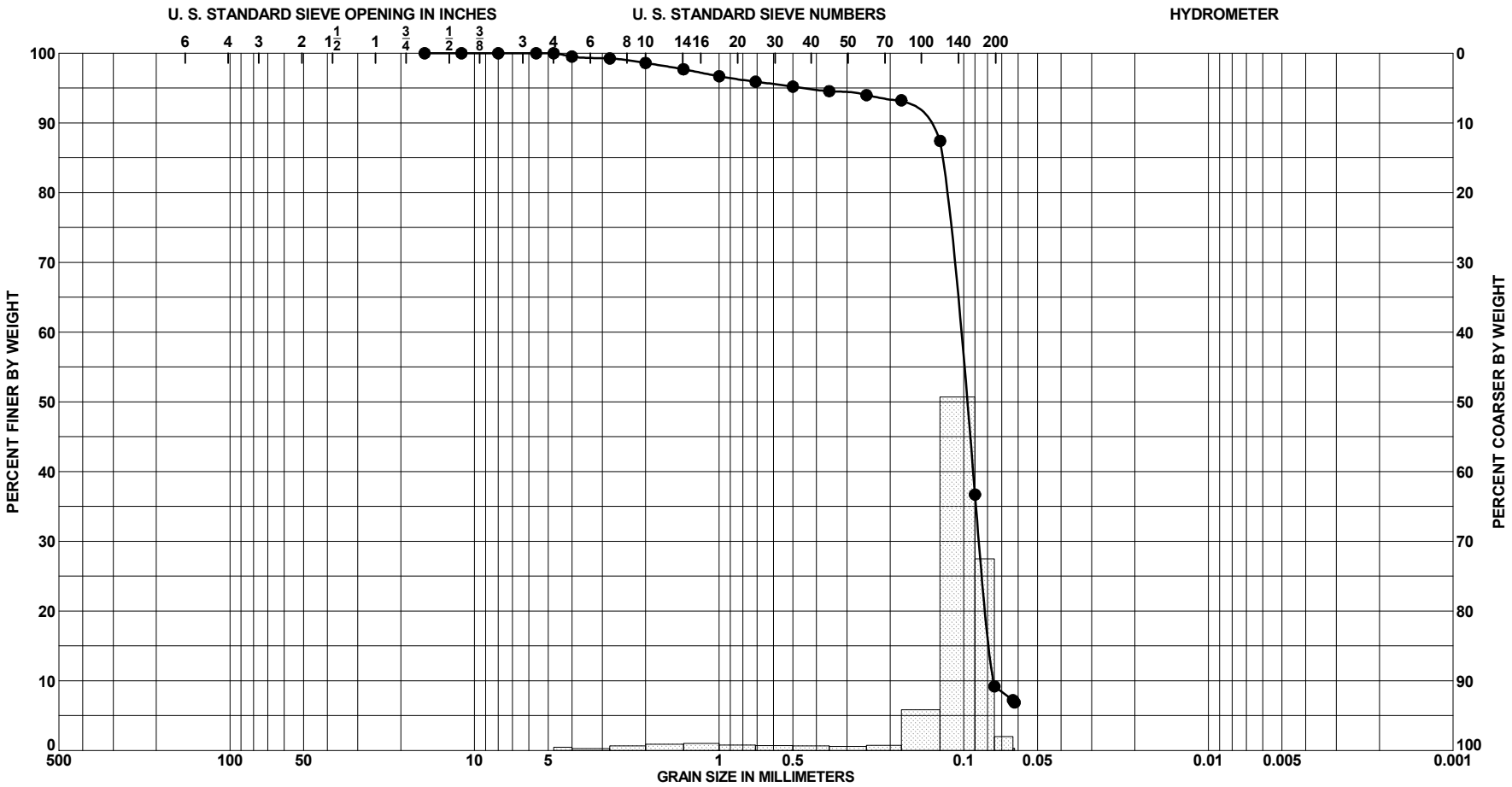


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	4.4 to 4.6 Ft.	(SP)			12		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP09-13R
BORING ELEV.	-9.8 Ft., NAVD88
DATE	4/17/2009

GRADATION CURVES

SAJ FORM 2087
JUN 02

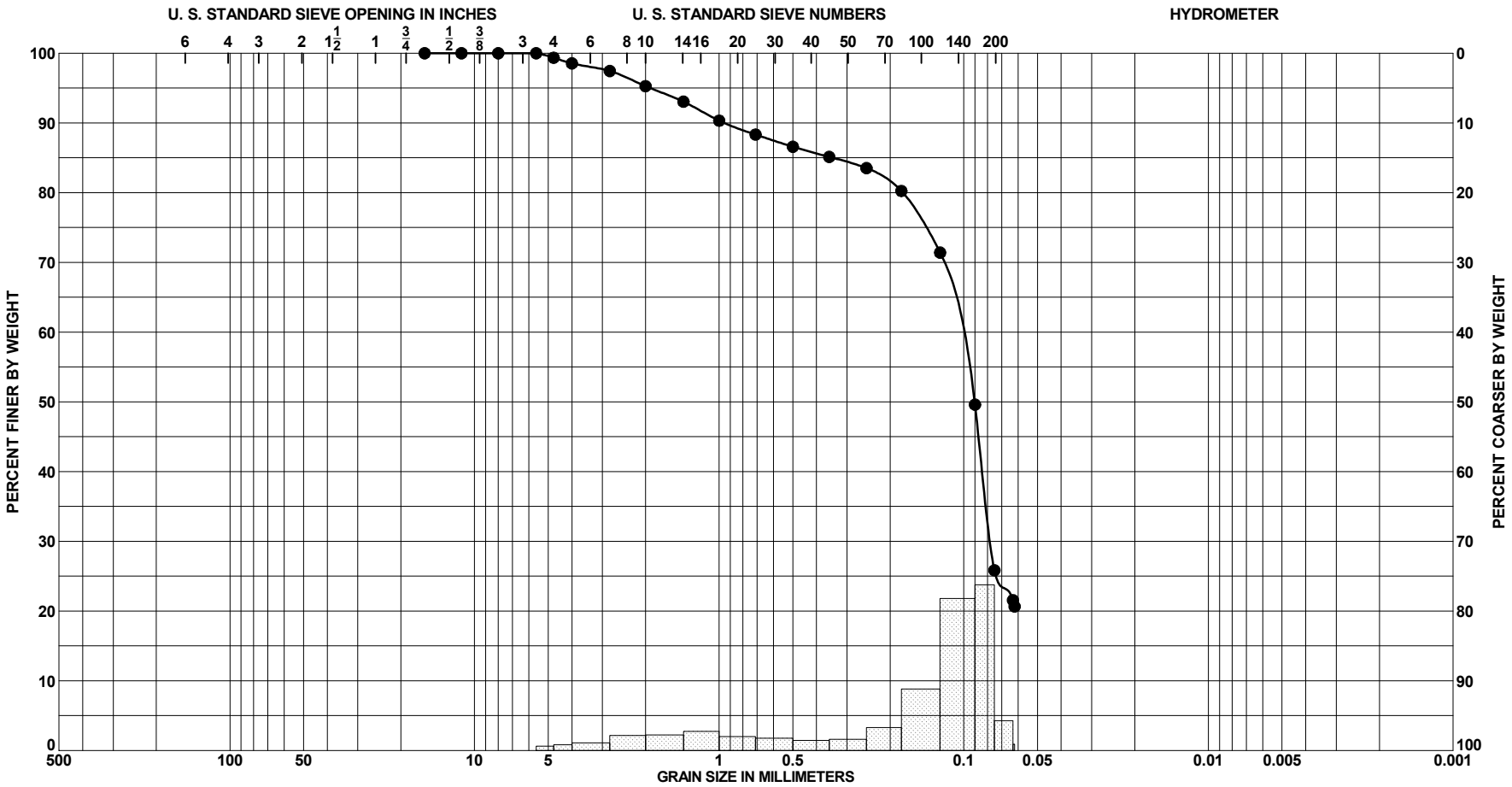


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	5.9 to 6.1 Ft.	(SP-SM)			13		0				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP09-13R
BORING ELEV.	-9.8 Ft., NAVD88
DATE	4/17/2009

GRADATION CURVES

SAJ FORM 2087
JUN 02

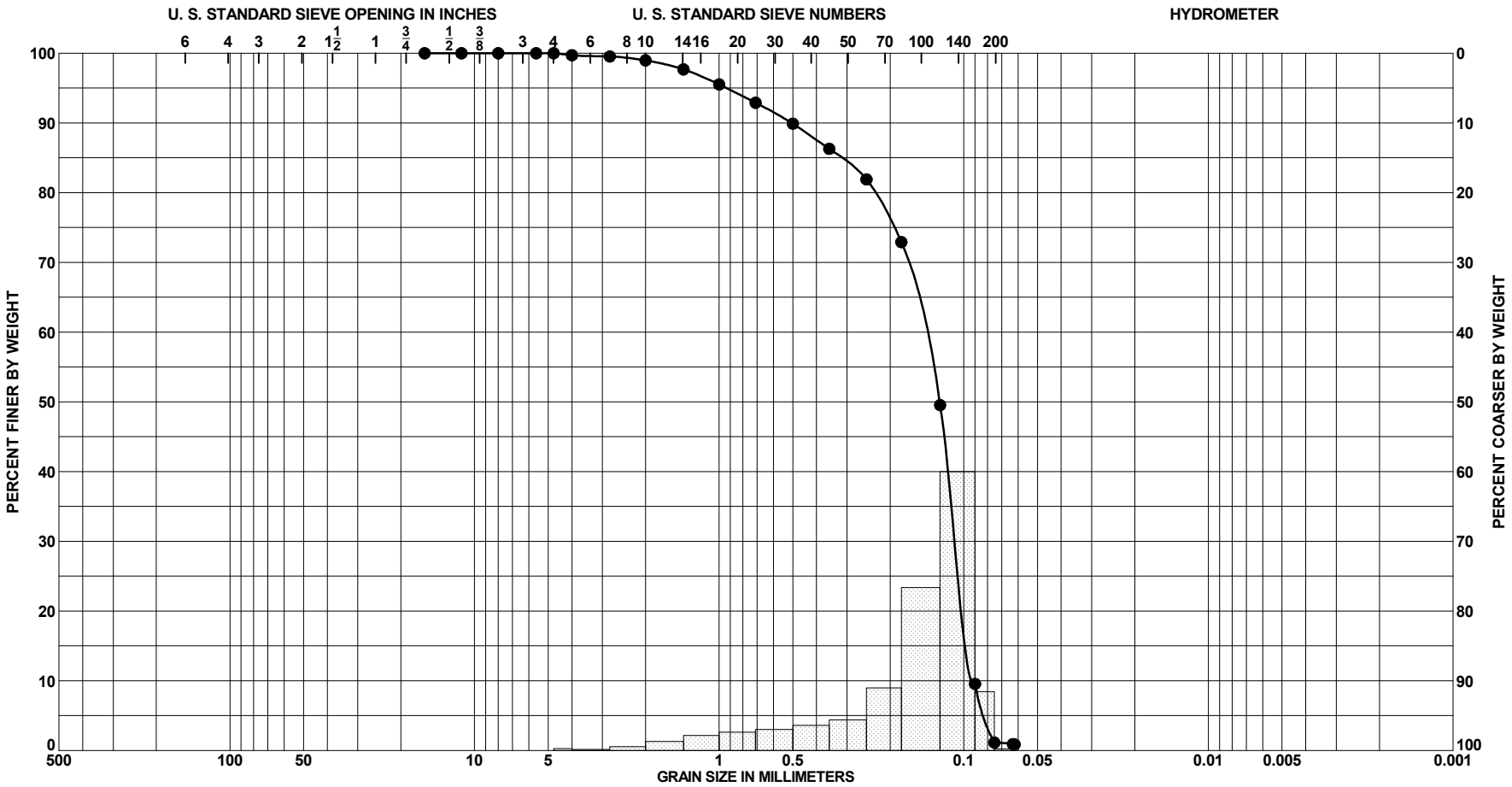


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 4	8.0 to 8.2 Ft.	(SM)			23		0				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP09-13R
BORING ELEV.	-9.8 Ft., NAVD88
DATE	4/17/2009

GRADATION CURVES

SAJ FORM 2087
JUN 02

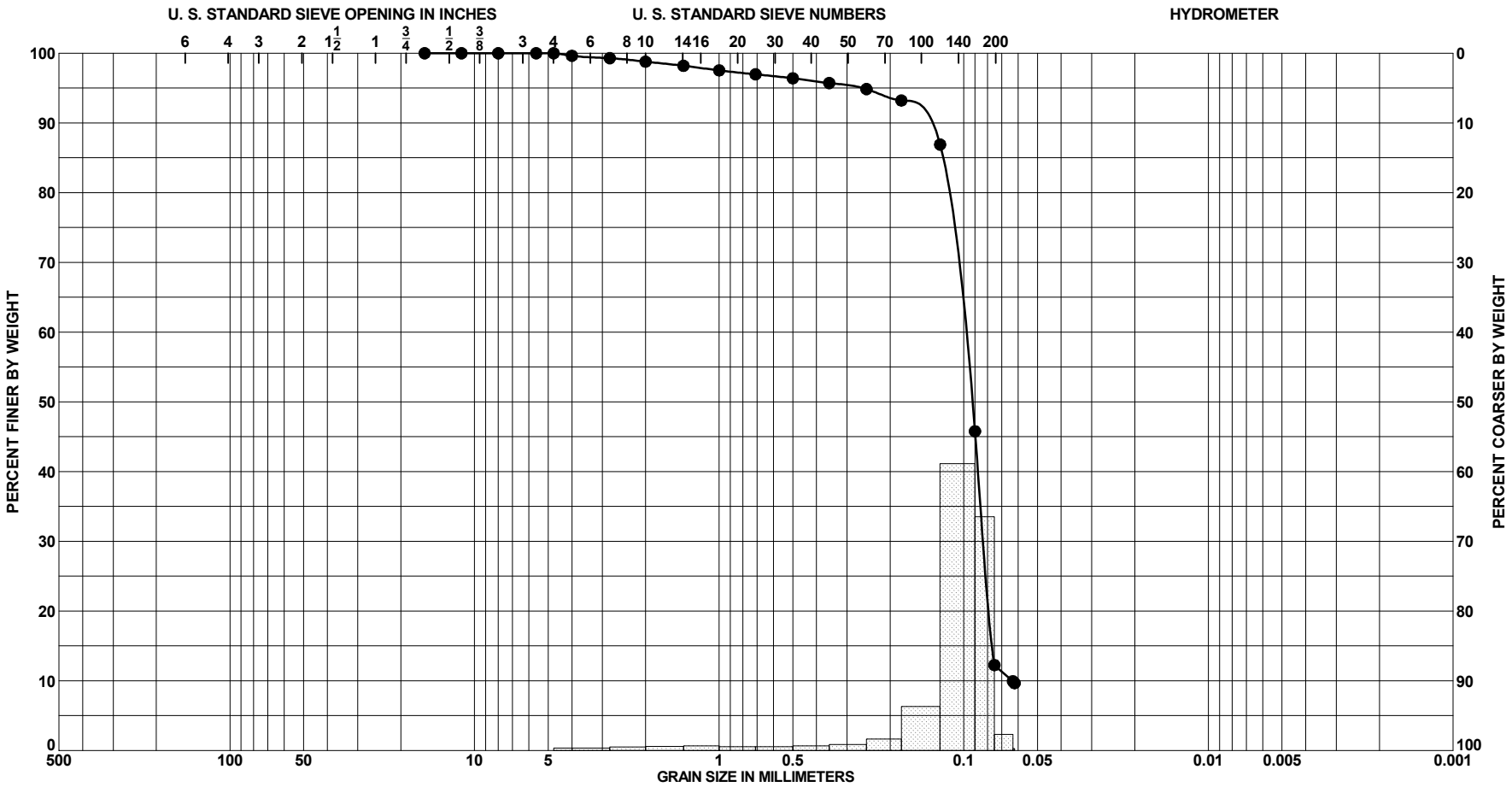


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	1.3 to 1.5 Ft.	SAND, poorly-graded (SP)			25		0				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP09-3
BORING ELEV.	-12.1 Ft., NAVD88
DATE	4/17/2009

GRADATION CURVES

SAJ FORM 2087
JUN 02

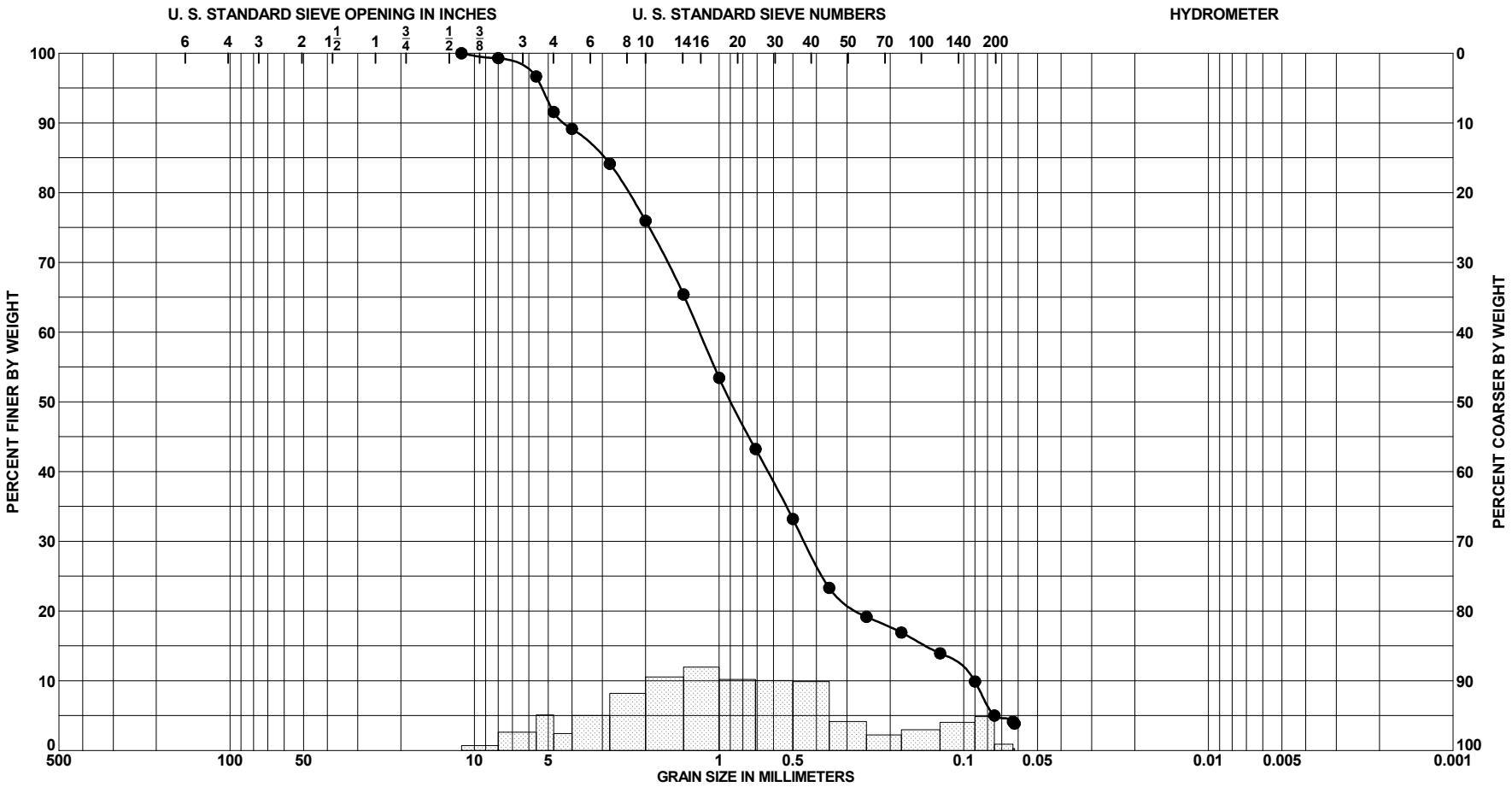


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	4.1 to 4.3 Ft.	(SP-SM)			11		0				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP09-3
BORING ELEV.	-12.1 Ft., NAVD88
DATE	4/17/2009

GRADATION CURVES

SAJ FORM 2087
JUN 02

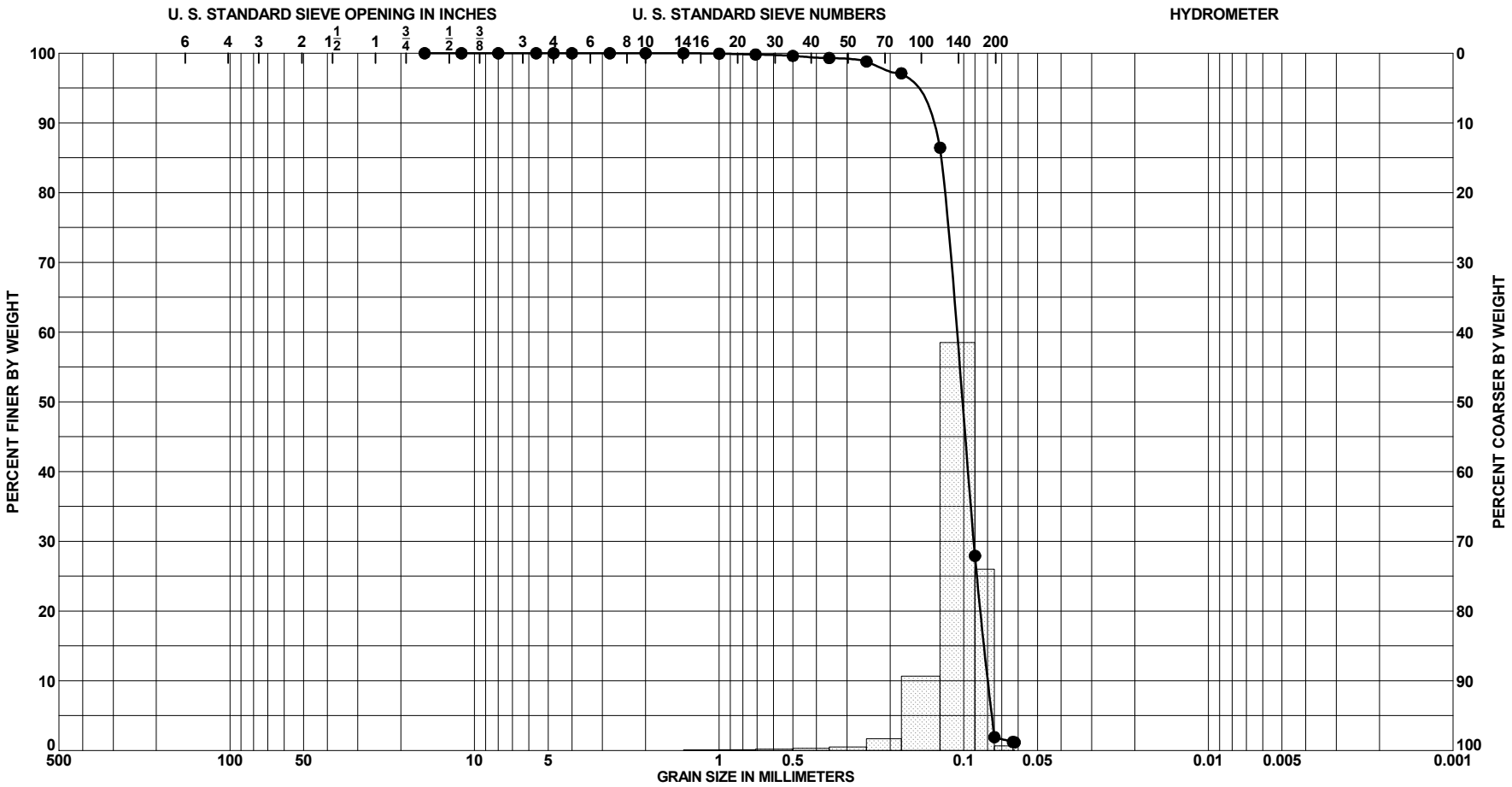


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	6.6 to 6.8 Ft.	(SH)			75		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP09-3
BORING ELEV.	-12.1 Ft., NAVD88
DATE	4/17/2009

GRADATION CURVES

SAJ FORM 2087
JUN 02

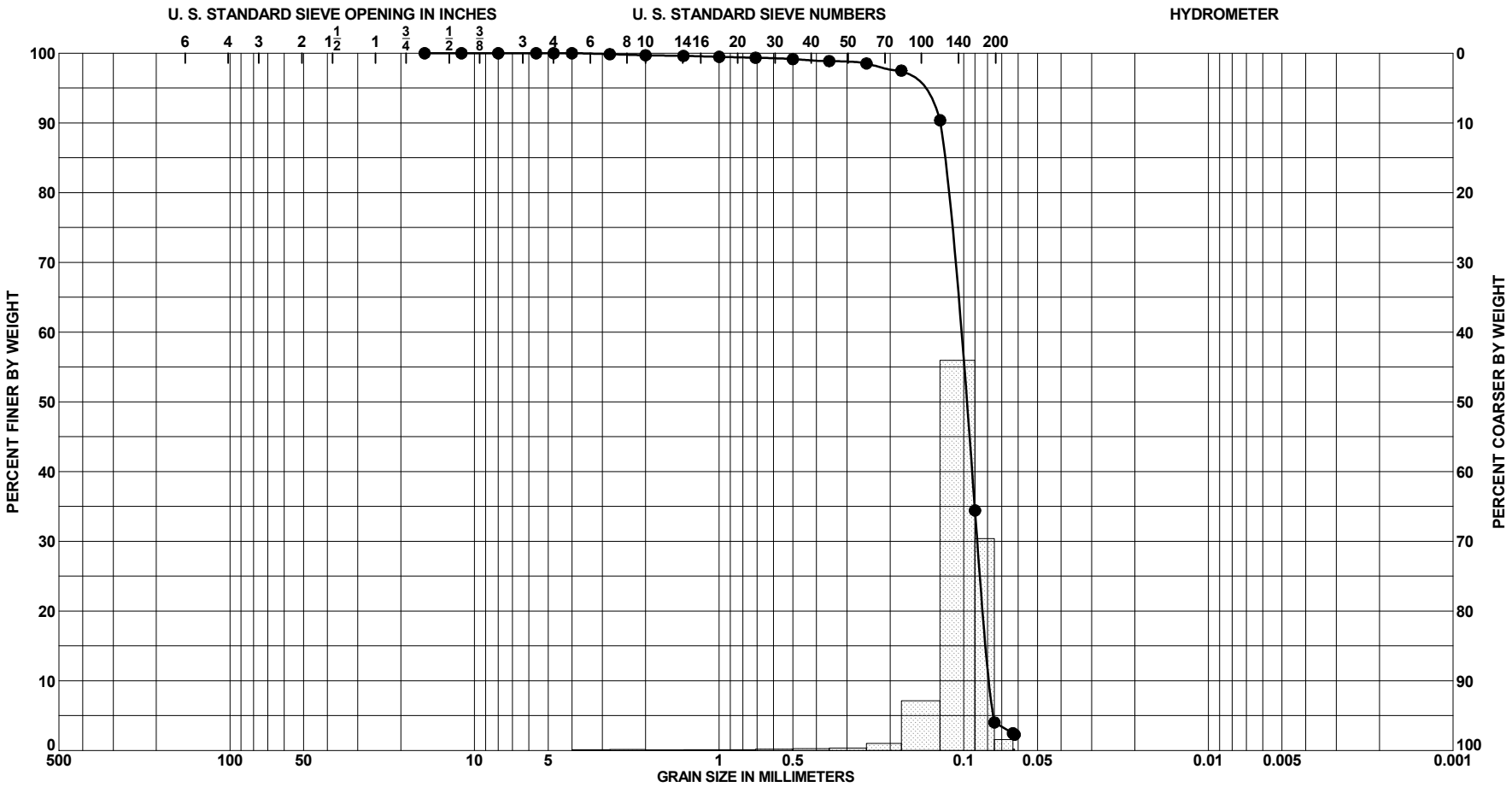


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	1.3 to 1.5 Ft.	SAND, poorly-graded (SP)			10		0				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP09-4
BORING ELEV.	-11.8 Ft., NAVD88
DATE	4/17/2009

GRADATION CURVES

SAJ FORM 2087
JUN 02

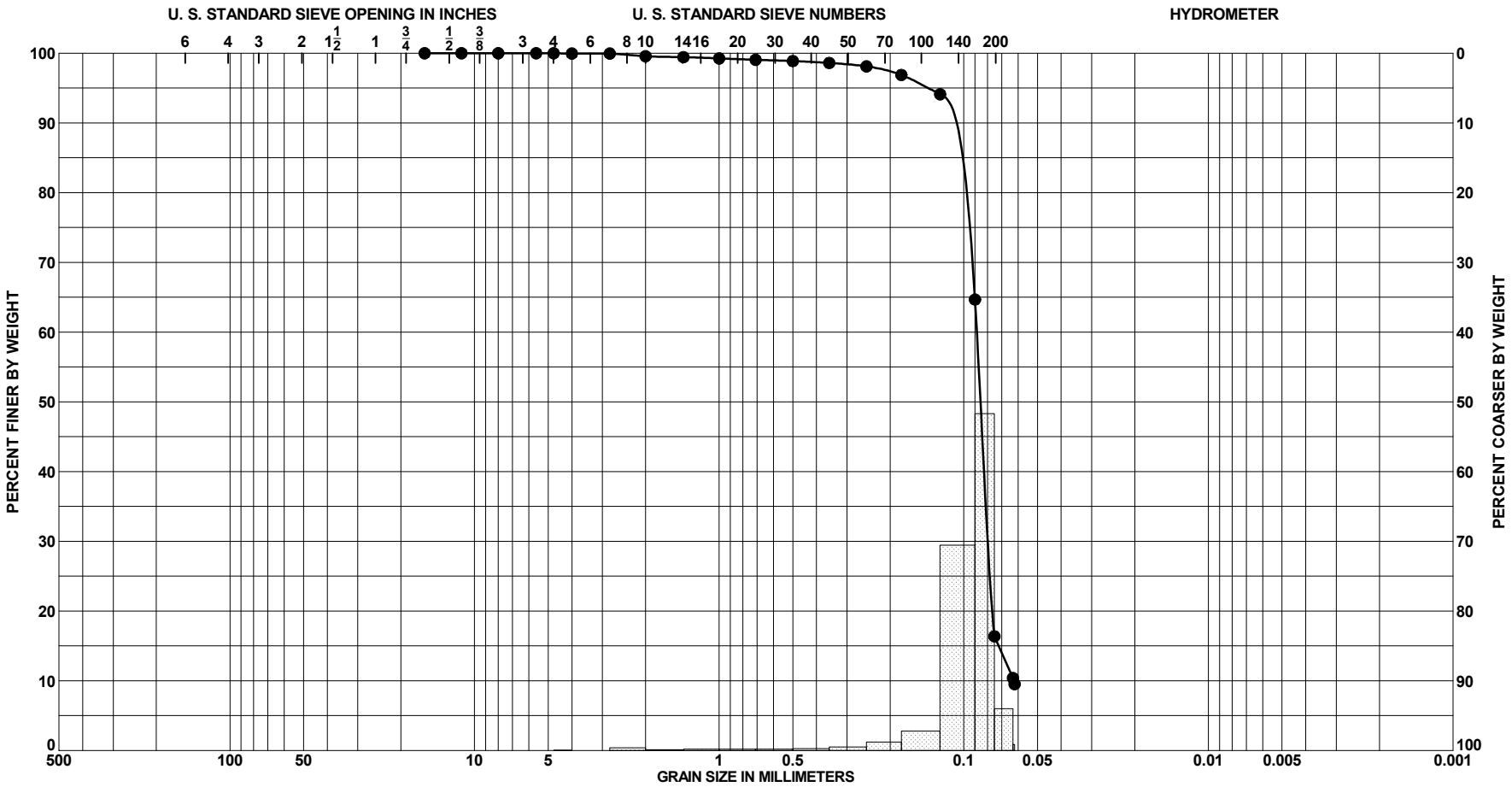


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	3.3 to 3.5 Ft.	SAND, poorly-graded (SP)			9		0				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP09-4
BORING ELEV.	-11.8 Ft., NAVD88
DATE	4/17/2009

GRADATION CURVES

SAJ FORM 2087
JUN 02

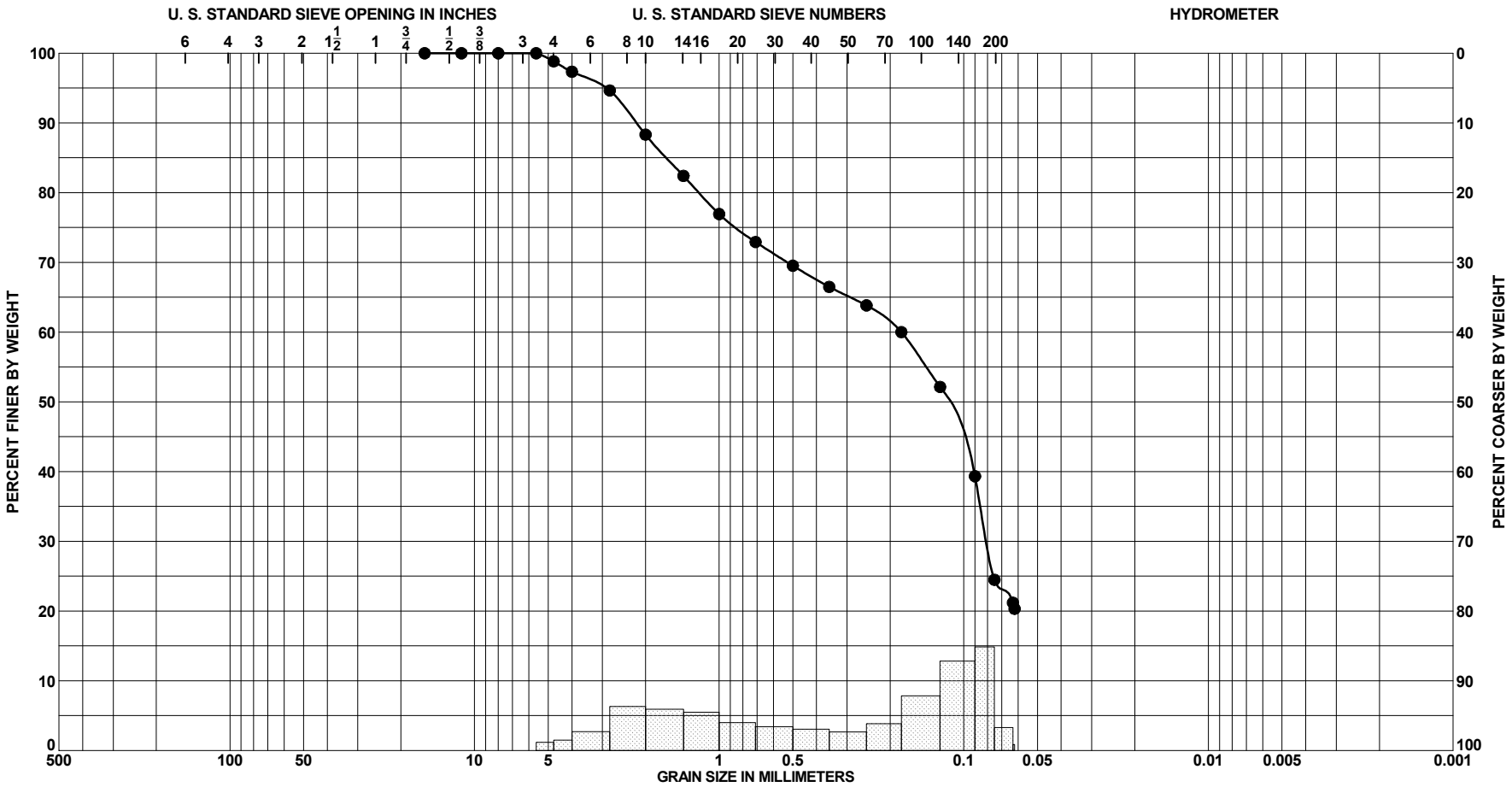


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	5.2 to 5.4 Ft.	(SP-SM)			9		0				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP09-4
BORING ELEV.	-11.8 Ft., NAVD88
DATE	4/17/2009

GRADATION CURVES

SAJ FORM 2087
JUN 02

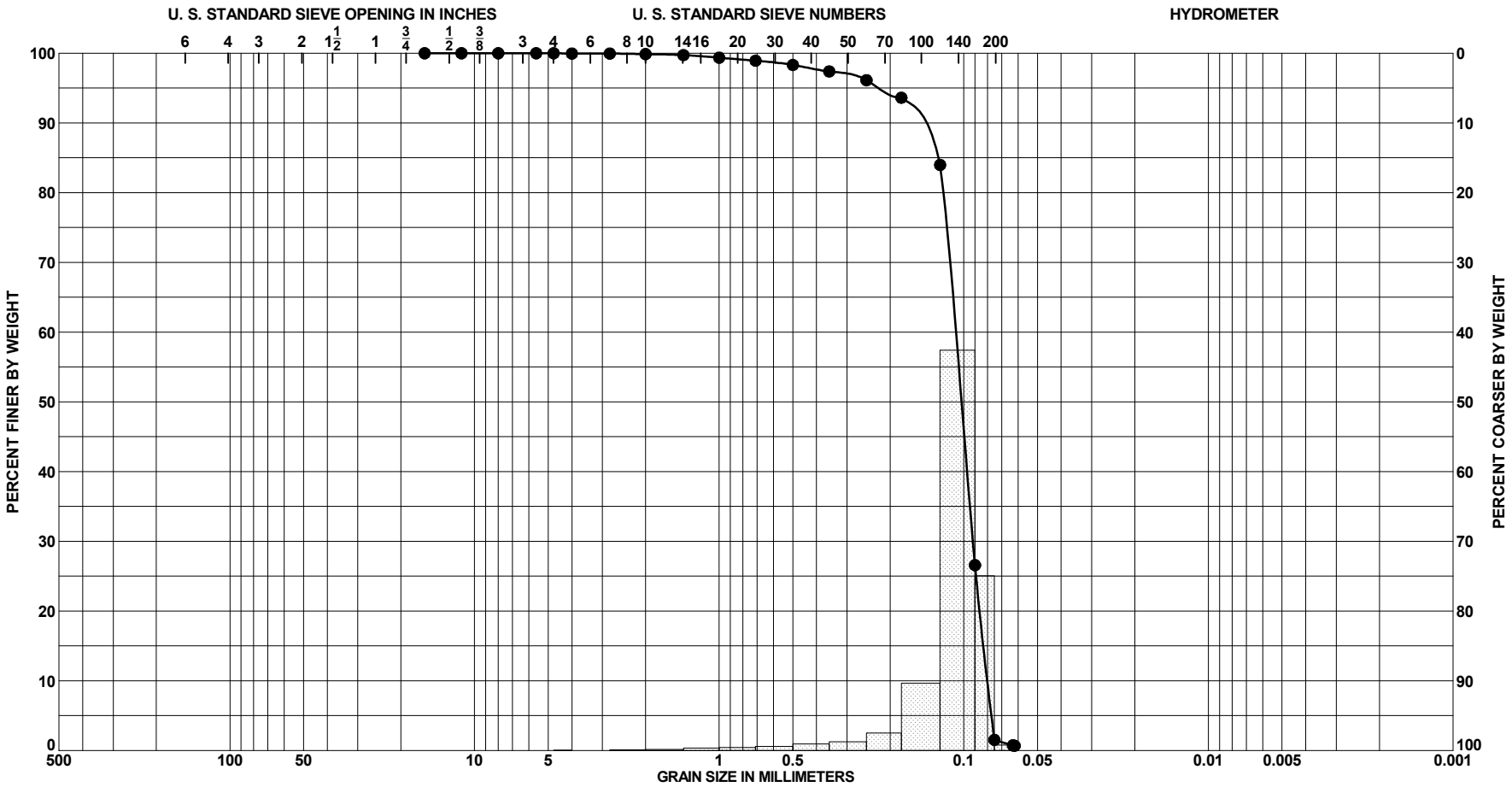


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 4	8.2 to 8.4 Ft.	(SM)			48		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP09-4
BORING ELEV.	-11.8 Ft., NAVD88
DATE	4/17/2009

GRADATION CURVES

SAJ FORM 2087
JUN 02

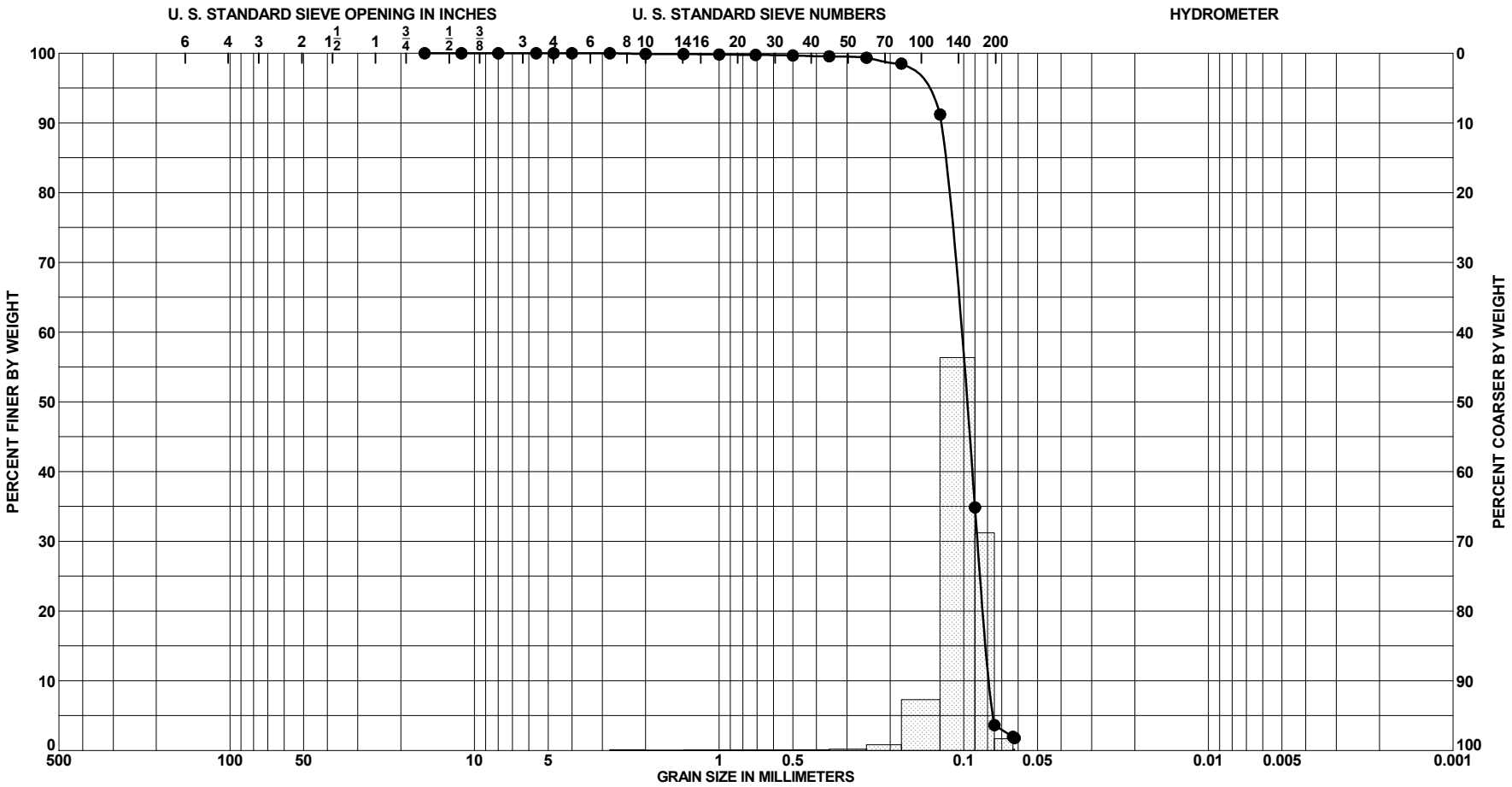


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	1.6 to 1.8 Ft.	SAND, poorly-graded (SP)			9		0				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP09-6
BORING ELEV.	-9.5 Ft., NAVD88
DATE	4/17/2009

GRADATION CURVES

SAJ FORM 2087
JUN 02

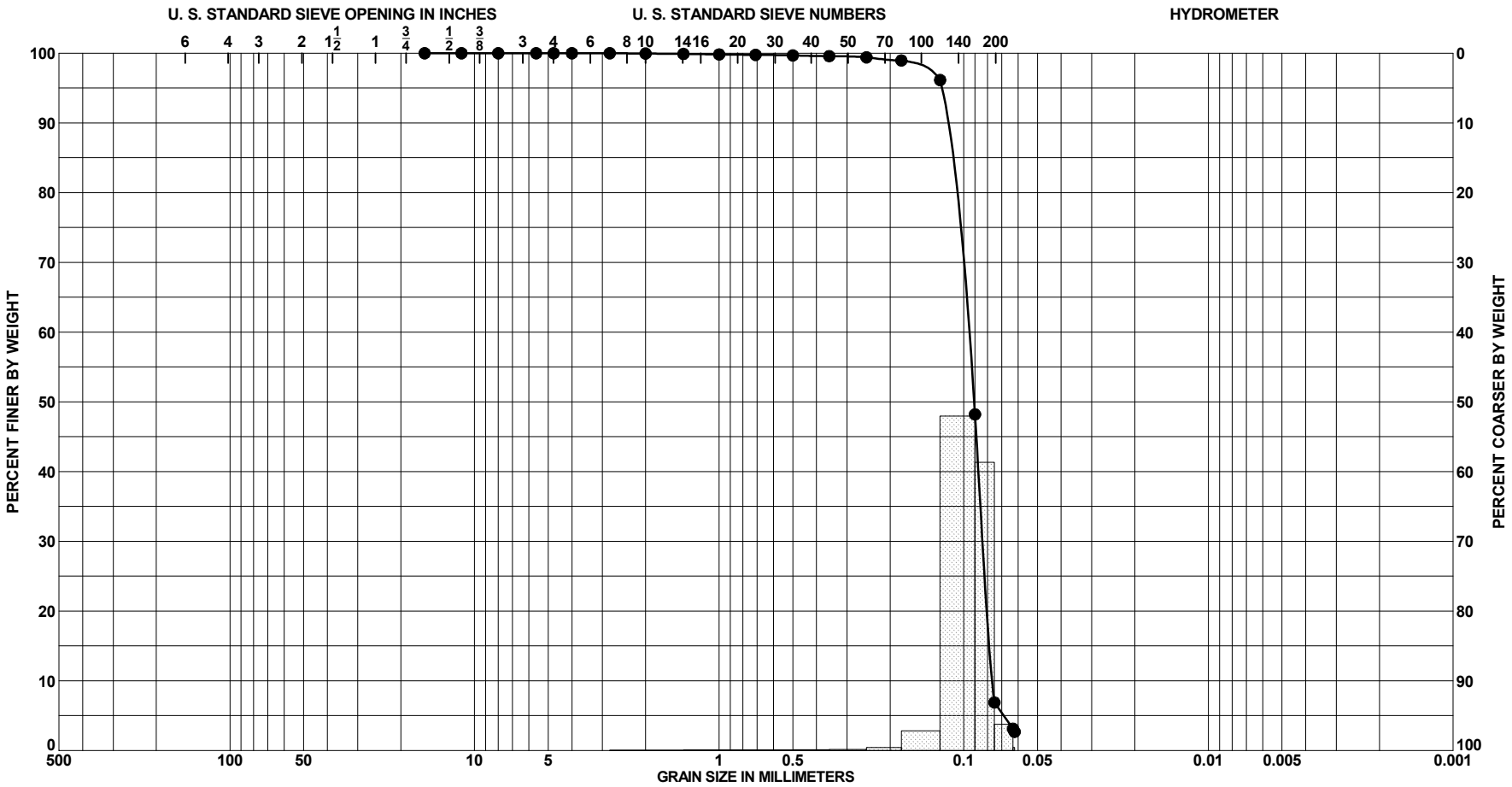


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	4.3 to 4.5 Ft.	SAND, poorly-graded (SP)			7		0				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP09-6
BORING ELEV.	-9.5 Ft., NAVD88
DATE	4/17/2009

GRADATION CURVES

SAJ FORM 2087
JUN 02

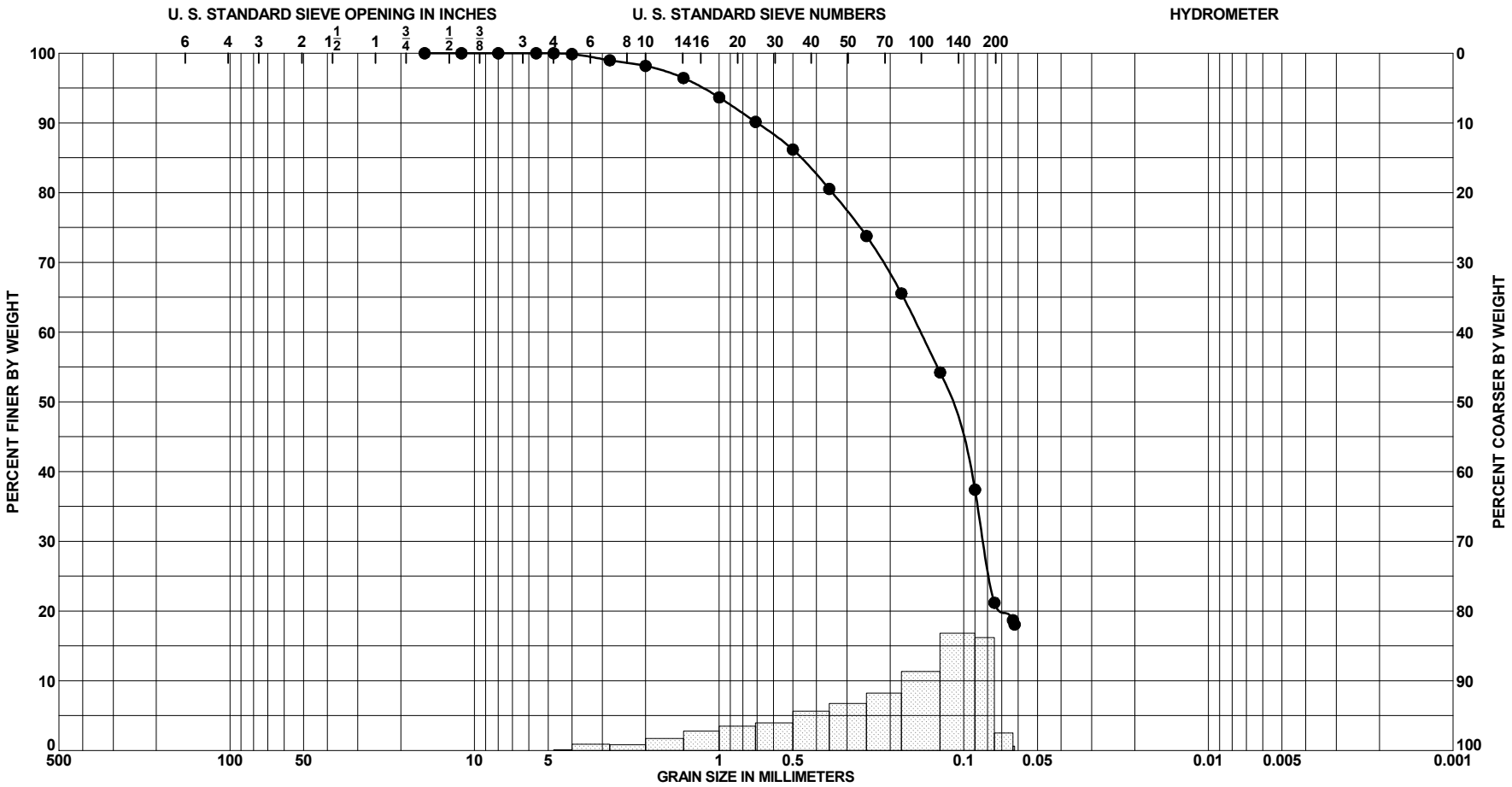


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	6.6 to 6.8 Ft.	(SP)			7		0				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP09-6
BORING ELEV.	-9.5 Ft., NAVD88
DATE	4/17/2009

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 4	8.9 to 9.1 Ft.	(SM)			31		1				

PROJECT	Pinellas County SPP
	Treasure Island/Johns Pass
BORING NO.	JP09-6
BORING ELEV.	-9.5 Ft., NAVD88
DATE	4/17/2009

GRADATION CURVES

SAJ FORM 2087
JUN 02

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-03 @ 0.7 ft

Analysis Date: 10/20/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,454	1,252,902	State Plane, FLW (U.S. Ft.)	-9.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW		#200 - 0.03 #230 - 0.00	1.03	61.72	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	14.09	14.09
#4	-2.25	4.75	2.27	16.36
#5	-2.00	4.00	4.51	20.87
#7	-1.50	2.80	6.98	27.85
#10	-1.00	2.00	7.17	35.02
#14	-0.50	1.40	6.95	41.97
#18	0.00	1.00	5.99	47.96
#25	0.50	0.71	5.62	53.58
#35	1.00	0.50	5.77	59.35
#45	1.50	0.36	5.39	64.74
#60	2.00	0.25	6.80	71.54
#80	2.50	0.18	11.52	83.06
#120	3.00	0.13	14.75	97.81
#170	3.50	0.09	2.10	99.91
#200	3.75	0.08	0.06	99.97
#230	4.00	0.06	0.03	100.00

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.90	2.53	2.15	0.18	-1.70	-2.29	-3.63

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.08	0.95	0.18	0.88	2.14	-0.22	1.73

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-03 @ 2 ft

Analysis Date: 10/23/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,454	1,252,902	State Plane, FLW (U.S. Ft.)	-11.2 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW		#200 - 0.02 #230 - 0.02	0.58	26.61	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.85	0.85
#4	-2.25	4.75	0.00	0.85
#5	-2.00	4.00	0.51	1.36
#7	-1.50	2.80	1.22	2.58
#10	-1.00	2.00	1.09	3.67
#14	-0.50	1.40	1.36	5.03
#18	0.00	1.00	1.48	6.51
#25	0.50	0.71	2.39	8.90
#35	1.00	0.50	4.22	13.12
#45	1.50	0.36	6.63	19.75
#60	2.00	0.25	14.94	34.69
#80	2.50	0.18	33.31	68.00
#120	3.00	0.13	29.26	97.26
#170	3.50	0.09	2.66	99.92
#200	3.75	0.08	0.06	99.98
#230	4.00	0.06	0.00	99.98

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.96	2.77	2.62	2.23	1.68	1.22	-0.51

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.94	0.26	2.23	0.21	1.1	-2.24	8.98

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-03 @ 2.8 ft

Analysis Date: 10/20/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,454	1,252,902	State Plane, FLW (U.S. Ft.)	-12.0 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW		#200 - 1.22 #230 - 1.18	1.11	58.89	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	5.15	5.15
#4	-2.25	4.75	1.80	6.95
#5	-2.00	4.00	2.67	9.62
#7	-1.50	2.80	8.63	18.25
#10	-1.00	2.00	7.02	25.27
#14	-0.50	1.40	7.82	33.09
#18	0.00	1.00	6.55	39.64
#25	0.50	0.71	6.09	45.73
#35	1.00	0.50	5.79	51.52
#45	1.50	0.36	5.07	56.59
#60	2.00	0.25	7.59	64.18
#80	2.50	0.18	13.38	77.56
#120	3.00	0.13	18.04	95.60
#170	3.50	0.09	3.10	98.70
#200	3.75	0.08	0.08	98.78
#230	4.00	0.06	0.04	98.82

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.98	2.68	2.40	0.87	-1.02	-1.63	-2.55

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.58	0.67	0.87	0.55	1.92	-0.38	1.93

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-03 @ 3.9 ft

Analysis Date: 10/23/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,454	1,252,902	State Plane, FLW (U.S. Ft.)	-13.1 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 0.02 #230 - 0.02	0.99	14.22	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.57	0.57
#5	-2.00	4.00	0.38	0.95
#7	-1.50	2.80	0.41	1.36
#10	-1.00	2.00	0.48	1.84
#14	-0.50	1.40	0.60	2.44
#18	0.00	1.00	0.62	3.06
#25	0.50	0.71	0.84	3.90
#35	1.00	0.50	1.55	5.45
#45	1.50	0.36	2.92	8.37
#60	2.00	0.25	11.54	19.91
#80	2.50	0.18	46.94	66.85
#120	3.00	0.13	32.10	98.95
#170	3.50	0.09	1.03	99.98
#200	3.75	0.08	0.00	99.98
#230	4.00	0.06	0.00	99.98

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.94	2.77	2.63	2.32	2.05	1.83	0.85

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.18	0.22	2.32	0.20	0.79	-3.24	16.25

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-04 @ 0.7 ft

Analysis Date: 10/23/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,139	1,252,651	State Plane, FLW (U.S. Ft.)	-7.6 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW		#200 - 0.01 #230 - 0.01	0.78	22.60	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.16	0.16
#5	-2.00	4.00	0.20	0.36
#7	-1.50	2.80	0.60	0.96
#10	-1.00	2.00	0.74	1.70
#14	-0.50	1.40	1.21	2.91
#18	0.00	1.00	1.47	4.38
#25	0.50	0.71	2.68	7.06
#35	1.00	0.50	4.55	11.61
#45	1.50	0.36	6.56	18.17
#60	2.00	0.25	13.04	31.21
#80	2.50	0.18	30.82	62.03
#120	3.00	0.13	34.60	96.63
#170	3.50	0.09	3.30	99.93
#200	3.75	0.08	0.06	99.99
#230	4.00	0.06	0.00	99.99

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.98	2.82	2.69	2.30	1.76	1.33	0.12

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.07	0.24	2.30	0.20	0.92	-1.87	7.11

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-04 @ 3.3 ft

Analysis Date: 10/23/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,139	1,252,651	State Plane, FLW (U.S. Ft.)	-10.2 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 0.01 #230 - 0.01	0.49	11.38	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#10	-1.00	2.00	0.00	0.00
#14	-0.50	1.40	0.13	0.13
#18	0.00	1.00	0.22	0.35
#25	0.50	0.71	0.37	0.72
#35	1.00	0.50	0.82	1.54
#45	1.50	0.36	1.84	3.38
#60	2.00	0.25	7.89	11.27
#80	2.50	0.18	37.73	49.00
#120	3.00	0.13	46.74	95.74
#170	3.50	0.09	4.19	99.93
#200	3.75	0.08	0.06	99.99
#230	4.00	0.06	0.00	99.99

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.99	2.87	2.78	2.51	2.18	2.06	1.60

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.44	0.18	2.51	0.18	0.47	-1.79	9.85

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-04 @ 6.1 ft

Analysis Date: 10/23/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,139	1,252,651	State Plane, FLW (U.S. Ft.)	-13.0 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 2.03 #230 - 1.79	0.85	6.92	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#35	1.00	0.50	0.00	0.00
#45	1.50	0.36	0.12	0.12
#60	2.00	0.25	0.74	0.86
#80	2.50	0.18	9.92	10.78
#120	3.00	0.13	61.36	72.14
#170	3.50	0.09	24.47	96.61
#200	3.75	0.08	1.36	97.97
#230	4.00	0.06	0.24	98.21

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.47	3.24	3.06	2.82	2.62	2.54	2.21

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.83	0.14	2.82	0.14	0.32	-0.18	4.11

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-05 @ 0.7 ft

Analysis Date: 10/23/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,832	1,250,368	State Plane, FLW (U.S. Ft.)	-8.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 0.11 #230 - 0.07	0.67	17.07	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.11	0.11
#4	-2.25	4.75	0.00	0.11
#5	-2.00	4.00	0.05	0.16
#7	-1.50	2.80	0.00	0.16
#10	-1.00	2.00	0.11	0.27
#14	-0.50	1.40	0.14	0.41
#18	0.00	1.00	0.21	0.62
#25	0.50	0.71	0.46	1.08
#35	1.00	0.50	0.96	2.04
#45	1.50	0.36	2.14	4.18
#60	2.00	0.25	6.83	11.01
#80	2.50	0.18	19.88	30.89
#120	3.00	0.13	57.01	87.90
#170	3.50	0.09	11.65	99.55
#200	3.75	0.08	0.34	99.89
#230	4.00	0.06	0.04	99.93

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.30	2.97	2.89	2.67	2.35	2.13	1.56

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.56	0.17	2.67	0.16	0.58	-3.06	22.18

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-05 @ 3.3 ft

Analysis Date: 10/18/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,832	1,250,368	State Plane, FLW (U.S. Ft.)	-11.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 0.50 #230 - 0.33	0.82	11.50	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.10	0.10
#14	-0.50	1.40	0.12	0.22
#18	0.00	1.00	0.17	0.39
#25	0.50	0.71	0.26	0.65
#35	1.00	0.50	0.48	1.13
#45	1.50	0.36	0.90	2.03
#60	2.00	0.25	2.33	4.36
#80	2.50	0.18	15.81	20.17
#120	3.00	0.13	60.83	81.00
#170	3.50	0.09	17.72	98.72
#200	3.75	0.08	0.78	99.50
#230	4.00	0.06	0.17	99.67

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.40	3.08	2.95	2.75	2.54	2.37	2.02

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.70	0.15	2.75	0.15	0.46	-2.54	17.26

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-05 @ 6.4 ft

Analysis Date: 10/18/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,832	1,250,368	State Plane, FLW (U.S. Ft.)	-14.6 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 0.50 #230 - 0.27	0.68	9.01	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#14	-0.50	1.40	0.00	0.00
#18	0.00	1.00	0.02	0.02
#25	0.50	0.71	0.02	0.04
#35	1.00	0.50	0.09	0.13
#45	1.50	0.36	0.25	0.38
#60	2.00	0.25	1.52	1.90
#80	2.50	0.18	16.81	18.71
#120	3.00	0.13	61.66	80.37
#170	3.50	0.09	18.13	98.50
#200	3.75	0.08	1.00	99.50
#230	4.00	0.06	0.23	99.73

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.40	3.10	2.96	2.75	2.55	2.42	2.09

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.75	0.15	2.75	0.15	0.35	-0.59	6.17

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-05 @ 6.6 ft

Analysis Date: 10/18/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,832	1,250,368	State Plane, FLW (U.S. Ft.)	-14.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 55.31 #230 - 55.01	18.11	11.42	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#10	-1.00	2.00	0.00	0.00
#14	-0.50	1.40	0.04	0.04
#18	0.00	1.00	0.04	0.08
#25	0.50	0.71	0.08	0.16
#35	1.00	0.50	0.08	0.24
#45	1.50	0.36	0.27	0.51
#60	2.00	0.25	0.91	1.42
#80	2.50	0.18	8.56	9.98
#120	3.00	0.13	25.39	35.37
#170	3.50	0.09	8.75	44.12
#200	3.75	0.08	0.57	44.69
#230	4.00	0.06	0.30	44.99

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
				2.80	2.62	2.21

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.73	0.15			0.43	-1.43	11.3

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-05 @ 8.9 ft

Analysis Date: 10/23/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,832	1,250,368	State Plane, FLW (U.S. Ft.)	-17.1 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 0.48 #230 - 0.35	1.25	9.40	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.02	0.02
#14	-0.50	1.40	0.00	0.02
#18	0.00	1.00	0.05	0.07
#25	0.50	0.71	0.04	0.11
#35	1.00	0.50	0.15	0.26
#45	1.50	0.36	0.49	0.75
#60	2.00	0.25	1.59	2.34
#80	2.50	0.18	11.34	13.68
#120	3.00	0.13	71.76	85.44
#170	3.50	0.09	13.64	99.08
#200	3.75	0.08	0.44	99.52
#230	4.00	0.06	0.13	99.65

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.35	2.99	2.93	2.75	2.58	2.52	2.12

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.74	0.15	2.75	0.15	0.33	-1.77	15.43

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-06 @ 0.7 ft

Analysis Date: 10/20/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,626	1,250,725	State Plane, FLW (U.S. Ft.)	-12.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW		#200 - 0.11 #230 - 0.07	1.18	39.11	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	1.59	1.59
#4	-2.25	4.75	0.17	1.76
#5	-2.00	4.00	1.29	3.05
#7	-1.50	2.80	2.16	5.21
#10	-1.00	2.00	3.09	8.30
#14	-0.50	1.40	5.03	13.33
#18	0.00	1.00	4.94	18.27
#25	0.50	0.71	5.12	23.39
#35	1.00	0.50	5.31	28.70
#45	1.50	0.36	5.29	33.99
#60	2.00	0.25	7.95	41.94
#80	2.50	0.18	16.84	58.78
#120	3.00	0.13	34.33	93.11
#170	3.50	0.09	6.60	99.71
#200	3.75	0.08	0.18	99.89
#230	4.00	0.06	0.04	99.93

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.14	2.87	2.74	2.24	0.65	-0.23	-1.55

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.59	0.33	2.24	0.21	1.55	-1.2	3.62

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-06 @ 1.3 ft

Analysis Date: 10/20/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,626	1,250,725	State Plane, FLW (U.S. Ft.)	-13.1 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW		#200 - 0.04 #230 - 0.04	1.33	69.99	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	24.28	24.28
#4	-2.25	4.75	3.88	28.16
#5	-2.00	4.00	4.85	33.01
#7	-1.50	2.80	7.58	40.59
#10	-1.00	2.00	6.15	46.74
#14	-0.50	1.40	6.27	53.01
#18	0.00	1.00	5.26	58.27
#25	0.50	0.71	4.84	63.11
#35	1.00	0.50	4.88	67.99
#45	1.50	0.36	4.49	72.48
#60	2.00	0.25	5.69	78.17
#80	2.50	0.18	7.91	86.08
#120	3.00	0.13	11.71	97.79
#170	3.50	0.09	2.11	99.90
#200	3.75	0.08	0.06	99.96
#230	4.00	0.06	0.00	99.96

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.88	2.37	1.72	-0.74	-2.45	-3.10	-3.89

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	-0.51	1.42			2.26	0.14	1.6

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-06 @ 3.3 ft

Analysis Date: 10/20/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,626	1,250,725	State Plane, FLW (U.S. Ft.)	-15.1 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW		#200 - 0.10 #230 - 0.06	0.84	36.40	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	11.58	11.58
#4	-2.25	4.75	0.29	11.87
#5	-2.00	4.00	0.70	12.57
#7	-1.50	2.80	2.25	14.82
#10	-1.00	2.00	2.49	17.31
#14	-0.50	1.40	2.56	19.87
#18	0.00	1.00	2.58	22.45
#25	0.50	0.71	2.81	25.26
#35	1.00	0.50	3.04	28.30
#45	1.50	0.36	3.27	31.57
#60	2.00	0.25	7.14	38.71
#80	2.50	0.18	26.48	65.19
#120	3.00	0.13	31.61	96.80
#170	3.50	0.09	3.01	99.81
#200	3.75	0.08	0.09	99.90
#230	4.00	0.06	0.04	99.94

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.97	2.80	2.66	2.21	0.45	-1.26	-3.49

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.26	0.42	2.21	0.22	2.07	-1.32	3.31

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-07 @ 0.7 ft

Analysis Date: 10/20/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,390	1,251,121	State Plane, FLW (U.S. Ft.)	-13.2 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW		#200 - 0.04 #230 - 0.04	1.06	42.84	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	2.42	2.42
#4	-2.25	4.75	2.63	5.05
#5	-2.00	4.00	1.79	6.84
#7	-1.50	2.80	5.15	11.99
#10	-1.00	2.00	4.75	16.74
#14	-0.50	1.40	5.22	21.96
#18	0.00	1.00	4.11	26.07
#25	0.50	0.71	4.14	30.21
#35	1.00	0.50	4.07	34.28
#45	1.50	0.36	4.31	38.59
#60	2.00	0.25	8.53	47.12
#80	2.50	0.18	23.31	70.43
#120	3.00	0.13	26.27	96.70
#170	3.50	0.09	3.19	99.89
#200	3.75	0.08	0.07	99.96
#230	4.00	0.06	0.00	99.96

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.97	2.76	2.59	2.06	-0.13	-1.08	-2.25

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.22	0.43	2.06	0.24	1.78	-0.96	2.65

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-07 @ 3.3 ft

Analysis Date: 10/18/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,390	1,251,121	State Plane, FLW (U.S. Ft.)	-15.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW		#200 - 0.00 #230 - 0.00	0.87	26.57	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	5.29	5.29
#4	-2.25	4.75	0.32	5.61
#5	-2.00	4.00	1.12	6.73
#7	-1.50	2.80	1.09	7.82
#10	-1.00	2.00	0.98	8.80
#14	-0.50	1.40	1.44	10.24
#18	0.00	1.00	1.61	11.85
#25	0.50	0.71	1.73	13.58
#35	1.00	0.50	2.47	16.05
#45	1.50	0.36	3.89	19.94
#60	2.00	0.25	9.09	29.03
#80	2.50	0.18	29.94	58.97
#120	3.00	0.13	38.19	97.16
#170	3.50	0.09	2.80	99.96
#200	3.75	0.08	0.04	100.00
#230	4.00	0.06	0.00	100.00

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.97	2.83	2.71	2.35	1.78	0.99	-2.60

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.79	0.29	2.35	0.20	1.61	-2.16	6.8

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-07 @ 5.6 ft

Analysis Date: 10/20/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,390	1,251,121	State Plane, FLW (U.S. Ft.)	-18.1 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW		#200 - 0.24 #230 - 0.19	1.22	70.22	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	8.07	8.07
#4	-2.25	4.75	1.54	9.61
#5	-2.00	4.00	2.20	11.81
#7	-1.50	2.80	5.49	17.30
#10	-1.00	2.00	5.93	23.23
#14	-0.50	1.40	7.46	30.69
#18	0.00	1.00	7.18	37.87
#25	0.50	0.71	7.51	45.38
#35	1.00	0.50	8.52	53.90
#45	1.50	0.36	9.23	63.13
#60	2.00	0.25	8.38	71.51
#80	2.50	0.18	8.28	79.79
#120	3.00	0.13	15.96	95.75
#170	3.50	0.09	3.85	99.60
#200	3.75	0.08	0.16	99.76
#230	4.00	0.06	0.05	99.81

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.98	2.63	2.21	0.77	-0.88	-1.62	-3.17

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.50	0.71	0.77	0.59	1.92	-0.47	2.22

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-07 @ 6.9 ft

Analysis Date: 10/23/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,390	1,251,121	State Plane, FLW (U.S. Ft.)	-19.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW		#200 - 0.01 #230 - 0.01	0.57	16.12	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.23	0.23
#4	-2.25	4.75	0.07	0.30
#5	-2.00	4.00	0.44	0.74
#7	-1.50	2.80	0.95	1.69
#10	-1.00	2.00	0.79	2.48
#14	-0.50	1.40	1.03	3.51
#18	0.00	1.00	1.10	4.61
#25	0.50	0.71	1.28	5.89
#35	1.00	0.50	1.91	7.80
#45	1.50	0.36	3.33	11.13
#60	2.00	0.25	10.58	21.71
#80	2.50	0.18	45.10	66.81
#120	3.00	0.13	31.58	98.39
#170	3.50	0.09	1.58	99.97
#200	3.75	0.08	0.02	99.99
#230	4.00	0.06	0.00	99.99

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.95	2.77	2.63	2.31	2.04	1.73	0.15

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.12	0.23	2.31	0.20	0.9	-2.84	12.58

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-07 @ 9.5 ft

Analysis Date: 10/20/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,390	1,251,121	State Plane, FLW (U.S. Ft.)	-22.0 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 14.69 #230 - 14.20	2.91	36.96	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	7.76	7.76
#4	-2.25	4.75	1.23	8.99
#5	-2.00	4.00	3.12	12.11
#7	-1.50	2.80	2.97	15.08
#10	-1.00	2.00	3.42	18.50
#14	-0.50	1.40	2.95	21.45
#18	0.00	1.00	2.34	23.79
#25	0.50	0.71	1.68	25.47
#35	1.00	0.50	0.98	26.45
#45	1.50	0.36	0.78	27.23
#60	2.00	0.25	1.52	28.75
#80	2.50	0.18	7.19	35.94
#120	3.00	0.13	23.67	59.61
#170	3.50	0.09	22.73	82.34
#200	3.75	0.08	2.97	85.31
#230	4.00	0.06	0.49	85.80

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.64	3.34	2.80	0.36	-1.37	-3.12

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.45	0.37	2.80	0.14	2.3	-1.03	2.49

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-08 @ 0.7 ft

Analysis Date: 10/18/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,985	1,253,080	State Plane, FLW (U.S. Ft.)	-8.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 0.04 #230 - 0.04	0.77	10.15	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.07	0.07
#5	-2.00	4.00	0.00	0.07
#7	-1.50	2.80	0.00	0.07
#10	-1.00	2.00	0.12	0.19
#14	-0.50	1.40	0.05	0.24
#18	0.00	1.00	0.19	0.43
#25	0.50	0.71	0.31	0.74
#35	1.00	0.50	0.68	1.42
#45	1.50	0.36	1.93	3.35
#60	2.00	0.25	8.38	11.73
#80	2.50	0.18	35.14	46.87
#120	3.00	0.13	47.80	94.67
#170	3.50	0.09	5.22	99.89
#200	3.75	0.08	0.07	99.96
#230	4.00	0.06	0.00	99.96

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.03	2.89	2.79	2.53	2.19	2.06	1.60

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.45	0.18	2.53	0.17	0.5	-2.32	16.03

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-08 @ 5.6 ft

Analysis Date: 10/18/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,985	1,253,080	State Plane, FLW (U.S. Ft.)	-13.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 2.05 #230 - 1.94	0.87	6.75	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.07	0.07
#10	-1.00	2.00	0.00	0.07
#14	-0.50	1.40	0.00	0.07
#18	0.00	1.00	0.04	0.11
#25	0.50	0.71	0.04	0.15
#35	1.00	0.50	0.07	0.22
#45	1.50	0.36	0.18	0.40
#60	2.00	0.25	0.91	1.31
#80	2.50	0.18	13.73	15.04
#120	3.00	0.13	65.68	80.72
#170	3.50	0.09	16.54	97.26
#200	3.75	0.08	0.69	97.95
#230	4.00	0.06	0.11	98.06

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.43	3.10	2.96	2.77	2.58	2.51	2.13

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.75	0.15	2.77	0.15	0.35	-2.25	27.22

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-08 @ 6.9 ft

Analysis Date: 10/23/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,985	1,253,080	State Plane, FLW (U.S. Ft.)	-15.1 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 34.28 #230 - 28.48	3.37	23.45	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.09	0.09
#4	-2.25	4.75	0.09	0.18
#5	-2.00	4.00	0.00	0.18
#7	-1.50	2.80	0.02	0.20
#10	-1.00	2.00	0.02	0.22
#14	-0.50	1.40	0.05	0.27
#18	0.00	1.00	0.05	0.32
#25	0.50	0.71	0.07	0.39
#35	1.00	0.50	0.09	0.48
#45	1.50	0.36	0.21	0.69
#60	2.00	0.25	0.78	1.47
#80	2.50	0.18	6.93	8.40
#120	3.00	0.13	29.15	37.55
#170	3.50	0.09	20.16	57.71
#200	3.75	0.08	8.01	65.72
#230	4.00	0.06	5.80	71.52

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
			3.31	2.78	2.63	2.25

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.99	0.13	3.31	0.10	0.6	-3.05	29.4

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-08 @ 9.5 ft

Analysis Date: 10/23/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,985	1,253,080	State Plane, FLW (U.S. Ft.)	-17.7 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 9.62 #230 - 9.26	0.99	10.41	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#10	-1.00	2.00	0.00	0.00
#14	-0.50	1.40	0.03	0.03
#18	0.00	1.00	0.05	0.08
#25	0.50	0.71	0.05	0.13
#35	1.00	0.50	0.14	0.27
#45	1.50	0.36	0.32	0.59
#60	2.00	0.25	1.29	1.88
#80	2.50	0.18	11.16	13.04
#120	3.00	0.13	59.79	72.83
#170	3.50	0.09	16.41	89.24
#200	3.75	0.08	1.14	90.38
#230	4.00	0.06	0.36	90.74

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.34	3.07	2.81	2.60	2.52	2.14

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.77	0.15	2.81	0.14	0.36	-1.3	12.19

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-09 @ 0.7 ft

Analysis Date: 10/23/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,669	1,252,850	State Plane, FLW (U.S. Ft.)	-12.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 0.14 #230 - 0.09	0.62	11.95	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.10	0.10
#4	-2.25	4.75	0.36	0.46
#5	-2.00	4.00	0.05	0.51
#7	-1.50	2.80	0.45	0.96
#10	-1.00	2.00	0.55	1.51
#14	-0.50	1.40	0.53	2.04
#18	0.00	1.00	0.40	2.44
#25	0.50	0.71	0.48	2.92
#35	1.00	0.50	0.69	3.61
#45	1.50	0.36	1.15	4.76
#60	2.00	0.25	3.36	8.12
#80	2.50	0.18	18.75	26.87
#120	3.00	0.13	60.67	87.54
#170	3.50	0.09	11.98	99.52
#200	3.75	0.08	0.34	99.86
#230	4.00	0.06	0.05	99.91

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.31	2.97	2.90	2.69	2.45	2.21	1.54

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.54	0.17	2.69	0.15	0.76	-3.89	22.08

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-09 @ 3.9 ft

Analysis Date: 10/18/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,669	1,252,850	State Plane, FLW (U.S. Ft.)	-16.0 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 1.02 #230 - 0.93	0.72	9.42	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.05	0.05
#14	-0.50	1.40	0.05	0.10
#18	0.00	1.00	0.08	0.18
#25	0.50	0.71	0.12	0.30
#35	1.00	0.50	0.30	0.60
#45	1.50	0.36	0.59	1.19
#60	2.00	0.25	1.60	2.79
#80	2.50	0.18	9.18	11.97
#120	3.00	0.13	65.89	77.86
#170	3.50	0.09	20.36	98.22
#200	3.75	0.08	0.76	98.98
#230	4.00	0.06	0.09	99.07

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.42	3.15	2.98	2.79	2.60	2.53	2.12

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.77	0.15	2.79	0.14	0.39	-2.46	19.55

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-10 @ 0.7 ft

Analysis Date: 10/20/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,510	1,252,670	State Plane, FLW (U.S. Ft.)	-6.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW		#200 - 0.03 #230 - 0.01	1.18	46.21	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	2.63	2.63
#4	-2.25	4.75	1.52	4.15
#5	-2.00	4.00	1.66	5.81
#7	-1.50	2.80	3.68	9.49
#10	-1.00	2.00	3.87	13.36
#14	-0.50	1.40	5.69	19.05
#18	0.00	1.00	5.95	25.00
#25	0.50	0.71	7.27	32.27
#35	1.00	0.50	8.67	40.94
#45	1.50	0.36	8.10	49.04
#60	2.00	0.25	10.15	59.19
#80	2.50	0.18	20.89	80.08
#120	3.00	0.13	18.33	98.41
#170	3.50	0.09	1.54	99.95
#200	3.75	0.08	0.02	99.97
#230	4.00	0.06	0.02	99.99

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.91	2.61	2.38	1.55	0.00	-0.77	-2.12

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.06	0.48	1.55	0.34	1.63	-0.88	2.91

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-10 @ 2.3 ft

Analysis Date: 10/18/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,510	1,252,670	State Plane, FLW (U.S. Ft.)	-8.0 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 0.04 #230 - 0.02	0.49	7.47	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#10	-1.00	2.00	0.00	0.00
#14	-0.50	1.40	0.06	0.06
#18	0.00	1.00	0.06	0.12
#25	0.50	0.71	0.11	0.23
#35	1.00	0.50	0.29	0.52
#45	1.50	0.36	0.51	1.03
#60	2.00	0.25	2.13	3.16
#80	2.50	0.18	22.73	25.89
#120	3.00	0.13	65.05	90.94
#170	3.50	0.09	8.85	99.79
#200	3.75	0.08	0.17	99.96
#230	4.00	0.06	0.02	99.98

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.23	2.95	2.88	2.69	2.48	2.28	2.04

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.64	0.16	2.69	0.15	0.36	-1.91	14.01

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-10 @ 2.9 ft

Analysis Date: 10/18/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,510	1,252,670	State Plane, FLW (U.S. Ft.)	-8.6 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW		#200 - 0.10 #230 - 0.10	1.34	63.17	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	10.77	10.77
#4	-2.25	4.75	2.05	12.82
#5	-2.00	4.00	3.86	16.68
#7	-1.50	2.80	7.83	24.51
#10	-1.00	2.00	8.21	32.72
#14	-0.50	1.40	8.84	41.56
#18	0.00	1.00	6.93	48.49
#25	0.50	0.71	6.39	54.88
#35	1.00	0.50	6.73	61.61
#45	1.50	0.36	6.38	67.99
#60	2.00	0.25	8.66	76.65
#80	2.50	0.18	12.39	89.04
#120	3.00	0.13	10.01	99.05
#170	3.50	0.09	0.85	99.90
#200	3.75	0.08	0.00	99.90
#230	4.00	0.06	0.00	99.90

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.80	2.30	1.90	0.12	-1.47	-2.04	-3.44

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.06	0.96	0.12	0.92	1.95	-0.23	1.89

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-10 @ 3.3 ft

Analysis Date: 10/20/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,510	1,252,670	State Plane, FLW (U.S. Ft.)	-9.0 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW		#200 - 0.02 #230 - 0.01	0.48	16.15	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	1.69	1.69
#4	-2.25	4.75	0.00	1.69
#5	-2.00	4.00	0.34	2.03
#7	-1.50	2.80	0.83	2.86
#10	-1.00	2.00	0.56	3.42
#14	-0.50	1.40	0.80	4.22
#18	0.00	1.00	0.62	4.84
#25	0.50	0.71	0.81	5.65
#35	1.00	0.50	1.25	6.90
#45	1.50	0.36	2.33	9.23
#60	2.00	0.25	8.45	17.68
#80	2.50	0.18	41.72	59.40
#120	3.00	0.13	38.12	97.52
#170	3.50	0.09	2.43	99.95
#200	3.75	0.08	0.03	99.98
#230	4.00	0.06	0.01	99.99

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.97	2.82	2.70	2.39	2.09	1.90	0.10

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.16	0.22	2.39	0.19	1.06	-3.45	16.29

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-10 @ 4.3 ft

Analysis Date: 10/20/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,510	1,252,670	State Plane, FLW (U.S. Ft.)	-10.0 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW		#200 - 0.88 #230 - 0.83	1.21	69.38	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	18.37	18.37
#4	-2.25	4.75	3.55	21.92
#5	-2.00	4.00	4.11	26.03
#7	-1.50	2.80	6.95	32.98
#10	-1.00	2.00	6.28	39.26
#14	-0.50	1.40	7.06	46.32
#18	0.00	1.00	6.37	52.69
#25	0.50	0.71	6.37	59.06
#35	1.00	0.50	7.24	66.30
#45	1.50	0.36	9.14	75.44
#60	2.00	0.25	11.34	86.78
#80	2.50	0.18	7.29	94.07
#120	3.00	0.13	4.19	98.26
#170	3.50	0.09	0.78	99.04
#200	3.75	0.08	0.08	99.12
#230	4.00	0.06	0.05	99.17

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.61	1.88	1.48	-0.21	-2.06	-2.73	-3.77

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	-0.37	1.29			2.01	-0.13	1.74

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-10 @ 5.6 ft

Analysis Date: 10/18/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,510	1,252,670	State Plane, FLW (U.S. Ft.)	-11.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 0.46 #230 - 0.26	0.53	7.27	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.08	0.08
#10	-1.00	2.00	0.07	0.15
#14	-0.50	1.40	0.10	0.25
#18	0.00	1.00	0.18	0.43
#25	0.50	0.71	0.23	0.66
#35	1.00	0.50	0.31	0.97
#45	1.50	0.36	0.54	1.51
#60	2.00	0.25	1.67	3.18
#80	2.50	0.18	11.17	14.35
#120	3.00	0.13	54.10	68.45
#170	3.50	0.09	29.31	97.76
#200	3.75	0.08	1.78	99.54
#230	4.00	0.06	0.20	99.74

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.45	3.27	3.11	2.83	2.60	2.52	2.08

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.81	0.14	2.83	0.14	0.48	-2.85	21.36

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-11 @ 0.7 ft

Analysis Date: 10/20/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,284	1,253,065	State Plane, FLW (U.S. Ft.)	-6.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW		#200 - 0.05 #230 - 0.02	0.86	34.04	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.33	0.33
#4	-2.25	4.75	0.00	0.33
#5	-2.00	4.00	0.09	0.42
#7	-1.50	2.80	1.10	1.52
#10	-1.00	2.00	2.37	3.89
#14	-0.50	1.40	4.48	8.37
#18	0.00	1.00	5.08	13.45
#25	0.50	0.71	5.89	19.34
#35	1.00	0.50	6.67	26.01
#45	1.50	0.36	6.20	32.21
#60	2.00	0.25	9.59	41.80
#80	2.50	0.18	23.89	65.69
#120	3.00	0.13	30.37	96.06
#170	3.50	0.09	3.80	99.86
#200	3.75	0.08	0.09	99.95
#230	4.00	0.06	0.03	99.98

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.98	2.80	2.65	2.17	0.92	0.22	-0.88

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.70	0.31	2.17	0.22	1.26	-1.13	3.55

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-11 @ 2.9 ft

Analysis Date: 10/23/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,284	1,253,065	State Plane, FLW (U.S. Ft.)	-9.1 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 1.22 #230 - 1.12	0.80	15.08	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#10	-1.00	2.00	0.00	0.00
#14	-0.50	1.40	0.06	0.06
#18	0.00	1.00	0.06	0.12
#25	0.50	0.71	0.20	0.32
#35	1.00	0.50	0.47	0.79
#45	1.50	0.36	1.14	1.93
#60	2.00	0.25	3.16	5.09
#80	2.50	0.18	8.30	13.39
#120	3.00	0.13	62.45	75.84
#170	3.50	0.09	21.96	97.80
#200	3.75	0.08	0.98	98.78
#230	4.00	0.06	0.10	98.88

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.44	3.19	2.99	2.79	2.59	2.52	1.99

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.76	0.15	2.79	0.14	0.43	-2.01	11.9

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-11 @ 4.3 ft

Analysis Date: 10/23/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,284	1,253,065	State Plane, FLW (U.S. Ft.)	-10.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 4.21 #230 - 3.92	2.24	13.40	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.21	0.21
#7	-1.50	2.80	0.00	0.21
#10	-1.00	2.00	0.04	0.25
#14	-0.50	1.40	0.10	0.35
#18	0.00	1.00	0.12	0.47
#25	0.50	0.71	0.21	0.68
#35	1.00	0.50	0.43	1.11
#45	1.50	0.36	0.84	1.95
#60	2.00	0.25	2.26	4.21
#80	2.50	0.18	10.19	14.40
#120	3.00	0.13	55.47	69.87
#170	3.50	0.09	24.09	93.96
#200	3.75	0.08	1.83	95.79
#230	4.00	0.06	0.29	96.08

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.64	3.29	3.11	2.82	2.60	2.51	2.04

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.77	0.15	2.82	0.14	0.51	-3.41	27.17

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-11 @ 7.5 ft

Analysis Date: 10/23/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,284	1,253,065	State Plane, FLW (U.S. Ft.)	-13.7 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 2.06 #230 - 1.76	0.68	8.20	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.02	0.02
#14	-0.50	1.40	0.02	0.04
#18	0.00	1.00	0.00	0.04
#25	0.50	0.71	0.03	0.07
#35	1.00	0.50	0.06	0.13
#45	1.50	0.36	0.19	0.32
#60	2.00	0.25	0.90	1.22
#80	2.50	0.18	10.43	11.65
#120	3.00	0.13	64.85	76.50
#170	3.50	0.09	19.68	96.18
#200	3.75	0.08	1.76	97.94
#230	4.00	0.06	0.30	98.24

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.47	3.19	2.99	2.80	2.60	2.53	2.18

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.80	0.14	2.80	0.14	0.34	-0.94	12.31

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-11 @ 10.8 ft

Analysis Date: 10/20/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,284	1,253,065	State Plane, FLW (U.S. Ft.)	-17.0 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 73.49 #230 - 72.82	4.83	12.34	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#25	0.50	0.71	0.00	0.00
#35	1.00	0.50	0.02	0.02
#45	1.50	0.36	0.06	0.08
#60	2.00	0.25	0.31	0.39
#80	2.50	0.18	2.69	3.08
#120	3.00	0.13	15.00	18.08
#170	3.50	0.09	7.19	25.27
#200	3.75	0.08	1.24	26.51
#230	4.00	0.06	0.67	27.18

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
				3.48	2.93	2.56

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.88	0.14			0.4	-0.07	4.32

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-12-R @ 0.7 ft

Analysis Date: 10/23/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,968	1,252,754	State Plane, FLW (U.S. Ft.)	-5.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 0.00 #230 - 0.00	0.55	9.60	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#10	-1.00	2.00	0.00	0.00
#14	-0.50	1.40	0.04	0.04
#18	0.00	1.00	0.01	0.05
#25	0.50	0.71	0.09	0.14
#35	1.00	0.50	0.30	0.44
#45	1.50	0.36	1.30	1.74
#60	2.00	0.25	7.15	8.89
#80	2.50	0.18	44.68	53.57
#120	3.00	0.13	42.09	95.66
#170	3.50	0.09	4.28	99.94
#200	3.75	0.08	0.06	100.00
#230	4.00	0.06	0.00	100.00

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.99	2.86	2.75	2.46	2.18	2.08	1.73

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.45	0.18	2.46	0.18	0.39	-0.89	6.6

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-12-R @ 3.3 ft

Analysis Date: 10/23/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,968	1,252,754	State Plane, FLW (U.S. Ft.)	-7.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 0.03 #230 - 0.00	0.47	13.50	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.48	0.48
#4	-2.25	4.75	0.00	0.48
#5	-2.00	4.00	0.00	0.48
#7	-1.50	2.80	0.35	0.83
#10	-1.00	2.00	0.27	1.10
#14	-0.50	1.40	0.35	1.45
#18	0.00	1.00	0.29	1.74
#25	0.50	0.71	0.38	2.12
#35	1.00	0.50	0.78	2.90
#45	1.50	0.36	2.00	4.90
#60	2.00	0.25	10.30	15.20
#80	2.50	0.18	40.84	56.04
#120	3.00	0.13	40.32	96.36
#170	3.50	0.09	3.55	99.91
#200	3.75	0.08	0.06	99.97
#230	4.00	0.06	0.03	100.00

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.98	2.85	2.74	2.43	2.12	2.01	1.50

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.33	0.20	2.43	0.19	0.71	-4.1	28.44

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-12-R @ 6.6 ft

Analysis Date: 10/18/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,968	1,252,754	State Plane, FLW (U.S. Ft.)	-11.2 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 1.20 #230 - 1.07	0.58	16.97	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.08	0.08
#5	-2.00	4.00	0.00	0.08
#7	-1.50	2.80	0.22	0.30
#10	-1.00	2.00	0.16	0.46
#14	-0.50	1.40	0.30	0.76
#18	0.00	1.00	0.47	1.23
#25	0.50	0.71	0.77	2.00
#35	1.00	0.50	1.50	3.50
#45	1.50	0.36	2.66	6.16
#60	2.00	0.25	7.22	13.38
#80	2.50	0.18	22.35	35.73
#120	3.00	0.13	40.64	76.37
#170	3.50	0.09	21.18	97.55
#200	3.75	0.08	1.25	98.80
#230	4.00	0.06	0.13	98.93

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.44	3.18	2.98	2.68	2.26	2.06	1.28

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.55	0.17	2.68	0.16	0.7	-2.19	11.32

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-13 @ 0.7 ft

Analysis Date: 10/23/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,079	1,250,531	State Plane, FLW (U.S. Ft.)	-10.2 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 0.07 #230 - 0.01	0.53	8.14	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.30	0.30
#14	-0.50	1.40	0.51	0.81
#18	0.00	1.00	0.52	1.33
#25	0.50	0.71	0.73	2.06
#35	1.00	0.50	1.10	3.16
#45	1.50	0.36	1.74	4.90
#60	2.00	0.25	3.94	8.84
#80	2.50	0.18	16.20	25.04
#120	3.00	0.13	60.02	85.06
#170	3.50	0.09	14.30	99.36
#200	3.75	0.08	0.57	99.93
#230	4.00	0.06	0.06	99.99

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.35	2.99	2.92	2.71	2.50	2.22	1.51

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.59	0.17	2.71	0.15	0.62	-2.82	14.31

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-13 @ 2.3 ft

Analysis Date: 10/20/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,079	1,250,531	State Plane, FLW (U.S. Ft.)	-11.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 0.03 #230 - 0.00	0.60	7.42	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.04	0.04
#10	-1.00	2.00	0.19	0.23
#14	-0.50	1.40	0.23	0.46
#18	0.00	1.00	0.32	0.78
#25	0.50	0.71	0.45	1.23
#35	1.00	0.50	0.70	1.93
#45	1.50	0.36	1.07	3.00
#60	2.00	0.25	2.63	5.63
#80	2.50	0.18	11.71	17.34
#120	3.00	0.13	63.98	81.32
#170	3.50	0.09	18.09	99.41
#200	3.75	0.08	0.56	99.97
#230	4.00	0.06	0.03	100.00

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.38	3.07	2.95	2.76	2.56	2.44	1.88

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.69	0.15	2.76	0.15	0.53	-3.22	19.84

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-13 @ 4.3 ft

Analysis Date: 10/23/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,079	1,250,531	State Plane, FLW (U.S. Ft.)	-13.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 1.73 #230 - 1.51	0.64	5.90	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.02	0.02
#14	-0.50	1.40	0.02	0.04
#18	0.00	1.00	0.02	0.06
#25	0.50	0.71	0.02	0.08
#35	1.00	0.50	0.05	0.13
#45	1.50	0.36	0.10	0.23
#60	2.00	0.25	0.35	0.58
#80	2.50	0.18	4.85	5.43
#120	3.00	0.13	57.35	62.78
#170	3.50	0.09	33.30	96.08
#200	3.75	0.08	2.19	98.27
#230	4.00	0.06	0.22	98.49

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.48	3.32	3.18	2.89	2.67	2.59	2.46

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.91	0.13	2.89	0.13	0.33	-1.19	14.81

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-14 @ 0.7 ft

Analysis Date: 10/23/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,533	1,250,888	State Plane, FLW (U.S. Ft.)	-7.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 0.10 #230 - 0.02	0.71	4.56	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.06	0.06
#7	-1.50	2.80	0.00	0.06
#10	-1.00	2.00	0.03	0.09
#14	-0.50	1.40	0.06	0.15
#18	0.00	1.00	0.06	0.21
#25	0.50	0.71	0.11	0.32
#35	1.00	0.50	0.22	0.54
#45	1.50	0.36	0.38	0.92
#60	2.00	0.25	1.13	2.05
#80	2.50	0.18	7.34	9.39
#120	3.00	0.13	68.36	77.75
#170	3.50	0.09	21.37	99.12
#200	3.75	0.08	0.78	99.90
#230	4.00	0.06	0.08	99.98

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.40	3.15	2.98	2.80	2.61	2.55	2.20

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.80	0.14	2.80	0.14	0.38	-3.39	34.66

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-14 @ 3.3 ft

Analysis Date: 10/18/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,533	1,250,888	State Plane, FLW (U.S. Ft.)	-10.0 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 0.03 #230 - 0.03	0.58	9.03	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.08	0.08
#10	-1.00	2.00	0.09	0.17
#14	-0.50	1.40	0.14	0.31
#18	0.00	1.00	0.27	0.58
#25	0.50	0.71	0.56	1.14
#35	1.00	0.50	1.00	2.14
#45	1.50	0.36	1.66	3.80
#60	2.00	0.25	4.76	8.56
#80	2.50	0.18	19.56	28.12
#120	3.00	0.13	61.42	89.54
#170	3.50	0.09	10.22	99.76
#200	3.75	0.08	0.21	99.97
#230	4.00	0.06	0.00	99.97

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.27	2.95	2.88	2.68	2.42	2.19	1.63

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.58	0.17	2.68	0.16	0.53	-2.69	15.39

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-14 @ 6.6 ft

Analysis Date: 10/23/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,533	1,250,888	State Plane, FLW (U.S. Ft.)	-13.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 3.01 #230 - 2.71	0.84	5.84	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.05	0.05
#14	-0.50	1.40	0.03	0.08
#18	0.00	1.00	0.03	0.11
#25	0.50	0.71	0.05	0.16
#35	1.00	0.50	0.07	0.23
#45	1.50	0.36	0.13	0.36
#60	2.00	0.25	0.47	0.83
#80	2.50	0.18	4.47	5.30
#120	3.00	0.13	50.70	56.00
#170	3.50	0.09	38.01	94.01
#200	3.75	0.08	2.98	96.99
#230	4.00	0.06	0.30	97.29

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.58	3.37	3.25	2.94	2.69	2.61	2.47

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.94	0.13	2.94	0.13	0.36	-1.93	19.98

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-14 @ 8.2 ft

Analysis Date: 10/18/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,533	1,250,888	State Plane, FLW (U.S. Ft.)	-14.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 5.17 #230 - 4.52	1.22	7.26	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.07	0.07
#14	-0.50	1.40	0.18	0.25
#18	0.00	1.00	0.18	0.43
#25	0.50	0.71	0.11	0.54
#35	1.00	0.50	0.16	0.70
#45	1.50	0.36	0.20	0.90
#60	2.00	0.25	0.56	1.46
#80	2.50	0.18	3.22	4.68
#120	3.00	0.13	37.19	41.87
#170	3.50	0.09	48.34	90.21
#200	3.75	0.08	4.62	94.83
#230	4.00	0.06	0.65	95.48

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.82	3.44	3.34	3.08	2.77	2.65	2.50

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	3.01	0.12	3.08	0.12	0.44	-3.41	27.2

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-14 @ 10.8 ft

Analysis Date: 10/20/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,533	1,250,888	State Plane, FLW (U.S. Ft.)	-17.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 21.57 #230 - 21.08	3.88	63.02	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	3.30	3.30
#4	-2.25	4.75	2.29	5.59
#5	-2.00	4.00	4.39	9.98
#7	-1.50	2.80	9.99	19.97
#10	-1.00	2.00	9.12	29.09
#14	-0.50	1.40	7.23	36.32
#18	0.00	1.00	4.12	40.44
#25	0.50	0.71	3.02	43.46
#35	1.00	0.50	2.62	46.08
#45	1.50	0.36	2.27	48.35
#60	2.00	0.25	3.25	51.60
#80	2.50	0.18	5.87	57.47
#120	3.00	0.13	9.28	66.75
#170	3.50	0.09	9.78	76.53
#200	3.75	0.08	1.90	78.43
#230	4.00	0.06	0.49	78.92

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
		3.42	1.75	-1.22	-1.70	-2.31

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.37	0.77	1.75	0.30	2.13	0.08	1.57

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-14 @ 17.1 ft

Analysis Date: 10/18/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,533	1,250,888	State Plane, FLW (U.S. Ft.)	-23.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 32.43 #230 - 27.81	3.48	30.62	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	1.17	1.17
#4	-2.25	4.75	0.59	1.76
#5	-2.00	4.00	1.50	3.26
#7	-1.50	2.80	1.69	4.95
#10	-1.00	2.00	1.04	5.99
#14	-0.50	1.40	1.63	7.62
#18	0.00	1.00	1.89	9.51
#25	0.50	0.71	1.82	11.33
#35	1.00	0.50	1.56	12.89
#45	1.50	0.36	1.56	14.45
#60	2.00	0.25	2.73	17.18
#80	2.50	0.18	6.83	24.01
#120	3.00	0.13	14.69	38.70
#170	3.50	0.09	21.78	60.48
#200	3.75	0.08	7.09	67.57
#230	4.00	0.06	4.62	72.19

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
			3.26	2.53	1.78	-1.48

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.27	0.21	3.26	0.10	1.7	-1.67	4.9

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-15 @ 0.7 ft

Analysis Date: 10/23/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,213	1,251,284	State Plane, FLW (U.S. Ft.)	-7.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 0.06 #230 - 0.01	0.54	4.13	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.02	0.02
#14	-0.50	1.40	0.05	0.07
#18	0.00	1.00	0.05	0.12
#25	0.50	0.71	0.10	0.22
#35	1.00	0.50	0.14	0.36
#45	1.50	0.36	0.27	0.63
#60	2.00	0.25	1.08	1.71
#80	2.50	0.18	11.79	13.50
#120	3.00	0.13	66.85	80.35
#170	3.50	0.09	18.83	99.18
#200	3.75	0.08	0.76	99.94
#230	4.00	0.06	0.05	99.99

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.39	3.10	2.96	2.77	2.59	2.52	2.14

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.77	0.15	2.77	0.15	0.35	-1.96	18.05

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-15 @ 3.3 ft

Analysis Date: 10/23/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,213	1,251,284	State Plane, FLW (U.S. Ft.)	-9.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 0.08 #230 - 0.05	0.61	13.94	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.58	0.58
#4	-2.25	4.75	0.06	0.64
#5	-2.00	4.00	0.05	0.69
#7	-1.50	2.80	0.16	0.85
#10	-1.00	2.00	0.09	0.94
#14	-0.50	1.40	0.17	1.11
#18	0.00	1.00	0.23	1.34
#25	0.50	0.71	0.34	1.68
#35	1.00	0.50	0.67	2.35
#45	1.50	0.36	1.18	3.53
#60	2.00	0.25	3.83	7.36
#80	2.50	0.18	19.72	27.08
#120	3.00	0.13	62.68	89.76
#170	3.50	0.09	10.00	99.76
#200	3.75	0.08	0.16	99.92
#230	4.00	0.06	0.03	99.95

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.26	2.95	2.88	2.68	2.45	2.22	1.69

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.56	0.17	2.68	0.16	0.7	-5.07	38.58

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-15 @ 6.6 ft

Analysis Date: 10/23/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,213	1,251,284	State Plane, FLW (U.S. Ft.)	-13.2 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 4.88 #230 - 4.40	0.89	7.30	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.08	0.08
#10	-1.00	2.00	0.20	0.28
#14	-0.50	1.40	0.15	0.43
#18	0.00	1.00	0.15	0.58
#25	0.50	0.71	0.13	0.71
#35	1.00	0.50	0.18	0.89
#45	1.50	0.36	0.30	1.19
#60	2.00	0.25	0.78	1.97
#80	2.50	0.18	4.28	6.25
#120	3.00	0.13	39.32	45.57
#170	3.50	0.09	45.20	90.77
#200	3.75	0.08	4.35	95.12
#230	4.00	0.06	0.48	95.60

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.74	3.43	3.33	3.05	2.74	2.62	2.35

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.97	0.13	3.05	0.12	0.49	-3.86	30.53

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-15 @ 9.8 ft

Analysis Date: 10/23/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,213	1,251,284	State Plane, FLW (U.S. Ft.)	-16.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW		#200 - 4.03 #230 - 3.60	2.21	41.27	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	3.07	3.07
#4	-2.25	4.75	2.04	5.11
#5	-2.00	4.00	1.23	6.34
#7	-1.50	2.80	5.26	11.60
#10	-1.00	2.00	6.44	18.04
#14	-0.50	1.40	5.88	23.92
#18	0.00	1.00	4.95	28.87
#25	0.50	0.71	4.58	33.45
#35	1.00	0.50	5.33	38.78
#45	1.50	0.36	5.18	43.96
#60	2.00	0.25	7.27	51.23
#80	2.50	0.18	11.01	62.24
#120	3.00	0.13	14.51	76.75
#170	3.50	0.09	16.60	93.35
#200	3.75	0.08	2.62	95.97
#230	4.00	0.06	0.43	96.40

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.66	3.22	2.94	1.92	-0.39	-1.16	-2.26

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.18	0.44	1.92	0.26	1.94	-0.63	2.21

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP08-15 @ 11.5 ft

Analysis Date: 10/20/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,213	1,251,284	State Plane, FLW (U.S. Ft.)	-18.1 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 21.37 #230 - 20.76	2.24	25.99	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	1.72	1.72
#4	-2.25	4.75	2.12	3.84
#5	-2.00	4.00	0.83	4.67
#7	-1.50	2.80	1.99	6.66
#10	-1.00	2.00	2.24	8.90
#14	-0.50	1.40	2.79	11.69
#18	0.00	1.00	1.96	13.65
#25	0.50	0.71	1.26	14.91
#35	1.00	0.50	1.04	15.95
#45	1.50	0.36	1.01	16.96
#60	2.00	0.25	2.02	18.98
#80	2.50	0.18	7.69	26.67
#120	3.00	0.13	26.12	52.79
#170	3.50	0.09	22.13	74.92
#200	3.75	0.08	3.71	78.63
#230	4.00	0.06	0.61	79.24

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
		3.51	2.95	2.39	1.02	-1.92

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.04	0.24	2.95	0.13	1.79	-1.59	4.29

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP09-13R @ 1.6 ft

Analysis Date: 4/17/2009

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,088	1,250,572	State Plane, FLW (U.S. Ft.)	-11.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 1.23 #230 - 0.58	0.18	9.32	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.24	0.24
#14	-0.50	1.40	0.26	0.50
#18	0.00	1.00	0.36	0.86
#25	0.50	0.71	0.40	1.26
#35	1.00	0.50	0.53	1.79
#45	1.50	0.36	0.61	2.40
#60	2.00	0.25	0.91	3.31
#80	2.50	0.18	2.31	5.62
#120	3.00	0.13	12.98	18.60
#170	3.50	0.09	62.33	80.93
#200	3.75	0.08	17.84	98.77
#230	4.00	0.06	0.65	99.42

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.70	3.54	3.45	3.25	3.05	2.90	2.37

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	3.15	0.11	3.25	0.11	0.57	-4.05	24.86

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP09-13R @ 4.4 ft

Analysis Date: 4/17/2009

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,088	1,250,572	State Plane, FLW (U.S. Ft.)	-14.2 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 8.32 #230 - 4.16	0.71	11.90	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.21	0.21
#5	-2.00	4.00	0.00	0.21
#7	-1.50	2.80	0.34	0.55
#10	-1.00	2.00	0.76	1.31
#14	-0.50	1.40	0.81	2.12
#18	0.00	1.00	1.21	3.33
#25	0.50	0.71	0.83	4.16
#35	1.00	0.50	0.69	4.85
#45	1.50	0.36	0.73	5.58
#60	2.00	0.25	0.71	6.29
#80	2.50	0.18	1.48	7.77
#120	3.00	0.13	5.05	12.82
#170	3.50	0.09	38.09	50.91
#200	3.75	0.08	40.77	91.68
#230	4.00	0.06	4.16	95.84

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.95	3.70	3.65	3.49	3.16	3.04	1.10

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	3.18	0.11	3.49	0.09	0.94	-3.49	15.62

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP09-13R @ 5.9 ft

Analysis Date: 4/17/2009

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,088	1,250,572	State Plane, FLW (U.S. Ft.)	-15.7 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 9.21 #230 - 6.89	0.48	12.73	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.47	0.47
#7	-1.50	2.80	0.27	0.74
#10	-1.00	2.00	0.65	1.39
#14	-0.50	1.40	0.91	2.30
#18	0.00	1.00	1.00	3.30
#25	0.50	0.71	0.78	4.08
#35	1.00	0.50	0.70	4.78
#45	1.50	0.36	0.65	5.43
#60	2.00	0.25	0.58	6.01
#80	2.50	0.18	0.74	6.75
#120	3.00	0.13	5.82	12.57
#170	3.50	0.09	50.72	63.29
#200	3.75	0.08	27.50	90.79
#230	4.00	0.06	2.32	93.11

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.69	3.61	3.37	3.12	3.03	1.17

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	3.12	0.12	3.37	0.10	0.93	-3.63	16.55

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP09-13R @ 8.01 ft

Analysis Date: 4/17/2009

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,088	1,250,572	State Plane, FLW (U.S. Ft.)	-17.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 25.85 #230 - 20.66	0.39	22.99	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.64	0.64
#5	-2.00	4.00	0.82	1.46
#7	-1.50	2.80	1.08	2.54
#10	-1.00	2.00	2.18	4.72
#14	-0.50	1.40	2.22	6.94
#18	0.00	1.00	2.73	9.67
#25	0.50	0.71	1.99	11.66
#35	1.00	0.50	1.75	13.41
#45	1.50	0.36	1.45	14.86
#60	2.00	0.25	1.61	16.47
#80	2.50	0.18	3.28	19.75
#120	3.00	0.13	8.84	28.59
#170	3.50	0.09	21.81	50.40
#200	3.75	0.08	23.75	74.15
#230	4.00	0.06	5.19	79.34

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
		3.79	3.49	2.80	1.85	-0.94

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.58	0.17	3.49	0.09	1.58	-1.65	4.5

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP09-3 @ 1.3 ft

Analysis Date: 4/17/2009

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
399,967	1,250,831	State Plane, FLW (U.S. Ft.)	-13.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW		#200 - 1.13 #230 - 0.87	0.13	25.08	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.28	0.28
#7	-1.50	2.80	0.18	0.46
#10	-1.00	2.00	0.57	1.03
#14	-0.50	1.40	1.28	2.31
#18	0.00	1.00	2.16	4.47
#25	0.50	0.71	2.62	7.09
#35	1.00	0.50	3.01	10.10
#45	1.50	0.36	3.61	13.71
#60	2.00	0.25	4.38	18.09
#80	2.50	0.18	8.99	27.08
#120	3.00	0.13	23.38	50.46
#170	3.50	0.09	39.98	90.44
#200	3.75	0.08	8.43	98.87
#230	4.00	0.06	0.26	99.13

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.64	3.42	3.31	2.99	2.38	1.76	0.10

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.60	0.16	2.99	0.13	1.06	-1.84	6.14

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP09-3 @ 4.1 ft

Analysis Date: 4/17/2009

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
399,967	1,250,831	State Plane, FLW (U.S. Ft.)	-16.2 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 12.25 #230 - 9.66	0.15	10.84	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.36	0.36
#7	-1.50	2.80	0.34	0.70
#10	-1.00	2.00	0.50	1.20
#14	-0.50	1.40	0.60	1.80
#18	0.00	1.00	0.66	2.46
#25	0.50	0.71	0.56	3.02
#35	1.00	0.50	0.57	3.59
#45	1.50	0.36	0.68	4.27
#60	2.00	0.25	0.87	5.14
#80	2.50	0.18	1.63	6.77
#120	3.00	0.13	6.32	13.09
#170	3.50	0.09	41.13	54.22
#200	3.75	0.08	33.53	87.75
#230	4.00	0.06	2.59	90.34

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.72	3.65	3.45	3.14	3.04	1.92

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	3.17	0.11	3.45	0.09	0.87	-3.82	19.01

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP09-3 @ 6.6 ft

Analysis Date: 4/17/2009

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
399,967	1,250,831	State Plane, FLW (U.S. Ft.)	-18.7 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 5.03 #230 - 3.86	0.78	74.72	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	3.32	3.32
#4	-2.25	4.75	5.10	8.42
#5	-2.00	4.00	2.42	10.84
#7	-1.50	2.80	5.01	15.85
#10	-1.00	2.00	8.18	24.03
#14	-0.50	1.40	10.56	34.59
#18	0.00	1.00	11.97	46.56
#25	0.50	0.71	10.19	56.75
#35	1.00	0.50	10.04	66.79
#45	1.50	0.36	9.89	76.68
#60	2.00	0.25	4.14	80.82
#80	2.50	0.18	2.26	83.08
#120	3.00	0.13	2.98	86.06
#170	3.50	0.09	4.04	90.10
#200	3.75	0.08	4.87	94.97
#230	4.00	0.06	1.17	96.14

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.76	2.65	1.42	0.17	-0.95	-1.49	-2.42

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.23	0.85	0.17	0.89	1.64	0.59	2.63

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP09-4 @ 1.3 ft

Analysis Date: 4/17/2009

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,485	1,250,293	State Plane, FLW (U.S. Ft.)	-13.1 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 1.91 #230 - 1.17	0.25	9.62	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.00	0.00
#14	-0.50	1.40	0.00	0.00
#18	0.00	1.00	0.06	0.06
#25	0.50	0.71	0.12	0.18
#35	1.00	0.50	0.20	0.38
#45	1.50	0.36	0.30	0.68
#60	2.00	0.25	0.51	1.19
#80	2.50	0.18	1.69	2.88
#120	3.00	0.13	10.67	13.55
#170	3.50	0.09	58.53	72.08
#200	3.75	0.08	26.01	98.09
#230	4.00	0.06	0.74	98.83

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.72	3.61	3.53	3.31	3.10	3.02	2.60

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	3.26	0.10	3.31	0.10	0.37	-2.91	19.64

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP09-4 @ 3.3 ft

Analysis Date: 4/17/2009

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,485	1,250,293	State Plane, FLW (U.S. Ft.)	-15.1 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 4.03 #230 - 2.28	0.12	8.90	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.13	0.13
#10	-1.00	2.00	0.16	0.29
#14	-0.50	1.40	0.09	0.38
#18	0.00	1.00	0.13	0.51
#25	0.50	0.71	0.14	0.65
#35	1.00	0.50	0.19	0.84
#45	1.50	0.36	0.28	1.12
#60	2.00	0.25	0.34	1.46
#80	2.50	0.18	1.03	2.49
#120	3.00	0.13	7.12	9.61
#170	3.50	0.09	55.96	65.57
#200	3.75	0.08	30.40	95.97
#230	4.00	0.06	1.75	97.72

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.74	3.65	3.58	3.36	3.14	3.06	2.68

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	3.29	0.10	3.36	0.10	0.47	-5.43	47.64

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP09-4 @ 5.2 ft

Analysis Date: 4/17/2009

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,485	1,250,293	State Plane, FLW (U.S. Ft.)	-17.0 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 16.38 #230 - 9.52	0.43	8.56	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.05	0.05
#7	-1.50	2.80	0.00	0.05
#10	-1.00	2.00	0.37	0.42
#14	-0.50	1.40	0.14	0.56
#18	0.00	1.00	0.18	0.74
#25	0.50	0.71	0.20	0.94
#35	1.00	0.50	0.18	1.12
#45	1.50	0.36	0.27	1.39
#60	2.00	0.25	0.50	1.89
#80	2.50	0.18	1.22	3.11
#120	3.00	0.13	2.77	5.88
#170	3.50	0.09	29.44	35.32
#200	3.75	0.08	48.30	83.62
#230	4.00	0.06	6.86	90.48

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.76	3.71	3.58	3.32	3.17	2.84

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	3.41	0.09	3.58	0.08	0.55	-5.31	39.94

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP09-4 @ 8.2 ft

Analysis Date: 4/17/2009

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
400,485	1,250,293	State Plane, FLW (U.S. Ft.)	-20.0 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 24.49 #230 - 20.32	0.70	47.62	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	1.16	1.16
#5	-2.00	4.00	1.49	2.65
#7	-1.50	2.80	2.69	5.34
#10	-1.00	2.00	6.33	11.67
#14	-0.50	1.40	5.92	17.59
#18	0.00	1.00	5.47	23.06
#25	0.50	0.71	4.01	27.07
#35	1.00	0.50	3.39	30.46
#45	1.50	0.36	3.05	33.51
#60	2.00	0.25	2.65	36.16
#80	2.50	0.18	3.83	39.99
#120	3.00	0.13	7.86	47.85
#170	3.50	0.09	12.82	60.67
#200	3.75	0.08	14.84	75.51
#230	4.00	0.06	4.17	79.68

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
		3.74	3.08	0.24	-0.63	-1.56

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.63	0.32	3.08	0.12	1.98	-0.49	1.72

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP09-6 @ 1.6 ft

Analysis Date: 4/17/2009

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,229	1,250,167	State Plane, FLW (U.S. Ft.)	-11.1 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 1.52 #230 - 0.68	0.16	9.06	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.05	0.05
#7	-1.50	2.80	0.00	0.05
#10	-1.00	2.00	0.07	0.12
#14	-0.50	1.40	0.14	0.26
#18	0.00	1.00	0.38	0.64
#25	0.50	0.71	0.43	1.07
#35	1.00	0.50	0.61	1.68
#45	1.50	0.36	0.93	2.61
#60	2.00	0.25	1.25	3.86
#80	2.50	0.18	2.52	6.38
#120	3.00	0.13	9.63	16.01
#170	3.50	0.09	57.41	73.42
#200	3.75	0.08	25.06	98.48
#230	4.00	0.06	0.84	99.32

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.72	3.61	3.52	3.30	3.08	3.00	2.23

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	3.19	0.11	3.30	0.10	0.57	-3.69	21.7

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP09-6 @ 4.3 ft

Analysis Date: 4/17/2009

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,229	1,250,167	State Plane, FLW (U.S. Ft.)	-13.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 3.65 #230 - 1.78	0.35	7.01	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.10	0.10
#14	-0.50	1.40	0.02	0.12
#18	0.00	1.00	0.06	0.18
#25	0.50	0.71	0.06	0.24
#35	1.00	0.50	0.08	0.32
#45	1.50	0.36	0.12	0.44
#60	2.00	0.25	0.20	0.64
#80	2.50	0.18	0.84	1.48
#120	3.00	0.13	7.30	8.78
#170	3.50	0.09	56.36	65.14
#200	3.75	0.08	31.21	96.35
#230	4.00	0.06	1.87	98.22

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.74	3.65	3.58	3.37	3.14	3.06	2.74

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	3.32	0.10	3.37	0.10	0.35	-4.48	47.01

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP09-6 @ 6.6 ft

Analysis Date: 4/17/2009

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,229	1,250,167	State Plane, FLW (U.S. Ft.)	-16.1 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 6.89 #230 - 2.68	0.14	6.84	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.05	0.05
#14	-0.50	1.40	0.04	0.09
#18	0.00	1.00	0.08	0.17
#25	0.50	0.71	0.06	0.23
#35	1.00	0.50	0.08	0.31
#45	1.50	0.36	0.11	0.42
#60	2.00	0.25	0.17	0.59
#80	2.50	0.18	0.44	1.03
#120	3.00	0.13	2.81	3.84
#170	3.50	0.09	47.95	51.79
#200	3.75	0.08	41.32	93.11
#230	4.00	0.06	4.21	97.32

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.86	3.69	3.64	3.48	3.22	3.13	3.01

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	3.40	0.09	3.48	0.09	0.33	-4.89	53.4

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Johns Pass
Pinellas County SPP

Sample Name: JP09-6 @ 8.9 ft

Analysis Date: 4/17/2009

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
401,229	1,250,167	State Plane, FLW (U.S. Ft.)	-18.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 21.19 #230 - 18.07	0.83	30.58	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.12	0.12
#7	-1.50	2.80	0.89	1.01
#10	-1.00	2.00	0.80	1.81
#14	-0.50	1.40	1.74	3.55
#18	0.00	1.00	2.78	6.33
#25	0.50	0.71	3.51	9.84
#35	1.00	0.50	3.97	13.81
#45	1.50	0.36	5.65	19.46
#60	2.00	0.25	6.75	26.21
#80	2.50	0.18	8.23	34.44
#120	3.00	0.13	11.34	45.78
#170	3.50	0.09	16.81	62.59
#200	3.75	0.08	16.22	78.81
#230	4.00	0.06	3.12	81.93

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
		3.69	3.13	1.91	1.19	-0.24

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.36	0.19	3.13	0.11	1.34	-1.08	3.41

GRANULARMETRIC REPORT % JOHNSPASS08_09_RELOG_NEW_TEMPLATEXX.GPJ CESAJ 20171021.GDT 5/16/20

7.3 BLIND PASS

- Boring Logs
- Gradation Graphs
- Granularmetric Reports

Boring Designation 12

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County Blind Pass
2. BORING DESIGNATION	12
LOCATION COORDINATES	X = 411,251 Y = 1,237,945
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	11.7 Ft.
9. SIZE AND TYPE OF BIT	
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	Custom Rig
☐ AUTO HAMMER ☐ MANUAL HAMMER	
12. TOTAL SAMPLES	DISTURBED 3 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 11-10-07 / COMPLETED 11-10-07
16. ELEVATION TOP OF BORING	-5.4 Ft.
17. TOTAL RECOVERY FOR BORING	86 %
18. SIGNATURE AND TITLE OF INSPECTOR	Barbara Nist, Geologist

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-5.4	0.0						-5.4		
			SAND, poorly-graded, mostly rounded fine-grained sand-sized quartz, little subangular fine to coarse-grained sand-sized shell, trace fine gravel-sized shell, 10YR 8/1 white (SP)	100			Vibracore -6.7		
					1				
			At El. -7.9 Ft., some subangular fine to coarse-grained sand-sized shell, 10YR 8/1 white	100			Vibracore -10.2		
					2				
			At El. -10.6 Ft., little subangular fine to coarse-grained sand-sized shell, 10YR 8/1 white At El. -11.9 Ft., trace fine to medium-grained sand-sized shell, 10YR 7/1 light gray	100			Vibracore -13.6		
					3				
-15.5	10.1			100			Vibracore -15.5		
-17.1	11.7	NR		0			Vibracore -17.1		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

(Continued)

Boring Designation 12

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville	SHEET 2 OF 2 SHEETS

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 411,251 Y = 1,237,945	-5.4 Ft.

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			SAMPLE ID / SAMPLE DEPTH / LABORATORY CLASSIFICATION 1 / 1.3/1.5 / SP* 2 / 4.8/5.0 / SP* 3 / 8.2/8.4 / SP* *Lab visual classification based on gradation curve						

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Boring Designation 13

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville	SHEET 1 OF 1 SHEETS

1. PROJECT	Pinellas County Blind Pass
2. BORING DESIGNATION	13
LOCATION COORDINATES	X = 411,063 Y = 1,237,844
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	8.3 Ft.
9. SIZE AND TYPE OF BIT	
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	Custom Rig
☐ AUTO HAMMER ☐ MANUAL HAMMER	
12. TOTAL SAMPLES	DISTURBED 4 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 03-23-08 / COMPLETED 03-23-08
16. ELEVATION TOP OF BORING	-4.8 Ft.
17. TOTAL RECOVERY FOR BORING	Not Recorded
18. SIGNATURE AND TITLE OF INSPECTOR	Barbara Nist, Geologist

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-4.8	0.0						-4.8		
			SAND, poorly-graded, mostly rounded fine-grained sand-sized sand, some subangular sand to gravel-sized shell, 10YR 8/1 white (SP)	NR	1		-4.8 Vibracore		
			At El. -6.7 Ft., trace sandstone up to 1	NR			Vibracore		
			At El. -7.3 Ft., discontinue shell				-8.1		
			From El. -8.9 to -9.9 Ft., few silt	NR	2		Vibracore		
-10.7	5.9						-10.7		
-11.1	6.3		SAND, silty, mostly rounded fine-grained sand-sized quartz, some silt, occasional thin bands of sand, 10YR 8/1 white (SM)	NR	3		Vibracore		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine to coarse-grained sand-sized shell, 10YR 8/1 white (SP)				-12.3		
			At El. -11.9 Ft., some silt	NR	4		Vibracore		
-13.1	8.3						-13.1		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	0.1/0.3	SP*
2	3.3/3.5	SP*
3	5.9/6.1	SM*
4	7.5/7.7	SP*

*Lab visual classification based on gradation curve

Abbreviations:

0 5 10 15

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Boring Designation 18

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County Blind Pass
2. BORING DESIGNATION	18
LOCATION COORDINATES	X = 411,124 Y = 1,237,764
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	9.8 Ft.
9. SIZE AND TYPE OF BIT	
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	Custom Rig
☐ AUTO HAMMER ☐ MANUAL HAMMER	
12. TOTAL SAMPLES	DISTURBED 2 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 11-10-07 / COMPLETED 11-10-07
16. ELEVATION TOP OF BORING	-5.8 Ft.
17. TOTAL RECOVERY FOR BORING	Not Recorded
18. SIGNATURE AND TITLE OF INSPECTOR	Barbara Nist, Geologist

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-5.8	0.0						-5.8		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to coarse-grained sand-sized shell, 10YR 8/1 white (SP)	NR			Vibracore -7.4		
					1				
			From El. -9.4 to -10.9 Ft., some fine to coarse-grained sand-sized shell At El. -10.9 Ft., discontinue shell	NR			Vibracore -13.0		
					2				
			From El. -13.8 to -14.1 Ft., some fine to coarse-grained sand-sized shell At El. -14.1 Ft., discontinue shell	NR			Vibracore		
-15.6	9.8						-15.6		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.6/1.8	SP*
2	7.2/7.4	SP*

Abbreviations:

0 5 10 15

(Continued)

SAJ FORM 1836
JUN 02

Boring Designation 18

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 411,124 Y = 1,237,764	ELEVATION TOP OF BORING -5.8 Ft.		

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			*Lab visual classification based on gradation curve						

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SAJ FORM 1836-A
JUN 02

Boring Designation 24

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County Blind Pass
2. BORING DESIGNATION	24
LOCATION COORDINATES	X = 411,819 Y = 1,238,305
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	12.4 Ft.
9. SIZE AND TYPE OF BIT	
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	Custom Rig
☐ AUTO HAMMER ☐ MANUAL HAMMER	
12. TOTAL SAMPLES	DISTURBED 3 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 11-10-07 / COMPLETED 11-10-07
16. ELEVATION TOP OF BORING	-4.7 Ft.
17. TOTAL RECOVERY FOR BORING	100 %
18. SIGNATURE AND TITLE OF INSPECTOR	Jase Ousley, Geologist

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-4.7	0.0						-4.7		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace angular coarse-grained sand-sized shell, 10Y 8/1 light greenish gray (SP)	100			Vibracore -5.7		
					1				
			From El. -8.1 to -8.2 Ft., few fine gravel-sized shell	100			Vibracore		
			At El. -10.5 Ft., trace wood debris				-10.6		
					2				
				100			Vibracore		
-13.8	9.1		From El. -13.6 to -13.8 Ft., layer of silt						
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt, 2.5Y 6/1 gray (SP-SM) From El. -14.3 to -14.4 Ft., layer of silt From El. -14.5 to -14.6 Ft., layer of silt From El. -14.7 to -15.4 Ft., layer of silt				-14.2		
					3				
-15.4	10.7			101			Vibracore		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, 10Y 8/1 light greenish gray (SP)						
-17.1	12.4						-17.1		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System

(Continued)

SAJ FORM 1836
JUN 02

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 411,819 Y = 1,238,305	ELEVATION TOP OF BORING -4.7 Ft.		

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			3. Laboratory Testing Results						

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.0/1.2	SP*
2	5.9/6.1	SP*
3	9.5/9.7	SP-SM*

*Lab visual classification based on gradation curve

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SAJ FORM 1836-A
JUN 02

Boring Designation 27

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County Blind Pass
2. BORING DESIGNATION	27
LOCATION COORDINATES	X = 411,983 Y = 1,238,474
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	13.8 Ft.
9. SIZE AND TYPE OF BIT	
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	Custom Rig
☐ AUTO HAMMER ☐ MANUAL HAMMER	
12. TOTAL SAMPLES	DISTURBED 4 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 10-06-07 / COMPLETED 10-06-07
16. ELEVATION TOP OF BORING	-3.0 Ft.
17. TOTAL RECOVERY FOR BORING	89 %
18. SIGNATURE AND TITLE OF INSPECTOR	Jase Ousley, Geologist

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-3.0	0.0						-3.0		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little angular fine gravel-sized shell, 2.5Y 6/1 gray (SP)	100			Vibracore		
			At El. -3.9 Ft., discontinue shell		1		-3.7		
				100			Vibracore		
							-6.0		
					2				
				100			Vibracore		
							-9.2		
					3				
			From El. -10.0 to -10.1 Ft., little silt						
			At El. -10.6 Ft., trace shell up to 1-1/2						
			At El. -11.4 Ft., trace wood debris up to 1	100			Vibracore		
			At El. -12.3 Ft., little silt						
-13.7	10.7								
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt (SP-SM)				-14.3		
			At El. -14.2 Ft., little silt, 2.5Y 8/1 white		4				
-15.2	12.2								
		NR		36			Vibracore		
-16.8	13.8						-16.8		
			NOTES: 1. USACE Jacksonville is the custodian for						

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(Continued)

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DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 411,983 Y = 1,238,474	ELEVATION TOP OF BORING -3.0 Ft.		

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE ID / SAMPLE DEPTH / LABORATORY CLASSIFICATION 1 / 0.7/0.9 / SP-SM* 2 / 3.0/3.2 / SP* 3 / 6.2/6.4 / SP* 4 / 11.3/11.5 / SP-SM* *Lab visual classification based on gradation curve						

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Boring Designation 31

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County Blind Pass
2. BORING DESIGNATION	31
LOCATION COORDINATES	X = 411,754 Y = 1,238,243
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	9.7 Ft.
9. SIZE AND TYPE OF BIT	
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	Custom Rig
☐ AUTO HAMMER ☐ MANUAL HAMMER	
12. TOTAL SAMPLES	DISTURBED 2 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 11-11-07 / COMPLETED 11-11-07
16. ELEVATION TOP OF BORING	-5.1 Ft.
17. TOTAL RECOVERY FOR BORING	Not Recorded
18. SIGNATURE AND TITLE OF INSPECTOR	Barbara Nist, Geologist

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-5.1	0.0						-5.1		
			SAND, poorly-graded, mostly rounded fine-grained sand-sized quartz, few fine to coarse-grained sand-sized shell, 10YR 8/1 white (SP) At El. -6.2 Ft., discontinue shell	NR			Vibracore -6.7		
					1				
			From El. -8.1 to -8.9 Ft., some subangular fine to coarse-grained sand-sized shell At El. -8.5 Ft., trace sandstone up to 1	NR			Vibracore -12.0		
					2				
-14.8	9.7			NR			Vibracore -14.8		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.6/1.8	SP*
2	6.9/7.1	SP*

Abbreviations:

(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 411,754 Y = 1,238,243	ELEVATION TOP OF BORING -5.1 Ft.		

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			*Lab visual classification based on gradation curve						

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Boring Designation 34

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County, Blind Pass
2. BORING DESIGNATION	34
LOCATION COORDINATES	X = 411,818 Y = 1,239,485
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	14.1 Ft.
9. SIZE AND TYPE OF BIT	
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	Custom Rig ☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 3 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 06-21-07 / COMPLETED 06-21-07
16. ELEVATION TOP OF BORING	-6.0 Ft.
17. TOTAL RECOVERY FOR BORING	78 %
18. SIGNATURE AND TITLE OF INSPECTOR	Jase Ousley, Geologist

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-6.0	0.0						-6.0		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, some angular fine gravel-sized shell, trace shell up to 1/2 (SP)	100			Vibracore -7.0		
					1				
			At El. -7.8 Ft., discontinue shell	100			Vibracore -9.8		
					2				
			At El. -12.1 Ft., few granite clasts up to 1.5' in dia., (6 clasts- non-native), one oyster 1 dia. shell fragment, 10B 4/1 dark bluish gray	100			Vibracore		
			At El. -13.7 Ft., trace silt						
			At El. -14.6 Ft., some angular fine gravel-sized shell				-14.7		
					3				
-15.7	9.7		SILT, inorganic-L, low plasticity, hard, dry, 2.5Y 7/1 light gray (ML)						
-17.0	11.0	NO RECOVERY		43			Vibracore		
-20.1	14.1						-20.1		
			NOTES:						

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(Continued)

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DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 411,818 Y = 1,239,485	ELEVATION TOP OF BORING -6.0 Ft.		

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			1. USACE Jacksonville is the custodian for these original files.						
			2. Soils are field visually classified in accordance with the Unified Soils Classification System.						
			3. Laboratory Testing Results						

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.0/1.2	SP*
2	3.8/4.0	SP*
3	8.7/8.9	SP*

*Lab visual classification based on gradation curve

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Boring Designation 35

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County Blind Pass
2. BORING DESIGNATION	35
LOCATION COORDINATES	X = 411,898 Y = 1,239,354
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	12.1 Ft.
9. SIZE AND TYPE OF BIT	
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	Custom Rig
☐ AUTO HAMMER ☐ MANUAL HAMMER	
12. TOTAL SAMPLES	DISTURBED 2 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 06-21-07 / COMPLETED 06-21-07
16. ELEVATION TOP OF BORING	-10.4 Ft.
17. TOTAL RECOVERY FOR BORING	85 %
18. SIGNATURE AND TITLE OF INSPECTOR	Barbara Nist, Geologist

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-10.4	0.0						-10.4		
			SAND, poorly-graded, mostly rounded fine-grained sand-sized quartz, little subangular medium to coarse-grained sand-sized shell, 2.5Y 8/1 white (SP)	100			Vibracore -12.4		
				100	1		Vibracore -17.5		
			At El. -16.1 Ft., some subangular medium to coarse-grained sand-sized shell At El. -16.4 Ft., little subangular medium to coarse-grained sand-sized shell At El. -17.4 Ft., some medium to coarse-grained sand-sized shell up to 2		2				
-18.7	8.3								
			SILT, inorganic-L, nonplastic, hard, little subangular fine to medium-grained sand-sized shell, 2.5Y 5/1 gray (ML)	100			Vibracore -20.7		
-20.7	10.3								
		NR		0			Vibracore -22.5		
-22.5	12.1								

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

(Continued)

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DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 411,898 Y = 1,239,354	ELEVATION TOP OF BORING -10.4 Ft.		

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			3. Laboratory Testing Results						

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	2.0/2.2	SP*
2	7.1/7.3	SP*

*Lab visual classification based on gradation curve

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Boring Designation 44

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County, Blind Pass
2. BORING DESIGNATION	44
LOCATION COORDINATES	X = 411,722 Y = 1,238,506
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	13.9 Ft.
9. SIZE AND TYPE OF BIT	
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	Custom Rig
☐ AUTO HAMMER ☐ MANUAL HAMMER	
12. TOTAL SAMPLES	DISTURBED 3 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 10-07-07 / COMPLETED 10-07-07
16. ELEVATION TOP OF BORING	-2.8 Ft.
17. TOTAL RECOVERY FOR BORING	86 %
18. SIGNATURE AND TITLE OF INSPECTOR	Barbara Nist, Geologist

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-2.8	0.0						-2.8		
			SAND, poorly-graded, mostly rounded fine-grained sand-sized quartz, some subangular medium to coarse-grained sand-sized shell, trace fine gravel-sized shell, 10Y 8/1 light greenish gray (SP)	100			Vibracore		
					1		-4.4		
			At El. -5.4 Ft., trace subangular fine to coarse-grained sand-sized shell up to 1, trace shell up to 1, 10YR 8/1 white	100			Vibracore		
							-8.0		
					2				
				100			Vibracore		
-12.2	9.4								
			SAND, silty, nonplastic, mostly rounded fine-grained sand-sized quartz, little silt, 2.5Y 6/1 gray (SM)				-12.6		
					3				
-14.7	11.9			51			Vibracore		
-16.7	13.9	NR					-16.7		
			NOTES:						

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(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville	SHEET 2 OF 2 SHEETS

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 411,722 Y = 1,238,506	-2.8 Ft.

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.6/1.8	SP*
2	5.2/5.4	SP*
3	9.8/10.0	SM*

*Lab visual classification based on gradation curve

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Boring Designation 45

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County Blind Pass
2. BORING DESIGNATION	45
LOCATION COORDINATES	X = 411,614 Y = 1,238,416
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	15.7 Ft.
9. SIZE AND TYPE OF BIT	
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	Custom Rig
☐ AUTO HAMMER ☐ MANUAL HAMMER	
12. TOTAL SAMPLES	DISTURBED 3 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 10-06-07 / COMPLETED 10-06-07
16. ELEVATION TOP OF BORING	-3.7 Ft.
17. TOTAL RECOVERY FOR BORING	86 %
18. SIGNATURE AND TITLE OF INSPECTOR	Jase Ousley, Geologist

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-3.7	0.0						-3.7		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few angular coarse-grained sand-sized shell, trace fine gravel-sized shell, 2.5Y 8/1 white (SP)	100			Vibracore		
					1		-5.3		
			At El. -6.2 Ft., trace shell up to 2 From El. -6.3 to -7.0 Ft., little angular sand to gravel-sized shell At El. -7.2 Ft., trace shell up to 1 At El. -7.7 Ft., trace shell up to 2-1/2						
-10.0	6.3								
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt, few angular coarse-grained sand-sized shell, 10YR 6/1 gray (SP-SM) At El. -10.8 Ft., trace shell up to 1' At El. -11.2 Ft., trace wood debris	100			Vibracore		
-11.8	8.1								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, 2.5Y 5/1 gray (SP) At El. -13.1 Ft., discontinue shell						
-14.0	10.3								
-14.4	10.7		SHELL, mostly fine gravel-sized shell, few fine-grained sand-sized quartz, 10YR 8/2 very pale brown				-14.9		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, 2.5Y 6/1 gray (SP)	100	2		Vibracore		
-16.0	12.3						-16.2		
			SAND, poorly-graded with silt, mostly fine gravel-sized quartz, few silt, 2.5Y 7/1 light gray (SP-SM)		3				
-17.1	13.4								
		NR		29			Vibracore		

(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville	SHEET 2 OF 2 SHEETS

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 411,614 Y = 1,238,416	-3.7 Ft.

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-19.4	15.7	NR		29			-19.4 Vibracore		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.6/1.8	SP*
2	11.2/11.4	SP*
3	12.5/12.7	SM*

*Lab visual classification based on gradation curve

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DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville
SHEET	1 OF 2 SHEETS
1. PROJECT	Pinellas County Blind Pass
2. BORING DESIGNATION	46
LOCATION COORDINATES	X = 411,550 Y = 1,238,316
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	10.9 Ft.
9. SIZE AND TYPE OF BIT	
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	Custom Rig
☐ AUTO HAMMER ☐ MANUAL HAMMER	
12. TOTAL SAMPLES	DISTURBED 2 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 10-06-07 / COMPLETED 10-06-07
16. ELEVATION TOP OF BORING	-3.5 Ft.
17. TOTAL RECOVERY FOR BORING	91 %
18. SIGNATURE AND TITLE OF INSPECTOR	Barbara Nist, Geologist

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-3.5	0.0						-3.5		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few subangular medium to coarse-grained sand-sized shell, 10Y 8/1 light greenish gray (SP)	100			Vibracore -4.8		
					1				
			At El. -6.4 Ft., trace subangular fine to medium-grained sand-sized shell	100			Vibracore -9.1		
					2				
			At El. -11.6 Ft., some medium to coarse-grained sand-sized shell At El. -11.9 Ft., trace subangular fine to medium-grained sand-sized shell	82			Vibracore		
-13.4	9.9								
-14.4	10.9	NR					-14.4		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION

(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 411,550 Y = 1,238,316	ELEVATION TOP OF BORING -3.5 Ft.		

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			----------						
			1 1.3/1.5 SP*						
			2 5.6/5.8 SP*						
			*Lab visual classification based on gradation curve						

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Boring Designation 49

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County Blind Pass
2. BORING DESIGNATION	49
LOCATION COORDINATES	X = 412,072 Y = 1,238,343
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	17.0 Ft.
9. SIZE AND TYPE OF BIT	
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	Custom Rig
☐ AUTO HAMMER ☐ MANUAL HAMMER	
12. TOTAL SAMPLES	DISTURBED 5 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 11-10-07 / COMPLETED 11-10-07
16. ELEVATION TOP OF BORING	-7.6 Ft.
17. TOTAL RECOVERY FOR BORING	79 %
18. SIGNATURE AND TITLE OF INSPECTOR	Jase Ousley, Geologist

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-7.6	0.0						-7.6		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few angular coarse-grained sand-sized shell, 2.5Y 8/1 white (SP)	100			Vibracore		
					1		-9.2		
			At El. -10.4 Ft., trace shell up to 2	100			Vibracore		
			At El. -12.0 Ft., little angular fine gravel-sized shell up to 1				-12.5		
					2				
			At El. -14.4 Ft., few angular coarse-grained sand-sized shell	100			Vibracore		
							-15.8		
					3				
				100			Vibracore		
			At El. -17.5 Ft., some fine gravel-sized shell At El. -17.6 Ft., trace shell up to 1-1/2				-18.1		
					4				
			At El. -18.6 Ft., trace shell up to 2	100			Vibracore		
			At El. -19.6 Ft., mostly fine-grained sand-sized quartz, few silt, trace coarse-grained sand-sized shell, 2.5Y 6/1 gray				-20.4		
					5				
-21.1	13.5		At El. -20.5 Ft., some fine gravel-sized shell						
		NO RECOVERY		17			Vibracore		

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(Continued)

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DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville	SHEET 2 OF 2 SHEETS

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 412,072 Y = 1,238,343	-7.6 Ft.

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-24.6	17.0	NO RECOVERY		17			Vibracore -24.6		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.6/1.8	SP*
2	4.9/5.1	SP*
3	8.2/8.4	SP*
4	10.5/10.7	SP*
5	12.8/13.0	SP-SM*

*Lab visual classification based on gradation curve

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SAJ FORM 1836-A
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Boring Designation 61

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County, Blind Pass
2. BORING DESIGNATION	61
LOCATION COORDINATES	X = 411,882 Y = 1,239,637
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	13.6 Ft.
9. SIZE AND TYPE OF BIT	
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	Custom Rig
☐ AUTO HAMMER ☐ MANUAL HAMMER	
12. TOTAL SAMPLES	DISTURBED 4 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 07-29-07 / COMPLETED 07-29-07
16. ELEVATION TOP OF BORING	-13.2 Ft.
17. TOTAL RECOVERY FOR BORING	86 %
18. SIGNATURE AND TITLE OF INSPECTOR	Jase Ousley, Geologist

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-13.2	0.0						-13.2		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little angular fine gravel-sized shell, 2.5Y 8/1 white (SP)	100			Vibracore		
							-14.5		
			At El. -14.6 Ft., trace angular shell	100	1		Vibracore		
			At El. -16.7 Ft., little angular shell				-17.5		
			At El. -19.0 Ft., trace angular shell	100	2		Vibracore		
			From El. -20.6 to -20.7 Ft., little angular shell						
-21.2	8.0						-21.1		
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt, few angular shell, 2.5Y 6/1 gray (SP-SM)	100	3		Vibracore		
							-22.4		
-23.8	10.6				4				
-24.9	11.7		LIMESTONE, sandy, sparsely fossiliferous, very soft, fine grained, massive bedding, bedding orientation, pitted, broken due to drill action, 2.5Y 5/1 gray	57			Vibracore		
-26.8	13.6	NR					-26.8		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

(Continued)

SAJ FORM 1836
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DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 411,882 Y = 1,239,637	ELEVATION TOP OF BORING -13.2 Ft.		

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			2. Soils are field visually classified in accordance with the Unified Soils Classification System.						
			3. Laboratory Testing Results						

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.3/1.5	SP*
2	4.3/4.5	SP*
3	7.9/8.1	SP-SM*
4	9.2/9.4	SM*

*Lab visual classification based on gradation curve

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SAJ FORM 1836-A
JUN 02

Boring Designation 65

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville	SHEET 1 OF 1 SHEETS

1. PROJECT	Pinellas County Blind Pass
2. BORING DESIGNATION	65
LOCATION COORDINATES	X = 411,971 Y = 1,239,515
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	6.5 Ft.
9. SIZE AND TYPE OF BIT	
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	Custom Rig
☐ AUTO HAMMER ☐ MANUAL HAMMER	
12. TOTAL SAMPLES	DISTURBED 2 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 07-30-07 / COMPLETED 07-30-07
16. ELEVATION TOP OF BORING	-13.6 Ft.
17. TOTAL RECOVERY FOR BORING	85 %
18. SIGNATURE AND TITLE OF INSPECTOR	Troy Mayhew, Geologist

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-13.6	0.0						-13.6		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, some subangular sand to gravel-sized shell, 2.5Y 8/1 white (SP)	100			Vibracore -15.6		
				100	1		Vibracore -17.5		
			At El. -16.6 Ft., mostly fine-grained sand-sized quartz, few sand to gravel-sized shell	100	2		Vibracore -19.1		
-19.1	5.5								
-20.1	6.5	NR		0			Vibracore -20.1		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	2.0/2.2	SP*
2	3.9/4.1	SP*

*Lab visual classification based on gradation curve

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SAJ FORM 1836
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Boring Designation 67

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County Blind Pass
2. BORING DESIGNATION	67
LOCATION COORDINATES	X = 411,952 Y = 1,239,363
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	12.0 Ft.
9. SIZE AND TYPE OF BIT	
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	Custom Rig
☐ AUTO HAMMER ☐ MANUAL HAMMER	
12. TOTAL SAMPLES	DISTURBED 4 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 07-30-07 / COMPLETED 07-30-07
16. ELEVATION TOP OF BORING	-12.3 Ft.
17. TOTAL RECOVERY FOR BORING	84 %
18. SIGNATURE AND TITLE OF INSPECTOR	Troy Mayhew, Geologist

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-12.3	0.0						-12.3		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few subangular sand to gravel-sized shell, 2.5Y 8/1 white (SP)	100			Vibracore -13.6		
				100	1		Vibracore -16.2		
				100	2		Vibracore -19.2		
			From El. -20.2 to -20.3 Ft., layer of silt At El. -20.3 Ft., some fine-grained sand-sized shell	100	3		Vibracore -21.8		
-21.3	9.0								
			SAND, silty, mostly fine-grained sand-sized quartz, little silt, few subangular coarse-grained sand-sized shell, 10Y 6/1 greenish gray (SM)	100	4		Vibracore -22.4		
-22.4	10.1								
		NR		0			Vibracore -24.3		
-24.3	12.0								

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

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(Continued)

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DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 411,952 Y = 1,239,363	ELEVATION TOP OF BORING -12.3 Ft.		

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			3. Laboratory Testing Results						

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.3/1.5	SP*
2	3.9/4.1	SP*
3	6.9/7.1	SP*
4	9.5/9.7	SM*

*Lab visual classification based on gradation curve

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SAJ FORM 1836-A
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Boring Designation 71

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County, Blind Pass
2. BORING DESIGNATION	71
LOCATION COORDINATES	X = 412,050 Y = 1,239,242
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	11.9 Ft.
9. SIZE AND TYPE OF BIT	
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	Custom Rig ☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 1 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 08-24-07 / COMPLETED 08-24-07
16. ELEVATION TOP OF BORING	-13.6 Ft.
17. TOTAL RECOVERY FOR BORING	67 %
18. SIGNATURE AND TITLE OF INSPECTOR	Troy Mayhew, Geologist

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-13.6	0.0						-13.6		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, some subangular to rounded sand to gravel-sized shell, 2.5Y 8/1 white (SP)	100			Vibracore		
							-15.6		
					1				
				100			Vibracore		
							-19.5		
-21.5	7.9								
		NO RECOVERY		34			Vibracore		
-25.5	11.9						-25.5		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville	SHEET 2 OF 2 SHEETS

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 412,050 Y = 1,239,242	-13.6 Ft.

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			3. Laboratory Testing Results						

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	2.0/2.2	SP*

*Lab visual classification based on gradation curve

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Boring Designation 77

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville	SHEET 1 OF 1 SHEETS

1. PROJECT	Pinellas County Blind Pass
2. BORING DESIGNATION	77
LOCATION COORDINATES	X = 412,174 Y = 1,238,978
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	7.2 Ft.
9. SIZE AND TYPE OF BIT	
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	Custom Rig
☐ AUTO HAMMER ☐ MANUAL HAMMER	
12. TOTAL SAMPLES	DISTURBED 4 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 03-23-08 / COMPLETED 03-23-08
16. ELEVATION TOP OF BORING	-15.4 Ft.
17. TOTAL RECOVERY FOR BORING	82 %
18. SIGNATURE AND TITLE OF INSPECTOR	Troy Mayhew, Geologist

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-15.4	0.0						-15.4		
			SAND, poorly-graded, mostly subangular fine to coarse-grained sand-sized shell, few fine gravel-sized shell, 10Y 8/1 light greenish gray (SP)	100	1		Vibracore -16.1		
-17.0	1.6		SAND, poorly-graded, mostly fine-grained sand-sized quartz, few coarse-grained sand-sized shell, 2.5Y 6/1 gray (SP)	100			Vibracore -18.7		
-20.0	4.6			100	2		Vibracore -20.3		
-20.7	5.3		SAND, poorly-graded, mostly fine to coarse-grained sand-sized shell, few fine gravel-sized shell, 10Y 8/1 light greenish gray (SP)	100	3		Vibracore -21.3		
-21.3	5.9		SILT, inorganic-L, low plasticity (ML)						
-22.6	7.2	NR		0	4		Vibracore -22.6		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	0.7/0.9	SP*
2	3.3/3.5	SP*
3	4.9/5.1	SP*
4	5.9/6.1	ML*

*Lab visual classification based on gradation curve

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Boring Designation 88

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County Blind Pass
2. BORING DESIGNATION	88
LOCATION COORDINATES	X = 411,378 Y = 1,238,053
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	10.0 Ft.
9. SIZE AND TYPE OF BIT	
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	Custom Rig
☐ AUTO HAMMER ☐ MANUAL HAMMER	
12. TOTAL SAMPLES	DISTURBED 2 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 11-10-07 / COMPLETED 11-10-07
16. ELEVATION TOP OF BORING	-4.9 Ft.
17. TOTAL RECOVERY FOR BORING	Not Recorded
18. SIGNATURE AND TITLE OF INSPECTOR	Barbara Nist, Geologist

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-4.9	0.0						-4.9		
			SAND, poorly-graded, mostly rounded fine-grained sand-sized quartz, little fine to coarse-grained sand-sized shell, 10YR 8/1 white (SP)	NR			Vibracore		
							-6.5		
					1				
			At El. -8.9 Ft., discontinue shell	NR			Vibracore		
			At El. -9.7 Ft., trace fine gravel-sized sandstone From El. -9.9 to -10.2 Ft., some fine to coarse-grained sand-sized shell At El. -10.2 Ft., discontinue shell At El. -10.6 Ft., little organic matter, fibrous						
							-11.5		
			At El. -11.5 Ft., trace shell up to 2 From El. -11.8 to -14.5 Ft., some fine to coarse-grained sand-sized shell		2				
				NR			Vibracore		
			From El. -13.9 to -14.0 Ft., little silt At El. -14.0 Ft., discontinue shell						
-14.9	10.0						-14.9		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.6/1.8	SP*

Abbreviations:

(Continued)

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Boring Designation 88

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville	SHEET 2 OF 2 SHEETS

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 411,378 Y = 1,238,053	-4.9 Ft.

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			2 6.6/6.8 SP*						
			*Lab visual classification based on gradation curve						

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Boring Designation 93

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County Blind Pass
2. BORING DESIGNATION	93
LOCATION COORDINATES	X = 411,508 Y = 1,238,103
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	9.9 Ft.
9. SIZE AND TYPE OF BIT	
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	Custom Rig
☐ AUTO HAMMER ☐ MANUAL HAMMER	
12. TOTAL SAMPLES	DISTURBED 3 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 11-11-07 / COMPLETED 11-11-07
16. ELEVATION TOP OF BORING	-4.7 Ft.
17. TOTAL RECOVERY FOR BORING	Not Recorded
18. SIGNATURE AND TITLE OF INSPECTOR	Barbara Nist, Geologist

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-4.7	0.0						-4.7		
			SAND, poorly-graded, mostly rounded fine-grained sand-sized quartz, trace fine-grained sand-sized shell, 10YR 8/1 white (SP)	NR			Vibracore -5.7		
				NR	1		Vibracore -9.0		
			At El. -7.0 Ft., some fine to coarse-grained sand-sized shell From El. -7.6 to -8.2 Ft., some sand to gravel-sized shell From El. -8.8 to -11.9 Ft., little fine to coarse-grained sand-sized shell	NR	2		Vibracore -12.6		
				NR	3		Vibracore		
-14.6	9.9						-14.6		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.0/1.2	SP*
2	4.3/4.5	SP*

Abbreviations:

(Continued)

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JUN 02

Boring Designation 93

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville	SHEET 2 OF 2 SHEETS

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 411,508 Y = 1,238,103	-4.7 Ft.

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			3 7.9/8.1 SP*						
			*Lab visual classification based on gradation curve						

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DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville
SHEET	1 OF 2 SHEETS
1. PROJECT	Pinellas County Blind Pass
2. BORING DESIGNATION	95
LOCATION COORDINATES	X = 411,529 Y = 1,237,972
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	9.4 Ft.
9. SIZE AND TYPE OF BIT	
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	Custom Rig
☐ AUTO HAMMER ☐ MANUAL HAMMER	
12. TOTAL SAMPLES	DISTURBED 2 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 05-31-08 / COMPLETED 05-31-08
16. ELEVATION TOP OF BORING	-9.6 Ft.
17. TOTAL RECOVERY FOR BORING	83 %
18. SIGNATURE AND TITLE OF INSPECTOR	Troy Mayhew, Geologist

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-9.6	0.0						-9.6		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace subangular coarse-grained sand-sized shell, 2.5Y 8/1 white (SP)	100			Vibracore		
							-11.6		
				100	1		-11.8 Vibracore		
				100			Vibracore		
			At El. -16.2 Ft., mostly fine-grained sand-sized quartz, few subangular sand to gravel-sized shell, 2.5Y 8/1 white				-17.1		
-17.4	7.8			100	2		-17.4 Vibracore		
		NR		0			Vibracore		
-19.0	9.4						-19.0		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	2.0/2.2	SP*
2	7.5/7.7	SP*

(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 411,529 Y = 1,237,972	ELEVATION TOP OF BORING -9.6 Ft.		

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			*Lab visual classification based on gradation curve						

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SAJ FORM 1836-A
JUN 02

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville
SHEET	1 OF 2 SHEETS
1. PROJECT	Pinellas County, Blind Pass
2. BORING DESIGNATION	96
LOCATION COORDINATES	X = 411,757 Y = 1,239,769
3. DRILLING AGENCY	Coastal Research Laboratory
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	10.8 Ft.
9. SIZE AND TYPE OF BIT	
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	Custom Rig
☐ AUTO HAMMER ☐ MANUAL HAMMER	
12. TOTAL SAMPLES	DISTURBED 6 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 07-29-07 / COMPLETED 07-29-07
16. ELEVATION TOP OF BORING	-13.9 Ft.
17. TOTAL RECOVERY FOR BORING	68 %
18. SIGNATURE AND TITLE OF INSPECTOR	Jase Ousley, Geologist

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-13.9	0.0						-13.9		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few coarse-grained sand-sized shell, 10Y 6/1 greenish gray (SP)	100			Vibracore -14.9		
			From El. -14.9 to -15.1 Ft., trace wood debris, weak cementation, 10Y 7/1 light greenish gray	100	1		Vibracore -15.5		
				100	2		Vibracore -16.9		
				100	3		Vibracore -19.0		
			At El. -19.3 Ft., trace shell up to 1 At El. -19.4 Ft., layer of silt	100	4		Vibracore -20.6		
-20.9	7.0			100	5		Vibracore -21.1		
-21.1 / -21.2	7.2 / 7.4		SILT, inorganic-L, low plasticity, hard, dry, 2.5Y 6/1 gray (ML)		6				
		NO RECOVERY	SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, few silt, 2.5Y 8/1 white (SP-SM)	4			Vibracore		
-24.7	10.8						-24.7		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION

(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville	SHEET 2 OF 2 SHEETS

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 411,757 Y = 1,239,769	-13.9 Ft.

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			1 1.0/1.2 SP*						
			2 1.6/1.8 SP*						
			3 3.0/3.2 SP*						
			4 5.1/5.3 SP*						
			5 6.7/6.8 SP*						
			6 7.2/7.3 SP-SM*						
			*Lab visual classification based on gradation curve						

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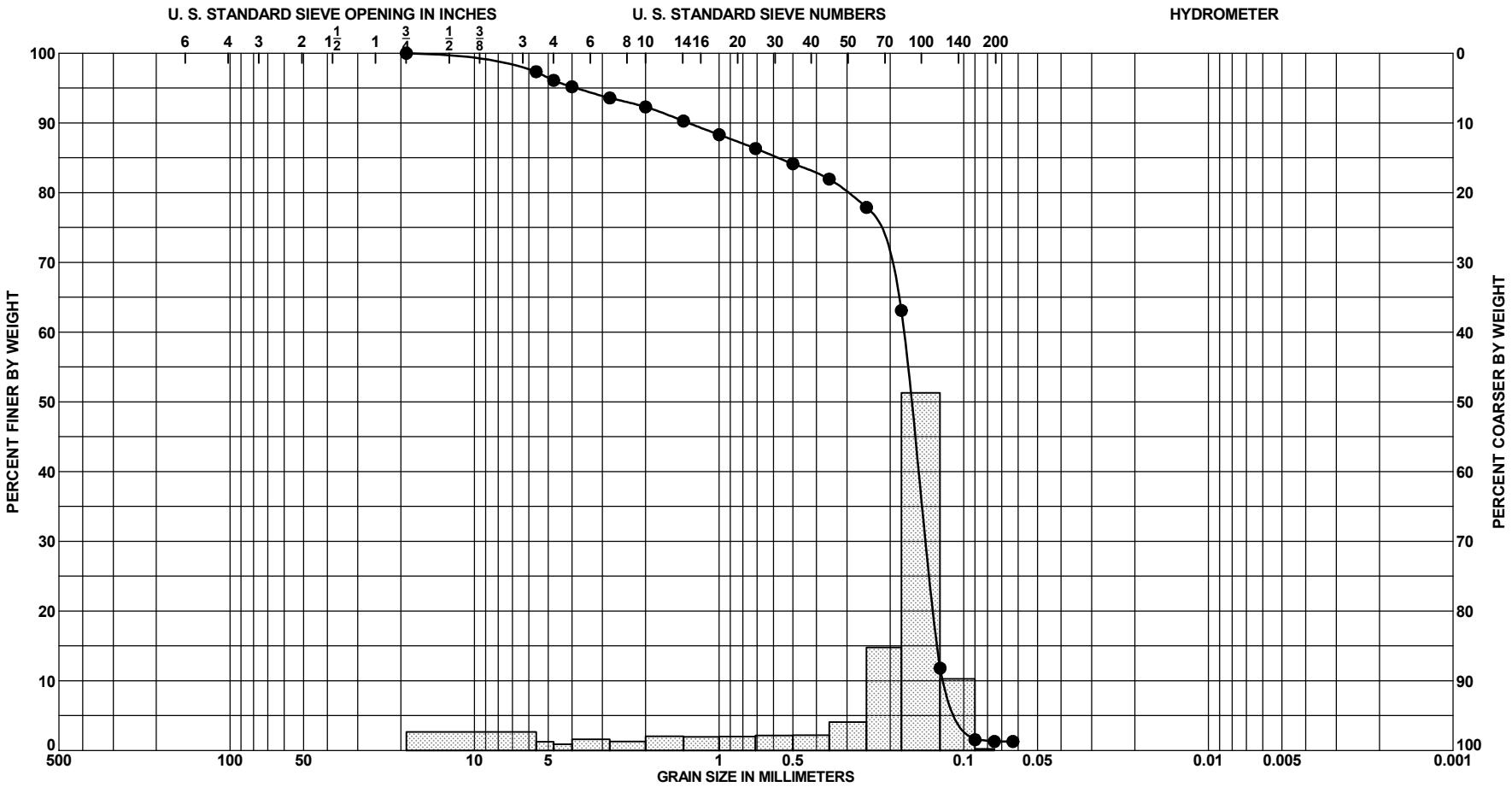
SAJ FORM 1836-A
JUN 02

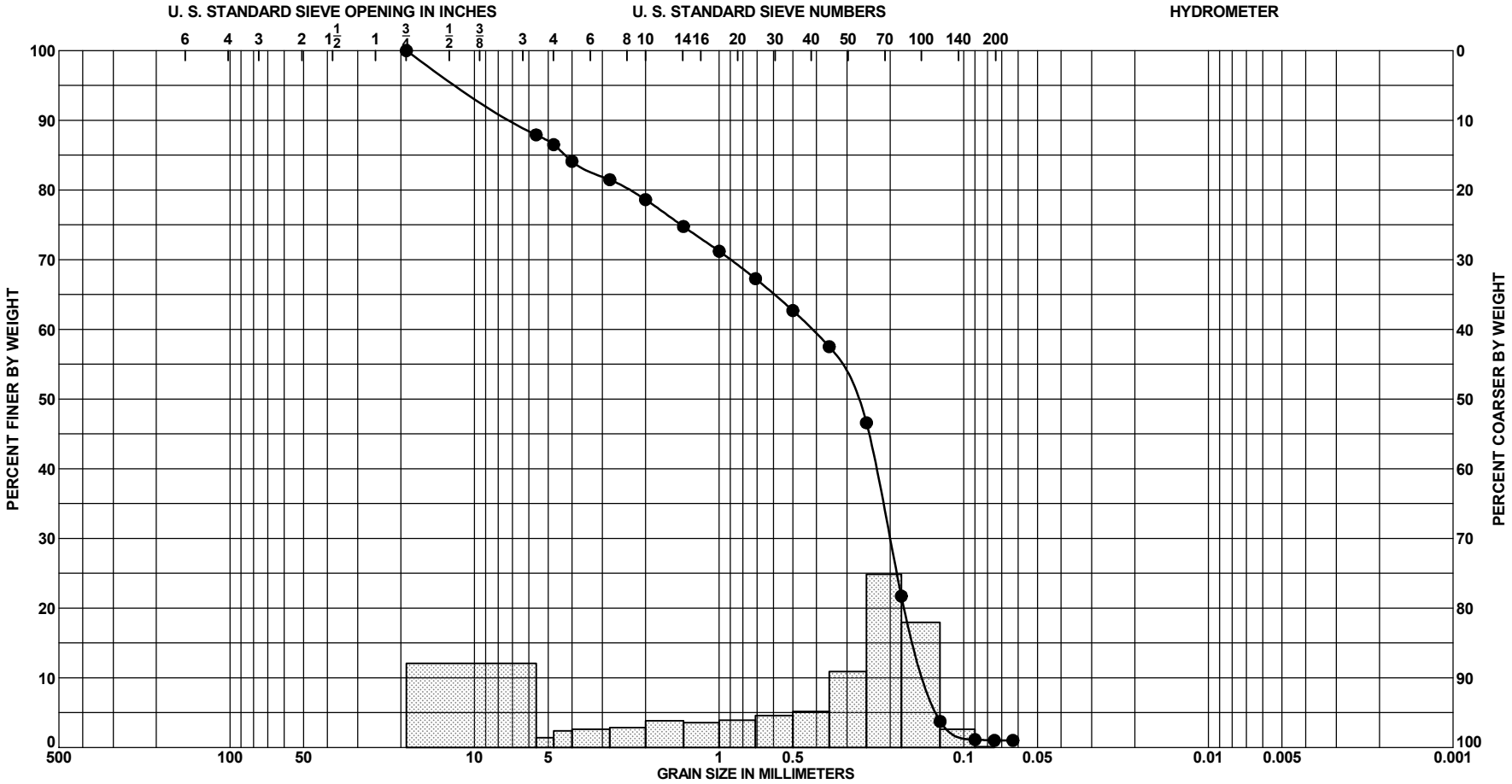


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	1.3 to 1.5 Ft.	SAND, poorly-graded, light gray	2.5Y 7/1		23		1				
		(SP)									

PROJECT	Pinellas County
	Blind Pass
BORING NO.	12
BORING ELEV.	-5.4 Ft., NAVD88
DATE	12/20/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

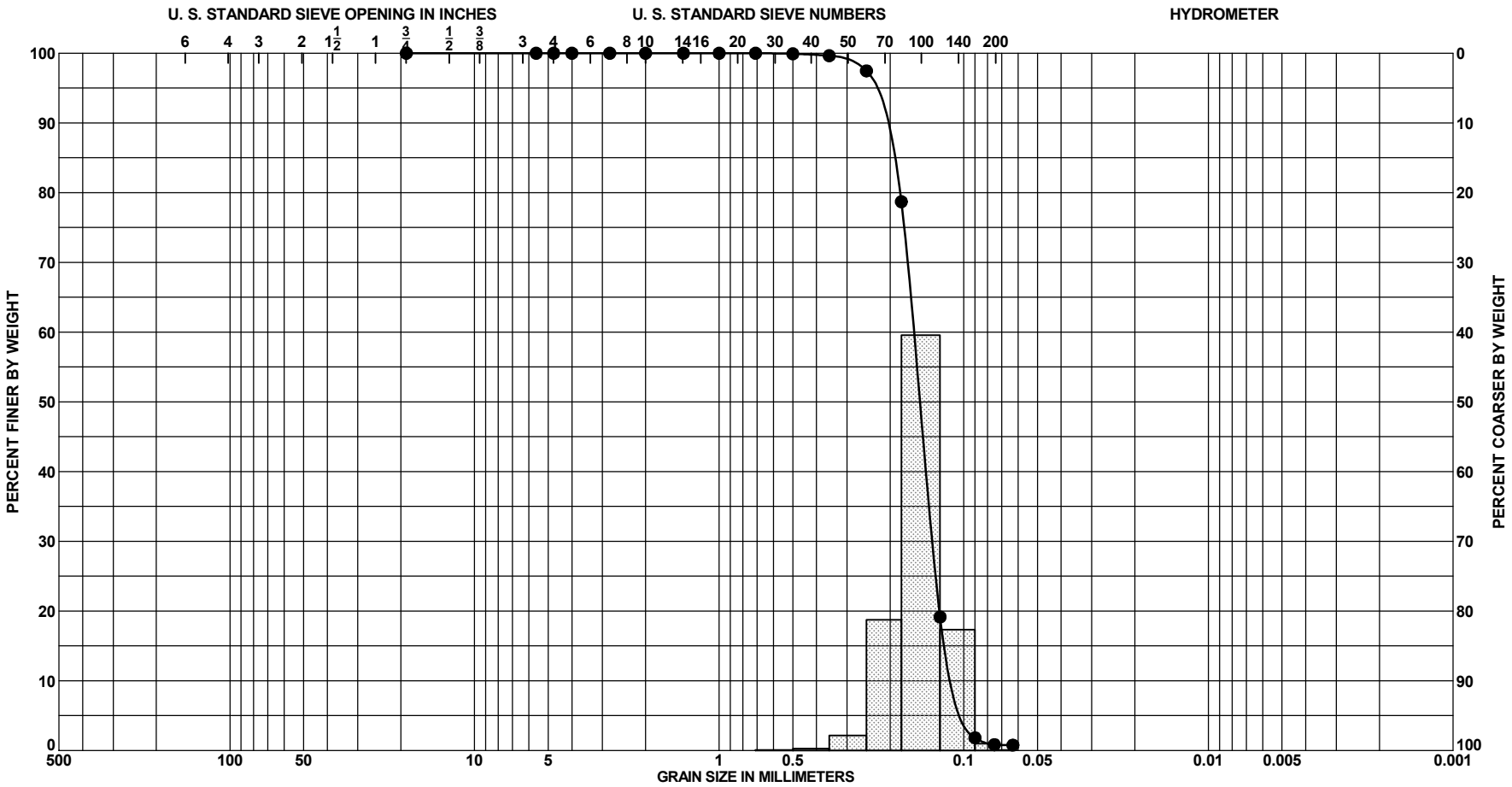


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	4.8 to 5.0 Ft.	SAND, poorly-graded, light gray (SP)	2.5Y 7/1		46		0				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	12
BORING ELEV.	-5.4 Ft., NAVD88
DATE	12/20/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

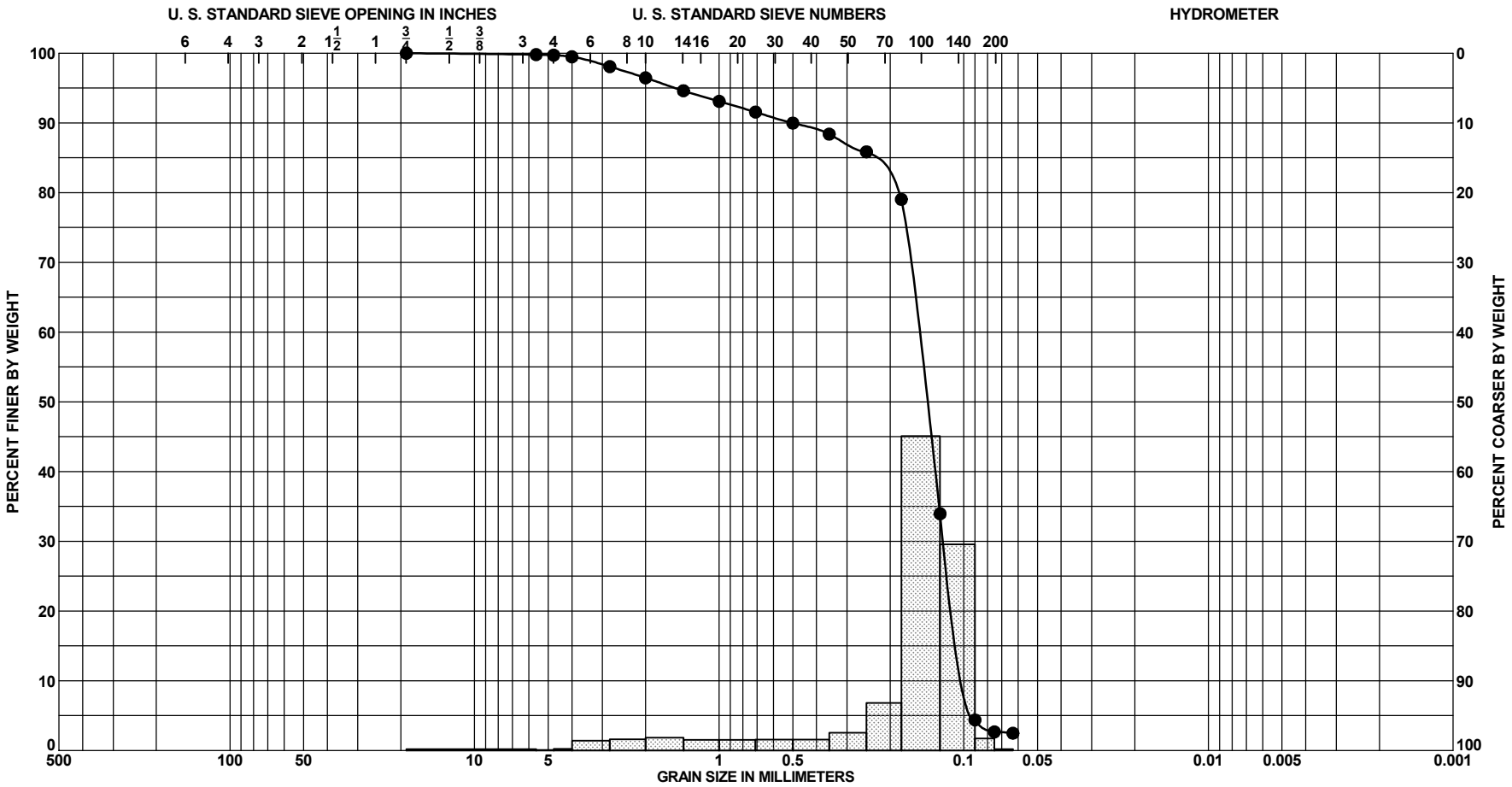


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	8.2 to 8.4 Ft.	SAND, poorly-graded, light gray	2.5Y 7/1		7		0				
		(SP)									

PROJECT	Pinellas County
	Blind Pass
BORING NO.	12
BORING ELEV.	-5.4 Ft., NAVD88
DATE	12/20/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

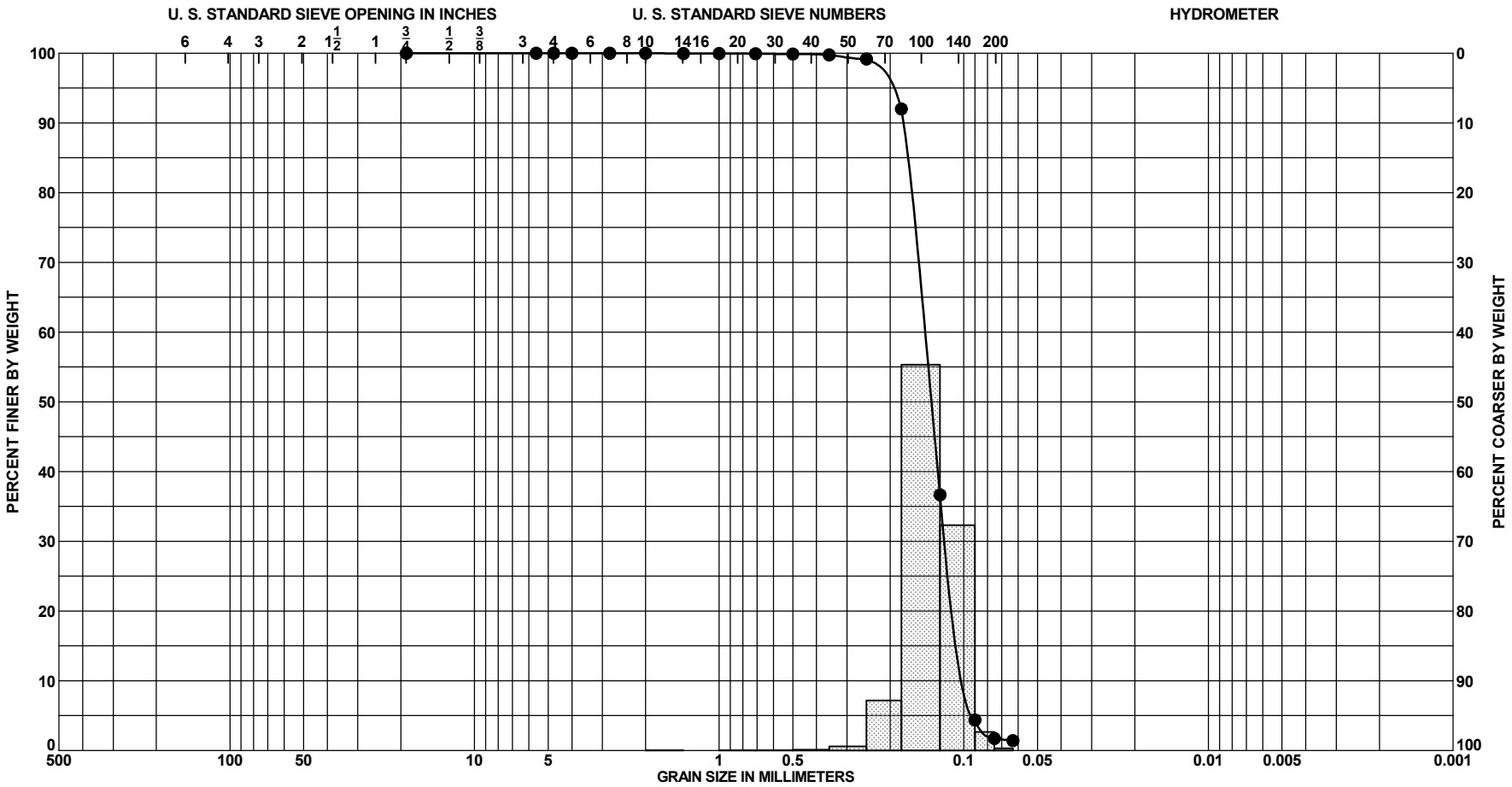


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	0.1 to 0.3 Ft.	SAND, poorly-graded, light gray	2.5Y 7/1		20		1				
		(SP)									

PROJECT	Pinellas County
	Blind Pass
BORING NO.	13
BORING ELEV.	-4.8 Ft., NAVD88
DATE	5/28/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

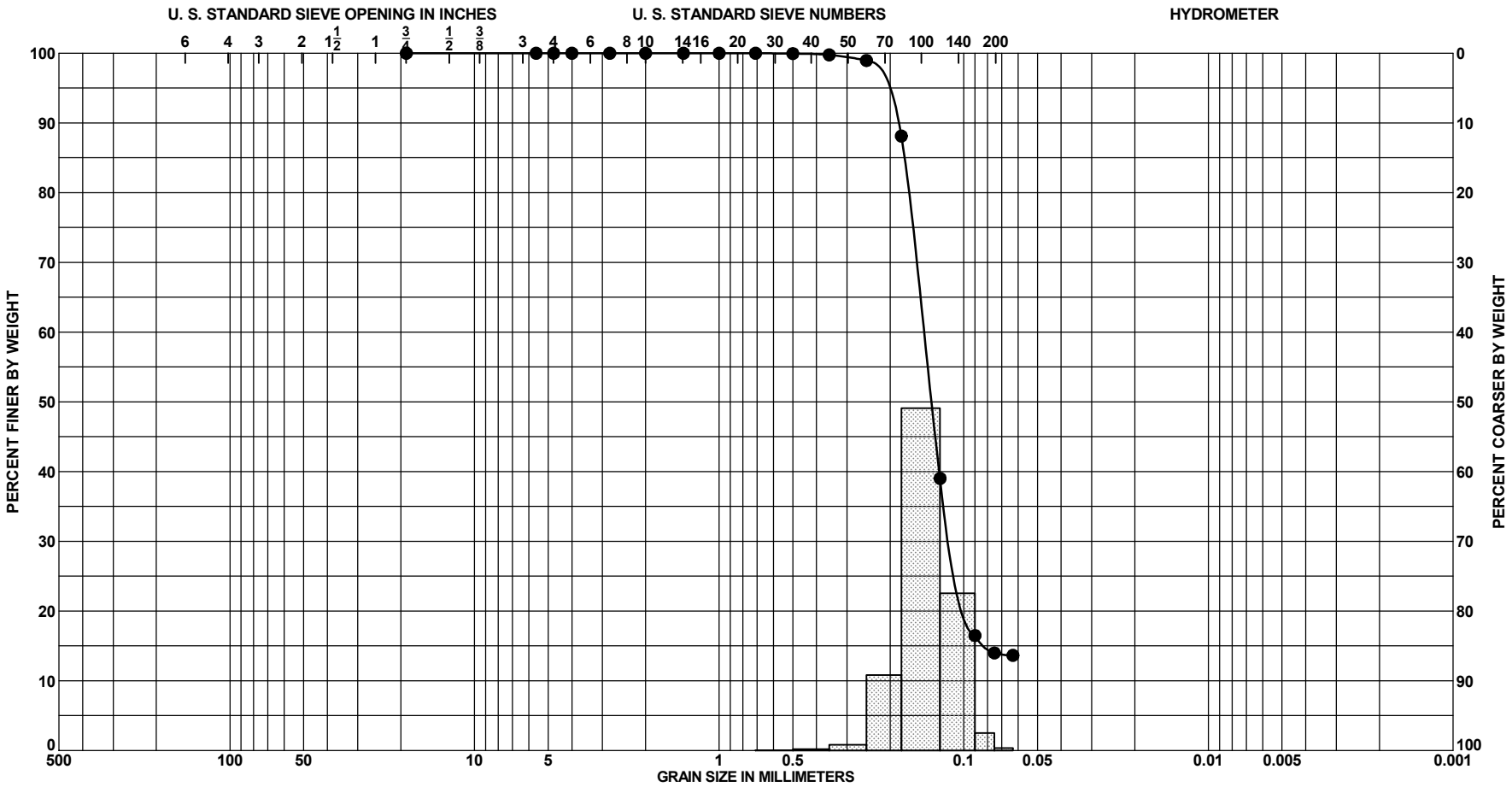


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	3.3 to 3.5 Ft.	SAND, poorly-graded, light gray (SP)	2.5Y 7/1		6		0				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	13
BORING ELEV.	-4.8 Ft., NAVD88
DATE	6/23/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

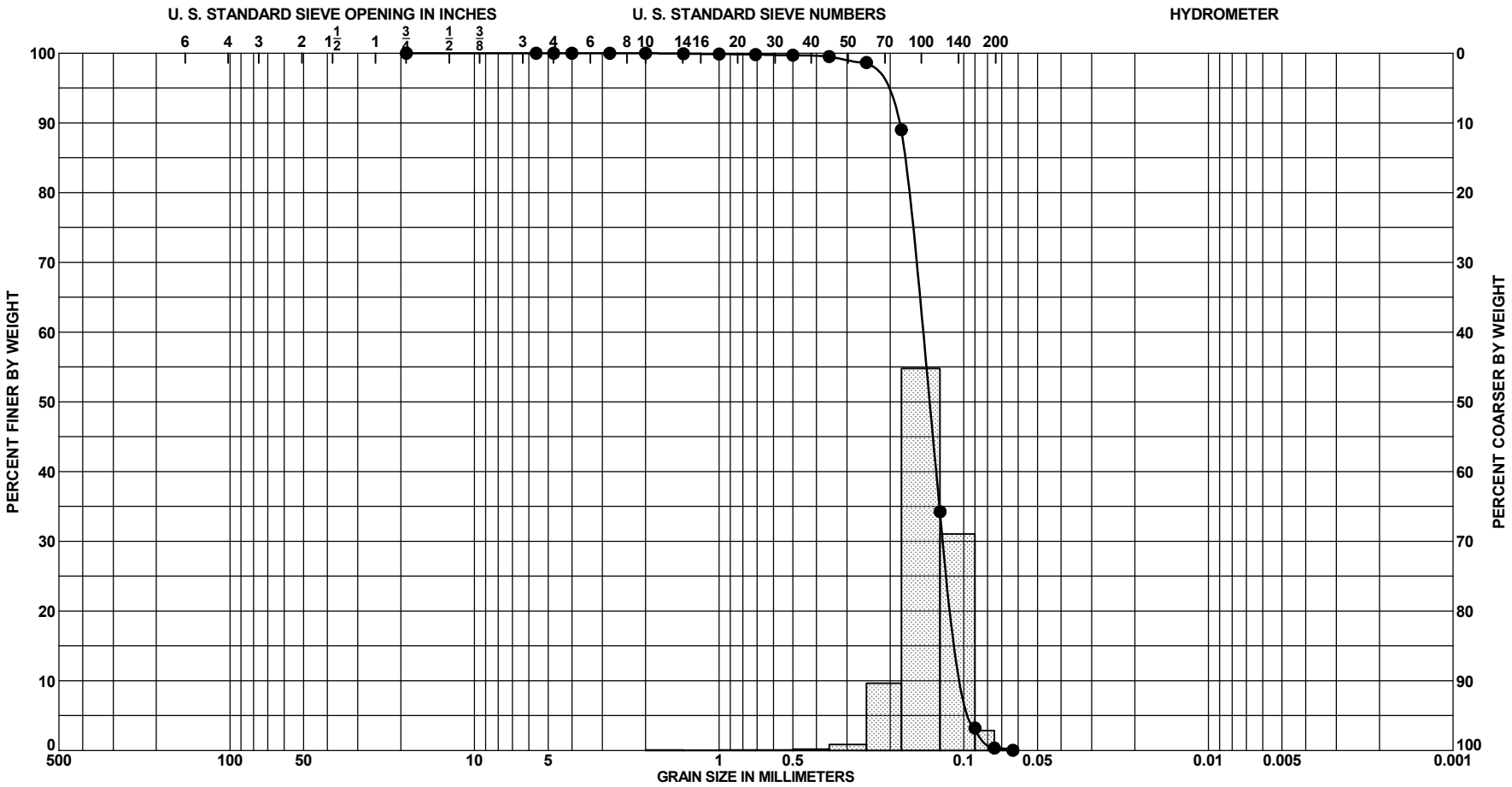


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	5.9 to 6.1 Ft.	, (SM)	2.5Y6/1		7		0				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	13
BORING ELEV.	-4.8 Ft., NAVD88
DATE	5/28/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

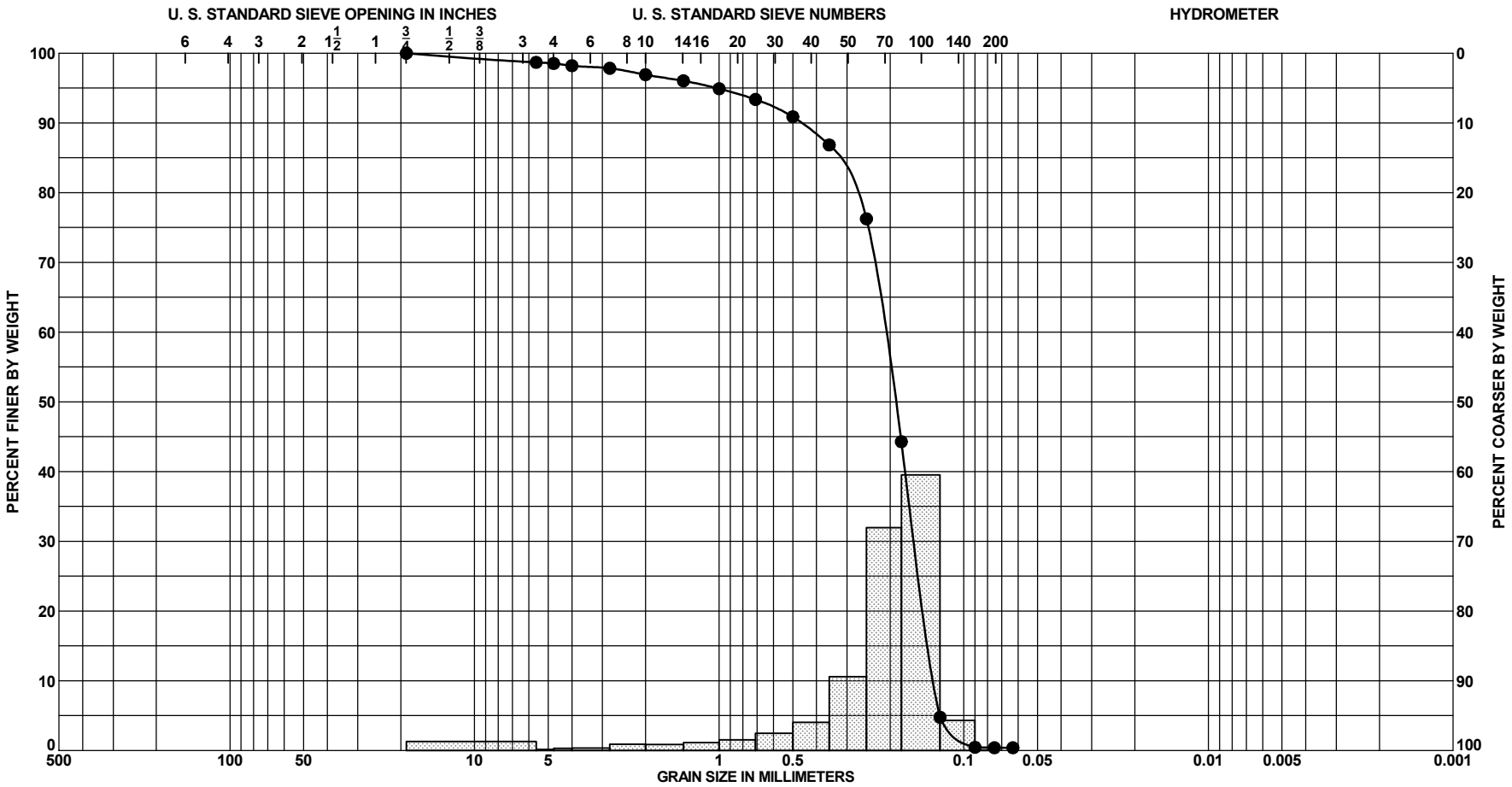


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 4	7.5 to 7.7 Ft.	SAND, poorly-graded, white (SP)	2.5Y 8/1		6		2				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	13
BORING ELEV.	-4.8 Ft., NAVD88
DATE	5/28/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

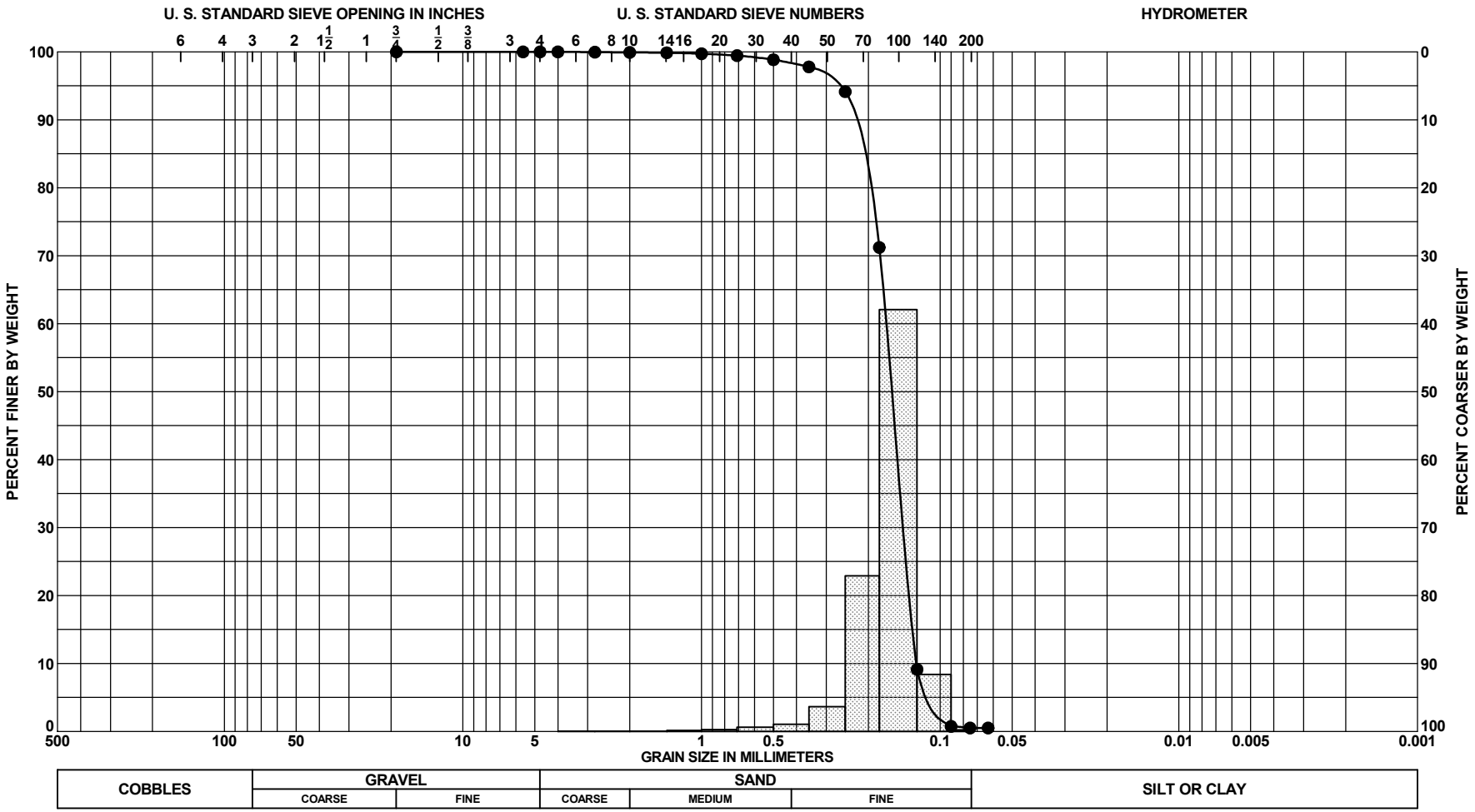


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	1.6 to 1.8 Ft.	SAND, poorly-graded, light gray	2.5Y 7/1		19		0				
		(SP)									

PROJECT	Pinellas County
	Blind Pass
BORING NO.	18
BORING ELEV.	-5.8 Ft., NAVD88
DATE	12/20/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

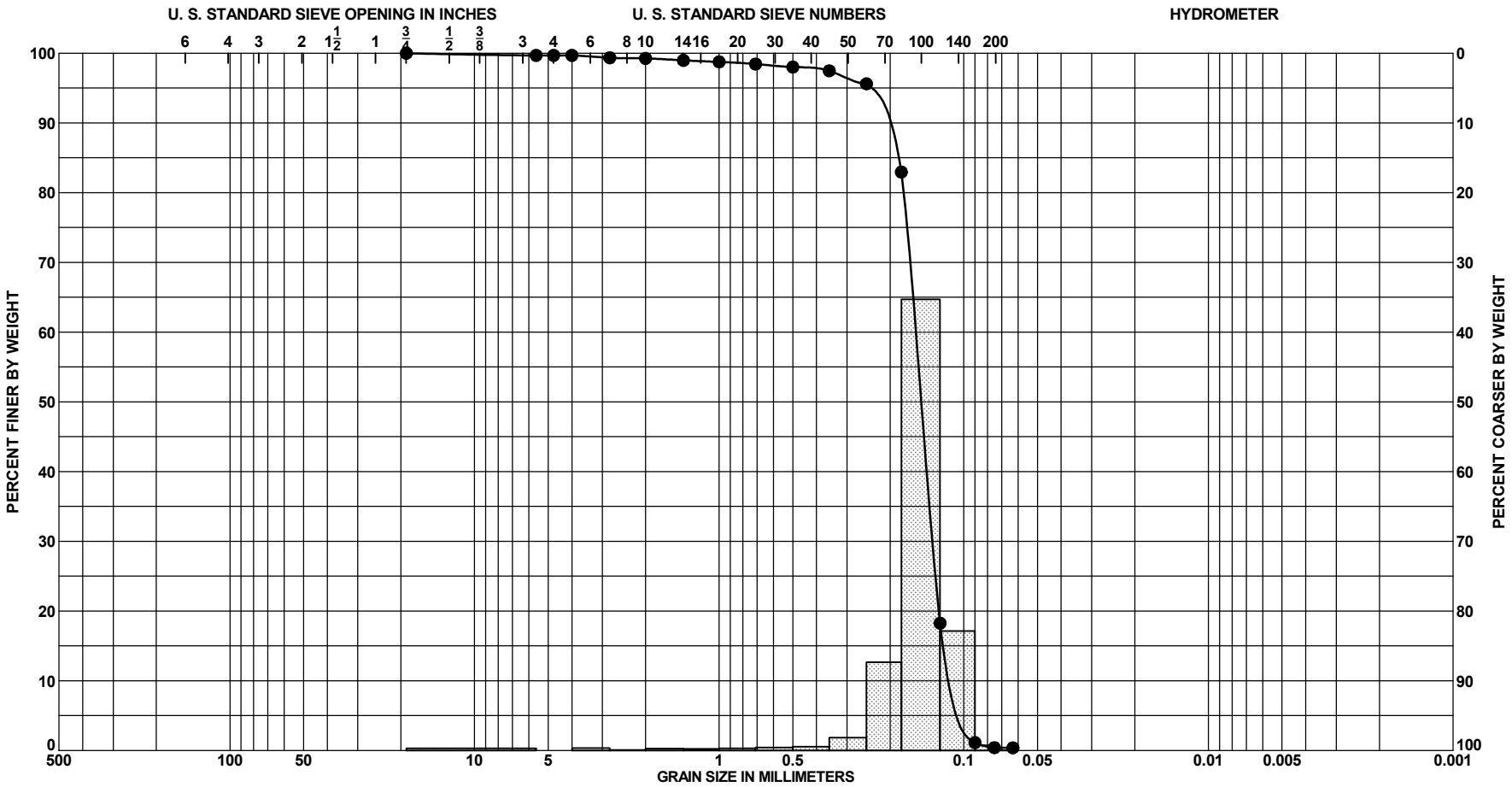


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	7.2 to 7.4 Ft.	SAND, poorly-graded, light gray	2.5Y 7/1		10		0				
		(SP)									

