



Report of the Sand Source Investigation of the Paleo-Sabine-Trinity Marine Features (PSTMF)

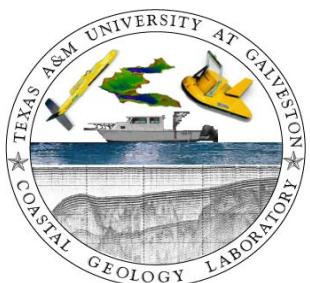
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**Texas General Land Office Cooperative Agreement Number MO7AC12518
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1.0 Introduction

Mineral Management Services-Texas General Land Office Cooperative Agreement Number MO7AC12518, and service contract 09-109-000-3517, between the General Land Office (GLO), Texas A&M University at Galveston and the United States Geological Survey (USGS), includes the investigation of potential sand sources located on the Sabine River submerged paleo-channel, Sabine Bank, Heald Bank, Shepard Bank and Trinity River submerged paleo-channel, called Paleo-Sabine-Trinity Marine Features (PSTMF). Figure 1 shows the PSTMF, outlines of Sabine and Heald Banks along with the geophysical track lines and core locations. The following is a technical report summarizing the methods and results of this study.

The project included three phases, 1) literature review of existing data and reports of the study area; 2) field geophysical data collection and data analyses; 3) field sediment core collection; 4) sediment core analyses and report preparation. Phase 1 began in December 2008 and was completed in February 2009. The geophysical cruise was conducted March 2-6, 2009 aboard the R/V Manta (Figure 2). The coring phase was conducted June 5-20, 2009 aboard the R/V Gilbert (Figure 3). Core analyses began on June 10 and extended through July 20, 2009. Assemblage of final figures, tables and report preparation continued through August 2009. Much research and exploration of Sabine Bank has already been conducted, as outlined below. As result, our focus was both on collecting a few additional cores on both Sabine and Heald Bank, but also to characterize the sediments in various types of other targets found within the incised channels off of the banks and other potentially sand bearing units identified during the geophysical phase of the study.

