Core 09CCT02_06 (Core 6)

The Core 6 location is on the crest of Heald Bank. The target was both the shoal deposits which make up the bank as well the fill of an incised channel below the shoal. Core 6 is 325 cm long and completely penetrated through the shoal deposit (0-109 cm) and into the upper portion of the channel fill deposit (109-325). The upper 28 cm of the core was dominated by shell lag and mud. From 28-109 cm is muddy sand with coarse shell, with a mean grain size for the sequence of ~110 microns for the silica clastic component. From 109-306 cm, the sediments are described as being silty sand with coarse shell. This interval has a mean size of 110 microns. The basal unit of the core consists of mud with sparse shell.

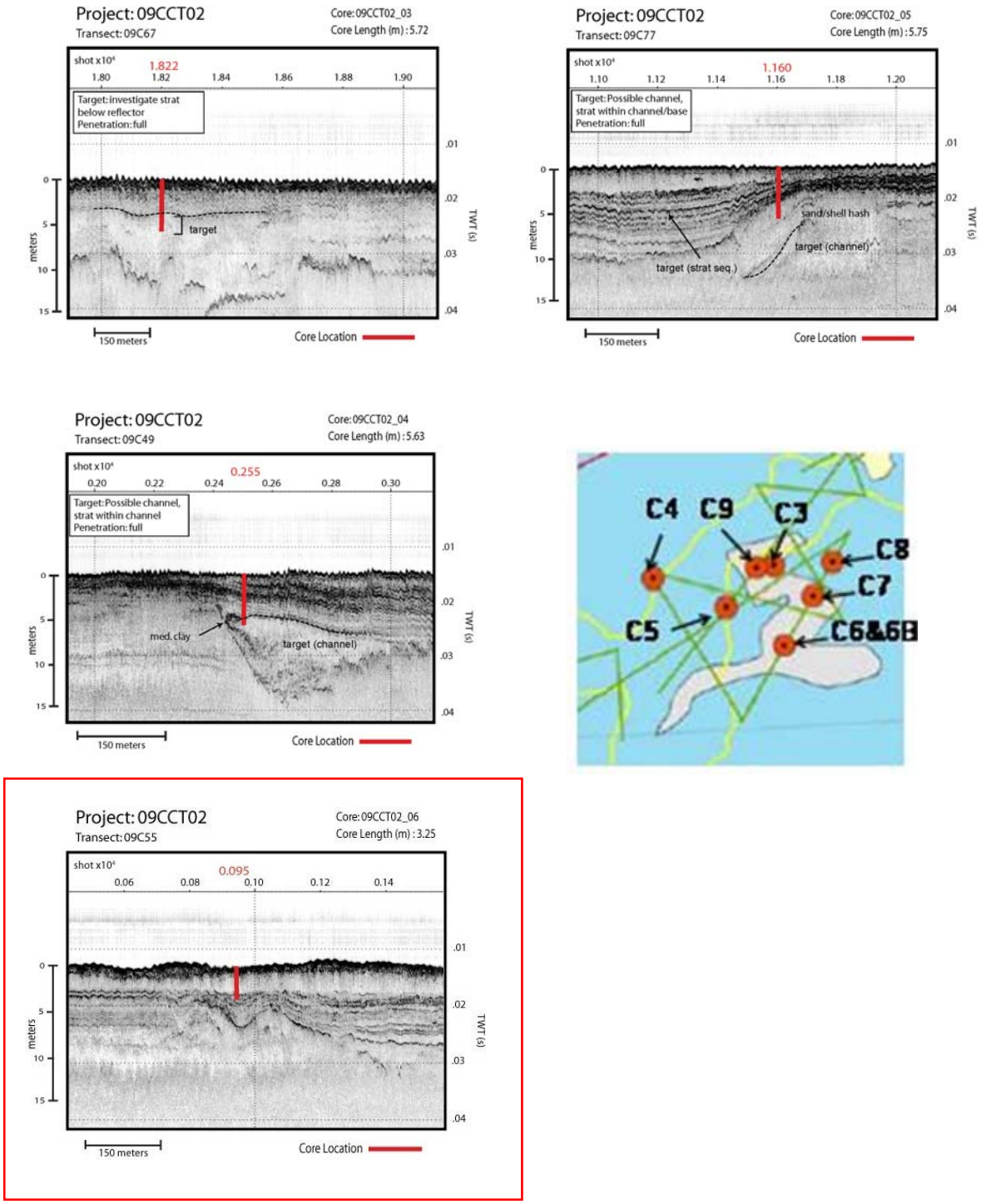


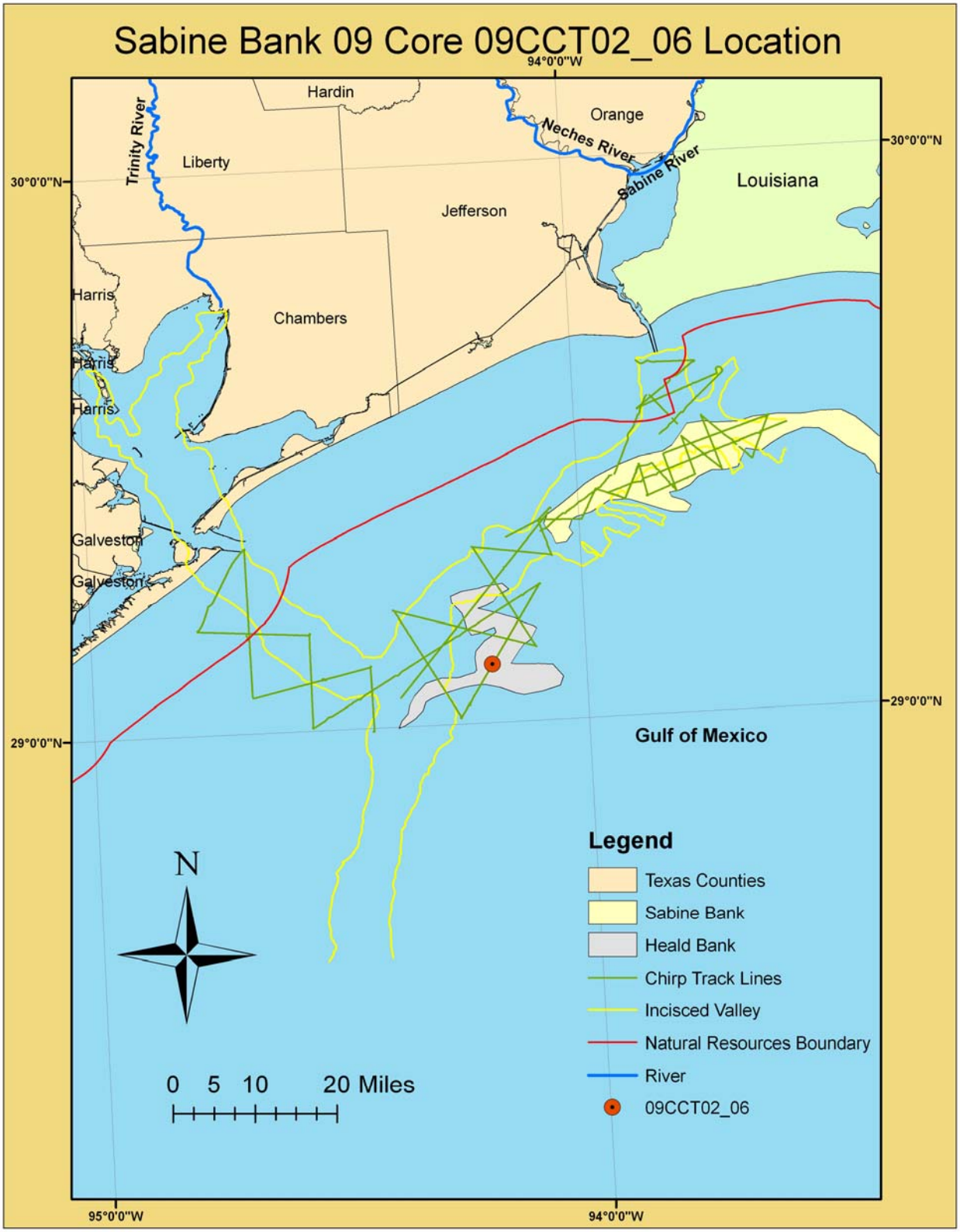
Figure 9-A. Chirp lines showing core locations and lithologies for Heald Bank and western Sabine Incised Channel cores.

