

Line 13

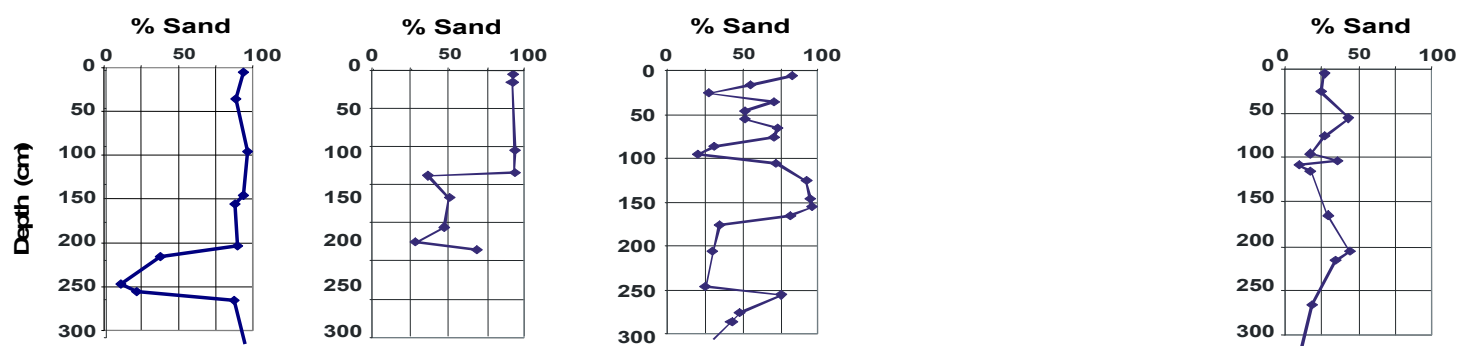


Figure 47: Fence Profile for Line 13

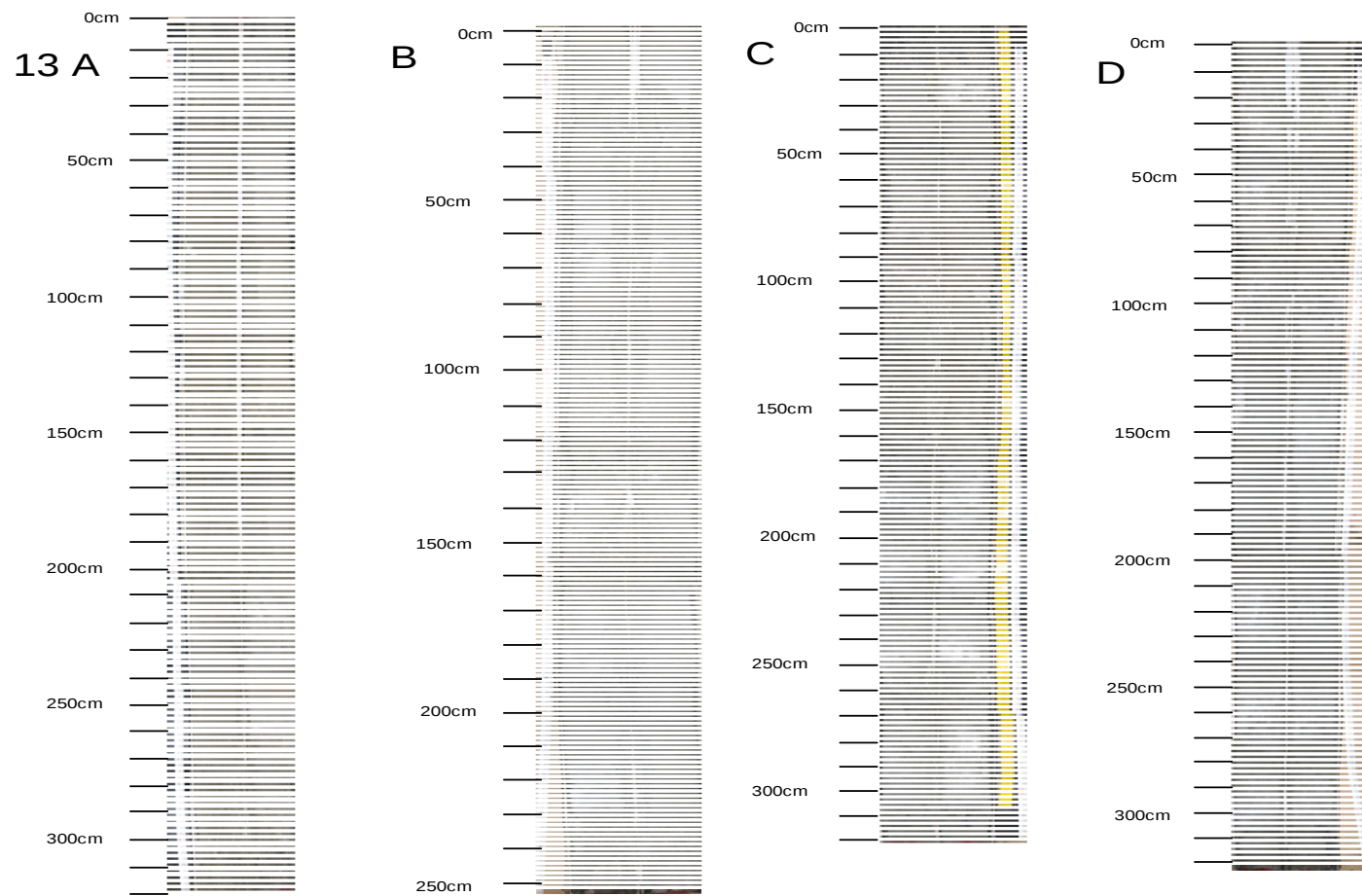


Figure 48: Core Photographs for Line 13

CORE 13B:

Core 13B was taken at a water depth of 6.1m (20ft) (Table 1) and had a total length of 240cm (94.5in) (Figures 57-59). A total of 9 grain size samples were taken at depths of 1-10cm (0.4-3.9in), 11-20cm (4.3- 8.3in) , 101-110cm (39.3-49.8in), 131-136cm (51.6-53.5in), 136-140cm (53.5-55.1in), 164-170cm (64.6-66.9in), 201-210cm (78.7-82.7in), 220-230cm (86.6-90.5in) and 231-240cm (90.9-94.5in). The grain size analyses revealed that the top 136cm (53.5in) of the core contained at least 76% sand and had a mean grain size of no less than 0.09mm (3.4phi) (Tables 40&41). Sand and shell weights are shown in Table 39. Percent sand, silt and clay are shown in Table 40.

Median grain size, mean grain size, skewness and sorting index are shown in Table 41.

Graphs of the results are located in Figures 60-63.

It was determined that core 13B had approximately 150cm (59.1in) of sediment contained at least 50% sand, of which 100cm (39.4in) was located shallower than 1m (39.4in) depth. The average grain size in the upper 1m (3.28ft) was determined to be 0.0916mm.