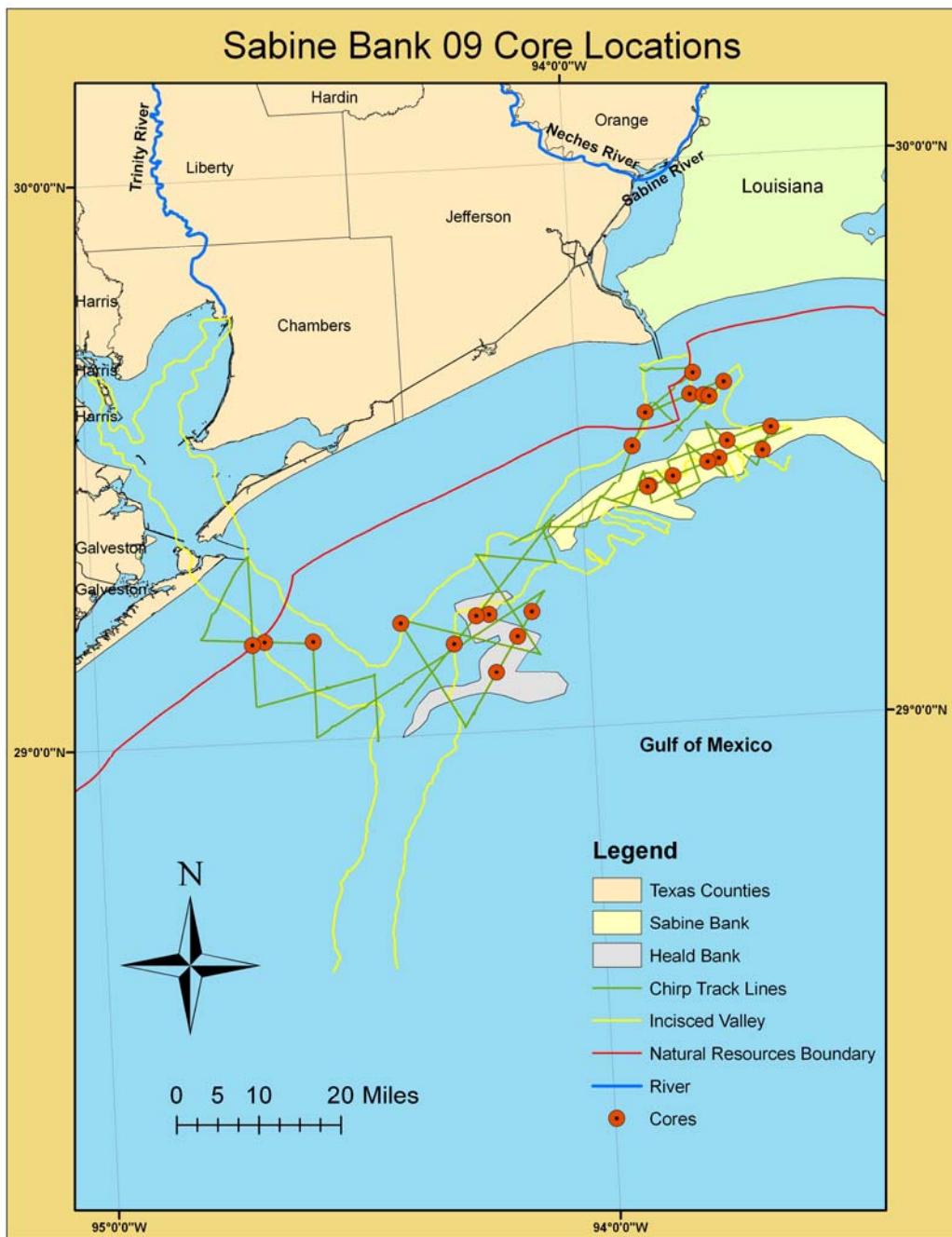


Figure 1.

Base map showing outline of the Paleo Trinity-Sabine Incised Channel, Sabine and Heald Banks and the location of the geophysical track lines and core locations.



Figure 2.

R/V Manta- NOAA Flower Garden Banks Marine Sanctuary vessel used to conduct the geophysical survey.

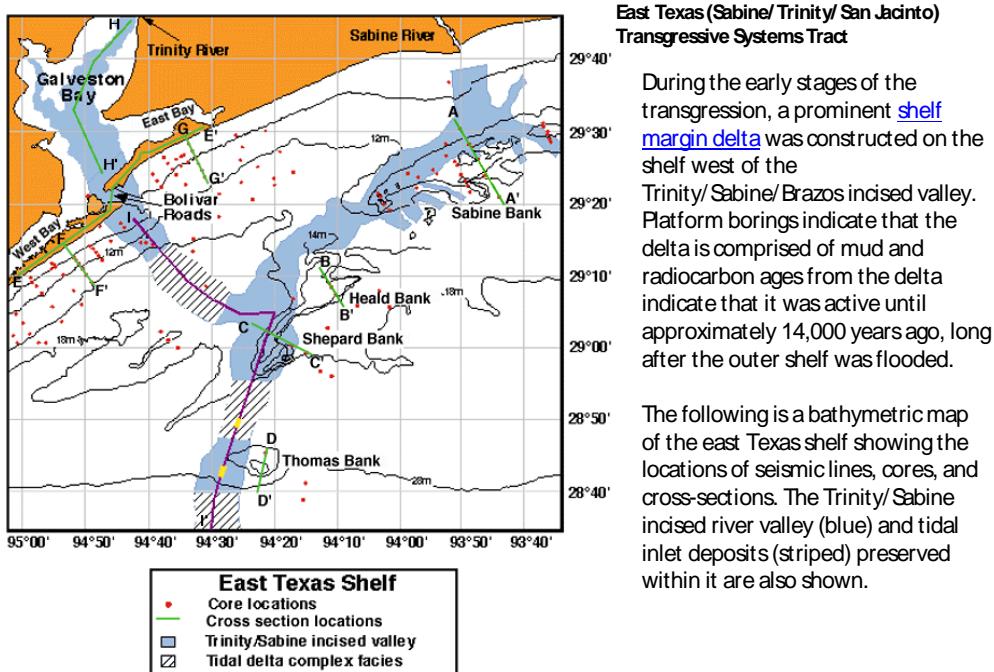


Figure 3.

R/V Gilbert- the USGS coring vessel used to collect the submersible offshore vibracores.