PROJECT	Pinellas County
	Blind Pass
BORING NO.	18
BORING ELEV.	-5.8 Ft., NAVD88
DATE	12/20/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

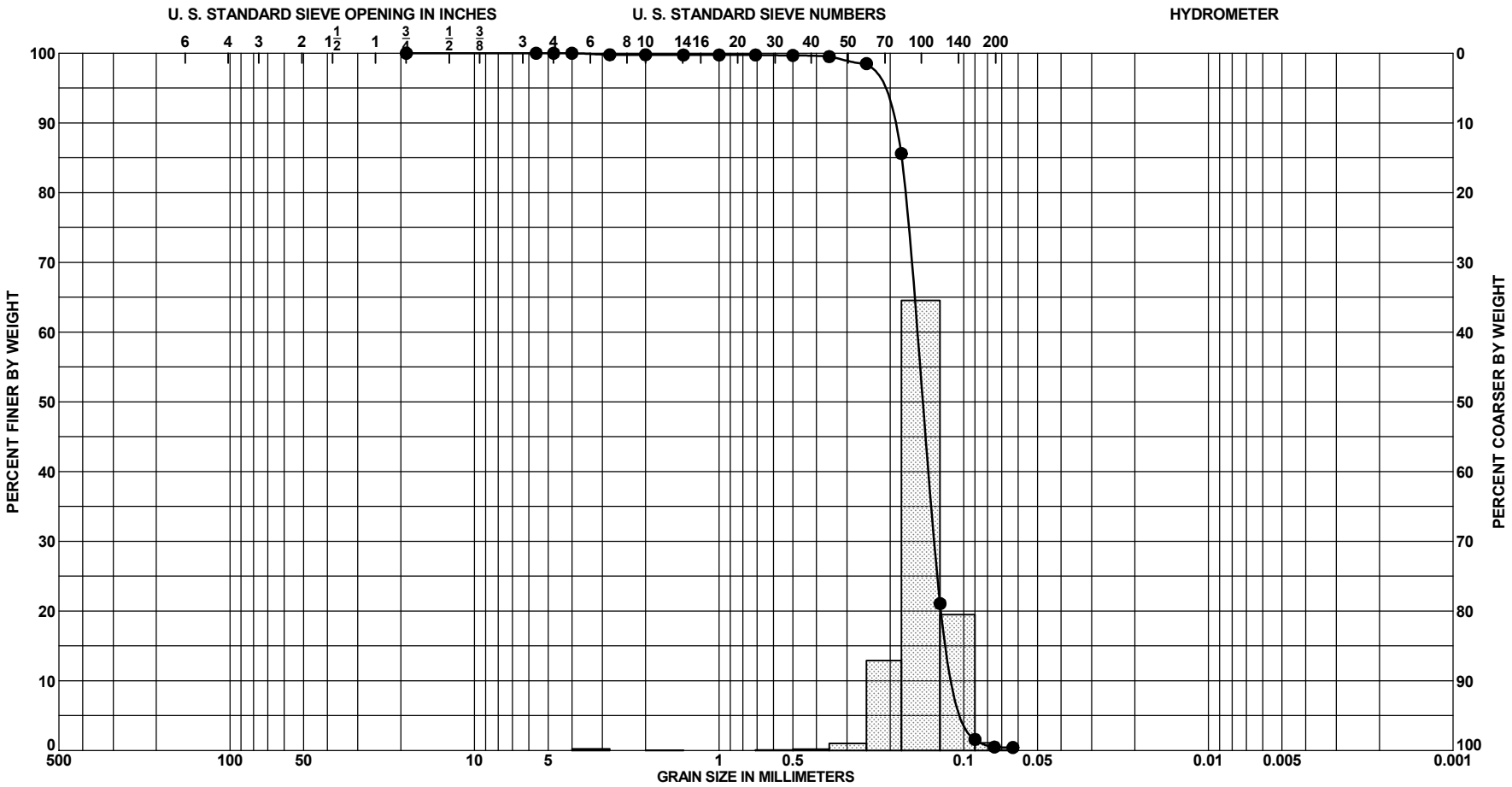


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	1.0 to 1.2 Ft.	SAND, poorly-graded, light gray (SP)	2.5Y 7/1		8		1				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	24
BORING ELEV.	-4.7 Ft., NAVD88
DATE	2/7/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

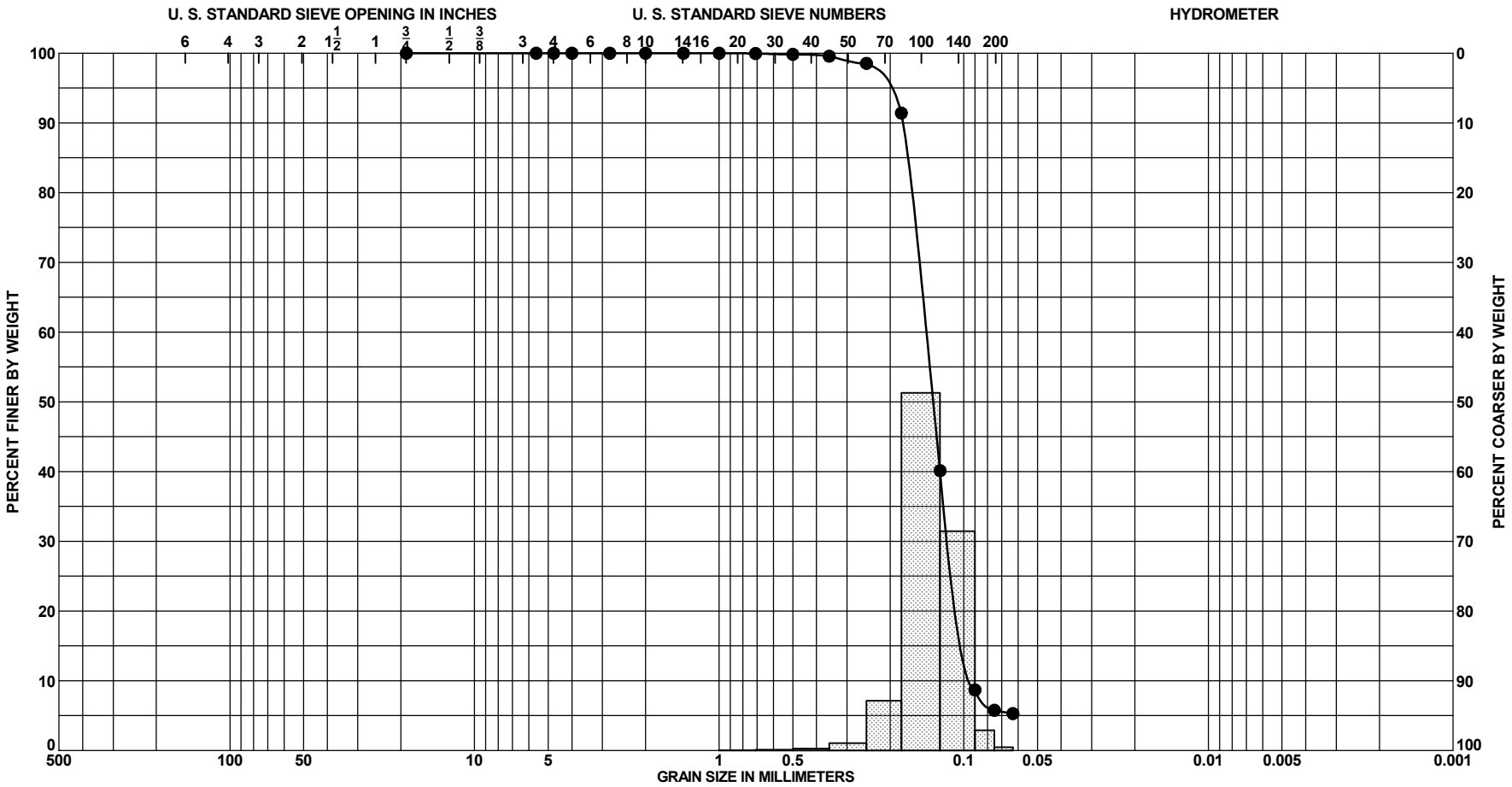


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	5.9 to 6.1 Ft.	SAND, poorly-graded, light gray (SP)	2.5Y 7/1		7		1				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	24
BORING ELEV.	-4.7 Ft., NAVD88
DATE	12/20/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

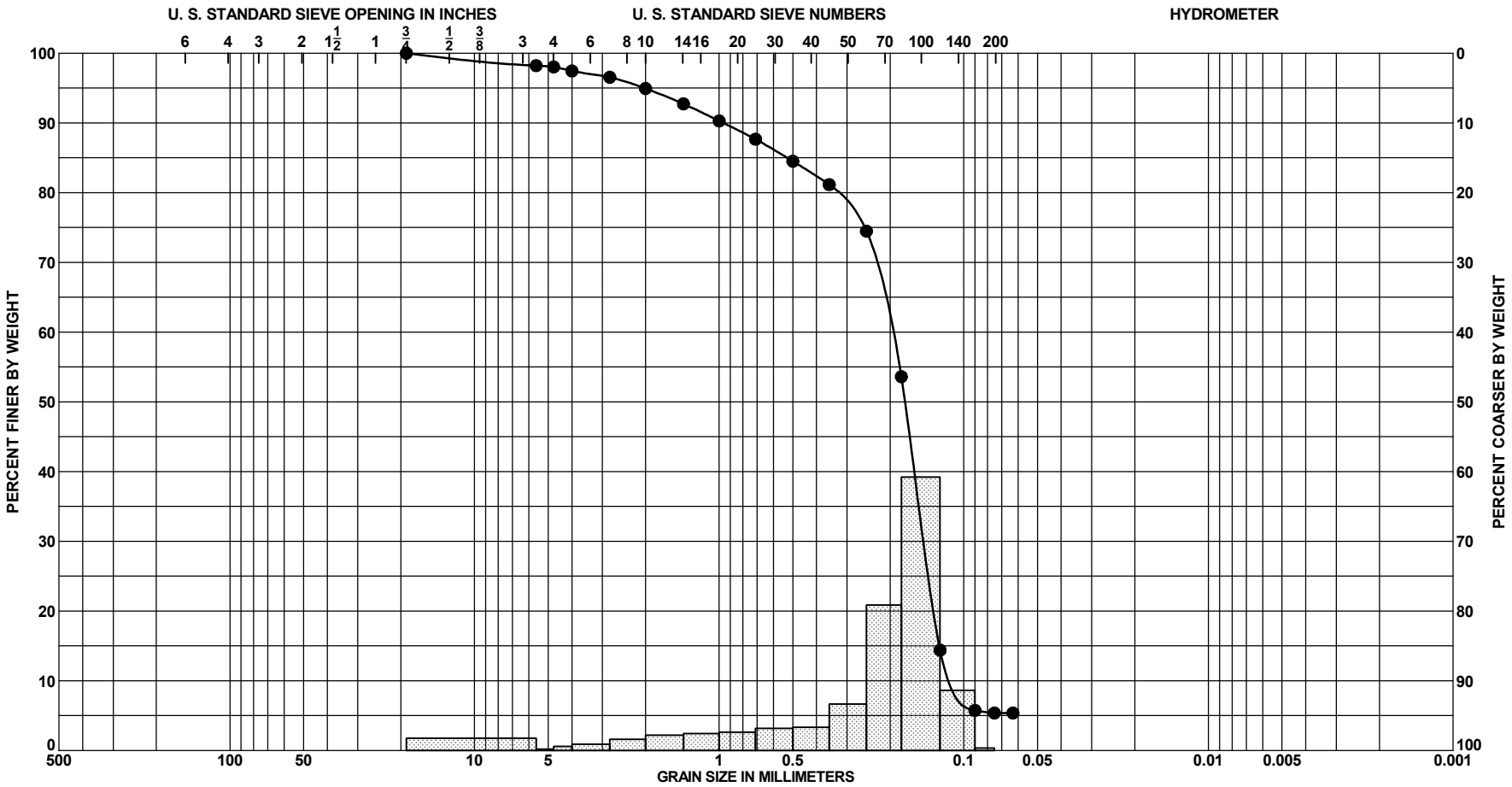


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	9.5 to 9.7 Ft.	, gray (SP-SM)	2.5Y 6/1		10		1				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	24
BORING ELEV.	-4.7 Ft., NAVD88
DATE	12/20/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

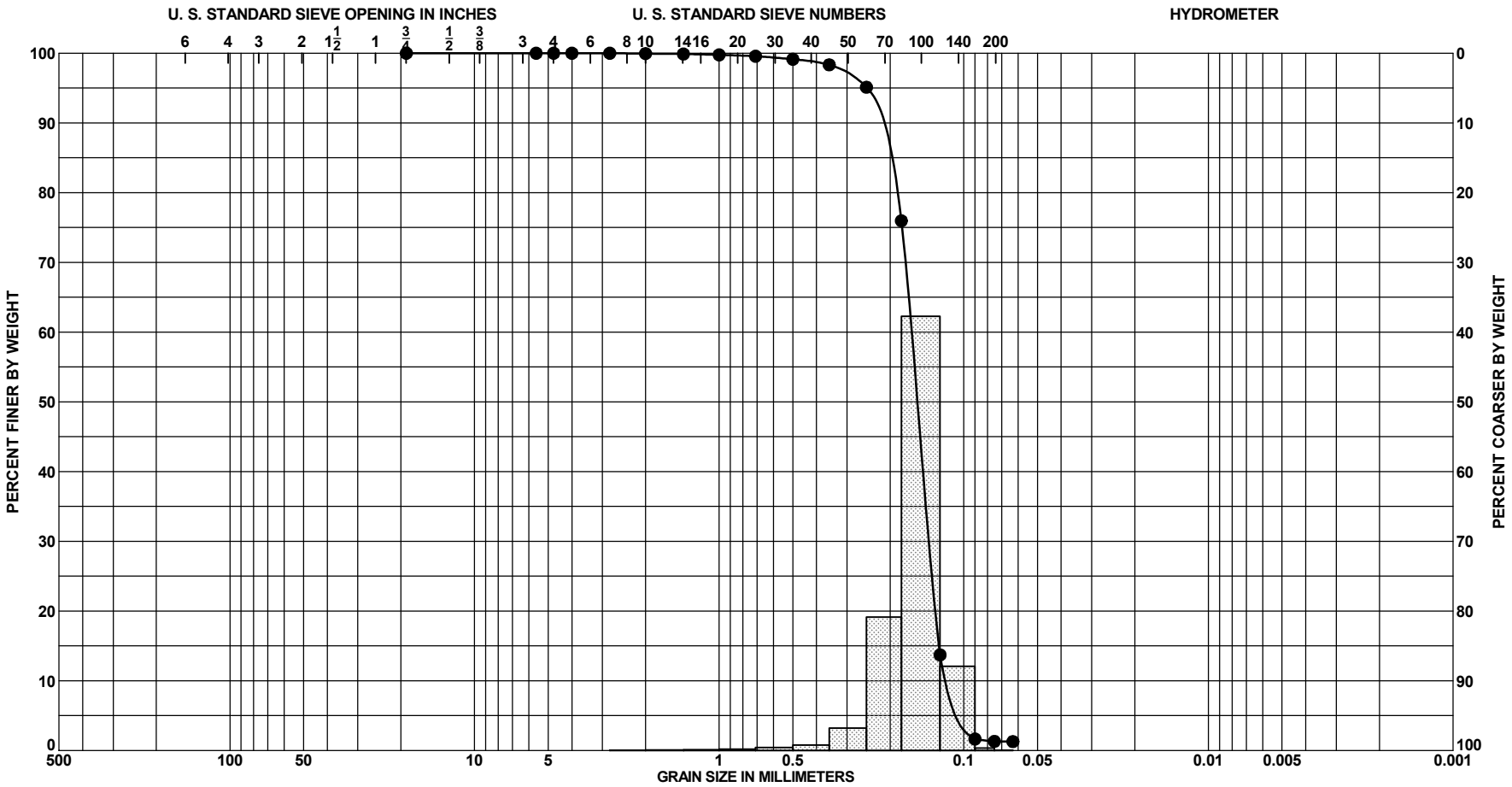


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	0.7 to 0.9 Ft.	, white (SP-SM)	2.5Y 8/1		26		0				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	27
BORING ELEV.	-3.0 Ft., NAVD88
DATE	1/15/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

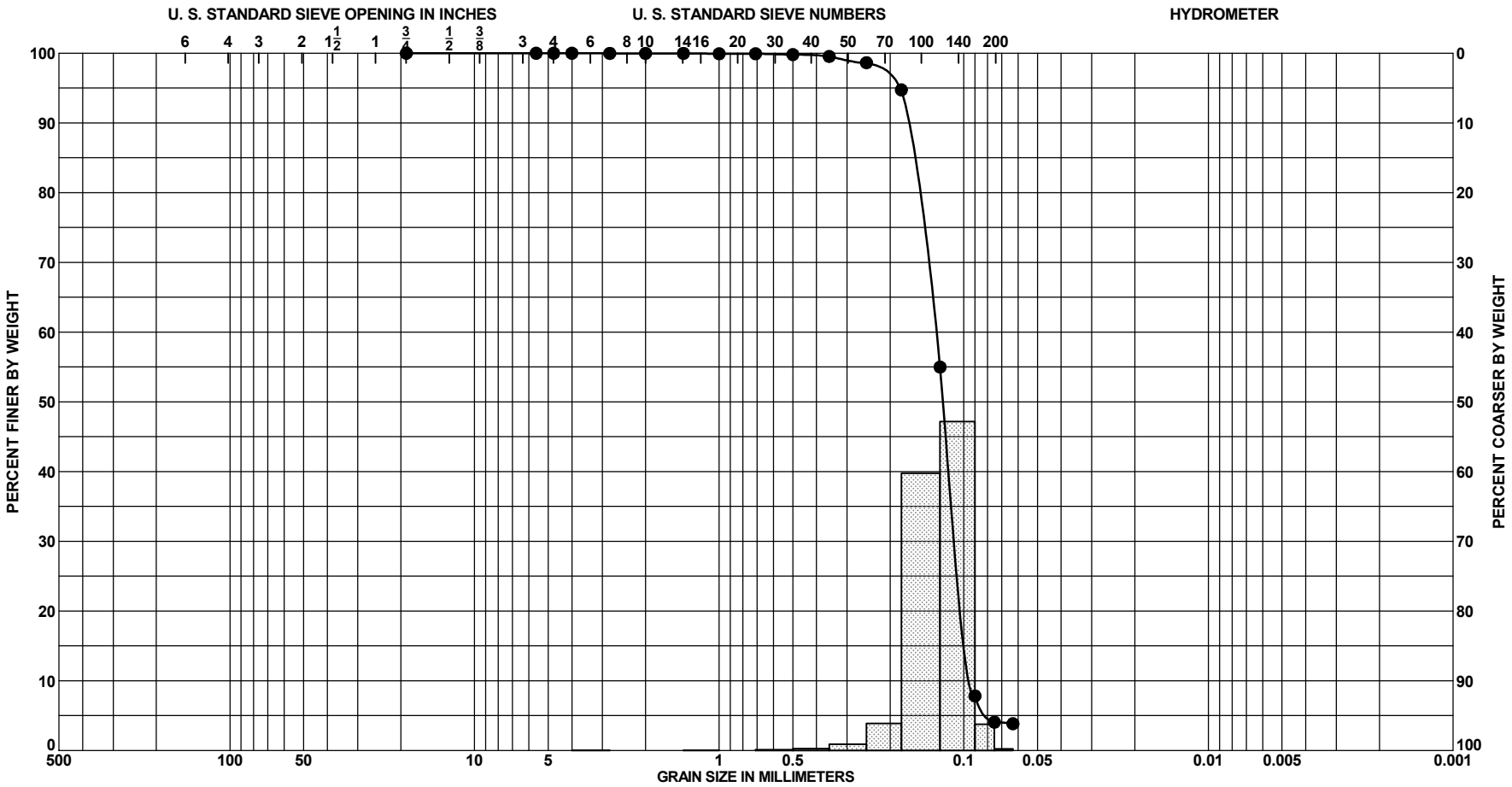


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	3.0 to 3.2 Ft.	SAND, poorly-graded, white (SP)	2.5Y 8/1		15		0				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	27
BORING ELEV.	-3.0 Ft., NAVD88
DATE	1/15/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

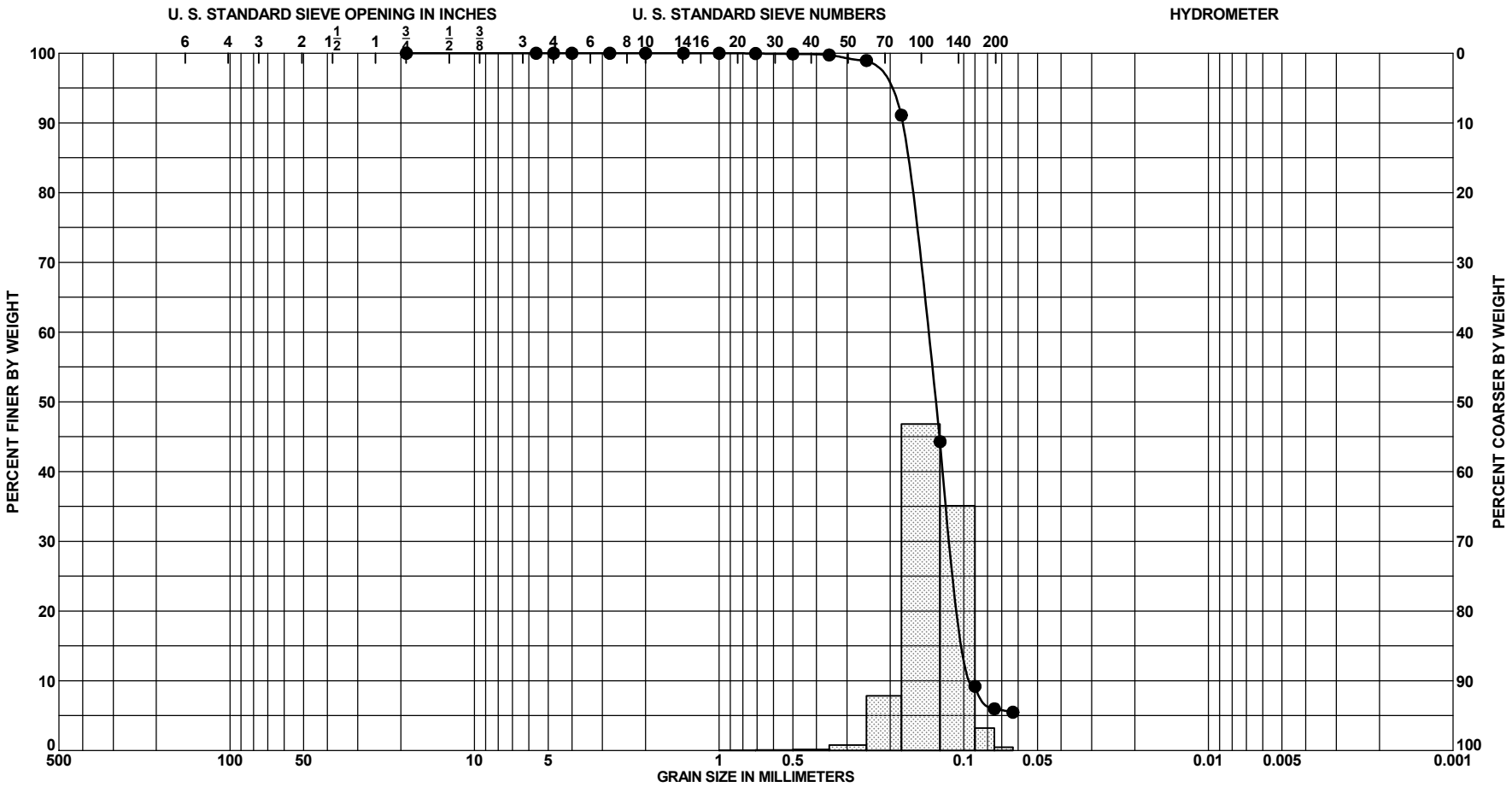


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	6.2 to 6.4 Ft.	SAND, poorly-graded, white (SP)	2.5Y 8/1		10		0				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	27
BORING ELEV.	-3.0 Ft., NAVD88
DATE	1/15/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

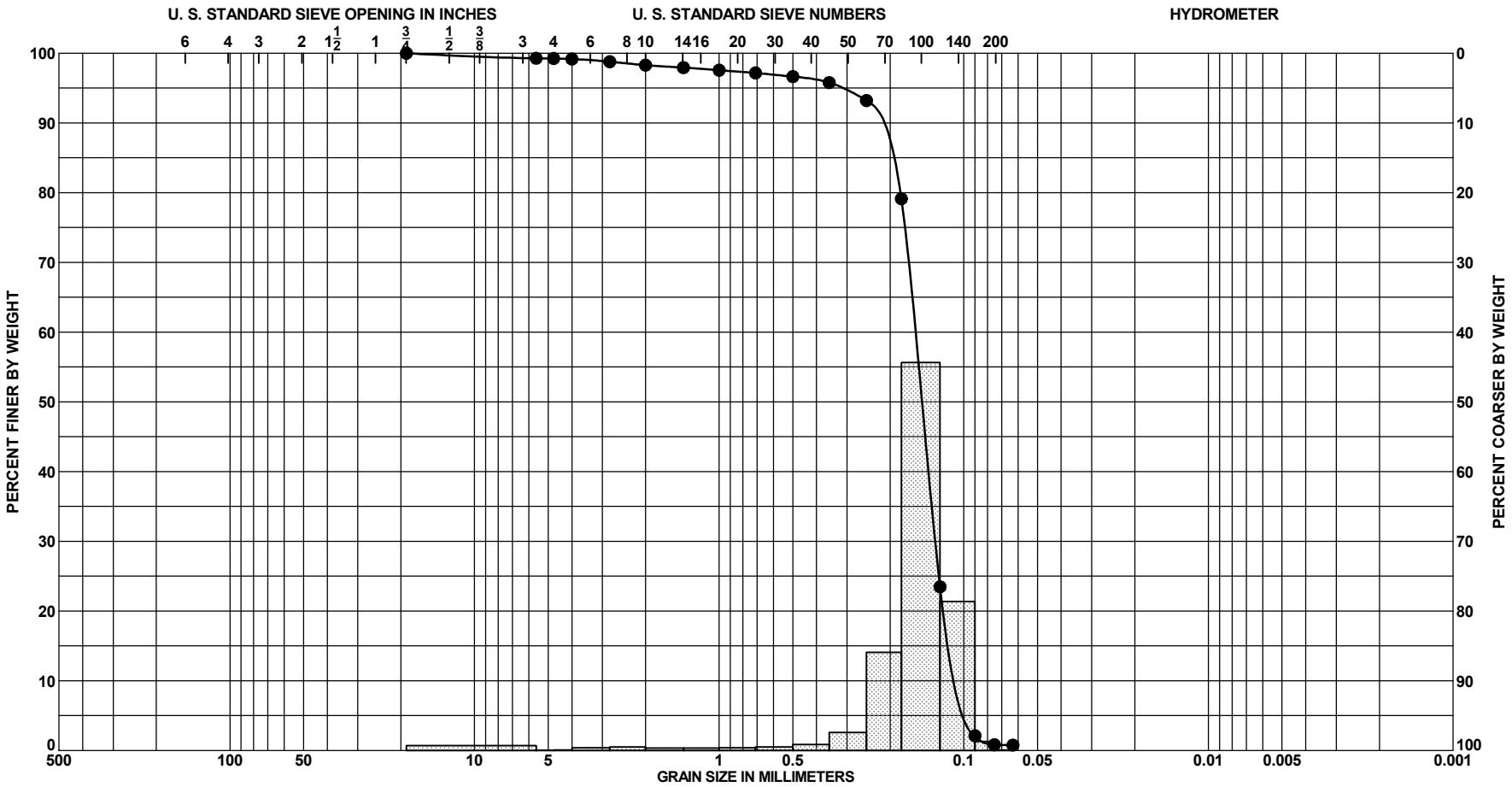


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 4	11.3 to 11.5 Ft.	, white (SP-SM)	2.5Y 8/1		11		0				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	27
BORING ELEV.	-3.0 Ft., NAVD88
DATE	1/15/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

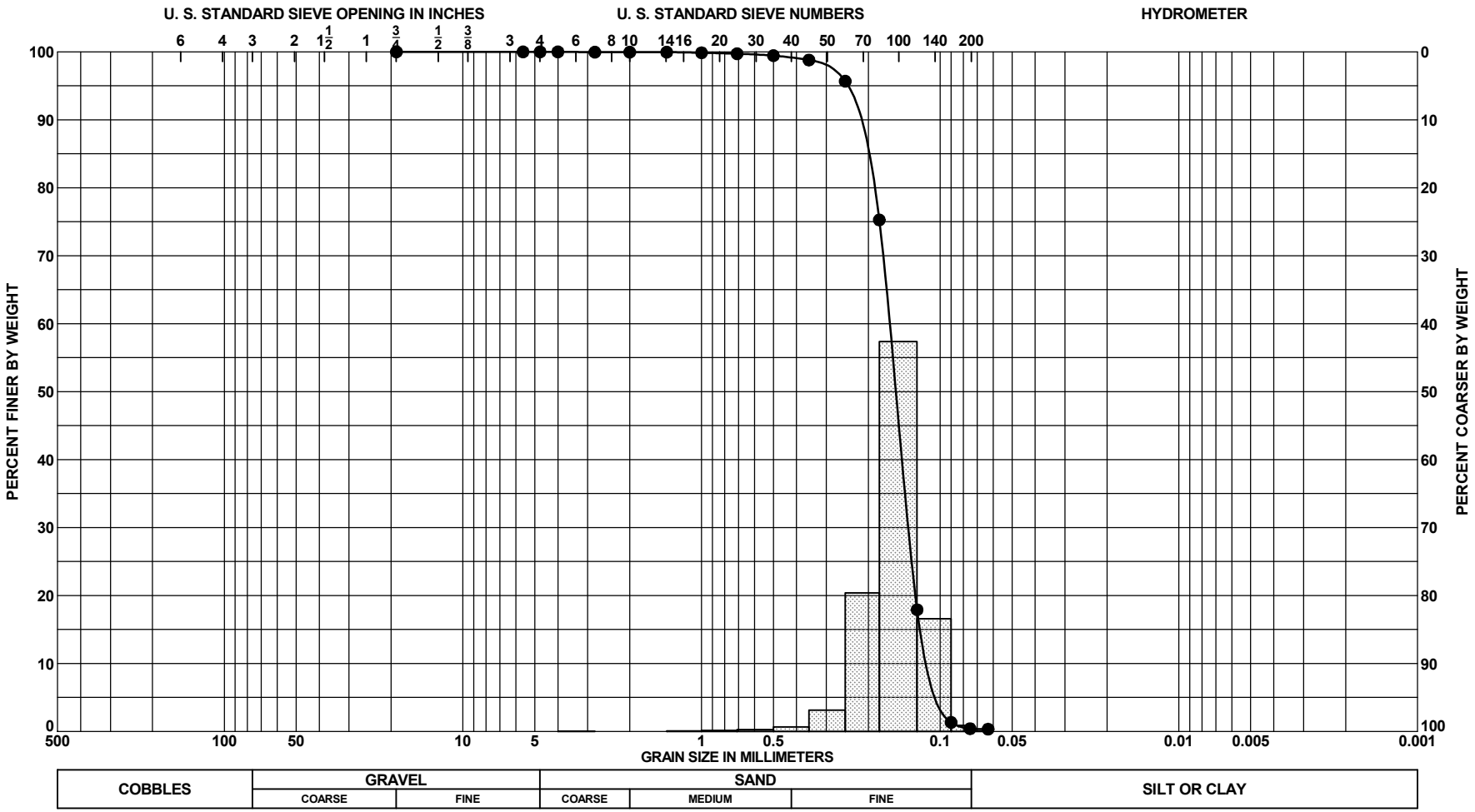


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	1.6 to 1.8 Ft.	SAND, poorly-graded, white (SP)	2.5Y 8/1		10		0				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	31
BORING ELEV.	-5.1 Ft., NAVD88
DATE	2/7/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

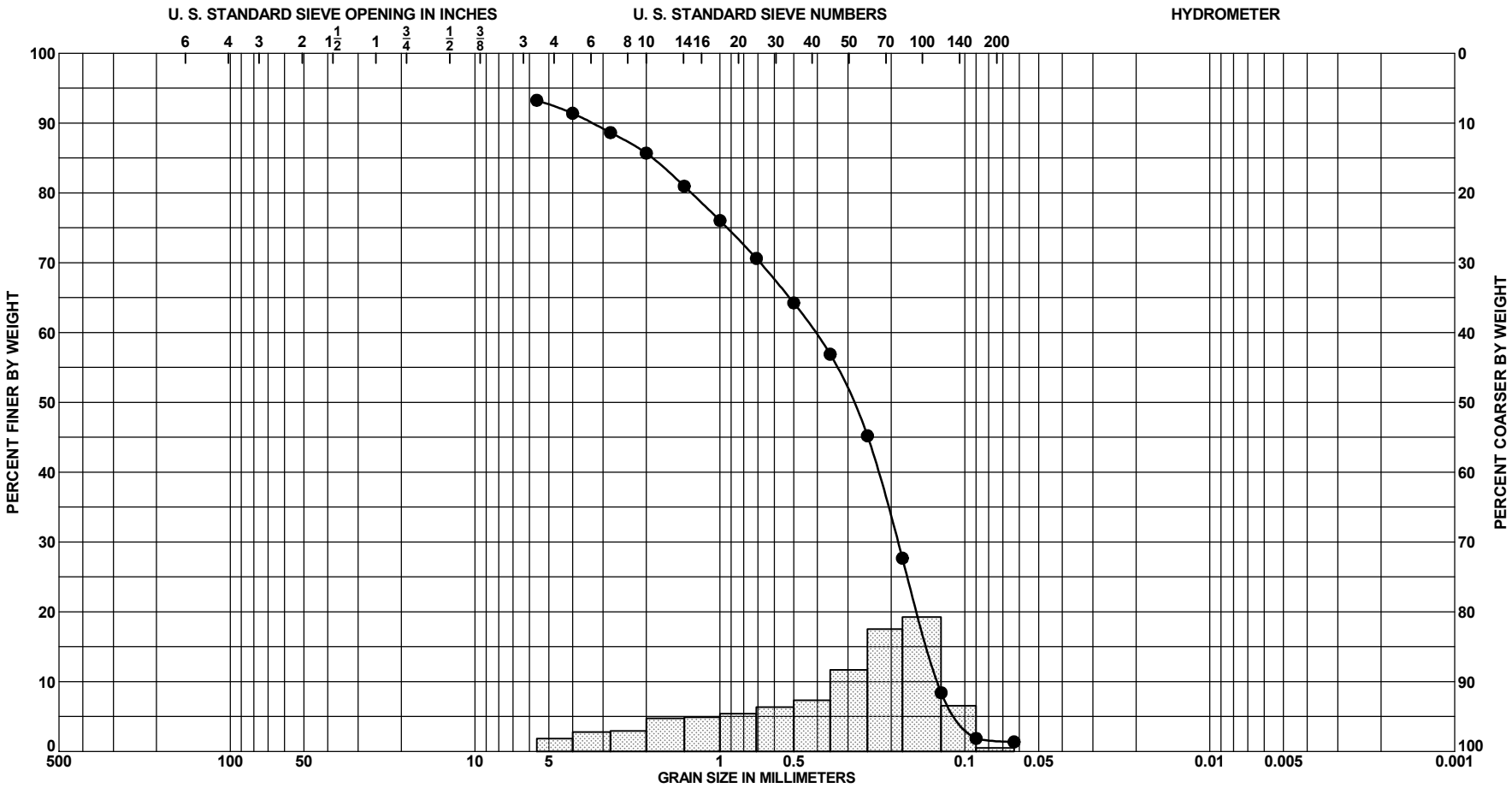


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	6.9 to 7.1 Ft.	SAND, poorly-graded, white (SP)	2.5Y 8/1		7		0				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	31
BORING ELEV.	-5.1 Ft., NAVD88
DATE	12/20/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

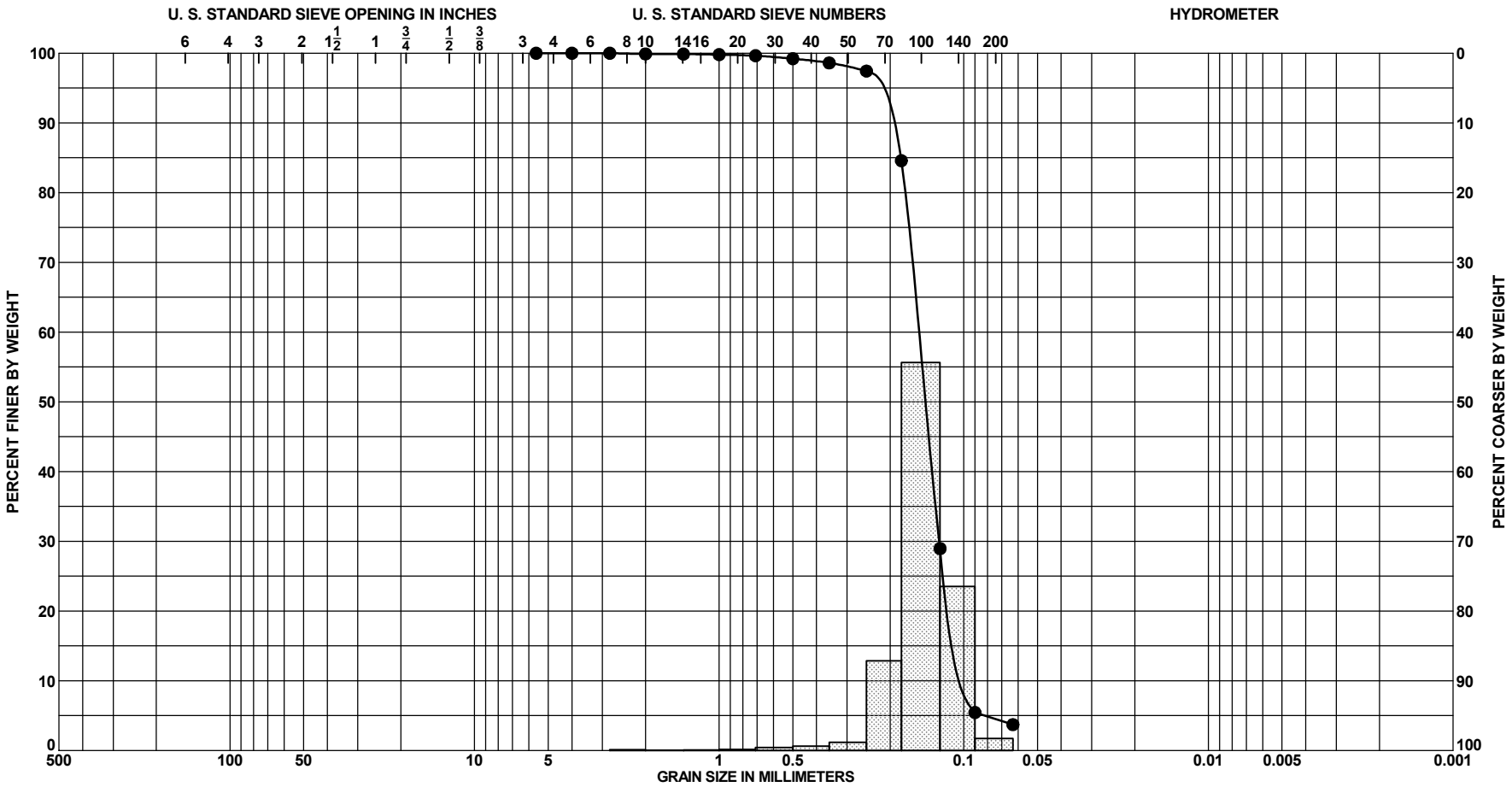


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	1.0 to 1.2 Ft.	SAND, poorly-graded, light gray	2.5Y 7/1		45		1				
		(SP)									

PROJECT	Pinellas County
	Blind Pass
BORING NO.	34
BORING ELEV.	-6.0 Ft., NAVD88
DATE	10/2/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

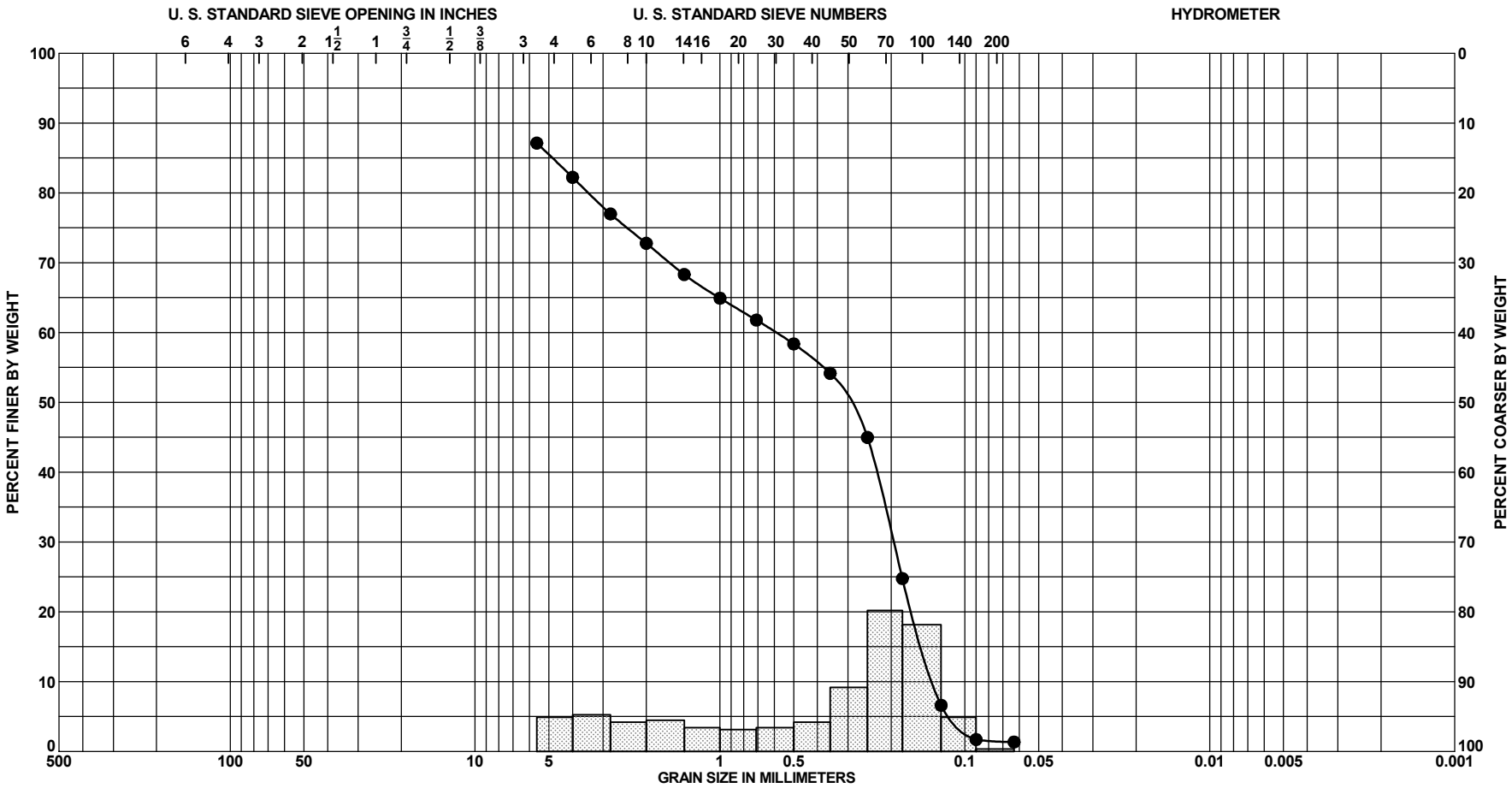


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	3.8 to 4.0 Ft.	SAND, poorly-graded, light gray	2.5Y 7/1		8		1				
		(SP)									

PROJECT	Pinellas County
	Blind Pass
BORING NO.	34
BORING ELEV.	-6.0 Ft., NAVD88
DATE	10/2/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

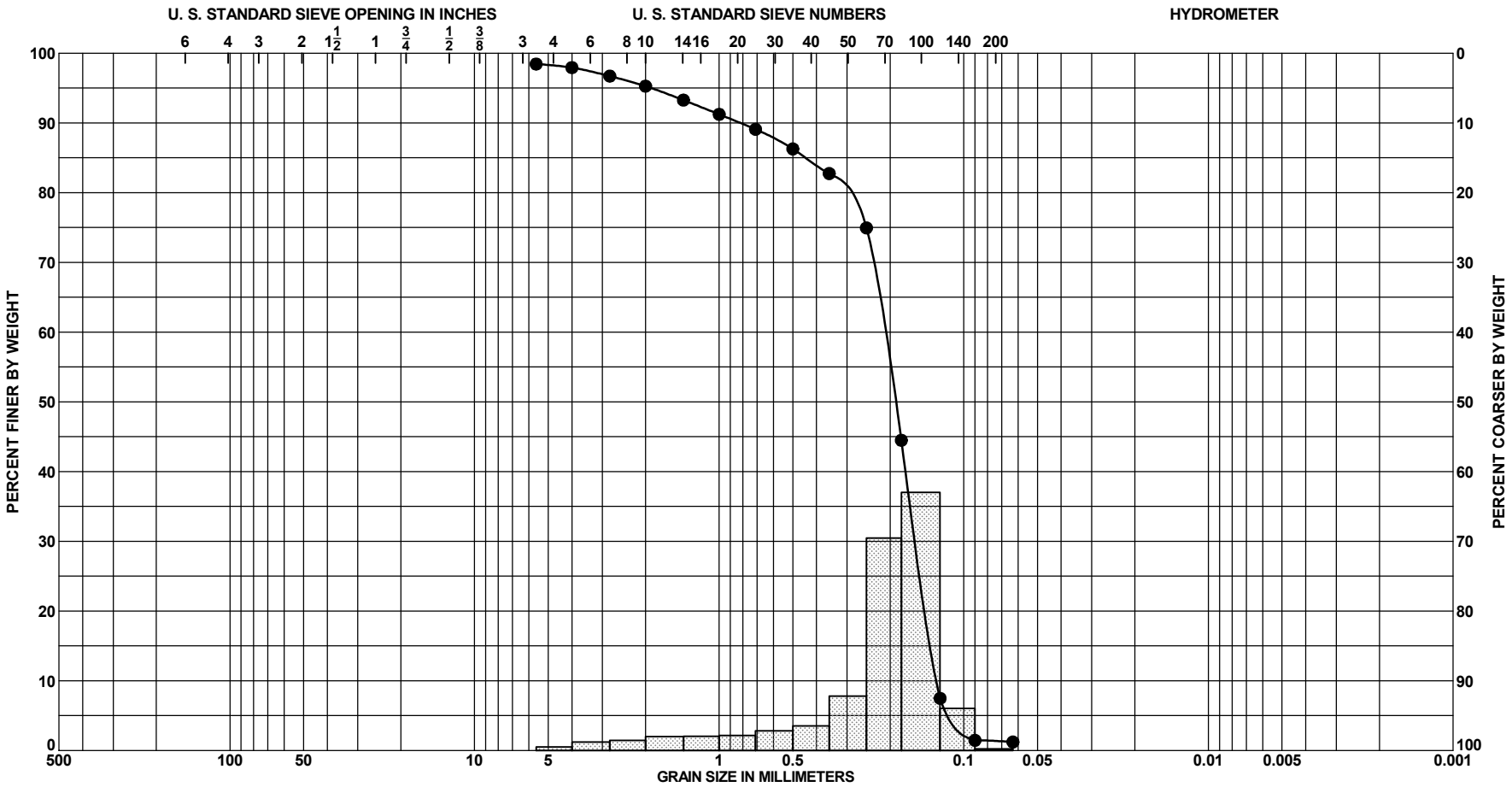


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	8.7 to 8.9 Ft.	SAND, poorly-graded, very dark gray (SP)	2.5Y 3/1		47		1				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	34
BORING ELEV.	-6.0 Ft., NAVD88
DATE	10/2/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

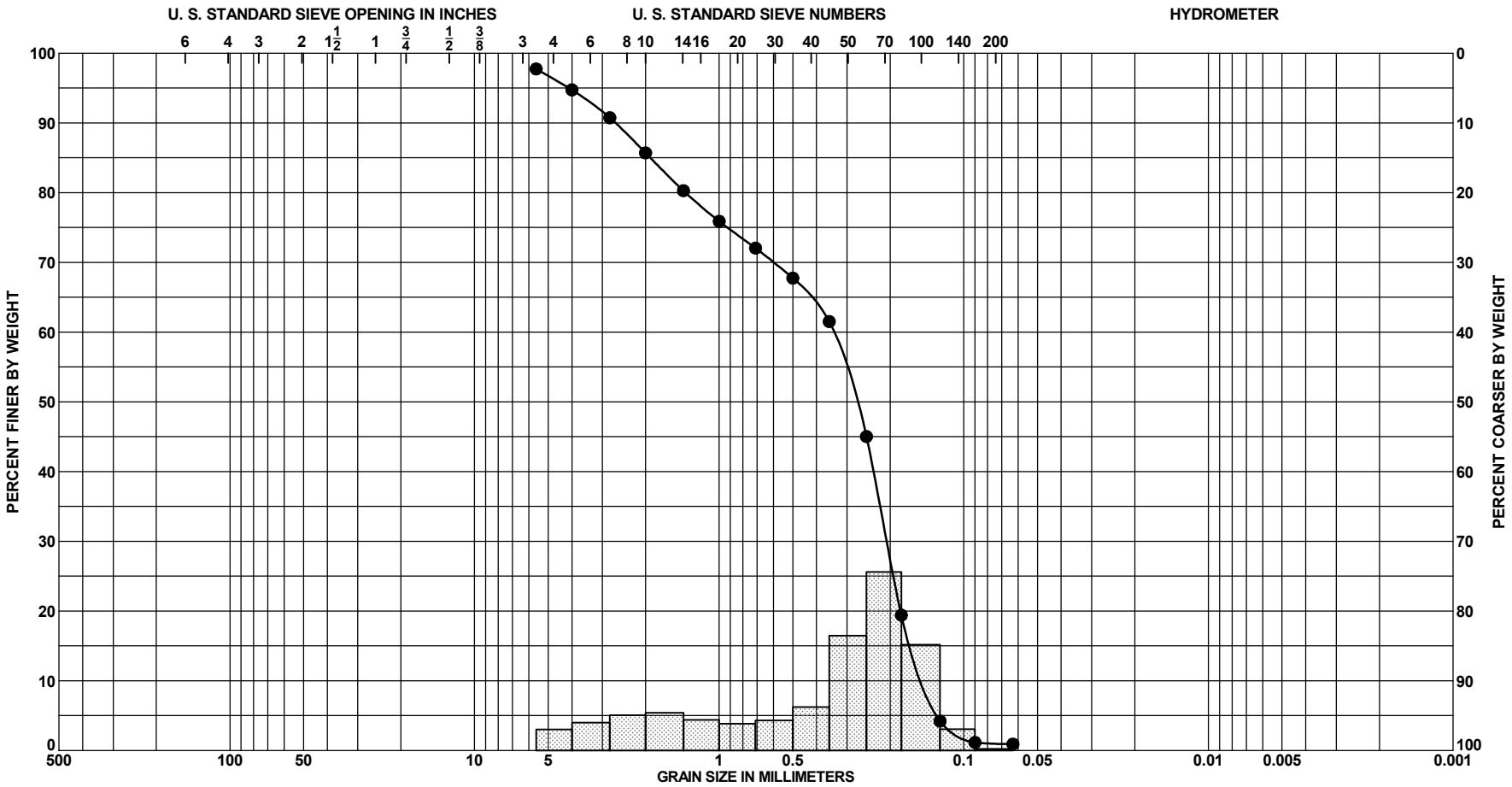


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	2.0 to 2.2 Ft.	SAND, poorly-graded, light gray (SP)	2.5Y 7/1		24		0				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	35
BORING ELEV.	-10.4 Ft., NAVD88
DATE	10/2/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

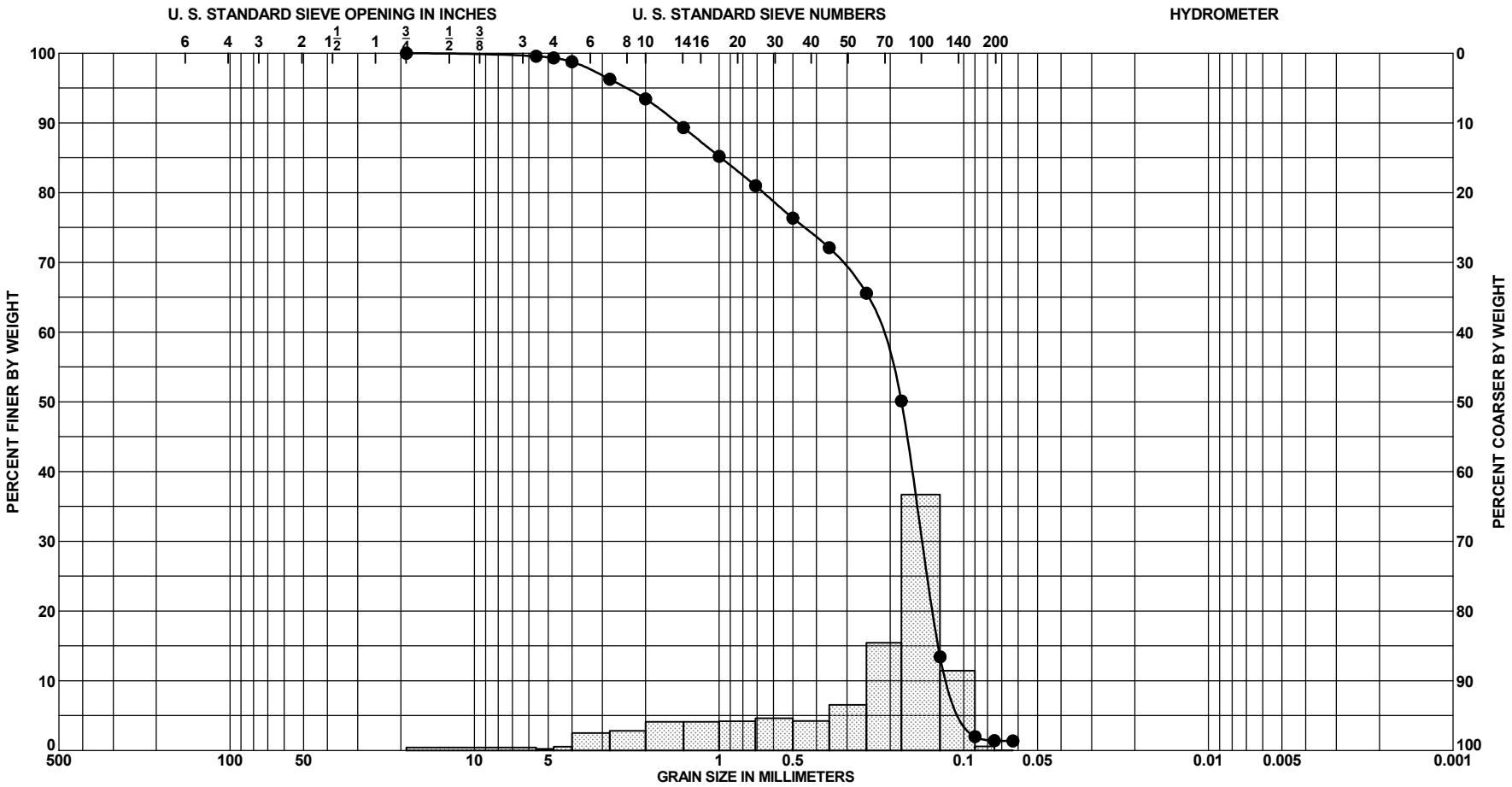


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	7.1 to 7.3 Ft.	SAND, poorly-graded, light gray	2.5Y 7/1		41		0				
		(SP)									

PROJECT	Pinellas County
	Blind Pass
BORING NO.	35
BORING ELEV.	-10.4 Ft., NAVD88
DATE	10/2/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

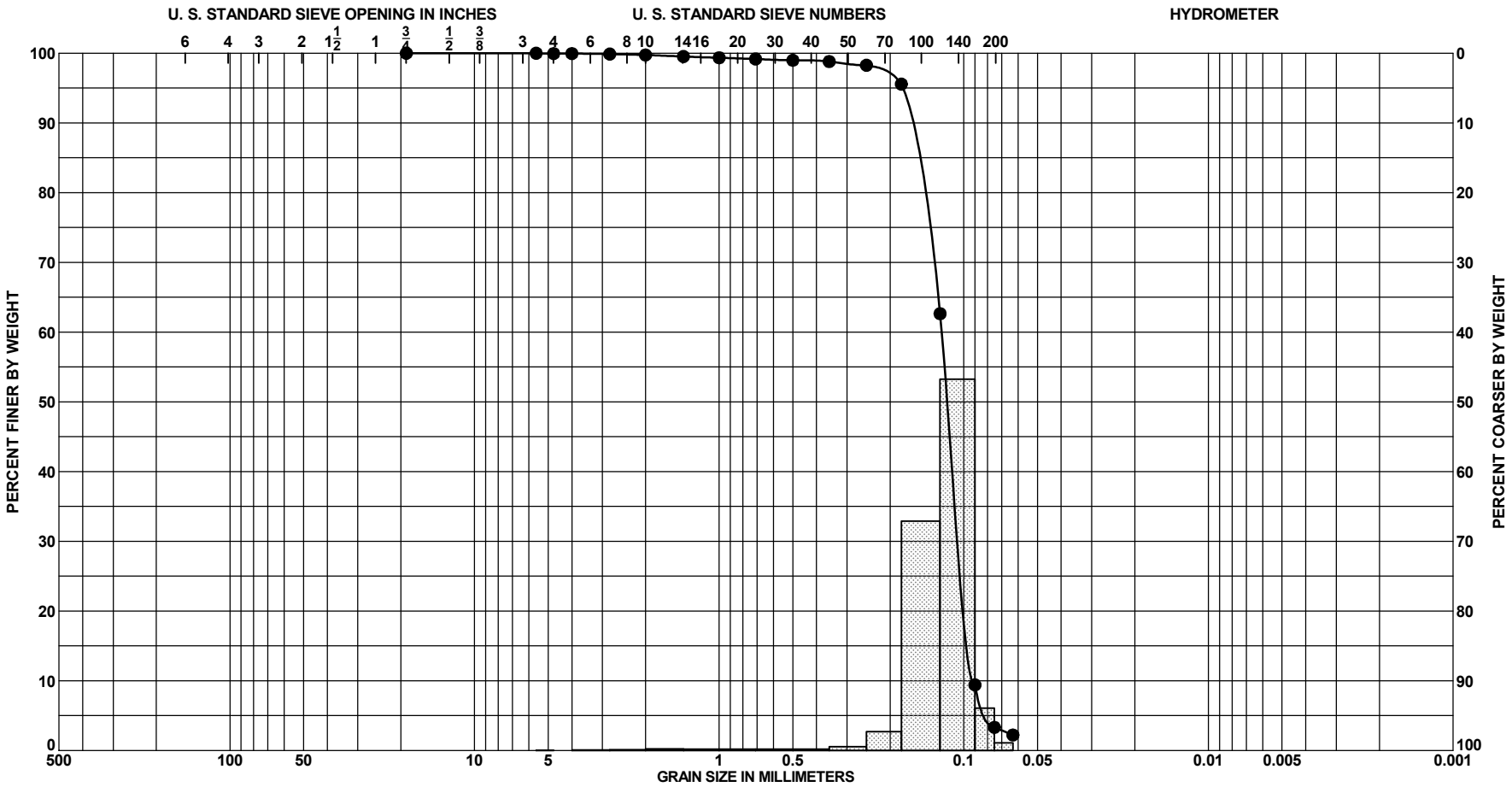


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	1.6 to 1.8 Ft.	SAND, poorly-graded, light gray (SP)	2.5Y 7/1		33		0				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	44
BORING ELEV.	-2.8 Ft., NAVD88
DATE	12/17/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

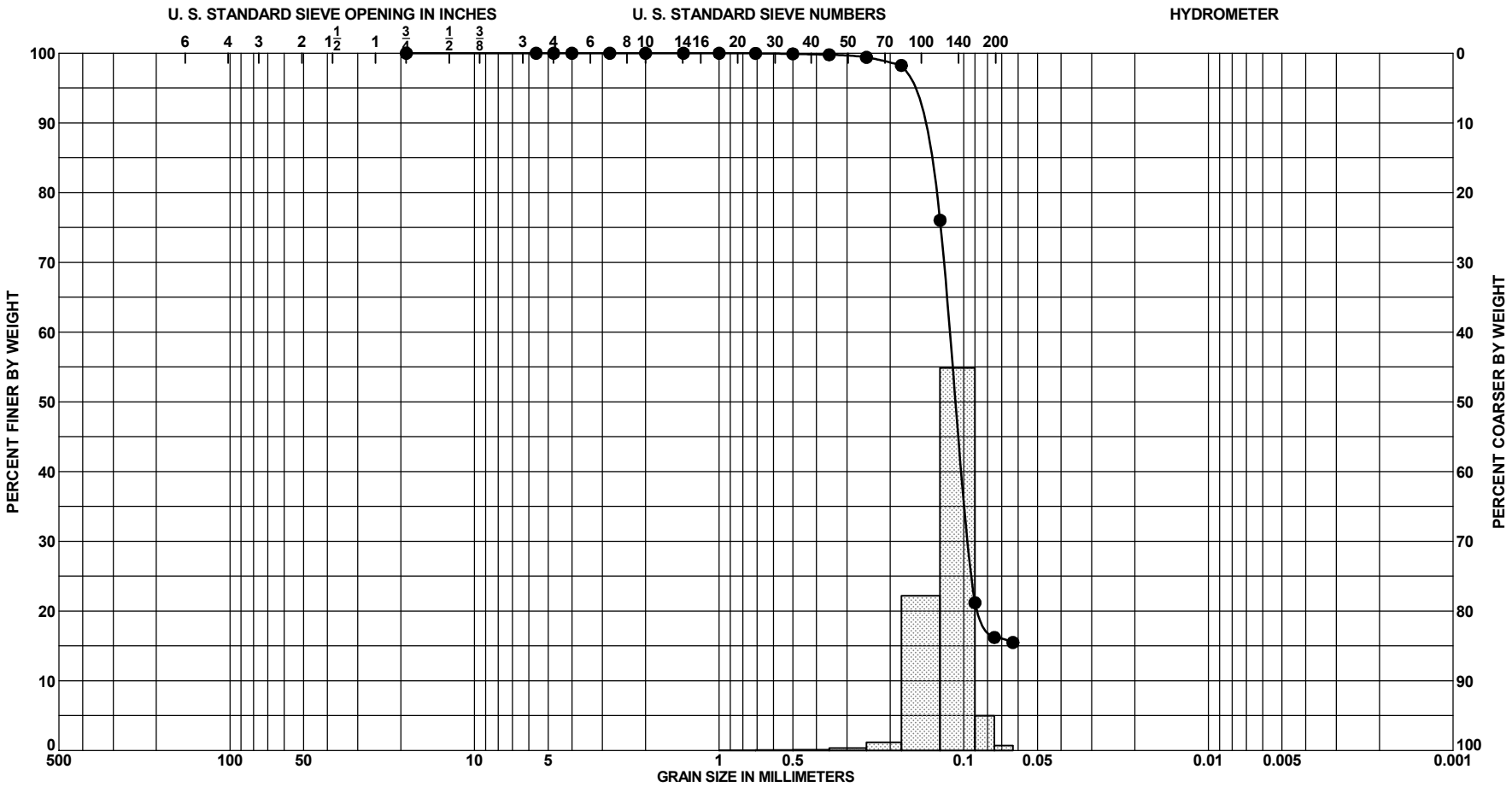


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	5.2 to 5.4 Ft.	SAND, poorly-graded, dark gray (SP)	2.5Y 4/1		6		0				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	44
BORING ELEV.	-2.8 Ft., NAVD88
DATE	12/17/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

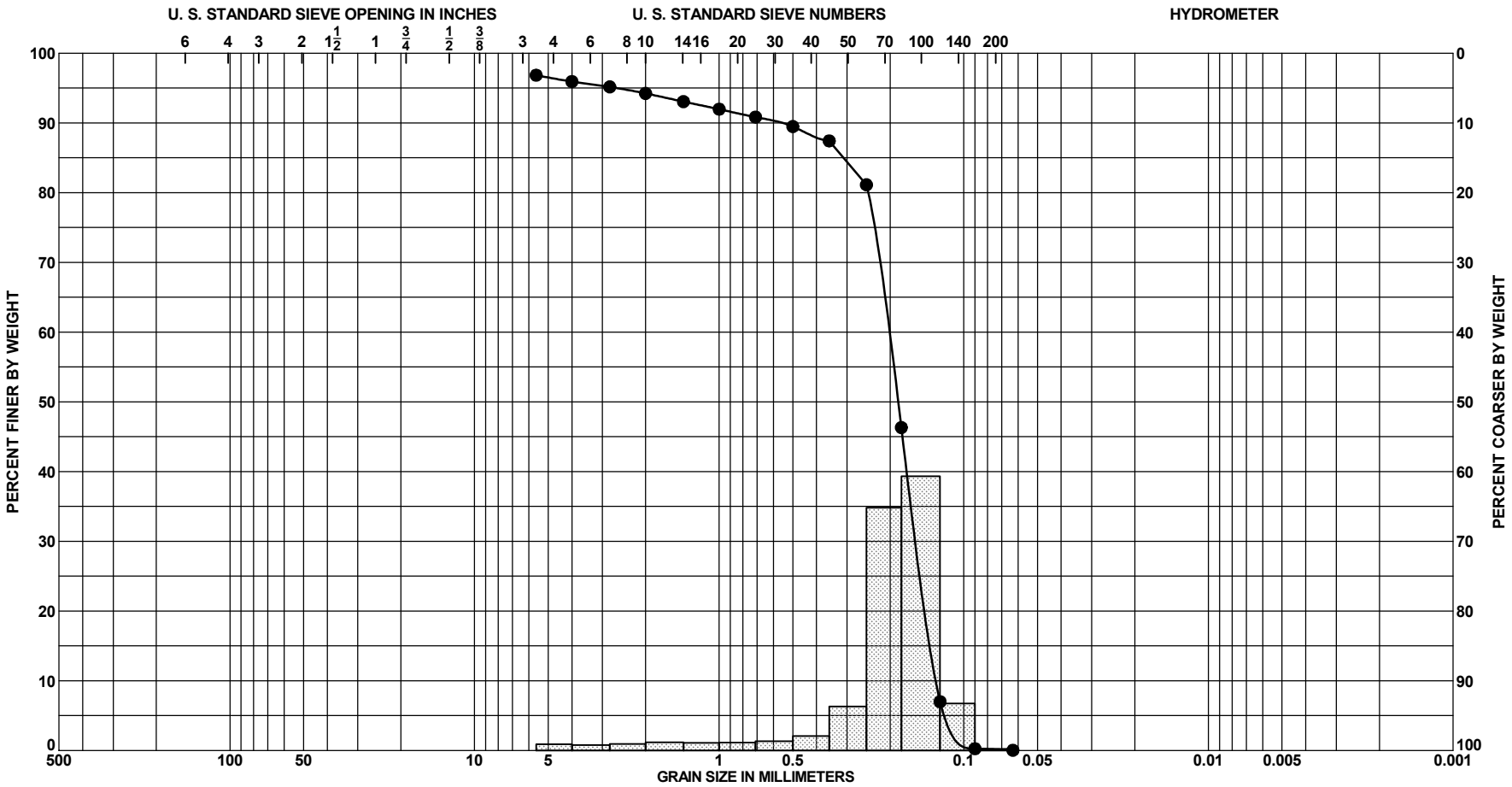


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	9.8 to 10.0 Ft.	, dark gray (SM)	2.5Y 4/1		8		1				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	44
BORING ELEV.	-2.8 Ft., NAVD88
DATE	12/17/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

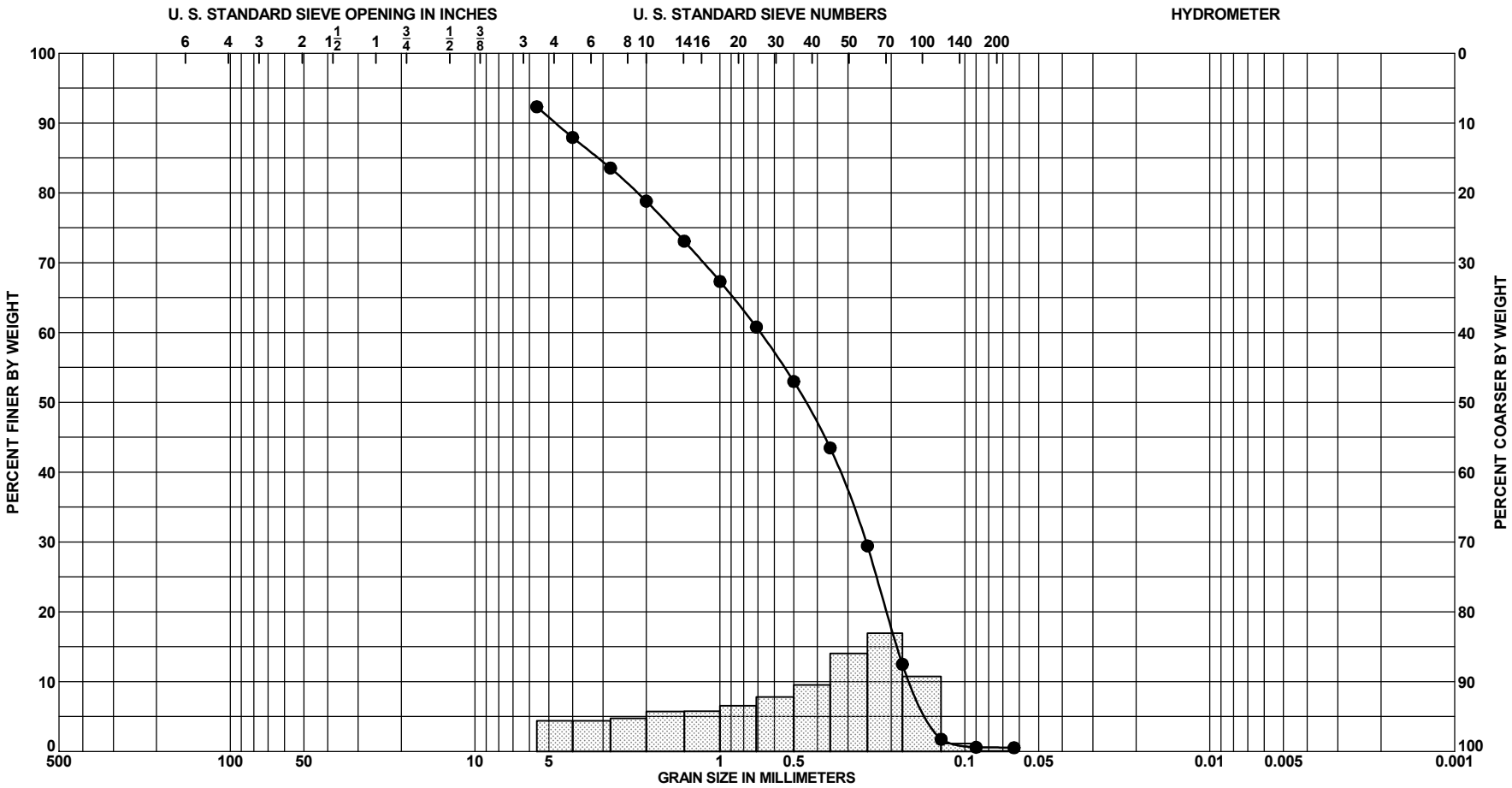


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	1.6 to 1.8 Ft.	SAND, poorly-graded, light gray	5Y 7/1		42		1				
		(SP)									

PROJECT	Pinellas County
	Blind Pass
BORING NO.	45
BORING ELEV.	-3.7 Ft., NAVD88
DATE	10/2/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

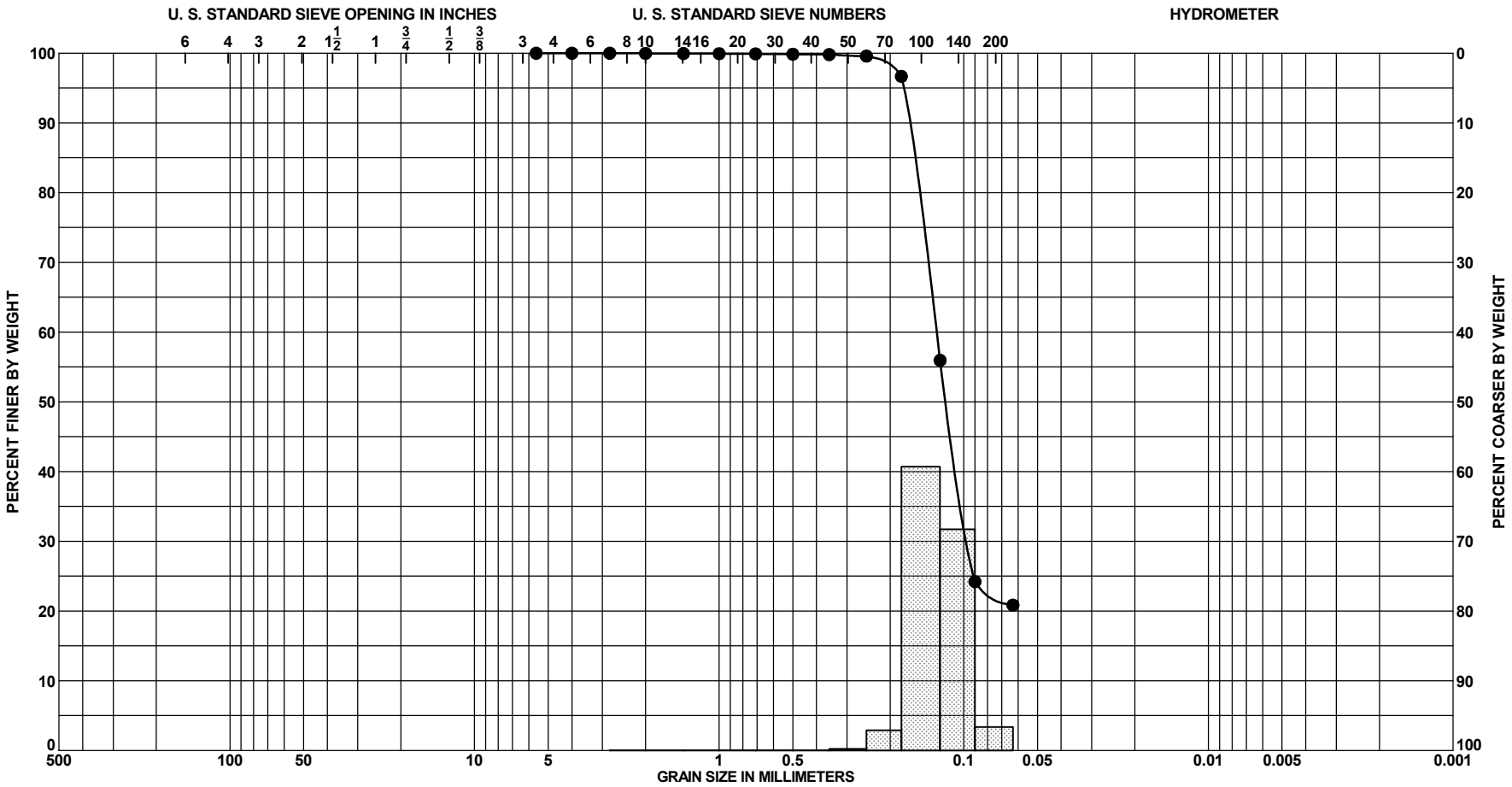


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	11.2 to 11.4 Ft.	SAND, poorly-graded, light gray	5Y 7/1		52		1				
		(SP)									

PROJECT	Pinellas County
	Blind Pass
BORING NO.	45
BORING ELEV.	-3.7 Ft., NAVD88
DATE	10/2/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

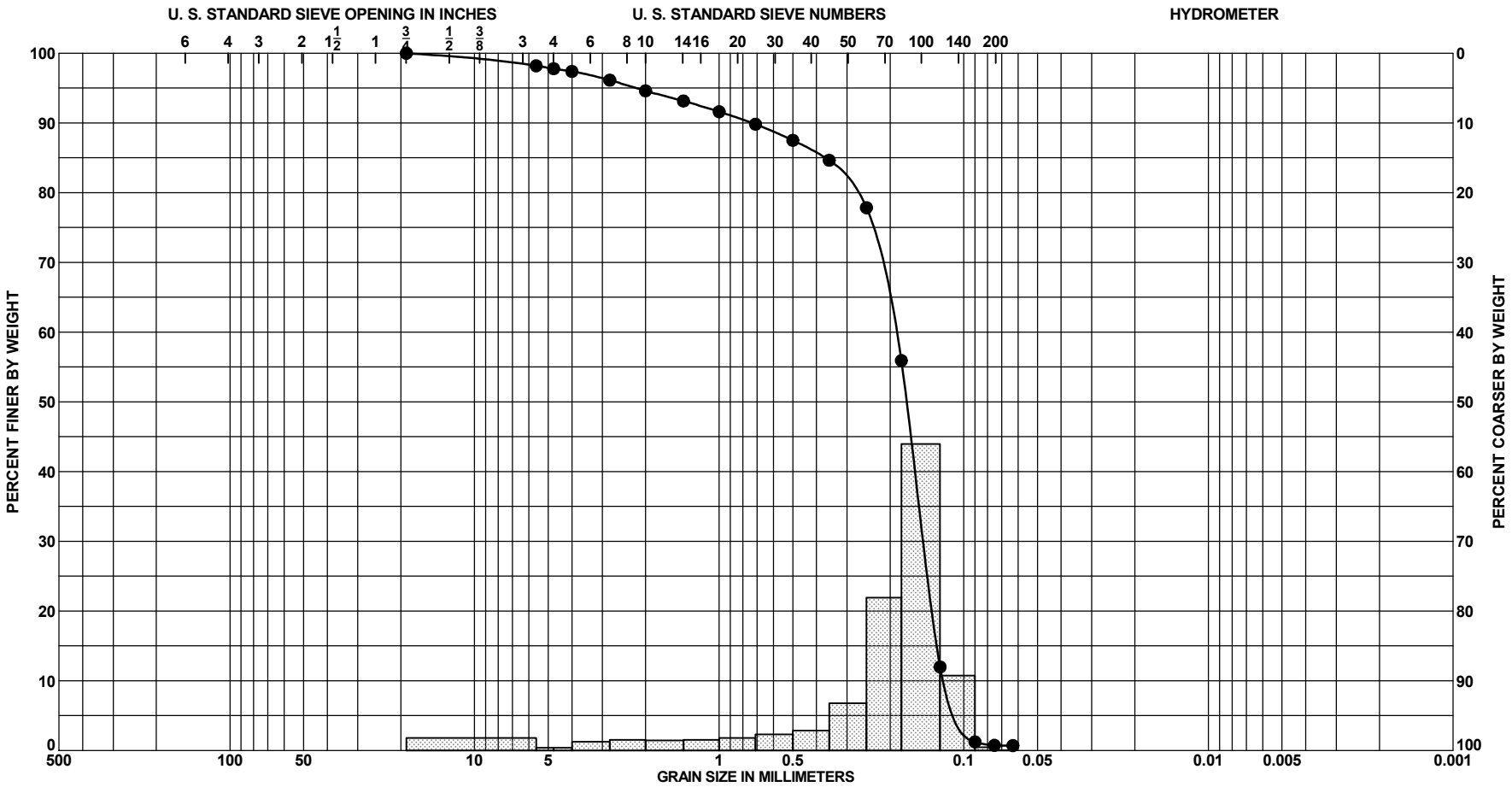


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	12.5 to 12.7 Ft.	, light gray (SM)	5Y 7/1		7		1				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	45
BORING ELEV.	-3.7 Ft., NAVD88
DATE	10/2/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

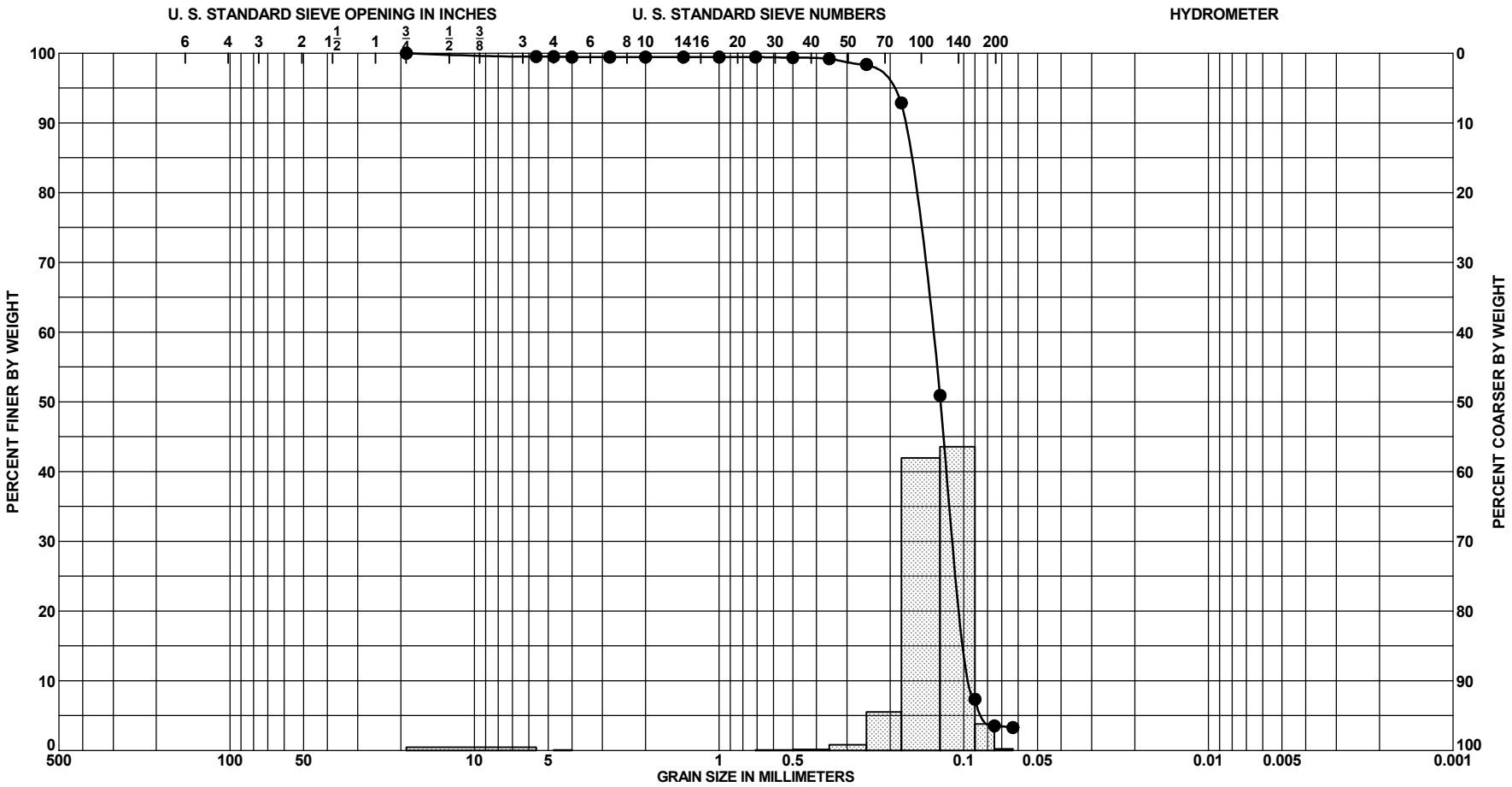


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	1.3 to 1.5 Ft.	SAND, poorly-graded, light gray	2.5Y 7/1		23		0				
		(SP)									

PROJECT	Pinellas County
	Blind Pass
BORING NO.	46
BORING ELEV.	-3.5 Ft., NAVD88
DATE	1/18/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

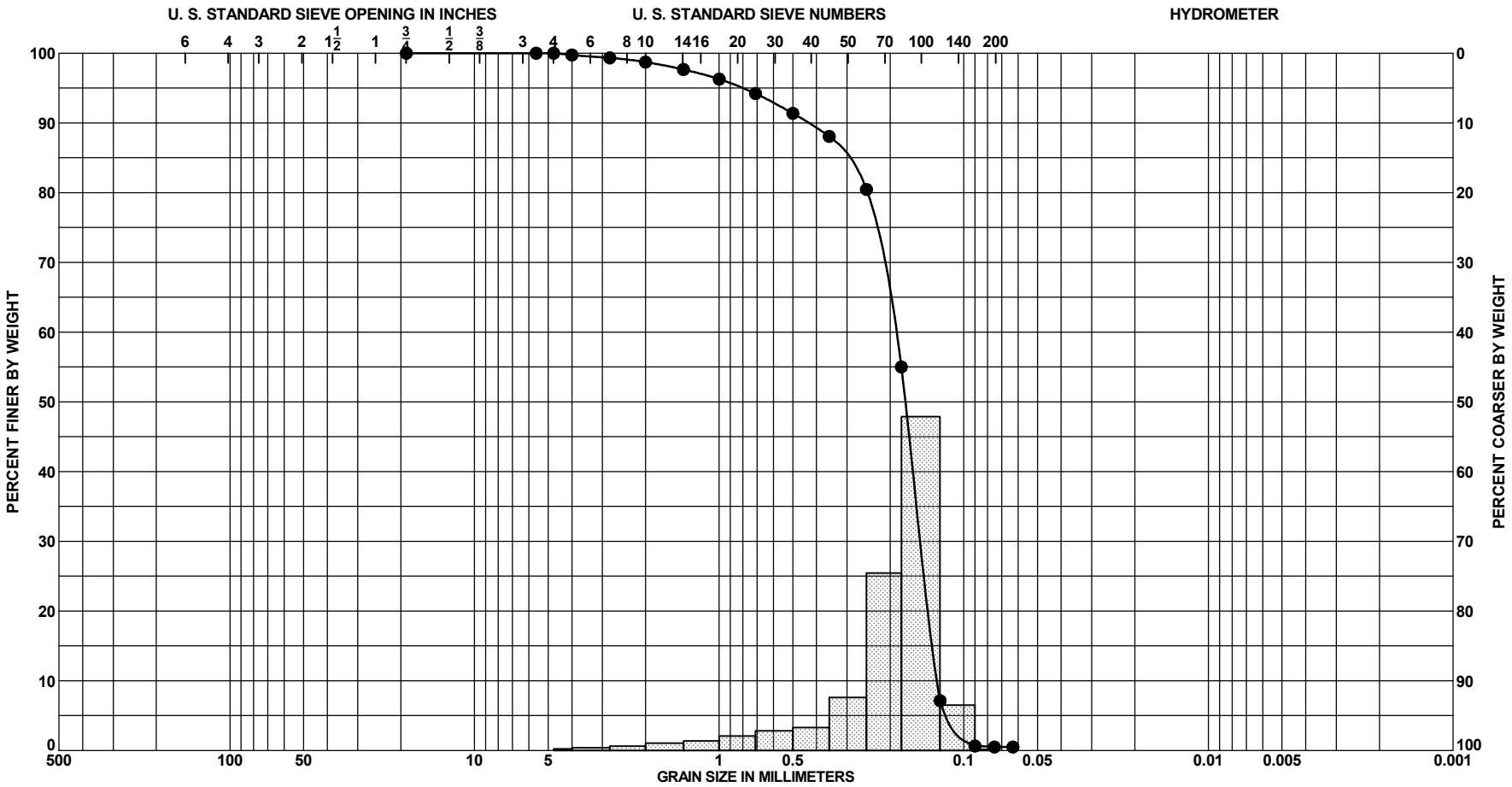


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	5.6 to 5.8 Ft.	SAND, poorly-graded, light gray	2.5Y 7/1		8		0				
		(SP)									

PROJECT	Pinellas County
	Blind Pass
BORING NO.	46
BORING ELEV.	-3.5 Ft., NAVD88
DATE	1/18/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

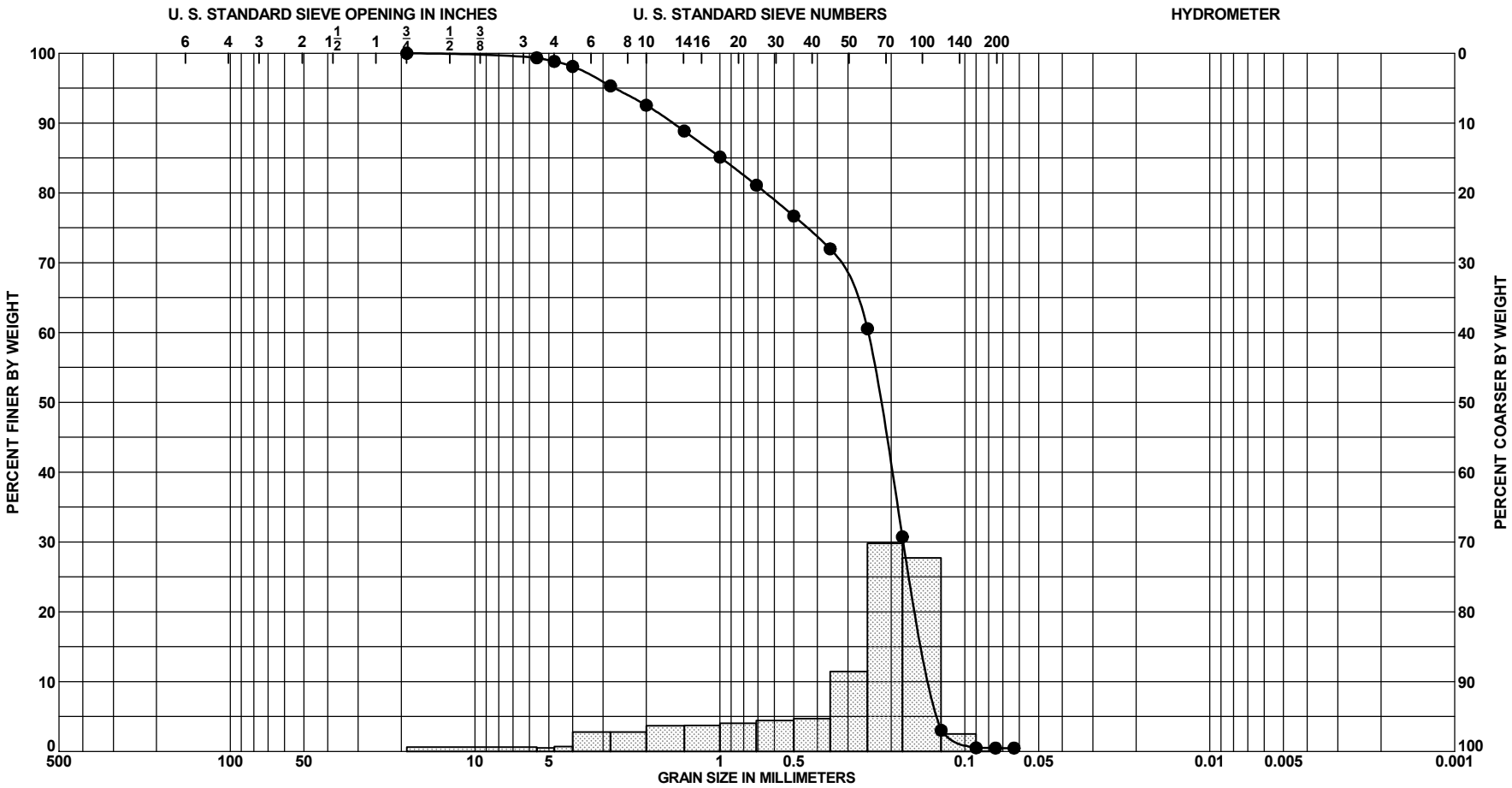


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	1.6 to 1.8 Ft.	SAND, poorly-graded, light gray	2.5Y 7/1		19		0				
		(SP)									

PROJECT	Pinellas County
	Blind Pass
BORING NO.	49
BORING ELEV.	-7.6 Ft., NAVD88
DATE	12/20/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

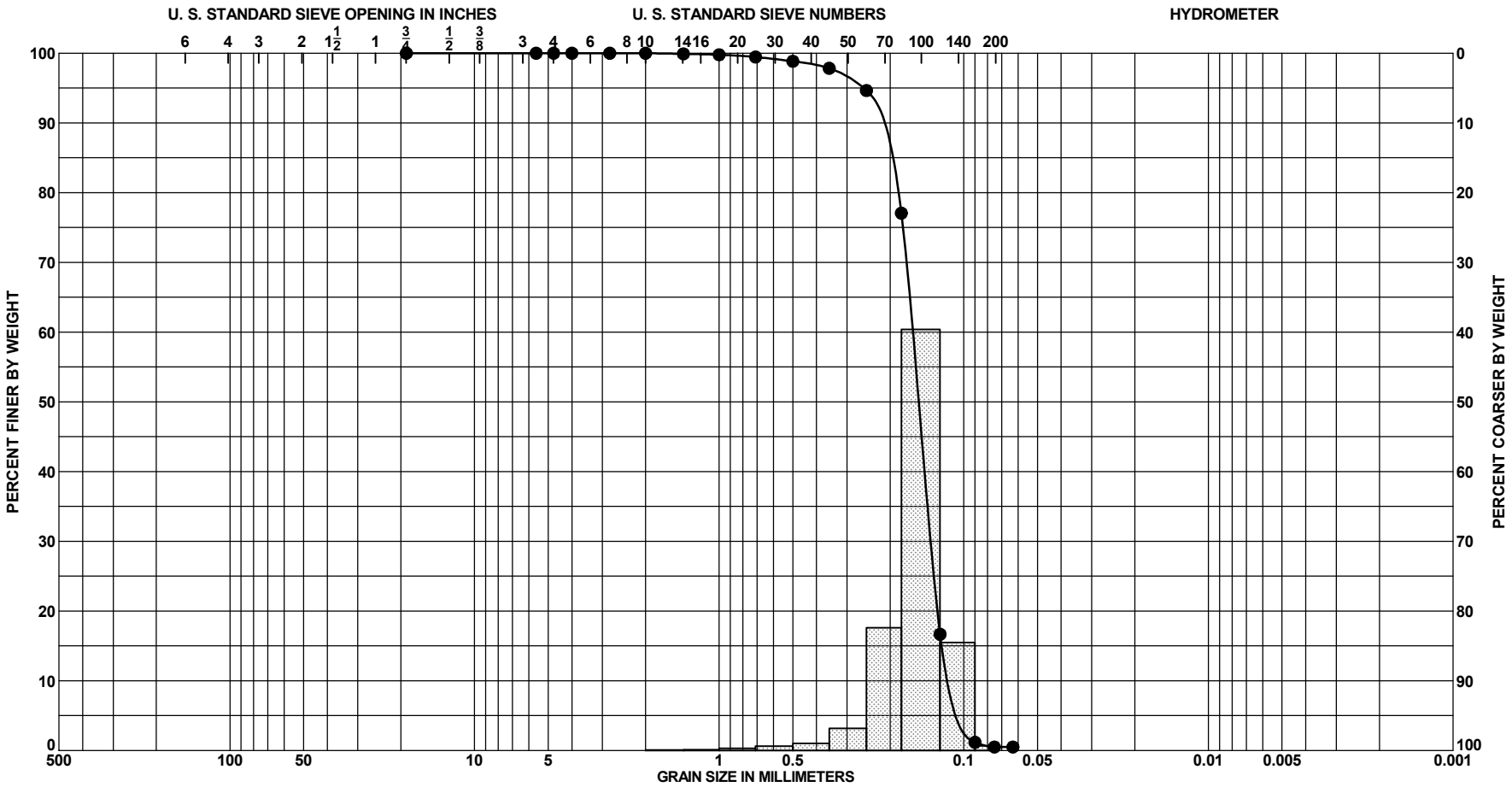


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	4.9 to 5.1 Ft.	SAND, poorly-graded, light gray	2.5Y 7/1		31		0				
		(SP)									

PROJECT	Pinellas County
	Blind Pass
BORING NO.	49
BORING ELEV.	-7.6 Ft., NAVD88
DATE	12/20/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

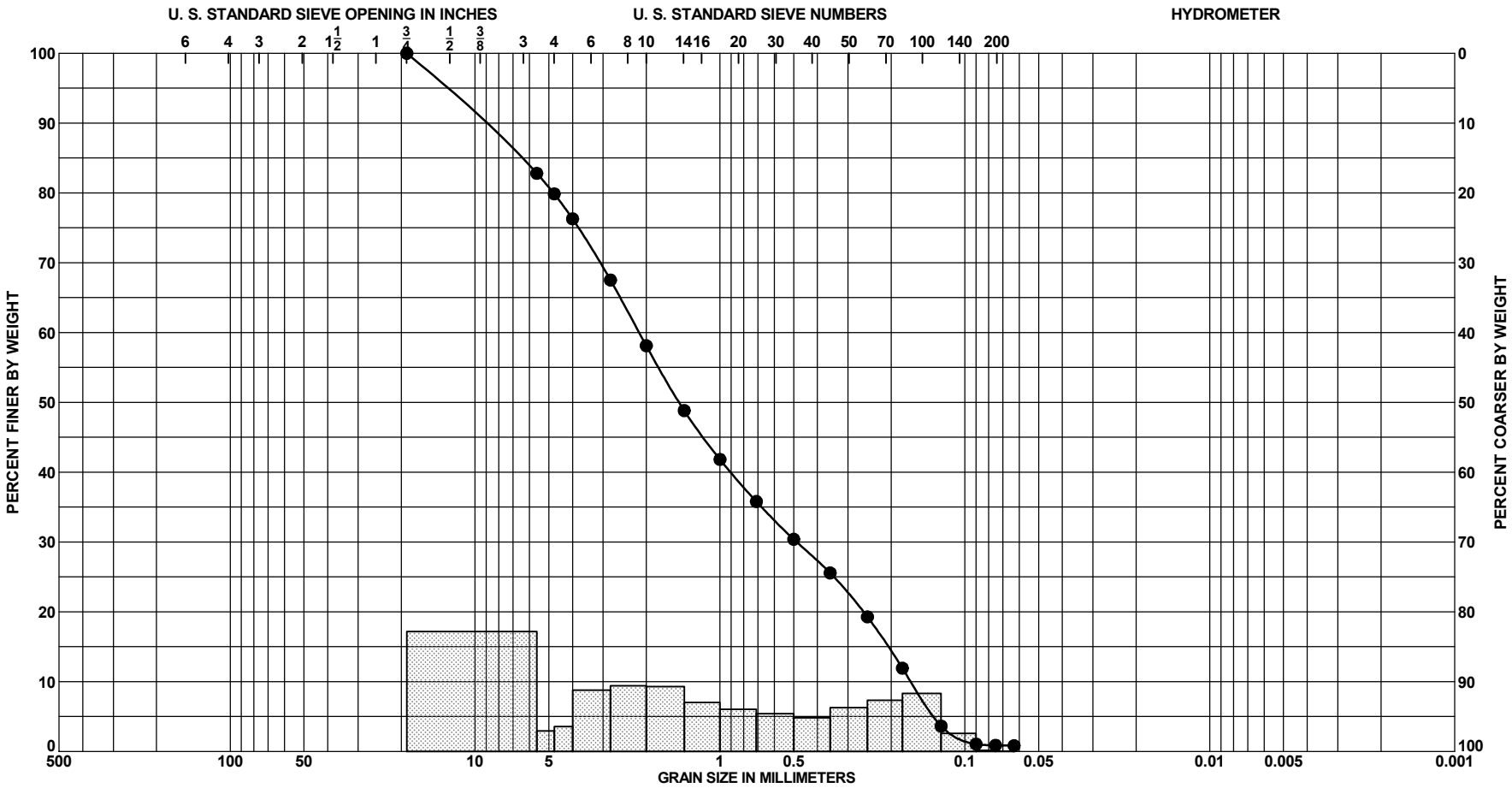


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	8.2 to 8.4 Ft.	SAND, poorly-graded, light gray (SP)	2.5Y 7/1		9		3				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	49
BORING ELEV.	-7.6 Ft., NAVD88
DATE	12/20/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

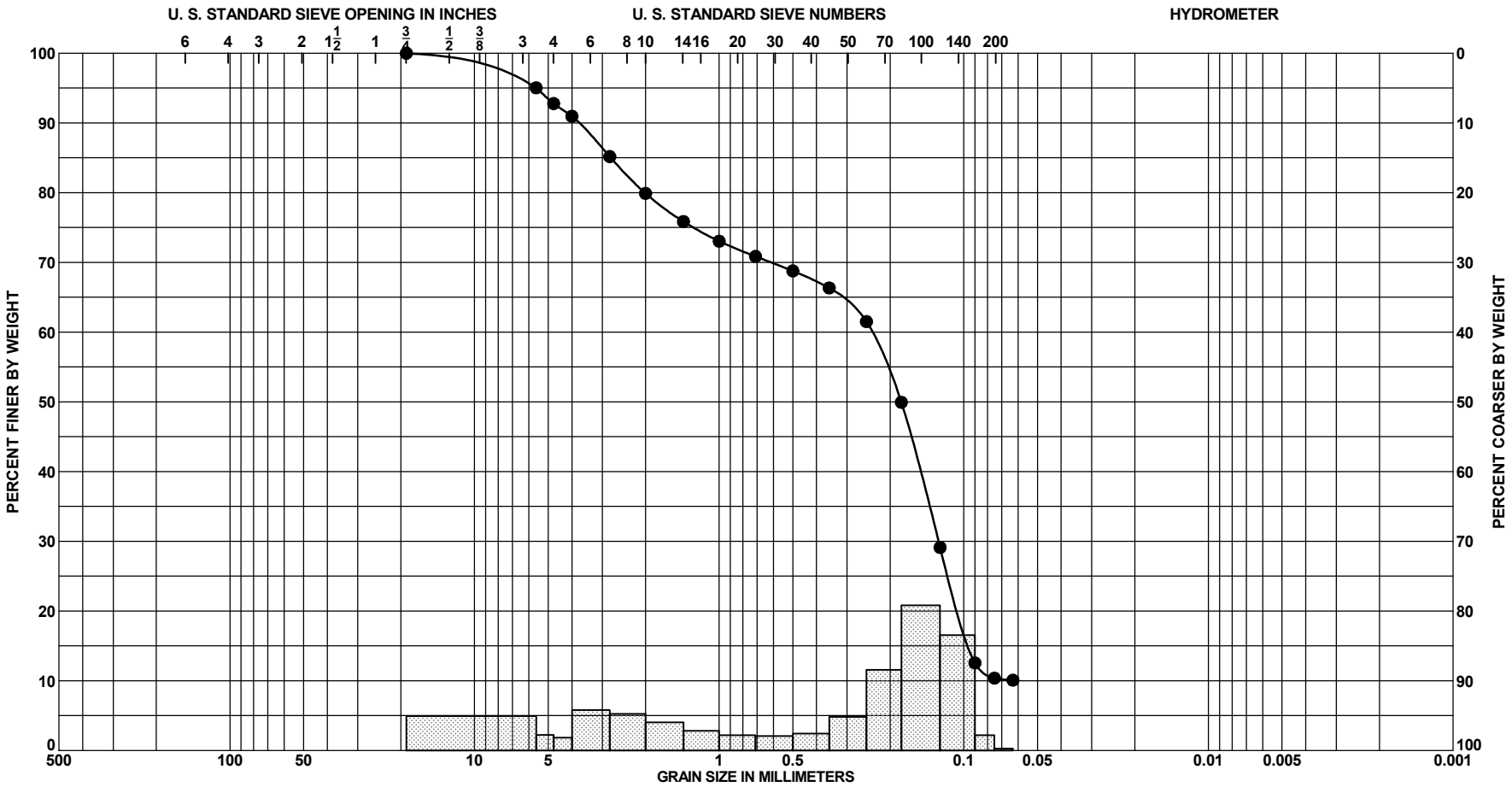


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 4	10.5 to 10.7 Ft.	SAND, poorly-graded, light gray	2.5Y 7/1		73		1				
		(SP)									

PROJECT	Pinellas County
	Blind Pass
BORING NO.	49
BORING ELEV.	-7.6 Ft., NAVD88
DATE	12/20/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

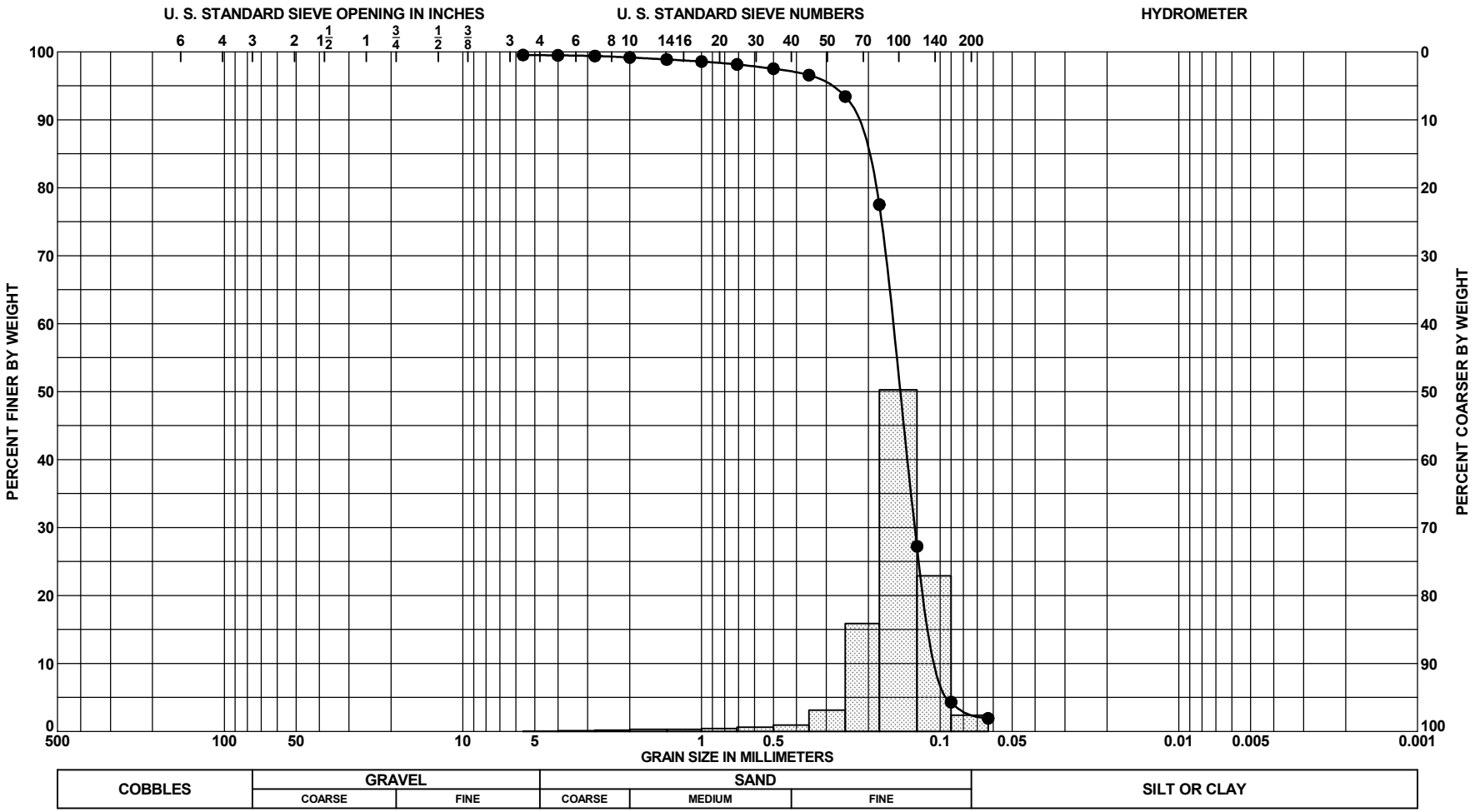


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 5	12.8 to 13.0 Ft.	, gray (SP-SM)	2.5Y 5/1		39		1				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	49
BORING ELEV.	-7.6 Ft., NAVD88
DATE	12/20/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

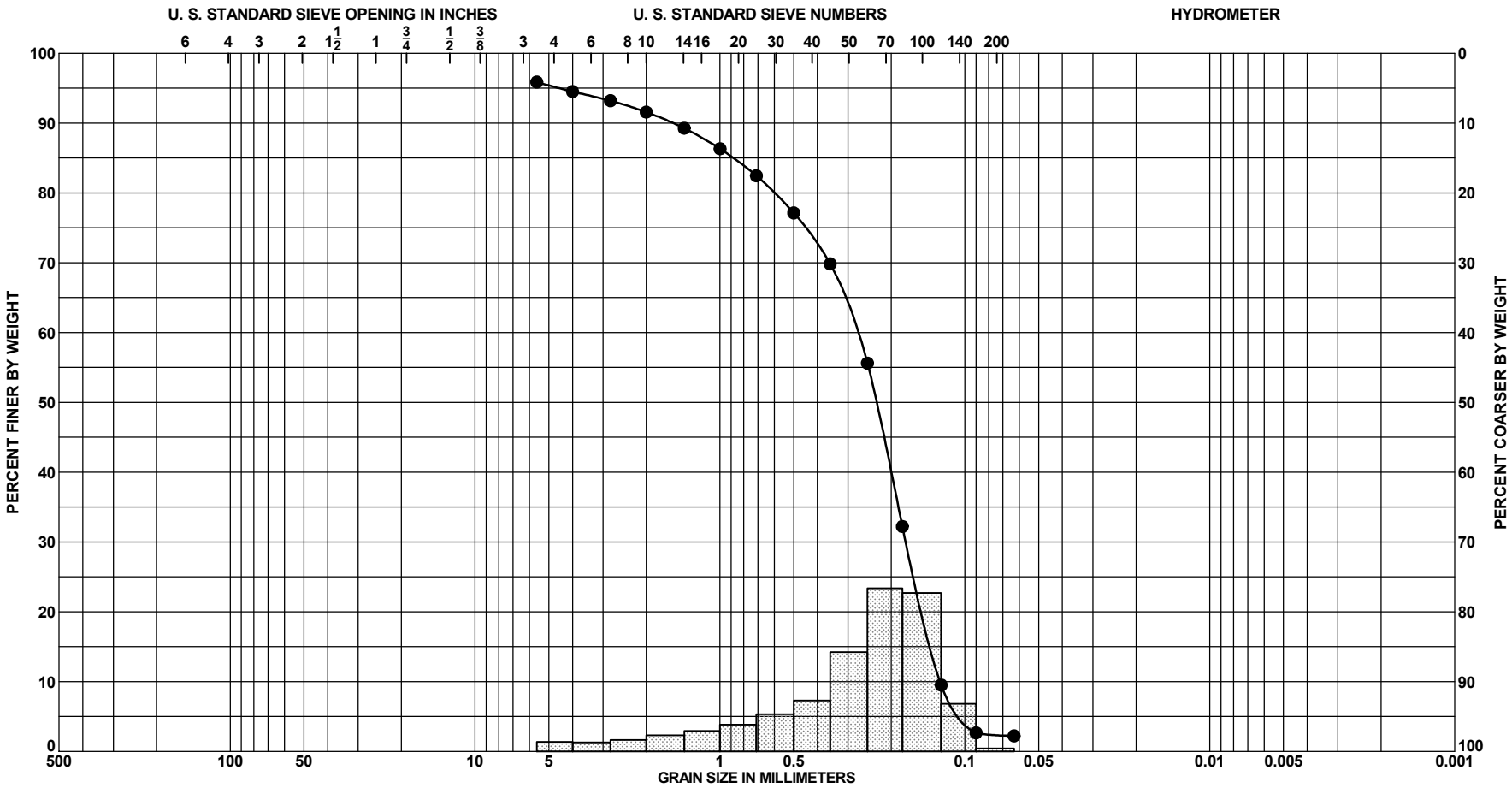


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	1.3 to 1.5 Ft.	SAND, poorly-graded, light gray	2.5Y 7/1		10		0				
		(SP)									

PROJECT	Pinellas County
	Blind Pass
BORING NO.	61
BORING ELEV.	-13.2 Ft., NAVD88
DATE	10/2/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

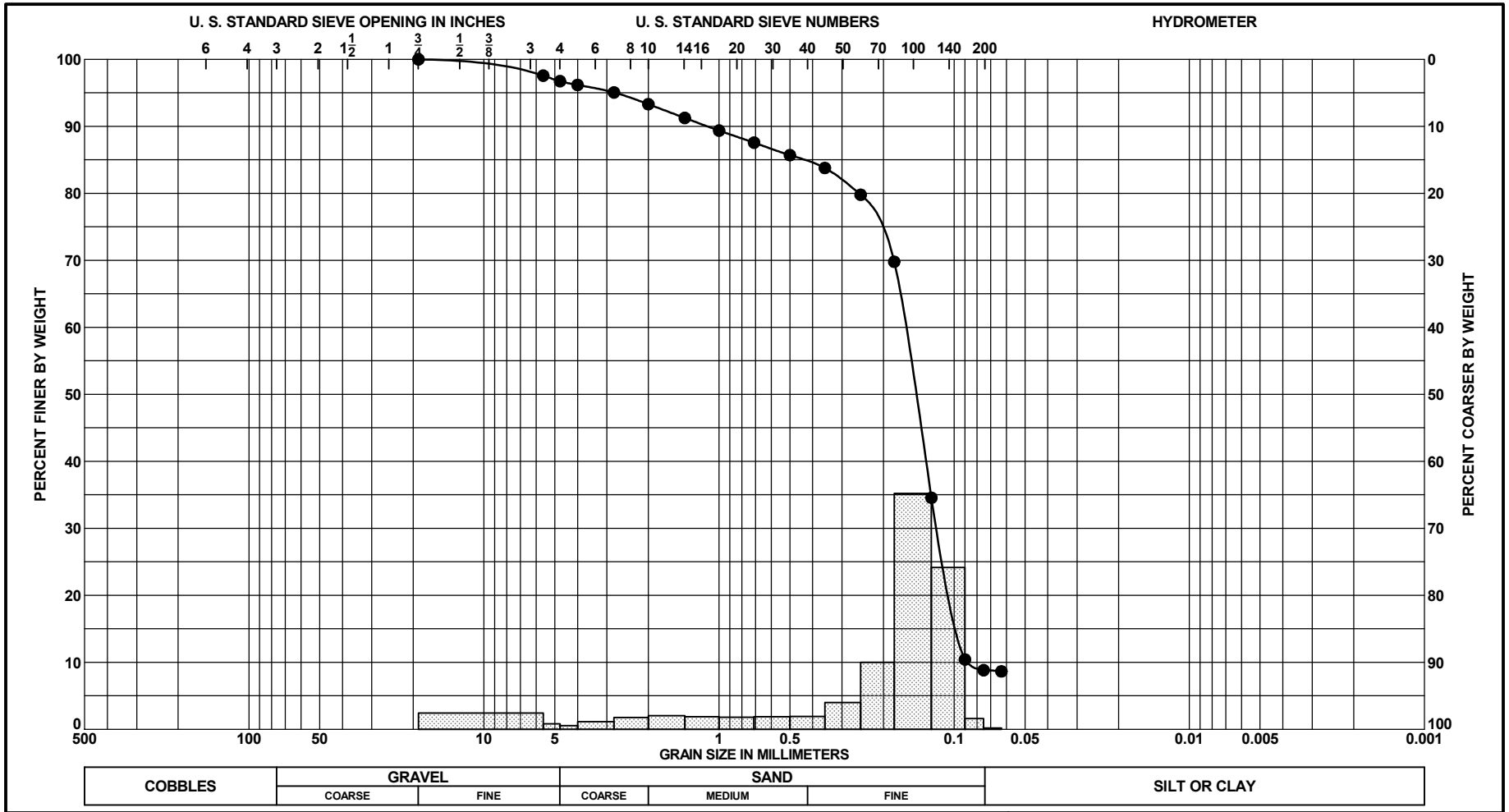


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	4.3 to 4.5 Ft.	SAND, poorly-graded, light gray (SP)	2.5Y 7/1		19		1				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	61
BORING ELEV.	-13.2 Ft., NAVD88
DATE	10/2/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

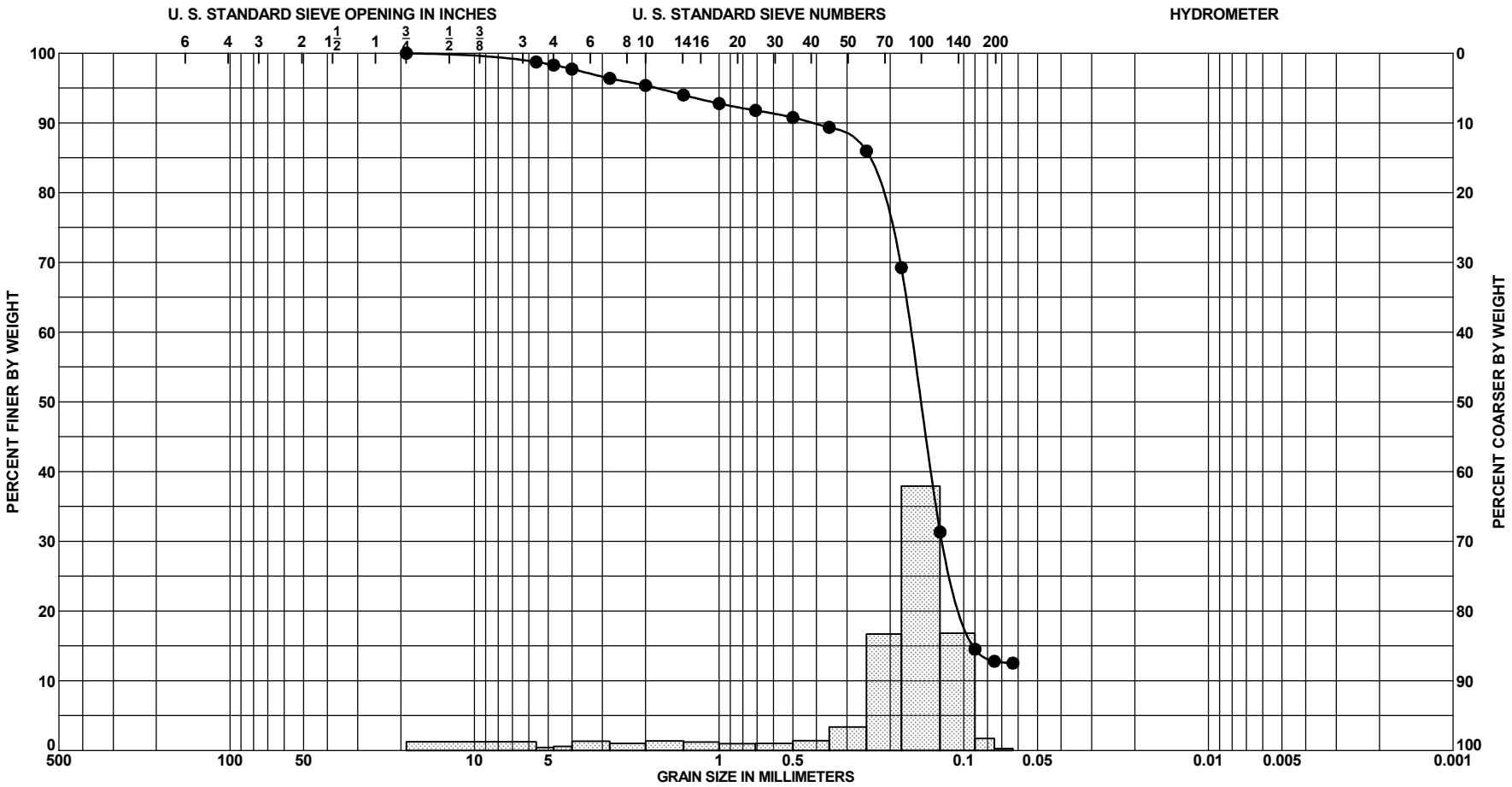


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	7.9 to 8.1 Ft.	, light gray (SP-SM)	2.5Y 7/1		22		0				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	61
BORING ELEV.	-13.2 Ft., NAVD88
DATE	1/30/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

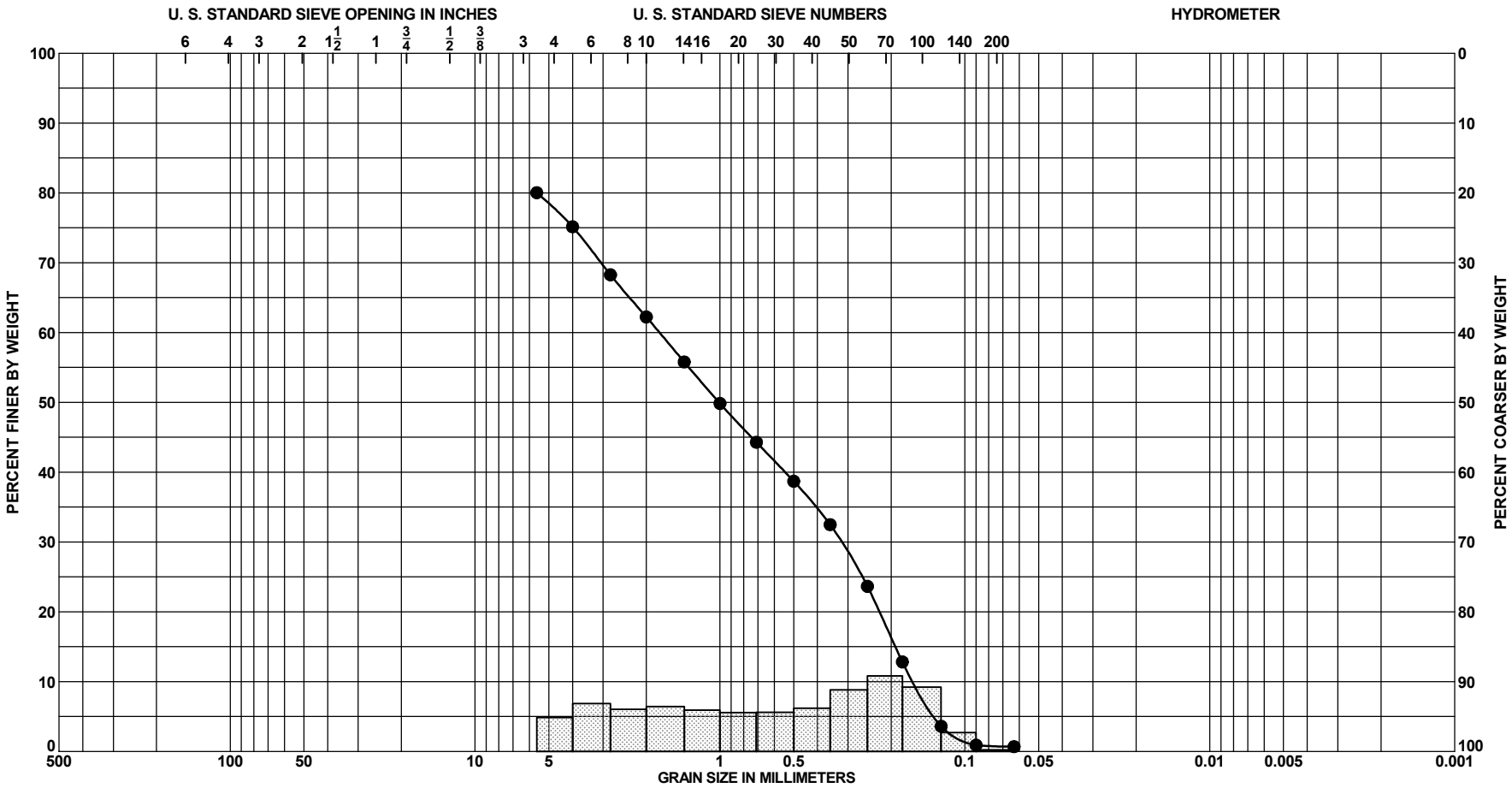


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 4	9.2 to 9.4 Ft.	, dark gray (SM)	2.5Y 4/1		11		0				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	61
BORING ELEV.	-13.2 Ft., NAVD88
DATE	2/8/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

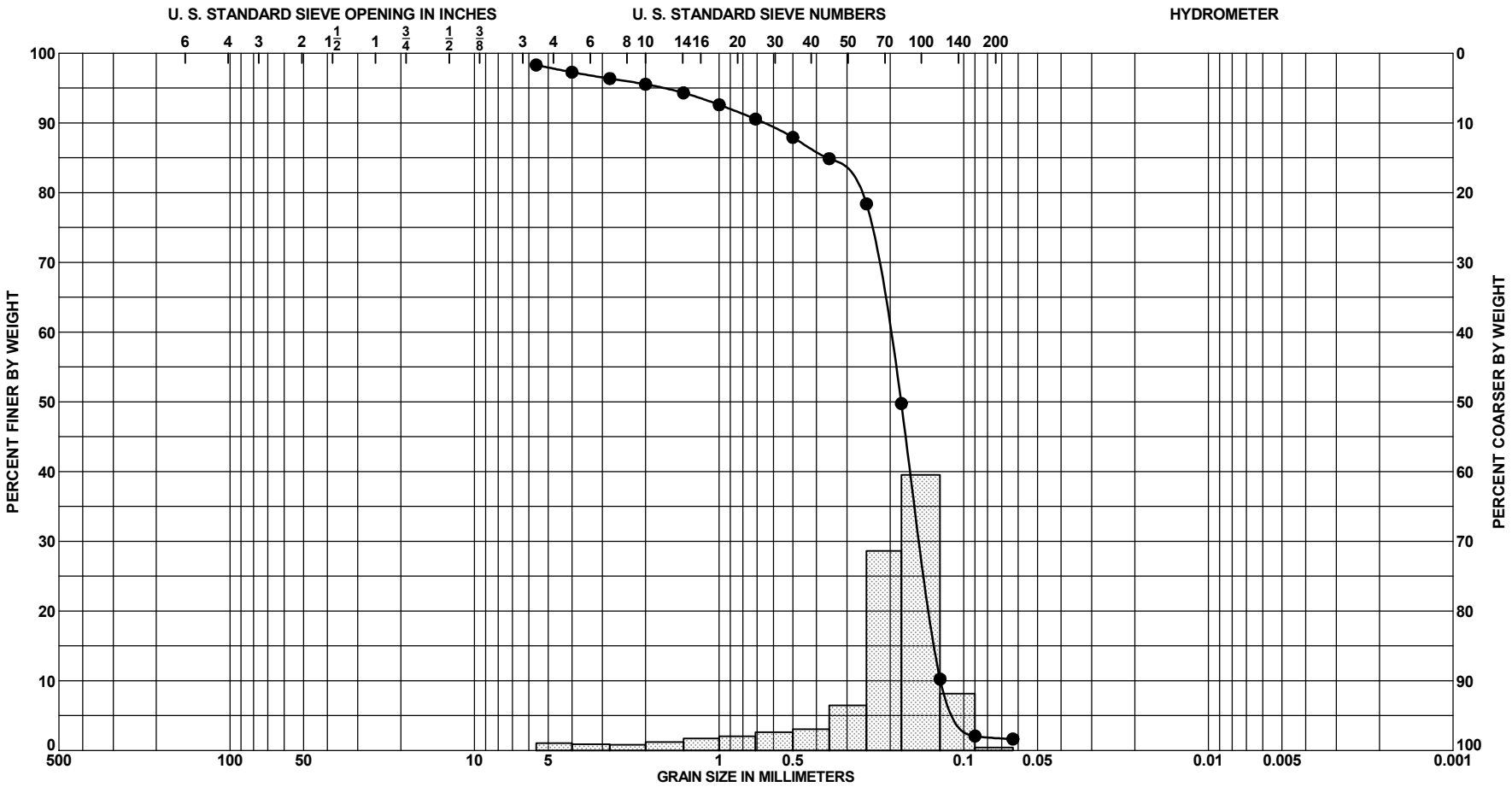


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	2.0 to 2.2 Ft.	SAND, poorly-graded, white (SP)	2.5Y 8/1		65		1				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	65
BORING ELEV.	-13.6 Ft., NAVD88
DATE	10/2/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

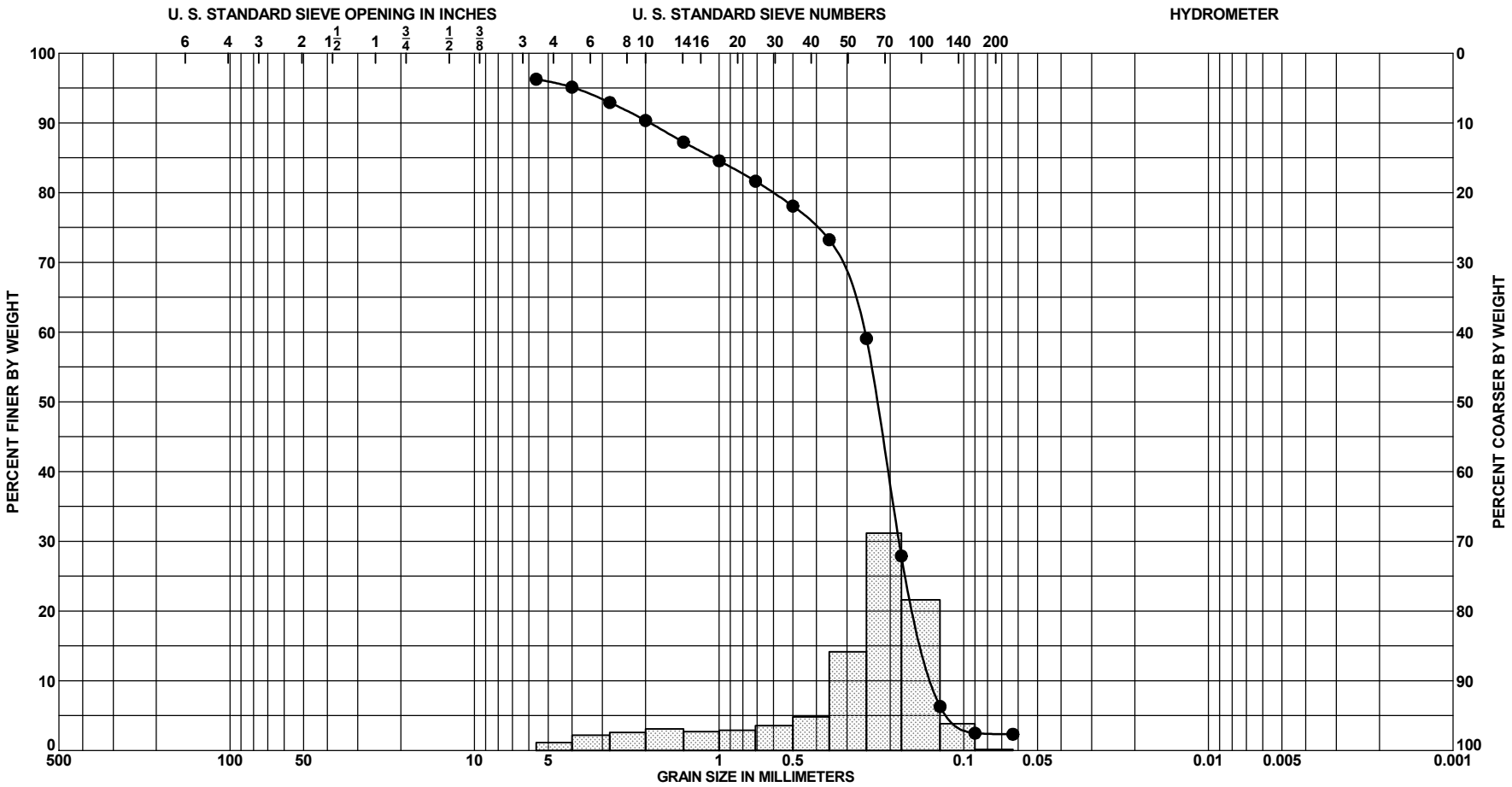


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	3.9 to 4.1 Ft.	SAND, poorly-graded, white (SP)	2.5Y 8/1		18		0				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	65
BORING ELEV.	-13.6 Ft., NAVD88
DATE	10/2/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

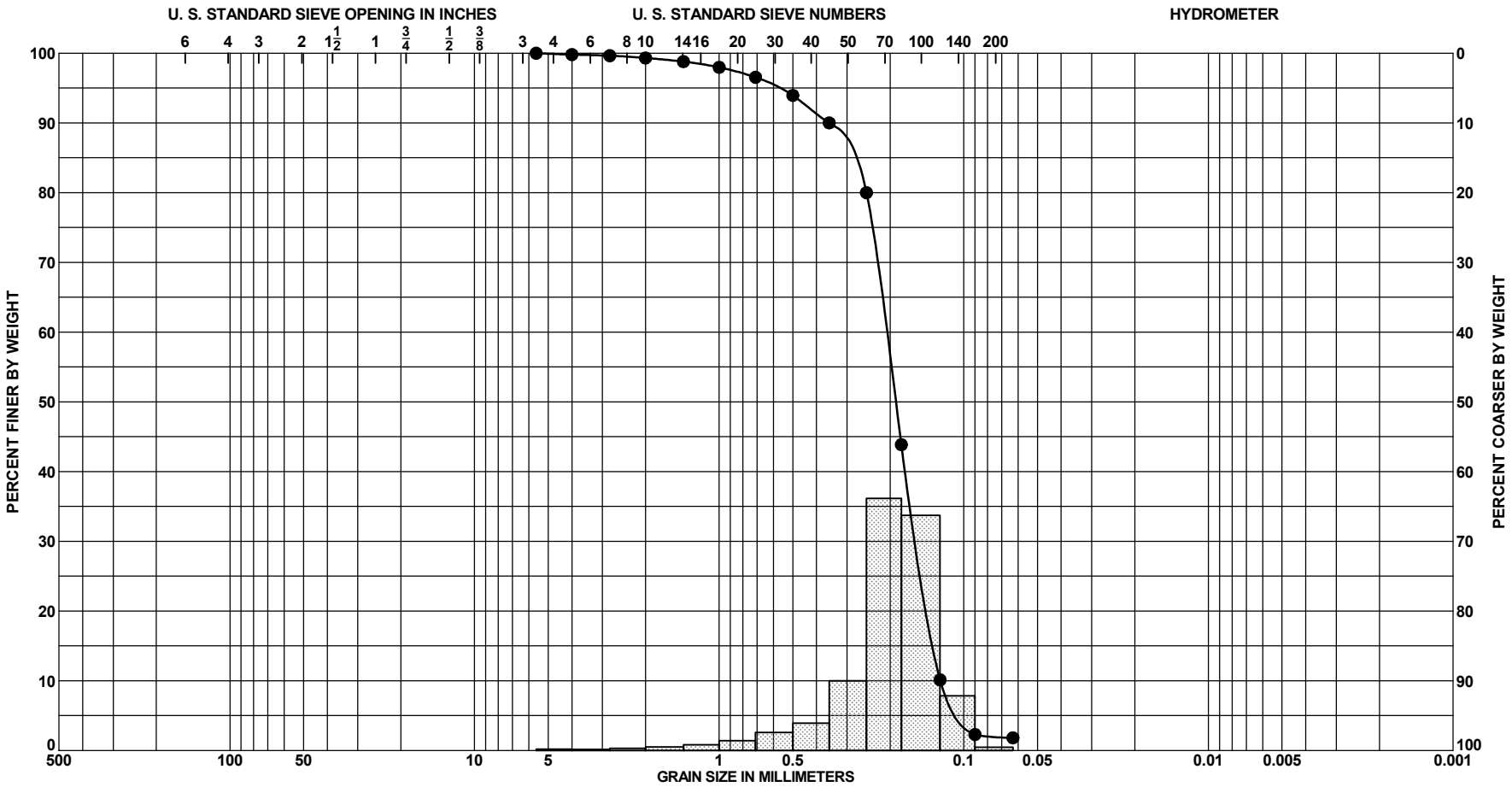


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	1.3 to 1.5 Ft.	SAND, poorly-graded, light gray	2.5Y 7/1		38		1				
		(SP)									

PROJECT	Pinellas County
	Blind Pass
BORING NO.	67
BORING ELEV.	-12.3 Ft., NAVD88
DATE	10/2/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

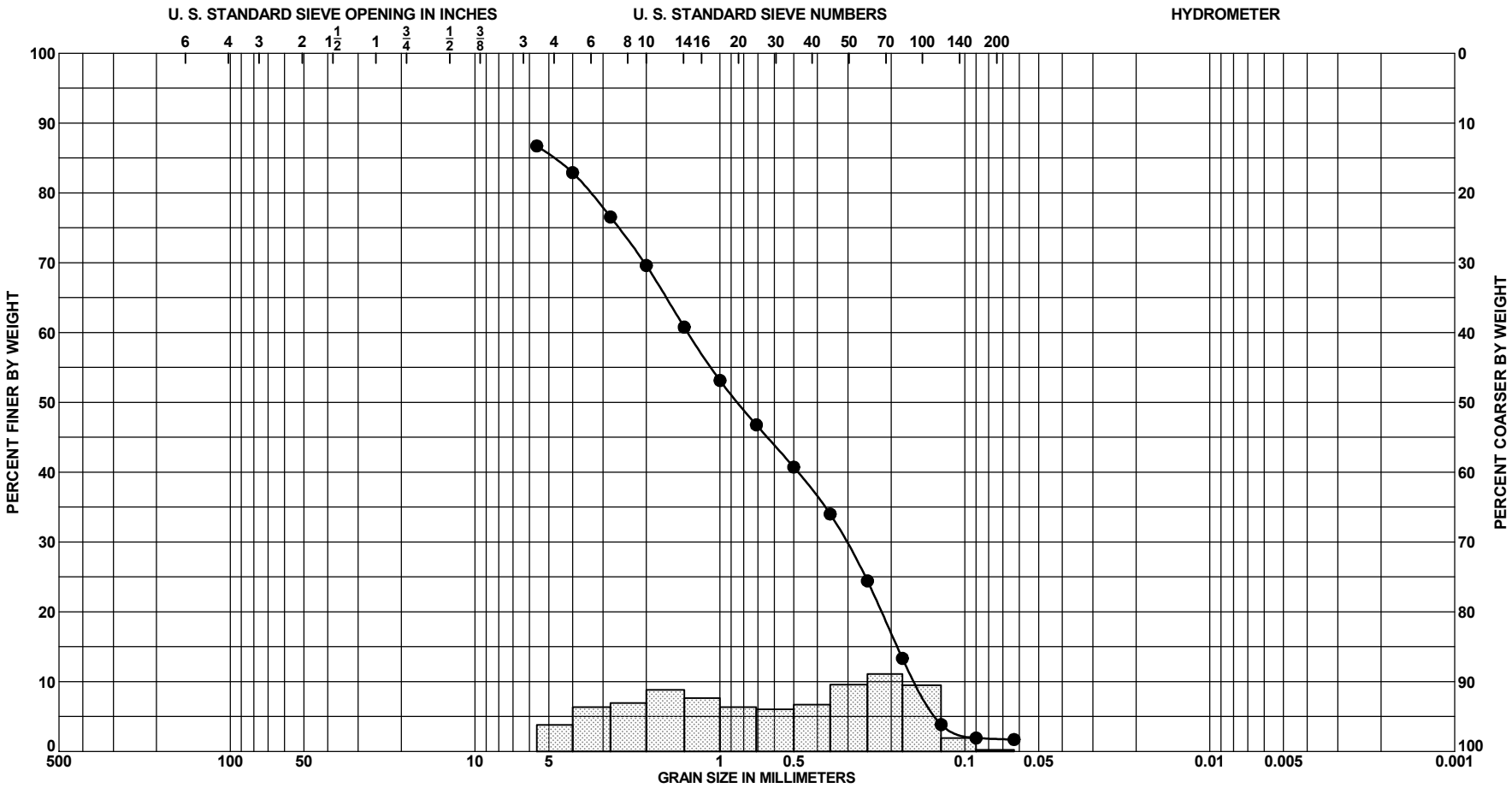


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	3.9 to 4.1 Ft.	SAND, poorly-graded, light gray	2.5Y 7/1		26		1				
		(SP)									

PROJECT	Pinellas County
	Blind Pass
BORING NO.	67
BORING ELEV.	-12.3 Ft., NAVD88
DATE	10/2/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

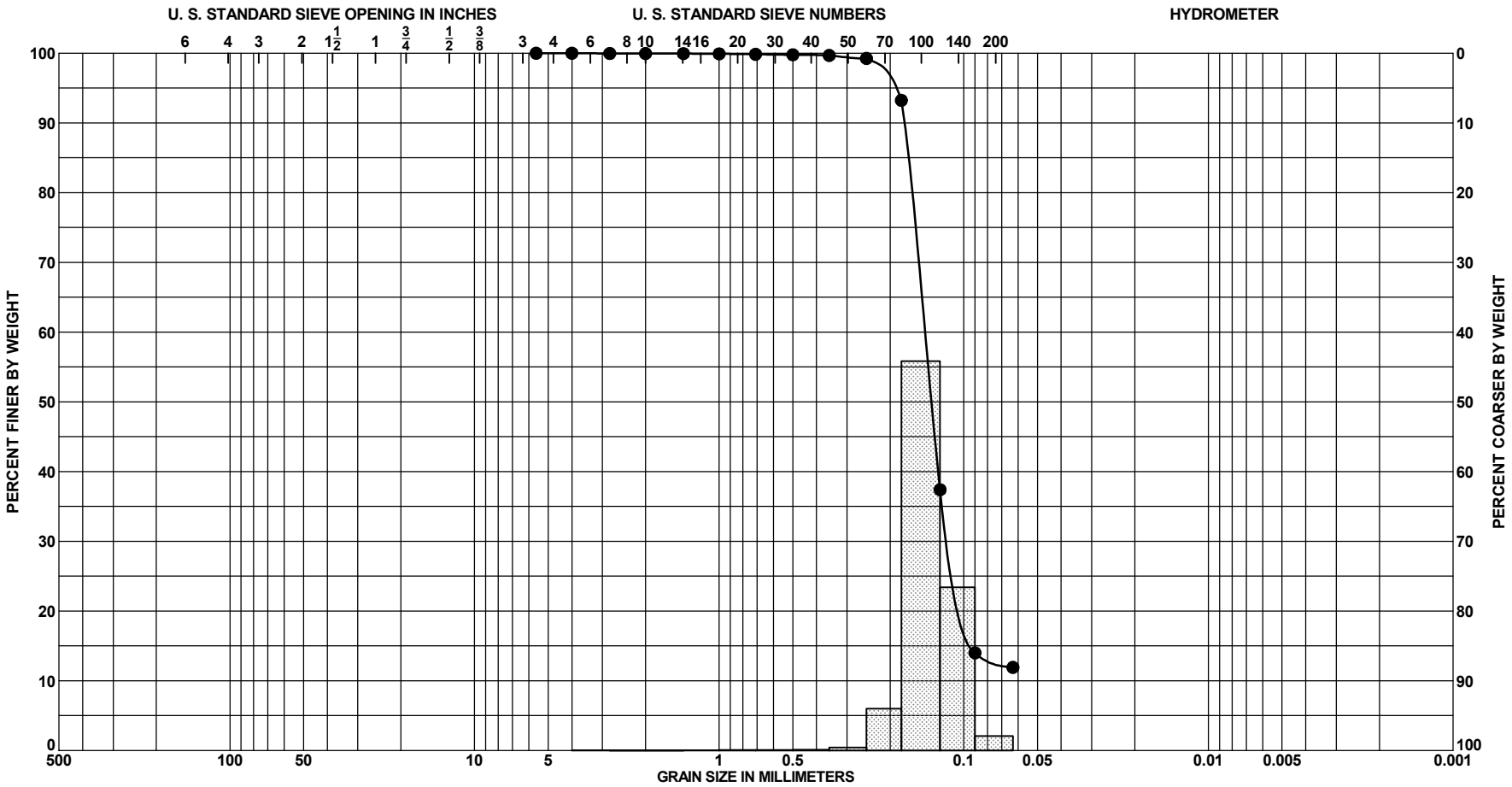


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	6.9 to 7.1 Ft.	SAND, poorly-graded, light gray	2.5Y 7/1		63		1				
		(SP)									

PROJECT	Pinellas County
	Blind Pass
BORING NO.	67
BORING ELEV.	-12.3 Ft., NAVD88
DATE	10/2/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

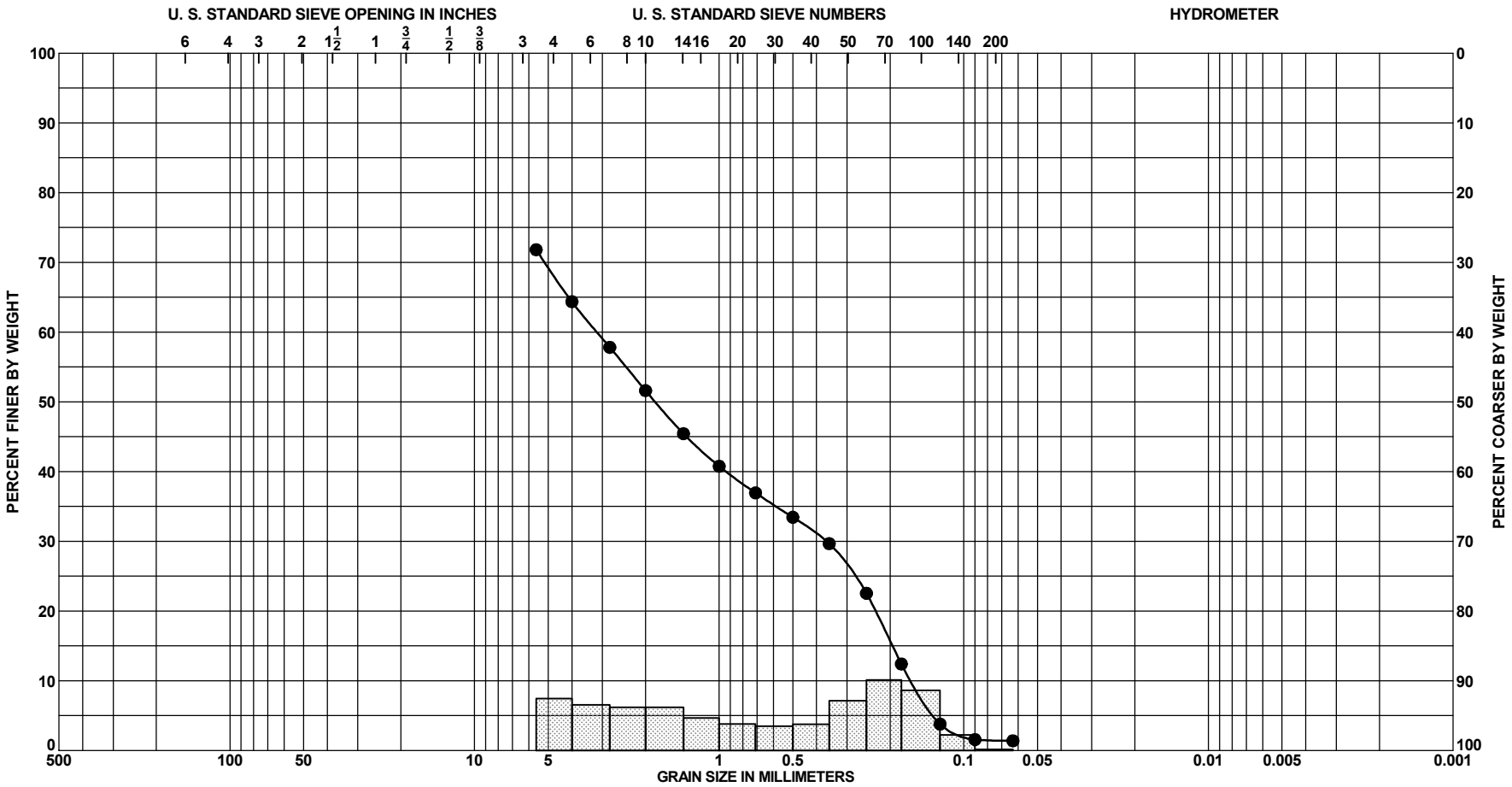


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 4	9.5 to 9.7 Ft.	, gray (SM)	5Y 5/1		5		1				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	67
BORING ELEV.	-12.3 Ft., NAVD88
DATE	12/2/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

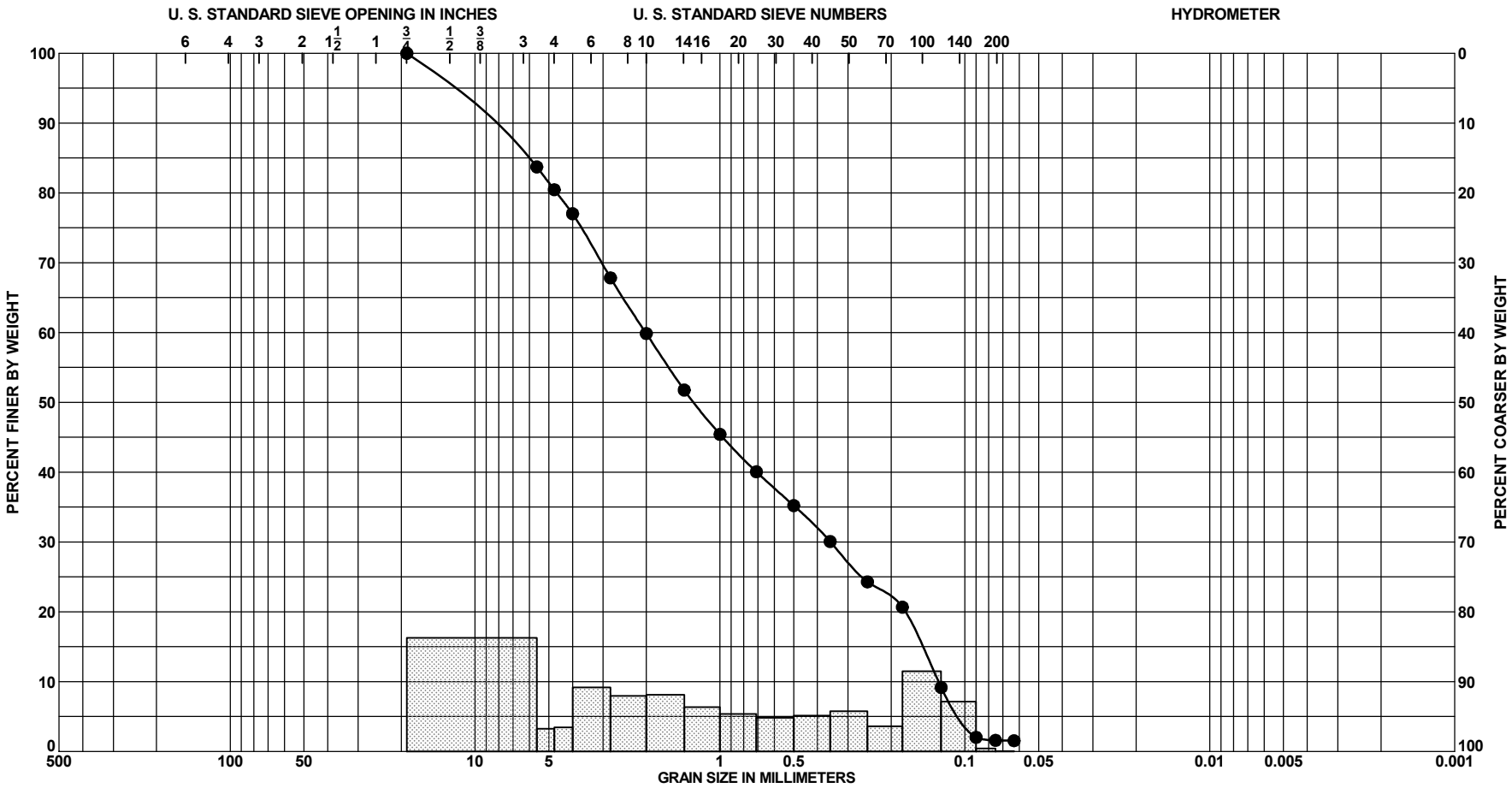


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	2.0 to 2.2 Ft.	SAND, poorly-graded, white (SP)	2.5Y 8/1		71		1				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	71
BORING ELEV.	-13.6 Ft., NAVD88
DATE	10/2/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

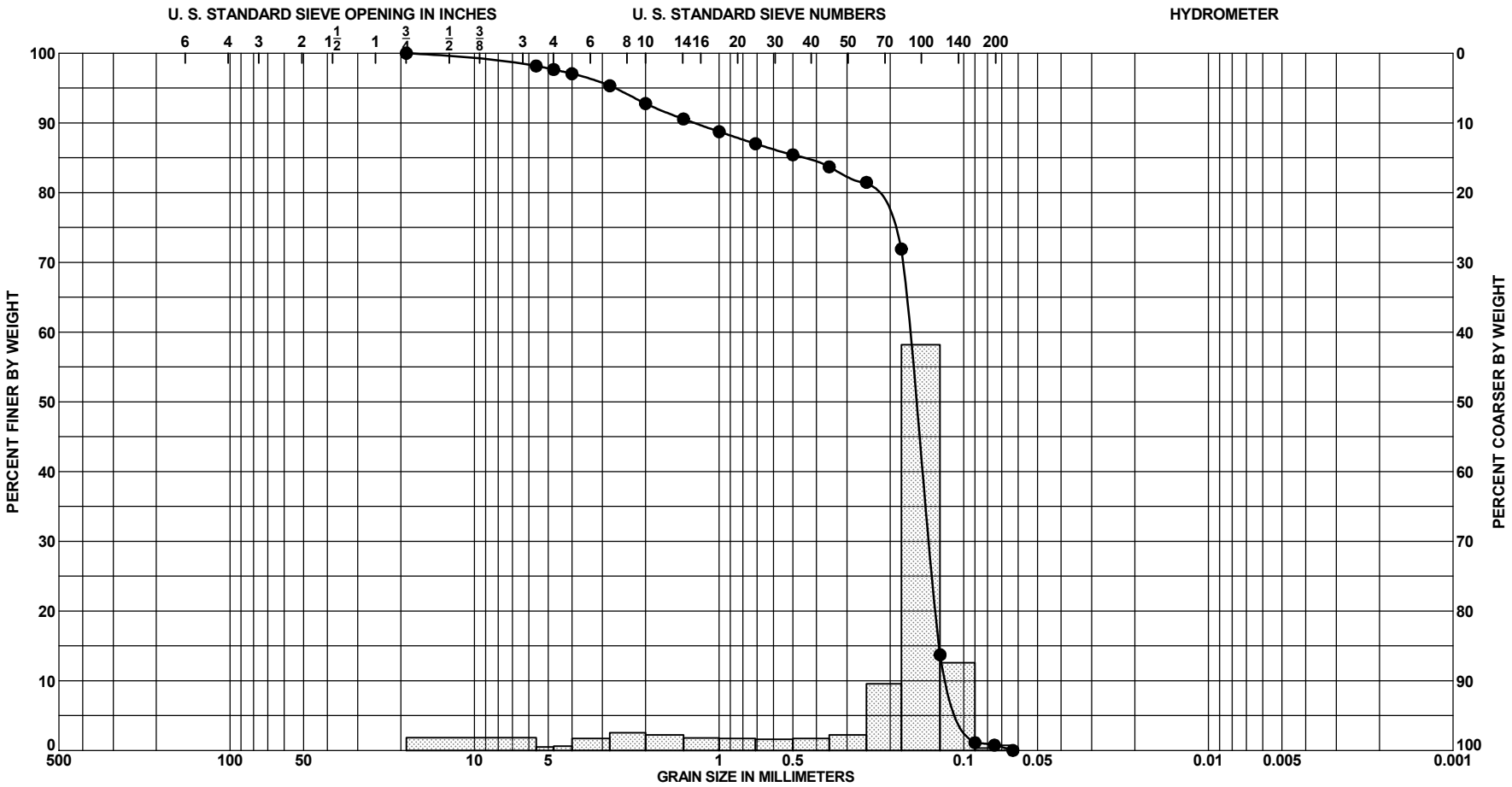


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	0.7 to 0.9 Ft.	SAND, poorly-graded, gray (SP)	2.5Y 6/1		67		2				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	77
BORING ELEV.	-15.4 Ft., NAVD88
DATE	5/28/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

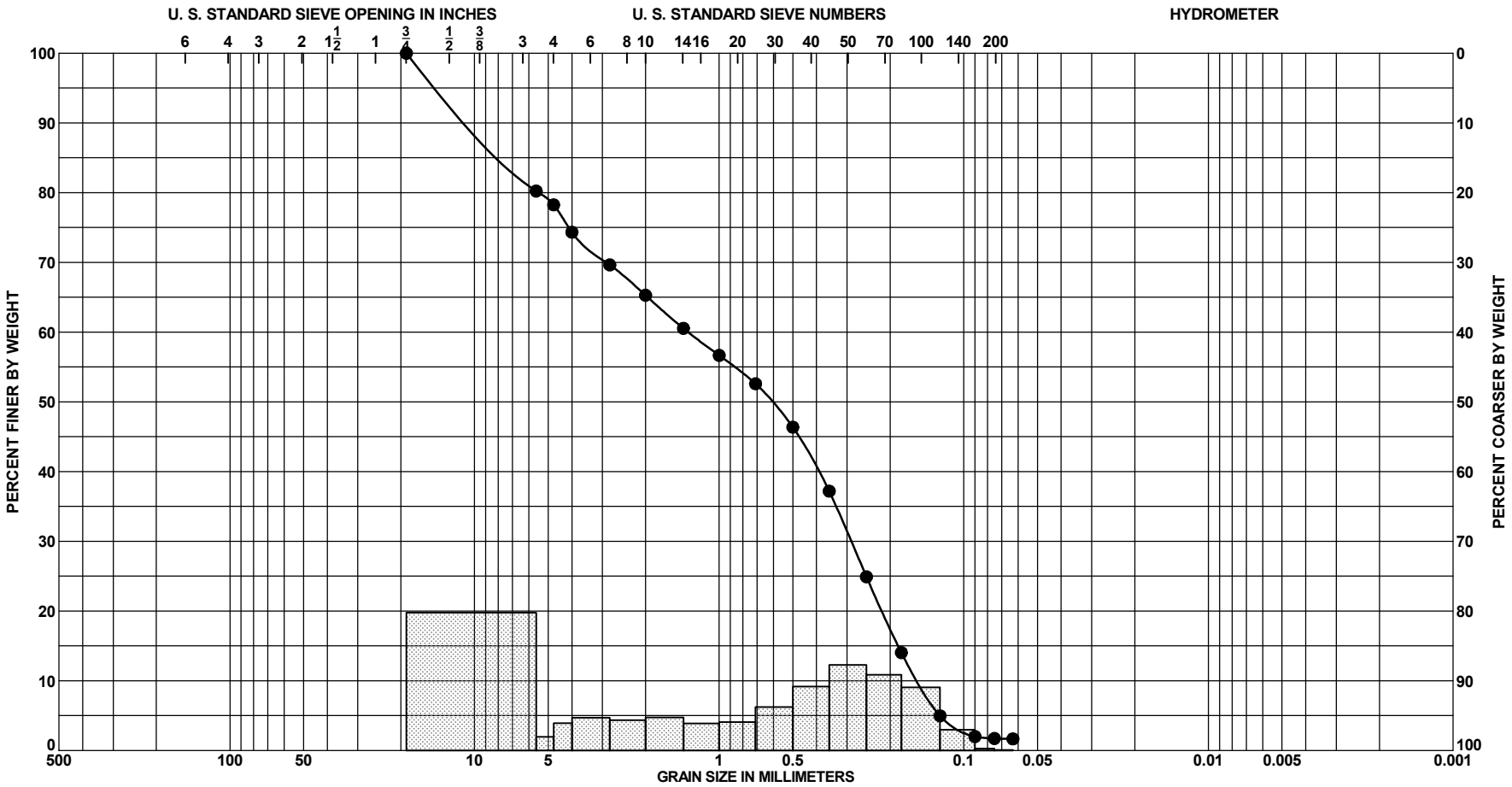


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	3.3 to 3.5 Ft.	SAND, poorly-graded, gray (SP)	2.5Y 6/1		18		1				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	77
BORING ELEV.	-15.4 Ft., NAVD88
DATE	5/28/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

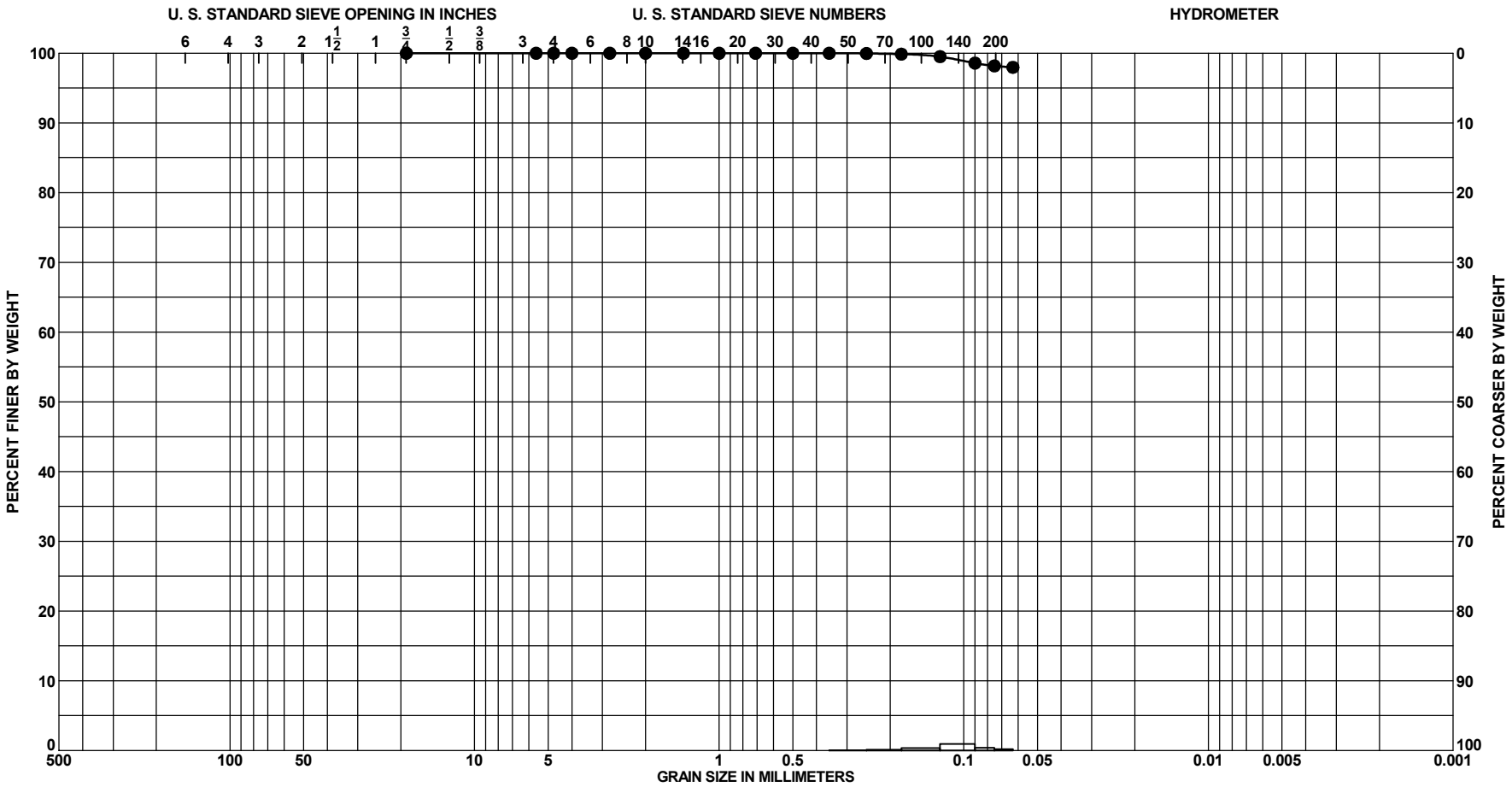


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	4.9 to 5.1 Ft.	SAND, poorly-graded, gray (SP)	2.5Y 6/1		48		2				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	77
BORING ELEV.	-15.4 Ft., NAVD88
DATE	5/28/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

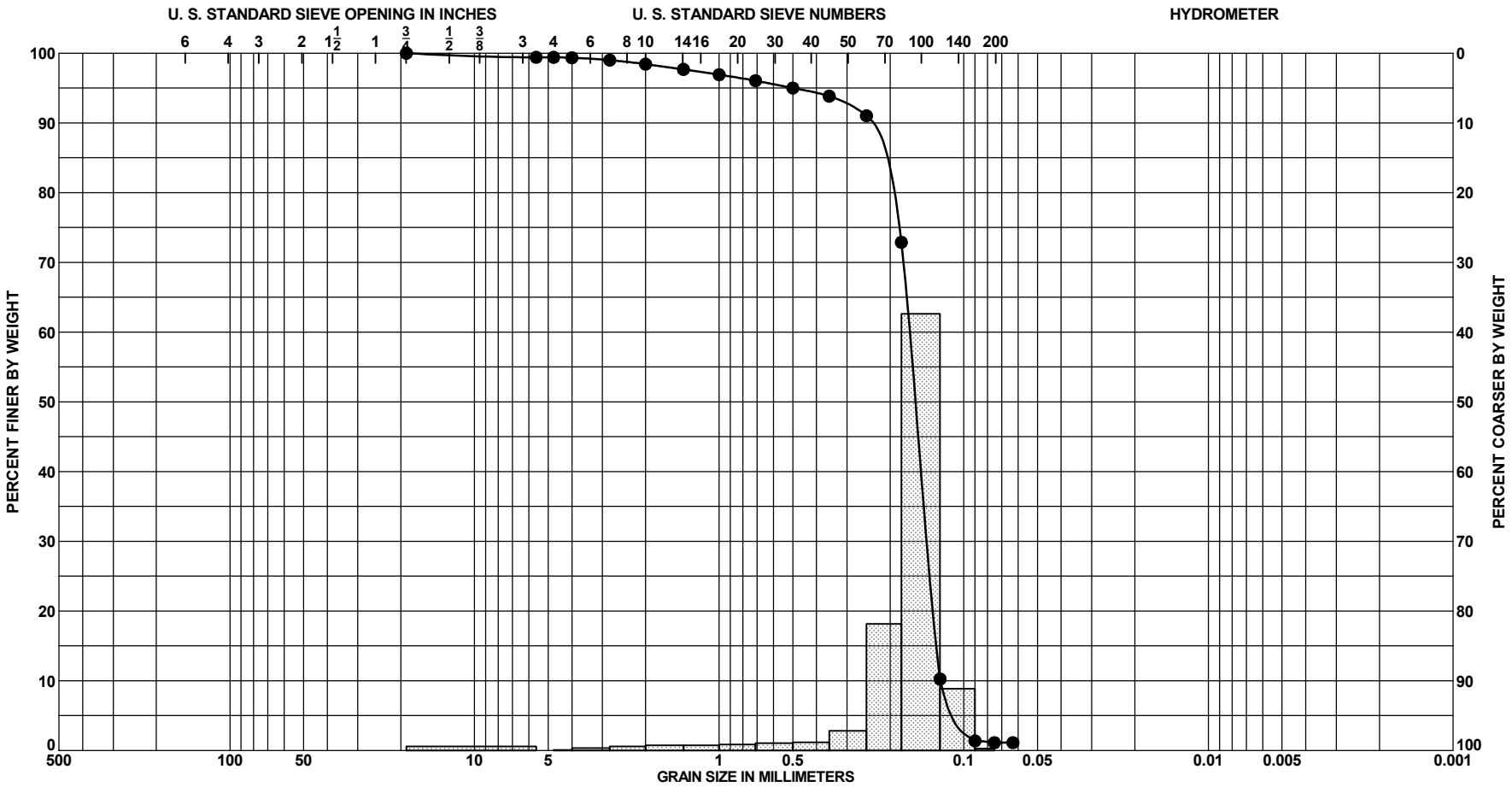


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 4	5.9 to 6.1 Ft.	, dark gray (ML)	2.5Y 4/1		0		12				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	77
BORING ELEV.	-15.4 Ft., NAVD88
DATE	5/28/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

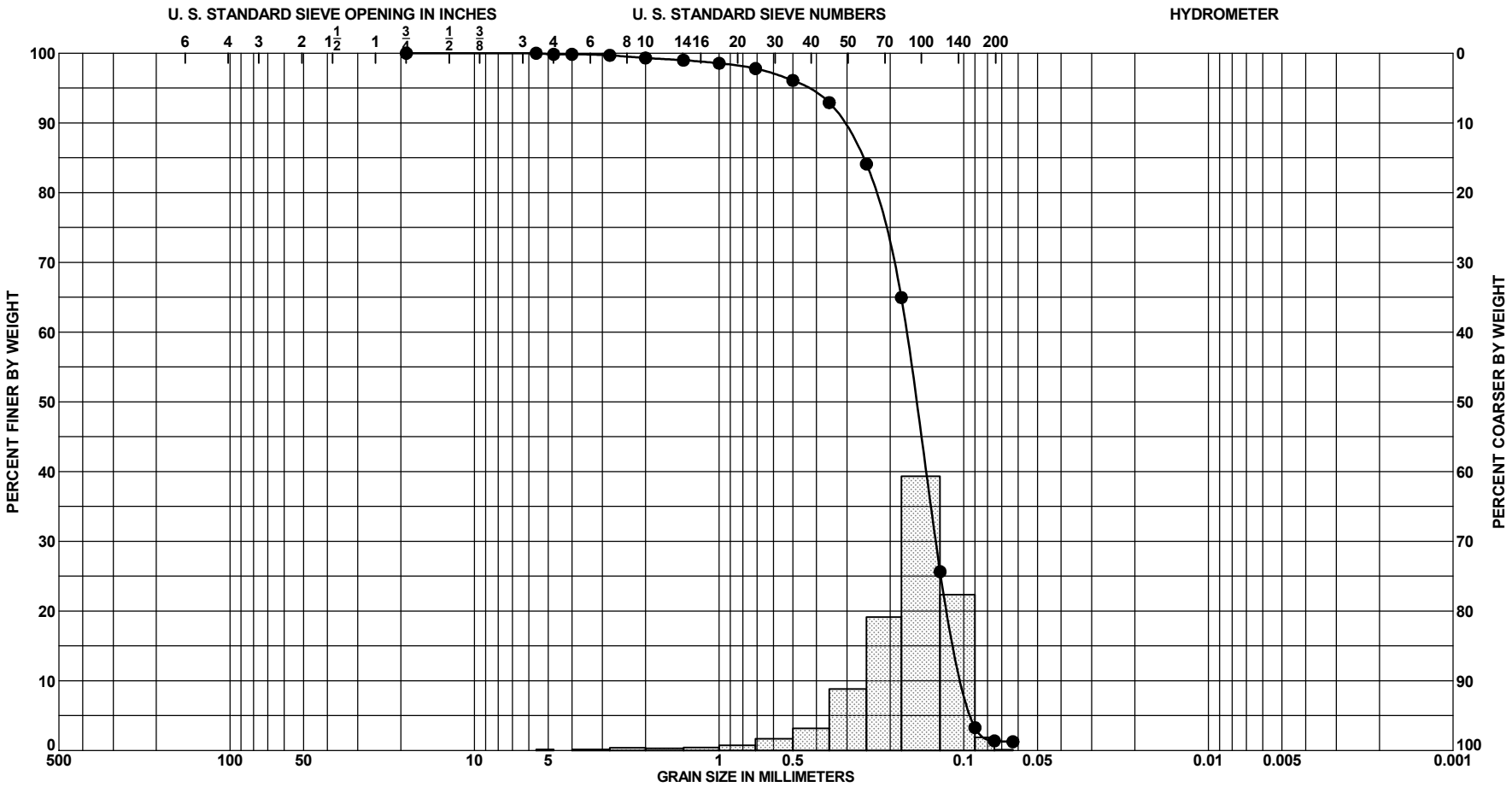


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	1.6 to 1.8 Ft.	SAND, poorly-graded, white (SP)	2.5Y 8/1		10		0				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	88
BORING ELEV.	-4.9 Ft., NAVD88
DATE	12/20/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

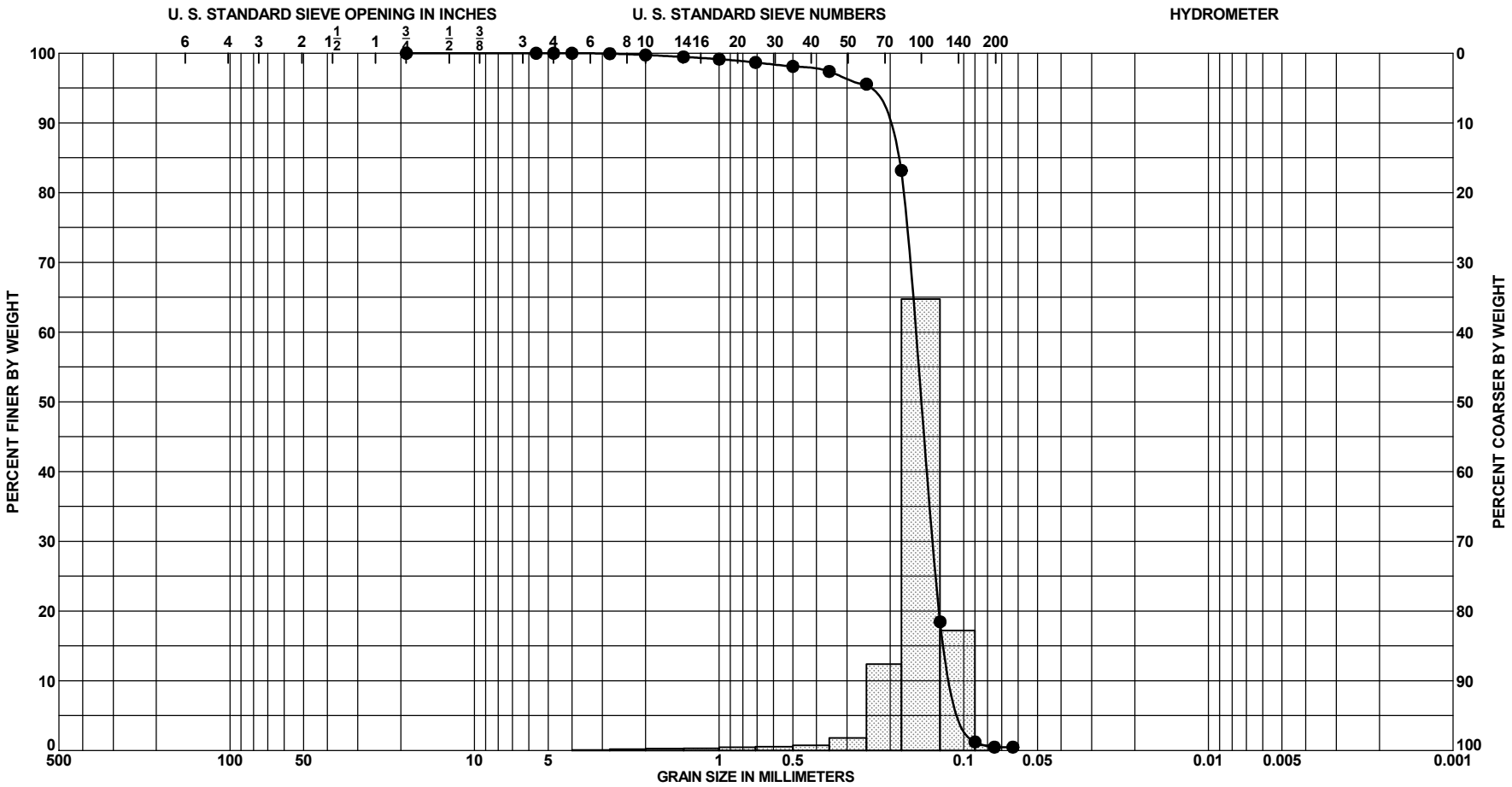


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	6.6 to 6.8 Ft.	SAND, poorly-graded, white (SP)	2.5Y 8/1		16		0				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	88
BORING ELEV.	-4.9 Ft., NAVD88
DATE	12/20/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

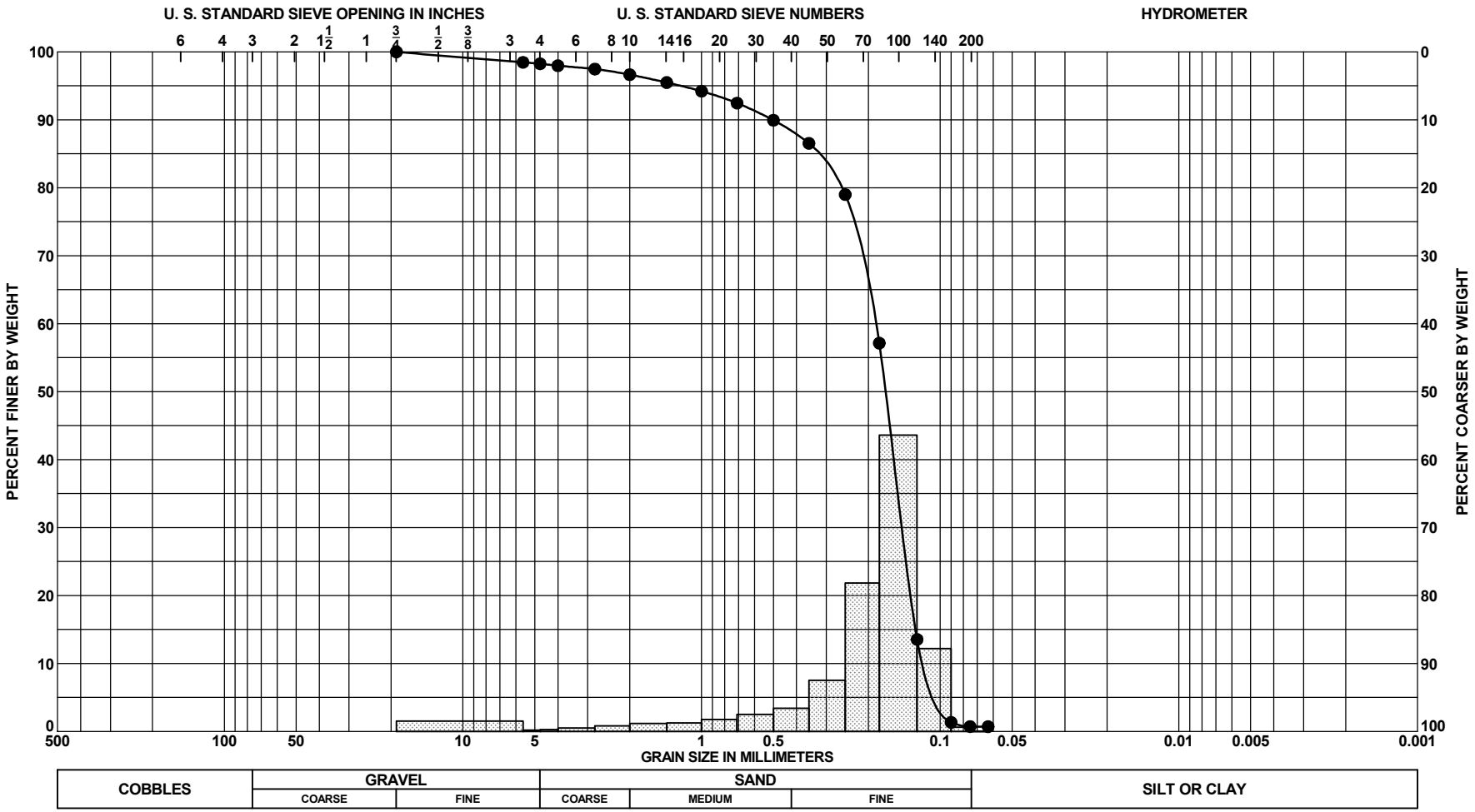


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	1.0 to 1.2 Ft.	SAND, poorly-graded, white (SP)	2.5Y 8/1		6		0				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	93
BORING ELEV.	-4.7 Ft., NAVD88
DATE	12/20/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

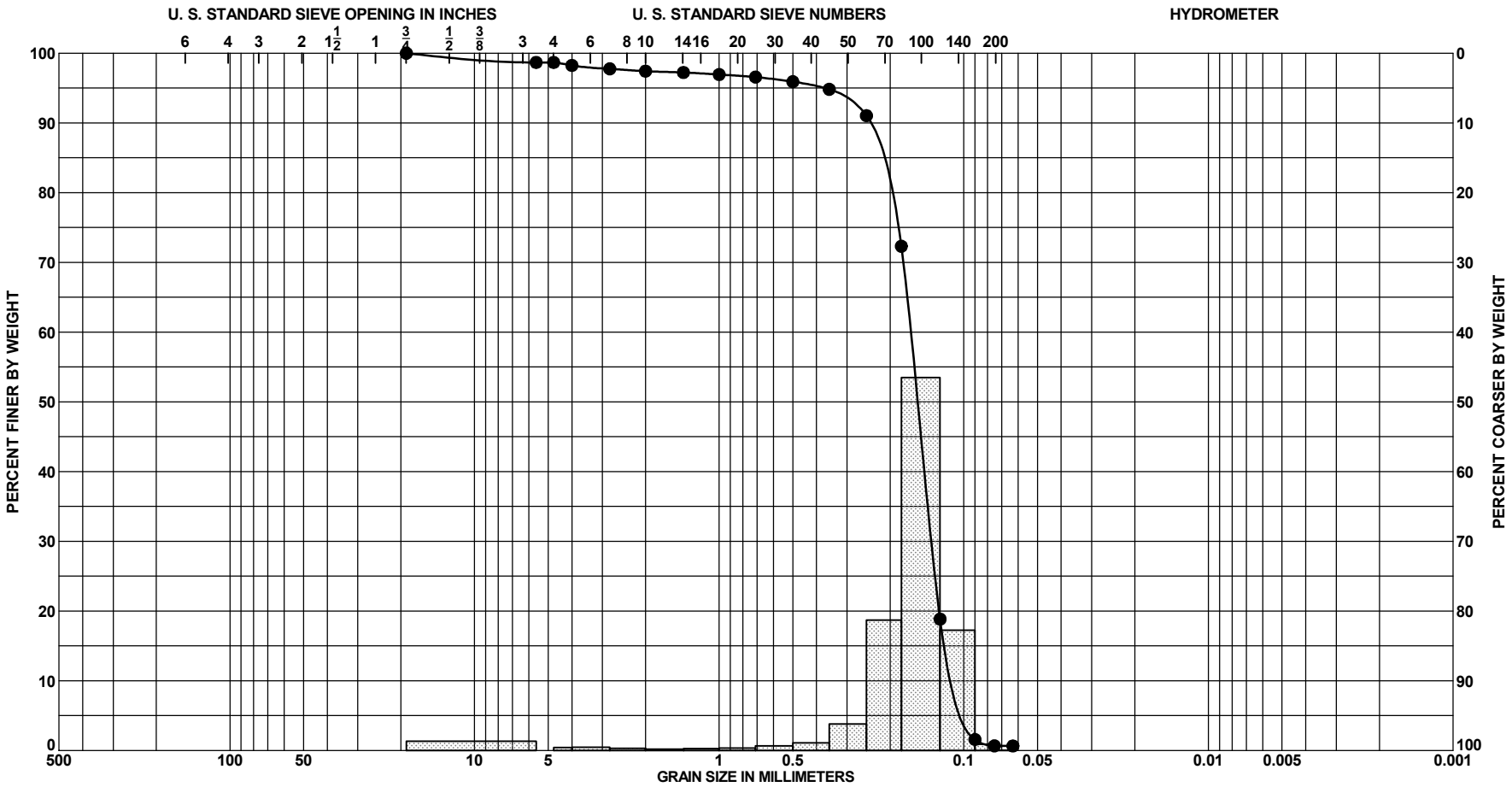


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	4.3 to 4.5 Ft.	SAND, poorly-graded, white (SP)	2.5Y 8/1		24		0				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	93
BORING ELEV.	-4.7 Ft., NAVD88
DATE	12/20/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

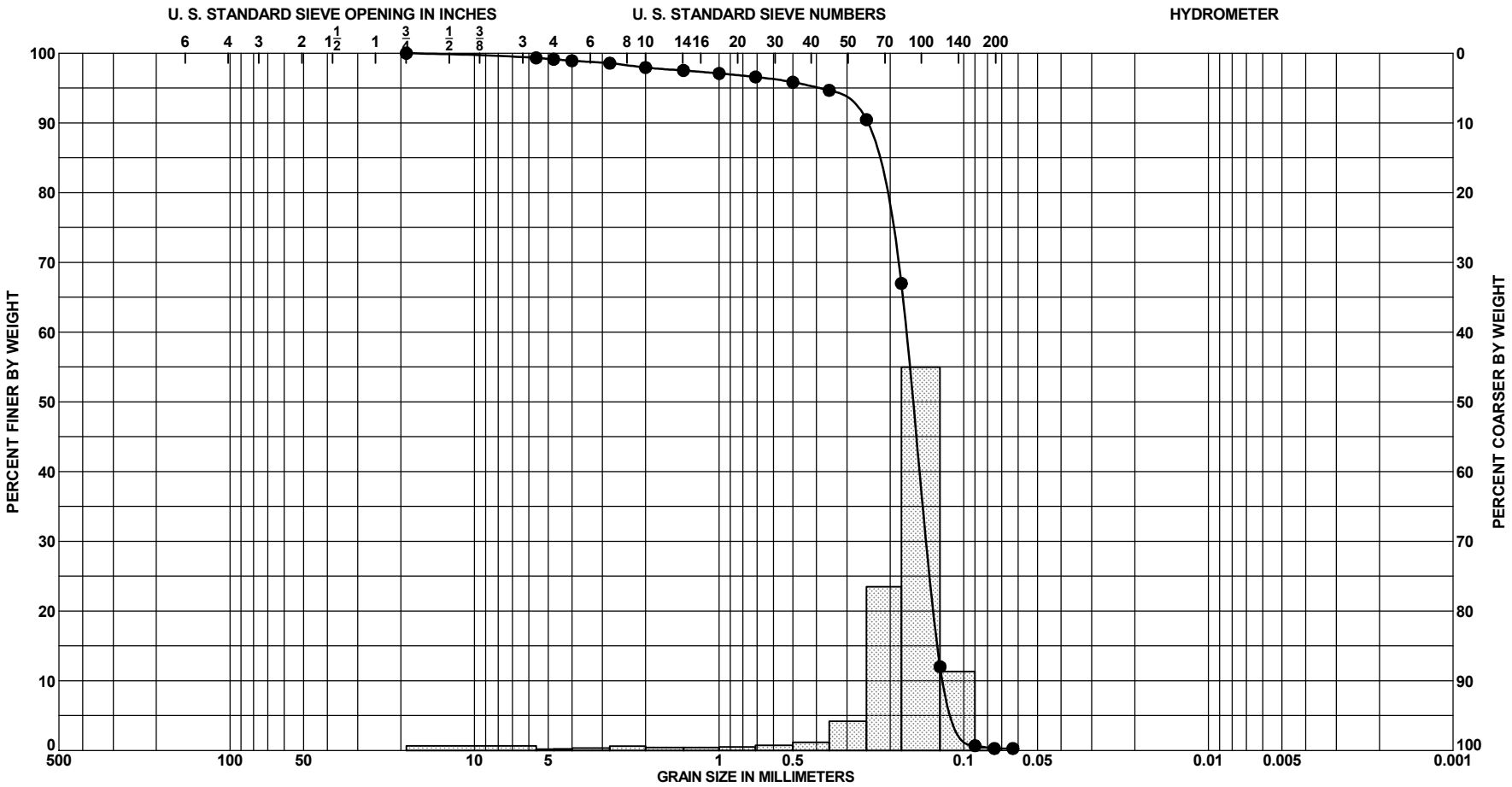


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	7.9 to 8.1 Ft.	SAND, poorly-graded, white (SP)	2.5Y 8/1		13		0				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	93
BORING ELEV.	-4.7 Ft., NAVD88
DATE	12/20/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

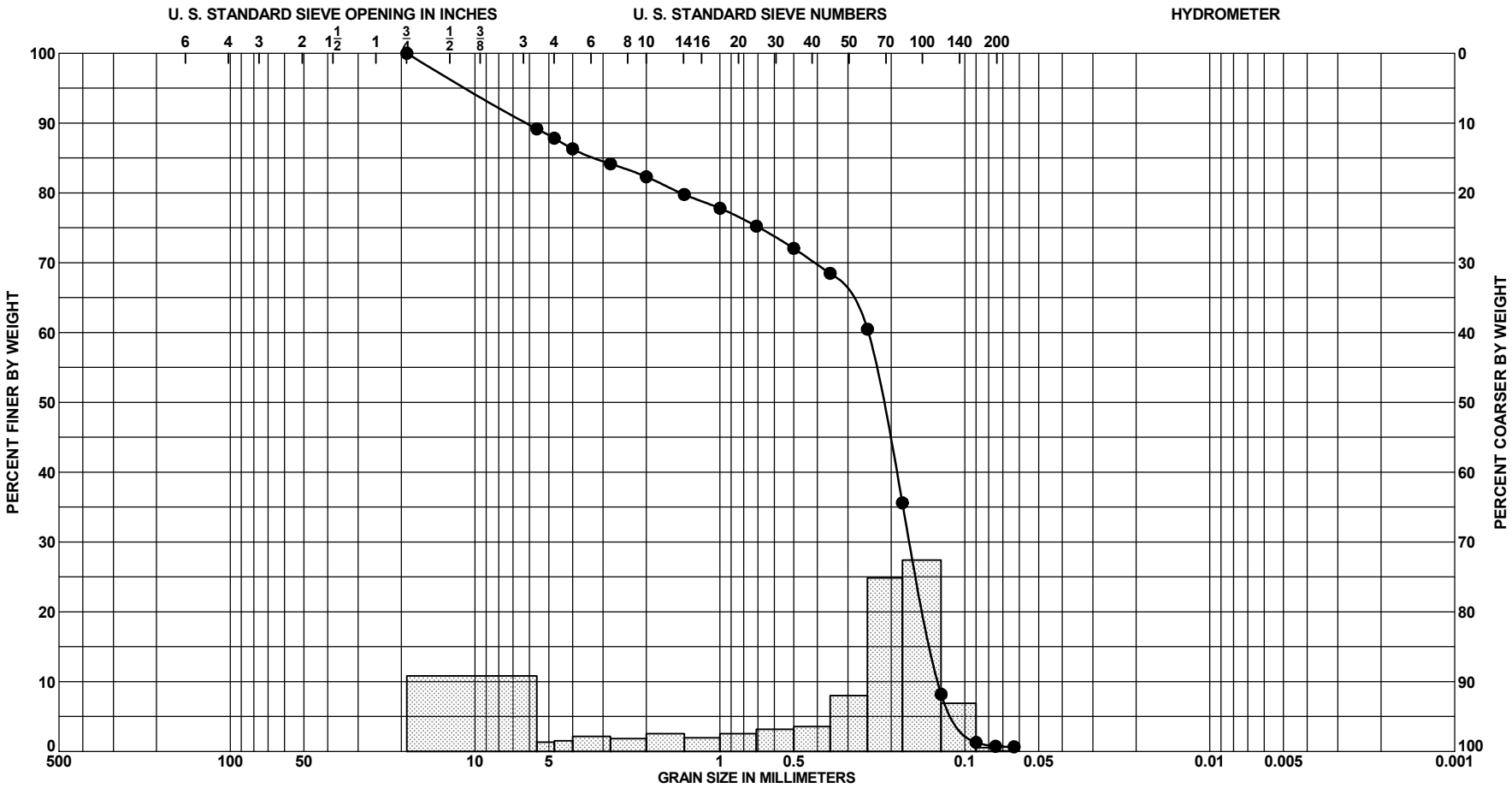


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	2.0 to 2.2 Ft.	SAND, poorly-graded, gray (SP)	2.5Y 6/1		13		1				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	95
BORING ELEV.	-9.6 Ft., NAVD88
DATE	6/22/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