Core#: 13B
Core Date: 7/18/2005

Date Split/subsampled: 7/18/05
Length: 240cm
Lat: 39 11.631
Long: 94 55.989

Centi-Meters	Munsell Soil Color	Depths Sampled	Description:
0-10cm	5y 4/1	VC	0-10 → shell hash layer w/sand
10-23cm		0-1cm 10-11cm 20-21cm 20-31cm 40-41cm 50-51cm 60-61cm 70-71cm 80-81cm 90-91cm	10-23 → sand w/several dark greyish/black spots and trace shell hash
23-115cm	5y 3/1		23-115 → sand w/labundant shell hash
115-136cm	5y 4/1	100-101cm 110-111cm 120-121cm 130-131cm 140-141cm 150-151cm 160-161cm 170-171cm 180-181cm 190-191cm 200-201cm 210-211cm 220-221cm 230-231cm 240-241cm	105-136 → shell hash layer w/sand
136-147cm	Grey 1 4/1		136-147 → sandy mud w/trace shell hash
147-150cm			147-150 → shell hash layer w/sand
150-164cm			150-164 → sand w/trace shell hash
164-185cm			164-185 → muddy sand w/trace shell hash
185-188cm			185-188 → sandy mud slightly browner color
188-206cm			188-206 → muddy sand w/trace shell hash
206-230cm			206-230 → silt dominated mud w/fine sand laminations & trace shell hash
230-235cm			230-235 → sand w/shell hash
235-240cm			235-240 → shell hash layer w/sand