2.0 Background

The inner portion of the mid continental shelf in the northern Gulf of Mexico contains a series of shore parallel banks, the largest of which is Sabine Bank, at 600 km² and situated approximately 30 km offshore, in 5-12 m of water (Figures 4 and 5). The second largest is Heald Bank, at 475 km², 45 km offshore, and in 9-15 m of water. These two banks are situated on the incised Sabine-Trinity valley, which runs parallel to the coast at the location of the banks. John Anderson's Lab at Rice University collected boomer seismic data. Line A-A' transects the axis of the bank (Figure 6) and shows the bank to be composed of three Holocene sedimentary facies and the Beaumont Clay. Photographs of sediment cores of each facies are shown in Figure 7. Facies A is composed of interbedded shell hash and sand; Facies B is composed of a muddy sand unit; Facies C is an interbedded sand and mud unit; and the Pleistocene Beaumont Clay is composed of dense, indurated red clay. Based on their work on Sabine Bank, they worked up a series of cartoons showing the four stages of evolution of Sabine Bank (Figure 8; Rodriguez et al., 1999). Stage 1 shows the development of the bank and the deposition of Facies B and C, which constitute the barrier island complex at the time the bank was in a shoreline position. During Stages 1 and 2 show that the bank was situated over a subsurface topographic high produced by the Trinity River levee. Stages 3 and 4 show that as the bank migrated over the ancestral Trinity River valley fill, off of the Beaumont Clay, to a much softer basement, the bank deflated (Figure 8).



http://gulf.rice.edu/ETexas/gulfTexasS_T_SJ_tst.html

Figure 4. Geological setting of Sabine and Heald Banks.

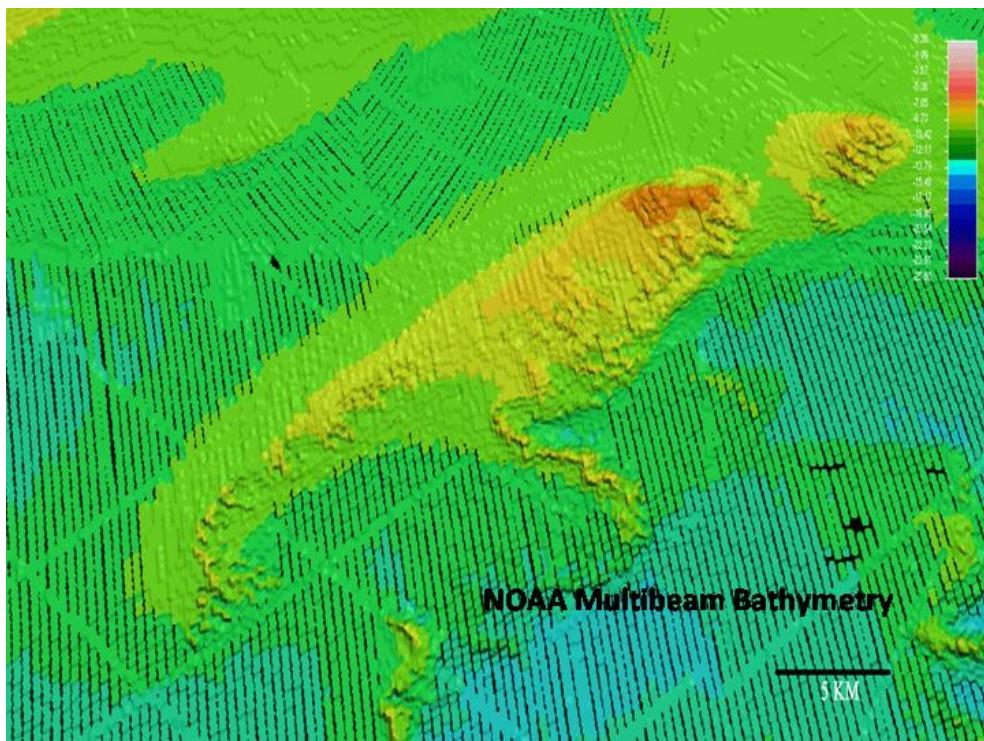
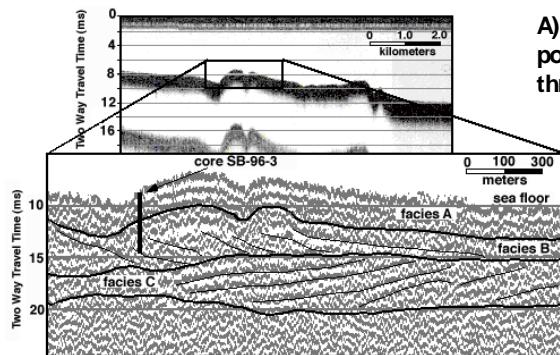
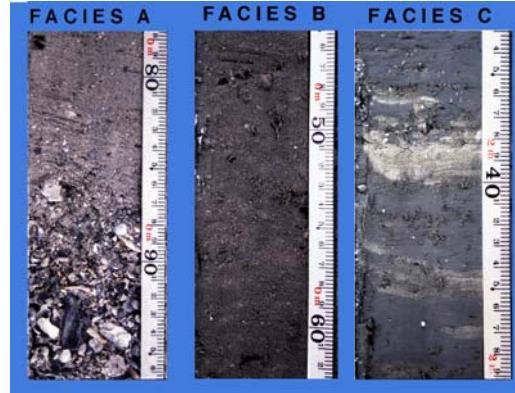


Figure 5. NOAA multibeam bathymetry of Sabine Bank and surrounding seabed.