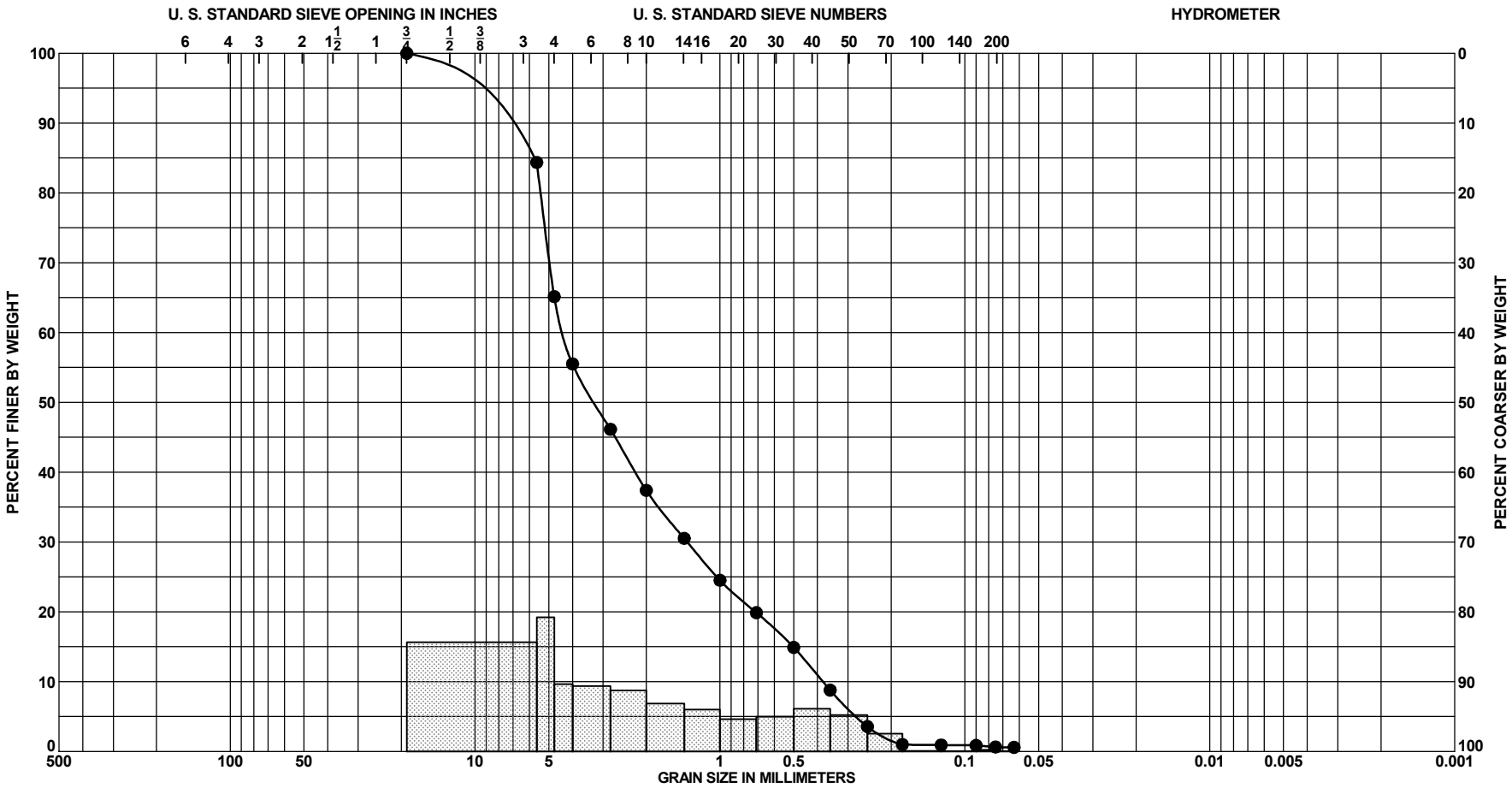


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	7.5 to 7.7 Ft.	SAND, poorly-graded, gray (SP)	2.5Y 5/1		40		1				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	95
BORING ELEV.	-9.6 Ft., NAVD88
DATE	6/22/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

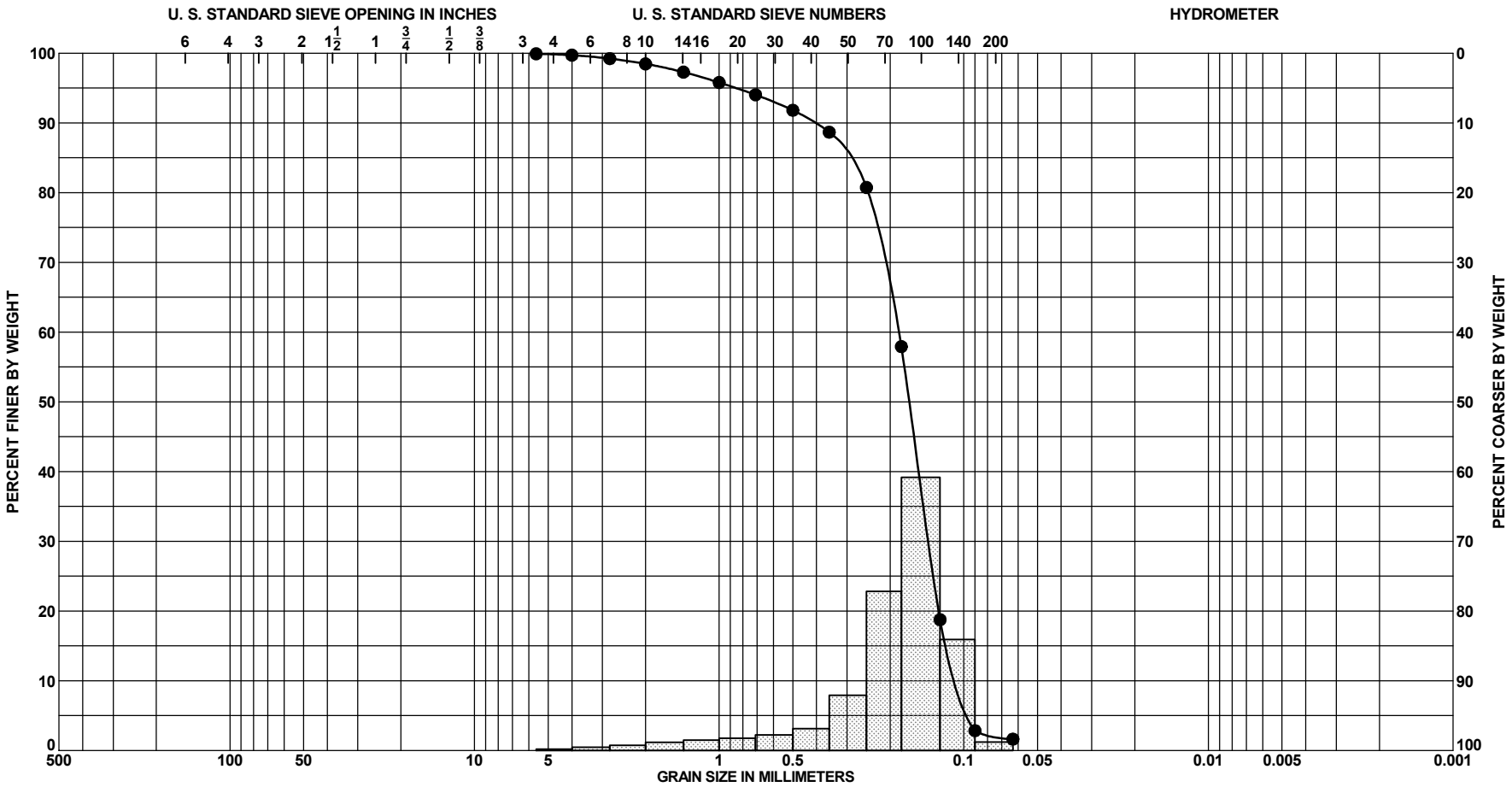


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	1.0 to 1.2 Ft.	SAND, well-graded, light gray (SP)	2.5Y 7/1		79		1				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	96
BORING ELEV.	-13.9 Ft., NAVD88
DATE	2/7/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

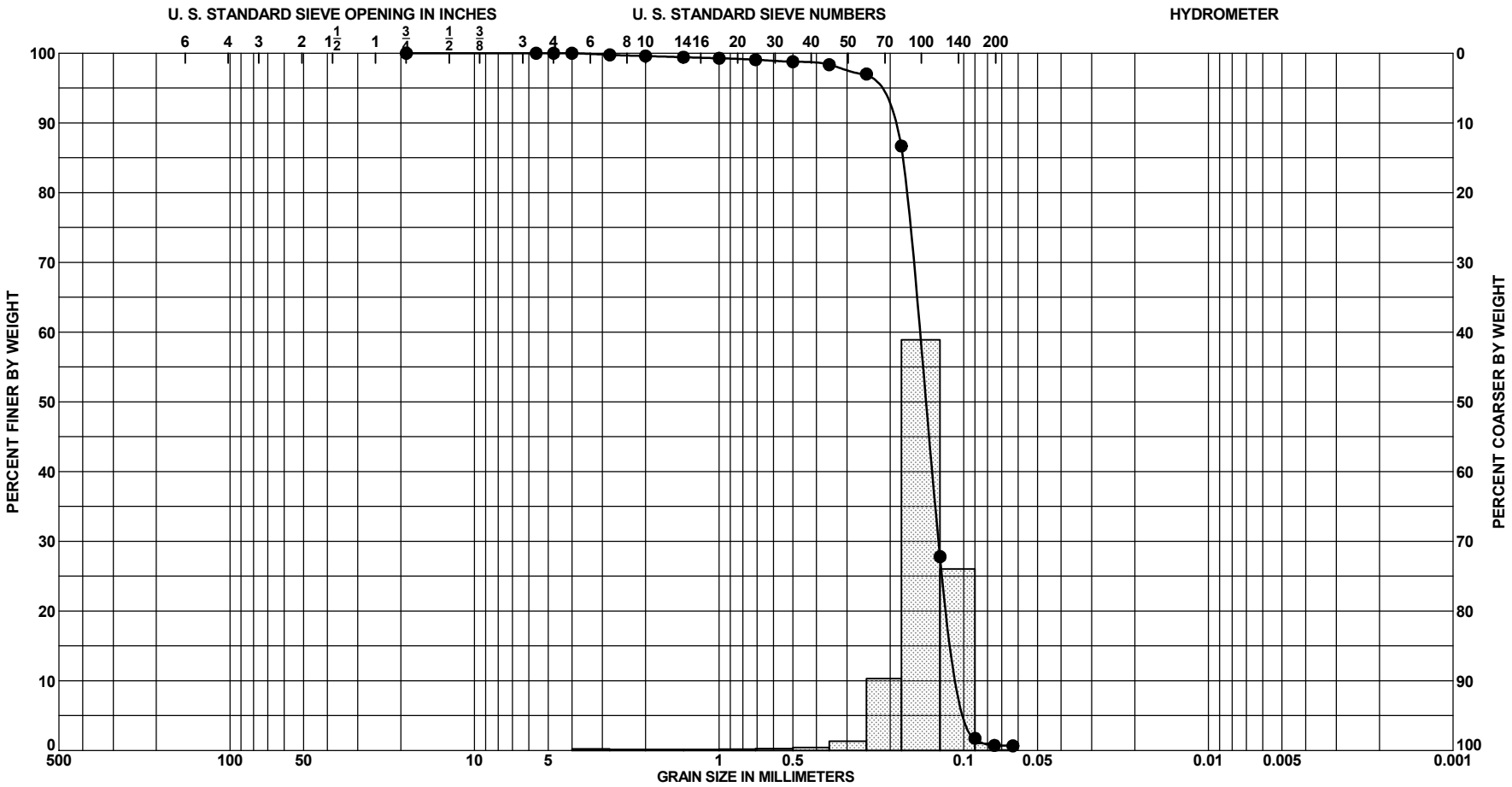


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	1.6 to 1.8 Ft.	SAND, poorly-graded, light gray (SP)	2.5Y 7/1		16		0				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	96
BORING ELEV.	-13.9 Ft., NAVD88
DATE	10/2/2007

GRADATION CURVES

SAJ FORM 2087
JUN 02

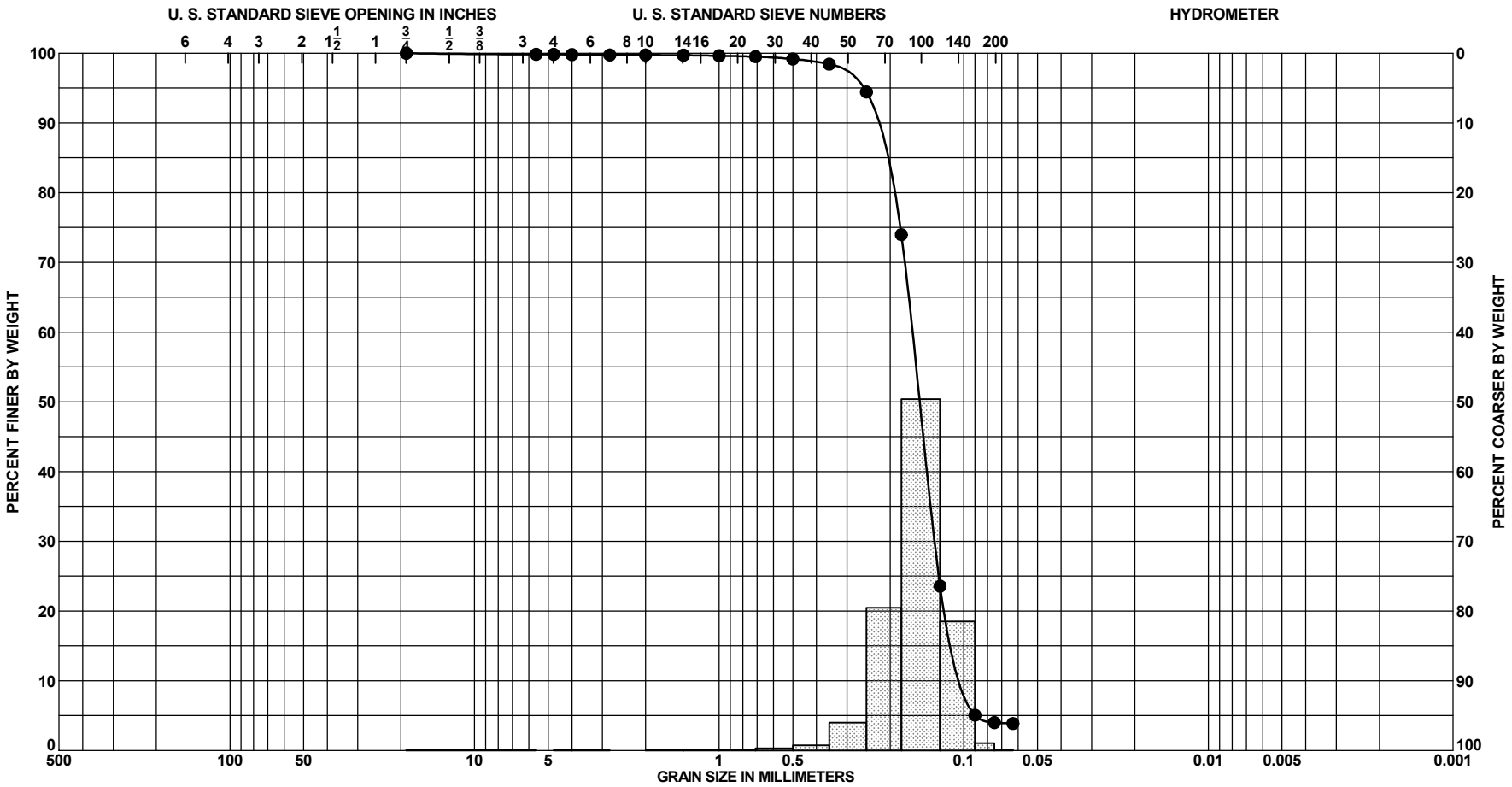


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	3.0 to 3.2 Ft.	SAND, poorly-graded, light gray (SP)	2.5Y 7/1		7		0				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	96
BORING ELEV.	-13.9 Ft., NAVD88
DATE	1/29/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

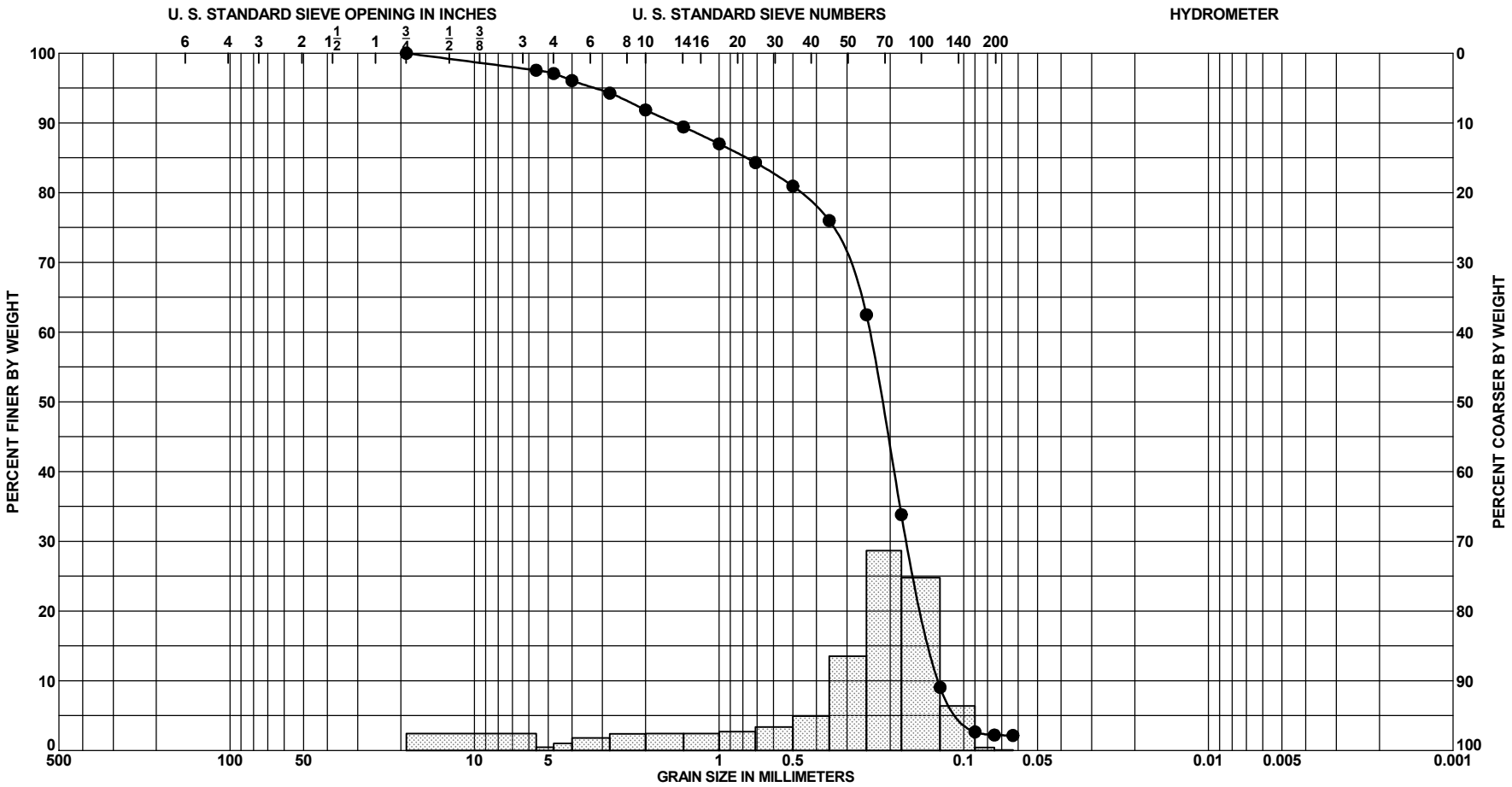


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 4	5.1 to 5.3 Ft.	SAND, poorly-graded, light gray	2.5Y 7/1		7		0				
		(SP)									

PROJECT	Pinellas County
	Blind Pass
BORING NO.	96
BORING ELEV.	-13.9 Ft., NAVD88
DATE	1/29/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

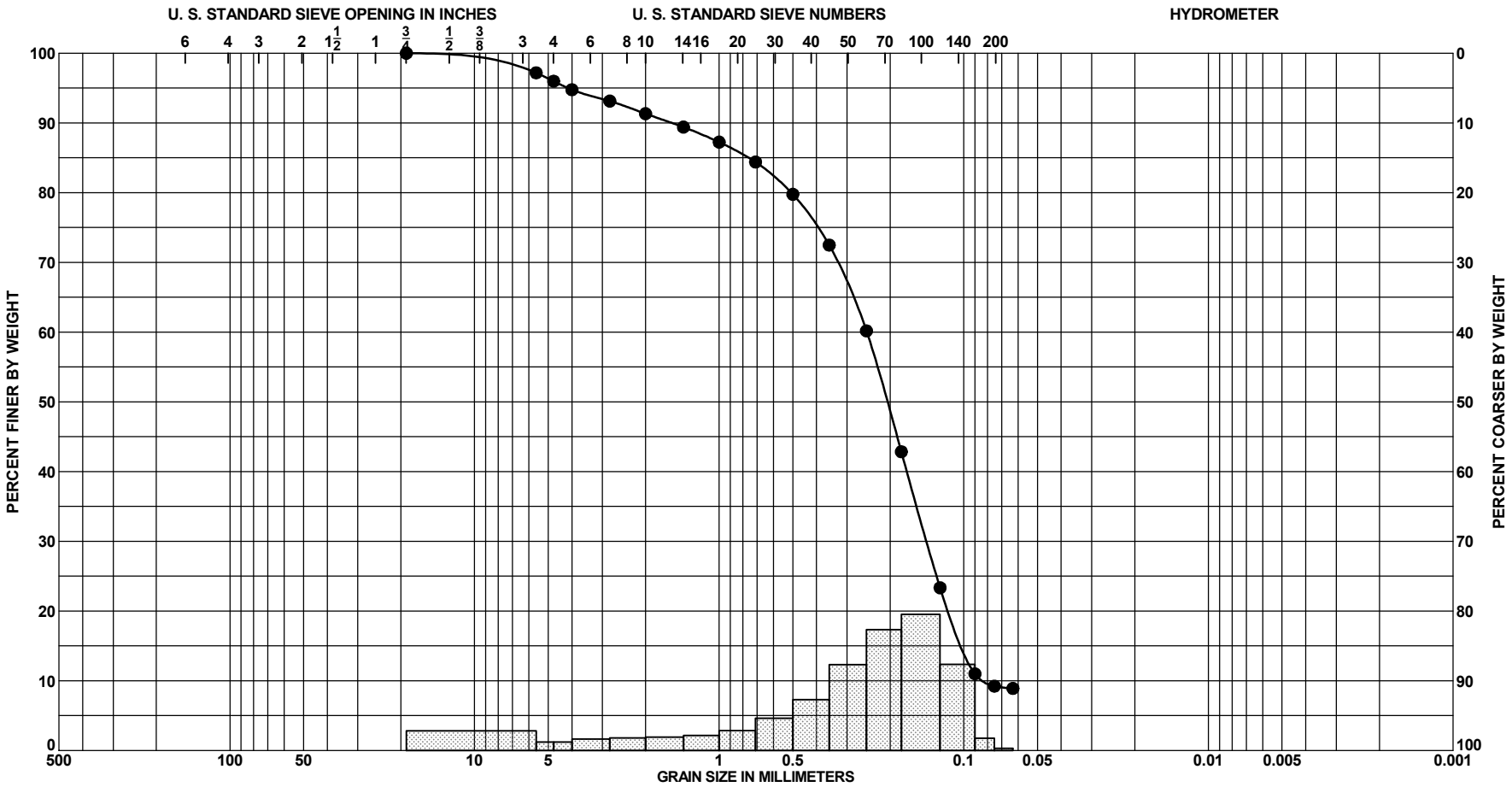


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 5	6.7 to 6.8 Ft.	SAND, poorly-graded, gray (SP)	2.5Y 5/1		27		0				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	96
BORING ELEV.	-13.9 Ft., NAVD88
DATE	1/17/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 6	7.2 to 7.3 Ft.	, light gray (SP-SM)	2.5Y 7/1		21		1				

PROJECT	Pinellas County
	Blind Pass
BORING NO.	96
BORING ELEV.	-13.9 Ft., NAVD88
DATE	2/8/2008

GRADATION CURVES

SAJ FORM 2087
JUN 02

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 12 @ 1.3 ft

Analysis Date: 12/20/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,251	1,237,945	State Plane, FLW (U.S. Ft.)	-6.7 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/1	#200 - 1.30 #230 - 1.30	0.54	22.52	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	2.65	2.65
#4	-2.25	4.75	1.24	3.89
#5	-2.00	4.00	0.92	4.81
#7	-1.50	2.80	1.60	6.41
#10	-1.00	2.00	1.29	7.70
#14	-0.50	1.40	2.02	9.72
#18	0.00	1.00	1.96	11.68
#25	0.50	0.71	1.99	13.67
#35	1.00	0.50	2.17	15.84
#45	1.50	0.36	2.21	18.05
#60	2.00	0.25	4.06	22.11
#80	2.50	0.18	14.78	36.89
#120	3.00	0.13	51.30	88.19
#170	3.50	0.09	10.26	98.45
#200	3.75	0.08	0.25	98.70
#230	4.00	0.06	0.00	98.70

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.33	2.96	2.87	2.63	2.10	1.04	-1.94

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.03	0.24	2.63	0.16	1.54	-2.12	6.66

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 12 @ 4.8 ft

Analysis Date: 12/20/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,251	1,237,945	State Plane, FLW (U.S. Ft.)	-10.2 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/1	#200 - 1.02 #230 - 1.02	0.38	46.04	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	12.09	12.09
#4	-2.25	4.75	1.40	13.49
#5	-2.00	4.00	2.39	15.88
#7	-1.50	2.80	2.64	18.52
#10	-1.00	2.00	2.86	21.38
#14	-0.50	1.40	3.85	25.23
#18	0.00	1.00	3.55	28.78
#25	0.50	0.71	3.94	32.72
#35	1.00	0.50	4.58	37.30
#45	1.50	0.36	5.18	42.48
#60	2.00	0.25	10.92	53.40
#80	2.50	0.18	24.87	78.27
#120	3.00	0.13	17.98	96.25
#170	3.50	0.09	2.62	98.87
#200	3.75	0.08	0.11	98.98
#230	4.00	0.06	0.00	98.98

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.97	2.66	2.43	1.84	-0.53	-1.98	-3.53

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.84	0.56	1.84	0.28	2.1	-0.94	2.49

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 12 @ 8.2 ft

Analysis Date: 12/20/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,251	1,237,945	State Plane, FLW (U.S. Ft.)	-13.6 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/1	#200 - 0.84 #230 - 0.77	0.17	6.94	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.00	0.00
#14	-0.50	1.40	0.00	0.00
#18	0.00	1.00	0.00	0.00
#25	0.50	0.71	0.00	0.00
#35	1.00	0.50	0.08	0.08
#45	1.50	0.36	0.28	0.36
#60	2.00	0.25	2.17	2.53
#80	2.50	0.18	18.76	21.29
#120	3.00	0.13	59.56	80.85
#170	3.50	0.09	17.32	98.17
#200	3.75	0.08	0.99	99.16
#230	4.00	0.06	0.07	99.23

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.41	3.09	2.95	2.74	2.53	2.36	2.07

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.72	0.15	2.74	0.15	0.36	-0.47	4.48

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 13 @ 0.07 ft

Analysis Date: 5/28/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,063	1,237,844	State Plane, FLW (U.S. Ft.)	-4.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/1	#200 - 2.67 #230 - 2.48	0.70	19.66	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.20	0.20
#4	-2.25	4.75	0.07	0.27
#5	-2.00	4.00	0.24	0.51
#7	-1.50	2.80	1.41	1.92
#10	-1.00	2.00	1.61	3.53
#14	-0.50	1.40	1.85	5.38
#18	0.00	1.00	1.52	6.90
#25	0.50	0.71	1.54	8.44
#35	1.00	0.50	1.58	10.02
#45	1.50	0.36	1.58	11.60
#60	2.00	0.25	2.54	14.14
#80	2.50	0.18	6.82	20.96
#120	3.00	0.13	45.08	66.04
#170	3.50	0.09	29.58	95.62
#200	3.75	0.08	1.71	97.33
#230	4.00	0.06	0.19	97.52

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.49	3.30	3.15	2.82	2.54	2.14	-0.60

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.49	0.18	2.82	0.14	1.16	-2.42	8.51

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 13 @ 3.3 ft

Analysis Date: 6/23/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,063	1,237,844	State Plane, FLW (U.S. Ft.)	-8.1 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/1	#200 - 1.72 #230 - 1.42	0.00	6.21	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.00	0.00
#14	-0.50	1.40	0.04	0.04
#18	0.00	1.00	0.00	0.04
#25	0.50	0.71	0.03	0.07
#35	1.00	0.50	0.04	0.11
#45	1.50	0.36	0.13	0.24
#60	2.00	0.25	0.58	0.82
#80	2.50	0.18	7.17	7.99
#120	3.00	0.13	55.34	63.33
#170	3.50	0.09	32.30	95.63
#200	3.75	0.08	2.65	98.28
#230	4.00	0.06	0.30	98.58

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.49	3.32	3.18	2.88	2.65	2.57	2.29

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.89	0.13	2.88	0.14	0.35	-0.87	9.73

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 13 @ 5.9 ft

Analysis Date: 5/28/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,063	1,237,844	State Plane, FLW (U.S. Ft.)	-10.7 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y6/1	#200 - 13.99 #230 - 13.64	0.45	6.83	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.00	0.00
#14	-0.50	1.40	0.00	0.00
#18	0.00	1.00	0.00	0.00
#25	0.50	0.71	0.00	0.00
#35	1.00	0.50	0.05	0.05
#45	1.50	0.36	0.18	0.23
#60	2.00	0.25	0.81	1.04
#80	2.50	0.18	10.84	11.88
#120	3.00	0.13	49.10	60.98
#170	3.50	0.09	22.53	83.51
#200	3.75	0.08	2.50	86.01
#230	4.00	0.06	0.35	86.36

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.55	3.31	2.89	2.63	2.54	2.18

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.83	0.14	2.89	0.13	0.37	-0.27	4.25

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 13 @ 7.5 ft

Analysis Date: 5/28/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,063	1,237,844	State Plane, FLW (U.S. Ft.)	-12.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 0.35 #230 - 0.03	2.17	6.36	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.00	0.00
#14	-0.50	1.40	0.07	0.07
#18	0.00	1.00	0.05	0.12
#25	0.50	0.71	0.07	0.19
#35	1.00	0.50	0.09	0.28
#45	1.50	0.36	0.20	0.48
#60	2.00	0.25	0.86	1.34
#80	2.50	0.18	9.63	10.97
#120	3.00	0.13	54.78	65.75
#170	3.50	0.09	31.04	96.79
#200	3.75	0.08	2.86	99.65
#230	4.00	0.06	0.32	99.97

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.47	3.29	3.15	2.86	2.63	2.55	2.19

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.87	0.14	2.86	0.14	0.38	-1.4	12.67

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 18 @ 1.6 ft

Analysis Date: 12/20/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,124	1,237,764	State Plane, FLW (U.S. Ft.)	-7.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/1	#200 - 0.40 #230 - 0.40	0.22	18.94	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	1.31	1.31
#4	-2.25	4.75	0.16	1.47
#5	-2.00	4.00	0.32	1.79
#7	-1.50	2.80	0.37	2.16
#10	-1.00	2.00	0.92	3.08
#14	-0.50	1.40	0.88	3.96
#18	0.00	1.00	1.13	5.09
#25	0.50	0.71	1.54	6.63
#35	1.00	0.50	2.48	9.11
#45	1.50	0.36	4.04	13.15
#60	2.00	0.25	10.60	23.75
#80	2.50	0.18	31.96	55.71
#120	3.00	0.13	39.52	95.23
#170	3.50	0.09	4.31	99.54
#200	3.75	0.08	0.06	99.60
#230	4.00	0.06	0.00	99.60

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.00	2.86	2.74	2.41	2.02	1.63	-0.04

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.13	0.23	2.41	0.19	1.07	-2.9	13.08

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 18 @ 7.2 ft

Analysis Date: 12/20/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,124	1,237,764	State Plane, FLW (U.S. Ft.)	-13.0 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/1	#200 - 0.51 #230 - 0.51	0.22	9.72	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.04	0.04
#10	-1.00	2.00	0.04	0.08
#14	-0.50	1.40	0.05	0.13
#18	0.00	1.00	0.14	0.27
#25	0.50	0.71	0.28	0.55
#35	1.00	0.50	0.61	1.16
#45	1.50	0.36	1.05	2.21
#60	2.00	0.25	3.65	5.86
#80	2.50	0.18	22.92	28.78
#120	3.00	0.13	62.09	90.87
#170	3.50	0.09	8.39	99.26
#200	3.75	0.08	0.23	99.49
#230	4.00	0.06	0.00	99.49

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.25	2.94	2.87	2.67	2.42	2.22	1.88

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.60	0.16	2.67	0.16	0.44	-2.5	16.6

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 24 @ 1 ft

Analysis Date: 2/7/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,819	1,238,305	State Plane, FLW (U.S. Ft.)	-5.7 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/1	#200 - 0.41 #230 - 0.38	0.93	8.44	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.31	0.31
#4	-2.25	4.75	0.00	0.31
#5	-2.00	4.00	0.00	0.31
#7	-1.50	2.80	0.34	0.65
#10	-1.00	2.00	0.09	0.74
#14	-0.50	1.40	0.28	1.02
#18	0.00	1.00	0.22	1.24
#25	0.50	0.71	0.31	1.55
#35	1.00	0.50	0.43	1.98
#45	1.50	0.36	0.54	2.52
#60	2.00	0.25	1.86	4.38
#80	2.50	0.18	12.66	17.04
#120	3.00	0.13	64.70	81.74
#170	3.50	0.09	17.12	98.86
#200	3.75	0.08	0.73	99.59
#230	4.00	0.06	0.03	99.62

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.39	3.07	2.95	2.75	2.56	2.46	2.02

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.68	0.16	2.75	0.15	0.63	-5.14	41.03

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 24 @ 5.9 ft

Analysis Date: 12/20/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,819	1,238,305	State Plane, FLW (U.S. Ft.)	-10.6 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/1	#200 - 0.50 #230 - 0.43	0.96	6.91	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.22	0.22
#10	-1.00	2.00	0.00	0.22
#14	-0.50	1.40	0.03	0.25
#18	0.00	1.00	0.00	0.25
#25	0.50	0.71	0.00	0.25
#35	1.00	0.50	0.06	0.31
#45	1.50	0.36	0.18	0.49
#60	2.00	0.25	1.00	1.49
#80	2.50	0.18	12.89	14.38
#120	3.00	0.13	64.55	78.93
#170	3.50	0.09	19.48	98.41
#200	3.75	0.08	1.09	99.50
#230	4.00	0.06	0.07	99.57

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.41	3.13	2.97	2.78	2.58	2.51	2.14

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.77	0.15	2.78	0.15	0.39	-3.72	42.55

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 24 @ 9.5 ft

Analysis Date: 12/20/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,819	1,238,305	State Plane, FLW (U.S. Ft.)	-14.2 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 6/1	#200 - 5.77 #230 - 5.30	1.10	9.79	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.00	0.00
#14	-0.50	1.40	0.00	0.00
#18	0.00	1.00	0.00	0.00
#25	0.50	0.71	0.04	0.04
#35	1.00	0.50	0.12	0.16
#45	1.50	0.36	0.26	0.42
#60	2.00	0.25	1.04	1.46
#80	2.50	0.18	7.12	8.58
#120	3.00	0.13	51.29	59.87
#170	3.50	0.09	31.45	91.32
#200	3.75	0.08	2.91	94.23
#230	4.00	0.06	0.47	94.70

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.38	3.24	2.90	2.66	2.57	2.25

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.89	0.13	2.90	0.13	0.37	-0.76	6.35

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 27 @ 0.7 ft

Analysis Date: 1/15/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,983	1,238,474	State Plane, FLW (U.S. Ft.)	-3.7 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 8/1	#200 - 5.38 #230 - 5.38	0.40	26.06	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	1.78	1.78
#4	-2.25	4.75	0.19	1.97
#5	-2.00	4.00	0.57	2.54
#7	-1.50	2.80	0.91	3.45
#10	-1.00	2.00	1.61	5.06
#14	-0.50	1.40	2.20	7.26
#18	0.00	1.00	2.45	9.71
#25	0.50	0.71	2.62	12.33
#35	1.00	0.50	3.16	15.49
#45	1.50	0.36	3.35	18.84
#60	2.00	0.25	6.68	25.52
#80	2.50	0.18	20.87	46.39
#120	3.00	0.13	39.22	85.61
#170	3.50	0.09	8.64	94.25
#200	3.75	0.08	0.37	94.62
#230	4.00	0.06	0.00	94.62

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	2.98	2.86	2.55	1.96	1.08	-1.02

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.00	0.25	2.55	0.17	1.37	-2.06	7.11

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 27 @ 3 ft

Analysis Date: 1/15/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,983	1,238,474	State Plane, FLW (U.S. Ft.)	-6.0 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 1.31 #230 - 1.28	0.18	15.31	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.05	0.05
#14	-0.50	1.40	0.06	0.11
#18	0.00	1.00	0.12	0.23
#25	0.50	0.71	0.20	0.43
#35	1.00	0.50	0.43	0.86
#45	1.50	0.36	0.80	1.66
#60	2.00	0.25	3.22	4.88
#80	2.50	0.18	19.15	24.03
#120	3.00	0.13	62.26	86.29
#170	3.50	0.09	12.06	98.35
#200	3.75	0.08	0.34	98.69
#230	4.00	0.06	0.03	98.72

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.36	2.98	2.91	2.71	2.51	2.29	2.00

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.65	0.16	2.71	0.15	0.42	-2.23	15.06

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 27 @ 6.2 ft

Analysis Date: 1/15/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,983	1,238,474	State Plane, FLW (U.S. Ft.)	-9.2 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 4.06 #230 - 3.84	0.45	9.99	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.02	0.02
#10	-1.00	2.00	0.00	0.02
#14	-0.50	1.40	0.00	0.02
#18	0.00	1.00	0.05	0.07
#25	0.50	0.71	0.00	0.07
#35	1.00	0.50	0.12	0.19
#45	1.50	0.36	0.27	0.46
#60	2.00	0.25	0.90	1.36
#80	2.50	0.18	3.90	5.26
#120	3.00	0.13	39.75	45.01
#170	3.50	0.09	47.16	92.17
#200	3.75	0.08	3.77	95.94
#230	4.00	0.06	0.22	96.16

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.69	3.41	3.32	3.05	2.75	2.64	2.47

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.99	0.13	3.05	0.12	0.37	-1.79	14.39

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 27 @ 11.3 ft

Analysis Date: 1/15/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,983	1,238,474	State Plane, FLW (U.S. Ft.)	-14.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 8/1	#200 - 5.98 #230 - 5.49	0.32	10.99	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.00	0.00
#14	-0.50	1.40	0.00	0.00
#18	0.00	1.00	0.00	0.00
#25	0.50	0.71	0.04	0.04
#35	1.00	0.50	0.06	0.10
#45	1.50	0.36	0.15	0.25
#60	2.00	0.25	0.79	1.04
#80	2.50	0.18	7.84	8.88
#120	3.00	0.13	46.82	55.70
#170	3.50	0.09	35.10	90.80
#200	3.75	0.08	3.22	94.02
#230	4.00	0.06	0.49	94.51

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.40	3.27	2.94	2.67	2.58	2.25

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.92	0.13	2.94	0.13	0.37	-0.63	5.31

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 31 @ 1.6 ft

Analysis Date: 2/7/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,754	1,238,243	State Plane, FLW (U.S. Ft.)	-6.7 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 0.83 #230 - 0.77	0.19	9.96	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.72	0.72
#4	-2.25	4.75	0.03	0.75
#5	-2.00	4.00	0.08	0.83
#7	-1.50	2.80	0.38	1.21
#10	-1.00	2.00	0.50	1.71
#14	-0.50	1.40	0.35	2.06
#18	0.00	1.00	0.37	2.43
#25	0.50	0.71	0.40	2.83
#35	1.00	0.50	0.52	3.35
#45	1.50	0.36	0.86	4.21
#60	2.00	0.25	2.57	6.78
#80	2.50	0.18	14.09	20.87
#120	3.00	0.13	55.65	76.52
#170	3.50	0.09	21.36	97.88
#200	3.75	0.08	1.29	99.17
#230	4.00	0.06	0.06	99.23

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.43	3.18	2.99	2.76	2.54	2.33	1.65

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.63	0.16	2.76	0.15	0.84	-4.34	26.86

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 31 @ 6.9 ft

Analysis Date: 12/20/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,754	1,238,243	State Plane, FLW (U.S. Ft.)	-12.0 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 0.41 #230 - 0.34	0.18	6.91	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.04	0.04
#10	-1.00	2.00	0.00	0.04
#14	-0.50	1.40	0.00	0.04
#18	0.00	1.00	0.09	0.13
#25	0.50	0.71	0.14	0.27
#35	1.00	0.50	0.28	0.55
#45	1.50	0.36	0.65	1.20
#60	2.00	0.25	3.12	4.32
#80	2.50	0.18	20.41	24.73
#120	3.00	0.13	57.36	82.09
#170	3.50	0.09	16.58	98.67
#200	3.75	0.08	0.92	99.59
#230	4.00	0.06	0.07	99.66

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.39	3.06	2.94	2.72	2.50	2.29	2.02

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.68	0.16	2.72	0.15	0.42	-1.6	12.38

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 34 @ 1 ft

Analysis Date: 10/2/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,818	1,239,485	State Plane, FLW (U.S. Ft.)	-7.0 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 7/1	#230 - 1.37	0.63	45.44	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	6.73	6.73
#5	-2.00	4.00	1.86	8.59
#7	-1.50	2.80	2.77	11.36
#10	-1.00	2.00	2.94	14.30
#14	-0.50	1.40	4.73	19.03
#18	0.00	1.00	4.92	23.95
#25	0.50	0.71	5.43	29.38
#35	1.00	0.50	6.37	35.75
#45	1.50	0.36	7.35	43.10
#60	2.00	0.25	11.69	54.79
#80	2.50	0.18	17.53	72.32
#120	3.00	0.13	19.27	91.59
#170	3.50	0.09	6.54	98.13
#230	4.00	0.06	0.50	98.63

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.26	2.80	2.57	1.80	0.10	-0.82	

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.17	0.44	1.80	0.29	1.42	-0.24	2.31

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 34 @ 3.8 ft

Analysis Date: 10/2/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,818	1,239,485	State Plane, FLW (U.S. Ft.)	-9.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/1	#230 - 3.71	0.88	8.23	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.10	0.10
#14	-0.50	1.40	0.02	0.12
#18	0.00	1.00	0.08	0.20
#25	0.50	0.71	0.16	0.36
#35	1.00	0.50	0.42	0.78
#45	1.50	0.36	0.61	1.39
#60	2.00	0.25	1.17	2.56
#80	2.50	0.18	12.85	15.41
#120	3.00	0.13	55.63	71.04
#170	3.50	0.09	23.51	94.55
#230	4.00	0.06	1.74	96.29

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.63	3.28	3.08	2.81	2.59	2.51	2.09

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.78	0.15	2.81	0.14	0.44	-2.12	16.39

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 34 @ 8.7 ft

Analysis Date: 10/2/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,818	1,239,485	State Plane, FLW (U.S. Ft.)	-14.7 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 3/1	#230 - 1.35	0.65	47.38	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	12.86	12.86
#5	-2.00	4.00	4.90	17.76
#7	-1.50	2.80	5.25	23.01
#10	-1.00	2.00	4.20	27.21
#14	-0.50	1.40	4.47	31.68
#18	0.00	1.00	3.40	35.08
#25	0.50	0.71	3.13	38.21
#35	1.00	0.50	3.42	41.63
#45	1.50	0.36	4.21	45.84
#60	2.00	0.25	9.18	55.02
#80	2.50	0.18	20.21	75.23
#120	3.00	0.13	18.16	93.39
#170	3.50	0.09	4.90	98.29
#230	4.00	0.06	0.36	98.65

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.16	2.74	2.49	1.73	-1.26	-2.18	

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.73	0.60	1.73	0.30	1.66	0.12	1.77

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 35 @ 2 ft

Analysis Date: 10/2/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,898	1,239,354	State Plane, FLW (U.S. Ft.)	-12.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 7/1	#230 - 1.22	0.43	24.37	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	1.55	1.55
#5	-2.00	4.00	0.51	2.06
#7	-1.50	2.80	1.22	3.28
#10	-1.00	2.00	1.44	4.72
#14	-0.50	1.40	2.00	6.72
#18	0.00	1.00	2.04	8.76
#25	0.50	0.71	2.15	10.91
#35	1.00	0.50	2.81	13.72
#45	1.50	0.36	3.53	17.25
#60	2.00	0.25	7.80	25.05
#80	2.50	0.18	30.46	55.51
#120	3.00	0.13	37.01	92.52
#170	3.50	0.09	6.02	98.54
#230	4.00	0.06	0.24	98.78

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.21	2.88	2.76	2.41	2.00	1.32	-0.93

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.03	0.24	2.41	0.19	1.07	-1.79	6.31

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 35 @ 7.1 ft

Analysis Date: 10/2/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,898	1,239,354	State Plane, FLW (U.S. Ft.)	-17.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 7/1	#230 - 0.92	0.43	40.87	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	2.25	2.25
#5	-2.00	4.00	3.00	5.25
#7	-1.50	2.80	4.00	9.25
#10	-1.00	2.00	5.04	14.29
#14	-0.50	1.40	5.42	19.71
#18	0.00	1.00	4.39	24.10
#25	0.50	0.71	3.85	27.95
#35	1.00	0.50	4.30	32.25
#45	1.50	0.36	6.23	38.48
#60	2.00	0.25	16.49	54.97
#80	2.50	0.18	25.62	80.59
#120	3.00	0.13	15.19	95.78
#170	3.50	0.09	3.06	98.84
#230	4.00	0.06	0.24	99.08

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.97	2.61	2.39	1.85	0.12	-0.84	-2.04

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.21	0.43	1.85	0.28	1.49	-0.75	2.49

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 44 @ 1.6 ft

Analysis Date: 12/17/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,722	1,238,506	State Plane, FLW (U.S. Ft.)	-4.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/1	#200 - 1.41 #230 - 1.37	0.34	33.04	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.43	0.43
#4	-2.25	4.75	0.24	0.67
#5	-2.00	4.00	0.55	1.22
#7	-1.50	2.80	2.51	3.73
#10	-1.00	2.00	2.82	6.55
#14	-0.50	1.40	4.11	10.66
#18	0.00	1.00	4.13	14.79
#25	0.50	0.71	4.21	19.00
#35	1.00	0.50	4.64	23.64
#45	1.50	0.36	4.25	27.89
#60	2.00	0.25	6.53	34.42
#80	2.50	0.18	15.45	49.87
#120	3.00	0.13	36.70	86.57
#170	3.50	0.09	11.44	98.01
#200	3.75	0.08	0.58	98.59
#230	4.00	0.06	0.04	98.63

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.37	2.96	2.84	2.50	1.16	0.14	-1.27

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.84	0.28	2.50	0.18	1.44	-1.28	3.7

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 44 @ 5.2 ft

Analysis Date: 12/17/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,722	1,238,506	State Plane, FLW (U.S. Ft.)	-8.0 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 4/1	#200 - 3.32 #230 - 2.22	0.29	5.67	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.05	0.05
#5	-2.00	4.00	0.00	0.05
#7	-1.50	2.80	0.07	0.12
#10	-1.00	2.00	0.13	0.25
#14	-0.50	1.40	0.22	0.47
#18	0.00	1.00	0.18	0.65
#25	0.50	0.71	0.18	0.83
#35	1.00	0.50	0.18	1.01
#45	1.50	0.36	0.18	1.19
#60	2.00	0.25	0.53	1.72
#80	2.50	0.18	2.71	4.43
#120	3.00	0.13	32.92	37.35
#170	3.50	0.09	53.24	90.59
#200	3.75	0.08	6.09	96.68
#230	4.00	0.06	1.10	97.78

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.68	3.44	3.35	3.12	2.81	2.68	2.51

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	3.03	0.12	3.12	0.12	0.5	-4.36	35.72

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 44 @ 9.8 ft

Analysis Date: 12/17/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,722	1,238,506	State Plane, FLW (U.S. Ft.)	-12.6 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 4/1	#200 - 16.21 #230 - 15.49	0.90	8.12	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.00	0.00
#14	-0.50	1.40	0.00	0.00
#18	0.00	1.00	0.00	0.00
#25	0.50	0.71	0.02	0.02
#35	1.00	0.50	0.07	0.09
#45	1.50	0.36	0.13	0.22
#60	2.00	0.25	0.37	0.59
#80	2.50	0.18	1.16	1.75
#120	3.00	0.13	22.21	23.96
#170	3.50	0.09	54.85	78.81
#200	3.75	0.08	4.98	83.79
#230	4.00	0.06	0.72	84.51

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.82	3.47	3.24	3.01	2.82	2.57

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	3.12	0.12	3.24	0.11	0.31	-1.56	10.11

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 45 @ 1.6 ft

Analysis Date: 10/2/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,614	1,238,416	State Plane, FLW (U.S. Ft.)	-5.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	5Y 7/1	#230 - 0.03	0.59	42.44	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	3.15	3.15
#5	-2.00	4.00	0.91	4.06
#7	-1.50	2.80	0.77	4.83
#10	-1.00	2.00	0.93	5.76
#14	-0.50	1.40	1.18	6.94
#18	0.00	1.00	1.08	8.02
#25	0.50	0.71	1.14	9.16
#35	1.00	0.50	1.35	10.51
#45	1.50	0.36	2.06	12.57
#60	2.00	0.25	6.30	18.87
#80	2.50	0.18	34.81	53.68
#120	3.00	0.13	39.32	93.00
#170	3.50	0.09	6.74	99.74
#230	4.00	0.06	0.23	99.97

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.15	2.89	2.77	2.45	2.09	1.77	-1.41

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.10	0.23	2.45	0.18	0.95	-2.15	9.34

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 45 @ 11.2 ft

Analysis Date: 10/2/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,614	1,238,416	State Plane, FLW (U.S. Ft.)	-14.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	5Y 7/1	#230 - 0.53	0.84	51.73	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	7.66	7.66
#5	-2.00	4.00	4.39	12.05
#7	-1.50	2.80	4.39	16.44
#10	-1.00	2.00	4.74	21.18
#14	-0.50	1.40	5.73	26.91
#18	0.00	1.00	5.77	32.68
#25	0.50	0.71	6.53	39.21
#35	1.00	0.50	7.80	47.01
#45	1.50	0.36	9.51	56.52
#60	2.00	0.25	14.04	70.56
#80	2.50	0.18	16.95	87.51
#120	3.00	0.13	10.75	98.26
#170	3.50	0.09	1.14	99.40
#230	4.00	0.06	0.07	99.47

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.85	2.40	2.13	1.16	-0.67	-1.55	

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.66	0.63	1.16	0.45	1.47	-0.04	2.02

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 45 @ 12.5 ft

Analysis Date: 10/2/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,614	1,238,416	State Plane, FLW (U.S. Ft.)	-16.2 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	5Y 7/1	#230 - 20.85	1.36	6.94	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.02	0.02
#14	-0.50	1.40	0.02	0.04
#18	0.00	1.00	0.02	0.06
#25	0.50	0.71	0.03	0.09
#35	1.00	0.50	0.05	0.14
#45	1.50	0.36	0.05	0.19
#60	2.00	0.25	0.22	0.41
#80	2.50	0.18	2.91	3.32
#120	3.00	0.13	40.72	44.04
#170	3.50	0.09	31.74	75.78
#230	4.00	0.06	3.37	79.15

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
		3.49	3.09	2.77	2.66	2.52

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.97	0.13	3.09	0.12	0.35	-1.19	15.13

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 46 @ 1.3 ft

Analysis Date: 1/18/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,550	1,238,316	State Plane, FLW (U.S. Ft.)	-4.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/1	#200 - 0.74 #230 - 0.71	0.36	22.69	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	1.80	1.80
#4	-2.25	4.75	0.41	2.21
#5	-2.00	4.00	0.40	2.61
#7	-1.50	2.80	1.25	3.86
#10	-1.00	2.00	1.53	5.39
#14	-0.50	1.40	1.46	6.85
#18	0.00	1.00	1.54	8.39
#25	0.50	0.71	1.79	10.18
#35	1.00	0.50	2.31	12.49
#45	1.50	0.36	2.86	15.35
#60	2.00	0.25	6.80	22.15
#80	2.50	0.18	21.92	44.07
#120	3.00	0.13	43.95	88.02
#170	3.50	0.09	10.75	98.77
#200	3.75	0.08	0.49	99.26
#230	4.00	0.06	0.03	99.29

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.32	2.95	2.85	2.57	2.07	1.55	-1.13

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.13	0.23	2.57	0.17	1.32	-2.4	8.75

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 46 @ 5.6 ft

Analysis Date: 1/18/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,550	1,238,316	State Plane, FLW (U.S. Ft.)	-9.1 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/1	#200 - 3.53 #230 - 3.29	0.41	7.64	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.48	0.48
#4	-2.25	4.75	0.00	0.48
#5	-2.00	4.00	0.07	0.55
#7	-1.50	2.80	0.00	0.55
#10	-1.00	2.00	0.00	0.55
#14	-0.50	1.40	0.00	0.55
#18	0.00	1.00	0.00	0.55
#25	0.50	0.71	0.00	0.55
#35	1.00	0.50	0.07	0.62
#45	1.50	0.36	0.17	0.79
#60	2.00	0.25	0.82	1.61
#80	2.50	0.18	5.51	7.12
#120	3.00	0.13	41.96	49.08
#170	3.50	0.09	43.57	92.65
#200	3.75	0.08	3.82	96.47
#230	4.00	0.06	0.24	96.71

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.65	3.40	3.30	3.01	2.71	2.61	2.31

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.94	0.13	3.01	0.12	0.59	-6.77	71.35

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 49 @ 1.6 ft

Analysis Date: 12/20/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
412,072	1,238,343	State Plane, FLW (U.S. Ft.)	-9.2 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/1	#200 - 0.50 #230 - 0.50	0.21	18.69	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.25	0.25
#7	-1.50	2.80	0.41	0.66
#10	-1.00	2.00	0.61	1.27
#14	-0.50	1.40	1.06	2.33
#18	0.00	1.00	1.38	3.71
#25	0.50	0.71	2.07	5.78
#35	1.00	0.50	2.84	8.62
#45	1.50	0.36	3.31	11.93
#60	2.00	0.25	7.61	19.54
#80	2.50	0.18	25.45	44.99
#120	3.00	0.13	47.87	92.86
#170	3.50	0.09	6.50	99.36
#200	3.75	0.08	0.14	99.50
#230	4.00	0.06	0.00	99.50

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.16	2.91	2.81	2.55	2.11	1.77	0.31

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.29	0.20	2.55	0.17	0.87	-2.27	8.91

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 49 @ 4.9 ft

Analysis Date: 12/20/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
412,072	1,238,343	State Plane, FLW (U.S. Ft.)	-12.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/1	#200 - 0.49 #230 - 0.49	0.25	30.61	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.64	0.64
#4	-2.25	4.75	0.52	1.16
#5	-2.00	4.00	0.72	1.88
#7	-1.50	2.80	2.79	4.67
#10	-1.00	2.00	2.77	7.44
#14	-0.50	1.40	3.69	11.13
#18	0.00	1.00	3.74	14.87
#25	0.50	0.71	4.02	18.89
#35	1.00	0.50	4.42	23.31
#45	1.50	0.36	4.70	28.01
#60	2.00	0.25	11.44	39.45
#80	2.50	0.18	29.81	69.26
#120	3.00	0.13	27.71	96.97
#170	3.50	0.09	2.51	99.48
#200	3.75	0.08	0.03	99.51
#230	4.00	0.06	0.00	99.51

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.96	2.77	2.60	2.18	1.18	0.14	-1.44

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.66	0.32	2.18	0.22	1.38	-1.44	4.27

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 49 @ 8.2 ft

Analysis Date: 12/20/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
412,072	1,238,343	State Plane, FLW (U.S. Ft.)	-15.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/1	#200 - 0.50 #230 - 0.50	3.02	8.61	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.00	0.00
#14	-0.50	1.40	0.09	0.09
#18	0.00	1.00	0.13	0.22
#25	0.50	0.71	0.32	0.54
#35	1.00	0.50	0.61	1.15
#45	1.50	0.36	1.01	2.16
#60	2.00	0.25	3.19	5.35
#80	2.50	0.18	17.59	22.94
#120	3.00	0.13	60.39	83.33
#170	3.50	0.09	15.49	98.82
#200	3.75	0.08	0.68	99.50
#230	4.00	0.06	0.00	99.50

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.38	3.02	2.93	2.72	2.52	2.30	1.95

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.67	0.16	2.72	0.15	0.45	-2.04	12.11

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 49 @ 10.5 ft

Analysis Date: 12/20/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
412,072	1,238,343	State Plane, FLW (U.S. Ft.)	-18.1 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/1	#200 - 0.88 #230 - 0.83	0.50	72.53	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	17.19	17.19
#4	-2.25	4.75	2.94	20.13
#5	-2.00	4.00	3.58	23.71
#7	-1.50	2.80	8.77	32.48
#10	-1.00	2.00	9.40	41.88
#14	-0.50	1.40	9.29	51.17
#18	0.00	1.00	7.00	58.17
#25	0.50	0.71	6.03	64.20
#35	1.00	0.50	5.41	69.61
#45	1.50	0.36	4.82	74.43
#60	2.00	0.25	6.29	80.72
#80	2.50	0.18	7.35	88.07
#120	3.00	0.13	8.30	96.37
#170	3.50	0.09	2.58	98.95
#200	3.75	0.08	0.17	99.12
#230	4.00	0.06	0.05	99.17

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.92	2.22	1.55	-0.56	-1.93	-2.62	-3.74

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	-0.38	1.30			2.06	0.09	1.85

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 49 @ 12.8 ft

Analysis Date: 12/20/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
412,072	1,238,343	State Plane, FLW (U.S. Ft.)	-20.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 5/1	#200 - 10.38 #230 - 10.09	0.54	38.93	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	4.96	4.96
#4	-2.25	4.75	2.25	7.21
#5	-2.00	4.00	1.83	9.04
#7	-1.50	2.80	5.79	14.83
#10	-1.00	2.00	5.27	20.10
#14	-0.50	1.40	4.04	24.14
#18	0.00	1.00	2.82	26.96
#25	0.50	0.71	2.18	29.14
#35	1.00	0.50	2.08	31.22
#45	1.50	0.36	2.44	33.66
#60	2.00	0.25	4.83	38.49
#80	2.50	0.18	11.57	50.06
#120	3.00	0.13	20.82	70.88
#170	3.50	0.09	16.56	87.44
#200	3.75	0.08	2.18	89.62
#230	4.00	0.06	0.29	89.91

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.40	3.12	2.50	-0.35	-1.39	-2.50

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.26	0.42	2.50	0.18	2.13	-0.83	2.25

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 61 @ 1.3 ft

Analysis Date: 10/2/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,882	1,239,637	State Plane, FLW (U.S. Ft.)	-14.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 7/1	#230 - 1.93	0.25	9.75	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.46	0.46
#5	-2.00	4.00	0.05	0.51
#7	-1.50	2.80	0.10	0.61
#10	-1.00	2.00	0.21	0.82
#14	-0.50	1.40	0.30	1.12
#18	0.00	1.00	0.30	1.42
#25	0.50	0.71	0.43	1.85
#35	1.00	0.50	0.63	2.48
#45	1.50	0.36	0.94	3.42
#60	2.00	0.25	3.15	6.57
#80	2.50	0.18	15.90	22.47
#120	3.00	0.13	50.29	72.76
#170	3.50	0.09	22.92	95.68
#230	4.00	0.06	2.39	98.07

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.49	3.25	3.05	2.77	2.53	2.30	1.75

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.68	0.16	2.77	0.15	0.6	-2.67	16.99

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 61 @ 4.3 ft

Analysis Date: 10/2/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,882	1,239,637	State Plane, FLW (U.S. Ft.)	-17.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 7/1	#230 - 2.23	0.54	19.46	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	4.12	4.12
#5	-2.00	4.00	1.36	5.48
#7	-1.50	2.80	1.31	6.79
#10	-1.00	2.00	1.63	8.42
#14	-0.50	1.40	2.31	10.73
#18	0.00	1.00	2.94	13.67
#25	0.50	0.71	3.86	17.53
#35	1.00	0.50	5.33	22.86
#45	1.50	0.36	7.30	30.16
#60	2.00	0.25	14.23	44.39
#80	2.50	0.18	23.39	67.78
#120	3.00	0.13	22.71	90.49
#170	3.50	0.09	6.84	97.33
#230	4.00	0.06	0.44	97.77

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.33	2.86	2.66	2.12	1.15	0.30	-2.18

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.60	0.33	2.12	0.23	1.21	-0.87	3.79

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 61 @ 7.9 ft

Analysis Date: 1/30/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,882	1,239,637	State Plane, FLW (U.S. Ft.)	-21.1 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 7/1	#200 - 8.83 #230 - 8.65	0.43	21.79	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	2.43	2.43
#4	-2.25	4.75	0.83	3.26
#5	-2.00	4.00	0.56	3.82
#7	-1.50	2.80	1.12	4.94
#10	-1.00	2.00	1.75	6.69
#14	-0.50	1.40	2.05	8.74
#18	0.00	1.00	1.89	10.63
#25	0.50	0.71	1.80	12.43
#35	1.00	0.50	1.87	14.30
#45	1.50	0.36	1.91	16.21
#60	2.00	0.25	4.00	20.21
#80	2.50	0.18	10.00	30.21
#120	3.00	0.13	35.23	65.44
#170	3.50	0.09	24.14	89.58
#200	3.75	0.08	1.59	91.17
#230	4.00	0.06	0.18	91.35

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.38	3.20	2.78	2.24	1.45	-1.48

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.17	0.22	2.78	0.15	1.57	-2.06	6.55

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 61 @ 9.2 ft

Analysis Date: 2/8/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,882	1,239,637	State Plane, FLW (U.S. Ft.)	-22.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 4/1	#200 - 12.80 #230 - 12.53	0.46	10.68	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	1.25	1.25
#4	-2.25	4.75	0.45	1.70
#5	-2.00	4.00	0.57	2.27
#7	-1.50	2.80	1.33	3.60
#10	-1.00	2.00	1.02	4.62
#14	-0.50	1.40	1.37	5.99
#18	0.00	1.00	1.23	7.22
#25	0.50	0.71	0.98	8.20
#35	1.00	0.50	1.02	9.22
#45	1.50	0.36	1.41	10.63
#60	2.00	0.25	3.39	14.02
#80	2.50	0.18	16.72	30.74
#120	3.00	0.13	37.93	68.67
#170	3.50	0.09	16.81	85.48
#200	3.75	0.08	1.72	87.20
#230	4.00	0.06	0.27	87.47

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.46	3.19	2.75	2.33	2.06	-0.86

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.30	0.20	2.75	0.15	1.32	-2.53	9.29

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 65 @ 2 ft

Analysis Date: 10/2/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,971	1,239,515	State Plane, FLW (U.S. Ft.)	-15.6 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 8/1	#230 - 0.69	0.69	65.16	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	19.97	19.97
#5	-2.00	4.00	4.88	24.85
#7	-1.50	2.80	6.88	31.73
#10	-1.00	2.00	6.03	37.76
#14	-0.50	1.40	6.45	44.21
#18	0.00	1.00	5.94	50.15
#25	0.50	0.71	5.56	55.71
#35	1.00	0.50	5.59	61.30
#45	1.50	0.36	6.21	67.51
#60	2.00	0.25	8.84	76.35
#80	2.50	0.18	10.82	87.17
#120	3.00	0.13	9.23	96.40
#170	3.50	0.09	2.69	99.09
#230	4.00	0.06	0.22	99.31

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.92	2.35	1.92	-0.01	-1.99		

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	-0.04	1.03			1.62	0.96	2.23

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 65 @ 3.9 ft

Analysis Date: 10/2/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,971	1,239,515	State Plane, FLW (U.S. Ft.)	-17.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 8/1	#230 - 1.65	0.36	18.35	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	1.68	1.68
#5	-2.00	4.00	1.04	2.72
#7	-1.50	2.80	0.91	3.63
#10	-1.00	2.00	0.82	4.45
#14	-0.50	1.40	1.23	5.68
#18	0.00	1.00	1.71	7.39
#25	0.50	0.71	2.05	9.44
#35	1.00	0.50	2.63	12.07
#45	1.50	0.36	3.05	15.12
#60	2.00	0.25	6.48	21.60
#80	2.50	0.18	28.64	50.24
#120	3.00	0.13	39.52	89.76
#170	3.50	0.09	8.16	97.92
#230	4.00	0.06	0.43	98.35

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.32	2.93	2.81	2.50	2.06	1.57	-0.78

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.11	0.23	2.50	0.18	1.04	-2.01	7.76

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 67 @ 1.3 ft

Analysis Date: 10/2/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,952	1,239,363	State Plane, FLW (U.S. Ft.)	-13.6 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 7/1	#230 - 2.33	0.63	37.73	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	3.72	3.72
#5	-2.00	4.00	1.15	4.87
#7	-1.50	2.80	2.20	7.07
#10	-1.00	2.00	2.57	9.64
#14	-0.50	1.40	3.10	12.74
#18	0.00	1.00	2.69	15.43
#25	0.50	0.71	2.92	18.35
#35	1.00	0.50	3.57	21.92
#45	1.50	0.36	4.83	26.75
#60	2.00	0.25	14.17	40.92
#80	2.50	0.18	31.18	72.10
#120	3.00	0.13	21.59	93.69
#170	3.50	0.09	3.83	97.52
#230	4.00	0.06	0.15	97.67

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.17	2.78	2.57	2.15	1.32	0.10	-1.97

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.58	0.33	2.15	0.23	1.24	-1.08	3.8

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 67 @ 3.9 ft

Analysis Date: 10/2/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,952	1,239,363	State Plane, FLW (U.S. Ft.)	-16.2 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/1	#230 - 1.82	0.81	26.03	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#5	-2.00	4.00	0.19	0.19
#7	-1.50	2.80	0.16	0.35
#10	-1.00	2.00	0.33	0.68
#14	-0.50	1.40	0.52	1.20
#18	0.00	1.00	0.82	2.02
#25	0.50	0.71	1.43	3.45
#35	1.00	0.50	2.60	6.05
#45	1.50	0.36	3.94	9.99
#60	2.00	0.25	10.01	20.00
#80	2.50	0.18	36.14	56.14
#120	3.00	0.13	33.73	89.87
#170	3.50	0.09	7.83	97.70
#230	4.00	0.06	0.48	98.18

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.33	2.91	2.78	2.42	2.07	1.80	0.80

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.29	0.20	2.42	0.19	0.75	-2.07	9.8

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 67 @ 6.9 ft

Analysis Date: 10/2/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,952	1,239,363	State Plane, FLW (U.S. Ft.)	-19.2 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 7/1	#230 - 1.71	0.99	63.30	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	13.27	13.27
#5	-2.00	4.00	3.82	17.09
#7	-1.50	2.80	6.36	23.45
#10	-1.00	2.00	6.94	30.39
#14	-0.50	1.40	8.83	39.22
#18	0.00	1.00	7.64	46.86
#25	0.50	0.71	6.36	53.22
#35	1.00	0.50	6.05	59.27
#45	1.50	0.36	6.72	65.99
#60	2.00	0.25	9.58	75.57
#80	2.50	0.18	11.09	86.66
#120	3.00	0.13	9.49	96.15
#170	3.50	0.09	1.92	98.07
#230	4.00	0.06	0.22	98.29

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.94	2.38	1.97	0.25	-1.39	-2.14	

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.16	0.90	0.25	0.84	1.55	0.7	2.07

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 67 @ 9.5 ft

Analysis Date: 12/2/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,952	1,239,363	State Plane, FLW (U.S. Ft.)	-21.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	5Y 5/1	#230 - 11.92	1.34	5.07	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.03	0.03
#10	-1.00	2.00	0.01	0.04
#14	-0.50	1.40	0.01	0.05
#18	0.00	1.00	0.04	0.09
#25	0.50	0.71	0.06	0.15
#35	1.00	0.50	0.07	0.22
#45	1.50	0.36	0.10	0.32
#60	2.00	0.25	0.43	0.75
#80	2.50	0.18	6.01	6.76
#120	3.00	0.13	55.84	62.60
#170	3.50	0.09	23.40	86.00
#230	4.00	0.06	2.08	88.08

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.46	3.26	2.89	2.66	2.58	2.35

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.86	0.14	2.89	0.13	0.35	-1.7	22.03

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 71 @ 2 ft

Analysis Date: 10/2/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
412,050	1,239,242	State Plane, FLW (U.S. Ft.)	-15.6 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 8/1	#230 - 1.39	0.55	70.95	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	28.18	28.18
#5	-2.00	4.00	7.45	35.63
#7	-1.50	2.80	6.55	42.18
#10	-1.00	2.00	6.20	48.38
#14	-0.50	1.40	6.18	54.56
#18	0.00	1.00	4.67	59.23
#25	0.50	0.71	3.82	63.05
#35	1.00	0.50	3.50	66.55
#45	1.50	0.36	3.78	70.33
#60	2.00	0.25	7.13	77.46
#80	2.50	0.18	10.13	87.59
#120	3.00	0.13	8.62	96.21
#170	3.50	0.09	2.23	98.44
#230	4.00	0.06	0.17	98.61

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.93	2.32	1.83	-0.87			

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	-0.45	1.37			1.71	1.32	2.64

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 77 @ 0.7 ft

Analysis Date: 5/28/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
412,174	1,238,978	State Plane, FLW (U.S. Ft.)	-16.1 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 6/1	#200 - 1.59 #230 - 1.54	1.51	67.33	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	16.27	16.27
#4	-2.25	4.75	3.27	19.54
#5	-2.00	4.00	3.44	22.98
#7	-1.50	2.80	9.19	32.17
#10	-1.00	2.00	7.96	40.13
#14	-0.50	1.40	8.10	48.23
#18	0.00	1.00	6.35	54.58
#25	0.50	0.71	5.36	59.94
#35	1.00	0.50	4.84	64.78
#45	1.50	0.36	5.15	69.93
#60	2.00	0.25	5.78	75.71
#80	2.50	0.18	3.62	79.33
#120	3.00	0.13	11.50	90.83
#170	3.50	0.09	7.15	97.98
#200	3.75	0.08	0.43	98.41
#230	4.00	0.06	0.05	98.46

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.29	2.70	1.94	-0.36	-1.89	-2.53	-3.71

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	-0.18	1.13			2.2	0.07	1.75

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 77 @ 3.3 ft

Analysis Date: 5/28/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
412,174	1,238,978	State Plane, FLW (U.S. Ft.)	-18.7 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 6/1	#200 - 0.77 #230 - 0.01	0.70	17.54	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	1.83	1.83
#4	-2.25	4.75	0.50	2.33
#5	-2.00	4.00	0.61	2.94
#7	-1.50	2.80	1.72	4.66
#10	-1.00	2.00	2.55	7.21
#14	-0.50	1.40	2.22	9.43
#18	0.00	1.00	1.82	11.25
#25	0.50	0.71	1.73	12.98
#35	1.00	0.50	1.59	14.57
#45	1.50	0.36	1.73	16.30
#60	2.00	0.25	2.22	18.52
#80	2.50	0.18	9.56	28.08
#120	3.00	0.13	58.20	86.28
#170	3.50	0.09	12.60	98.88
#200	3.75	0.08	0.35	99.23
#230	4.00	0.06	0.76	99.99

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.35	2.98	2.90	2.69	2.34	1.41	-1.43

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.17	0.22	2.69	0.15	1.46	-2.21	7.1

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 77 @ 4.9 ft

Analysis Date: 5/28/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
412,174	1,238,978	State Plane, FLW (U.S. Ft.)	-20.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 6/1	#200 - 1.73 #230 - 1.67	1.62	47.60	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	19.76	19.76
#4	-2.25	4.75	1.98	21.74
#5	-2.00	4.00	3.92	25.66
#7	-1.50	2.80	4.70	30.36
#10	-1.00	2.00	4.35	34.71
#14	-0.50	1.40	4.75	39.46
#18	0.00	1.00	3.87	43.33
#25	0.50	0.71	4.07	47.40
#35	1.00	0.50	6.23	53.63
#45	1.50	0.36	9.17	62.80
#60	2.00	0.25	12.29	75.09
#80	2.50	0.18	10.87	85.96
#120	3.00	0.13	9.07	95.03
#170	3.50	0.09	2.97	98.00
#200	3.75	0.08	0.27	98.27
#230	4.00	0.06	0.06	98.33

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.00	2.41	2.00	0.71	-2.04	-2.83	-3.81

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.01	0.99	0.71	0.61	2.24	-0.32	1.66

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 77 @ 5.9 ft

Analysis Date: 5/28/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
412,174	1,238,978	State Plane, FLW (U.S. Ft.)	-21.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 4/1	#200 - 98.18 #230 - 97.98	12.07	0.00	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.00	0.00
#14	-0.50	1.40	0.00	0.00
#18	0.00	1.00	0.00	0.00
#25	0.50	0.71	0.00	0.00
#35	1.00	0.50	0.00	0.00
#45	1.50	0.36	0.00	0.00
#60	2.00	0.25	0.03	0.03
#80	2.50	0.18	0.10	0.13
#120	3.00	0.13	0.36	0.49
#170	3.50	0.09	0.93	1.42
#200	3.75	0.08	0.40	1.82
#230	4.00	0.06	0.20	2.02

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	3.23	0.11	4.12	0.06	0.44	-0.86	3.93

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 88 @ 1.6 ft

Analysis Date: 12/20/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,378	1,238,053	State Plane, FLW (U.S. Ft.)	-6.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 1.12 #230 - 1.12	0.26	10.49	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.58	0.58
#4	-2.25	4.75	0.00	0.58
#5	-2.00	4.00	0.07	0.65
#7	-1.50	2.80	0.34	0.99
#10	-1.00	2.00	0.57	1.56
#14	-0.50	1.40	0.76	2.32
#18	0.00	1.00	0.76	3.08
#25	0.50	0.71	0.86	3.94
#35	1.00	0.50	1.05	4.99
#45	1.50	0.36	1.17	6.16
#60	2.00	0.25	2.81	8.97
#80	2.50	0.18	18.15	27.12
#120	3.00	0.13	62.63	89.75
#170	3.50	0.09	8.87	98.62
#200	3.75	0.08	0.26	98.88
#230	4.00	0.06	0.00	98.88

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.30	2.95	2.88	2.68	2.44	2.19	1.00

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.49	0.18	2.68	0.16	0.85	-3.91	21.77

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 88 @ 6.6 ft

Analysis Date: 12/20/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,378	1,238,053	State Plane, FLW (U.S. Ft.)	-11.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 1.38 #230 - 1.26	0.27	15.96	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.15	0.15
#5	-2.00	4.00	0.00	0.15
#7	-1.50	2.80	0.15	0.30
#10	-1.00	2.00	0.38	0.68
#14	-0.50	1.40	0.32	1.00
#18	0.00	1.00	0.44	1.44
#25	0.50	0.71	0.76	2.20
#35	1.00	0.50	1.70	3.90
#45	1.50	0.36	3.18	7.08
#60	2.00	0.25	8.81	15.89
#80	2.50	0.18	19.15	35.04
#120	3.00	0.13	39.32	74.36
#170	3.50	0.09	22.37	96.73
#200	3.75	0.08	1.89	98.62
#230	4.00	0.06	0.12	98.74

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.46	3.22	3.01	2.69	2.24	2.00	1.17

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.54	0.17	2.69	0.15	0.75	-2.14	10.69

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 93 @ 1 ft

Analysis Date: 12/20/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,508	1,238,103	State Plane, FLW (U.S. Ft.)	-5.7 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 0.49 #230 - 0.49	0.12	6.30	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.06	0.06
#10	-1.00	2.00	0.19	0.25
#14	-0.50	1.40	0.28	0.53
#18	0.00	1.00	0.32	0.85
#25	0.50	0.71	0.47	1.32
#35	1.00	0.50	0.56	1.88
#45	1.50	0.36	0.73	2.61
#60	2.00	0.25	1.82	4.43
#80	2.50	0.18	12.38	16.81
#120	3.00	0.13	64.73	81.54
#170	3.50	0.09	17.23	98.77
#200	3.75	0.08	0.74	99.51
#230	4.00	0.06	0.00	99.51

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.39	3.07	2.95	2.76	2.56	2.47	2.02

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.70	0.15	2.76	0.15	0.52	-3.51	22.78

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 93 @ 4.3 ft

Analysis Date: 12/20/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,508	1,238,103	State Plane, FLW (U.S. Ft.)	-9.0 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 8/1	#200 - 0.72 #230 - 0.71	0.25	23.90	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	1.54	1.54
#4	-2.25	4.75	0.21	1.75
#5	-2.00	4.00	0.28	2.03
#7	-1.50	2.80	0.50	2.53
#10	-1.00	2.00	0.82	3.35
#14	-0.50	1.40	1.16	4.51
#18	0.00	1.00	1.27	5.78
#25	0.50	0.71	1.76	7.54
#35	1.00	0.50	2.52	10.06
#45	1.50	0.36	3.40	13.46
#60	2.00	0.25	7.54	21.00
#80	2.50	0.18	21.86	42.86
#120	3.00	0.13	43.60	86.46
#170	3.50	0.09	12.20	98.66
#200	3.75	0.08	0.62	99.28
#230	4.00	0.06	0.01	99.29

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.35	2.97	2.87	2.58	2.09	1.67	-0.31

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.23	0.21	2.58	0.17	1.18	-2.7	11.39

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 93 @ 7.9 ft

Analysis Date: 12/20/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,508	1,238,103	State Plane, FLW (U.S. Ft.)	-12.6 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 8/1	#200 - 0.67 #230 - 0.65	0.21	12.83	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	1.32	1.32
#4	-2.25	4.75	0.00	1.32
#5	-2.00	4.00	0.43	1.75
#7	-1.50	2.80	0.49	2.24
#10	-1.00	2.00	0.33	2.57
#14	-0.50	1.40	0.19	2.76
#18	0.00	1.00	0.29	3.05
#25	0.50	0.71	0.37	3.42
#35	1.00	0.50	0.66	4.08
#45	1.50	0.36	1.09	5.17
#60	2.00	0.25	3.79	8.96
#80	2.50	0.18	18.72	27.68
#120	3.00	0.13	53.48	81.16
#170	3.50	0.09	17.26	98.42
#200	3.75	0.08	0.91	99.33
#230	4.00	0.06	0.02	99.35

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.40	3.08	2.94	2.71	2.43	2.19	1.42

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.52	0.17	2.71	0.15	0.98	-4.12	22.74

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 95 @ 2 ft

Analysis Date: 6/22/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,529	1,237,972	State Plane, FLW (U.S. Ft.)	-11.6 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 6/1	#200 - 0.29 #230 - 0.29	0.50	12.56	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.67	0.67
#4	-2.25	4.75	0.19	0.86
#5	-2.00	4.00	0.22	1.08
#7	-1.50	2.80	0.35	1.43
#10	-1.00	2.00	0.62	2.05
#14	-0.50	1.40	0.42	2.47
#18	0.00	1.00	0.43	2.90
#25	0.50	0.71	0.50	3.40
#35	1.00	0.50	0.75	4.15
#45	1.50	0.36	1.17	5.32
#60	2.00	0.25	4.21	9.53
#80	2.50	0.18	23.48	33.01
#120	3.00	0.13	54.98	87.99
#170	3.50	0.09	11.32	99.31
#200	3.75	0.08	0.40	99.71
#230	4.00	0.06	0.00	99.71

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.31	2.96	2.88	2.65	2.33	2.14	1.36

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.48	0.18	2.65	0.16	0.87	-4.01	22.83

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 95 @ 7.5 ft

Analysis Date: 6/22/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,529	1,237,972	State Plane, FLW (U.S. Ft.)	-17.1 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 5/1	#200 - 0.75 #230 - 0.67	0.79	40.31	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	10.82	10.82
#4	-2.25	4.75	1.34	12.16
#5	-2.00	4.00	1.52	13.68
#7	-1.50	2.80	2.15	15.83
#10	-1.00	2.00	1.85	17.68
#14	-0.50	1.40	2.54	20.22
#18	0.00	1.00	1.98	22.20
#25	0.50	0.71	2.56	24.76
#35	1.00	0.50	3.18	27.94
#45	1.50	0.36	3.57	31.51
#60	2.00	0.25	8.00	39.51
#80	2.50	0.18	24.88	64.39
#120	3.00	0.13	27.42	91.81
#170	3.50	0.09	6.89	98.70
#200	3.75	0.08	0.55	99.25
#230	4.00	0.06	0.08	99.33

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.23	2.86	2.69	2.21	0.54	-1.45	-3.44

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.27	0.41	2.21	0.22	2.09	-1.27	3.18

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 96 @ 1 ft

Analysis Date: 2/7/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,757	1,239,769	State Plane, FLW (U.S. Ft.)	-14.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/1	#200 - 0.64 #230 - 0.59	0.50	79.27	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	15.63	15.63
#4	-2.25	4.75	19.22	34.85
#5	-2.00	4.00	9.64	44.49
#7	-1.50	2.80	9.37	53.86
#10	-1.00	2.00	8.74	62.60
#14	-0.50	1.40	6.88	69.48
#18	0.00	1.00	6.00	75.48
#25	0.50	0.71	4.64	80.12
#35	1.00	0.50	4.98	85.10
#45	1.50	0.36	6.11	91.21
#60	2.00	0.25	5.23	96.44
#80	2.50	0.18	2.56	99.00
#120	3.00	0.13	0.08	99.08
#170	3.50	0.09	0.05	99.13
#200	3.75	0.08	0.23	99.36
#230	4.00	0.06	0.05	99.41

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
1.86	0.89	-0.04	-1.71	-2.38	-2.50	-3.69

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	-1.25	2.38			1.64	0.6	2.37

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 96 @ 1.6 ft

Analysis Date: 10/2/2007

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,757	1,239,769	State Plane, FLW (U.S. Ft.)	-15.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 7/1	#230 - 1.63	0.19	16.05	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.08	0.08
#5	-2.00	4.00	0.20	0.28
#7	-1.50	2.80	0.49	0.77
#10	-1.00	2.00	0.76	1.53
#14	-0.50	1.40	1.18	2.71
#18	0.00	1.00	1.49	4.20
#25	0.50	0.71	1.76	5.96
#35	1.00	0.50	2.22	8.18
#45	1.50	0.36	3.14	11.32
#60	2.00	0.25	7.94	19.26
#80	2.50	0.18	22.81	42.07
#120	3.00	0.13	39.17	81.24
#170	3.50	0.09	15.91	97.15
#230	4.00	0.06	1.22	98.37

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.43	3.09	2.92	2.60	2.13	1.79	0.23

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.35	0.20	2.60	0.16	0.93	-2.06	8.13

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 96 @ 3 ft

Analysis Date: 1/29/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,757	1,239,769	State Plane, FLW (U.S. Ft.)	-16.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/1	#200 - 0.73 #230 - 0.67	0.24	7.09	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.23	0.23
#10	-1.00	2.00	0.17	0.40
#14	-0.50	1.40	0.17	0.57
#18	0.00	1.00	0.15	0.72
#25	0.50	0.71	0.21	0.93
#35	1.00	0.50	0.28	1.21
#45	1.50	0.36	0.43	1.64
#60	2.00	0.25	1.34	2.98
#80	2.50	0.18	10.33	13.31
#120	3.00	0.13	58.89	72.20
#170	3.50	0.09	26.05	98.25
#200	3.75	0.08	1.02	99.27
#230	4.00	0.06	0.06	99.33

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.44	3.23	3.05	2.81	2.60	2.52	2.10

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.78	0.15	2.81	0.14	0.51	-3.97	30.87

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 96 @ 5.1 ft

Analysis Date: 1/29/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,757	1,239,769	State Plane, FLW (U.S. Ft.)	-19.0 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/1	#200 - 4.00 #230 - 3.87	0.23	7.04	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	0.15	0.15
#4	-2.25	4.75	0.00	0.15
#5	-2.00	4.00	0.05	0.20
#7	-1.50	2.80	0.05	0.25
#10	-1.00	2.00	0.00	0.25
#14	-0.50	1.40	0.03	0.28
#18	0.00	1.00	0.08	0.36
#25	0.50	0.71	0.13	0.49
#35	1.00	0.50	0.33	0.82
#45	1.50	0.36	0.74	1.56
#60	2.00	0.25	4.00	5.56
#80	2.50	0.18	20.46	26.02
#120	3.00	0.13	50.41	76.43
#170	3.50	0.09	18.50	94.93
#200	3.75	0.08	1.07	96.00
#230	4.00	0.06	0.13	96.13

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.52	3.20	2.99	2.74	2.48	2.26	1.93

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.67	0.16	2.74	0.15	0.53	-3.69	36.68

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 96 @ 6.9 ft

Analysis Date: 1/17/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,757	1,239,769	State Plane, FLW (U.S. Ft.)	-20.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 5/1	#200 - 2.22 #230 - 2.16	0.19	27.15	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	2.44	2.44
#4	-2.25	4.75	0.47	2.91
#5	-2.00	4.00	1.01	3.92
#7	-1.50	2.80	1.80	5.72
#10	-1.00	2.00	2.41	8.13
#14	-0.50	1.40	2.44	10.57
#18	0.00	1.00	2.42	12.99
#25	0.50	0.71	2.70	15.69
#35	1.00	0.50	3.37	19.06
#45	1.50	0.36	4.94	24.00
#60	2.00	0.25	13.51	37.51
#80	2.50	0.18	28.66	66.17
#120	3.00	0.13	24.78	90.95
#170	3.50	0.09	6.38	97.33
#200	3.75	0.08	0.45	97.78
#230	4.00	0.06	0.06	97.84

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.32	2.86	2.68	2.22	1.54	0.55	-1.70

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.72	0.30	2.22	0.21	1.48	-1.76	5.64

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

Granularmetric Report

Project Name: Blind Pass
Pinellas County

Sample Name: 96 @ 7.4 ft

Analysis Date: 2/8/2008

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,757	1,239,769	State Plane, FLW (U.S. Ft.)	-21.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 7/1	#200 - 9.23 #230 - 8.91	1.47	20.96	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
#3.5	-2.50	5.60	2.81	2.81
#4	-2.25	4.75	1.20	4.01
#5	-2.00	4.00	1.22	5.23
#7	-1.50	2.80	1.63	6.86
#10	-1.00	2.00	1.81	8.67
#14	-0.50	1.40	1.92	10.59
#18	0.00	1.00	2.16	12.75
#25	0.50	0.71	2.85	15.60
#35	1.00	0.50	4.63	20.23
#45	1.50	0.36	7.28	27.51
#60	2.00	0.25	12.31	39.82
#80	2.50	0.18	17.33	57.15
#120	3.00	0.13	19.51	76.66
#170	3.50	0.09	12.35	89.01
#200	3.75	0.08	1.76	90.77
#230	4.00	0.06	0.32	91.09

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.30	2.96	2.29	1.33	0.54	-2.05

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.68	0.31	2.29	0.20	1.63	-1.5	4.74

GRANULARMETRIC REPORT % BLIND_PASS_VC2009_NAD83+MUNSELL_MAY2020X.GPJ CESAJ 20171021.GDT 5/25/20

7.4 PASS-A-GRILLE

- Boring Logs
- Gradation Graphs
- Granularmetric Reports

Boring Designation VB-PAG-12-1

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT	Pass-A-Grille Channel, Pinellas County
2. BORING DESIGNATION	VB-PAG-12-1
LOCATION COORDINATES	X = 410,582 Y = 1,215,980
3. DRILLING AGENCY	Athena Technologies, Inc.
CONTRACTOR FILE NO.	6734-13-9700
4. NAME OF DRILLER	Palmer McClellan
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	9.6 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	MLLW
11. MANUFACTURER'S DESIGNATION OF DRILL	Vibracore
☐ AUTO HAMMER ☐ MANUAL HAMMER	
12. TOTAL SAMPLES	DISTURBED 3 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	-0.1 Ft.
15. DATE BORING	STARTED 01-11-13 / COMPLETED 01-11-13
16. ELEVATION TOP OF BORING	-10.4 Ft.
17. TOTAL RECOVERY FOR BORING	99 %
18. SIGNATURE AND TITLE OF INSPECTOR	Joel Raven, Geologist

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-10.4	0.0								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, no reaction with HCl, moist, 2.5Y 8/1 white (SP)				-11.4		
			At El. -11.4 Ft., trace shell		1				
							-13.4		
					2				
			From El. -14.4 to -14.9 Ft., <0.5" thick sandy silt seams				-15.4		
			At El. -15.3 Ft., few fine-grained sand-sized shell, 2.5Y 7/1 light gray		3				
			At El. -18.7 Ft., <0.5" thick thin sandy silt seams						
-20.0	9.6		At El. -19.6 Ft., 2.5Y 6/1 gray				-20.0		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.0/1.2	SP*
2	3.0/3.2	SP*
3	5.0/5.2	SP*

Abbreviations:

(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pass-A-Grille Channel	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL MLLW
LOCATION COORDINATES X = 410,582 Y = 1,215,980	ELEVATION TOP OF BORING -10.4 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			*Lab visual classification based on gradation curve						

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SAJ FORM 1836-A
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Boring Designation VB-PAG-12-2

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT	Pass-A-Grille Channel, Pinellas County
2. BORING DESIGNATION	VB-PAG-12-2
LOCATION COORDINATES	X = 413,627 Y = 1,216,013
3. DRILLING AGENCY	Athena Technologies, Inc.
CONTRACTOR FILE NO.	6734-13-9700
4. NAME OF DRILLER	Palmer McClellan
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	9.8 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	MLLW
11. MANUFACTURER'S DESIGNATION OF DRILL	Vibracore
☐ AUTO HAMMER ☐ MANUAL HAMMER	
12. TOTAL SAMPLES	DISTURBED 4 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	0.3 Ft.
15. DATE BORING	STARTED 01-11-13 / COMPLETED 01-11-13
16. ELEVATION TOP OF BORING	-8.0 Ft.
17. TOTAL RECOVERY FOR BORING	100 %
18. SIGNATURE AND TITLE OF INSPECTOR	Joel Raven, Geologist

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-8.0	0.0								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, no reaction with HCl, moist, 2.5Y 8/1 white (SP)				-9.5		
			At El. -9.5 Ft., trace silt		1		-11.5		
			At El. -11.5 Ft., few fine-grained sand-sized shell		2		-13.5		
			At El. -14.3 Ft., 2.5Y 6/1 gray At El. -14.5 Ft., trace fine to coarse-grained sand-sized shell, 2.5Y 7/1 light gray		3		-15.5		
			At El. -15.5 Ft., little fine to medium-grained sand-sized shell, weak reaction with HCl At El. -15.9 Ft., no reaction with HCl, 2.5Y 8/1 white		4				
-17.8	9.8						-17.8		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.5/1.7	SP*
2	3.5/3.7	SP*

Abbreviations:

0 5 10 15

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(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District	SHEET 2 OF 2 SHEETS

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pass-A-Grille Channel	State Plane, FLW (U.S. Ft.)	NAD83	MLLW

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 413,627 Y = 1,216,013	-8.0 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			3 5.5/5.7 SP*						
			4 7.5/7.7 SP*						
			*Lab visual classification based on gradation curve						

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DRILLING LOG

DIVISION South Atlantic	**INSTALLATION** Jacksonville District		**SHEET** 1 **OF** 2 **SHEETS**
1. PROJECT Pass-A-Grille Channel, Pinellas County	**9. SIZE AND TYPE OF BIT** See Remarks		
	10. COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	**HORIZONTAL** NAD83	**VERTICAL** MLLW
2. BORING DESIGNATION VB-PAG-12-3	**LOCATION COORDINATES** X = 414,633 Y = 1,216,135	**11. MANUFACTURER'S DESIGNATION OF DRILL** Vibracore	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY Athena Technologies, Inc.	**CONTRACTOR FILE NO.** 6734-13-9700	**12. TOTAL SAMPLES**	**DISTURBED** 4 / **UNDISTURBED (UD)** 0
4. NAME OF DRILLER Palmer McClellan		**13. TOTAL NUMBER CORE BOXES** 0	
5. DIRECTION OF BORING ☒ VERTICAL ☐ INCLINED	**DEG. FROM VERTICAL** / **BEARING**	**14. ELEVATION GROUND WATER** -0.2 Ft.	
		15. DATE BORING	**STARTED** 01-11-13 / **COMPLETED** 01-11-13
6. THICKNESS OF OVERBURDEN N/A		**16. ELEVATION TOP OF BORING** -7.5 Ft.	
7. DEPTH DRILLED INTO ROCK N/A		**17. TOTAL RECOVERY FOR BORING** 93 %	
8. TOTAL DEPTH OF BORING 9.3 Ft.		**18. SIGNATURE AND TITLE OF INSPECTOR** Joel Raven, Geologist	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-7.5	0.0								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, no reaction with HCl, moist, 2.5Y 8/1 white (SP)				-8.5		
			At El. -8.5 Ft., little fine to medium-grained sand-sized shell, weak reaction with HCl, 2.5Y 7/1 light gray		1				
			At El. -9.1 Ft., some fine to coarse-grained sand-sized shell, strong reaction with HCl, 2.5Y 8/1 white				-10.5		
			At El. -10.5 Ft., few fine-grained sand-sized shell, no reaction with HCl		2				
							-12.5		
			At El. -12.5 Ft., some fine to medium-grained sand-sized shell, strong reaction with HCl, 2.5Y 7/1 light gray		3				
			At El. -13.6 Ft., trace fine to coarse-grained sand-sized shell, no reaction with HCl, 2.5Y 8/1 white				-14.5		
			At El. -14.5 Ft., few fine-grained sand-sized shell, trace silt		4				
-16.8	9.3						-16.8		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.0/1.2	SP*
2	3.0/3.2	SP*
3	5.0/5.2	SP*
4	7.0/7.2	SP*

Abbreviations:

(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pass-A-Grille Channel	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL MLLW
LOCATION COORDINATES X = 414,633 Y = 1,216,135	ELEVATION TOP OF BORING -7.5 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			*Lab visual classification based on gradation curve						

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Boring Designation VB-PAG-12-4

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 1 SHEETS

1. PROJECT	Pass-A-Grille Channel, Pinellas County
2. BORING DESIGNATION	VB-PAG-12-4
LOCATION COORDINATES	X = 415,600 Y = 1,216,360
3. DRILLING AGENCY	Athena Technologies, Inc.
CONTRACTOR FILE NO.	6734-13-9700
4. NAME OF DRILLER	Palmer McClellan
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	8.0 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	MLLW
11. MANUFACTURER'S DESIGNATION OF DRILL	Vibracore
☐ AUTO HAMMER ☐ MANUAL HAMMER	
12. TOTAL SAMPLES	DISTURBED 4 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	1.2 Ft.
15. DATE BORING	STARTED 01-11-13 / COMPLETED 01-11-13
16. ELEVATION TOP OF BORING	-7.3 Ft.
17. TOTAL RECOVERY FOR BORING	82.5 %
18. SIGNATURE AND TITLE OF INSPECTOR	Joel Raven, Geologist

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-7.3	0.0								
-8.5	1.2		SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace sand to gravel-sized shell, no reaction with HCl, moist, 2.5Y 7/1 light gray (SP)						
			At El. -7.6 Ft., some sand to gravel-sized shell, 2.5Y 6/1 gray				-8.8		
					1				
-10.1	2.8		SHELL, mostly sand to gravel-sized shell, little fine-grained sand-sized quartz, strong reaction with HCl, moist, 2.5Y 6/1 gray						
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, weak reaction with HCl, moist, 2.5Y 6/1 gray (SP)				-10.8		
					2				
			At El. -11.4 Ft., little sand to gravel-sized shell, 2.5Y 7/1 light gray						
							-12.8		
			At El. -12.8 Ft., some sand to gravel-sized shell, strong reaction with HCl		3				
							-14.8		
-15.3	8.0		At El. -14.8 Ft., some fine to coarse-grained sand-sized shell		4		-15.3		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.5/1.7	SH*
2	3.5/3.7	SP*
3	5.5/5.7	SP*
4	7.5/7.7	SP*

*Lab visual classification based on gradation curve

Abbreviations:

0 5 10 15

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Boring Designation VB-PAG-12-5

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT	Pass-A-Grille Channel, Pinellas County
2. BORING DESIGNATION	VB-PAG-12-5
LOCATION COORDINATES	X = 417,016 Y = 1,216,708
3. DRILLING AGENCY	Athena Technologies, Inc.
CONTRACTOR FILE NO.	6734-13-9700
4. NAME OF DRILLER	Palmer McClellan
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	9.4 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	MLLW
11. MANUFACTURER'S DESIGNATION OF DRILL	Vibracore
☐ AUTO HAMMER ☐ MANUAL HAMMER	
12. TOTAL SAMPLES	DISTURBED 4 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	-0.2 Ft.
15. DATE BORING	STARTED 01-13-13 / COMPLETED 01-13-13
16. ELEVATION TOP OF BORING	-9.4 Ft.
17. TOTAL RECOVERY FOR BORING	94 %
18. SIGNATURE AND TITLE OF INSPECTOR	Joel Raven, Geologist

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-9.4	0.0								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt, strong reaction with HCl, moist, 2.5Y 6/1 gray (SP)		1		-9.9		
-11.4	2.0		SAND, poorly-graded, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz (SP)		2		-11.4		
-12.4	3.0		SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell (SP)		3		-12.4		
-14.4	5.0		SAND, poorly-graded, mostly sand to gravel-sized shell (SP)		4		-14.4		
-18.8	9.4		At El. -17.9 Ft., some fine to coarse gravel-sized shell, 2.5Y 7/1 light gray				-18.8		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	0.5/0.7	SP*
2	2.0/2.2	SP*
3	3.0/3.2	SP*

Abbreviations:

0 5 10 15

(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pass-A-Grille Channel	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL MLLW
LOCATION COORDINATES X = 417,016 Y = 1,216,708	ELEVATION TOP OF BORING -9.4 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			4 5.0/5.2 SP*						
			*Lab visual classification based on gradation curve						

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DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	Pass-A-Grille Channel, Pinellas County
2. BORING DESIGNATION	VB-PAG-12-6
LOCATION COORDINATES	X = 418,658 Y = 1,218,631
3. DRILLING AGENCY	Athena Technologies, Inc.
CONTRACTOR FILE NO.	6734-13-9700
4. NAME OF DRILLER	Palmer McClellan
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	8.8 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	MLLW
11. MANUFACTURER'S DESIGNATION OF DRILL	Vibracore
☐ AUTO HAMMER ☐ MANUAL HAMMER	
12. TOTAL SAMPLES	DISTURBED 3 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	0.4 Ft.
15. DATE BORING	STARTED 01-13-13 / COMPLETED 01-13-13
16. ELEVATION TOP OF BORING	-11.5 Ft.
17. TOTAL RECOVERY FOR BORING	88.6 %
18. SIGNATURE AND TITLE OF INSPECTOR	Joel Raven, Geologist

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-11.5	0.0								
			SAND, poorly-graded, mostly fine to coarse-grained sand-sized shell, some fine-grained sand-sized quartz, trace silt, strong reaction with HCl, moist, 2.5Y 6/3 light yellowish brown (SP)		1		-12.5		
-13.3	1.8		SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, 2.5Y 6/2 light brownish gray (SP)						
-14.3	2.8		SAND, poorly-graded, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz (SP)		2		-14.5		
							-16.5		
					3				
-17.4	5.9		At El. -16.9 Ft., mostly medium to coarse-grained sand-sized shell						
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell (SP)						
-20.3	8.8						-20.3		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.0/1.2	SP*
2	3.0/3.2	SP*
3	5.0/5.2	SP*

*Lab visual classification based on gradation

Abbreviations:

(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pass-A-Grille Channel	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL MLLW
LOCATION COORDINATES X = 418,658 Y = 1,218,631	ELEVATION TOP OF BORING -11.5 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			curve						

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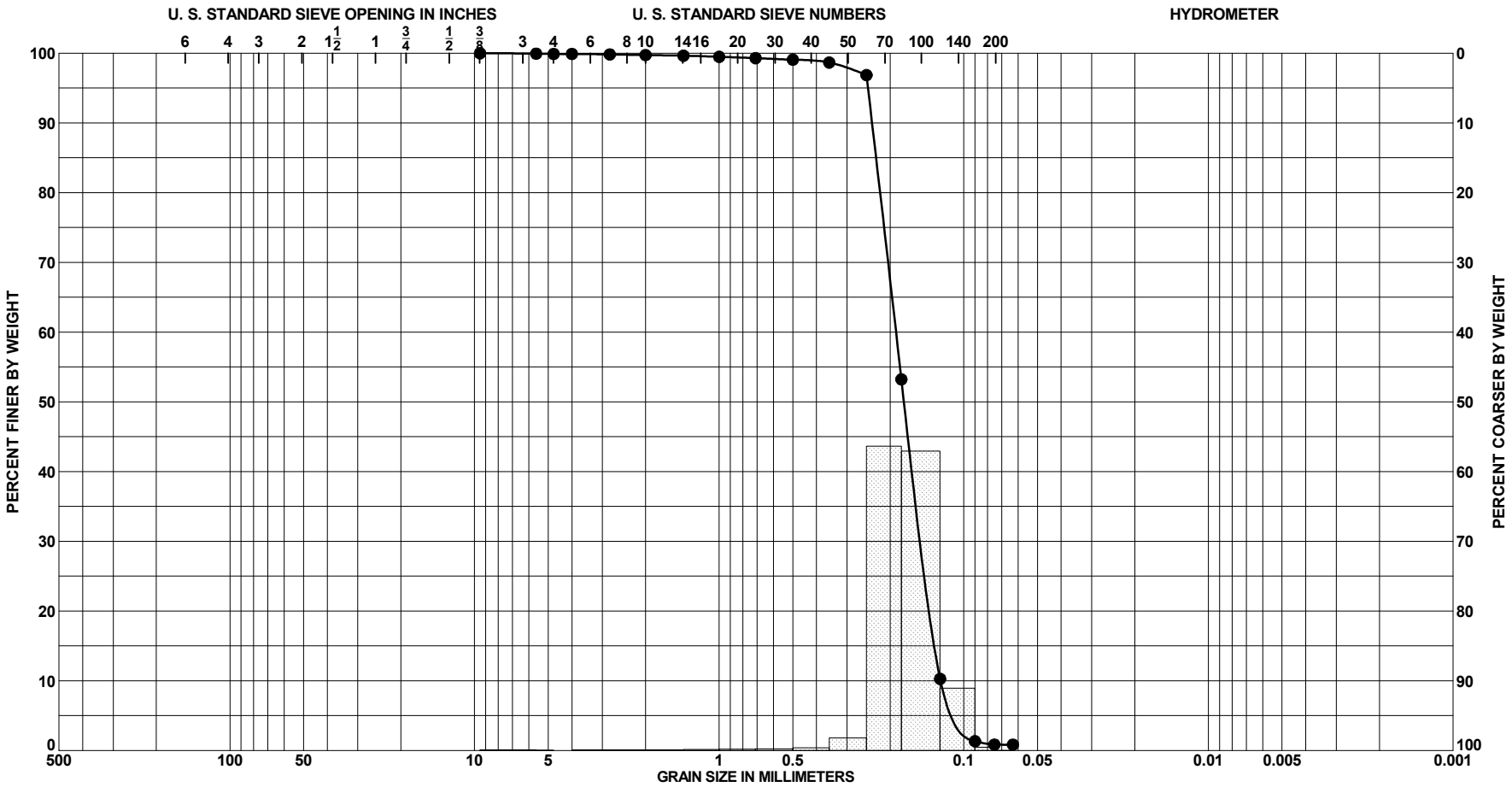

Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	1.0 to 1.2 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, white (SP)	2.5Y 8/1	1							

PROJECT	Pass-A-Grille Channel
	Pinellas County
BORING NO.	VB-PAG-12-1
BORING ELEV.	-10.4 Ft., MLLW
DATE	4/26/2013

GRADATION CURVES

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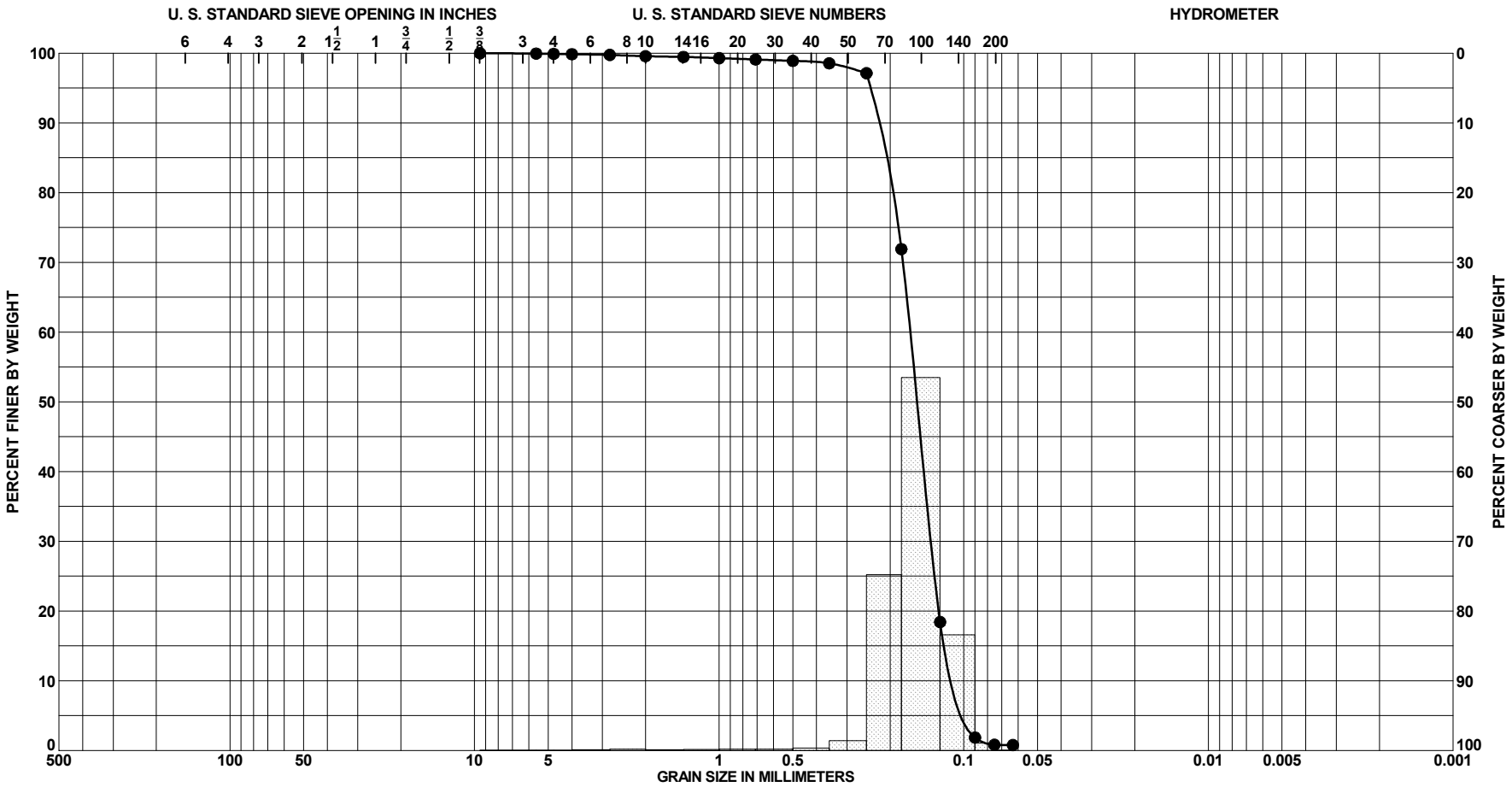
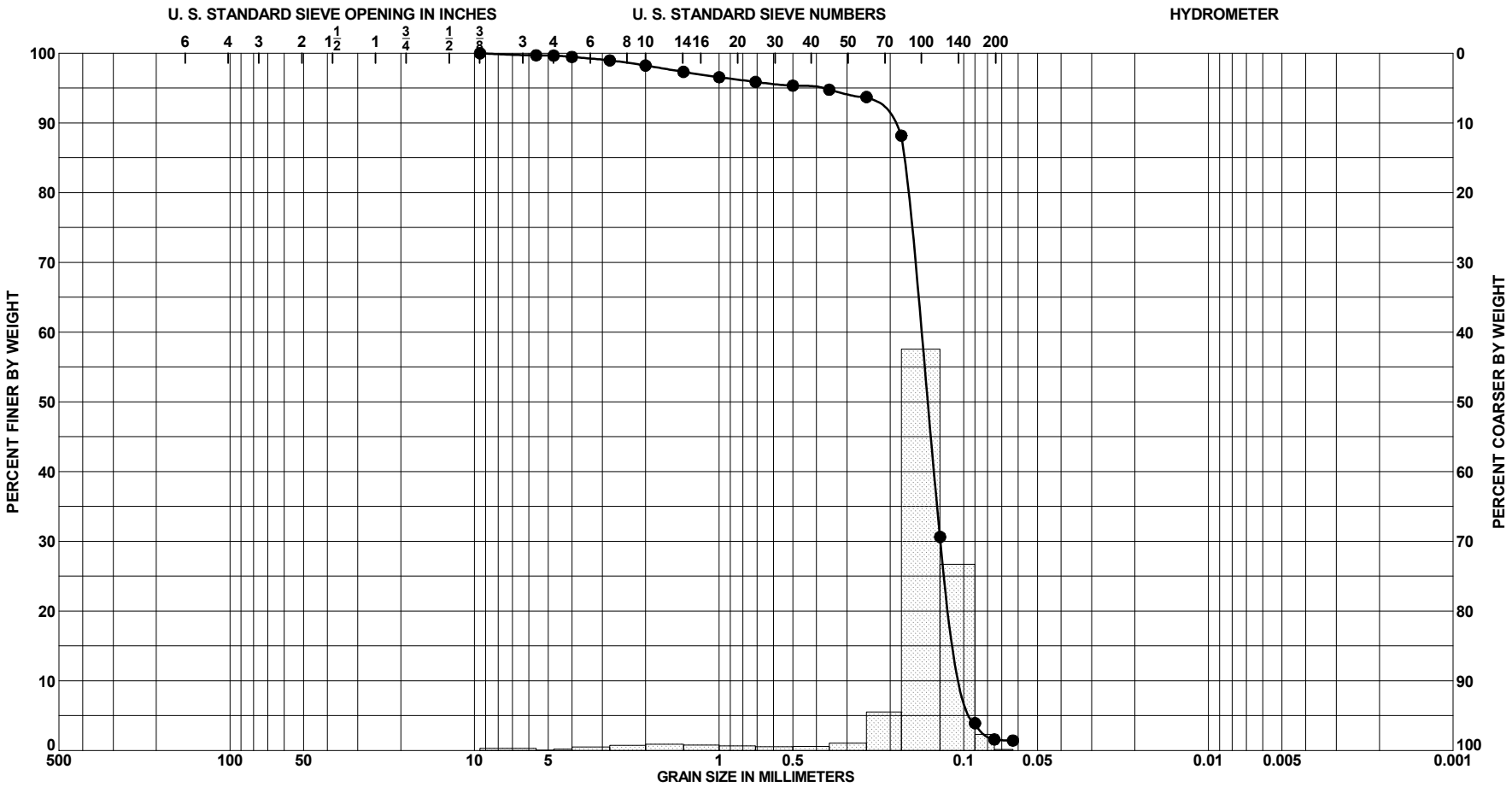


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	3.0 to 3.2 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, white (SP)	2.5Y 8/1	1							

PROJECT	Pass-A-Grille Channel
	Pinellas County
BORING NO.	VB-PAG-12-1
BORING ELEV.	-10.4 Ft., MLLW
DATE	4/26/2013

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	5.0 to 5.2 Ft.	SAND, poorly-graded, mostly	2.5Y 7/1	7							
		fine-grained sand-sized quartz, few									
		fine-grained sand-sized shell, trace									
		silt, light gray (SP)									

PROJECT	Pass-A-Grille Channel
	Pinellas County
BORING NO.	VB-PAG-12-1
BORING ELEV.	-10.4 Ft., MLLW
DATE	4/26/2013

GRADATION CURVES

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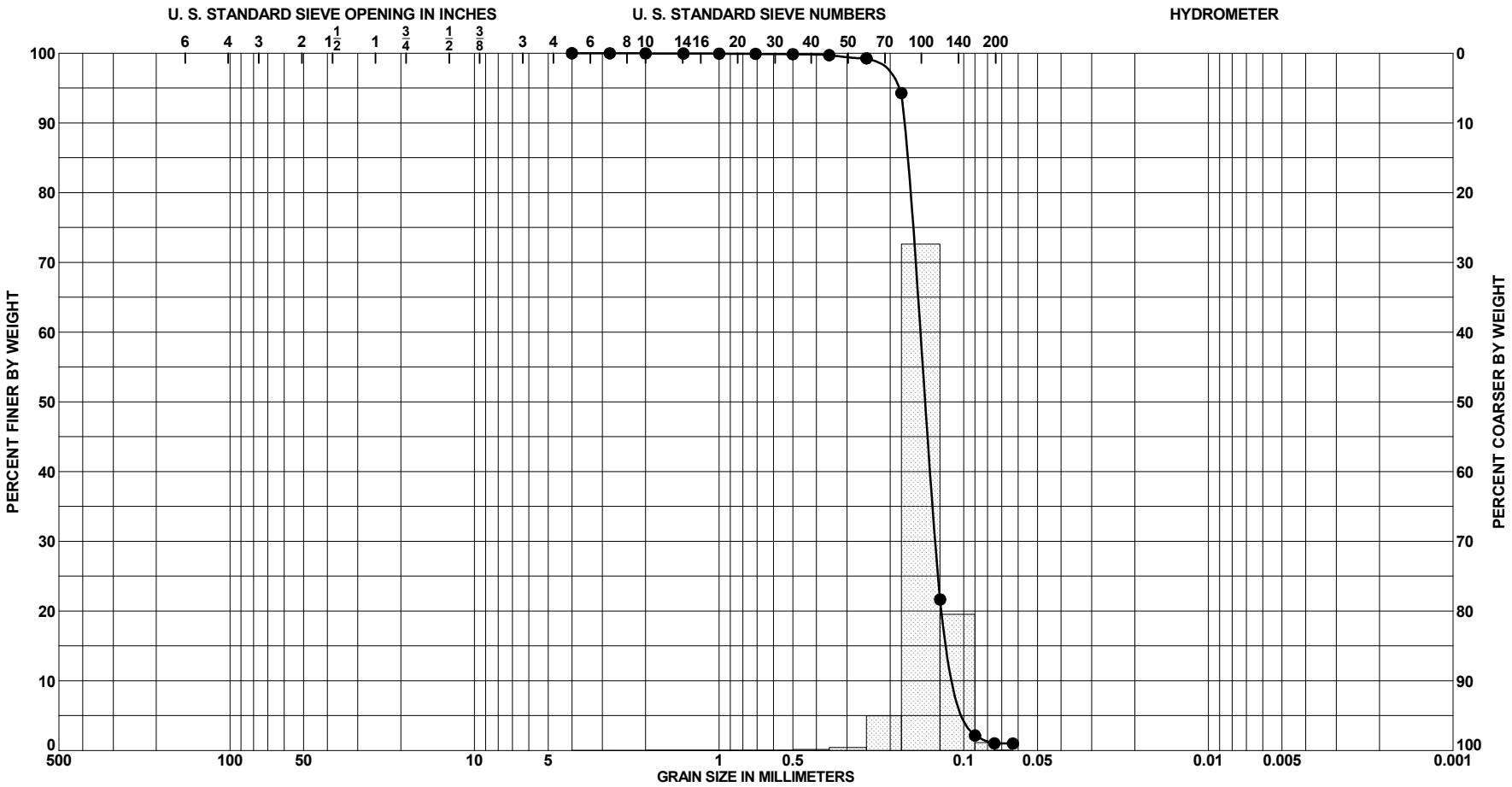
JUN 02



Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	1.5 to 1.7 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt, white (SP)	2.5Y 8/1	0							

PROJECT	Pass-A-Grille Channel
	Pinellas County
BORING NO.	VB-PAG-12-2
BORING ELEV.	-8.0 Ft., MLLW
DATE	4/26/2013

GRADATION CURVES

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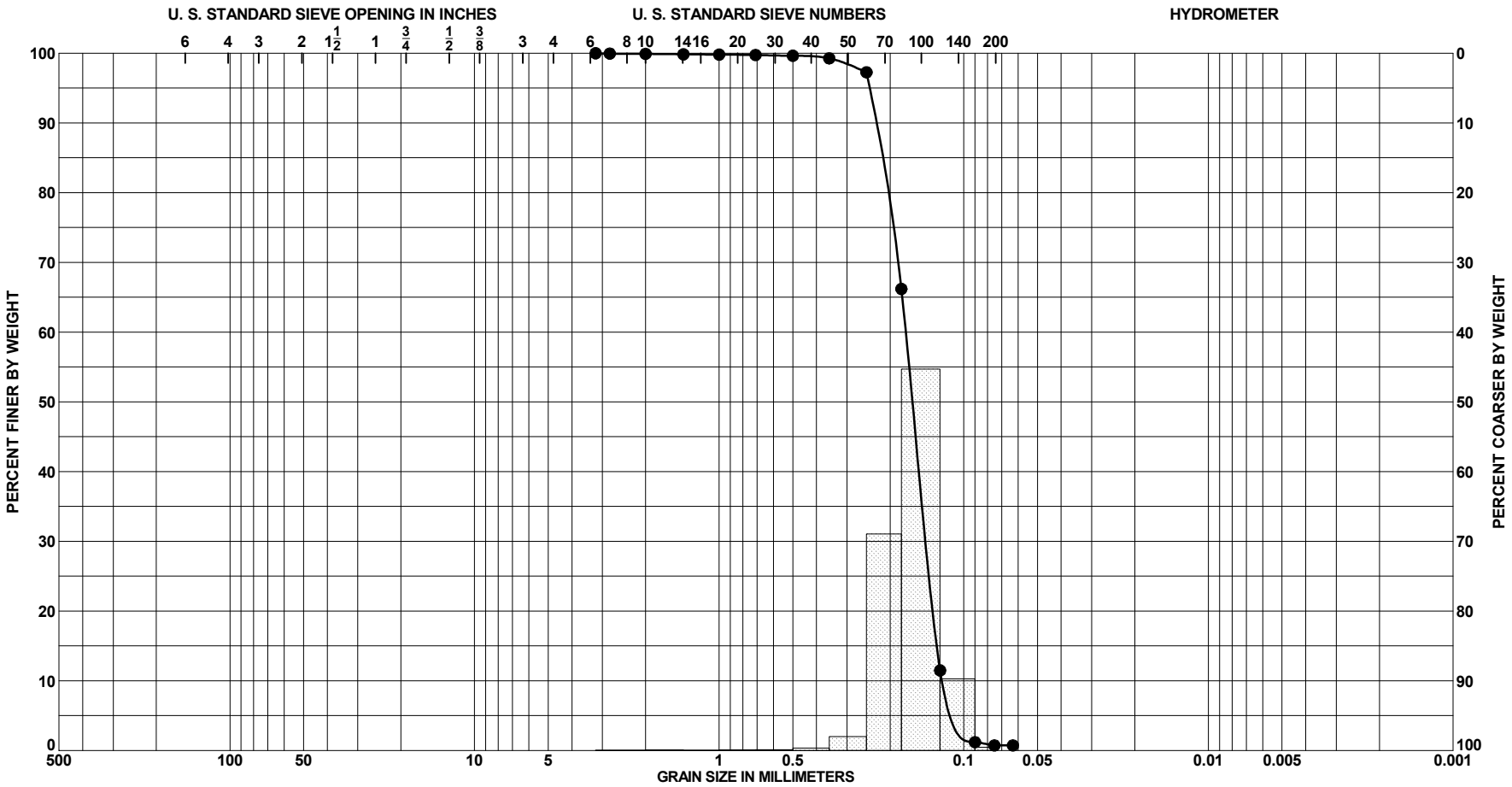
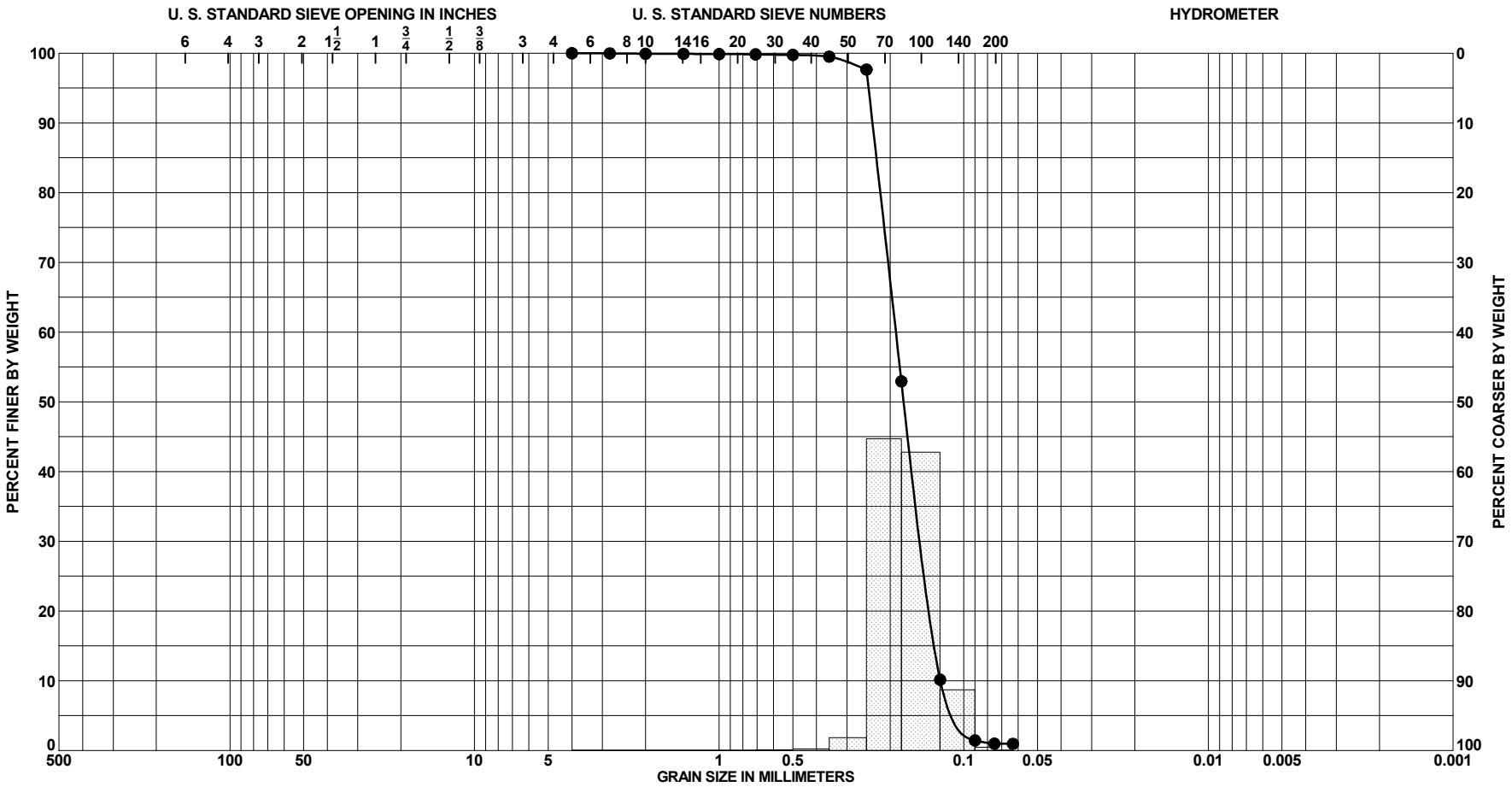


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	3.5 to 3.7 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	7							
		fine-grained sand-sized quartz, few									
		fine-grained sand-sized shell, white									
		(SP)									

PROJECT	Pass-A-Grille Channel
	Pinellas County
BORING NO.	VB-PAG-12-2
BORING ELEV.	-8.0 Ft., MLLW
DATE	4/26/2013

GRADATION CURVES

SAJ FORM 2087
JUN 02

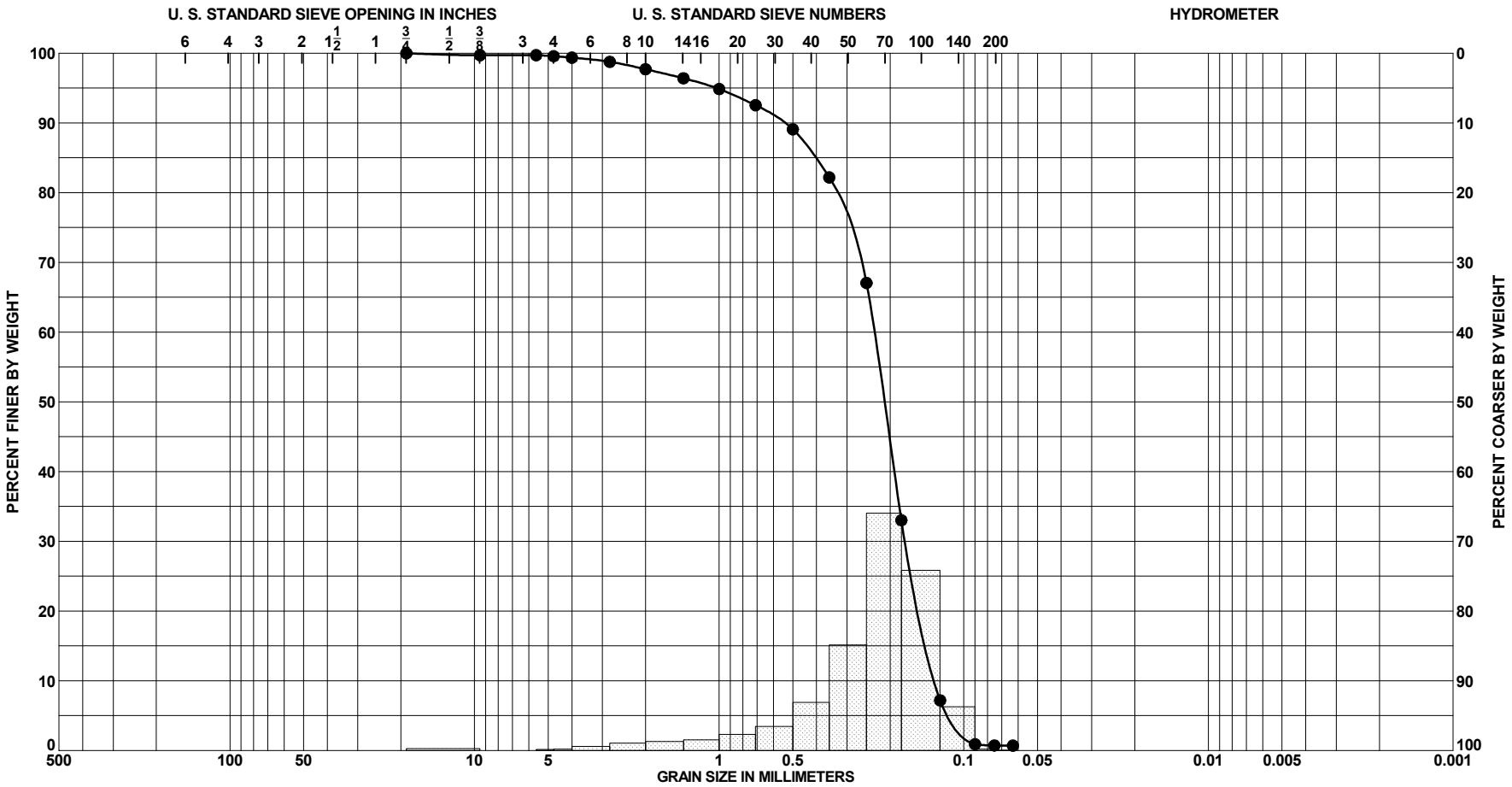


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	5.5 to 5.7 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt, white (SP)	2.5Y 8/1	4							

PROJECT	Pass-A-Grille Channel
	Pinellas County
BORING NO.	VB-PAG-12-2
BORING ELEV.	-8.0 Ft., MLLW
DATE	4/26/2013

GRADATION CURVES

SAJ FORM 2087
JUN 02

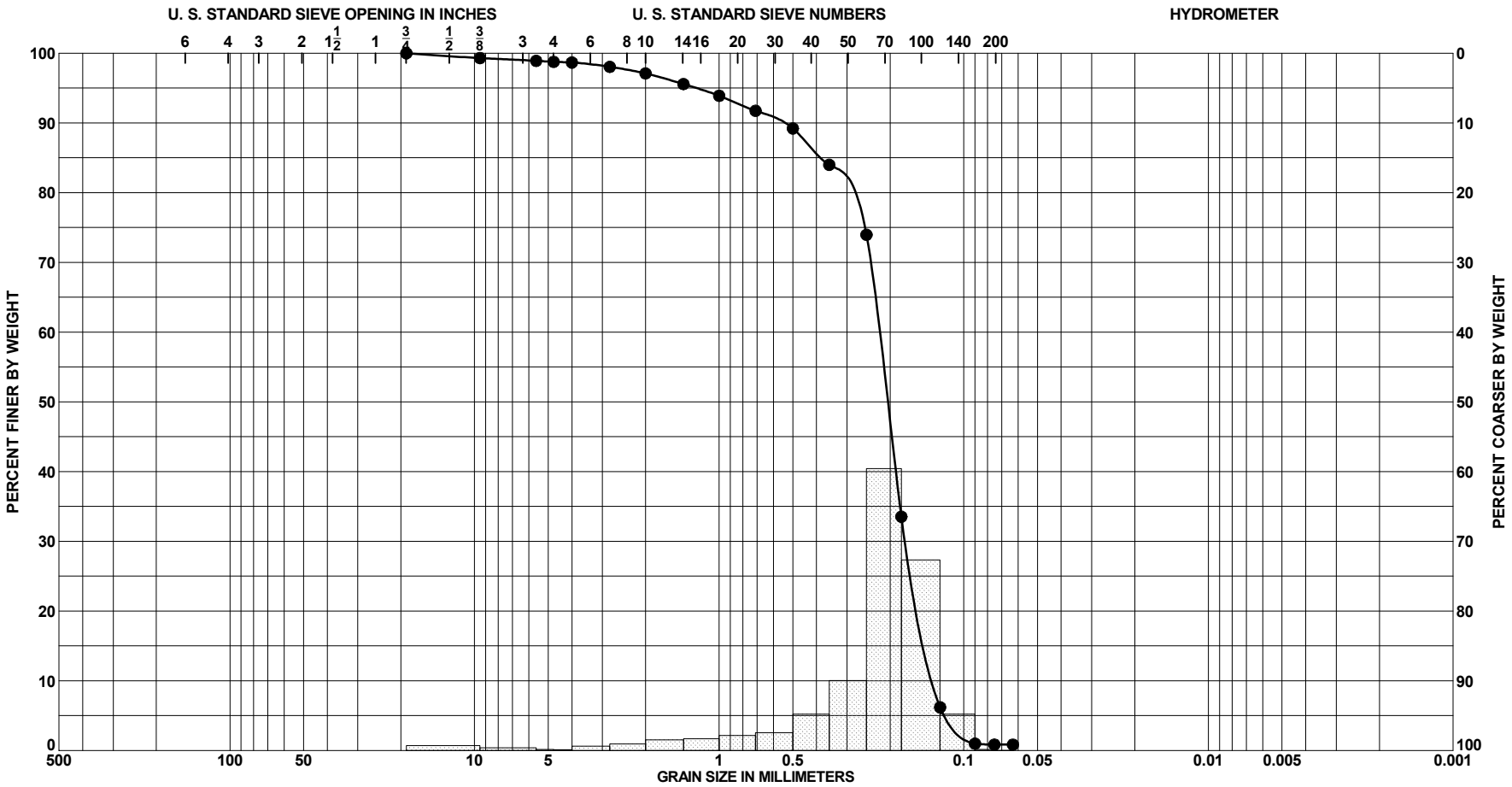


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 4	7.5 to 7.7 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	21							
		fine-grained sand-sized quartz, little									
		fine to medium-grained sand-sized									
		shell, white (SP)									

PROJECT	Pass-A-Grille Channel
	Pinellas County
BORING NO.	VB-PAG-12-2
BORING ELEV.	-8.0 Ft., MLLW
DATE	4/26/2013

GRADATION CURVES

SAJ FORM 2087
JUN 02

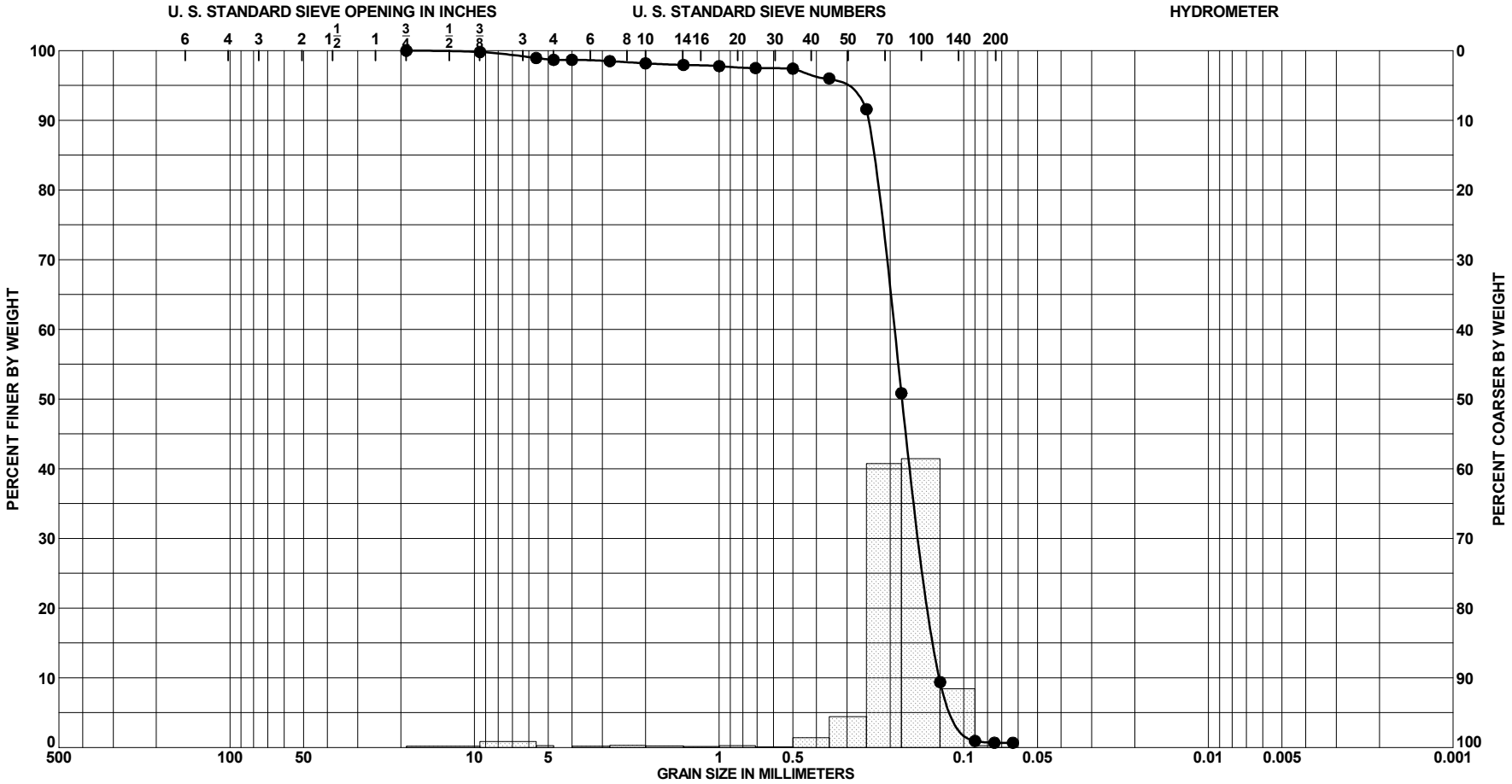


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	1.0 to 1.2 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium sand-sized shell, light gray (SP)	2.5Y 7/1	17							

PROJECT	Pass-A-Grille Channel
	Pinellas County
BORING NO.	VB-PAG-12-3
BORING ELEV.	-7.5 Ft., MLLW
DATE	4/26/2013

GRADATION CURVES

SAJ FORM 2087
JUN 02

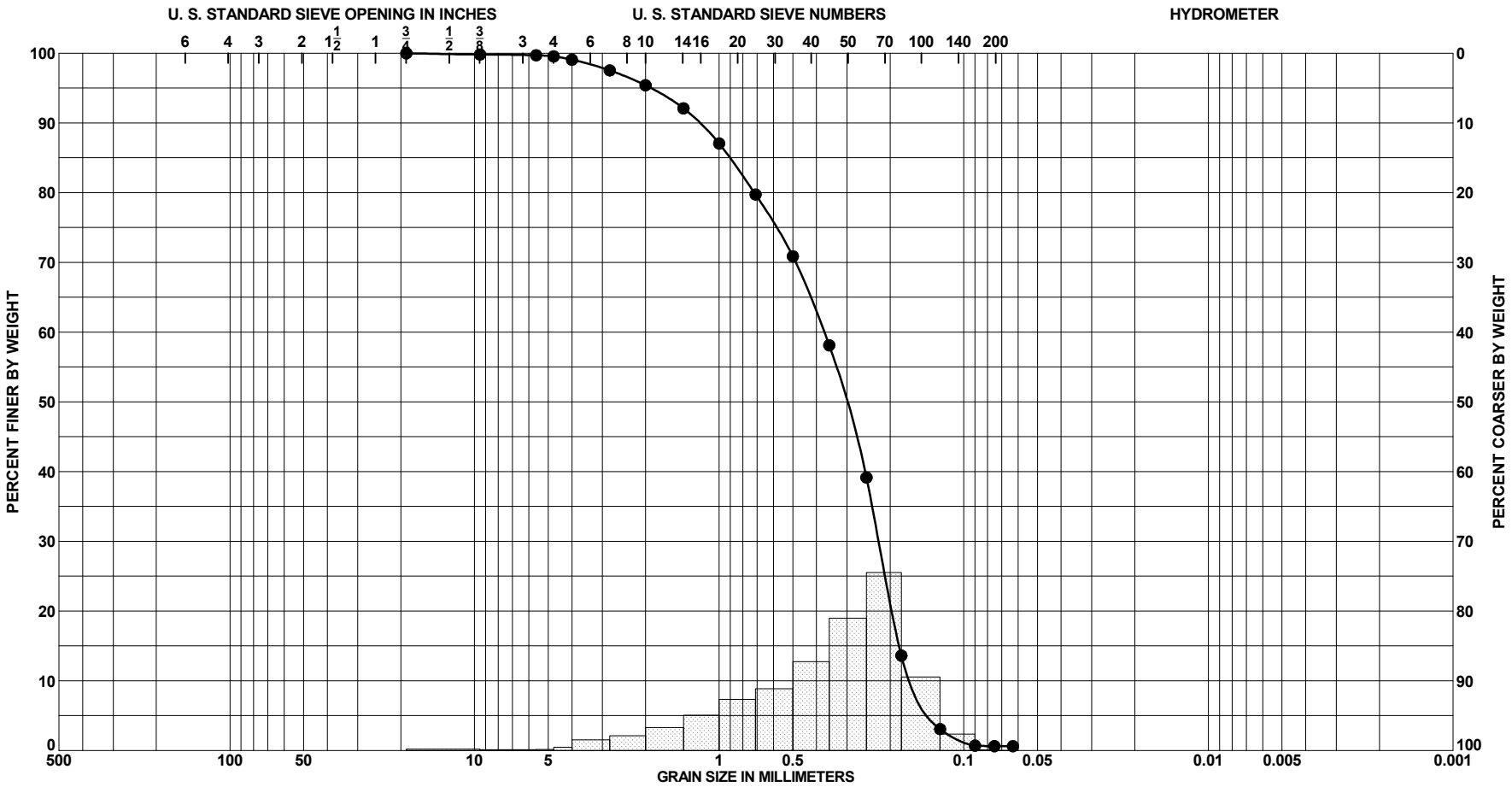


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	3.0 to 3.2 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	6							
		fine-grained sand-sized quartz, few									
		fine-grained sand-sized shell, white									
		(SP)									

PROJECT	Pass-A-Grille Channel
	Pinellas County
BORING NO.	VB-PAG-12-3
BORING ELEV.	-7.5 Ft., MLLW
DATE	4/26/2013

GRADATION CURVES

SAJ FORM 2087
JUN 02

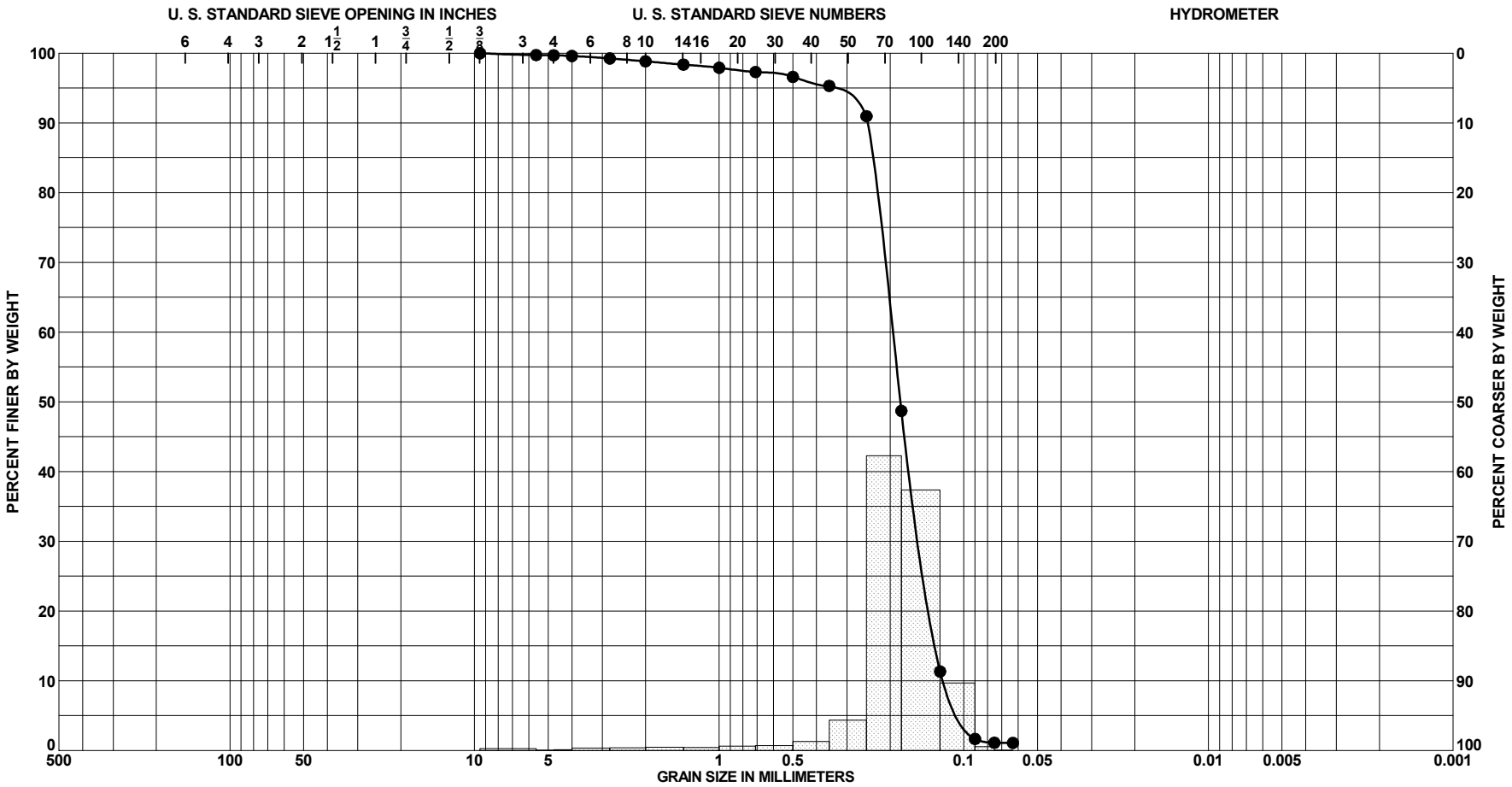


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	5.0 to 5.2 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, some fine to medium-grained sand-sized shell, light gray (SP)	2.5Y 7/1	42							

PROJECT	Pass-A-Grille Channel
	Pinellas County
BORING NO.	VB-PAG-12-3
BORING ELEV.	-7.5 Ft., MLLW
DATE	4/26/2013

GRADATION CURVES

SAJ FORM 2087
JUN 02

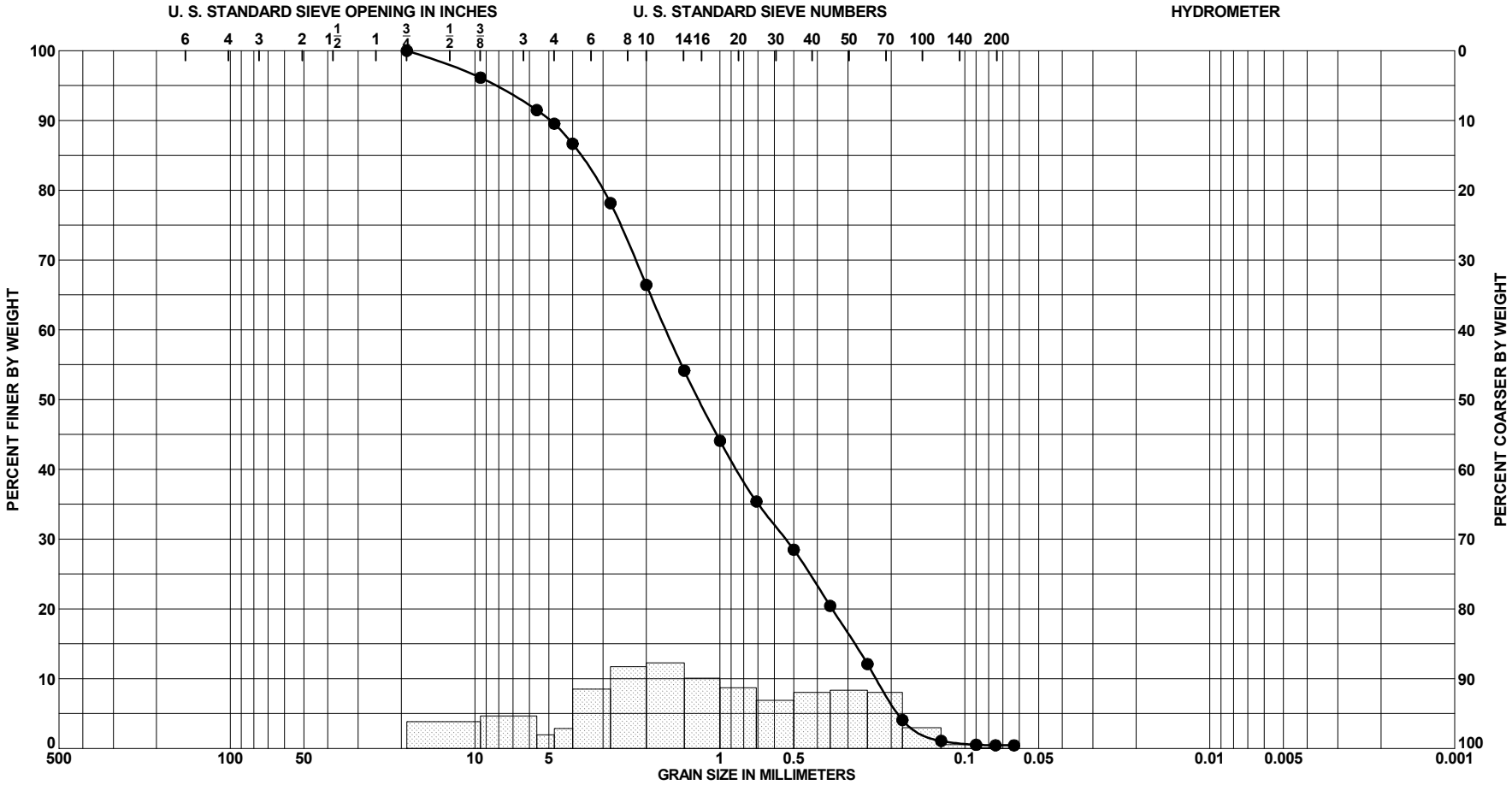


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 4	7.0 to 7.2 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	7							
		fine-grained sand-sized quartz, few									
		fine-grained sand-sized shell, trace									
		silt, white (SP)									

PROJECT	Pass-A-Grille Channel
	Pinellas County
BORING NO.	VB-PAG-12-3
BORING ELEV.	-7.5 Ft., MLLW
DATE	4/26/2013

GRADATION CURVES

SAJ FORM 2087
JUN 02

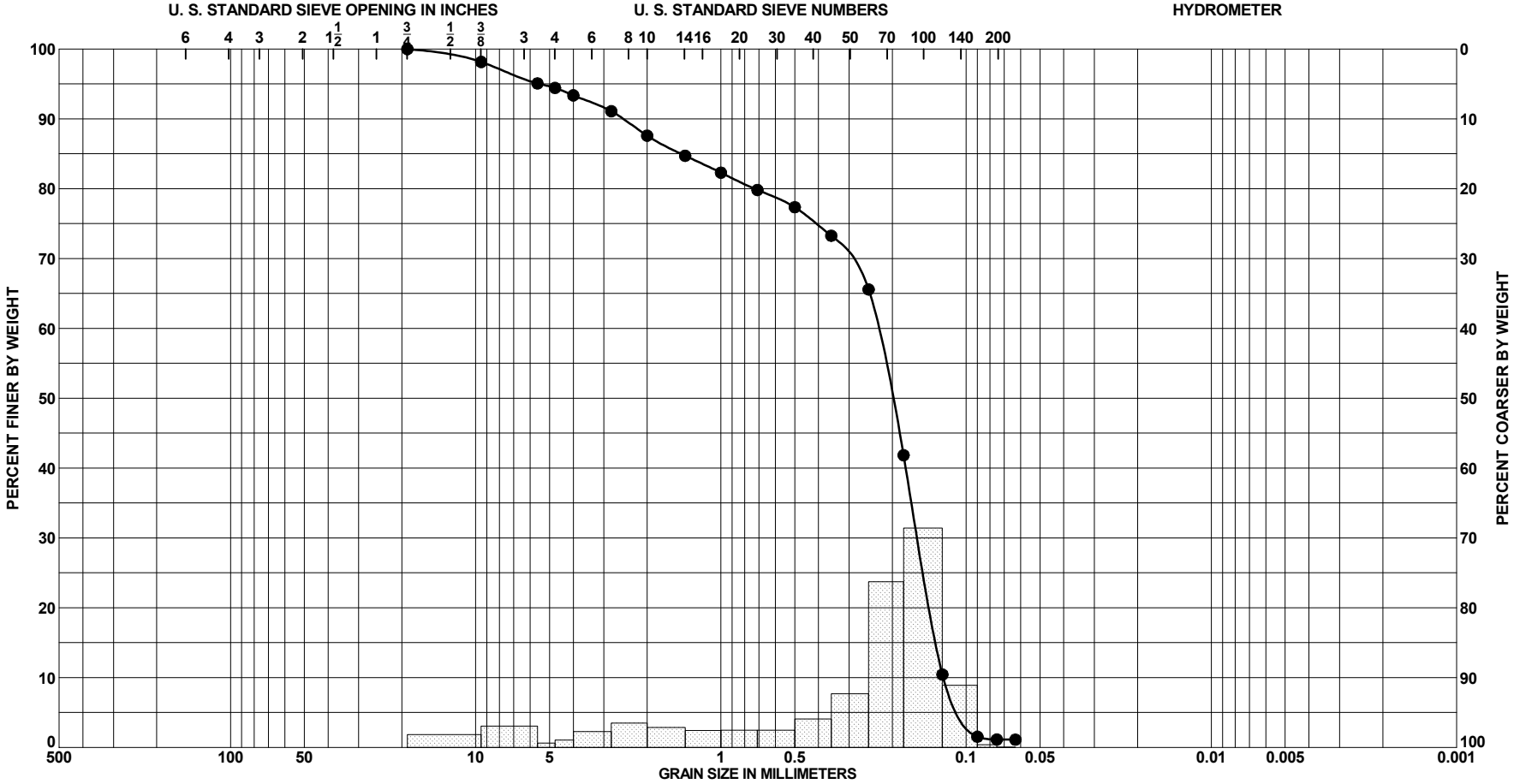


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	1.5 to 1.7 Ft.	SHELL, mostly sand to gravel-sized	2.5Y 6/1	75							
		shell, little fine-grained sand-sized									
		quartz, gray (SH)									

PROJECT	Pass-A-Grille Channel
	Pinellas County
BORING NO.	VB-PAG-12-4
BORING ELEV.	-7.3 Ft., MLLW
DATE	4/26/2013

GRADATION CURVES

SAJ FORM 2087
JUN 02

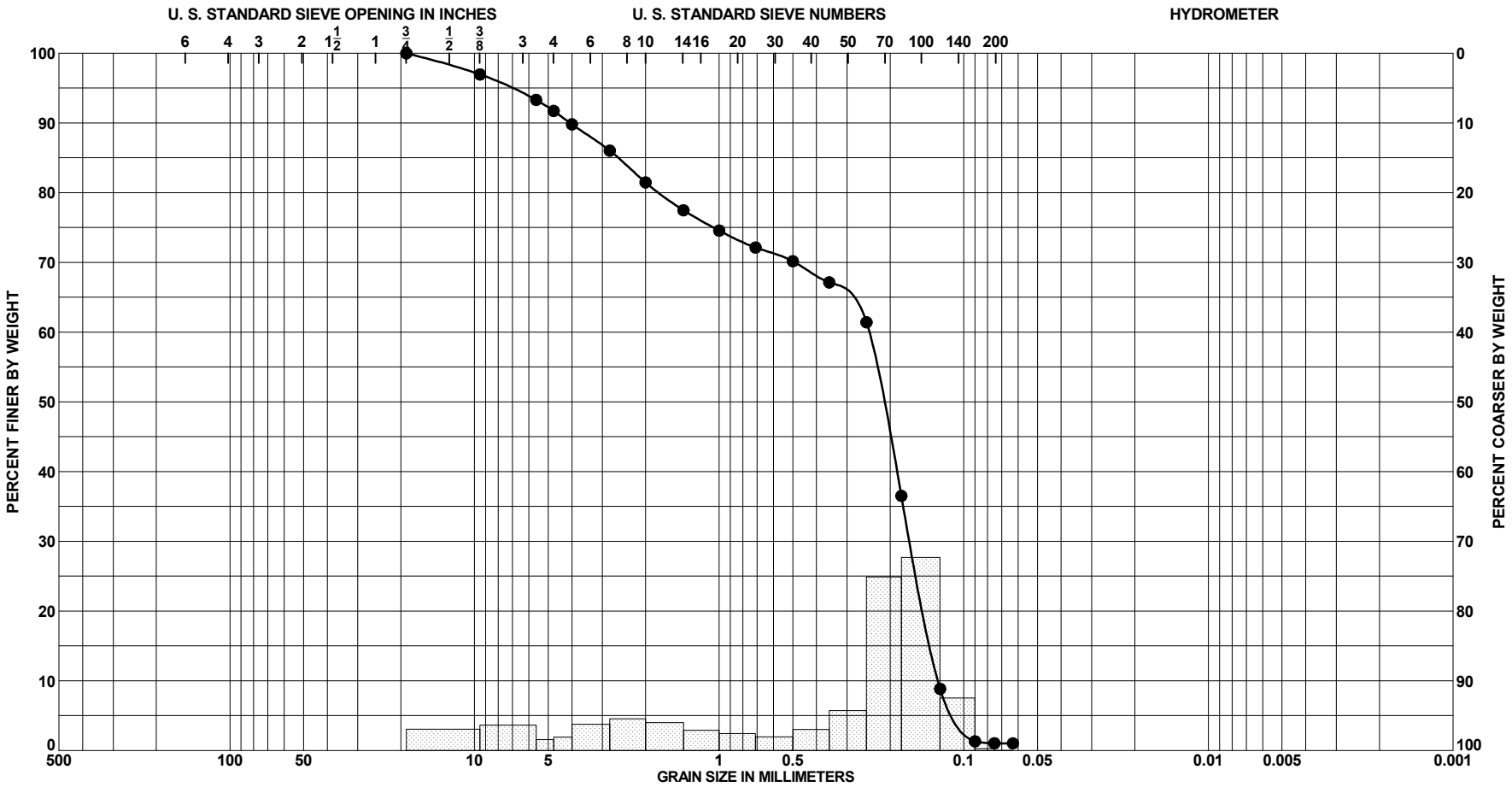


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	3.5 to 3.7 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, trace silt, gray (SP)	2.5Y 6/1	28							

PROJECT	Pass-A-Grille Channel
	Pinellas County
BORING NO.	VB-PAG-12-4
BORING ELEV.	-7.3 Ft., MLLW
DATE	4/26/2013

GRADATION CURVES

SAJ FORM 2087
JUN 02

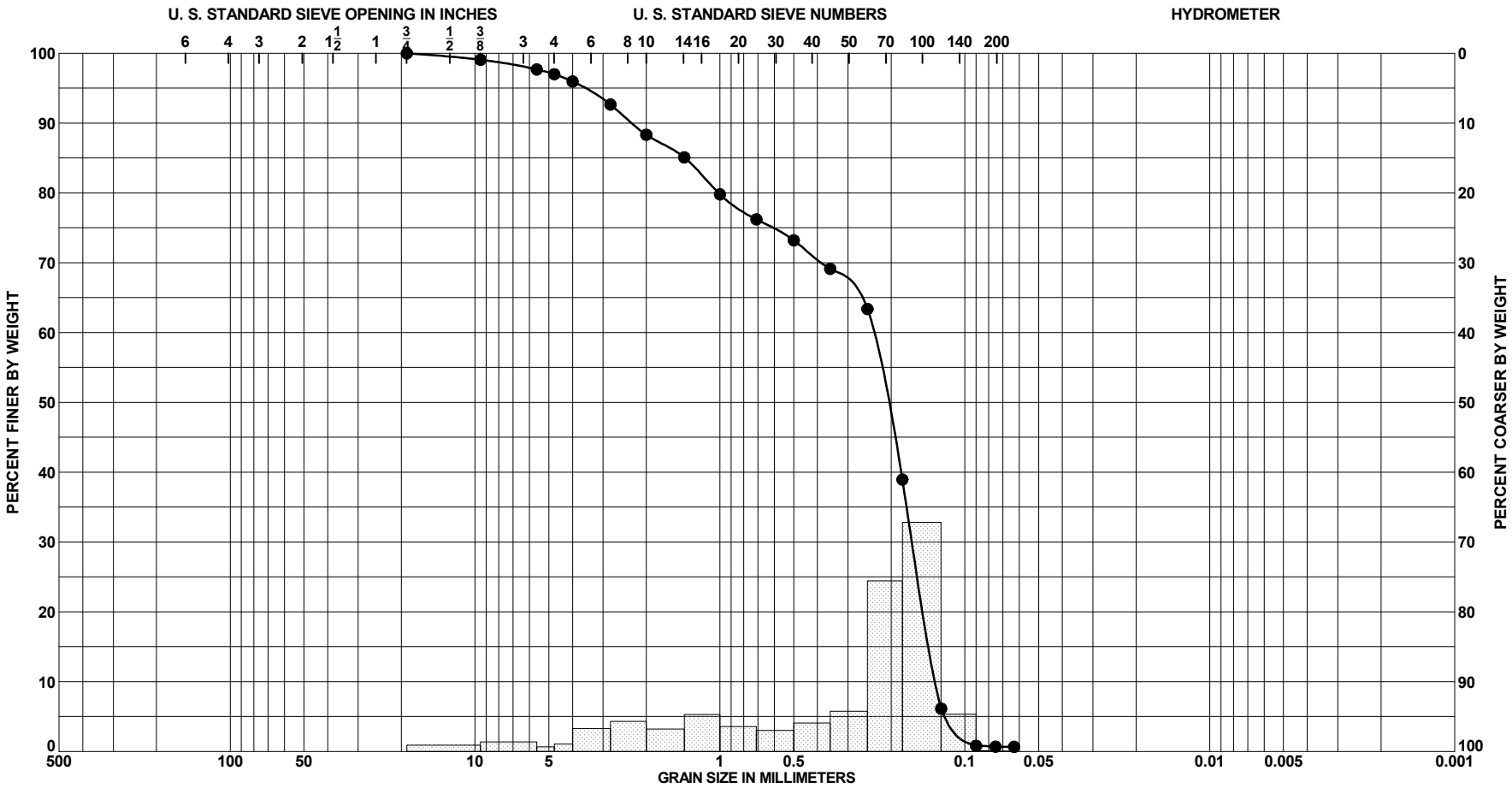


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	5.5 to 5.7 Ft.	SAND, poorly-graded, mostly	2.5Y 7/1	34							
		fine-grained sand-sized quartz,									
		some sand to gravel-sized shell,									
		trace silt, light gray (SP)									

PROJECT	Pass-A-Grille Channel
	Pinellas County
BORING NO.	VB-PAG-12-4
BORING ELEV.	-7.3 Ft., MLLW
DATE	4/26/2013

GRADATION CURVES

SAJ FORM 2087
JUN 02

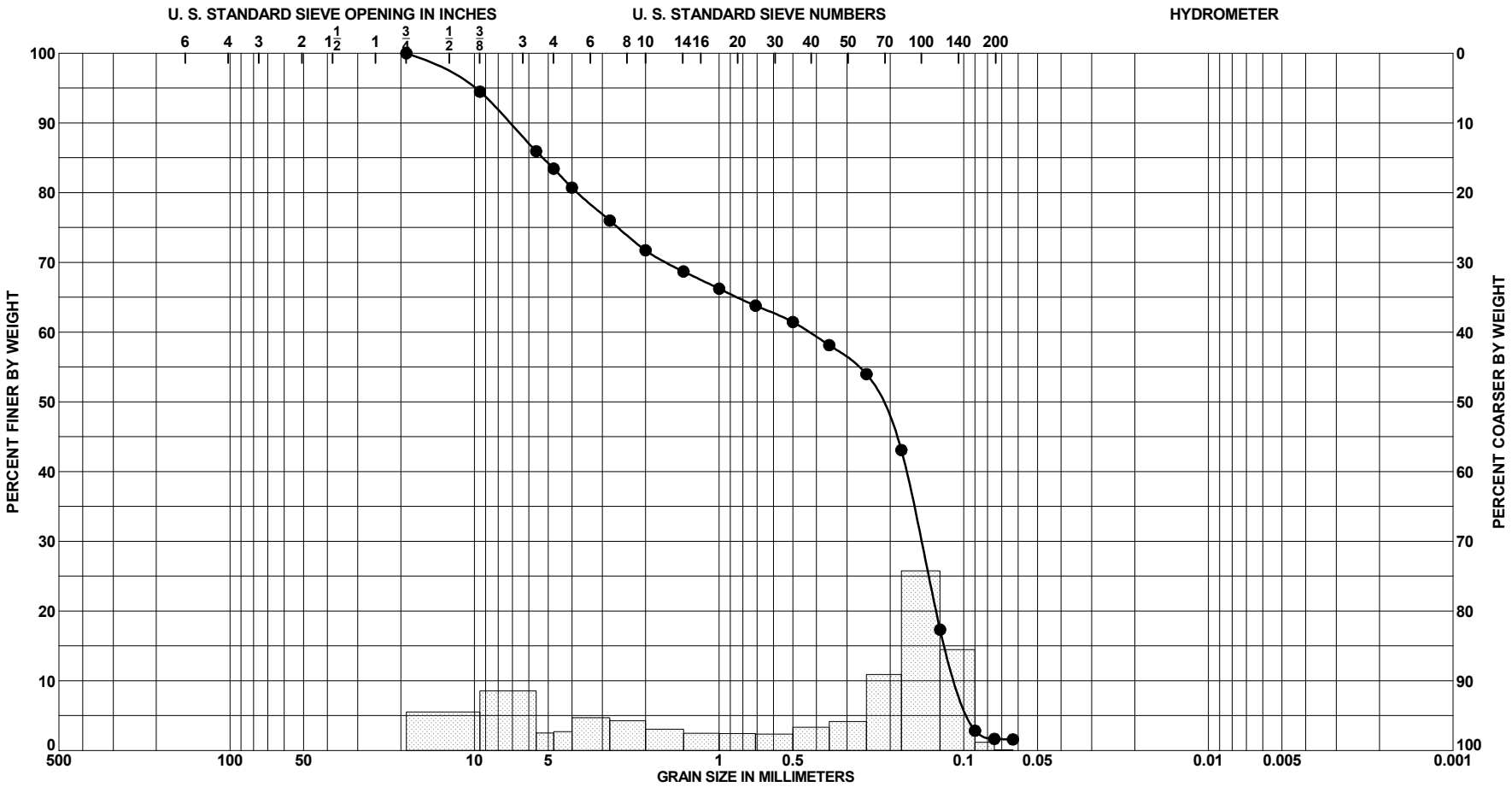


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 4	7.5 to 7.7 Ft.	SAND, poorly-graded, mostly	2.5Y 7/1	30							
		fine-grained sand-sized quartz,									
		some fine to coarse-grained									
		sand-sized shell, light gray (SP)									

PROJECT	Pass-A-Grille Channel
	Pinellas County
BORING NO.	VB-PAG-12-4
BORING ELEV.	-7.3 Ft., MLLW
DATE	4/26/2013

GRADATION CURVES

SAJ FORM 2087
JUN 02

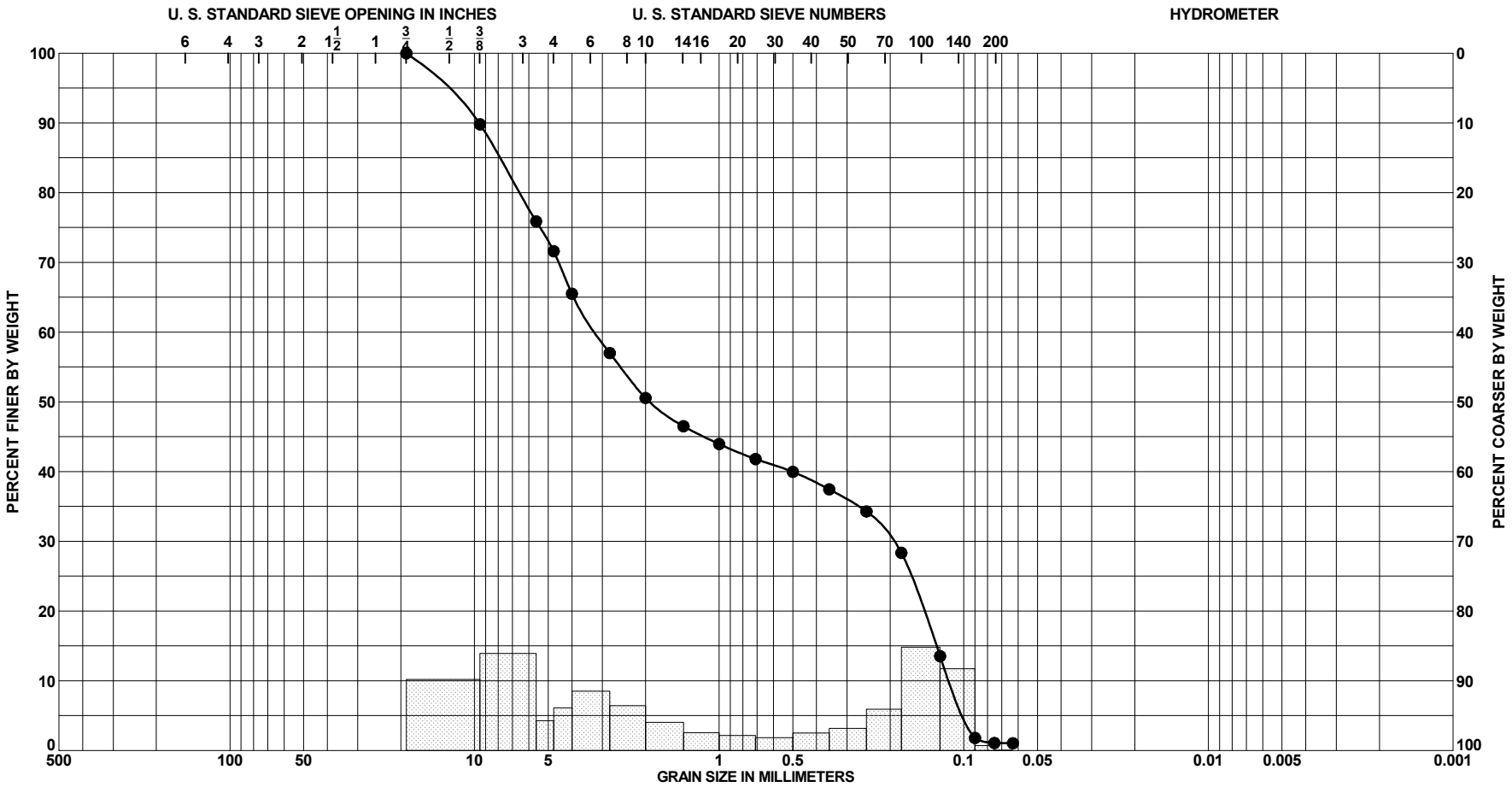


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	0.5 to 0.7 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt, gray (SP)	2.5Y 6/1	42							

PROJECT	Pass-A-Grille Channel
	Pinellas County
BORING NO.	VB-PAG-12-5
BORING ELEV.	-9.4 Ft., MLLW
DATE	4/26/2013

GRADATION CURVES

SAJ FORM 2087
JUN 02

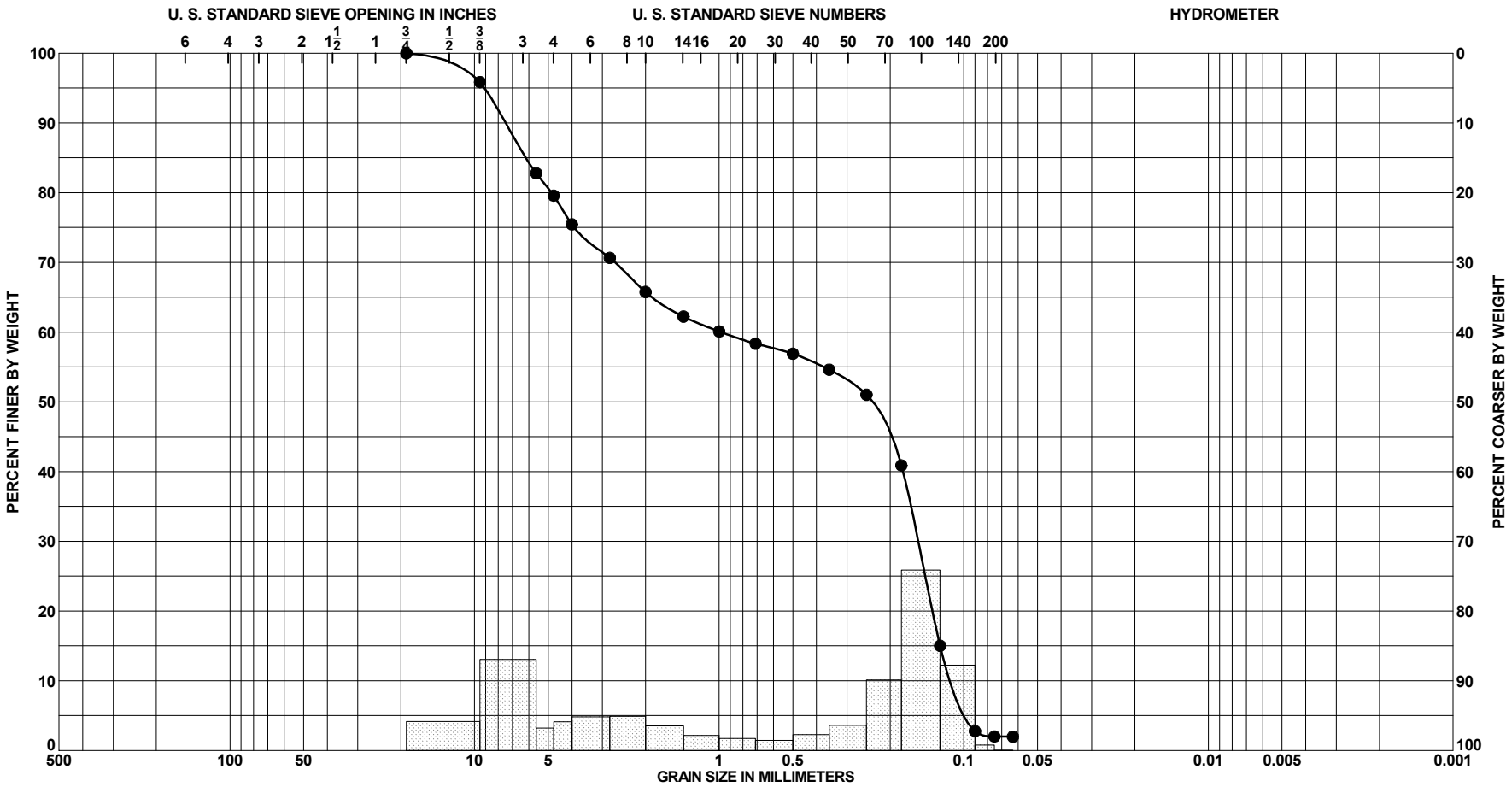


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	2.0 to 2.2 Ft.	SAND, poorly-graded, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz, trace silt, gray (SP)	2.5Y 6/1	60							

PROJECT	Pass-A-Grille Channel
	Pinellas County
BORING NO.	VB-PAG-12-5
BORING ELEV.	-9.4 Ft., MLLW
DATE	4/26/2013

GRADATION CURVES

SAJ FORM 2087
JUN 02

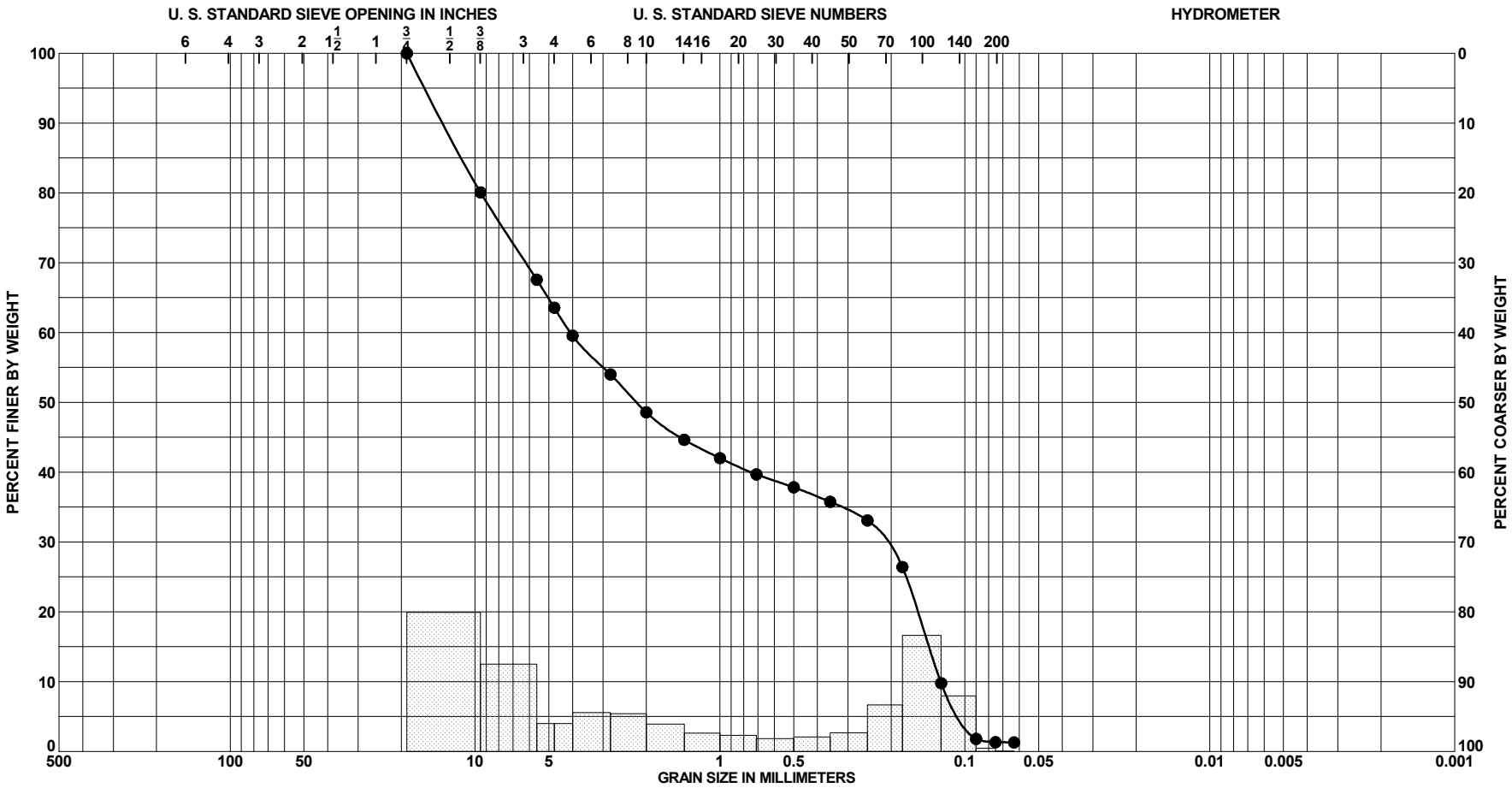


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	3.0 to 3.2 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt, gray (SP)	2.5Y 6/1	44							

PROJECT	Pass-A-Grille Channel
	Pinellas County
BORING NO.	VB-PAG-12-5
BORING ELEV.	-9.4 Ft., MLLW
DATE	4/26/2013

GRADATION CURVES

SAJ FORM 2087
JUN 02

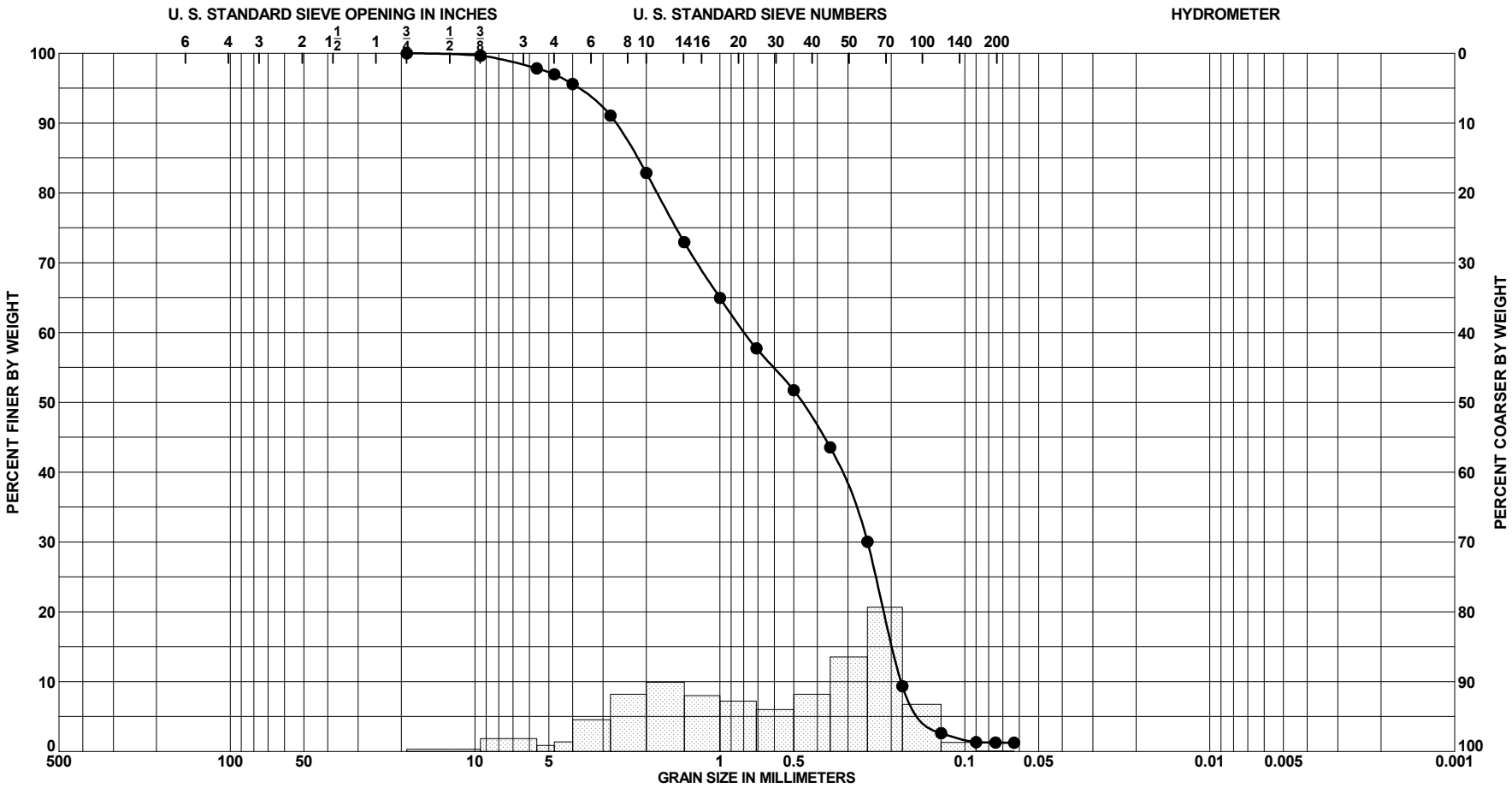


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 4	5.0 to 5.2 Ft.	SAND, poorly-graded, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz, trace silt, gray (SP)	2.5Y 6/1	65							

PROJECT	Pass-A-Grille Channel
	Pinellas County
BORING NO.	VB-PAG-12-5
BORING ELEV.	-9.4 Ft., MLLW
DATE	4/26/2013

GRADATION CURVES

SAJ FORM 2087
JUN 02

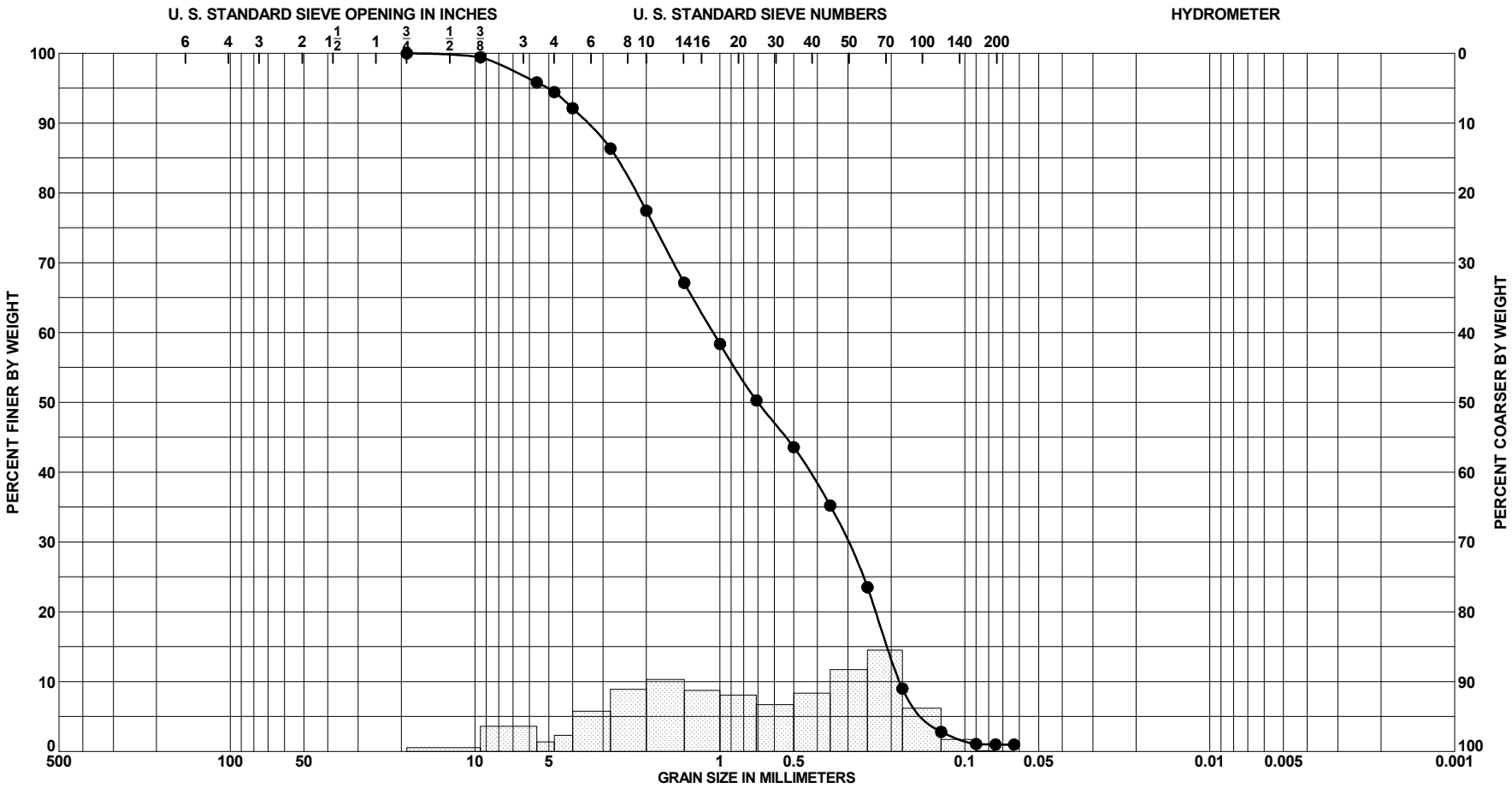


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 1	1.0 to 1.2 Ft.	SAND, poorly-graded, mostly fine to	2.5Y 6/3	57							
		coarse-grained sand-sized shell,									
		some fine-grained sand-sized									
		quartz, trace silt, light yellowish									
		brown (SP)									

PROJECT	Pass-A-Grille Channel
	Pinellas County
BORING NO.	VB-PAG-12-6
BORING ELEV.	-11.5 Ft., MLLW
DATE	4/26/2013

GRADATION CURVES

SAJ FORM 2087
JUN 02

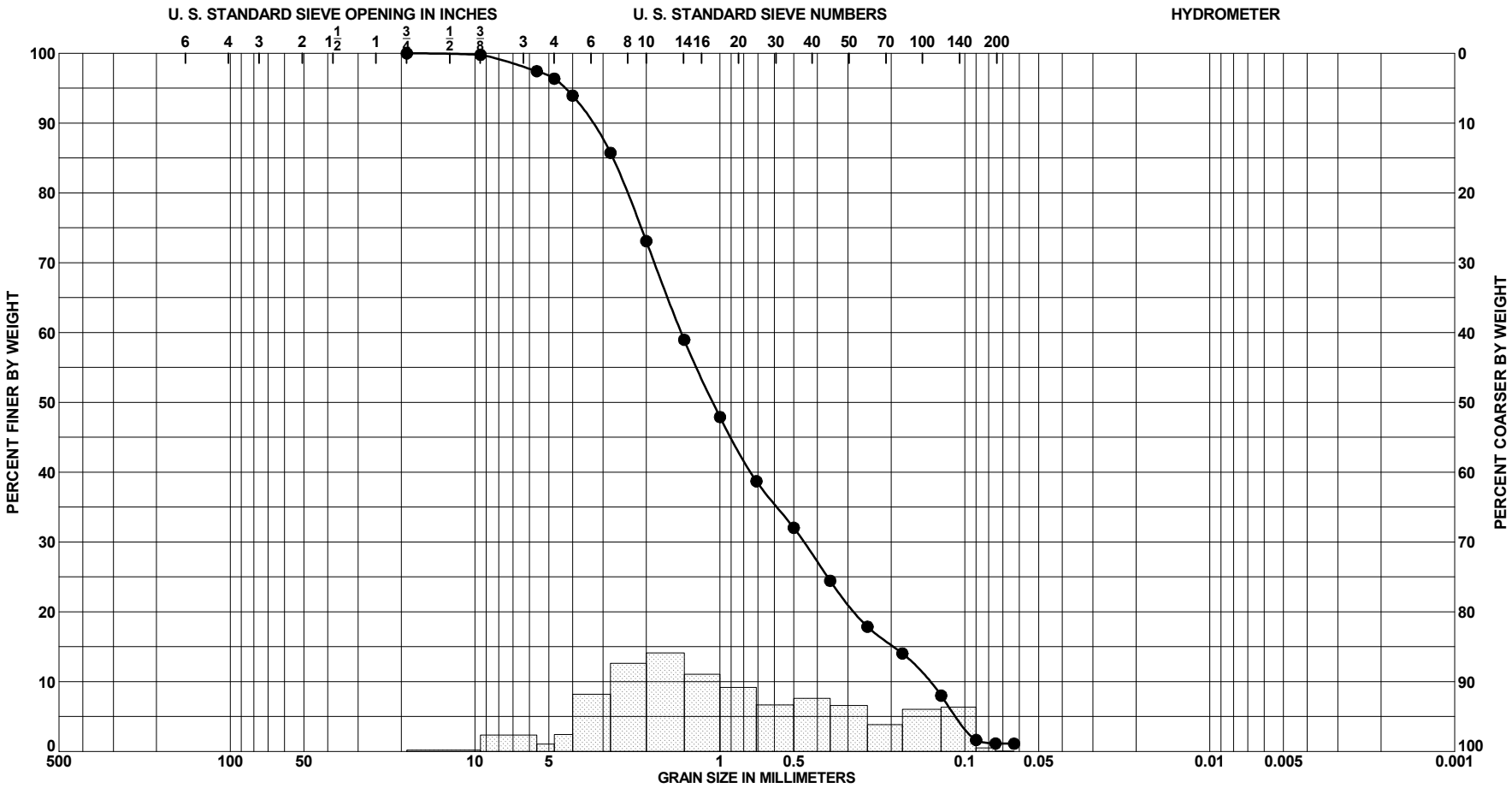


Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 2	3.0 to 3.2 Ft.	SAND, poorly-graded, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz, trace silt, light brownish gray (SP)	2.5Y 6/2	60							

PROJECT	Pass-A-Grille Channel
	Pinellas County
BORING NO.	VB-PAG-12-6
BORING ELEV.	-11.5 Ft., MLLW
DATE	4/26/2013

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual % Shell (est)	%CO_3	G_s	Org %	w_n	LL	PL	PI
● 3	5.0 to 5.2 Ft.	SAND, poorly-graded, mostly	2.5Y 6/2	68							
		medium to coarse-grained									
		sand-sized shell, some fine-grained									
		sand-sized quartz, trace silt, light									
		brownish gray (SP)									

PROJECT	Pass-A-Grille Channel
	Pinellas County
BORING NO.	VB-PAG-12-6
BORING ELEV.	-11.5 Ft., MLLW
DATE	4/26/2013

GRADATION CURVES

SAJ FORM 2087
JUN 02

Granularmetric Report

Project Name: Compatibility Sand Sources Pinellas County SPP

Sample Name: VB-PAG-12-1 @ 1 ft

Analysis Date: 4/26/2013

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
410,582	1,215,980	State Plane, FLW (U.S. Ft.)	-11.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 0.85 #230 - 0.84			1

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.06	0.06
#4	-2.25	4.75	0.04	0.10
#5	-2.00	4.00	0.00	0.10
#7	-1.50	2.80	0.07	0.17
#10	-1.00	2.00	0.09	0.26
#14	-0.50	1.40	0.09	0.35
#18	0.00	1.00	0.16	0.51
#25	0.50	0.71	0.19	0.70
#35	1.00	0.50	0.22	0.92
#45	1.50	0.36	0.41	1.33
#60	2.00	0.25	1.80	3.13
#80	2.50	0.18	43.64	46.77
#120	3.00	0.13	42.95	89.72
#170	3.50	0.09	8.95	98.67
#200	3.75	0.08	0.48	99.15
#230	4.00	0.06	0.01	99.16

SAND, poorly-graded, mostly fine-grained sand-sized quartz

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.29	2.93	2.83	2.54	2.25	2.15	2.02

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.53	0.17	2.54	0.17	0.47	-3.22	31.3

GRANULARMETRIC REPORT % PINELLAS_EGMONTEAST_MERGED+COMPOSITES_NEWTEMPLATE_10OCT2016 - COPY.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Compatibility Sand Sources Pinellas County SPP

Sample Name: VB-PAG-12-1 @ 3 ft

Analysis Date: 4/26/2013

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
410,582	1,215,980	State Plane, FLW (U.S. Ft.)	-13.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 0.82 #230 - 0.78			1

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.05	0.05
#4	-2.25	4.75	0.04	0.09
#5	-2.00	4.00	0.05	0.14
#7	-1.50	2.80	0.10	0.24
#10	-1.00	2.00	0.18	0.42
#14	-0.50	1.40	0.11	0.53
#18	0.00	1.00	0.17	0.70
#25	0.50	0.71	0.19	0.89
#35	1.00	0.50	0.20	1.09
#45	1.50	0.36	0.35	1.44
#60	2.00	0.25	1.42	2.86
#80	2.50	0.18	25.23	28.09
#120	3.00	0.13	53.48	81.57
#170	3.50	0.09	16.57	98.14
#200	3.75	0.08	1.04	99.18
#230	4.00	0.06	0.04	99.22

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.41	3.07	2.94	2.70	2.44	2.26	2.04

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.66	0.16	2.70	0.15	0.51	-3.72	31.72

GRANULARMETRIC REPORT % PINELLAS_EGMONTEAST_MERGED+COMPOSITES_NEWTEMPLATE_10OCT2016 - COPY.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Compatibility Sand Sources Pinellas County SPP

Sample Name: VB-PAG-12-1 @ 5 ft

Analysis Date: 4/26/2013

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
410,582	1,215,980	State Plane, FLW (U.S. Ft.)	-15.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/1	#200 - 1.59 #230 - 1.43			7