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Centi-Meters	Munsell Soil Color	Depths Sampled	Description:
0-10cm			
10-23cm			
23-115cm			
115-136cm			
136-147cm			
147-150cm			
150-164cm			
164-185cm			
185-188cm			
188-206cm			
206-230cm			
230-235cm			
235-240cm			

Figure 57: Core Log of 13B for depths 0-150cm

Figure 58: Core Log of 13B for depths 150-240cm

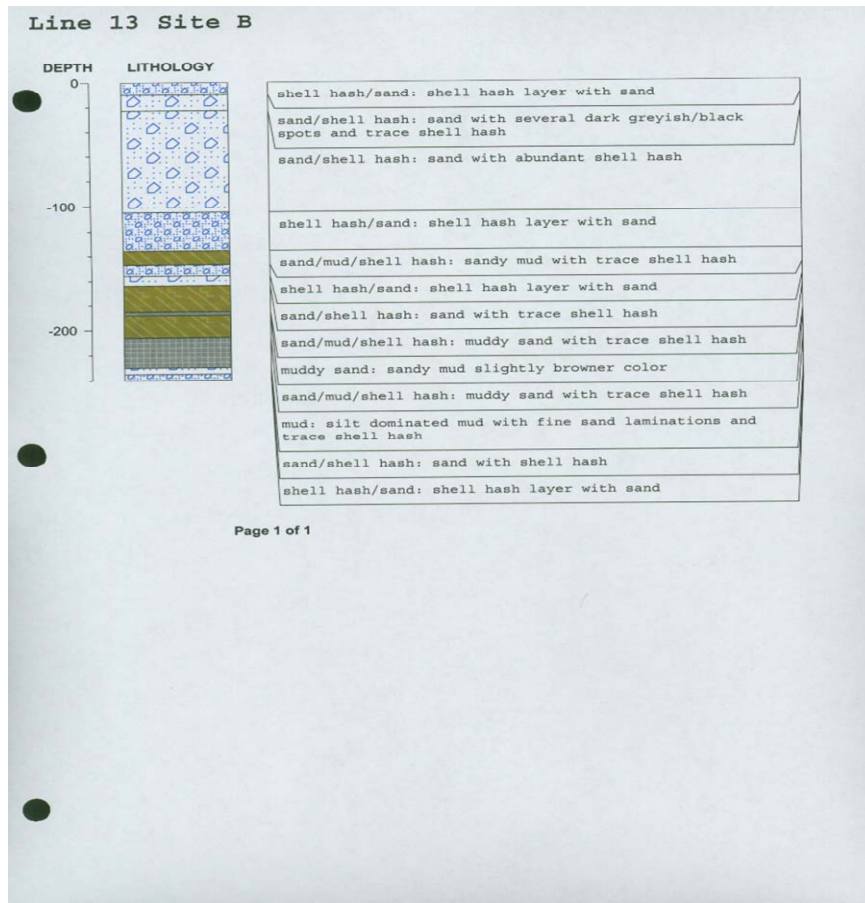


Figure 59: Computerized core log of 13B

Core ID	Sample Depth (cm)	#10/ 2.0mm Screen Sample Weight (g)	#14/ 1.40mm Screen Sample Weight (g)	#18/ 1.00mm Screen Sample Weight (g)	#25/ 710µm Screen Sample Weight (g)	#35/ 500µm Screen Sample Weight (g)	#45/ 355µm Screen Sample Weight (g)	#60/ 250µm Screen Sample Weight (g)	#80/ 180µm Screen Sample Weight (g)	#125/ 125µm Screen Sample Weight (g)	#170/ 90µm Screen Sample Weight (g)	#200/ 75µm Screen Sample Weight (g)	#230/ 63µm Screen Sample Weight (g)
13B	1-10	0.29	0.40	0.30	0.20	0.13	0.16	0.30	1.14	9.51	61.14	34.74	13.63
13B	11-20	0.00	0.06	0.06	0.07	0.06	0.28	0.45	1.88	11.06	67.59	28.05	20.22
13B	101-110	1.01	0.85	0.58	0.39	0.21	0.37	0.65	3.53	45.64	93.03		11.79
13B	131-136	1.04	0.35	0.21	0.16	0.11	0.14	0.53	1.78	8.55	51.12	23.87	0.86
13B	136-140											13.76	3.95
13B	164-170											26.00	6.01
13B	201-210											22.40	4.01
13B	220-230											5.73	0.95
13B	231-240	3.68	5.70	5.18	4.17	1.73	0.87	0.74	4.95	70.72	39.87	0.78	6.70

Table 37: RO-TAP data for core 13B

ASTM Classification		coarse sand	medium sand	medium sand	medium sand	medium sand	fine sand	fine sand	fine sand	fine sand	fine sand	fine sand	silt