7.0 Core Table

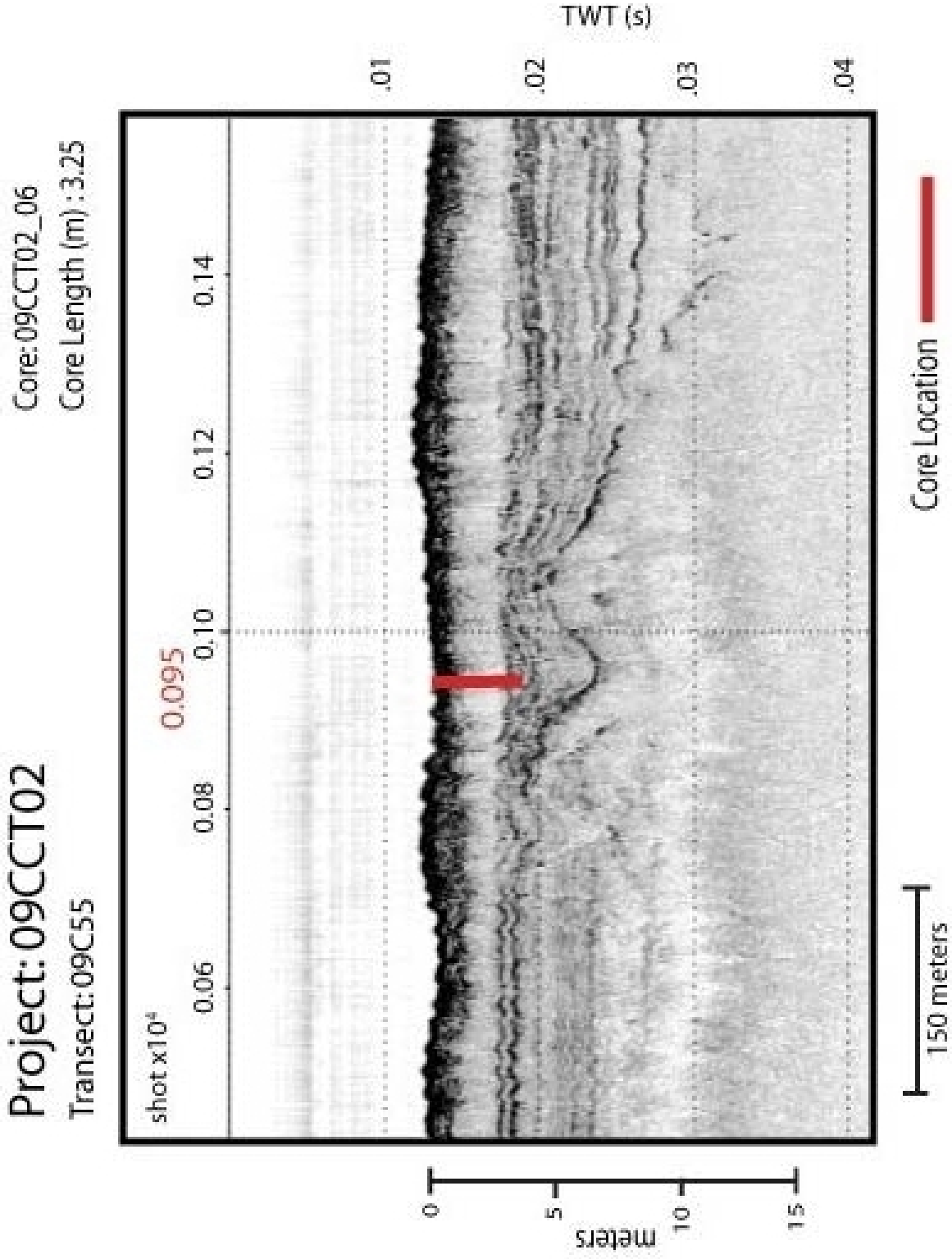
Table 1-Core Data Summary Table

Core	Core Length	Location	Type of feature	Environment	Net Sand deposits	% Sand	Comments
09CCT01-01	563 cm	Trin. Incis. Chan	Channel flank	Estuarine fill	0		
09CCT02-02	189 cm	Trin. Incis. Chan	Channel top	Estuarine fill	0		
09CCT03-03	575 cm	Heald Bank	Bank crest	Shoal?	0		Plant debris starting @465 cm
09CCT04-04	566 cm	Sabine Incis. Chan-west	Channel flank	Estuarine fill	0		
09CCT05-05	576 cm	Sabine Incis. Chan-west	Channel flank	Shoal and channel fill	200 cm	50-60%	
09CCT06-06	325 cm	Heald Bank	Bank crest	Shoal	300 cm	65-80%	See below
09CCT06-06B	438 cm	Heald Bank	Bank crest	Flat strata over channel fill	340 cm	60-70%	Sand is in shoal deposit, channel is filled with mud w/30-40% sand
09CCT07-07	176 cm	Heald Bank	Bank crest	Flat strata	0		
09CCT08-08	584 cm	Sabine Incis. Chan-central	Channel flank	Estuarine mud	0		
09CCT09-09	599 cm	Heald Bank	Bank crest	Flat strata	300 cm	50-60%	
09CCT10-10	587 cm	Trin. Incis. Chan	Channel flank	Estuarine mud	0		Plant debris starting @386 cm
09CCT11-11	566 cm	Sab. Incis. Channel-nw	Channel	Estuarine Mud	0		