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.30	0.30
#4	-2.25	4.75	0.03	0.33
#5	-2.00	4.00	0.20	0.53
#7	-1.50	2.80	0.50	1.03
#10	-1.00	2.00	0.73	1.76
#14	-0.50	1.40	0.91	2.67
#18	0.00	1.00	0.77	3.44
#25	0.50	0.71	0.67	4.11
#35	1.00	0.50	0.53	4.64
#45	1.50	0.36	0.59	5.23
#60	2.00	0.25	1.05	6.28
#80	2.50	0.18	5.54	11.82
#120	3.00	0.13	57.55	69.37
#170	3.50	0.09	26.71	96.08
#200	3.75	0.08	2.33	98.41
#230	4.00	0.06	0.16	98.57

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.48	3.27	3.11	2.83	2.61	2.54	1.31

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.70	0.15	2.83	0.14	0.86	-3.7	18.59

GRANULARMETRIC REPORT % PINELLAS_EGMONTEAST_MERGED+COMPOSITES_NEWTEMPLATE_10OCT2016 - COPY.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Compatibility Sand Sources Pinellas County SPP

Sample Name: VB-PAG-12-2 @ 1.5 ft

Analysis Date: 4/26/2013

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
413,627	1,216,013	State Plane, FLW (U.S. Ft.)	-9.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 1.03 #230 - 1.00			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.01	0.01
#10	-1.00	2.00	0.01	0.02
#14	-0.50	1.40	0.02	0.04
#18	0.00	1.00	0.02	0.06
#25	0.50	0.71	0.03	0.09
#35	1.00	0.50	0.05	0.14
#45	1.50	0.36	0.14	0.28
#60	2.00	0.25	0.45	0.73
#80	2.50	0.18	4.98	5.71
#120	3.00	0.13	72.62	78.33
#170	3.50	0.09	19.52	97.85
#200	3.75	0.08	1.12	98.97
#230	4.00	0.06	0.03	99.00

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.43	3.15	2.98	2.80	2.63	2.57	2.43

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.82	0.14	2.80	0.14	0.29	-1.63	24.44

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Granularmetric Report

Project Name: Compatibility Sand Sources Pinellas County SPP

Sample Name: VB-PAG-12-2 @ 3.5 ft

Analysis Date: 4/26/2013

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
413,627	1,216,013	State Plane, FLW (U.S. Ft.)	-11.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 8/1	#200 - 0.73 #230 - 0.73			7

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#7	-1.50	2.80	0.05	0.05
#10	-1.00	2.00	0.04	0.09
#14	-0.50	1.40	0.06	0.15
#18	0.00	1.00	0.04	0.19
#25	0.50	0.71	0.06	0.25
#35	1.00	0.50	0.11	0.36
#45	1.50	0.36	0.37	0.73
#60	2.00	0.25	2.00	2.73
#80	2.50	0.18	31.07	33.80
#120	3.00	0.13	54.71	88.51
#170	3.50	0.09	10.29	98.80
#200	3.75	0.08	0.47	99.27
#230	4.00	0.06	0.00	99.27

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.32	2.96	2.88	2.65	2.36	2.21	2.04

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.61	0.16	2.65	0.16	0.38	-1.37	13.44

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Granularmetric Report

Project Name: Compatibility Sand Sources Pinellas County SPP

Sample Name: VB-PAG-12-2 @ 5.5 ft

Analysis Date: 4/26/2013

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
413,627	1,216,013	State Plane, FLW (U.S. Ft.)	-13.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 0.98 #230 - 0.96			4

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.02	0.02
#10	-1.00	2.00	0.05	0.07
#14	-0.50	1.40	0.02	0.09
#18	0.00	1.00	0.03	0.12
#25	0.50	0.71	0.04	0.16
#35	1.00	0.50	0.08	0.24
#45	1.50	0.36	0.25	0.49
#60	2.00	0.25	1.85	2.34
#80	2.50	0.18	44.71	47.05
#120	3.00	0.13	42.80	89.85
#170	3.50	0.09	8.70	98.55
#200	3.75	0.08	0.47	99.02
#230	4.00	0.06	0.02	99.04

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.30	2.93	2.83	2.53	2.25	2.15	2.03

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.54	0.17	2.53	0.17	0.38	-0.95	13.75

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Granularmetric Report

Project Name: Compatibility Sand Sources Pinellas County SPP

Sample Name: VB-PAG-12-2 @ 7.5 ft

Analysis Date: 4/26/2013

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
413,627	1,216,013	State Plane, FLW (U.S. Ft.)	-15.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 8/1	#200 - 0.72 #230 - 0.70			21

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
3/8	-3.25	9.50	0.28	0.28
#3.5	-2.50	5.60	0.00	0.28
#4	-2.25	4.75	0.14	0.42
#5	-2.00	4.00	0.21	0.63
#7	-1.50	2.80	0.60	1.23
#10	-1.00	2.00	1.06	2.29
#14	-0.50	1.40	1.30	3.59
#18	0.00	1.00	1.54	5.13
#25	0.50	0.71	2.32	7.45
#35	1.00	0.50	3.46	10.91
#45	1.50	0.36	6.90	17.81
#60	2.00	0.25	15.14	32.95
#80	2.50	0.18	34.02	66.97
#120	3.00	0.13	25.83	92.80
#170	3.50	0.09	6.29	99.09
#200	3.75	0.08	0.19	99.28
#230	4.00	0.06	0.02	99.30

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.17	2.83	2.66	2.25	1.74	1.37	-0.04

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.03	0.24	2.25	0.21	0.99	-2.07	8.95

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Granularmetric Report

Project Name: Compatibility Sand Sources Pinellas County SPP

Sample Name: VB-PAG-12-3 @ 1 ft

Analysis Date: 4/26/2013

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
414,633	1,216,135	State Plane, FLW (U.S. Ft.)	-8.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/1	#200 - 0.85 #230 - 0.84			17

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
3/8	-3.25	9.50	0.69	0.69
#3.5	-2.50	5.60	0.40	1.09
#4	-2.25	4.75	0.14	1.23
#5	-2.00	4.00	0.10	1.33
#7	-1.50	2.80	0.62	1.95
#10	-1.00	2.00	0.94	2.89
#14	-0.50	1.40	1.53	4.42
#18	0.00	1.00	1.68	6.10
#25	0.50	0.71	2.15	8.25
#35	1.00	0.50	2.53	10.78
#45	1.50	0.36	5.22	16.00
#60	2.00	0.25	10.03	26.03
#80	2.50	0.18	40.44	66.47
#120	3.00	0.13	27.33	93.80
#170	3.50	0.09	5.21	99.01
#200	3.75	0.08	0.14	99.15
#230	4.00	0.06	0.01	99.16

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.12	2.82	2.66	2.30	1.95	1.50	-0.33

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.04	0.24	2.30	0.20	1.08	-2.56	11.21

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Granularmetric Report

Project Name: Compatibility Sand Sources Pinellas County SPP

Sample Name: VB-PAG-12-3 @ 3 ft

Analysis Date: 4/26/2013

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
414,633	1,216,135	State Plane, FLW (U.S. Ft.)	-10.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 0.69 #230 - 0.68			6

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
3/8	-3.25	9.50	0.19	0.19
#3.5	-2.50	5.60	0.86	1.05
#4	-2.25	4.75	0.27	1.32
#5	-2.00	4.00	0.00	1.32
#7	-1.50	2.80	0.18	1.50
#10	-1.00	2.00	0.32	1.82
#14	-0.50	1.40	0.23	2.05
#18	0.00	1.00	0.17	2.22
#25	0.50	0.71	0.28	2.50
#35	1.00	0.50	0.08	2.58
#45	1.50	0.36	1.41	3.99
#60	2.00	0.25	4.42	8.41
#80	2.50	0.18	40.74	49.15
#120	3.00	0.13	41.46	90.61
#170	3.50	0.09	8.44	99.05
#200	3.75	0.08	0.26	99.31
#230	4.00	0.06	0.01	99.32

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.26	2.92	2.81	2.51	2.20	2.09	1.61

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.41	0.19	2.51	0.18	0.81	-4.46	28.41

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Granularmetric Report

Project Name: Compatibility Sand Sources Pinellas County SPP

Sample Name: VB-PAG-12-3 @ 5 ft

Analysis Date: 4/26/2013

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
414,633	1,216,135	State Plane, FLW (U.S. Ft.)	-12.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/1	#200 - 0.63 #230 - 0.62			42

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
3/8	-3.25	9.50	0.18	0.18
#3.5	-2.50	5.60	0.11	0.29
#4	-2.25	4.75	0.16	0.45
#5	-2.00	4.00	0.47	0.92
#7	-1.50	2.80	1.54	2.46
#10	-1.00	2.00	2.13	4.59
#14	-0.50	1.40	3.31	7.90
#18	0.00	1.00	5.04	12.94
#25	0.50	0.71	7.32	20.26
#35	1.00	0.50	8.86	29.12
#45	1.50	0.36	12.76	41.88
#60	2.00	0.25	18.97	60.85
#80	2.50	0.18	25.54	86.39
#120	3.00	0.13	10.54	96.93
#170	3.50	0.09	2.37	99.30
#200	3.75	0.08	0.07	99.37
#230	4.00	0.06	0.01	99.38

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.91	2.45	2.28	1.71	0.77	0.21	-0.94

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.41	0.38	1.71	0.31	1.17	-1.05	3.93

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Granularmetric Report

Project Name: Compatibility Sand Sources Pinellas County SPP

Sample Name: VB-PAG-12-3 @ 7 ft

Analysis Date: 4/26/2013

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
414,633	1,216,135	State Plane, FLW (U.S. Ft.)	-14.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 1.12 #230 - 1.09			7

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.26	0.26
#4	-2.25	4.75	0.03	0.29
#5	-2.00	4.00	0.10	0.39
#7	-1.50	2.80	0.36	0.75
#10	-1.00	2.00	0.41	1.16
#14	-0.50	1.40	0.47	1.63
#18	0.00	1.00	0.45	2.08
#25	0.50	0.71	0.61	2.69
#35	1.00	0.50	0.70	3.39
#45	1.50	0.36	1.29	4.68
#60	2.00	0.25	4.35	9.03
#80	2.50	0.18	42.26	51.29
#120	3.00	0.13	37.37	88.66
#170	3.50	0.09	9.68	98.34
#200	3.75	0.08	0.54	98.88
#230	4.00	0.06	0.03	98.91

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.33	2.94	2.82	2.48	2.19	2.08	1.54

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.41	0.19	2.48	0.18	0.72	-3.41	20.51

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Granularmetric Report

Project Name: Compatibility Sand Sources Pinellas County SPP

Sample Name: VB-PAG-12-4 @ 1.5 ft

Analysis Date: 4/26/2013

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
415,600	1,216,360	State Plane, FLW (U.S. Ft.)	-8.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 6/1	#200 - 0.46 #230 - 0.45			75

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
3/8	-3.25	9.50	3.86	3.86
#3.5	-2.50	5.60	4.65	8.51
#4	-2.25	4.75	1.95	10.46
#5	-2.00	4.00	2.87	13.33
#7	-1.50	2.80	8.51	21.84
#10	-1.00	2.00	11.72	33.56
#14	-0.50	1.40	12.28	45.84
#18	0.00	1.00	10.06	55.90
#25	0.50	0.71	8.70	64.60
#35	1.00	0.50	6.91	71.51
#45	1.50	0.36	8.05	79.56
#60	2.00	0.25	8.34	87.90
#80	2.50	0.18	8.02	95.92
#120	3.00	0.13	2.99	98.91
#170	3.50	0.09	0.56	99.47
#200	3.75	0.08	0.07	99.54
#230	4.00	0.06	0.01	99.55

SHELL, mostly sand to gravel-sized shell, little fine-grained sand-sized quartz

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.44	1.77	1.22	-0.29	-1.37	-1.84	-3.07

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	-0.20	1.15			1.67	-0.08	2.29

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Granularmetric Report

Project Name: Compatibility Sand Sources Pinellas County SPP

Sample Name: VB-PAG-12-4 @ 3.5 ft

Analysis Date: 4/26/2013

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
415,600	1,216,360	State Plane, FLW (U.S. Ft.)	-10.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 6/1	#200 - 1.14 #230 - 1.12			28

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
3/8	-3.25	9.50	1.85	1.85
#3.5	-2.50	5.60	3.07	4.92
#4	-2.25	4.75	0.64	5.56
#5	-2.00	4.00	1.07	6.63
#7	-1.50	2.80	2.27	8.90
#10	-1.00	2.00	3.50	12.40
#14	-0.50	1.40	2.88	15.28
#18	0.00	1.00	2.42	17.70
#25	0.50	0.71	2.48	20.18
#35	1.00	0.50	2.46	22.64
#45	1.50	0.36	4.09	26.73
#60	2.00	0.25	7.69	34.42
#80	2.50	0.18	23.73	58.15
#120	3.00	0.13	31.41	89.56
#170	3.50	0.09	8.90	98.46
#200	3.75	0.08	0.40	98.86
#230	4.00	0.06	0.02	98.88

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.31	2.91	2.77	2.33	1.29	-0.35	-2.47

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.62	0.33	2.33	0.20	1.75	-1.53	4.3

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Granularmetric Report

Project Name: Compatibility Sand Sources Pinellas County SPP

Sample Name: VB-PAG-12-4 @ 5.5 ft

Analysis Date: 4/26/2013

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
415,600	1,216,360	State Plane, FLW (U.S. Ft.)	-12.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/1	#200 - 1.04 #230 - 1.03			34

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
3/8	-3.25	9.50	3.04	3.04
#3.5	-2.50	5.60	3.65	6.69
#4	-2.25	4.75	1.58	8.27
#5	-2.00	4.00	1.92	10.19
#7	-1.50	2.80	3.78	13.97
#10	-1.00	2.00	4.55	18.52
#14	-0.50	1.40	4.00	22.52
#18	0.00	1.00	2.91	25.43
#25	0.50	0.71	2.43	27.86
#35	1.00	0.50	1.97	29.83
#45	1.50	0.36	3.03	32.86
#60	2.00	0.25	5.72	38.58
#80	2.50	0.18	24.90	63.48
#120	3.00	0.13	27.68	91.16
#170	3.50	0.09	7.52	98.68
#200	3.75	0.08	0.28	98.96
#230	4.00	0.06	0.01	98.97

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.26	2.87	2.71	2.23	-0.07	-1.28	-2.85

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.29	0.41	2.23	0.21	1.98	-1.13	2.93

GRANULARMETRIC REPORT % PINELLAS_EGMONTEAST_MERGED+COMPOSITES_NEWTEMPLATE_10OCT2016 - COPY.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Compatibility Sand Sources Pinellas County SPP

Sample Name: VB-PAG-12-4 @ 7.5 ft

Analysis Date: 4/26/2013

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
415,600	1,216,360	State Plane, FLW (U.S. Ft.)	-14.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/1	#200 - 0.69 #230 - 0.67			30

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
3/8	-3.25	9.50	0.92	0.92
#3.5	-2.50	5.60	1.39	2.31
#4	-2.25	4.75	0.68	2.99
#5	-2.00	4.00	1.04	4.03
#7	-1.50	2.80	3.31	7.34
#10	-1.00	2.00	4.33	11.67
#14	-0.50	1.40	3.23	14.90
#18	0.00	1.00	5.30	20.20
#25	0.50	0.71	3.58	23.78
#35	1.00	0.50	3.00	26.78
#45	1.50	0.36	4.08	30.86
#60	2.00	0.25	5.76	36.62
#80	2.50	0.18	24.43	61.05
#120	3.00	0.13	32.81	93.86
#170	3.50	0.09	5.33	99.19
#200	3.75	0.08	0.12	99.31
#230	4.00	0.06	0.02	99.33

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some fine to coarse-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.11	2.85	2.71	2.27	0.70	-0.40	-1.85

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.56	0.34	2.27	0.21	1.64	-1.29	3.62

GRANULARMETRIC REPORT % PINELLAS_EGMONTEAST_MERGED+COMPOSITES_NEWTEMPLATE_10OCT2016 - COPY.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Compatibility Sand Sources Pinellas County SPP

Sample Name: VB-PAG-12-5 @ 0.5 ft

Analysis Date: 4/26/2013

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
417,016	1,216,708	State Plane, FLW (U.S. Ft.)	-9.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 6/1	#200 - 1.67 #230 - 1.59			42

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
3/8	-3.25	9.50	5.51	5.51
#3.5	-2.50	5.60	8.54	14.05
#4	-2.25	4.75	2.50	16.55
#5	-2.00	4.00	2.72	19.27
#7	-1.50	2.80	4.72	23.99
#10	-1.00	2.00	4.27	28.26
#14	-0.50	1.40	3.04	31.30
#18	0.00	1.00	2.47	33.77
#25	0.50	0.71	2.43	36.20
#35	1.00	0.50	2.34	38.54
#45	1.50	0.36	3.32	41.86
#60	2.00	0.25	4.16	46.02
#80	2.50	0.18	10.89	56.91
#120	3.00	0.13	25.76	82.67
#170	3.50	0.09	14.48	97.15
#200	3.75	0.08	1.18	98.33
#230	4.00	0.06	0.08	98.41

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.43	3.05	2.85	2.18	-1.38	-2.31	-3.34

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.89	0.54	2.18	0.22	2.38	-0.67	1.89

GRANULARMETRIC REPORT % PINELLAS_EGMONTEAST_MERGED+COMPOSITES_NEWTEMPLATE_10OCT2016 - COPY.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Compatibility Sand Sources Pinellas County SPP

Sample Name: VB-PAG-12-5 @ 2 ft

Analysis Date: 4/26/2013

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
417,016	1,216,708	State Plane, FLW (U.S. Ft.)	-11.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 6/1	#200 - 1.08 #230 - 1.04			60

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
3/8	-3.25	9.50	10.19	10.19
#3.5	-2.50	5.60	13.92	24.11
#4	-2.25	4.75	4.28	28.39
#5	-2.00	4.00	6.10	34.49
#7	-1.50	2.80	8.51	43.00
#10	-1.00	2.00	6.44	49.44
#14	-0.50	1.40	4.05	53.49
#18	0.00	1.00	2.55	56.04
#25	0.50	0.71	2.15	58.19
#35	1.00	0.50	1.84	60.03
#45	1.50	0.36	2.51	62.54
#60	2.00	0.25	3.17	65.71
#80	2.50	0.18	5.94	71.65
#120	3.00	0.13	14.82	86.47
#170	3.50	0.09	11.73	98.20
#200	3.75	0.08	0.72	98.92
#230	4.00	0.06	0.04	98.96

SAND, poorly-graded, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.36	2.92	2.61	-0.93	-2.45	-2.94	-3.76

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	-0.23	1.17			2.53	0.14	1.43

GRANULARMETRIC REPORT % PINELLAS_EGMONTEAST_MERGED+COMPOSITES_NEWTEMPLATE_10OCT2016 - COPY.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Compatibility Sand Sources Pinellas County SPP

Sample Name: VB-PAG-12-5 @ 3 ft

Analysis Date: 4/26/2013

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
417,016	1,216,708	State Plane, FLW (U.S. Ft.)	-12.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 6/1	#200 - 2.01 #230 - 1.98			44

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
3/8	-3.25	9.50	4.14	4.14
#3.5	-2.50	5.60	13.07	17.21
#4	-2.25	4.75	3.21	20.42
#5	-2.00	4.00	4.12	24.54
#7	-1.50	2.80	4.81	29.35
#10	-1.00	2.00	4.89	34.24
#14	-0.50	1.40	3.52	37.76
#18	0.00	1.00	2.14	39.90
#25	0.50	0.71	1.74	41.64
#35	1.00	0.50	1.45	43.09
#45	1.50	0.36	2.29	45.38
#60	2.00	0.25	3.60	48.98
#80	2.50	0.18	10.13	59.11
#120	3.00	0.13	25.87	84.98
#170	3.50	0.09	12.24	97.22
#200	3.75	0.08	0.77	97.99
#230	4.00	0.06	0.03	98.02

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.41	2.98	2.81	2.05	-1.95	-2.57	-3.20

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.61	0.66	2.05	0.24	2.46	-0.43	1.51

GRANULARMETRIC REPORT % PINELLAS_EGMONTEAST_MERGED+COMPOSITES_NEWTEMPLATE_10OCT2016 - COPY.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Compatibility Sand Sources Pinellas County SPP

Sample Name: VB-PAG-12-5 @ 5 ft

Analysis Date: 4/26/2013

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
417,016	1,216,708	State Plane, FLW (U.S. Ft.)	-14.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 6/1	#200 - 1.33 #230 - 1.29			65

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
3/8	-3.25	9.50	19.93	19.93
#3.5	-2.50	5.60	12.50	32.43
#4	-2.25	4.75	4.01	36.44
#5	-2.00	4.00	4.00	40.44
#7	-1.50	2.80	5.56	46.00
#10	-1.00	2.00	5.42	51.42
#14	-0.50	1.40	3.94	55.36
#18	0.00	1.00	2.63	57.99
#25	0.50	0.71	2.32	60.31
#35	1.00	0.50	1.85	62.16
#45	1.50	0.36	2.08	64.24
#60	2.00	0.25	2.67	66.91
#80	2.50	0.18	6.67	73.58
#120	3.00	0.13	16.64	90.22
#170	3.50	0.09	7.97	98.19
#200	3.75	0.08	0.48	98.67
#230	4.00	0.06	0.04	98.71

SAND, poorly-graded, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.30	2.81	2.54	-1.13	-2.95	-3.45	-4.00

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	-0.52	1.43			2.64	0.19	1.41

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Granularmetric Report

Project Name: Compatibility Sand Sources Pinellas County SPP

Sample Name: VB-PAG-12-6 @ 1 ft

Analysis Date: 4/26/2013

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
418,658	1,218,631	State Plane, FLW (U.S. Ft.)	-12.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 6/3	#200 - 1.28 #230 - 1.25			57

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
3/8	-3.25	9.50	0.33	0.33
#3.5	-2.50	5.60	1.83	2.16
#4	-2.25	4.75	0.85	3.01
#5	-2.00	4.00	1.38	4.39
#7	-1.50	2.80	4.53	8.92
#10	-1.00	2.00	8.21	17.13
#14	-0.50	1.40	9.92	27.05
#18	0.00	1.00	7.99	35.04
#25	0.50	0.71	7.22	42.26
#35	1.00	0.50	6.00	48.26
#45	1.50	0.36	8.18	56.44
#60	2.00	0.25	13.52	69.96
#80	2.50	0.18	20.68	90.64
#120	3.00	0.13	6.74	97.38
#170	3.50	0.09	1.29	98.67
#200	3.75	0.08	0.05	98.72
#230	4.00	0.06	0.03	98.75

SAND, poorly-graded, mostly fine to coarse-grained sand-sized shell, some fine-grained sand-sized quartz, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.82	2.34	2.12	1.11	-0.60	-1.07	-1.93

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.72	0.61	1.11	0.46	1.56	-0.45	2.12

GRANULARMETRIC REPORT % PINELLAS_EGMONTEAST_MERGED+COMPOSITES_NEWTEMPLATE_10OCT2016 - COPY.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Compatibility Sand Sources Pinellas County SPP

Sample Name: VB-PAG-12-6 @ 3 ft

Analysis Date: 4/26/2013

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
418,658	1,218,631	State Plane, FLW (U.S. Ft.)	-14.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 6/2	#200 - 1.00 #230 - 0.99			60

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
3/8	-3.25	9.50	0.56	0.56
#3.5	-2.50	5.60	3.61	4.17
#4	-2.25	4.75	1.38	5.55
#5	-2.00	4.00	2.31	7.86
#7	-1.50	2.80	5.78	13.64
#10	-1.00	2.00	8.90	22.54
#14	-0.50	1.40	10.33	32.87
#18	0.00	1.00	8.76	41.63
#25	0.50	0.71	8.08	49.71
#35	1.00	0.50	6.71	56.42
#45	1.50	0.36	8.35	64.77
#60	2.00	0.25	11.71	76.48
#80	2.50	0.18	14.51	90.99
#120	3.00	0.13	6.20	97.19
#170	3.50	0.09	1.74	98.93
#200	3.75	0.08	0.07	99.00
#230	4.00	0.06	0.01	99.01

SAND, poorly-graded, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.82	2.26	1.94	0.52	-0.88	-1.37	-2.35

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.42	0.75	0.52	0.70	1.65	-0.26	2.05

GRANULARMETRIC REPORT % PINELLAS_EGMONTEAST_MERGED+COMPOSITES_NEWTEMPLATE_10OCT2016 - COPY.GPJ CESAJ 20171021.GDT 5/16/20

Granularmetric Report

Project Name: Compatibility Sand Sources Pinellas County SPP

Sample Name: VB-PAG-12-6 @ 5 ft

Analysis Date: 4/26/2013

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
418,658	1,218,631	State Plane, FLW (U.S. Ft.)	-16.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 6/2	#200 - 1.14 #230 - 1.12			68

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4	-4.25	19.00	0.00	0.00
3/8	-3.25	9.50	0.21	0.21
#3.5	-2.50	5.60	2.35	2.56
#4	-2.25	4.75	1.07	3.63
#5	-2.00	4.00	2.43	6.06
#7	-1.50	2.80	8.20	14.26
#10	-1.00	2.00	12.64	26.90
#14	-0.50	1.40	14.13	41.03
#18	0.00	1.00	11.07	52.10
#25	0.50	0.71	9.19	61.29
#35	1.00	0.50	6.67	67.96
#45	1.50	0.36	7.59	75.55
#60	2.00	0.25	6.58	82.13
#80	2.50	0.18	3.84	85.97
#120	3.00	0.13	6.03	92.00
#170	3.50	0.09	6.36	98.36
#200	3.75	0.08	0.50	98.86
#230	4.00	0.06	0.02	98.88

SAND, poorly-graded, mostly medium to coarse-grained sand-sized shell, some fine-grained sand-sized quartz, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.24	2.24	1.46	-0.09	-1.08	-1.43	-2.11

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.18	0.88			1.64	0.34	2.21

GRANULARMETRIC REPORT % PINELLAS_EGMONTEAST_MERGED+COMPOSITES_NEWTEMPLATE_10OCT2016 - COPY.GPJ CESAJ 20171021.GDT 5/16/20

7.5 EGMONT SHOAL

- Boring Logs
- Gradation Graphs
- Granularmetric Reports
- Fence Diagrams

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	Pinellas County SPP Egmont Shoal Borrow Area
2. BORING DESIGNATION	CB-EC00-10
LOCATION COORDINATES	X = 413,070 Y = 1,194,540
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☐ VERTICAL ☒ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	15.6 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 3 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 03-22-00 / COMPLETED 03-22-00
16. ELEVATION TOP OF BORING	-10.0 Ft.
17. TOTAL RECOVERY FOR BORING	N/A
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-10.0	0.0								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace sand to gravel-sized shell, N 7/ light gray (SP)		1				
			From El. -14.5 to -15.0 Ft., shell layer						
			From El. -16.7 to -19.7 Ft., some sand to gravel-sized shell		2				
					3				
			At El. -24.5 Ft., 5" silty sand seam						

0 5 10 15

(Continued)

SAJ FORM 1836
JUN 02

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County SPP	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 413,070 Y = 1,194,540	ELEVATION TOP OF BORING -10.0 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-25.6	15.6				3		-25.6		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	0.0/6.7	SP*
2	6.7/9.7	SP*
3	9.7/15.6	SP*

*Lab visual classification based on gradation curve

Abbreviations:

15
20
25
30
35

SAJ FORM 1836-A
JUN 02

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	Pinellas County SPP Egmont Shoal Borrow Area
2. BORING DESIGNATION	CB-EC00-20
LOCATION COORDINATES	X = 412,323 Y = 1,194,176
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☐ VERTICAL ☒ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	9.9 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 2 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 03-23-00 / COMPLETED 03-23-00
16. ELEVATION TOP OF BORING	-10.3 Ft.
17. TOTAL RECOVERY FOR BORING	N/A
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-10.3	0.0								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt, N 6/ gray (SP)		1				
			From El. -12.0 to -13.3 Ft., mostly fine-grained sand-sized quartz, little sand to gravel-sized shell						
			From El. -13.3 to -19.9 Ft., trace silt, trace sand to gravel-sized shell, N 7/ light gray		2				
-20.2	9.9						-20.2		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	0.0/1.7	SP*
2	3.0/6.0	SP*

Abbreviations:

(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County SPP	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 412,323 Y = 1,194,176	ELEVATION TOP OF BORING -10.3 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			*Lab visual classification based on gradation curve						

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DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	Pinellas County SPP Egmont Shoal Borrow Area
2. BORING DESIGNATION	CB-EC00-28
LOCATION COORDINATES	X = 411,214 Y = 1,193,408
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☐ VERTICAL ☒ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	10.2 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 2 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 03-23-00 / COMPLETED 03-23-00
16. ELEVATION TOP OF BORING	-9.3 Ft.
17. TOTAL RECOVERY FOR BORING	N/A
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-9.3	0.0								
-13.0	3.7		SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace sand to gravel-sized shell, occassional shell pockets, N 7/ light gray (SP)		1				
-17.3	8.0		SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt, trace sand to gravel-sized shell, N 7/ light gray (SP-SM)		2				
-19.5	10.2		SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace sand to gravel-sized shell, N 7/ light gray (SP)				-19.5		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	0.0/3.7	SP*

Abbreviations:

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(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District			SHEET 2 OF 2 SHEETS
PROJECT Pinellas County SPP	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88	
LOCATION COORDINATES X = 411,214 Y = 1,193,408	ELEVATION TOP OF BORING -9.3 Ft.			

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			2 3.7/8.0 SP-SM*						
			*Lab visual classification based on gradation curve						

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DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	Pinellas County SPP Egmont Shoal Borrow Area
2. BORING DESIGNATION	CB-EC00-29
LOCATION COORDINATES	X = 412,265 Y = 1,193,131
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☐ VERTICAL ☒ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	10.2 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 2 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 03-23-00 / COMPLETED 03-23-00
16. ELEVATION TOP OF BORING	-10.3 Ft.
17. TOTAL RECOVERY FOR BORING	N/A
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-10.3	0.0								
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, few silt, N 6/ gray (SP-SM)						
			At El. -11.8 Ft., 2" shell layer		1				
			At El. -18.2 Ft., silty sand seam		2				
			At El. -19.8 Ft., silty sand seam						
-20.5	10.2		At El. -20.3 Ft., trace shell				-20.5		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION

Abbreviations:

0 5 10 15

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(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District	SHEET 2 OF 2 SHEETS

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County SPP	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 412,265 Y = 1,193,131	-10.3 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			1 0.0/7.7 SP-SM*						
			2 7.7/10.0 SP-SM*						
			*Lab visual classification based on gradation curve						

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Boring Designation CB-EC00-34

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT Pinellas County SPP Egmont Shoal Borrow Area	9. SIZE AND TYPE OF BIT See Remarks
	10. COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.) / HORIZONTAL NAD83 / VERTICAL NAVD88
2. BORING DESIGNATION CB-EC00-34 / LOCATION COORDINATES X = 408,109 Y = 1,193,215	11. MANUFACTURER'S DESIGNATION OF DRILL ☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY Corps of Engineers - CESAJ / CONTRACTOR FILE NO.	12. TOTAL SAMPLES DISTURBED 3 / UNDISTURBED (UD) 0
4. NAME OF DRILLER	13. TOTAL NUMBER CORE BOXES 0
5. DIRECTION OF BORING ☐ VERTICAL ☒ INCLINED / DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER
	15. DATE BORING STARTED 03-23-00 / COMPLETED 03-23-00
6. THICKNESS OF OVERBURDEN N/A	16. ELEVATION TOP OF BORING -8.9 Ft.
7. DEPTH DRILLED INTO ROCK N/A	17. TOTAL RECOVERY FOR BORING N/A
8. TOTAL DEPTH OF BORING 12.8 Ft.	18. SIGNATURE AND TITLE OF INSPECTOR ,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-8.9	0.0								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, N 6/ gray (SP)		1				
			From El. -12.9 to -18.9 Ft., trace fine to coarse-grained sand-sized shell		2				
			From El. -18.9 to -21.7 Ft., some sand to gravel-sized shell, trace silt		3				
-21.7	12.8						-21.7		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in

Abbreviations:

0 5 10 15

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(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County SPP	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 408,109 Y = 1,193,215	ELEVATION TOP OF BORING -8.9 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			accordance with the Unified Soils Classification System.						
			3. Laboratory Testing Results						

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	0.0/4.0	SP*
2	4.0/10.0	SP*
3	10.0/12.0	SP*

*Lab visual classification based on gradation curve

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Boring Designation CB-EC00-36

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County SPP Egmont Shoal Borrow Area
2. BORING DESIGNATION	CB-EC00-36
LOCATION COORDINATES	X = 410,212 Y = 1,192,762
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☐ VERTICAL ☒ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	14.5 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 3 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 03-23-00 / COMPLETED 03-23-00
16. ELEVATION TOP OF BORING	-6.1 Ft.
17. TOTAL RECOVERY FOR BORING	N/A
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-6.1	0.0								
-7.3	1.2		SAND, poorly-graded, mostly fine to coarse-grained sand-sized shell, few fine gravel-sized shell, trace quartz, trace silt, N 4/ dark gray (SP)		1				
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt, N 7/ light gray (SP)						
			From El. -13.8 to -19.3 Ft., trace sand to gravel-sized shell		3				
-19.3	13.2								
-20.6	14.5		SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, few silt, N 6/ gray (SP-SM)		4		-20.6		
							Abbreviations:		

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(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County SPP	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 410,212 Y = 1,192,762	ELEVATION TOP OF BORING -6.1 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	0.0/1.3	SP*
3	7.7/10.7	SP*
4	13.2/14.5	SP-SM*

*Lab visual classification based on gradation curve

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Boring Designation CB-EC00-37

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT	Pinellas County SPP Egmont Shoal Borrow Area
2. BORING DESIGNATION	CB-EC00-37
LOCATION COORDINATES	X = 411,201 Y = 1,192,519
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☐ VERTICAL ☒ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	14.2 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 3 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 03-23-00 / COMPLETED 03-23-00
16. ELEVATION TOP OF BORING	-6.3 Ft.
17. TOTAL RECOVERY FOR BORING	N/A
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-6.3	0.0								
			SAND, poorly-graded, mostly fine to coarse-grained sand-sized shell, few fine gravel-sized shell, trace fine-grained sand-sized quartz, N 6/ gray (SP)		1				
-8.8	2.5		SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace sand to gravel-sized shell, trace silt, N 7/ light gray (SP)						
					3				
			From El. -19.3 to -20.5 Ft., trace fine to coarse-grained sand-sized shell, N 6/ gray		4				
-20.5	14.2						-20.5		
			NOTES:				Abbreviations:		

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(Continued)

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DRILLING LOG (Cont. Sheet)	INSTALLATION	SHEET 2 OF 2 SHEETS
	Jacksonville District	

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County SPP	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 411,201 Y = 1,192,519	-6.3 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results						

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	0.0/2.5	SP*
3	7.0/10.0	SP*
4	13.0/14.5	SP*

*Lab visual classification based on gradation curve

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DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	Pinellas County SPP Egmont Shoal Borrow Area
2. BORING DESIGNATION	CB-EC00-38A
LOCATION COORDINATES	X = 412,225 Y = 1,192,282
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☐ VERTICAL ☒ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	13.0 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 3 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 03-23-00 / COMPLETED 03-23-00
16. ELEVATION TOP OF BORING	-9.3 Ft.
17. TOTAL RECOVERY FOR BORING	N/A
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-9.3	0.0								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, N 6/ gray (SP)		1				
			From El. -13.8 to -22.3 Ft., trace sand to gravel-sized shell, trace silt, N 7/ light gray						
					2				
					3				
-22.3	13.0						-22.3		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

Abbreviations:

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(Continued)

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DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District	SHEET 2 OF 2 SHEETS

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County SPP	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 412,225 Y = 1,192,282	-9.3 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			2. Soils are field visually classified in accordance with the Unified Soils Classification System.						
			3. Laboratory Testing Results						

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	0.0/4.5	SP*
2	9.0/11.0	SP*
3	11.0/13.0	SP*

*Lab visual classification based on gradation curve

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DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	Pinellas County SPP Egmont Shoal Borrow Area
2. BORING DESIGNATION	VB-EGSH2015-01
LOCATION COORDINATES	X = 403,981 Y = 1,197,077
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5442
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	19.8 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 6 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 05-05-15 / COMPLETED 05-05-15
16. ELEVATION TOP OF BORING	-11.8 Ft.
17. TOTAL RECOVERY FOR BORING	82 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-11.8	0.0						-11.8		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt, strong reaction with HCl, 10Y 6/1 greenish gray (SP) From El. -12.8 to -13.9 Ft., some sand to gravel-sized shell, N 7/ light gray At El. -13.2 Ft., 1" silty sand seam	1630			Vibracore -12.8		
					1				
-13.9	2.1		SAND, poorly-graded, mostly fine to coarse-grained sand-sized shell, some fine-grained sand-sized quartz, N 5/ gray (SP)						
-14.8	3.0		SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell (SP)				-15.3		
					2				
-16.5	4.7						-16.8		
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, some medium to coarse-grained sand-sized shell, few silt, strong reaction with HCl, silt seams, N 4/ dark gray (SP-SM)		3				
-17.5	5.7		SAND, poorly-graded, mostly medium to coarse-grained sand-sized shell, some fine-grained sand-sized quartz, trace silt, strong reaction with HCl, N 5/ gray (SP)				-19.3		
					4				
-21.5	9.7		SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell (SP) From El. -22.4 to -23.8 Ft., intermittent silt seams From El. -22.9 to -23.8 Ft., some sand to gravel-sized shell, N 4/ dark gray				-23.8		
			From El. -23.8 to -24.5 Ft., few fine to medium-grained sand-sized shell, N 5/ gray		5				
-25.0	13.2		From El. -24.5 to -25.0 Ft., little fine to medium-grained sand-sized shell SAND, poorly-graded with silt, mostly fine to coarse-grained sand-sized quartz, little medium to coarse-grained sand-sized shell, few silt, few fine-grained sand-sized shell, strong reaction with HCl, 1" seam of weakly cemented to				-25.8		
					6				

(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District	SHEET 2 OF 2 SHEETS

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County SPP	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 403,981 Y = 1,197,077	-11.8 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-28.1	16.3		cemented sand, N 5/ gray (SP-SM) From El. -25.7 to -27.5 Ft., few fine to medium-grained sand-sized shell, 2.5Y 7/1 light gray From El. -27.5 to -28.1 Ft., mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell, 10Y 6/1 greenish gray						
-31.6	19.8	NO RECOVERY					-31.6		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.0/1.3	SP*
2	3.5/3.8	SP*
3	5.0/5.3	SP-SM*
4	7.5/7.8	SP*
5	12.0/12.3	SP*
6	14.0/14.3	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell
6 Percent Visual Shell

Abbreviations:

15 20 25 30 35

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DRILLING LOG	DIVISION	INSTALLATION	SHEET 1 OF 2 SHEETS
	South Atlantic	Jacksonville District	

1. PROJECT Pinellas County SPP Egmont Shoal Borrow Area		9. SIZE AND TYPE OF BIT: See Remarks	
		10. COORDINATE SYSTEM/DATUM: State Plane, FLW (U.S. Ft.)	HORIZONTAL: NAD83 / VERTICAL: NAVD88
2. BORING DESIGNATION: VB-EGSH2015-02	LOCATION COORDINATES: X = 405,016 Y = 1,196,858	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5442	12. TOTAL SAMPLES	DISTURBED: 4 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 05-05-15 / COMPLETED: 05-05-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -11.9 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 77 %	
8. TOTAL DEPTH OF BORING: 16.2 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-11.9	0.0						-11.9		
			SAND, poorly-graded, mostly fine to medium-grained sand-sized shell, some fine-grained sand-sized quartz, trace silt, strong reaction with HCl, 2.5Y 7/1 light gray (SP) From El. -12.6 to -14.4 Ft., little fine to medium-grained sand-sized shell, 2.5Y 8/1 white	500			Vibracore		
							-14.4		
			From El. -14.4 to -16.9 Ft., few fine-grained sand-sized shell		1				
							-16.9		
			From El. -16.9 to -18.2 Ft., mostly medium to coarse-grained sand-sized shell, some fine-grained sand-sized quartz From El. -17.1 to -18.0 Ft., silt nodules		2				
-18.2	6.3								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium-grained sand-sized shell, intermittent silt seams, 2.5Y 5/2 grayish brown (SP) From El. -19.1 to -21.3 Ft., few fine-grained sand-sized shell				-19.4		
					3				
			From El. -20.2 to -20.6 Ft., shell seams						
-21.3	9.4								
			SAND, poorly-graded, mostly fine to medium-grained sand-sized shell, some fine-grained sand-sized quartz, 2.5Y 7/1 light gray (SP)						
							-23.9		
			From El. -23.9 to -24.4 Ft., mostly sand to gravel-sized shell, 2.5Y 7/2 light gray		4				
-24.4	12.5								
		NO RECOVERY							

0 5 10 15

(Continued)

SAJ FORM 1836
JUN 02

DRILLING LOG (Cont. Sheet)	INSTALLATION	SHEET 2 OF 2 SHEETS
	Jacksonville District	

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County SPP	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 405,016 Y = 1,196,858	-11.9 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-28.1	16.2	NO RECOVERY					-28.1		
			NOTES: 1. USACE Jacksonville is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results SAMPLE ID / SAMPLE DEPTH / LABORATORY CLASSIFICATION 1 / 2.5/2.8 / SP* 2 / 5.0/5.3 / SP* 3 / 7.5/7.8 / SP* 4 / 12.0/12.3 / SP* *Lab visual classification based on gradation curve 4. Additional Laboratory Testing 1 Percent Visual Shell 2 Percent Visual Shell 3 Percent Visual Shell 4 Percent Visual Shell				Abbreviations:		

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SAJ FORM 1836-A
JUN 02

DRILLING LOG	DIVISION	INSTALLATION	SHEET 1 OF 2 SHEETS
	South Atlantic	Jacksonville District	

1. PROJECT Pinellas County SPP Egmont Shoal Borrow Area		9. SIZE AND TYPE OF BIT: See Remarks	
		10. COORDINATE SYSTEM/DATUM: State Plane, FLW (U.S. Ft.)	HORIZONTAL: NAD83 / VERTICAL: NAVD88
2. BORING DESIGNATION: VB-EGSH2015-03	LOCATION COORDINATES: X = 406,056 Y = 1,196,616	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5442	12. TOTAL SAMPLES	DISTURBED: 6 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 05-05-15 / COMPLETED: 05-05-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -12.9 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 85 %	
8. TOTAL DEPTH OF BORING: 19.7 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-12.9	0.0						-12.9		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 7/2 light gray (SP) From El. -13.8 to -14.6 Ft., little fine-grained sand-sized shell From El. -14.6 to -17.9 Ft., trace shell	835			Vibracore -14.9		
					1				
			At El. -16.6 Ft., 1" shelly silty sand seam				-17.9		
			From El. -17.9 to -21.2 Ft., few fine-grained sand-sized shell		2		-19.9		
					3				
			From El. -21.2 to -21.9 Ft., little fine to medium-grained sand-sized shell, silt seams, 10Y 5/1 greenish gray From El. -21.9 to -23.9 Ft., some fine-grained sand-sized quartz, some sand to gravel-sized shell				-21.9		
					4		-23.9		
			From El. -23.9 to -26.9 Ft., mostly fine-grained sand-sized quartz		5				
-26.9	14.0						-26.9		
-27.9	15.0		SAND, poorly-graded with silt, some fine-grained sand-sized quartz, some sand to gravel-sized shell, few silt, trace limestone,		6				

(Continued)

SAJ FORM 1836
JUN 02

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County SPP	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 406,056 Y = 1,196,616	ELEVATION TOP OF BORING -12.9 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-29.6	16.7		strong reaction with HCl, silt seams, 10Y 5/1 greenish gray (SP-SM) SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, few silt, few coarse gravel-sized limestone, occasional cemented shell nodules (possible residual soil), 2.5Y 8/1 white (SP-SM)						
-32.6	19.7	NO RECOVERY					-32.6		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	2.0/2.3	SP*
2	5.0/5.3	SP*
3	7.0/7.3	SP*
4	9.0/9.3	SP*
5	11.0/11.3	SP*
6	14.0/14.3	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell
6 Percent Visual Shell

Abbreviations:

15 20 25 30 35

SAJ FORM 1836-A
JUN 02

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	Pinellas County SPP Egmont Shoal Borrow Area
2. BORING DESIGNATION	VB-EGSH2015-04
LOCATION COORDINATES	X = 407,058 Y = 1,196,379
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5442
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	19.8 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 6 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 05-05-15 / COMPLETED 05-05-15
16. ELEVATION TOP OF BORING	-12.6 Ft.
17. TOTAL RECOVERY FOR BORING	84 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-12.6	0.0						-12.6		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 6/2 light brownish gray (SP)	1650			Vibracore -13.6		
					1				
			From El. -14.8 to -15.4 Ft., trace shell						
			From El. -15.4 to -16.9 Ft., little fine to medium-grained sand-sized shell, 2.5Y 5/1 gray				-15.6		
					2				
			At El. -16.1 Ft., 2.5Y 7/1 light gray						
			From El. -16.9 to -17.6 Ft., trace shell, 2.5Y 6/2 light brownish gray				-17.6		
			From El. -17.6 to -18.3 Ft., little fine-grained sand-sized shell, silt seam		3				
			At El. -18.2 Ft., 1" silt seam						
			From El. -18.3 to -20.4 Ft., coarse gravel-sized shell seam, 2.5Y 5/1 gray						
			At El. -19.1 Ft., 5" silt seam						
			From El. -20.4 to -21.2 Ft., few sand to gravel-sized shell, 2.5Y 6/2 light brownish gray				-21.1		
			From El. -21.2 to -24.6 Ft., little fine-grained sand-sized shell, 2.5Y 5/1 gray		4				
			From El. -23.9 to -24.2 Ft., shell seam				-24.6		
			From El. -24.6 to -26.5 Ft., some fine to coarse-grained sand-sized shell, some fine-grained sand-sized quartz		5				
-26.5	13.9								
-27.6	15.0		SAND, silty, mostly fine-grained sand-sized quartz, some silt, few fine gravel-sized shell, strong reaction with HCl, 10Y 5/1 greenish gray				-27.6		

0 5 10 15

(Continued)

SAJ FORM 1836
JUN 02

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District	SHEET 2 OF 2 SHEETS

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County SPP	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 407,058 Y = 1,196,379	-12.6 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			(SM) SAND, poorly-graded, mostly sand to gravel-sized shell, little fine-grained sand-sized quartz, trace silt, strong reaction with HCl, silt seams, 10Y 8/1 light greenish gray (SP) From El. -28.4 to -29.1 Ft., few fine-grained sand-sized quartz, trace limestone		6				
-29.1	16.5								
-32.4	19.8	NO RECOVERY					-32.4		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	1.0/1.3	SP*
2	3.0/3.3	SP*
3	5.0/5.3	SP*
4	8.5/8.8	SP*
5	12.0/12.3	SP*
6	15.0/15.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell
6 Percent Visual Shell

Abbreviations:

15 20 25 30 35

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	Pinellas County SPP Egmont Shoal Borrow Area
2. BORING DESIGNATION	VB-EGSH2015-05
LOCATION COORDINATES	X = 408,066 Y = 1,196,112
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5442
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	19.8 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 6 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 05-04-15 / COMPLETED 05-04-15
16. ELEVATION TOP OF BORING	-12.7 Ft.
17. TOTAL RECOVERY FOR BORING	73 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-12.7	0.0						-12.7		
-14.0	1.3		SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium to coarse-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 7/2 light gray (SP) At El. -13.7 Ft., 2.5Y 8/1 white	720			Vibracore		
-14.9	2.2		SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt, trace shell, strong reaction with HCl, 2.5Y 6/2 light brownish gray (SP-SM) From El. -14.7 to -14.9 Ft., little medium-grained sand-sized shell, 2.5Y 5/1 gray		1		-14.7		
-16.8	4.1		SAND, poorly-graded, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz, trace silt, strong reaction with HCl, 2.5Y 5/1 gray (SP) SAND, poorly-graded, mostly fine-grained sand-sized quartz, some medium to coarse-grained sand-sized shell (SP) From El. -18.3 to -21.2 Ft., little fine to medium-grained sand-sized shell, 2.5Y 7/2 light gray		2		-17.2		
-21.2	8.5		SAND, poorly-graded, mostly medium to coarse-grained sand-sized shell, little fine-grained sand-sized quartz, 2.5Y 5/1 gray (SP)		3		-19.7		
-23.2	10.5		SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell (SP) From El. -24.5 to -26.7 Ft., little fine to medium-grained sand-sized shell, 2.5Y 7/2 light gray At El. -25.3 Ft., 2.5Y 6/2 light brownish gray		4		-22.2		
-27.1	14.4	NO RECOVERY	From El. -26.7 to -27.1 Ft., some sand to gravel-sized shell		5		-24.7		
					6		-26.7		

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(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District	SHEET 2 OF 2 SHEETS

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County SPP	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 408,066 Y = 1,196,112	-12.7 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-32.5	19.8	NO RECOVERY					-32.5		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	2.0/2.3	SP-SM*
2	4.5/4.8	SP*
3	7.0/7.3	SP*
4	9.5/9.8	SP*
5	12.0/12.3	SP*
6	14.0/14.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell
6 Percent Visual Shell

Abbreviations:

15
20
25
30
35

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT Pinellas County SPP Egmont Shoal Borrow Area		9. SIZE AND TYPE OF BIT See Remarks	
		10. COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83 / VERTICAL NAVD88
2. BORING DESIGNATION VB-EGSH2015-06	LOCATION COORDINATES X = 409,020 Y = 1,195,925	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY Corps of Engineers - CESAJ	CONTRACTOR FILE NO. 6738-15-5442	12. TOTAL SAMPLES	DISTURBED 5 / UNDISTURBED (UD) 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES 0	
5. DIRECTION OF BORING ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED 05-03-15 / COMPLETED 05-03-15
6. THICKNESS OF OVERBURDEN N/A		16. ELEVATION TOP OF BORING -11.4 Ft.	
7. DEPTH DRILLED INTO ROCK N/A		17. TOTAL RECOVERY FOR BORING 85 %	
8. TOTAL DEPTH OF BORING 19.8 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-11.4	0.0						-11.4		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, trace silt, strong reaction with HCl, 2.5Y 7/1 light gray (SP)	840			Vibracore		
			From El. -12.7 to -14.0 Ft., little fine to medium-grained sand-sized shell, 2.5Y 8/1 white				-13.4		
					1				
-14.0	2.6		At El. -13.9 Ft., 2" seam of 1" diameter shell						
			SAND, poorly-graded, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz, 2.5Y 6/1 gray (SP)						
-15.6	4.2								
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, 2.5Y 8/1 white (SP)				-16.4		
					2				
			From El. -19.2 to -21.9 Ft., little fine to coarse-grained sand-sized shell, 2.5Y 7/1 light gray				-19.4		
					3				
			From El. -21.9 to -22.4 Ft., trace shell, 3" silt seam, 2.5Y 6/1 gray				-22.4		
			At El. -22.2 Ft., 2.5Y 8/1 white		4				
			From El. -22.4 to -25.1 Ft., few fine-grained sand-sized shell						
			From El. -25.1 to -25.6 Ft., little fine to coarse-grained sand-sized shell, 2.5Y 7/1 light gray				-25.4		
					5				
			From El. -25.6 to -26.4 Ft., little fine-grained						

0 5 10 15

(Continued)

SAJ FORM 1836
JUN 02

DRILLING LOG (Cont. Sheet)	INSTALLATION: Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT: Pinellas County SPP	COORDINATE SYSTEM/DATUM: State Plane, FLW (U.S. Ft.)	HORIZONTAL: NAD83	VERTICAL: NAVD88
LOCATION COORDINATES: X = 409,020 Y = 1,195,925	ELEVATION TOP OF BORING: -11.4 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-28.2	16.8		sand-sized shell, 2.5Y 8/1 white From El. -26.4 to -28.2 Ft., trace shell, 2.5Y 6/1 gray From El. -27.5 to -27.9 Ft., silt seam At El. -27.8 Ft., 2.5Y 7/1 light gray						
-31.2	19.8	NO RECOVERY					-31.2		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	2.0/2.3	SP*
2	5.0/5.3	SP*
3	8.0/8.3	SP*
4	11.0/11.3	SP*
5	14.0/14.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Carbonate
1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell

Abbreviations:

15 20 25 30 35

SAJ FORM 1836-A
JUN 02

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	Pinellas County SPP Egmont Shoal Borrow Area
2. BORING DESIGNATION	VB-EGSH2015-07
LOCATION COORDINATES	X = 410,109 Y = 1,195,700
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5442
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	19.9 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 5 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 05-03-15 / COMPLETED 05-03-15
16. ELEVATION TOP OF BORING	-10.8 Ft.
17. TOTAL RECOVERY FOR BORING	81 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-10.8	0.0						-10.8		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 7/2 light gray (SP)	800			Vibracore		
							-12.8		
					1				
			From El. -14.1 to -14.8 Ft., few fine to medium-grained sand-sized shell						
			From El. -14.8 to -15.5 Ft., little fine to medium-grained sand-sized shell						
			From El. -15.5 to -18.4 Ft., some fine to coarse-grained sand-sized shell, 2.5Y 6/2 light brownish gray				-15.8		
					2				
			From El. -18.4 to -21.8 Ft., little fine to coarse-grained sand-sized shell, 2.5Y 7/2 light gray				-18.8		
					3				
							-21.8		
			From El. -21.8 to -23.4 Ft., few medium-grained sand-sized shell		4				
			From El. -23.4 to -24.9 Ft., some fine to medium-grained sand-sized shell						
			From El. -24.5 to -24.9 Ft., silt seam				-24.8		
			From El. -24.9 to -25.8 Ft., little medium-grained sand-sized shell		5				
			From El. -25.5 to -25.8 Ft., shell seam						

0 5 10 15

(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District	SHEET 2 OF 2 SHEETS

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County SPP	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 410,109 Y = 1,195,700	-10.8 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-26.5	15.7		From El. -25.8 to -26.5 Ft., trace shell						
-26.8	16.0		SAND, silty, mostly fine-grained sand-sized quartz, little silt, trace shell, strong reaction with HCl, 2.5Y 7/2 light gray (SM)						
-30.7	19.9	NO RECOVERY					-30.7		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	2.0/2.3	SP*
2	5.0/5.3	SP*
3	8.0/8.3	SP*
4	11.0/11.3	SP*
5	14.0/14.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell

Abbreviations:

15 20 25 30 35

DRILLING LOG	DIVISION	INSTALLATION	SHEET 1 OF 2 SHEETS
	South Atlantic	Jacksonville District	

1. PROJECT Pinellas County SPP Egmont Shoal Borrow Area		9. SIZE AND TYPE OF BIT: See Remarks	
		10. COORDINATE SYSTEM/DATUM: State Plane, FLW (U.S. Ft.)	HORIZONTAL: NAD83 / VERTICAL: NAVD88
2. BORING DESIGNATION: VB-EGSH2015-08	LOCATION COORDINATES: X = 411,057 Y = 1,195,355	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5442	12. TOTAL SAMPLES	DISTURBED: 5 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 05-03-15 / COMPLETED: 05-03-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -9.8 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 75 %	
8. TOTAL DEPTH OF BORING: 19.9 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-9.8	0.0						-9.8		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to coarse-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 8/1 white (SP)	750			Vibracore		
			From El. -11.1 to -12.9 Ft., few medium-grained sand-sized shell				-11.8		
					1				
			From El. -12.9 to -16.1 Ft., few fine-grained sand-sized shell, 2.5Y 6/1 gray				-14.8		
					2				
			From El. -16.1 to -16.7 Ft., trace shell, trace silt, 2.5Y 8/1 white						
			From El. -16.7 to -17.8 Ft., few sand to gravel-sized shell, 2.5Y 6/1 gray				-17.8		
			From El. -17.8 to -18.1 Ft., little sand to gravel-sized shell		3				
			From El. -18.1 to -23.8 Ft., trace shell				-20.8		
					4				
							-23.8		
			From El. -23.8 to -24.8 Ft., little fine-grained sand-sized shell		5				
-24.8	15.0								

0 5 10 15

(Continued)

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DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County SPP	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 411,057 Y = 1,195,355	ELEVATION TOP OF BORING -9.8 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-29.7	19.9	NO RECOVERY					-29.7		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	2.0/2.3	SP*
2	5.0/5.3	SP*
3	8.0/8.3	SP*
4	11.0/11.3	SP*
5	14.0/14.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell

Abbreviations:

15
20
25
30
35

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DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT Pinellas County SPP Egmont Shoal Borrow Area		9. SIZE AND TYPE OF BIT See Remarks	
		10. COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83 / VERTICAL NAVD88
2. BORING DESIGNATION VB-EGSH2015-09	LOCATION COORDINATES X = 412,059 Y = 1,195,106	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY Corps of Engineers - CESAJ	CONTRACTOR FILE NO. 6738-15-5442	12. TOTAL SAMPLES	DISTURBED 5 / UNDISTURBED (UD) 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES 0	
5. DIRECTION OF BORING ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED 05-03-15 / COMPLETED 05-03-15
6. THICKNESS OF OVERBURDEN N/A		16. ELEVATION TOP OF BORING -10.4 Ft.	
7. DEPTH DRILLED INTO ROCK N/A		17. TOTAL RECOVERY FOR BORING 81 %	
8. TOTAL DEPTH OF BORING 19.8 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-10.4	0.0						-10.4		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 8/1 white (SP)	800			Vibracore		
			From El. -11.2 to -11.7 Ft., some fine to medium-grained sand-sized shell						
			From El. -11.7 to -12.6 Ft., little fine to medium-grained sand-sized shell				-12.4		
			From El. -12.6 to -13.2 Ft., few medium-grained sand-sized shell, 2.5Y 6/1 gray		1				
			From El. -13.2 to -15.4 Ft., few fine to medium-grained sand-sized shell, 2.5Y 8/1 white						
							-15.4		
			From El. -15.4 to -18.4 Ft., few medium-grained sand-sized shell		2				
							-18.4		
			From El. -18.4 to -21.4 Ft., little medium to coarse-grained sand-sized shell		3				
							-21.4		
			From El. -21.4 to -22.1 Ft., some fine to coarse-grained sand-sized shell		4				
			From El. -22.1 to -24.4 Ft., few sand to gravel-sized shell, 2.5Y 7/1 light gray						
							-24.4		
			From El. -24.4 to -26.4 Ft., few medium-grained sand-sized shell		5				

0 5 10 15

(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District	SHEET 2 OF 2 SHEETS

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County SPP	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 412,059 Y = 1,195,106	-10.4 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-26.4	16.0								
-30.2	19.8	NO RECOVERY					-30.2		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	2.0/2.3	SP*
2	5.0/5.3	SP*
3	8.0/8.3	SP*
4	11.0/11.3	SP*
5	14.0/14.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Carbonate
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell

Abbreviations:

15 20 25 30 35

SAJ FORM 1836-A
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DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	Pinellas County SPP Egmont Shoal Borrow Area
2. BORING DESIGNATION	VB-EGSH2015-10
LOCATION COORDINATES	X = 403,631 Y = 1,196,328
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5442
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	19.8 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 5 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 05-05-15 / COMPLETED 05-05-15
16. ELEVATION TOP OF BORING	-9.9 Ft.
17. TOTAL RECOVERY FOR BORING	81 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-9.9	0.0						-9.9		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine to coarse-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 7/1 light gray (SP)	533			Vibracore		
			From El. -12.1 to -15.9 Ft., trace shell, 2.5Y 8/1 white				-12.9		
					1				
							-15.9		
			From El. -15.9 to -17.2 Ft., few fine-grained sand-sized shell		2				
			From El. -17.2 to -18.2 Ft., few fine to coarse-grained sand-sized shell, 2.5Y 7/1 light gray						
-18.2	8.3		SAND, poorly-graded with silt, mostly fine to coarse-grained sand-sized shell, some fine-grained sand-sized quartz, few silt, strong reaction with HCl, 2.5Y 6/1 gray (SP-SM)				-18.9		
-19.4	9.5				3				
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, some fine to coarse-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 6/1 gray (SP)				-21.4		
			From El. -21.4 to -22.7 Ft., little fine-grained sand-sized quartz, 2.5Y 6/1 gray		4				
-22.7	12.8		SAND, silty, mostly fine-grained sand-sized quartz, little silt, little sand to gravel-sized shell, strong reaction with HCl, 2.5Y 6/1 gray (SM)				-23.4		
			From El. -23.7 to -24.3 Ft., some silt, some fine to coarse-grained sand-sized shell		5				
-24.3	14.4		SAND, poorly-graded, mostly fine-grained sand-sized quartz, some fine to coarse-grained						

0 5 10 15

(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION	SHEET 2 OF 2 SHEETS
	Jacksonville District	

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County SPP	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 403,631 Y = 1,196,328	-9.9 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-25.9	16.0		sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 6/1 gray (SP)						
-29.7	19.8	NO RECOVERY					-29.7		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	3.0/3.3	SP*
2	6.0/6.3	SP*
3	9.0/9.3	SP-SM*
4	11.5/11.8	SP*
5	13.5/13.8	SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell

Abbreviations:

15 20 25 30 35

SAJ FORM 1836-A
JUN 02

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	Pinellas County SPP Egmont Shoal Borrow Area
2. BORING DESIGNATION	VB-EGSH2015-11
LOCATION COORDINATES	X = 404,325 Y = 1,196,087
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5442
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	19.8 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 5 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 05-05-15 / COMPLETED 05-05-15
16. ELEVATION TOP OF BORING	-8.2 Ft.
17. TOTAL RECOVERY FOR BORING	85 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-8.2	0.0						-8.2		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, some fine to medium-grained sand-sized shell, trace silt, strong reaction with HCl, N 6/ gray (SP) From El. -9.2 to -11.5 Ft., few fine-grained sand-sized shell, weak reaction with HCl, 2.5Y 7/1 light gray	840			Vibracore		
					1		-10.2		
			From El. -11.5 to -18.2 Ft., trace shell, 2.5Y 8/1 white				-14.2		
					2		-18.2		
			From El. -18.2 to -19.0 Ft., little fine to medium-grained sand-sized shell, strong reaction with HCl, N 5/ gray		3		-19.7		
-19.0	10.8		SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, few silt, strong reaction with HCl, 10Y 5/1 greenish gray (SP-SM) From El. -19.7 to -20.0 Ft., some fine to coarse-grained sand-sized shell		4				
-20.0	11.8		SAND, poorly-graded with silt, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz (SP-SM)		5		-21.7		
-21.7	13.5		SAND, poorly-graded, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz, strong reaction with HCl,						
-21.9	13.7								

0 5 10 15

(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District	SHEET 2 OF 2 SHEETS

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County SPP	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 404,325 Y = 1,196,087	-8.2 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
~~-23.4~~	~~15.2~~		10Y 5/1 greenish gray (SP)						
-23.9	15.7		SAND, poorly-graded, mostly fine-grained sand-sized quartz, some silt, little sand to gravel-sized shell (SP)						
-25.0	16.8		From El. -22.9 to -23.2 Ft., shell seam At El. -23.2 Ft., 2" silt seam						
		NO RECOVERY	SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt, trace shell, strong reaction with HCl, 2.5Y 8/1 white (SP)						
-28.0	19.8		SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, few silt, strong reaction with HCl, N 5/ gray (SP-SM)				-28.0		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	2.0/2.3	SP*
2	6.0/6.3	SP*
3	10.0/10.3	SP*
4	11.5/11.8	SP-SM*
5	13.5/13.8	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell

Abbreviations:

15 20 25 30 35

SAJ FORM 1836-A
JUN 02

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	Pinellas County SPP Egmont Shoal Borrow Area
2. BORING DESIGNATION	VB-EGSH2015-12
LOCATION COORDINATES	X = 405,371 Y = 1,195,875
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5442
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	19.3 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 5 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 05-05-15 / COMPLETED 05-05-15
16. ELEVATION TOP OF BORING	-9.2 Ft.
17. TOTAL RECOVERY FOR BORING	88 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-9.2	0.0						-9.2		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell, strong reaction with HCl, 2.5Y 7/1 light gray (SP)	850			Vibracore		
			From El. -10.7 to -11.2 Ft., little fine to medium-grained sand-sized shell				-11.2		
			From El. -11.2 to -13.2 Ft., little medium to coarse-grained sand-sized shell		1				
			From El. -13.2 to -20.7 Ft., trace shell, 2.5Y 8/1 white				-14.2		
					2				
							-17.2		
					3				
							-20.7		
			From El. -20.7 to -21.2 Ft., some fine to medium-grained sand-sized shell, 2.5Y 6/1 gray		4				
-21.2	12.0		SAND, poorly-graded with silt, some fine to coarse-grained sand-sized shell, some fine-grained sand-sized quartz, few silt, strong reaction with HCl, 2.5Y 6/1 gray (SP-SM)				-22.7		
					5				
-24.1	14.9								

0 5 10 15

(Continued)

SAJ FORM 1836
JUN 02

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District	SHEET 2 OF 2 SHEETS

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County SPP	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 405,371 Y = 1,195,875	-9.2 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-26.2	17.0		SAND, poorly-graded, mostly fine-grained sand-sized quartz, some fine to coarse-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 6/1 gray (SP)						
-28.5	19.3	NR					-28.5		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	2.0/2.3	SP*
2	5.0/5.3	SP*
3	8.0/8.3	SP*
4	11.5/11.8	SP*
5	13.5/13.8	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell

Abbreviations:

15
20
25
30
35

SAJ FORM 1836-A
JUN 02

DRILLING LOG	DIVISION	INSTALLATION	SHEET 1 OF 2 SHEETS
	South Atlantic	Jacksonville District	

1. PROJECT Pinellas County SPP Egmont Shoal Borrow Area		9. SIZE AND TYPE OF BIT: See Remarks	
		10. COORDINATE SYSTEM/DATUM: State Plane, FLW (U.S. Ft.)	HORIZONTAL: NAD83 / VERTICAL: NAVD88
2. BORING DESIGNATION: VB-EGSH2015-13	LOCATION COORDINATES: X = 406,314 Y = 1,195,590	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5442	12. TOTAL SAMPLES	DISTURBED: 5 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 05-04-15 / COMPLETED: 05-04-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -11.7 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 81 %	
8. TOTAL DEPTH OF BORING: 19.8 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-11.7	0.0						-11.7		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt, strong reaction with HCl, 2.5Y 8/1 white (SP)	800			Vibracore		
							-13.7		
			From El. -13.7 to -22.7 Ft., few fine-grained sand-sized shell		1				
							-16.7		
					2				
							-19.7		
					3				
							-22.7		
			From El. -22.7 to -24.7 Ft., trace shell		4				
-24.7	13.0								
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, few silt, strong reaction with HCl, 2.5Y 6/1 gray (SP-SM)				-25.7		
					5				
-26.7	15.0								

0 5 10 15

(Continued)

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DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District	SHEET 2 OF 2 SHEETS

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County SPP	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 406,314 Y = 1,195,590	-11.7 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-27.7	16.0		SAND, well-graded, mostly fine to coarse-grained sand-sized shell, little fine-grained sand-sized quartz, trace silt, strong reaction with HCl, 2.5Y 6/1 gray (SW)						
-31.5	19.8	NO RECOVERY					-31.5		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	2.0/2.3	SP*
2	5.0/5.3	SP*
3	8.0/8.3	SP*
4	11.0/11.3	SP*
5	14.0/14.3	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Carbonate
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell

Abbreviations:

15 20 25 30 35

SAJ FORM 1836-A
JUN 02

DRILLING LOG	DIVISION	INSTALLATION	SHEET 1 OF 2 SHEETS
	South Atlantic	Jacksonville District	

1. PROJECT: Pinellas County SPP		9. SIZE AND TYPE OF BIT: See Remarks	
		10. COORDINATE SYSTEM/DATUM: State Plane, FLW (U.S. Ft.)	HORIZONTAL: NAD83 / VERTICAL: MLLW
2. BORING DESIGNATION: VB-EGSH2015-14	LOCATION COORDINATES: X = 407,392 Y = 1,195,341	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5442	12. TOTAL SAMPLES	DISTURBED: 4 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 05-03-15 / COMPLETED: 05-03-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -11.8 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 85 %	
8. TOTAL DEPTH OF BORING: 19.8 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: Stephanie A. Setser, P.E., Geotechnical Engineer	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-11.8	0.0						-11.8		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 8/1 white (SP)	840			Vibracore		
							-13.8		
			From El. -13.8 to -15.8 Ft., little sand to gravel-sized shell		1				
			At El. -14.3 Ft., 3" diameter shell fragments						
			From El. -15.8 to -16.8 Ft., trace shell						
-16.8	5.0						-16.8		
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, few silt, strong reaction with HCl, 2.5Y 8/1 white (SP-SM)		2				
			At El. -18.8 Ft., 2.5Y 7/1 light gray						
			At El. -19.3 Ft., 2.5Y 8/1 white						
-19.8	8.0						-19.8		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 8/1 white (SP)		3				
			At El. -21.8 Ft., 2.5Y 7/1 light gray						
-22.8	11.0						-22.8		
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell, few silt, strong reaction with HCl, N 7/ light gray (SP-SM)		4				
-24.3	12.5		From El. -23.5 to -24.3 Ft., occasional silt seams						
-24.8	13.0		SAND, poorly-graded, mostly fine-grained sand-sized quartz, strong reaction with HCl, 2.5Y 8/1 white (SP)						
			SAND, silty, mostly fine-grained sand-sized quartz, little silt, little fine to medium-grained sand-sized shell, strong reaction with HCl, N 7/ light gray (SM)						
-26.8	15.0								

0 5 10 15

(Continued)

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DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District	SHEET 2 OF 2 SHEETS

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County SPP	State Plane, FLW (U.S. Ft.)	NAD83	MLLW

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 407,392 Y = 1,195,341	-11.8 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			From El. -25.4 to -26.5 Ft., trace shell From El. -26.5 to -26.8 Ft., little fine to medium-grained sand-sized shell, N 5/ gray						
-28.6	16.8		SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, some fine-grained sand-sized shell, few silt, strong reaction with HCl, N 5/ gray (SP-SM)						
-31.6	19.8	NO RECOVERY					-31.6		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	2.0/2.3	SP*
2	5.0/5.3	SP-SM*
3	8.0/8.3	SP*
4	11.0/11.3	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell

Abbreviations:

15 20 25 30 35

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JUN 02

Boring Designation VB-EGSH2015-15

DRILLING LOG	DIVISION South Atlantic	INSTALLATION Jacksonville District	SHEET 1 OF 2 SHEETS

1. PROJECT: Pinellas County SPP	9. SIZE AND TYPE OF BIT: See Remarks
	10. COORDINATE SYSTEM/DATUM: State Plane, FLW (U.S. Ft.) — HORIZONTAL: NAD83 — VERTICAL: MLLW
2. BORING DESIGNATION: VB-EGSH2015-15 — LOCATION COORDINATES: X = 408,384 Y = 1,195,153	11. MANUFACTURER'S DESIGNATION OF DRILL: ☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ — CONTRACTOR FILE NO.: 6738-15-5442	12. TOTAL SAMPLES — DISTURBED: 6 — UNDISTURBED (UD): 0
4. NAME OF DRILLER	13. TOTAL NUMBER CORE BOXES: 0
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED — DEG. FROM VERTICAL — BEARING	14. ELEVATION GROUND WATER
	15. DATE BORING — STARTED: 05-03-15 — COMPLETED: 05-03-15
6. THICKNESS OF OVERBURDEN: N/A	16. ELEVATION TOP OF BORING: -11.5 Ft.
7. DEPTH DRILLED INTO ROCK: N/A	17. TOTAL RECOVERY FOR BORING: 76 %
8. TOTAL DEPTH OF BORING: 19.8 Ft.	18. SIGNATURE AND TITLE OF INSPECTOR: Stephanie A. Setser, P.E., Geotechnical Engineer

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-11.5	0.0						-11.5		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 7/1 light gray (SP)	500			Vibracore		
			At El. -13.7 Ft., 2.5Y 6/2 light brownish gray				-14.5		
			From El. -14.5 to -16.0 Ft., little sand to gravel-sized shell		1		-16.0		
			At El. -15.8 Ft., 2" silt seam From El. -16.0 to -17.4 Ft., some sand to gravel-sized shell, 2.5Y 7/2 light gray		2		-17.0		
			From El. -17.4 to -17.8 Ft., little fine to medium-grained sand-sized shell, strong reaction with HCl, 2.5Y 5/2 grayish brown From El. -17.8 to -18.8 Ft., some fine to coarse-grained sand-sized shell, strong reaction with HCl, 2.5Y 7/1 light gray From El. -18.8 to -19.2 Ft., shell seams		3		-17.8		
					4		-20.5		
			At El. -22.7 Ft., 2" shell seam From El. -22.9 to -24.0 Ft., little fine-grained sand-sized shell, 2.5Y 6/2 light brownish gray		5		-23.5		
-24.0	12.5		SAND, silty, mostly fine-grained sand-sized quartz, little fine to coarse-grained sand-sized shell, little silt, strong reaction with HCl, 2.5Y 6/2 light brownish gray (SM)		6				
-26.5	15.0								

0 5 10 15

(Continued)

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DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County SPP	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL MLLW
LOCATION COORDINATES X = 408,384 Y = 1,195,153	ELEVATION TOP OF BORING -11.5 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-31.3	19.8	NO RECOVERY	From El. -26.3 to -26.5 Ft., little medium to coarse-grained sand-sized shell				-31.3		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	3.0/3.3	SP*
2	4.5/4.8	SP*
3	5.5/5.8	SP*
4	6.3/6.6	SP*
5	9.0/9.3	SP*
6	12.0/12.3	SP*

*Lab visual classification based on gradation curve. No Atterberg limits.

Abbreviations:
NR = Not Recorded.

DRILLING LOG	DIVISION	INSTALLATION	SHEET 1 OF 2 SHEETS
	South Atlantic	Jacksonville District	

1. PROJECT Pinellas County SPP Egmont Shoal Borrow Area		9. SIZE AND TYPE OF BIT: See Remarks	
		10. COORDINATE SYSTEM/DATUM: State Plane, FLW (U.S. Ft.)	HORIZONTAL: NAD83 / VERTICAL: NAVD88
2. BORING DESIGNATION: VB-EGSH2015-16	LOCATION COORDINATES: X = 409,462 Y = 1,194,898	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5442	12. TOTAL SAMPLES	DISTURBED: 5 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 05-03-15 / COMPLETED: 05-03-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -11.8 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 76 %	
8. TOTAL DEPTH OF BORING: 19.8 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-11.8	0.0						-11.8		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 8/1 white (SP) From El. -12.8 to -13.9 Ft., few fine to coarse-grained sand-sized shell	750			Vibracore		
							-13.8		
			From El. -13.9 to -16.9 Ft., few fine-grained sand-sized shell, 2.5Y 7/1 light gray		1				
							-16.8		
			From El. -16.9 to -19.8 Ft., some fine to coarse-grained sand-sized shell		2				
			At El. -17.9 Ft., 2.5Y 6/1 gray						
							-19.8		
			From El. -19.8 to -21.8 Ft., some fine-grained sand-sized shell		3				
-21.8	10.0								
			SAND, poorly-graded, mostly sand to gravel-sized shell, little fine-grained sand-sized quartz (SP)						
							-22.8		
					4				
							-25.8		
			From El. -25.8 to -26.8 Ft., some fine-grained sand-sized quartz		5				
-26.8	15.0								

0 5 10 15

(Continued)

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DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County SPP	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 409,462 Y = 1,194,898	ELEVATION TOP OF BORING -11.8 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-31.6	19.8	NO RECOVERY					-31.6		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	2.0/2.3	SP*
2	5.0/5.3	SP*
3	8.0/8.3	SP*
4	11.0/11.3	SP*
5	14.0/14.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Carbonate
1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell

Abbreviations:

15 20 25 30 35

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JUN 02

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	Pinellas County SPP Egmont Shoal Borrow Area
2. BORING DESIGNATION	VB-EGSH2015-17
LOCATION COORDINATES	X = 410,399 Y = 1,194,583
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5442
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	19.8 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 4 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 05-03-15 / COMPLETED 05-03-15
16. ELEVATION TOP OF BORING	-8.5 Ft.
17. TOTAL RECOVERY FOR BORING	77 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-8.5	0.0						-8.5		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 8/1 white (SP)	507			Vibracore		
			From El. -10.4 to -11.5 Ft., trace shell						
							-11.5		
			From El. -11.5 to -12.0 Ft., some fine to coarse-grained sand-sized shell, 2.5Y 7/1 light gray		1				
			From El. -12.0 to -13.5 Ft., trace shell, 2.5Y 8/1 white						
-13.5	5.0								
			SAND, poorly-graded, mostly sand to gravel-sized shell, little fine-grained sand-sized quartz, 2.5Y 7/1 light gray (SP)						
-14.5	6.0						-14.5		
-15.1	6.6		SAND, well-graded, mostly sand to gravel-sized shell, little fine-grained sand-sized quartz, trace silt, strong reaction with HCl, 2.5Y 7/1 light gray (SW)		2				
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, strong reaction with HCl, 2.5Y 7/1 light gray (SP)						
							-17.5		
					3				
							-20.5		
					4				
			From El. -21.2 to -23.7 Ft., trace shell, 2.5Y 6/1 gray						

0 5 10 15

(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County SPP	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 410,399 Y = 1,194,583	ELEVATION TOP OF BORING -8.5 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-23.7	15.2								
		NO RECOVERY							
-28.3	19.8						-28.3		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	3.0/3.3	SP*
2	6.0/6.3	SW*
3	9.0/9.3	SP*
4	12.0/12.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell

Abbreviations:

15 20 25 30 35

DRILLING LOG	DIVISION	INSTALLATION	SHEET 1 OF 2 SHEETS
	South Atlantic	Jacksonville District	

1. PROJECT Pinellas County SPP Egmont Shoal Borrow Area		9. SIZE AND TYPE OF BIT: See Remarks	
		10. COORDINATE SYSTEM/DATUM: State Plane, FLW (U.S. Ft.)	HORIZONTAL: NAD83 / VERTICAL: NAVD88
2. BORING DESIGNATION: VB-EGSH2015-18	LOCATION COORDINATES: X = 411,385 Y = 1,194,353	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5442	12. TOTAL SAMPLES	DISTURBED: 5 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 05-03-15 / COMPLETED: 05-03-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -10.8 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 78 %	
8. TOTAL DEPTH OF BORING: 19.8 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-10.8	0.0						-10.8		
-12.3	1.5		SAND, poorly-graded, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, trace silt, strong reaction with HCl, 2.5Y 8/1 white (SP)	775			Vibracore		
-15.8	5.0		SAND, poorly-graded, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz, 2.5Y 5/1 gray (SP) At El. -12.9 Ft., 2.5Y 6/1 gray		1		-12.8		
-20.8	10.0		SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell (SP)		2		-15.8		
-23.5	12.7		SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, few silt, strong reaction with HCl, 2.5Y 6/1 gray (SP-SM)		3		-18.8		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 6/1 gray (SP)		4		-21.8		
					5		-24.3		

0 5 10 15

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(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District	SHEET 2 OF 2 SHEETS

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County SPP	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 411,385 Y = 1,194,353	-10.8 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-26.3	15.5		From El. -25.8 to -26.3 Ft., trace shell, 2.5Y 7/1 light gray						
-30.6	19.8	NO RECOVERY					-30.6		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	2.0/2.3	SP*
2	5.0/5.3	SP*
3	8.0/8.3	SP*
4	11.0/11.3	SP-SM*
5	13.5/13.8	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell

Abbreviations:

15 20 25 30 35

SAJ FORM 1836-A
JUN 02

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	Pinellas County SPP Egmont Shoal Borrow Area
2. BORING DESIGNATION	VB-EGSH2015-19
LOCATION COORDINATES	X = 403,641 Y = 1,195,383
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5442
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	19.7 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 4 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 05-05-15 / COMPLETED 05-05-15
16. ELEVATION TOP OF BORING	-10.4 Ft.
17. TOTAL RECOVERY FOR BORING	83 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-10.4	0.0						-10.4		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt, strong reaction with HCl, 2.5Y 8/1 white (SP)	547			Vibracore		
			From El. -13.4 to -17.7 Ft., few fine-grained sand-sized shell		1		-13.4		
					2		-16.4		
			From El. -17.7 to -17.9 Ft., few fine to medium-grained sand-sized shell, 2.5Y 6/1 gray From El. -17.9 to -19.2 Ft., few sand to gravel-sized shell, 2.5Y 5/1 gray						
			From El. -19.2 to -20.6 Ft., little fine to medium-grained sand-sized shell, 5GY 6/1 greenish gray				-19.9		
					3				
-20.9	10.5		From El. -20.6 to -20.9 Ft., few sand to gravel-sized shell, N 5/ gray SAND, poorly-graded, mostly fine to coarse-grained sand-sized shell, some fine-grained sand-sized quartz, N 6/ gray (SP)				-21.4		
					4				
-22.2	11.8		SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt, 2.5Y 8/1 white (SP)						

0 5 10 15

(Continued)

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DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District	SHEET 2 OF 2 SHEETS

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County SPP	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 403,641 Y = 1,195,383	-10.4 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-26.4	16.0								
-26.8	16.4		SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt, few fine to coarse-grained sand-sized shell, strong reaction with HCl, 2.5Y 8/1 white (SP-SM)						
-30.1	19.7	NO RECOVERY					-30.1		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	3.0/3.3	SP*
2	6.0/6.3	SP*
3	9.5/9.8	SP*
4	11.0/11.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell

Abbreviations:

15
20
25
30
35

SAJ FORM 1836-A
JUN 02

DRILLING LOG	DIVISION	INSTALLATION	SHEET 1 OF 2 SHEETS
	South Atlantic	Jacksonville District	

1. PROJECT Pinellas County SPP Egmont Shoal Borrow Area		9. SIZE AND TYPE OF BIT: See Remarks	
		10. COORDINATE SYSTEM/DATUM: State Plane, FLW (U.S. Ft.)	HORIZONTAL: NAD83 / VERTICAL: NAVD88
2. BORING DESIGNATION: VB-EGSH2015-20	LOCATION COORDINATES: X = 404,708 Y = 1,195,139	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5442	12. TOTAL SAMPLES	DISTURBED: 5 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 05-05-15 / COMPLETED: 05-05-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -8.2 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 88 %	
8. TOTAL DEPTH OF BORING: 19.8 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-8.2	0.0						-8.2		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 8/1 white (SP)	583			Vibracore		
			From El. -10.2 to -11.2 Ft., trace shell				-11.2		
			From El. -11.2 to -20.2 Ft., few fine-grained sand-sized shell		1		-14.2		
					2		-17.2		
					3				
			At El. -18.9 Ft., 2.5Y 7/1 light gray						
-20.2	12.0						-20.2		
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell, few silt, strong reaction with HCl, 2.5Y 7/1 light gray (SP-SM) From El. -21.2 to -23.2 Ft., little fine to coarse-grained sand-sized shell, 2.5Y 6/1 gray		4				

0 5 10 15

(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County SPP	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 404,708 Y = 1,195,139	ELEVATION TOP OF BORING -8.2 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-24.2	16.0		From El. -23.2 to -24.2 Ft., little fine to medium-grained sand-sized shell, 2.5Y 5/1 gray				-24.2		
-25.7	17.5		SAND, well-graded, mostly sand to gravel-sized shell, little fine-grained sand-sized quartz, trace silt, strong reaction with HCl, 2.5Y 6/1 gray (SW) From El. -24.4 to -25.7 Ft., mostly fine to medium-grained sand-sized shell, some fine-grained sand-sized quartz, 2.5Y 6/1 gray		5				
-28.0	19.8	NR					-28.0		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	3.0/3.3	SP*
2	6.0/6.3	SP*
3	9.0/9.3	SP*
4	12.0/12.3	SP-SM*
5	16.0/16.3	SW*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Carbonate
5 Percent Visual Shell

Abbreviations:

DRILLING LOG	DIVISION	INSTALLATION	SHEET 1 OF 2 SHEETS
	South Atlantic	Jacksonville District	

1. PROJECT Pinellas County SPP Egmont Shoal Borrow Area		9. SIZE AND TYPE OF BIT: See Remarks	
		10. COORDINATE SYSTEM/DATUM: State Plane, FLW (U.S. Ft.)	HORIZONTAL: NAD83 / VERTICAL: NAVD88
2. BORING DESIGNATION: VB-EGSH2015-21	LOCATION COORDINATES: X = 405,689 Y = 1,194,867	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5442	12. TOTAL SAMPLES	DISTURBED: 5 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 05-05-15 / COMPLETED: 05-05-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -7.8 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 84 %	
8. TOTAL DEPTH OF BORING: 19.8 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-7.8	0.0						-7.8		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt, strong reaction with HCl, 2.5Y 8/1 white (SP)	553			Vibracore		
			From El. -10.4 to -10.8 Ft., few fine to medium-grained sand-sized shell, 2.5Y 7/1 light gray At El. -10.7 Ft., 2.5Y 8/1 white From El. -10.8 to -22.7 Ft., few fine-grained sand-sized shell		1		-10.8		
					2		-13.8		
					3		-16.8		
					4		-19.8		
							-22.8		

0 5 10 15

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(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District	SHEET 2 OF 2 SHEETS

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County SPP	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 405,689 Y = 1,194,867	-7.8 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-24.4	16.6		From El. -22.7 to -24.4 Ft., some fine to coarse-grained sand-sized shell, 2.5Y 6/1 gray		5				
-27.6	19.8	NO RECOVERY					-27.6		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	3.0/3.3	SP*
2	6.0/6.3	SP*
3	9.0/9.3	SP*
4	12.0/12.3	SP*
5	15.0/15.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell

Abbreviations:

15 20 25 30 35

SAJ FORM 1836-A
JUN 02

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	Pinellas County SPP Egmont Shoal Borrow Area
2. BORING DESIGNATION	VB-EGSH2015-22
LOCATION COORDINATES	X = 406,685 Y = 1,194,582
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5442
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	19.8 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 5 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 05-05-15 / COMPLETED 05-05-15
16. ELEVATION TOP OF BORING	-8.6 Ft.
17. TOTAL RECOVERY FOR BORING	85 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-8.6	0.0						-8.6		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt, trace shell, strong reaction with HCl, 2.5Y 7/1 light gray (SP)	676			Vibracore		
			From El. -10.1 to -11.0 Ft., few fine-grained sand-sized shell						
			From El. -11.0 to -14.1 Ft., trace shell, 2.5Y 8/1 white		1		-11.1		
			From El. -14.1 to -17.0 Ft., few fine-grained sand-sized shell		2		-14.1		
			From El. -14.5 to -14.9 Ft., intermittent silt seams						
			At El. -15.2 Ft., 2.5Y 7/1 light gray						
			From El. -17.0 to -17.7 Ft., little fine to medium-grained sand-sized shell		3		-17.3		
			From El. -17.7 to -18.6 Ft., few fine-grained sand-sized shell, 2.5Y 8/1 white						
			From El. -18.6 to -23.6 Ft., trace shell						
			From El. -19.4 to -19.6 Ft., intermittent silt seams				-20.6		
					4				
			From El. -21.6 to -24.1 Ft., intermittent silt seams						
-23.6	15.0						-23.6		

0 5 10 15

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(Continued)

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District	SHEET 2 OF 2 SHEETS

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County SPP	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 406,685 Y = 1,194,582	-8.6 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell, few silt, strong reaction with HCl, 2.5Y 8/1 white (SP-SM) At El. -24.1 Ft., 3" silty sand seam At El. -25.1 Ft., 3" silty sand seam At El. -25.3 Ft., 3" shell seams		5				
-25.5	16.9								
-28.4	19.8	NO RECOVERY					-28.4		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	2.5/2.8	SP*
2	5.5/5.8	SP*
3	8.7/9.0	SP*
4	12.0/12.3	SP*
5	15.0/15.3	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Carbonate
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell

Abbreviations:

15 20 25 30 35

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JUN 02

DRILLING LOG	DIVISION	INSTALLATION	SHEET 1 OF 2 SHEETS
	South Atlantic	Jacksonville District	

1. PROJECT Pinellas County SPP Egmont Shoal Borrow Area		9. SIZE AND TYPE OF BIT: See Remarks	
		10. COORDINATE SYSTEM/DATUM: State Plane, FLW (U.S. Ft.)	HORIZONTAL: NAD83 / VERTICAL: NAVD88
2. BORING DESIGNATION: VB-EGSH2015-23	LOCATION COORDINATES: X = 407,688 Y = 1,194,418	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5442	12. TOTAL SAMPLES	DISTURBED: 5 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 05-03-15 / COMPLETED: 05-03-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -10.4 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 71 %	
8. TOTAL DEPTH OF BORING: 19.8 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-10.4	0.0						-10.4		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt, trace shell, strong reaction with HCl, A 5-foot long thin lense of blue clay was observed., 2.5Y 7/2 light gray (SP) From El. -11.3 to -12.4 Ft., coarse-grained shelly sand seam	700			Vibracore -12.4		
			From El. -12.4 to -15.6 Ft., few fine-grained sand-sized shell		1		-15.4		
			From El. -15.6 to -18.4 Ft., little fine-grained sand-sized shell, 2.5Y 7/1 light gray		2		-18.4		
			From El. -18.4 to -21.4 Ft., few medium-grained sand-sized shell		3		-21.4		
			From El. -21.4 to -22.8 Ft., few fine-grained sand-sized shell At El. -21.8 Ft., 2" silty sand seam		4				
-22.8	12.4								
-23.4	13.0		SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt, strong reaction with HCl, 2.5Y 6/2 light brownish gray (SP-SM) At El. -23.3 Ft., 1" silt seam		5		-23.4		
-24.4	14.0	NO RECOVERY	SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt, strong reaction with HCl,						

0 5 10 15

(Continued)

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DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County SPP	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 407,688 Y = 1,194,418	ELEVATION TOP OF BORING -10.4 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-30.2	19.8	NO RECOVERY	2.5Y 6/2 light brownish gray (SP) At El. -24.0 Ft., 2" silt seam				-30.2		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	2.0/2.3	SP*
2	5.0/5.3	SP*
3	8.0/8.3	SP*
4	11.0/11.3	SP*
5	13.0/13.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell

Abbreviations:

DRILLING LOG

DIVISION	South Atlantic
INSTALLATION	Jacksonville District
SHEET	1 OF 2 SHEETS
1. PROJECT	Pinellas County SPP Egmont Shoal Borrow Area
2. BORING DESIGNATION	VB-EGSH2015-24
LOCATION COORDINATES	X = 408,685 Y = 1,194,139
3. DRILLING AGENCY	Corps of Engineers - CESAJ
CONTRACTOR FILE NO.	6738-15-5442
4. NAME OF DRILLER	
5. DIRECTION OF BORING	☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL	
BEARING	
6. THICKNESS OF OVERBURDEN	N/A
7. DEPTH DRILLED INTO ROCK	N/A
8. TOTAL DEPTH OF BORING	19.8 Ft.
9. SIZE AND TYPE OF BIT	See Remarks
10. COORDINATE SYSTEM/DATUM	State Plane, FLW (U.S. Ft.)
HORIZONTAL	NAD83
VERTICAL	NAVD88
11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
12. TOTAL SAMPLES	DISTURBED 5 / UNDISTURBED (UD) 0
13. TOTAL NUMBER CORE BOXES	0
14. ELEVATION GROUND WATER	
15. DATE BORING	STARTED 05-03-15 / COMPLETED 05-03-15
16. ELEVATION TOP OF BORING	-10.5 Ft.
17. TOTAL RECOVERY FOR BORING	72 %
18. SIGNATURE AND TITLE OF INSPECTOR	,

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-10.5	0.0						-10.5		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell, trace silt, strong reaction with HCl, with occasional sand to gravel-sized shell seams, 2.5Y 7/1 light gray (SP)	473			Vibracore		
							-13.5		
					1				
							-16.5		
			From El. -16.5 to -18.4 Ft., little fine to medium-grained sand-sized shell		2				
			From El. -18.4 to -21.0 Ft., few fine-grained sand-sized shell, 2.5Y 6/2 light brownish gray				-19.5		
					3				
			At El. -20.2 Ft., 2.5Y 7/1 light gray						
			From El. -21.0 to -23.5 Ft., trace shell, 2.5Y 6/2 light brownish gray				-22.0		
					4				
			From El. -22.3 to -24.7 Ft., intermittent silt seams						
-23.5	13.0						-23.5		
-24.7	14.2	NO RECOVERY	SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell, few silt, strong reaction with HCl, 2.5Y 6/2 light brownish gray (SP-SM)		5				

0 5 10 15

(Continued)

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DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County SPP	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 408,685 Y = 1,194,139	ELEVATION TOP OF BORING -10.5 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-30.3	19.8	NO RECOVERY					-30.3		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	3.0/3.3	SP*
1	3.0/3.3	SP*
2	6.0/6.3	SP*
3	9.0/9.3	SP*
4	11.5/11.8	SP*
5	13.0/13.3	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell

Abbreviations:

15 20 25 30 35

SAJ FORM 1836-A
JUN 02

DRILLING LOG	DIVISION	INSTALLATION	SHEET 1 OF 2 SHEETS
	South Atlantic	Jacksonville District	

1. PROJECT: Pinellas County SPP, Egmont Shoal Borrow Area		9. SIZE AND TYPE OF BIT: See Remarks	
		10. COORDINATE SYSTEM/DATUM: State Plane, FLW (U.S. Ft.)	HORIZONTAL: NAD83 / VERTICAL: NAVD88
2. BORING DESIGNATION: VB-EGSH2015-25	LOCATION COORDINATES: X = 409,676 Y = 1,193,836	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5442	12. TOTAL SAMPLES	DISTURBED: 5 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 05-04-15 / COMPLETED: 05-04-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -10.6 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 76 %	
8. TOTAL DEPTH OF BORING: 19.8 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR: ,	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-10.6	0.0						-10.6		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell, strong reaction with HCl, 2.5Y 8/1 white (SP)	750			Vibracore		
			From El. -11.4 to -12.7 Ft., trace shell, trace silt				-12.6		
			From El. -12.7 to -15.6 Ft., some fine to coarse-grained sand-sized shell, discontinue silt		1		-15.6		
			From El. -15.6 to -21.1 Ft., few fine-grained sand-sized shell		2				
			At El. -16.3 Ft., 2.5Y 6/1 gray						
			At El. -17.0 Ft., 2.5Y 8/1 white				-18.6		
			From El. -18.6 to -21.1 Ft., trace silt		3				
-21.1	10.5								
-21.4	10.8		SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt, trace shell, strong reaction with HCl, 2.5Y 7/1 light gray (SP-SM)				-21.6		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 8/1 white (SP)		4				
			At El. -23.2 Ft., 2.5Y 7/1 light gray						
			At El. -23.4 Ft., 2.5Y 8/1 white				-24.1		
			From El. -24.1 to -25.6 Ft., few fine-grained sand-sized shell, discontinue silt		5				
			At El. -24.5 Ft., 2.5Y 7/1 light gray						
-25.6	15.0								

0 5 10 15

(Continued)

SAJ FORM 1836
JUN 02

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County SPP	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 409,676 Y = 1,193,836	ELEVATION TOP OF BORING -10.6 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-30.4	19.8	NO RECOVERY					-30.4		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	2.0/2.3	SP*
2	5.0/5.3	SP*
3	8.0/8.3	SP*
4	11.0/11.3	SP*
5	13.5/13.8	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Carbonate
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell

Abbreviations:

15
20
25
30
35

SAJ FORM 1836-A
JUN 02

DRILLING LOG	DIVISION	INSTALLATION	SHEET 1 OF 2 SHEETS
	South Atlantic	Jacksonville District	

1. PROJECT Pinellas County SPP Egmont Shoal Borrow Area		9. SIZE AND TYPE OF BIT: See Remarks	
		10. COORDINATE SYSTEM/DATUM: State Plane, FLW (U.S. Ft.)	HORIZONTAL: NAD83 / VERTICAL: NAVD88
2. BORING DESIGNATION: VB-EGSH2015-26	LOCATION COORDINATES: X = 404,034 Y = 1,194,332	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5442	12. TOTAL SAMPLES	DISTURBED: 5 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 05-05-15 / COMPLETED: 05-05-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -13.3 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 81 %	
8. TOTAL DEPTH OF BORING: 19.7 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-13.3	0.0						-13.3		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt, strong reaction with HCl, 2.5Y 8/1 white (SP)	800			Vibracore		
			From El. -15.3 to -18.3 Ft., little fine to medium-grained sand-sized shell, trace silt		1		-15.3		
			From El. -18.3 to -19.1 Ft., few fine-grained sand-sized shell		2		-18.3		
			From El. -19.1 to -20.0 Ft., little medium to coarse-grained sand-sized shell, 2.5Y 7/1 light gray						
			From El. -20.0 to -21.3 Ft., trace shell				-21.3		
			From El. -21.3 to -24.3 Ft., little fine to medium-grained sand-sized shell		3				
			At El. -22.0 Ft., 2" diameter shell				-24.3		
			From El. -24.3 to -25.2 Ft., few fine-grained sand-sized shell		4				
			From El. -25.2 to -26.4 Ft., little fine to medium-grained sand-sized shell, 10Y 6/1 greenish gray				-25.8		
-26.4	13.1				5				
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt, few fine-grained sand-sized shell, strong reaction with HCl, 2.5Y 8/1 white (SP-SM)						
-28.3	15.0								

0 5 10 15

(Continued)

SAJ FORM 1836
JUN 02

DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District	SHEET 2 OF 2 SHEETS

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County SPP	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 404,034 Y = 1,194,332	-13.3 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-28.6	15.3		SAND, silty, mostly fine-grained sand-sized quartz, little silt, little fine to coarse-grained sand-sized shell, strong reaction with HCl, 2.5Y 6/1 gray (SM)						
-29.3	16.0		SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine to coarse-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 7/1 light gray (SP)						
		NO RECOVERY							
-33.0	19.7						-33.0		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	2.0/2.3	SP*
2	5.0/5.3	SP*
3	8.0/8.3	SP*
4	11.0/11.3	SP*
5	12.5/12.8	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell

Abbreviations:

15 20 25 30 35

SAJ FORM 1836-A
JUN 02

DRILLING LOG	DIVISION	INSTALLATION	SHEET 1 OF 2 SHEETS
	South Atlantic	Jacksonville District	

1. PROJECT Pinellas County SPP Egmont Shoal Borrow Area		9. SIZE AND TYPE OF BIT: See Remarks	
		10. COORDINATE SYSTEM/DATUM: State Plane, FLW (U.S. Ft.)	HORIZONTAL: NAD83 / VERTICAL: NAVD88
2. BORING DESIGNATION: VB-EGSH2015-27	LOCATION COORDINATES: X = 405,041 Y = 1,194,071	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5442	12. TOTAL SAMPLES	DISTURBED: 5 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 05-05-15 / COMPLETED: 05-05-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -12.3 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 80 %	
8. TOTAL DEPTH OF BORING: 19.8 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-12.3	0.0						-12.3		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt, strong reaction with HCl, 2.5Y 8/1 white (SP)	530			Vibracore		
							-15.3		
			From El. -15.3 to -17.0 Ft., little fine-grained sand-sized shell		1				
			From El. -17.0 to -18.3 Ft., trace shell						
							-18.3		
			From El. -18.3 to -21.3 Ft., little fine-grained sand-sized shell, discontinue silt		2				
			At El. -20.8 Ft., 5"shell seam				-21.3		
			From El. -21.3 to -24.3 Ft., few fine-grained sand-sized shell, trace silt		3				
							-24.3		
			From El. -24.3 to -25.3 Ft., trace shell		4				
			From El. -25.3 to -28.2 Ft., little sand to gravel-sized shell				-27.3		

0 5 10 15

(Continued)

SAJ FORM 1836
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DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County SPP	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 405,041 Y = 1,194,071	ELEVATION TOP OF BORING -12.3 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-28.2	15.9				5				
-32.1	19.8	NO RECOVERY					-32.1		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	3.0/3.3	SP*
2	6.0/6.3	SP*
3	9.0/9.3	SP*
4	12.0/12.3	SP*
5	15.0/15.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Carbonate
4 Percent Visual Shell
5 Percent Visual Shell

Abbreviations:

15 20 25 30 35

SAJ FORM 1836-A
JUN 02

DRILLING LOG	DIVISION	INSTALLATION	SHEET 1 OF 2 SHEETS
	South Atlantic	Jacksonville District	

1. PROJECT Pinellas County SPP Egmont Shoal Borrow Area		9. SIZE AND TYPE OF BIT: See Remarks	
		10. COORDINATE SYSTEM/DATUM: State Plane, FLW (U.S. Ft.)	HORIZONTAL: NAD83 / VERTICAL: NAVD88
2. BORING DESIGNATION: VB-EGSH2015-28	LOCATION COORDINATES: X = 406,027 Y = 1,193,798	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.: 6738-15-5442	12. TOTAL SAMPLES	DISTURBED: 5 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 05-05-15 / COMPLETED: 05-05-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -14.0 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 80 %	
8. TOTAL DEPTH OF BORING: 19.8 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-14.0	0.0						-14.0		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell, strong reaction with HCl, 2.5Y 8/1 white (SP) From El. -15.1 to -18.8 Ft., few fine-grained sand-sized shell	632			Vibracore -16.5		
					1				
-18.8	4.8						-19.0		
-19.3	5.3		SAND, silty, mostly fine-grained sand-sized quartz, little silt, little fine to medium-grained sand-sized shell, strong reaction with HCl, 2.5Y 6/2 light brownish gray (SM)		2				
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 8/1 white (SP) From El. -21.0 to -23.8 Ft., intermittent silt seams						
-22.0	8.0						-22.0		
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell, few silt, strong reaction with HCl, 2.5Y 6/2 light brownish gray (SP-SM) At El. -23.0 Ft., 1" shell seam		3				
-25.0	11.0						-25.0		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt, strong reaction with HCl, intermittent silt seams, 2.5Y 8/1 white (SP)		4				
-28.0	14.0						-28.0		
			SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, few silt,		5				

0 5 10 15

(Continued)

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DRILLING LOG (Cont. Sheet)	INSTALLATION	SHEET 2 OF 2 SHEETS
	Jacksonville District	

PROJECT	COORDINATE SYSTEM/DATUM	HORIZONTAL	VERTICAL
Pinellas County SPP	State Plane, FLW (U.S. Ft.)	NAD83	NAVD88

LOCATION COORDINATES	ELEVATION TOP OF BORING
X = 406,027 Y = 1,193,798	-14.0 Ft.

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-29.8	15.8		strong reaction with HCl, 2.5Y 8/1 white (SP-SM) At El. -29.0 Ft., 1" silt seam From El. -29.1 to -29.8 Ft., few fine-grained sand-sized shell, 2.5Y 6/2 light brownish gray						
-33.8	19.8	NO RECOVERY					-33.8		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	2.5/2.8	SP*
2	5.0/5.3	SM*
3	8.0/8.3	SP-SM*
4	11.0/11.3	SP*
5	14.0/14.3	SP-SM*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell
5 Percent Visual Shell

Abbreviations:

DRILLING LOG	DIVISION	INSTALLATION	SHEET 1 OF 2 SHEETS
	South Atlantic	Jacksonville District	

1. PROJECT Pinellas County SPP Egmont Shoal Borrow Area		9. SIZE AND TYPE OF BIT: See Remarks	
		10. COORDINATE SYSTEM/DATUM: State Plane, FLW (U.S. Ft.)	HORIZONTAL: NAD83 / VERTICAL: NAVD88
2. BORING DESIGNATION: VB-EGSH2015-29	LOCATION COORDINATES: X = 407,036 Y = 1,193,622	11. MANUFACTURER'S DESIGNATION OF DRILL	☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY: Corps of Engineers - CESAJ	CONTRACTOR FILE NO.	12. TOTAL SAMPLES	DISTURBED: 4 / UNDISTURBED (UD): 0
4. NAME OF DRILLER		13. TOTAL NUMBER CORE BOXES: 0	
5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED	DEG. FROM VERTICAL / BEARING	14. ELEVATION GROUND WATER	
		15. DATE BORING	STARTED: 05-05-15 / COMPLETED: 05-05-15
6. THICKNESS OF OVERBURDEN: N/A		16. ELEVATION TOP OF BORING: -12.9 Ft.	
7. DEPTH DRILLED INTO ROCK: N/A		17. TOTAL RECOVERY FOR BORING: 76 %	
8. TOTAL DEPTH OF BORING: 19.8 Ft.		18. SIGNATURE AND TITLE OF INSPECTOR	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-12.9	0.0						-12.9		
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine to medium-grained sand-sized shell, trace silt, strong reaction with HCl, 2.5Y 8/1 white (SP)	500			Vibracore		
			From El. -15.0 to -15.6 Ft., some fine to coarse-grained sand-sized shell, 2.5Y 6/1 gray From El. -15.6 to -15.9 Ft., trace shell, 2.5Y 8/1 white From El. -15.9 to -16.9 Ft., few fine-grained sand-sized shell From El. -16.9 to -21.2 Ft., trace shell		1		-15.9		
							-18.9		
					2				
			From El. -21.2 to -21.6 Ft., little fine to coarse-grained sand-sized shell From El. -21.6 to -22.1 Ft., some sand to gravel-sized shell, 2.5Y 6/1 gray From El. -22.1 to -22.9 Ft., trace shell, intermittent silt seams, 2.5Y 7/1 light gray From El. -22.9 to -27.2 Ft., few fine-grained sand-sized shell				-21.9		
					3				
							-24.9		
					4				
			At El. -25.3 Ft., 2.5Y 6/1 gray From El. -26.1 to -27.2 Ft., intermittent silt seams, 2.5Y 7/1 light gray From El. -27.2 to -27.9 Ft., little fine to medium-grained sand-sized shell, 2.5Y 6/1 gray						
-27.9	15.0								

0 5 10 15

(Continued)

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DRILLING LOG (Cont. Sheet)	INSTALLATION Jacksonville District		SHEET 2 OF 2 SHEETS
PROJECT Pinellas County SPP	COORDINATE SYSTEM/DATUM State Plane, FLW (U.S. Ft.)	HORIZONTAL NAD83	VERTICAL NAVD88
LOCATION COORDINATES X = 407,036 Y = 1,193,622	ELEVATION TOP OF BORING -12.9 Ft.		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE
-32.7	19.8	NO RECOVERY					-32.7		

NOTES:

1. USACE Jacksonville is the custodian for these original files.

2. Soils are field visually classified in accordance with the Unified Soils Classification System.

3. Laboratory Testing Results

SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION
1	3.0/3.3	SP*
2	6.0/6.3	SP*
3	9.0/9.3	SP*
4	12.0/12.3	SP*

*Lab visual classification based on gradation curve

4. Additional Laboratory Testing

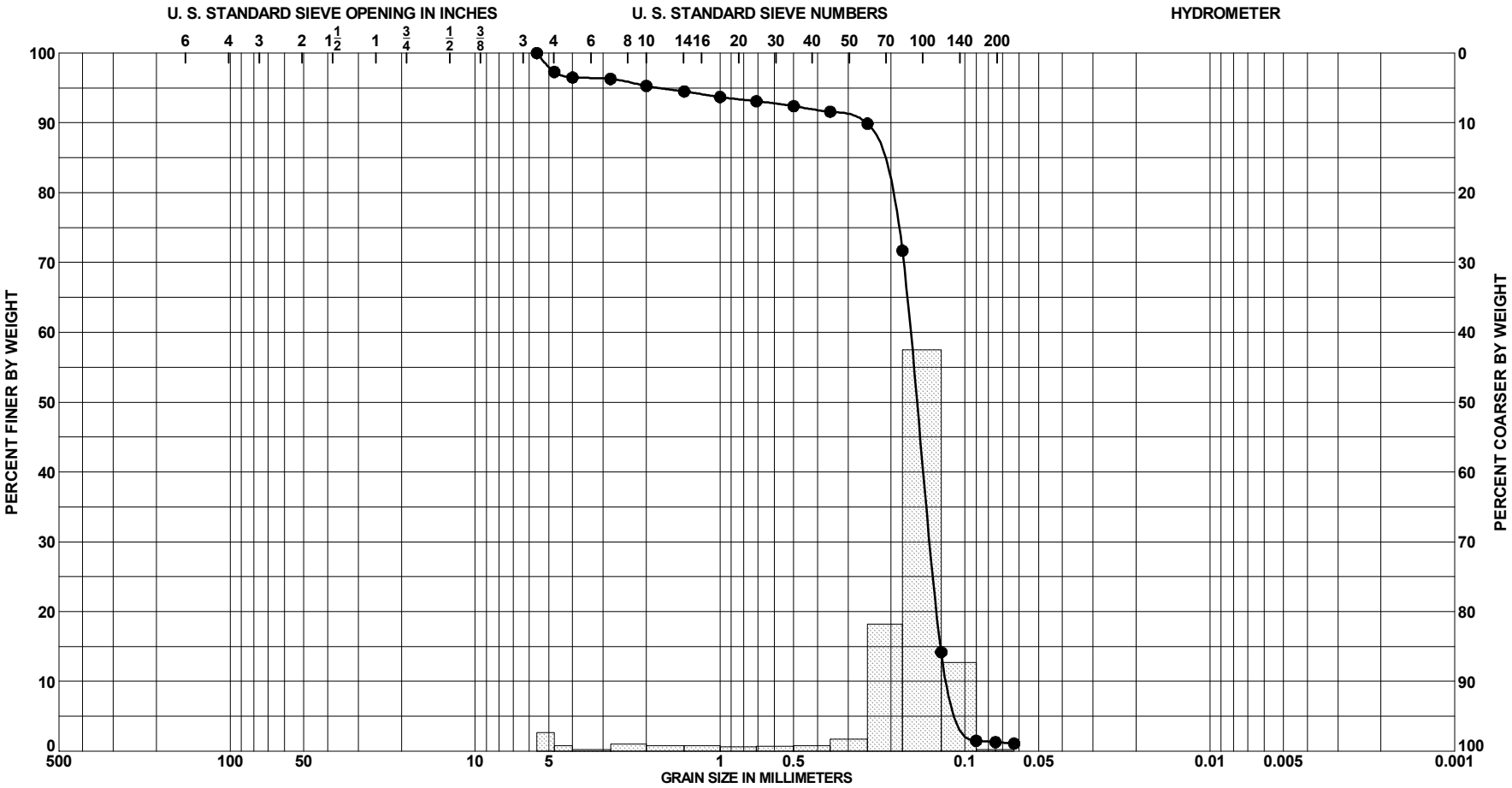
1 Percent Visual Shell
2 Percent Visual Shell
3 Percent Visual Shell
4 Percent Visual Shell

Abbreviations:

15 20 25 30 35

8.2 GRADATION CURVES: SAND SOURCE

Applicable gradation curves are presented on the following pages.



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 1	0.0 to 6.7 Ft.	SAND, poorly-graded (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	CB-EC00-10
BORING ELEV.	-10.0 Ft., NAVD88
DATE	

GRADATION CURVES

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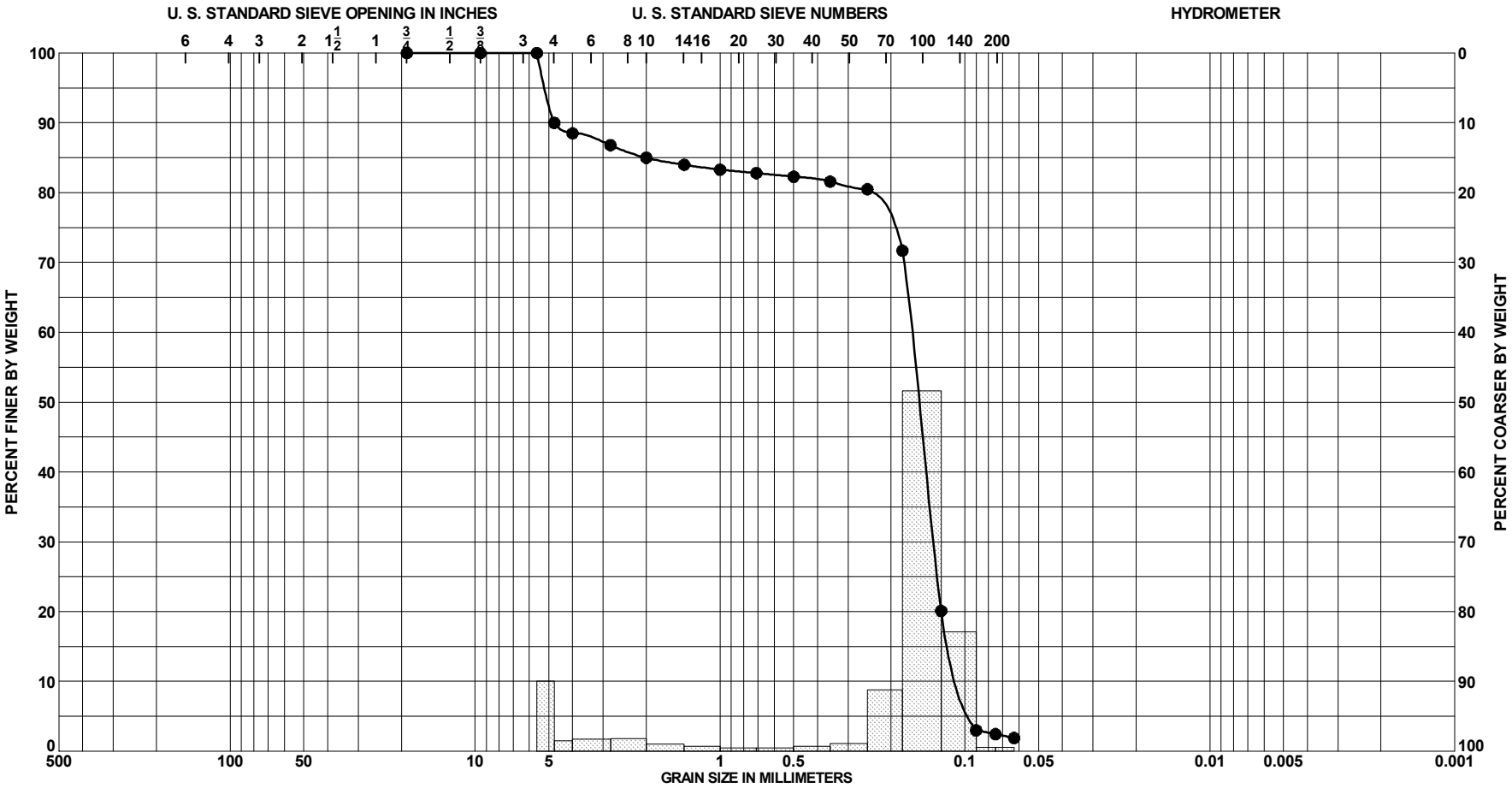

Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 2	6.7 to 9.7 Ft.	SAND, poorly-graded (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	CB-EC00-10
BORING ELEV.	-10.0 Ft., NAVD88
DATE	

GRADATION CURVES

SAJ FORM 2087
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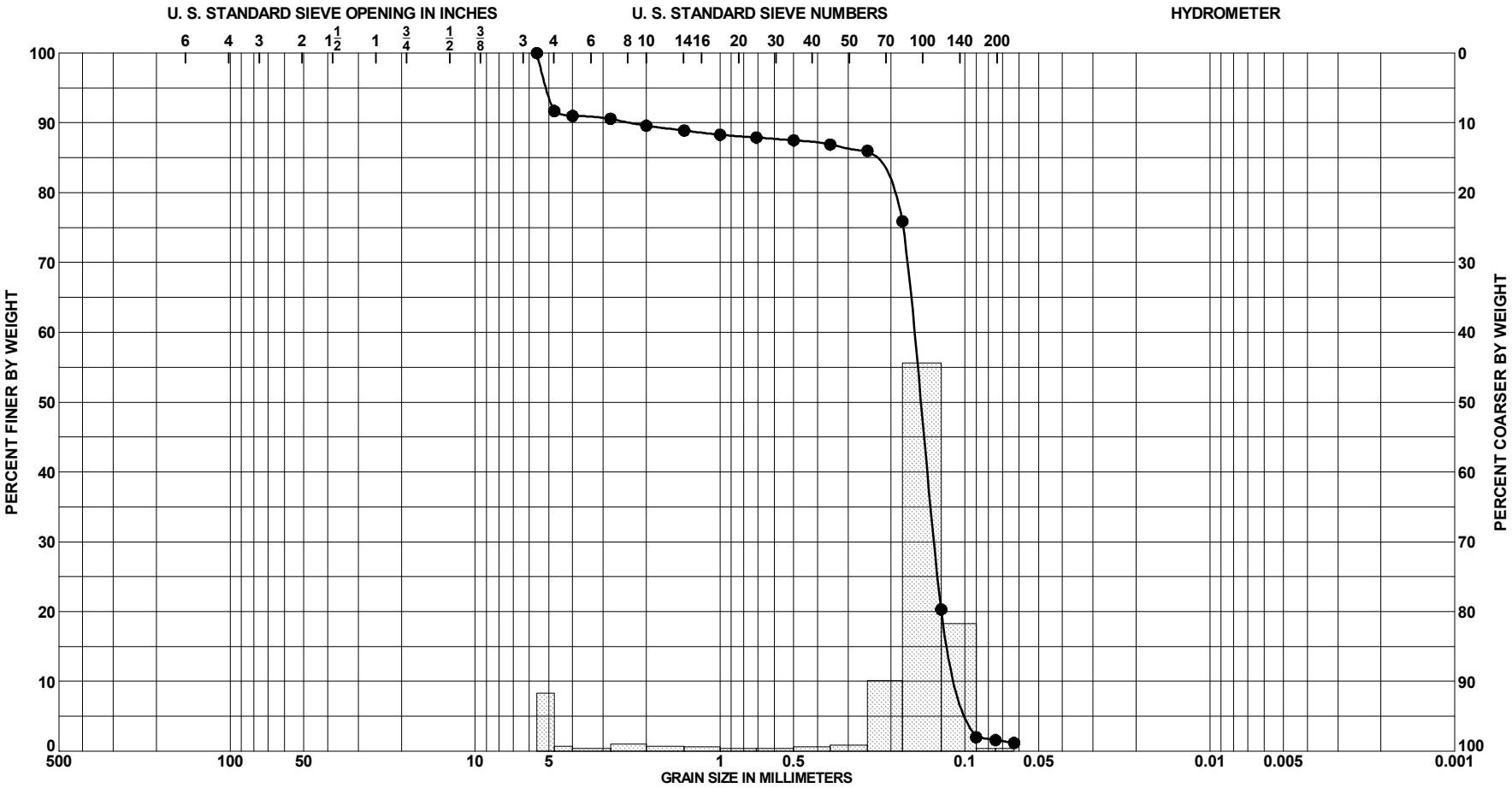

Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 3	9.7 to 15.6 Ft.	SAND, poorly-graded (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	CB-EC00-10
BORING ELEV.	-10.0 Ft., NAVD88
DATE	

GRADATION CURVES

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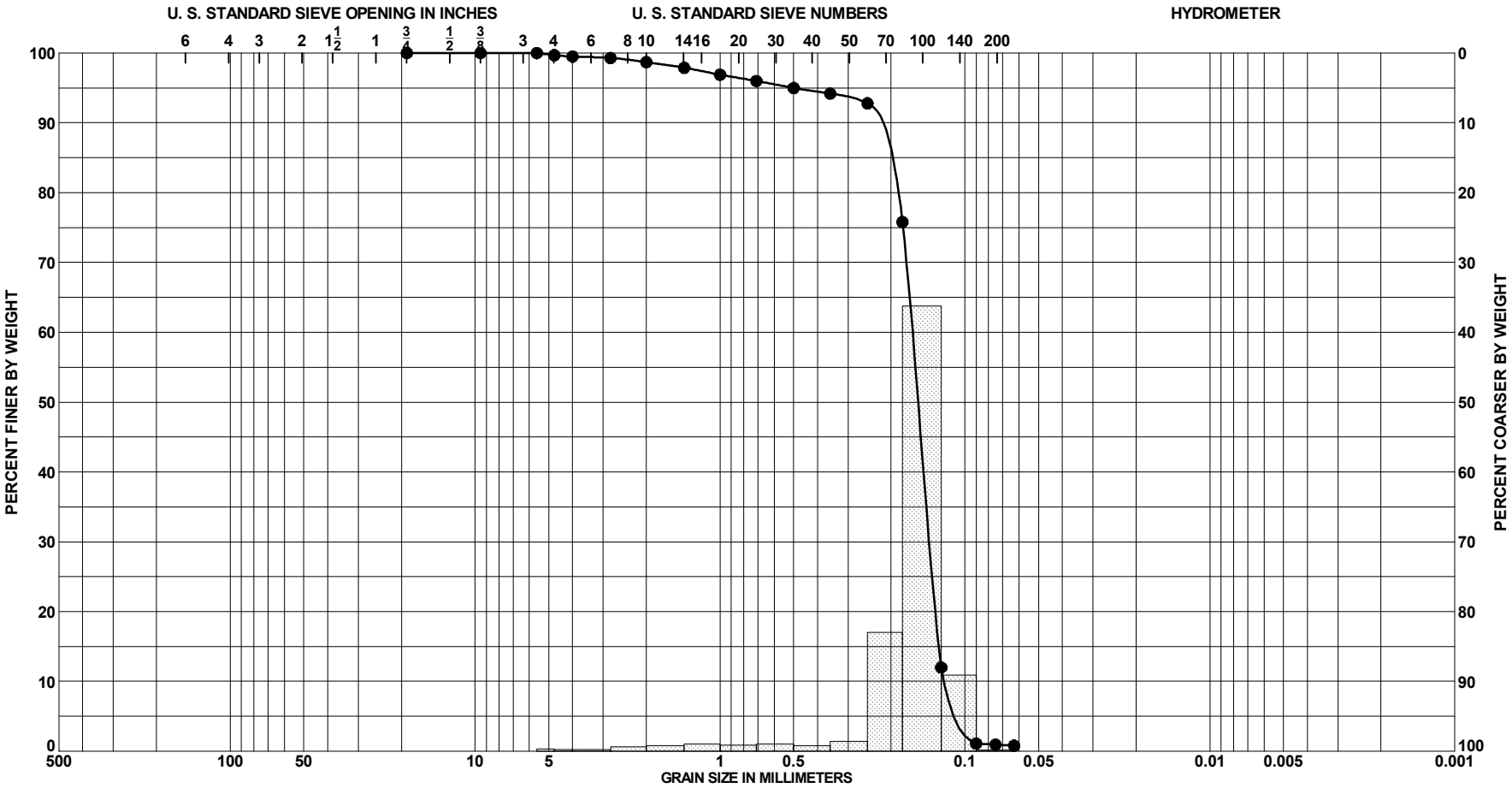

Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 1	0.0 to 1.7 Ft.	SAND, poorly-graded (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	CB-EC00-20
BORING ELEV.	-10.3 Ft., NAVD88
DATE	

GRADATION CURVES

SAJ FORM 2087
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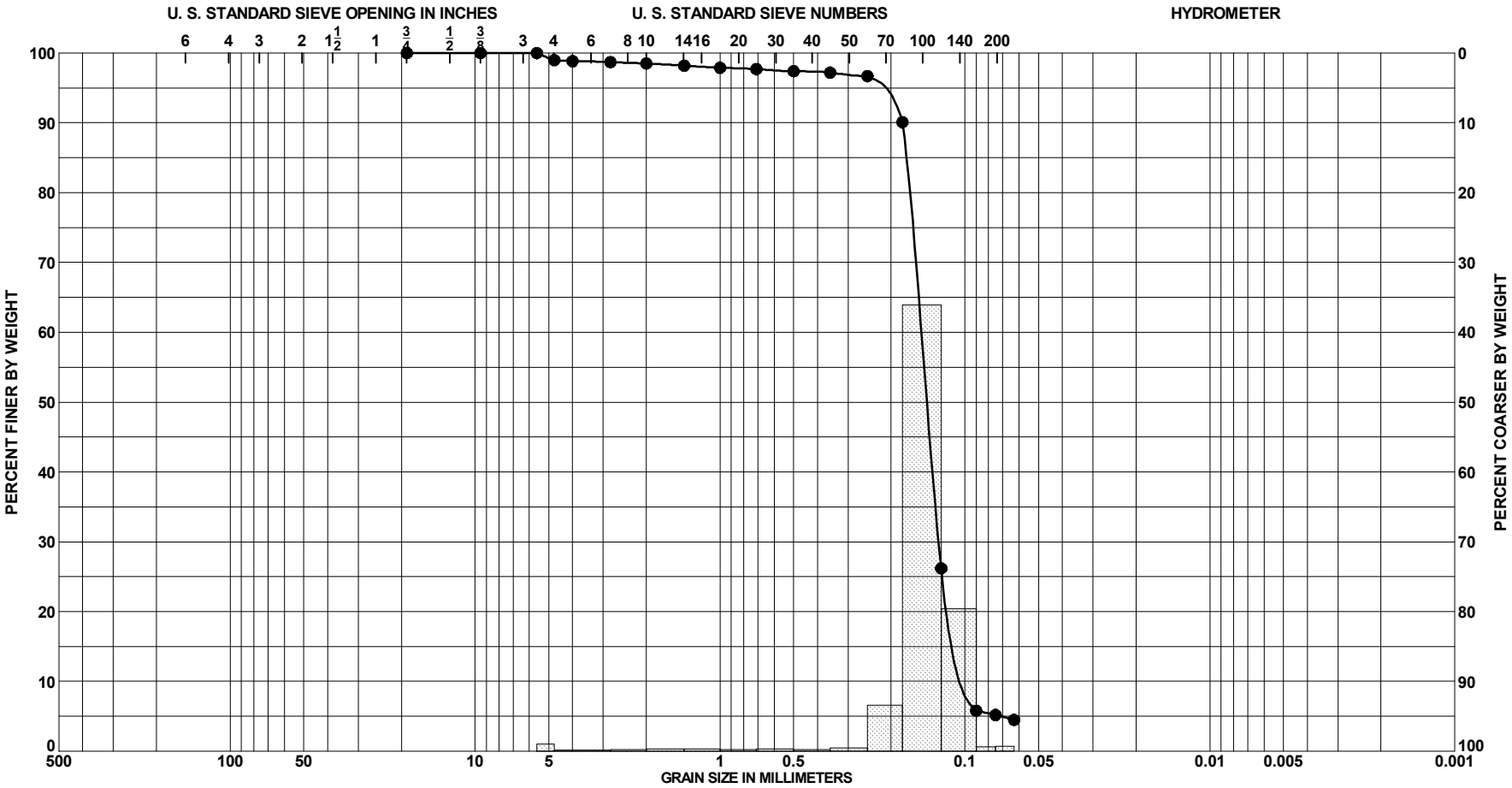

Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 2	3.0 to 6.0 Ft.	SAND, poorly-graded (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	CB-EC00-20
BORING ELEV.	-10.3 Ft., NAVD88
DATE	

GRADATION CURVES

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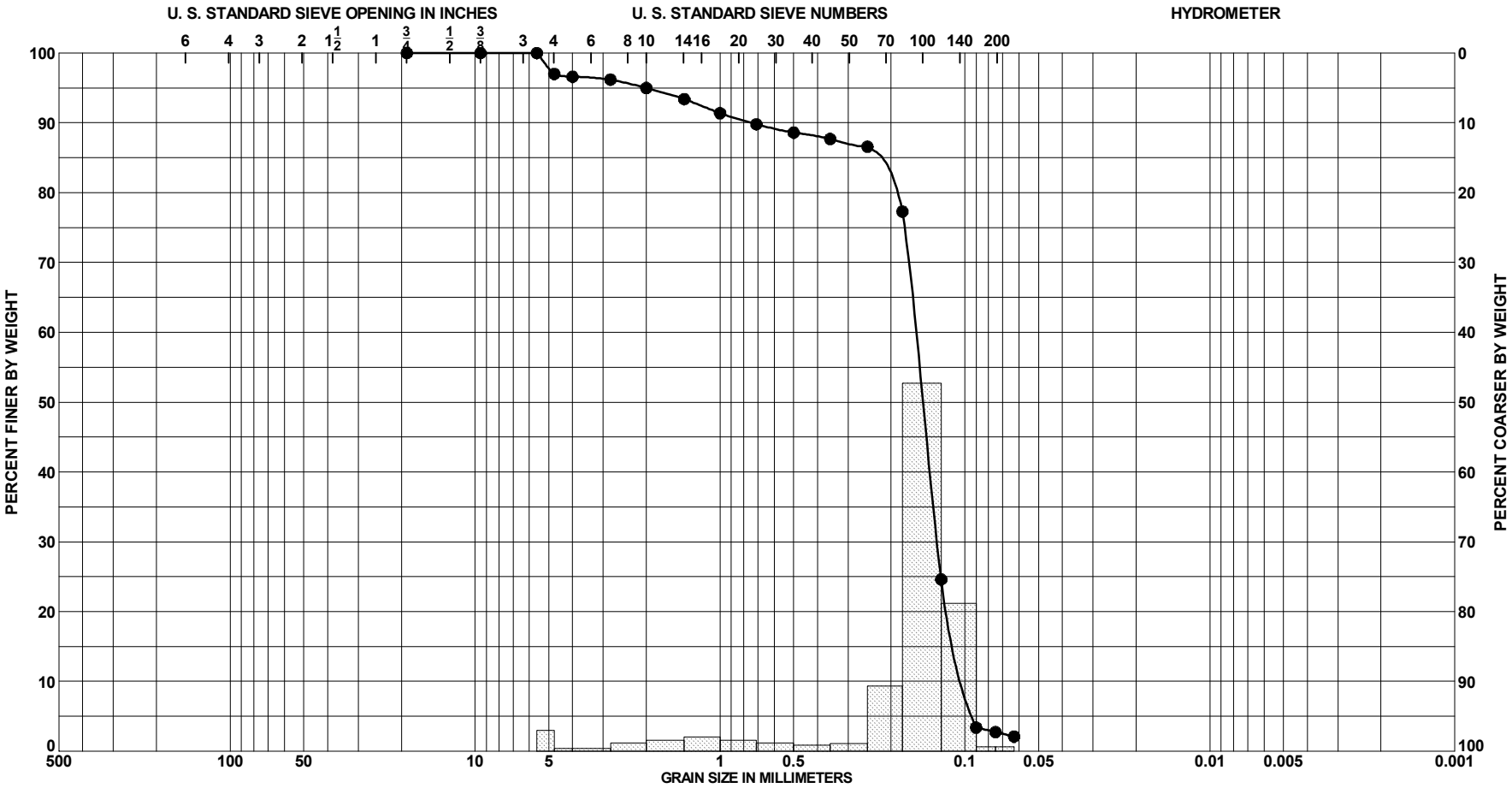
JUN 02

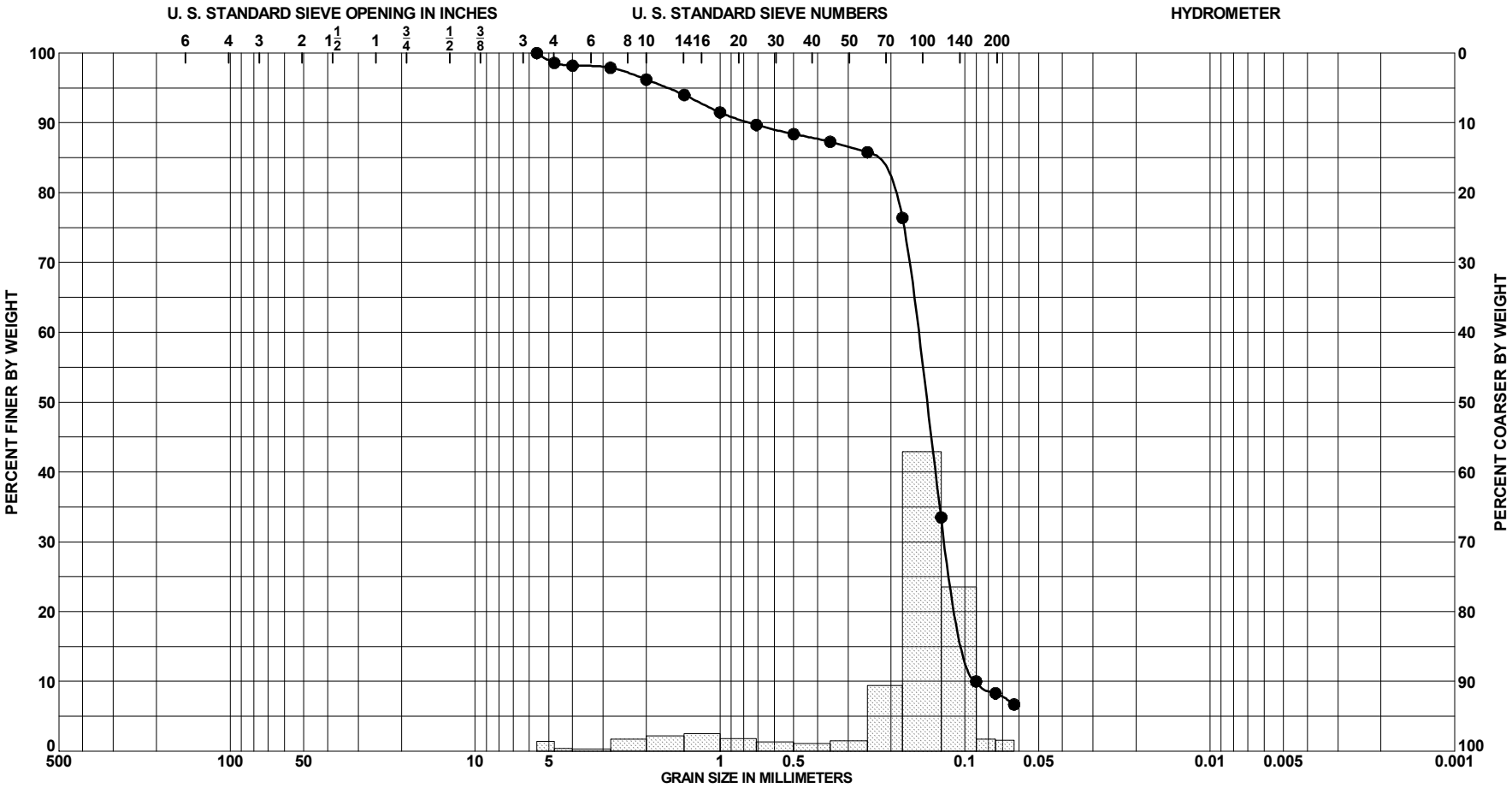


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 1	0.0 to 3.7 Ft.	SAND, poorly-graded (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	CB-EC00-28
BORING ELEV.	-9.3 Ft., NAVD88
DATE	

GRADATION CURVES

SAJ FORM 2087
JUN 02

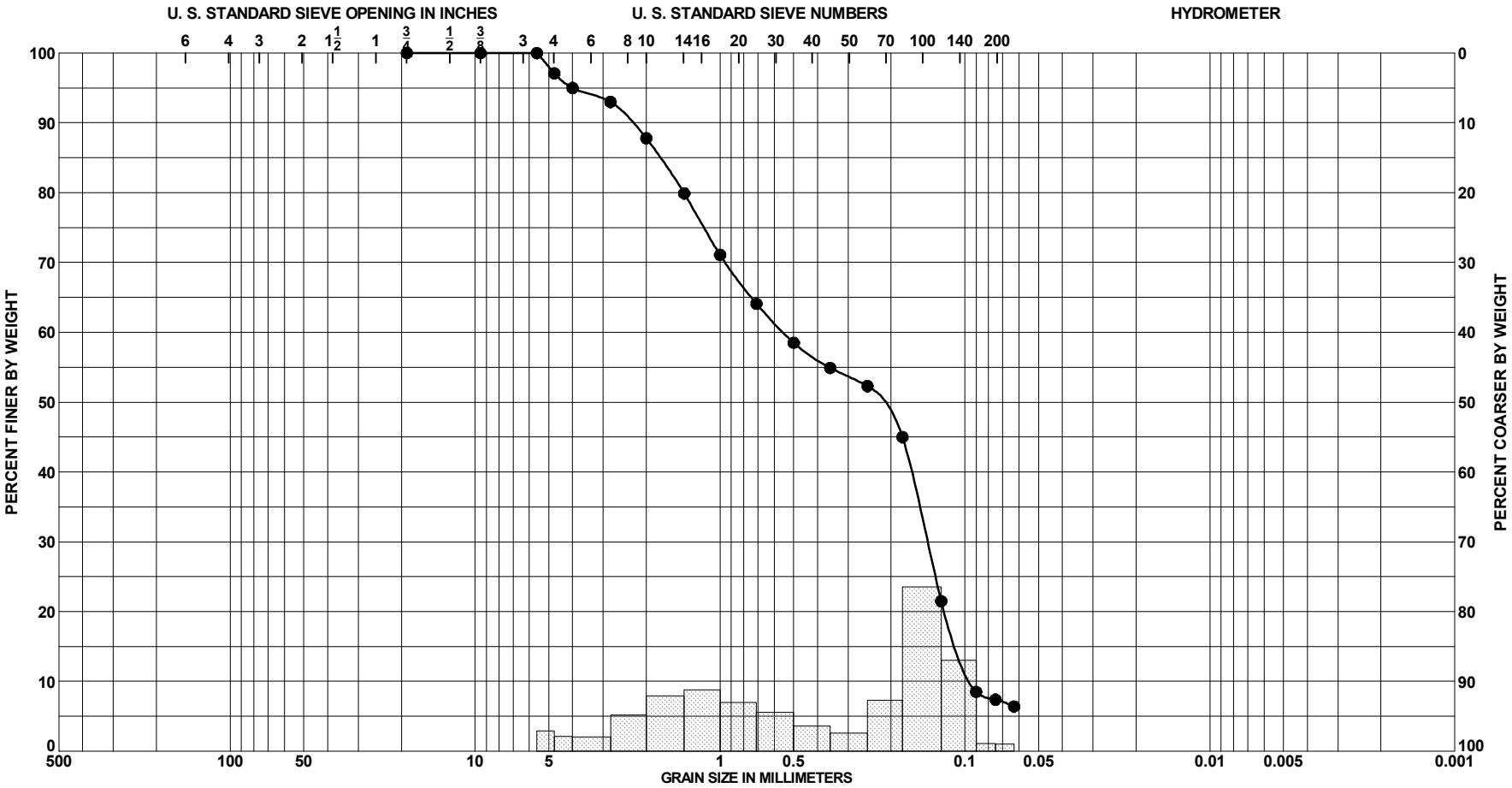


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 2	3.7 to 8.0 Ft.	SAND, poorly-graded with silt (SP-SM)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	CB-EC00-28
BORING ELEV.	-9.3 Ft., NAVD88
DATE	

GRADATION CURVES

SAJ FORM 2087
JUN 02

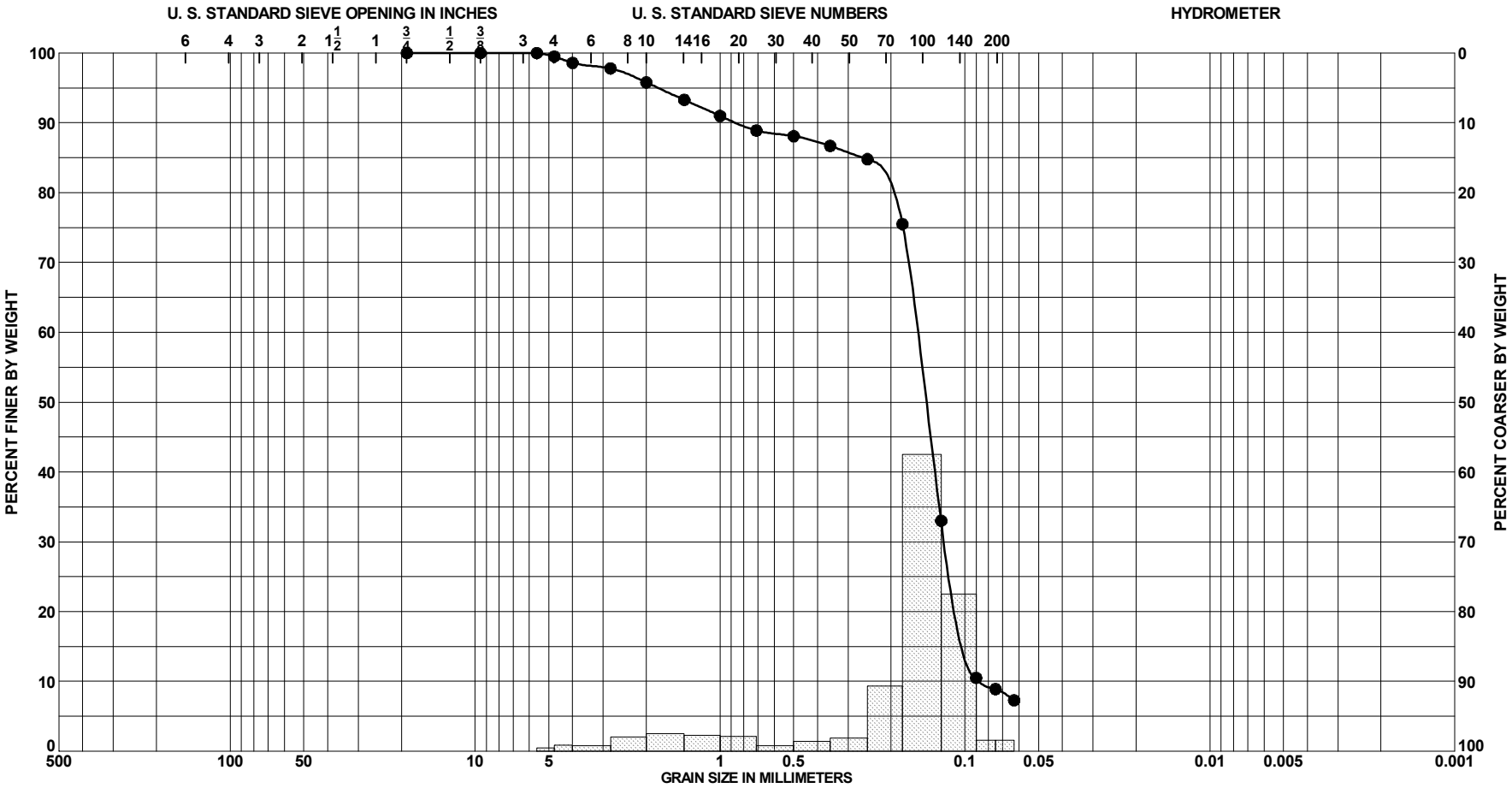


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 1	0.0 to 7.7 Ft.	SAND, poorly-graded with silt (SP-SM)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	CB-EC00-29
BORING ELEV.	-10.3 Ft., NAVD88
DATE	

GRADATION CURVES

SAJ FORM 2087
JUN 02

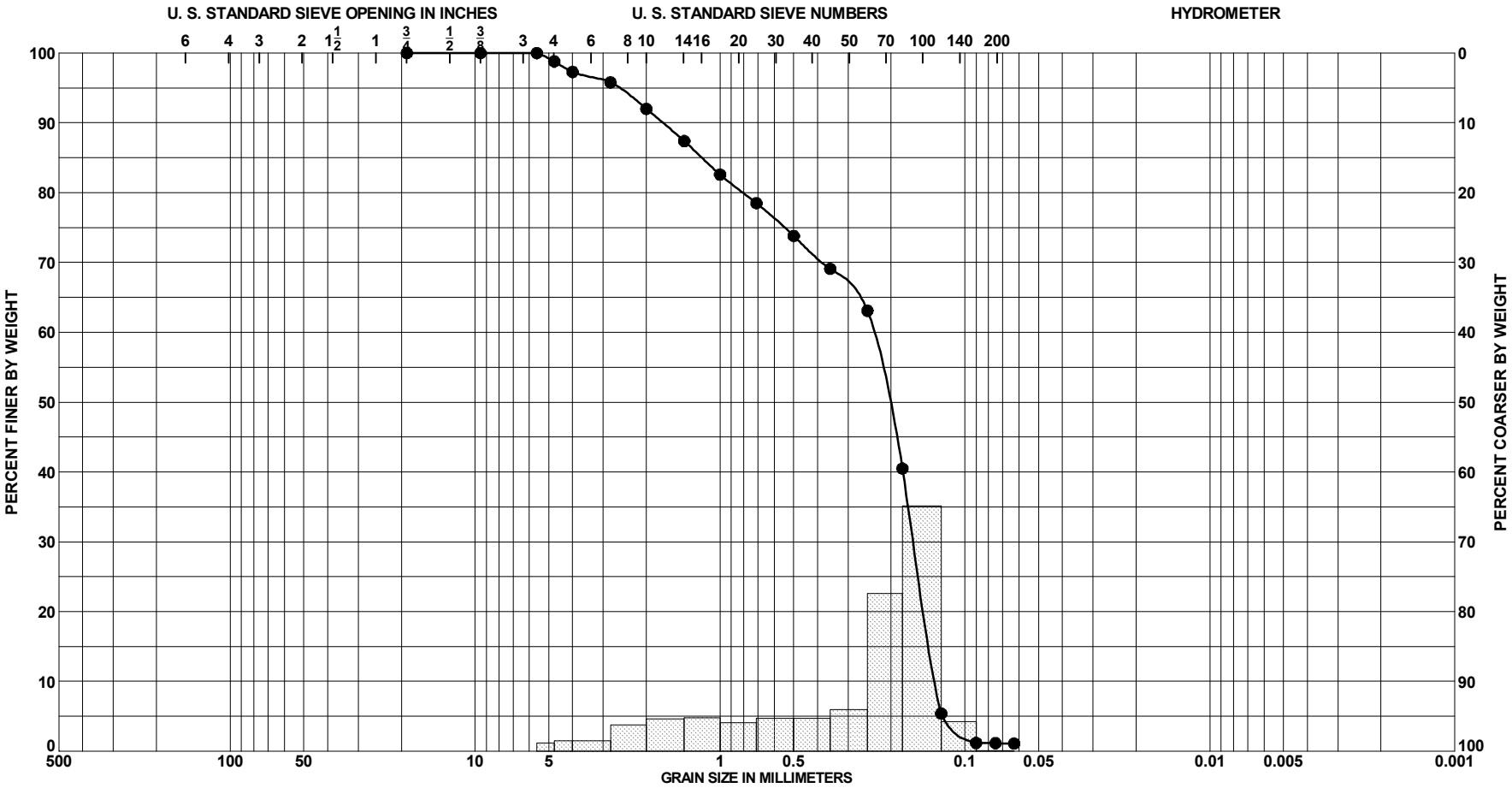


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 2	7.7 to 10.0 Ft.	SAND, poorly-graded with silt (SP-SM)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	CB-EC00-29
BORING ELEV.	-10.3 Ft., NAVD88
DATE	

GRADATION CURVES

SAJ FORM 2087
JUN 02

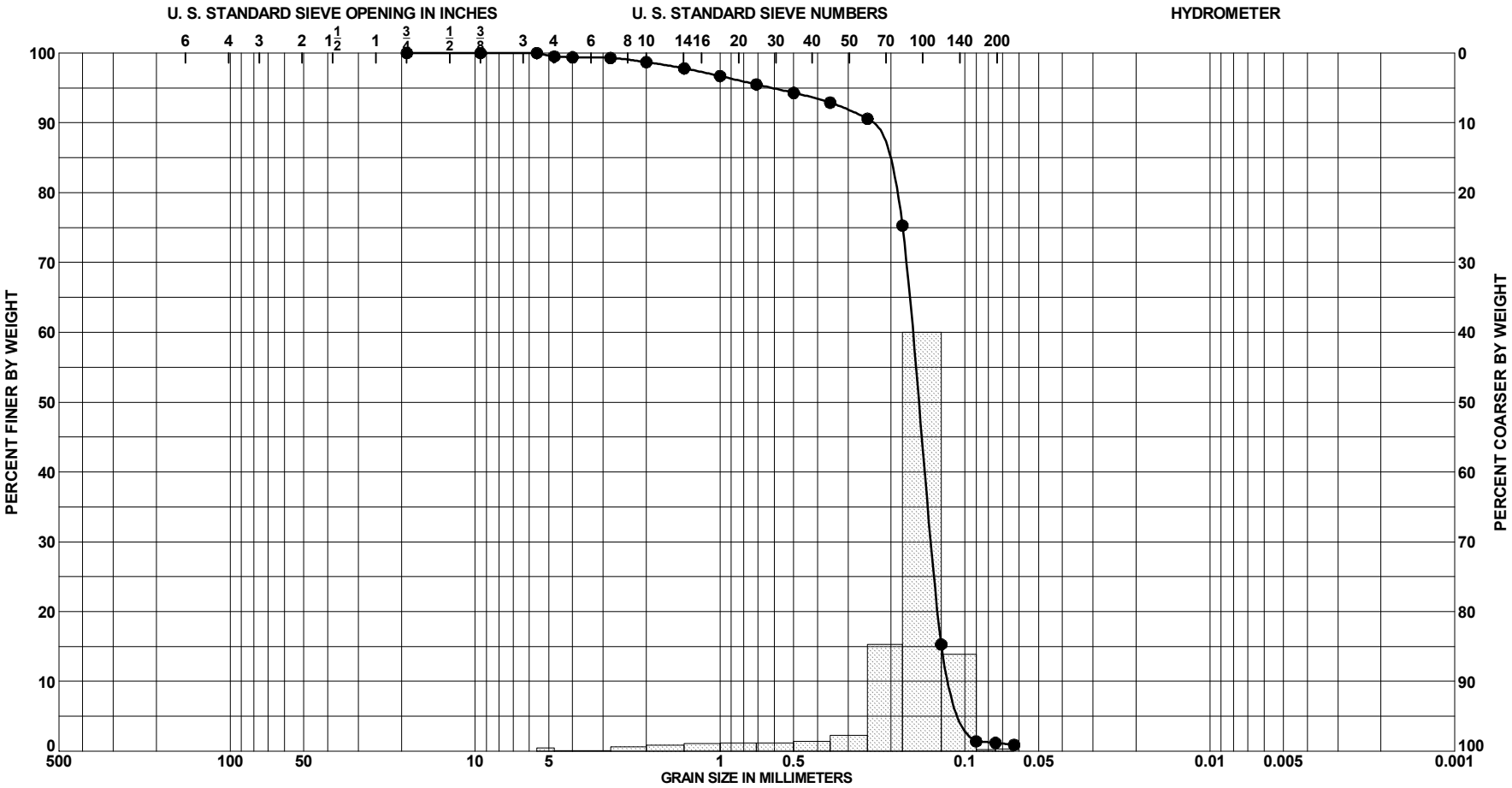


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 1	0.0 to 4.0 Ft.	SAND, poorly-graded (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	CB-EC00-34
BORING ELEV.	-8.9 Ft., NAVD88
DATE	

GRADATION CURVES

SAJ FORM 2087
JUN 02

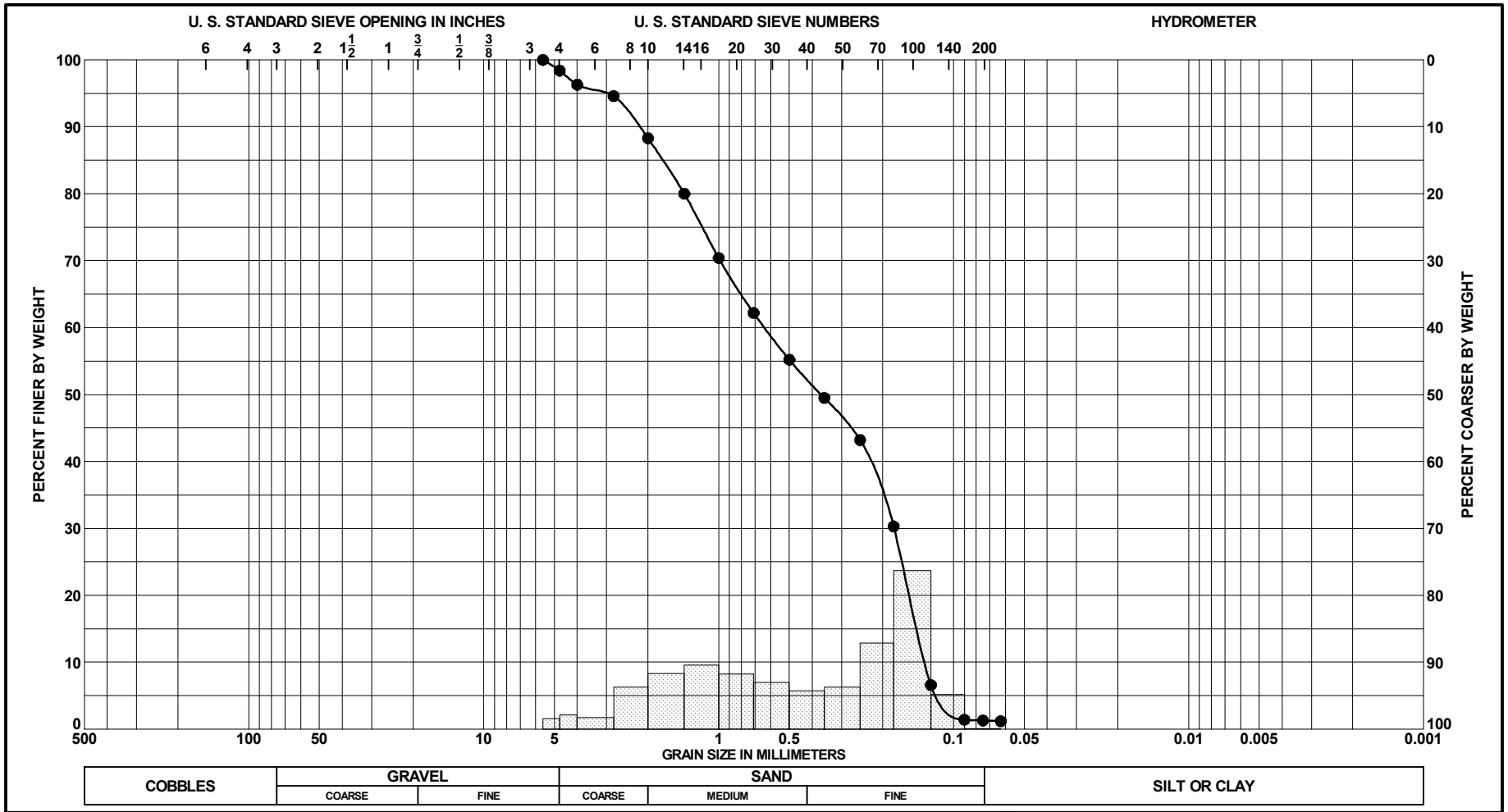


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 2	4.0 to 10.0 Ft.	SAND, poorly-graded (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	CB-EC00-34
BORING ELEV.	-8.9 Ft., NAVD88
DATE	

GRADATION CURVES

SAJ FORM 2087
JUN 02

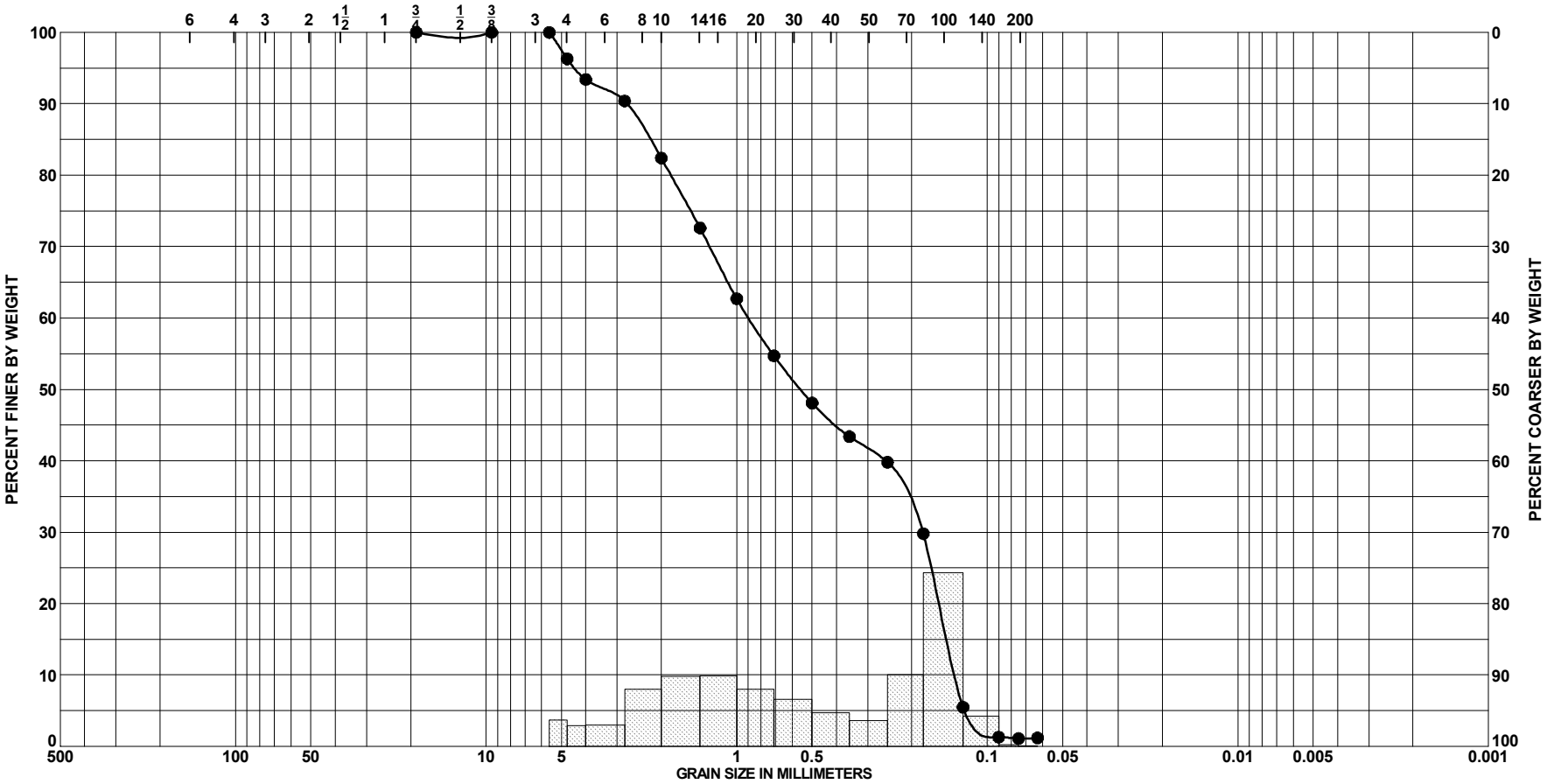


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 3	10.0 to 12.0 Ft.	SAND, poorly-graded (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	CB-EC00-34
BORING ELEV.	-8.9 Ft., NAVD88
DATE	

GRADATION CURVES

SAJ FORM 2087
JUN 02

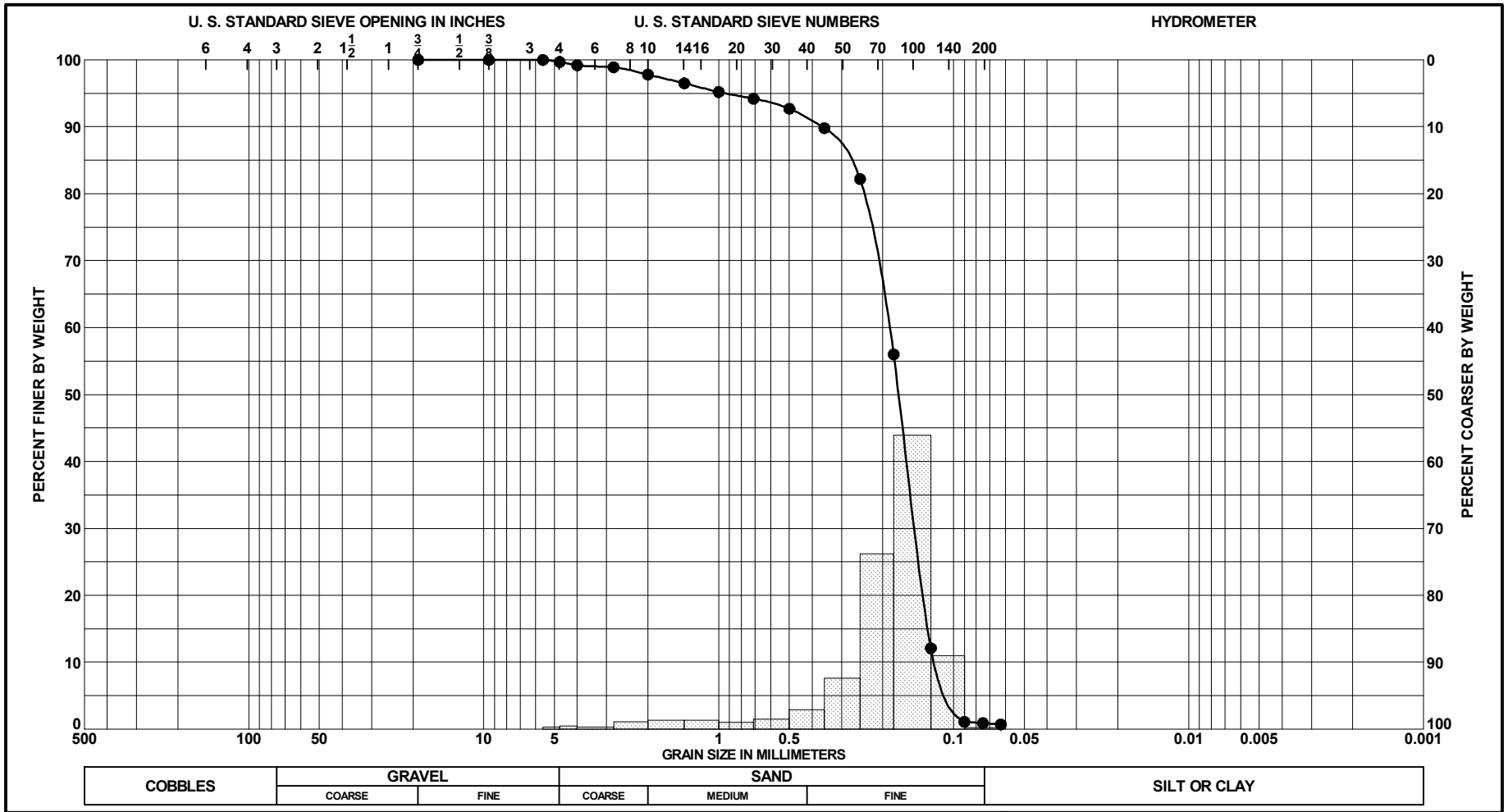


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 1	0.0 to 1.3 Ft.	SAND, poorly-graded (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	CB-EC00-36
BORING ELEV.	-6.1 Ft., NAVD88
DATE	

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 3	7.7 to 10.7 Ft.	SAND, poorly-graded (SP)								

PROJECT Pinellas County SPP

Egmont Shoal Borrow Area

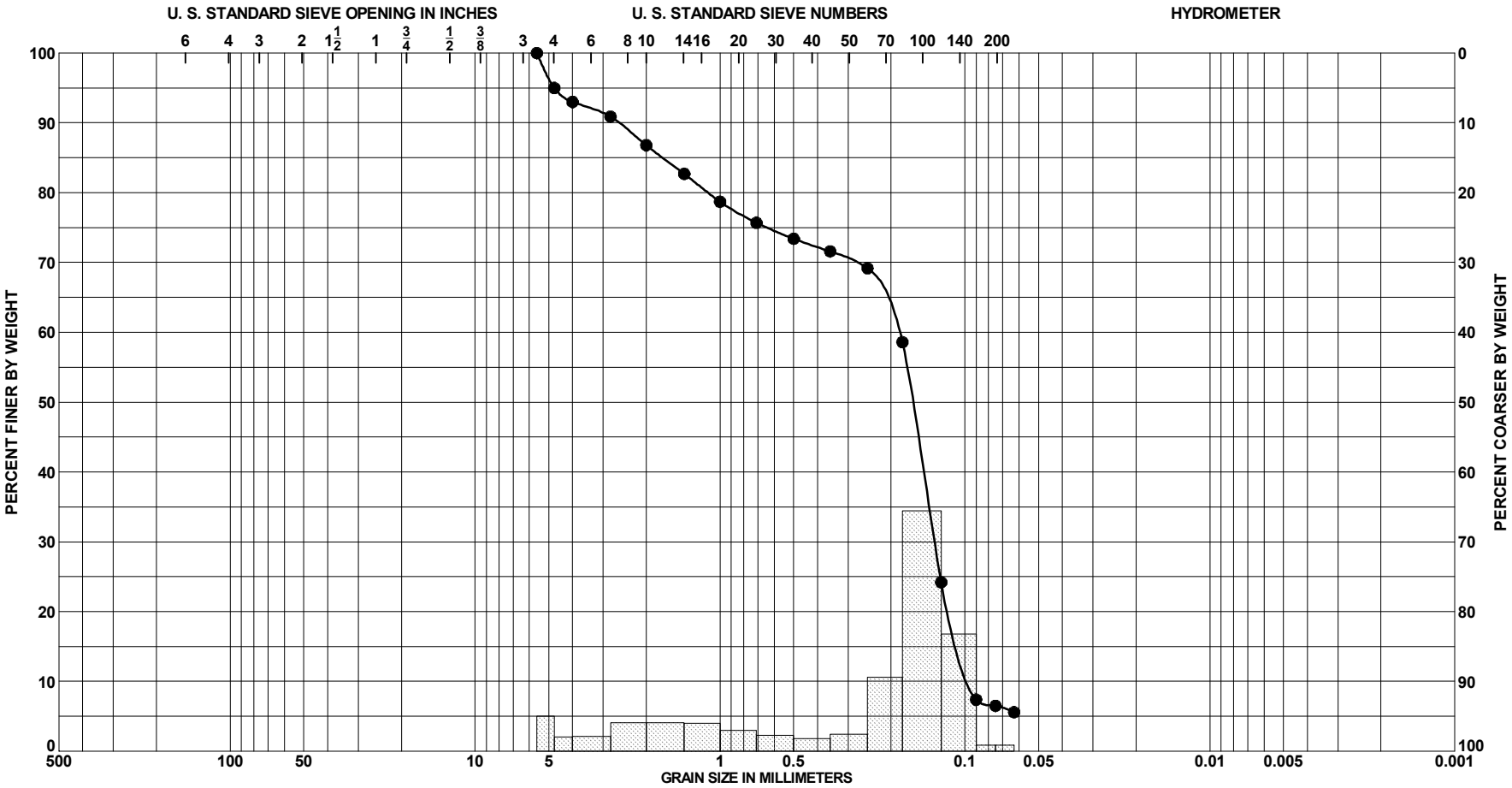
BORING NO. CB-EC00-36

BORING ELEV. -6.1 Ft., NAVD88

DATE

GRADATION CURVES

SAJ FORM 2087
JUN 02

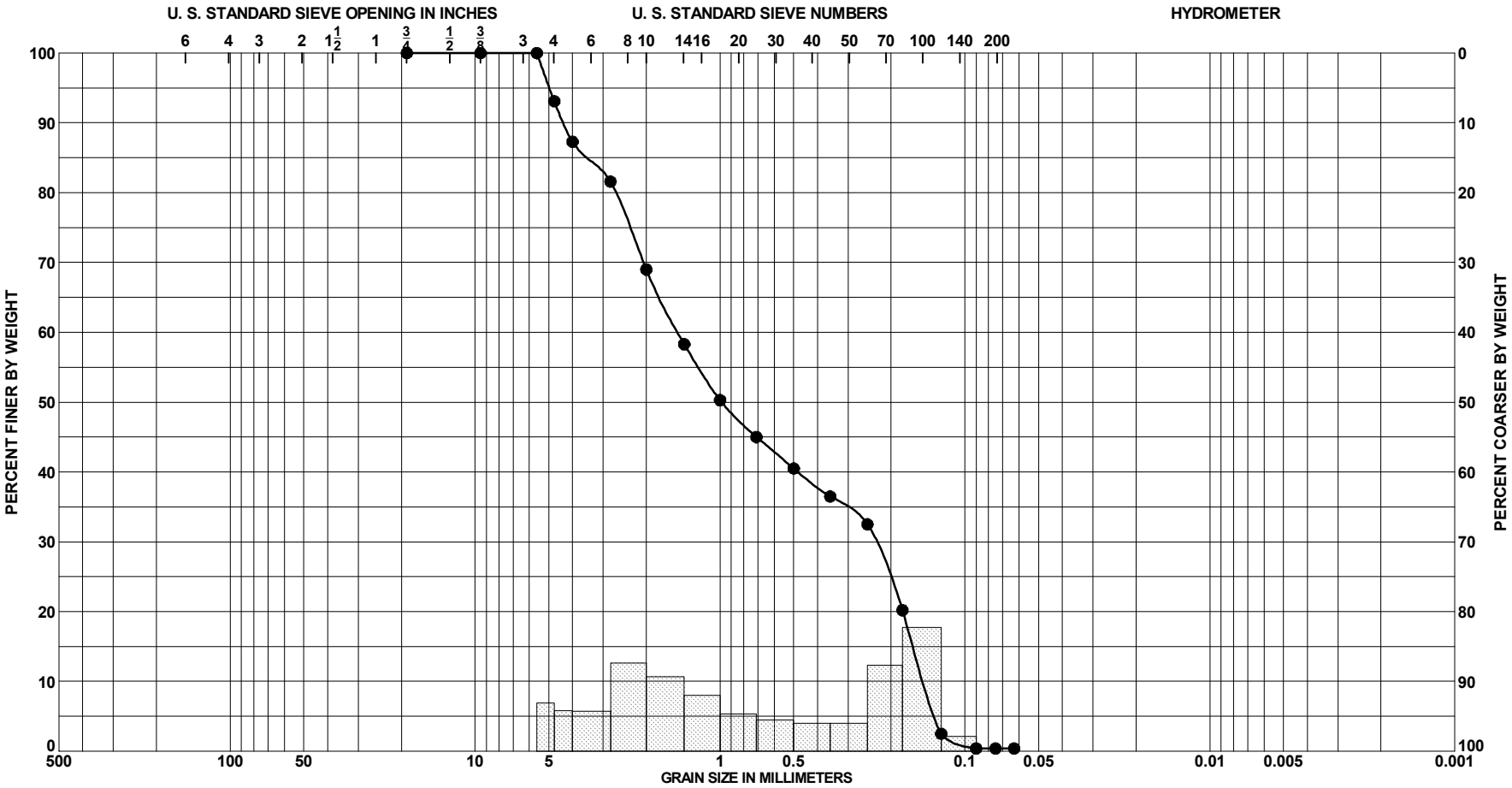


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 4	13.2 to 14.5 Ft.	SAND, poorly-graded with silt (SP-SM)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	CB-EC00-36
BORING ELEV.	-6.1 Ft., NAVD88
DATE	

GRADATION CURVES

SAJ FORM 2087
JUN 02

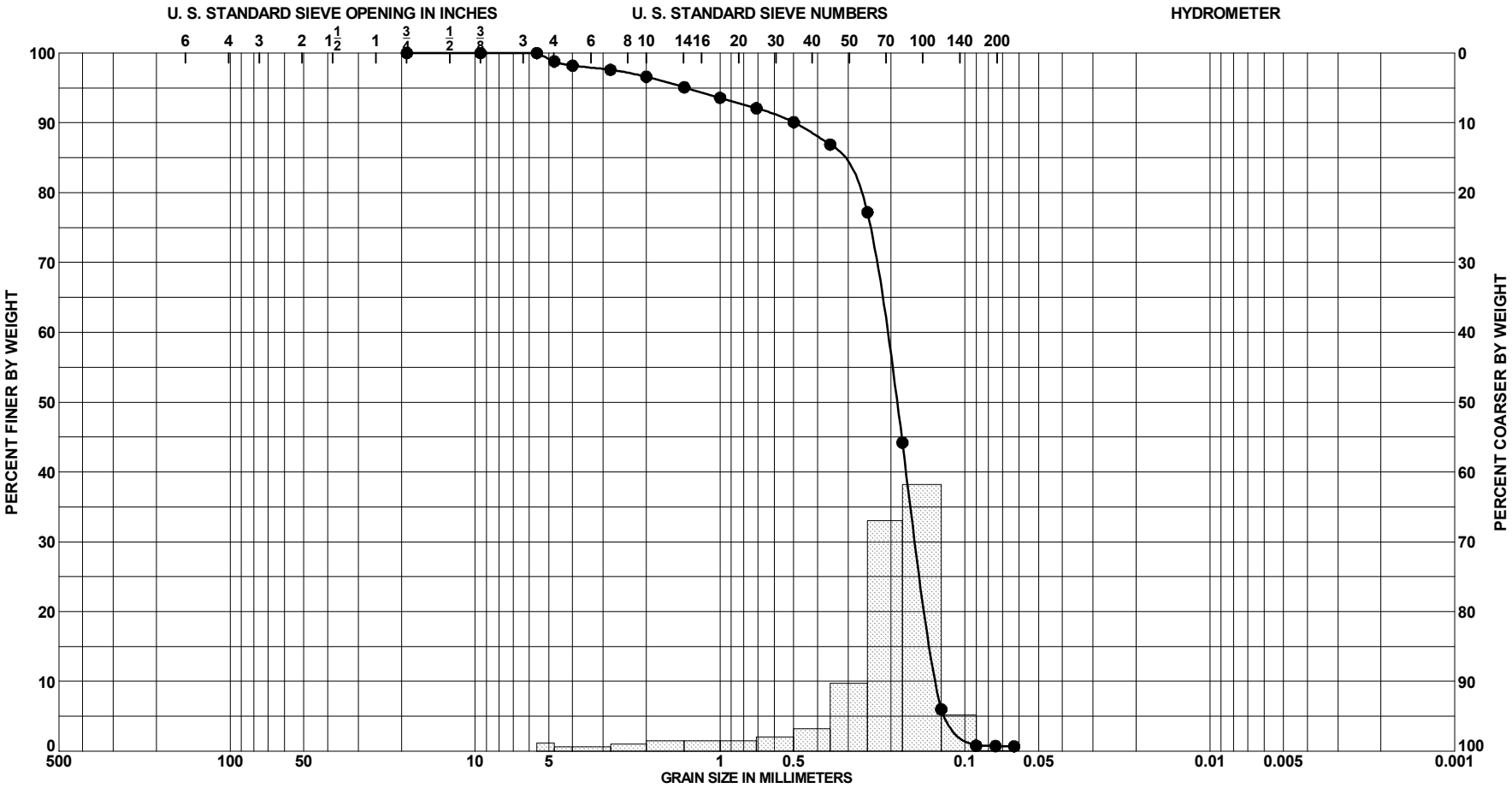


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 1	0.0 to 2.5 Ft.	SAND, poorly-graded (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	CB-EC00-37
BORING ELEV.	-6.3 Ft., NAVD88
DATE	

GRADATION CURVES

SAJ FORM 2087
JUN 02

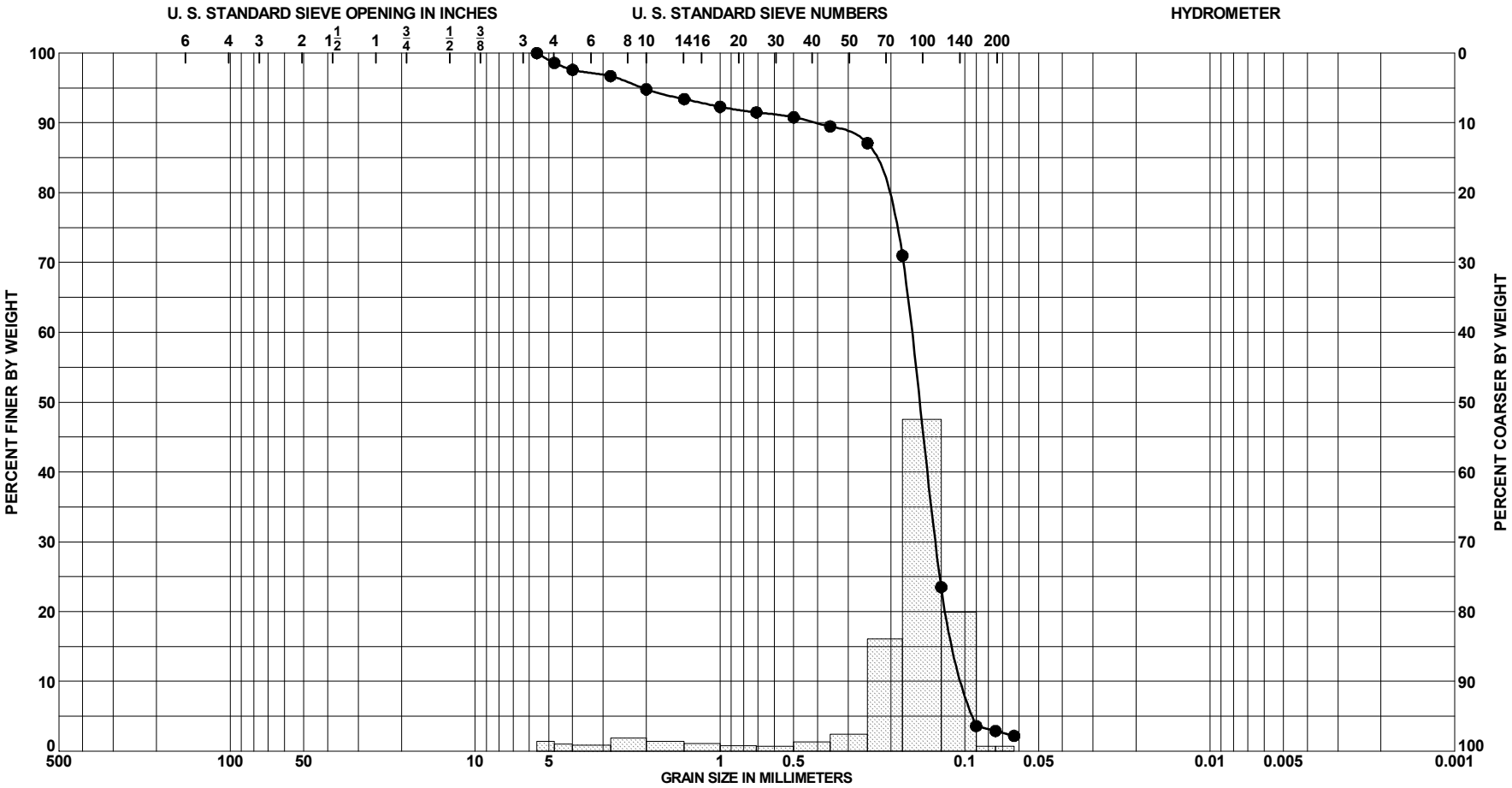


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 3	7.0 to 10.0 Ft.	SAND, poorly-graded (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	CB-EC00-37
BORING ELEV.	-6.3 Ft., NAVD88
DATE	

GRADATION CURVES

SAJ FORM 2087
JUN 02

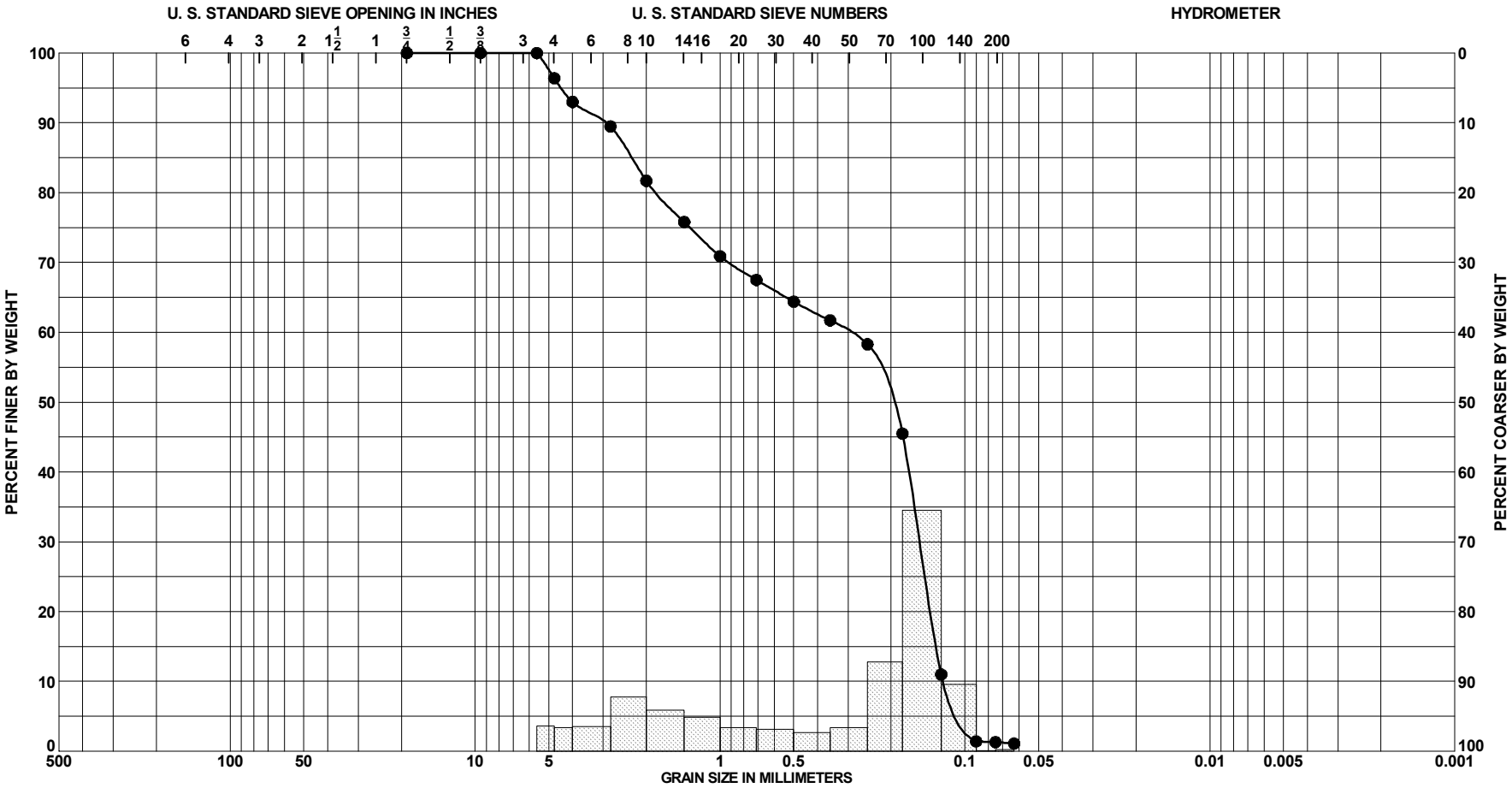


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 4	13.0 to 14.5 Ft.	SAND, poorly-graded (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	CB-EC00-37
BORING ELEV.	-6.3 Ft., NAVD88
DATE	

GRADATION CURVES

SAJ FORM 2087
JUN 02

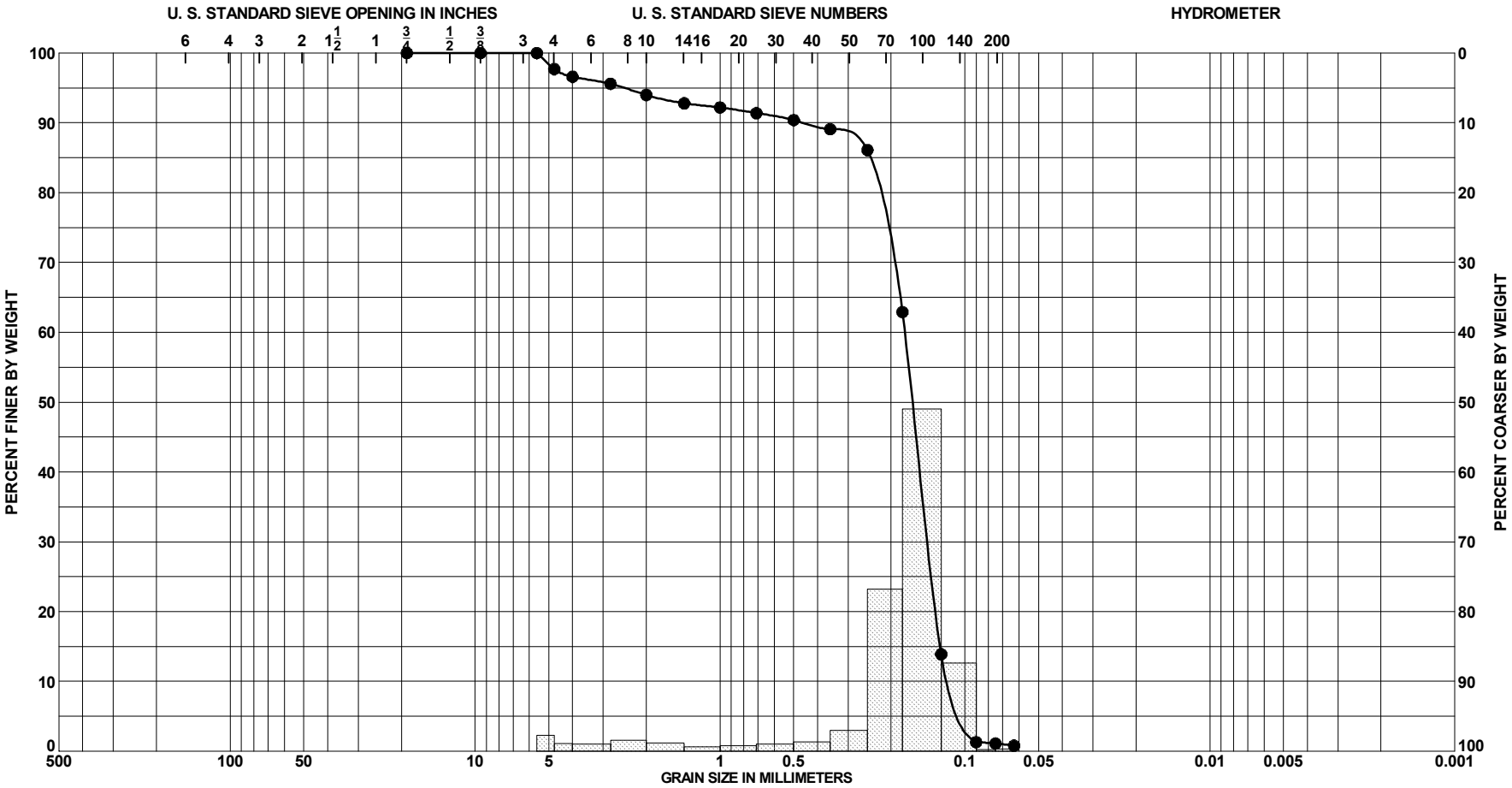


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 1	0.0 to 4.5 Ft.	SAND, poorly-graded (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	CB-EC00-38A
BORING ELEV.	-9.3 Ft., NAVD88
DATE	

GRADATION CURVES

SAJ FORM 2087
JUN 02

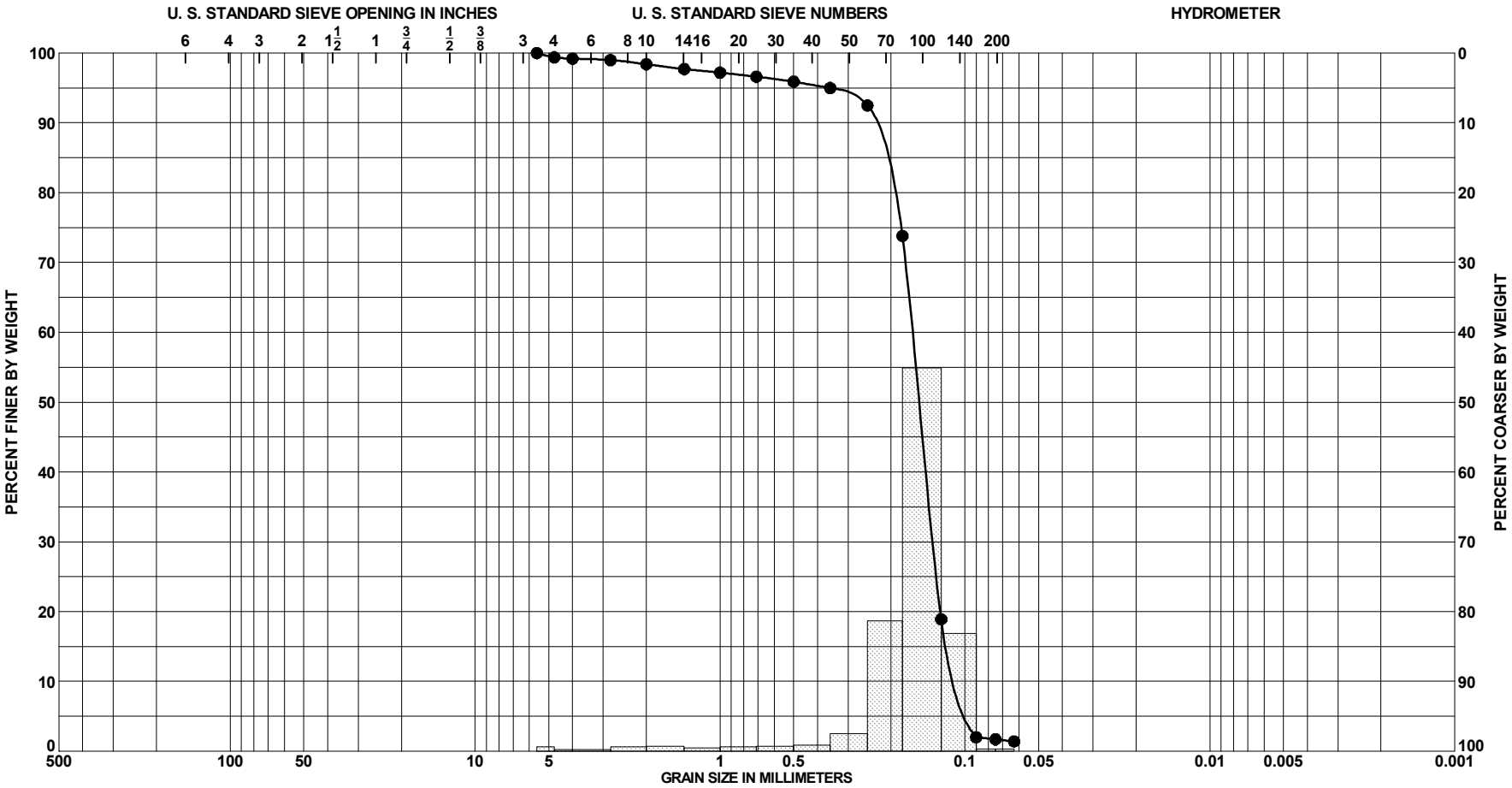


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 2	9.0 to 11.0 Ft.	SAND, poorly-graded (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	CB-EC00-38A
BORING ELEV.	-9.3 Ft., NAVD88
DATE	

GRADATION CURVES

SAJ FORM 2087
JUN 02

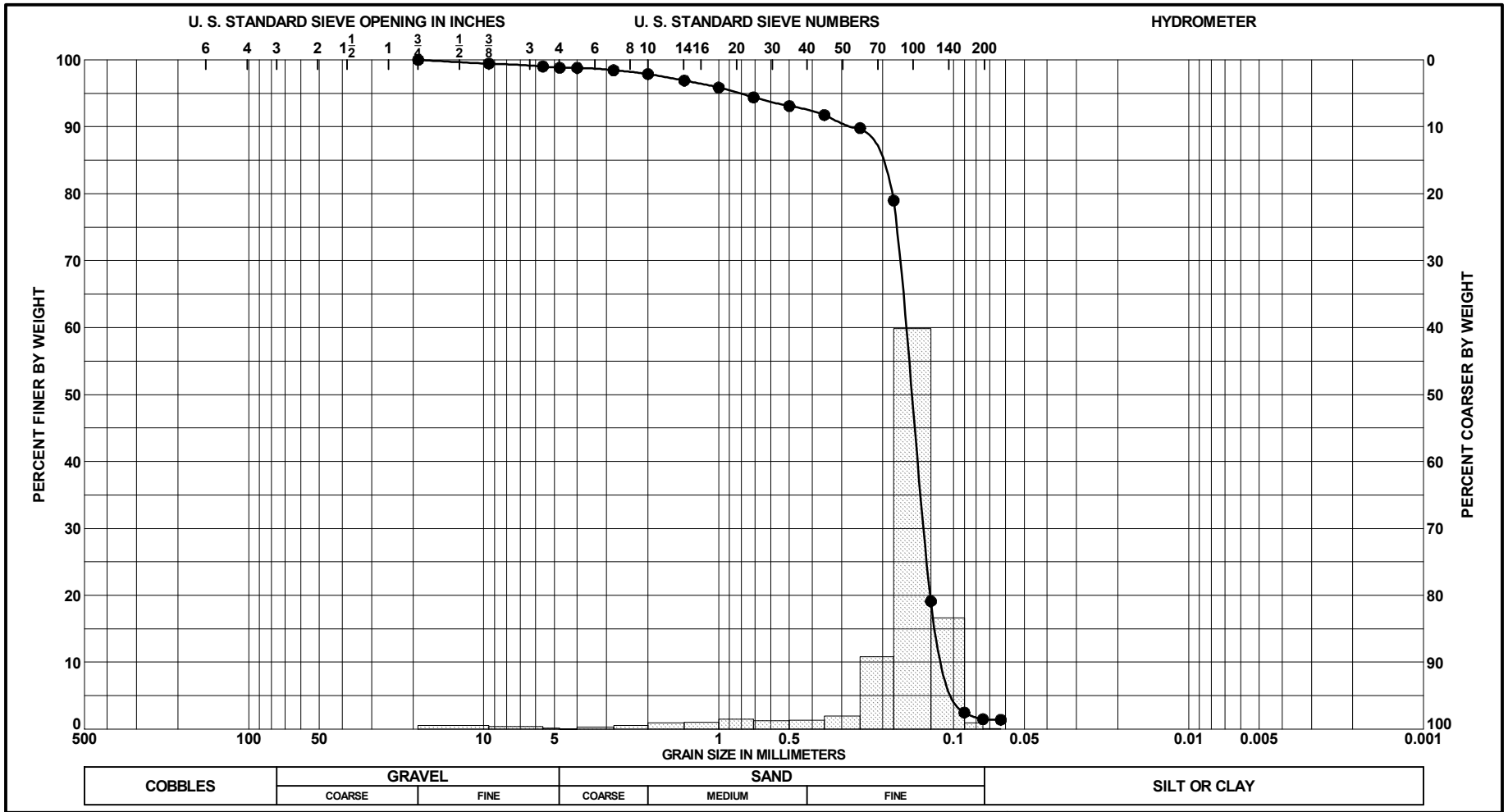


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 3	11.0 to 13.0 Ft.	SAND, poorly-graded (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	CB-EC00-38A
BORING ELEV.	-9.3 Ft., NAVD88
DATE	