Wentworth Classification		granule	very coarse sand	very coarse sand	coarse sand	coarse sand	medium sand	fine sand	fine sand	fine sand	very fine sand	very fine sand	very fine silt
Core ID	Sample Depth (cm)	% finer than N10/ 2.0mm/ -1.0Φ Screen	% finer than N14/ 1.40mm / -0.5Φ Screen	% finer than N18/ 1.00mm/ 0.0Φ Screen	% finer than N25/ 710µm / 0.5Φ Screen	% finer than N35/ 500µm/ 1.0Φ Screen	% finer than N45/ 355µm / 1.5Φ Screen	% finer than N60/ 250µm 2.0Φ Screen	% finer than N80/ 180µm/ 2.5 Φ Screen	% finer than N125/ 125µm/ 3.0Φ Screen	% finer than N170/ 90µm / 3.5Φ Screen	% finer than N200/ 75µm / 4.0Φ Screen	% finer than 4µm/ 8Φ
Observed Contents of the sample		shell only	shell only	shell only	shell only	shell only	shell only	shell only	sand	sand	sand	sand	silt
13B	1-10	99.8	99.5	99.2	99.1	99.0	98.9	98.6	97.7	90.4	43.3	16.5	1.7
13B	11-20	100.0	100.0	99.9	99.9	99.8	99.6	99.3	98.0	90.1	42.0	22.1	2.6
13B	101-110	99.4	98.9	98.5	98.3	98.2	97.9	97.5	95.4	67.7	11.2	11.2	1.8
13B	131-136	98.9	98.5	98.3	98.1	98.0	97.8	97.3	95.4	86.2	31.2	5.6	2.8
13B	136-140											71.8	43.8
13B	164-170											58.7	17.2
13B	201-210											59.7	29.0
13B	220-230											75.7	47.2
13B	231-240	97.9	94.7	91.8	89.5	88.5	88.0	87.6	84.8	45.2	22.8	22.4	12.1

Table 38: Percent finer table for core 13B

Core ID	Sample Depth (cm)	shell weight	200+ weight	200-230 weight	sand + shell
13B	1-10	1.48	106.83	13.63	108.31
13B	11-20	0.53	109.03	20.22	109.56
13B	101-110	3.41	142.85	11.79	146.26
13B	131-136	2.01	85.85	0.86	87.86
13B	136-140		13.76	3.95	13.76
13B	164-170		26.00	6.01	26.00
13B	201-210		22.40	4.01	22.40
13B	220-230		5.73	0.95	5.73
13B	231-240	21.33	117.06	6.70	138.39