09CCT12-12	564 cm	Sab. Incis. Channel-nw	Channel	Fluvial sand fill	112 cm ~200 cm	40-50% 20-30%	Plant debris starting @370 cm
09CCT13-13	580 cm	Sab. Incis. Channel-nw	Channel	Estuarine Mud			Plant debris starting @207 cm
09CCT14-14	566 cm	Sab. Incis. Channel-nw	Shoal	Flat strata	0		Plant debris starting @417 cm
09CCT15-15	239 cm	Sabine Bank	Shoal	Flat strata	110 cm	70-80%	
09CCT16-16	138 cm	Sab. Incis. Channel-nw	Shoal	Flat strata	0		Paleosol @10 cm Deweyville Ter?
09CCT17-17	565 cm	Sab. Incis. Channel-north	Channel	Estuarine Mud	0		
09CCT18-18	566 cm	Sabine Bank	Shoal	Flat strata	259 cm 307 cm	80-90% 50-60%	
09CCT19-19	574 cm	Sabine Bank-west	Channel	Fluvial fill	290 cm	30-40%	Plant debris starting @286 cm
09CCT20-20	470 cm	Sabine Bank-west	Channel-flank	Shoal over fluvial fill	470 cm	40-50%	
09CCT21-21	569 cm	Sabine Bank	Shoal	Flat strata	130 cm	50%	
09CCT22-22	569 cm	Sabine Bank-middle	Shoal & channel	Flata strata over channel	200 cm 220 cm	80% 50-60%	Shoal is sand dominated-channel fill has 25-30% sand
09CCT23-23	43 cm	Sabine Bank-middle	Shoal	Flat strata	43 cm	98%	
09CCT24-24	108 cm	Sab. Incis. Channel-nw	shoal	Flat strata	0		Paleosol @40 cm Deweyville Ter?
09CCT25-25	557 cm	Sabine Bank	Shoal	Flat strata	557 cm	Sand*	