GRADATION CURVES

SAJ FORM 2087
JUN 02

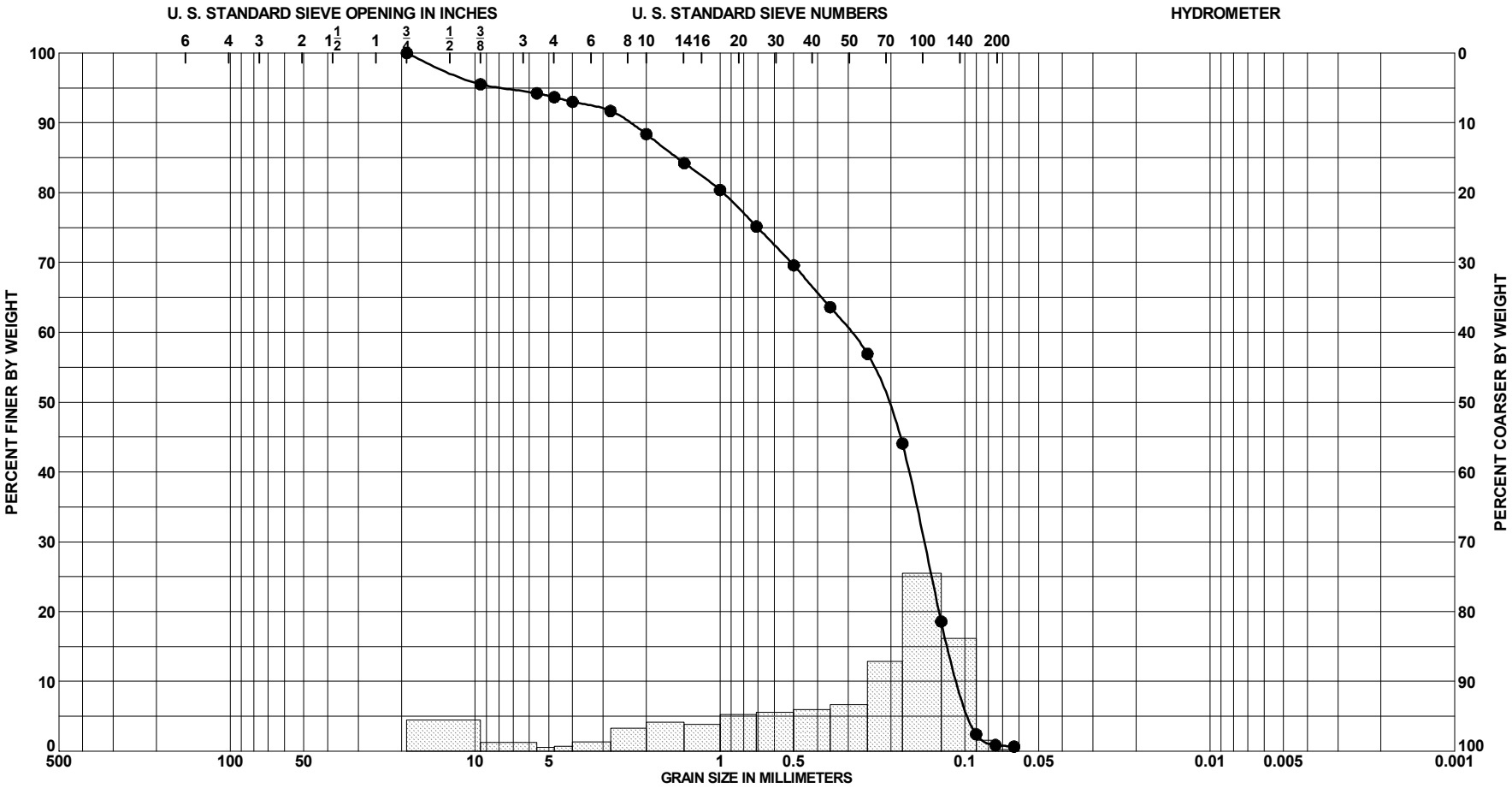


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 1	1.0 to 1.3 Ft.	SAND, poorly-graded, mostly	10Y 6/1	11 (est)						
		fine-grained sand-sized quartz, few								
		medium-grained sand-sized shell,								
		trace silt, greenish gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-01
BORING ELEV.	-11.8 Ft., NAVD88
DATE	7/27/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

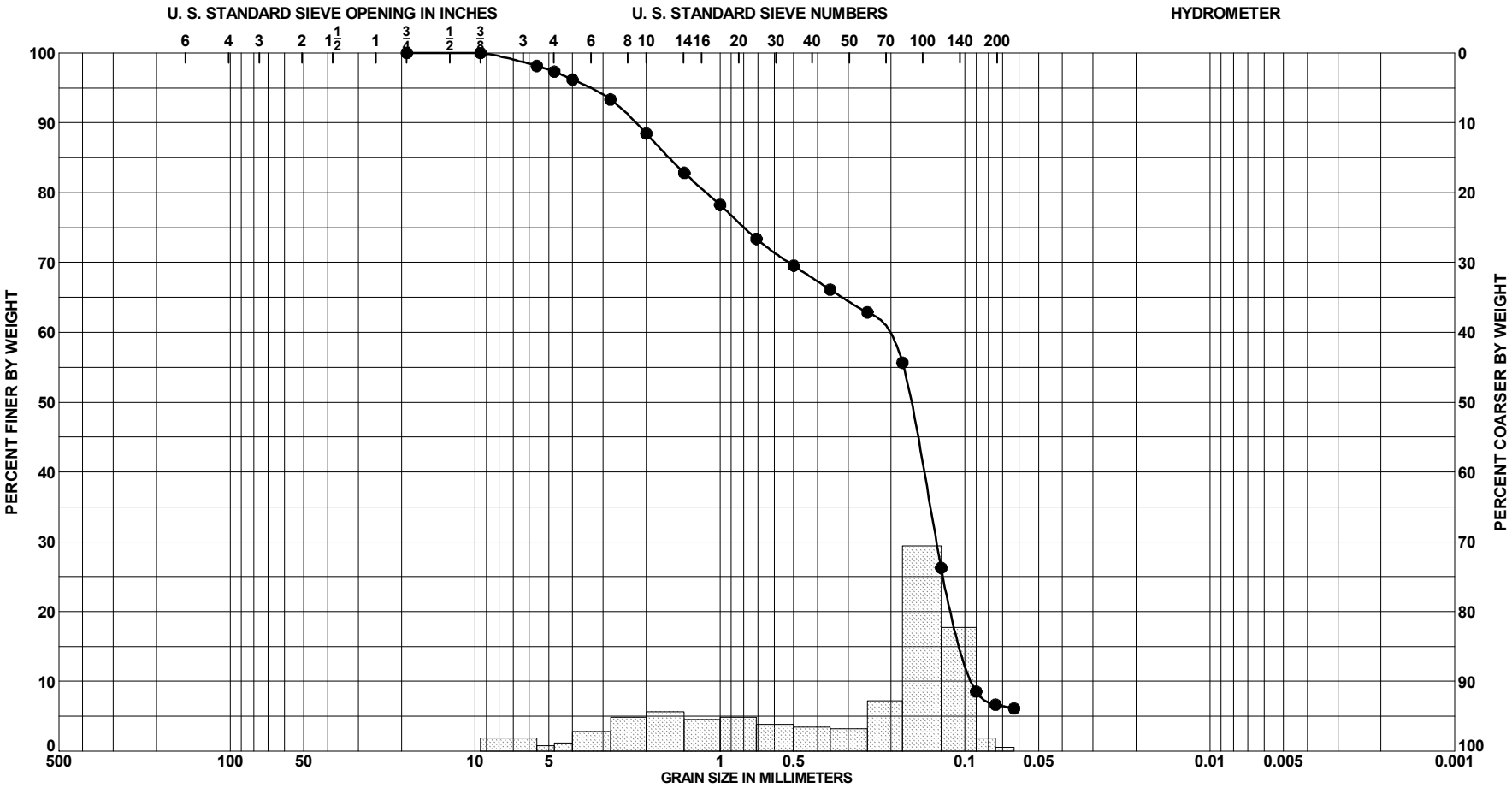


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 2	3.5 to 3.8 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt, gray (SP)	N 5/	44 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-01
BORING ELEV.	-11.8 Ft., NAVD88
DATE	7/27/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

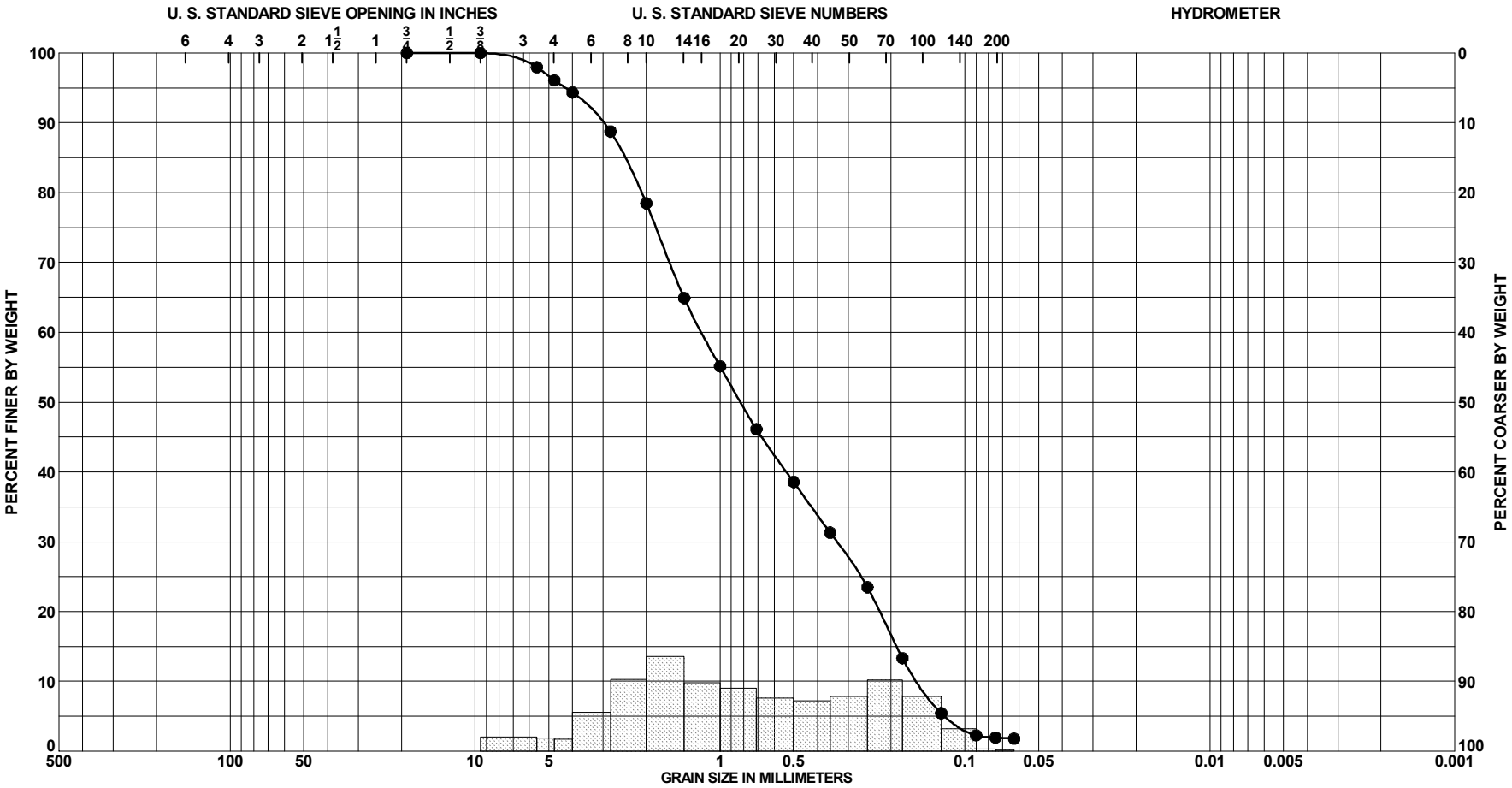


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 3	5.0 to 5.3 Ft.	SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, some medium to coarse-grained sand-sized shell, few silt, dark gray (SP-SM)	N 4/	35 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-01
BORING ELEV.	-11.8 Ft., NAVD88
DATE	7/27/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

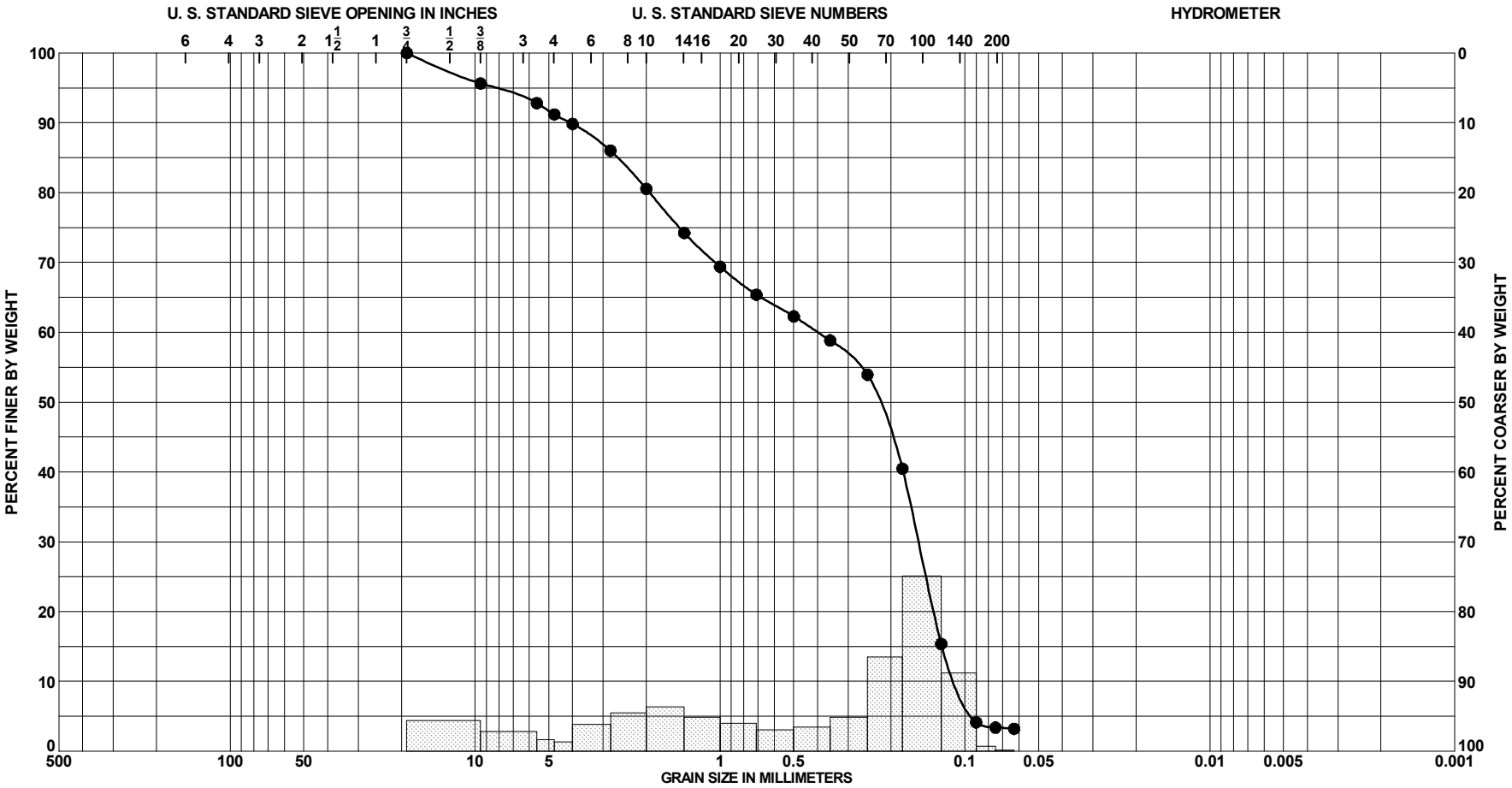


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 4	7.5 to 7.8 Ft.	SAND, poorly-graded, mostly medium to coarse-grained sand-sized shell, some fine-grained sand-sized quartz, trace silt, gray (SP)	N 5/	68 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-01
BORING ELEV.	-11.8 Ft., NAVD88
DATE	7/27/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

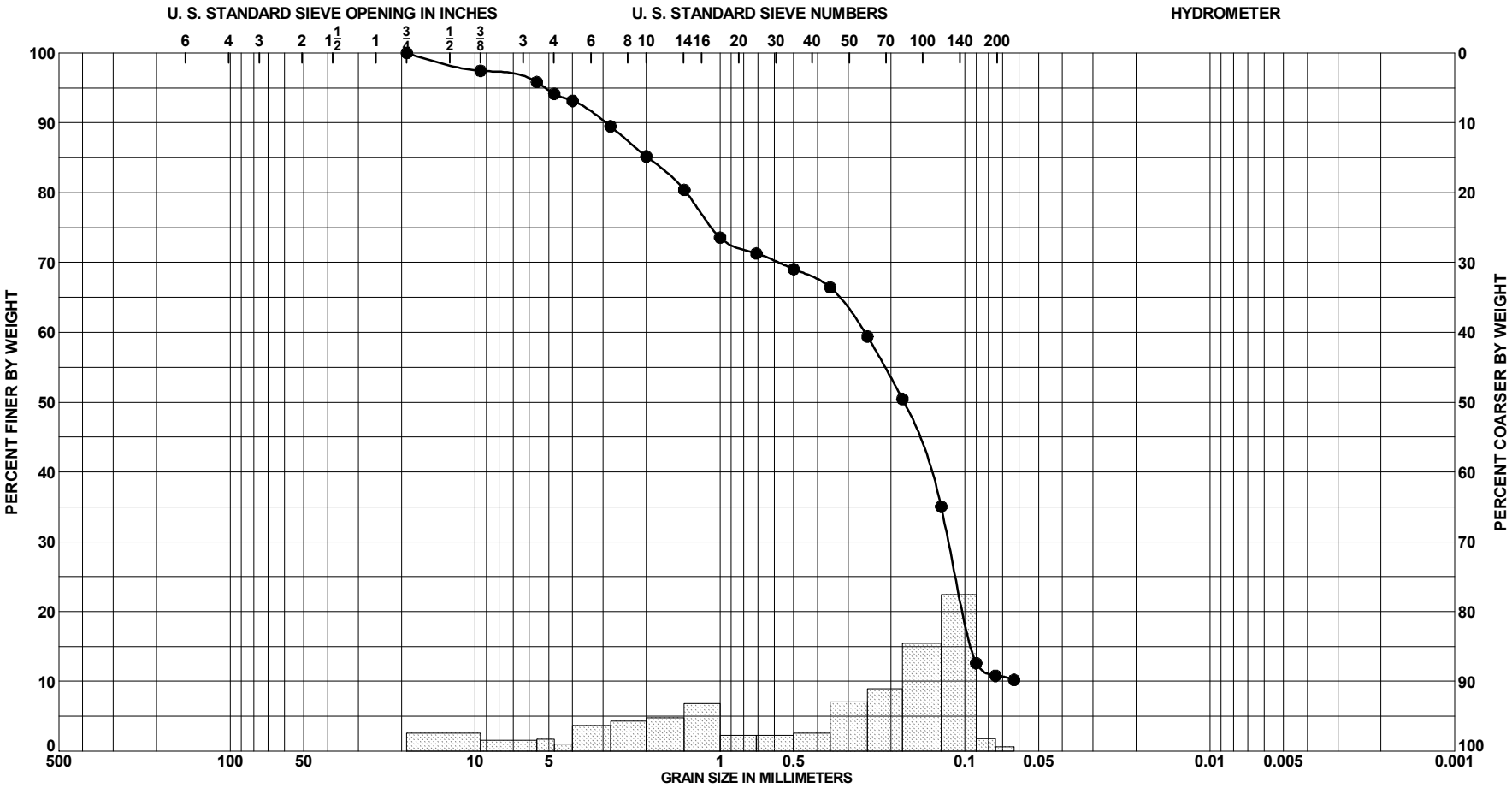


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 5	12.0 to 12.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt, gray (SP)	N 5/	38 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-01
BORING ELEV.	-11.8 Ft., NAVD88
DATE	7/27/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

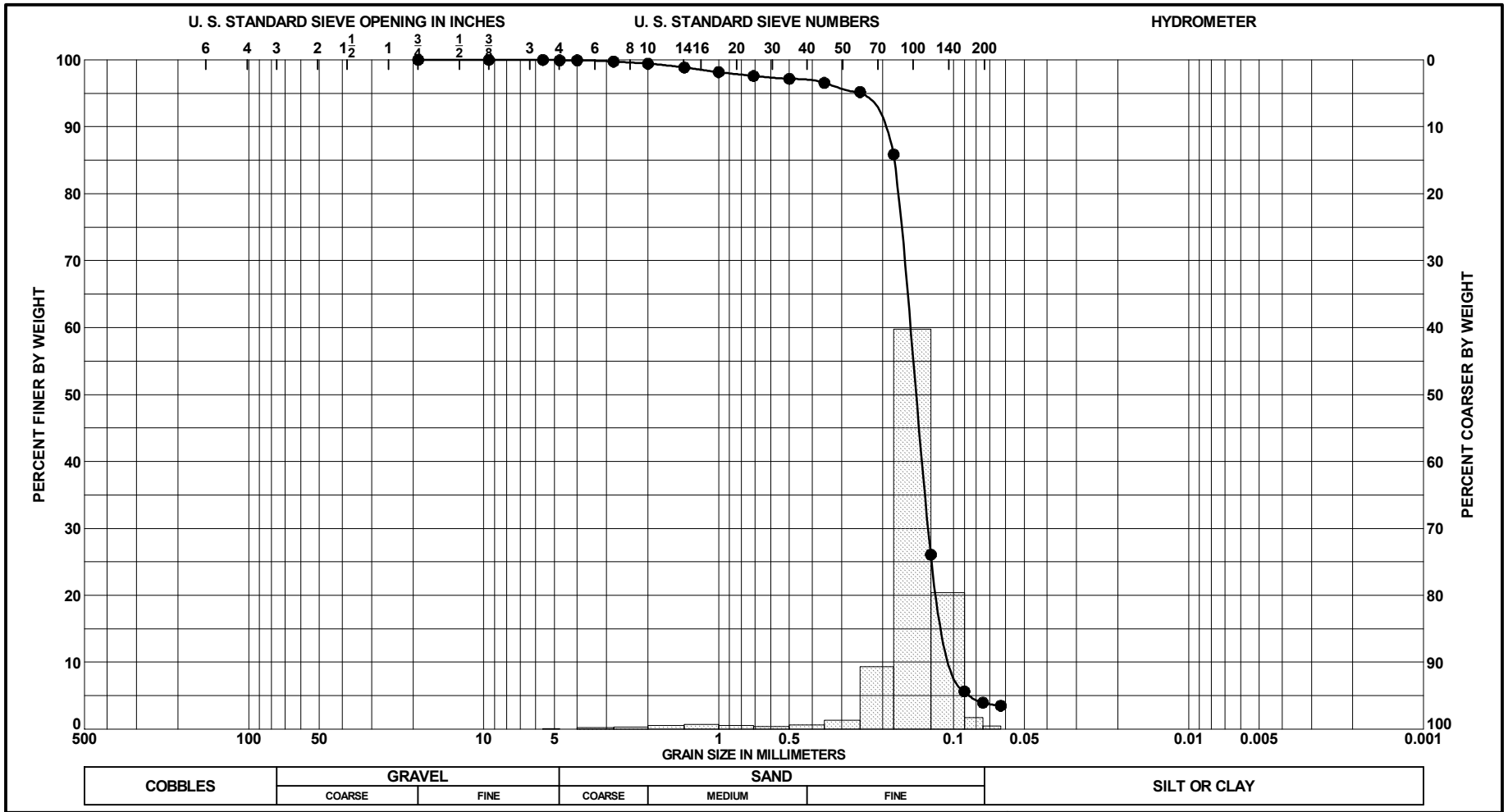


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 6	14.0 to 14.3 Ft.	SAND, poorly-graded with silt, mostly	N 5/	13 (est)						
		fine to coarse-grained sand-sized								
		quartz, little medium to coarse-grained								
		sand-sized shell, few silt, gray								
		(SP-SM)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-01
BORING ELEV.	-11.8 Ft., NAVD88
DATE	7/27/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

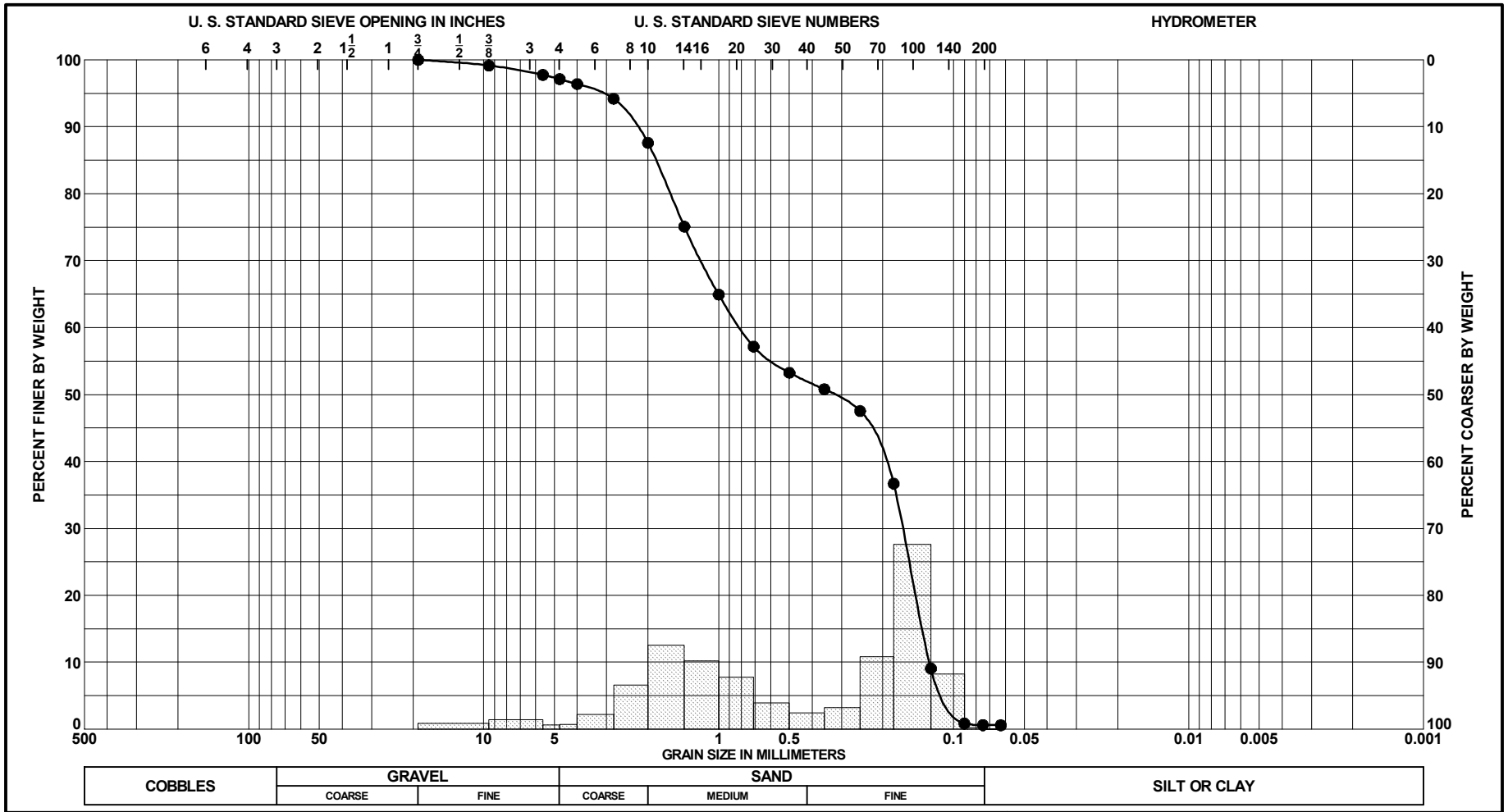


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 1	2.5 to 2.8 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	7 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-02
BORING ELEV.	-11.9 Ft., NAVD88
DATE	7/27/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

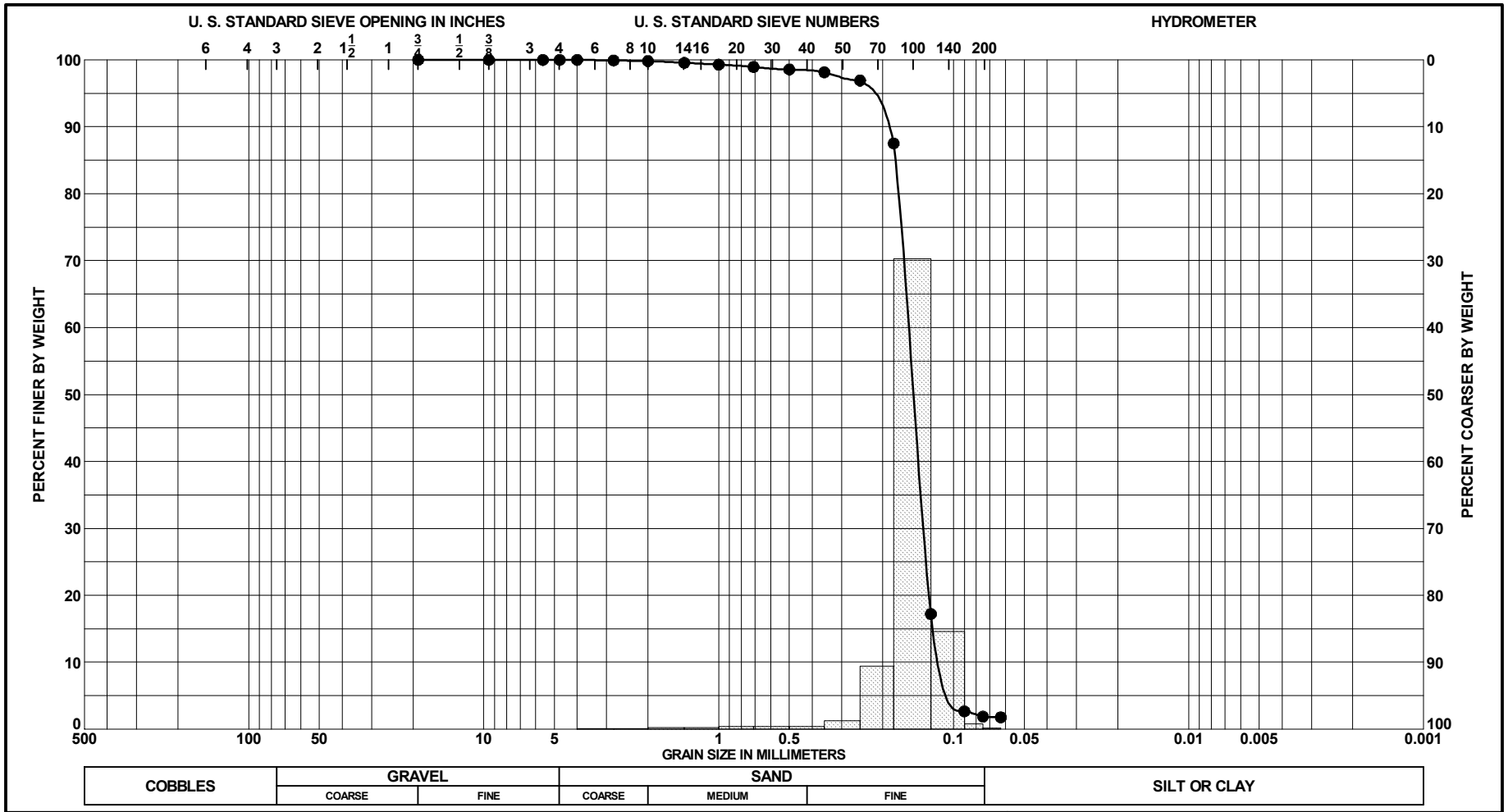


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 2	5.0 to 5.3 Ft.	SAND, poorly-graded, mostly medium to coarse-grained sand-sized shell, some fine-grained sand-sized quartz, trace silt, white (SP)	2.5Y 8/1	50 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-02
BORING ELEV.	-11.9 Ft., NAVD88
DATE	7/27/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

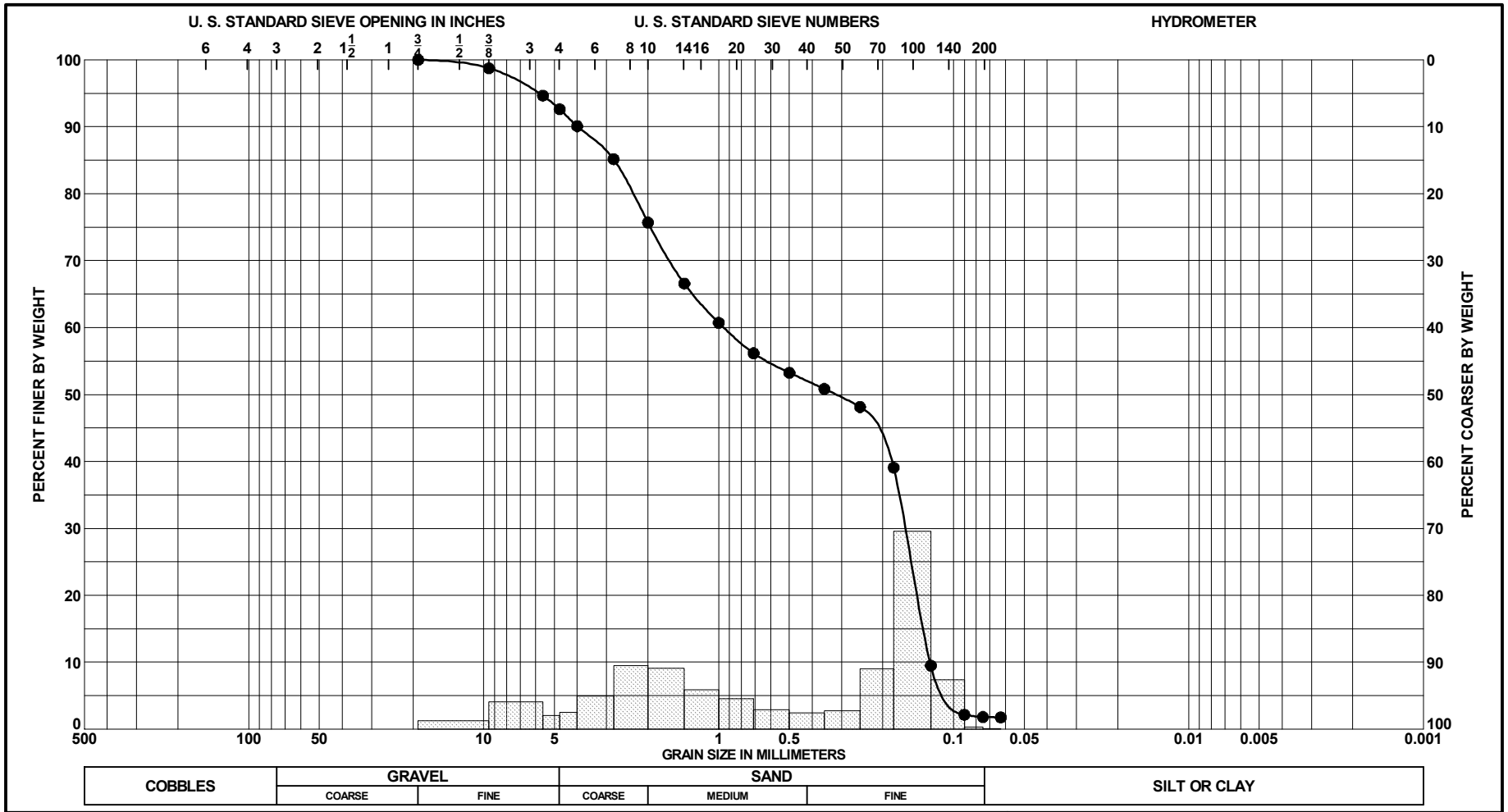


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 3	7.5 to 7.8 Ft.	SAND, poorly-graded, mostly	2.5Y 5/2	7 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, grayish brown (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-02
BORING ELEV.	-11.9 Ft., NAVD88
DATE	7/27/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

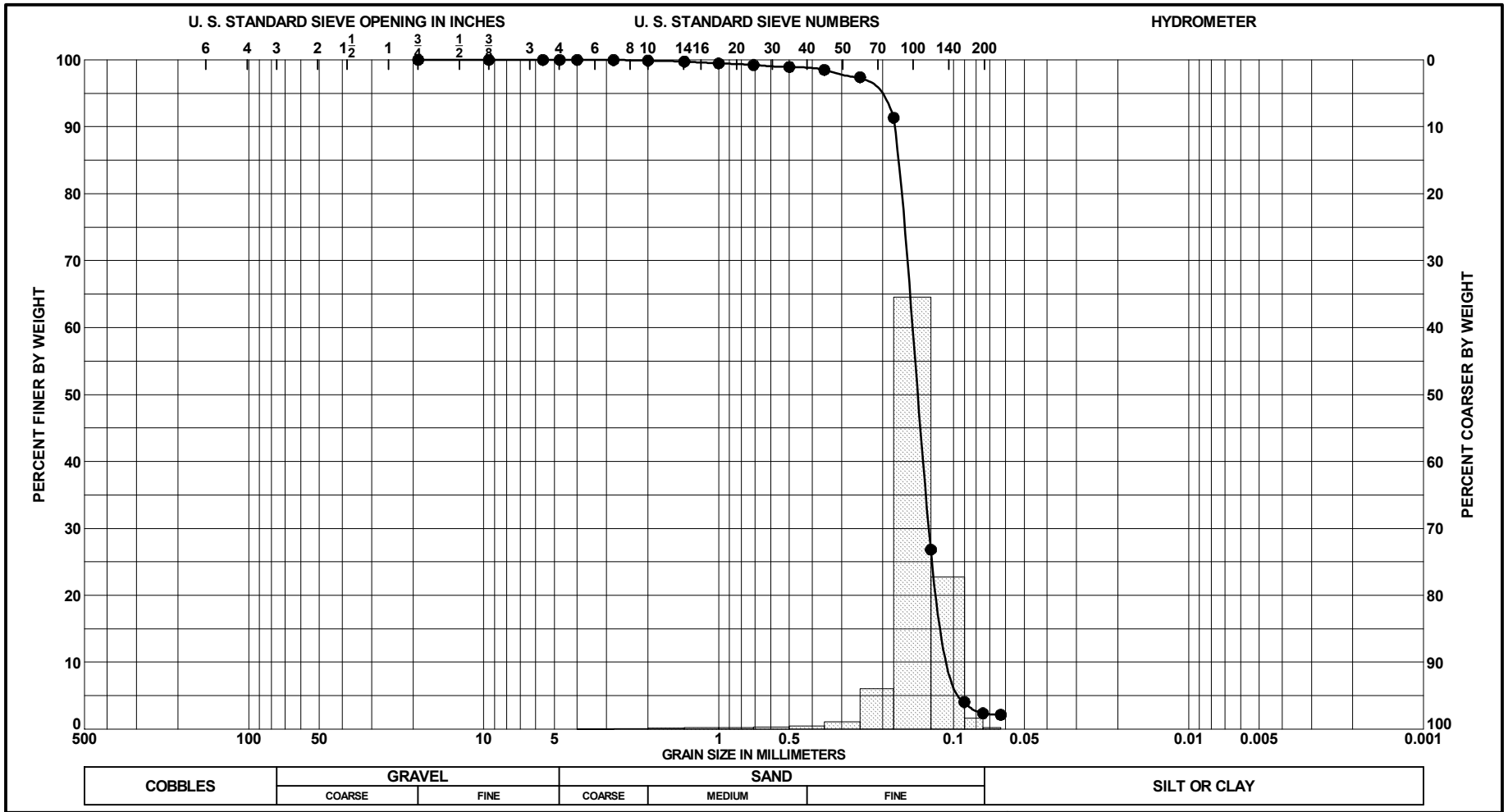


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 4	12.0 to 12.3 Ft.	SAND, poorly-graded, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz, trace silt, light gray (SP)	2.5Y 7/2	52 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-02
BORING ELEV.	-11.9 Ft., NAVD88
DATE	7/27/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

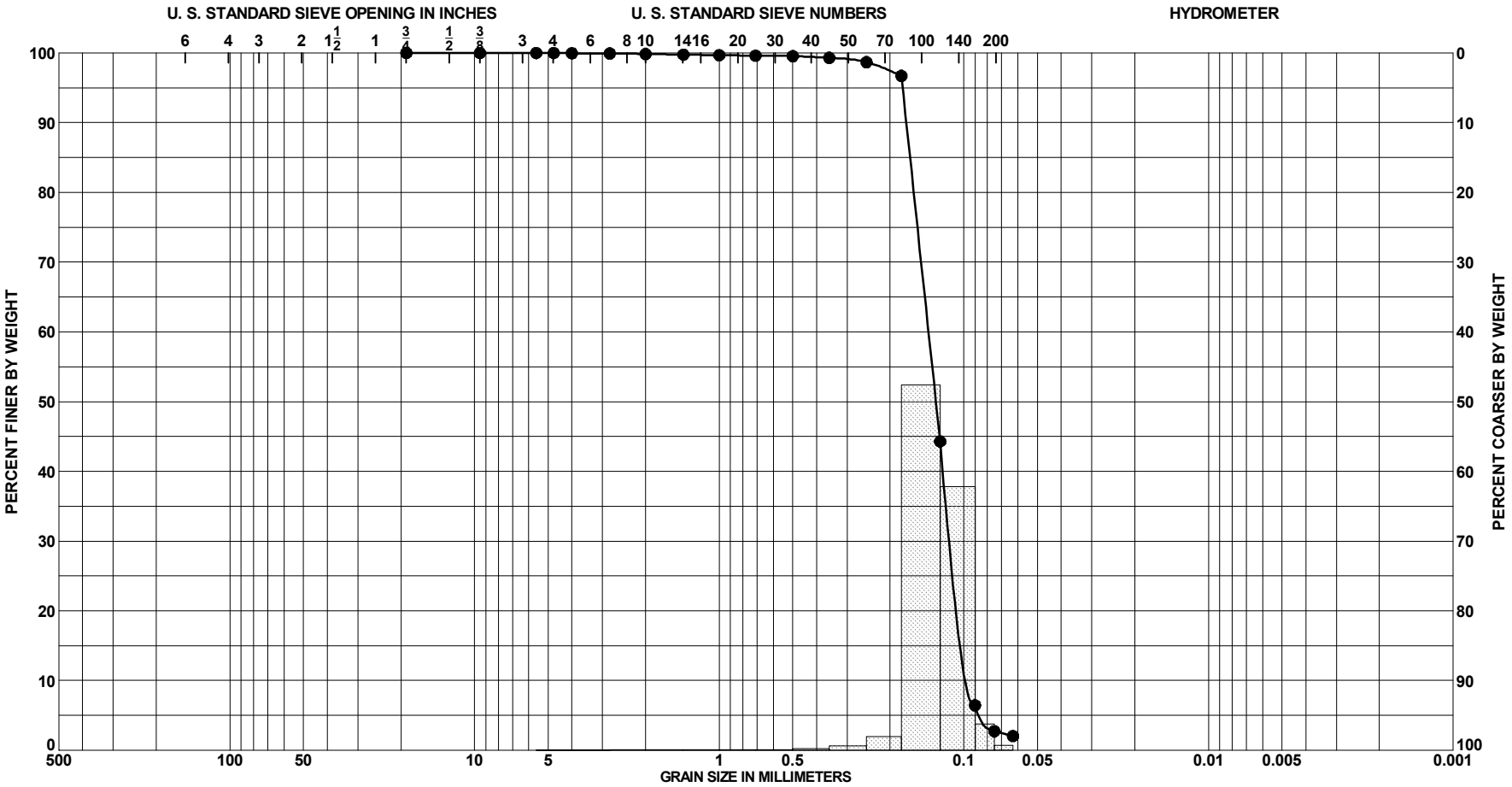


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 1	2.0 to 2.3 Ft.	SAND, poorly-graded, mostly	2.5Y 7/2	15 (est)						
		fine-grained sand-sized quartz, little								
		fine-grained sand-sized shell, trace								
		silt, light gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-03
BORING ELEV.	-12.9 Ft., NAVD88
DATE	7/27/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

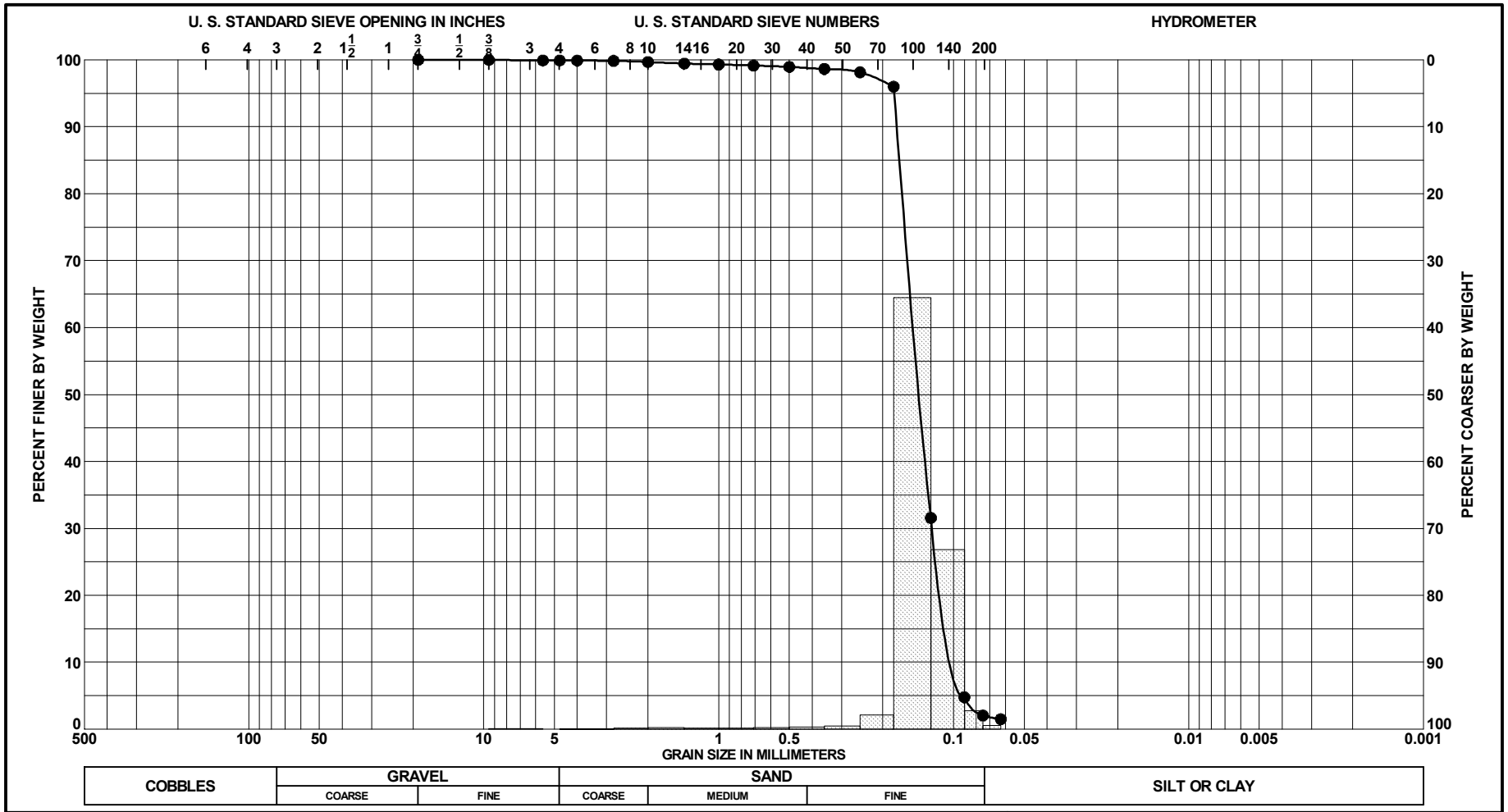


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 2	5.0 to 5.3 Ft.	SAND, poorly-graded, mostly	2.5Y 7/2	10 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, light gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-03
BORING ELEV.	-12.9 Ft., NAVD88
DATE	7/27/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

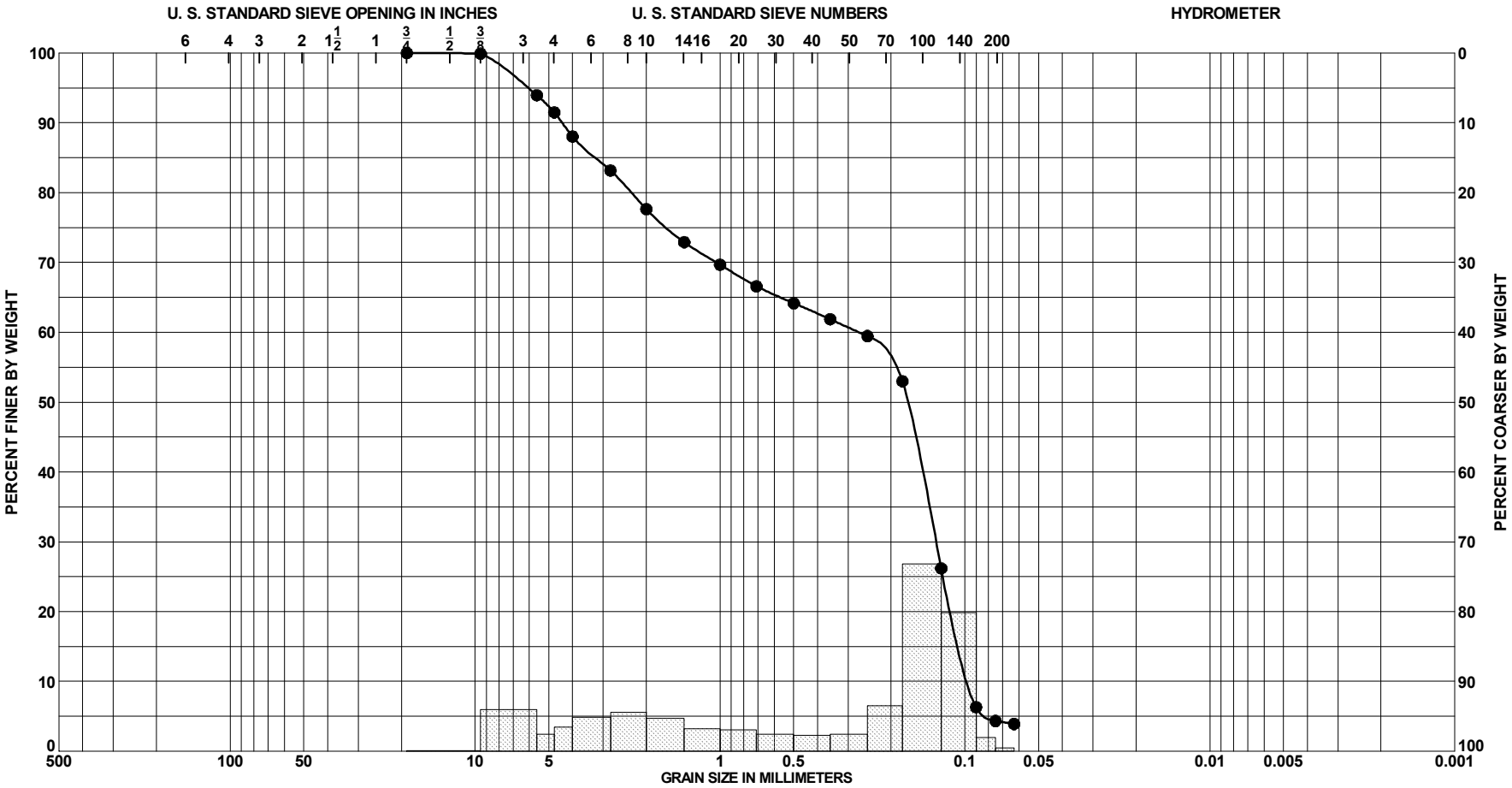


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 3	7.0 to 7.3 Ft.	SAND, poorly-graded, mostly	2.5Y 7/2	8 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, light gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-03
BORING ELEV.	-12.9 Ft., NAVD88
DATE	7/27/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

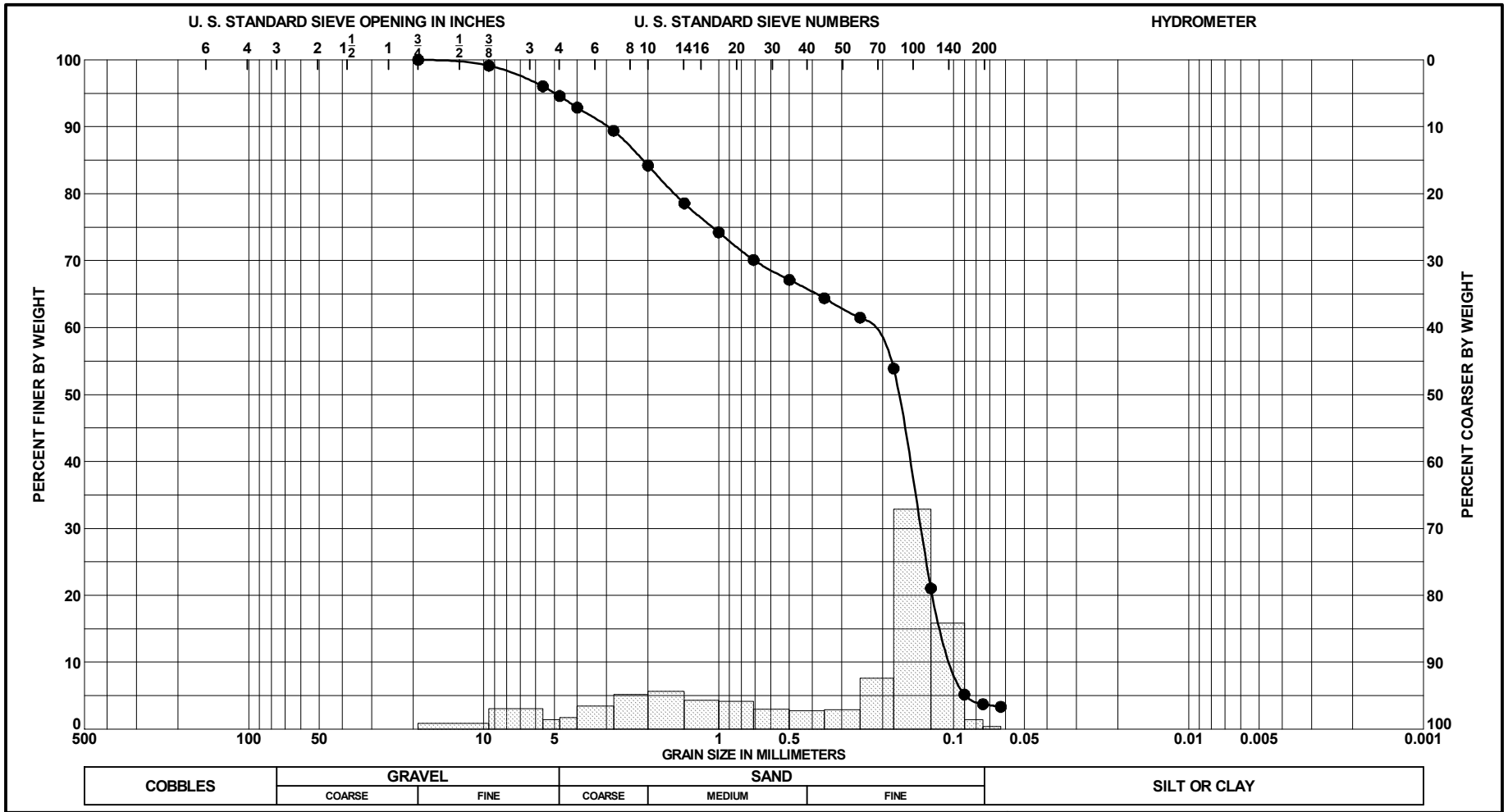


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 4	9.0 to 9.3 Ft.	SAND, poorly-graded, some	10Y 5/1	47 (est)						
		fine-grained sand-sized quartz, some								
		sand to gravel-sized shell, trace silt,								
		greenish gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-03
BORING ELEV.	-12.9 Ft., NAVD88
DATE	7/27/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 5	11.0 to 11.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt, greenish gray (SP)	10Y 5/1	42 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-03
BORING ELEV.	-12.9 Ft., NAVD88
DATE	7/27/2015

GRADATION CURVES

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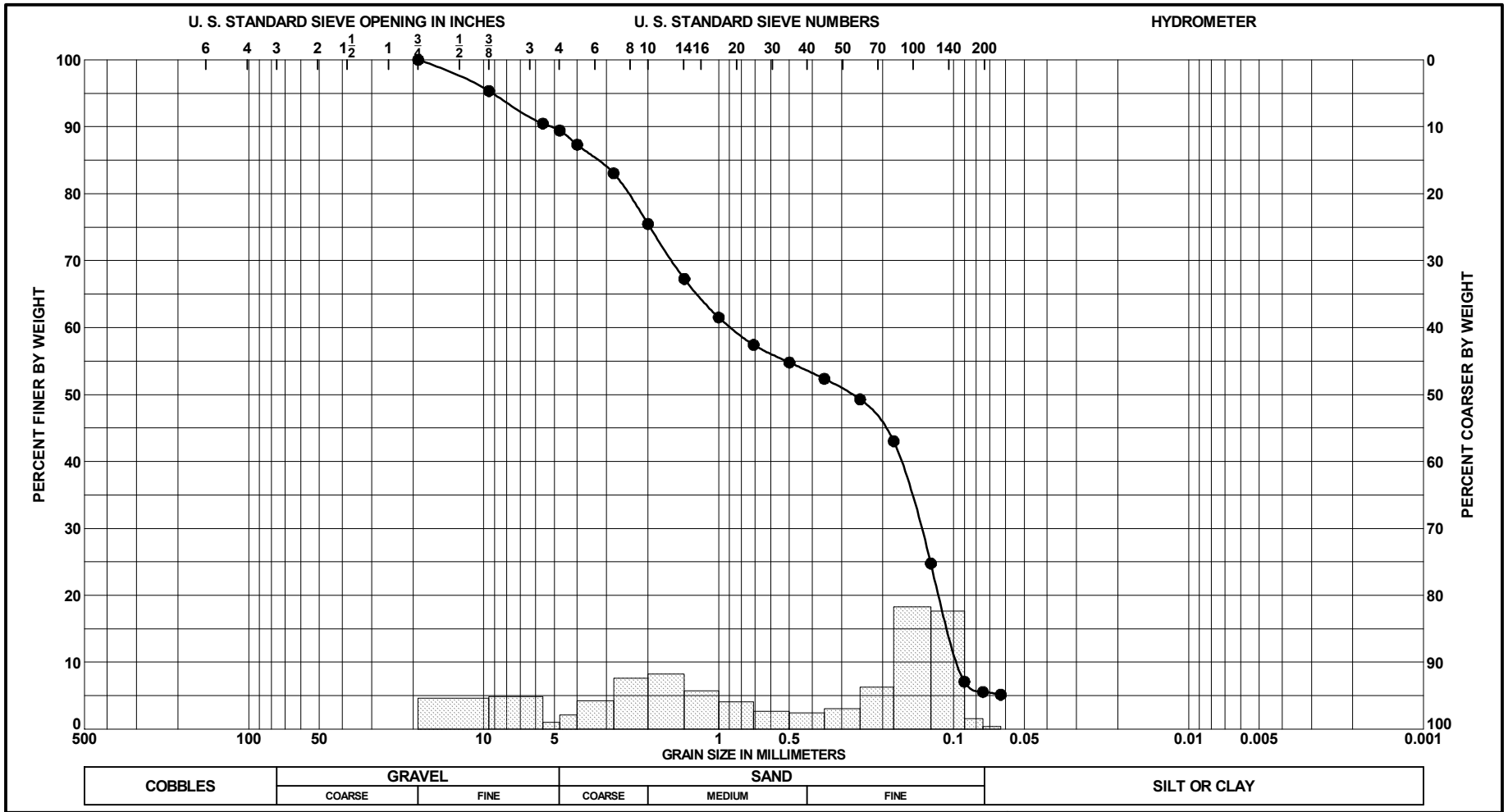
JUN 02

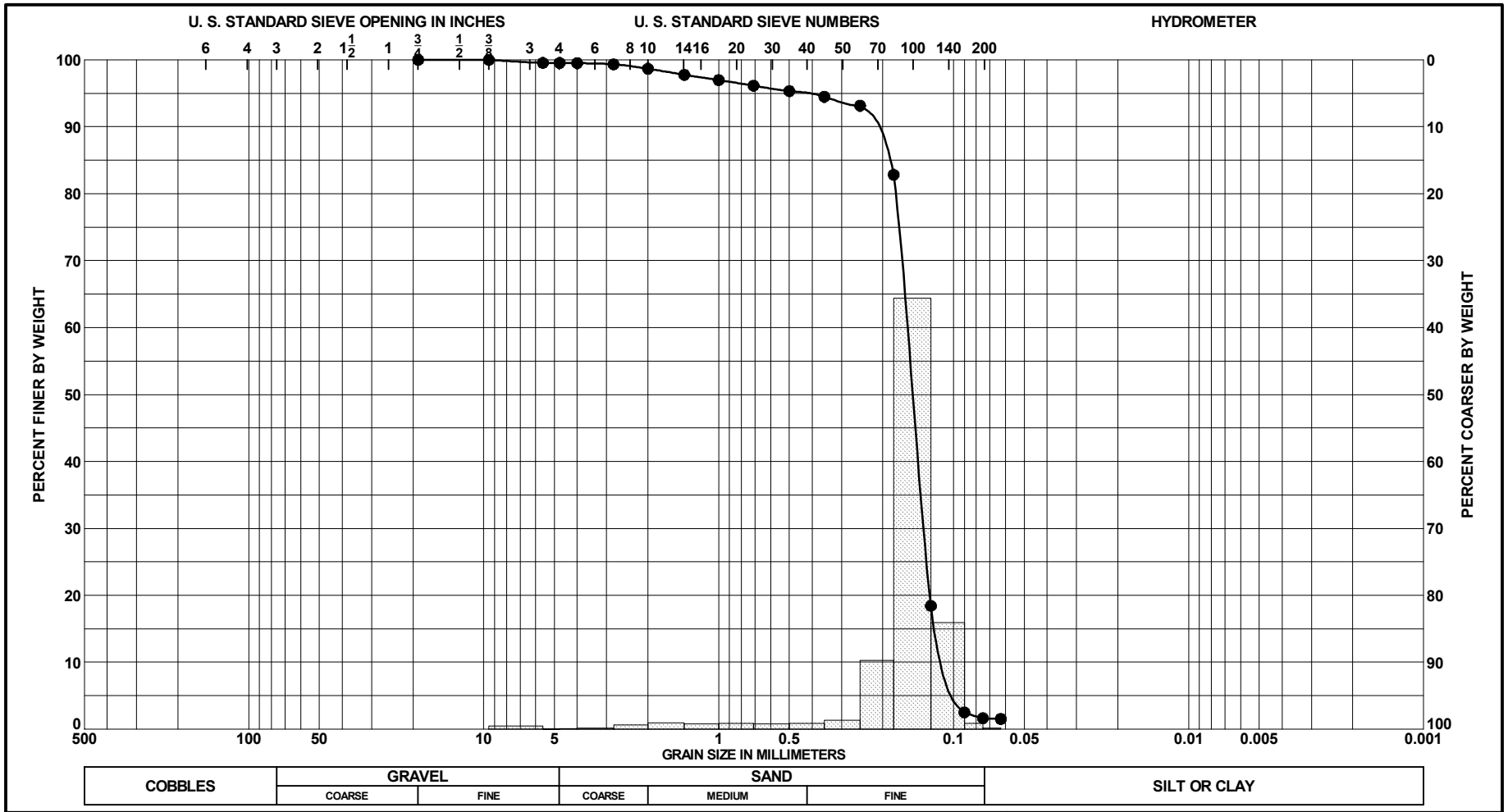


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 6	14.0 to 14.3 Ft.	SAND, poorly-graded with silt, some fine-grained sand-sized quartz, some sand to gravel-sized shell, few silt, trace limestone, greenish gray (SP-SM)	10Y 5/1	45 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-03
BORING ELEV.	-12.9 Ft., NAVD88
DATE	7/27/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

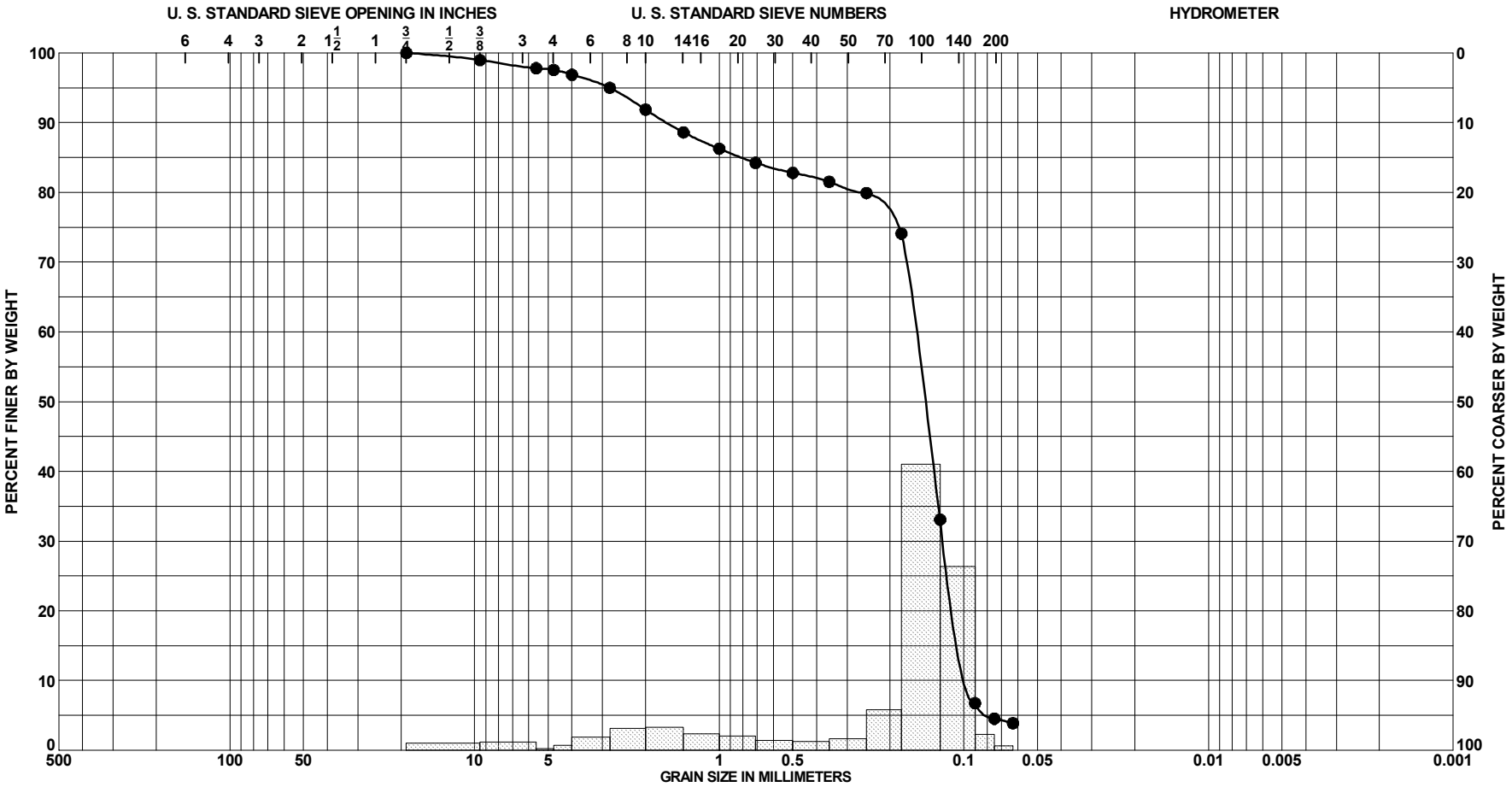


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 1	1.0 to 1.3 Ft.	SAND, poorly-graded, mostly	2.5Y 6/2	15 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium-grained sand-sized								
		shell, trace silt, light brownish gray								
		(SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-04
BORING ELEV.	-12.6 Ft., NAVD88
DATE	7/27/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

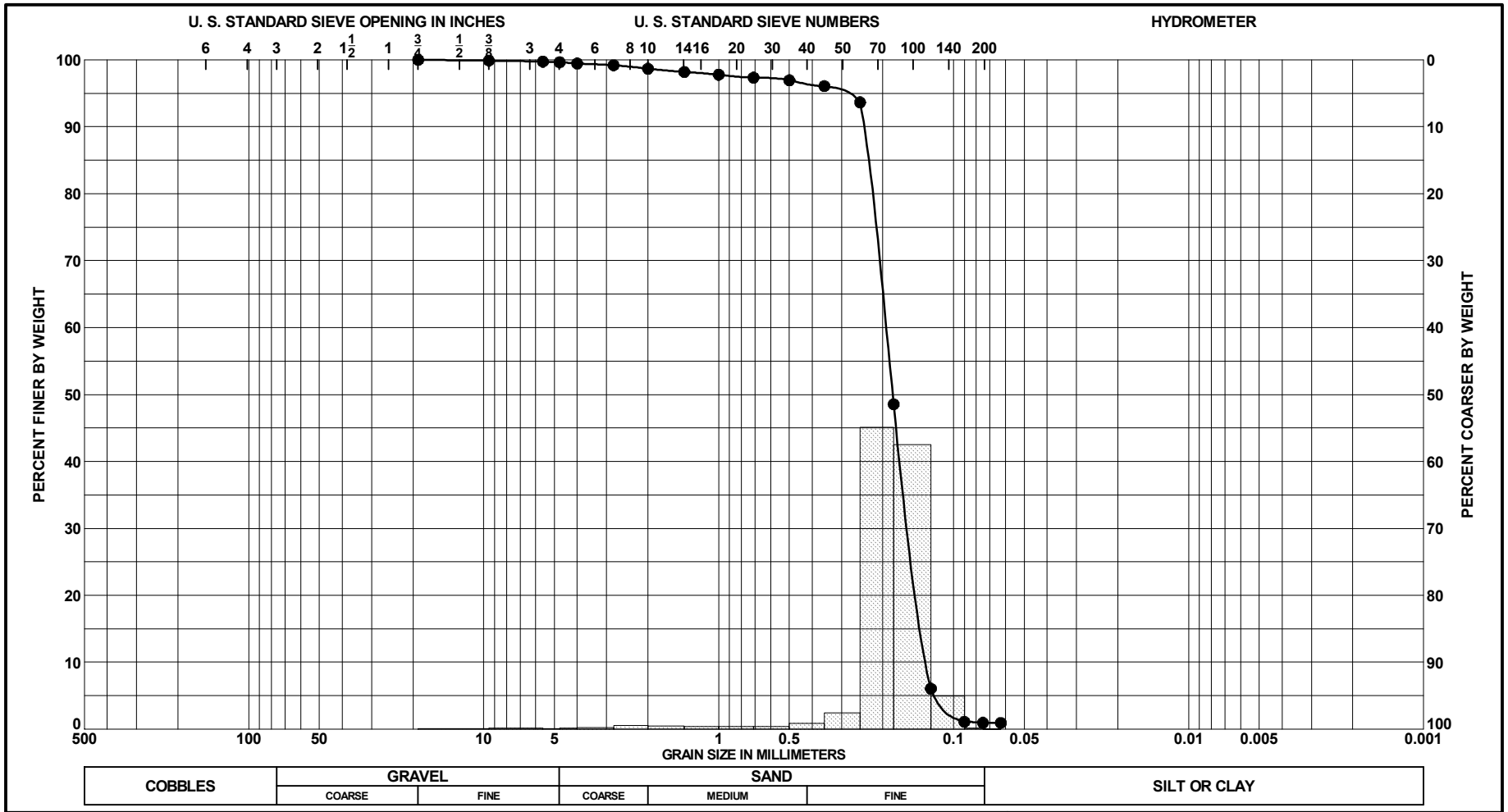


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 2	3.0 to 3.3 Ft.	SAND, poorly-graded, mostly	2.5Y 5/1	24 (est)						
		fine-grained sand-sized quartz, little								
		fine to coarse-grained sand-sized								
		shell, trace silt, gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-04
BORING ELEV.	-12.6 Ft., NAVD88
DATE	7/27/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

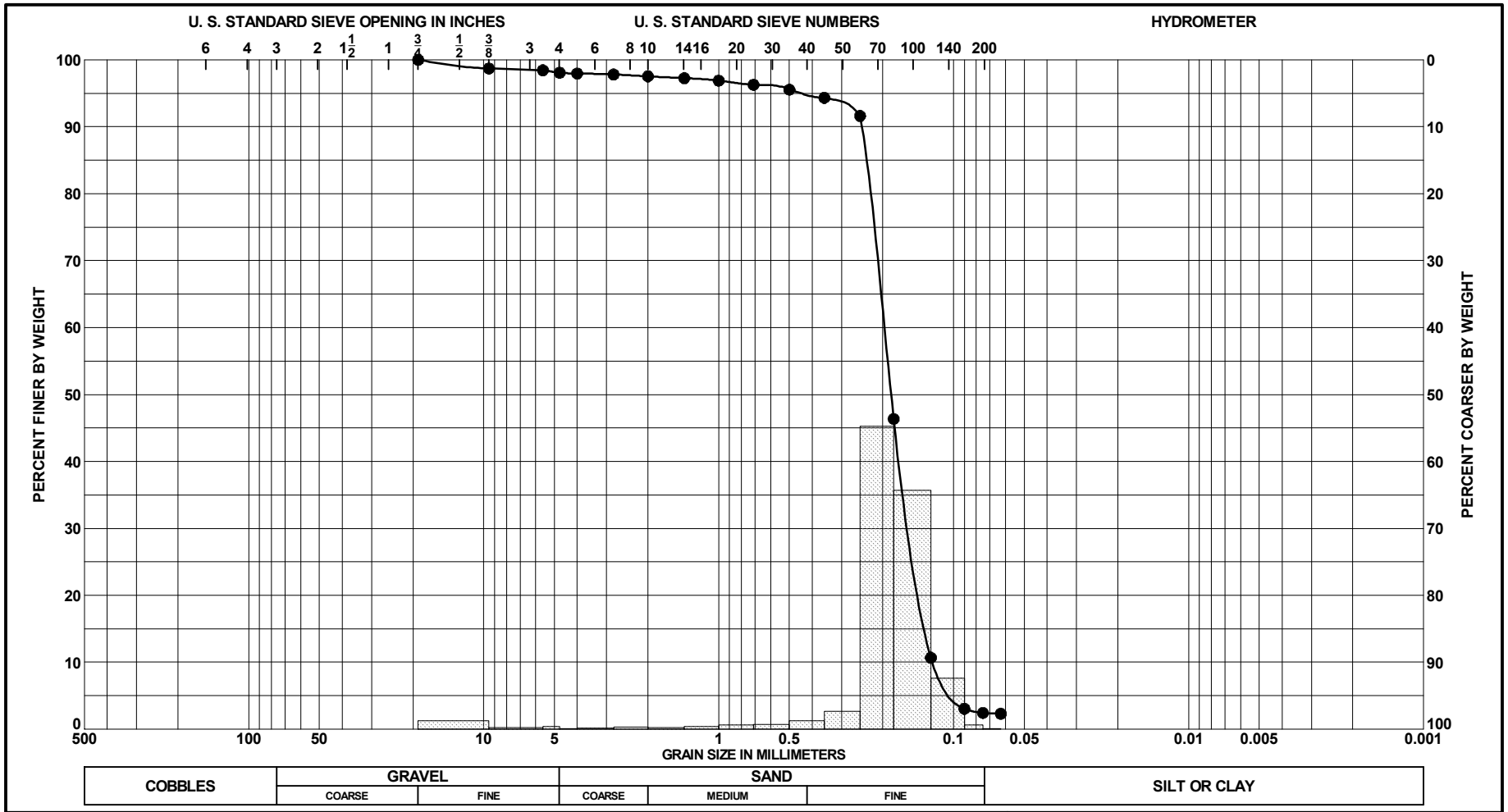


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 3	5.0 to 5.3 Ft.	SAND, poorly-graded, mostly	2.5Y 6/2	14 (est)						
		fine-grained sand-sized quartz, little								
		fine-grained sand-sized shell, trace								
		silt, light brownish gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-04
BORING ELEV.	-12.6 Ft., NAVD88
DATE	7/28/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

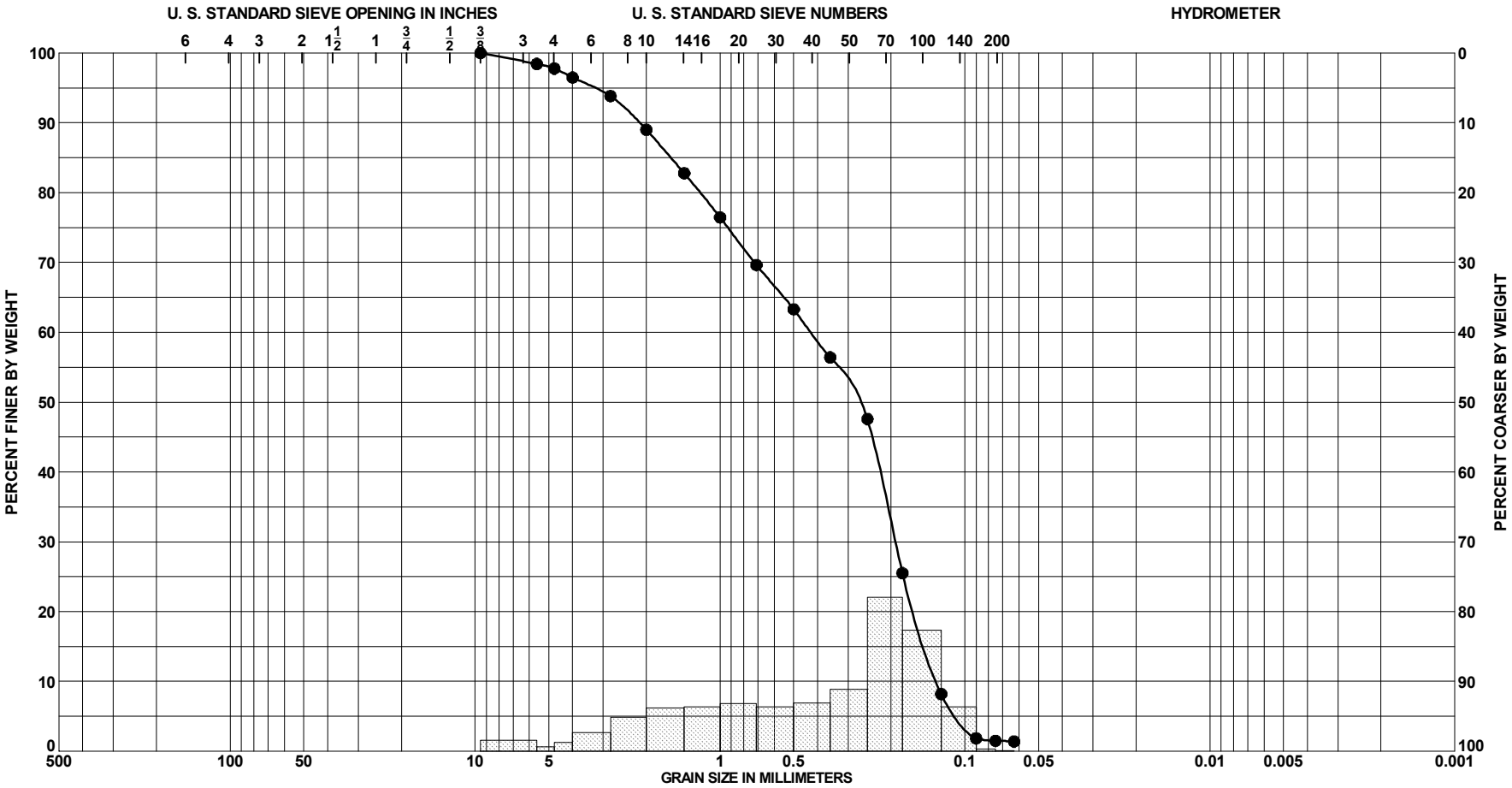


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 4	8.5 to 8.8 Ft.	SAND, poorly-graded, mostly	2.5Y 5/1	17 (est)						
		fine-grained sand-sized quartz, little								
		fine-grained sand-sized shell, trace								
		silt, gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-04
BORING ELEV.	-12.6 Ft., NAVD88
DATE	7/28/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

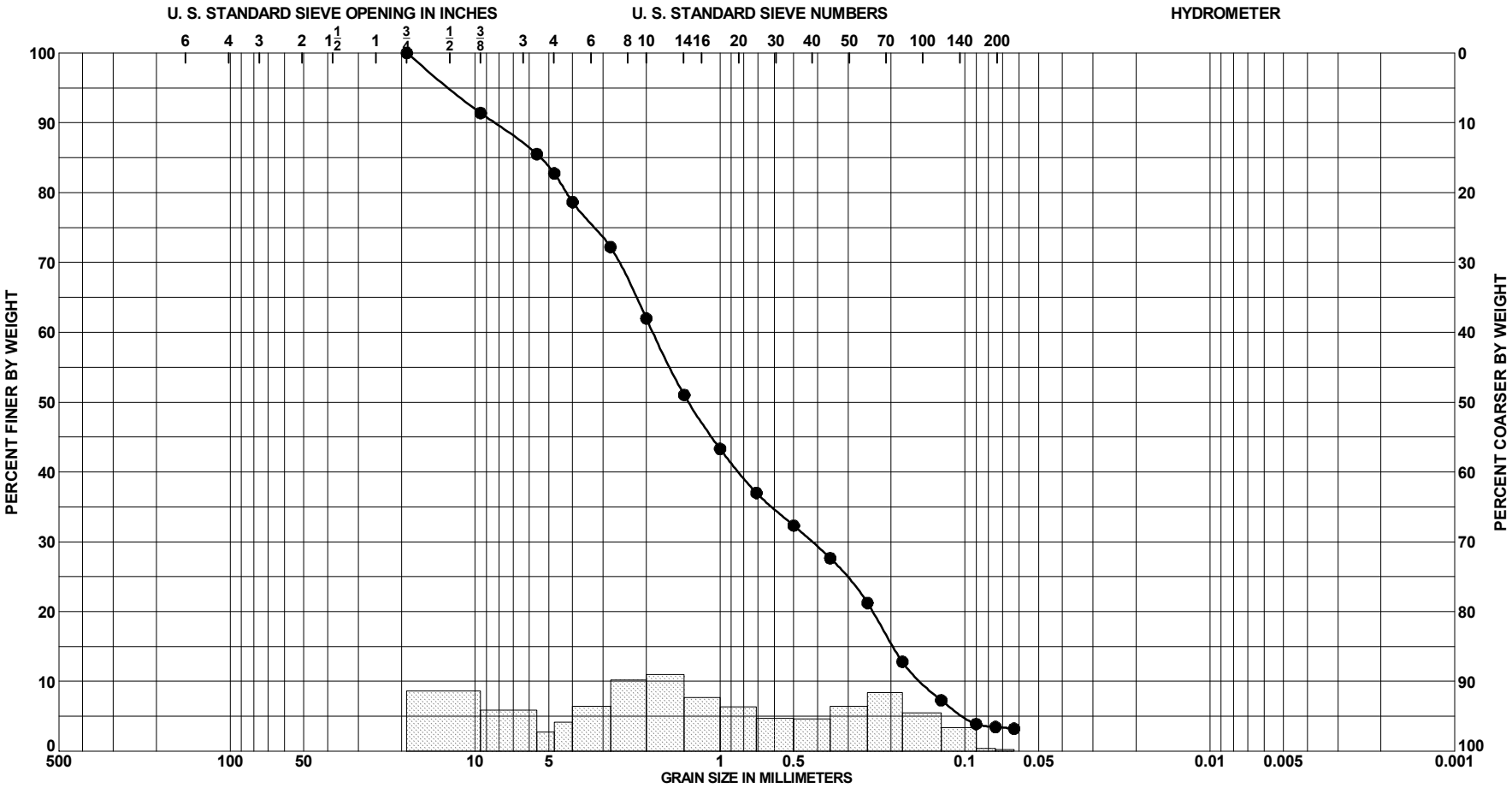


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 5	12.0 to 12.3 Ft.	SAND, poorly-graded, some fine to coarse-grained sand-sized shell, some fine-grained sand-sized quartz, trace silt, gray (SP)	2.5Y 5/1	50 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-04
BORING ELEV.	-12.6 Ft., NAVD88
DATE	7/28/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 6	15.0 to 15.3 Ft.	SAND, poorly-graded, mostly sand to gravel-sized shell, little fine-grained sand-sized quartz, trace silt, greenish gray (SP)	10Y 5/1	74 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-04
BORING ELEV.	-12.6 Ft., NAVD88
DATE	7/28/2015

GRADATION CURVES

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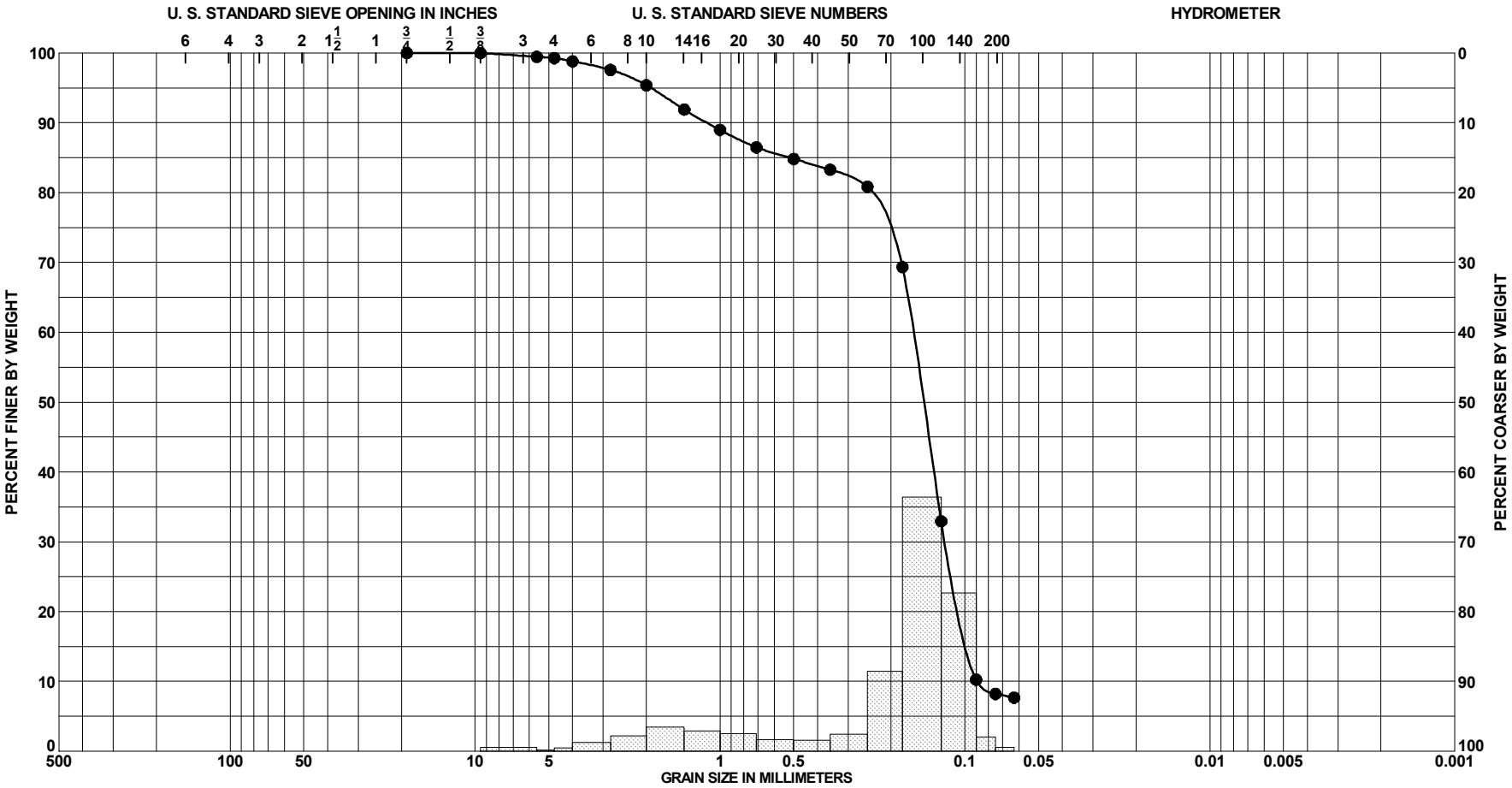
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 1	2.0 to 2.3 Ft.	SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little medium-grained sand-sized shell, few silt, light brownish gray (SP-SM)	2.5Y 6/2	19 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-05
BORING ELEV.	-12.7 Ft., NAVD88
DATE	7/28/2015

GRADATION CURVES

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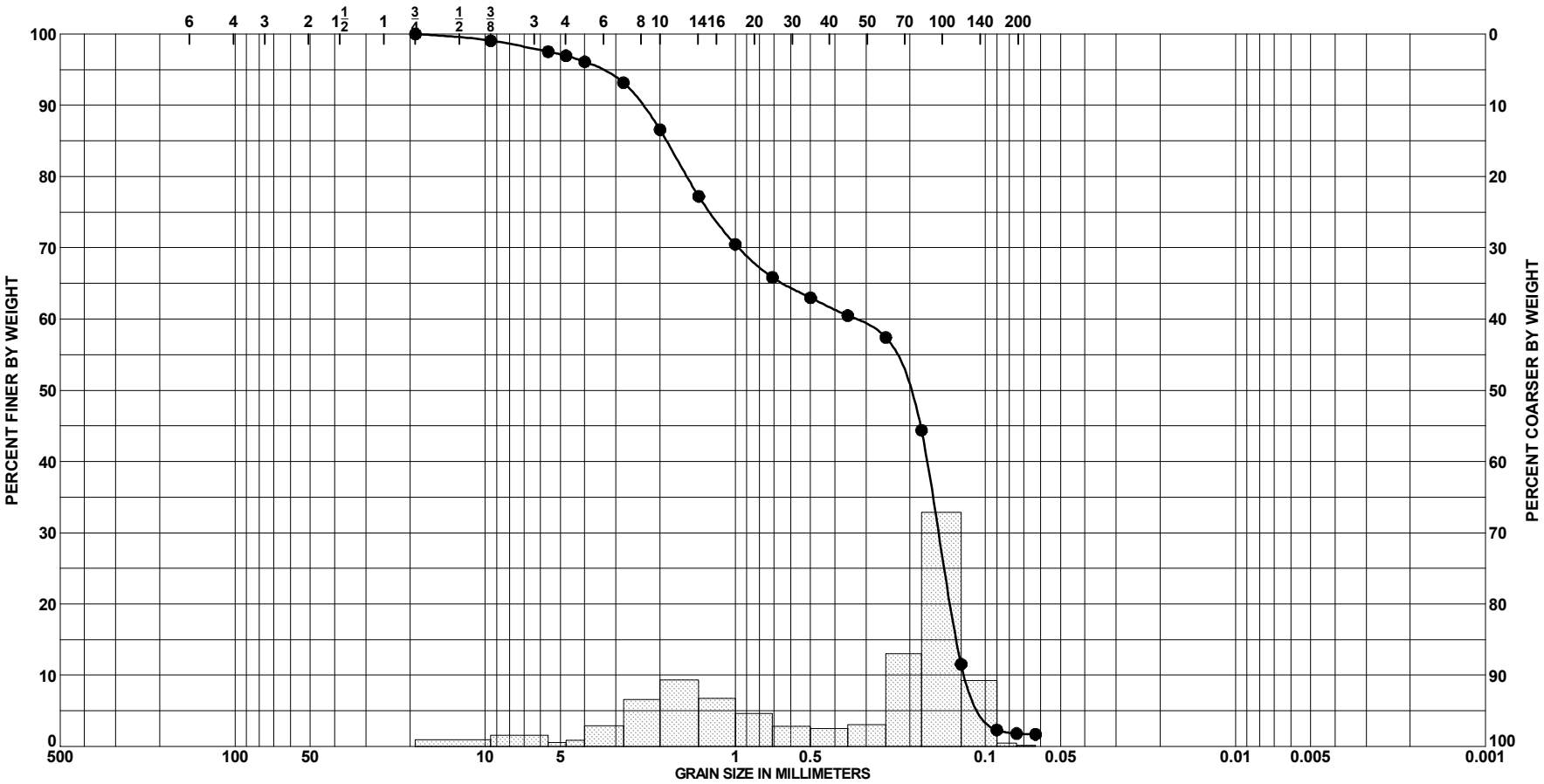

Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 2	4.5 to 4.8 Ft.	SAND, poorly-graded, mostly	2.5Y 5/1	43 (est)						
		fine-grained sand-sized quartz, some								
		medium to coarse-grained sand-sized								
		shell, trace silt, gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-05
BORING ELEV.	-12.7 Ft., NAVD88
DATE	7/28/2015

GRADATION CURVES

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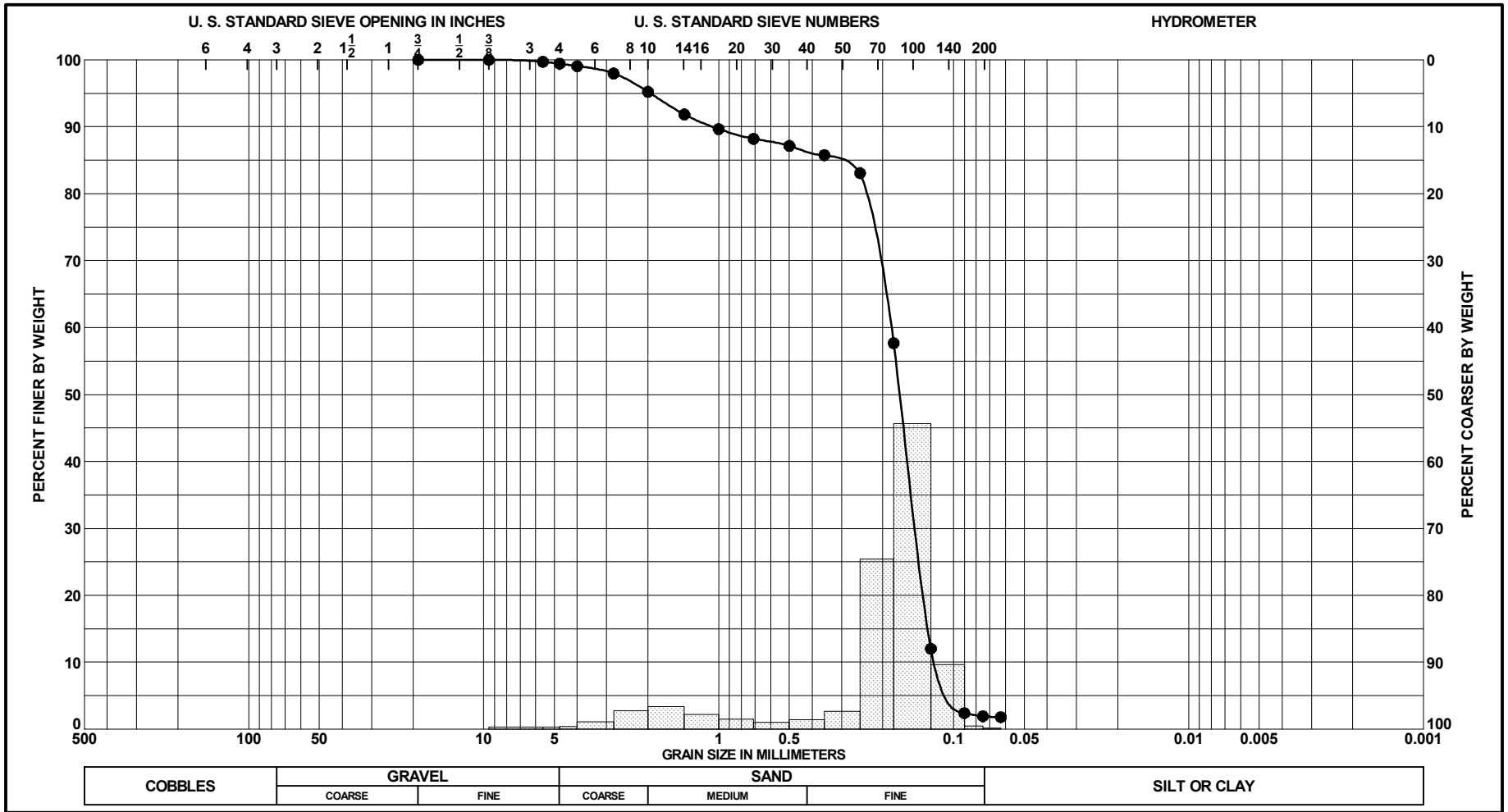
JUN 02

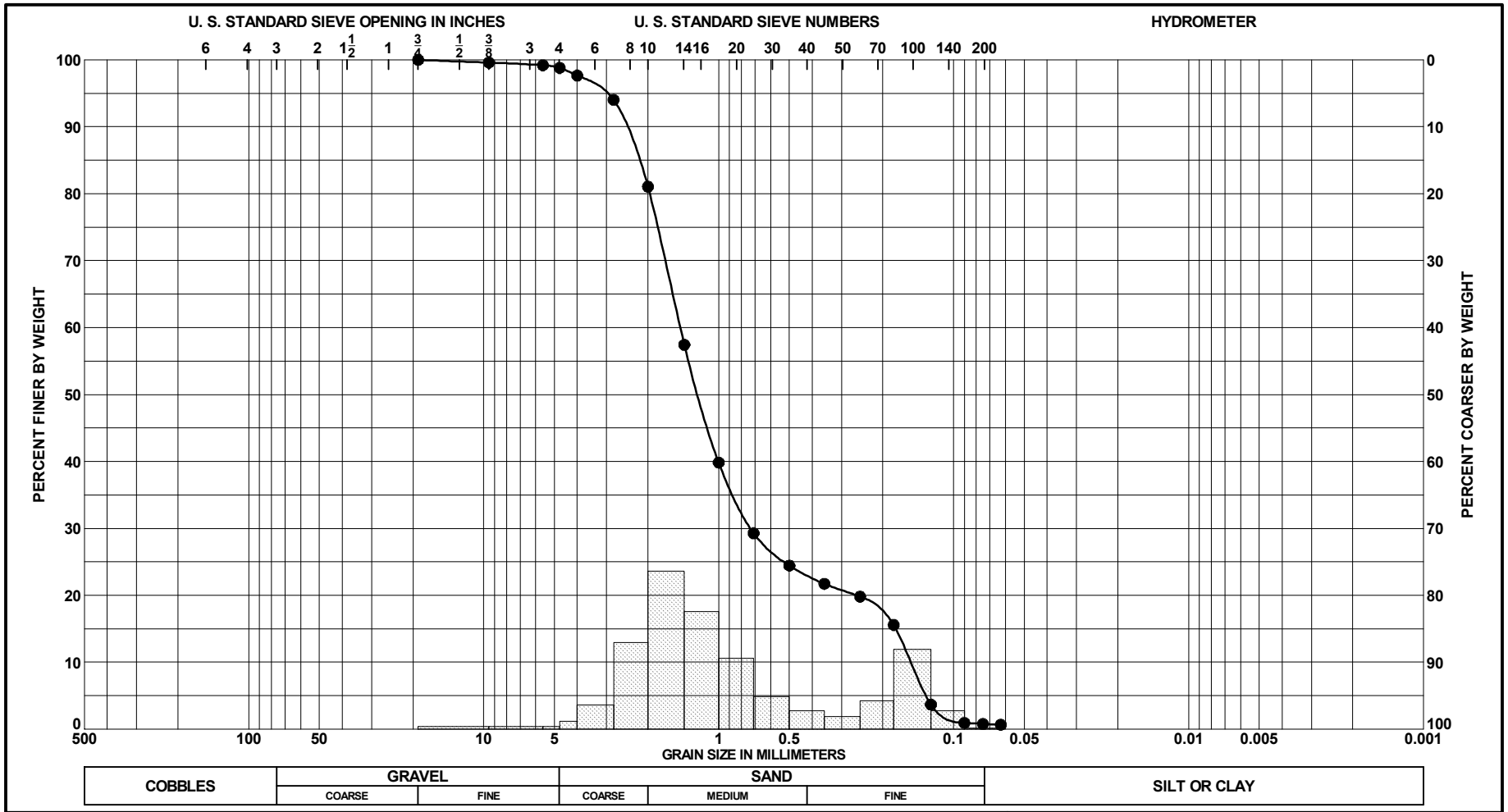


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 3	7.0 to 7.3 Ft.	SAND, poorly-graded, mostly	2.5Y 7/2	25 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium-grained sand-sized								
		shell, trace silt, light gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-05
BORING ELEV.	-12.7 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

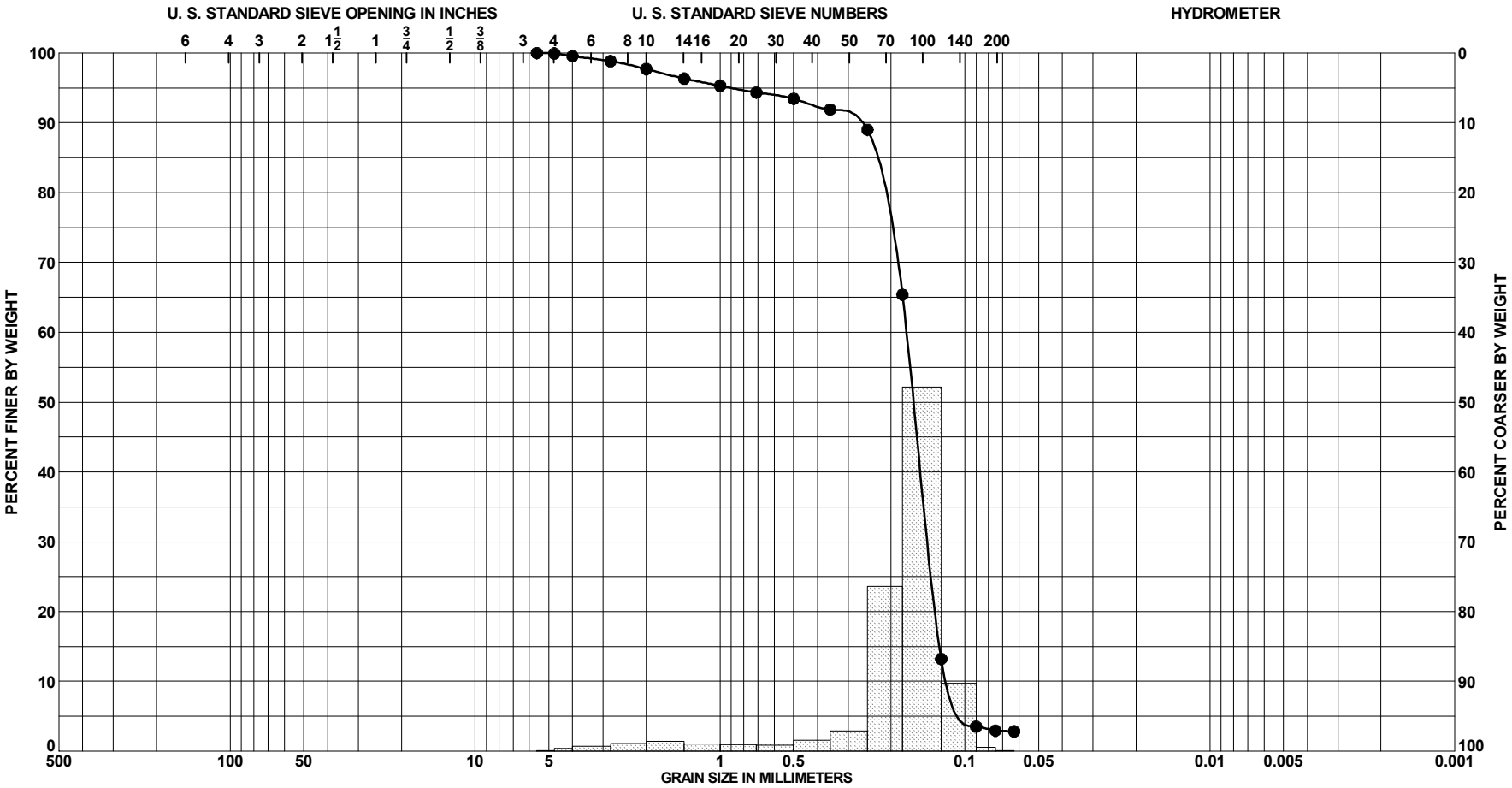


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 4	9.5 to 9.8 Ft.	SAND, poorly-graded, mostly medium to coarse-grained sand-sized shell, little fine-grained sand-sized quartz, trace silt, gray (SP)	2.5Y 5/1	82 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-05
BORING ELEV.	-12.7 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 5	12.0 to 12.3 Ft.	SAND, poorly-graded, mostly	2.5Y 7/2	27 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium-grained sand-sized								
		shell, trace silt, light gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-05
BORING ELEV.	-12.7 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

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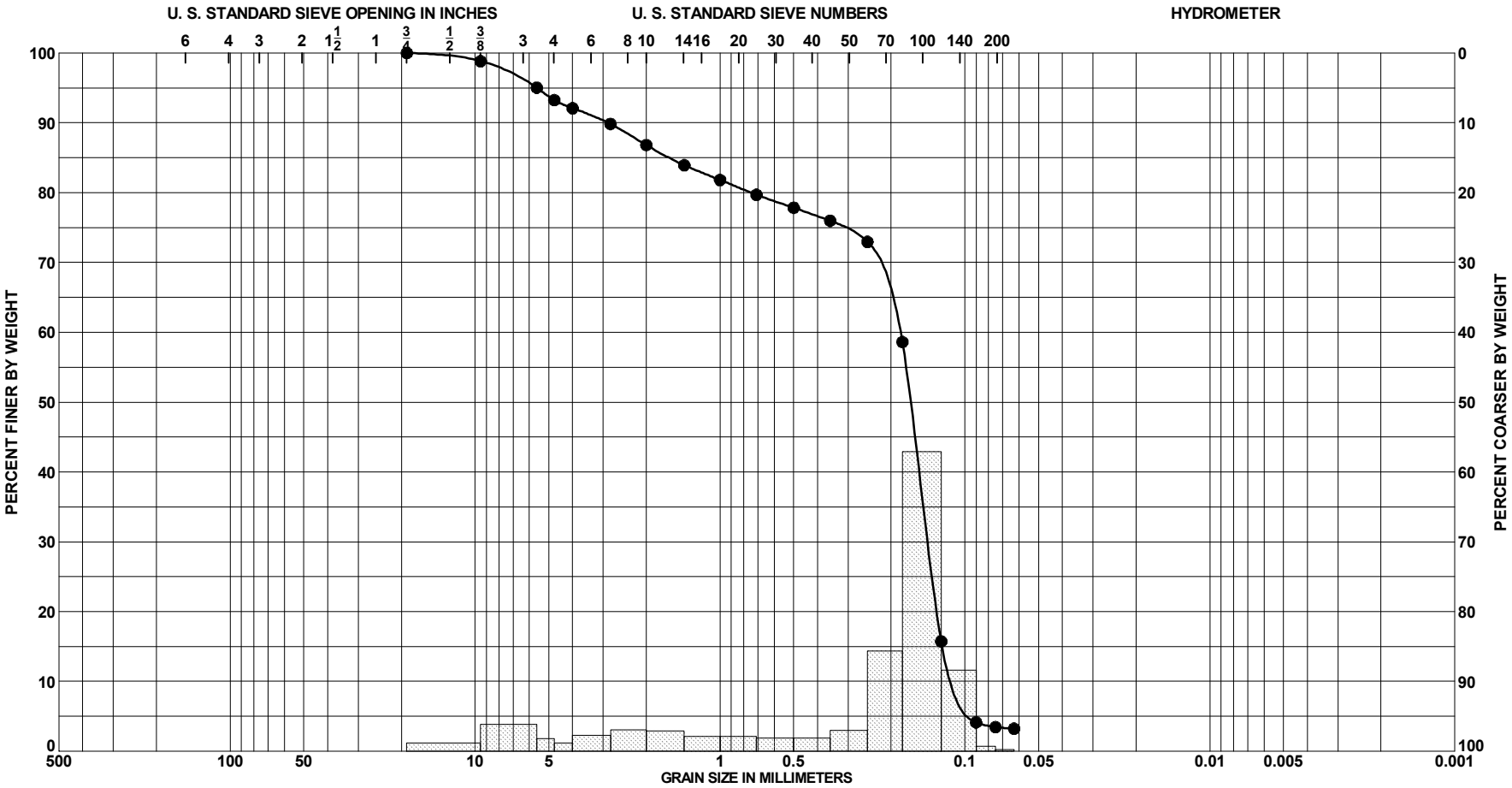
JUN 02

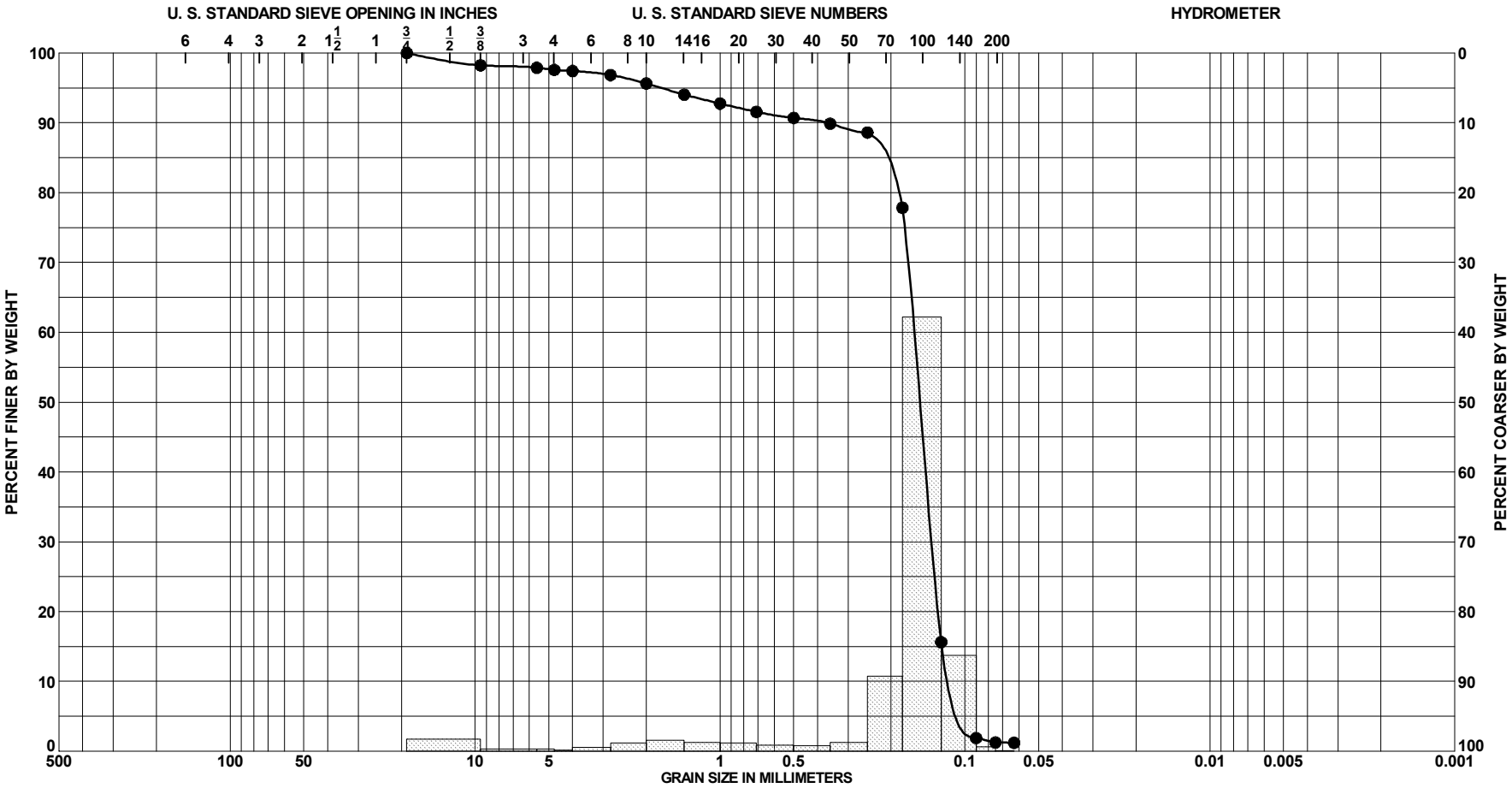


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 6	14.0 to 14.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt, light brownish gray (SP)	2.5Y 6/2	33 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-05
BORING ELEV.	-12.7 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

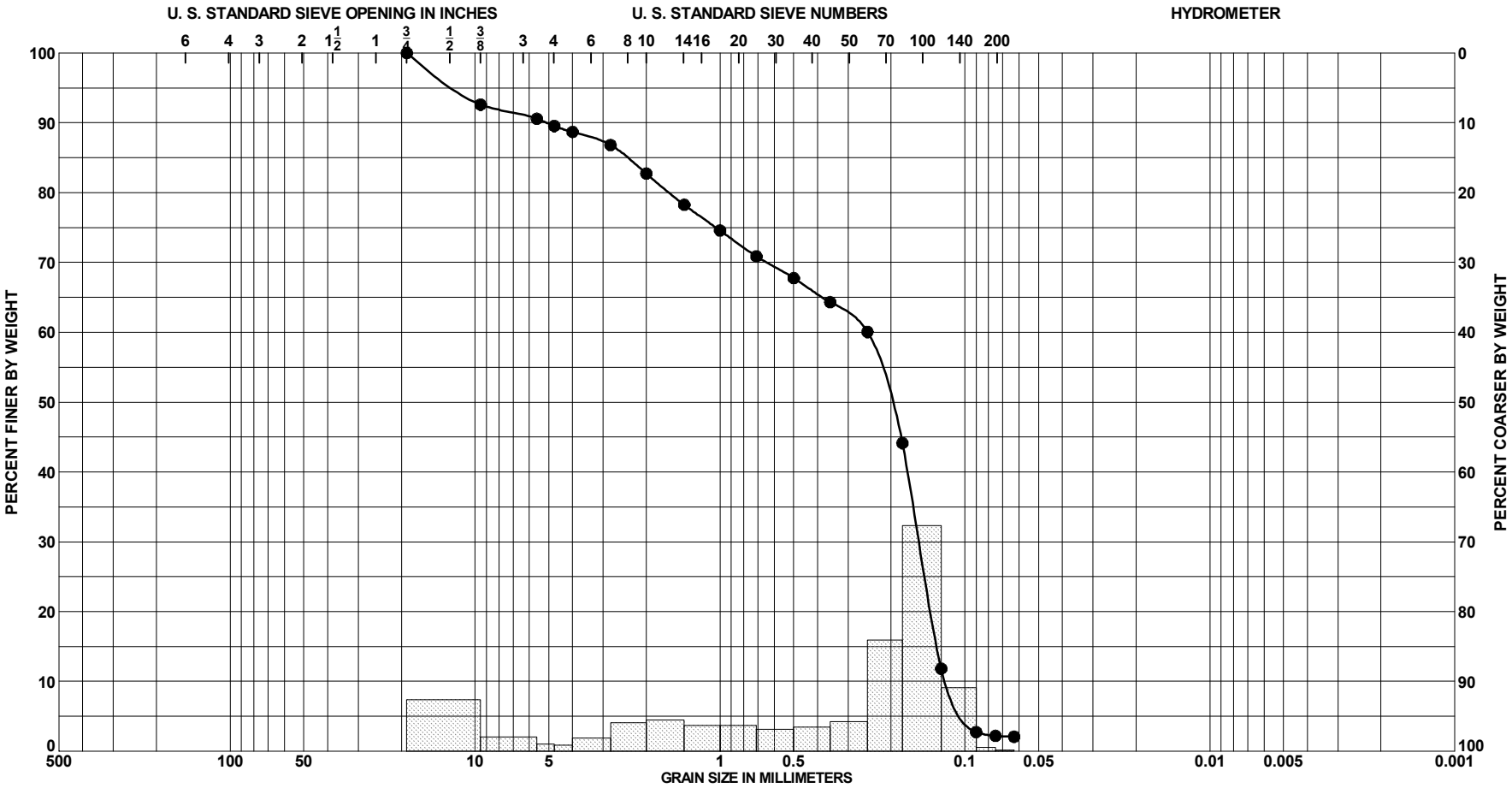


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 1	2.0 to 2.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	13/17 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium-grained sand-sized								
		shell, trace silt, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-06
BORING ELEV.	-11.4 Ft., NAVD88
DATE	7/28/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

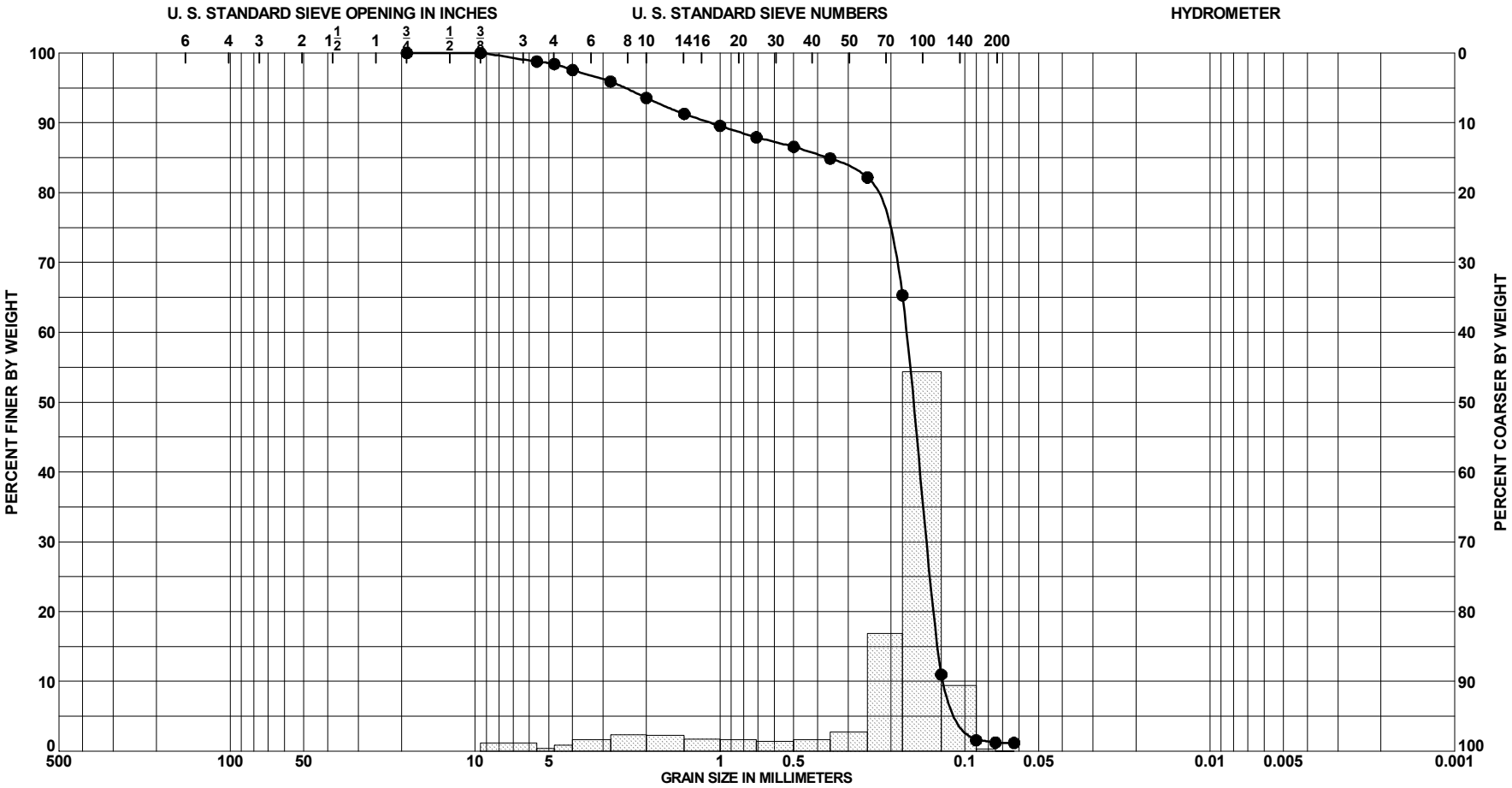


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 2	5.0 to 5.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt, white (SP)	2.5Y 8/1	42 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-06
BORING ELEV.	-11.4 Ft., NAVD88
DATE	7/28/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

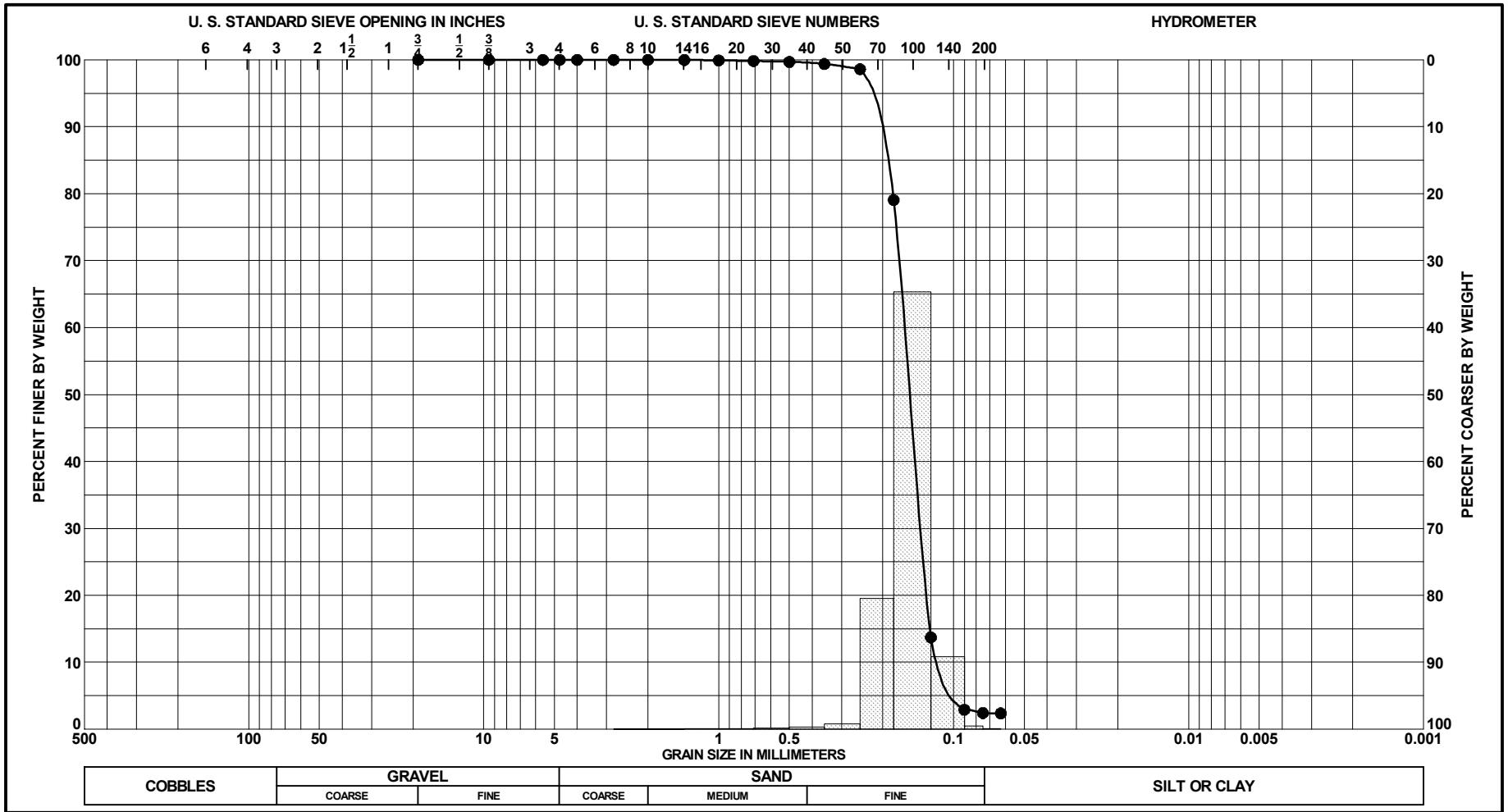


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 3	8.0 to 8.3 Ft.	SAND, poorly-graded, mostly	2.5Y 7/1	21 (est)						
		fine-grained sand-sized quartz, little								
		fine to coarse-grained sand-sized								
		shell, trace silt, light gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-06
BORING ELEV.	-11.4 Ft., NAVD88
DATE	7/28/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

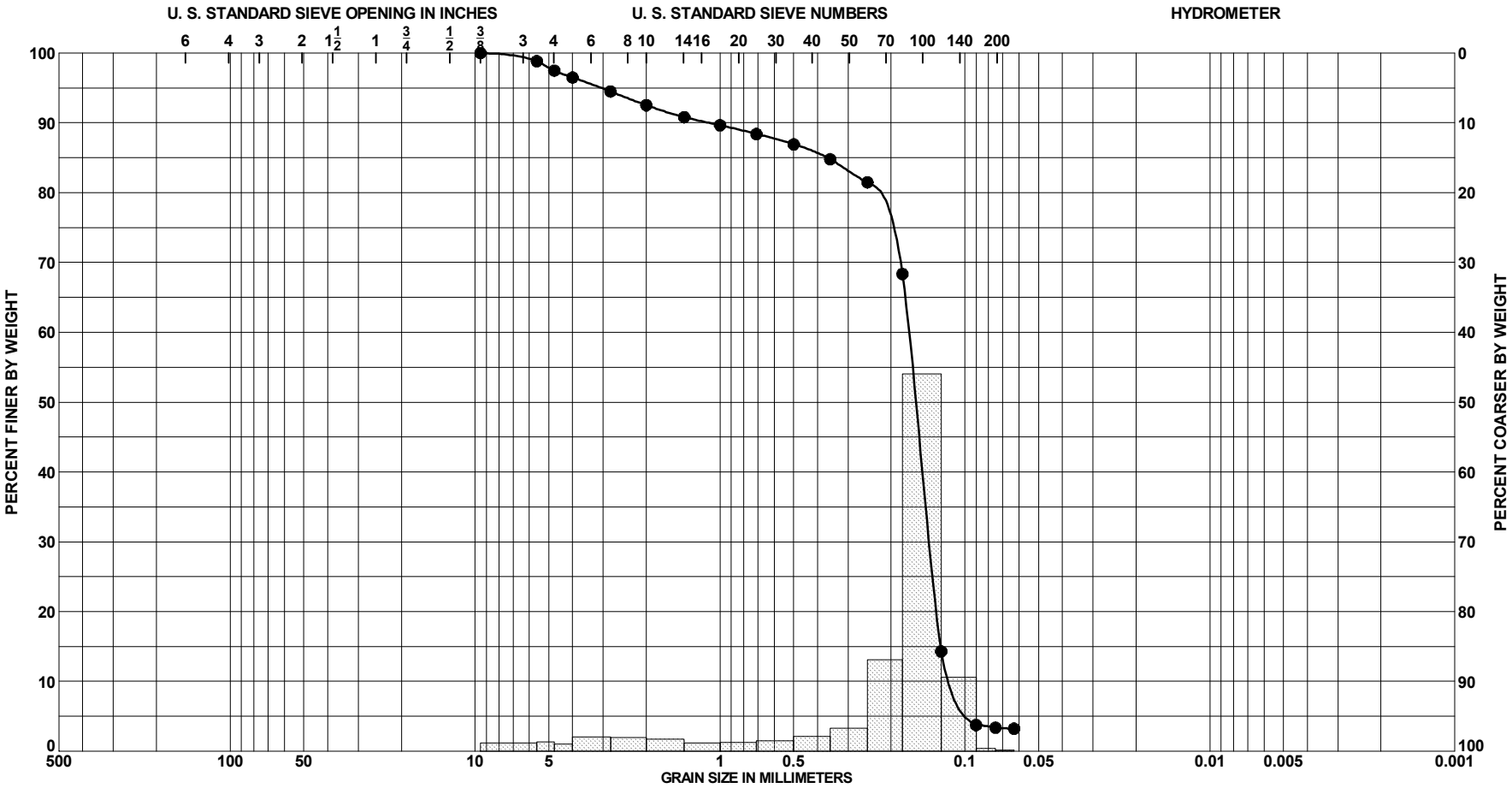


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 4	11.0 to 11.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	7 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-06
BORING ELEV.	-11.4 Ft., NAVD88
DATE	7/28/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

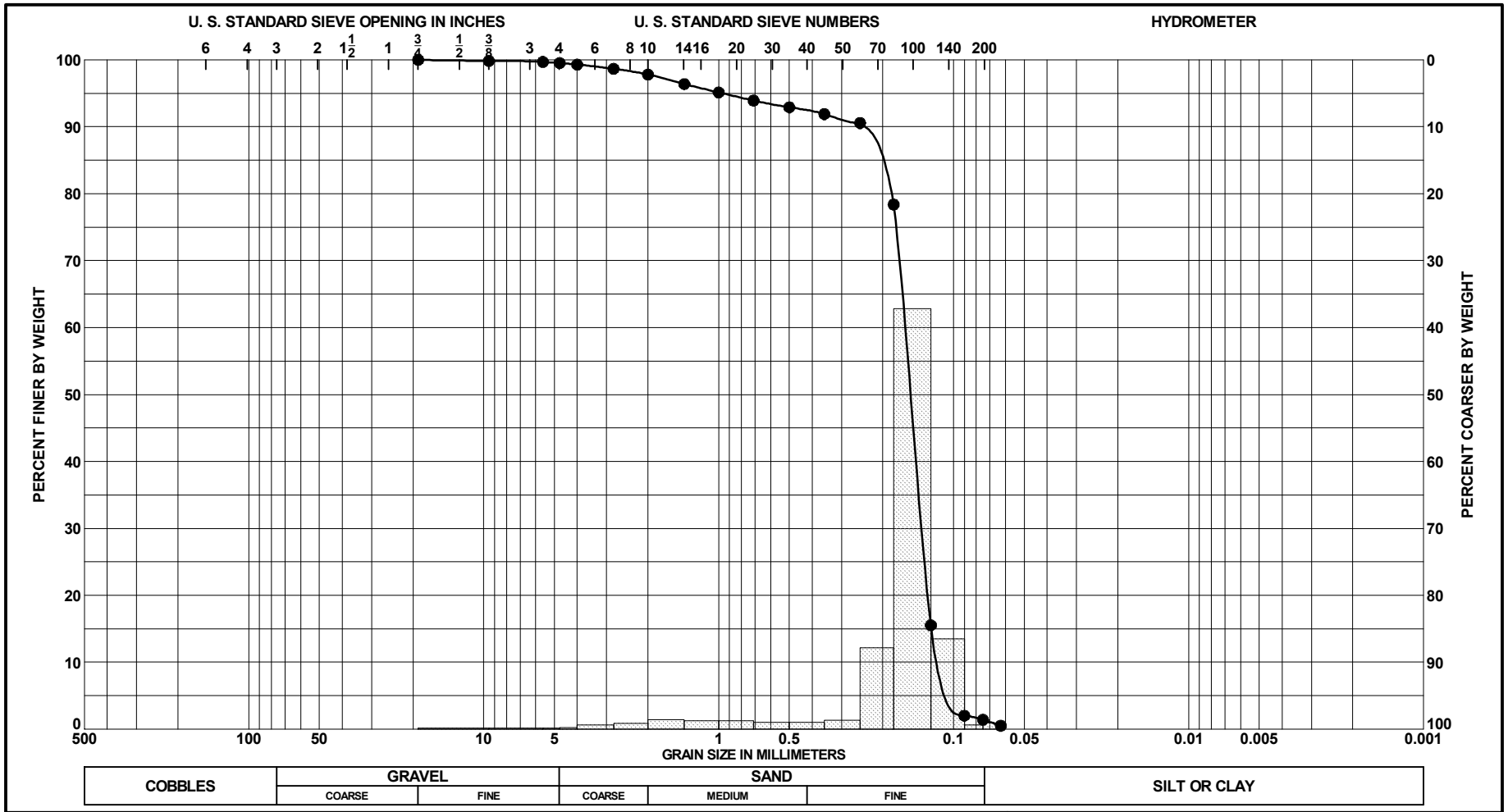


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 5	14.0 to 14.3 Ft.	SAND, poorly-graded, mostly	2.5Y 7/1	24 (est)						
		fine-grained sand-sized quartz, little								
		fine to coarse-grained sand-sized								
		shell, trace silt, light gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-06
BORING ELEV.	-11.4 Ft., NAVD88
DATE	7/28/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

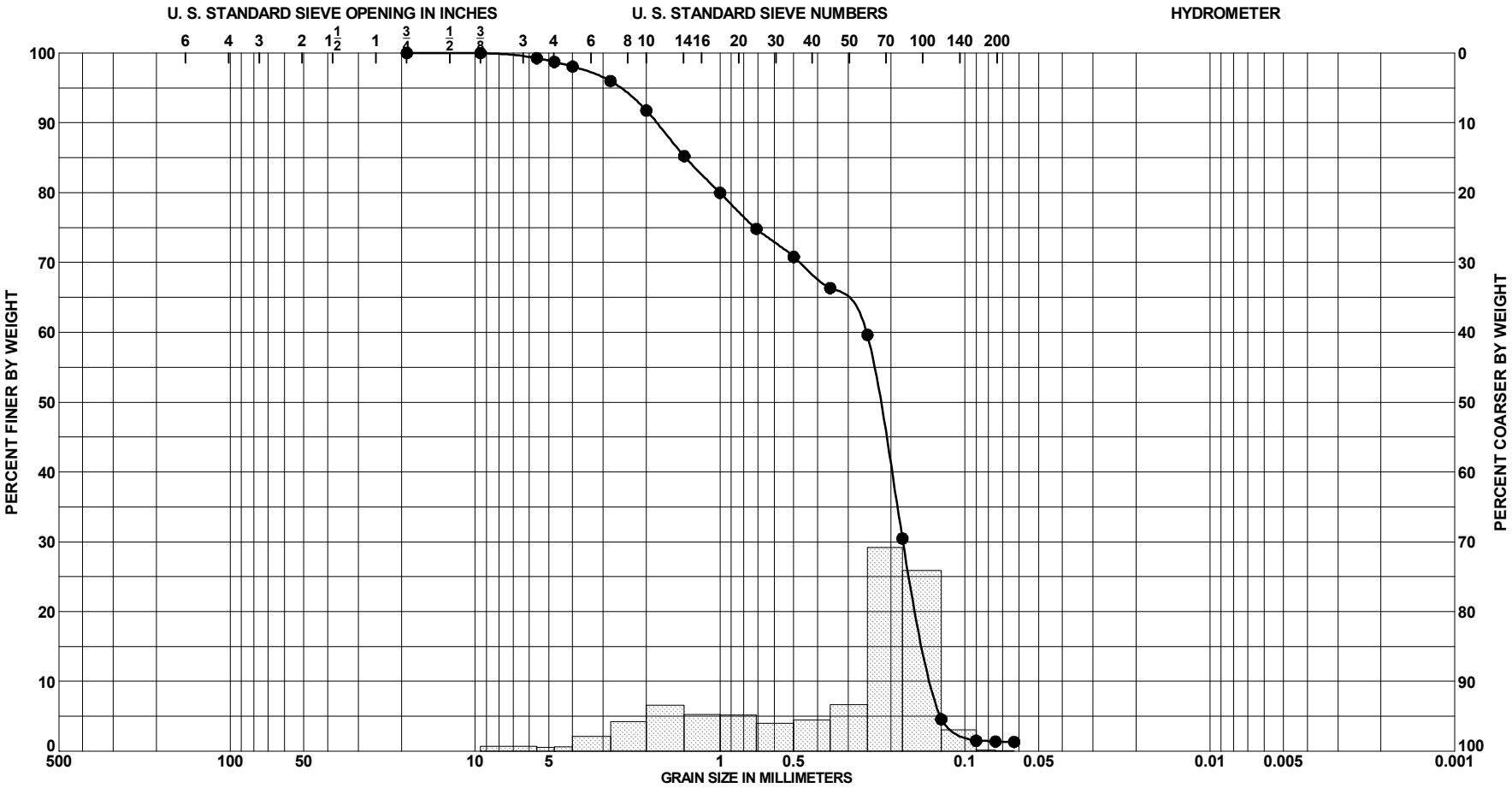


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 1	2.0 to 2.3 Ft.	SAND, poorly-graded, mostly	2.5Y 7/2	13 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium-grained sand-sized								
		shell, trace silt, light gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-07
BORING ELEV.	-10.8 Ft., NAVD88
DATE	7/28/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 2	5.0 to 5.3 Ft.	SAND, poorly-graded, mostly	2.5Y 6/2	43 (est)						
		fine-grained sand-sized quartz, some								
		fine to coarse-grained sand-sized								
		shell, trace silt, light brownish gray								
		(SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-07
BORING ELEV.	-10.8 Ft., NAVD88
DATE	7/28/2015

GRADATION CURVES

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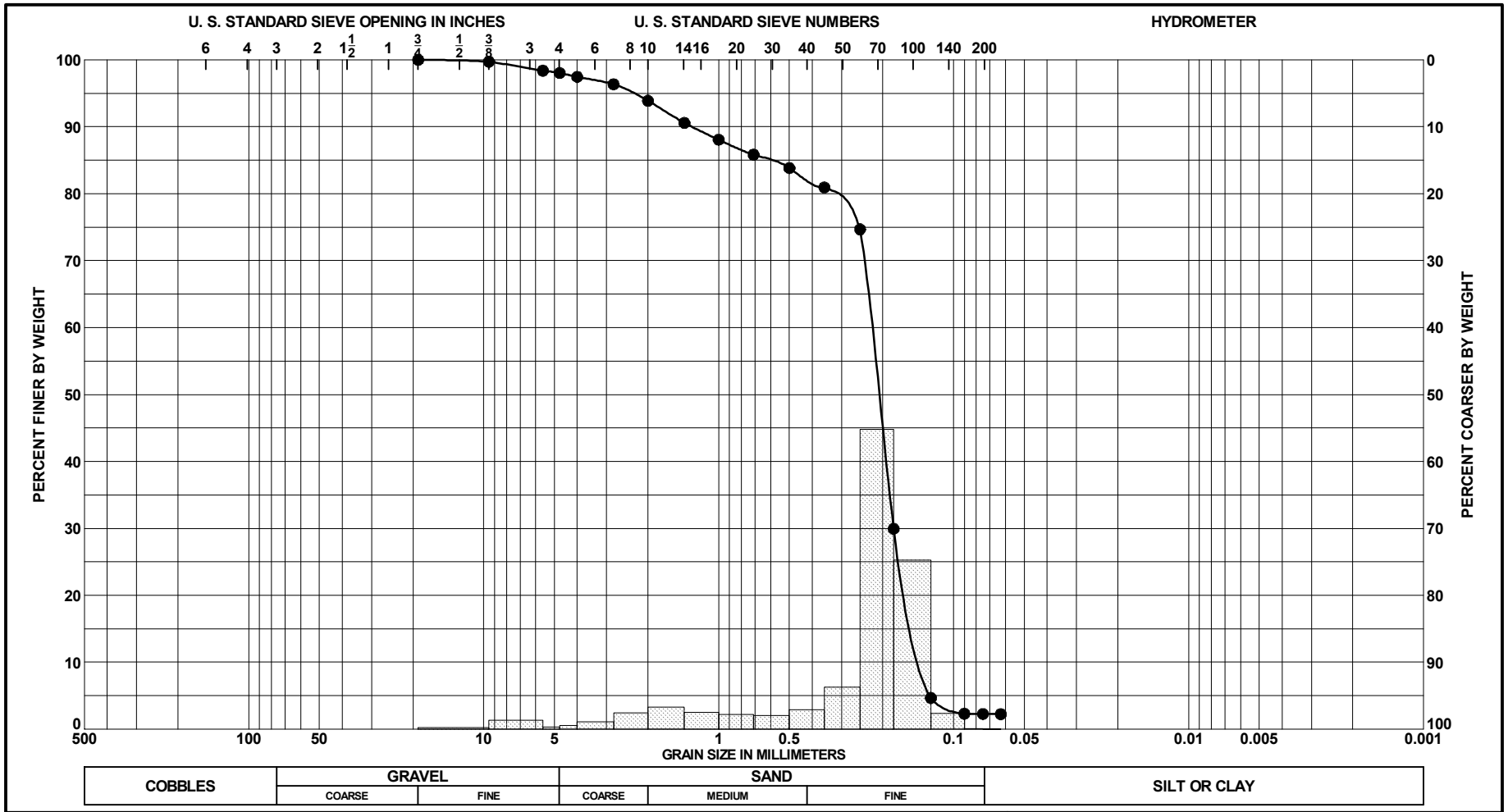
JUN 02

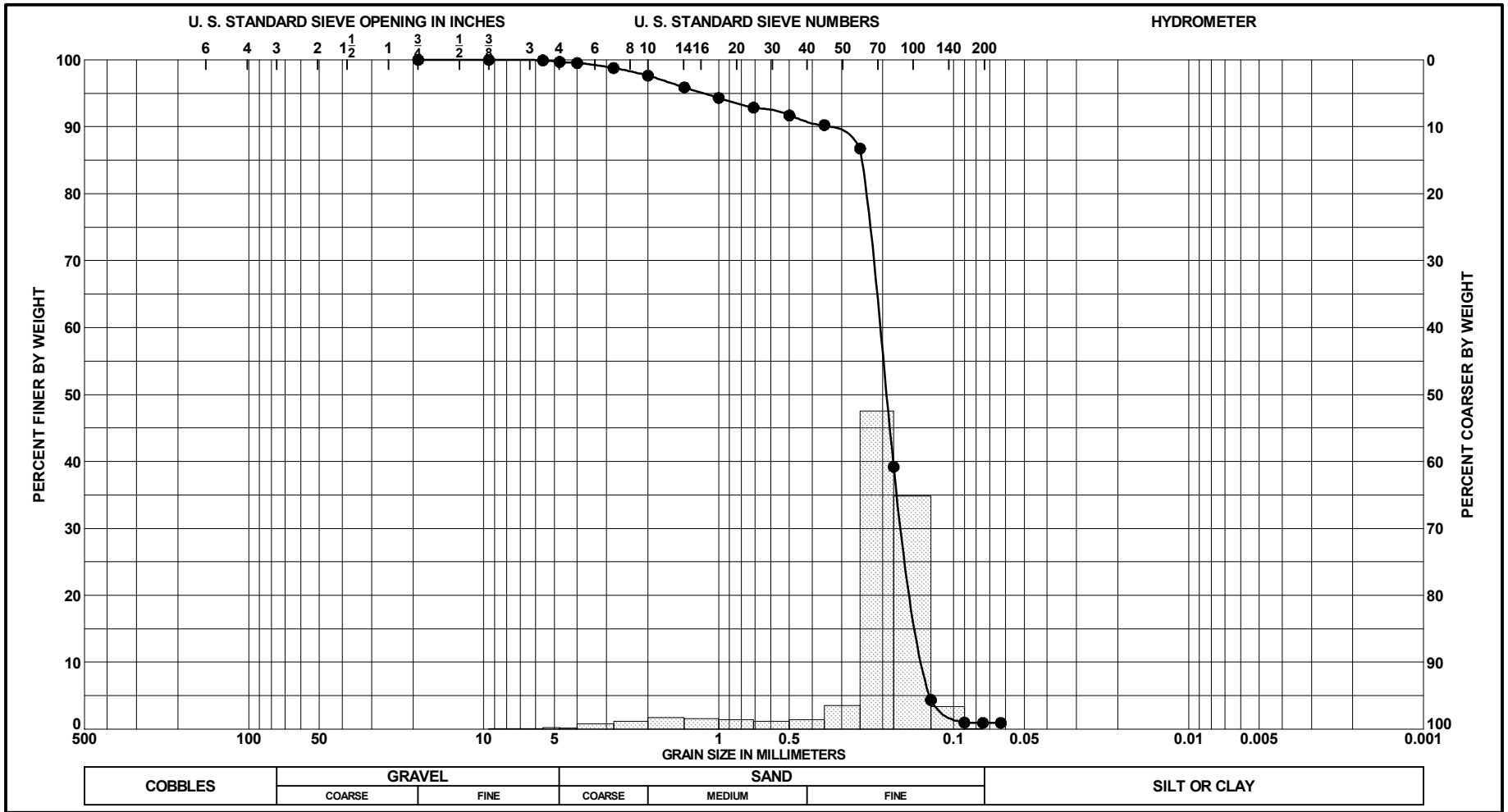


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 3	8.0 to 8.3 Ft.	SAND, poorly-graded, mostly	2.5Y 7/2	24 (est)						
		fine-grained sand-sized quartz, little								
		fine to coarse-grained sand-sized								
		shell, trace silt, light gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-07
BORING ELEV.	-10.8 Ft., NAVD88
DATE	7/28/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

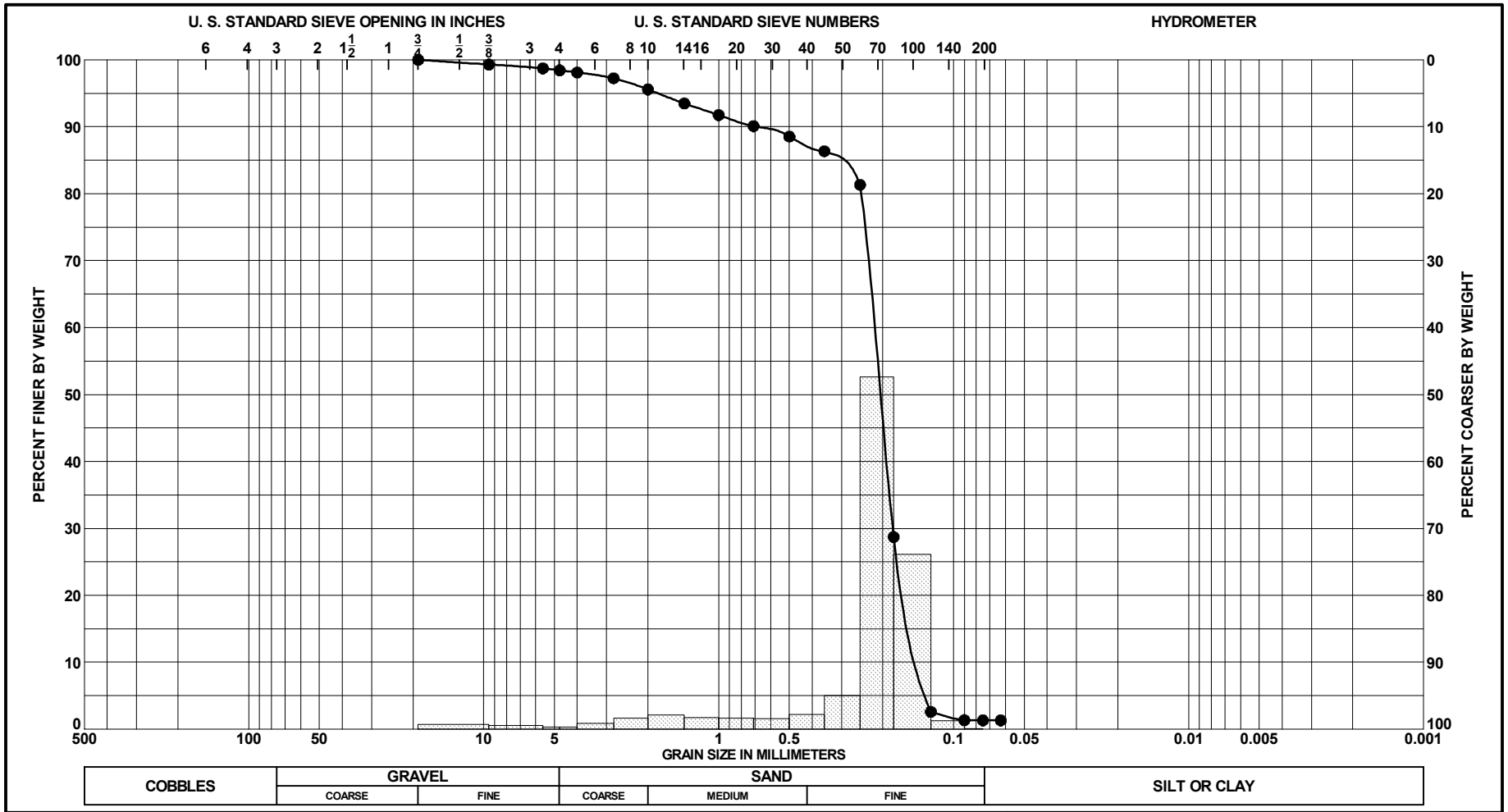


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 4	11.0 to 11.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, light gray (SP)	2.5Y 7/2	12 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-07
BORING ELEV.	-10.8 Ft., NAVD88
DATE	7/28/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

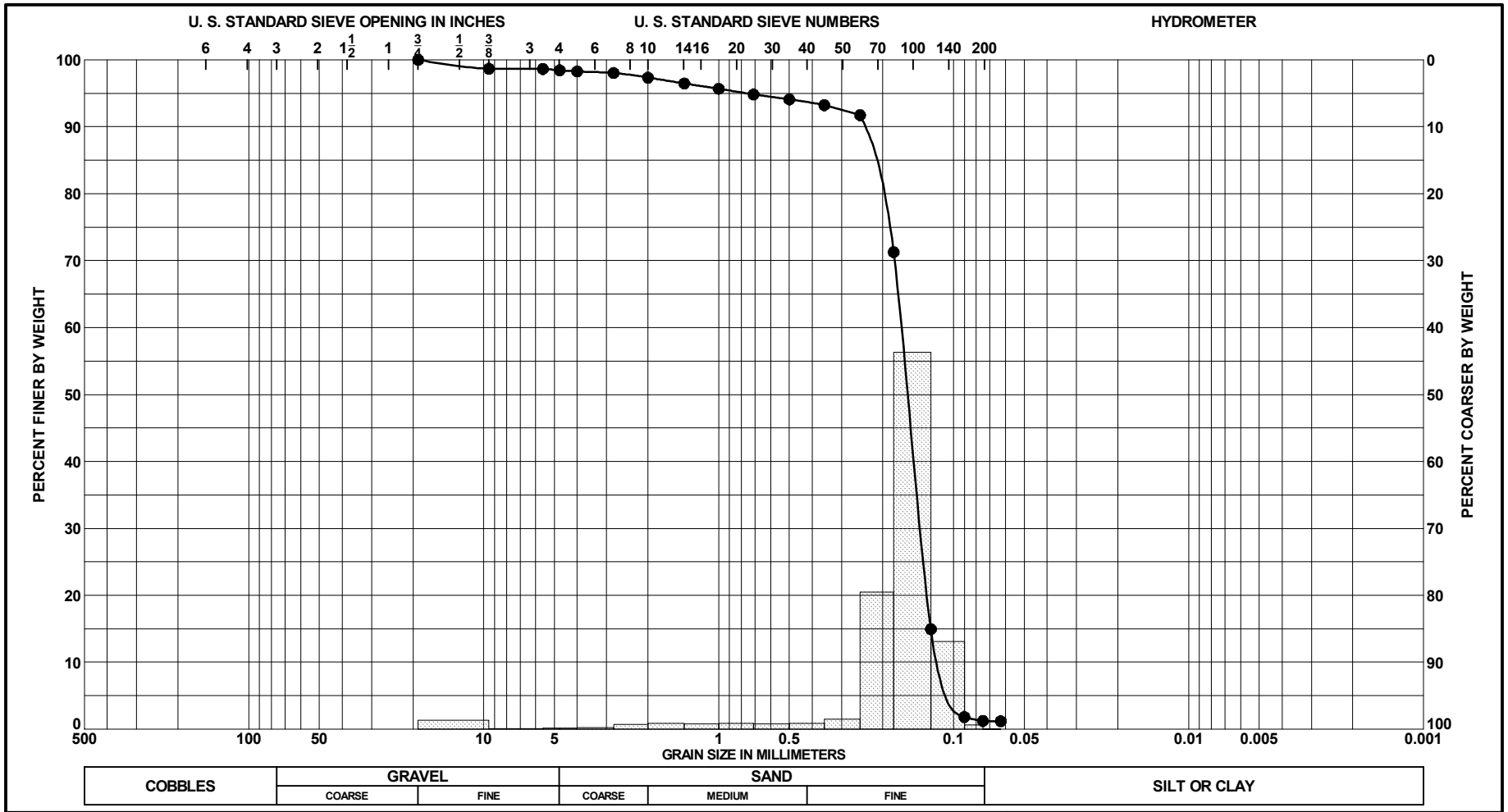


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 5	14.0 to 14.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium-grained sand-sized shell, trace silt, light gray (SP)	2.5Y 7/2	16 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-07
BORING ELEV.	-10.8 Ft., NAVD88
DATE	7/28/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

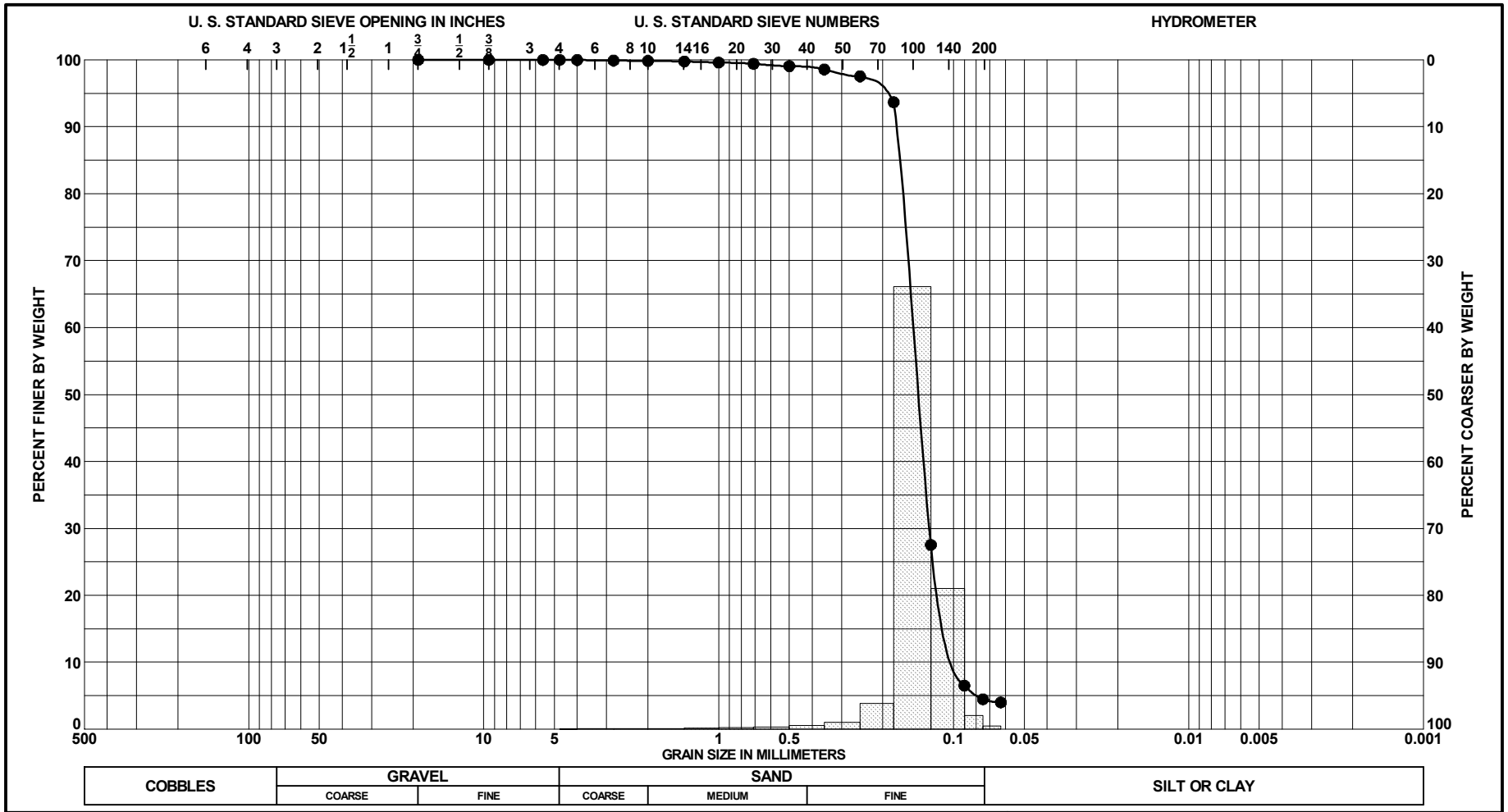


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 1	2.0 to 2.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt, white (SP)	2.5Y 8/1	9 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-08
BORING ELEV.	-9.8 Ft., NAVD88
DATE	7/28/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

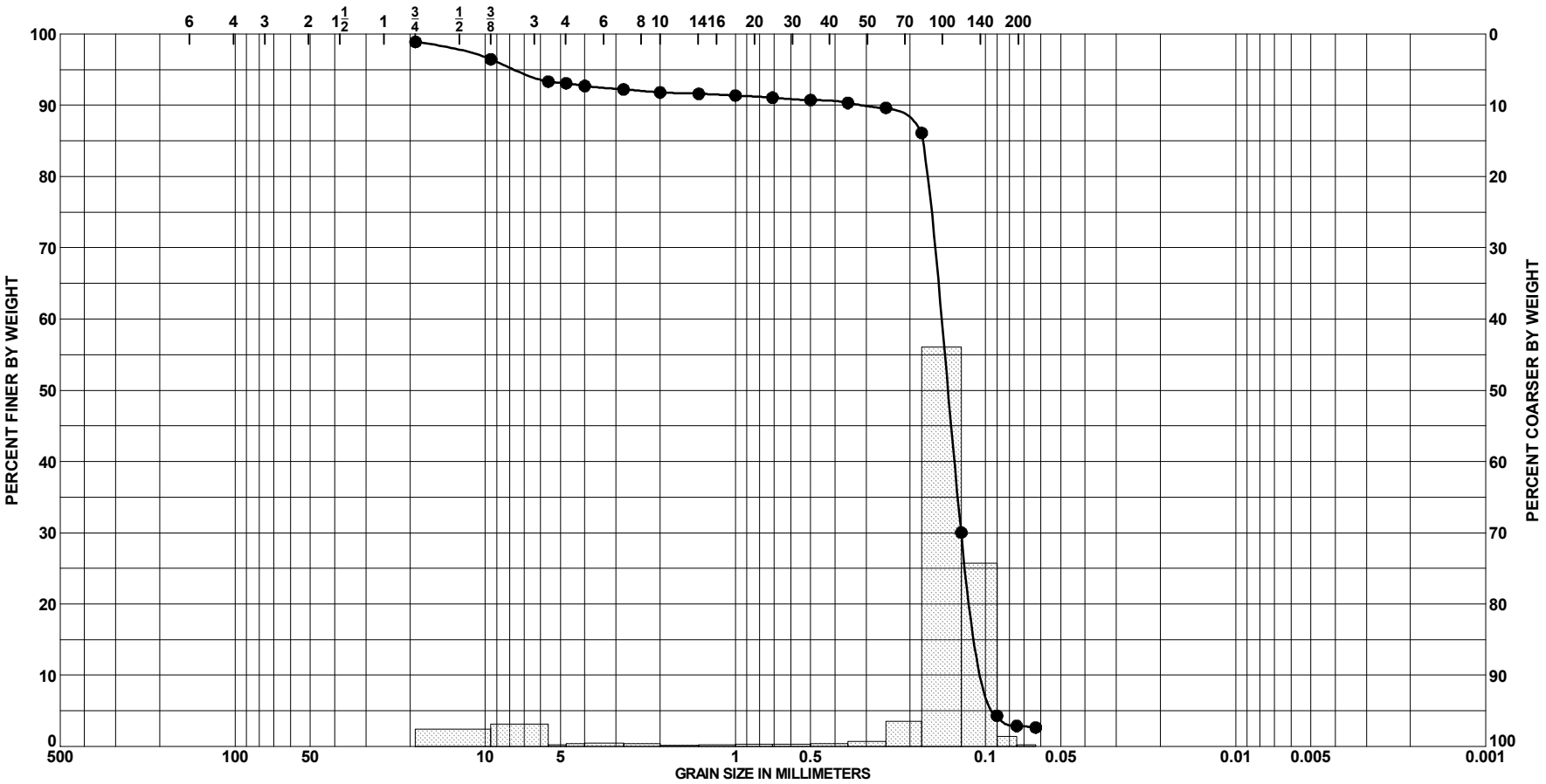


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 2	5.0 to 5.3 Ft.	SAND, poorly-graded, mostly	2.5Y 6/1	9 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-08
BORING ELEV.	-9.8 Ft., NAVD88
DATE	7/28/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

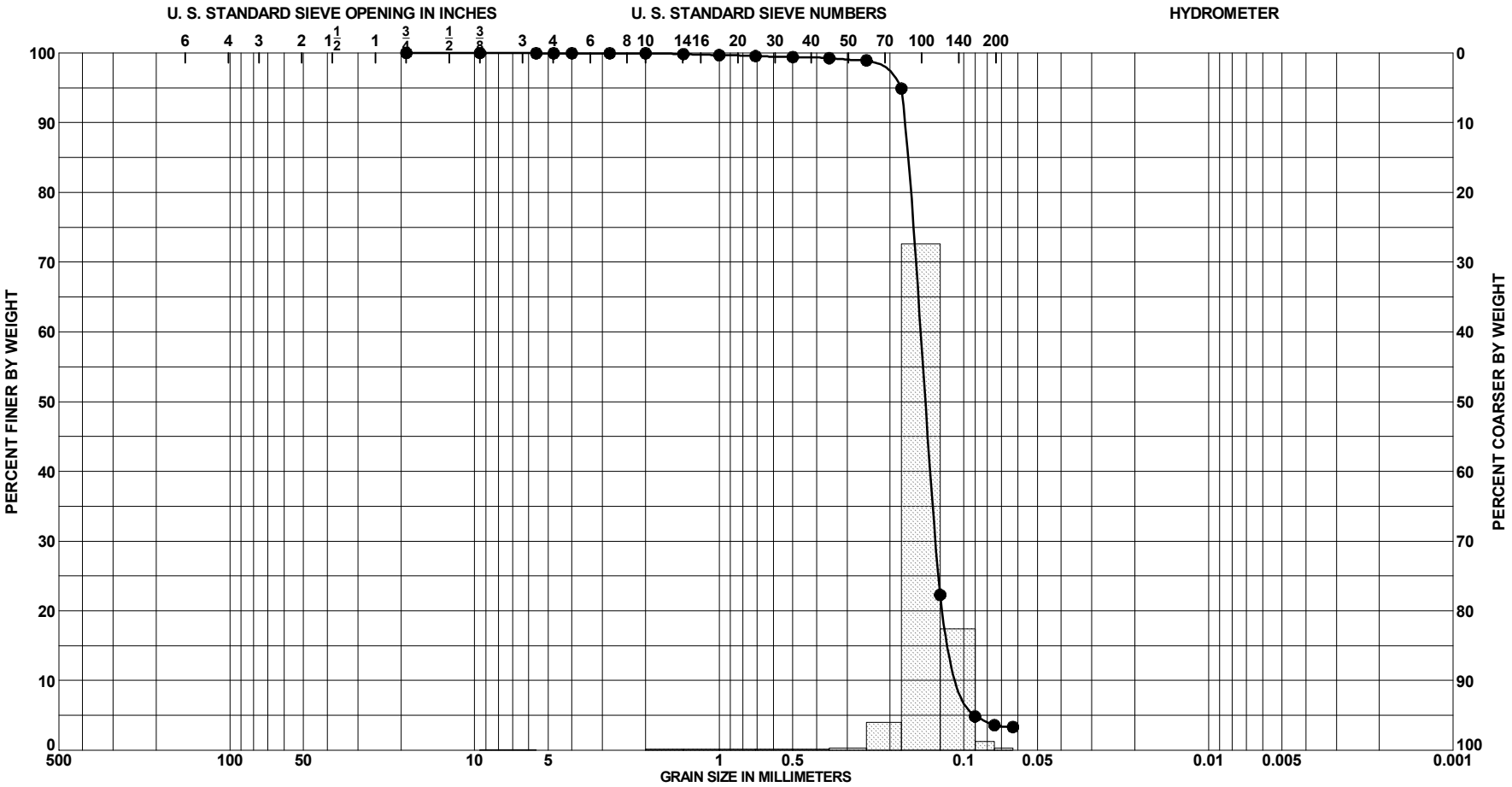


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 3	8.0 to 8.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, trace silt, gray (SP)	2.5Y 6/1	13 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-08
BORING ELEV.	-9.8 Ft., NAVD88
DATE	7/28/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

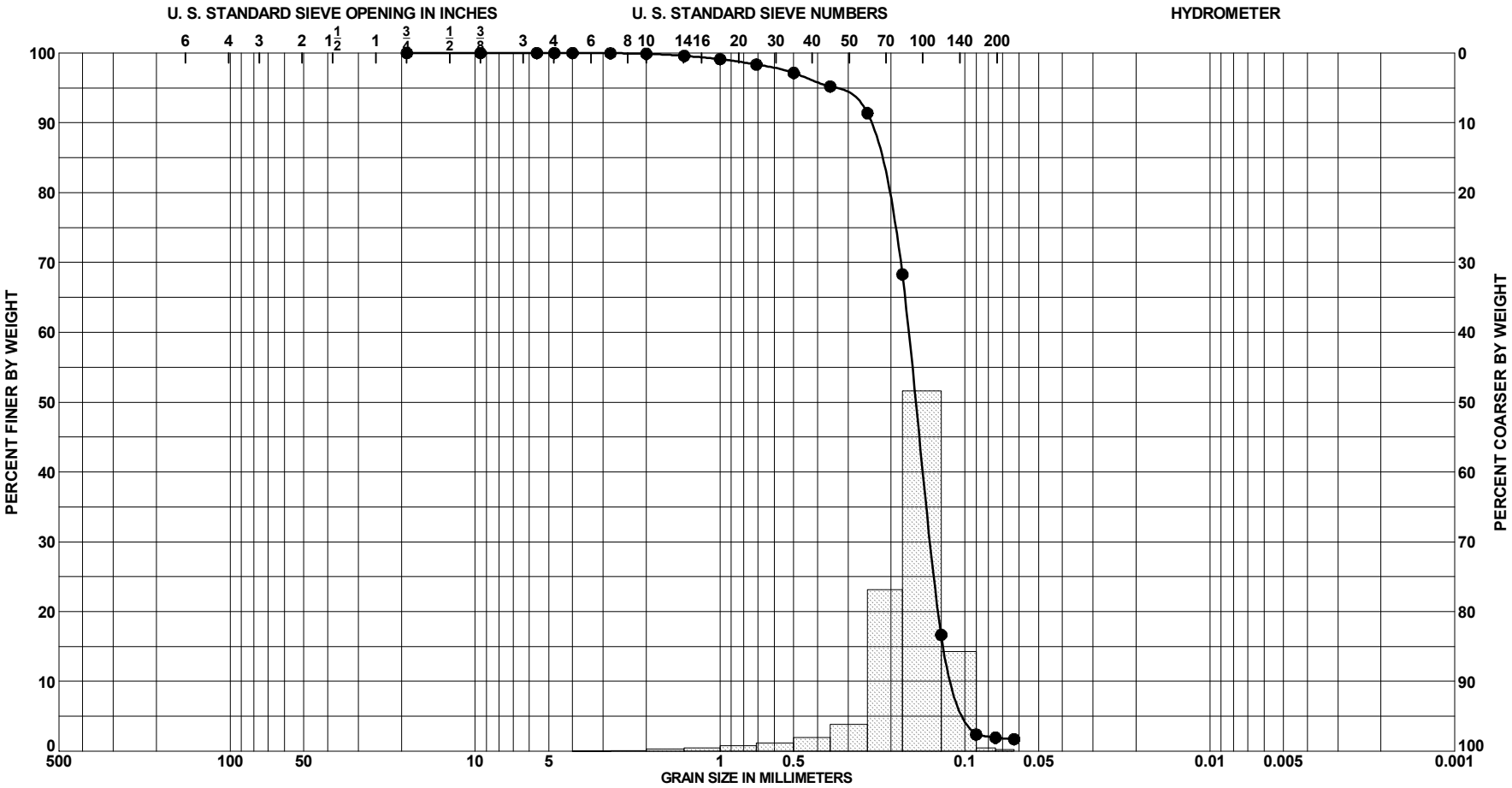


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 4	11.0 to 11.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt, gray (SP)	2.5Y 6/1	5 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-08
BORING ELEV.	-9.8 Ft., NAVD88
DATE	7/28/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

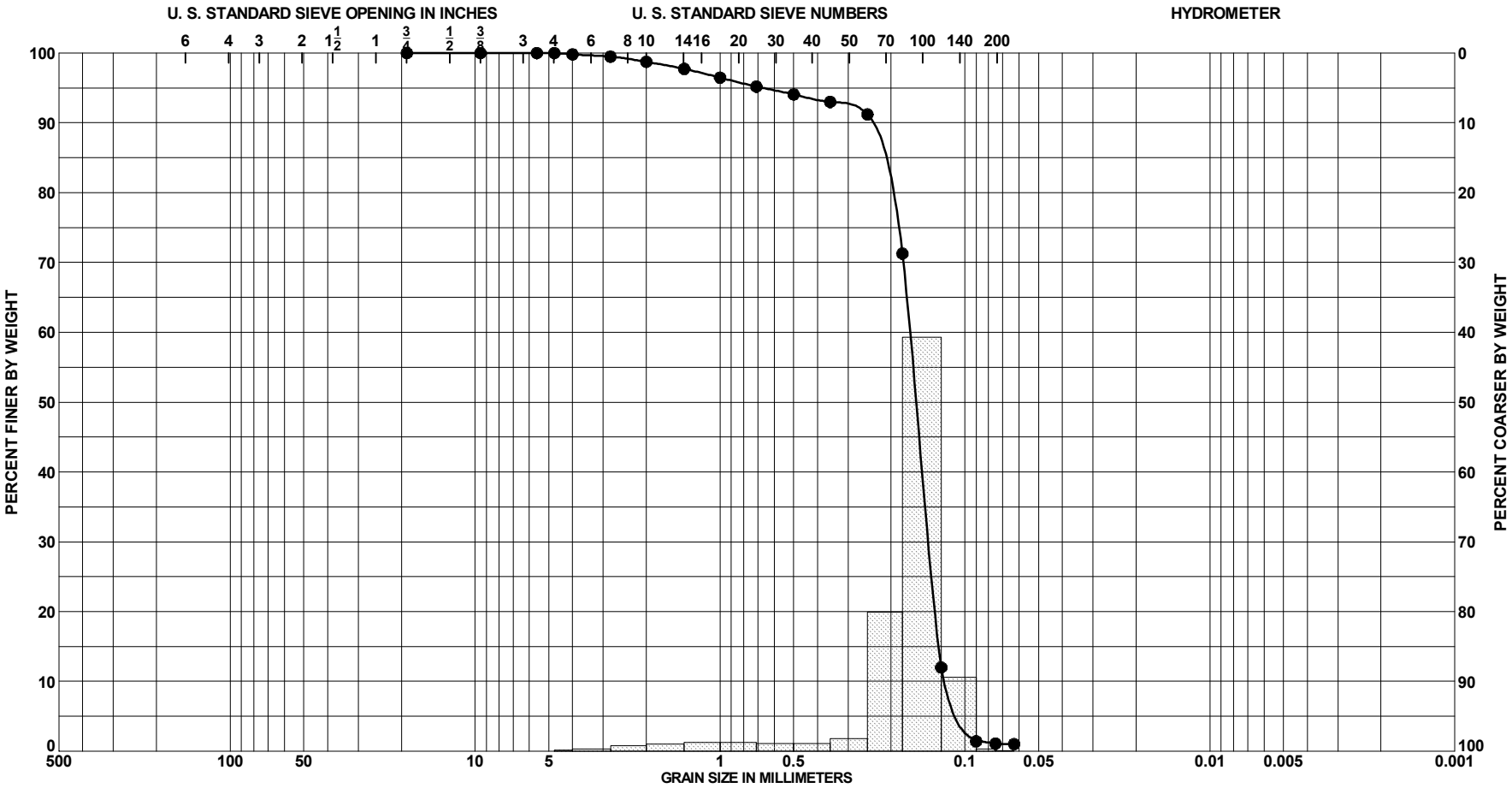


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 5	14.0 to 14.3 Ft.	SAND, poorly-graded, mostly	2.5Y 6/1	15 (est)						
		fine-grained sand-sized quartz, little								
		fine-grained sand-sized shell, trace								
		silt, gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-08
BORING ELEV.	-9.8 Ft., NAVD88
DATE	7/28/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

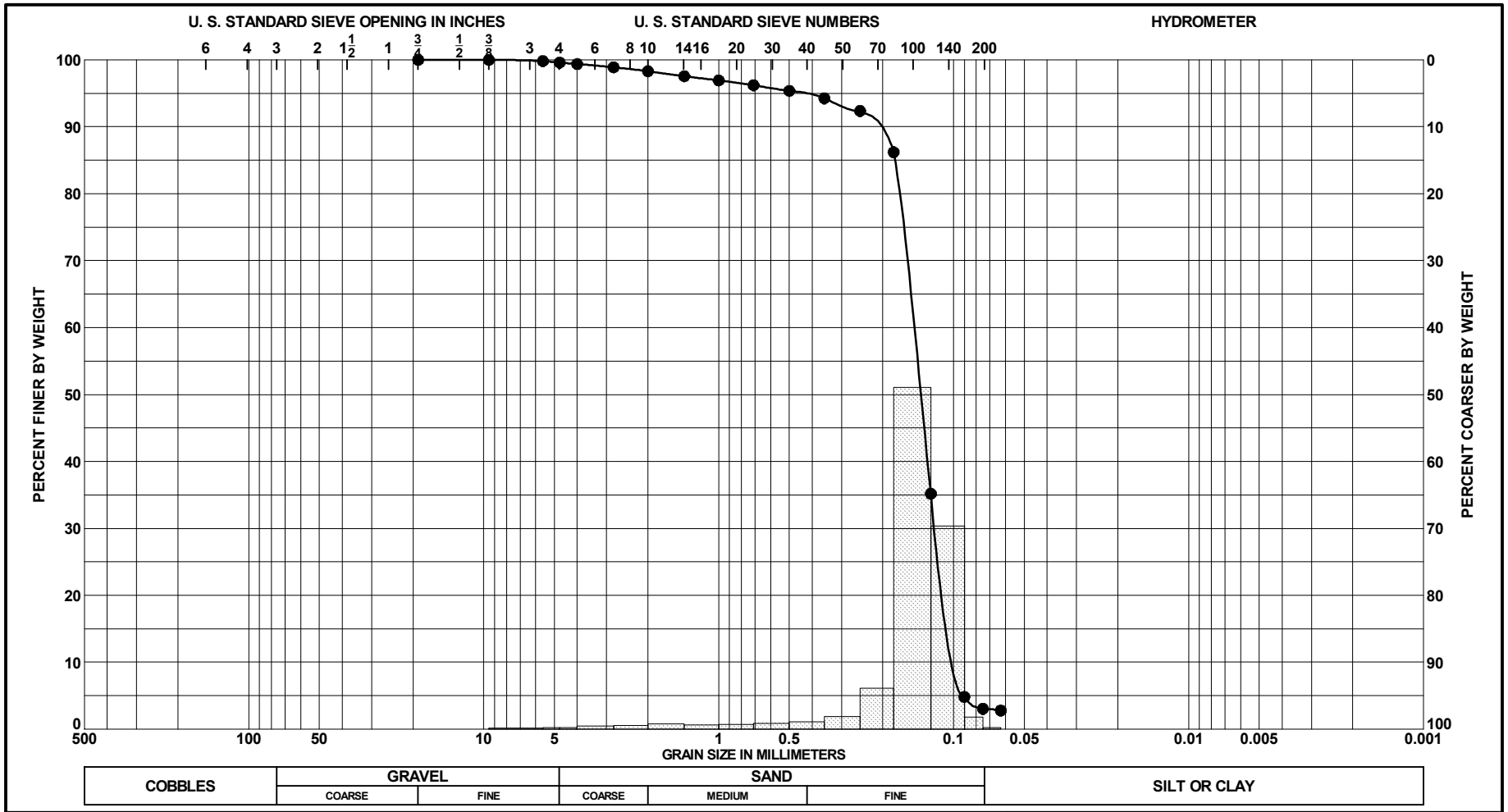


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 1	2.0 to 2.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt, gray (SP)	2.5Y 6/1	8 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-09
BORING ELEV.	-10.4 Ft., NAVD88
DATE	7/28/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

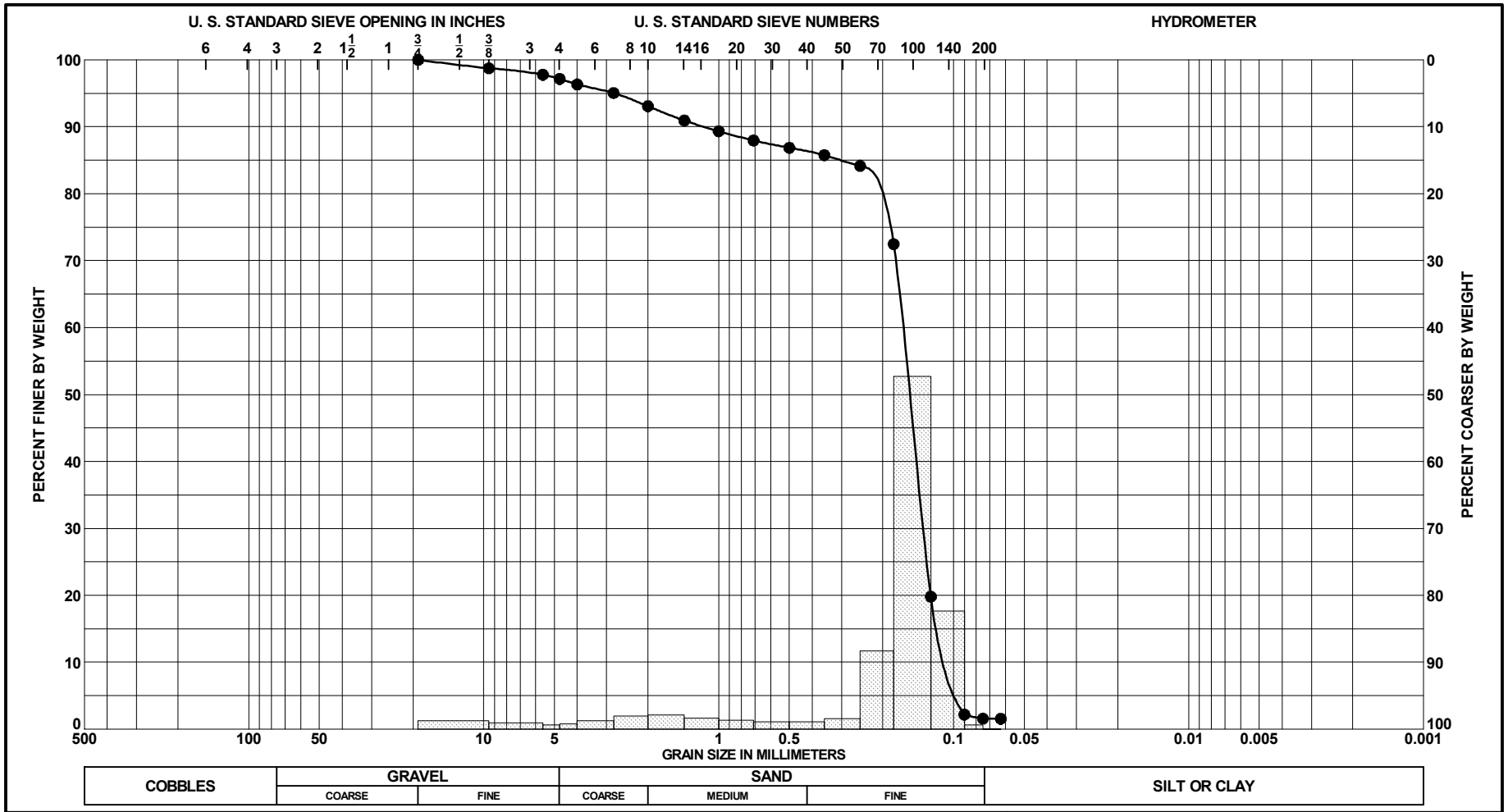


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 2	5.0 to 5.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt, white (SP)	2.5Y 8/1	12/9 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-09
BORING ELEV.	-10.4 Ft., NAVD88
DATE	7/28/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

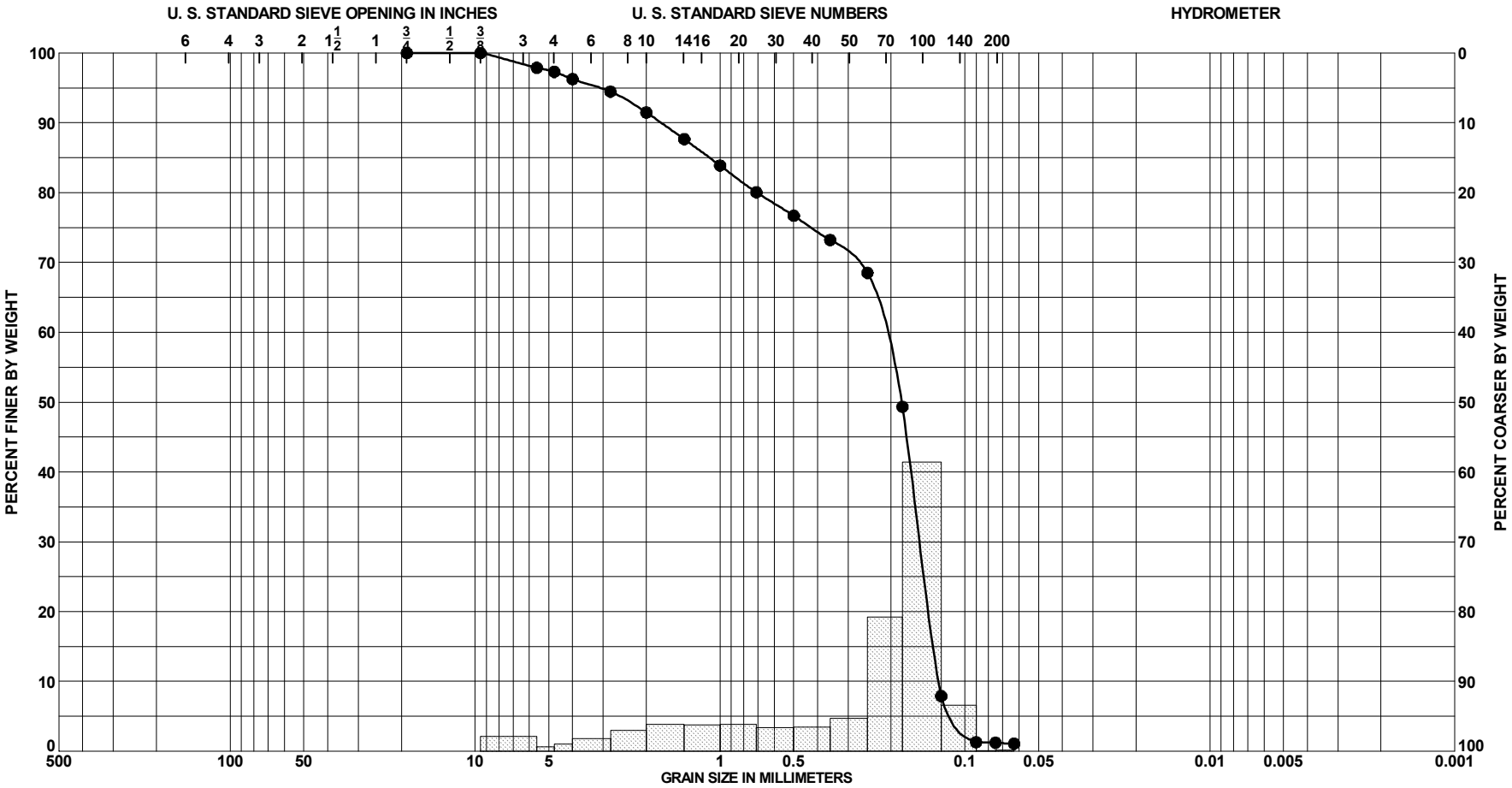


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 3	8.0 to 8.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium to coarse-grained sand-sized shell, trace silt, white (SP)	2.5Y 8/1	14 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-09
BORING ELEV.	-10.4 Ft., NAVD88
DATE	7/28/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

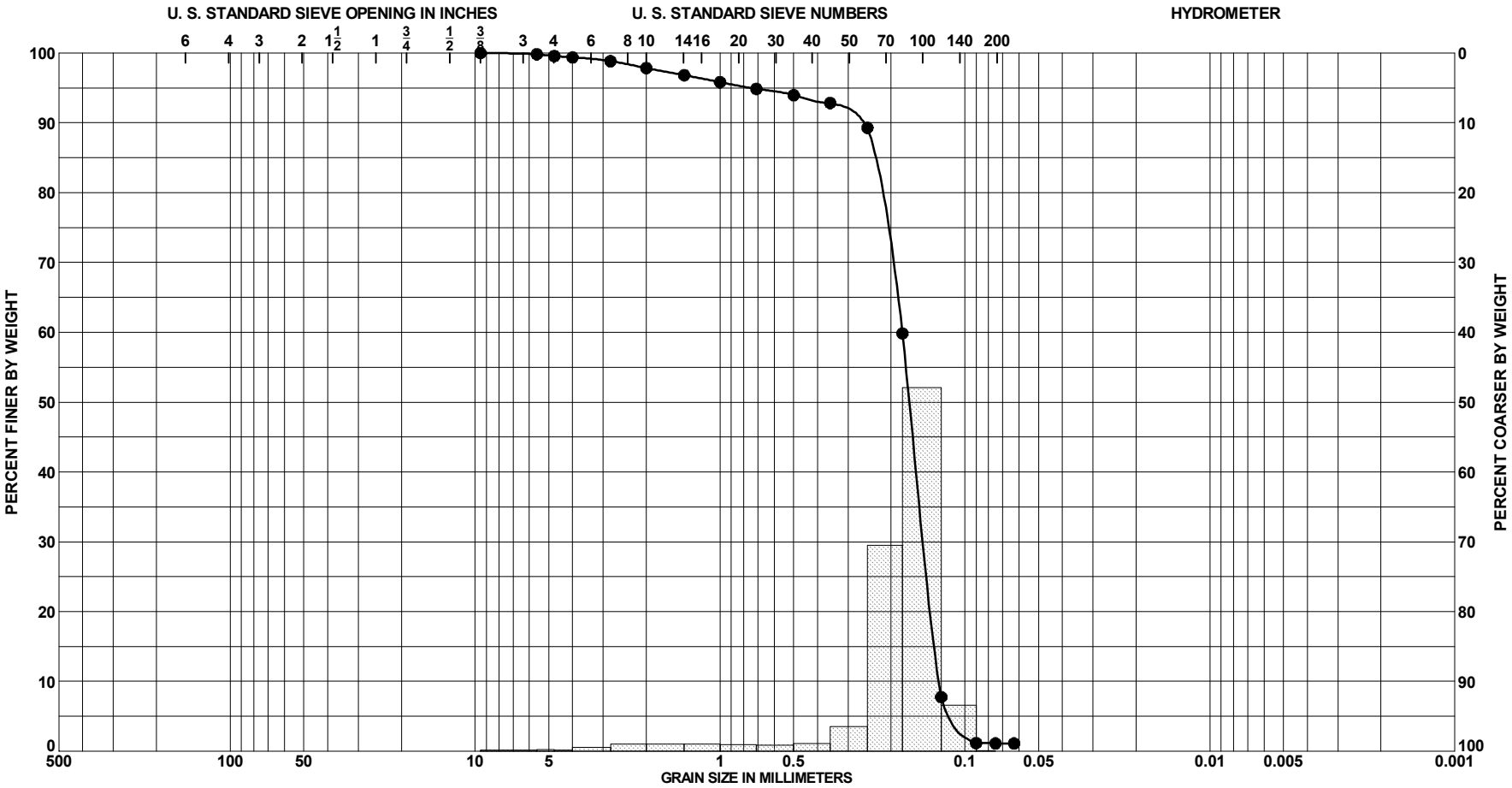


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 4	11.0 to 11.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	32 (est)						
		fine-grained sand-sized quartz, some								
		fine to coarse-grained sand-sized								
		shell, trace silt, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-09
BORING ELEV.	-10.4 Ft., NAVD88
DATE	7/28/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

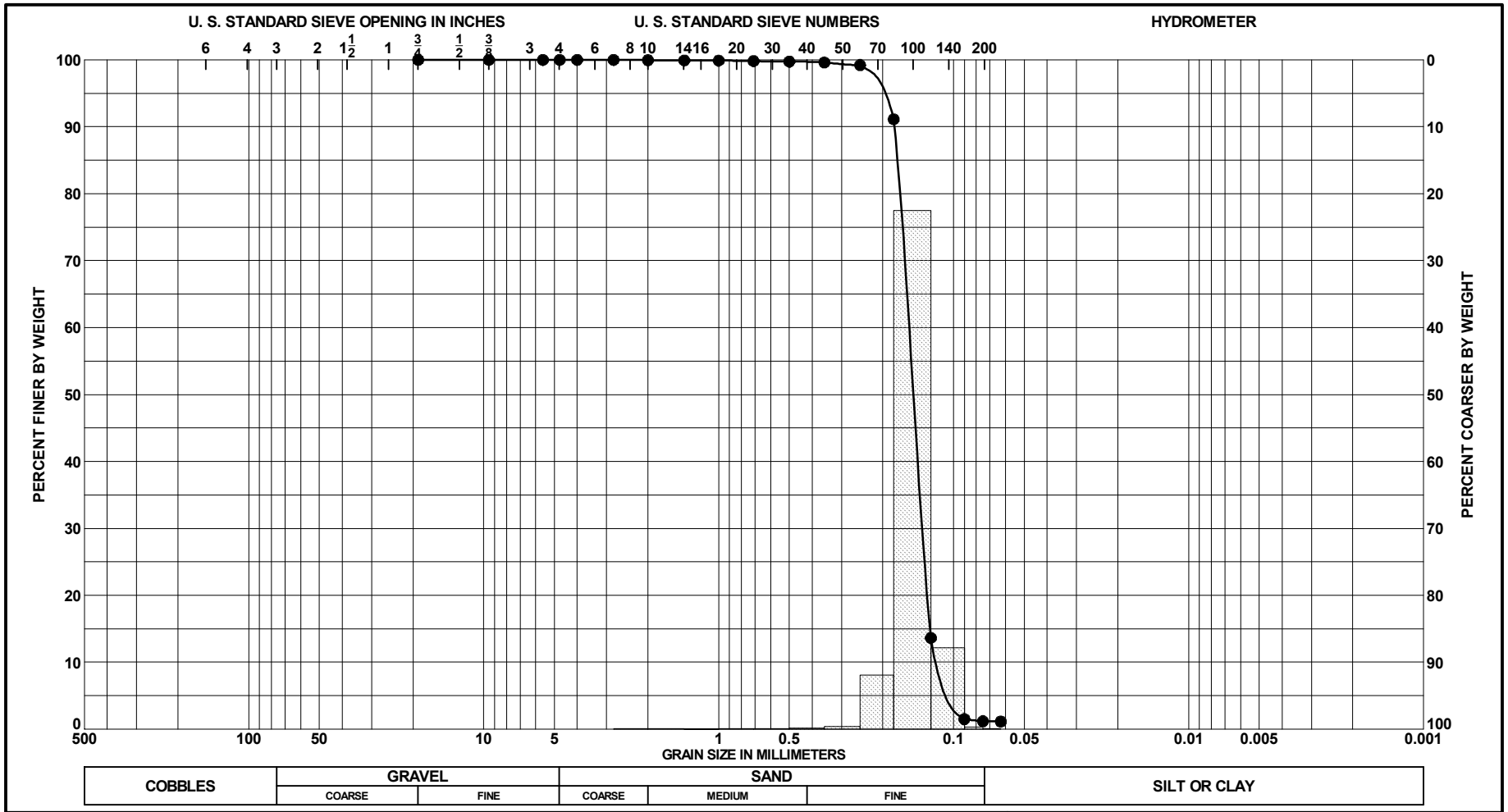


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 5	14.0 to 14.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt, light gray (SP)	2.5Y 7/1	10 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-09
BORING ELEV.	-10.4 Ft., NAVD88
DATE	7/28/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