Table 39: Shell and sand weights for core 13B

Core ID	sample id	mid sample depth	% shell	% sand	%silt	%clay	total %
13B	1-10	5.5	1.1	82.3	14.9	1.7	100
13B	11-20	15.5	0.4	77.5	19.5	2.6	100
13B	101-110	105.5	2.1	86.8	9.3	1.8	100
13B	131-136	133.5	2.2	92.3	2.8	2.8	100
13B	136-140	138		28.2	28.0	43.8	100
13B	164-170	167		41.3	41.5	17.2	100
13B	201-210	205.5		40.3	30.8	29.0	100
13B	220-230	225.5		24.3	28.5	47.2	100
13B	231-240	235.5	12.0	65.7	10.2	12.1	100

Table 40: Percent Shell, Sand, Silt and Clay for core 13B

Station ID	Average Depth	Median Grain Size	Median Grain Size	Mean Grain Size	Mean Grain Size	Skewness	Sorting Index
	(cm)	(phi)	(mm)	(phi)	(mm)		
CC13B/1-10	5.5	3.444	0.0915	3.4340	0.0921	-0.0049	0.3395
CC13B/11-20	15.5	3.421	0.0929	3.4509	0.0910	0.1063	0.3663
CC13B/101-110	105.5	3.138	0.1131	3.1228	0.1143	0.0392	0.3717
CC13B/131-136	133.5	3.356	0.0972	3.3385	0.0984	-0.1420	0.301
CC13B/136-140	138						
CC13B/164-170	167						
CC13B/201-210	205.5						
CC13B/220-230	225						
CC13B/231-240	235.5	2.941	0.1296	3.2015	0.1083	0.4802	2.4492

PINK=Upper sand area

Table 41: Median grain size, Mean grain size, Skewness and Sorting Index for core 13B