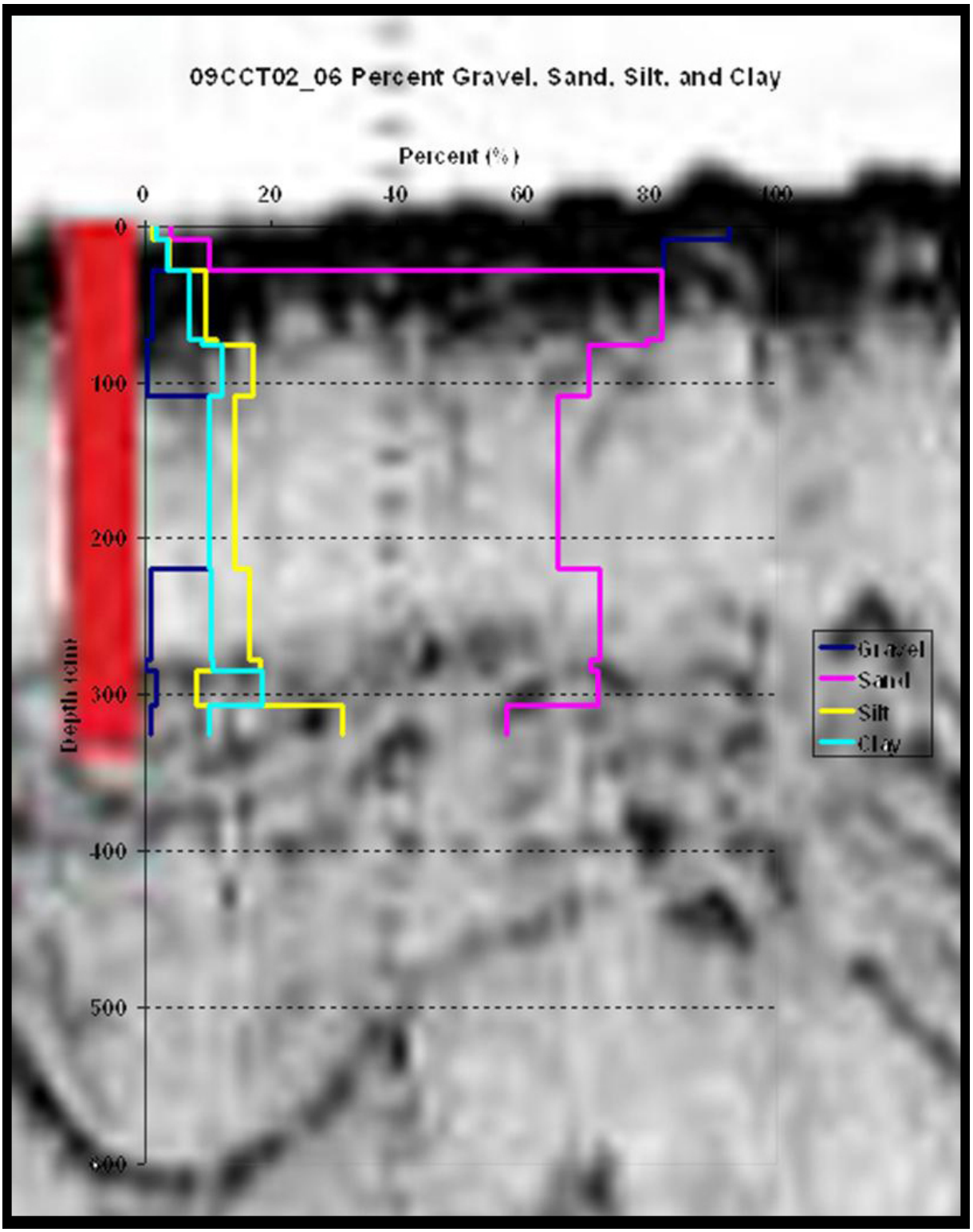
09CCT02_06 Core Location



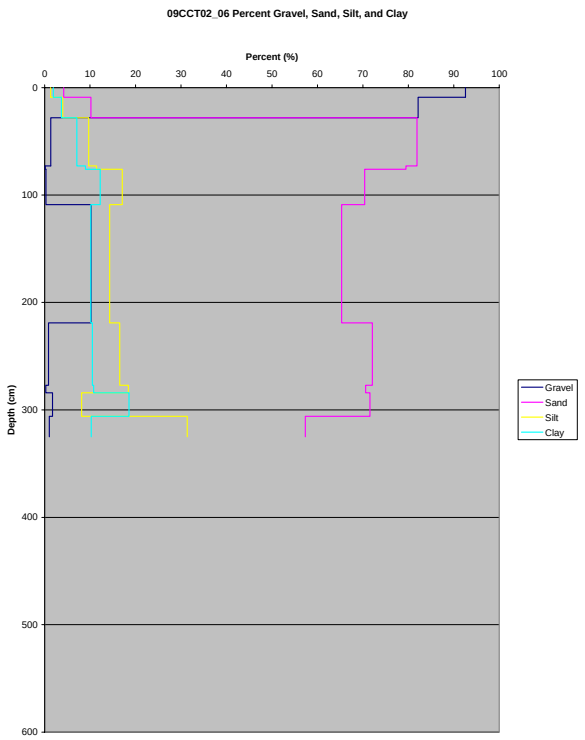
09CCT02_06 Seismic



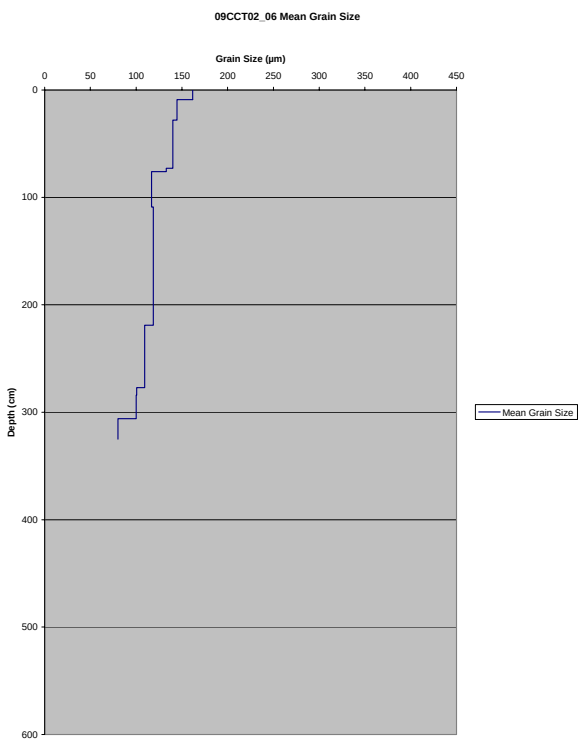
09CCT02_06 Seismic