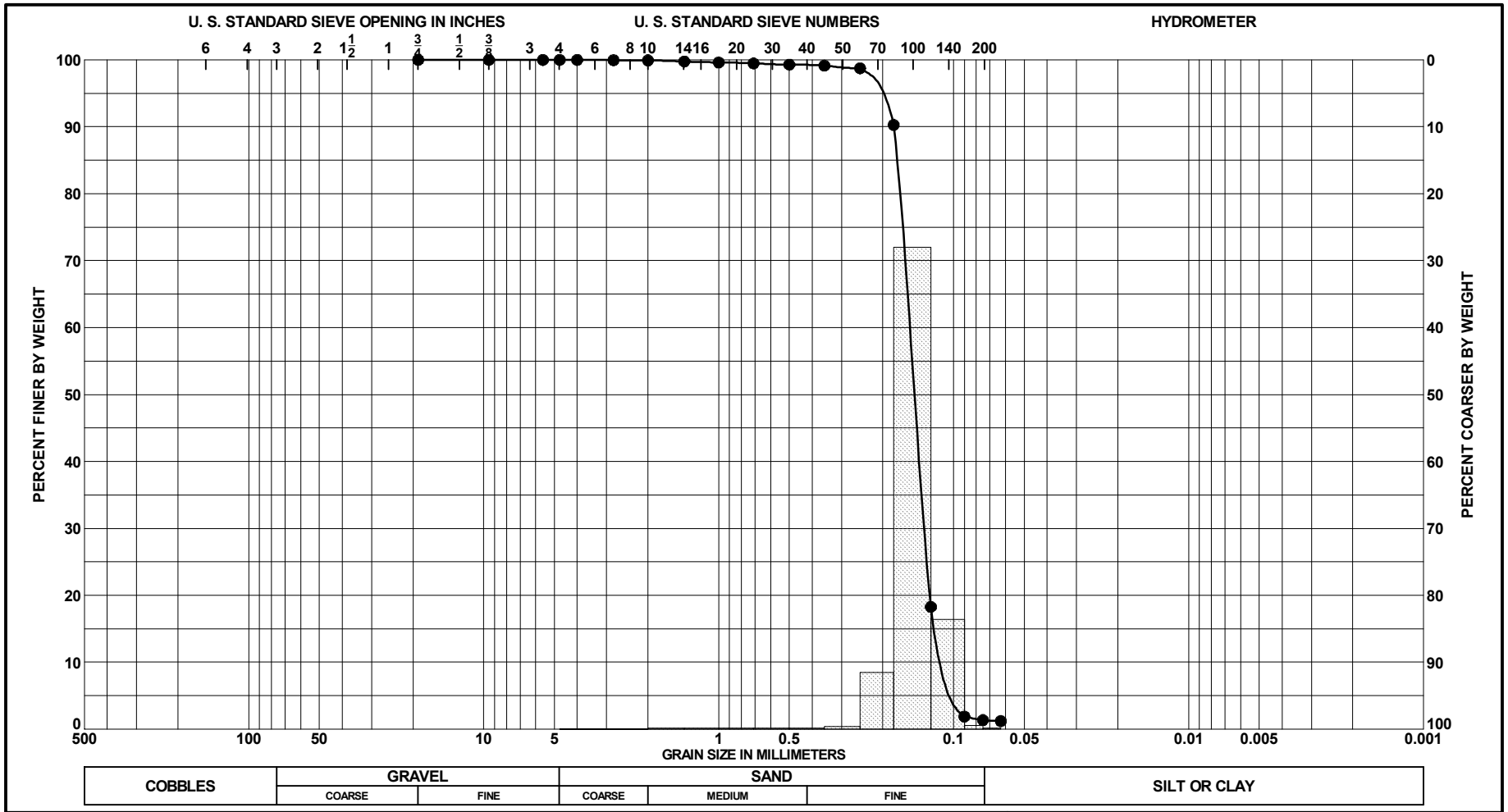


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 1	3.0 to 3.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt, white (SP)	2.5Y 8/1	3 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-10
BORING ELEV.	-9.9 Ft., NAVD88
DATE	7/30/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

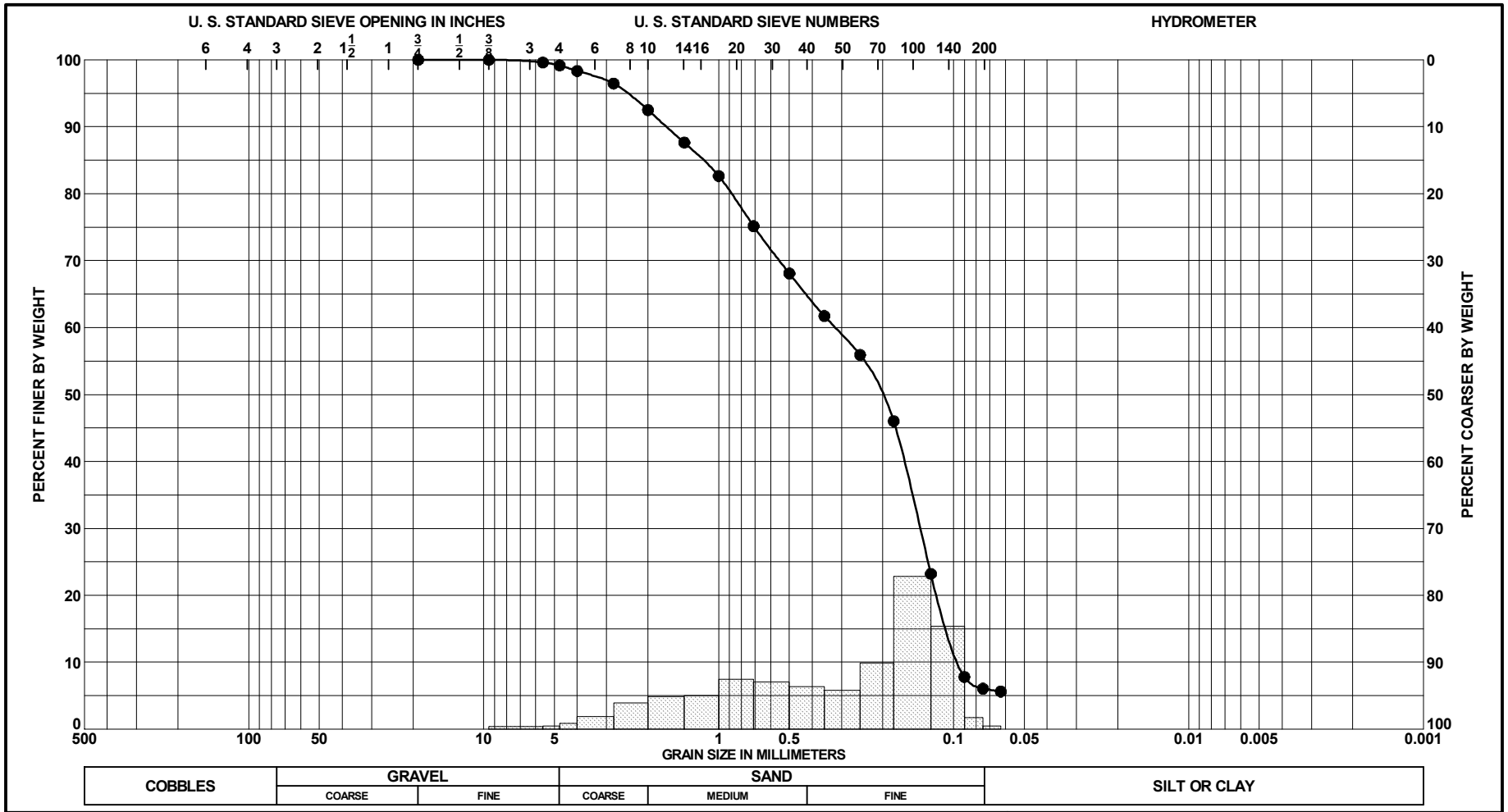


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 2	6.0 to 6.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	10 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-10
BORING ELEV.	-9.9 Ft., NAVD88
DATE	7/30/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

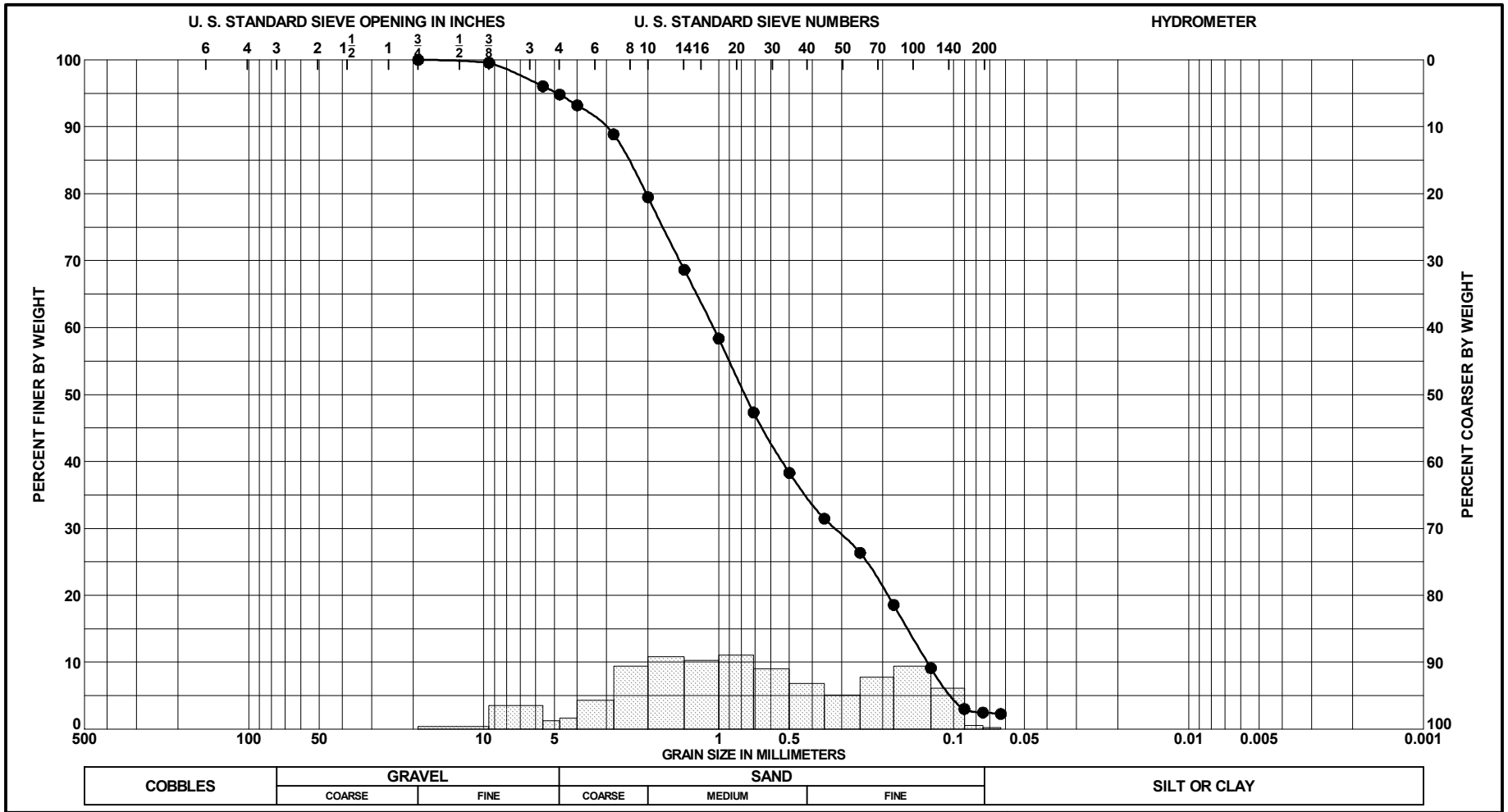


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 3	9.0 to 9.3 Ft.	SAND, poorly-graded with silt, mostly fine to coarse-grained sand-sized shell, some fine-grained sand-sized quartz, few silt, gray (SP-SM)	2.5Y 6/1	52 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-10
BORING ELEV.	-9.9 Ft., NAVD88
DATE	7/30/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 4	11.5 to 11.8 Ft.	SAND, poorly-graded, mostly sand to gravel-sized shell, little fine-grained sand-sized quartz, trace silt, gray (SP)	2.5Y 6/1	74 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-10
BORING ELEV.	-9.9 Ft., NAVD88
DATE	7/30/2015

GRADATION CURVES

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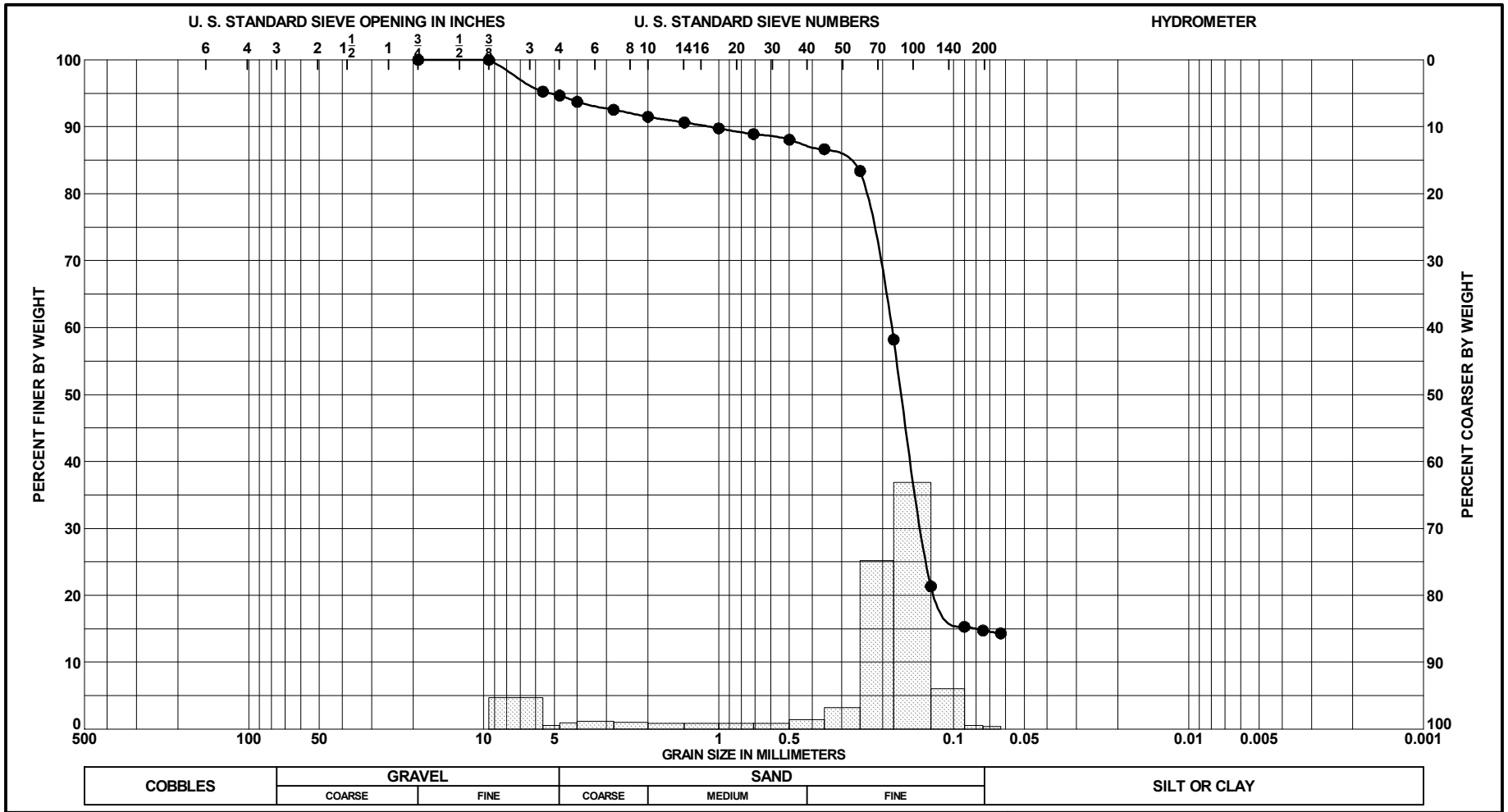
JUN 02

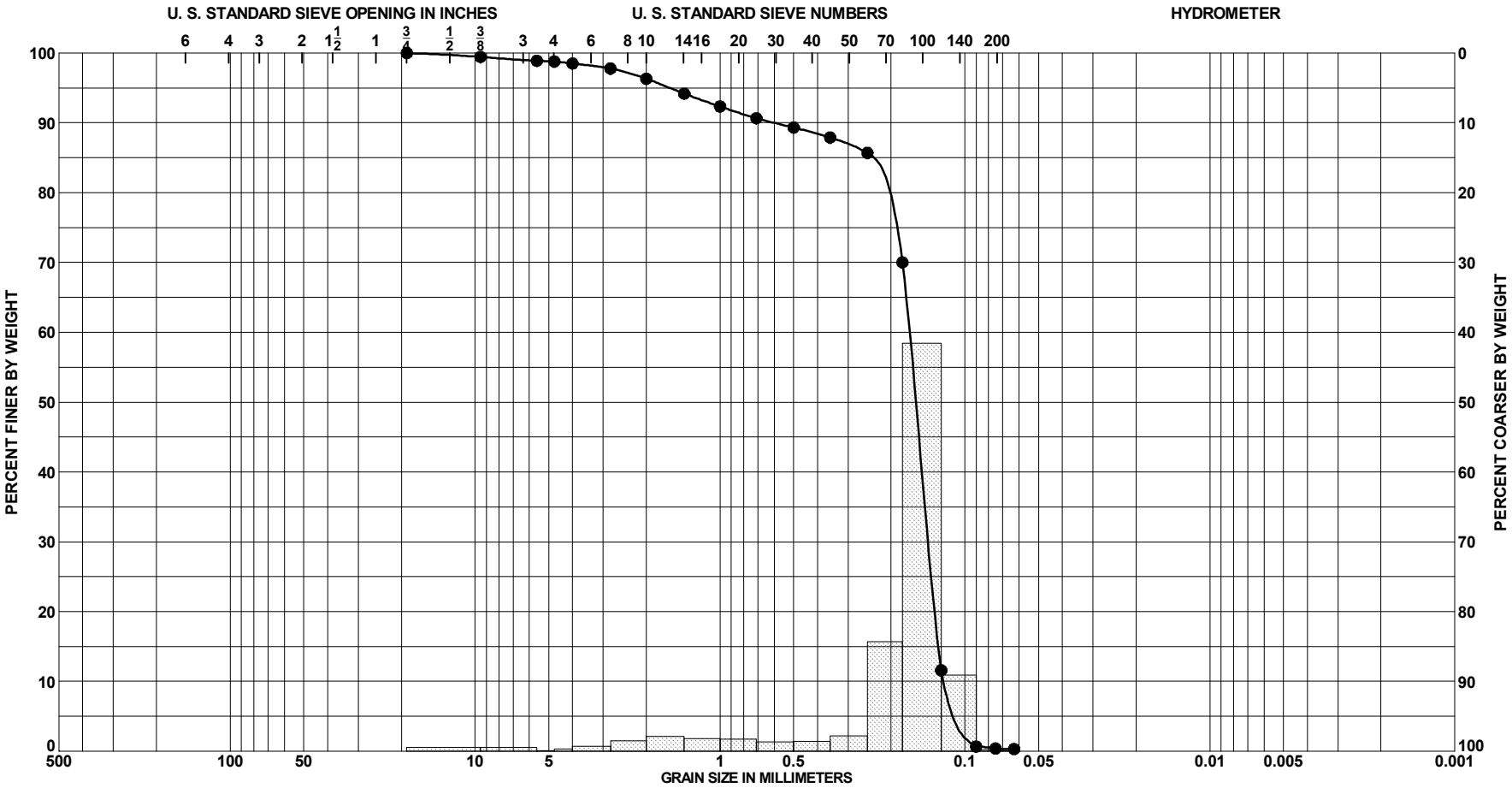


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 5	13.5 to 13.8 Ft.	SAND, silty, mostly fine-grained	2.5Y 6/1	23 (est)						
		sand-sized quartz, little sand to								
		gravel-sized shell, little silt, gray (SM)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-10
BORING ELEV.	-9.9 Ft., NAVD88
DATE	7/30/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

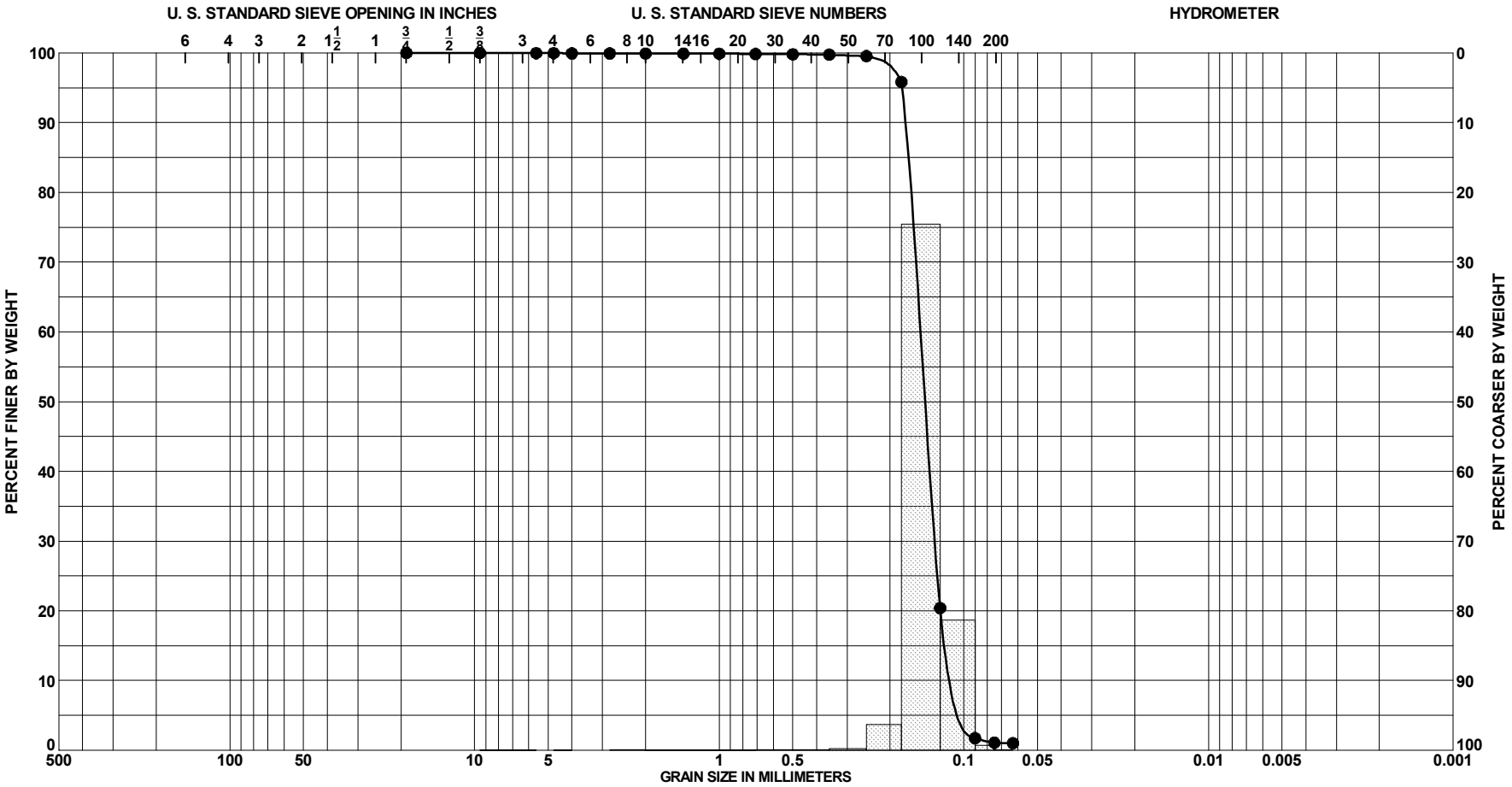


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 1	2.0 to 2.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium-grained sand-sized shell, light gray (SP)	2.5Y 7/1	15 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-11
BORING ELEV.	-8.2 Ft., NAVD88
DATE	7/30/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

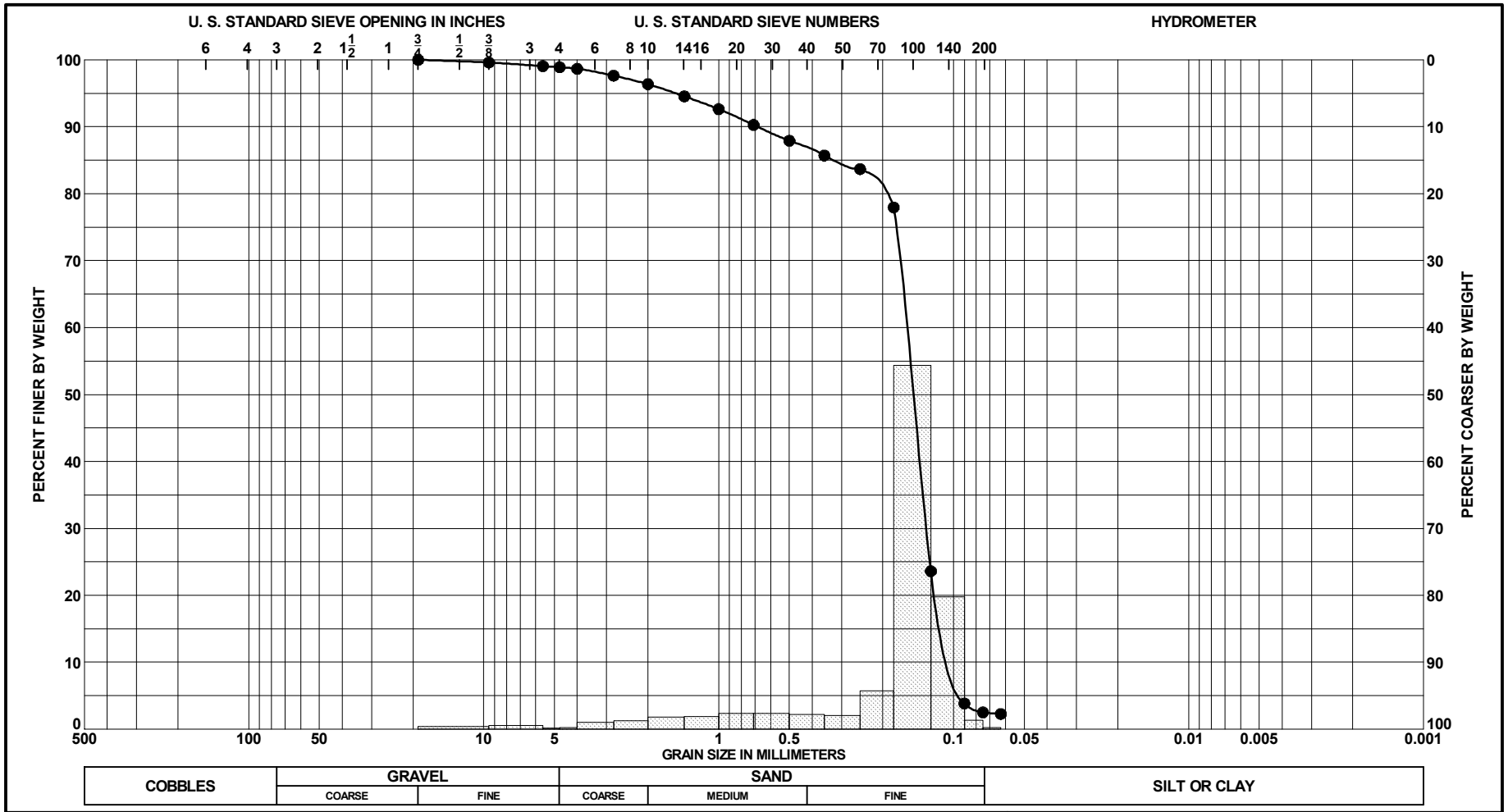


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 2	6.0 to 6.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt, trace shell, white (SP)	2.5Y 8/1	1 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-11
BORING ELEV.	-8.2 Ft., NAVD88
DATE	7/30/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

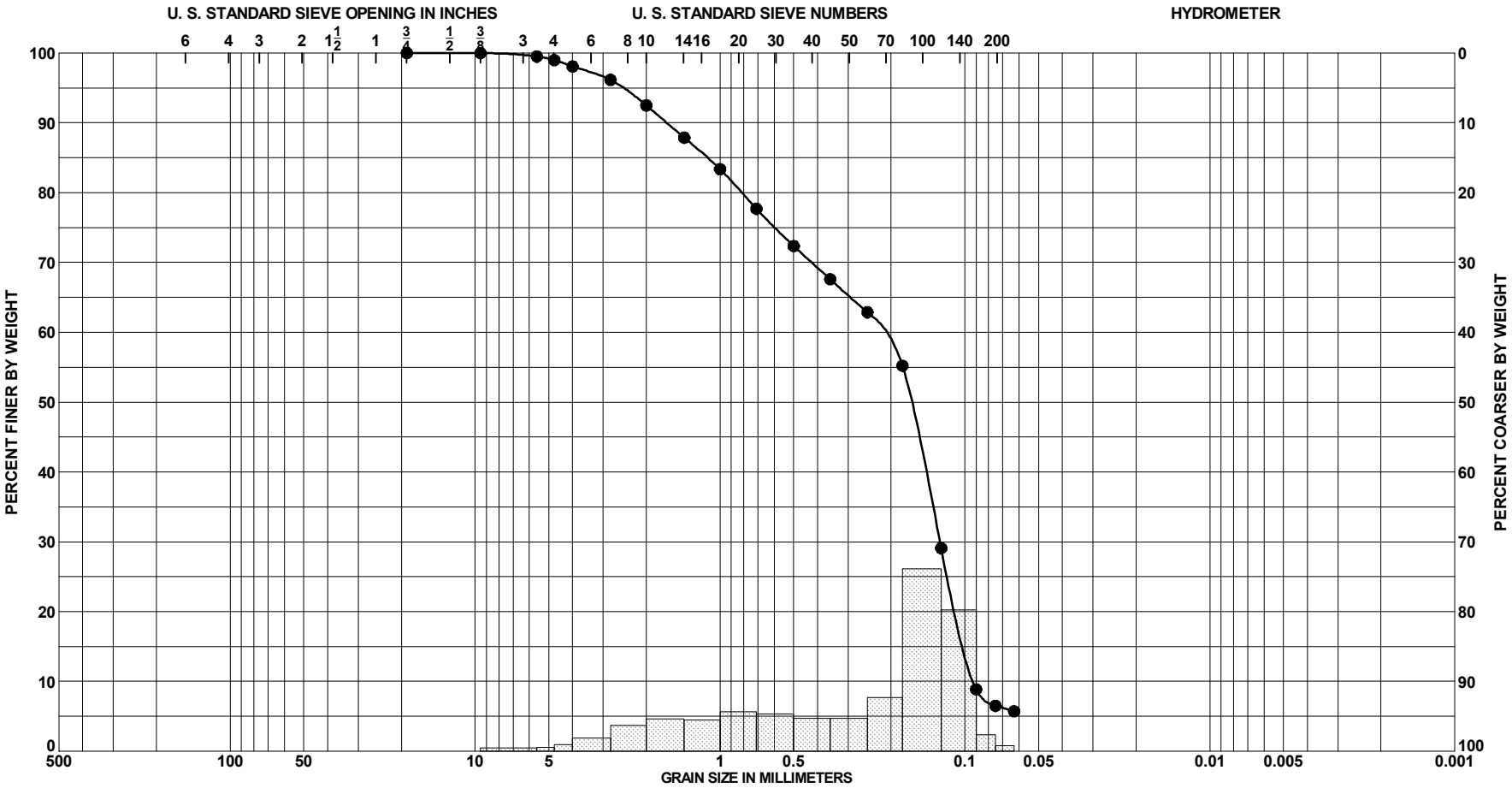


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 3	10.0 to 10.3 Ft.	SAND, poorly-graded, mostly	N 5/	22 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium-grained sand-sized								
		shell, trace silt, gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-11
BORING ELEV.	-8.2 Ft., NAVD88
DATE	7/30/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

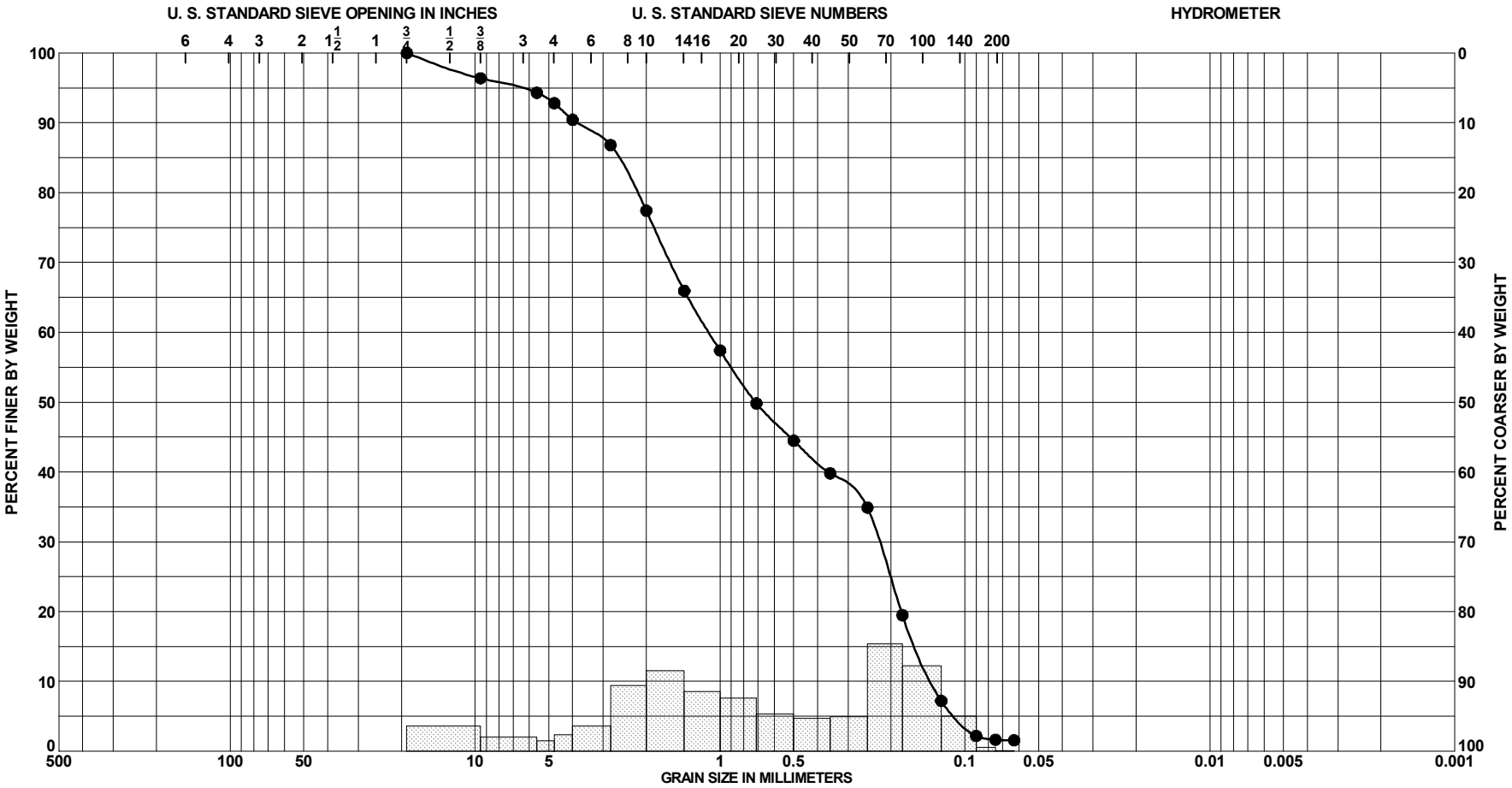


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 4	11.5 to 11.8 Ft.	SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, some fine to coarse-grained sand-sized shell, few silt, greenish gray (SP-SM)	10Y 5/1	38 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-11
BORING ELEV.	-8.2 Ft., NAVD88
DATE	7/30/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

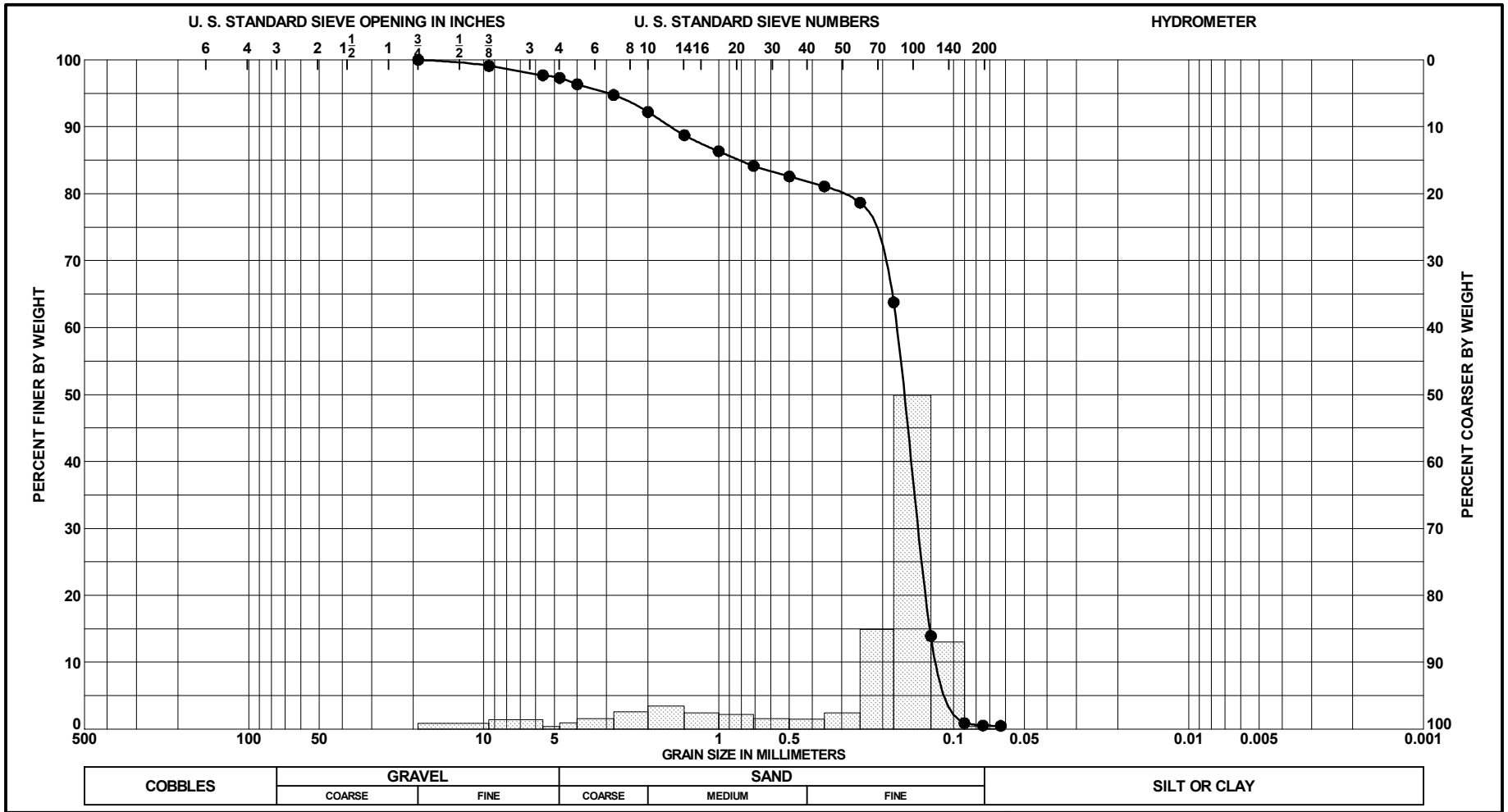


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 5	13.5 to 13.8 Ft.	SAND, poorly-graded, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz, trace silt, greenish gray (SP)	10Y 5/1	64 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-11
BORING ELEV.	-8.2 Ft., NAVD88
DATE	7/30/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

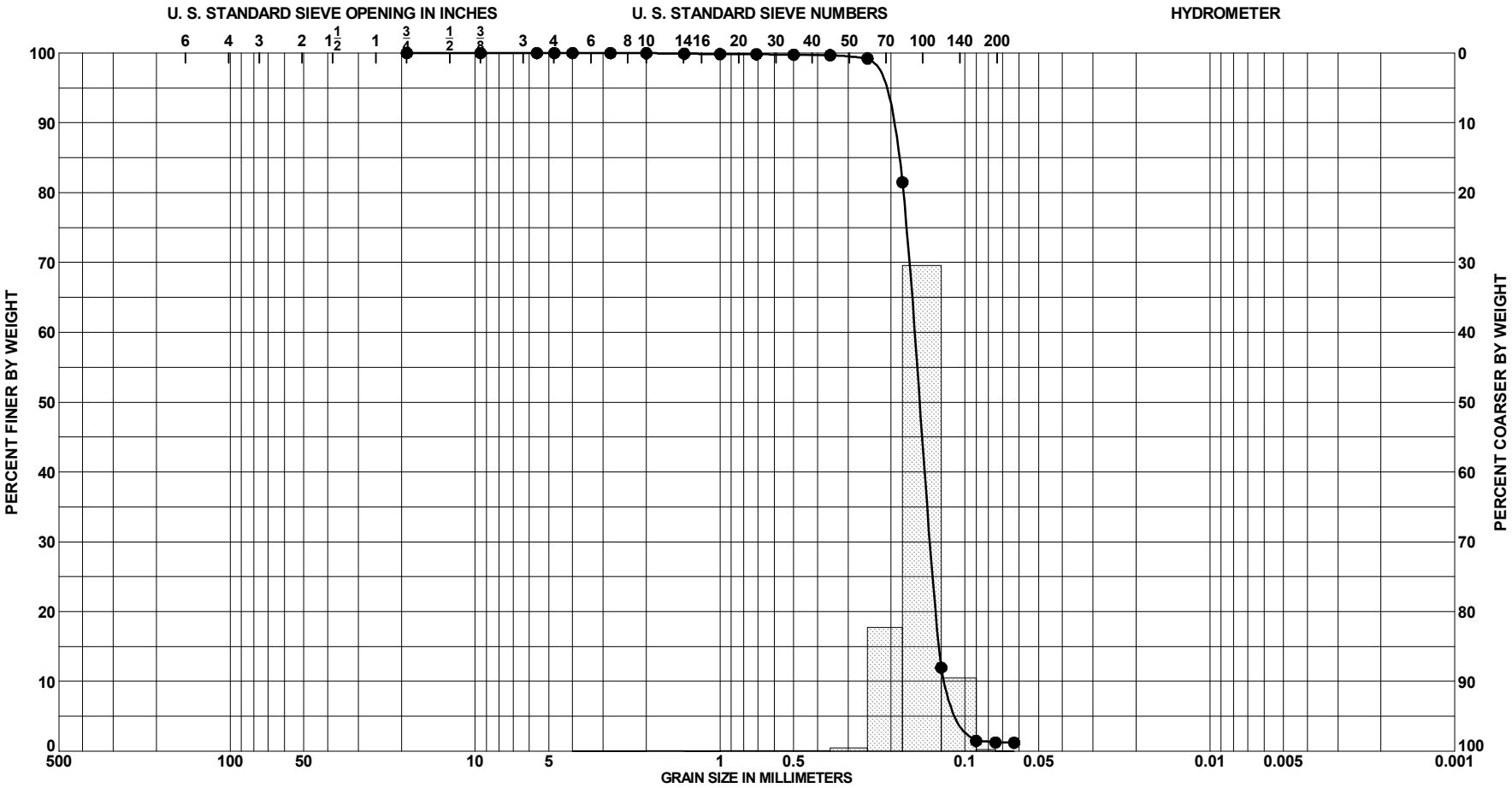


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 1	2.0 to 2.3 Ft.	SAND, poorly-graded, mostly	2.5Y 7/1	20 (est)						
		fine-grained sand-sized quartz, little								
		medium to coarse-grained sand-sized								
		shell. trace silt, light gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-12
BORING ELEV.	-9.2 Ft., NAVD88
DATE	7/30/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

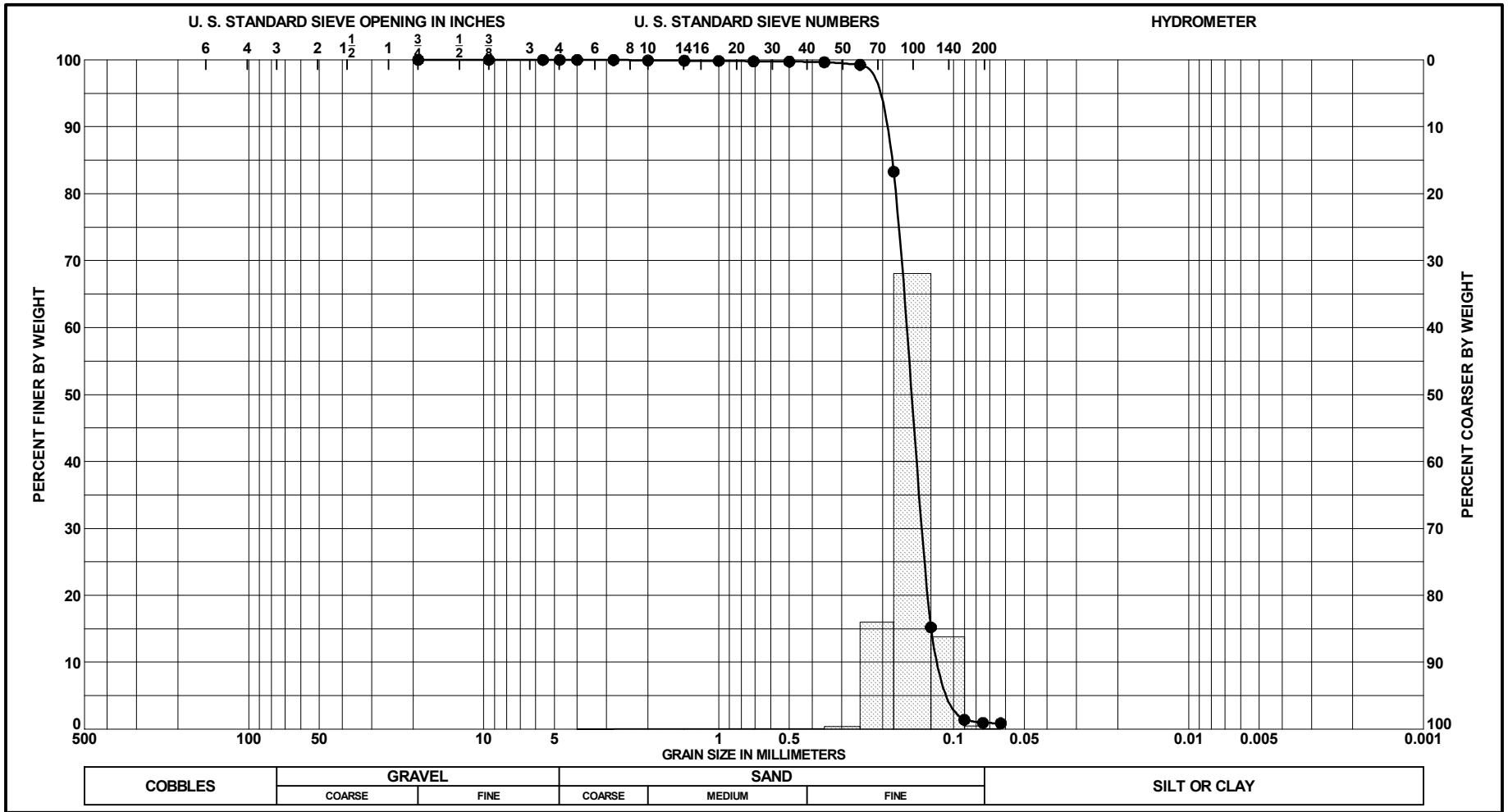


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 2	5.0 to 5.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt, trace shell, white (SP)	2.5Y 8/1	1 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-12
BORING ELEV.	-9.2 Ft., NAVD88
DATE	7/30/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

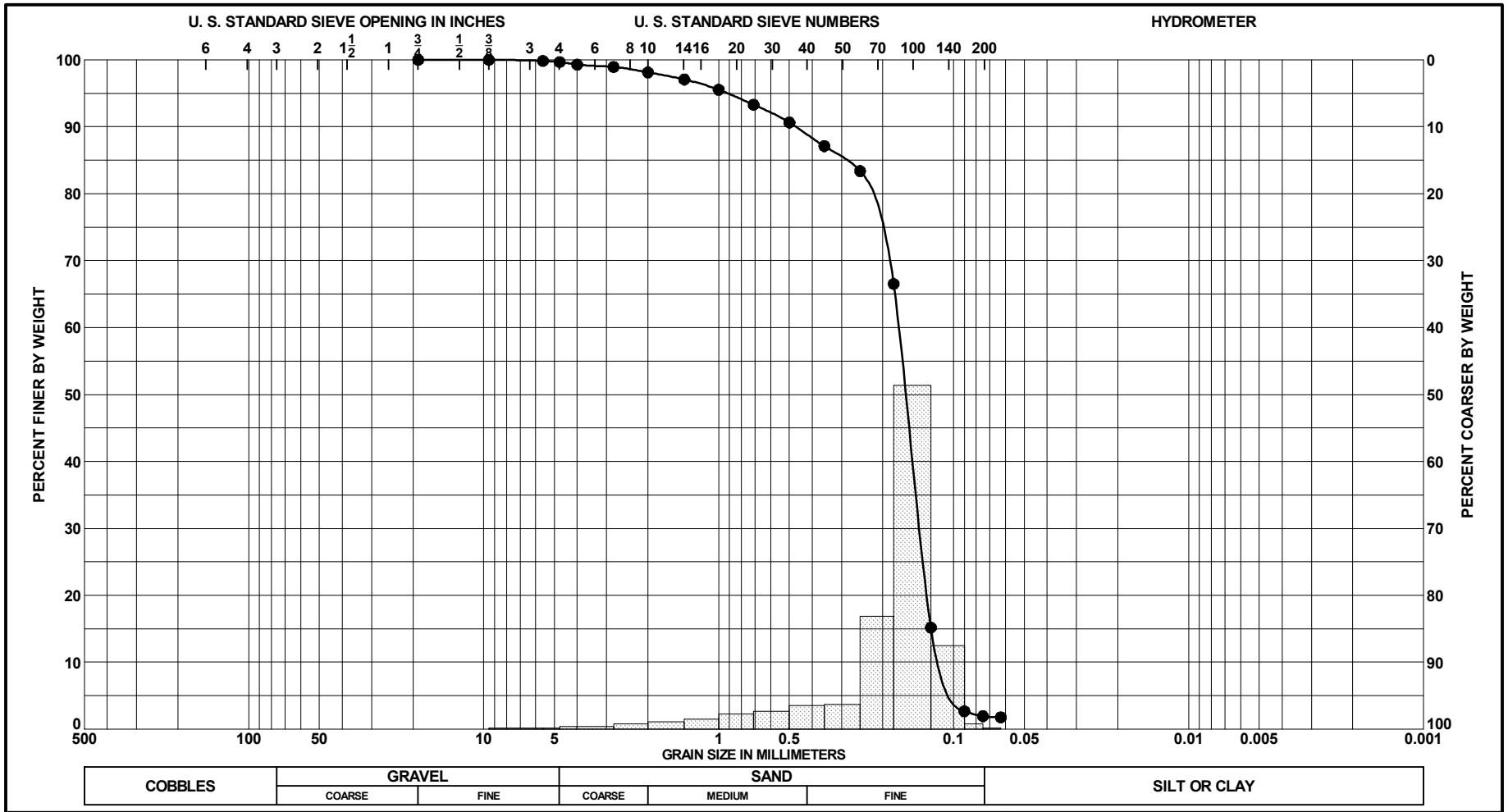


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 3	8.0 to 8.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, white (SP)	2.5Y 8/1	2 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-12
BORING ELEV.	-9.2 Ft., NAVD88
DATE	7/30/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

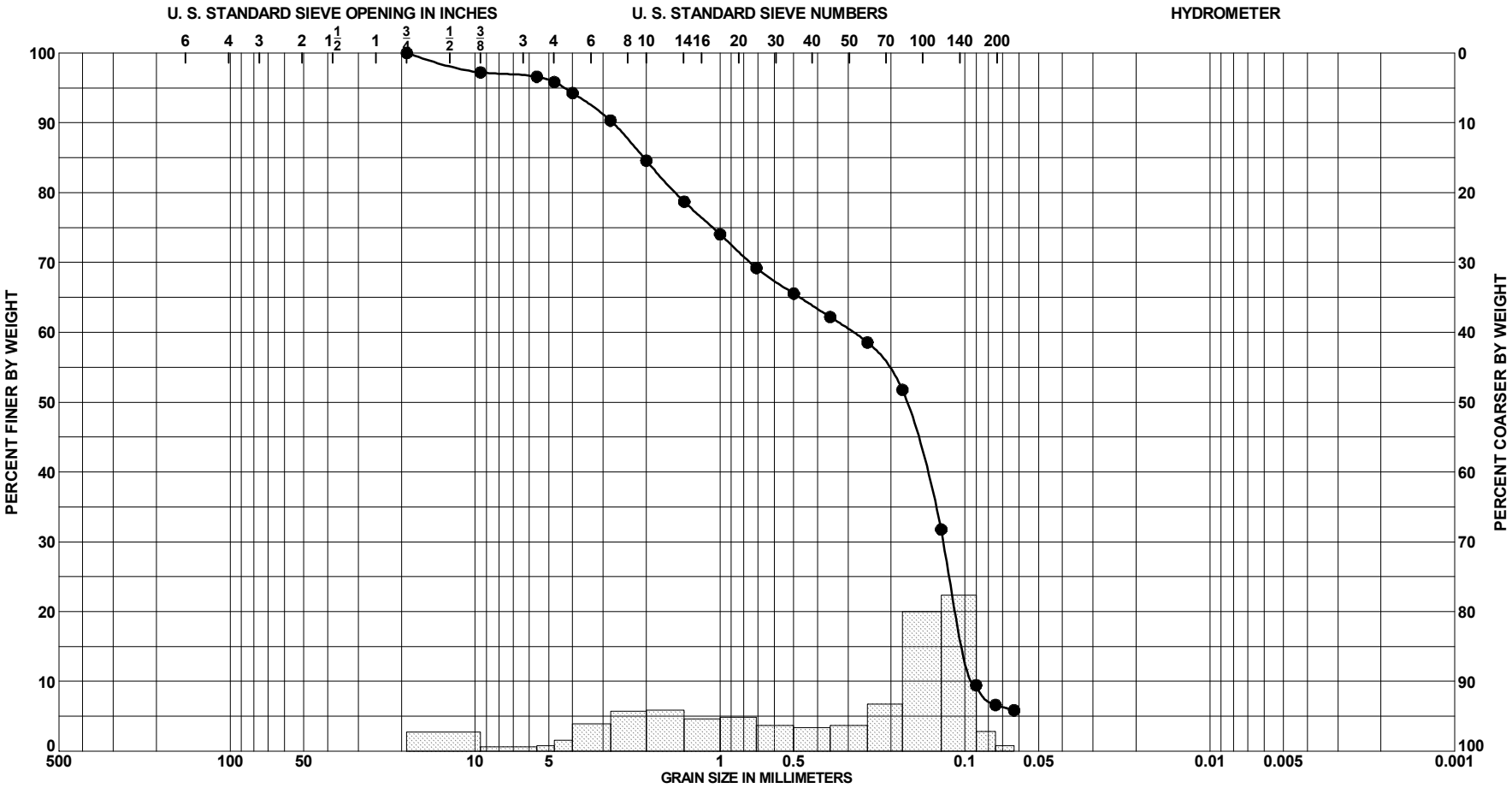


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 4	11.5 to 11.8 Ft.	SAND, poorly-graded, mostly	2.5Y 6/1	29 (est)						
		fine-grained sand-sized quartz, some								
		fine to medium-grained sand-sized								
		shell, trace silt, gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-12
BORING ELEV.	-9.2 Ft., NAVD88
DATE	7/30/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

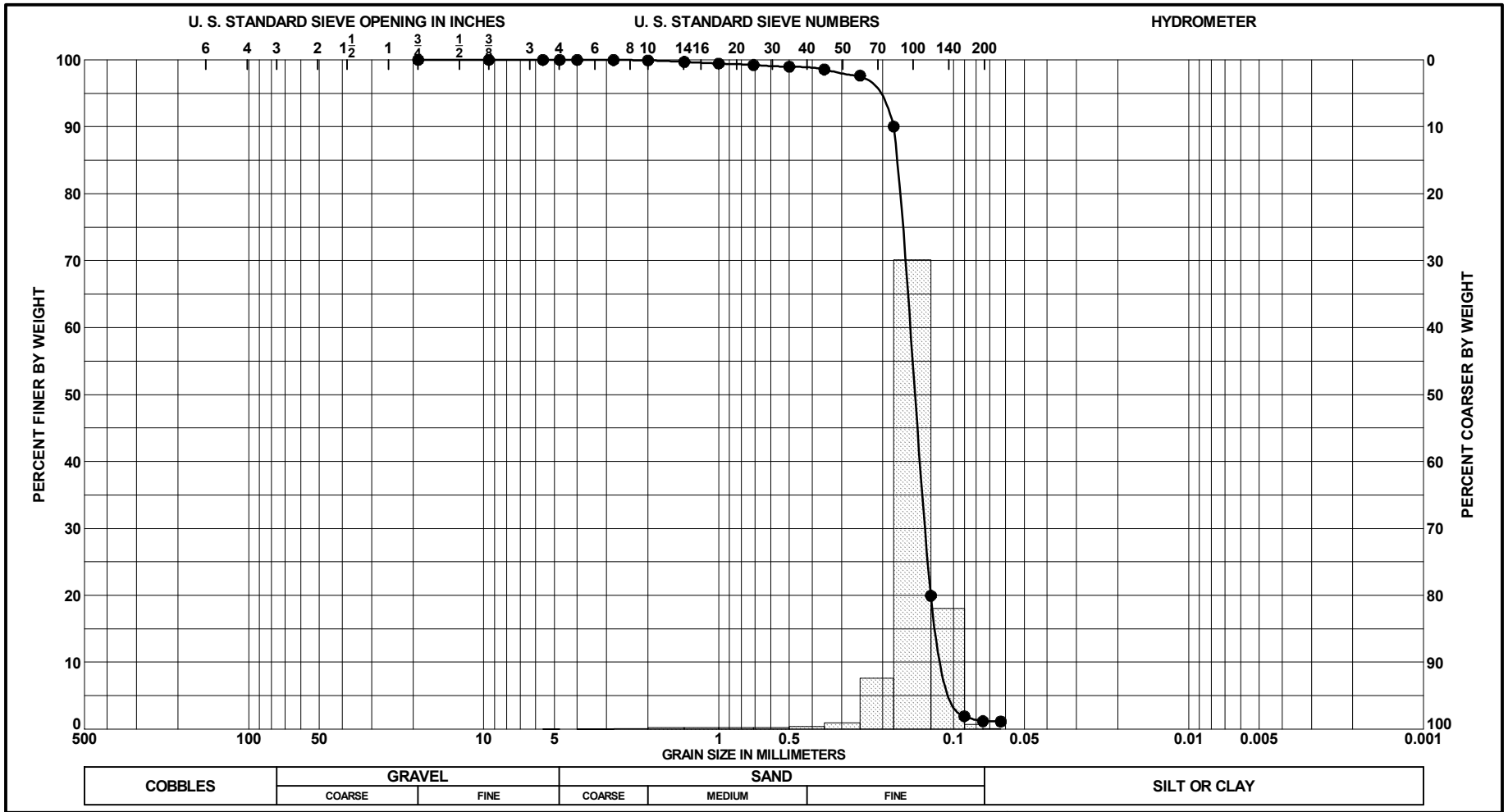


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 5	13.5 to 13.8 Ft.	SAND, poorly-graded with silt, some fine to coarse-grained sand-sized shell, some fine-grained sand-sized quartz, few silt, gray (SP-SM)	2.5Y 6/1	49 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-12
BORING ELEV.	-9.2 Ft., NAVD88
DATE	7/30/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

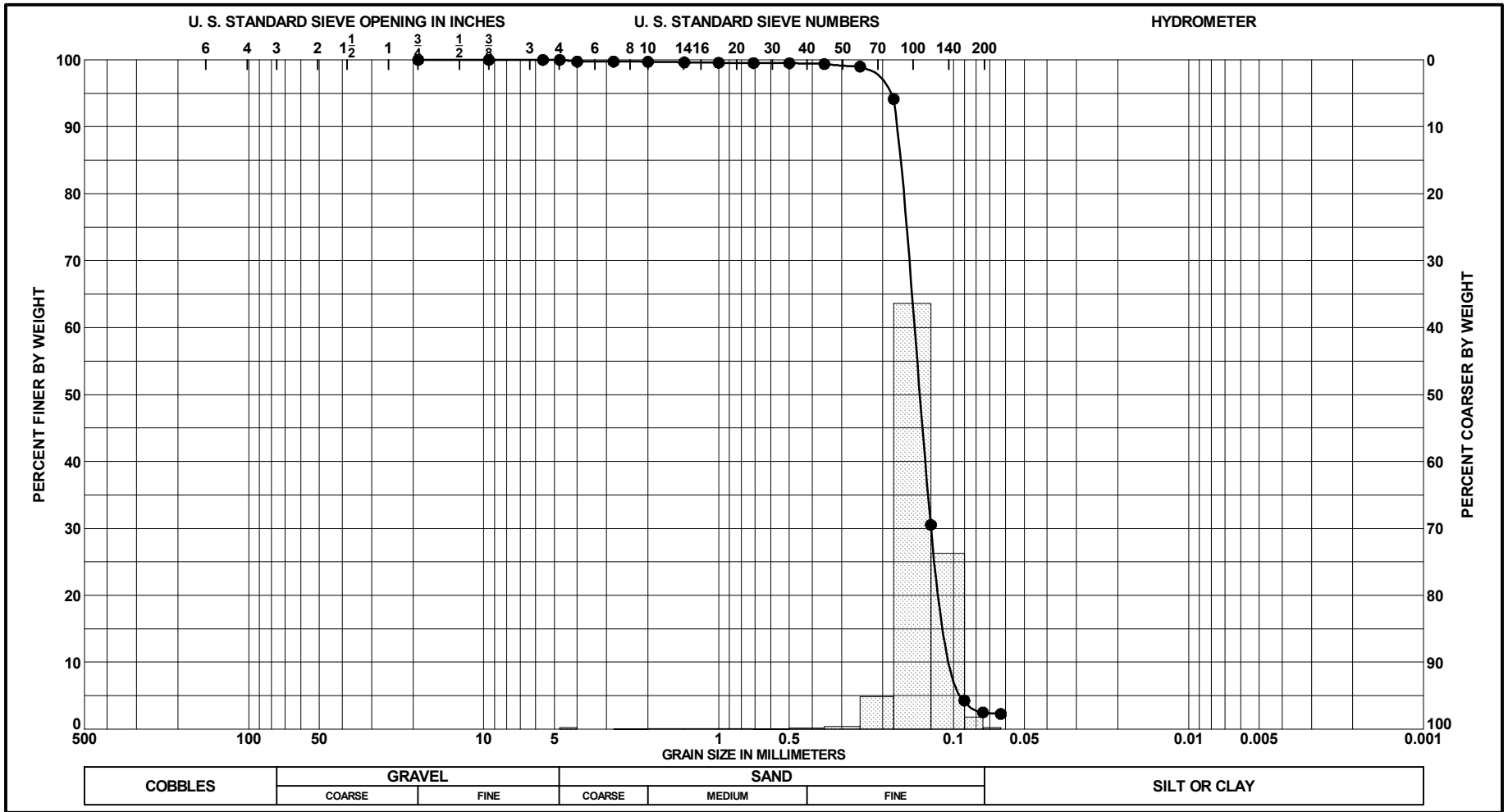


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 1	2.0 to 2.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	7 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-13
BORING ELEV.	-11.7 Ft., NAVD88
DATE	7/30/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

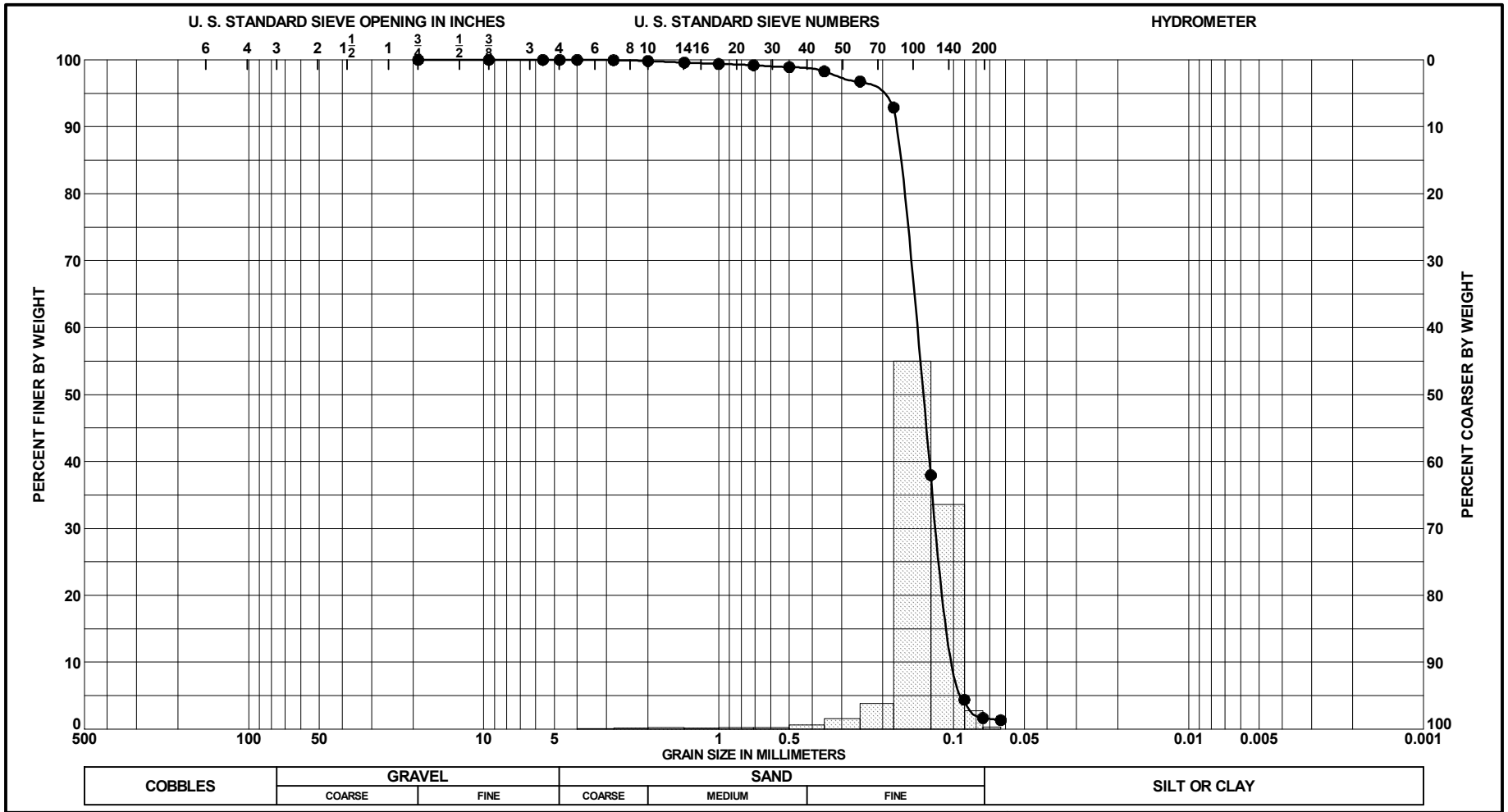


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 2	5.0 to 5.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	8 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-13
BORING ELEV.	-11.7 Ft., NAVD88
DATE	7/30/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

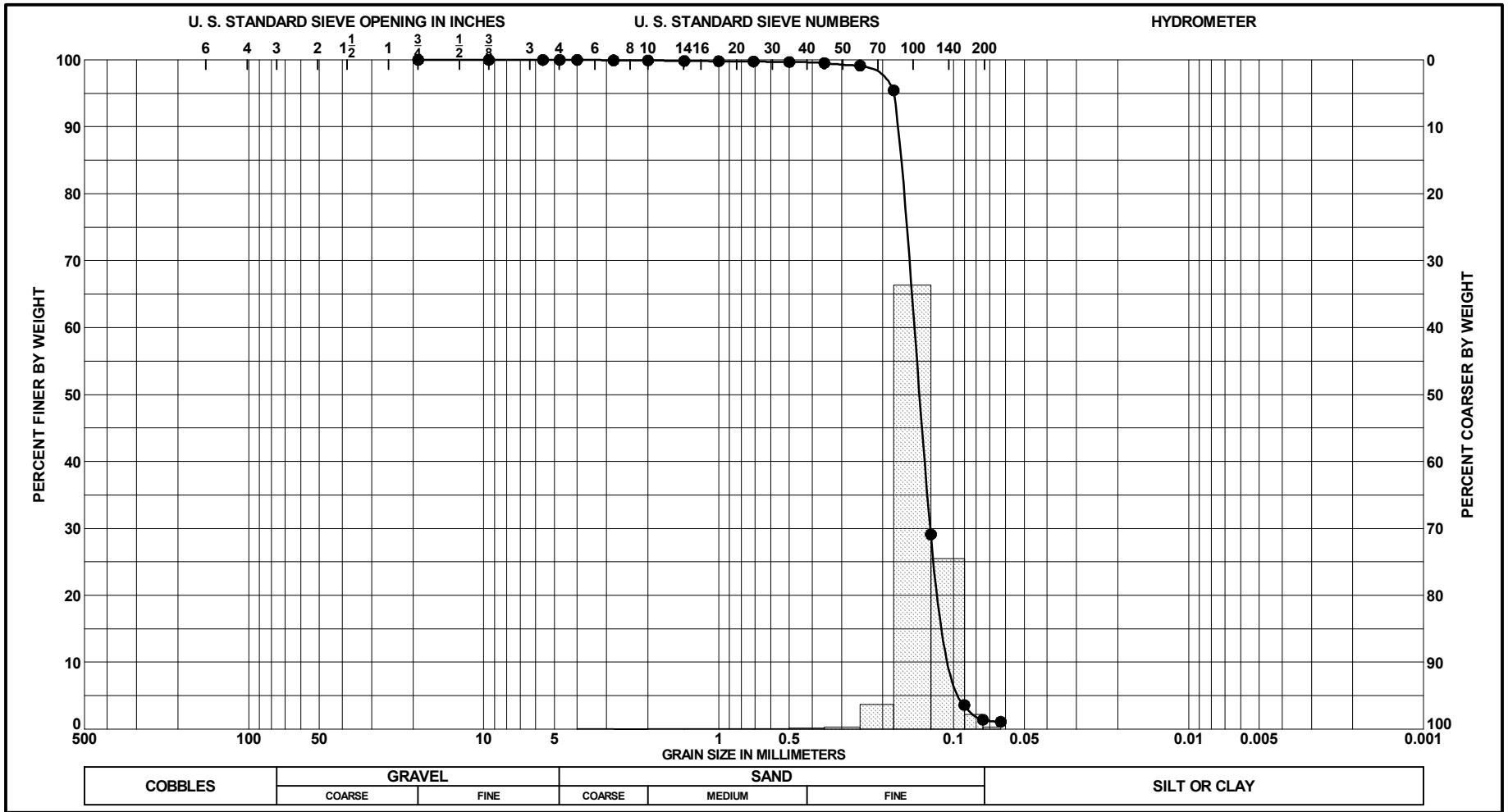


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 3	8.0 to 8.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	9/8 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-13
BORING ELEV.	-11.7 Ft., NAVD88
DATE	7/30/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

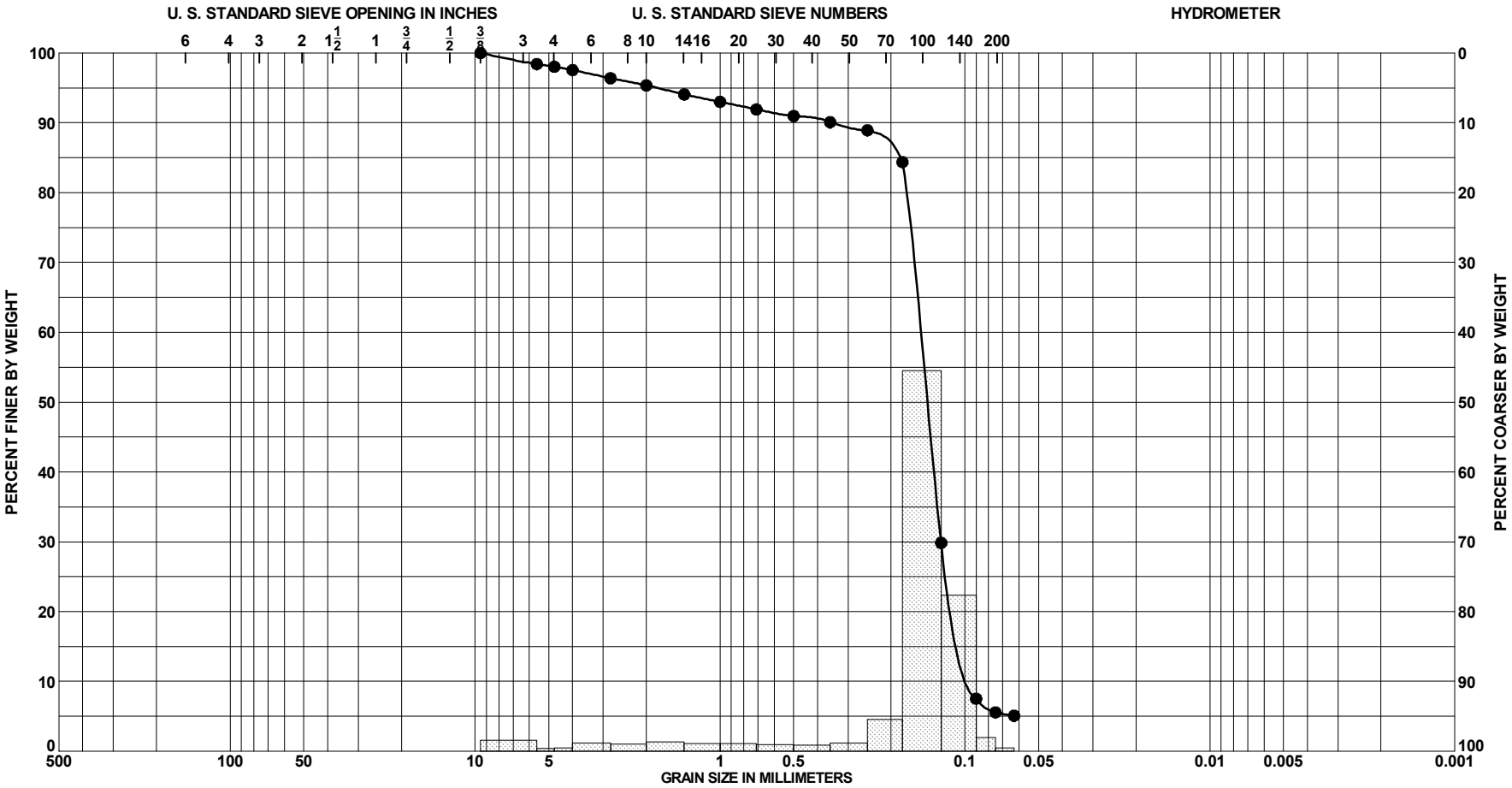


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 4	11.0 to 11.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt, white (SP)	2.5Y 8/1	4 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-13
BORING ELEV.	-11.7 Ft., NAVD88
DATE	7/30/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

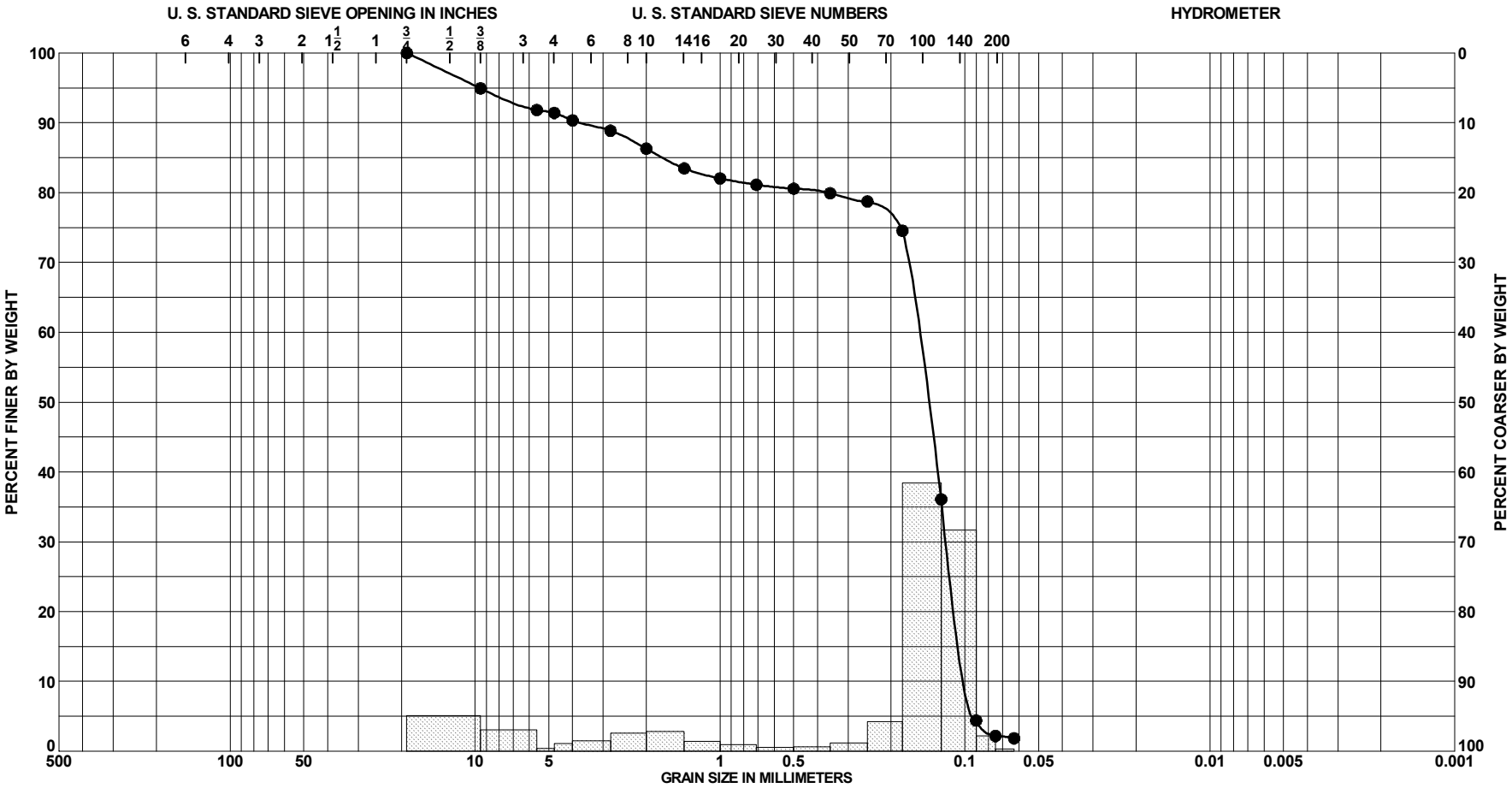


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 5	14.0 to 14.3 Ft.	SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, few silt, gray (SP-SM)	2.5Y 6/1	17 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-13
BORING ELEV.	-11.7 Ft., NAVD88
DATE	7/30/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

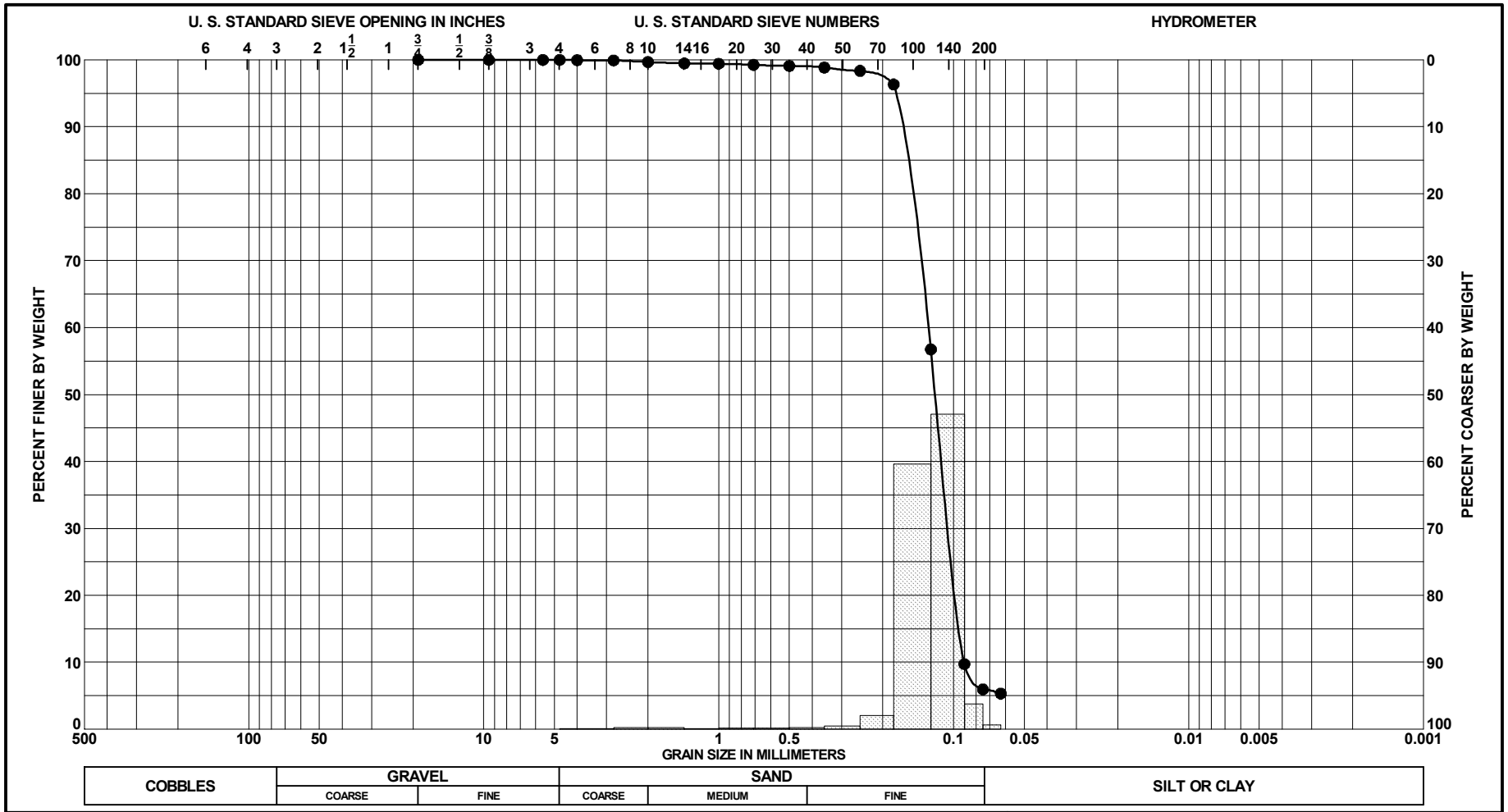


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 1	2.0 to 2.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, trace silt, white (SP)	2.5Y 8/1	27 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-14
BORING ELEV.	-11.8 Ft., NAVD88
DATE	7/30/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

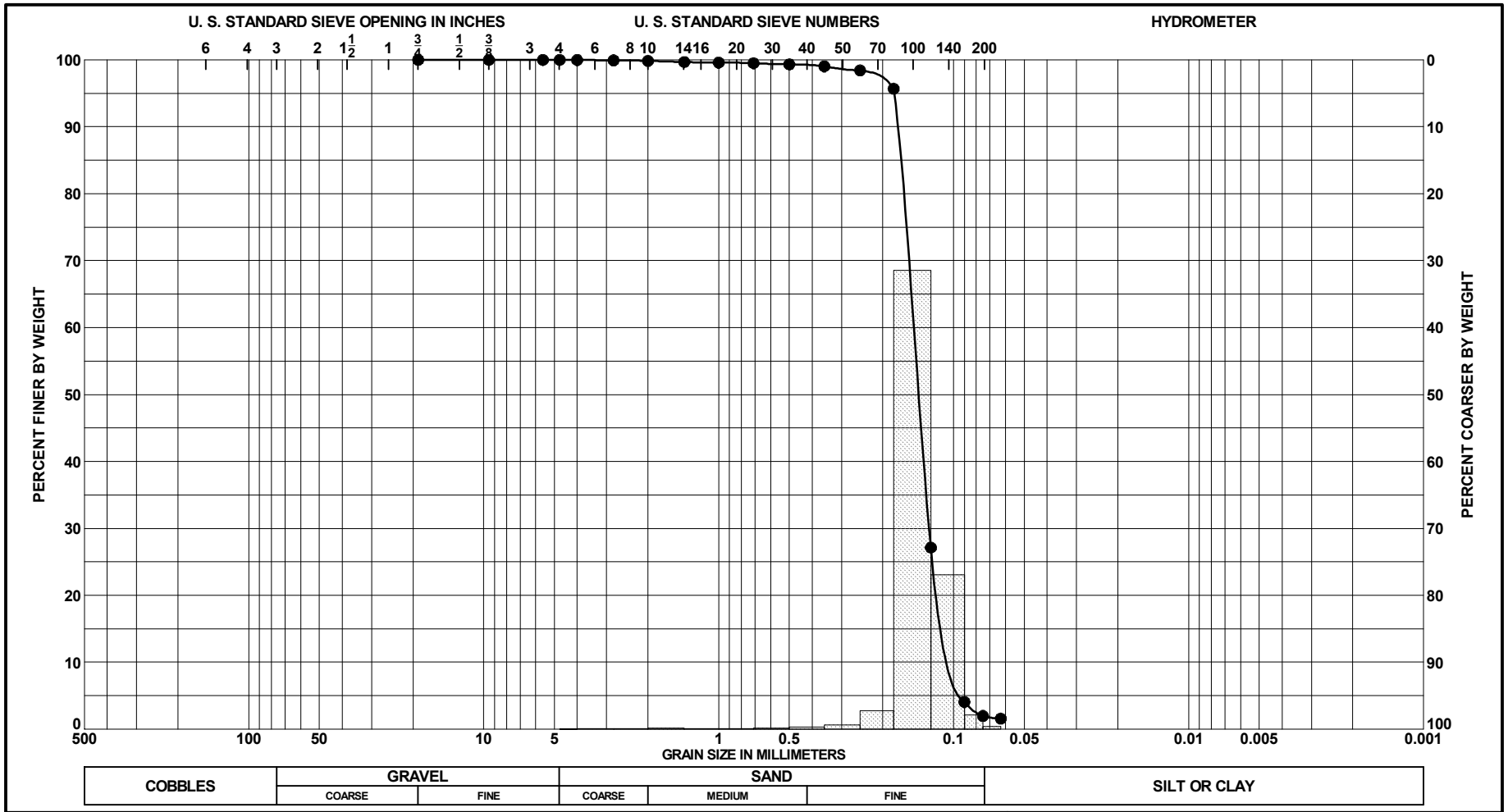


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 2	5.0 to 5.3 Ft.	SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, few silt, white (SP-SM)	2.5Y 8/1	7 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-14
BORING ELEV.	-11.8 Ft., NAVD88
DATE	7/30/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

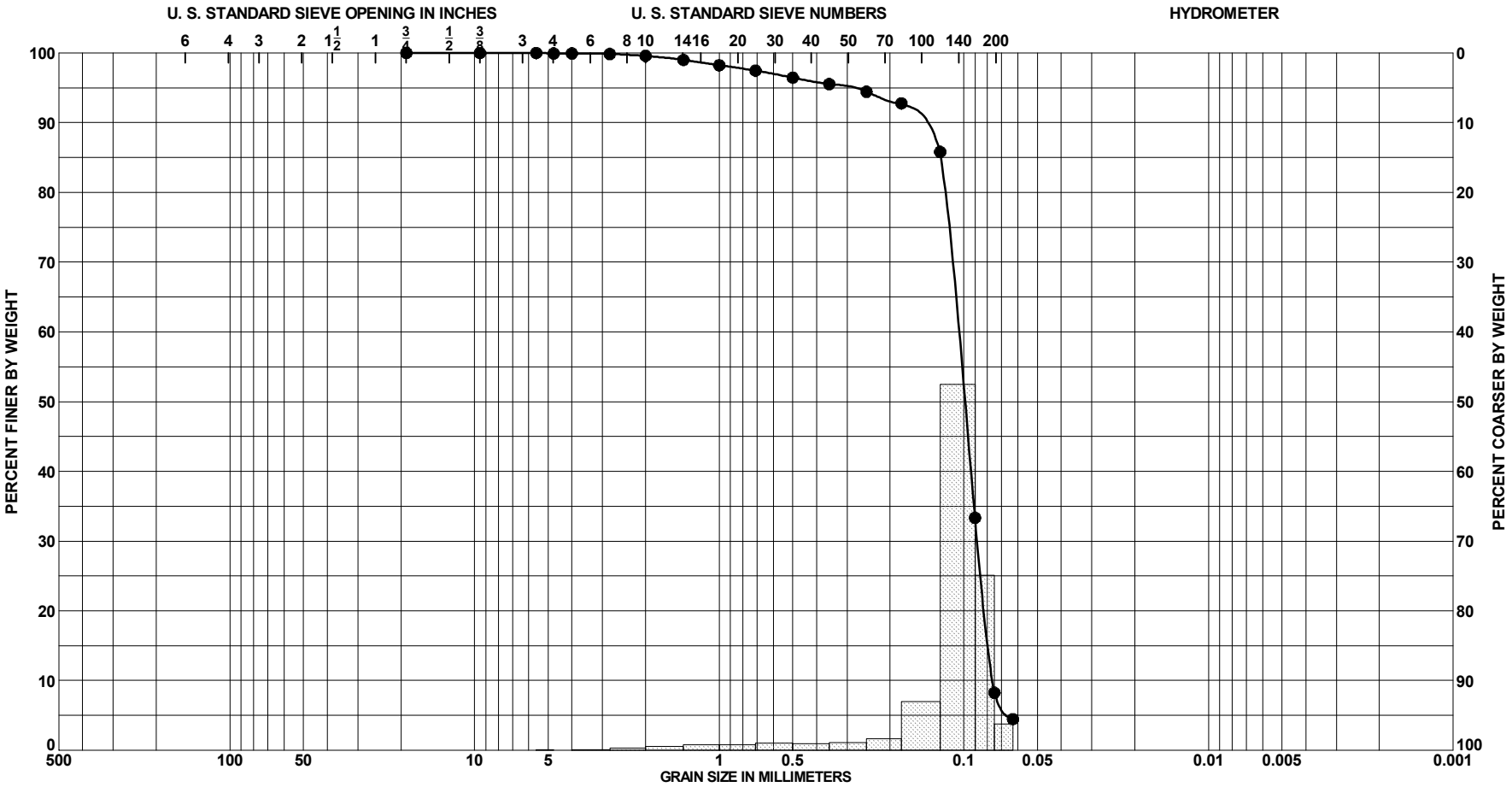


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 3	8.0 to 8.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	7 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-14
BORING ELEV.	-11.8 Ft., NAVD88
DATE	7/30/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

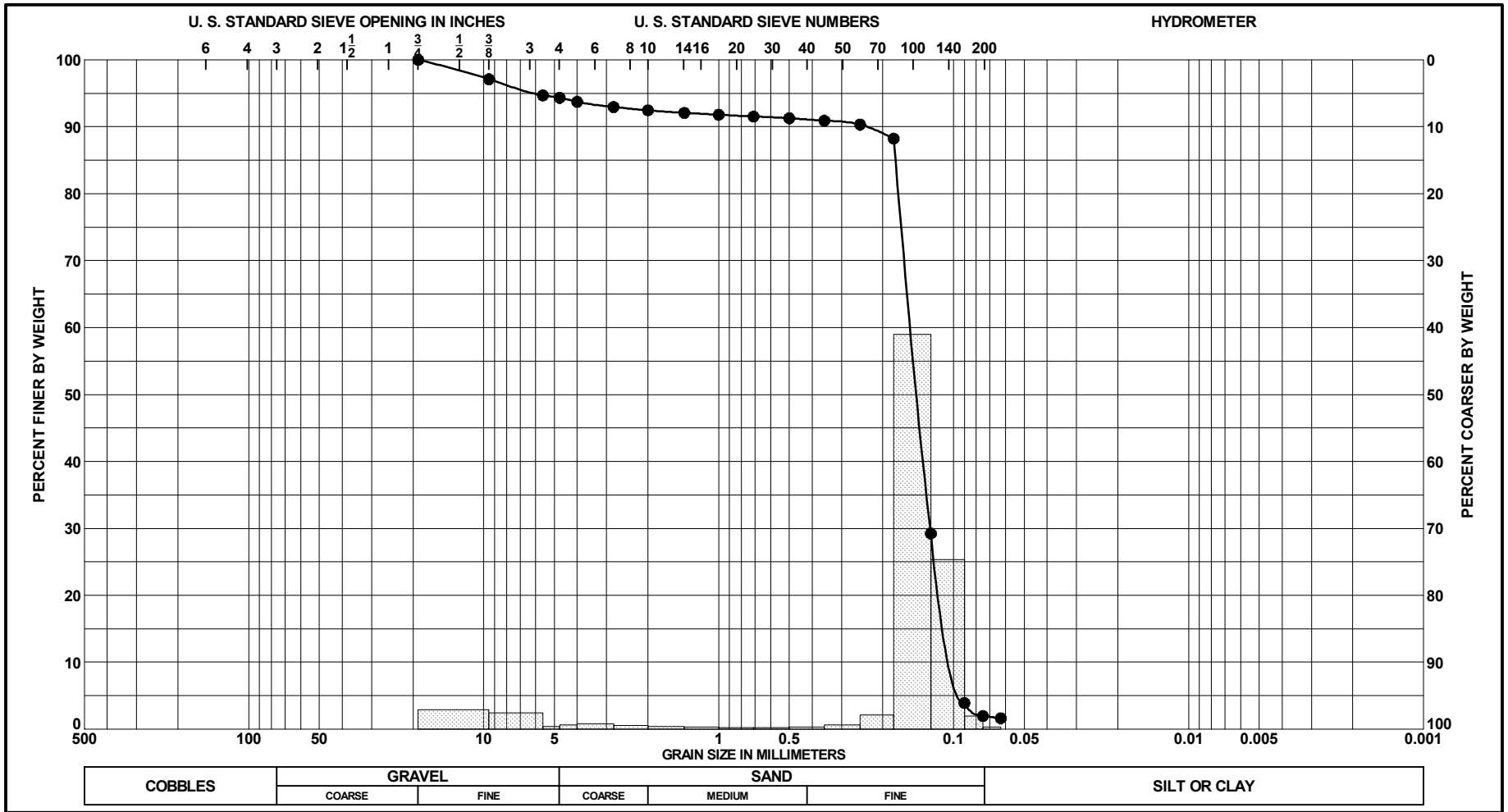


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 4	11.0 to 11.3 Ft.	SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell, few silt, light gray (SP-SM)	N 7/	14 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-14
BORING ELEV.	-11.8 Ft., NAVD88
DATE	7/30/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

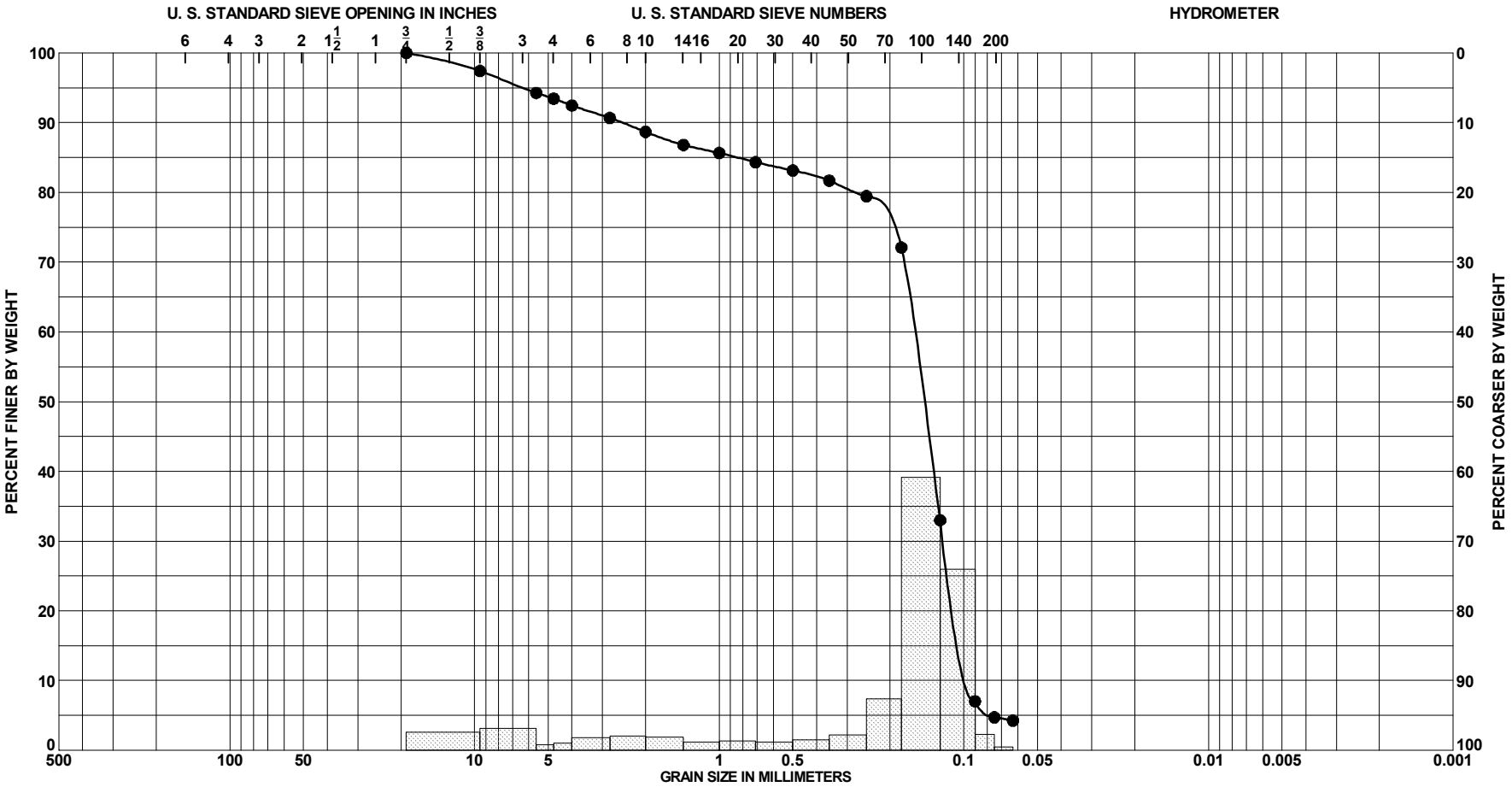


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 1	3.0 to 3.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, trace silt, light brownish gray (SP)	2.5Y 6/2	27 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-15
BORING ELEV.	-11.5 Ft., NAVD88
DATE	7/30/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

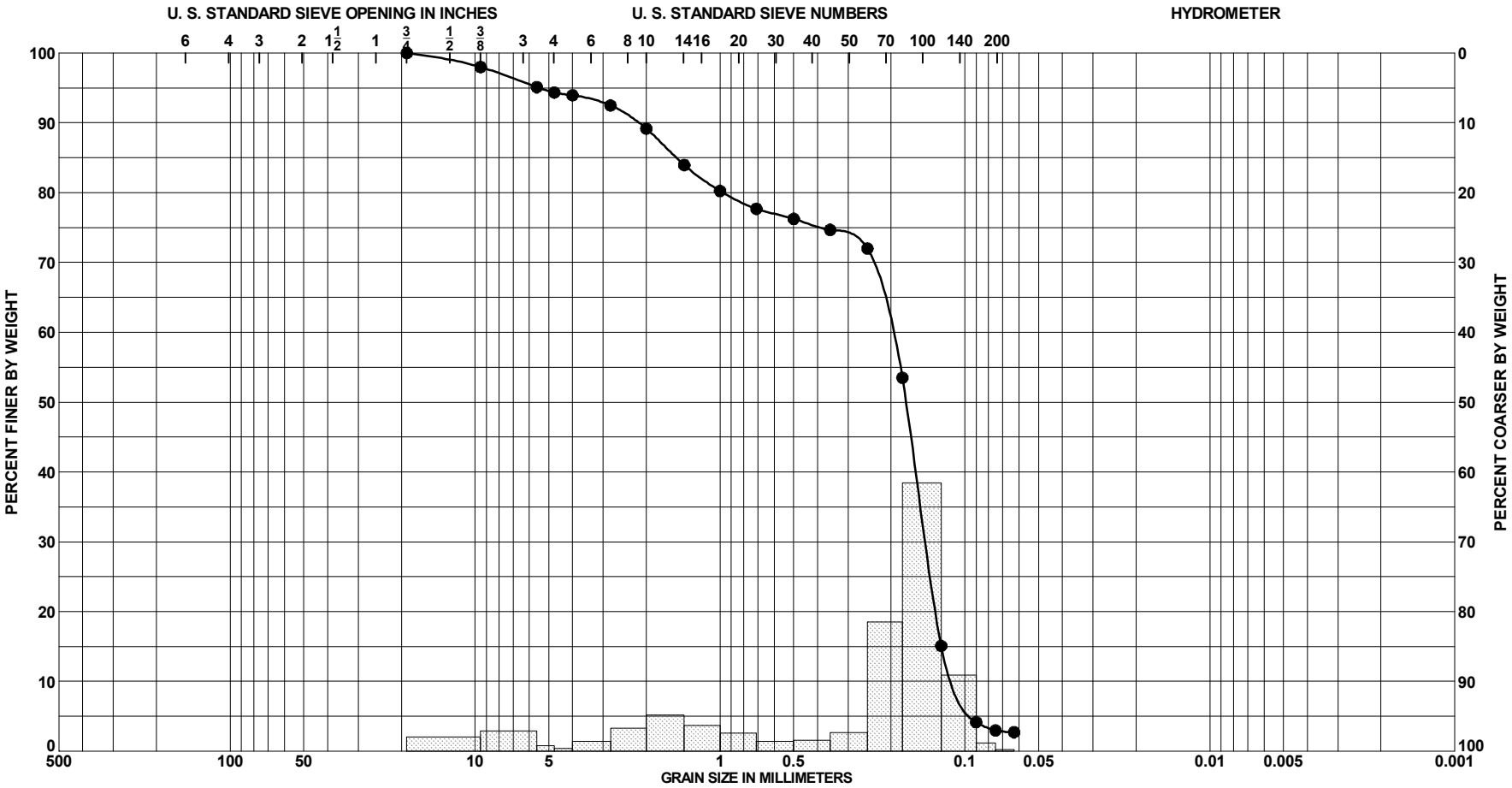


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 2	4.5 to 4.8 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt, light gray (SP)	2.5Y 7/2	30 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-15
BORING ELEV.	-11.5 Ft., NAVD88
DATE	7/30/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

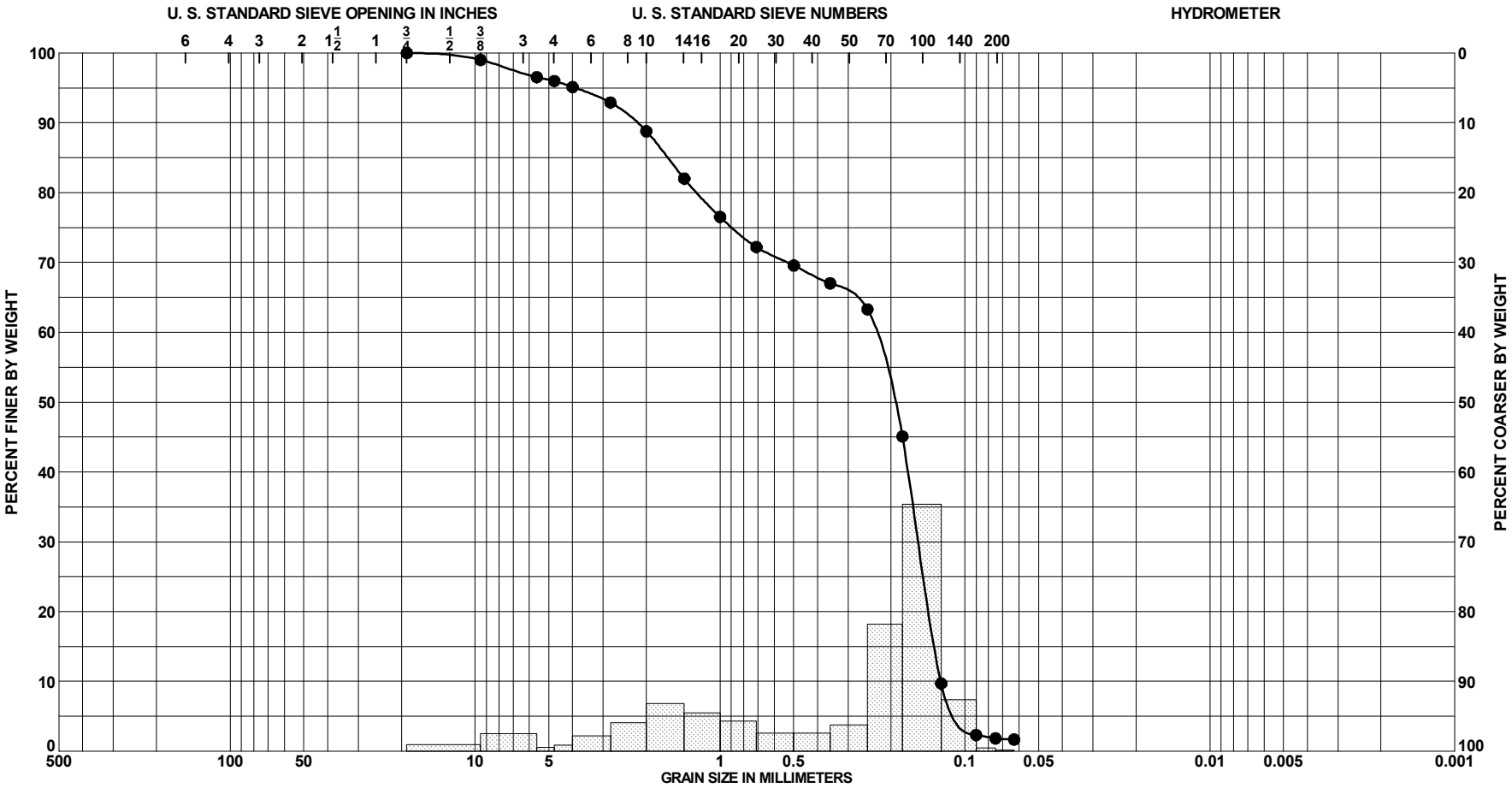


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 3	5.5 to 5.8 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt, light gray (SP)	2.5Y 7/2	31 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-15
BORING ELEV.	-11.5 Ft., NAVD88
DATE	7/30/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 4	6.3 to 6.6 Ft.	SAND, poorly-graded, mostly	2.5Y 7/1	45 (est)						
		fine-grained sand-sized quartz, some								
		fine to coarse-grained sand-sized								
		shell, trace silt, light gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-15
BORING ELEV.	-11.5 Ft., NAVD88
DATE	7/30/2015

GRADATION CURVES

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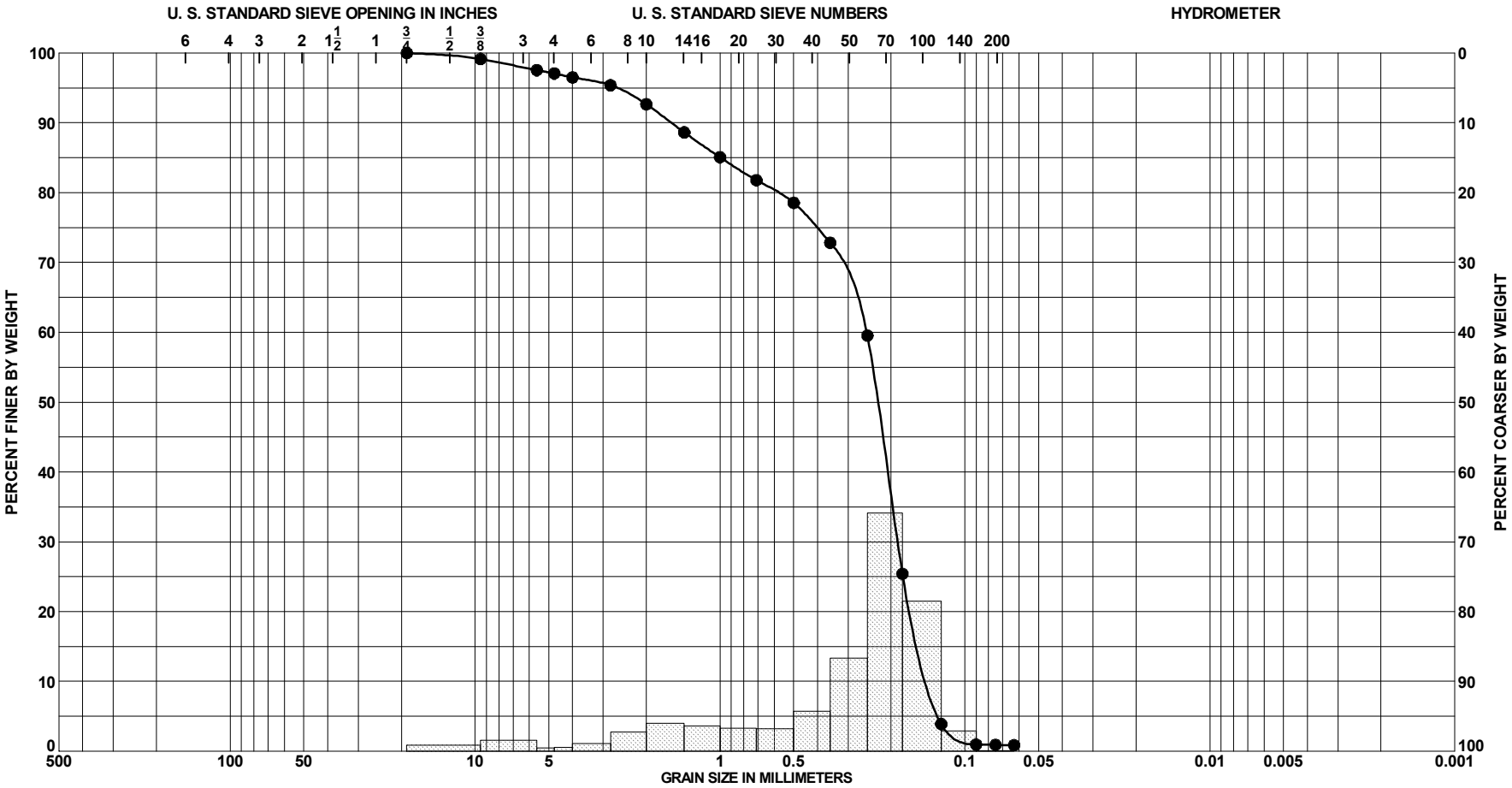
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 5	9.0 to 9.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, some fine to coarse-grained sand-sized shell, light gray (SP)	2.5Y 7/1	40 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-15
BORING ELEV.	-11.5 Ft., NAVD88
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GRADATION CURVES

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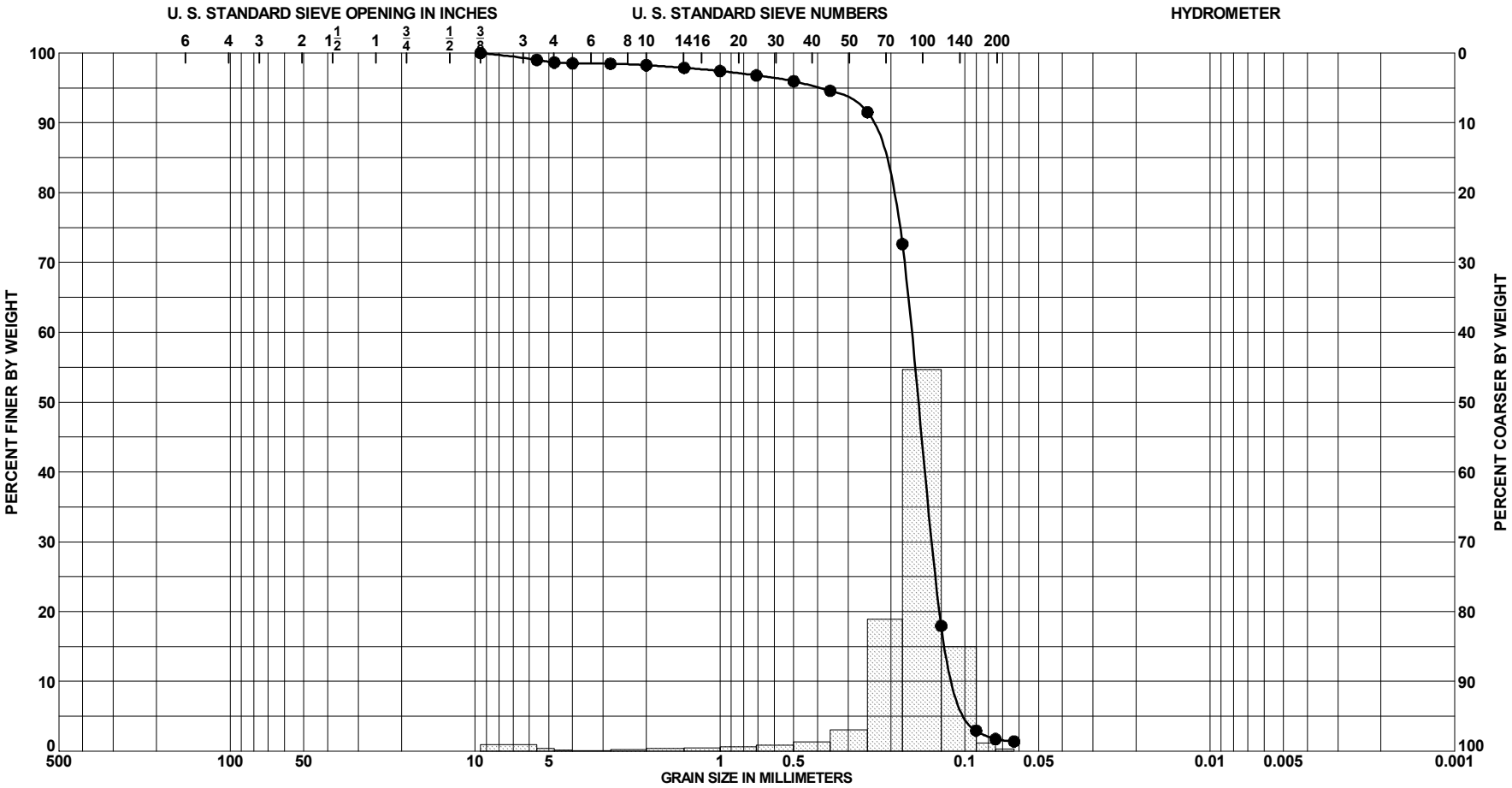
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 6	12.0 to 12.3 Ft.	SAND, poorly-graded, mostly	2.5Y 6/2	17 (est)						
		fine-grained sand-sized quartz, little								
		fine-grained sand-sized shell, trace								
		silt, light brownish gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-15
BORING ELEV.	-11.5 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

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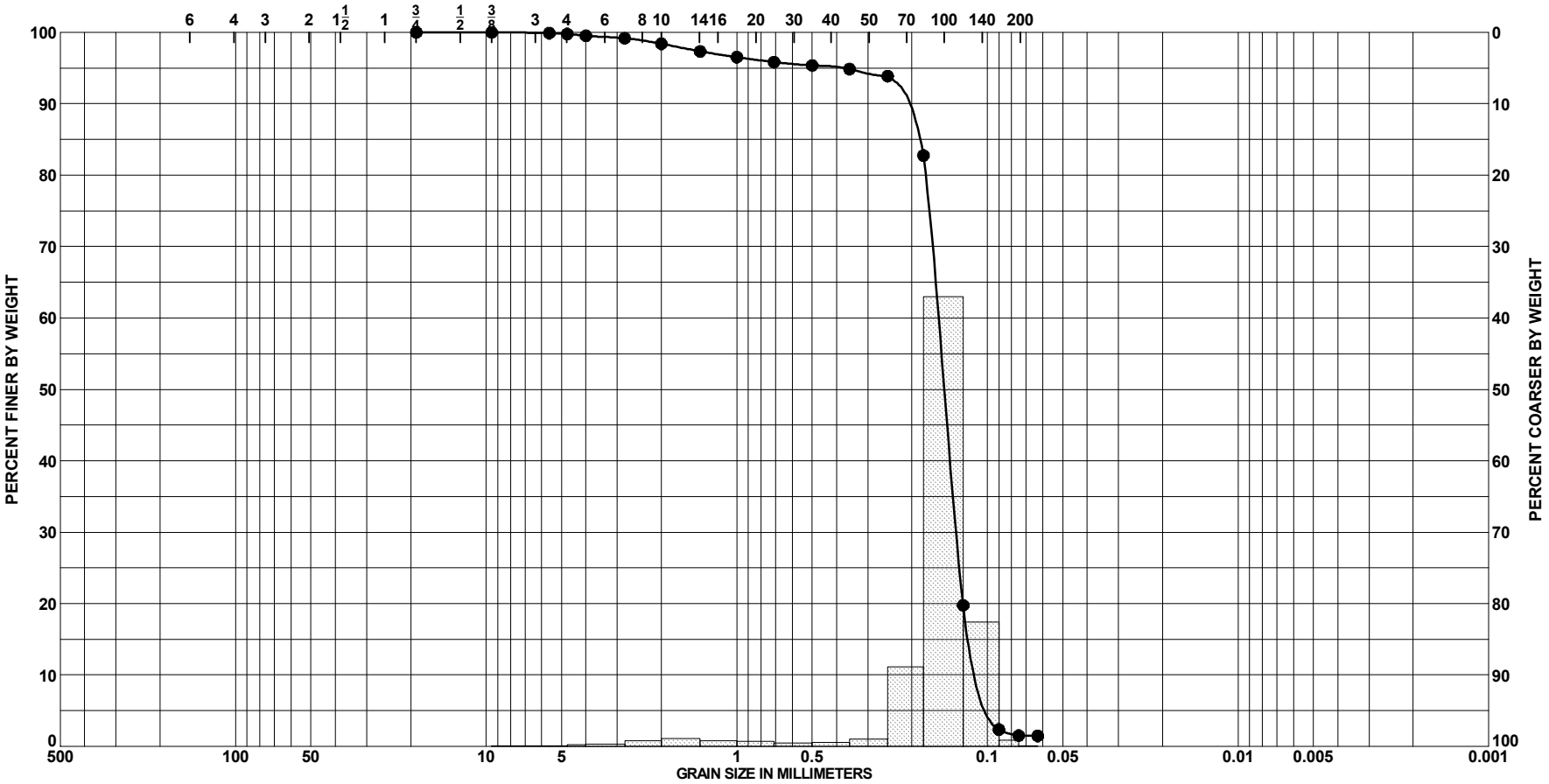
JUN 02

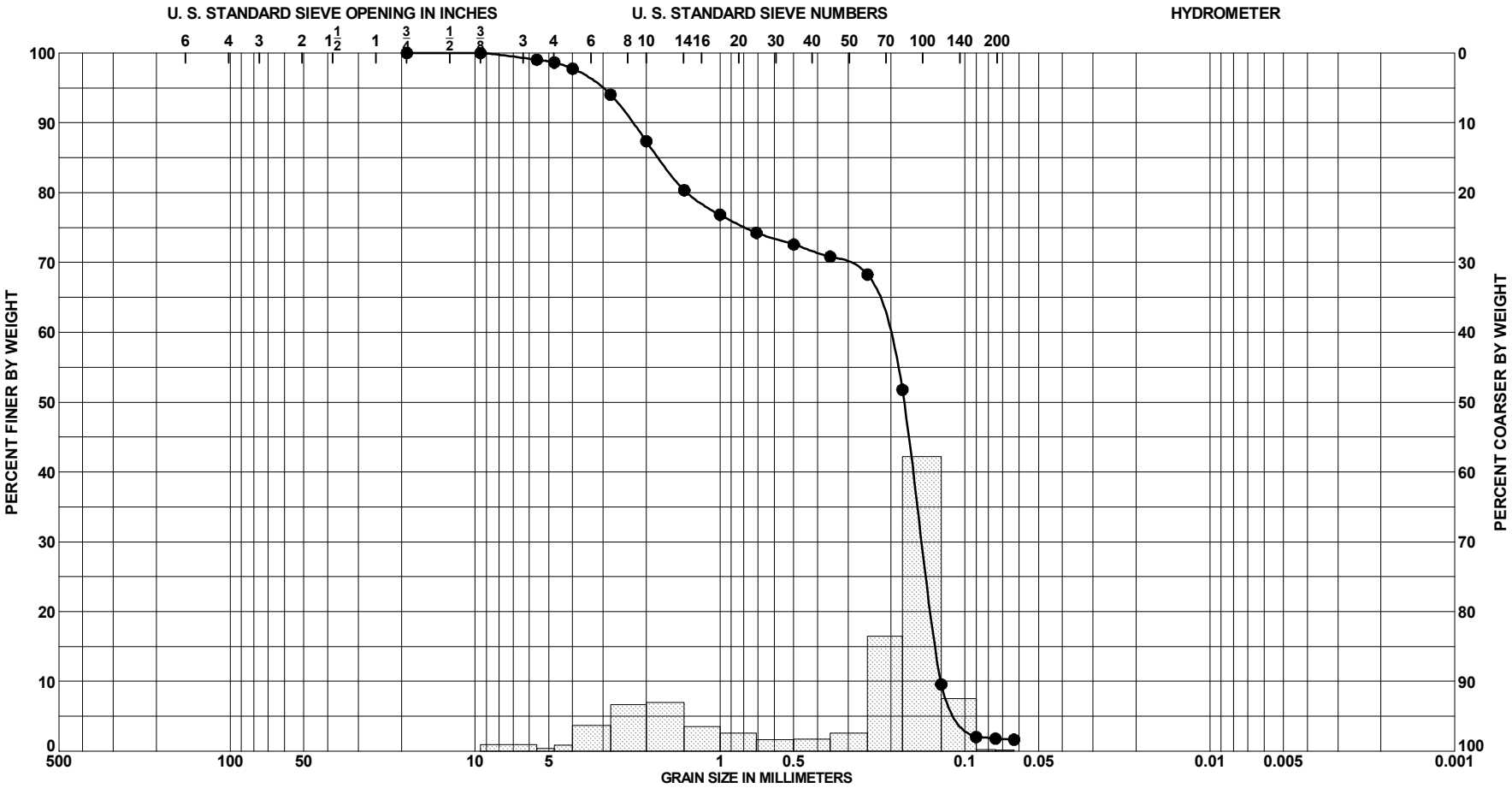


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 1	2.0 to 2.3 Ft.	SAND, poorly-graded, mostly	2.5Y 7/1	7/11 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, light gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-16
BORING ELEV.	-11.8 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 2	5.0 to 5.3 Ft.	SAND, poorly-graded, mostly	2.5Y 7/1	36 (est)						
		fine-grained sand-sized quartz, some								
		fine to coarse-grained sand-sized								
		shell, trace silt, light gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-16
BORING ELEV.	-11.8 Ft., NAVD88
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GRADATION CURVES

SAJ FORM 2087
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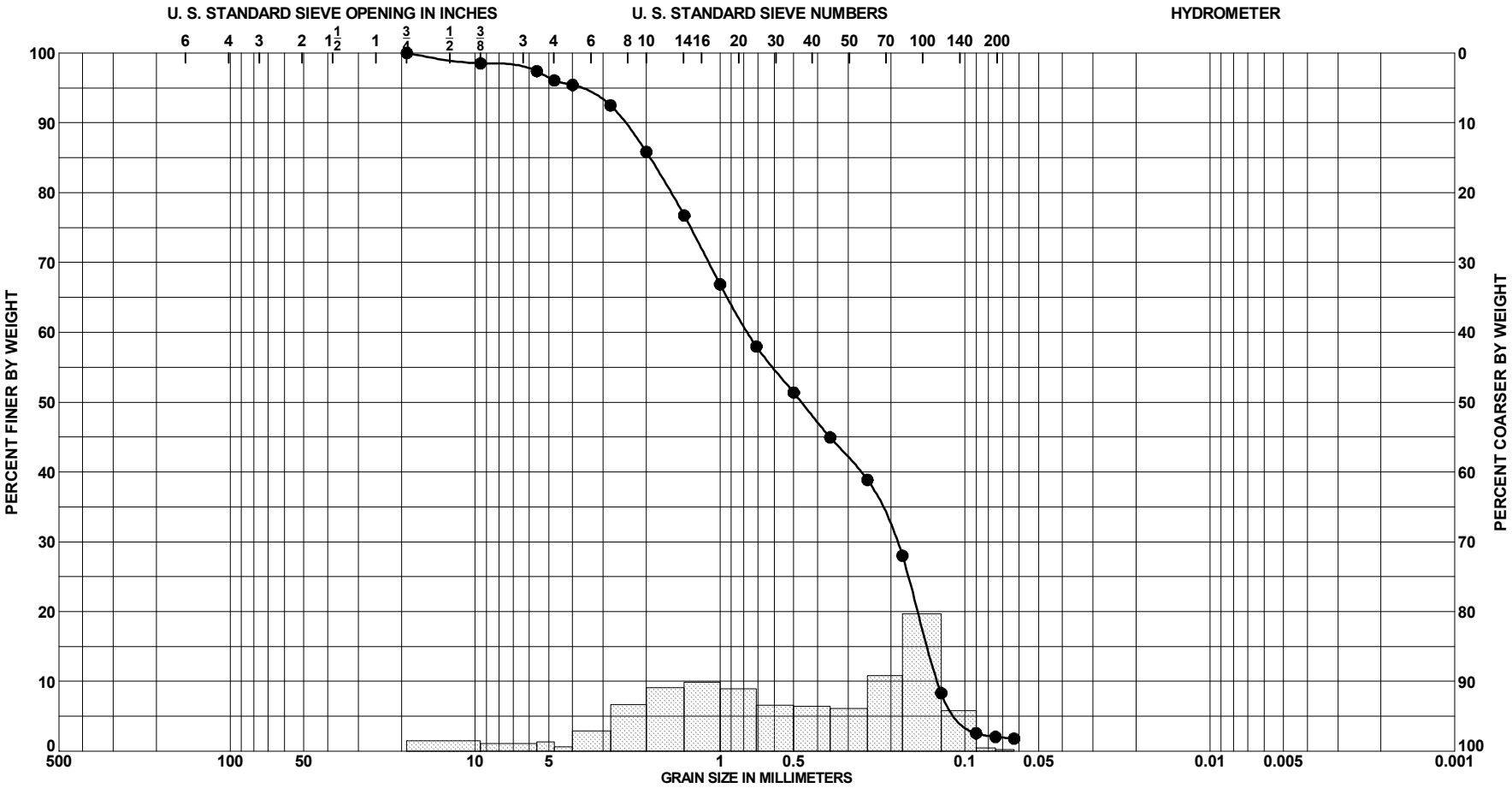

Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 3	8.0 to 8.3 Ft.	SAND, poorly-graded, mostly fine to coarse-grained sand-sized shell, some fine-grained sand-sized quartz, trace silt, gray (SP)	2.5Y 6/1	63 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-16
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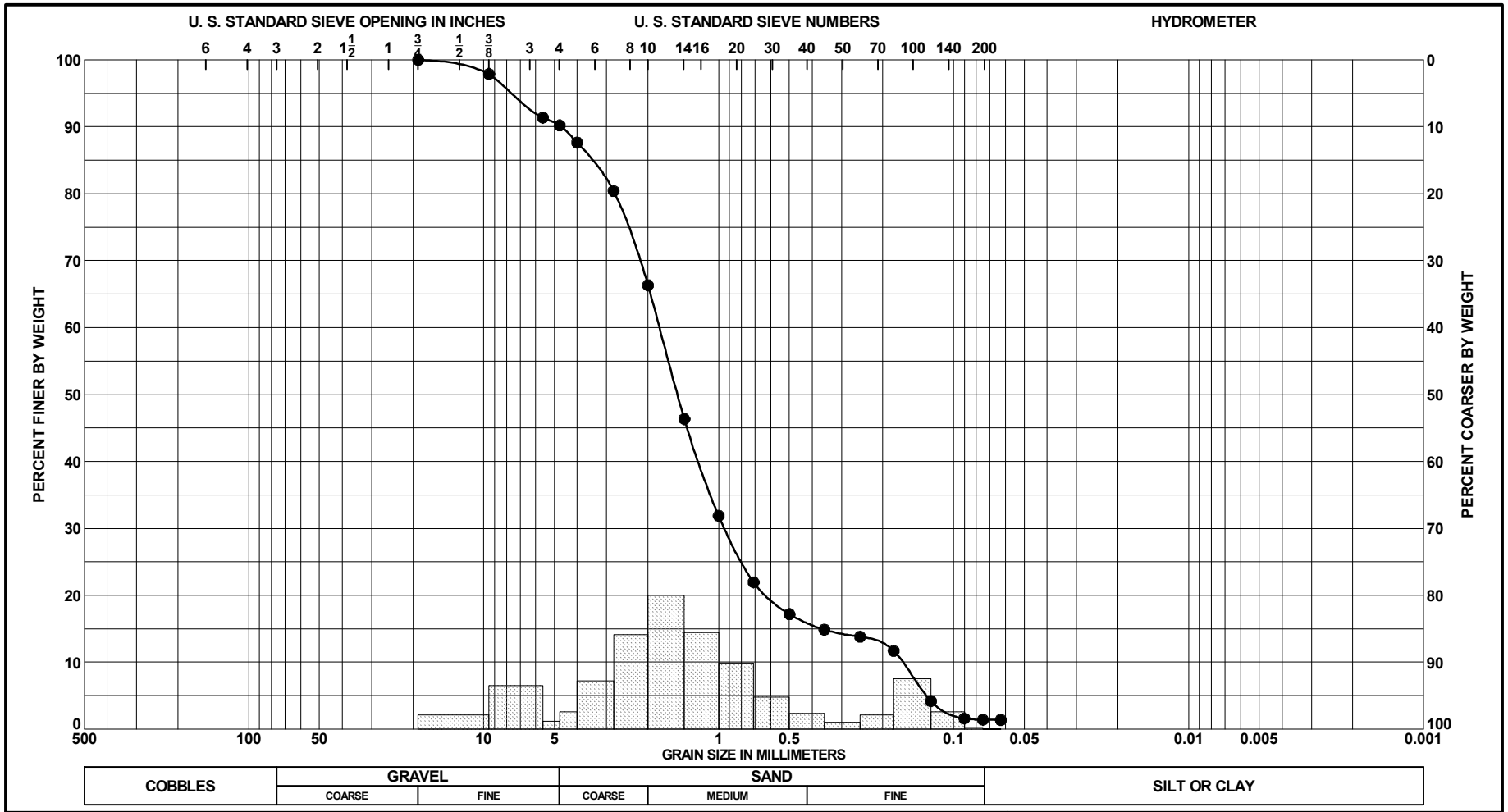
GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 4	11.0 to 11.3 Ft.	SAND, poorly-graded, mostly sand to gravel-sized shell, little fine-grained sand-sized quartz, trace silt, gray (SP)	2.5Y 6/1	85 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-16
BORING ELEV.	-11.8 Ft., NAVD88
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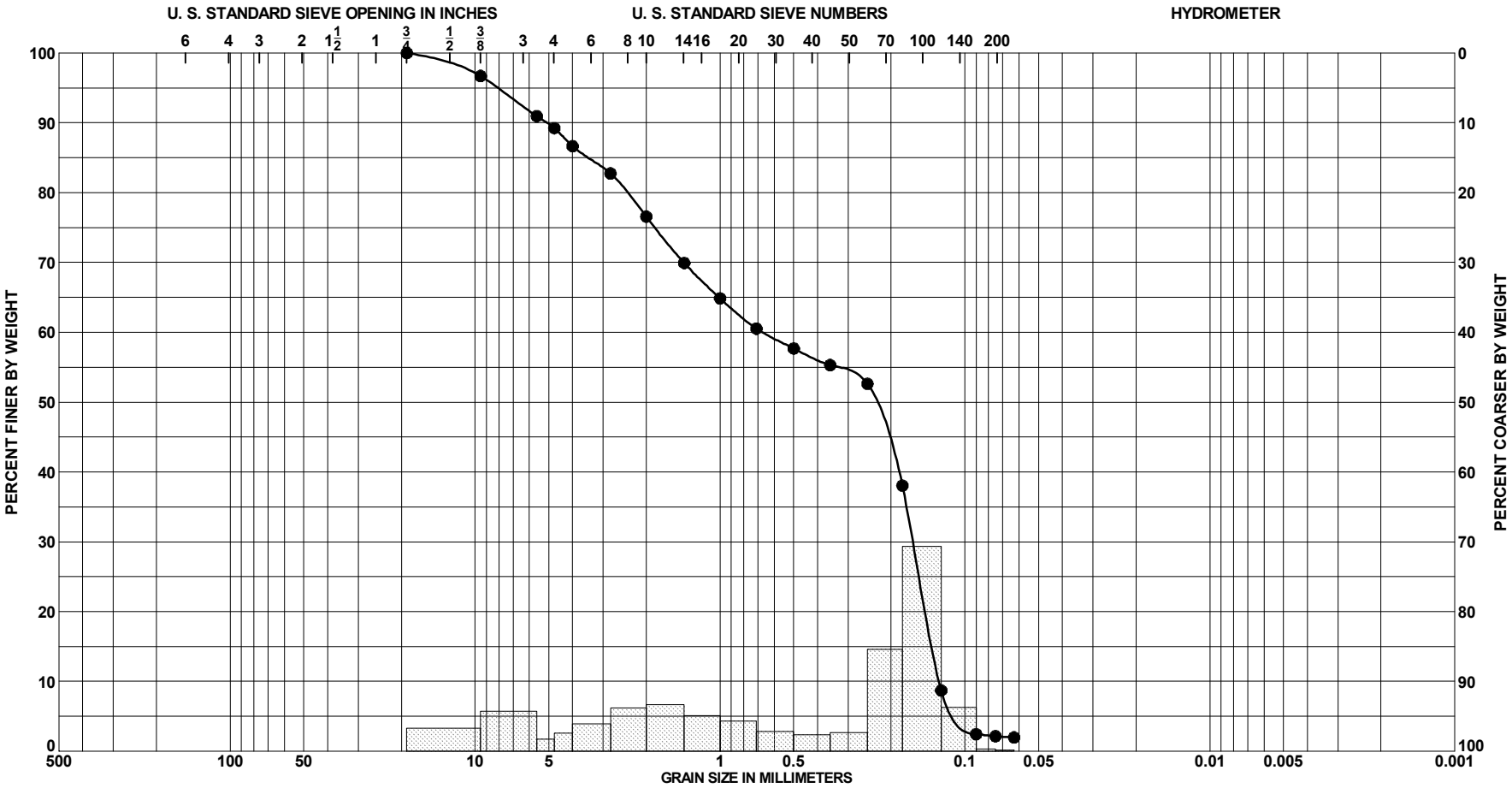
GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 5	14.0 to 14.3 Ft.	SAND, poorly-graded, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz, trace silt, gray (SP)	2.5Y 6/1	55 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-16
BORING ELEV.	-11.8 Ft., NAVD88
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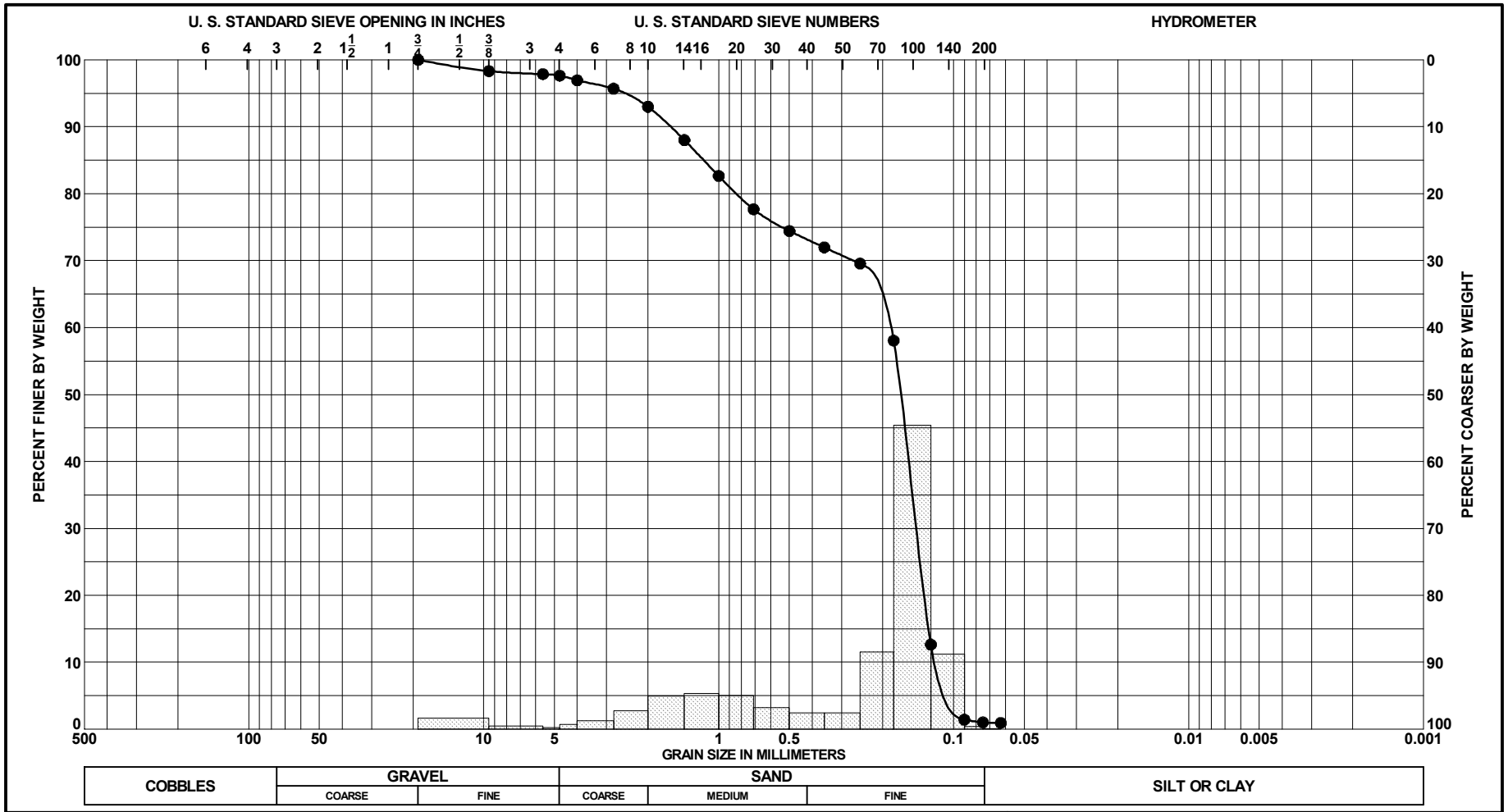
GRADATION CURVES

SAJ FORM 2087
JUN 02

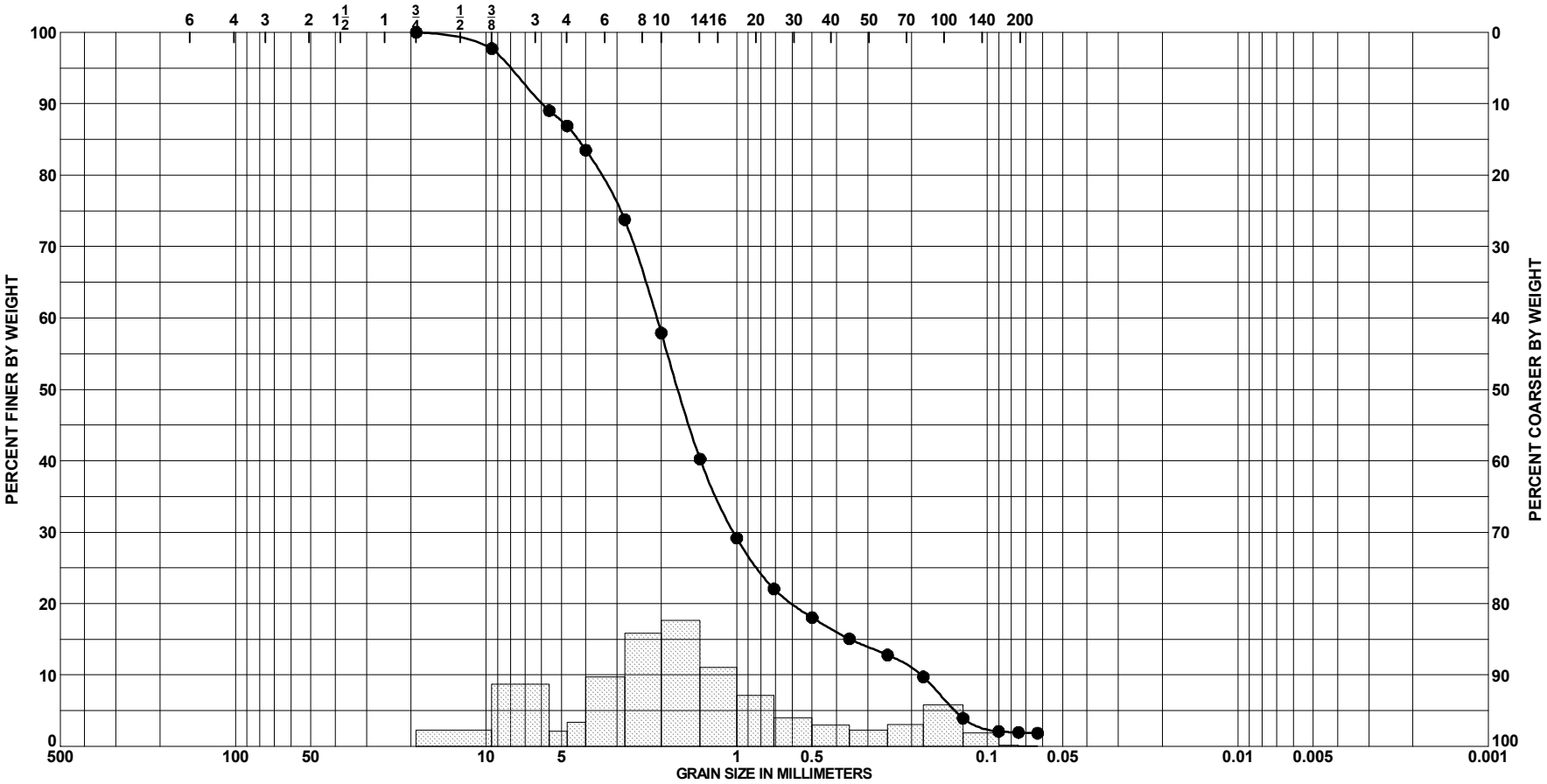


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 1	3.0 to 3.3 Ft.	SAND, poorly-graded, mostly	2.5Y 7/1	34 (est)						
		fine-grained sand-sized quartz, some								
		fine to coarse-grained sand-sized								
		shell, trace silt, light gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-17
BORING ELEV.	-8.5 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 2	6.0 to 6.3 Ft.	SAND, well-graded, mostly sand to gravel-sized shell, little fine-grained sand-sized quartz, trace silt, light gray (SW)	2.5Y 7/1	84 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
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BORING ELEV.	-8.5 Ft., NAVD88
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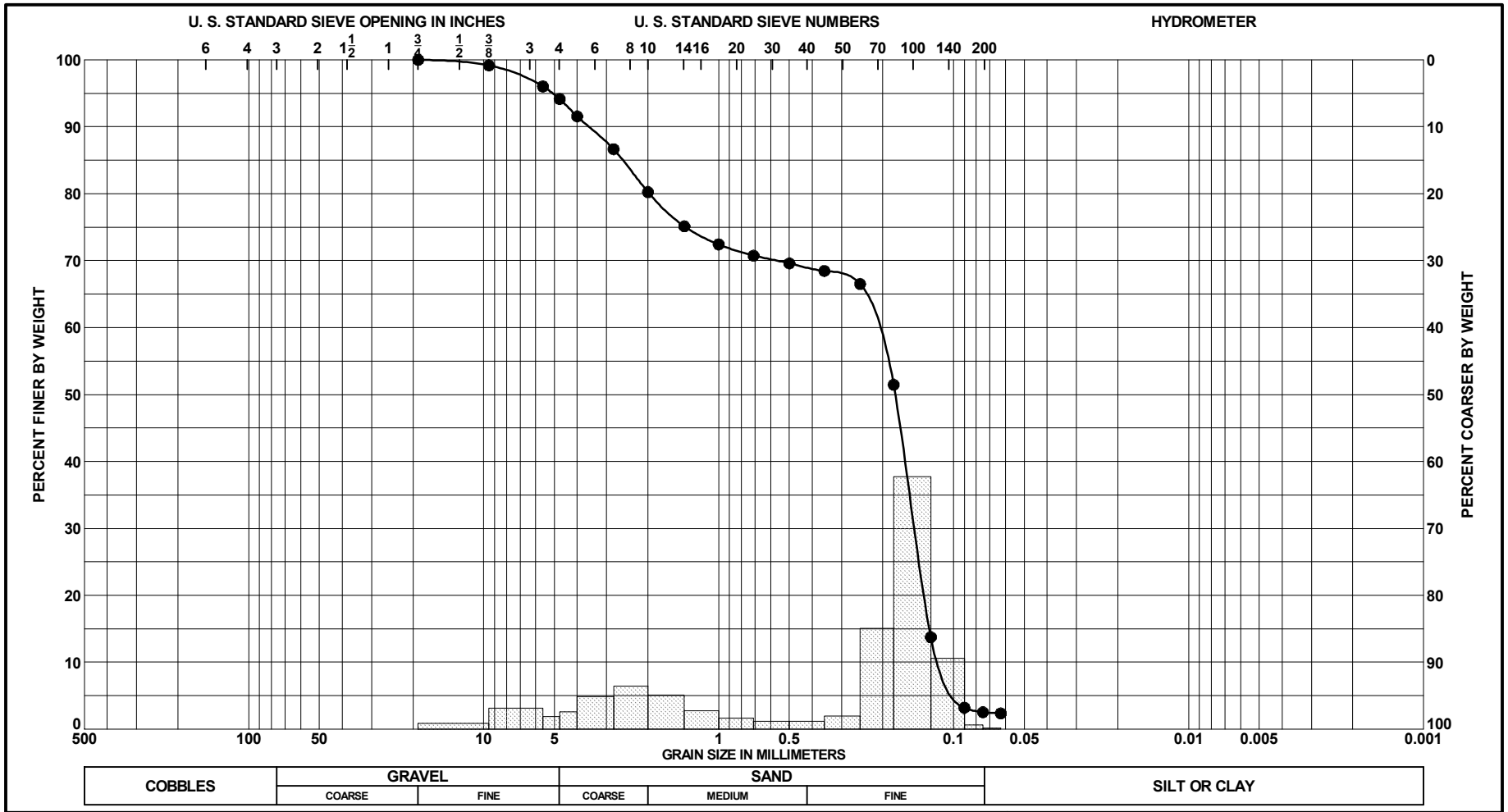
GRADATION CURVES

SAJ FORM 2087
JUN 02

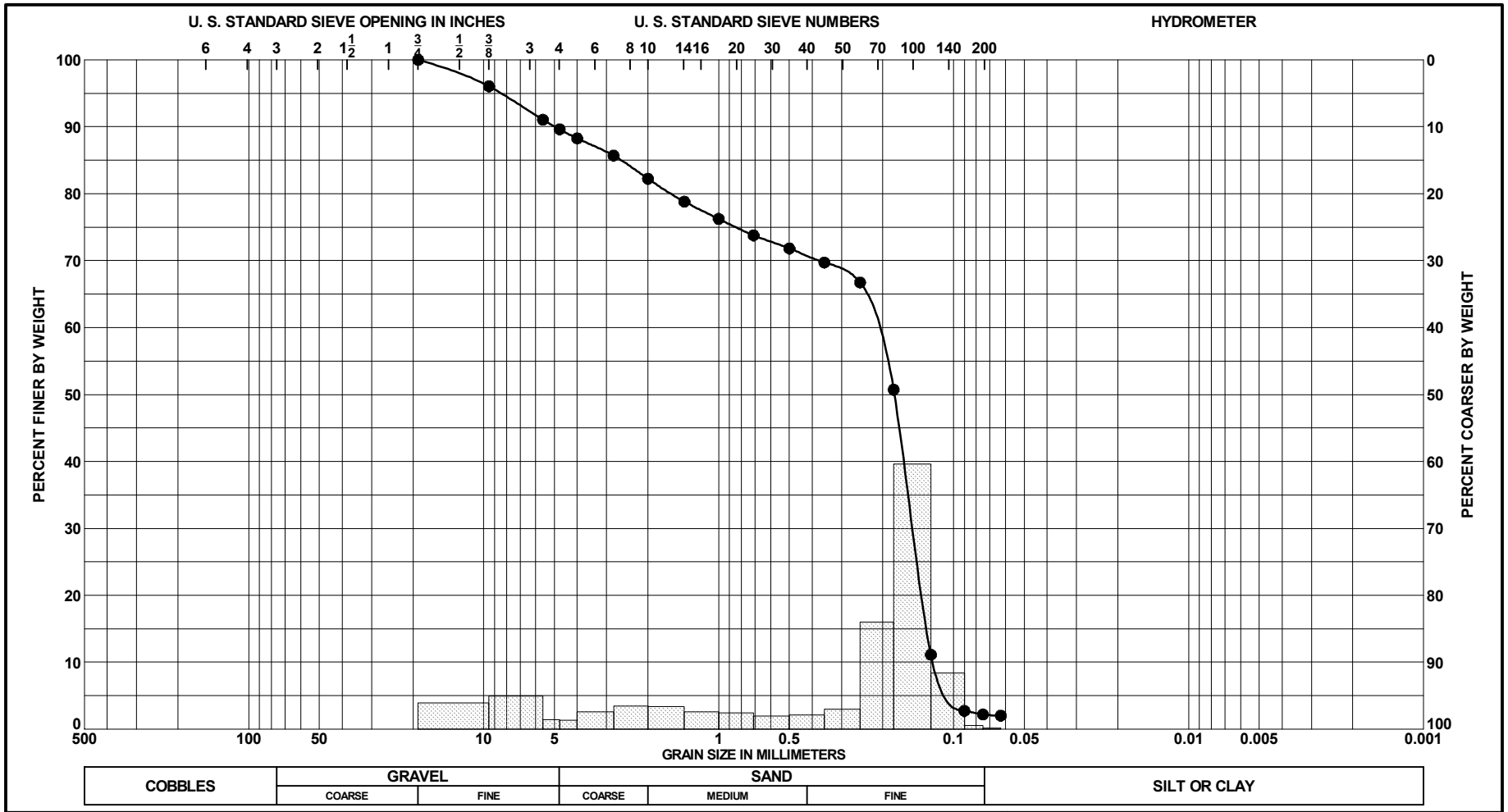


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 3	9.0 to 9.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt, light gray (SP)	2.5Y 7/1	39 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-17
BORING ELEV.	-8.5 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

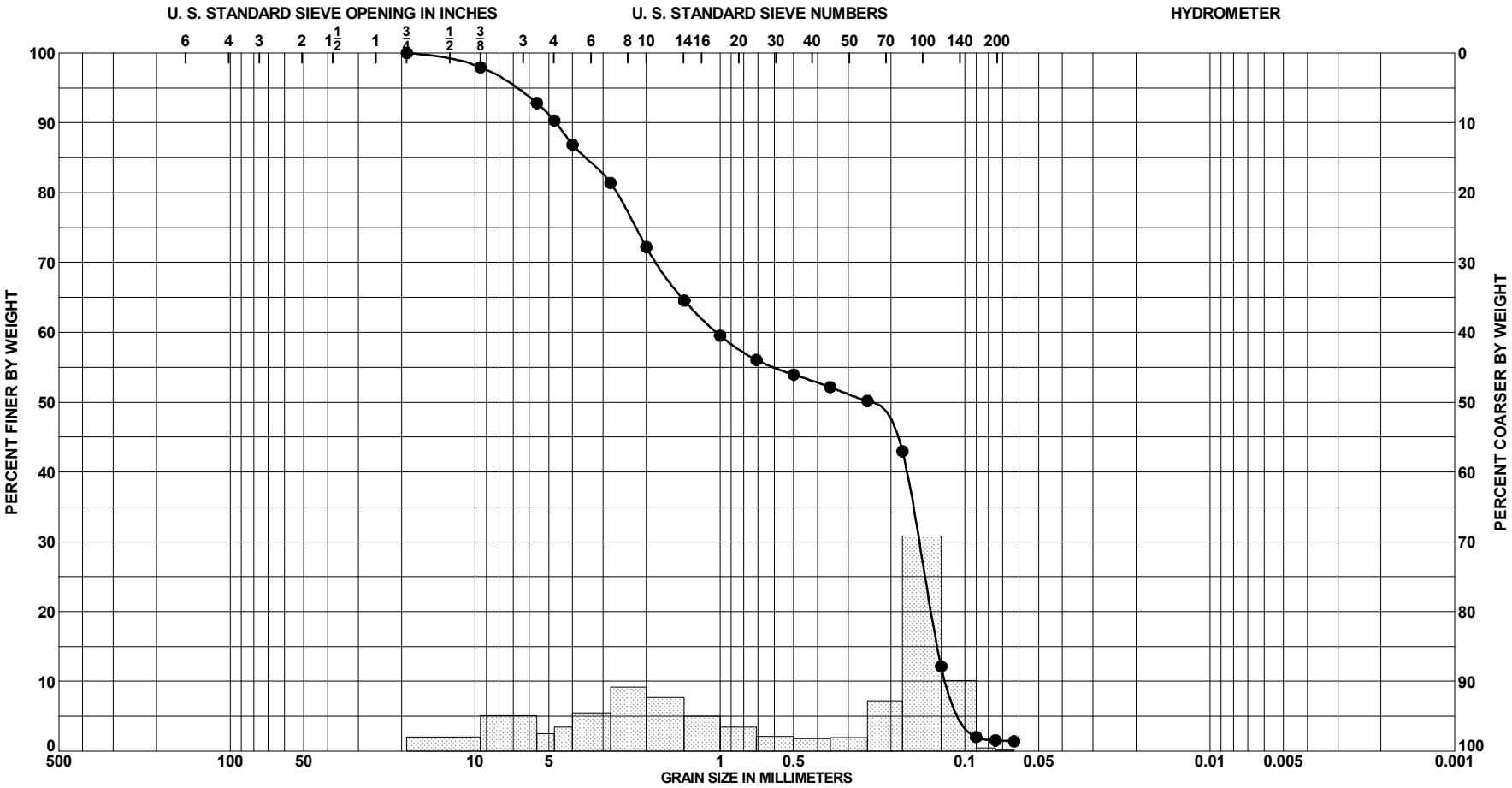


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 4	12.0 to 12.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt, light gray (SP)	2.5Y 7/1	34 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-17
BORING ELEV.	-8.5 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

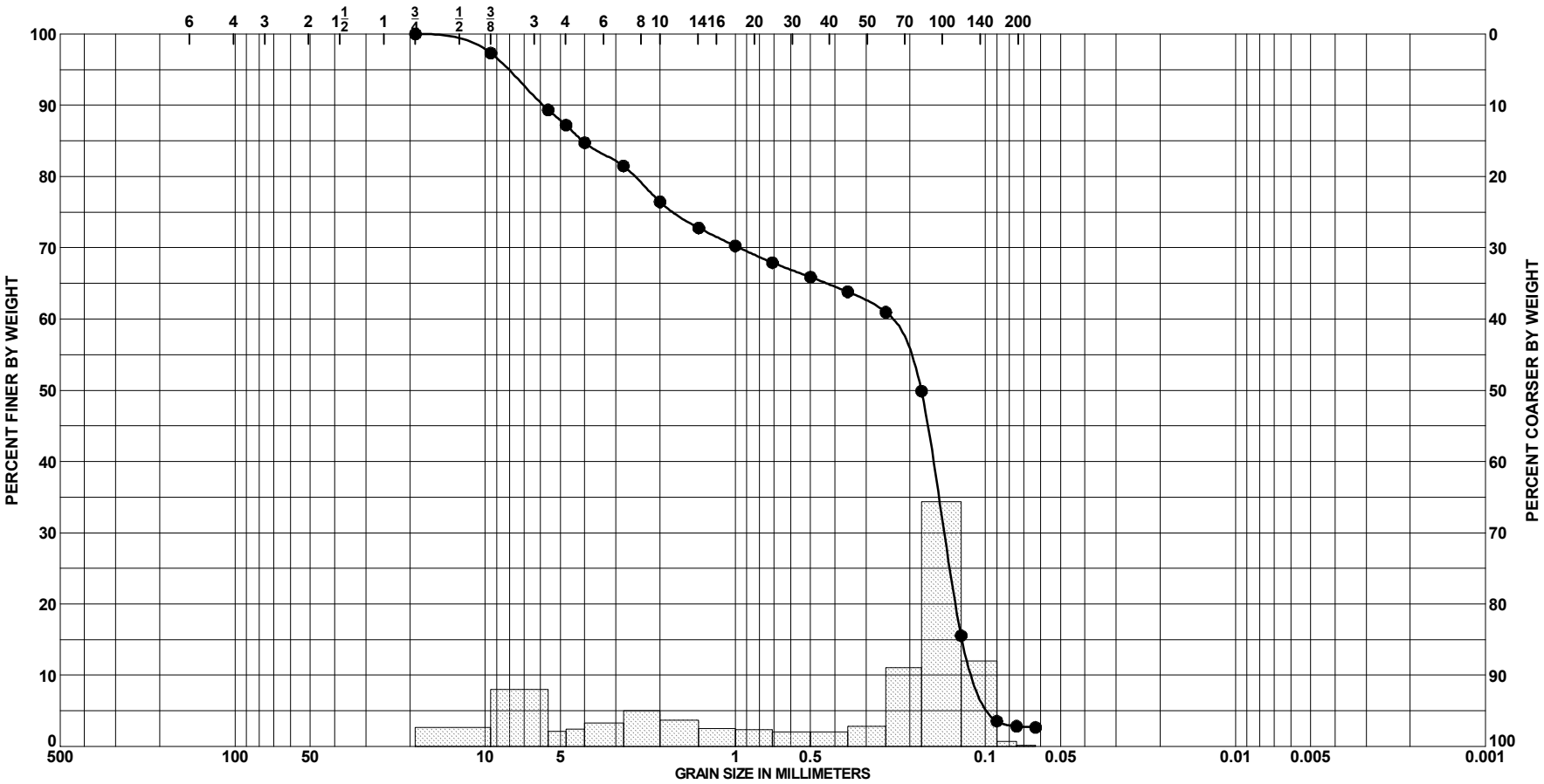


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 1	2.0 to 2.3 Ft.	SAND, poorly-graded, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz, trace silt, gray (SP)	2.5Y 5/1	50 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-18
BORING ELEV.	-10.8 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

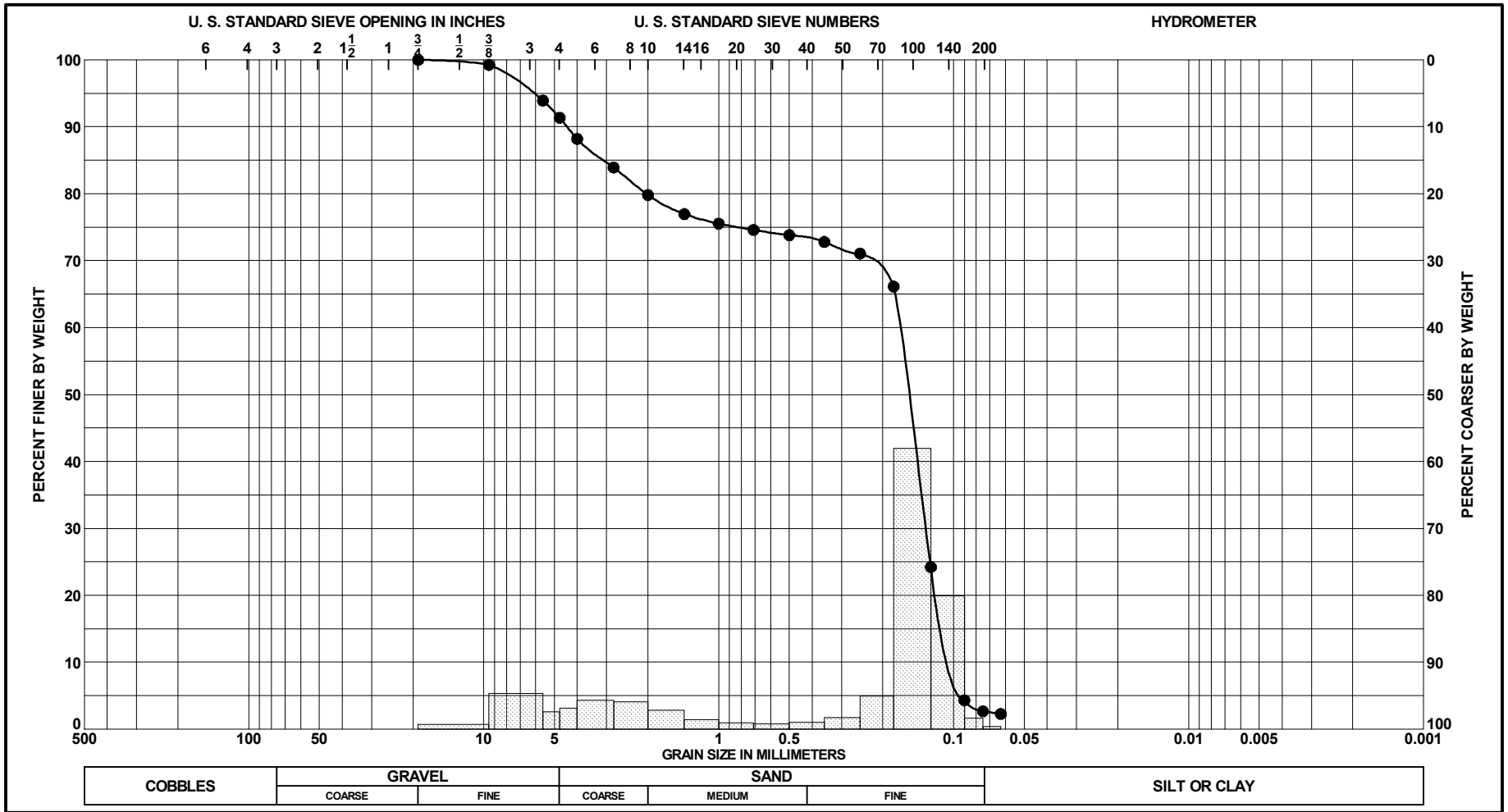


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 2	5.0 to 5.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt, gray (SP)	2.5Y 6/1	39 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-18
BORING ELEV.	-10.8 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

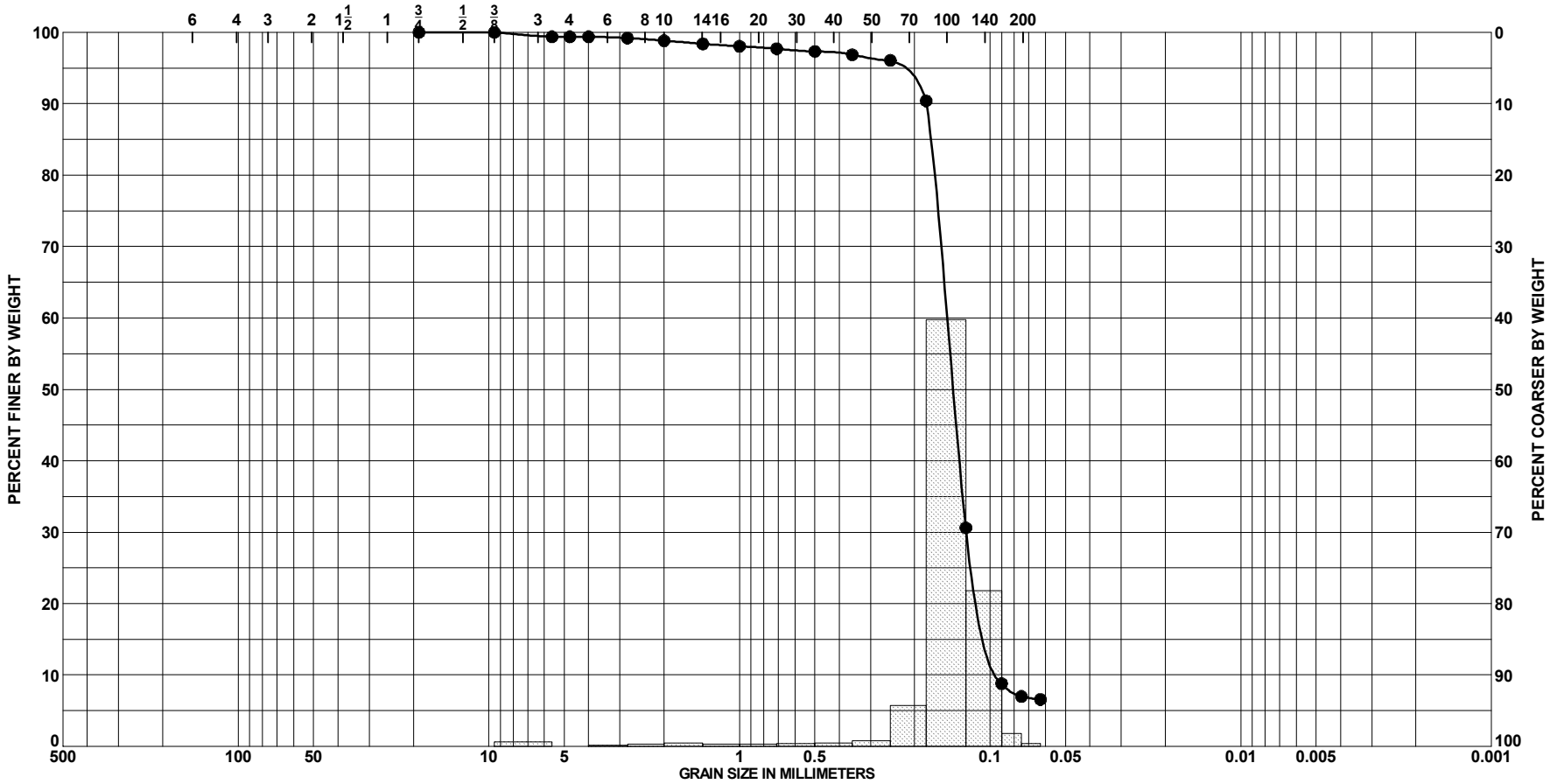


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 3	8.0 to 8.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt, gray (SP)	2.5Y 6/1	32 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-18
BORING ELEV.	-10.8 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

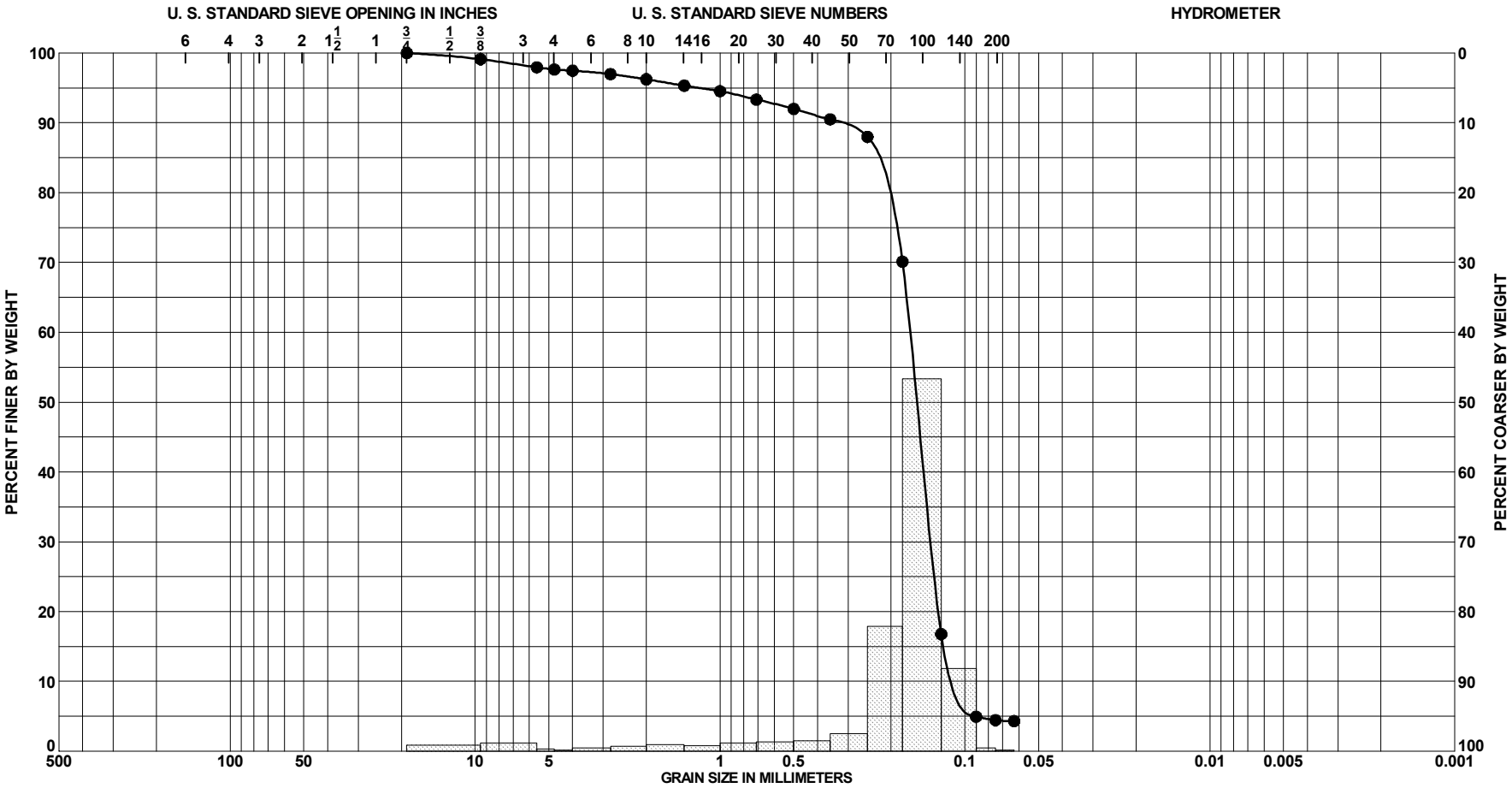


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 4	11.0 to 11.3 Ft.	SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, few silt, gray (SP-SM)	2.5Y 6/1	11 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-18
BORING ELEV.	-10.8 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

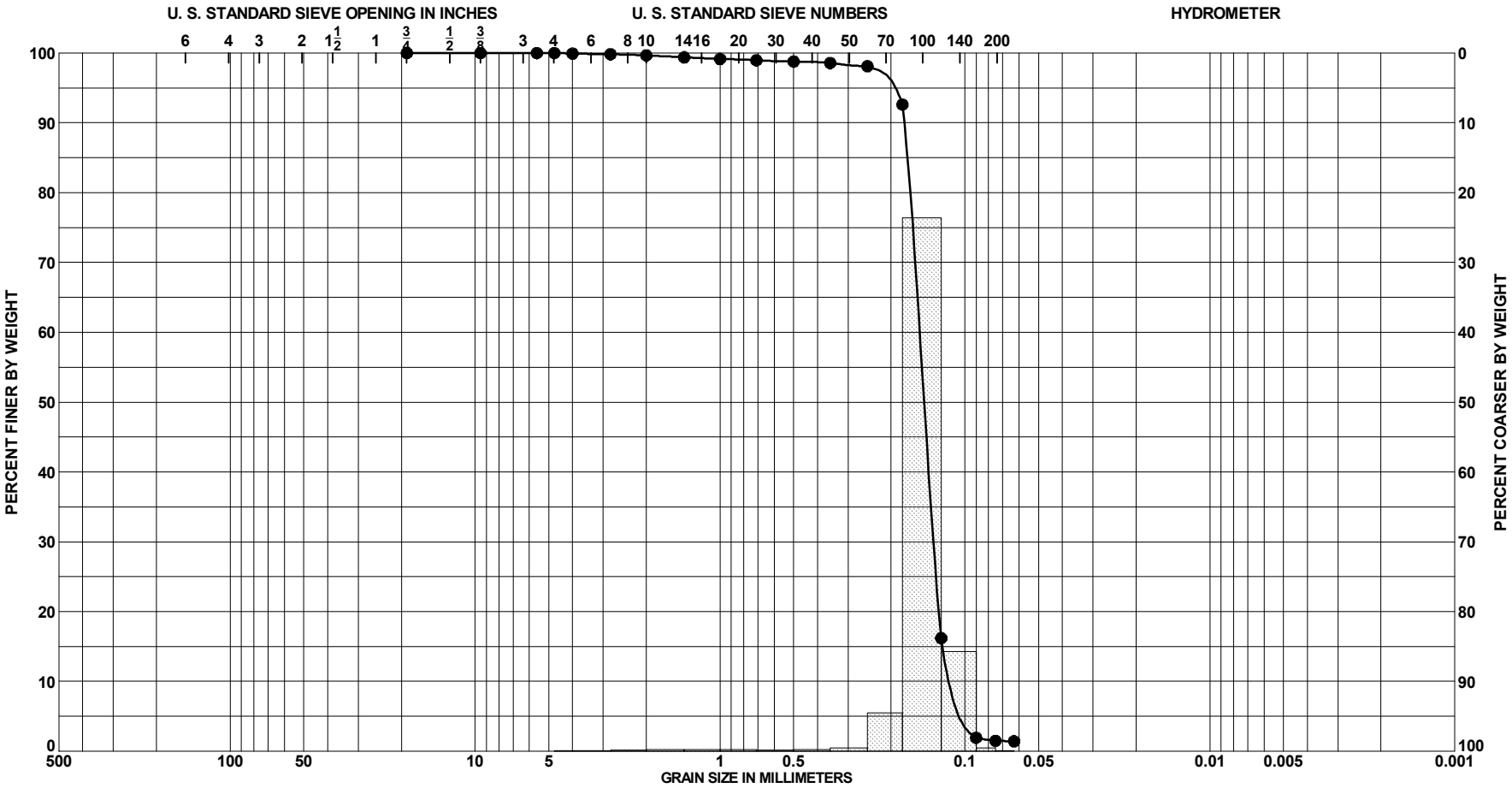


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 5	13.5 to 13.8 Ft.	SAND, poorly-graded, mostly	2.5Y 6/1	21 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium -grained sand-sized								
		shell, trace silt, gray (SP)								

GRADATION CURVES

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-18
BORING ELEV.	-10.8 Ft., NAVD88
DATE	8/5/2015

SAJ FORM 2087
JUN 02

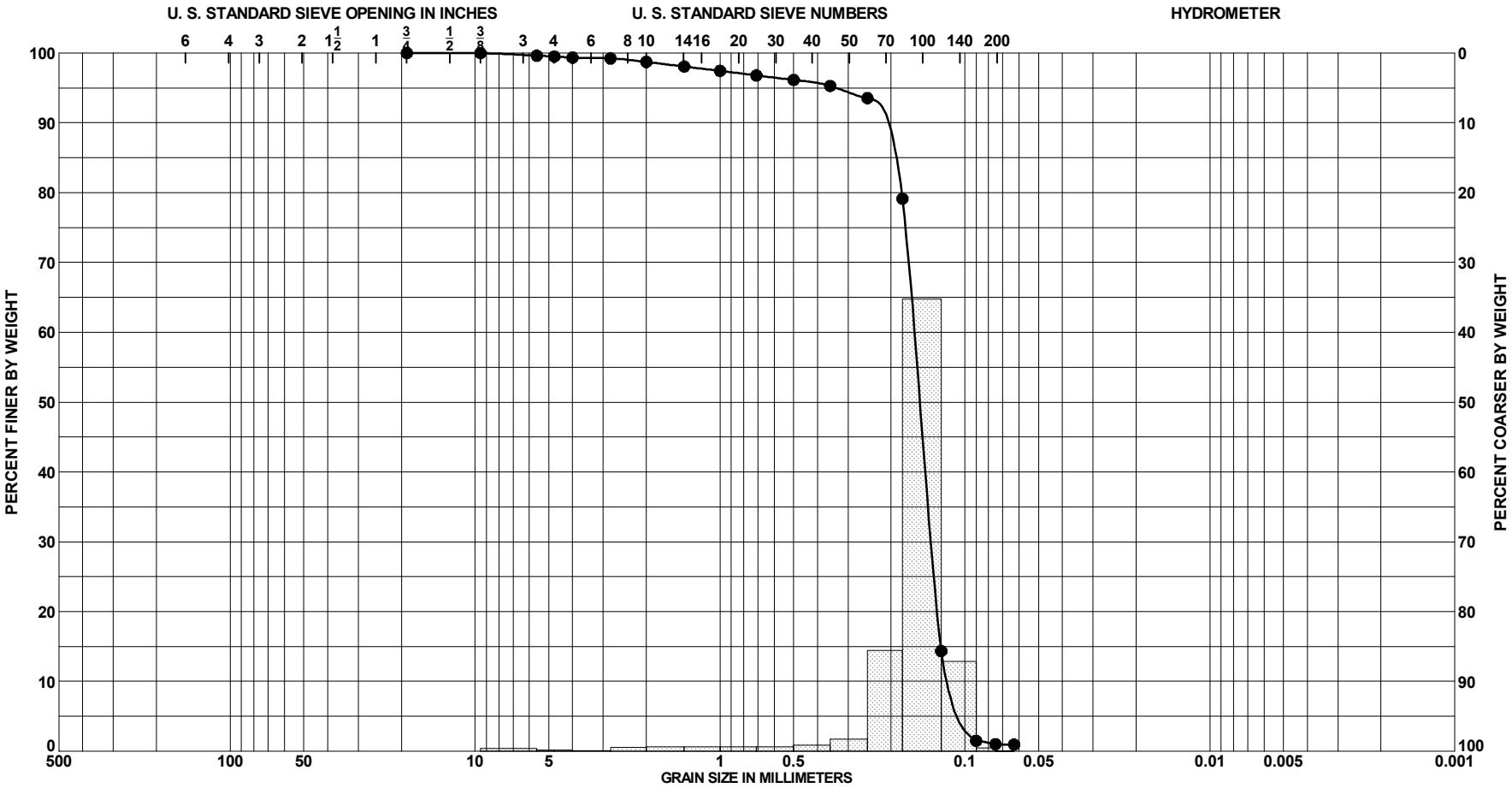


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 1	3.0 to 3.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	7 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-19
BORING ELEV.	-10.4 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

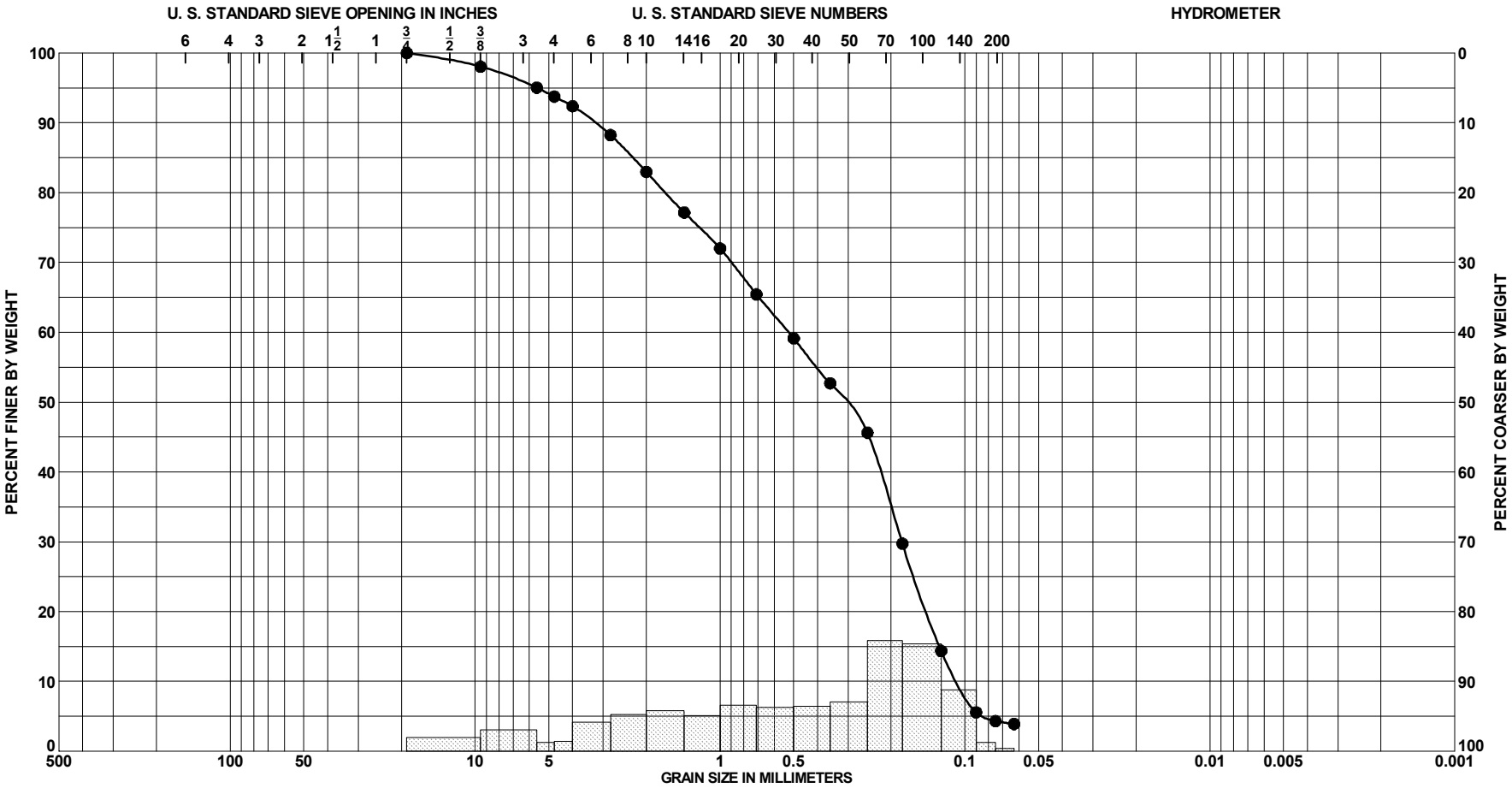


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 2	6.0 to 6.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	11 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-19
BORING ELEV.	-10.4 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

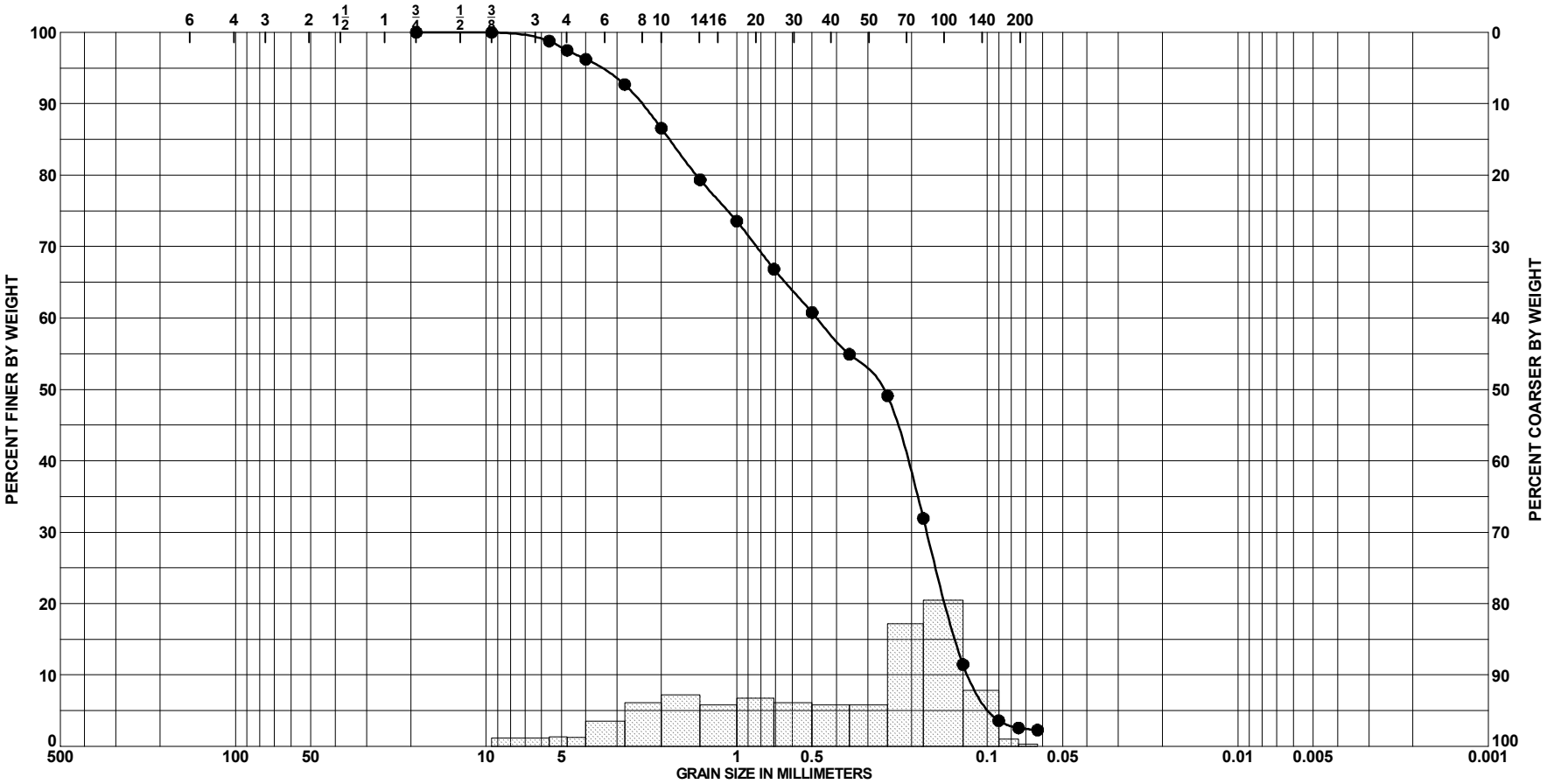


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 3	9.5 to 9.8 Ft.	SAND, poorly-graded, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz, trace silt, greenish gray (SP)	5GY 6/1	52 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-19
BORING ELEV.	-10.4 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

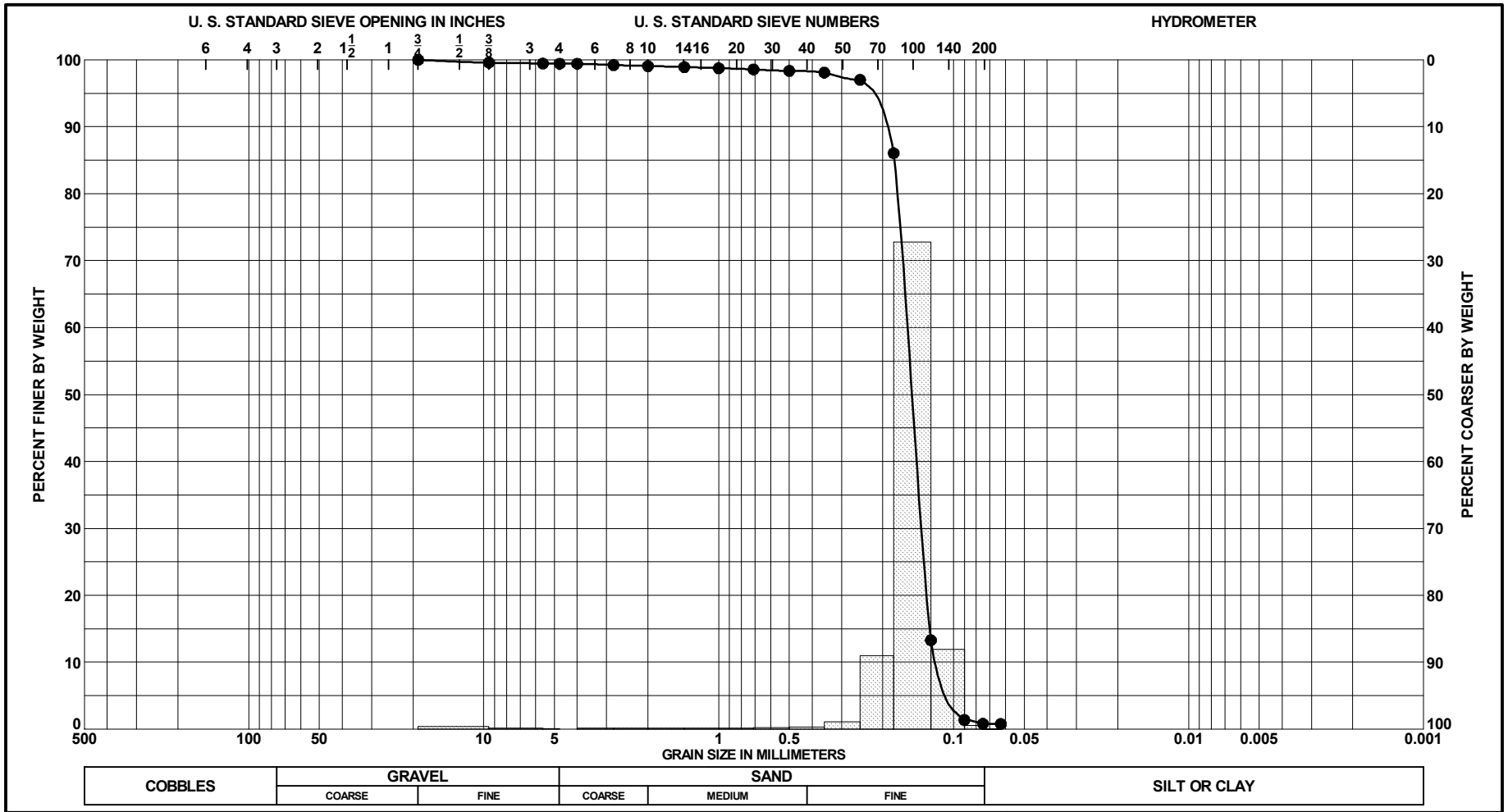


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 4	11.0 to 11.3 Ft.	SAND, poorly-graded, mostly fine to coarse-grained sand-sized shell, some fine-grained sand-sized quartz, trace silt, gray (SP)	N 6/	57 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-19
BORING ELEV.	-10.4 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

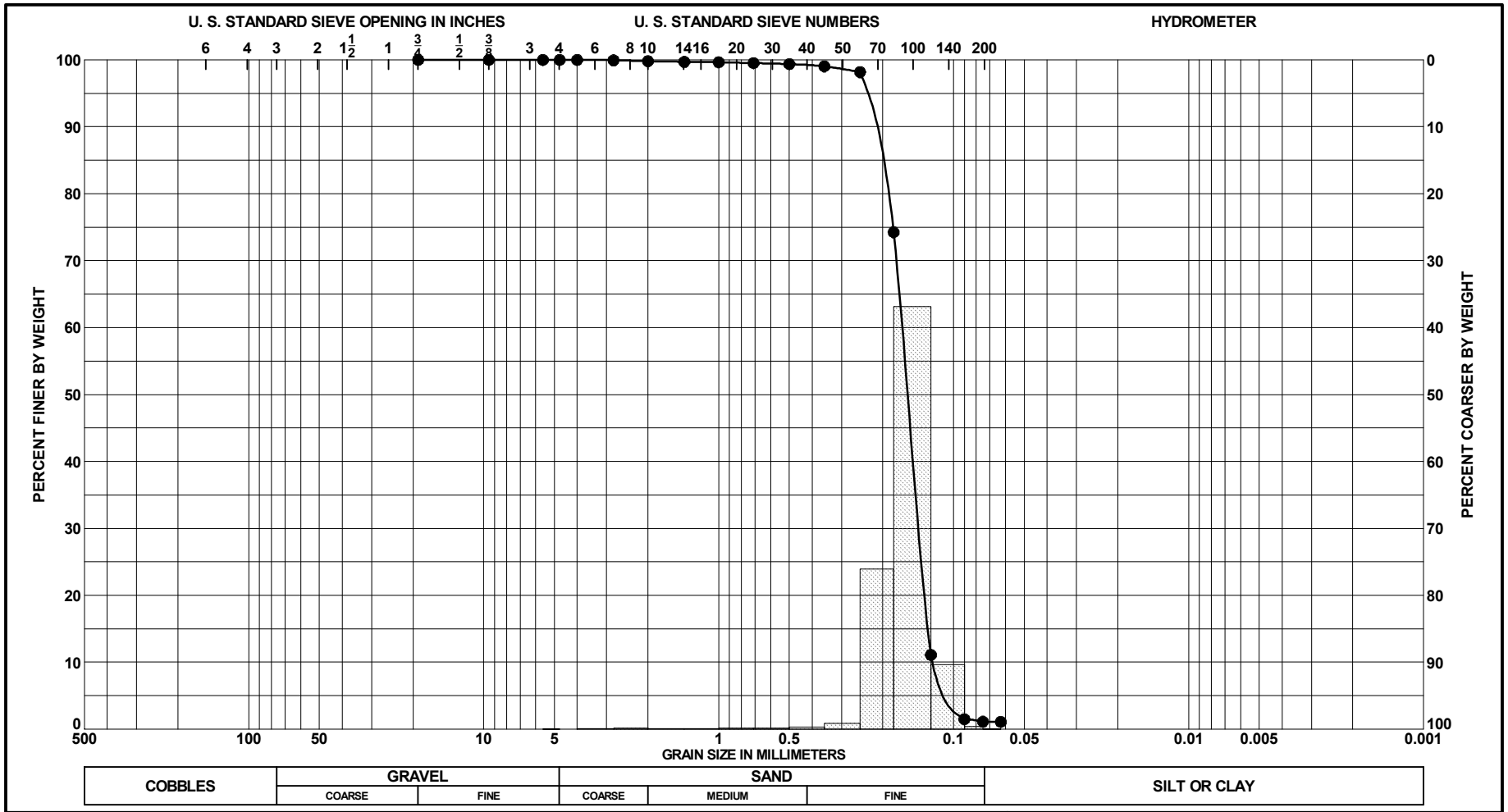


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 1	3.0 to 3.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	7 (est)						
		fine-grained sand-sized quartz, few								
		fine -grained sand-sized shell, trace								
		silt, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-20
BORING ELEV.	-8.2 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