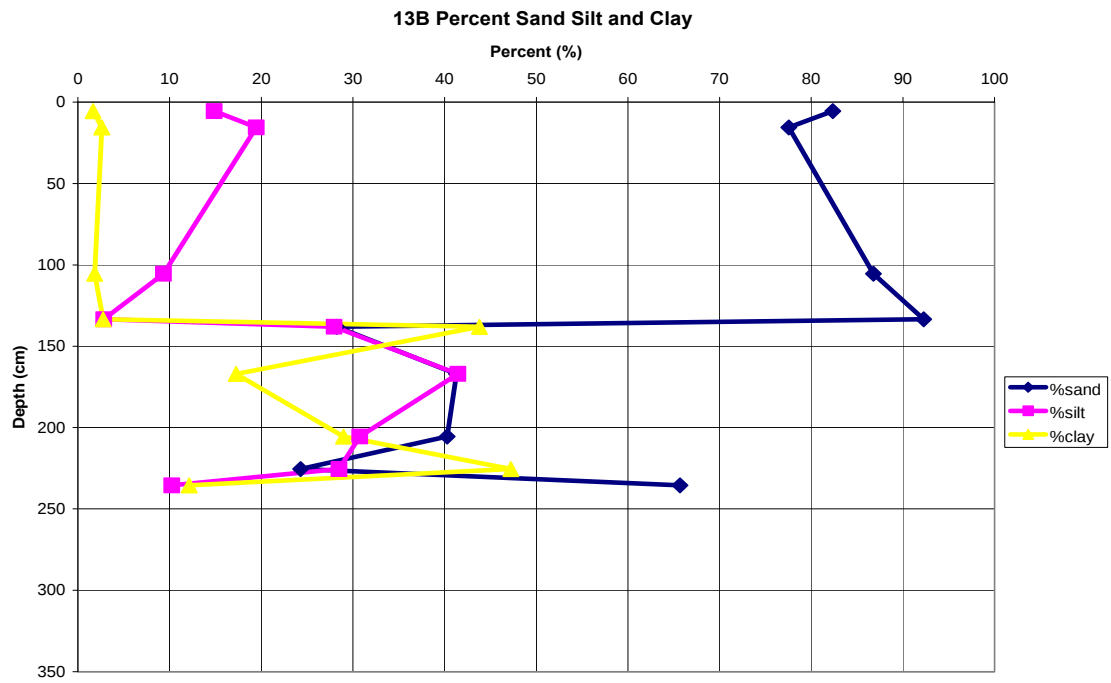


Figure 60: Percent Sand, Silt and Clay graph for core 13B

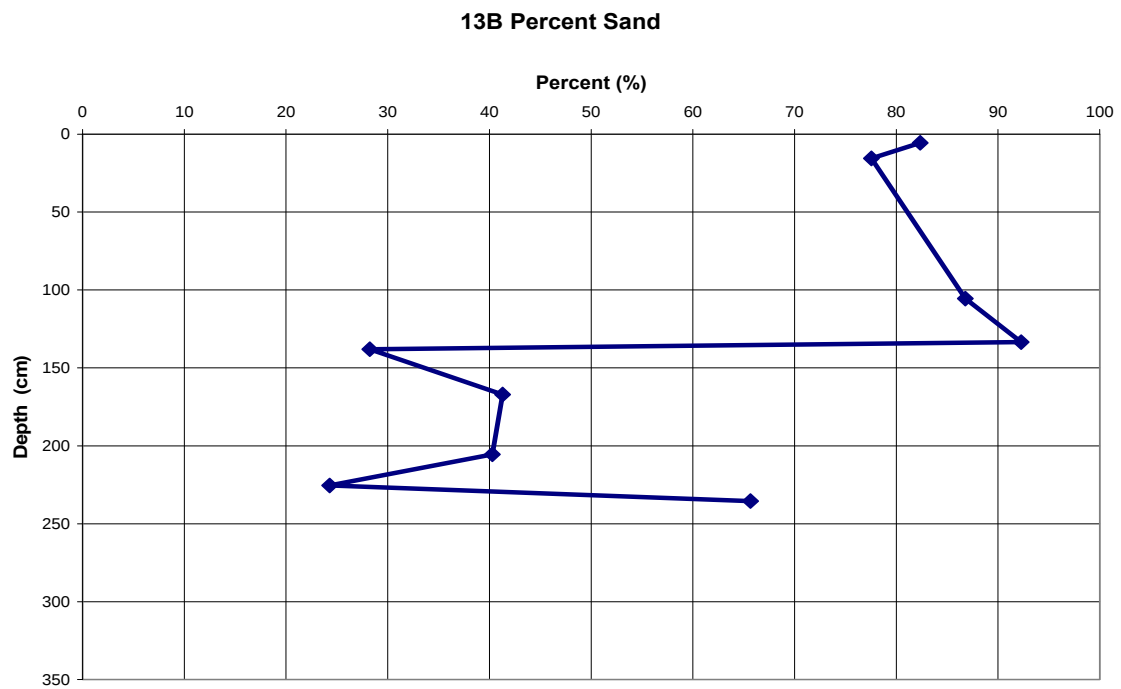


Figure 61: Percent Sand graph for core 13B