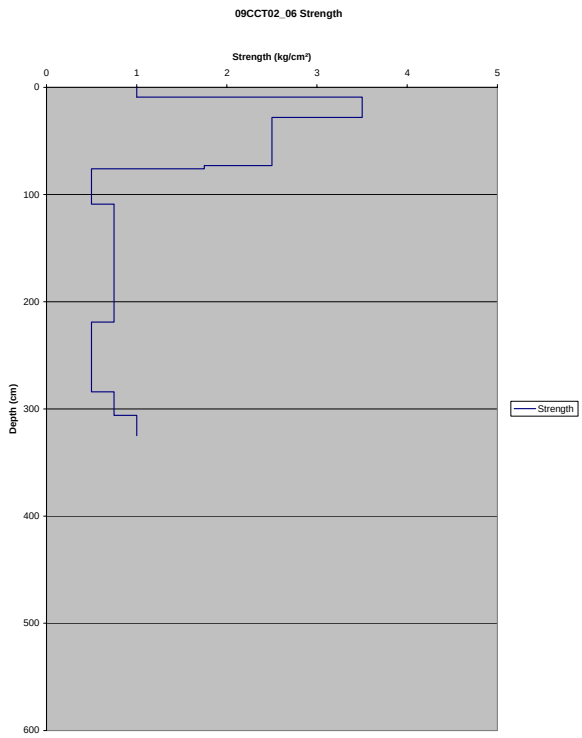
09CCT02_06 Percent Grain Size Distribution Graph



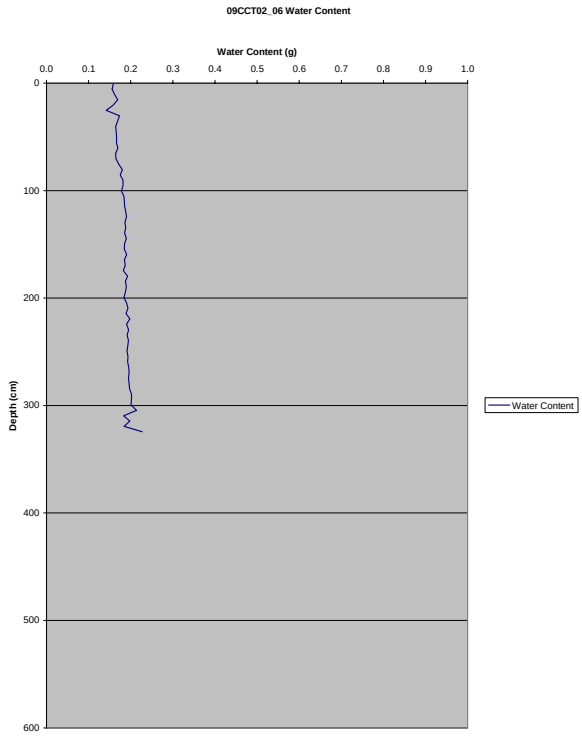
09CCT02_06 Mean Grain Size Distribution Graph