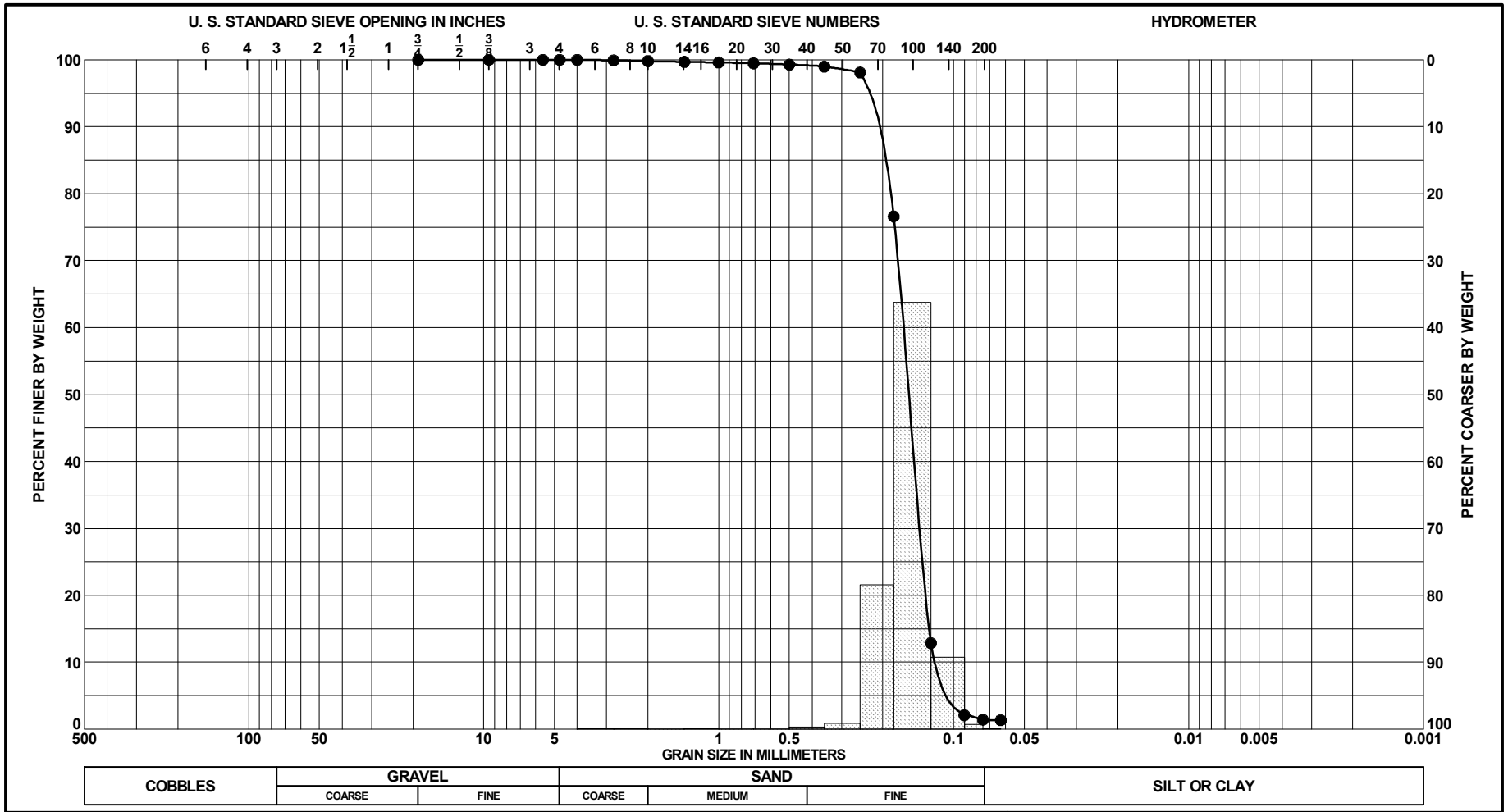


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 2	6.0 to 6.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	9 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-20
BORING ELEV.	-8.2 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 3	9.0 to 9.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	6 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-20
BORING ELEV.	-8.2 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

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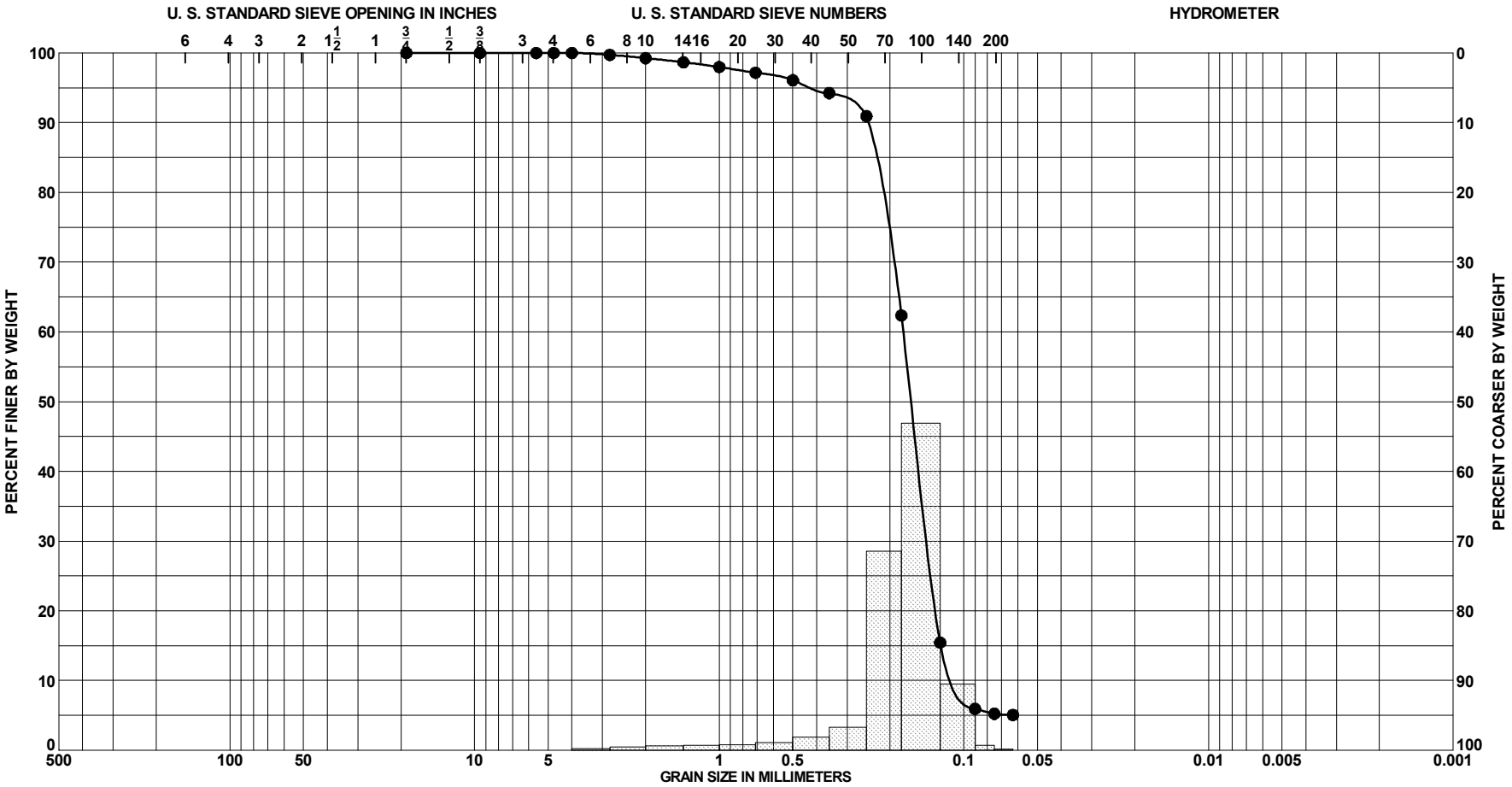
JUN 02

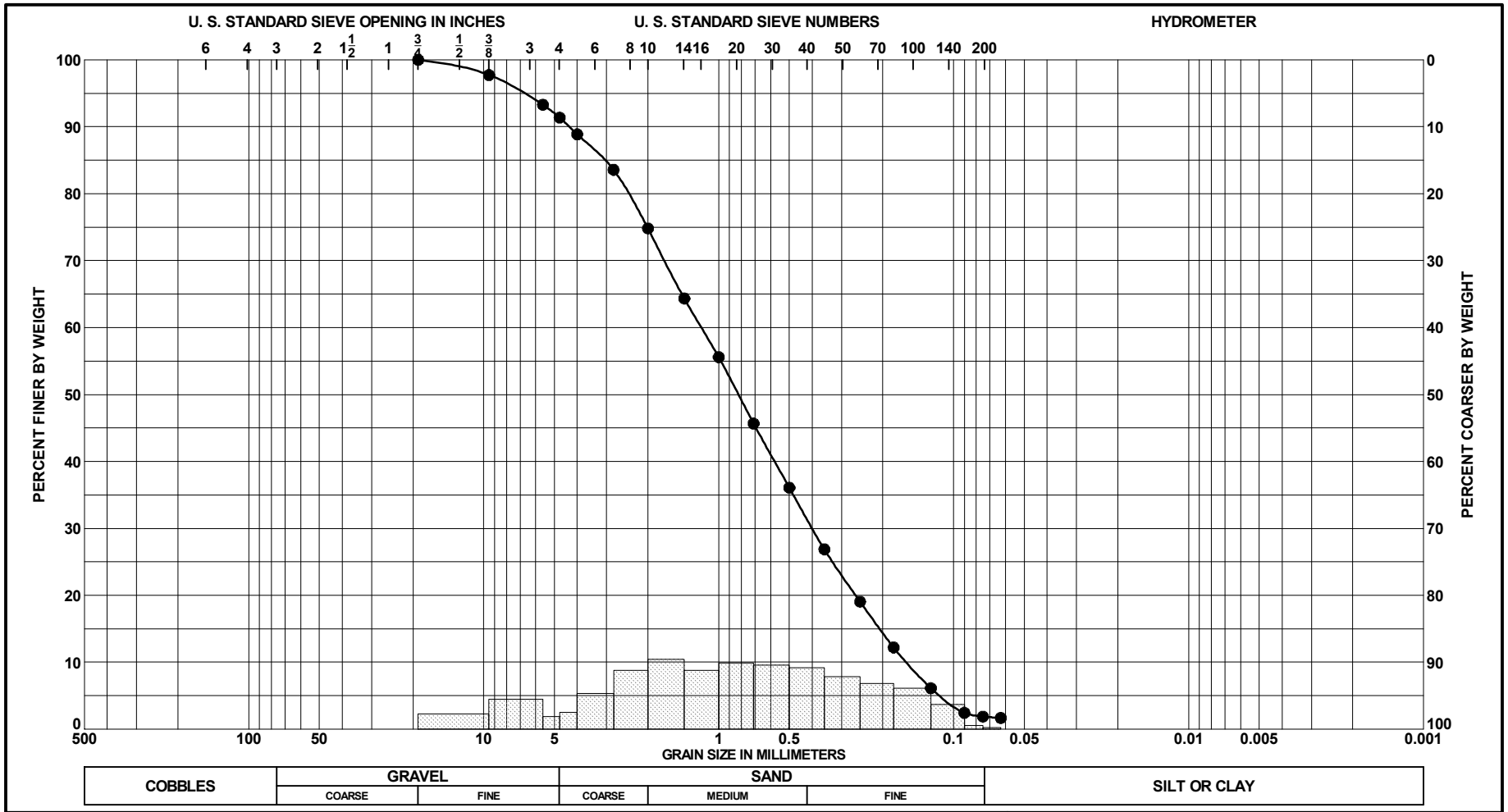


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 4	12.0 to 12.3 Ft.	SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell, few silt, light gray (SP-SM)	2.5Y 7/1	26 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-20
BORING ELEV.	-8.2 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

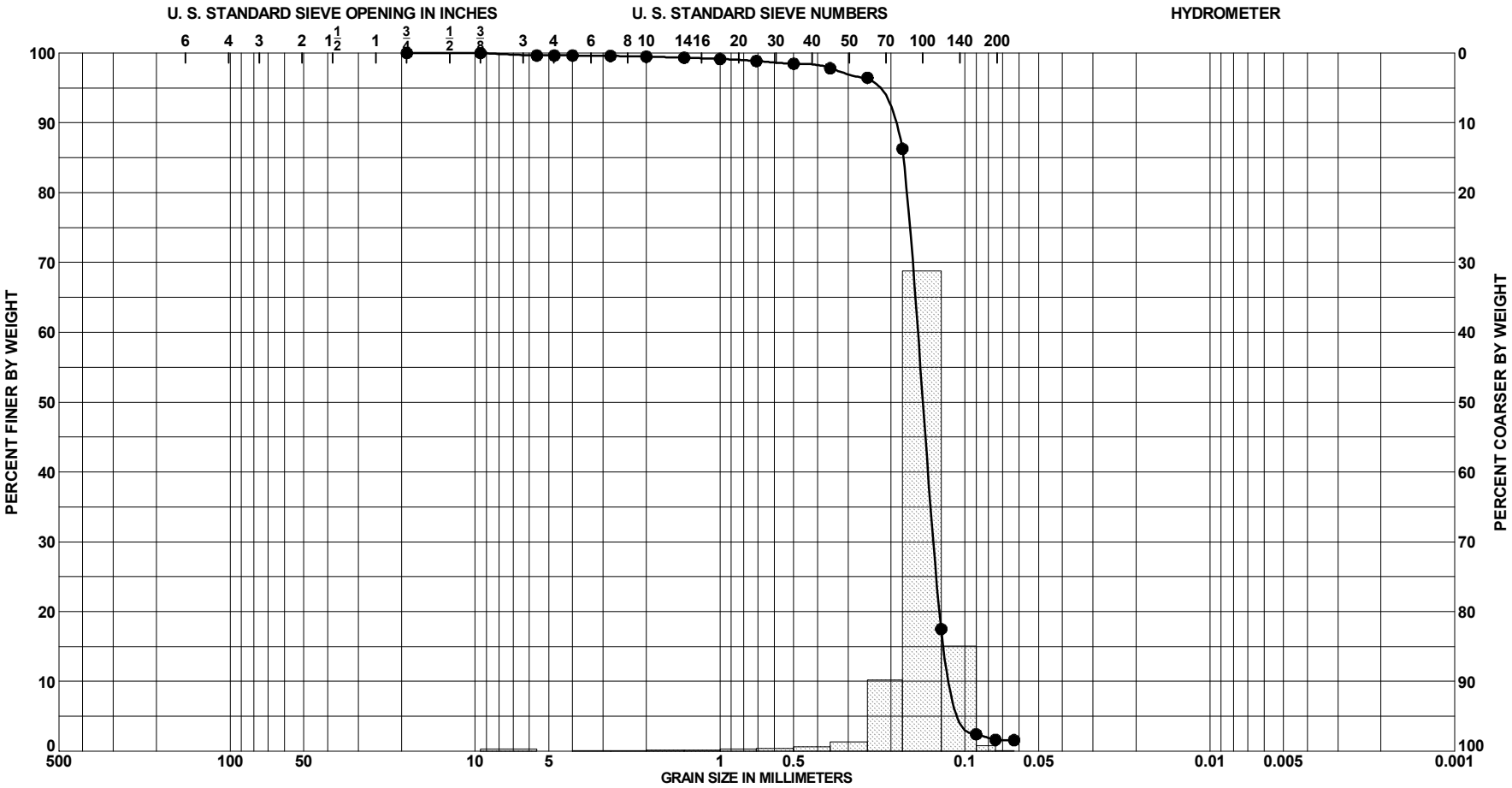


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 5	16.0 to 16.3 Ft.	SAND, well-graded, mostly sand to gravel-sized shell, little fine-grained sand-sized quartz, trace silt, gray (SW)	2.5Y 6/1	75/79 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-20
BORING ELEV.	-8.2 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

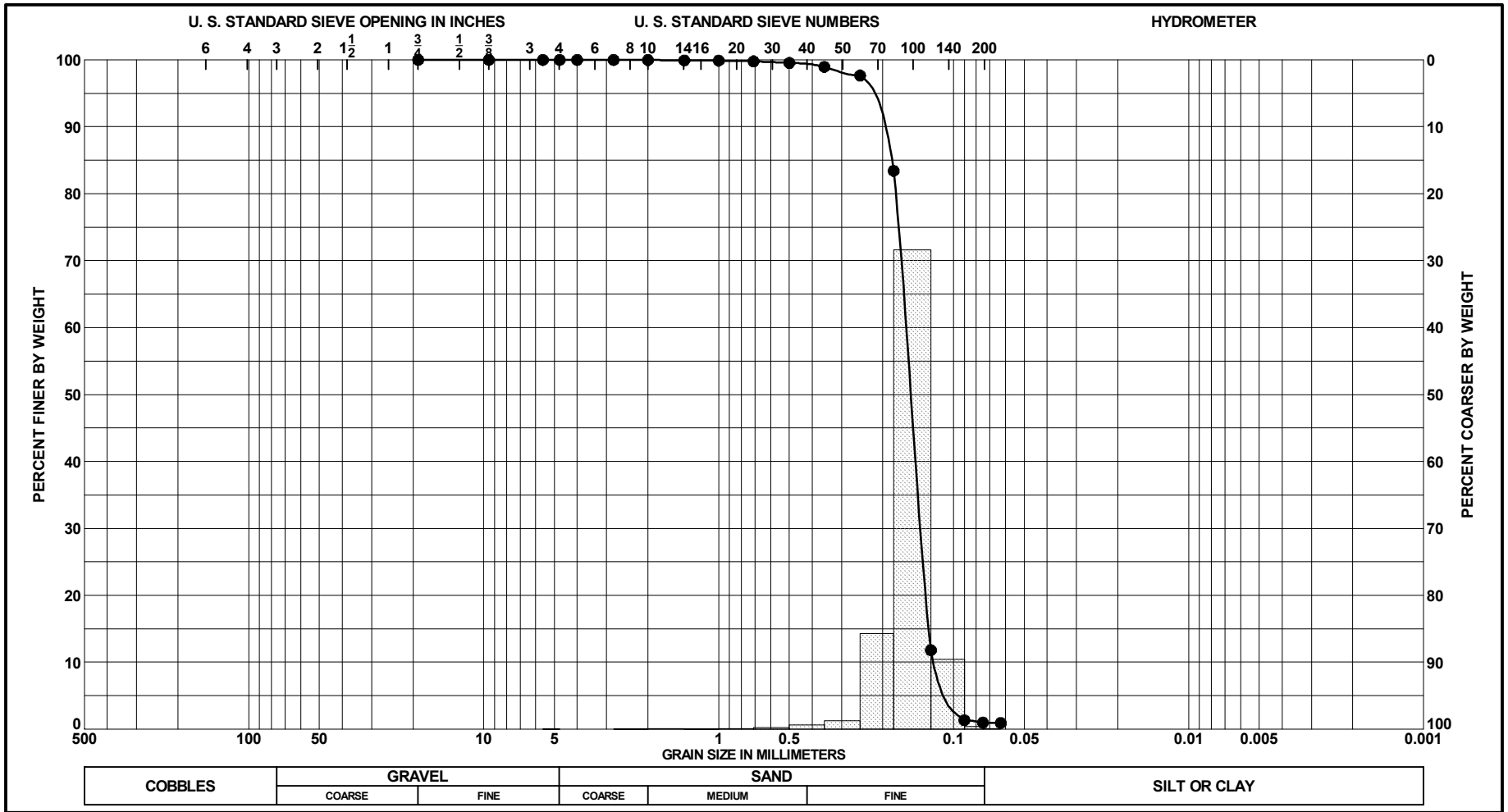


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 1	3.0 to 3.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	11 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-21
BORING ELEV.	-7.8 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

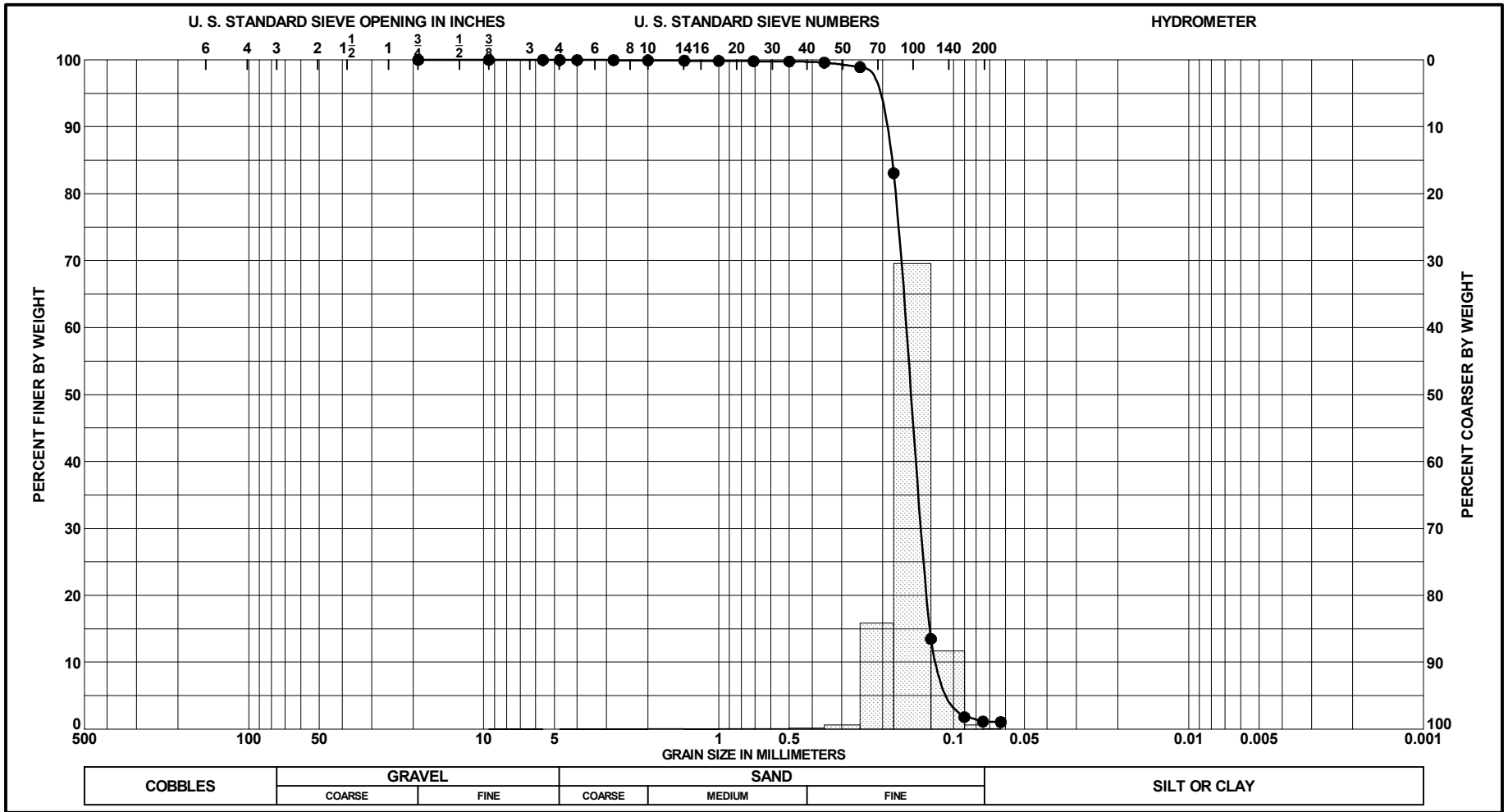


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 2	6.0 to 6.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	8 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-21
BORING ELEV.	-7.8 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 3	9.0 to 9.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	7 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-21
BORING ELEV.	-7.8 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

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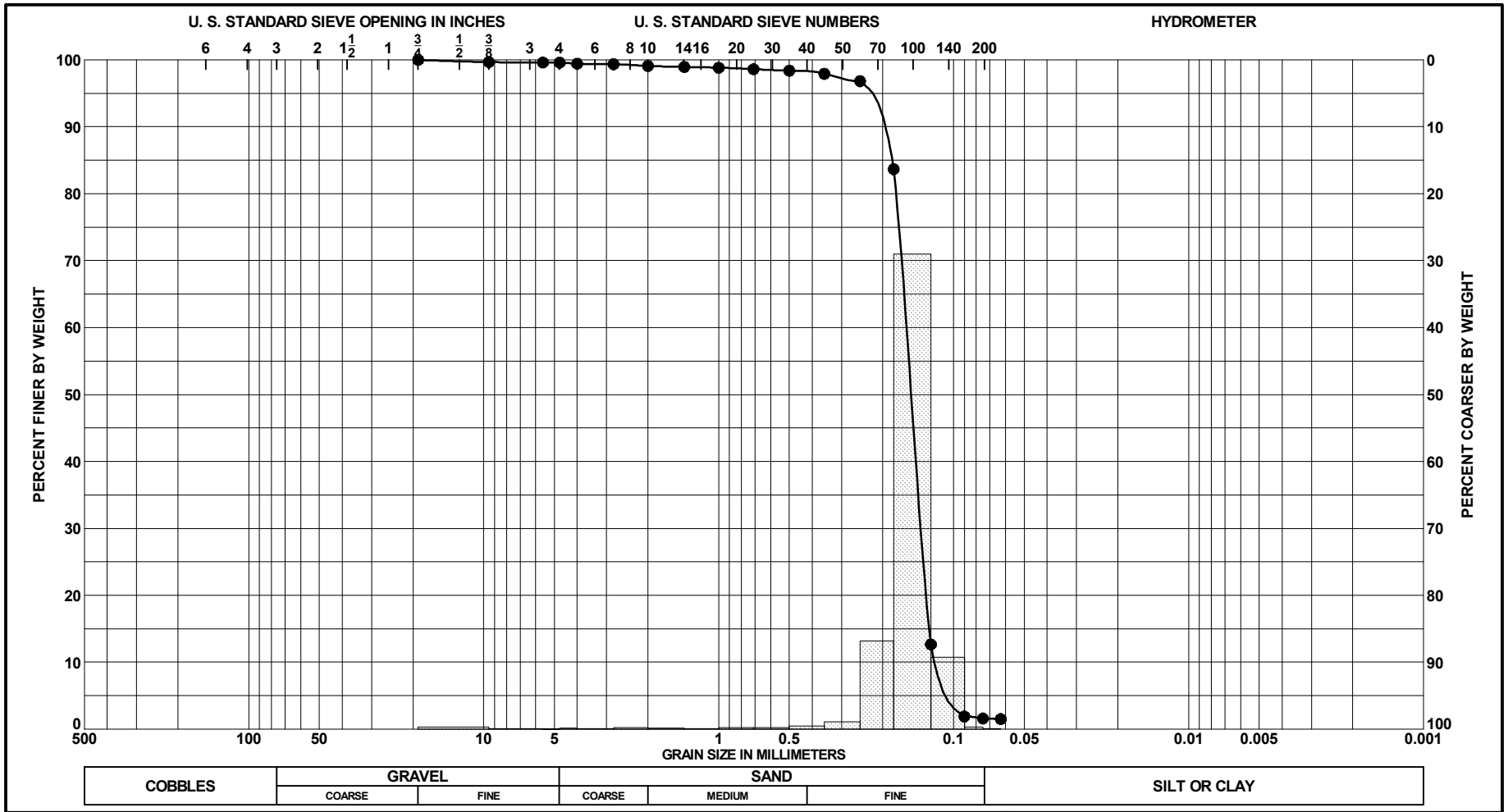
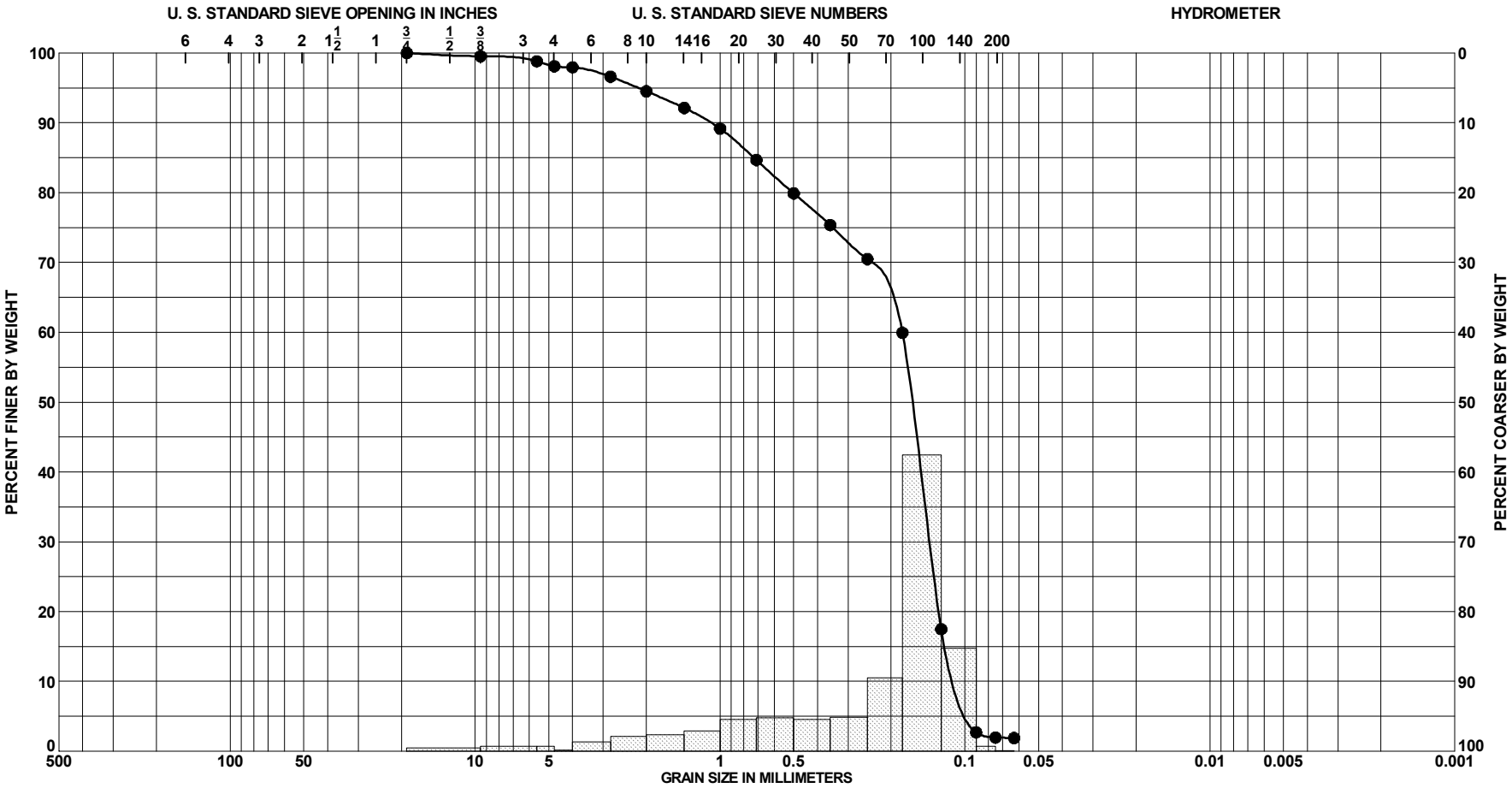


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 4	12.0 to 12.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	9 (est)						
		fine-grained sand-sized quartz, few								
		fine -grained sand-sized shell, trace								
		silt, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-21
BORING ELEV.	-7.8 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

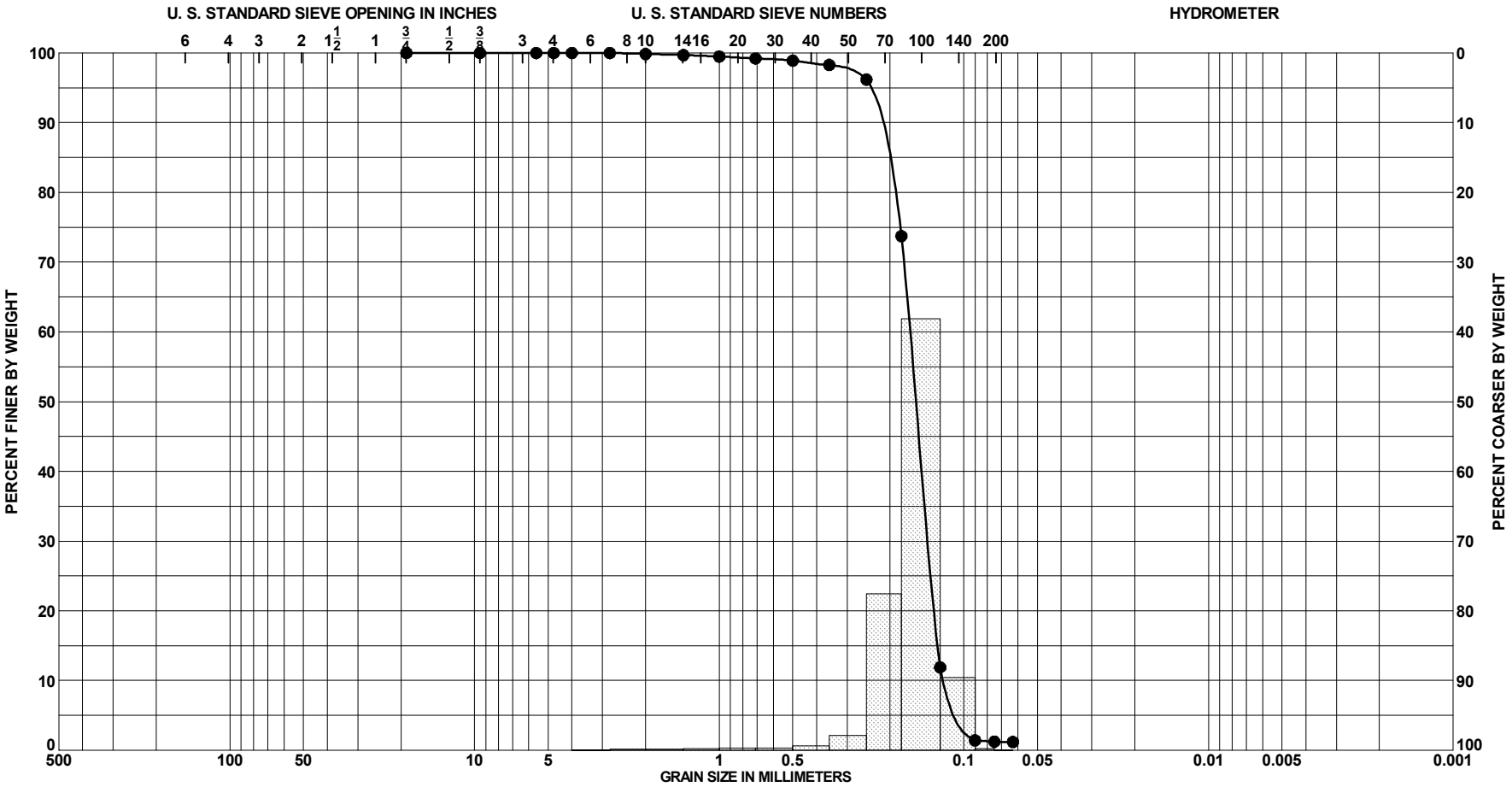


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 5	15.0 to 15.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	29 (est)						
		fine-grained sand-sized quartz, some								
		fine to coarse-grained sand-sized								
		shell, trace silt, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-21
BORING ELEV.	-7.8 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

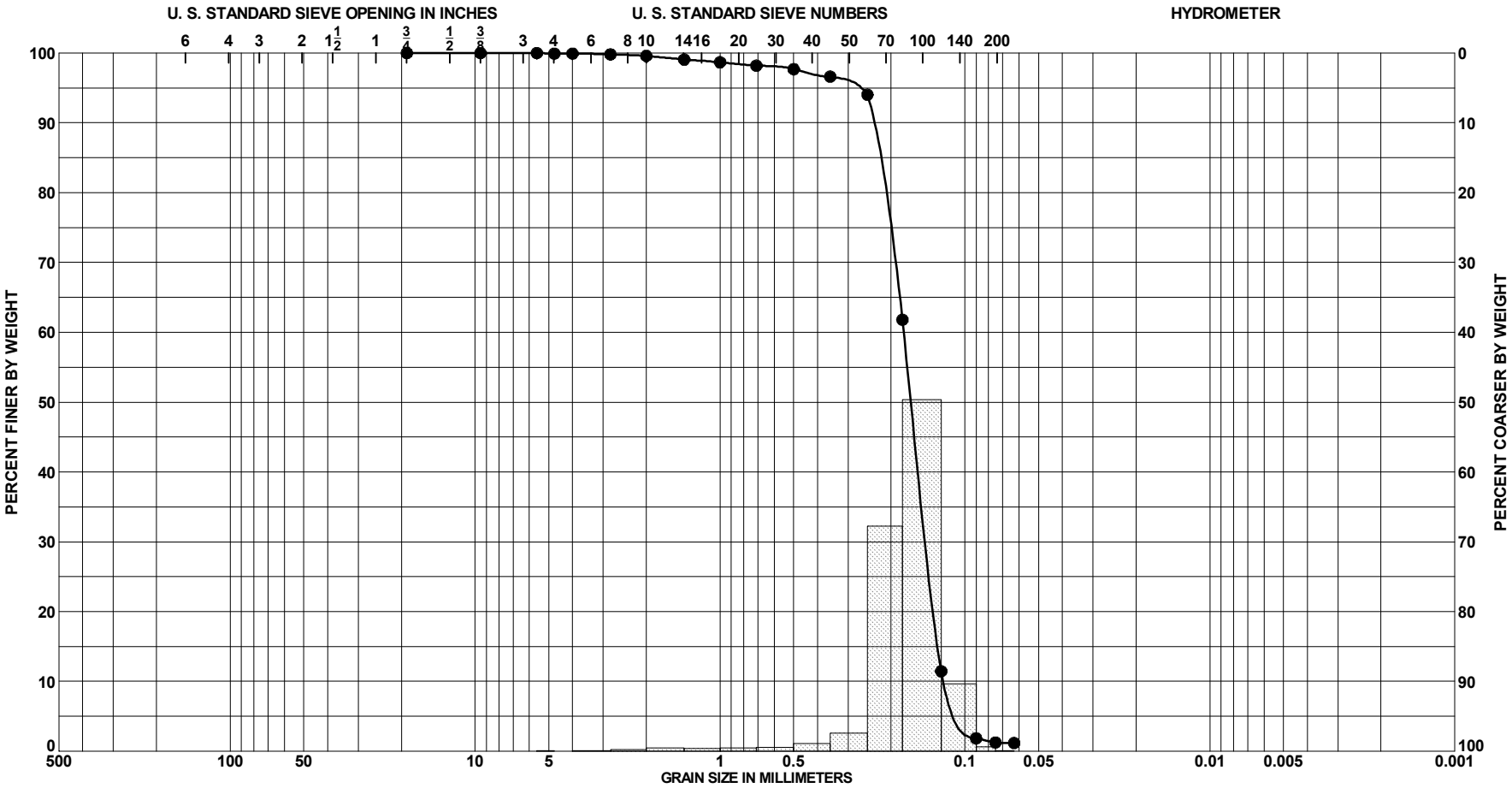


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 1	2.5 to 2.8 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt, white (SP)	2.5Y 8/1	4 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-22
BORING ELEV.	-8.6 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

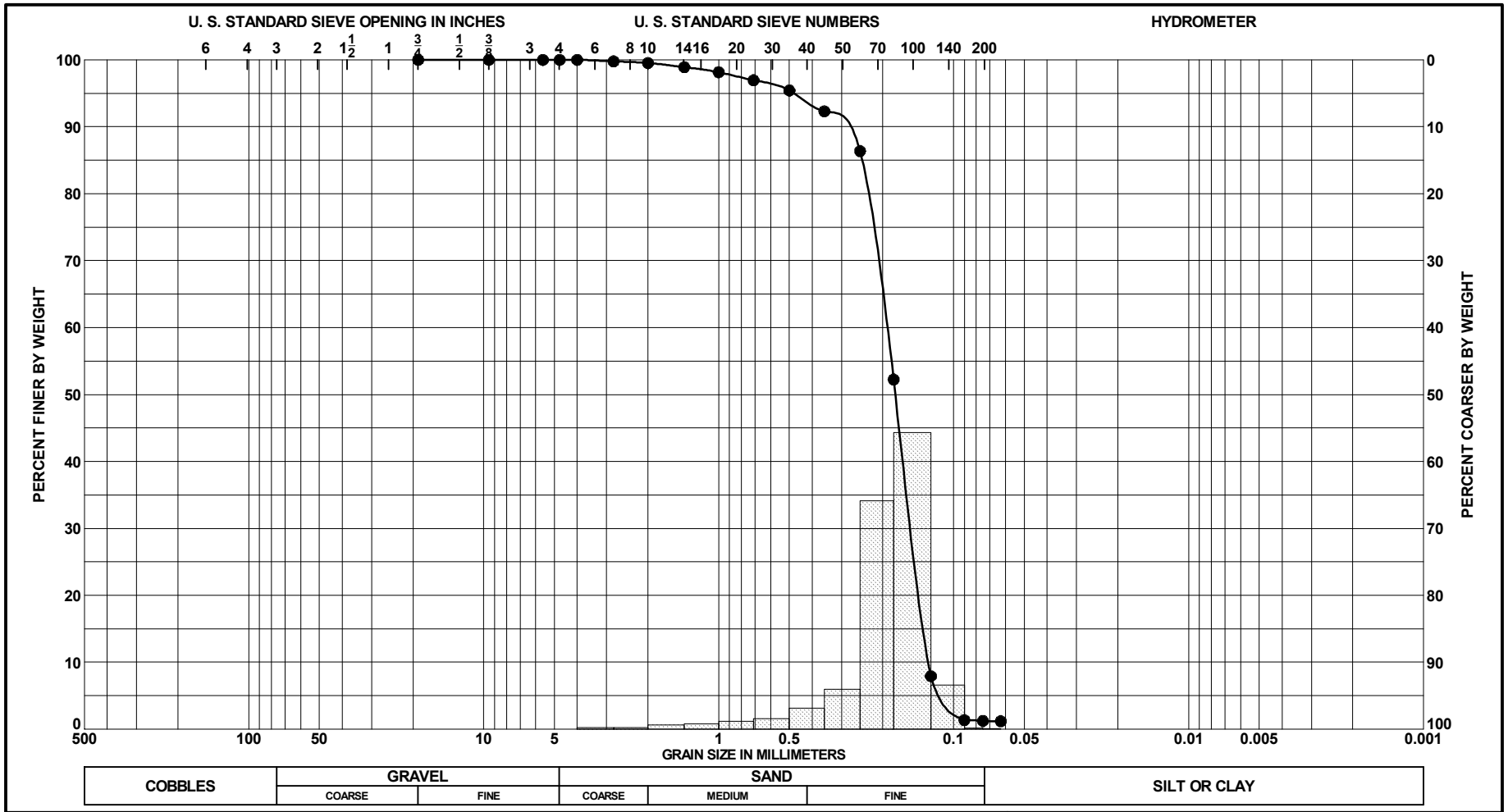


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 2	5.5 to 5.8 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	8/11 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-22
BORING ELEV.	-8.6 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

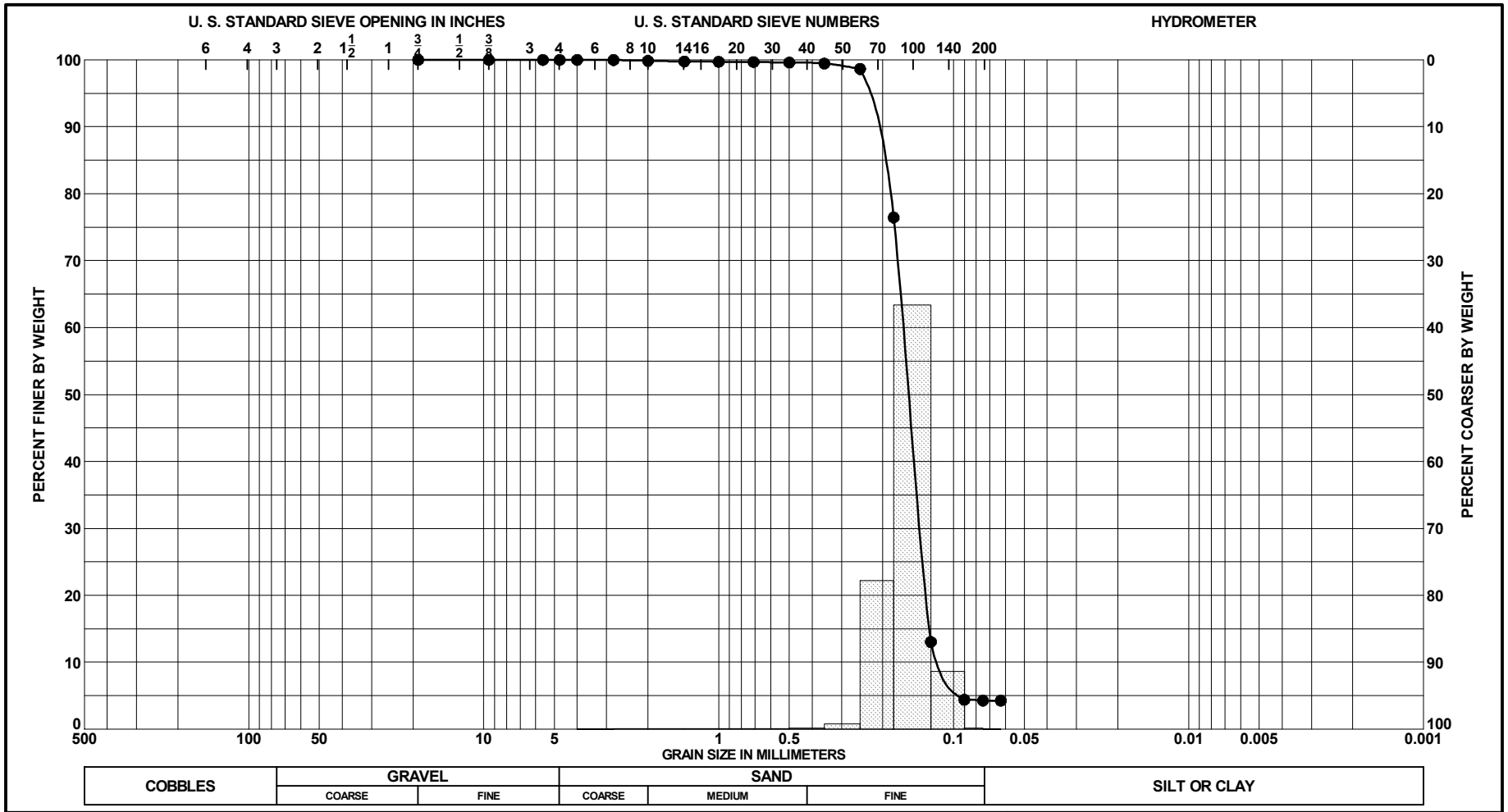


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 3	8.7 to 9.0 Ft.	SAND, poorly-graded, mostly	2.5Y 7/1	19 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium-grained sand-sized								
		shell, trace silt, light gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-22
BORING ELEV.	-8.6 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

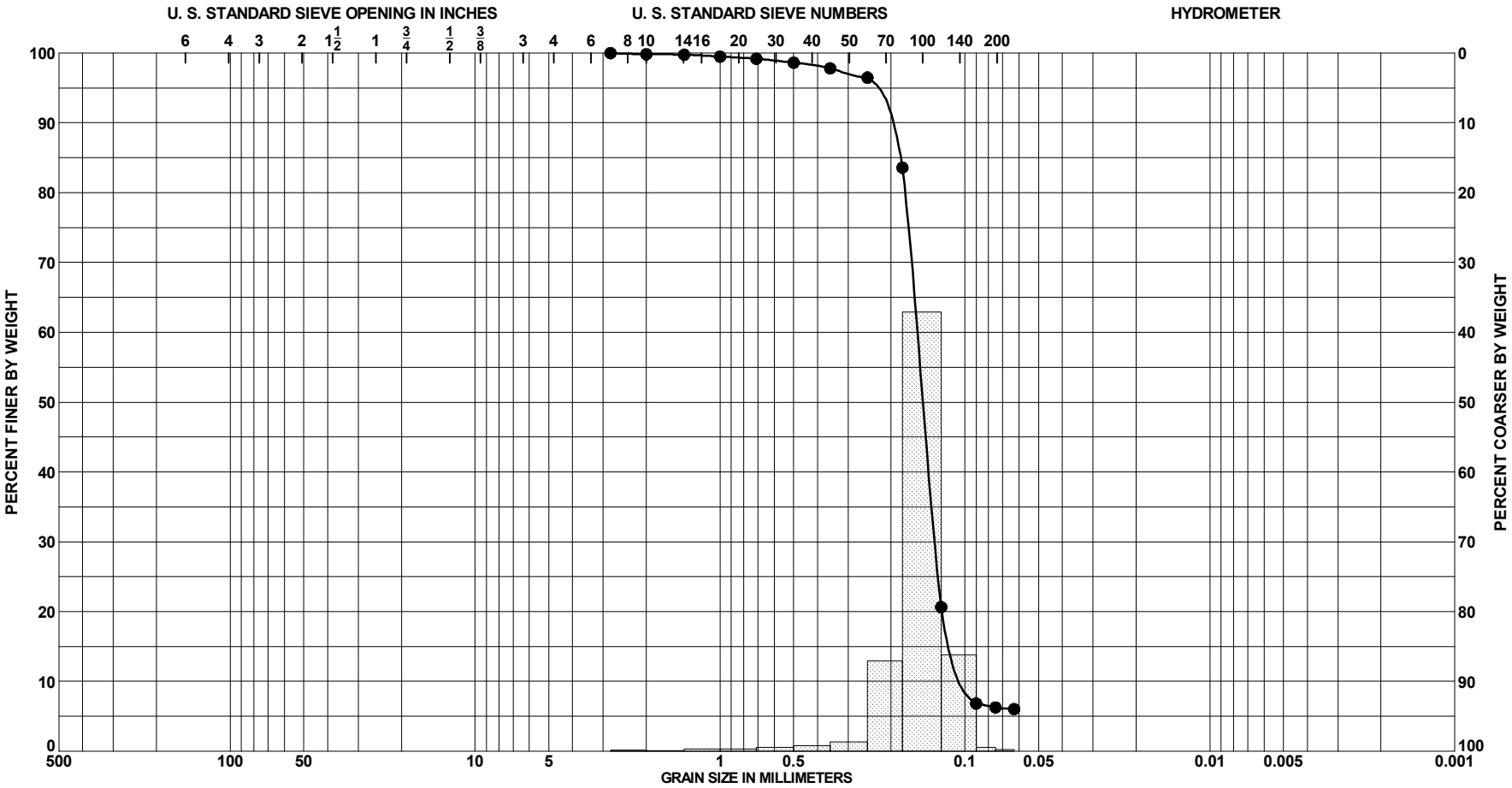


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 4	12.0 to 12.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt, trace shell, white (SP)	2.5Y 8/1	3 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-22
BORING ELEV.	-8.6 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

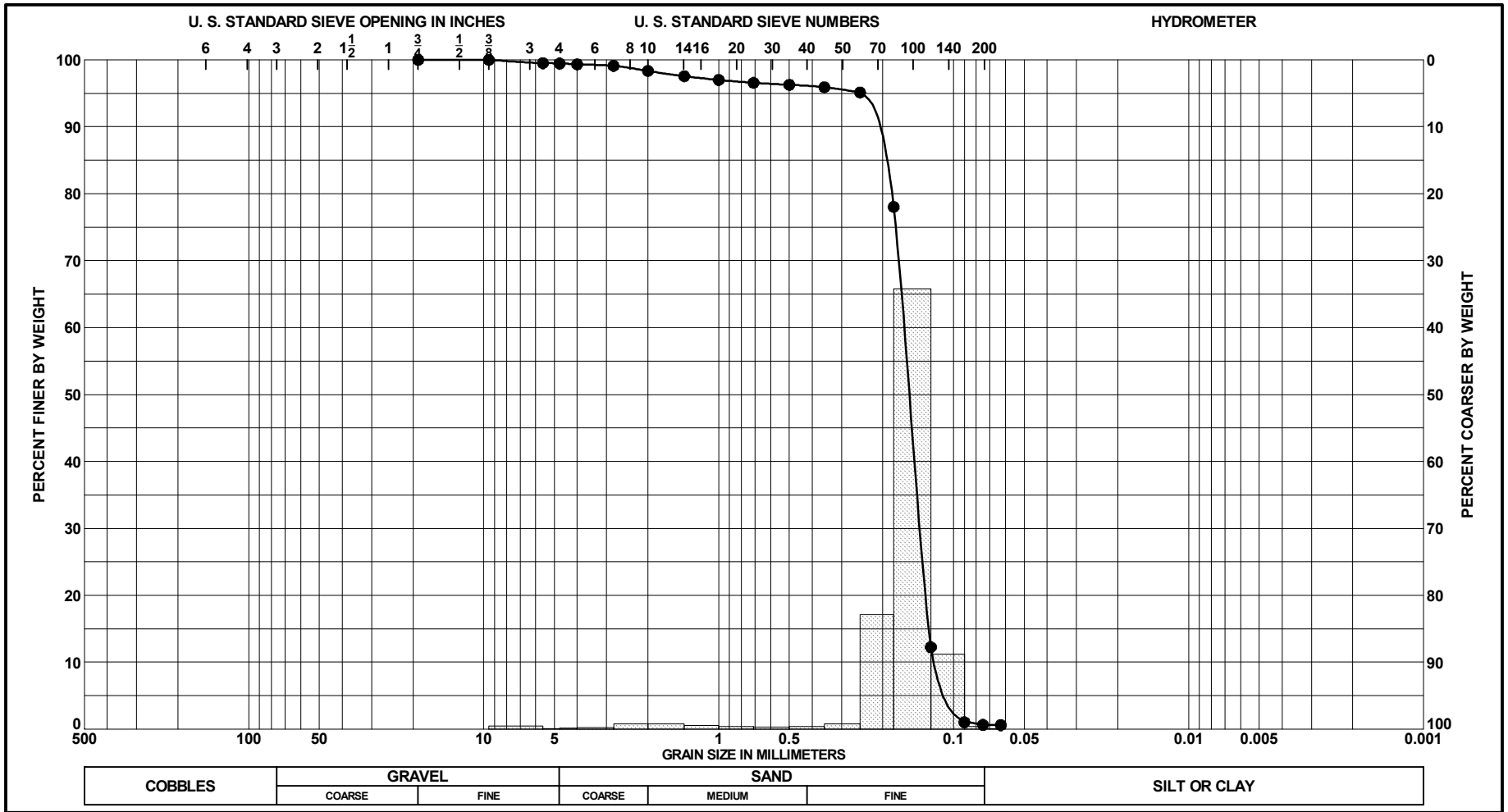


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 5	15.0 to 15.3 Ft.	SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell, few silt, white (SP-SM)	2.5Y 8/1	13 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-22
BORING ELEV.	-8.6 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

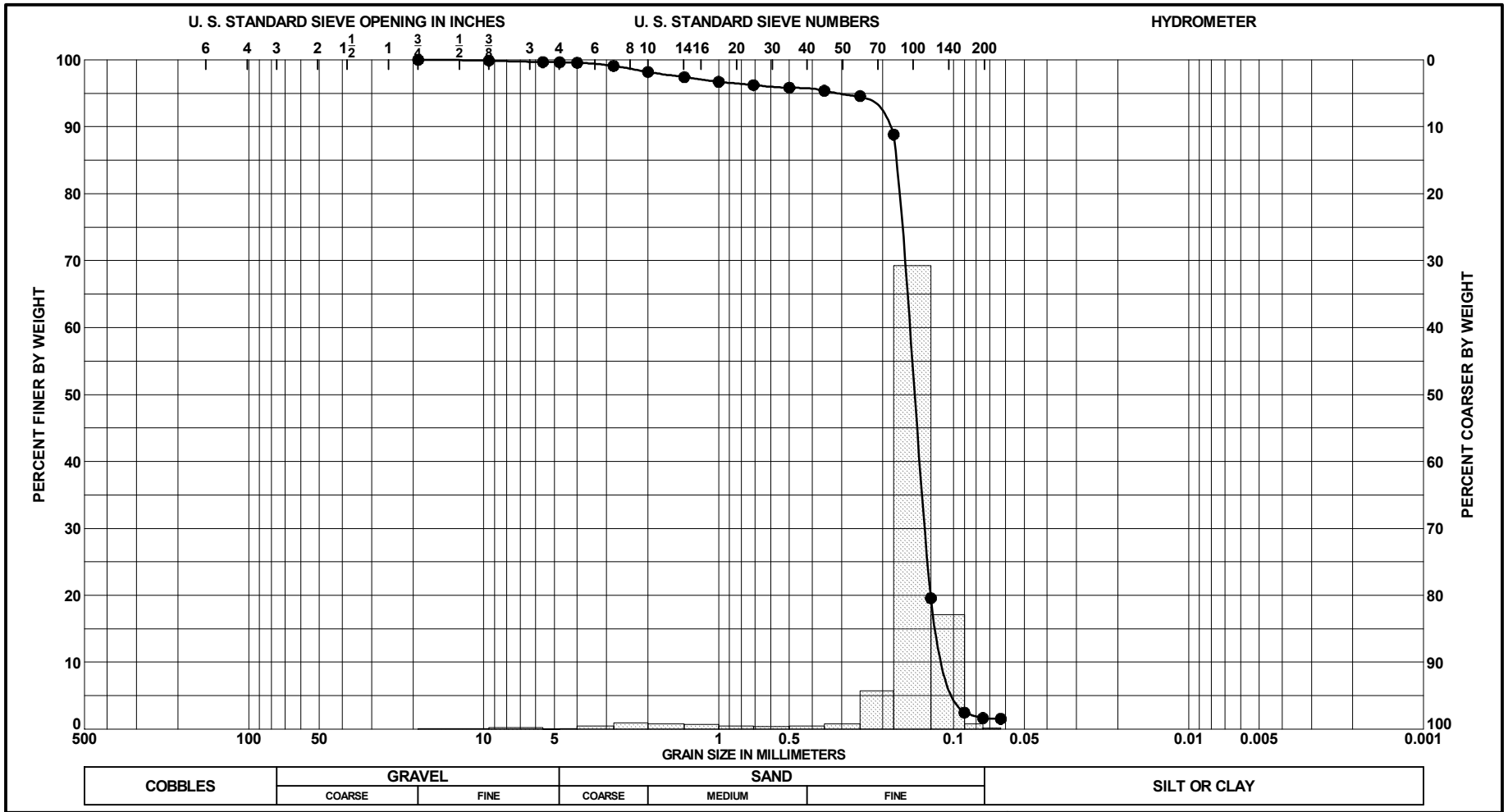


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 1	2.0 to 2.3 Ft.	SAND, poorly-graded, mostly	2.5Y 7/2	11 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell. trace								
		silt, light gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-23
BORING ELEV.	-10.4 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

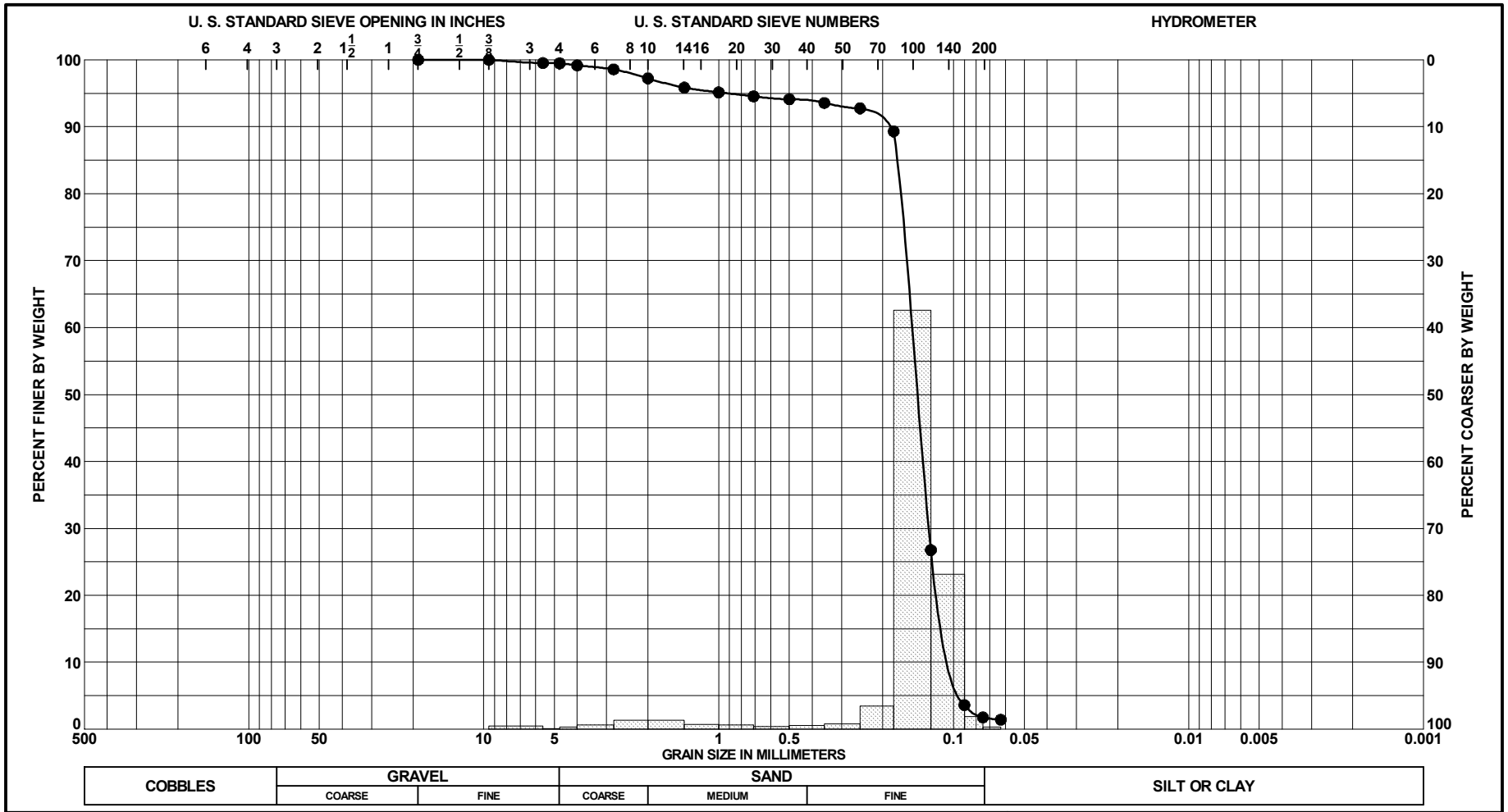


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 2	5.0 to 5.3 Ft.	SAND, poorly-graded, mostly	2.5Y 7/1	13 (est)						
		fine-grained sand-sized quartz, little								
		fine-grained sand-sized shell, trace								
		silt, light gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-23
BORING ELEV.	-10.4 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

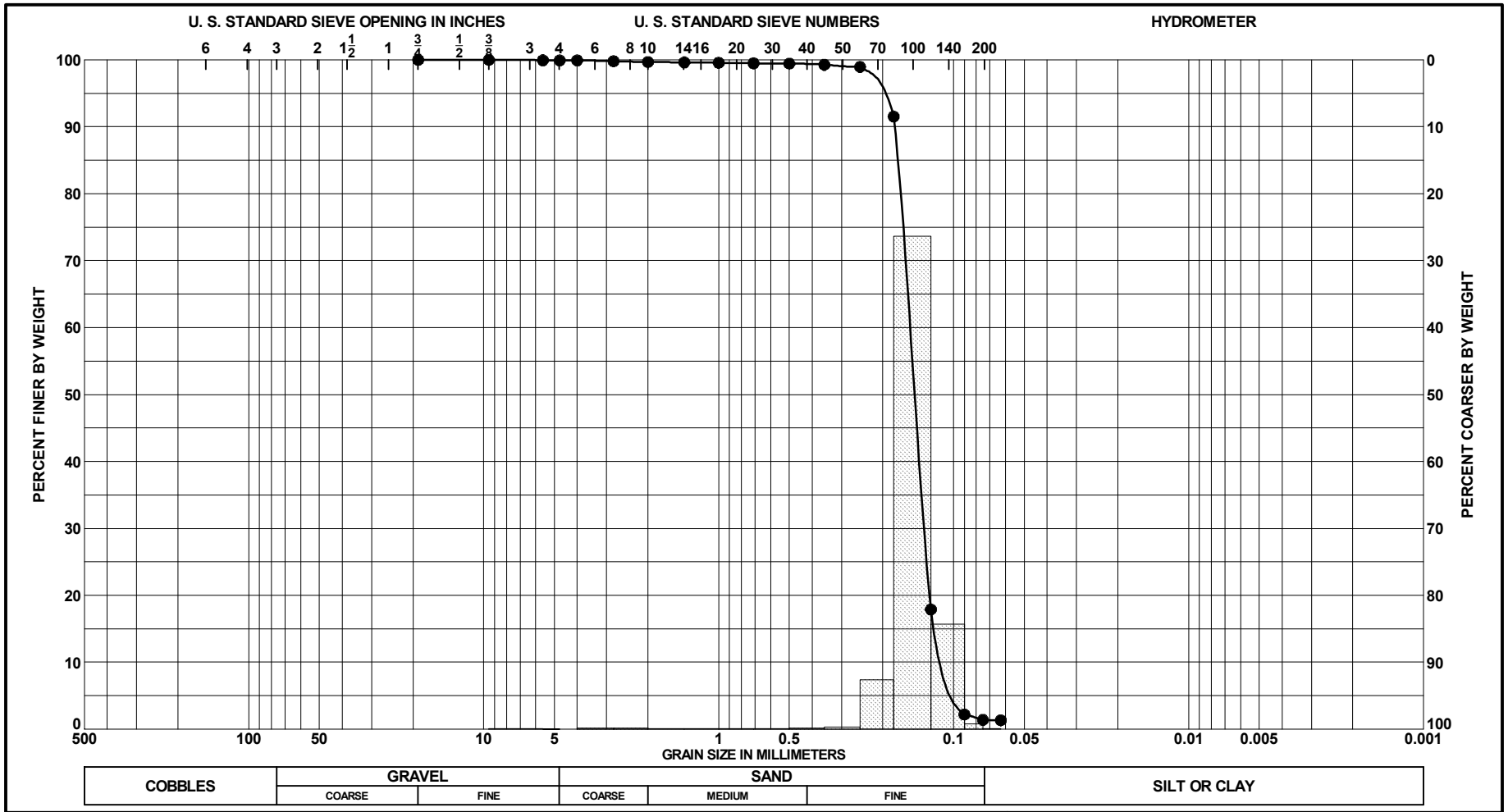


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 3	8.0 to 8.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt, light gray (SP)	2.5Y 7/1	10 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-23
BORING ELEV.	-10.4 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 4	11.0 to 11.3 Ft.	SAND, poorly-graded, mostly	2.5Y 7/1	10 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, light gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-23
BORING ELEV.	-10.4 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

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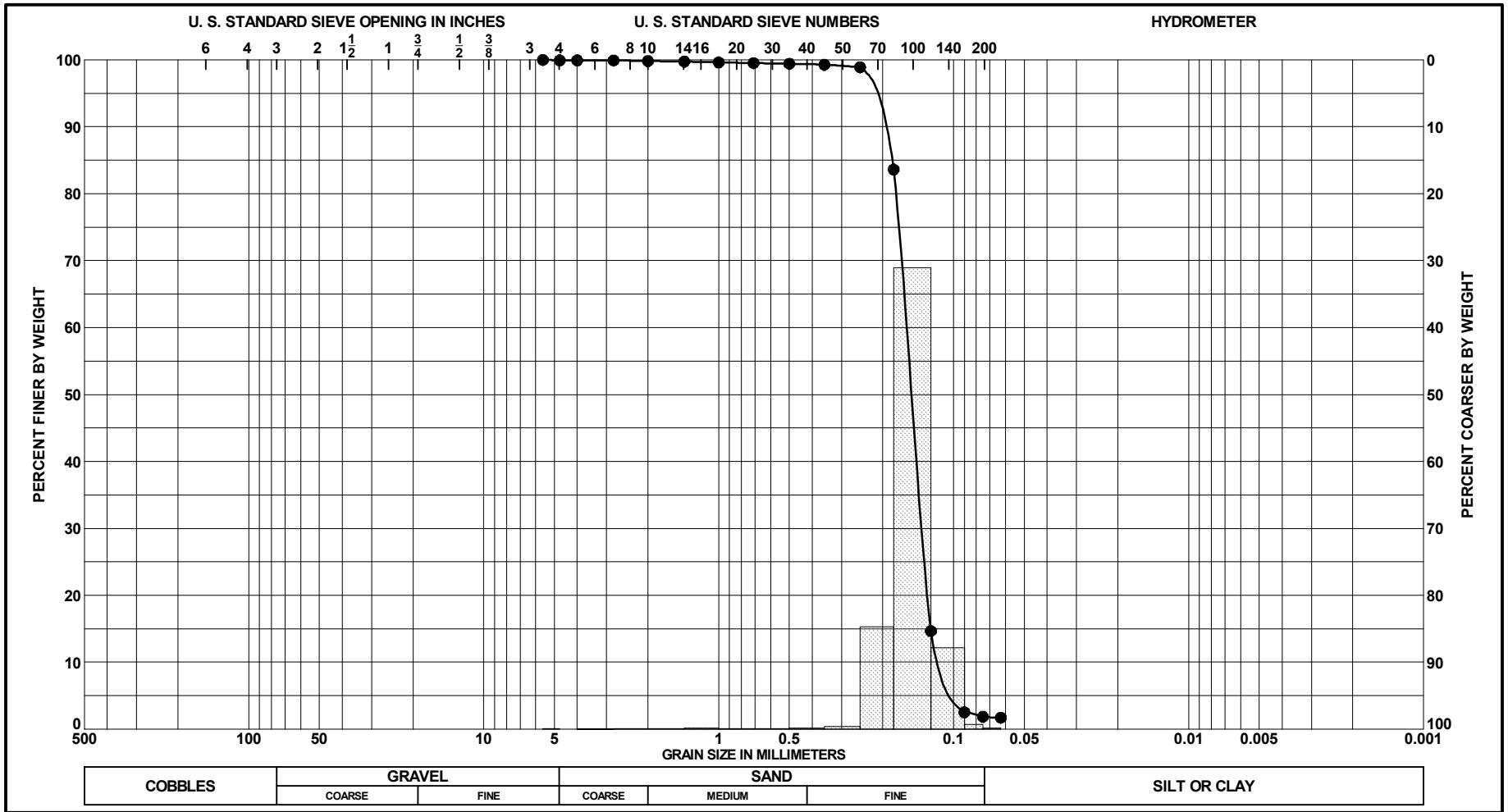
JUN 02

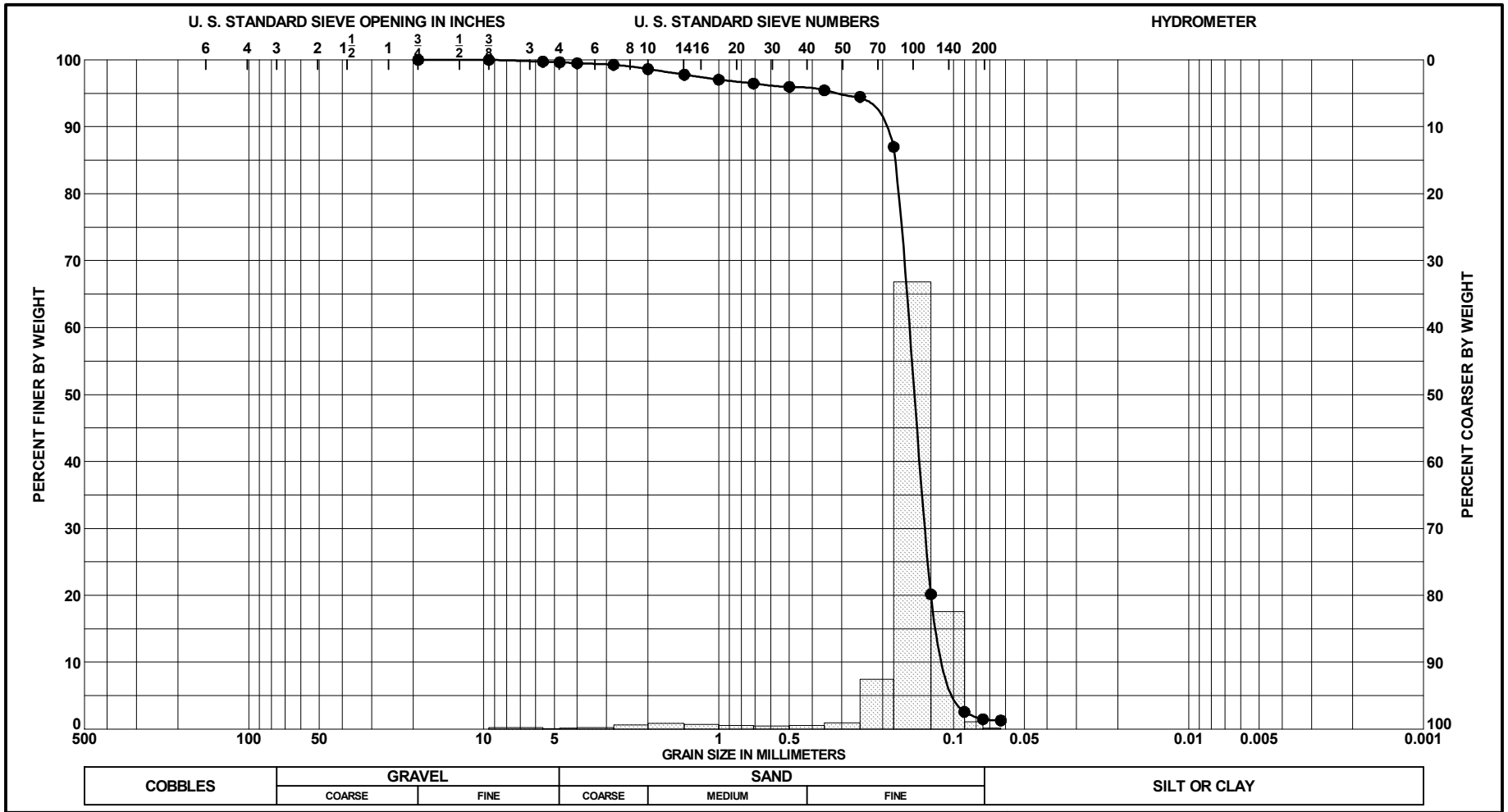


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 5	13.0 to 13.3 Ft.	SAND, poorly-graded, mostly	2.5Y 6/2	7 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, light brownish gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-23
BORING ELEV.	-10.4 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

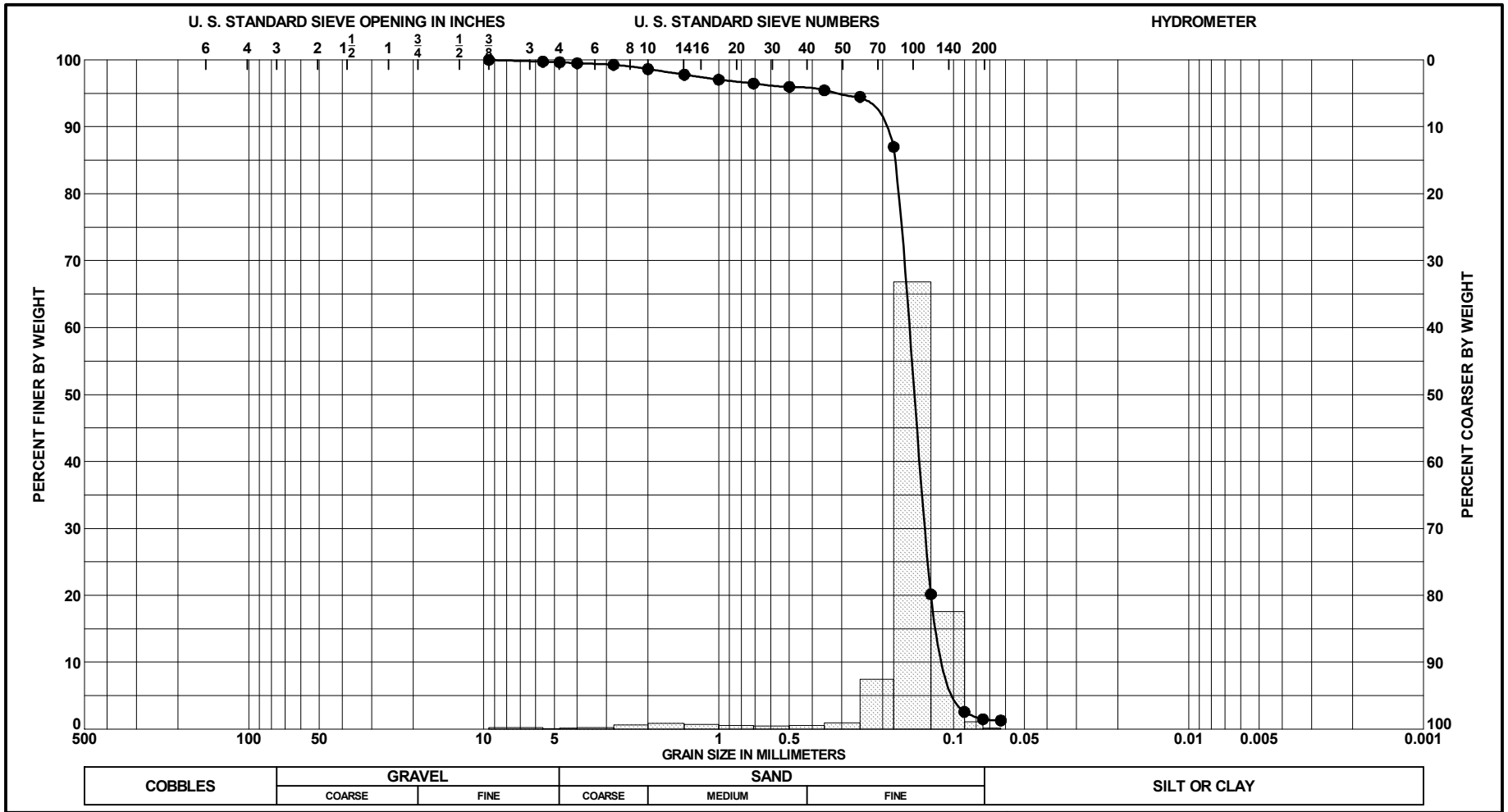


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 1	3.0 to 3.3 Ft.	SAND, poorly-graded, mostly	2.5Y 7/1	14 (est)						
		fine-grained sand-sized quartz, little								
		fine-grained sand-sized shell, trace								
		silt, light gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-24
BORING ELEV.	-10.5 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

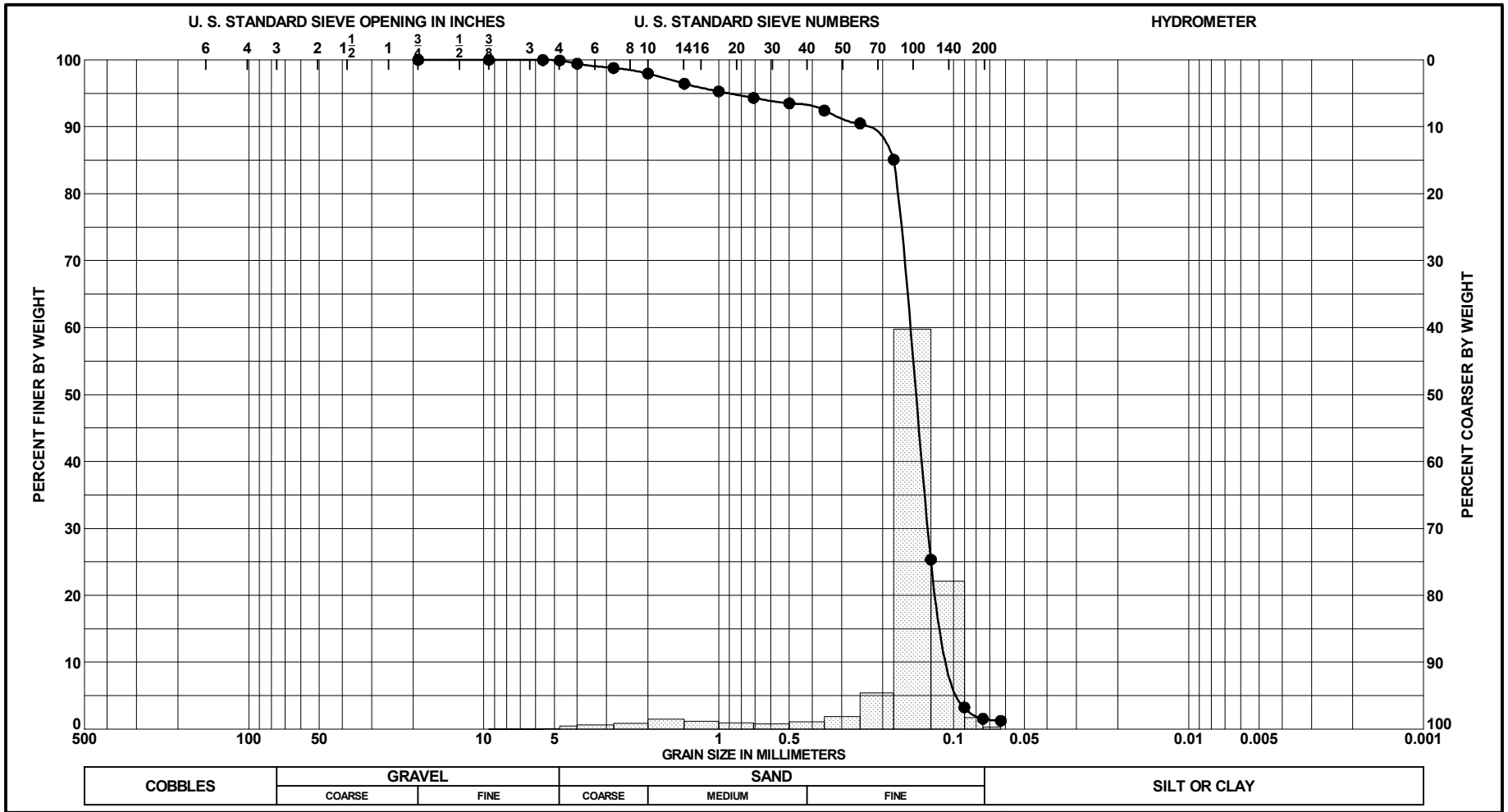


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 1	3.0 to 3.3 Ft.	SAND, poorly-graded, mostly	2.5Y 7/1	14 (est)						
		fine-grained sand-sized quartz, little								
		fine-grained sand-sized shell, trace								
		silt, light gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-24
BORING ELEV.	-10.5 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

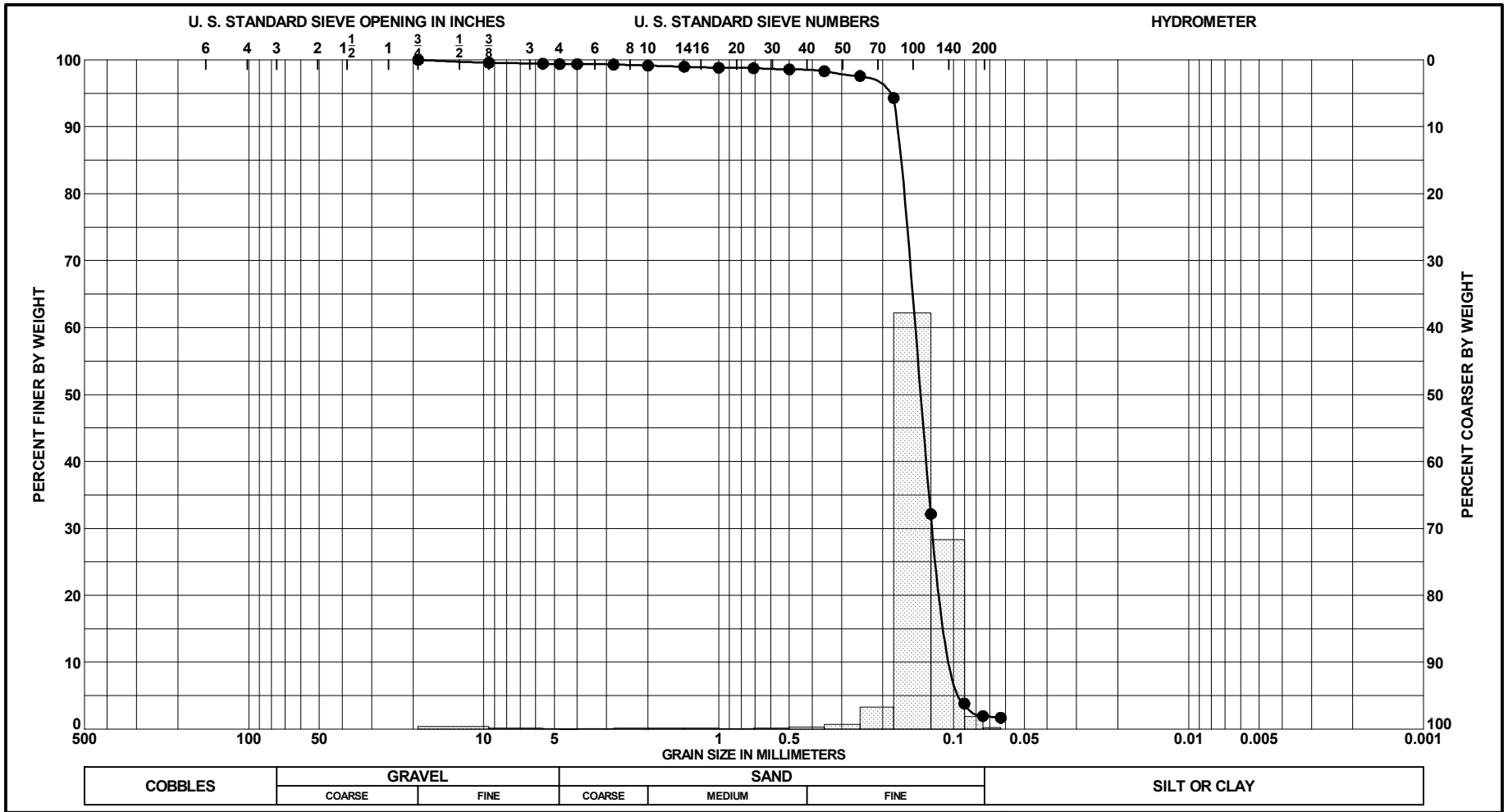


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 2	6.0 to 6.3 Ft.	SAND, poorly-graded, mostly	2.5Y 7/1	20 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium-grained sand-sized								
		shell, trace silt, light gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-24
BORING ELEV.	-10.5 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

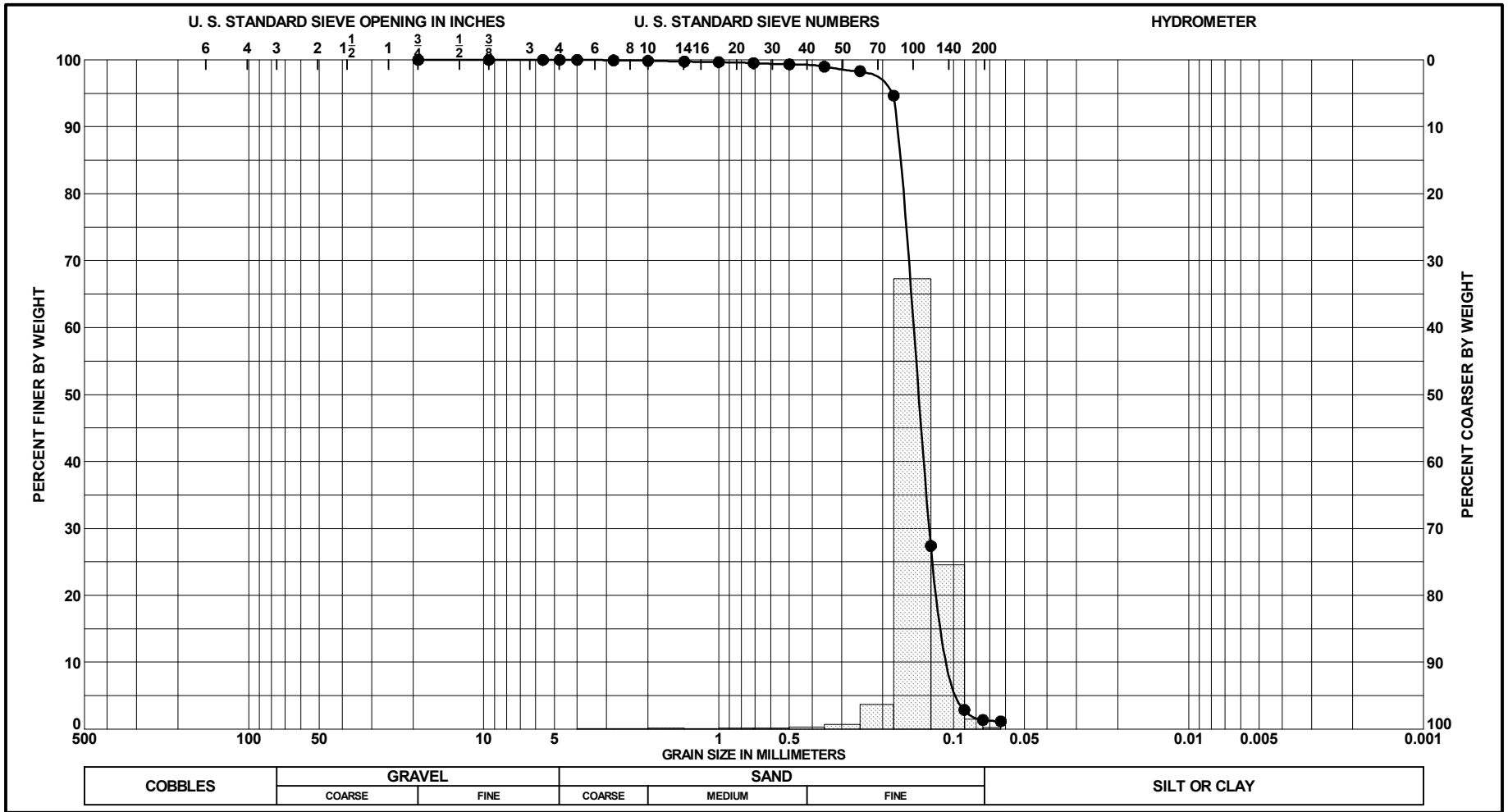


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 3	9.0 to 9.3 Ft.	SAND, poorly-graded, mostly	2.5Y 6/2	9 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, light brownish gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-24
BORING ELEV.	-10.5 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

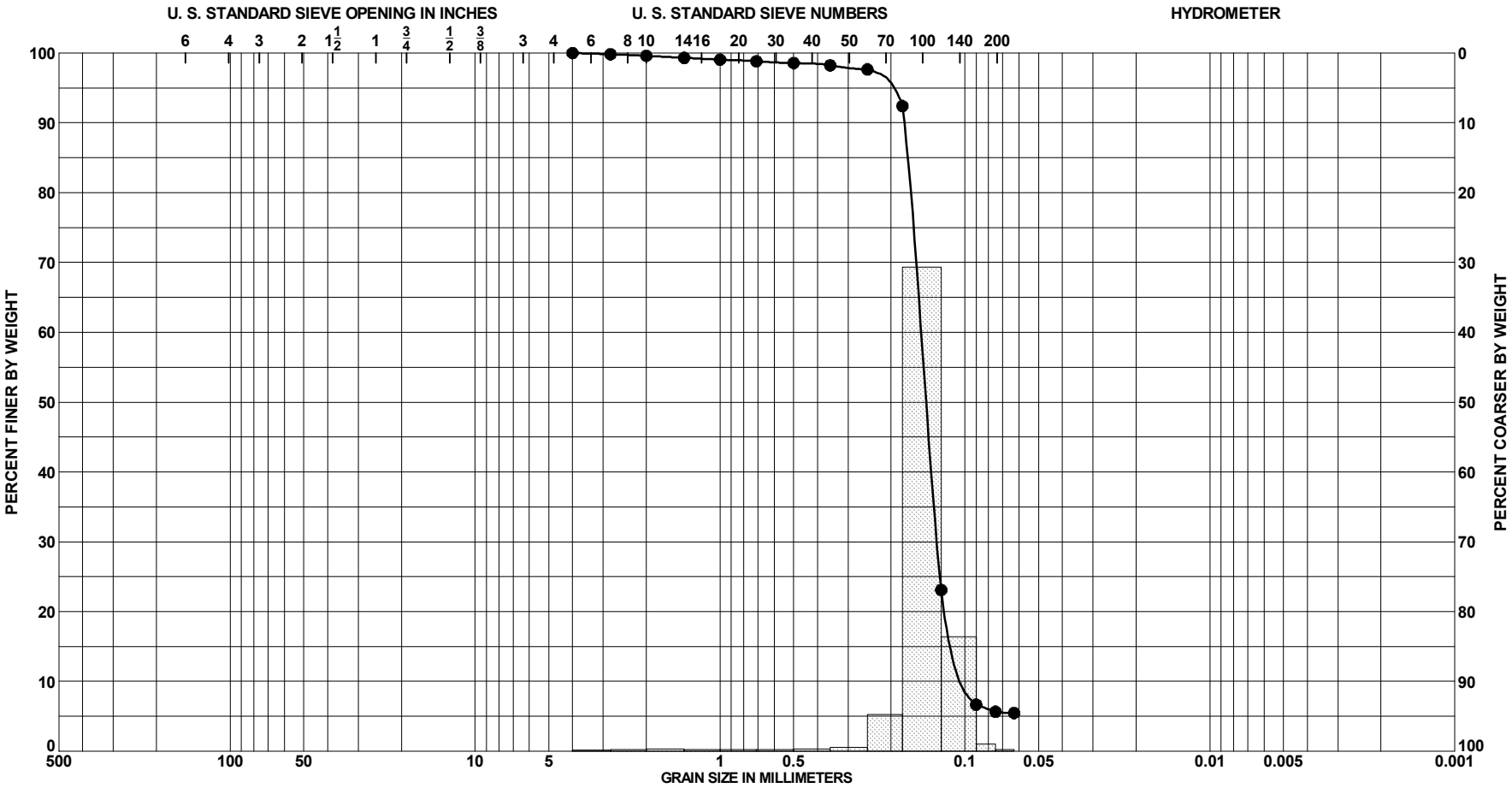


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 4	11.5 to 11.8 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt, light brownish gray (SP)	2.5Y 6/2	5 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-24
BORING ELEV.	-10.5 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

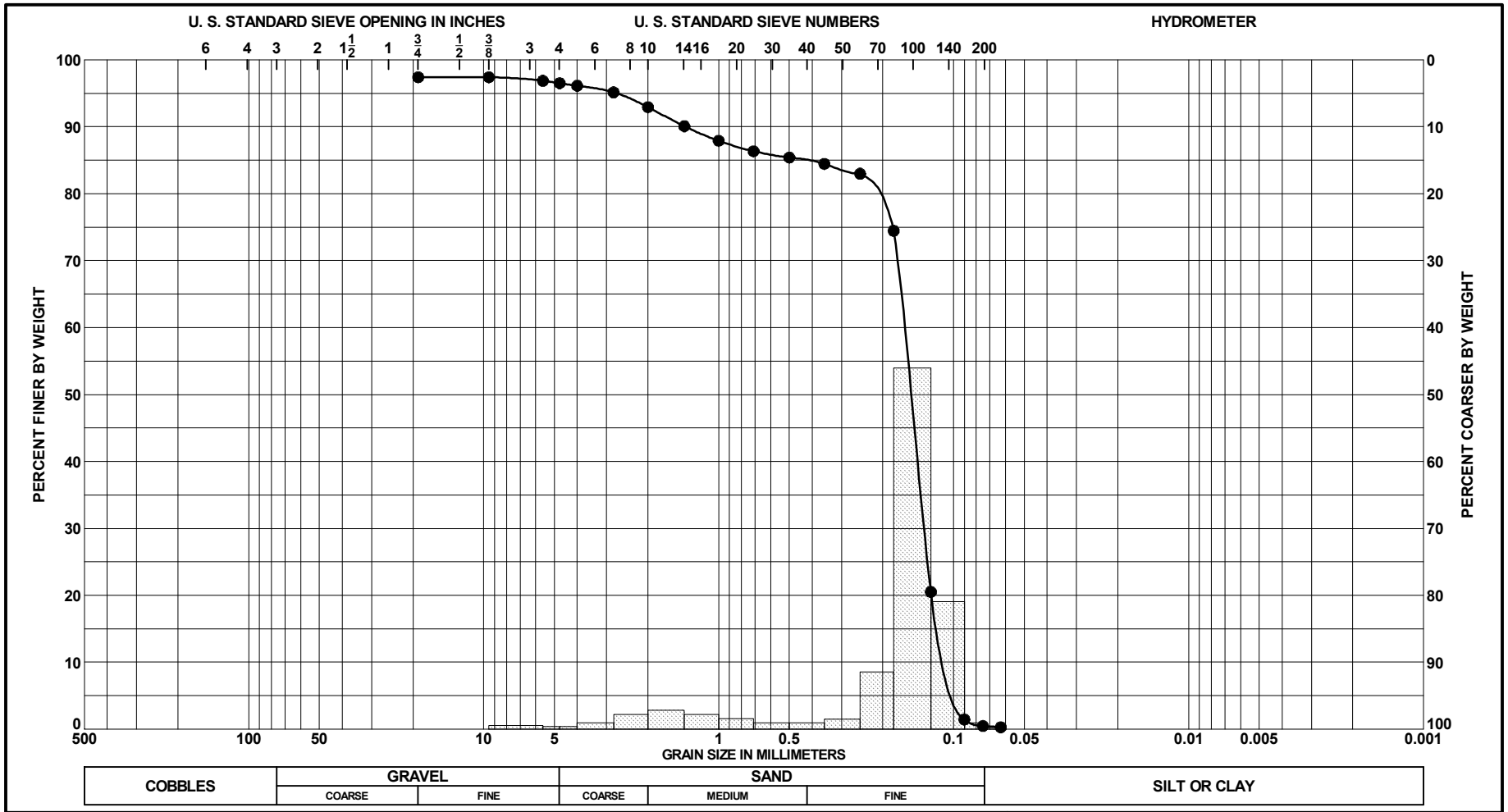


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 5	13.0 to 13.3 Ft.	SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell, few silt, light brownish gray (SP-SM)	2.5Y 6/2	19 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-24
BORING ELEV.	-10.5 Ft., NAVD88
DATE	8/5/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

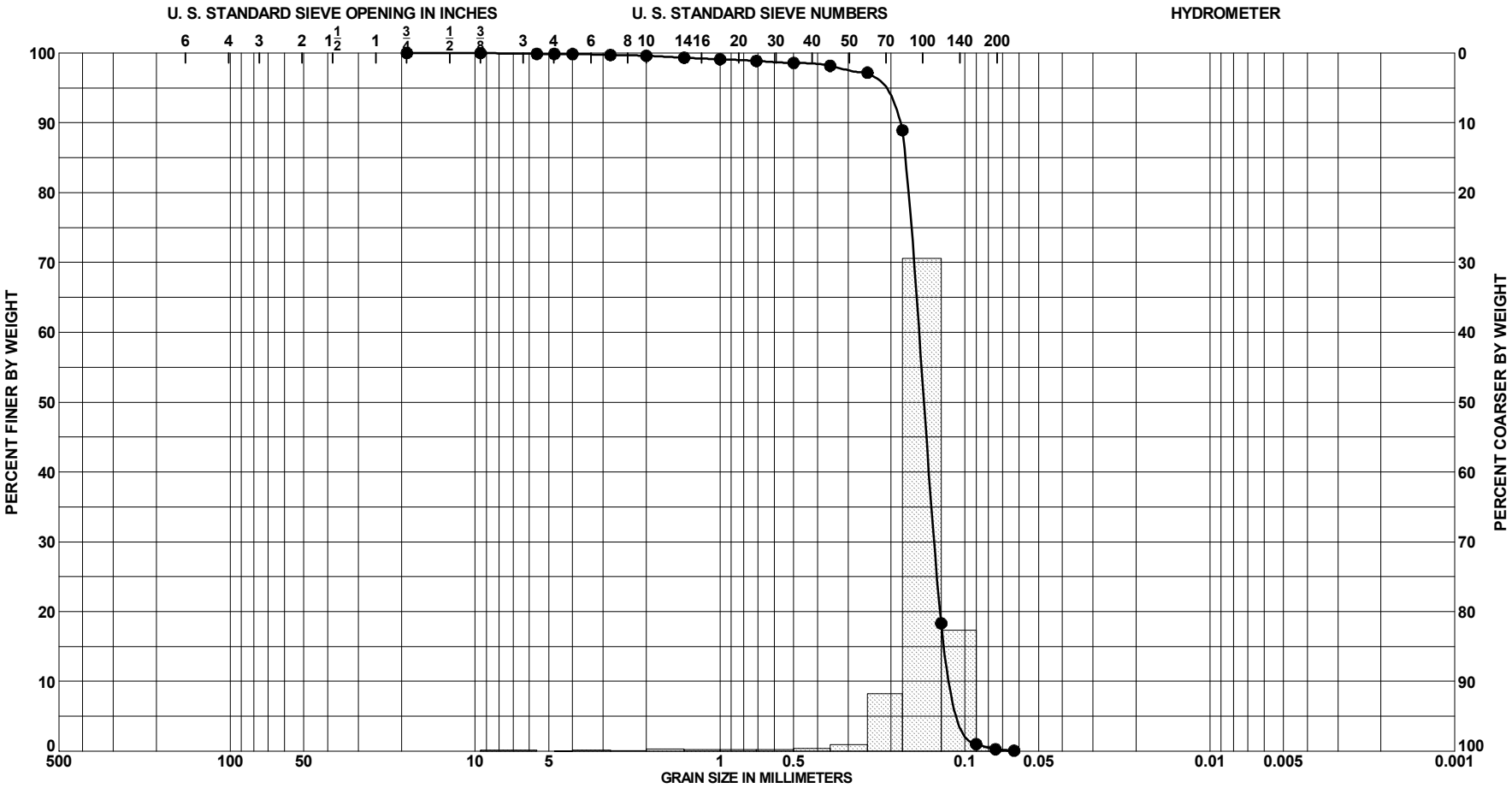


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 1	2.0 to 2.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	28 (est)						
		fine-grained sand-sized quartz, some								
		fine to coarse-grained sand-sized								
		shell, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-25
BORING ELEV.	-10.6 Ft., NAVD88
DATE	8/12/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

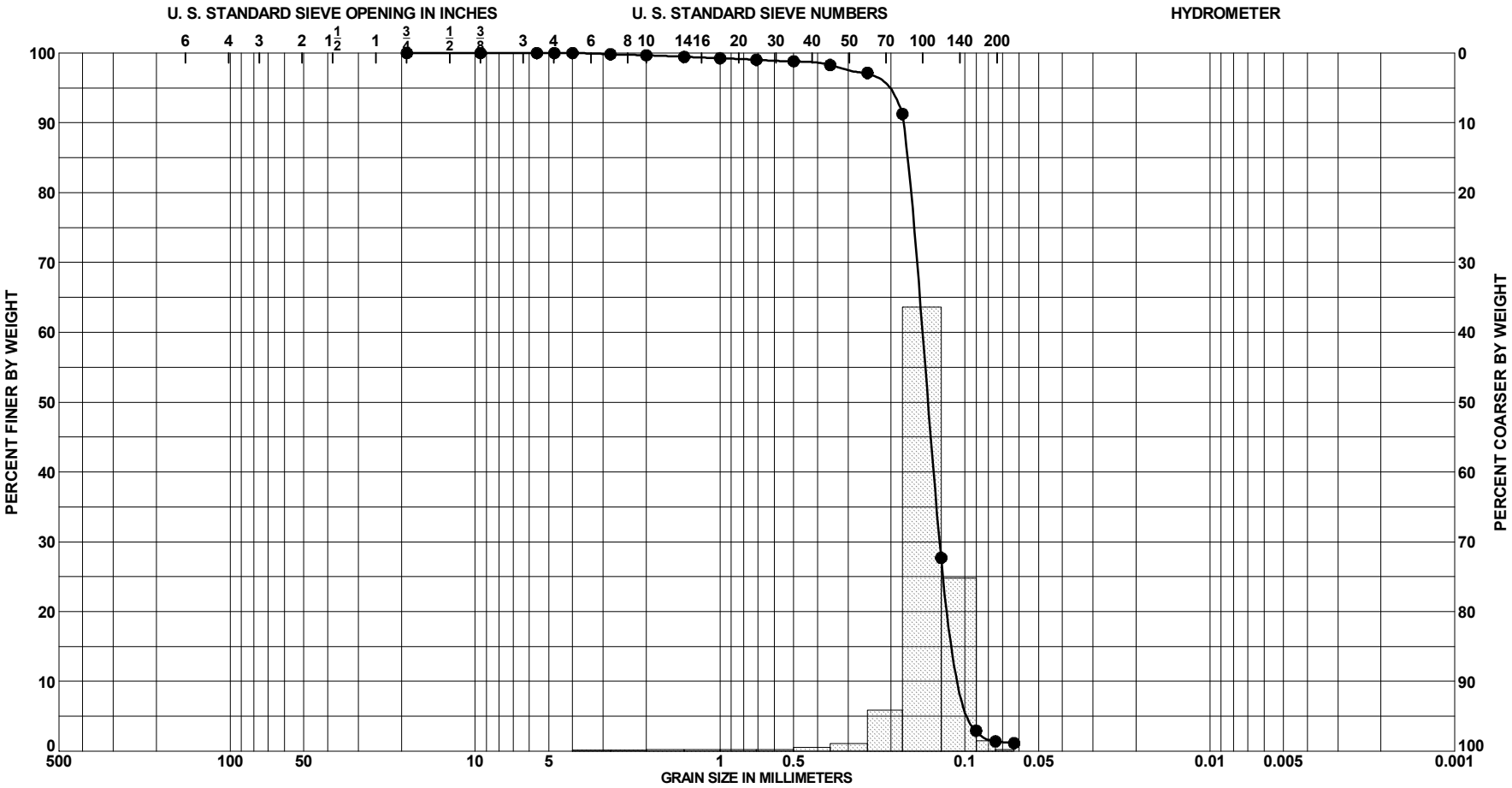


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 2	5.0 to 5.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	11 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, white								
		(SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-25
BORING ELEV.	-10.6 Ft., NAVD88
DATE	8/12/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

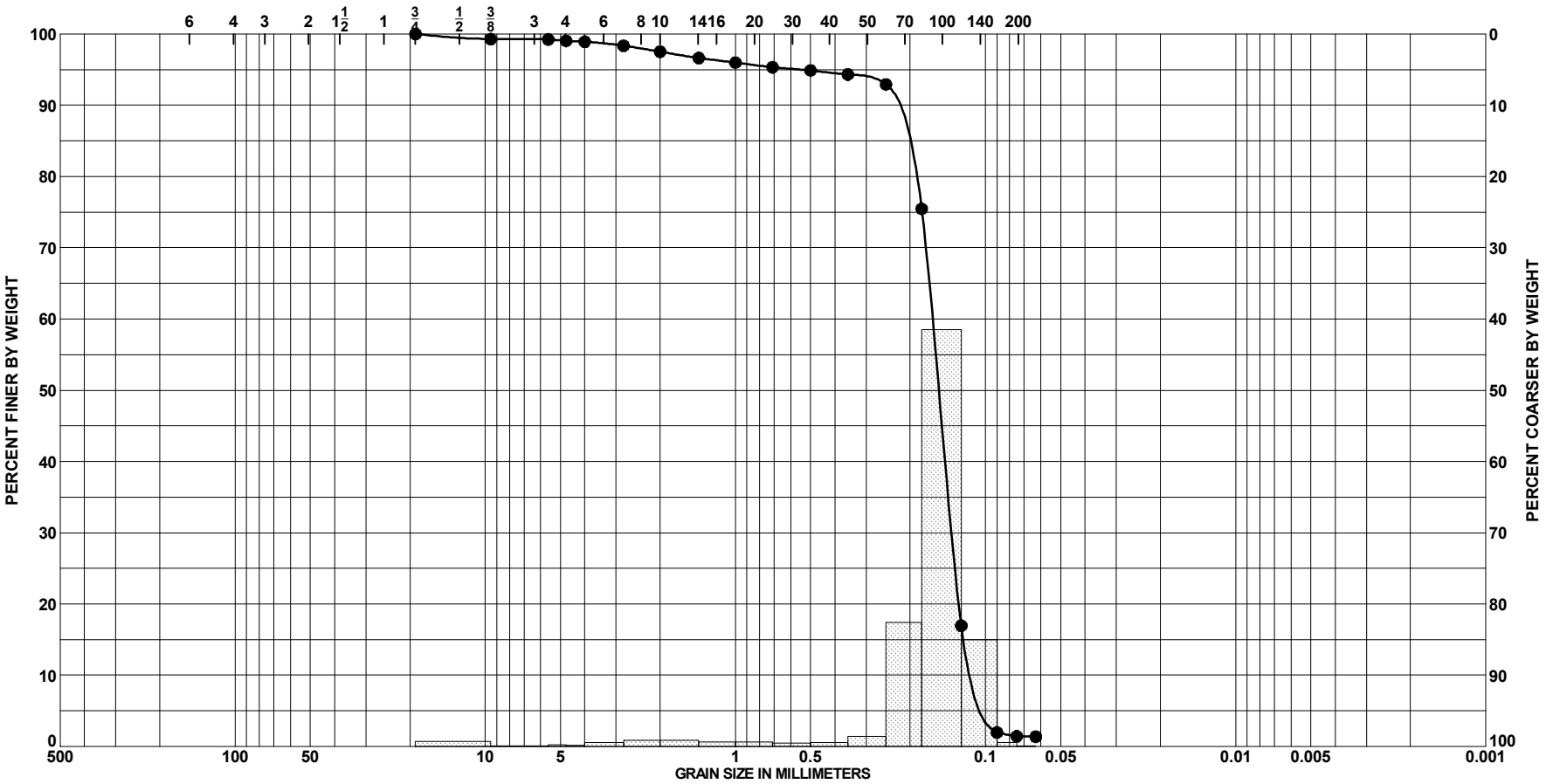


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 3	8.0 to 8.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	6/9 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-25
BORING ELEV.	-10.6 Ft., NAVD88
DATE	8/12/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

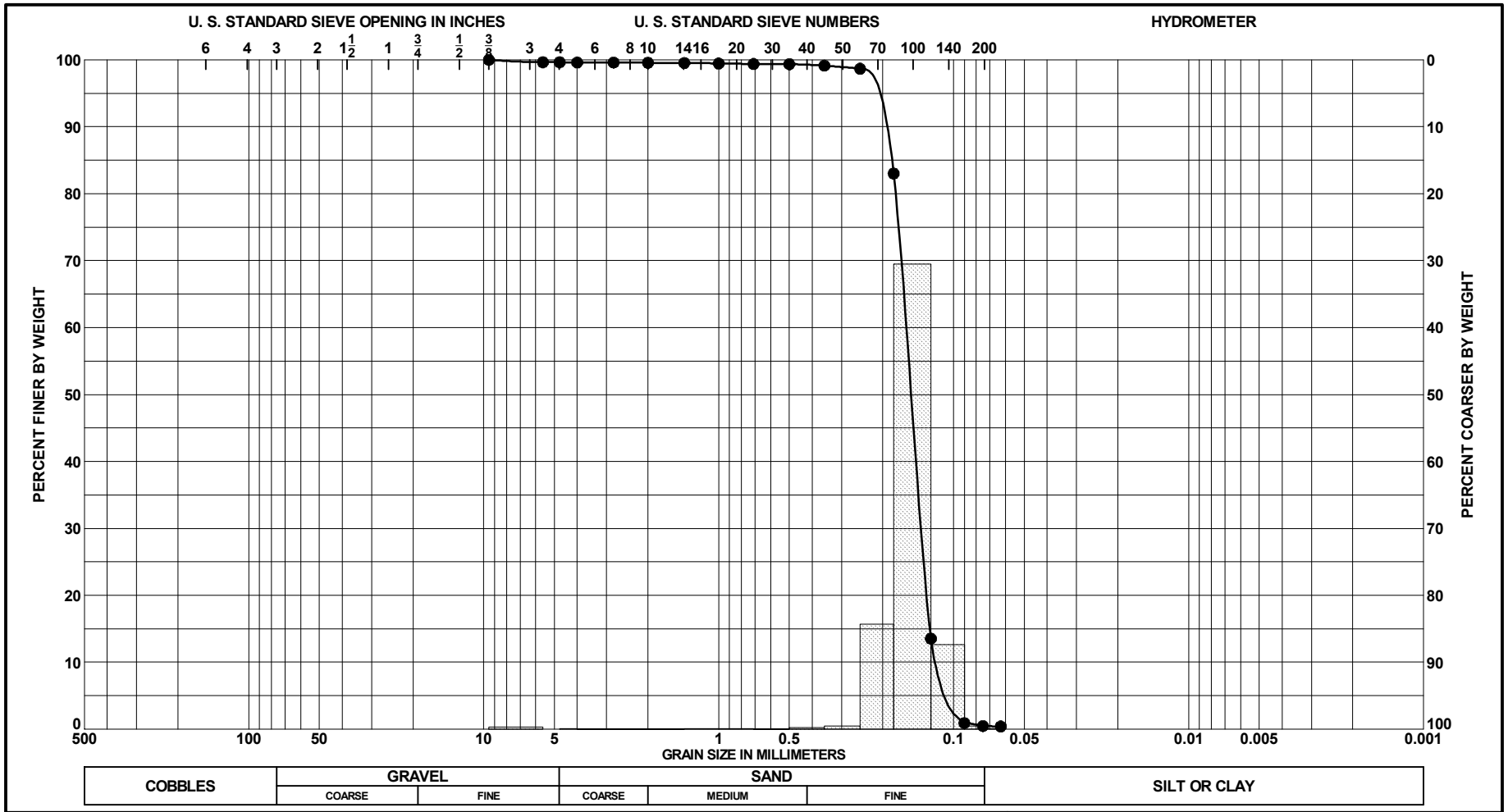


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 4	11.0 to 11.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	16 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium-grained sand-sized								
		shell, trace silt, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-25
BORING ELEV.	-10.6 Ft., NAVD88
DATE	8/12/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

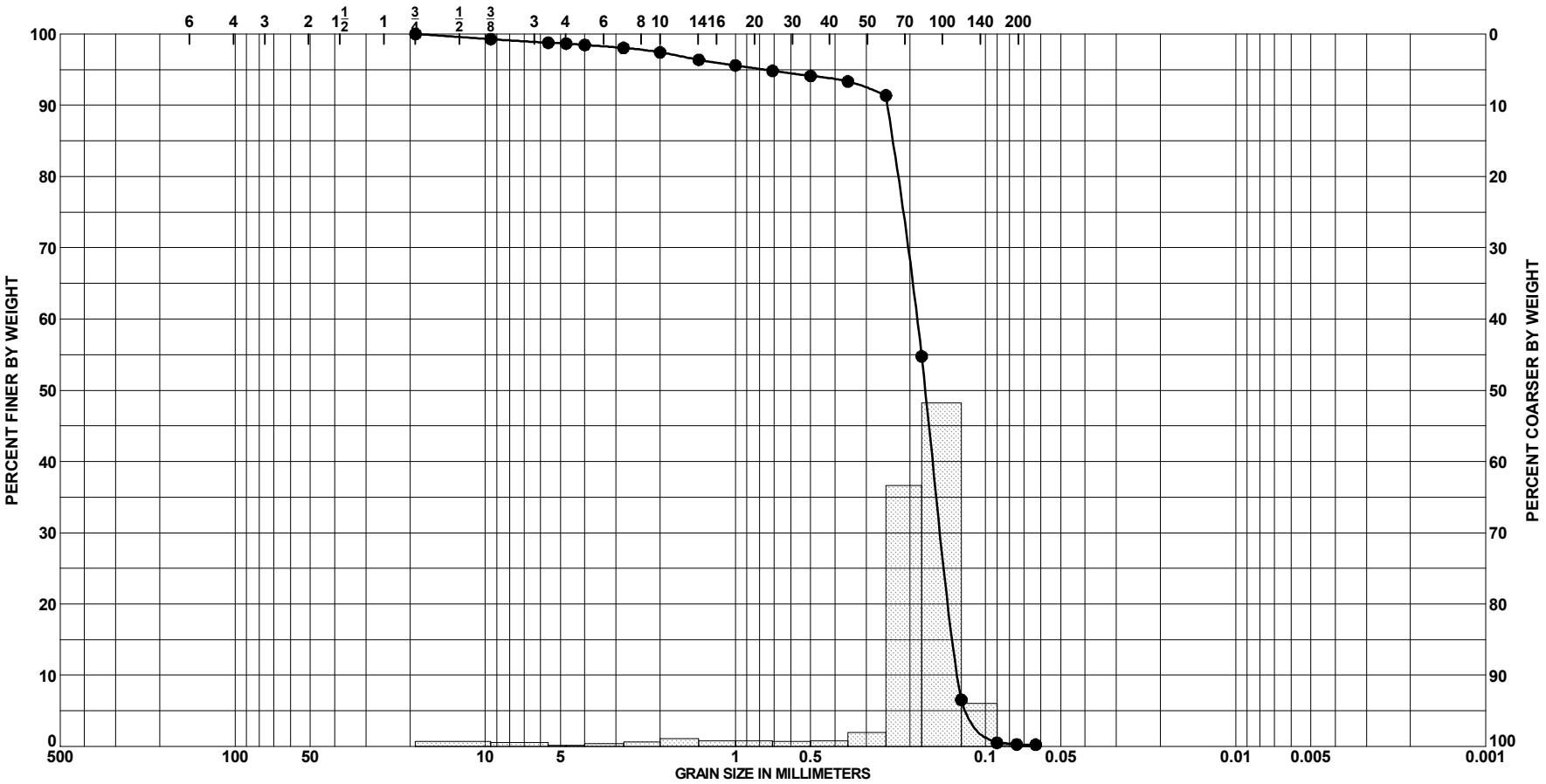


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 5	13.5 to 13.8 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	12 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, white								
		(SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-25
BORING ELEV.	-10.6 Ft., NAVD88
DATE	8/12/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

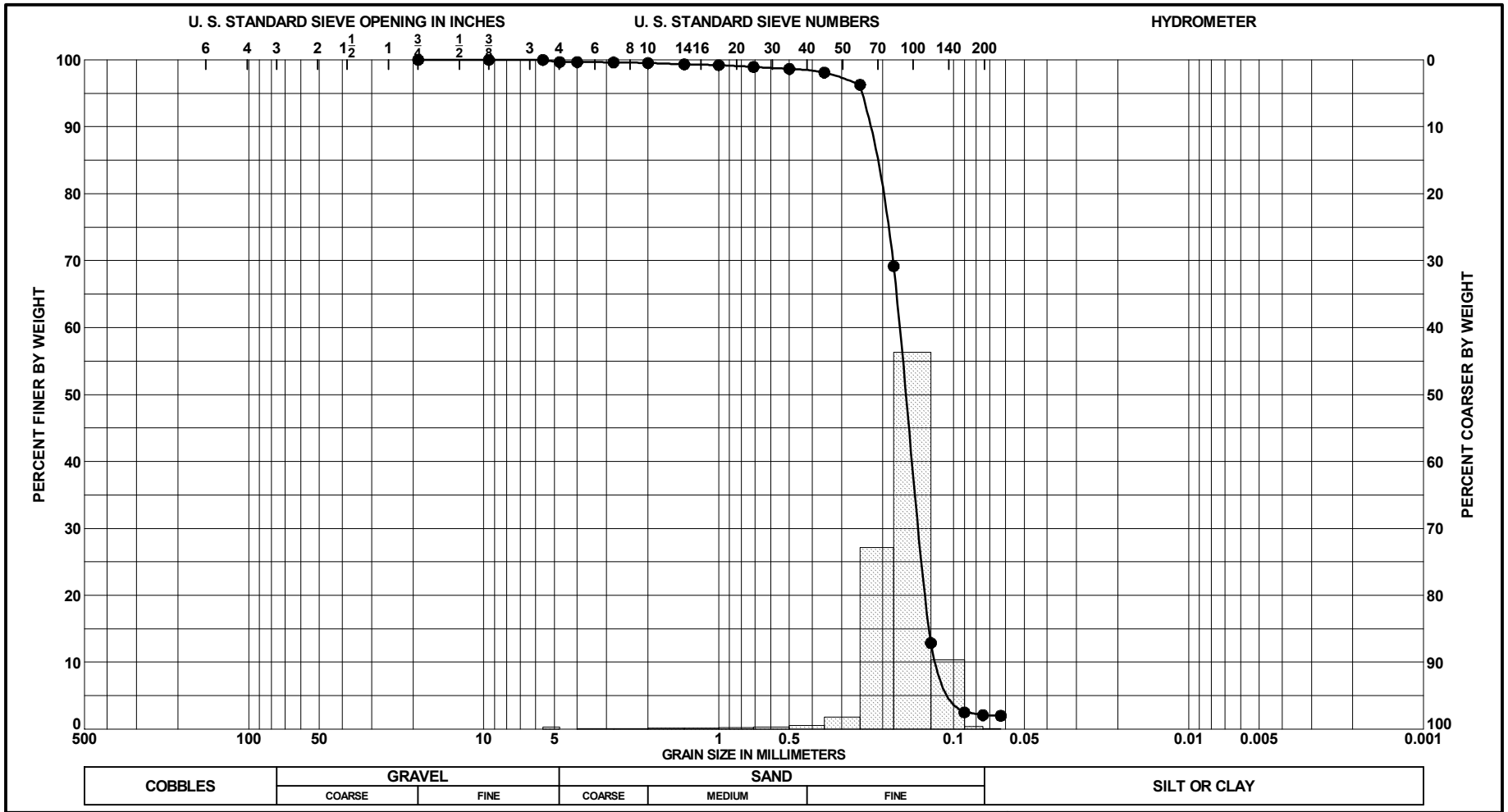


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 1	2.0 to 2.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	17 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium-grained sand-sized								
		shell, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-26
BORING ELEV.	-13.3 Ft., NAVD88
DATE	8/12/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

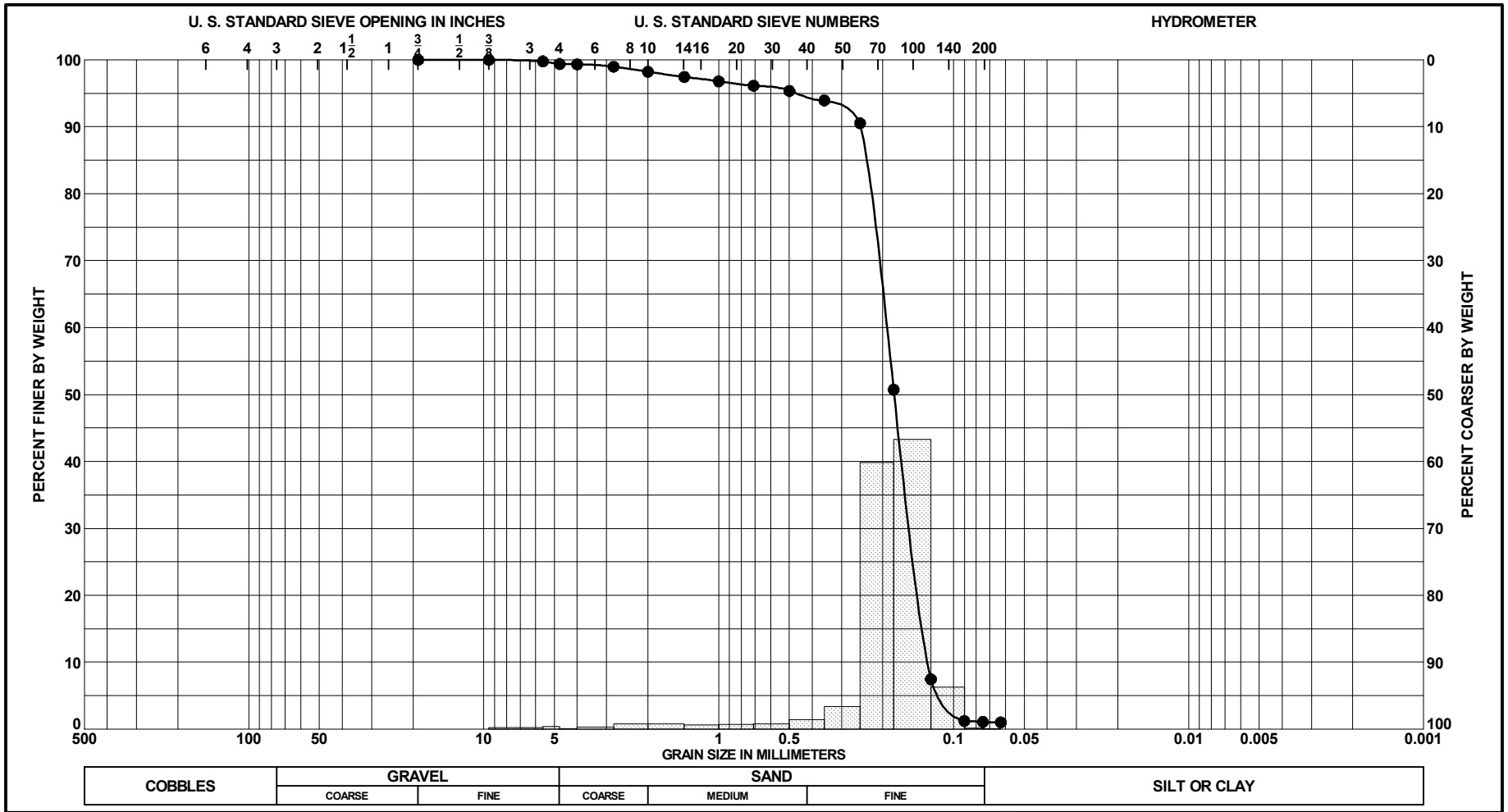


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 2	5.0 to 5.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	6 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-26
BORING ELEV.	-13.3 Ft., NAVD88
DATE	8/12/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

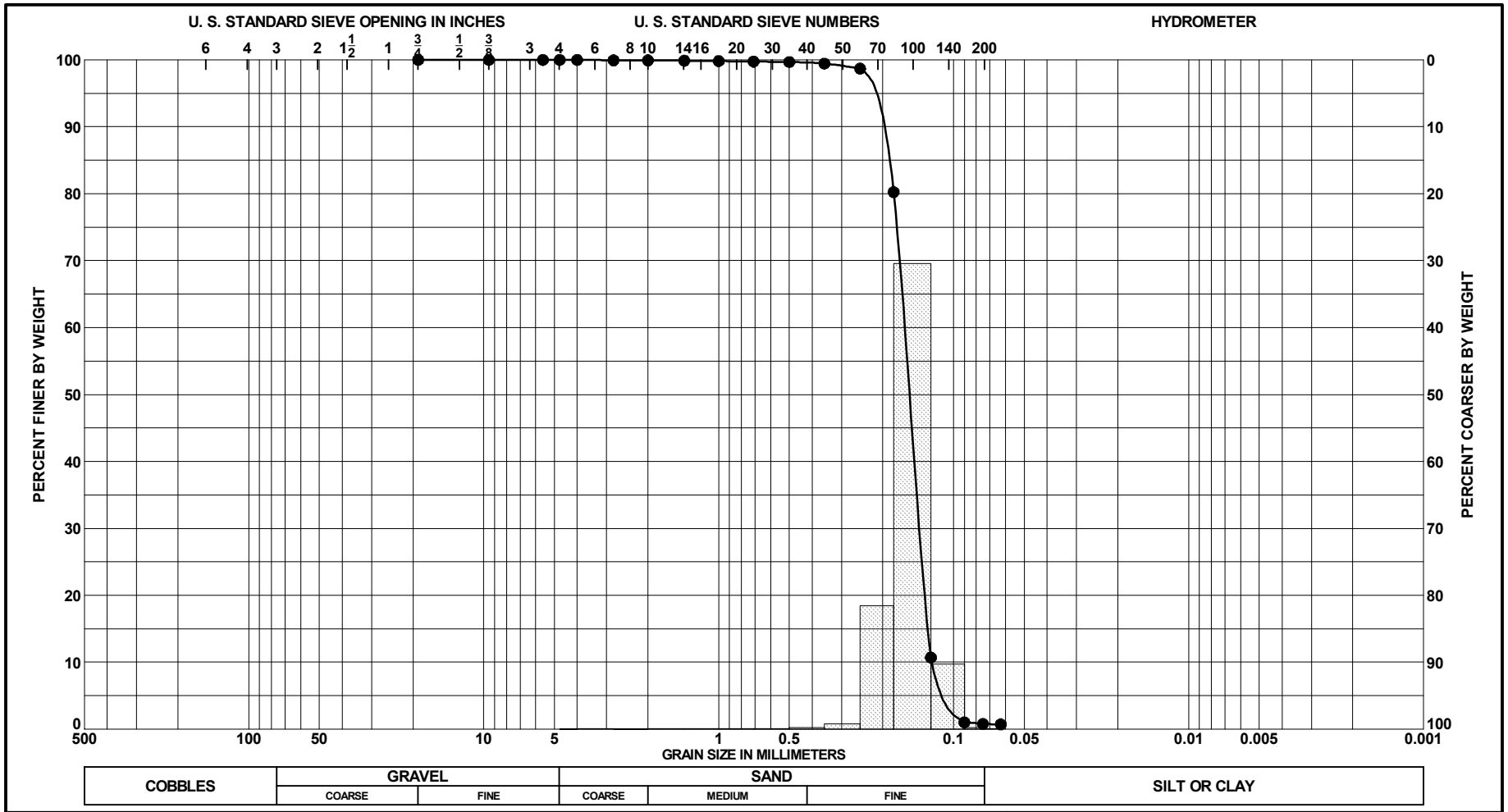


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 3	8.0 to 8.3 Ft.	SAND, poorly-graded, mostly	2.5Y 7/1	15 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium-grained sand-sized								
		shell, trace silt, light gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-26
BORING ELEV.	-13.3 Ft., NAVD88
DATE	8/12/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

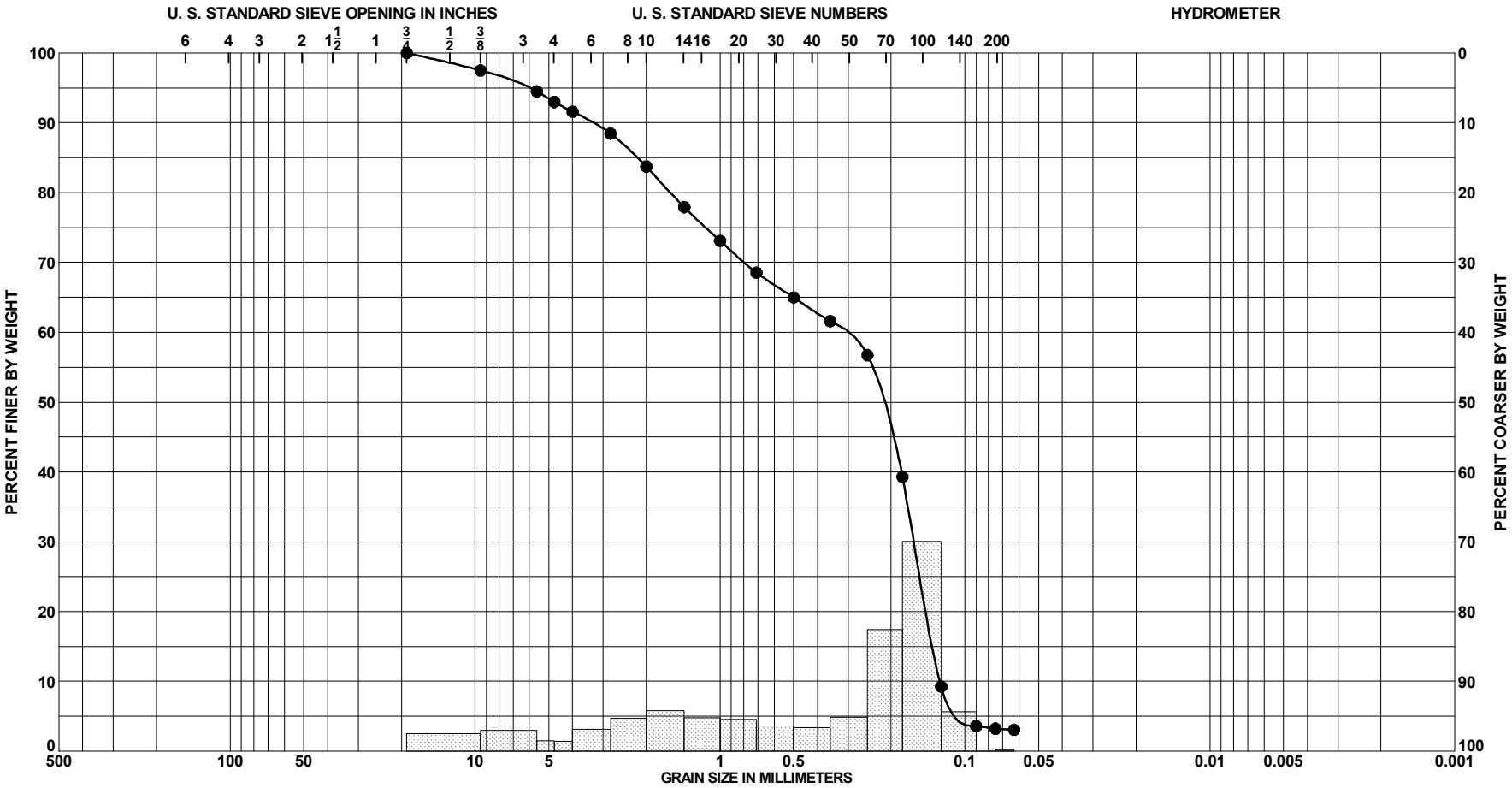


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 4	11.0 to 11.3 Ft.	SAND, poorly-graded, mostly	2.5Y 7/1	8 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, light gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-26
BORING ELEV.	-13.3 Ft., NAVD88
DATE	8/12/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 5	12.5 to 12.8 Ft.	SAND, poorly-graded, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz, trace silt, greenish gray (SP)	10Y 6/1	51 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-26
BORING ELEV.	-13.3 Ft., NAVD88
DATE	8/12/2015

GRADATION CURVES

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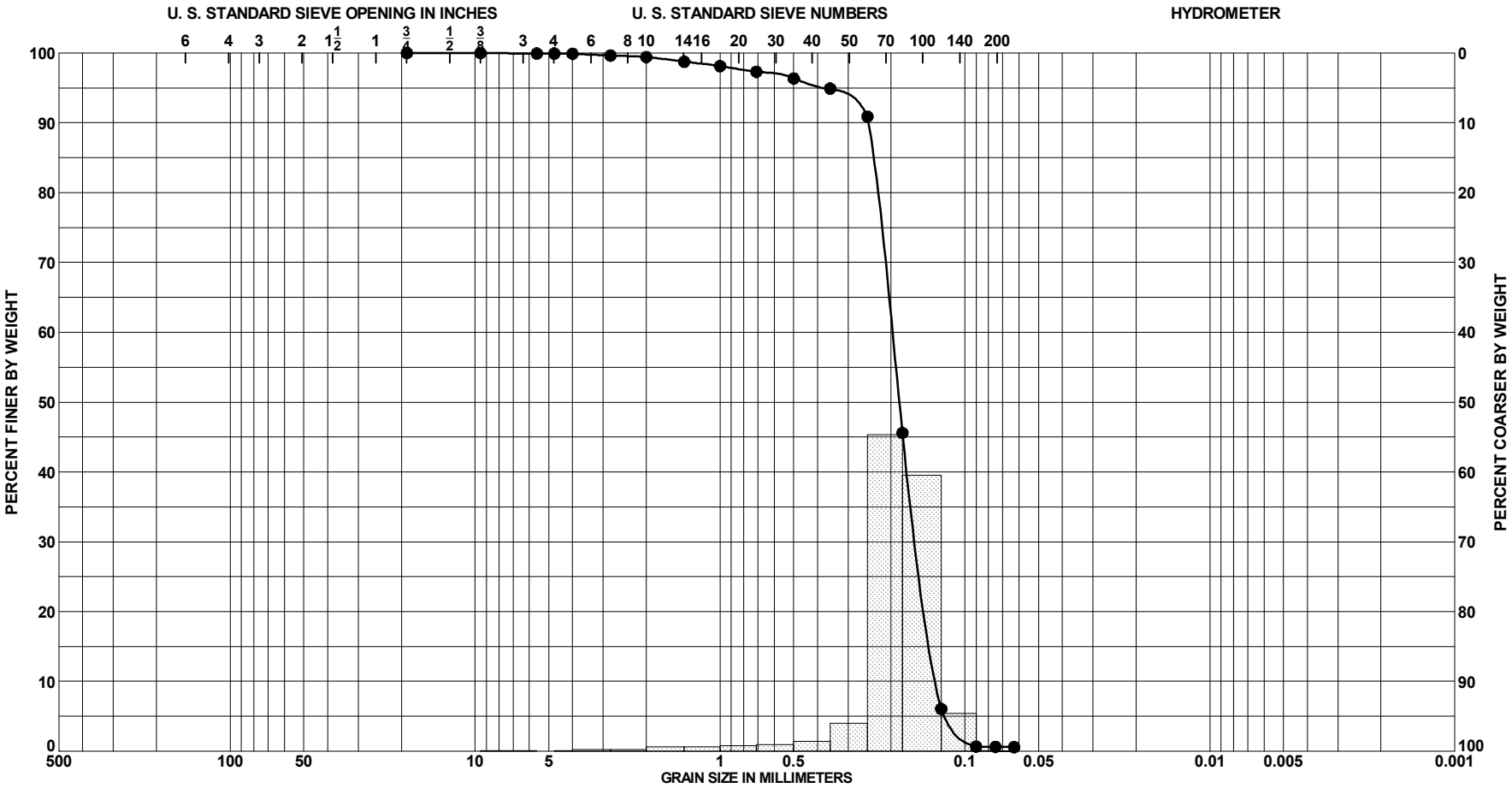
JUN 02

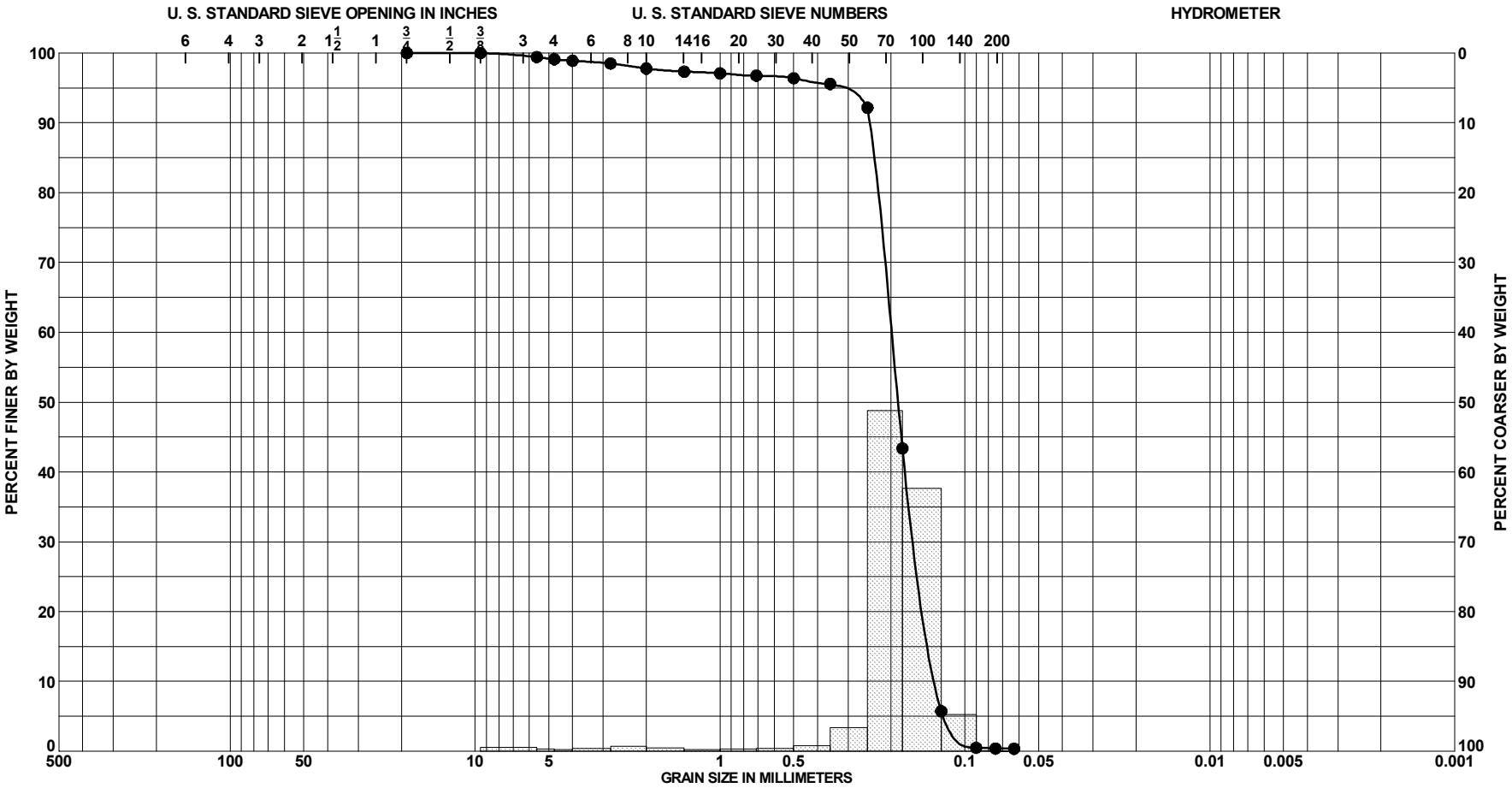


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 1	3.0 to 3.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	18 (est)						
		fine-grained sand-sized quartz, little								
		fine-grained sand-sized shell, trace								
		silt, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-27
BORING ELEV.	-12.3 Ft., NAVD88
DATE	8/12/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

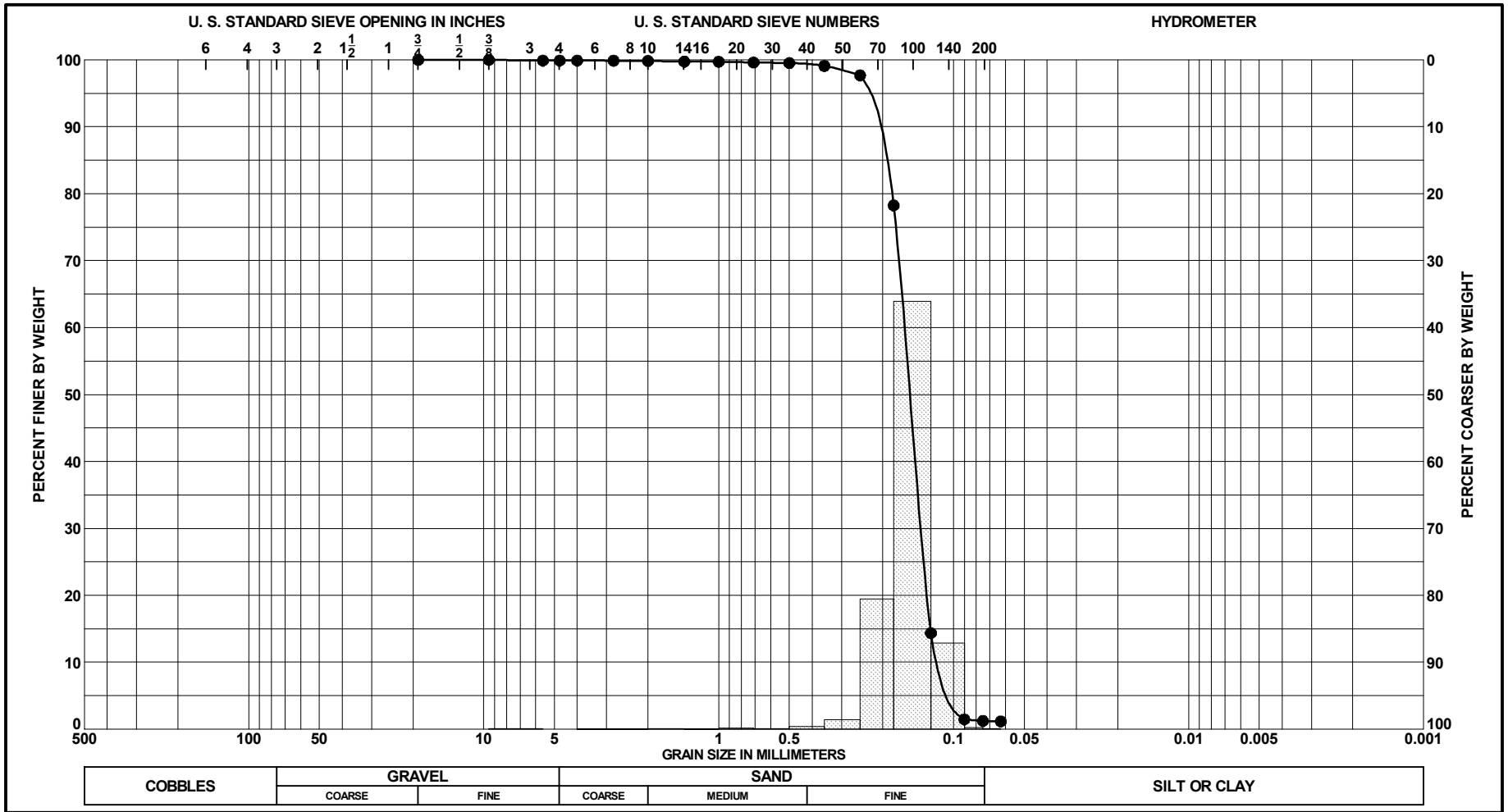


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 2	6.0 to 6.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	22 (est)						
		fine-grained sand-sized quartz, little								
		fine-grained sand-sized shell, white								
		(SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-27
BORING ELEV.	-12.3 Ft., NAVD88
DATE	8/12/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 3	9.0 to 9.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	11 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-27
BORING ELEV.	-12.3 Ft., NAVD88
DATE	8/12/2015

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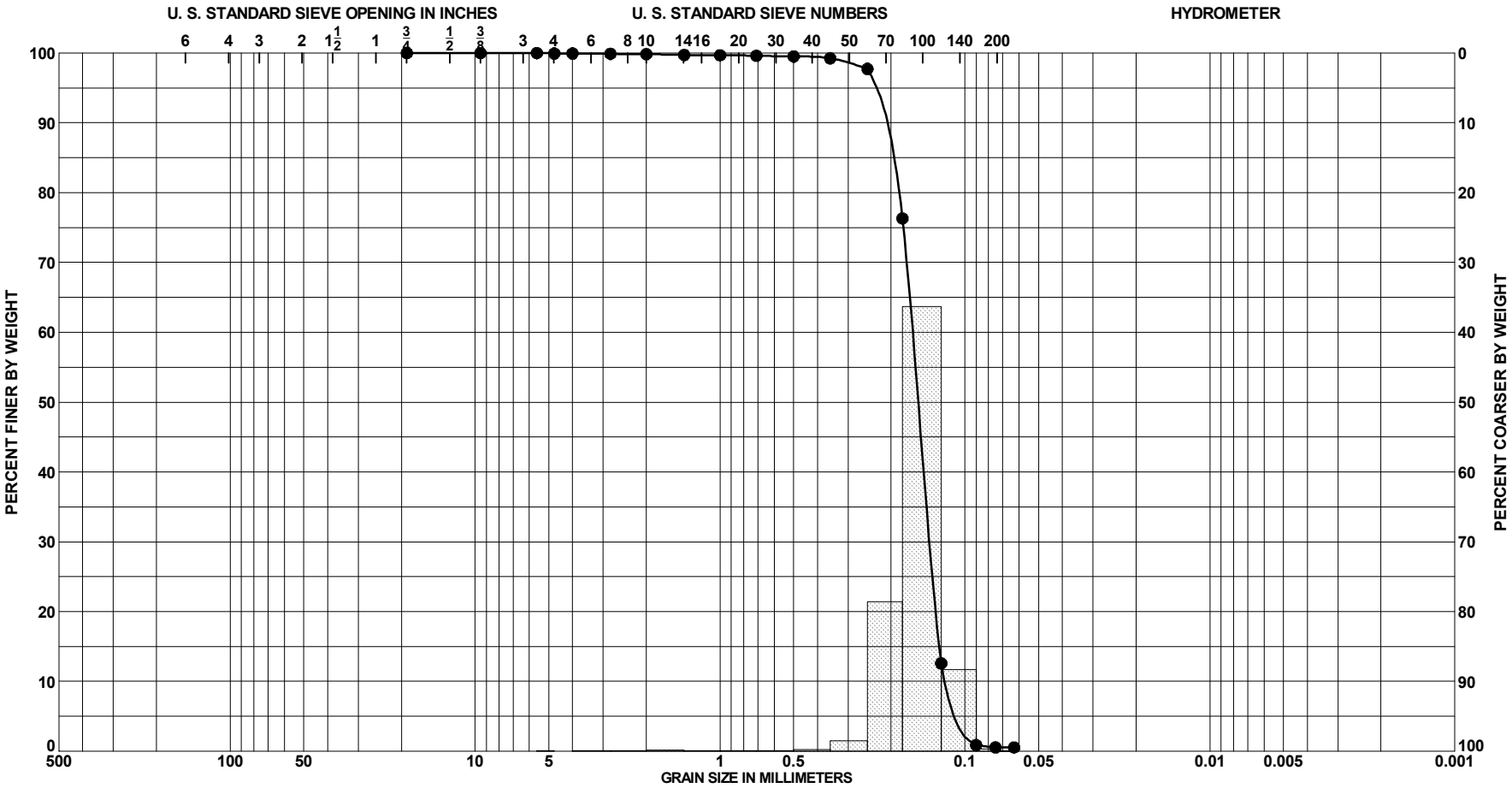
SAJ FORM 2087
JUN 02

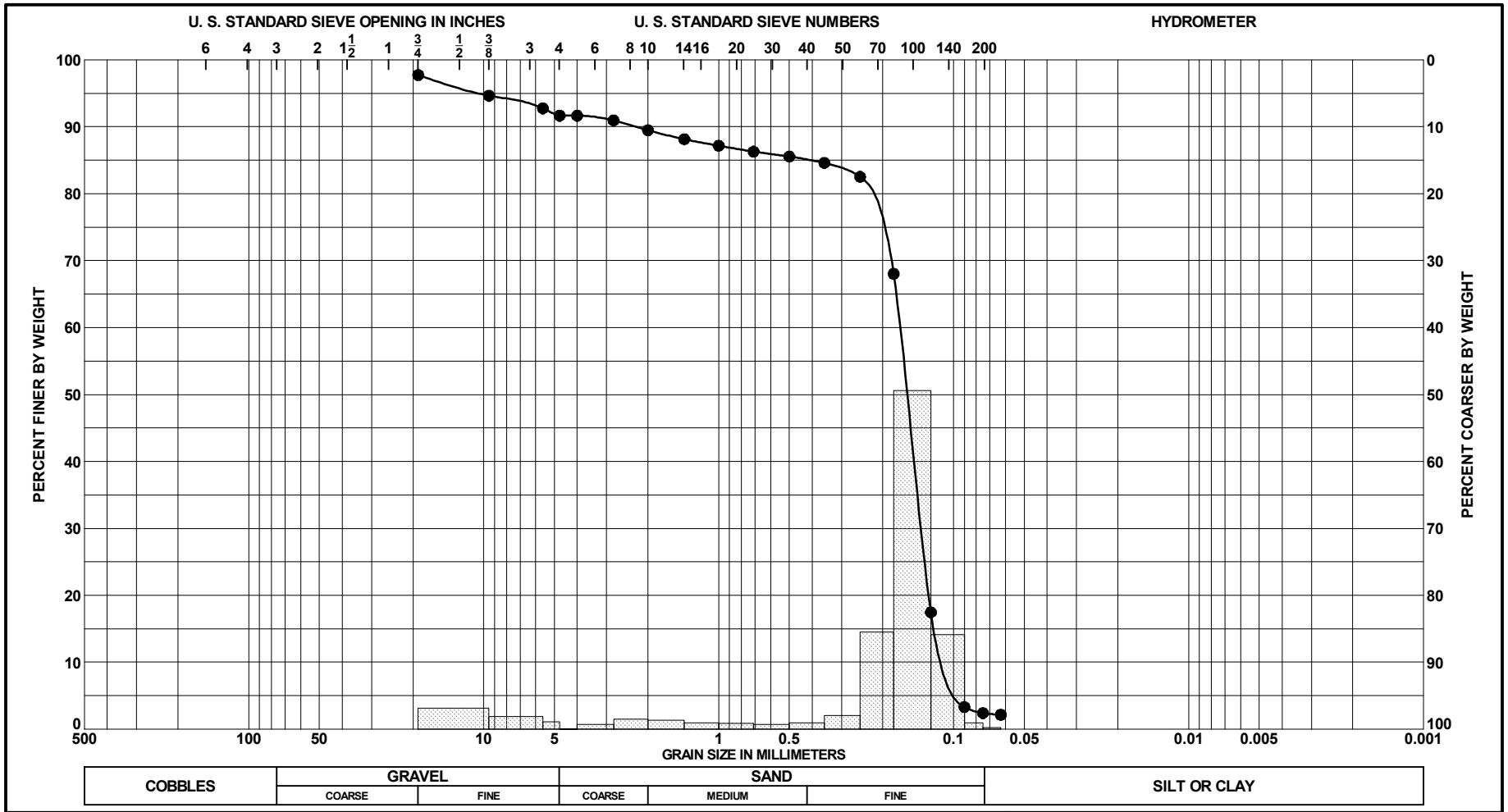


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 4	12.0 to 12.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt, white (SP)	2.5Y 8/1	4/4 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-27
BORING ELEV.	-12.3 Ft., NAVD88
DATE	8/12/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

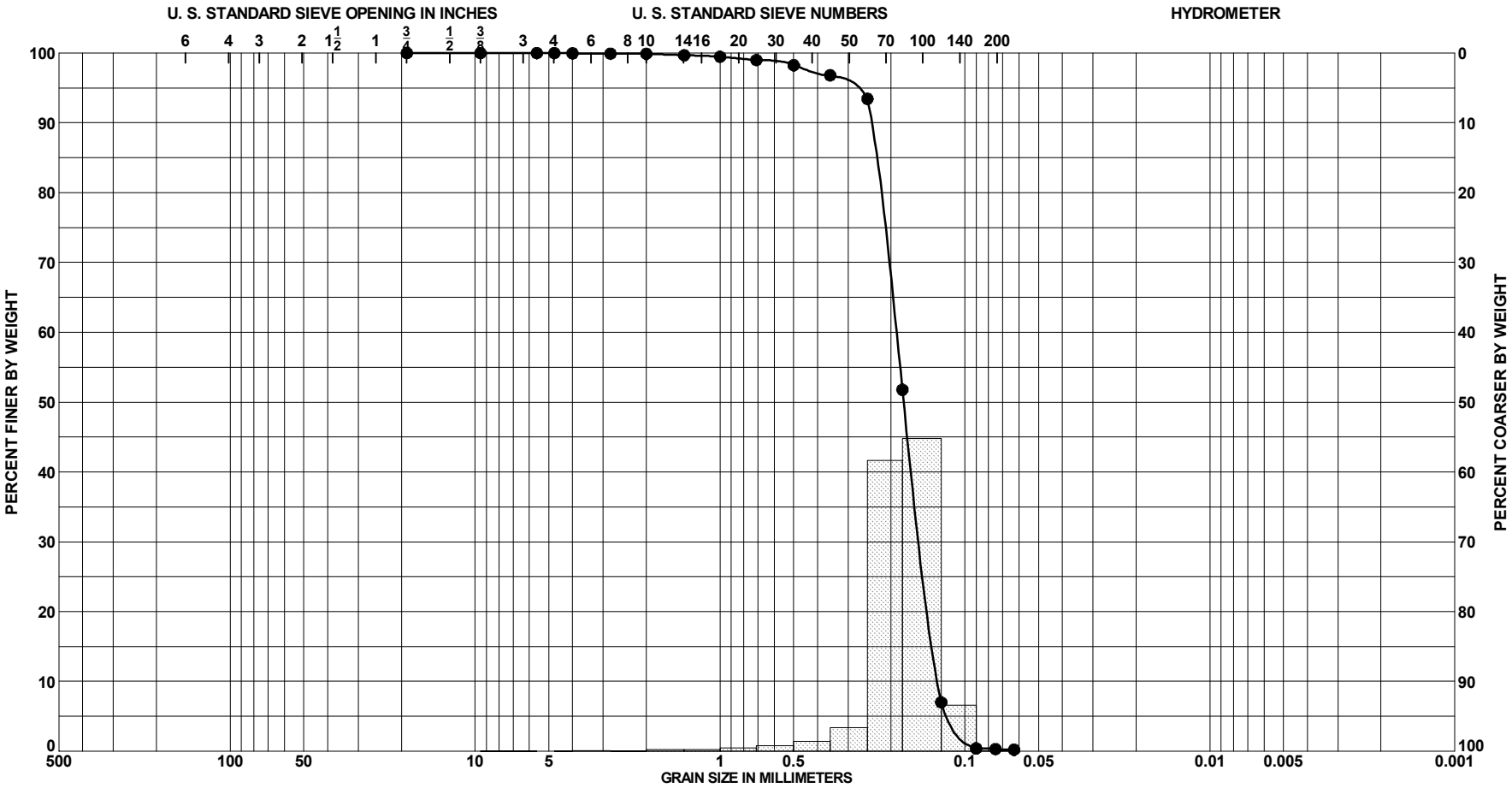


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 5	15.0 to 15.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, trace silt, white (SP)	2.5Y 8/1	24 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-27
BORING ELEV.	-12.3 Ft., NAVD88
DATE	8/12/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

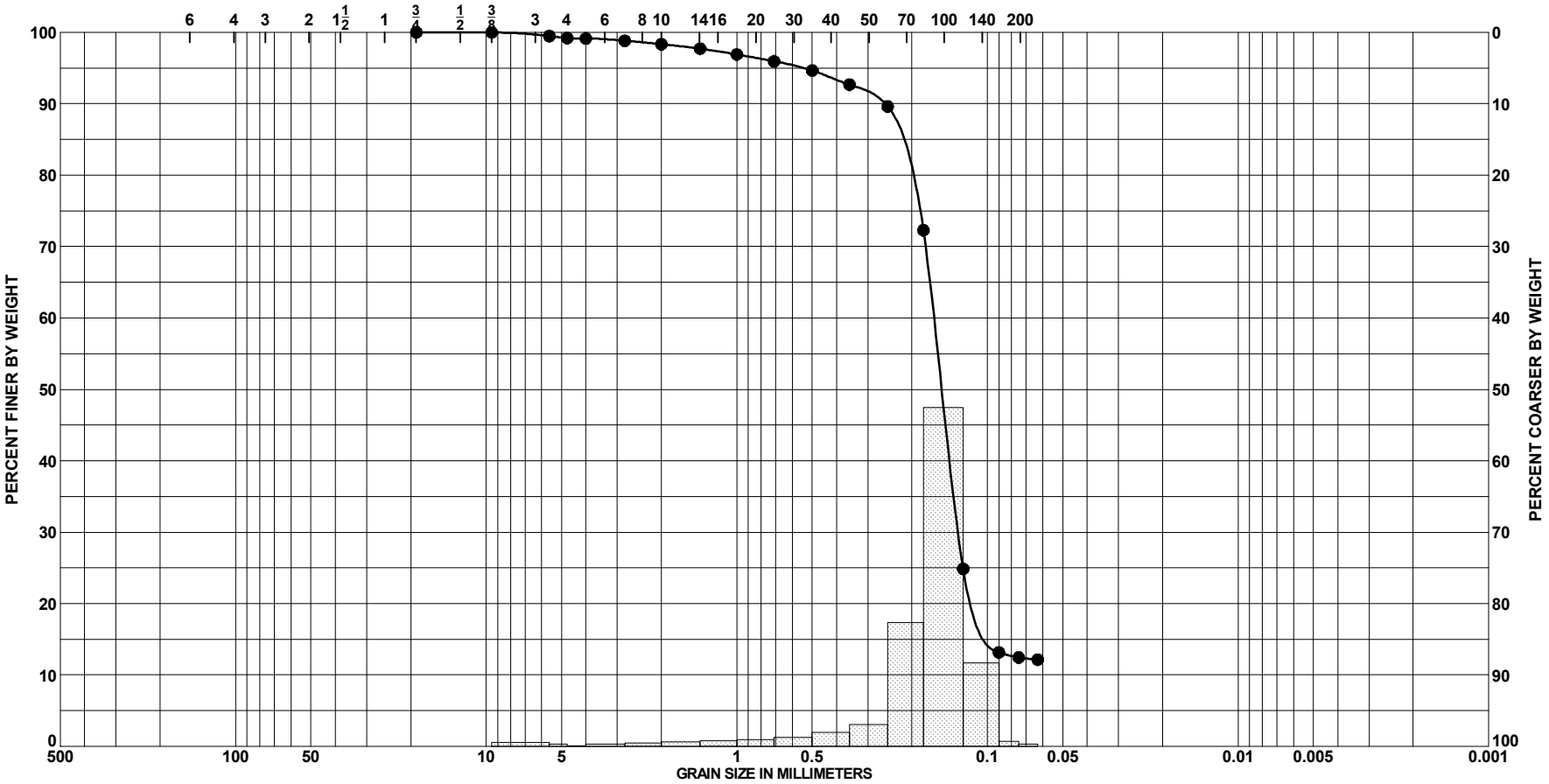


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 1	2.5 to 2.8 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	15 (est)						
		fine-grained sand-sized quartz, little								
		fine-grained sand-sized shell, white								
		(SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-28
BORING ELEV.	-14.0 Ft., NAVD88
DATE	8/12/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

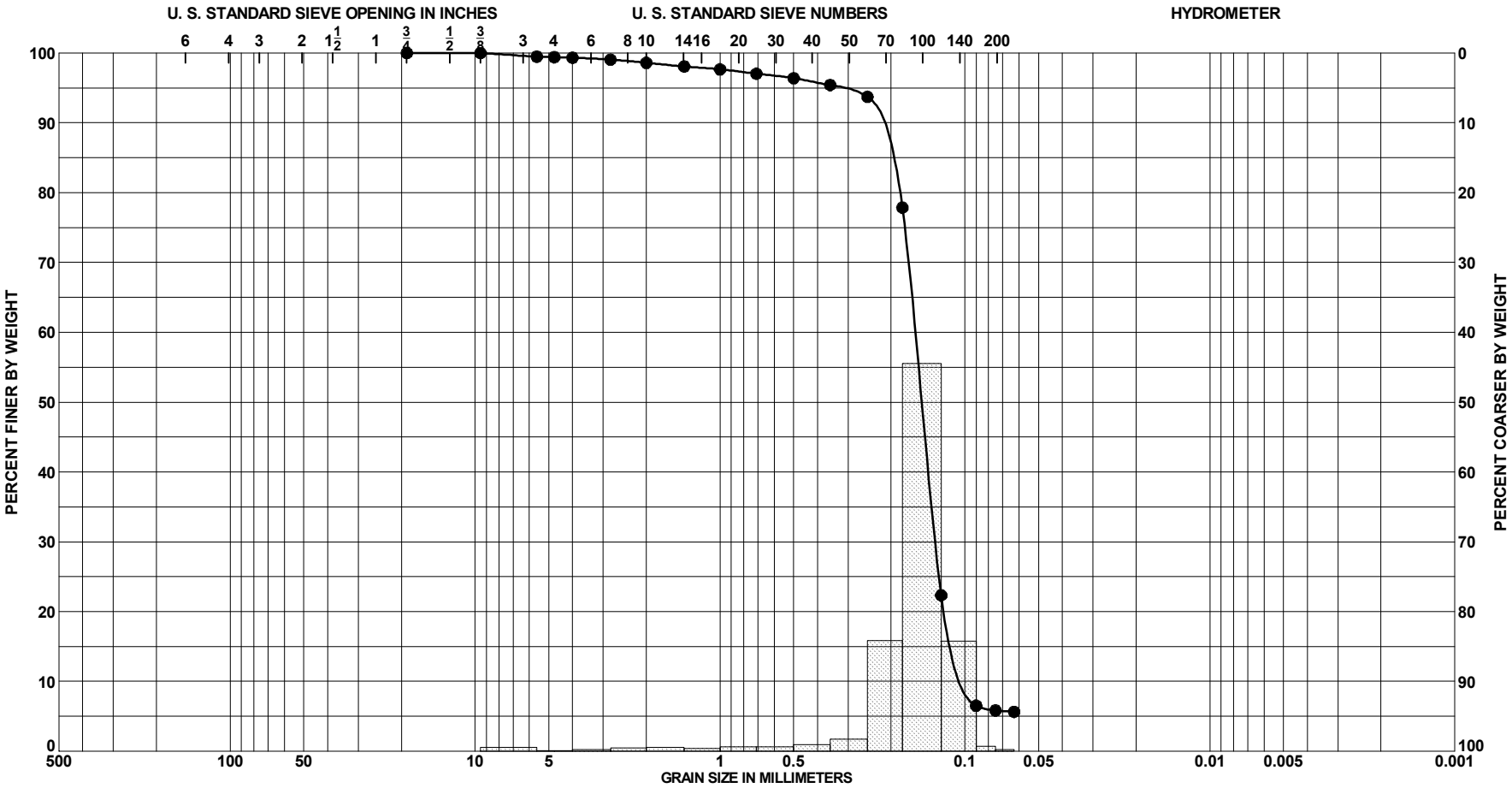


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 2	5.0 to 5.3 Ft.	SAND, silty, mostly fine-grained sand sized quartz, little fine to medium-grained sand-sized shell, little silt, light brownish gray (SM)	2.5Y 6/2	16 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-28
BORING ELEV.	-14.0 Ft., NAVD88
DATE	8/12/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

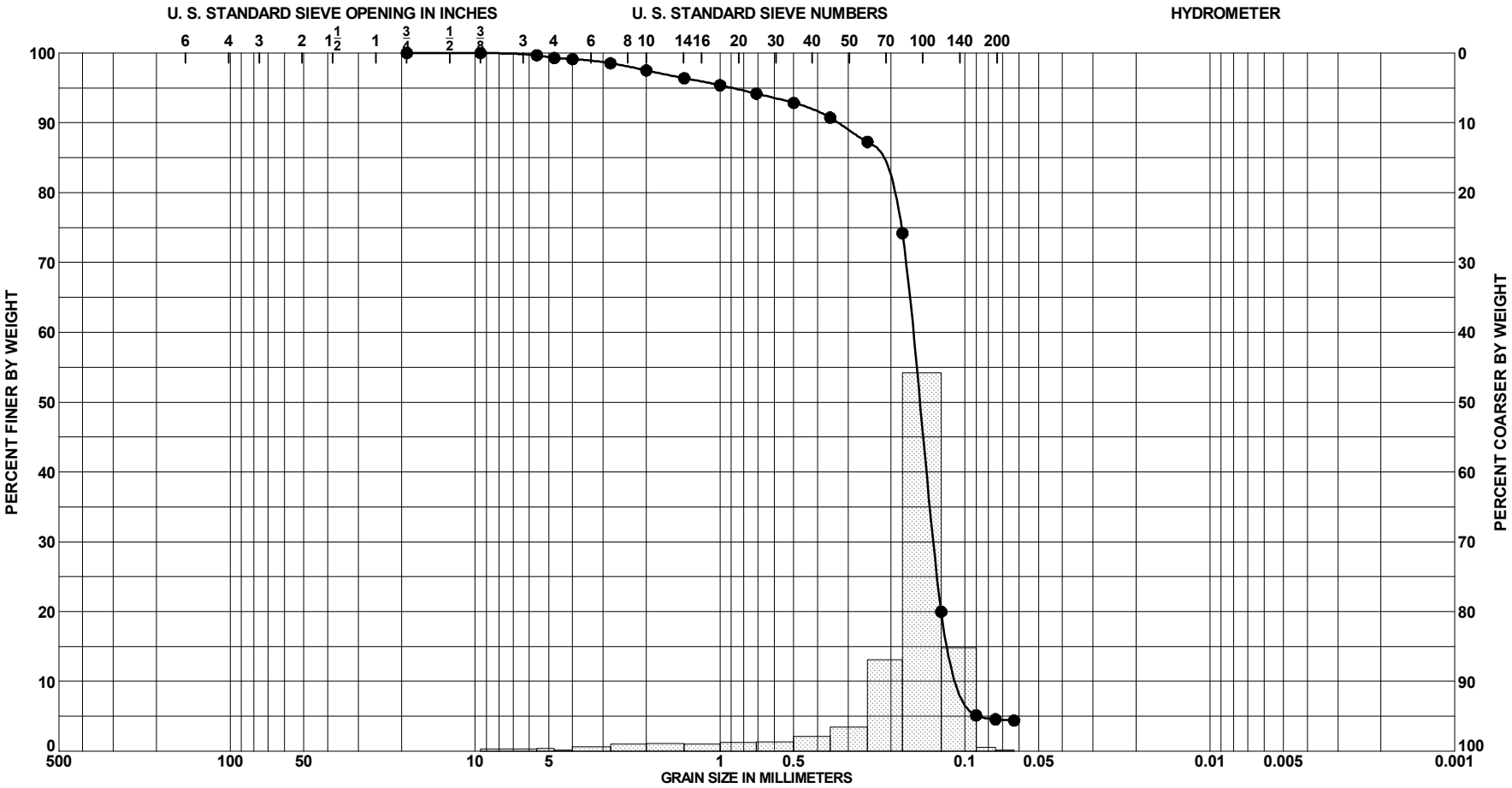


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 3	8.0 to 8.3 Ft.	SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell, few silt, white (SP-SM)	2.5Y 8/1	14 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-28
BORING ELEV.	-14.0 Ft., NAVD88
DATE	8/12/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

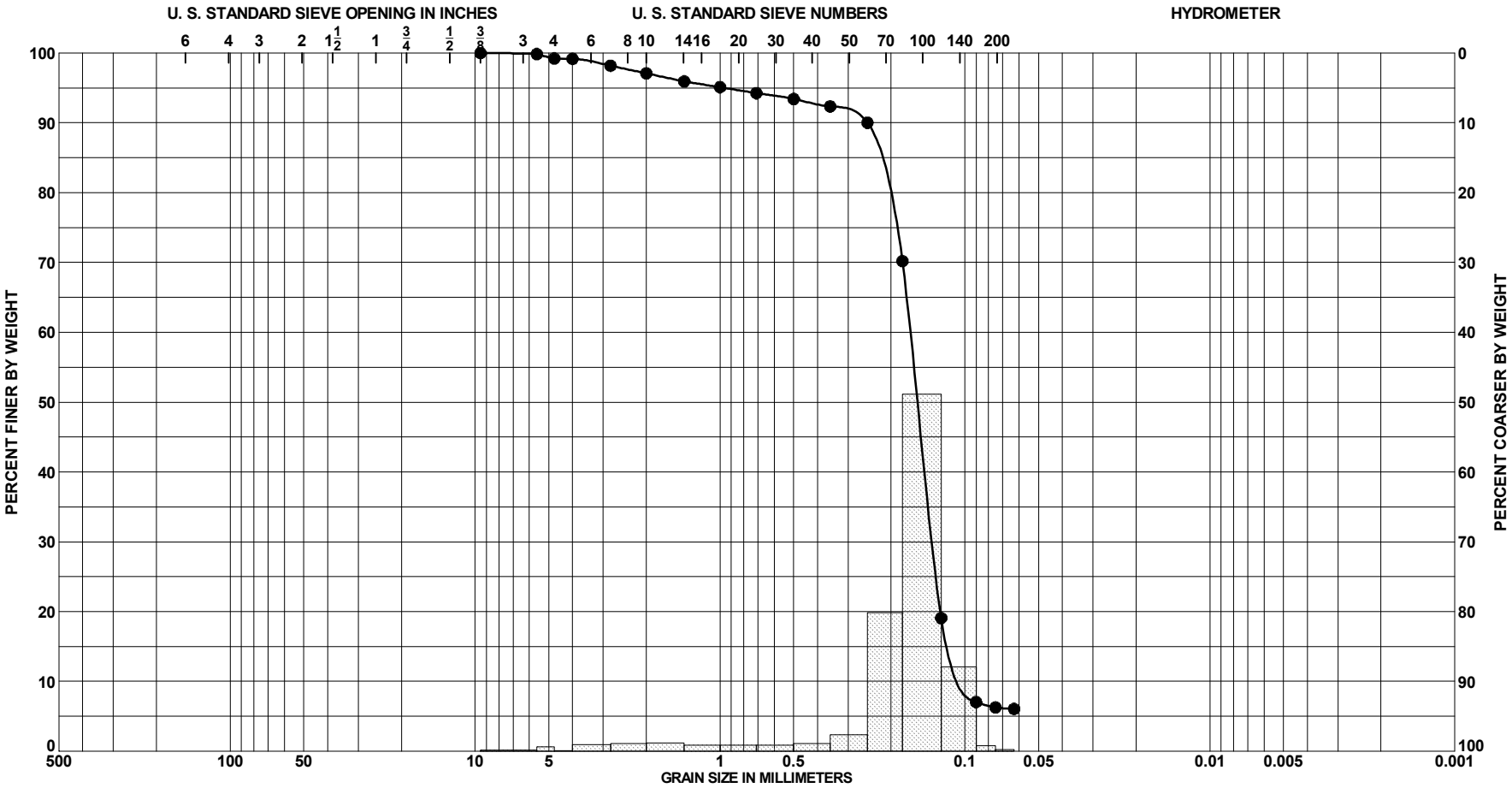


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 4	11.0 to 11.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	14 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium-grained sand-sized								
		shell, trace silt, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-28
BORING ELEV.	-14.0 Ft., NAVD88
DATE	8/12/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

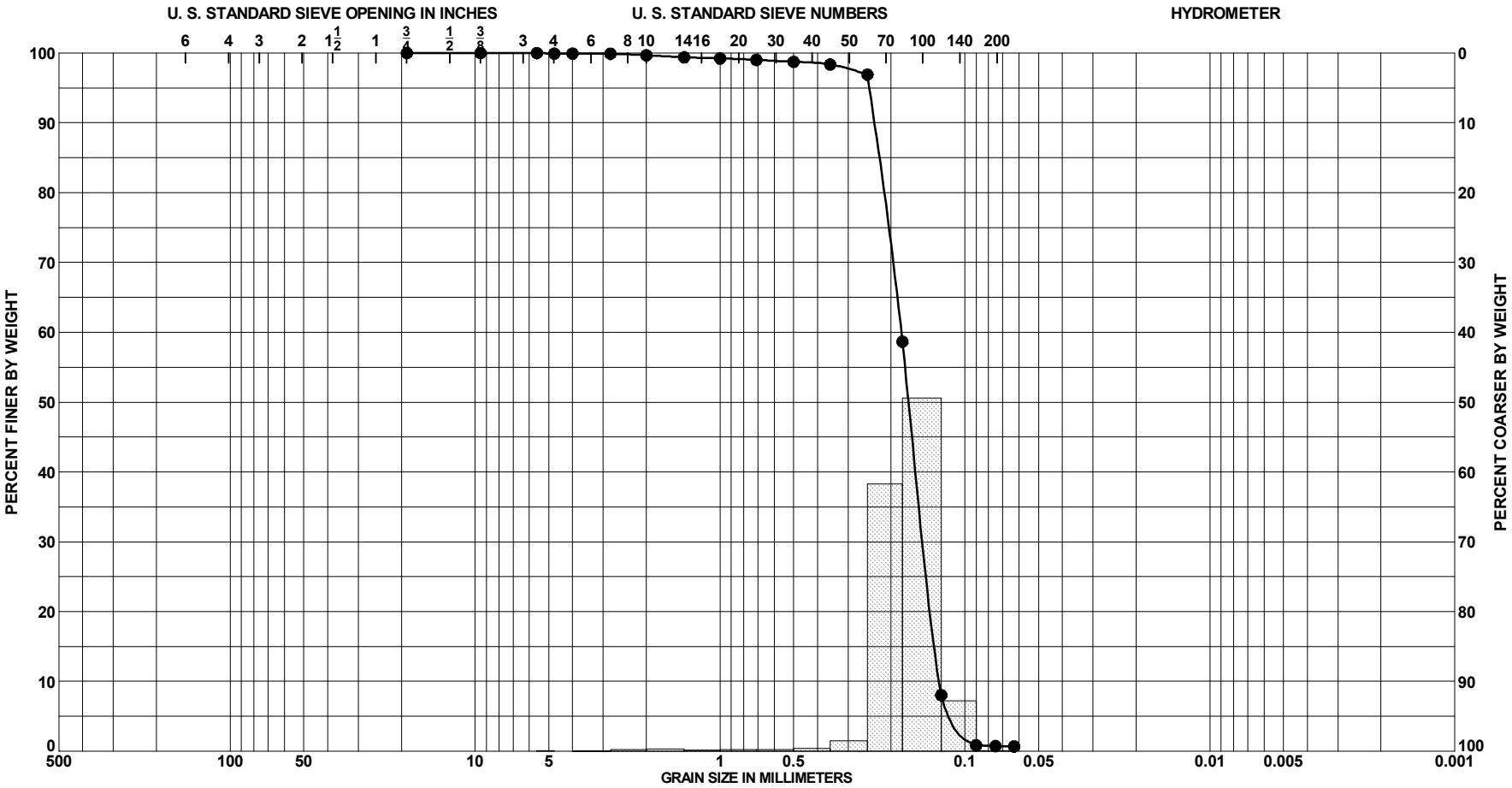


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 5	14.0 to 14.3 Ft.	SAND, poorly-graded with silt, mostly	2.5Y 8/1	15 (est)						
		fine-grained sand-sized quartz, little								
		fine to medium-grained sand-sized								
		shell, few silt, white (SP-SM)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-28
BORING ELEV.	-14.0 Ft., NAVD88
DATE	8/12/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

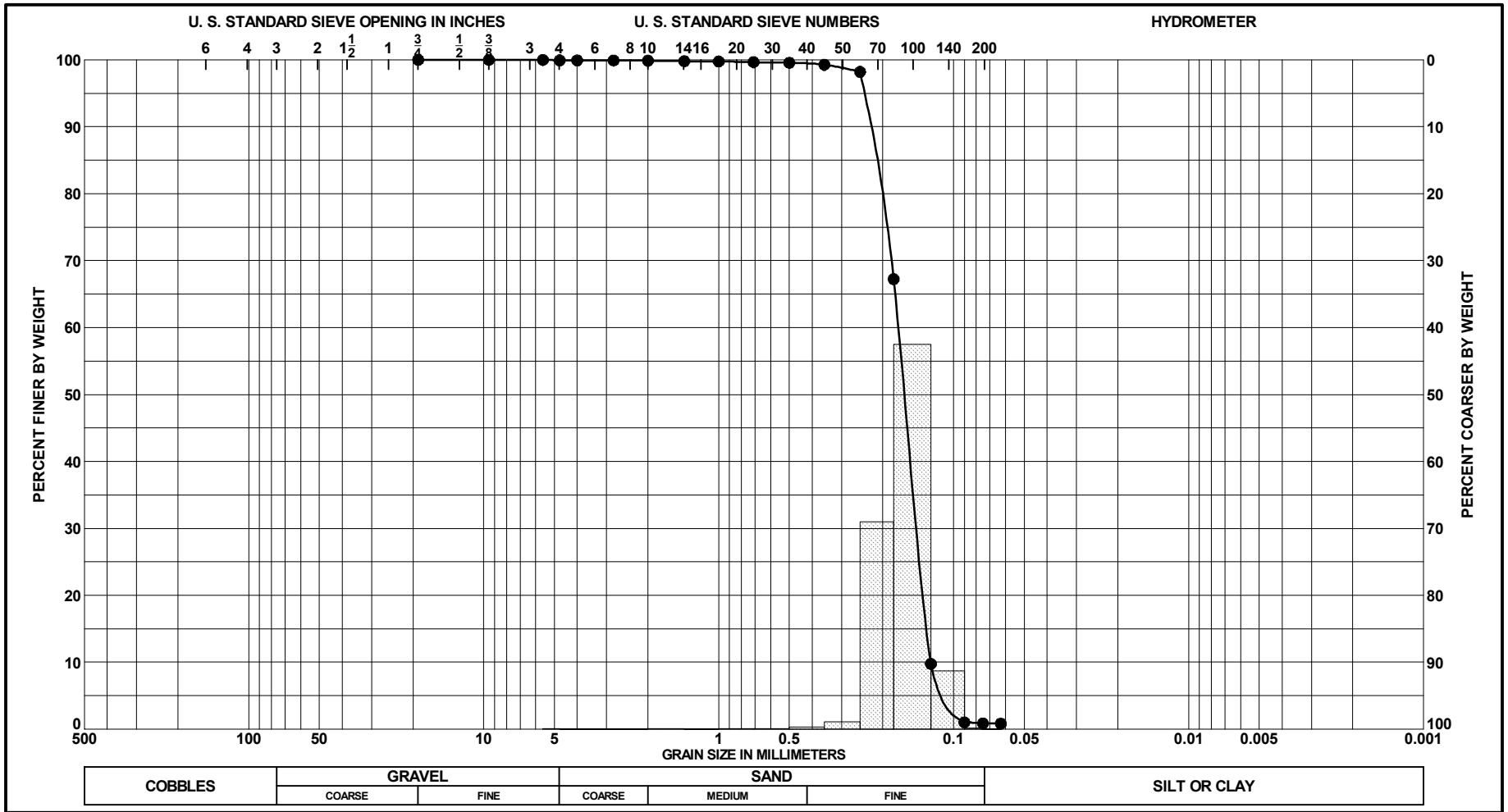


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3 %	G_s	Org %	w_n	LL	PL	PI
● 1	3.0 to 3.3 Ft.	SAND, poorly-graded, mostly	2.5Y 8/1	10 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, white (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-29
BORING ELEV.	-12.9 Ft., NAVD88
DATE	8/12/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

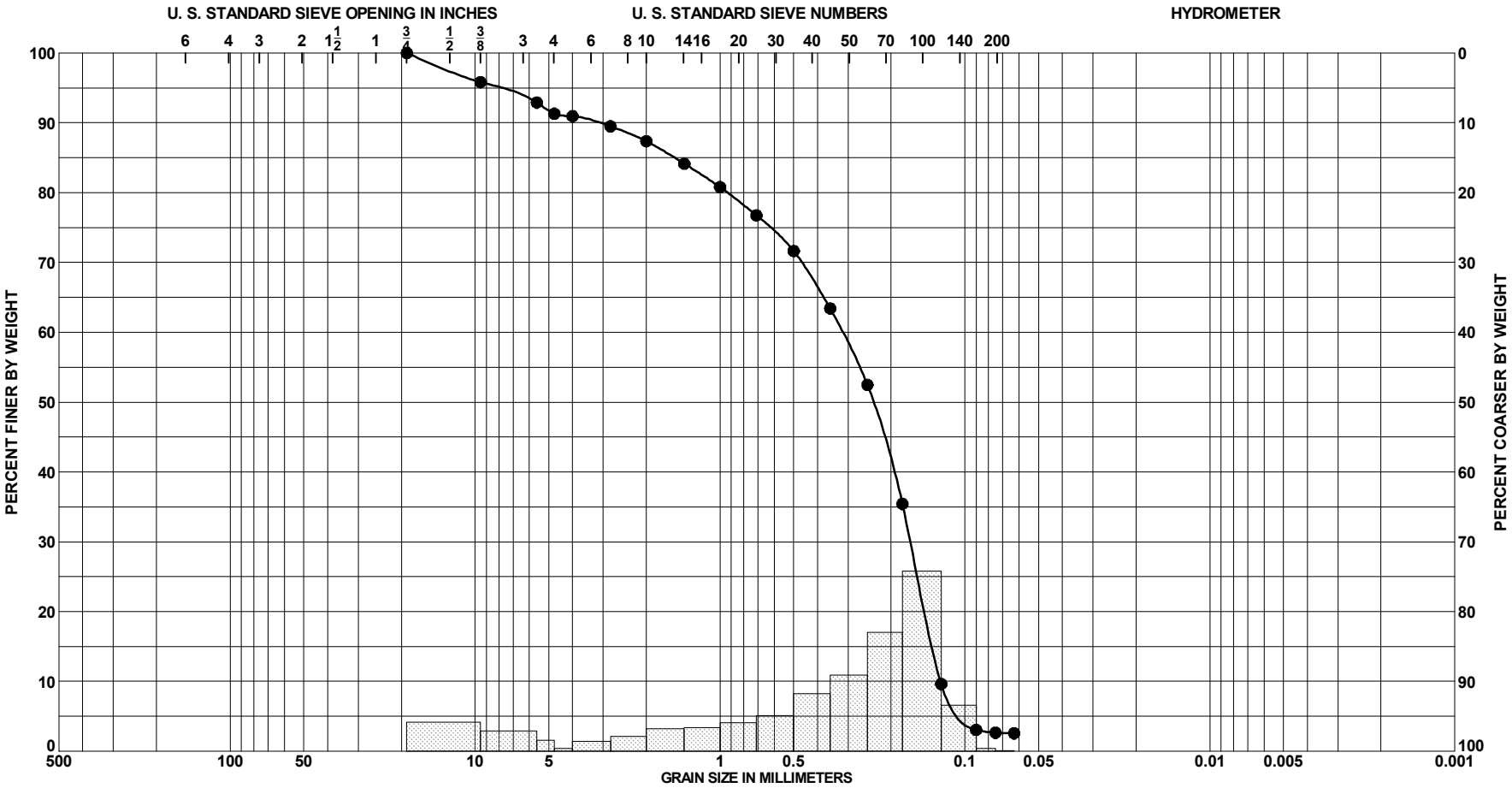


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 2	6.0 to 6.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt, white (SP)	2.5Y 8/1	4 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-29
BORING ELEV.	-12.9 Ft., NAVD88
DATE	8/12/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

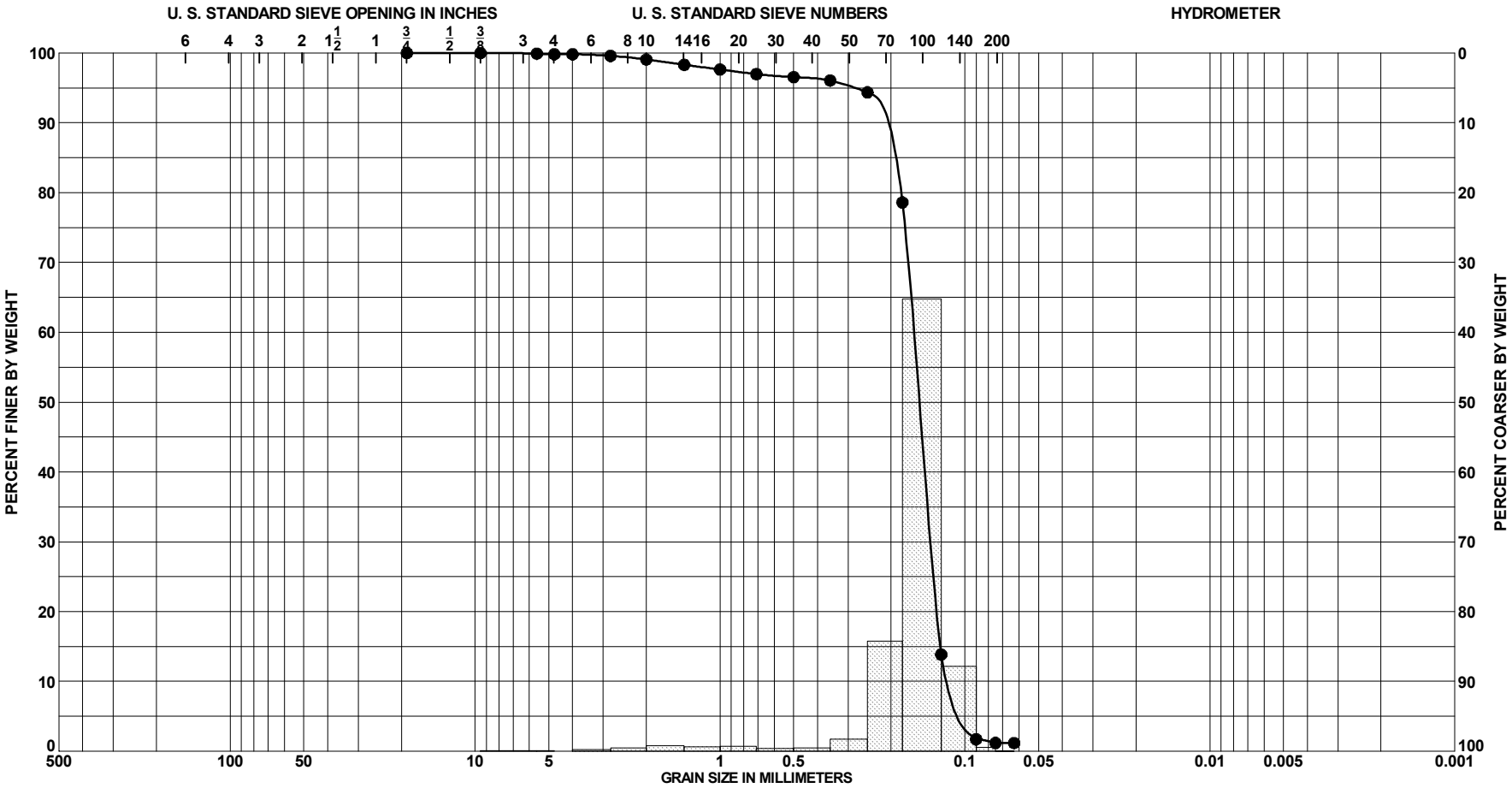


Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 3	9.0 to 9.3 Ft.	SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt, gray (SP)	2.5Y 6/1	39 (est)						

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-29
BORING ELEV.	-12.9 Ft., NAVD88
DATE	8/12/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02



Sample No.	Depth	Classification	Munsell	Visual Shell/ CO_3, %	G_s	Org %	w_n	LL	PL	PI
● 4	12.0 to 12.3 Ft.	SAND, poorly-graded, mostly	2.5Y 7/1	10 (est)						
		fine-grained sand-sized quartz, few								
		fine-grained sand-sized shell, trace								
		silt, light gray (SP)								

PROJECT	Pinellas County SPP
	Egmont Shoal Borrow Area
BORING NO.	VB-EGSH2015-29
BORING ELEV.	-12.9 Ft., NAVD88
DATE	8/12/2015

GRADATION CURVES

SAJ FORM 2087
JUN 02

8.3 GRANULARMETRIC REPORTS: SAND SOURCE

Applicable granulometric reports are presented on the following pages.