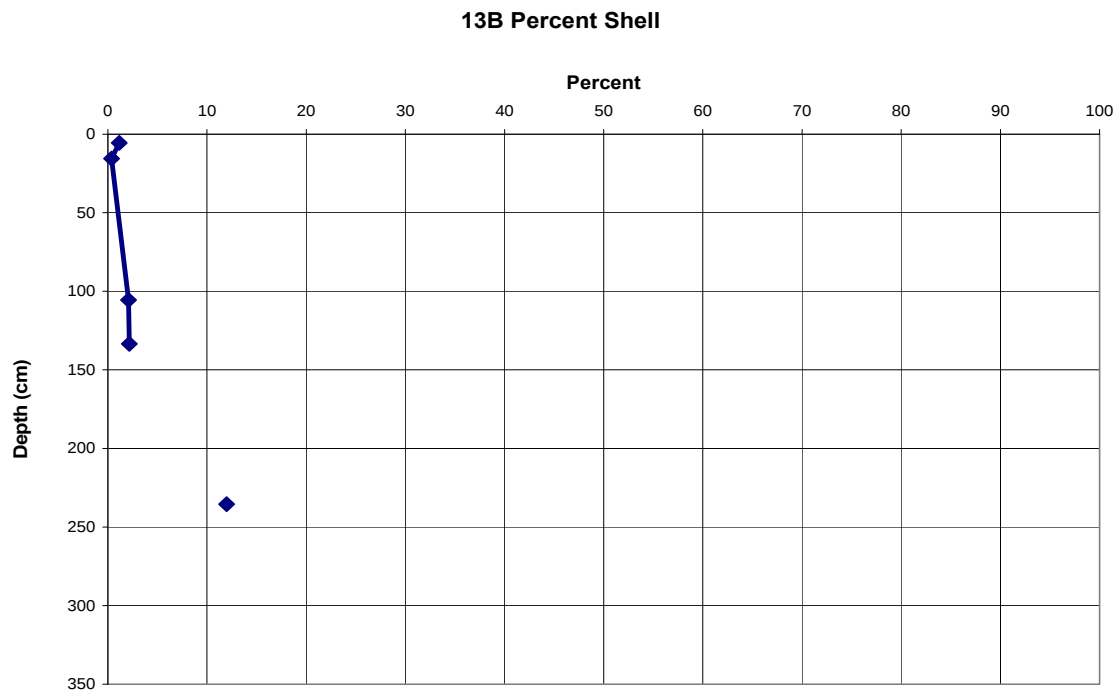


Figure 62: Percent Shell graph for core 13B

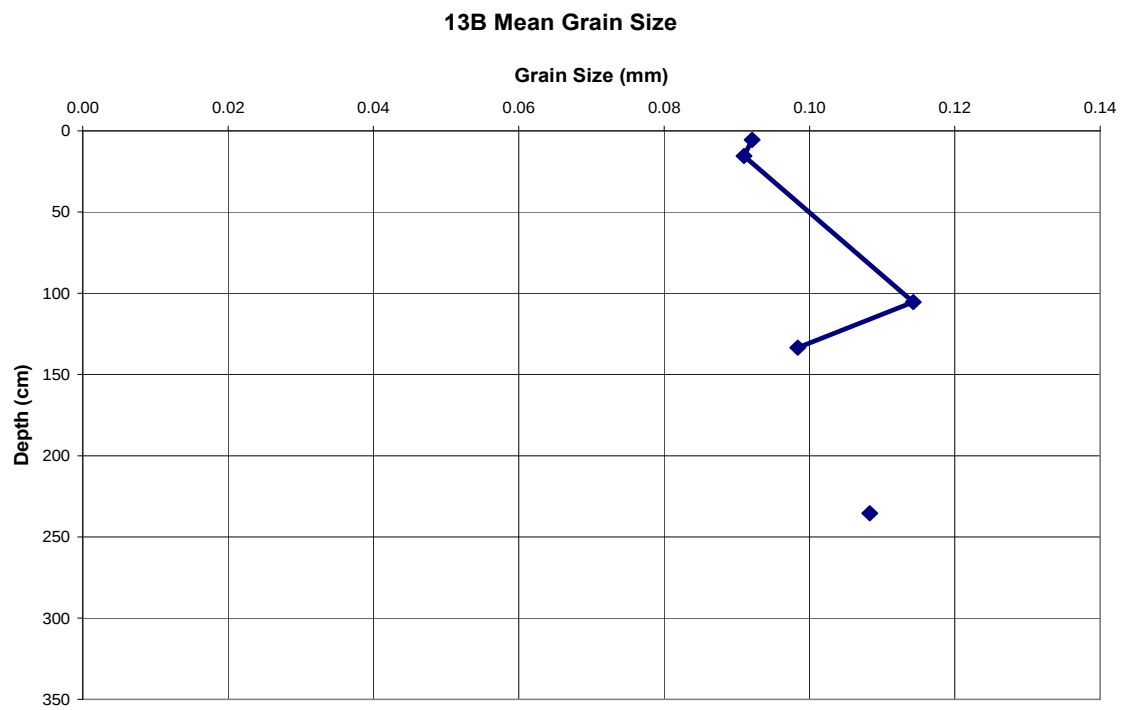


Figure 63: Mean grain size graph for core 13B