09CCT02_06 Strength Graph



09CCT02_06 Water Content Graph



09CCT02_06 Grain Size Sand Percent

09CCT02_06 Grain Size Sand Percent											
Depth (cm)	63-257 µm (%)	257-451 µm (%)	451-645 µm (%)	645-839 µm (%)	839-1033 µm (%)	1033-1227 µm (%)	1227-1421 µm (%)	1421-1615 µm (%)	1615-1809 µm (%)	1809-2000 µm (%)	Total (%)
0-5	68.09	21.23	3.46	1.65	1.55	1.38	1.10	0.79	0.48	0.26	100
20-25	76.41	16.64	1.36	0.74	1.13	1.20	1.02	0.77	0.47	0.26	100
50-55	90.85	9.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
73-75	91.46	8.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
95-100	91.33	8.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
169-174	91.37	8.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
244-249	95.11	4.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
279-284	97.22	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
299-304	98.18	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
314-319	99.08	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100

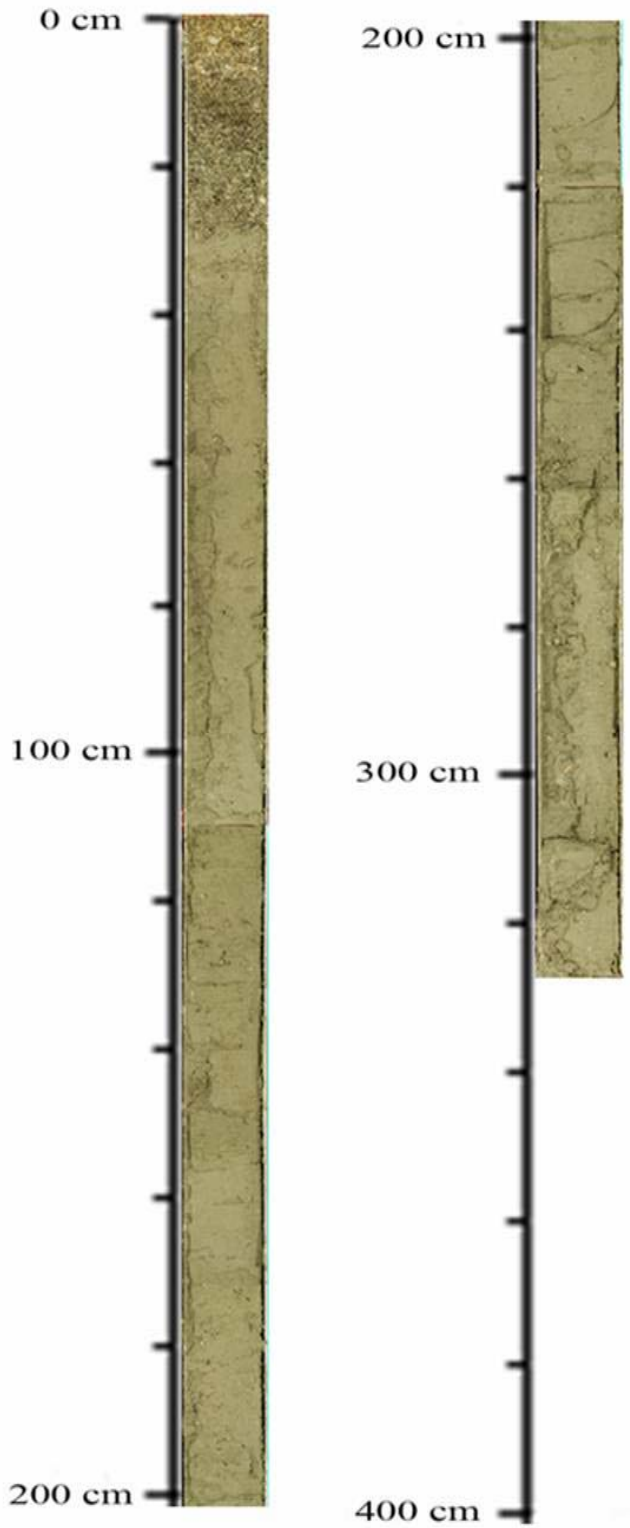
09CCT02-06											
Depth (cm)	63-82µm (%)	82-101µm (%)	101-120µm (%)	120-139µm (%)	139-158µm (%)	158-177µm (%)	177-196µm (%)	196-215µm (%)	215-234µm (%)	234-257µm (%)	Total (%)
0-5	8.92	8.69	9.91	11.05	11.95	12.39	12.08	10.78	5.79	8.45	100
20-25	7.30	7.40	8.74	10.13	11.42	12.40	12.75	12.12	7.50	10.25	100
50-55	5.71	6.46	8.32	10.41	12.48	14.14	14.75	13.51	4.39	9.82	100
73-75	5.42	6.20	8.06	10.18	12.34	14.14	14.94	13.87	4.62	10.22	100
95-100	5.21	5.83	7.46	9.35	11.35	13.19	14.40	14.27	7.04	11.91	100
169-174	4.96	5.54	7.11	8.94	10.93	12.84	14.26	14.52	8.22	12.69	100
244-249	3.58	4.28	5.78	7.66	9.87	12.24	14.44	15.76	11.28	15.10	100
279-284	2.63	3.37	4.78	6.62	8.92	11.58	14.36	16.59	14.11	17.05	100
299-304	2.06	2.76	4.08	5.87	8.18	11.00	14.15	17.06	16.39	18.46	100
314-319	1.44	2.00	3.09	4.69	6.84	9.66	13.15	17.03	21.67	20.43	100