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: CB-EC00-10 @ 0 ft

Analysis Date:

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
413,070	1,194,540	State Plane, FLW (U.S. Ft.)	-10.0 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW		#200 - 1.30 #230 - 1.10			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	2.70	2.70
#5	-2.00	4.00	0.80	3.50
#7	-1.50	2.80	0.20	3.70
#10	-1.00	2.00	1.00	4.70
#14	-0.50	1.40	0.80	5.50
#18	0.00	1.00	0.80	6.30
#25	0.50	0.71	0.60	6.90
#35	1.00	0.50	0.70	7.60
#45	1.50	0.36	0.80	8.40
#60	2.00	0.25	1.70	10.10
#80	2.50	0.18	18.20	28.30
#120	3.00	0.13	57.50	85.80
#170	3.50	0.09	12.70	98.50
#200	3.75	0.08	0.20	98.70
#230	4.00	0.06	0.20	98.90

SAND, poorly-graded

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.36	2.98	2.91	2.69	2.41	2.16	-0.81

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.39	0.19	2.69	0.15	1.16	-3.05	11.89

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: CB-EC00-10 @ 6.75 ft

Analysis Date:

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
413,070	1,194,540	State Plane, FLW (U.S. Ft.)	-16.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 2.45 #230 - 1.90			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	10.00	10.00
#5	-2.00	4.00	1.50	11.50
#7	-1.50	2.80	1.70	13.20
#10	-1.00	2.00	1.80	15.00
#14	-0.50	1.40	1.00	16.00
#18	0.00	1.00	0.70	16.70
#25	0.50	0.71	0.50	17.20
#35	1.00	0.50	0.50	17.70
#45	1.50	0.36	0.70	18.40
#60	2.00	0.25	1.10	19.50
#80	2.50	0.18	8.80	28.30
#120	3.00	0.13	51.60	79.90
#170	3.50	0.09	17.10	97.00
#200	3.75	0.08	0.55	97.55
#230	4.00	0.06	0.55	98.10

SAND, poorly-graded

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.44	3.12	2.95	2.71	2.31	-0.50	-3.25

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.93	0.26	2.71	0.15	1.22	-1.06	4.63

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: CB-EC00-10 @ 9.7 ft

Analysis Date:

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
413,070	1,194,540	State Plane, FLW (U.S. Ft.)	-19.7 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 1.60 #230 - 1.20			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	8.30	8.30
#5	-2.00	4.00	0.70	9.00
#7	-1.50	2.80	0.40	9.40
#10	-1.00	2.00	1.00	10.40
#14	-0.50	1.40	0.70	11.10
#18	0.00	1.00	0.60	11.70
#25	0.50	0.71	0.40	12.10
#35	1.00	0.50	0.40	12.50
#45	1.50	0.36	0.60	13.10
#60	2.00	0.25	0.90	14.00
#80	2.50	0.18	10.10	24.10
#120	3.00	0.13	55.60	79.70
#170	3.50	0.09	18.30	98.00
#200	3.75	0.08	0.40	98.40
#230	4.00	0.06	0.40	98.80

SAND, poorly-graded

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.42	3.12	2.96	2.73	2.51	2.10	-2.35

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.20	0.22	2.73	0.15	1.61	-2.21	6.33

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: CB-EC00-20 @ 0 ft

Analysis Date:

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
412,323	1,194,176	State Plane, FLW (U.S. Ft.)	-10.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 0.95 #230 - 0.80			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.30	0.30
#5	-2.00	4.00	0.20	0.50
#7	-1.50	2.80	0.20	0.70
#10	-1.00	2.00	0.60	1.30
#14	-0.50	1.40	0.80	2.10
#18	0.00	1.00	1.00	3.10
#25	0.50	0.71	0.90	4.00
#35	1.00	0.50	1.00	5.00
#45	1.50	0.36	0.80	5.80
#60	2.00	0.25	1.40	7.20
#80	2.50	0.18	17.00	24.20
#120	3.00	0.13	63.80	88.00
#170	3.50	0.09	10.90	98.90
#200	3.75	0.08	0.15	99.05
#230	4.00	0.06	0.15	99.20

SAND, poorly-graded

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.32	2.97	2.90	2.70	2.51	2.26	1.00

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.54	0.17	2.70	0.15	0.73	-3.36	16.46

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: CB-EC00-20 @ 3 ft

Analysis Date:

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
412,323	1,194,176	State Plane, FLW (U.S. Ft.)	-13.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 5.20 #230 - 4.50			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	1.00	1.00
#5	-2.00	4.00	0.15	1.15
#7	-1.50	2.80	0.15	1.30
#10	-1.00	2.00	0.20	1.50
#14	-0.50	1.40	0.30	1.80
#18	0.00	1.00	0.30	2.10
#25	0.50	0.71	0.20	2.30
#35	1.00	0.50	0.30	2.60
#45	1.50	0.36	0.20	2.80
#60	2.00	0.25	0.50	3.30
#80	2.50	0.18	6.60	9.90
#120	3.00	0.13	63.90	73.80
#170	3.50	0.09	20.40	94.20
#200	3.75	0.08	0.60	94.80
#230	4.00	0.06	0.70	95.50

SAND, poorly-graded

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.82	3.25	3.03	2.81	2.62	2.55	2.13

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.72	0.15	2.81	0.14	0.54	-4.31	33.13

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: CB-EC00-28 @ 0 ft

Analysis Date:

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,214	1,193,408	State Plane, FLW (U.S. Ft.)	-9.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 2.75 #230 - 2.10			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	3.00	3.00
#5	-2.00	4.00	0.40	3.40
#7	-1.50	2.80	0.40	3.80
#10	-1.00	2.00	1.20	5.00
#14	-0.50	1.40	1.60	6.60
#18	0.00	1.00	2.00	8.60
#25	0.50	0.71	1.60	10.20
#35	1.00	0.50	1.20	11.40
#45	1.50	0.36	0.90	12.30
#60	2.00	0.25	1.10	13.40
#80	2.50	0.18	9.30	22.70
#120	3.00	0.13	52.70	75.40
#170	3.50	0.09	21.20	96.60
#200	3.75	0.08	0.65	97.25
#230	4.00	0.06	0.65	97.90

SAND, poorly-graded

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.46	3.20	3.00	2.76	2.52	2.14	-1.00

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.36	0.19	2.76	0.15	1	-2.05	7.8

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: CB-EC00-28 @ 3.7 ft

Analysis Date:

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,214	1,193,408	State Plane, FLW (U.S. Ft.)	-13.0 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 8.30 #230 - 6.70			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	1.40	1.40
#5	-2.00	4.00	0.40	1.80
#7	-1.50	2.80	0.30	2.10
#10	-1.00	2.00	1.70	3.80
#14	-0.50	1.40	2.20	6.00
#18	0.00	1.00	2.50	8.50
#25	0.50	0.71	1.80	10.30
#35	1.00	0.50	1.30	11.60
#45	1.50	0.36	1.10	12.70
#60	2.00	0.25	1.50	14.20
#80	2.50	0.18	9.40	23.60
#120	3.00	0.13	42.90	66.50
#170	3.50	0.09	23.50	90.00
#200	3.75	0.08	1.70	91.70
#230	4.00	0.06	1.60	93.30

SAND, poorly-graded with silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.37	3.18	2.81	2.52	2.10	-0.73

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.40	0.19	2.81	0.14	1.27	-2.17	7.1

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: CB-EC00-29 @ 0 ft

Analysis Date:

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
412,265	1,193,131	State Plane, FLW (U.S. Ft.)	-10.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 7.40 #230 - 6.40			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	2.90	2.90
#5	-2.00	4.00	2.10	5.00
#7	-1.50	2.80	2.00	7.00
#10	-1.00	2.00	5.20	12.20
#14	-0.50	1.40	7.90	20.10
#18	0.00	1.00	8.80	28.90
#25	0.50	0.71	7.00	35.90
#35	1.00	0.50	5.60	41.50
#45	1.50	0.36	3.60	45.10
#60	2.00	0.25	2.60	47.70
#80	2.50	0.18	7.30	55.00
#120	3.00	0.13	23.50	78.50
#170	3.50	0.09	13.00	91.50
#200	3.75	0.08	1.10	92.60
#230	4.00	0.06	1.00	93.60

SAND, poorly-graded with silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.21	2.93	2.16	-0.22	-0.76	-2.00

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.24	0.42	2.16	0.22	1.66	-0.18	1.66

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: CB-EC00-29 @ 7.7 ft

Analysis Date:

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
412,265	1,193,131	State Plane, FLW (U.S. Ft.)	-18.0 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 8.90 #230 - 7.30			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.50	0.50
#5	-2.00	4.00	0.90	1.40
#7	-1.50	2.80	0.80	2.20
#10	-1.00	2.00	2.00	4.20
#14	-0.50	1.40	2.50	6.70
#18	0.00	1.00	2.30	9.00
#25	0.50	0.71	2.10	11.10
#35	1.00	0.50	0.80	11.90
#45	1.50	0.36	1.40	13.30
#60	2.00	0.25	1.90	15.20
#80	2.50	0.18	9.30	24.50
#120	3.00	0.13	42.50	67.00
#170	3.50	0.09	22.50	89.50
#200	3.75	0.08	1.60	91.10
#230	4.00	0.06	1.60	92.70

SAND, poorly-graded with silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.38	3.18	2.80	2.51	2.04	-0.84

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.37	0.19	2.80	0.14	1.23	-1.97	6.16

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: CB-EC00-34 @ 0 ft

Analysis Date:

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
408,109	1,193,215	State Plane, FLW (U.S. Ft.)	-8.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 1.15 #230 - 1.10			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	1.20	1.20
#5	-2.00	4.00	1.50	2.70
#7	-1.50	2.80	1.50	4.20
#10	-1.00	2.00	3.80	8.00
#14	-0.50	1.40	4.60	12.60
#18	0.00	1.00	4.80	17.40
#25	0.50	0.71	4.10	21.50
#35	1.00	0.50	4.70	26.20
#45	1.50	0.36	4.70	30.90
#60	2.00	0.25	6.00	36.90
#80	2.50	0.18	22.60	59.50
#120	3.00	0.13	35.10	94.60
#170	3.50	0.09	4.20	98.80
#200	3.75	0.08	0.05	98.85
#230	4.00	0.06	0.05	98.90

SAND, poorly-graded

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.05	2.85	2.72	2.29	0.87	-0.15	-1.39

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.66	0.32	2.29	0.20	1.38	-1.05	2.99

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: CB-EC00-34 @ 4 ft

Analysis Date:

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
408,109	1,193,215	State Plane, FLW (U.S. Ft.)	-12.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 1.20 #230 - 0.90			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.50	0.50
#5	-2.00	4.00	0.10	0.60
#7	-1.50	2.80	0.10	0.70
#10	-1.00	2.00	0.60	1.30
#14	-0.50	1.40	0.90	2.20
#18	0.00	1.00	1.10	3.30
#25	0.50	0.71	1.20	4.50
#35	1.00	0.50	1.20	5.70
#45	1.50	0.36	1.40	7.10
#60	2.00	0.25	2.30	9.40
#80	2.50	0.18	15.30	24.70
#120	3.00	0.13	60.00	84.70
#170	3.50	0.09	13.90	98.60
#200	3.75	0.08	0.20	98.80
#230	4.00	0.06	0.30	99.10

SAND, poorly-graded

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.37	2.99	2.92	2.71	2.50	2.22	0.71

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.52	0.17	2.71	0.15	0.75	-2.87	13.01

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: CB-EC00-34 @ 10 ft

Analysis Date:

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
408,109	1,193,215	State Plane, FLW (U.S. Ft.)	-18.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 1.30 #230 - 1.20			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	1.60	1.60
#5	-2.00	4.00	2.10	3.70
#7	-1.50	2.80	1.70	5.40
#10	-1.00	2.00	6.30	11.70
#14	-0.50	1.40	8.30	20.00
#18	0.00	1.00	9.60	29.60
#25	0.50	0.71	8.20	37.80
#35	1.00	0.50	7.00	44.80
#45	1.50	0.36	5.70	50.50
#60	2.00	0.25	6.30	56.80
#80	2.50	0.18	12.90	69.70
#120	3.00	0.13	23.70	93.40
#170	3.50	0.09	5.20	98.60
#200	3.75	0.08	0.10	98.70
#230	4.00	0.06	0.10	98.80

SAND, poorly-graded

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.15	2.80	2.61	1.46	-0.24	-0.74	-1.62

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.11	0.46	1.46	0.36	1.6	-0.41	1.9

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: CB-EC00-36 @ 0 ft

Analysis Date:

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
410,212	1,192,762	State Plane, FLW (U.S. Ft.)	-6.1 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 1.10 #230 - 1.20			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	3.70	3.70
#5	-2.00	4.00	2.90	6.60
#7	-1.50	2.80	3.00	9.60
#10	-1.00	2.00	8.00	17.60
#14	-0.50	1.40	9.80	27.40
#18	0.00	1.00	9.90	37.30
#25	0.50	0.71	8.00	45.30
#35	1.00	0.50	6.60	51.90
#45	1.50	0.36	4.70	56.60
#60	2.00	0.25	3.60	60.20
#80	2.50	0.18	10.00	70.20
#120	3.00	0.13	24.30	94.50
#170	3.50	0.09	4.20	98.70
#200	3.75	0.08	0.10	98.90
#230	4.00	0.06	0.10	98.80

SAND, poorly-graded

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.06	2.78	2.60	0.86	-0.62	-1.10	-2.14

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.83	0.56	0.86	0.55	1.61	0.06	1.61

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: CB-EC00-36 @ 7.7 ft

Analysis Date:

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
410,212	1,192,762	State Plane, FLW (U.S. Ft.)	-13.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 0.90 #230 - 0.70			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.30	0.30
#5	-2.00	4.00	0.50	0.80
#7	-1.50	2.80	0.30	1.10
#10	-1.00	2.00	1.10	2.20
#14	-0.50	1.40	1.30	3.50
#18	0.00	1.00	1.30	4.80
#25	0.50	0.71	1.00	5.80
#35	1.00	0.50	1.50	7.30
#45	1.50	0.36	2.90	10.20
#60	2.00	0.25	7.60	17.80
#80	2.50	0.18	26.20	44.00
#120	3.00	0.13	43.90	87.90
#170	3.50	0.09	11.00	98.90
#200	3.75	0.08	0.20	99.10
#230	4.00	0.06	0.20	99.30

SAND, poorly-graded

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.32	2.96	2.85	2.57	2.14	1.88	0.10

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.32	0.20	2.57	0.17	0.9	-2.37	9.64

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: CB-EC00-36 @ 13.2 ft

Analysis Date:

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
410,212	1,192,762	State Plane, FLW (U.S. Ft.)	-19.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 6.50 #230 - 5.60			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	5.00	5.00
#5	-2.00	4.00	2.00	7.00
#7	-1.50	2.80	2.10	9.10
#10	-1.00	2.00	4.10	13.20
#14	-0.50	1.40	4.10	17.30
#18	0.00	1.00	4.00	21.30
#25	0.50	0.71	3.00	24.30
#35	1.00	0.50	2.30	26.60
#45	1.50	0.36	1.80	28.40
#60	2.00	0.25	2.40	30.80
#80	2.50	0.18	10.60	41.40
#120	3.00	0.13	34.40	75.80
#170	3.50	0.09	16.80	92.60
#200	3.75	0.08	0.90	93.50
#230	4.00	0.06	0.90	94.40

SAND, poorly-graded with silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.24	2.99	2.62	0.65	-0.66	-2.25

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.69	0.31	2.63	0.16	1.81	-1.09	2.73

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: CB-EC00-37 @ 0 ft

Analysis Date:

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,201	1,192,519	State Plane, FLW (U.S. Ft.)	-6.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 0.40 #230 - 0.40			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	6.90	6.90
#5	-2.00	4.00	5.80	12.70
#7	-1.50	2.80	5.70	18.40
#10	-1.00	2.00	12.60	31.00
#14	-0.50	1.40	10.70	41.70
#18	0.00	1.00	8.00	49.70
#25	0.50	0.71	5.30	55.00
#35	1.00	0.50	4.50	59.50
#45	1.50	0.36	4.00	63.50
#60	2.00	0.25	4.00	67.50
#80	2.50	0.18	12.30	79.80
#120	3.00	0.13	17.70	97.50
#170	3.50	0.09	0.00	99.60
#200	3.75	0.08	0.00	99.60
#230	4.00	0.06	2.10	99.60

SAND, poorly-graded

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.93	2.62	2.30	0.03	-1.24	-1.71	-2.80

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.35	0.78	0.03	0.98	1.68	0.43	1.64

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: CB-EC00-37 @ 7 ft

Analysis Date:

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,201	1,192,519	State Plane, FLW (U.S. Ft.)	-13.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 0.75 #230 - 0.70			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	1.20	1.20
#5	-2.00	4.00	0.60	1.80
#7	-1.50	2.80	0.60	2.40
#10	-1.00	2.00	1.00	3.40
#14	-0.50	1.40	1.50	4.90
#18	0.00	1.00	1.50	6.40
#25	0.50	0.71	1.50	7.90
#35	1.00	0.50	2.00	9.90
#45	1.50	0.36	3.20	13.10
#60	2.00	0.25	9.70	22.80
#80	2.50	0.18	33.00	55.80
#120	3.00	0.13	38.20	94.00
#170	3.50	0.09	5.20	99.20
#200	3.75	0.08	0.05	99.25
#230	4.00	0.06	0.05	99.30

SAND, poorly-graded

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.10	2.87	2.75	2.41	2.03	1.65	-0.47

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.13	0.23	2.41	0.19	0.93	-2.13	8.37

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: CB-EC00-37 @ 13 ft

Analysis Date:

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,201	1,192,519	State Plane, FLW (U.S. Ft.)	-19.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 2.90 #230 - 2.20			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	1.40	1.40
#5	-2.00	4.00	1.00	2.40
#7	-1.50	2.80	0.90	3.30
#10	-1.00	2.00	1.90	5.20
#14	-0.50	1.40	1.40	6.60
#18	0.00	1.00	1.10	7.70
#25	0.50	0.71	0.80	8.50
#35	1.00	0.50	0.70	9.20
#45	1.50	0.36	1.30	10.50
#60	2.00	0.25	2.40	12.90
#80	2.50	0.18	16.10	29.00
#120	3.00	0.13	47.50	76.50
#170	3.50	0.09	19.90	96.40
#200	3.75	0.08	0.70	97.10
#230	4.00	0.06	0.70	97.80

SAND, poorly-graded

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.46	3.19	2.98	2.72	2.38	2.10	-1.05

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.38	0.19	2.72	0.15	1.22	-2.53	8.89

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: CB-EC00-38A @ 0 ft

Analysis Date:

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
412,225	1,192,282	State Plane, FLW (U.S. Ft.)	-9.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 1.30 #230 - 1.10			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	3.60	3.60
#5	-2.00	4.00	3.40	7.00
#7	-1.50	2.80	3.50	10.50
#10	-1.00	2.00	7.80	18.30
#14	-0.50	1.40	5.90	24.20
#18	0.00	1.00	4.90	29.10
#25	0.50	0.71	3.40	32.50
#35	1.00	0.50	3.10	35.60
#45	1.50	0.36	2.70	38.30
#60	2.00	0.25	3.40	41.70
#80	2.50	0.18	12.80	54.50
#120	3.00	0.13	34.50	89.00
#170	3.50	0.09	9.60	98.60
#200	3.75	0.08	0.10	98.70
#230	4.00	0.06	0.20	98.90

SAND, poorly-graded

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.31	2.93	2.80	2.32	-0.42	-1.15	-2.15

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.32	0.40	2.32	0.20	1.69	-0.52	1.84

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: CB-EC00-38A @ 9 ft

Analysis Date:

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
412,225	1,192,282	State Plane, FLW (U.S. Ft.)	-18.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#200 - 1.10 #230 - 0.80			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	2.30	2.30
#5	-2.00	4.00	1.10	3.40
#7	-1.50	2.80	1.00	4.40
#10	-1.00	2.00	1.60	6.00
#14	-0.50	1.40	1.20	7.20
#18	0.00	1.00	0.60	7.80
#25	0.50	0.71	0.80	8.60
#35	1.00	0.50	1.00	9.60
#45	1.50	0.36	1.30	10.90
#60	2.00	0.25	3.00	13.90
#80	2.50	0.18	23.20	37.10
#120	3.00	0.13	49.00	86.10
#170	3.50	0.09	12.60	98.70
#200	3.75	0.08	0.20	98.90
#230	4.00	0.06	0.30	99.20

SAND, poorly-graded

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.35	2.98	2.89	2.63	2.24	2.05	-1.31

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.26	0.21	2.63	0.16	1.02	-2.41	9.53

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: CB-EC00-38A @ 11 ft

Analysis Date:

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
412,225	1,192,282	State Plane, FLW (U.S. Ft.)	-20.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP		#200 - 1.70 #230 - 1.40			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.60	0.60
#5	-2.00	4.00	0.20	0.80
#7	-1.50	2.80	0.20	1.00
#10	-1.00	2.00	0.60	1.60
#14	-0.50	1.40	0.70	2.30
#18	0.00	1.00	0.50	2.80
#25	0.50	0.71	0.60	3.40
#35	1.00	0.50	0.70	4.10
#45	1.50	0.36	0.90	5.00
#60	2.00	0.25	2.50	7.50
#80	2.50	0.18	18.70	26.20
#120	3.00	0.13	54.90	81.10
#170	3.50	0.09	16.90	98.00
#200	3.75	0.08	0.30	98.30
#230	4.00	0.06	0.30	98.60

SAND, poorly-graded

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.41	3.09	2.94	2.72	2.47	2.23	1.50

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.56	0.17	2.72	0.15	0.81	-3.6	19

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-01 @ 1 ft

Analysis Date: 7/27/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
403,981	1,197,077	State Plane, FLW (U.S. Ft.)	-12.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	10Y 6/1	#200 - 1.50 #230 - 1.40			11.3

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.56	0.56
#3.5	-2.50	5.60	0.42	0.98
#4	-2.25	4.75	0.19	1.17
#5	-2.00	4.00	0.03	1.20
#7	-1.50	2.80	0.34	1.54
#10	-1.00	2.00	0.58	2.12
#14	-0.50	1.40	0.97	3.09
#18	0.00	1.00	1.04	4.13
#25	0.50	0.71	1.48	5.61
#35	1.00	0.50	1.28	6.89
#45	1.50	0.36	1.35	8.24
#60	2.00	0.25	1.95	10.19
#80	2.50	0.18	10.82	21.01
#120	3.00	0.13	59.88	80.89
#170	3.50	0.09	16.63	97.52
#200	3.75	0.08	0.98	98.50
#230	4.00	0.06	0.10	98.60

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.42	3.09	2.95	2.74	2.53	2.27	0.29

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.51	0.18	2.74	0.15	1.01	-3.49	17.19

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-01 @ 3.5 ft

Analysis Date: 7/27/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
403,981	1,197,077	State Plane, FLW (U.S. Ft.)	-15.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	N 5/	#200 - 0.88 #230 - 0.66			43.6

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	4.47	4.47
#3.5	-2.50	5.60	1.29	5.76
#4	-2.25	4.75	0.56	6.32
#5	-2.00	4.00	0.67	6.99
#7	-1.50	2.80	1.30	8.29
#10	-1.00	2.00	3.33	11.62
#14	-0.50	1.40	4.14	15.76
#18	0.00	1.00	3.86	19.62
#25	0.50	0.71	5.22	24.84
#35	1.00	0.50	5.56	30.40
#45	1.50	0.36	6.00	36.40
#60	2.00	0.25	6.68	43.08
#80	2.50	0.18	12.85	55.93
#120	3.00	0.13	25.49	81.42
#170	3.50	0.09	16.15	97.57
#200	3.75	0.08	1.55	99.12
#230	4.00	0.06	0.22	99.34

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.42	3.08	2.87	2.27	0.51	-0.47	-2.94

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.50	0.35	2.27	0.21	1.89	-1.28	3.86

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-01 @ 5 ft

Analysis Date: 7/27/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
403,981	1,197,077	State Plane, FLW (U.S. Ft.)	-16.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	N 4/	#200 - 6.67 #230 - 6.13			35.4

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	1.85	1.85
#4	-2.25	4.75	0.81	2.66
#5	-2.00	4.00	1.15	3.81
#7	-1.50	2.80	2.84	6.65
#10	-1.00	2.00	4.88	11.53
#14	-0.50	1.40	5.63	17.16
#18	0.00	1.00	4.58	21.74
#25	0.50	0.71	4.87	26.61
#35	1.00	0.50	3.85	30.46
#45	1.50	0.36	3.42	33.88
#60	2.00	0.25	3.25	37.13
#80	2.50	0.18	7.23	44.36
#120	3.00	0.13	29.38	73.74
#170	3.50	0.09	17.71	91.45
#200	3.75	0.08	1.88	93.33
#230	4.00	0.06	0.54	93.87

SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, some medium to coarse-grained sand-sized shell, few silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.29	3.04	2.60	0.33	-0.60	-1.79

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.61	0.33	2.60	0.16	1.78	-0.9	2.5

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-01 @ 7.5 ft

Analysis Date: 7/27/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
403,981	1,197,077	State Plane, FLW (U.S. Ft.)	-19.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	N 5/	#200 - 1.95 #230 - 1.81			67.8

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	2.03	2.03
#4	-2.25	4.75	1.86	3.89
#5	-2.00	4.00	1.76	5.65
#7	-1.50	2.80	5.58	11.23
#10	-1.00	2.00	10.29	21.52
#14	-0.50	1.40	13.57	35.09
#18	0.00	1.00	9.78	44.87
#25	0.50	0.71	9.00	53.87
#35	1.00	0.50	7.57	61.44
#45	1.50	0.36	7.25	68.69
#60	2.00	0.25	7.81	76.50
#80	2.50	0.18	10.17	86.67
#120	3.00	0.13	7.88	94.55
#170	3.50	0.09	3.18	97.73
#200	3.75	0.08	0.32	98.05
#230	4.00	0.06	0.14	98.19

SAND, poorly-graded, mostly medium to coarse-grained sand-sized shell, some fine-grained sand-sized quartz, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.07	2.37	1.90	0.29	-0.87	-1.27	-2.09

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.39	0.76	0.29	0.82	1.61	0.06	1.98

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-01 @ 12 ft

Analysis Date: 7/27/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
403,981	1,197,077	State Plane, FLW (U.S. Ft.)	-23.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	N 5/	#200 - 3.40 #230 - 3.21			38.2

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	4.36	4.36
#3.5	-2.50	5.60	2.81	7.17
#4	-2.25	4.75	1.62	8.79
#5	-2.00	4.00	1.36	10.15
#7	-1.50	2.80	3.83	13.98
#10	-1.00	2.00	5.46	19.44
#14	-0.50	1.40	6.32	25.76
#18	0.00	1.00	4.85	30.61
#25	0.50	0.71	4.01	34.62
#35	1.00	0.50	3.09	37.71
#45	1.50	0.36	3.45	41.16
#60	2.00	0.25	4.90	46.06
#80	2.50	0.18	13.46	59.52
#120	3.00	0.13	25.10	84.62
#170	3.50	0.09	11.24	95.86
#200	3.75	0.08	0.74	96.60
#230	4.00	0.06	0.19	96.79

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.46	2.99	2.81	2.15	-0.56	-1.32	-3.08

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.08	0.47	2.15	0.23	2.09	-0.81	2.42

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-01 @ 14 ft

Analysis Date: 7/27/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
403,981	1,197,077	State Plane, FLW (U.S. Ft.)	-25.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	N 5/	#200 - 10.81 #230 - 10.21			13

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	2.55	2.55
#3.5	-2.50	5.60	1.60	4.15
#4	-2.25	4.75	1.69	5.84
#5	-2.00	4.00	1.00	6.84
#7	-1.50	2.80	3.65	10.49
#10	-1.00	2.00	4.31	14.80
#14	-0.50	1.40	4.80	19.60
#18	0.00	1.00	6.82	26.42
#25	0.50	0.71	2.28	28.70
#35	1.00	0.50	2.25	30.95
#45	1.50	0.36	2.60	33.55
#60	2.00	0.25	7.04	40.59
#80	2.50	0.18	8.95	49.54
#120	3.00	0.13	15.42	64.96
#170	3.50	0.09	22.43	87.39
#200	3.75	0.08	1.80	89.19
#230	4.00	0.06	0.60	89.79

SAND, poorly-graded with silt, mostly fine to coarse-grained sand-sized quartz, little medium to coarse-grained sand-sized shell, few silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.42	3.22	2.51	-0.10	-0.88	-2.37

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.39	0.38	2.51	0.18	2.03	-0.88	2.57

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-02 @ 2.5 ft

Analysis Date: 7/27/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
405,016	1,196,858	State Plane, FLW (U.S. Ft.)	-14.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 3.96 #230 - 3.50			6.7

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.05
#5	-2.00	4.00	0.05	0.05
#7	-1.50	2.80	0.20	0.25
#10	-1.00	2.00	0.32	0.57
#14	-0.50	1.40	0.56	1.13
#18	0.00	1.00	0.70	1.83
#25	0.50	0.71	0.57	2.40
#35	1.00	0.50	0.43	2.83
#45	1.50	0.36	0.60	3.43
#60	2.00	0.25	1.37	4.80
#80	2.50	0.18	9.33	14.13
#120	3.00	0.13	59.79	73.92
#170	3.50	0.09	20.43	94.35
#200	3.75	0.08	1.69	96.04
#230	4.00	0.06	0.46	96.50

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.60	3.25	3.03	2.80	2.59	2.52	2.01

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.71	0.15	2.80	0.14	0.65	-3.63	20.95

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-02 @ 5 ft

Analysis Date: 7/27/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
405,016	1,196,858	State Plane, FLW (U.S. Ft.)	-16.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 8/1	#200 - 0.61 #230 - 0.59			50

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.84	0.84
#3.5	-2.50	5.60	1.40	2.24
#4	-2.25	4.75	0.63	2.87
#5	-2.00	4.00	0.74	3.61
#7	-1.50	2.80	2.20	5.81
#10	-1.00	2.00	6.59	12.40
#14	-0.50	1.40	12.51	24.91
#18	0.00	1.00	10.16	35.07
#25	0.50	0.71	7.77	42.84
#35	1.00	0.50	3.91	46.75
#45	1.50	0.36	2.46	49.21
#60	2.00	0.25	3.25	52.46
#80	2.50	0.18	10.86	63.32
#120	3.00	0.13	27.61	90.93
#170	3.50	0.09	8.23	99.16
#200	3.75	0.08	0.23	99.39
#230	4.00	0.06	0.02	99.41

SAND, poorly-graded, mostly medium to coarse-grained sand-sized shell, some fine-grained sand-sized quartz, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.25	2.87	2.71	1.62	-0.50	-0.86	-1.68

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.08	0.47	1.62	0.33	1.76	-0.43	1.98

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-02 @ 7.5 ft

Analysis Date: 7/27/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
405,016	1,196,858	State Plane, FLW (U.S. Ft.)	-19.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 5/2	#200 - 1.89 #230 - 1.77			7.3

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.09	0.09
#10	-1.00	2.00	0.09	0.18
#14	-0.50	1.40	0.26	0.44
#18	0.00	1.00	0.26	0.70
#25	0.50	0.71	0.36	1.06
#35	1.00	0.50	0.38	1.44
#45	1.50	0.36	0.41	1.85
#60	2.00	0.25	1.23	3.08
#80	2.50	0.18	9.40	12.48
#120	3.00	0.13	70.31	82.79
#170	3.50	0.09	14.55	97.34
#200	3.75	0.08	0.77	98.11
#230	4.00	0.06	0.12	98.23

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.42	3.04	2.94	2.77	2.59	2.53	2.10

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.72	0.15	2.77	0.15	0.47	-4.05	30.39

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-02 @ 12 ft

Analysis Date: 7/27/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
405,016	1,196,858	State Plane, FLW (U.S. Ft.)	-23.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/2	#200 - 1.82 #230 - 1.76			51.9

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	1.25	1.25
#3.5	-2.50	5.60	4.09	5.34
#4	-2.25	4.75	2.03	7.37
#5	-2.00	4.00	2.54	9.91
#7	-1.50	2.80	4.92	14.83
#10	-1.00	2.00	9.47	24.30
#14	-0.50	1.40	9.12	33.42
#18	0.00	1.00	5.85	39.27
#25	0.50	0.71	4.56	43.83
#35	1.00	0.50	2.91	46.74
#45	1.50	0.36	2.42	49.16
#60	2.00	0.25	2.71	51.87
#80	2.50	0.18	9.04	60.91
#120	3.00	0.13	29.59	90.50
#170	3.50	0.09	7.34	97.84
#200	3.75	0.08	0.34	98.18
#230	4.00	0.06	0.06	98.24

SAND, poorly-graded, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.31	2.89	2.74	1.65	-0.96	-1.44	-2.56

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.84	0.56	1.65	0.32	2.03	-0.41	1.74

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-03 @ 2 ft

Analysis Date: 7/27/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
406,056	1,196,616	State Plane, FLW (U.S. Ft.)	-14.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/2	#200 - 2.38 #230 - 2.15			14.53

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.02	0.02
#10	-1.00	2.00	0.08	0.10
#14	-0.50	1.40	0.16	0.26
#18	0.00	1.00	0.26	0.52
#25	0.50	0.71	0.24	0.76
#35	1.00	0.50	0.30	1.06
#45	1.50	0.36	0.44	1.50
#60	2.00	0.25	1.09	2.59
#80	2.50	0.18	6.05	8.64
#120	3.00	0.13	64.54	73.18
#170	3.50	0.09	22.76	95.94
#200	3.75	0.08	1.68	97.62
#230	4.00	0.06	0.23	97.85

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.48	3.24	3.04	2.82	2.63	2.56	2.20

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.81	0.14	2.82	0.14	0.44	-3.42	26.53

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-03 @ 5 ft

Analysis Date: 7/27/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
406,056	1,196,616	State Plane, FLW (U.S. Ft.)	-17.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/2	#200 - 2.73 #230 - 2.04			9.7

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.01	0.01
#5	-2.00	4.00	0.03	0.04
#7	-1.50	2.80	0.02	0.06
#10	-1.00	2.00	0.08	0.14
#14	-0.50	1.40	0.10	0.24
#18	0.00	1.00	0.07	0.31
#25	0.50	0.71	0.07	0.38
#35	1.00	0.50	0.07	0.45
#45	1.50	0.36	0.24	0.69
#60	2.00	0.25	0.62	1.31
#80	2.50	0.18	1.97	3.28
#120	3.00	0.13	52.43	55.71
#170	3.50	0.09	37.83	93.54
#200	3.75	0.08	3.73	97.27
#230	4.00	0.06	0.69	97.96

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.60	3.37	3.25	2.95	2.71	2.62	2.52

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.95	0.13	2.95	0.13	0.41	-3.57	37.16

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-03 @ 7 ft

Analysis Date: 7/27/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
406,056	1,196,616	State Plane, FLW (U.S. Ft.)	-19.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/2	#200 - 2.04 #230 - 1.50			8

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.09
#4	-2.25	4.75	0.09	0.09
#5	-2.00	4.00	0.02	0.11
#7	-1.50	2.80	0.03	0.14
#10	-1.00	2.00	0.18	0.32
#14	-0.50	1.40	0.23	0.55
#18	0.00	1.00	0.13	0.68
#25	0.50	0.71	0.17	0.85
#35	1.00	0.50	0.20	1.05
#45	1.50	0.36	0.30	1.35
#60	2.00	0.25	0.50	1.85
#80	2.50	0.18	2.14	3.99
#120	3.00	0.13	64.44	68.43
#170	3.50	0.09	26.81	95.24
#200	3.75	0.08	2.72	97.96
#230	4.00	0.06	0.54	98.50

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.50	3.29	3.12	2.86	2.66	2.59	2.51

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.86	0.14	2.86	0.14	0.48	-4.95	46.73

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-03 @ 9 ft

Analysis Date: 7/27/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
406,056	1,196,616	State Plane, FLW (U.S. Ft.)	-21.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	10Y 5/1	#200 - 4.34 #230 - 3.90			47

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.07	0.07
#3.5	-2.50	5.60	5.97	6.04
#4	-2.25	4.75	2.46	8.50
#5	-2.00	4.00	3.46	11.96
#7	-1.50	2.80	4.86	16.82
#10	-1.00	2.00	5.53	22.35
#14	-0.50	1.40	4.74	27.09
#18	0.00	1.00	3.23	30.32
#25	0.50	0.71	3.08	33.40
#35	1.00	0.50	2.42	35.82
#45	1.50	0.36	2.30	38.12
#60	2.00	0.25	2.41	40.53
#80	2.50	0.18	6.48	47.01
#120	3.00	0.13	26.80	73.81
#170	3.50	0.09	19.88	93.69
#200	3.75	0.08	1.97	95.66
#230	4.00	0.06	0.44	96.10

SAND, poorly-graded, some fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.67	3.26	3.03	2.56	-0.72	-1.58	-2.63

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.26	0.42	2.56	0.17	2.15	-0.7	1.91

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-03 @ 11 ft

Analysis Date: 7/27/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
406,056	1,196,616	State Plane, FLW (U.S. Ft.)	-23.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	10Y 5/1	#200 - 3.73 #230 - 3.34			42.3

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.87	0.87
#3.5	-2.50	5.60	3.08	3.95
#4	-2.25	4.75	1.44	5.39
#5	-2.00	4.00	1.73	7.12
#7	-1.50	2.80	3.48	10.60
#10	-1.00	2.00	5.18	15.78
#14	-0.50	1.40	5.65	21.43
#18	0.00	1.00	4.34	25.77
#25	0.50	0.71	4.12	29.89
#35	1.00	0.50	2.98	32.87
#45	1.50	0.36	2.75	35.62
#60	2.00	0.25	2.90	38.52
#80	2.50	0.18	7.58	46.10
#120	3.00	0.13	32.85	78.95
#170	3.50	0.09	15.87	94.82
#200	3.75	0.08	1.45	96.27
#230	4.00	0.06	0.39	96.66

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.53	3.16	2.94	2.56	-0.09	-0.98	-2.32

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.45	0.37	2.56	0.17	1.95	-0.91	2.48

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-03 @ 14 ft

Analysis Date: 7/27/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
406,056	1,196,616	State Plane, FLW (U.S. Ft.)	-26.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	10Y 5/1	#200 - 5.56 #230 - 5.15			44.6

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	4.64	4.64
#3.5	-2.50	5.60	4.88	9.52
#4	-2.25	4.75	1.03	10.55
#5	-2.00	4.00	2.12	12.67
#7	-1.50	2.80	4.26	16.93
#10	-1.00	2.00	7.58	24.51
#14	-0.50	1.40	8.21	32.72
#18	0.00	1.00	5.76	38.48
#25	0.50	0.71	4.08	42.56
#35	1.00	0.50	2.65	45.21
#45	1.50	0.36	2.44	47.65
#60	2.00	0.25	3.07	50.72
#80	2.50	0.18	6.25	56.97
#120	3.00	0.13	18.27	75.24
#170	3.50	0.09	17.66	92.90
#200	3.75	0.08	1.54	94.44
#230	4.00	0.06	0.41	94.85

SAND, poorly-graded with silt, some fine-grained sand-sized quartz, some sand to gravel-sized shell, few silt, trace limestone

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.25	2.99	1.88	-0.97	-1.61	-3.19

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.82	0.57	1.88	0.27	2.26	-0.45	1.85

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-04 @ 1 ft

Analysis Date: 7/27/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
407,058	1,196,379	State Plane, FLW (U.S. Ft.)	-13.6 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 6/2	#200 - 1.65 #230 - 1.53			15.2

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.44	0.44
#4	-2.25	4.75	0.01	0.45
#5	-2.00	4.00	0.04	0.49
#7	-1.50	2.80	0.17	0.66
#10	-1.00	2.00	0.65	1.31
#14	-0.50	1.40	0.92	2.23
#18	0.00	1.00	0.79	3.02
#25	0.50	0.71	0.84	3.86
#35	1.00	0.50	0.80	4.66
#45	1.50	0.36	0.85	5.51
#60	2.00	0.25	1.33	6.84
#80	2.50	0.18	10.31	17.15
#120	3.00	0.13	64.43	81.58
#170	3.50	0.09	15.91	97.49
#200	3.75	0.08	0.86	98.35
#230	4.00	0.06	0.12	98.47

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.42	3.08	2.95	2.75	2.56	2.44	1.20

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.60	0.16	2.75	0.15	0.81	-3.77	19.97

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-04 @ 3 ft

Analysis Date: 7/27/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
407,058	1,196,379	State Plane, FLW (U.S. Ft.)	-15.6 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 5/1	#200 - 4.52 #230 - 3.88			23.5

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	1.01	1.01
#3.5	-2.50	5.60	1.17	2.18
#4	-2.25	4.75	0.24	2.42
#5	-2.00	4.00	0.69	3.11
#7	-1.50	2.80	1.88	4.99
#10	-1.00	2.00	3.13	8.12
#14	-0.50	1.40	3.26	11.38
#18	0.00	1.00	2.35	13.73
#25	0.50	0.71	2.02	15.75
#35	1.00	0.50	1.45	17.20
#45	1.50	0.36	1.27	18.47
#60	2.00	0.25	1.61	20.08
#80	2.50	0.18	5.82	25.90
#120	3.00	0.13	41.02	66.92
#170	3.50	0.09	26.32	93.24
#200	3.75	0.08	2.24	95.48
#230	4.00	0.06	0.64	96.12

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to coarse-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.70	3.32	3.15	2.79	2.42	0.59	-1.50

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.17	0.22	2.79	0.14	1.62	-1.85	5.44

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-04 @ 5 ft

Analysis Date: 7/28/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
407,058	1,196,379	State Plane, FLW (U.S. Ft.)	-17.6 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 6/2	#200 - 0.96 #230 - 0.94			13.8

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.11	0.11
#3.5	-2.50	5.60	0.15	0.26
#4	-2.25	4.75	0.09	0.35
#5	-2.00	4.00	0.18	0.53
#7	-1.50	2.80	0.27	0.80
#10	-1.00	2.00	0.51	1.31
#14	-0.50	1.40	0.49	1.80
#18	0.00	1.00	0.41	2.21
#25	0.50	0.71	0.43	2.64
#35	1.00	0.50	0.40	3.04
#45	1.50	0.36	0.87	3.91
#60	2.00	0.25	2.43	6.34
#80	2.50	0.18	45.11	51.45
#120	3.00	0.13	42.49	93.94
#170	3.50	0.09	4.96	98.90
#200	3.75	0.08	0.14	99.04
#230	4.00	0.06	0.02	99.06

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.11	2.88	2.78	2.48	2.21	2.11	1.72

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.40	0.19	2.48	0.18	0.7	-4.24	27.41

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-04 @ 8.5 ft

Analysis Date: 7/28/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
407,058	1,196,379	State Plane, FLW (U.S. Ft.)	-21.1 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 5/1	#200 - 2.42 #230 - 2.31			17

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	1.29	1.29
#3.5	-2.50	5.60	0.25	1.54
#4	-2.25	4.75	0.38	1.92
#5	-2.00	4.00	0.11	2.03
#7	-1.50	2.80	0.15	2.18
#10	-1.00	2.00	0.28	2.46
#14	-0.50	1.40	0.27	2.73
#18	0.00	1.00	0.37	3.10
#25	0.50	0.71	0.62	3.72
#35	1.00	0.50	0.72	4.44
#45	1.50	0.36	1.23	5.67
#60	2.00	0.25	2.70	8.37
#80	2.50	0.18	45.28	53.65
#120	3.00	0.13	35.67	89.32
#170	3.50	0.09	7.64	96.96
#200	3.75	0.08	0.62	97.58
#230	4.00	0.06	0.11	97.69

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.37	2.93	2.80	2.46	2.18	2.08	1.23

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.32	0.20	2.46	0.18	1	-4.22	23.9

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-04 @ 12 ft

Analysis Date: 7/28/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
407,058	1,196,379	State Plane, FLW (U.S. Ft.)	-24.6 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 5/1	#200 - 1.49 #230 - 1.39			49.6

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	1.55	1.55
#4	-2.25	4.75	0.66	2.21
#5	-2.00	4.00	1.29	3.50
#7	-1.50	2.80	2.65	6.15
#10	-1.00	2.00	4.83	10.98
#14	-0.50	1.40	6.23	17.21
#18	0.00	1.00	6.32	23.53
#25	0.50	0.71	6.83	30.36
#35	1.00	0.50	6.35	36.71
#45	1.50	0.36	6.87	43.58
#60	2.00	0.25	8.84	52.42
#80	2.50	0.18	22.07	74.49
#120	3.00	0.13	17.31	91.80
#170	3.50	0.09	6.36	98.16
#200	3.75	0.08	0.35	98.51
#230	4.00	0.06	0.10	98.61

SAND, poorly-graded, some fine to coarse-grained sand-sized shell, some fine-grained sand-sized quartz, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.25	2.77	2.51	1.86	0.11	-0.60	-1.72

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.26	0.42	1.86	0.28	1.57	-0.75	2.53

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-04 @ 15 ft

Analysis Date: 7/28/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
407,058	1,196,379	State Plane, FLW (U.S. Ft.)	-27.6 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	10Y 5/1	#200 - 3.48 #230 - 3.23			74.2

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	8.59	8.59
#3.5	-2.50	5.60	5.88	14.47
#4	-2.25	4.75	2.76	17.23
#5	-2.00	4.00	4.12	21.35
#7	-1.50	2.80	6.44	27.79
#10	-1.00	2.00	10.22	38.01
#14	-0.50	1.40	10.97	48.98
#18	0.00	1.00	7.70	56.68
#25	0.50	0.71	6.32	63.00
#35	1.00	0.50	4.69	67.69
#45	1.50	0.36	4.66	72.35
#60	2.00	0.25	6.41	78.76
#80	2.50	0.18	8.42	87.18
#120	3.00	0.13	5.52	92.70
#170	3.50	0.09	3.41	96.11
#200	3.75	0.08	0.41	96.52
#230	4.00	0.06	0.25	96.77

SAND, poorly-graded, mostly sand to gravel-sized shell, little fine-grained sand-sized quartz, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.34	2.31	1.71	-0.43	-1.72	-2.36	-3.67

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	-0.30	1.23			2.02	0.04	2.03

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-05 @ 2 ft

Analysis Date: 7/28/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
408,066	1,196,112	State Plane, FLW (U.S. Ft.)	-14.7 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 6/2	#200 - 8.21 #230 - 7.67			19.3

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.53	0.53
#4	-2.25	4.75	0.19	0.72
#5	-2.00	4.00	0.47	1.19
#7	-1.50	2.80	1.22	2.41
#10	-1.00	2.00	2.19	4.60
#14	-0.50	1.40	3.49	8.09
#18	0.00	1.00	2.92	11.01
#25	0.50	0.71	2.50	13.51
#35	1.00	0.50	1.66	15.17
#45	1.50	0.36	1.53	16.70
#60	2.00	0.25	2.45	19.15
#80	2.50	0.18	11.49	30.64
#120	3.00	0.13	36.42	67.06
#170	3.50	0.09	22.69	89.75
#200	3.75	0.08	2.04	91.79
#230	4.00	0.06	0.54	92.33

SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little medium-grained sand-sized shell, few silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.37	3.17	2.77	2.25	1.27	-0.94

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.23	0.21	2.77	0.15	1.38	-1.75	5.13

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-05 @ 4.5 ft

Analysis Date: 7/28/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
408,066	1,196,112	State Plane, FLW (U.S. Ft.)	-17.2 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 5/1	#200 - 1.82 #230 - 1.70			43.2

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.93	0.93
#3.5	-2.50	5.60	1.54	2.47
#4	-2.25	4.75	0.57	3.04
#5	-2.00	4.00	0.85	3.89
#7	-1.50	2.80	2.93	6.82
#10	-1.00	2.00	6.61	13.43
#14	-0.50	1.40	9.35	22.78
#18	0.00	1.00	6.74	29.52
#25	0.50	0.71	4.64	34.16
#35	1.00	0.50	2.85	37.01
#45	1.50	0.36	2.50	39.51
#60	2.00	0.25	3.07	42.58
#80	2.50	0.18	13.04	55.62
#120	3.00	0.13	32.83	88.45
#170	3.50	0.09	9.23	97.68
#200	3.75	0.08	0.50	98.18
#230	4.00	0.06	0.12	98.30

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some medium to coarse-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.35	2.93	2.80	2.28	-0.34	-0.86	-1.81

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.33	0.40	2.28	0.21	1.8	-0.76	2.3

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-05 @ 7 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
408,066	1,196,112	State Plane, FLW (U.S. Ft.)	-19.7 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/2	#200 - 1.93 #230 - 1.80			25.1

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.28	0.28
#4	-2.25	4.75	0.29	0.57
#5	-2.00	4.00	0.37	0.94
#7	-1.50	2.80	1.08	2.02
#10	-1.00	2.00	2.74	4.76
#14	-0.50	1.40	3.38	8.14
#18	0.00	1.00	2.19	10.33
#25	0.50	0.71	1.47	11.80
#35	1.00	0.50	1.04	12.84
#45	1.50	0.36	1.39	14.23
#60	2.00	0.25	2.68	16.91
#80	2.50	0.18	25.41	42.32
#120	3.00	0.13	45.65	87.97
#170	3.50	0.09	9.63	97.60
#200	3.75	0.08	0.47	98.07
#230	4.00	0.06	0.13	98.20

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.37	2.96	2.86	2.58	2.16	1.83	-0.96

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.17	0.22	2.58	0.17	1.23	-2.07	6.45

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-05 @ 9.5 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
408,066	1,196,112	State Plane, FLW (U.S. Ft.)	-22.2 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 5/1	#200 - 0.79 #230 - 0.66			81.6

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.41	0.41
#3.5	-2.50	5.60	0.39	0.80
#4	-2.25	4.75	0.39	1.19
#5	-2.00	4.00	1.14	2.33
#7	-1.50	2.80	3.63	5.96
#10	-1.00	2.00	12.98	18.94
#14	-0.50	1.40	23.62	42.56
#18	0.00	1.00	17.60	60.16
#25	0.50	0.71	10.56	70.72
#35	1.00	0.50	4.84	75.56
#45	1.50	0.36	2.72	78.28
#60	2.00	0.25	1.91	80.19
#80	2.50	0.18	4.23	84.42
#120	3.00	0.13	11.89	96.31
#170	3.50	0.09	2.76	99.07
#200	3.75	0.08	0.14	99.21
#230	4.00	0.06	0.13	99.34

SAND, poorly-graded, mostly medium to coarse-grained sand-sized shell, little fine-grained sand-sized quartz, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.94	2.45	0.94	-0.29	-0.87	-1.11	-1.63

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.15	0.90			1.48	0.7	2.58

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-05 @ 12 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
408,066	1,196,112	State Plane, FLW (U.S. Ft.)	-24.7 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/2	#200 - 2.95 #230 - 2.85			26.9

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.06	0.06
#5	-2.00	4.00	0.38	0.44
#7	-1.50	2.80	0.72	1.16
#10	-1.00	2.00	1.13	2.29
#14	-0.50	1.40	1.38	3.67
#18	0.00	1.00	1.01	4.68
#25	0.50	0.71	0.97	5.65
#35	1.00	0.50	0.90	6.55
#45	1.50	0.36	1.53	8.08
#60	2.00	0.25	2.91	10.99
#80	2.50	0.18	23.63	34.62
#120	3.00	0.13	52.16	86.78
#170	3.50	0.09	9.69	96.47
#200	3.75	0.08	0.58	97.05
#230	4.00	0.06	0.10	97.15

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.42	2.97	2.89	2.65	2.30	2.11	0.16

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.40	0.19	2.65	0.16	0.92	-2.87	11.86

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-05 @ 14 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
408,066	1,196,112	State Plane, FLW (U.S. Ft.)	-26.7 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 6/2	#200 - 3.46 #230 - 3.23			33

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	1.15	1.15
#3.5	-2.50	5.60	3.82	4.97
#4	-2.25	4.75	1.77	6.74
#5	-2.00	4.00	1.16	7.90
#7	-1.50	2.80	2.25	10.15
#10	-1.00	2.00	3.03	13.18
#14	-0.50	1.40	2.87	16.05
#18	0.00	1.00	2.12	18.17
#25	0.50	0.71	2.12	20.29
#35	1.00	0.50	1.87	22.16
#45	1.50	0.36	1.86	24.02
#60	2.00	0.25	3.01	27.03
#80	2.50	0.18	14.35	41.38
#120	3.00	0.13	42.89	84.27
#170	3.50	0.09	11.60	95.87
#200	3.75	0.08	0.67	96.54
#230	4.00	0.06	0.23	96.77

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.46	3.00	2.89	2.60	1.66	-0.51	-2.50

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.74	0.30	2.60	0.16	1.84	-1.51	3.95

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-06 @ 2 ft

Analysis Date: 7/28/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
409,020	1,195,925	State Plane, FLW (U.S. Ft.)	-13.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 8/1	#200 - 1.26 #230 - 1.21		13.48	16.6

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	1.76	1.76
#3.5	-2.50	5.60	0.34	2.10
#4	-2.25	4.75	0.30	2.40
#5	-2.00	4.00	0.17	2.57
#7	-1.50	2.80	0.58	3.15
#10	-1.00	2.00	1.21	4.36
#14	-0.50	1.40	1.59	5.95
#18	0.00	1.00	1.28	7.23
#25	0.50	0.71	1.20	8.43
#35	1.00	0.50	0.87	9.30
#45	1.50	0.36	0.81	10.11
#60	2.00	0.25	1.27	11.38
#80	2.50	0.18	10.78	22.16
#120	3.00	0.13	62.21	84.37
#170	3.50	0.09	13.75	98.12
#200	3.75	0.08	0.62	98.74
#230	4.00	0.06	0.05	98.79

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.39	3.00	2.92	2.72	2.52	2.21	-0.80

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.37	0.19	2.72	0.15	1.29	-3.13	12.89

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-06 @ 5 ft

Analysis Date: 7/28/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
409,020	1,195,925	State Plane, FLW (U.S. Ft.)	-16.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 8/1	#200 - 2.20 #230 - 2.08			42.2

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	7.39	7.39
#3.5	-2.50	5.60	2.02	9.41
#4	-2.25	4.75	1.05	10.46
#5	-2.00	4.00	0.84	11.30
#7	-1.50	2.80	1.87	13.17
#10	-1.00	2.00	4.08	17.25
#14	-0.50	1.40	4.47	21.72
#18	0.00	1.00	3.69	25.41
#25	0.50	0.71	3.71	29.12
#35	1.00	0.50	3.11	32.23
#45	1.50	0.36	3.45	35.68
#60	2.00	0.25	4.26	39.94
#80	2.50	0.18	15.93	55.87
#120	3.00	0.13	32.30	88.17
#170	3.50	0.09	9.08	97.25
#200	3.75	0.08	0.55	97.80
#230	4.00	0.06	0.12	97.92

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.38	2.94	2.80	2.32	-0.06	-1.15	-3.57

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.24	0.42	2.32	0.20	2.13	-1.15	3.06

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-06 @ 8 ft

Analysis Date: 7/28/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
409,020	1,195,925	State Plane, FLW (U.S. Ft.)	-19.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/1	#200 - 1.23 #230 - 1.20			20.9

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	1.21	1.21
#4	-2.25	4.75	0.37	1.58
#5	-2.00	4.00	0.85	2.43
#7	-1.50	2.80	1.66	4.09
#10	-1.00	2.00	2.33	6.42
#14	-0.50	1.40	2.29	8.71
#18	0.00	1.00	1.72	10.43
#25	0.50	0.71	1.63	12.06
#35	1.00	0.50	1.38	13.44
#45	1.50	0.36	1.66	15.10
#60	2.00	0.25	2.72	17.82
#80	2.50	0.18	16.88	34.70
#120	3.00	0.13	54.32	89.02
#170	3.50	0.09	9.41	98.43
#200	3.75	0.08	0.34	98.77
#230	4.00	0.06	0.03	98.80

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to coarse-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.32	2.95	2.87	2.64	2.21	1.67	-1.30

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.16	0.22	2.64	0.16	1.34	-2.19	6.9

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-06 @ 11 ft

Analysis Date: 7/28/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
409,020	1,195,925	State Plane, FLW (U.S. Ft.)	-22.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 2.41 #230 - 2.37			6.9

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.01	0.01
#14	-0.50	1.40	0.01	0.02
#18	0.00	1.00	0.05	0.07
#25	0.50	0.71	0.10	0.17
#35	1.00	0.50	0.12	0.29
#45	1.50	0.36	0.32	0.61
#60	2.00	0.25	0.77	1.38
#80	2.50	0.18	19.55	20.93
#120	3.00	0.13	65.36	86.29
#170	3.50	0.09	10.80	97.09
#200	3.75	0.08	0.50	97.59
#230	4.00	0.06	0.04	97.63

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.40	2.98	2.91	2.72	2.53	2.37	2.09

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.69	0.15	2.72	0.15	0.34	-1.49	13.74

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-06 @ 14 ft

Analysis Date: 7/28/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
409,020	1,195,925	State Plane, FLW (U.S. Ft.)	-25.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/1	#200 - 3.38 #230 - 3.24			23.7

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	1.15	1.15
#4	-2.25	4.75	1.36	2.51
#5	-2.00	4.00	0.99	3.50
#7	-1.50	2.80	2.00	5.50
#10	-1.00	2.00	1.97	7.47
#14	-0.50	1.40	1.71	9.18
#18	0.00	1.00	1.15	10.33
#25	0.50	0.71	1.26	11.59
#35	1.00	0.50	1.48	13.07
#45	1.50	0.36	2.14	15.21
#60	2.00	0.25	3.31	18.52
#80	2.50	0.18	13.12	31.64
#120	3.00	0.13	54.06	85.70
#170	3.50	0.09	10.56	96.26
#200	3.75	0.08	0.36	96.62
#230	4.00	0.06	0.14	96.76

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to coarse-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.44	2.98	2.90	2.67	2.25	1.62	-1.63

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.15	0.23	2.67	0.16	1.41	-2.17	6.71

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-07 @ 2 ft

Analysis Date: 7/28/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
410,109	1,195,700	State Plane, FLW (U.S. Ft.)	-12.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/2	#200 - 1.42 #230 - 0.51			13

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.15	0.15
#3.5	-2.50	5.60	0.15	0.30
#4	-2.25	4.75	0.17	0.47
#5	-2.00	4.00	0.23	0.70
#7	-1.50	2.80	0.63	1.33
#10	-1.00	2.00	0.86	2.19
#14	-0.50	1.40	1.42	3.61
#18	0.00	1.00	1.25	4.86
#25	0.50	0.71	1.22	6.08
#35	1.00	0.50	1.01	7.09
#45	1.50	0.36	1.01	8.10
#60	2.00	0.25	1.33	9.43
#80	2.50	0.18	12.18	21.61
#120	3.00	0.13	62.86	84.47
#170	3.50	0.09	13.52	97.99
#200	3.75	0.08	0.59	98.58
#230	4.00	0.06	0.91	99.49

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.39	3.00	2.92	2.73	2.53	2.27	0.06

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.50	0.18	2.73	0.15	0.97	-3.14	13.87

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-07 @ 5 ft

Analysis Date: 7/28/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
410,109	1,195,700	State Plane, FLW (U.S. Ft.)	-15.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 6/2	#200 - 1.38 #230 - 1.33			43

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.73	0.73
#4	-2.25	4.75	0.54	1.27
#5	-2.00	4.00	0.66	1.93
#7	-1.50	2.80	2.08	4.01
#10	-1.00	2.00	4.21	8.22
#14	-0.50	1.40	6.55	14.77
#18	0.00	1.00	5.25	20.02
#25	0.50	0.71	5.16	25.18
#35	1.00	0.50	4.02	29.20
#45	1.50	0.36	4.46	33.66
#60	2.00	0.25	6.70	40.36
#80	2.50	0.18	29.17	69.53
#120	3.00	0.13	25.89	95.42
#170	3.50	0.09	3.07	98.49
#200	3.75	0.08	0.13	98.62
#230	4.00	0.06	0.05	98.67

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some fine to coarse-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.99	2.78	2.61	2.17	0.48	-0.38	-1.38

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.51	0.35	2.17	0.22	1.47	-1.04	2.92

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-07 @ 8 ft

Analysis Date: 7/28/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
410,109	1,195,700	State Plane, FLW (U.S. Ft.)	-18.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/2	#200 - 2.27 #230 - 2.24			24.1

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.27	0.27
#3.5	-2.50	5.60	1.34	1.61
#4	-2.25	4.75	0.35	1.96
#5	-2.00	4.00	0.58	2.54
#7	-1.50	2.80	1.11	3.65
#10	-1.00	2.00	2.45	6.10
#14	-0.50	1.40	3.30	9.40
#18	0.00	1.00	2.53	11.93
#25	0.50	0.71	2.23	14.16
#35	1.00	0.50	2.00	16.16
#45	1.50	0.36	2.89	19.05
#60	2.00	0.25	6.26	25.31
#80	2.50	0.18	44.75	70.06
#120	3.00	0.13	25.27	95.33
#170	3.50	0.09	2.36	97.69
#200	3.75	0.08	0.04	97.73
#230	4.00	0.06	0.03	97.76

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to coarse-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.99	2.78	2.60	2.28	1.98	0.96	-1.22

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.84	0.28	2.28	0.21	1.31	-2	6.41

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-07 @ 11 ft

Analysis Date: 7/28/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
410,109	1,195,700	State Plane, FLW (U.S. Ft.)	-21.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/2	#200 - 0.93 #230 - 0.93			12.2

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.06	0.06
#4	-2.25	4.75	0.23	0.29
#5	-2.00	4.00	0.18	0.47
#7	-1.50	2.80	0.75	1.22
#10	-1.00	2.00	1.14	2.36
#14	-0.50	1.40	1.75	4.11
#18	0.00	1.00	1.57	5.68
#25	0.50	0.71	1.44	7.12
#35	1.00	0.50	1.17	8.29
#45	1.50	0.36	1.45	9.74
#60	2.00	0.25	3.51	13.25
#80	2.50	0.18	47.56	60.81
#120	3.00	0.13	34.82	95.63
#170	3.50	0.09	3.39	99.02
#200	3.75	0.08	0.00	99.07
#230	4.00	0.06	0.05	99.07

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.99	2.83	2.70	2.39	2.12	2.03	-0.22

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.20	0.22	2.39	0.19	0.92	-2.72	10.77

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-07 @ 14 ft

Analysis Date: 7/28/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
410,109	1,195,700	State Plane, FLW (U.S. Ft.)	-24.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/2	#200 - 1.31 #230 - 1.31			15.9

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.69	0.69
#3.5	-2.50	5.60	0.58	1.27
#4	-2.25	4.75	0.28	1.55
#5	-2.00	4.00	0.33	1.88
#7	-1.50	2.80	0.87	2.75
#10	-1.00	2.00	1.67	4.42
#14	-0.50	1.40	2.08	6.50
#18	0.00	1.00	1.75	8.25
#25	0.50	0.71	1.65	9.90
#35	1.00	0.50	1.56	11.46
#45	1.50	0.36	2.19	13.65
#60	2.00	0.25	5.02	18.67
#80	2.50	0.18	52.61	71.28
#120	3.00	0.13	26.12	97.40
#170	3.50	0.09	1.25	98.65
#200	3.75	0.08	0.04	98.69
#230	4.00	0.06	0.00	98.69

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.95	2.74	2.57	2.30	2.06	1.73	-0.86

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.99	0.25	2.30	0.20	1.15	-2.68	10.43

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-08 @ 2 ft

Analysis Date: 7/28/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,057	1,195,355	State Plane, FLW (U.S. Ft.)	-11.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 8/1	#200 - 1.23 #230 - 1.20			8.5

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	1.31	1.31
#3.5	-2.50	5.60	0.05	1.36
#4	-2.25	4.75	0.18	1.54
#5	-2.00	4.00	0.18	1.72
#7	-1.50	2.80	0.24	1.96
#10	-1.00	2.00	0.68	2.64
#14	-0.50	1.40	0.88	3.52
#18	0.00	1.00	0.80	4.32
#25	0.50	0.71	0.84	5.16
#35	1.00	0.50	0.75	5.91
#45	1.50	0.36	0.86	6.77
#60	2.00	0.25	1.49	8.26
#80	2.50	0.18	20.47	28.73
#120	3.00	0.13	56.33	85.06
#170	3.50	0.09	13.11	98.17
#200	3.75	0.08	0.60	98.77
#230	4.00	0.06	0.03	98.80

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.38	2.99	2.91	2.69	2.41	2.19	0.40

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.45	0.18	2.69	0.15	1.06	-3.89	20.11

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-08 @ 5 ft

Analysis Date: 7/28/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,057	1,195,355	State Plane, FLW (U.S. Ft.)	-14.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 6/1	#200 - 4.47 #230 - 4.00			9.2

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.02	0.02
#7	-1.50	2.80	0.08	0.10
#10	-1.00	2.00	0.04	0.14
#14	-0.50	1.40	0.10	0.24
#18	0.00	1.00	0.15	0.39
#25	0.50	0.71	0.20	0.59
#35	1.00	0.50	0.33	0.92
#45	1.50	0.36	0.52	1.44
#60	2.00	0.25	1.02	2.46
#80	2.50	0.18	3.86	6.32
#120	3.00	0.13	66.14	72.46
#170	3.50	0.09	21.03	93.49
#200	3.75	0.08	2.04	95.53
#230	4.00	0.06	0.47	96.00

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.69	3.27	3.06	2.83	2.64	2.57	2.33

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.82	0.14	2.83	0.14	0.43	-3.66	32.27

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-08 @ 8 ft

Analysis Date: 7/28/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,057	1,195,355	State Plane, FLW (U.S. Ft.)	-17.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 6/1	#200 - 2.88 #230 - 2.66			12.8

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	1.11	1.11
3/8"	-3.25	9.50	2.43	3.54
#3.5	-2.50	5.60	3.13	6.67
#4	-2.25	4.75	0.24	6.91
#5	-2.00	4.00	0.37	7.28
#7	-1.50	2.80	0.48	7.76
#10	-1.00	2.00	0.43	8.19
#14	-0.50	1.40	0.19	8.38
#18	0.00	1.00	0.25	8.63
#25	0.50	0.71	0.29	8.92
#35	1.00	0.50	0.33	9.25
#45	1.50	0.36	0.41	9.66
#60	2.00	0.25	0.70	10.36
#80	2.50	0.18	3.52	13.88
#120	3.00	0.13	56.09	69.97
#170	3.50	0.09	25.72	95.69
#200	3.75	0.08	1.43	97.12
#230	4.00	0.06	0.22	97.34

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.49	3.27	3.10	2.82	2.60	2.52	-2.90

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.34	0.20	2.82	0.14	1.58	-2.86	10.31

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-08 @ 11 ft

Analysis Date: 7/28/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,057	1,195,355	State Plane, FLW (U.S. Ft.)	-20.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 6/1	#200 - 3.61 #230 - 3.33			5

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.04
#4	-2.25	4.75	0.00	0.04
#5	-2.00	4.00	0.00	0.04
#7	-1.50	2.80	0.00	0.04
#10	-1.00	2.00	0.04	0.04
#14	-0.50	1.40	0.12	0.16
#18	0.00	1.00	0.14	0.30
#25	0.50	0.71	0.14	0.44
#35	1.00	0.50	0.15	0.59
#45	1.50	0.36	0.15	0.74
#60	2.00	0.25	0.32	1.06
#80	2.50	0.18	4.03	5.09
#120	3.00	0.13	72.62	77.71
#170	3.50	0.09	17.45	95.16
#200	3.75	0.08	1.23	96.39
#230	4.00	0.06	0.28	96.67

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.50	3.18	2.98	2.81	2.64	2.58	2.49

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.81	0.14	2.81	0.14	0.36	-4.4	53.29

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-08 @ 14 ft

Analysis Date: 7/28/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,057	1,195,355	State Plane, FLW (U.S. Ft.)	-23.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 6/1	#200 - 1.94 #230 - 1.72			15.4

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.03	0.03
#10	-1.00	2.00	0.07	0.10
#14	-0.50	1.40	0.31	0.41
#18	0.00	1.00	0.46	0.87
#25	0.50	0.71	0.77	1.64
#35	1.00	0.50	1.21	2.85
#45	1.50	0.36	1.94	4.79
#60	2.00	0.25	3.81	8.60
#80	2.50	0.18	23.11	31.71
#120	3.00	0.13	51.63	83.34
#170	3.50	0.09	14.27	97.61
#200	3.75	0.08	0.45	98.06
#230	4.00	0.06	0.22	98.28

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.41	3.02	2.92	2.68	2.35	2.16	1.53

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.57	0.17	2.68	0.16	0.59	-2.29	11.7

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-09 @ 2 ft

Analysis Date: 7/28/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
412,059	1,195,106	State Plane, FLW (U.S. Ft.)	-12.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 6/1	#200 - 1.08 #230 - 1.03			7.6

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.19	0.19
#7	-1.50	2.80	0.32	0.51
#10	-1.00	2.00	0.75	1.26
#14	-0.50	1.40	1.00	2.26
#18	0.00	1.00	1.26	3.52
#25	0.50	0.71	1.29	4.81
#35	1.00	0.50	1.11	5.92
#45	1.50	0.36	1.08	7.00
#60	2.00	0.25	1.78	8.78
#80	2.50	0.18	19.95	28.73
#120	3.00	0.13	59.27	88.00
#170	3.50	0.09	10.57	98.57
#200	3.75	0.08	0.35	98.92
#230	4.00	0.06	0.05	98.97

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.33	2.97	2.89	2.68	2.41	2.18	0.59

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.49	0.18	2.68	0.16	0.81	-3.05	13.49

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-09 @ 5 ft

Analysis Date: 7/28/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
412,059	1,195,106	State Plane, FLW (U.S. Ft.)	-15.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 3.04 #230 - 2.79		12.17	9

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.18	0.18
#4	-2.25	4.75	0.23	0.41
#5	-2.00	4.00	0.21	0.62
#7	-1.50	2.80	0.49	1.11
#10	-1.00	2.00	0.58	1.69
#14	-0.50	1.40	0.75	2.44
#18	0.00	1.00	0.63	3.07
#25	0.50	0.71	0.72	3.79
#35	1.00	0.50	0.84	4.63
#45	1.50	0.36	1.11	5.74
#60	2.00	0.25	1.89	7.63
#80	2.50	0.18	6.15	13.78
#120	3.00	0.13	51.05	64.83
#170	3.50	0.09	30.35	95.18
#200	3.75	0.08	1.78	96.96
#230	4.00	0.06	0.25	97.21

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.50	3.32	3.17	2.85	2.61	2.52	1.17

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.69	0.15	2.85	0.14	0.87	-3.52	17.48

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-09 @ 8 ft

Analysis Date: 7/28/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
412,059	1,195,106	State Plane, FLW (U.S. Ft.)	-18.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 8/1	#200 - 1.58 #230 - 1.55			14.3

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	1.25	1.25
#3.5	-2.50	5.60	0.97	2.22
#4	-2.25	4.75	0.62	2.84
#5	-2.00	4.00	0.82	3.66
#7	-1.50	2.80	1.29	4.95
#10	-1.00	2.00	1.98	6.93
#14	-0.50	1.40	2.13	9.06
#18	0.00	1.00	1.61	10.67
#25	0.50	0.71	1.37	12.04
#35	1.00	0.50	1.09	13.13
#45	1.50	0.36	1.10	14.23
#60	2.00	0.25	1.60	15.83
#80	2.50	0.18	11.69	27.52
#120	3.00	0.13	52.68	80.20
#170	3.50	0.09	17.62	97.82
#200	3.75	0.08	0.60	98.42
#230	4.00	0.06	0.03	98.45

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium to coarse-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.42	3.11	2.95	2.71	2.39	2.01	-1.49

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.22	0.21	2.71	0.15	1.48	-2.37	7.88

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-09 @ 11 ft

Analysis Date: 7/28/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
412,059	1,195,106	State Plane, FLW (U.S. Ft.)	-21.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 1.22 #230 - 1.07			31.9

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	2.10	2.10
#4	-2.25	4.75	0.59	2.69
#5	-2.00	4.00	1.04	3.73
#7	-1.50	2.80	1.79	5.52
#10	-1.00	2.00	2.99	8.51
#14	-0.50	1.40	3.82	12.33
#18	0.00	1.00	3.78	16.11
#25	0.50	0.71	3.84	19.95
#35	1.00	0.50	3.34	23.29
#45	1.50	0.36	3.49	26.78
#60	2.00	0.25	4.70	31.48
#80	2.50	0.18	19.19	50.67
#120	3.00	0.13	41.43	92.10
#170	3.50	0.09	6.61	98.71
#200	3.75	0.08	0.07	98.78
#230	4.00	0.06	0.15	98.93

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some fine to coarse-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.22	2.90	2.79	2.48	1.24	-0.01	-1.65

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.77	0.29	2.48	0.18	1.54	-1.45	4.06

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-09 @ 14 ft

Analysis Date: 7/28/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
412,059	1,195,106	State Plane, FLW (U.S. Ft.)	-24.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/1	#200 - 1.12 #230 - 1.12			10.3

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.17	0.17
#4	-2.25	4.75	0.26	0.43
#5	-2.00	4.00	0.19	0.62
#7	-1.50	2.80	0.53	1.15
#10	-1.00	2.00	1.00	2.15
#14	-0.50	1.40	1.02	3.17
#18	0.00	1.00	1.00	4.17
#25	0.50	0.71	0.97	5.14
#35	1.00	0.50	0.88	6.02
#45	1.50	0.36	1.13	7.15
#60	2.00	0.25	3.55	10.70
#80	2.50	0.18	29.46	40.16
#120	3.00	0.13	52.08	92.24
#170	3.50	0.09	6.60	98.84
#200	3.75	0.08	0.04	98.88
#230	4.00	0.06	0.00	98.88

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.21	2.92	2.83	2.59	2.24	2.09	0.43

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.38	0.19	2.59	0.17	0.88	-3.2	14.52

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-10 @ 3 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
403,631	1,196,328	State Plane, FLW (U.S. Ft.)	-12.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 1.19 #230 - 1.14			2.6

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.04	0.04
#14	-0.50	1.40	0.04	0.08
#18	0.00	1.00	0.03	0.11
#25	0.50	0.71	0.07	0.18
#35	1.00	0.50	0.07	0.25
#45	1.50	0.36	0.13	0.38
#60	2.00	0.25	0.39	0.77
#80	2.50	0.18	8.10	8.87
#120	3.00	0.13	77.50	86.37
#170	3.50	0.09	12.12	98.49
#200	3.75	0.08	0.32	98.81
#230	4.00	0.06	0.05	98.86

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.36	2.98	2.93	2.77	2.60	2.55	2.26

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.76	0.15	2.77	0.15	0.29	-3.01	37.79

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-10 @ 6 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
403,631	1,196,328	State Plane, FLW (U.S. Ft.)	-15.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 1.36 #230 - 1.21			9.8

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.01	0.01
#7	-1.50	2.80	0.03	0.04
#10	-1.00	2.00	0.02	0.06
#14	-0.50	1.40	0.18	0.24
#18	0.00	1.00	0.14	0.38
#25	0.50	0.71	0.14	0.52
#35	1.00	0.50	0.19	0.71
#45	1.50	0.36	0.15	0.86
#60	2.00	0.25	0.40	1.26
#80	2.50	0.18	8.45	9.71
#120	3.00	0.13	72.02	81.73
#170	3.50	0.09	16.38	98.11
#200	3.75	0.08	0.53	98.64
#230	4.00	0.06	0.15	98.79

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.41	3.07	2.95	2.78	2.61	2.54	2.22

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.77	0.15	2.78	0.15	0.37	-3.99	38.96

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-10 @ 9 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
403,631	1,196,328	State Plane, FLW (U.S. Ft.)	-18.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 6/1	#200 - 6.06 #230 - 5.62			51.8

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.38	0.38
#4	-2.25	4.75	0.45	0.83
#5	-2.00	4.00	0.83	1.66
#7	-1.50	2.80	1.87	3.53
#10	-1.00	2.00	3.96	7.49
#14	-0.50	1.40	4.87	12.36
#18	0.00	1.00	4.99	17.35
#25	0.50	0.71	7.49	24.84
#35	1.00	0.50	7.06	31.90
#45	1.50	0.36	6.36	38.26
#60	2.00	0.25	5.81	44.07
#80	2.50	0.18	9.91	53.98
#120	3.00	0.13	22.81	76.79
#170	3.50	0.09	15.40	92.19
#200	3.75	0.08	1.75	93.94
#230	4.00	0.06	0.44	94.38

SAND, poorly-graded with silt, mostly fine to coarse-grained sand-sized shell, some fine-grained sand-sized quartz, few silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.23	2.96	2.30	0.51	-0.14	-1.31

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.60	0.33	2.30	0.20	1.56	-0.73	2.45

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-10 @ 11.5 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
403,631	1,196,328	State Plane, FLW (U.S. Ft.)	-21.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 6/1	#200 - 2.48 #230 - 2.28			73.6

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.43	0.43
#3.5	-2.50	5.60	3.51	3.94
#4	-2.25	4.75	1.24	5.18
#5	-2.00	4.00	1.61	6.79
#7	-1.50	2.80	4.32	11.11
#10	-1.00	2.00	9.40	20.51
#14	-0.50	1.40	10.86	31.37
#18	0.00	1.00	10.26	41.63
#25	0.50	0.71	11.05	52.68
#35	1.00	0.50	9.02	61.70
#45	1.50	0.36	6.84	68.54
#60	2.00	0.25	5.11	73.65
#80	2.50	0.18	7.78	81.43
#120	3.00	0.13	9.43	90.86
#170	3.50	0.09	6.12	96.98
#200	3.75	0.08	0.54	97.52
#230	4.00	0.06	0.20	97.72

SAND, poorly-graded, mostly sand to gravel-sized shell, little fine-grained sand-sized quartz, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.34	2.64	2.09	0.38	-0.79	-1.24	-2.29

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.46	0.73	0.38	0.77	1.7	-0.01	2.15

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-10 @ 13.5 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
403,631	1,196,328	State Plane, FLW (U.S. Ft.)	-23.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 6/1	#200 - 14.75 #230 - 14.32			23

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	4.74	4.74
#4	-2.25	4.75	0.58	5.32
#5	-2.00	4.00	0.94	6.26
#7	-1.50	2.80	1.19	7.45
#10	-1.00	2.00	1.05	8.50
#14	-0.50	1.40	0.85	9.35
#18	0.00	1.00	0.88	10.23
#25	0.50	0.71	0.86	11.09
#35	1.00	0.50	0.83	11.92
#45	1.50	0.36	1.42	13.34
#60	2.00	0.25	3.25	16.59
#80	2.50	0.18	25.20	41.79
#120	3.00	0.13	36.86	78.65
#170	3.50	0.09	6.06	84.71
#200	3.75	0.08	0.54	85.25
#230	4.00	0.06	0.43	85.68

SAND, silty, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, little silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.44	2.95	2.61	2.17	1.91	-2.39

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.97	0.26	2.61	0.16	1.6	-2.13	6.36

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-11 @ 2 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
404,325	1,196,087	State Plane, FLW (U.S. Ft.)	-10.2 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/1	#200 - 0.40 #230 - 0.32			14.5

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.55	0.55
#3.5	-2.50	5.60	0.56	1.11
#4	-2.25	4.75	0.10	1.21
#5	-2.00	4.00	0.29	1.50
#7	-1.50	2.80	0.72	2.22
#10	-1.00	2.00	1.47	3.69
#14	-0.50	1.40	2.12	5.81
#18	0.00	1.00	1.84	7.65
#25	0.50	0.71	1.69	9.34
#35	1.00	0.50	1.33	10.67
#45	1.50	0.36	1.43	12.10
#60	2.00	0.25	2.20	14.30
#80	2.50	0.18	15.69	29.99
#120	3.00	0.13	58.42	88.41
#170	3.50	0.09	10.92	99.33
#200	3.75	0.08	0.27	99.60
#230	4.00	0.06	0.08	99.68

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.30	2.96	2.89	2.67	2.34	2.05	-0.69

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.31	0.20	2.67	0.16	1.18	-2.7	10.45

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-11 @ 6 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
404,325	1,196,087	State Plane, FLW (U.S. Ft.)	-14.2 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 1.07 #230 - 1.02			0.6

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.03
#4	-2.25	4.75	0.03	0.03
#5	-2.00	4.00	0.00	0.05
#7	-1.50	2.80	0.02	0.05
#10	-1.00	2.00	0.04	0.09
#14	-0.50	1.40	0.01	0.10
#18	0.00	1.00	0.01	0.11
#25	0.50	0.71	0.03	0.14
#35	1.00	0.50	0.05	0.19
#45	1.50	0.36	0.04	0.23
#60	2.00	0.25	0.21	0.44
#80	2.50	0.18	3.71	4.15
#120	3.00	0.13	75.45	79.60
#170	3.50	0.09	18.66	98.26
#200	3.75	0.08	0.67	98.93
#230	4.00	0.06	0.05	98.98

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt, trace shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.41	3.12	2.97	2.80	2.64	2.58	2.51

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.82	0.14	2.80	0.14	0.29	-4.59	81.73

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-11 @ 10 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
404,325	1,196,087	State Plane, FLW (U.S. Ft.)	-18.2 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	N 5/	#200 - 2.52 #230 - 2.27			22.1

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.40	0.40
#3.5	-2.50	5.60	0.52	0.92
#4	-2.25	4.75	0.17	1.09
#5	-2.00	4.00	0.24	1.33
#7	-1.50	2.80	1.03	2.36
#10	-1.00	2.00	1.27	3.63
#14	-0.50	1.40	1.82	5.45
#18	0.00	1.00	1.91	7.36
#25	0.50	0.71	2.35	9.71
#35	1.00	0.50	2.36	12.07
#45	1.50	0.36	2.22	14.29
#60	2.00	0.25	2.03	16.32
#80	2.50	0.18	5.72	22.04
#120	3.00	0.13	54.35	76.39
#170	3.50	0.09	19.76	96.15
#200	3.75	0.08	1.33	97.48
#230	4.00	0.06	0.25	97.73

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.47	3.19	2.99	2.76	2.53	1.92	-0.62

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.37	0.19	2.76	0.15	1.24	-2.42	8.82

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-11 @ 11.5 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
404,325	1,196,087	State Plane, FLW (U.S. Ft.)	-19.7 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	10Y 5/1	#200 - 6.50 #230 - 5.73			38.4

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.49	0.49
#4	-2.25	4.75	0.51	1.00
#5	-2.00	4.00	0.92	1.92
#7	-1.50	2.80	1.91	3.83
#10	-1.00	2.00	3.66	7.49
#14	-0.50	1.40	4.63	12.12
#18	0.00	1.00	4.50	16.62
#25	0.50	0.71	5.68	22.30
#35	1.00	0.50	5.34	27.64
#45	1.50	0.36	4.74	32.38
#60	2.00	0.25	4.74	37.12
#80	2.50	0.18	7.67	44.79
#120	3.00	0.13	26.13	70.92
#170	3.50	0.09	20.22	91.14
#200	3.75	0.08	2.36	93.50
#230	4.00	0.06	0.77	94.27

SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, some fine to coarse-grained sand-sized shell, few silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.32	3.10	2.60	0.75	-0.07	-1.34

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.79	0.29	2.60	0.16	1.6	-0.95	2.74

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-11 @ 13.5 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
404,325	1,196,087	State Plane, FLW (U.S. Ft.)	-21.7 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	10Y 5/1	#200 - 1.64 #230 - 1.57			63.7

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	3.61	3.61
#3.5	-2.50	5.60	2.07	5.68
#4	-2.25	4.75	1.50	7.18
#5	-2.00	4.00	2.37	9.55
#7	-1.50	2.80	3.62	13.17
#10	-1.00	2.00	9.39	22.56
#14	-0.50	1.40	11.50	34.06
#18	0.00	1.00	8.54	42.60
#25	0.50	0.71	7.57	50.17
#35	1.00	0.50	5.34	55.51
#45	1.50	0.36	4.68	60.19
#60	2.00	0.25	4.92	65.11
#80	2.50	0.18	15.40	80.51
#120	3.00	0.13	12.27	92.78
#170	3.50	0.09	5.03	97.81
#200	3.75	0.08	0.55	98.36
#230	4.00	0.06	0.07	98.43

SAND, poorly-graded, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.22	2.64	2.32	0.49	-0.89	-1.35	-2.75

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.51	0.70	0.49	0.71	1.89	-0.31	2.15

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-12 @ 2 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
405,371	1,195,875	State Plane, FLW (U.S. Ft.)	-11.2 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/1	#200 - 0.54 #230 - 0.50			20.3

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.90	0.90
#3.5	-2.50	5.60	1.39	2.29
#4	-2.25	4.75	0.40	2.69
#5	-2.00	4.00	0.96	3.65
#7	-1.50	2.80	1.59	5.24
#10	-1.00	2.00	2.55	7.79
#14	-0.50	1.40	3.46	11.25
#18	0.00	1.00	2.40	13.65
#25	0.50	0.71	2.19	15.84
#35	1.00	0.50	1.58	17.42
#45	1.50	0.36	1.49	18.91
#60	2.00	0.25	2.43	21.34
#80	2.50	0.18	14.87	36.21
#120	3.00	0.13	49.87	86.08
#170	3.50	0.09	13.02	99.10
#200	3.75	0.08	0.36	99.46
#230	4.00	0.06	0.04	99.50

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium to coarse-grained sand-sized shell. trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.34	2.98	2.89	2.64	2.12	0.55	-1.58

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.04	0.24	2.64	0.16	1.54	-1.93	5.83

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-12 @ 5 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
405,371	1,195,875	State Plane, FLW (U.S. Ft.)	-14.2 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 1.25 #230 - 1.22			1.2

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.01	0.01
#10	-1.00	2.00	0.01	0.02
#14	-0.50	1.40	0.08	0.10
#18	0.00	1.00	0.03	0.13
#25	0.50	0.71	0.04	0.17
#35	1.00	0.50	0.07	0.24
#45	1.50	0.36	0.06	0.30
#60	2.00	0.25	0.46	0.76
#80	2.50	0.18	17.74	18.50
#120	3.00	0.13	69.53	88.03
#170	3.50	0.09	10.50	98.53
#200	3.75	0.08	0.22	98.75
#230	4.00	0.06	0.03	98.78

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt, trace shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.33	2.97	2.91	2.73	2.55	2.43	2.12

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.70	0.15	2.73	0.15	0.31	-2.26	25.83

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-12 @ 8 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
405,371	1,195,875	State Plane, FLW (U.S. Ft.)	-17.2 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 0.94 #230 - 0.89			2.1

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.02	0.02
#10	-1.00	2.00	0.05	0.07
#14	-0.50	1.40	0.05	0.12
#18	0.00	1.00	0.04	0.16
#25	0.50	0.71	0.05	0.21
#35	1.00	0.50	0.05	0.26
#45	1.50	0.36	0.09	0.35
#60	2.00	0.25	0.38	0.73
#80	2.50	0.18	15.97	16.70
#120	3.00	0.13	68.09	84.79
#170	3.50	0.09	13.82	98.61
#200	3.75	0.08	0.45	99.06
#230	4.00	0.06	0.05	99.11

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.37	2.99	2.93	2.74	2.56	2.48	2.13

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.73	0.15	2.74	0.15	0.33	-2.52	29.64

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-12 @ 11.5 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
405,371	1,195,875	State Plane, FLW (U.S. Ft.)	-20.7 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 6/1	#200 - 1.94 #230 - 1.77			29

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.15	0.15
#4	-2.25	4.75	0.17	0.32
#5	-2.00	4.00	0.38	0.70
#7	-1.50	2.80	0.36	1.06
#10	-1.00	2.00	0.80	1.86
#14	-0.50	1.40	1.07	2.93
#18	0.00	1.00	1.52	4.45
#25	0.50	0.71	2.25	6.70
#35	1.00	0.50	2.65	9.35
#45	1.50	0.36	3.53	12.88
#60	2.00	0.25	3.72	16.60
#80	2.50	0.18	16.86	33.46
#120	3.00	0.13	51.36	84.82
#170	3.50	0.09	12.49	97.31
#200	3.75	0.08	0.75	98.06
#230	4.00	0.06	0.17	98.23

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some fine to medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.41	2.99	2.90	2.66	2.25	1.92	0.12

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.36	0.19	2.66	0.16	0.98	-2.37	9.21

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-12 @ 13.5 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
405,371	1,195,875	State Plane, FLW (U.S. Ft.)	-22.7 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 6/1	#200 - 6.63 #230 - 5.86			48.5

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	2.78	2.78
#3.5	-2.50	5.60	0.61	3.39
#4	-2.25	4.75	0.76	4.15
#5	-2.00	4.00	1.57	5.72
#7	-1.50	2.80	3.94	9.66
#10	-1.00	2.00	5.75	15.41
#14	-0.50	1.40	5.88	21.29
#18	0.00	1.00	4.66	25.95
#25	0.50	0.71	4.83	30.78
#35	1.00	0.50	3.67	34.45
#45	1.50	0.36	3.35	37.80
#60	2.00	0.25	3.65	41.45
#80	2.50	0.18	6.78	48.23
#120	3.00	0.13	20.00	68.23
#170	3.50	0.09	22.32	90.55
#200	3.75	0.08	2.82	93.37
#230	4.00	0.06	0.77	94.14

SAND, poorly-graded with silt, some fine to coarse-grained sand-sized shell, some fine-grained sand-sized quartz, few silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.35	3.15	2.54	-0.10	-0.95	-2.11

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.42	0.37	2.54	0.17	2.01	-0.84	2.53

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-13 @ 2 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
406,314	1,195,590	State Plane, FLW (U.S. Ft.)	-13.7 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 1.20 #230 - 1.14			6.7

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.01
#5	-2.00	4.00	0.01	0.01
#7	-1.50	2.80	0.01	0.02
#10	-1.00	2.00	0.06	0.08
#14	-0.50	1.40	0.22	0.30
#18	0.00	1.00	0.25	0.55
#25	0.50	0.71	0.21	0.76
#35	1.00	0.50	0.25	1.01
#45	1.50	0.36	0.43	1.44
#60	2.00	0.25	0.91	2.35
#80	2.50	0.18	7.60	9.95
#120	3.00	0.13	70.10	80.05
#170	3.50	0.09	18.02	98.07
#200	3.75	0.08	0.73	98.80
#230	4.00	0.06	0.06	98.86

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.41	3.11	2.96	2.79	2.61	2.54	2.17

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.76	0.15	2.79	0.14	0.42	-3.89	31.59

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-13 @ 5 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
406,314	1,195,590	State Plane, FLW (U.S. Ft.)	-16.7 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 2.50 #230 - 2.28			8

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.26
#7	-1.50	2.80	0.26	0.26
#10	-1.00	2.00	0.02	0.28
#14	-0.50	1.40	0.09	0.37
#18	0.00	1.00	0.06	0.43
#25	0.50	0.71	0.05	0.48
#35	1.00	0.50	0.02	0.50
#45	1.50	0.36	0.12	0.62
#60	2.00	0.25	0.37	0.99
#80	2.50	0.18	4.85	5.84
#120	3.00	0.13	63.62	69.46
#170	3.50	0.09	26.26	95.72
#200	3.75	0.08	1.78	97.50
#230	4.00	0.06	0.22	97.72

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.49	3.28	3.11	2.85	2.65	2.58	2.41

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.85	0.14	2.85	0.14	0.42	-5.35	60.74

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-13 @ 8 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
406,314	1,195,590	State Plane, FLW (U.S. Ft.)	-19.7 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 1.67 #230 - 1.34		9.05	8.3

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.04	0.04
#10	-1.00	2.00	0.13	0.17
#14	-0.50	1.40	0.24	0.41
#18	0.00	1.00	0.19	0.60
#25	0.50	0.71	0.21	0.81
#35	1.00	0.50	0.26	1.07
#45	1.50	0.36	0.63	1.70
#60	2.00	0.25	1.53	3.23
#80	2.50	0.18	3.88	7.11
#120	3.00	0.13	54.95	62.06
#170	3.50	0.09	33.54	95.60
#200	3.75	0.08	2.73	98.33
#230	4.00	0.06	0.33	98.66

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.49	3.33	3.19	2.89	2.66	2.58	2.23

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.87	0.14	2.89	0.13	0.49	-3.46	25.45

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-13 @ 11 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
406,314	1,195,590	State Plane, FLW (U.S. Ft.)	-22.7 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 1.40 #230 - 1.11			4

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.06	0.06
#10	-1.00	2.00	0.03	0.09
#14	-0.50	1.40	0.07	0.16
#18	0.00	1.00	0.04	0.20
#25	0.50	0.71	0.04	0.24
#35	1.00	0.50	0.08	0.32
#45	1.50	0.36	0.17	0.49
#60	2.00	0.25	0.35	0.84
#80	2.50	0.18	3.71	4.55
#120	3.00	0.13	66.34	70.89
#170	3.50	0.09	25.51	96.40
#200	3.75	0.08	2.20	98.60
#230	4.00	0.06	0.29	98.89

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.47	3.26	3.08	2.84	2.65	2.59	2.50

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.87	0.14	2.84	0.14	0.35	-3.14	38.98

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-13 @ 14 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
406,314	1,195,590	State Plane, FLW (U.S. Ft.)	-25.7 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 6/1	#200 - 5.56 #230 - 5.08			16.7

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	1.58	1.58
#4	-2.25	4.75	0.38	1.96
#5	-2.00	4.00	0.48	2.44
#7	-1.50	2.80	1.16	3.60
#10	-1.00	2.00	1.02	4.62
#14	-0.50	1.40	1.30	5.92
#18	0.00	1.00	1.07	6.99
#25	0.50	0.71	1.08	8.07
#35	1.00	0.50	0.94	9.01
#45	1.50	0.36	0.90	9.91
#60	2.00	0.25	1.16	11.07
#80	2.50	0.18	4.55	15.62
#120	3.00	0.13	54.54	70.16
#170	3.50	0.09	22.32	92.48
#200	3.75	0.08	1.96	94.44
#230	4.00	0.06	0.48	94.92

SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, few silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.31	3.11	2.82	2.59	2.50	-0.85

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.47	0.18	2.82	0.14	1.27	-2.81	10.41

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-14 @ 2 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
407,392	1,195,341	State Plane, FLW (U.S. Ft.)	-13.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 8/1	#200 - 2.18 #230 - 1.85			26.9

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	5.06	5.06
#3.5	-2.50	5.60	3.09	8.15
#4	-2.25	4.75	0.43	8.58
#5	-2.00	4.00	1.06	9.64
#7	-1.50	2.80	1.47	11.11
#10	-1.00	2.00	2.58	13.69
#14	-0.50	1.40	2.83	16.52
#18	0.00	1.00	1.43	17.95
#25	0.50	0.71	0.92	18.87
#35	1.00	0.50	0.55	19.42
#45	1.50	0.36	0.65	20.07
#60	2.00	0.25	1.18	21.25
#80	2.50	0.18	4.20	25.45
#120	3.00	0.13	38.46	63.91
#170	3.50	0.09	31.68	95.59
#200	3.75	0.08	2.23	97.82
#230	4.00	0.06	0.33	98.15

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.49	3.32	3.18	2.82	2.45	-0.59	-3.26

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.95	0.26	2.82	0.14	2.08	-1.72	4.51

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-14 @ 5 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
407,392	1,195,341	State Plane, FLW (U.S. Ft.)	-16.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 8/1	#200 - 5.94 #230 - 5.32			7

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.04	0.04
#7	-1.50	2.80	0.04	0.08
#10	-1.00	2.00	0.23	0.31
#14	-0.50	1.40	0.21	0.52
#18	0.00	1.00	0.06	0.58
#25	0.50	0.71	0.16	0.74
#35	1.00	0.50	0.16	0.90
#45	1.50	0.36	0.24	1.14
#60	2.00	0.25	0.49	1.63
#80	2.50	0.18	2.03	3.66
#120	3.00	0.13	39.60	43.26
#170	3.50	0.09	47.02	90.28
#200	3.75	0.08	3.78	94.06
#230	4.00	0.06	0.62	94.68

SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, few silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.43	3.34	3.07	2.77	2.66	2.52

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.99	0.13	3.07	0.12	0.48	-4.48	37.75

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-14 @ 8 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
407,392	1,195,341	State Plane, FLW (U.S. Ft.)	-19.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 1.98 #230 - 1.58			6.8

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.02	0.02
#7	-1.50	2.80	0.04	0.06
#10	-1.00	2.00	0.09	0.15
#14	-0.50	1.40	0.17	0.32
#18	0.00	1.00	0.09	0.41
#25	0.50	0.71	0.09	0.50
#35	1.00	0.50	0.17	0.67
#45	1.50	0.36	0.30	0.97
#60	2.00	0.25	0.59	1.56
#80	2.50	0.18	2.75	4.31
#120	3.00	0.13	68.56	72.87
#170	3.50	0.09	23.07	95.94
#200	3.75	0.08	2.08	98.02
#230	4.00	0.06	0.40	98.42

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.48	3.24	3.05	2.83	2.65	2.59	2.51

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.84	0.14	2.83	0.14	0.4	-4.09	41.14

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-14 @ 11 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
407,392	1,195,341	State Plane, FLW (U.S. Ft.)	-22.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	N 7/	#200 - 8.26 #230 - 4.46			14.3

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.06
#5	-2.00	4.00	0.06	0.06
#7	-1.50	2.80	0.08	0.14
#10	-1.00	2.00	0.28	0.42
#14	-0.50	1.40	0.57	0.99
#18	0.00	1.00	0.77	1.76
#25	0.50	0.71	0.77	2.53
#35	1.00	0.50	1.01	3.54
#45	1.50	0.36	0.91	4.45
#60	2.00	0.25	1.09	5.54
#80	2.50	0.18	1.68	7.22
#120	3.00	0.13	6.96	14.18
#170	3.50	0.09	52.47	66.65
#200	3.75	0.08	25.09	91.74
#230	4.00	0.06	3.80	95.54

SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell, few silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.96	3.67	3.58	3.34	3.10	3.02	1.75

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	3.16	0.11	3.34	0.10	0.76	-3.55	17.46

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-15 @ 3 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
408,384	1,195,153	State Plane, FLW (U.S. Ft.)	-14.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 6/2	#200 - 1.97 #230 - 1.62			26.6

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	2.88	2.88
#3.5	-2.50	5.60	2.42	5.30
#4	-2.25	4.75	0.36	5.66
#5	-2.00	4.00	0.60	6.26
#7	-1.50	2.80	0.77	7.03
#10	-1.00	2.00	0.51	7.54
#14	-0.50	1.40	0.37	7.91
#18	0.00	1.00	0.29	8.20
#25	0.50	0.71	0.26	8.46
#35	1.00	0.50	0.26	8.72
#45	1.50	0.36	0.35	9.07
#60	2.00	0.25	0.59	9.66
#80	2.50	0.18	2.10	11.76
#120	3.00	0.13	59.01	70.77
#170	3.50	0.09	25.32	96.09
#200	3.75	0.08	1.94	98.03
#230	4.00	0.06	0.35	98.38

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.48	3.26	3.08	2.82	2.61	2.54	-2.59

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.41	0.19	2.82	0.14	1.61	-2.95	10.46

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-15 @ 4.5 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
408,384	1,195,153	State Plane, FLW (U.S. Ft.)	-16.0 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/2	#200 - 4.73 #230 - 4.26			30

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	2.57	2.57
#3.5	-2.50	5.60	3.16	5.73
#4	-2.25	4.75	0.82	6.55
#5	-2.00	4.00	0.99	7.54
#7	-1.50	2.80	1.77	9.31
#10	-1.00	2.00	2.01	11.32
#14	-0.50	1.40	1.87	13.19
#18	0.00	1.00	1.15	14.34
#25	0.50	0.71	1.32	15.66
#35	1.00	0.50	1.19	16.85
#45	1.50	0.36	1.46	18.31
#60	2.00	0.25	2.22	20.53
#80	2.50	0.18	7.36	27.89
#120	3.00	0.13	39.12	67.01
#170	3.50	0.09	25.97	92.98
#200	3.75	0.08	2.29	95.27
#230	4.00	0.06	0.47	95.74

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.72	3.33	3.15	2.78	2.30	0.64	-2.67

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.04	0.24	2.78	0.15	1.87	-1.87	5.25

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-15 @ 5.5 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
408,384	1,195,153	State Plane, FLW (U.S. Ft.)	-17.0 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/2	#200 - 2.99 #230 - 2.72			30.5

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	2.00	2.00
#3.5	-2.50	5.60	2.88	4.88
#4	-2.25	4.75	0.77	5.65
#5	-2.00	4.00	0.40	6.05
#7	-1.50	2.80	1.45	7.50
#10	-1.00	2.00	3.33	10.83
#14	-0.50	1.40	5.21	16.04
#18	0.00	1.00	3.71	19.75
#25	0.50	0.71	2.56	22.31
#35	1.00	0.50	1.43	23.74
#45	1.50	0.36	1.58	25.32
#60	2.00	0.25	2.68	28.00
#80	2.50	0.18	18.50	46.50
#120	3.00	0.13	38.41	84.91
#170	3.50	0.09	10.91	95.82
#200	3.75	0.08	1.19	97.01
#230	4.00	0.06	0.27	97.28

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.46	2.99	2.87	2.55	1.40	-0.50	-2.46

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.71	0.31	2.55	0.17	1.8	-1.48	4.08

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-15 @ 6.3 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
408,384	1,195,153	State Plane, FLW (U.S. Ft.)	-17.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/1	#200 - 1.84 #230 - 1.68			45.1

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.98	0.98
#3.5	-2.50	5.60	2.48	3.46
#4	-2.25	4.75	0.54	4.00
#5	-2.00	4.00	0.86	4.86
#7	-1.50	2.80	2.23	7.09
#10	-1.00	2.00	4.10	11.19
#14	-0.50	1.40	6.79	17.98
#18	0.00	1.00	5.49	23.47
#25	0.50	0.71	4.32	27.79
#35	1.00	0.50	2.62	30.41
#45	1.50	0.36	2.57	32.98
#60	2.00	0.25	3.73	36.71
#80	2.50	0.18	18.20	54.91
#120	3.00	0.13	35.39	90.30
#170	3.50	0.09	7.38	97.68
#200	3.75	0.08	0.48	98.16
#230	4.00	0.06	0.16	98.32

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some fine to coarse-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.32	2.91	2.78	2.37	0.18	-0.65	-1.97

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.51	0.35	2.37	0.19	1.75	-1.11	3.1

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-15 @ 9 ft

Analysis Date: 7/30/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
408,384	1,195,153	State Plane, FLW (U.S. Ft.)	-20.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/1	#200 - 0.91 #230 - 0.87			39.8

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.85	0.85
#3.5	-2.50	5.60	1.60	2.45
#4	-2.25	4.75	0.47	2.92
#5	-2.00	4.00	0.57	3.49
#7	-1.50	2.80	1.11	4.60
#10	-1.00	2.00	2.73	7.33
#14	-0.50	1.40	4.03	11.36
#18	0.00	1.00	3.57	14.93
#25	0.50	0.71	3.28	18.21
#35	1.00	0.50	3.24	21.45
#45	1.50	0.36	5.72	27.17
#60	2.00	0.25	13.30	40.47
#80	2.50	0.18	34.12	74.59
#120	3.00	0.13	21.51	96.10
#170	3.50	0.09	2.93	99.03
#200	3.75	0.08	0.06	99.09
#230	4.00	0.06	0.04	99.13

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some fine to coarse-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.97	2.72	2.51	2.14	1.31	0.16	-1.43

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.62	0.33	2.14	0.23	1.43	-1.66	5.27

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-15 @ 12 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
408,384	1,195,153	State Plane, FLW (U.S. Ft.)	-23.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 6/2	#200 - 1.74 #230 - 1.39			17

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.98	0.98
#4	-2.25	4.75	0.37	1.35
#5	-2.00	4.00	0.12	1.47
#7	-1.50	2.80	0.06	1.53
#10	-1.00	2.00	0.21	1.74
#14	-0.50	1.40	0.39	2.13
#18	0.00	1.00	0.44	2.57
#25	0.50	0.71	0.63	3.20
#35	1.00	0.50	0.84	4.04
#45	1.50	0.36	1.36	5.40
#60	2.00	0.25	3.08	8.48
#80	2.50	0.18	18.87	27.35
#120	3.00	0.13	54.70	82.05
#170	3.50	0.09	15.00	97.05
#200	3.75	0.08	1.21	98.26
#230	4.00	0.06	0.35	98.61

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.43	3.07	2.94	2.71	2.44	2.20	1.35

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.54	0.17	2.71	0.15	0.88	-3.92	22.11

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-16 @ 2 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
409,462	1,194,898	State Plane, FLW (U.S. Ft.)	-13.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/1	#200 - 1.52 #230 - 1.47		7.31	11

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.10	0.10
#4	-2.25	4.75	0.11	0.21
#5	-2.00	4.00	0.26	0.47
#7	-1.50	2.80	0.35	0.82
#10	-1.00	2.00	0.77	1.59
#14	-0.50	1.40	1.07	2.66
#18	0.00	1.00	0.81	3.47
#25	0.50	0.71	0.69	4.16
#35	1.00	0.50	0.47	4.63
#45	1.50	0.36	0.51	5.14
#60	2.00	0.25	0.99	6.13
#80	2.50	0.18	11.10	17.23
#120	3.00	0.13	63.01	80.24
#170	3.50	0.09	17.39	97.63
#200	3.75	0.08	0.85	98.48
#230	4.00	0.06	0.05	98.53

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.42	3.11	2.96	2.76	2.56	2.44	1.36

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.61	0.16	2.76	0.15	0.82	-3.67	18.19

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-16 @ 5 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
409,462	1,194,898	State Plane, FLW (U.S. Ft.)	-16.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/1	#200 - 1.81 #230 - 1.67			35.7

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.95	0.95
#4	-2.25	4.75	0.40	1.35
#5	-2.00	4.00	0.89	2.24
#7	-1.50	2.80	3.71	5.95
#10	-1.00	2.00	6.68	12.63
#14	-0.50	1.40	7.01	19.64
#18	0.00	1.00	3.52	23.16
#25	0.50	0.71	2.59	25.75
#35	1.00	0.50	1.67	27.42
#45	1.50	0.36	1.74	29.16
#60	2.00	0.25	2.56	31.72
#80	2.50	0.18	16.49	48.21
#120	3.00	0.13	42.21	90.42
#170	3.50	0.09	7.56	97.98
#200	3.75	0.08	0.21	98.19
#230	4.00	0.06	0.14	98.33

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some fine to coarse-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.30	2.92	2.82	2.52	0.36	-0.76	-1.63

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.64	0.32	2.52	0.17	1.67	-1.08	2.64

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-16 @ 8 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
409,462	1,194,898	State Plane, FLW (U.S. Ft.)	-19.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 6/1	#200 - 2.06 #230 - 1.81			62.52

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	1.47	1.47
#3.5	-2.50	5.60	1.13	2.60
#4	-2.25	4.75	1.32	3.92
#5	-2.00	4.00	0.65	4.57
#7	-1.50	2.80	2.92	7.49
#10	-1.00	2.00	6.66	14.15
#14	-0.50	1.40	9.12	23.27
#18	0.00	1.00	9.85	33.12
#25	0.50	0.71	8.91	42.03
#35	1.00	0.50	6.60	48.63
#45	1.50	0.36	6.41	55.04
#60	2.00	0.25	6.10	61.14
#80	2.50	0.18	10.85	71.99
#120	3.00	0.13	19.68	91.67
#170	3.50	0.09	5.77	97.44
#200	3.75	0.08	0.50	97.94
#230	4.00	0.06	0.25	98.19

SAND, poorly-graded, mostly fine to coarse-grained sand-sized shell, some fine-grained sand-sized quartz, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.29	2.81	2.58	1.11	-0.41	-0.90	-1.93

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.92	0.53	1.11	0.46	1.72	-0.44	2.32

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-16 @ 11 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
409,462	1,194,898	State Plane, FLW (U.S. Ft.)	-22.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 6/1	#200 - 1.40 #230 - 1.37			85.29

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	2.10	2.10
#3.5	-2.50	5.60	6.53	8.63
#4	-2.25	4.75	1.15	9.78
#5	-2.00	4.00	2.58	12.36
#7	-1.50	2.80	7.22	19.58
#10	-1.00	2.00	14.09	33.67
#14	-0.50	1.40	19.99	53.66
#18	0.00	1.00	14.46	68.12
#25	0.50	0.71	9.92	78.04
#35	1.00	0.50	4.76	82.80
#45	1.50	0.36	2.34	85.14
#60	2.00	0.25	1.05	86.19
#80	2.50	0.18	2.10	88.29
#120	3.00	0.13	7.52	95.81
#170	3.50	0.09	2.59	98.40
#200	3.75	0.08	0.20	98.60
#230	4.00	0.06	0.03	98.63

SAND, poorly-graded, mostly sand to gravel-sized shell, little fine-grained sand-sized quartz, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.95	1.26	0.35	-0.59	-1.31	-1.75	-2.92

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	-0.39	1.31			1.6	0.52	3.11

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-16 @ 14 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
409,462	1,194,898	State Plane, FLW (U.S. Ft.)	-25.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 6/1	#200 - 2.15 #230 - 1.98			54.54

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	3.28	3.28
#3.5	-2.50	5.60	5.76	9.04
#4	-2.25	4.75	1.71	10.75
#5	-2.00	4.00	2.58	13.33
#7	-1.50	2.80	3.91	17.24
#10	-1.00	2.00	6.18	23.42
#14	-0.50	1.40	6.65	30.07
#18	0.00	1.00	5.06	35.13
#25	0.50	0.71	4.34	39.47
#35	1.00	0.50	2.84	42.31
#45	1.50	0.36	2.38	44.69
#60	2.00	0.25	2.68	47.37
#80	2.50	0.18	14.58	61.95
#120	3.00	0.13	29.34	91.29
#170	3.50	0.09	6.27	97.56
#200	3.75	0.08	0.29	97.85
#230	4.00	0.06	0.17	98.02

SAND, poorly-graded, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.30	2.88	2.72	2.09	-0.88	-1.66	-3.03

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.89	0.54	2.09	0.23	2.13	-0.65	2.02

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-17 @ 3 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
410,399	1,194,583	State Plane, FLW (U.S. Ft.)	-11.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/1	#200 - 1.02 #230 - 0.93			34.13

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	1.68	1.68
#3.5	-2.50	5.60	0.45	2.13
#4	-2.25	4.75	0.23	2.36
#5	-2.00	4.00	0.69	3.05
#7	-1.50	2.80	1.24	4.29
#10	-1.00	2.00	2.71	7.00
#14	-0.50	1.40	4.98	11.98
#18	0.00	1.00	5.35	17.33
#25	0.50	0.71	4.99	22.32
#35	1.00	0.50	3.24	25.56
#45	1.50	0.36	2.46	28.02
#60	2.00	0.25	2.41	30.43
#80	2.50	0.18	11.50	41.93
#120	3.00	0.13	45.43	87.36
#170	3.50	0.09	11.21	98.57
#200	3.75	0.08	0.41	98.98
#230	4.00	0.06	0.09	99.07

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some fine to coarse-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.34	2.96	2.86	2.59	0.91	-0.12	-1.37

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.81	0.29	2.59	0.17	1.61	-1.47	4.42

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-17 @ 6 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
410,399	1,194,583	State Plane, FLW (U.S. Ft.)	-14.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/1	#200 - 1.95 #230 - 1.85			84.2

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	2.25	2.25
#3.5	-2.50	5.60	8.70	10.95
#4	-2.25	4.75	2.15	13.10
#5	-2.00	4.00	3.41	16.51
#7	-1.50	2.80	9.70	26.21
#10	-1.00	2.00	15.88	42.09
#14	-0.50	1.40	17.67	59.76
#18	0.00	1.00	11.06	70.82
#25	0.50	0.71	7.12	77.94
#35	1.00	0.50	4.02	81.96
#45	1.50	0.36	2.98	84.94
#60	2.00	0.25	2.25	87.19
#80	2.50	0.18	3.06	90.25
#120	3.00	0.13	5.80	96.05
#170	3.50	0.09	1.86	97.91
#200	3.75	0.08	0.14	98.05
#230	4.00	0.06	0.10	98.15

SAND, well-graded, mostly sand to gravel-sized shell, little fine-grained sand-sized quartz, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.91	1.34	0.29	-0.78	-1.56	-2.04	-3.01

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	-0.57	1.48			1.63	0.57	2.95

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-17 @ 9 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
410,399	1,194,583	State Plane, FLW (U.S. Ft.)	-17.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/1	#200 - 2.54 #230 - 2.36			38.9

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.83	0.83
#3.5	-2.50	5.60	3.13	3.96
#4	-2.25	4.75	1.88	5.84
#5	-2.00	4.00	2.60	8.44
#7	-1.50	2.80	4.90	13.34
#10	-1.00	2.00	6.41	19.75
#14	-0.50	1.40	5.11	24.86
#18	0.00	1.00	2.71	27.57
#25	0.50	0.71	1.68	29.25
#35	1.00	0.50	1.15	30.40
#45	1.50	0.36	1.14	31.54
#60	2.00	0.25	1.94	33.48
#80	2.50	0.18	15.05	48.53
#120	3.00	0.13	37.72	86.25
#170	3.50	0.09	10.55	96.80
#200	3.75	0.08	0.66	97.46
#230	4.00	0.06	0.18	97.64

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.41	2.97	2.85	2.52	-0.47	-1.29	-2.36

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.41	0.38	2.52	0.17	1.99	-0.97	2.4

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-17 @ 12 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
410,399	1,194,583	State Plane, FLW (U.S. Ft.)	-20.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/1	#200 - 2.20 #230 - 2.02			33.6

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	3.95	3.95
#3.5	-2.50	5.60	4.98	8.93
#4	-2.25	4.75	1.44	10.37
#5	-2.00	4.00	1.36	11.73
#7	-1.50	2.80	2.57	14.30
#10	-1.00	2.00	3.46	17.76
#14	-0.50	1.40	3.41	21.17
#18	0.00	1.00	2.58	23.75
#25	0.50	0.71	2.47	26.22
#35	1.00	0.50	1.95	28.17
#45	1.50	0.36	2.11	30.28
#60	2.00	0.25	2.98	33.26
#80	2.50	0.18	16.01	49.27
#120	3.00	0.13	39.60	88.87
#170	3.50	0.09	8.40	97.27
#200	3.75	0.08	0.53	97.80
#230	4.00	0.06	0.18	97.98

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.36	2.94	2.82	2.51	0.25	-1.25	-3.09

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.40	0.38	2.51	0.18	2.09	-1.23	3.09

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-18 @ 2 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,385	1,194,353	State Plane, FLW (U.S. Ft.)	-12.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 5/1	#200 - 1.55 #230 - 1.43			50.4

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	2.03	2.03
#3.5	-2.50	5.60	5.12	7.15
#4	-2.25	4.75	2.52	9.67
#5	-2.00	4.00	3.45	13.12
#7	-1.50	2.80	5.47	18.59
#10	-1.00	2.00	9.19	27.78
#14	-0.50	1.40	7.67	35.45
#18	0.00	1.00	5.01	40.46
#25	0.50	0.71	3.49	43.95
#35	1.00	0.50	2.12	46.07
#45	1.50	0.36	1.78	47.85
#60	2.00	0.25	1.97	49.82
#80	2.50	0.18	7.22	57.04
#120	3.00	0.13	30.81	87.85
#170	3.50	0.09	10.12	97.97
#200	3.75	0.08	0.48	98.45
#230	4.00	0.06	0.12	98.57

SAND, poorly-graded, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.35	2.94	2.79	2.01	-1.15	-1.74	-2.81

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.82	0.57	2.01	0.25	2.17	-0.42	1.67

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-18 @ 5 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,385	1,194,353	State Plane, FLW (U.S. Ft.)	-15.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 6/1	#200 - 2.84 #230 - 2.67			39.4

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	2.66	2.66
#3.5	-2.50	5.60	7.99	10.65
#4	-2.25	4.75	2.13	12.78
#5	-2.00	4.00	2.47	15.25
#7	-1.50	2.80	3.27	18.52
#10	-1.00	2.00	5.03	23.55
#14	-0.50	1.40	3.67	27.22
#18	0.00	1.00	2.52	29.74
#25	0.50	0.71	2.35	32.09
#35	1.00	0.50	2.02	34.11
#45	1.50	0.36	2.07	36.18
#60	2.00	0.25	2.86	39.04
#80	2.50	0.18	11.08	50.12
#120	3.00	0.13	34.32	84.44
#170	3.50	0.09	12.00	96.44
#200	3.75	0.08	0.72	97.16
#230	4.00	0.06	0.17	97.33

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.44	2.99	2.86	2.49	-0.80	-1.89	-3.03

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.16	0.45	2.49	0.18	2.23	-0.86	2.18

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-18 @ 8 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,385	1,194,353	State Plane, FLW (U.S. Ft.)	-18.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 6/1	#200 - 2.67 #230 - 2.28			32.1

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.74	0.74
#3.5	-2.50	5.60	5.34	6.08
#4	-2.25	4.75	2.57	8.65
#5	-2.00	4.00	3.16	11.81
#7	-1.50	2.80	4.28	16.09
#10	-1.00	2.00	4.10	20.19
#14	-0.50	1.40	2.84	23.03
#18	0.00	1.00	1.43	24.46
#25	0.50	0.71	0.95	25.41
#35	1.00	0.50	0.77	26.18
#45	1.50	0.36	1.02	27.20
#60	2.00	0.25	1.75	28.95
#80	2.50	0.18	4.91	33.86
#120	3.00	0.13	41.93	75.79
#170	3.50	0.09	19.90	95.69
#200	3.75	0.08	1.64	97.33
#230	4.00	0.06	0.39	97.72

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.48	3.21	2.99	2.69	0.28	-1.51	-2.65

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.61	0.33	2.69	0.15	2.12	-1.15	2.67

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-18 @ 11 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,385	1,194,353	State Plane, FLW (U.S. Ft.)	-21.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 6/1	#200 - 7.00 #230 - 6.57			11.34

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.61
#4	-2.25	4.75	0.00	0.61
#5	-2.00	4.00	0.61	0.61
#7	-1.50	2.80	0.19	0.80
#10	-1.00	2.00	0.35	1.15
#14	-0.50	1.40	0.46	1.61
#18	0.00	1.00	0.33	1.94
#25	0.50	0.71	0.35	2.29
#35	1.00	0.50	0.38	2.67
#45	1.50	0.36	0.46	3.13
#60	2.00	0.25	0.78	3.91
#80	2.50	0.18	5.69	9.60
#120	3.00	0.13	59.78	69.38
#170	3.50	0.09	21.81	91.19
#200	3.75	0.08	1.81	93.00
#230	4.00	0.06	0.43	93.43

SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, few silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.34	3.13	2.84	2.63	2.55	2.10

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.74	0.15	2.84	0.14	0.74	-4.73	31.17

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-18 @ 13.5 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
411,385	1,194,353	State Plane, FLW (U.S. Ft.)	-24.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 6/1	#200 - 4.44 #230 - 4.32			21.02

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.88	0.88
#3.5	-2.50	5.60	1.16	2.04
#4	-2.25	4.75	0.31	2.35
#5	-2.00	4.00	0.18	2.53
#7	-1.50	2.80	0.49	3.02
#10	-1.00	2.00	0.73	3.75
#14	-0.50	1.40	0.92	4.67
#18	0.00	1.00	0.79	5.46
#25	0.50	0.71	1.20	6.66
#35	1.00	0.50	1.33	7.99
#45	1.50	0.36	1.51	9.50
#60	2.00	0.25	2.50	12.00
#80	2.50	0.18	17.87	29.87
#120	3.00	0.13	53.36	83.23
#170	3.50	0.09	11.83	95.06
#200	3.75	0.08	0.50	95.56
#230	4.00	0.06	0.12	95.68

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium -grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.50	3.03	2.92	2.69	2.36	2.11	-0.29

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.35	0.20	2.69	0.15	1.2	-3.2	13.82

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-19 @ 3 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
403,641	1,195,383	State Plane, FLW (U.S. Ft.)	-13.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 1.49 #230 - 1.44			6.55

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.07	0.07
#7	-1.50	2.80	0.10	0.17
#10	-1.00	2.00	0.17	0.34
#14	-0.50	1.40	0.27	0.61
#18	0.00	1.00	0.23	0.84
#25	0.50	0.71	0.20	1.04
#35	1.00	0.50	0.18	1.22
#45	1.50	0.36	0.21	1.43
#60	2.00	0.25	0.45	1.88
#80	2.50	0.18	5.50	7.38
#120	3.00	0.13	76.43	83.81
#170	3.50	0.09	14.26	98.07
#200	3.75	0.08	0.44	98.51
#230	4.00	0.06	0.05	98.56

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.39	3.01	2.94	2.78	2.62	2.56	2.28

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.75	0.15	2.78	0.15	0.45	-5.56	48.49

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-19 @ 6 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
403,641	1,195,383	State Plane, FLW (U.S. Ft.)	-16.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 1.00 #230 - 0.97			11.01

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.37	0.37
#4	-2.25	4.75	0.13	0.50
#5	-2.00	4.00	0.15	0.65
#7	-1.50	2.80	0.11	0.76
#10	-1.00	2.00	0.51	1.27
#14	-0.50	1.40	0.66	1.93
#18	0.00	1.00	0.62	2.55
#25	0.50	0.71	0.65	3.20
#35	1.00	0.50	0.65	3.85
#45	1.50	0.36	0.86	4.71
#60	2.00	0.25	1.75	6.46
#80	2.50	0.18	14.40	20.86
#120	3.00	0.13	64.78	85.64
#170	3.50	0.09	12.88	98.52
#200	3.75	0.08	0.48	99.00
#230	4.00	0.06	0.03	99.03

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.36	2.99	2.92	2.72	2.53	2.33	1.58

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.58	0.17	2.72	0.15	0.76	-4.08	23.45

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-19 @ 9.5 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
403,641	1,195,383	State Plane, FLW (U.S. Ft.)	-19.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	5GY 6/1	#200 - 4.32 #230 - 3.90			51.91

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	1.94	1.94
#3.5	-2.50	5.60	3.02	4.96
#4	-2.25	4.75	1.27	6.23
#5	-2.00	4.00	1.39	7.62
#7	-1.50	2.80	4.12	11.74
#10	-1.00	2.00	5.28	17.02
#14	-0.50	1.40	5.83	22.85
#18	0.00	1.00	5.13	27.98
#25	0.50	0.71	6.58	34.56
#35	1.00	0.50	6.30	40.86
#45	1.50	0.36	6.44	47.30
#60	2.00	0.25	7.08	54.38
#80	2.50	0.18	15.88	70.26
#120	3.00	0.13	15.36	85.62
#170	3.50	0.09	8.80	94.42
#200	3.75	0.08	1.26	95.68
#230	4.00	0.06	0.42	96.10

SAND, poorly-graded, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.62	2.95	2.65	1.69	-0.29	-1.10	-2.49

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.02	0.49	1.69	0.31	1.88	-0.69	2.48

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-19 @ 11 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
403,641	1,195,383	State Plane, FLW (U.S. Ft.)	-21.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	N 6/	#200 - 2.58 #230 - 2.30			57

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	1.21	1.21
#4	-2.25	4.75	1.31	2.52
#5	-2.00	4.00	1.24	3.76
#7	-1.50	2.80	3.54	7.30
#10	-1.00	2.00	6.11	13.41
#14	-0.50	1.40	7.24	20.65
#18	0.00	1.00	5.78	26.43
#25	0.50	0.71	6.72	33.15
#35	1.00	0.50	6.09	39.24
#45	1.50	0.36	5.84	45.08
#60	2.00	0.25	5.81	50.89
#80	2.50	0.18	17.16	68.05
#120	3.00	0.13	20.47	88.52
#170	3.50	0.09	7.87	96.39
#200	3.75	0.08	1.03	97.42
#230	4.00	0.06	0.28	97.70

SAND, poorly-graded, mostly fine to coarse-grained sand-sized shell, some fine-grained sand-sized quartz, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.41	2.89	2.67	1.92	-0.12	-0.82	-1.82

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.22	0.43	1.92	0.26	1.68	-0.6	2.14

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-20 @ 3 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
404,708	1,195,139	State Plane, FLW (U.S. Ft.)	-11.2 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 0.81 #230 - 0.79			7.3

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.42	0.42
#3.5	-2.50	5.60	0.12	0.54
#4	-2.25	4.75	0.04	0.58
#5	-2.00	4.00	0.00	0.58
#7	-1.50	2.80	0.19	0.77
#10	-1.00	2.00	0.15	0.92
#14	-0.50	1.40	0.15	1.07
#18	0.00	1.00	0.17	1.24
#25	0.50	0.71	0.19	1.43
#35	1.00	0.50	0.20	1.63
#45	1.50	0.36	0.28	1.91
#60	2.00	0.25	1.07	2.98
#80	2.50	0.18	10.95	13.93
#120	3.00	0.13	72.78	86.71
#170	3.50	0.09	11.92	98.63
#200	3.75	0.08	0.56	99.19
#230	4.00	0.06	0.02	99.21

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine -grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.35	2.98	2.92	2.75	2.58	2.51	2.09

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.67	0.16	2.75	0.15	0.65	-6.58	58.19

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-20 @ 6 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
404,708	1,195,139	State Plane, FLW (U.S. Ft.)	-14.2 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 1.12 #230 - 1.09			9

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.01
#5	-2.00	4.00	0.01	0.01
#7	-1.50	2.80	0.04	0.05
#10	-1.00	2.00	0.14	0.19
#14	-0.50	1.40	0.10	0.29
#18	0.00	1.00	0.07	0.36
#25	0.50	0.71	0.12	0.48
#35	1.00	0.50	0.15	0.63
#45	1.50	0.36	0.34	0.97
#60	2.00	0.25	0.85	1.82
#80	2.50	0.18	23.93	25.75
#120	3.00	0.13	63.15	88.90
#170	3.50	0.09	9.61	98.51
#200	3.75	0.08	0.37	98.88
#230	4.00	0.06	0.03	98.91

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.32	2.96	2.89	2.69	2.48	2.30	2.07

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.65	0.16	2.69	0.15	0.4	-3.44	32.45

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-20 @ 9 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
404,708	1,195,139	State Plane, FLW (U.S. Ft.)	-17.2 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 1.40 #230 - 1.34			5.83

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.07	0.07
#10	-1.00	2.00	0.11	0.18
#14	-0.50	1.40	0.12	0.30
#18	0.00	1.00	0.09	0.39
#25	0.50	0.71	0.12	0.51
#35	1.00	0.50	0.19	0.70
#45	1.50	0.36	0.30	1.00
#60	2.00	0.25	0.87	1.87
#80	2.50	0.18	21.53	23.40
#120	3.00	0.13	63.75	87.15
#170	3.50	0.09	10.77	97.92
#200	3.75	0.08	0.68	98.60
#230	4.00	0.06	0.06	98.66

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.36	2.98	2.90	2.71	2.51	2.33	2.07

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.67	0.16	2.71	0.15	0.41	-3.39	31.32

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-20 @ 12 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
404,708	1,195,139	State Plane, FLW (U.S. Ft.)	-20.2 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 7/1	#200 - 5.23 #230 - 5.06			26.34

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.27	0.27
#10	-1.00	2.00	0.47	0.74
#14	-0.50	1.40	0.59	1.33
#18	0.00	1.00	0.68	2.01
#25	0.50	0.71	0.82	2.83
#35	1.00	0.50	1.07	3.90
#45	1.50	0.36	1.85	5.75
#60	2.00	0.25	3.31	9.06
#80	2.50	0.18	28.58	37.64
#120	3.00	0.13	46.92	84.56
#170	3.50	0.09	9.50	94.06
#200	3.75	0.08	0.71	94.77
#230	4.00	0.06	0.17	94.94

SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell, few silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	2.99	2.90	2.63	2.28	2.12	1.30

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.47	0.18	2.63	0.16	0.7	-2.81	14.1

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-20 @ 16 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
404,708	1,195,139	State Plane, FLW (U.S. Ft.)	-24.2 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 6/1	#200 - 1.88 #230 - 1.68		75.47	78.8

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	2.25	2.25
#3.5	-2.50	5.60	4.45	6.70
#4	-2.25	4.75	1.92	8.62
#5	-2.00	4.00	2.49	11.11
#7	-1.50	2.80	5.31	16.42
#10	-1.00	2.00	8.76	25.18
#14	-0.50	1.40	10.47	35.65
#18	0.00	1.00	8.76	44.41
#25	0.50	0.71	9.92	54.33
#35	1.00	0.50	9.59	63.92
#45	1.50	0.36	9.20	73.12
#60	2.00	0.25	7.83	80.95
#80	2.50	0.18	6.84	87.79
#120	3.00	0.13	6.08	93.87
#170	3.50	0.09	3.68	97.55
#200	3.75	0.08	0.57	98.12
#230	4.00	0.06	0.20	98.32

SAND, well-graded, mostly sand to gravel-sized shell, little fine-grained sand-sized quartz, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.15	2.22	1.62	0.28	-1.01	-1.54	-2.79

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	0.21	0.86	0.28	0.82	1.74	-0.15	2.34

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-21 @ 3 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
405,689	1,194,867	State Plane, FLW (U.S. Ft.)	-10.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 1.63 #230 - 1.59			11.31

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.35
#4	-2.25	4.75	0.00	0.35
#5	-2.00	4.00	0.35	0.35
#7	-1.50	2.80	0.06	0.41
#10	-1.00	2.00	0.10	0.51
#14	-0.50	1.40	0.16	0.67
#18	0.00	1.00	0.18	0.85
#25	0.50	0.71	0.29	1.14
#35	1.00	0.50	0.39	1.53
#45	1.50	0.36	0.65	2.18
#60	2.00	0.25	1.35	3.53
#80	2.50	0.18	10.17	13.70
#120	3.00	0.13	68.80	82.50
#170	3.50	0.09	15.08	97.58
#200	3.75	0.08	0.79	98.37
#230	4.00	0.06	0.04	98.41

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.41	3.05	2.95	2.76	2.58	2.52	2.07

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.71	0.15	2.76	0.15	0.56	-5.43	47.49

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-21 @ 6 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
405,689	1,194,867	State Plane, FLW (U.S. Ft.)	-13.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 0.98 #230 - 0.92			8.06

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.01
#5	-2.00	4.00	0.00	0.01
#7	-1.50	2.80	0.01	0.01
#10	-1.00	2.00	0.01	0.02
#14	-0.50	1.40	0.06	0.08
#18	0.00	1.00	0.03	0.11
#25	0.50	0.71	0.11	0.22
#35	1.00	0.50	0.23	0.45
#45	1.50	0.36	0.60	1.05
#60	2.00	0.25	1.28	2.33
#80	2.50	0.18	14.25	16.58
#120	3.00	0.13	71.62	88.20
#170	3.50	0.09	10.46	98.66
#200	3.75	0.08	0.36	99.02
#230	4.00	0.06	0.06	99.08

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.33	2.97	2.91	2.73	2.56	2.48	2.09

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.70	0.15	2.73	0.15	0.35	-2.56	22.72

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-21 @ 9 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
405,689	1,194,867	State Plane, FLW (U.S. Ft.)	-16.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 1.14 #230 - 1.06			6.5

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.02
#4	-2.25	4.75	0.02	0.02
#5	-2.00	4.00	0.01	0.03
#7	-1.50	2.80	0.01	0.04
#10	-1.00	2.00	0.02	0.06
#14	-0.50	1.40	0.06	0.12
#18	0.00	1.00	0.02	0.14
#25	0.50	0.71	0.06	0.20
#35	1.00	0.50	0.04	0.24
#45	1.50	0.36	0.18	0.42
#60	2.00	0.25	0.66	1.08
#80	2.50	0.18	15.84	16.92
#120	3.00	0.13	69.60	86.52
#170	3.50	0.09	11.68	98.20
#200	3.75	0.08	0.66	98.86
#230	4.00	0.06	0.08	98.94

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.36	2.98	2.92	2.74	2.56	2.47	2.12

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.72	0.15	2.74	0.15	0.34	-3	39.39

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-21 @ 12 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
405,689	1,194,867	State Plane, FLW (U.S. Ft.)	-19.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 1.60 #230 - 1.52			8.8

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.33	0.33
#3.5	-2.50	5.60	0.06	0.39
#4	-2.25	4.75	0.03	0.42
#5	-2.00	4.00	0.15	0.57
#7	-1.50	2.80	0.07	0.64
#10	-1.00	2.00	0.26	0.90
#14	-0.50	1.40	0.16	1.06
#18	0.00	1.00	0.11	1.17
#25	0.50	0.71	0.21	1.38
#35	1.00	0.50	0.23	1.61
#45	1.50	0.36	0.47	2.08
#60	2.00	0.25	1.09	3.17
#80	2.50	0.18	13.16	16.33
#120	3.00	0.13	71.01	87.34
#170	3.50	0.09	10.75	98.09
#200	3.75	0.08	0.31	98.40
#230	4.00	0.06	0.08	98.48

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine -grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.36	2.98	2.91	2.74	2.56	2.49	2.07

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.66	0.16	2.74	0.15	0.63	-6.32	55.71

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-21 @ 15 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
405,689	1,194,867	State Plane, FLW (U.S. Ft.)	-22.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 1.96 #230 - 1.90			28.5

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.45	0.45
#3.5	-2.50	5.60	0.73	1.18
#4	-2.25	4.75	0.72	1.90
#5	-2.00	4.00	0.14	2.04
#7	-1.50	2.80	1.35	3.39
#10	-1.00	2.00	2.08	5.47
#14	-0.50	1.40	2.39	7.86
#18	0.00	1.00	2.94	10.80
#25	0.50	0.71	4.52	15.32
#35	1.00	0.50	4.78	20.10
#45	1.50	0.36	4.53	24.63
#60	2.00	0.25	4.88	29.51
#80	2.50	0.18	10.54	40.05
#120	3.00	0.13	42.47	82.52
#170	3.50	0.09	14.78	97.30
#200	3.75	0.08	0.74	98.04
#230	4.00	0.06	0.06	98.10

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some fine to coarse-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.42	3.05	2.91	2.62	1.54	0.57	-1.11

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.01	0.25	2.62	0.16	1.41	-1.64	5.21

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-22 @ 2.5 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
406,685	1,194,582	State Plane, FLW (U.S. Ft.)	-11.1 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 1.23 #230 - 1.20			3.89

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.01	0.01
#10	-1.00	2.00	0.12	0.13
#14	-0.50	1.40	0.17	0.30
#18	0.00	1.00	0.21	0.51
#25	0.50	0.71	0.28	0.79
#35	1.00	0.50	0.31	1.10
#45	1.50	0.36	0.61	1.71
#60	2.00	0.25	2.10	3.81
#80	2.50	0.18	22.44	26.25
#120	3.00	0.13	61.86	88.11
#170	3.50	0.09	10.46	98.57
#200	3.75	0.08	0.20	98.77
#230	4.00	0.06	0.03	98.80

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.33	2.97	2.89	2.69	2.47	2.27	2.03

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.63	0.16	2.69	0.15	0.44	-3.07	22.27

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-22 @ 5.5 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
406,685	1,194,582	State Plane, FLW (U.S. Ft.)	-14.1 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 1.25 #230 - 1.18		7.52	10.97

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.08
#5	-2.00	4.00	0.08	0.08
#7	-1.50	2.80	0.11	0.19
#10	-1.00	2.00	0.23	0.42
#14	-0.50	1.40	0.50	0.92
#18	0.00	1.00	0.39	1.31
#25	0.50	0.71	0.49	1.80
#35	1.00	0.50	0.51	2.31
#45	1.50	0.36	1.06	3.37
#60	2.00	0.25	2.58	5.95
#80	2.50	0.18	32.25	38.20
#120	3.00	0.13	50.34	88.54
#170	3.50	0.09	9.62	98.16
#200	3.75	0.08	0.59	98.75
#230	4.00	0.06	0.07	98.82

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.34	2.95	2.87	2.62	2.30	2.16	1.82

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.53	0.17	2.62	0.16	0.59	-3.23	20.42

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-22 @ 8.7 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
406,685	1,194,582	State Plane, FLW (U.S. Ft.)	-17.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/1	#200 - 1.23 #230 - 1.19			18.8

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.22	0.22
#10	-1.00	2.00	0.25	0.47
#14	-0.50	1.40	0.62	1.09
#18	0.00	1.00	0.75	1.84
#25	0.50	0.71	1.20	3.04
#35	1.00	0.50	1.53	4.57
#45	1.50	0.36	3.11	7.68
#60	2.00	0.25	5.94	13.62
#80	2.50	0.18	34.13	47.75
#120	3.00	0.13	44.33	92.08
#170	3.50	0.09	6.56	98.64
#200	3.75	0.08	0.13	98.77
#230	4.00	0.06	0.04	98.81

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.22	2.91	2.81	2.53	2.17	2.03	1.07

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.38	0.19	2.53	0.17	0.68	-2.46	11.6

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-22 @ 12 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
406,685	1,194,582	State Plane, FLW (U.S. Ft.)	-20.6 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 4.28 #230 - 4.27			2.9

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.02	0.02
#10	-1.00	2.00	0.11	0.13
#14	-0.50	1.40	0.11	0.24
#18	0.00	1.00	0.04	0.28
#25	0.50	0.71	0.04	0.32
#35	1.00	0.50	0.07	0.39
#45	1.50	0.36	0.15	0.54
#60	2.00	0.25	0.81	1.35
#80	2.50	0.18	22.20	23.55
#120	3.00	0.13	63.41	86.96
#170	3.50	0.09	8.63	95.59
#200	3.75	0.08	0.13	95.72
#230	4.00	0.06	0.01	95.73

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt, trace shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.47	2.98	2.91	2.71	2.51	2.33	2.08

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.66	0.16	2.71	0.15	0.36	-3.34	34.17

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-22 @ 15 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
406,685	1,194,582	State Plane, FLW (U.S. Ft.)	-23.6 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 8/1	#200 - 6.27 #230 - 6.04			13.1

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.17	0.17
#14	-0.50	1.40	0.06	0.23
#18	0.00	1.00	0.28	0.51
#25	0.50	0.71	0.31	0.82
#35	1.00	0.50	0.55	1.37
#45	1.50	0.36	0.82	2.19
#60	2.00	0.25	1.32	3.51
#80	2.50	0.18	12.91	16.42
#120	3.00	0.13	62.94	79.36
#170	3.50	0.09	13.80	93.16
#200	3.75	0.08	0.57	93.73
#230	4.00	0.06	0.23	93.96

SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell, few silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.17	2.97	2.77	2.57	2.48	2.06

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.70	0.15	2.77	0.15	0.47	-3.18	21.91

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-23 @ 2 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
407,688	1,194,418	State Plane, FLW (U.S. Ft.)	-12.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/2	#200 - 0.65 #230 - 0.61			11.1

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.49	0.49
#4	-2.25	4.75	0.04	0.53
#5	-2.00	4.00	0.13	0.66
#7	-1.50	2.80	0.23	0.89
#10	-1.00	2.00	0.76	1.65
#14	-0.50	1.40	0.79	2.44
#18	0.00	1.00	0.56	3.00
#25	0.50	0.71	0.42	3.42
#35	1.00	0.50	0.30	3.72
#45	1.50	0.36	0.37	4.09
#60	2.00	0.25	0.78	4.87
#80	2.50	0.18	17.10	21.97
#120	3.00	0.13	65.77	87.74
#170	3.50	0.09	11.22	98.96
#200	3.75	0.08	0.39	99.35
#230	4.00	0.06	0.04	99.39

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell. trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.32	2.97	2.90	2.71	2.52	2.33	2.00

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.57	0.17	2.71	0.15	0.78	-4.29	24.47

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-23 @ 5 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
407,688	1,194,418	State Plane, FLW (U.S. Ft.)	-15.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/1	#200 - 1.66 #230 - 1.54			12.69

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.11	0.11
#3.5	-2.50	5.60	0.22	0.33
#4	-2.25	4.75	0.03	0.36
#5	-2.00	4.00	0.07	0.43
#7	-1.50	2.80	0.47	0.90
#10	-1.00	2.00	0.91	1.81
#14	-0.50	1.40	0.77	2.58
#18	0.00	1.00	0.69	3.27
#25	0.50	0.71	0.50	3.77
#35	1.00	0.50	0.38	4.15
#45	1.50	0.36	0.45	4.60
#60	2.00	0.25	0.80	5.40
#80	2.50	0.18	5.75	11.15
#120	3.00	0.13	69.28	80.43
#170	3.50	0.09	17.10	97.53
#200	3.75	0.08	0.81	98.34
#230	4.00	0.06	0.12	98.46

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.43	3.10	2.96	2.78	2.60	2.54	1.75

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.65	0.16	2.78	0.15	0.82	-4.2	23.02

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-23 @ 8 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
407,688	1,194,418	State Plane, FLW (U.S. Ft.)	-18.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/1	#200 - 1.76 #230 - 1.42			10.08

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.47	0.47
#4	-2.25	4.75	0.04	0.51
#5	-2.00	4.00	0.32	0.83
#7	-1.50	2.80	0.59	1.42
#10	-1.00	2.00	1.35	2.77
#14	-0.50	1.40	1.37	4.14
#18	0.00	1.00	0.71	4.85
#25	0.50	0.71	0.60	5.45
#35	1.00	0.50	0.42	5.87
#45	1.50	0.36	0.57	6.44
#60	2.00	0.25	0.80	7.24
#80	2.50	0.18	3.44	10.68
#120	3.00	0.13	62.55	73.23
#170	3.50	0.09	23.16	96.39
#200	3.75	0.08	1.85	98.24
#230	4.00	0.06	0.34	98.58

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.47	3.23	3.04	2.81	2.61	2.54	0.13

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.63	0.16	2.81	0.14	0.98	-3.46	15.41

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-23 @ 11 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
407,688	1,194,418	State Plane, FLW (U.S. Ft.)	-21.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/1	#200 - 1.39 #230 - 1.33			9.72

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.05	0.05
#4	-2.25	4.75	0.00	0.07
#5	-2.00	4.00	0.02	0.07
#7	-1.50	2.80	0.13	0.20
#10	-1.00	2.00	0.12	0.32
#14	-0.50	1.40	0.05	0.37
#18	0.00	1.00	0.06	0.43
#25	0.50	0.71	0.08	0.51
#35	1.00	0.50	0.05	0.56
#45	1.50	0.36	0.17	0.73
#60	2.00	0.25	0.32	1.05
#80	2.50	0.18	7.41	8.46
#120	3.00	0.13	73.65	82.11
#170	3.50	0.09	15.70	97.81
#200	3.75	0.08	0.80	98.61
#230	4.00	0.06	0.06	98.67

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.41	3.06	2.95	2.78	2.61	2.55	2.27

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.77	0.15	2.78	0.15	0.4	-5.92	68.92

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-23 @ 13 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
407,688	1,194,418	State Plane, FLW (U.S. Ft.)	-23.4 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 6/2	#200 - 1.86 #230 - 1.72			6.5

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.06	0.06
#5	-2.00	4.00	0.00	0.06
#7	-1.50	2.80	0.02	0.08
#10	-1.00	2.00	0.09	0.17
#14	-0.50	1.40	0.08	0.25
#18	0.00	1.00	0.12	0.37
#25	0.50	0.71	0.11	0.48
#35	1.00	0.50	0.10	0.58
#45	1.50	0.36	0.14	0.72
#60	2.00	0.25	0.38	1.10
#80	2.50	0.18	15.27	16.37
#120	3.00	0.13	68.96	85.33
#170	3.50	0.09	12.14	97.47
#200	3.75	0.08	0.67	98.14
#230	4.00	0.06	0.14	98.28

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.40	2.99	2.93	2.74	2.56	2.49	2.13

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.72	0.15	2.74	0.15	0.39	-4.22	45.67

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-24 @ 2 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
408,685	1,194,139	State Plane, FLW (U.S. Ft.)	-12.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/1	#200 - 1.48 #230 - 1.30			13.5

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.26	0.26
#4	-2.25	4.75	0.09	0.35
#5	-2.00	4.00	0.15	0.50
#7	-1.50	2.80	0.23	0.73
#10	-1.00	2.00	0.64	1.37
#14	-0.50	1.40	0.84	2.21
#18	0.00	1.00	0.74	2.95
#25	0.50	0.71	0.58	3.53
#35	1.00	0.50	0.50	4.03
#45	1.50	0.36	0.51	4.54
#60	2.00	0.25	0.98	5.52
#80	2.50	0.18	7.47	12.99
#120	3.00	0.13	66.86	79.85
#170	3.50	0.09	17.56	97.41
#200	3.75	0.08	1.11	98.52
#230	4.00	0.06	0.18	98.70

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.43	3.12	2.96	2.78	2.59	2.52	1.73

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.65	0.16	2.78	0.15	0.78	-4.04	22.13

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-24 @ 3 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
408,685	1,194,139	State Plane, FLW (U.S. Ft.)	-13.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/1	#200 - 1.48 #230 - 1.30			13.5

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.26	0.26
#4	-2.25	4.75	0.09	0.35
#5	-2.00	4.00	0.15	0.50
#7	-1.50	2.80	0.23	0.73
#10	-1.00	2.00	0.64	1.37
#14	-0.50	1.40	0.84	2.21
#18	0.00	1.00	0.74	2.95
#25	0.50	0.71	0.58	3.53
#35	1.00	0.50	0.50	4.03
#45	1.50	0.36	0.51	4.54
#60	2.00	0.25	0.98	5.52
#80	2.50	0.18	7.47	12.99
#120	3.00	0.13	66.86	79.85
#170	3.50	0.09	17.56	97.41
#200	3.75	0.08	1.11	98.52
#230	4.00	0.06	0.18	98.70

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.43	3.12	2.96	2.78	2.59	2.52	1.73

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.65	0.16	2.78	0.15	0.78	-4.04	22.13

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-24 @ 6 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
408,685	1,194,139	State Plane, FLW (U.S. Ft.)	-16.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 7/1	#200 - 1.54 #230 - 1.25			20

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.02	0.02
#4	-2.25	4.75	0.06	0.08
#5	-2.00	4.00	0.49	0.57
#7	-1.50	2.80	0.64	1.21
#10	-1.00	2.00	0.83	2.04
#14	-0.50	1.40	1.52	3.56
#18	0.00	1.00	1.15	4.71
#25	0.50	0.71	0.97	5.68
#35	1.00	0.50	0.81	6.49
#45	1.50	0.36	1.08	7.57
#60	2.00	0.25	1.90	9.47
#80	2.50	0.18	5.43	14.90
#120	3.00	0.13	59.76	74.66
#170	3.50	0.09	22.08	96.74
#200	3.75	0.08	1.72	98.46
#230	4.00	0.06	0.29	98.75

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.46	3.21	3.01	2.79	2.58	2.51	0.15

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.60	0.16	2.79	0.14	0.95	-3.06	12.79

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-24 @ 9 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
408,685	1,194,139	State Plane, FLW (U.S. Ft.)	-19.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 6/2	#200 - 1.96 #230 - 1.70			8.75

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.43	0.43
#3.5	-2.50	5.60	0.14	0.57
#4	-2.25	4.75	0.05	0.62
#5	-2.00	4.00	0.01	0.63
#7	-1.50	2.80	0.06	0.69
#10	-1.00	2.00	0.17	0.86
#14	-0.50	1.40	0.17	1.03
#18	0.00	1.00	0.14	1.17
#25	0.50	0.71	0.07	1.24
#35	1.00	0.50	0.17	1.41
#45	1.50	0.36	0.28	1.69
#60	2.00	0.25	0.71	2.40
#80	2.50	0.18	3.29	5.69
#120	3.00	0.13	62.18	67.87
#170	3.50	0.09	28.31	96.18
#200	3.75	0.08	1.86	98.04
#230	4.00	0.06	0.26	98.30

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.48	3.28	3.13	2.86	2.66	2.58	2.40

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.82	0.14	2.86	0.14	0.66	-6.56	59.16

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-24 @ 11.5 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
408,685	1,194,139	State Plane, FLW (U.S. Ft.)	-22.0 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 6/2	#200 - 1.37 #230 - 1.17			4.95

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.06	0.06
#10	-1.00	2.00	0.07	0.13
#14	-0.50	1.40	0.12	0.25
#18	0.00	1.00	0.09	0.34
#25	0.50	0.71	0.15	0.49
#35	1.00	0.50	0.17	0.66
#45	1.50	0.36	0.34	1.00
#60	2.00	0.25	0.68	1.68
#80	2.50	0.18	3.66	5.34
#120	3.00	0.13	67.26	72.60
#170	3.50	0.09	24.52	97.12
#200	3.75	0.08	1.51	98.63
#230	4.00	0.06	0.20	98.83

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.46	3.23	3.05	2.83	2.65	2.58	2.45

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.84	0.14	2.83	0.14	0.39	-3.86	37.52

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-24 @ 13 ft

Analysis Date: 8/5/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
408,685	1,194,139	State Plane, FLW (U.S. Ft.)	-23.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 6/2	#200 - 5.67 #230 - 5.47			19.13

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.17	0.17
#10	-1.00	2.00	0.23	0.40
#14	-0.50	1.40	0.28	0.68
#18	0.00	1.00	0.26	0.94
#25	0.50	0.71	0.23	1.17
#35	1.00	0.50	0.26	1.43
#45	1.50	0.36	0.33	1.76
#60	2.00	0.25	0.58	2.34
#80	2.50	0.18	5.24	7.58
#120	3.00	0.13	69.32	76.90
#170	3.50	0.09	16.41	93.31
#200	3.75	0.08	1.02	94.33
#230	4.00	0.06	0.20	94.53

SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell, few silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.22	2.99	2.81	2.63	2.56	2.25

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.76	0.15	2.81	0.14	0.49	-4.81	37.44

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-25 @ 2 ft

Analysis Date: 8/12/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
409,676	1,193,836	State Plane, FLW (U.S. Ft.)	-12.6 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 8/1	#200 - 0.48 #230 - 0.28			27.9

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	2.59	2.59
3/8"	-3.25	9.50	0.00	2.59
#3.5	-2.50	5.60	0.53	3.12
#4	-2.25	4.75	0.36	3.48
#5	-2.00	4.00	0.39	3.87
#7	-1.50	2.80	0.97	4.84
#10	-1.00	2.00	2.22	7.06
#14	-0.50	1.40	2.85	9.91
#18	0.00	1.00	2.18	12.09
#25	0.50	0.71	1.56	13.65
#35	1.00	0.50	0.94	14.59
#45	1.50	0.36	0.95	15.54
#60	2.00	0.25	1.46	17.00
#80	2.50	0.18	8.53	25.53
#120	3.00	0.13	53.96	79.49
#170	3.50	0.09	19.06	98.55
#200	3.75	0.08	0.97	99.52
#230	4.00	0.06	0.20	99.72

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some fine to coarse-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.41	3.12	2.96	2.73	2.47	1.66	-1.46

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.17	0.22	2.73	0.15	1.26	-1.79	6

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-25 @ 5 ft

Analysis Date: 8/12/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
409,676	1,193,836	State Plane, FLW (U.S. Ft.)	-15.6 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 0.28 #230 - 0.08			11.4

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.12
#4	-2.25	4.75	0.12	0.12
#5	-2.00	4.00	0.01	0.13
#7	-1.50	2.80	0.15	0.28
#10	-1.00	2.00	0.11	0.39
#14	-0.50	1.40	0.28	0.67
#18	0.00	1.00	0.22	0.89
#25	0.50	0.71	0.24	1.13
#35	1.00	0.50	0.27	1.40
#45	1.50	0.36	0.43	1.83
#60	2.00	0.25	0.98	2.81
#80	2.50	0.18	8.26	11.07
#120	3.00	0.13	70.61	81.68
#170	3.50	0.09	17.30	98.98
#200	3.75	0.08	0.74	99.72
#230	4.00	0.06	0.20	99.92

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.38	3.07	2.95	2.78	2.60	2.53	2.13

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.74	0.15	2.78	0.15	0.51	-5.06	43.28

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-25 @ 8 ft

Analysis Date: 8/12/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
409,676	1,193,836	State Plane, FLW (U.S. Ft.)	-18.6 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 1.42 #230 - 1.15		5.62	9

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.17	0.17
#10	-1.00	2.00	0.15	0.32
#14	-0.50	1.40	0.22	0.54
#18	0.00	1.00	0.20	0.74
#25	0.50	0.71	0.23	0.97
#35	1.00	0.50	0.21	1.18
#45	1.50	0.36	0.53	1.71
#60	2.00	0.25	1.13	2.84
#80	2.50	0.18	5.88	8.72
#120	3.00	0.13	63.58	72.30
#170	3.50	0.09	24.76	97.06
#200	3.75	0.08	1.52	98.58
#230	4.00	0.06	0.27	98.85

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.46	3.24	3.05	2.82	2.63	2.56	2.18

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.80	0.14	2.82	0.14	0.49	-4.13	32.6

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-25 @ 11 ft

Analysis Date: 8/12/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
409,676	1,193,836	State Plane, FLW (U.S. Ft.)	-21.6 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 8/1	#200 - 1.44 #230 - 1.37			15.64

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.70	0.70
#3.5	-2.50	5.60	0.05	0.75
#4	-2.25	4.75	0.20	0.95
#5	-2.00	4.00	0.12	1.07
#7	-1.50	2.80	0.57	1.64
#10	-1.00	2.00	0.83	2.47
#14	-0.50	1.40	0.89	3.36
#18	0.00	1.00	0.65	4.01
#25	0.50	0.71	0.65	4.66
#35	1.00	0.50	0.45	5.11
#45	1.50	0.36	0.56	5.67
#60	2.00	0.25	1.40	7.07
#80	2.50	0.18	17.45	24.52
#120	3.00	0.13	58.52	83.04
#170	3.50	0.09	14.98	98.02
#200	3.75	0.08	0.54	98.56
#230	4.00	0.06	0.07	98.63

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.40	3.03	2.93	2.72	2.50	2.26	0.88

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.52	0.17	2.72	0.15	0.97	-3.94	20.89

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-25 @ 13.5 ft

Analysis Date: 8/12/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
409,676	1,193,836	State Plane, FLW (U.S. Ft.)	-24.1 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 0.47 #230 - 0.42			11.95

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.35	0.35
#4	-2.25	4.75	0.00	0.35
#5	-2.00	4.00	0.04	0.39
#7	-1.50	2.80	0.01	0.40
#10	-1.00	2.00	0.03	0.43
#14	-0.50	1.40	0.03	0.46
#18	0.00	1.00	0.07	0.53
#25	0.50	0.71	0.08	0.61
#35	1.00	0.50	0.03	0.64
#45	1.50	0.36	0.22	0.86
#60	2.00	0.25	0.46	1.32
#80	2.50	0.18	15.66	16.98
#120	3.00	0.13	69.49	86.47
#170	3.50	0.09	12.62	99.09
#200	3.75	0.08	0.44	99.53
#230	4.00	0.06	0.05	99.58

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.34	2.98	2.92	2.74	2.56	2.47	2.12

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.70	0.15	2.74	0.15	0.48	-6.76	76.18

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-26 @ 2 ft

Analysis Date: 8/12/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
404,034	1,194,332	State Plane, FLW (U.S. Ft.)	-15.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 8/1	#200 - 0.28 #230 - 0.25			17.07

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.71	0.71
#3.5	-2.50	5.60	0.51	1.22
#4	-2.25	4.75	0.12	1.34
#5	-2.00	4.00	0.19	1.53
#7	-1.50	2.80	0.41	1.94
#10	-1.00	2.00	0.62	2.56
#14	-0.50	1.40	1.06	3.62
#18	0.00	1.00	0.78	4.40
#25	0.50	0.71	0.76	5.16
#35	1.00	0.50	0.72	5.88
#45	1.50	0.36	0.77	6.65
#60	2.00	0.25	1.96	8.61
#80	2.50	0.18	36.62	45.23
#120	3.00	0.13	48.22	93.45
#170	3.50	0.09	6.04	99.49
#200	3.75	0.08	0.23	99.72
#230	4.00	0.06	0.03	99.75

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.13	2.90	2.81	2.55	2.22	2.10	0.39

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.34	0.20	2.55	0.17	0.99	-3.8	19.59

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-26 @ 5 ft

Analysis Date: 8/12/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
404,034	1,194,332	State Plane, FLW (U.S. Ft.)	-18.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 2.09 #230 - 2.00			6.3

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.33
#5	-2.00	4.00	0.33	0.33
#7	-1.50	2.80	0.04	0.37
#10	-1.00	2.00	0.10	0.47
#14	-0.50	1.40	0.19	0.66
#18	0.00	1.00	0.13	0.79
#25	0.50	0.71	0.27	1.06
#35	1.00	0.50	0.29	1.35
#45	1.50	0.36	0.55	1.90
#60	2.00	0.25	1.82	3.72
#80	2.50	0.18	27.11	30.83
#120	3.00	0.13	56.29	87.12
#170	3.50	0.09	10.38	97.50
#200	3.75	0.08	0.41	97.91
#230	4.00	0.06	0.09	98.00

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.38	2.97	2.89	2.67	2.39	2.23	2.02

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.60	0.16	2.67	0.16	0.53	-4.34	36.04

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-26 @ 8 ft

Analysis Date: 8/12/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
404,034	1,194,332	State Plane, FLW (U.S. Ft.)	-21.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/1	#200 - 1.07 #230 - 1.02			14.5

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.22	0.22
#4	-2.25	4.75	0.39	0.61
#5	-2.00	4.00	0.06	0.67
#7	-1.50	2.80	0.35	1.02
#10	-1.00	2.00	0.75	1.77
#14	-0.50	1.40	0.78	2.55
#18	0.00	1.00	0.64	3.19
#25	0.50	0.71	0.68	3.87
#35	1.00	0.50	0.77	4.64
#45	1.50	0.36	1.42	6.06
#60	2.00	0.25	3.40	9.46
#80	2.50	0.18	39.81	49.27
#120	3.00	0.13	43.26	92.53
#170	3.50	0.09	6.25	98.78
#200	3.75	0.08	0.15	98.93
#230	4.00	0.06	0.05	98.98

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.20	2.90	2.80	2.51	2.20	2.08	1.13

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.36	0.19	2.51	0.18	0.8	-3.47	18.04

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-26 @ 11 ft

Analysis Date: 8/12/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
404,034	1,194,332	State Plane, FLW (U.S. Ft.)	-24.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/1	#200 - 0.79 #230 - 0.73			8

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.00
#5	-2.00	4.00	0.01	0.01
#7	-1.50	2.80	0.04	0.05
#10	-1.00	2.00	0.01	0.06
#14	-0.50	1.40	0.06	0.12
#18	0.00	1.00	0.06	0.18
#25	0.50	0.71	0.07	0.25
#35	1.00	0.50	0.07	0.32
#45	1.50	0.36	0.23	0.55
#60	2.00	0.25	0.75	1.30
#80	2.50	0.18	18.44	19.74
#120	3.00	0.13	69.56	89.30
#170	3.50	0.09	9.70	99.00
#200	3.75	0.08	0.21	99.21
#230	4.00	0.06	0.06	99.27

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.29	2.96	2.90	2.72	2.54	2.40	2.10

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.69	0.15	2.72	0.15	0.34	-3	33.17

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-26 @ 12.5 ft

Analysis Date: 8/12/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
404,034	1,194,332	State Plane, FLW (U.S. Ft.)	-25.8 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	10Y 6/1	#200 - 3.24 #230 - 3.07			50.85

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	2.49	2.49
#3.5	-2.50	5.60	3.00	5.49
#4	-2.25	4.75	1.51	7.00
#5	-2.00	4.00	1.38	8.38
#7	-1.50	2.80	3.16	11.54
#10	-1.00	2.00	4.72	16.26
#14	-0.50	1.40	5.81	22.07
#18	0.00	1.00	4.82	26.89
#25	0.50	0.71	4.55	31.44
#35	1.00	0.50	3.57	35.01
#45	1.50	0.36	3.38	38.39
#60	2.00	0.25	4.88	43.27
#80	2.50	0.18	17.42	60.69
#120	3.00	0.13	30.06	90.75
#170	3.50	0.09	5.67	96.42
#200	3.75	0.08	0.34	96.76
#230	4.00	0.06	0.17	96.93

SAND, poorly-graded, mostly sand to gravel-sized shell, some fine-grained sand-sized quartz, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.37	2.89	2.74	2.19	-0.20	-1.03	-2.62

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.21	0.43	2.19	0.22	1.92	-0.96	2.72

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-27 @ 3 ft

Analysis Date: 8/12/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
405,041	1,194,071	State Plane, FLW (U.S. Ft.)	-15.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 0.62 #230 - 0.59			17.9

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.06
#4	-2.25	4.75	0.06	0.06
#5	-2.00	4.00	0.05	0.11
#7	-1.50	2.80	0.25	0.36
#10	-1.00	2.00	0.22	0.58
#14	-0.50	1.40	0.66	1.24
#18	0.00	1.00	0.62	1.86
#25	0.50	0.71	0.82	2.68
#35	1.00	0.50	0.96	3.64
#45	1.50	0.36	1.43	5.07
#60	2.00	0.25	4.03	9.10
#80	2.50	0.18	45.30	54.40
#120	3.00	0.13	39.53	93.93
#170	3.50	0.09	5.41	99.34
#200	3.75	0.08	0.04	99.38
#230	4.00	0.06	0.03	99.41

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.10	2.87	2.76	2.45	2.18	2.08	1.48

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.38	0.19	2.45	0.18	0.64	-3.17	18.08

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-27 @ 6 ft

Analysis Date: 8/12/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
405,041	1,194,071	State Plane, FLW (U.S. Ft.)	-18.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 0.39 #230 - 0.36			22.08

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.58	0.58
#4	-2.25	4.75	0.31	0.89
#5	-2.00	4.00	0.22	1.11
#7	-1.50	2.80	0.39	1.50
#10	-1.00	2.00	0.72	2.22
#14	-0.50	1.40	0.44	2.66
#18	0.00	1.00	0.24	2.90
#25	0.50	0.71	0.34	3.24
#35	1.00	0.50	0.37	3.61
#45	1.50	0.36	0.81	4.42
#60	2.00	0.25	3.40	7.82
#80	2.50	0.18	48.79	56.61
#120	3.00	0.13	37.65	94.26
#170	3.50	0.09	5.24	99.50
#200	3.75	0.08	0.11	99.61
#230	4.00	0.06	0.03	99.64

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.07	2.86	2.74	2.43	2.18	2.08	1.59

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.34	0.20	2.43	0.19	0.8	-4.07	23.11

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-27 @ 9 ft

Analysis Date: 8/12/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
405,041	1,194,071	State Plane, FLW (U.S. Ft.)	-21.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 1.23 #230 - 1.16			11.3

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.11
#4	-2.25	4.75	0.00	0.11
#5	-2.00	4.00	0.11	0.11
#7	-1.50	2.80	0.01	0.12
#10	-1.00	2.00	0.03	0.15
#14	-0.50	1.40	0.11	0.26
#18	0.00	1.00	0.01	0.27
#25	0.50	0.71	0.12	0.39
#35	1.00	0.50	0.08	0.47
#45	1.50	0.36	0.43	0.90
#60	2.00	0.25	1.41	2.31
#80	2.50	0.18	19.44	21.75
#120	3.00	0.13	63.90	85.65
#170	3.50	0.09	12.89	98.54
#200	3.75	0.08	0.23	98.77
#230	4.00	0.06	0.07	98.84

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.36	2.99	2.92	2.72	2.53	2.35	2.07

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.68	0.16	2.72	0.15	0.41	-4.26	49.07

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-27 @ 12 ft

Analysis Date: 8/12/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
405,041	1,194,071	State Plane, FLW (U.S. Ft.)	-24.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 0.55 #230 - 0.54		4.15	4.3

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.05
#5	-2.00	4.00	0.05	0.05
#7	-1.50	2.80	0.06	0.11
#10	-1.00	2.00	0.04	0.15
#14	-0.50	1.40	0.12	0.27
#18	0.00	1.00	0.05	0.32
#25	0.50	0.71	0.06	0.38
#35	1.00	0.50	0.11	0.49
#45	1.50	0.36	0.26	0.75
#60	2.00	0.25	1.51	2.26
#80	2.50	0.18	21.43	23.69
#120	3.00	0.13	63.72	87.41
#170	3.50	0.09	11.71	99.12
#200	3.75	0.08	0.33	99.45
#230	4.00	0.06	0.01	99.46

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.32	2.97	2.90	2.71	2.51	2.32	2.06

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.67	0.16	2.71	0.15	0.4	-3.54	36.49

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-27 @ 15 ft

Analysis Date: 8/12/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
405,041	1,194,071	State Plane, FLW (U.S. Ft.)	-27.3 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 8/1	#200 - 2.40 #230 - 2.16			23.5

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	2.25	2.25
3/8"	-3.25	9.50	3.10	5.35
#3.5	-2.50	5.60	1.89	7.24
#4	-2.25	4.75	1.09	8.33
#5	-2.00	4.00	0.01	8.34
#7	-1.50	2.80	0.70	9.04
#10	-1.00	2.00	1.46	10.50
#14	-0.50	1.40	1.35	11.85
#18	0.00	1.00	0.98	12.83
#25	0.50	0.71	0.87	13.70
#35	1.00	0.50	0.74	14.44
#45	1.50	0.36	0.96	15.40
#60	2.00	0.25	2.06	17.46
#80	2.50	0.18	14.50	31.96
#120	3.00	0.13	50.58	82.54
#170	3.50	0.09	14.14	96.68
#200	3.75	0.08	0.92	97.60
#230	4.00	0.06	0.24	97.84

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.44	3.05	2.93	2.68	2.26	1.65	-3.36

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.97	0.26	2.68	0.16	1.66	-2.14	7.06

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-28 @ 2.5 ft

Analysis Date: 8/12/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
406,027	1,193,798	State Plane, FLW (U.S. Ft.)	-16.5 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 0.31 #230 - 0.21			15.27

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.01
#4	-2.25	4.75	0.01	0.01
#5	-2.00	4.00	0.03	0.04
#7	-1.50	2.80	0.05	0.09
#10	-1.00	2.00	0.02	0.11
#14	-0.50	1.40	0.20	0.31
#18	0.00	1.00	0.21	0.52
#25	0.50	0.71	0.47	0.99
#35	1.00	0.50	0.75	1.74
#45	1.50	0.36	1.44	3.18
#60	2.00	0.25	3.37	6.55
#80	2.50	0.18	41.66	48.21
#120	3.00	0.13	44.78	92.99
#170	3.50	0.09	6.60	99.59
#200	3.75	0.08	0.10	99.69
#230	4.00	0.06	0.10	99.79

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.15	2.90	2.80	2.52	2.22	2.11	1.77

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.48	0.18	2.52	0.17	0.49	-2.49	17.37

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-28 @ 5 ft

Analysis Date: 8/12/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
406,027	1,193,798	State Plane, FLW (U.S. Ft.)	-19.0 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 6/2	#200 - 12.45 #230 - 12.15			15.6

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.51	0.51
#4	-2.25	4.75	0.29	0.80
#5	-2.00	4.00	0.05	0.85
#7	-1.50	2.80	0.32	1.17
#10	-1.00	2.00	0.49	1.66
#14	-0.50	1.40	0.62	2.28
#18	0.00	1.00	0.81	3.09
#25	0.50	0.71	0.96	4.05
#35	1.00	0.50	1.28	5.33
#45	1.50	0.36	1.99	7.32
#60	2.00	0.25	3.06	10.38
#80	2.50	0.18	17.33	27.71
#120	3.00	0.13	47.42	75.13
#170	3.50	0.09	11.71	86.84
#200	3.75	0.08	0.71	87.55
#230	4.00	0.06	0.30	87.85

SAND, silty, mostly fine-grained sand sized quartz, little fine to medium-grained sand-sized shell, little silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.38	3.00	2.74	2.42	2.16	0.87

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.46	0.18	2.74	0.15	0.92	-3.16	15.29

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-28 @ 8 ft

Analysis Date: 8/12/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
406,027	1,193,798	State Plane, FLW (U.S. Ft.)	-22.0 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 8/1	#200 - 5.84 #230 - 5.64			13.59

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.51	0.51
#4	-2.25	4.75	0.08	0.59
#5	-2.00	4.00	0.08	0.67
#7	-1.50	2.80	0.27	0.94
#10	-1.00	2.00	0.45	1.39
#14	-0.50	1.40	0.53	1.92
#18	0.00	1.00	0.41	2.33
#25	0.50	0.71	0.62	2.95
#35	1.00	0.50	0.65	3.60
#45	1.50	0.36	0.98	4.58
#60	2.00	0.25	1.69	6.27
#80	2.50	0.18	15.87	22.14
#120	3.00	0.13	55.53	77.67
#170	3.50	0.09	15.80	93.47
#200	3.75	0.08	0.69	94.16
#230	4.00	0.06	0.20	94.36

SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little fine-grained sand-sized shell, few silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.20	2.98	2.75	2.53	2.31	1.62

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.59	0.17	2.75	0.15	0.8	-3.97	22.91

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-28 @ 11 ft

Analysis Date: 8/12/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
406,027	1,193,798	State Plane, FLW (U.S. Ft.)	-25.0 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 4.57 #230 - 4.40			13.7

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.32	0.32
#4	-2.25	4.75	0.38	0.70
#5	-2.00	4.00	0.17	0.87
#7	-1.50	2.80	0.59	1.46
#10	-1.00	2.00	1.02	2.48
#14	-0.50	1.40	1.12	3.60
#18	0.00	1.00	1.00	4.60
#25	0.50	0.71	1.22	5.82
#35	1.00	0.50	1.32	7.14
#45	1.50	0.36	2.10	9.24
#60	2.00	0.25	3.48	12.72
#80	2.50	0.18	13.08	25.80
#120	3.00	0.13	54.22	80.02
#170	3.50	0.09	14.85	94.87
#200	3.75	0.08	0.56	95.43
#230	4.00	0.06	0.17	95.60

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.56	3.13	2.95	2.72	2.47	2.13	0.16

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.45	0.18	2.72	0.15	1	-2.87	11.98

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-28 @ 14 ft

Analysis Date: 8/12/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
406,027	1,193,798	State Plane, FLW (U.S. Ft.)	-28.0 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	2.5Y 8/1	#200 - 6.28 #230 - 6.07			14.9

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.14	0.14
#4	-2.25	4.75	0.63	0.77
#5	-2.00	4.00	0.06	0.83
#7	-1.50	2.80	0.98	1.81
#10	-1.00	2.00	1.09	2.90
#14	-0.50	1.40	1.15	4.05
#18	0.00	1.00	0.84	4.89
#25	0.50	0.71	0.85	5.74
#35	1.00	0.50	0.83	6.57
#45	1.50	0.36	1.07	7.64
#60	2.00	0.25	2.34	9.98
#80	2.50	0.18	19.82	29.80
#120	3.00	0.13	51.12	80.92
#170	3.50	0.09	12.05	92.97
#200	3.75	0.08	0.75	93.72
#230	4.00	0.06	0.21	93.93

SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, little fine to medium-grained sand-sized shell, few silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.13	2.94	2.70	2.38	2.15	0.06

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.43	0.19	2.70	0.15	1	-2.99	12.47

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-29 @ 3 ft

Analysis Date: 8/12/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
407,036	1,193,622	State Plane, FLW (U.S. Ft.)	-15.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 0.74 #230 - 0.68			10.1

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.00	0.07
#5	-2.00	4.00	0.07	0.07
#7	-1.50	2.80	0.03	0.10
#10	-1.00	2.00	0.21	0.31
#14	-0.50	1.40	0.29	0.60
#18	0.00	1.00	0.16	0.76
#25	0.50	0.71	0.22	0.98
#35	1.00	0.50	0.27	1.25
#45	1.50	0.36	0.38	1.63
#60	2.00	0.25	1.46	3.09
#80	2.50	0.18	38.26	41.35
#120	3.00	0.13	50.61	91.96
#170	3.50	0.09	7.20	99.16
#200	3.75	0.08	0.10	99.26
#230	4.00	0.06	0.06	99.32

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.21	2.92	2.83	2.59	2.29	2.17	2.02

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.54	0.17	2.59	0.17	0.48	-3.63	29.46

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-29 @ 6 ft

Analysis Date: 8/12/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
407,036	1,193,622	State Plane, FLW (U.S. Ft.)	-18.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 8/1	#200 - 0.85 #230 - 0.83			3.87

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.06	0.06
#5	-2.00	4.00	0.01	0.07
#7	-1.50	2.80	0.02	0.09
#10	-1.00	2.00	0.03	0.12
#14	-0.50	1.40	0.08	0.20
#18	0.00	1.00	0.03	0.23
#25	0.50	0.71	0.11	0.34
#35	1.00	0.50	0.09	0.43
#45	1.50	0.36	0.29	0.72
#60	2.00	0.25	1.06	1.78
#80	2.50	0.18	30.97	32.75
#120	3.00	0.13	57.49	90.24
#170	3.50	0.09	8.74	98.98
#200	3.75	0.08	0.17	99.15
#230	4.00	0.06	0.02	99.17

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.27	2.95	2.87	2.65	2.37	2.23	2.05

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.61	0.16	2.65	0.16	0.39	-3.1	34.35

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-29 @ 9 ft

Analysis Date: 8/12/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
407,036	1,193,622	State Plane, FLW (U.S. Ft.)	-21.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SW	2.5Y 6/1	#200 - 2.65 #230 - 2.57			39.18

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	4.16	4.16
#3.5	-2.50	5.60	2.93	7.09
#4	-2.25	4.75	1.59	8.68
#5	-2.00	4.00	0.36	9.04
#7	-1.50	2.80	1.45	10.49
#10	-1.00	2.00	2.14	12.63
#14	-0.50	1.40	3.21	15.84
#18	0.00	1.00	3.36	19.20
#25	0.50	0.71	4.05	23.25
#35	1.00	0.50	5.10	28.35
#45	1.50	0.36	8.23	36.58
#60	2.00	0.25	10.94	47.52
#80	2.50	0.18	17.05	64.57
#120	3.00	0.13	25.80	90.37
#170	3.50	0.09	6.57	96.94
#200	3.75	0.08	0.41	97.35
#230	4.00	0.06	0.08	97.43

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.35	2.88	2.70	2.07	0.67	-0.48	-3.03

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.33	0.40	2.07	0.24	1.86	-1.35	3.92

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

Granularmetric Report

Project Name: Egmont Shoal Borrow Area

Sample Name: VB-Egsh2015-29 @ 12 ft

Analysis Date: 8/12/2015

US Army Corps of Engineers
Jacksonville District

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
407,036	1,193,622	State Plane, FLW (U.S. Ft.)	-24.9 NAVD88

USCS:	Munsell:	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
SP	2.5Y 7/1	#200 - 1.19 #230 - 1.17			9.8

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.08	0.08
#4	-2.25	4.75	0.00	0.18
#5	-2.00	4.00	0.10	0.18
#7	-1.50	2.80	0.23	0.41
#10	-1.00	2.00	0.50	0.91
#14	-0.50	1.40	0.78	1.69
#18	0.00	1.00	0.66	2.35
#25	0.50	0.71	0.67	3.02
#35	1.00	0.50	0.42	3.44
#45	1.50	0.36	0.49	3.93
#60	2.00	0.25	1.69	5.62
#80	2.50	0.18	15.77	21.39
#120	3.00	0.13	64.77	86.16
#170	3.50	0.09	12.13	98.29
#200	3.75	0.08	0.52	98.81
#230	4.00	0.06	0.02	98.83

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.36	2.98	2.91	2.72	2.53	2.33	1.82

Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.60	0.16	2.72	0.15	0.69	-3.92	22.15

GRANULARMETRIC REPORT % PINELLAS_COMPAT2016_GINT_2FEB2016_ALL SAMPLES.GPJ CESAJ3.GDT 2/3/16

8.4 SAND SOURCE FENCE DIAGRAMMS

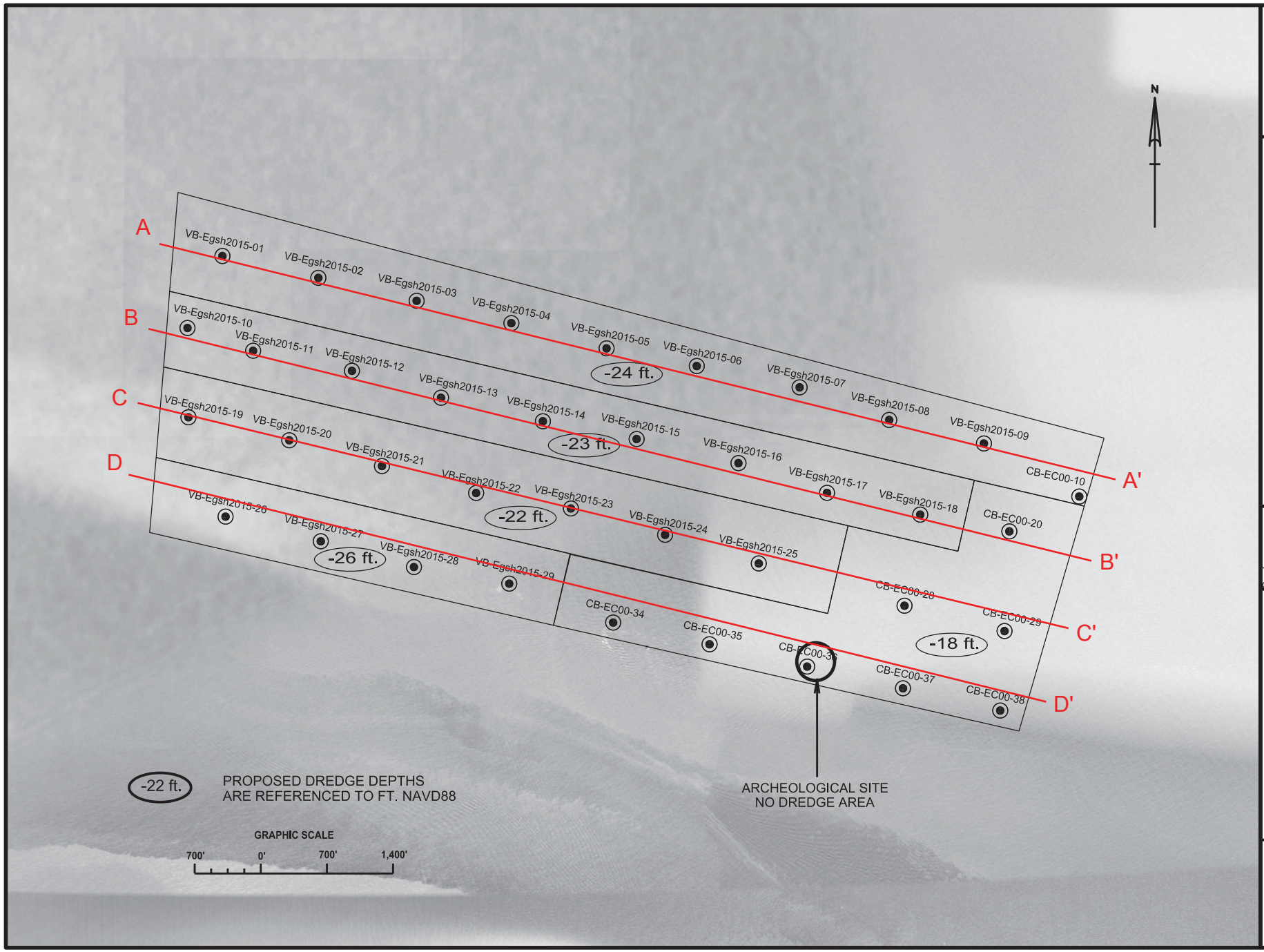


PLATE
B-6

PINELLAS COUNTY, FLORIDA
TREASURE ISLAND - LONG KEY
EGMONT SHOAL
COPATIBILITY ANALYSIS
BORROW AREAS DREDGE DEPTH

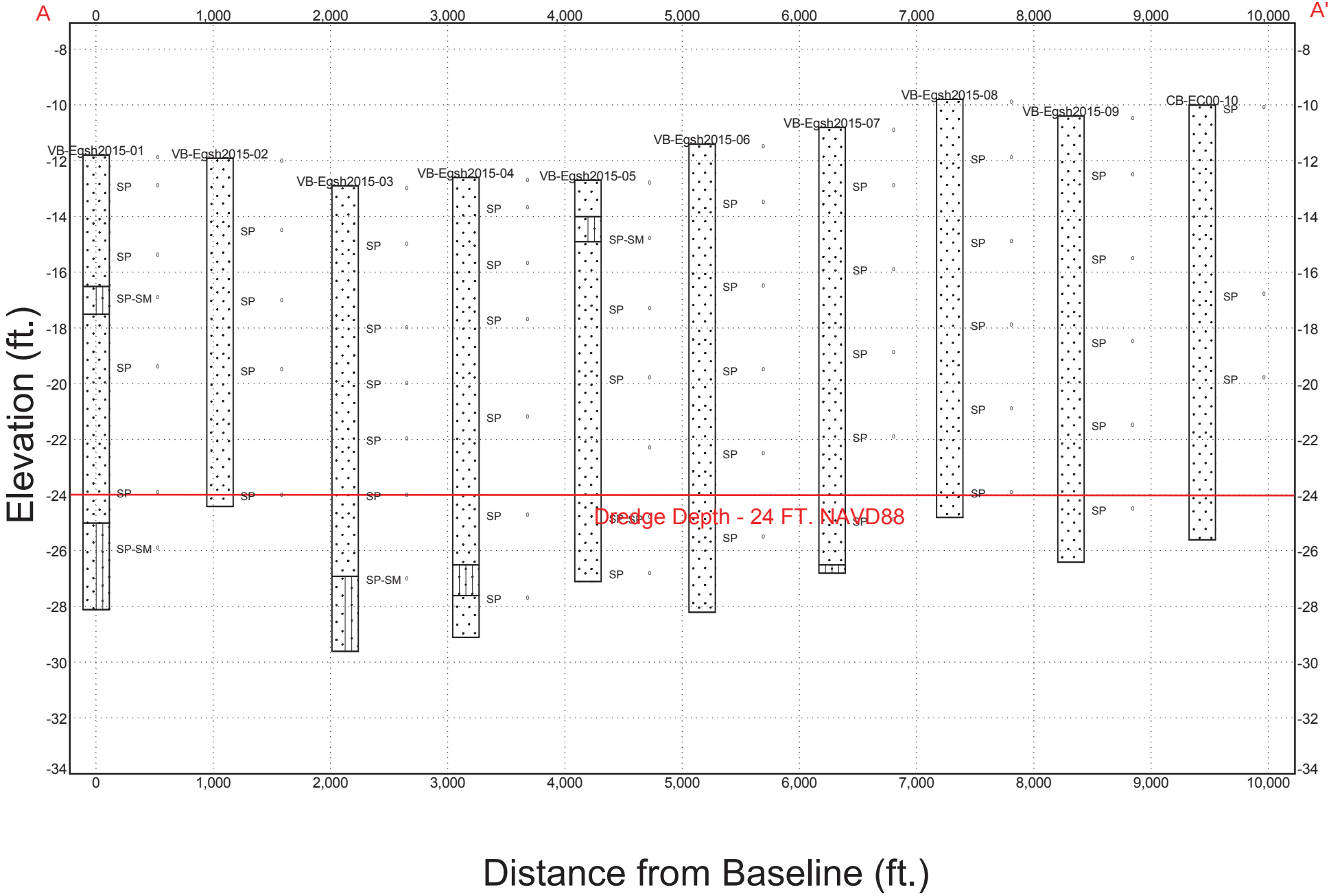
Dsn by: BUN
Dwn by: BUN
Ckd by: BUN
Dated: Feb 2016

GEOTECHNICAL DRAWINGS
FOR PERMIT

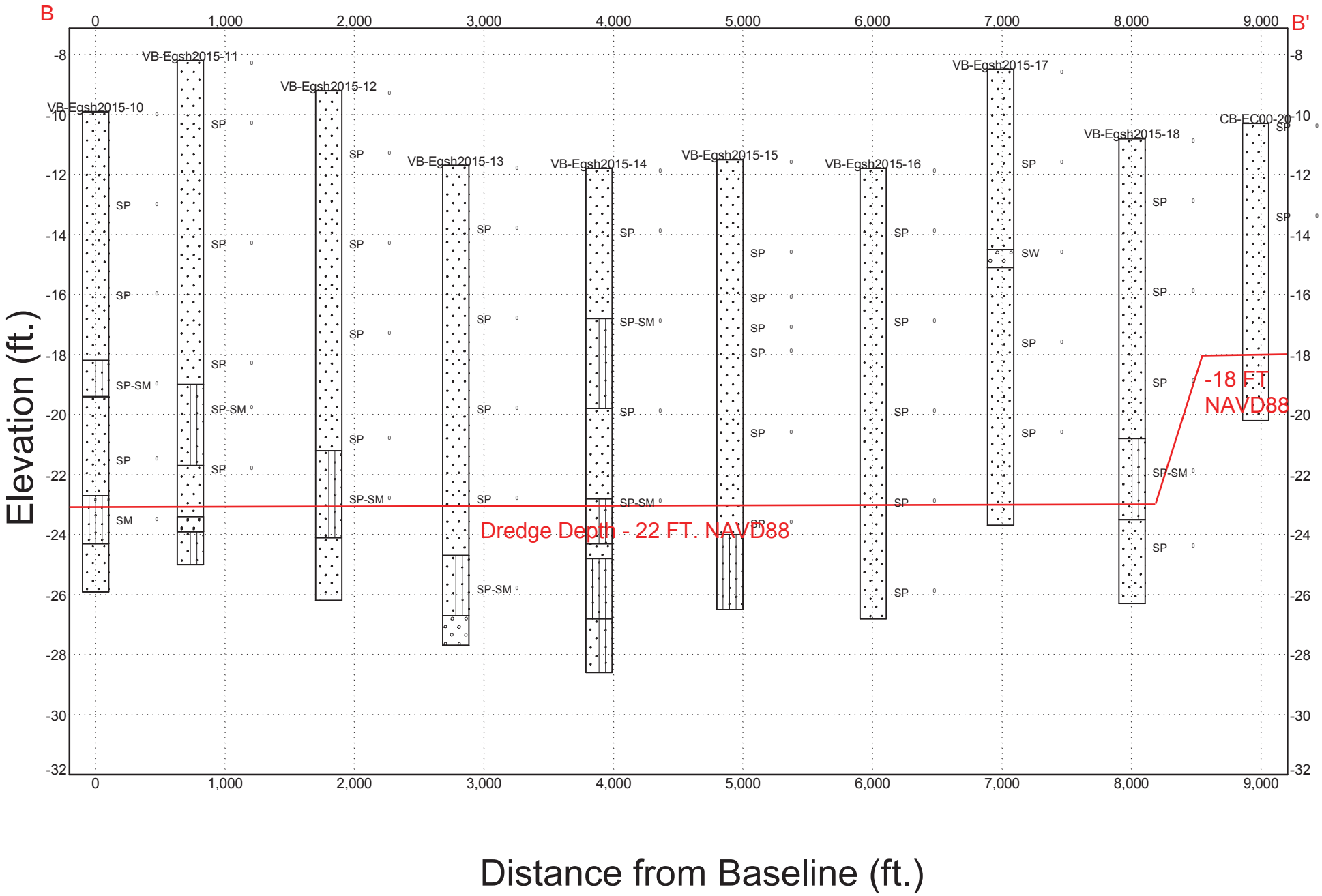
DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

US Army Corps of Engineers
Jacksonville District

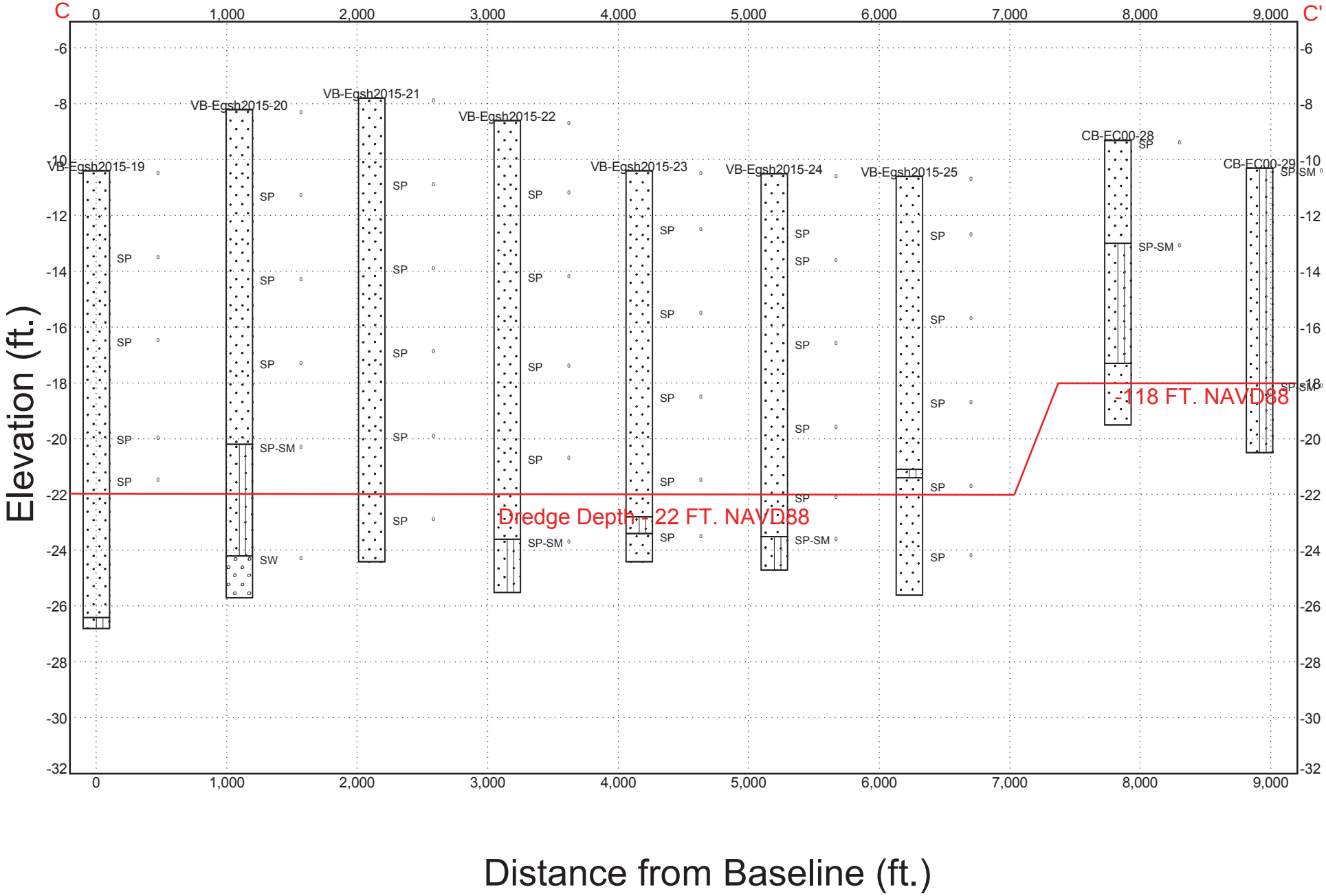
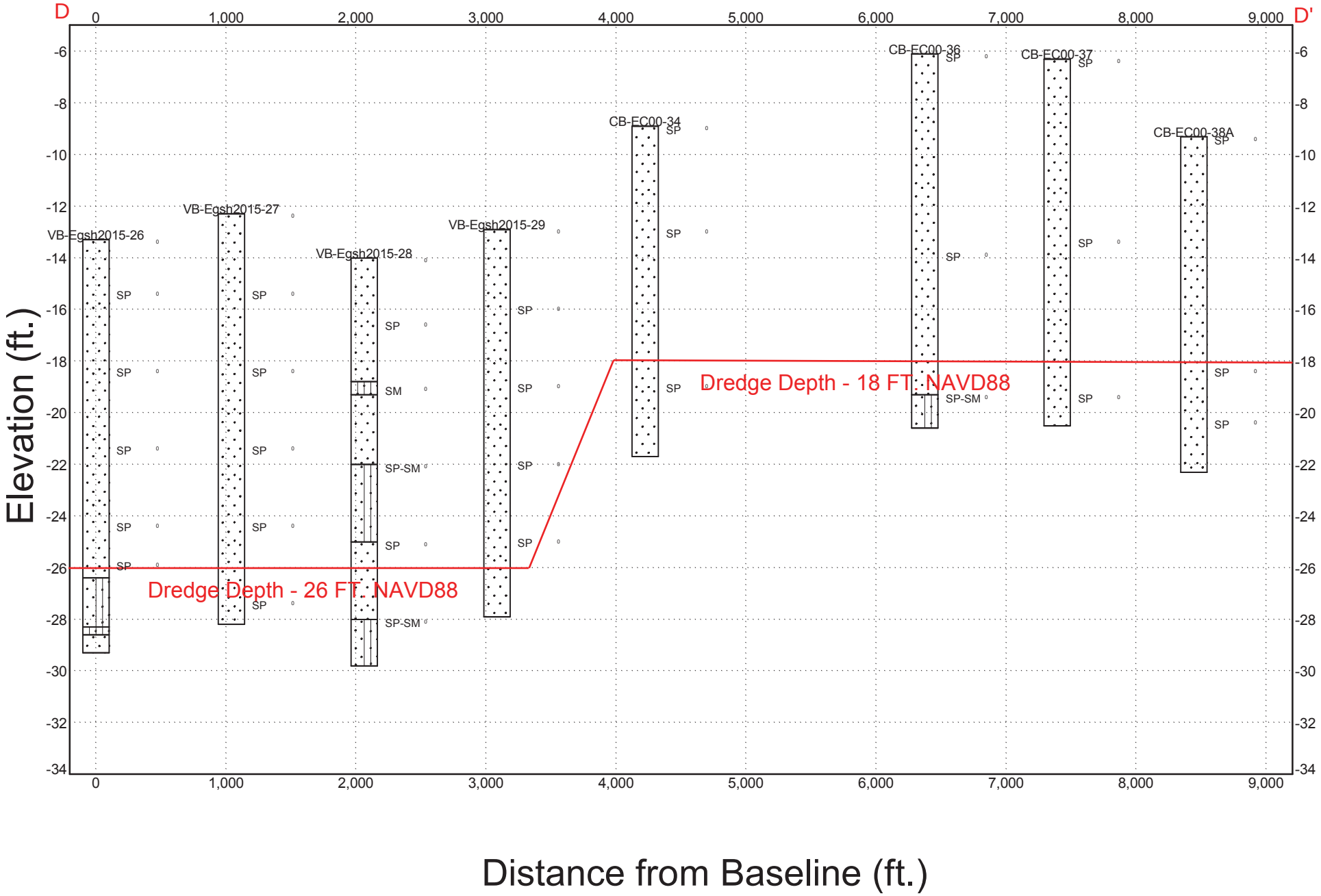
EGMONT SHOAL BORROW AREA FENCE DIAGRAM A-A'



EGMONT SHOAL BORROW AREA FENCE DIAGRAM B-B'



EGMONT SHOAL BORROW AREA FENCE DIAGRAM C-C'



EGMONT SHOAL BORROW AREA FENCE DIAGRAM D-D'