09CCT02_06 Table

Mean Grain Size 09CCT02-05	
Depth (cm)	Mean Grain Size (µm)
0-5	161.86
20-25	144.72
50-55	140.03
73-75	132.84
95-100	116.80
169-174	118.80
244-249	109.40
279-284	100.73
299-304	100.07
314-319	80.16

Strength 09CCT02-06	
Interval (cm)	Strength (kg/cm²)
0-9	1.0000
9-28	3.5000
28-73	2.5000
73-76	1.7500
76-109	0.5000
0-110	0.7500
0-58	0.5000
58-65	0.5000
65-87	0.7500
87-106	1.0000

09CCT02_06 Core Pictures



09CCT02_06 Core Log

Core#: 09CCT02-06-01

Core Date: 06-June-09

Date Split/subsampled	Length: 109 cm
16-Jun-09	E: 384136
	N: 3220097

Grain Size Samples:		Munsell Soil Color	Depths Sampled	Description:
0-5 5-9 9-10 10-15 15-20 20-25 25-28 28-30 30-35 35-40 40-45 45-50 50-55 55-60 60-65 65-70 70-73 73-75 75-76 76-80 80-85 85-90 90-95 95-100 100-105 105-109		0-9 cm 10yR 6/3 9-28 cm 10yR 4/1 28-73 cm Gley 2 4/5BG 73-76 cm Gley 2 4/5BG 76-109 cm Gley 2 4/5BG		0-9 cm shells w/ sparse clay 9-28 cm shells w/ grey clay 28-73 cm grey compacted sandy clay w/ sparse shells 73-76 cm grey compacted sandy clay w/ layer of shells 76-109 cm grey compacted sandy clay w/ sparse shells

09CCT02_06 Core Log

Core#: 09CCT02_06-02

Core Date: 06-Jun-09

Date Split/subsampled	Length: 110 cm
6-Jun-09	E: 384136
	N: 3220097

Grain Size Samples:		Munsell Soil Color	Depths Sampled	Description:
109-114 114-119 119-124 124-129 129-134 134-139 139-144 144-149 149-154 154-159 159-164 164-169 169-174 174-179 179-184 184-189 189-194 194-199 199-204 204-209 209-214 214-219		109-219cm Gley2 5/10G		109-219cm grey silty sand w/sparse shells

Core#: 09CCT02-06-03

Core Date: 06-Jun-09

Date Split/subsampled	Length: 106 cm
11-Jun-09	E: 384136
	N: 3220097

Grain Size Samples:		Munsell Soil Color	Depths Sampled	Description:
219-224 224-227 227-234 234-237 237-244 244-247 247-254 254-257 257-264 264-267 267-274 274-277 277-284 284-287 287-294 294-297 297-304 304-306 306-309 307-314 314-317 317-324 324-325		219-277cm Gley 2 5/0BG 277-284cm Gley 2 4/5BG 284-306cm Gley2 4/5B 306-325cm Gley2 4/0BG		219-277cm grey silty sand w/ sparse shell 277-284cm grey silty sand w/ layer of shell 284-306cm grey silty sand w/ sparse shell 306-325cm grey silty clay w/ sparse shell