A) An echo-sounding profile and a portion of a seismic (CHIRP) line through Sabine Bank

D) Core photographs of each lithofacies described in C.



C Typical Lithologic Facies

These representative core photographs characterize the sedimentary units that make up the banks.

Facies A

an inter-bedded shell hash and sand unit

- █ Facies A
- █ Facies B
- █ Facies C
- █ Pleistocene Beaumont Clay

Facies B

a muddy-sand unit characterized by a seaward prograding and chaotic seismic facies

Facies C

an inter-bedded sand and mud unit characterized by landward dipping seismic reflectors

<http://gulf.rice.edu/gulf/ETexas/facies.html>

B) Cross-section A-A' (five cores collected along the transect are indicated on the cross-section)

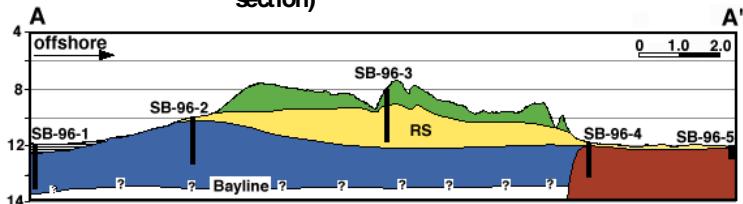
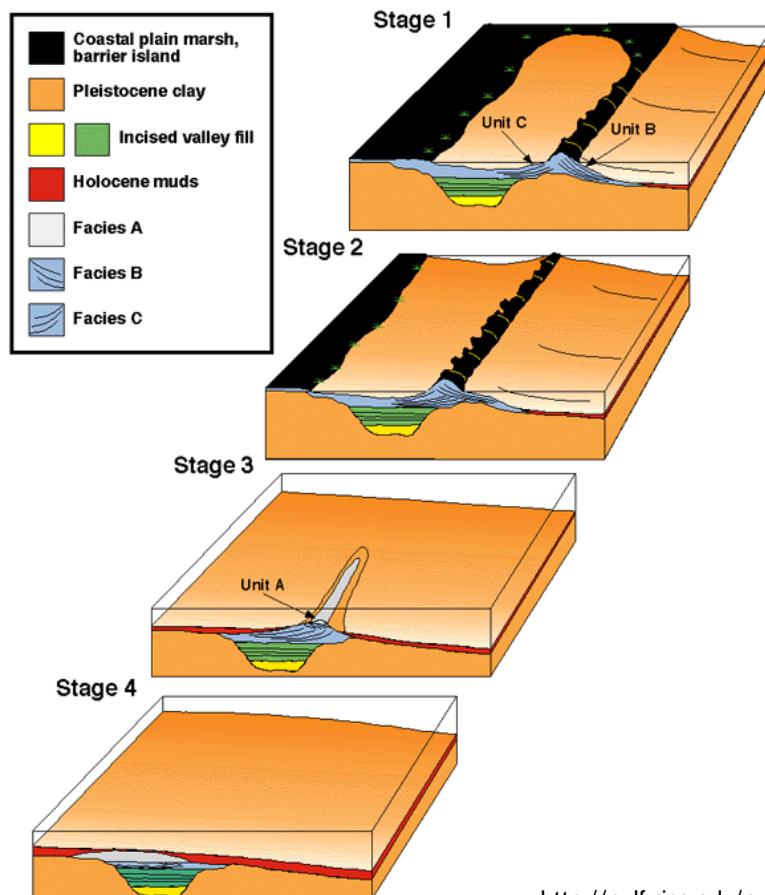


Figure 6.

Stratigraphic cross sections of Sabine Bank: A) An echo-sounding profile and a portion of a seismic (chirp) line through Sabine Bank; B) Cross-section A-A' (five cores collected along the transect are indicated on the cross-section); C) Lithofacies descriptions; D) core photographs showing examples of each lithofacies described.



<http://gulf.rice.edu/gulf/ETexas/facies.html>

Figure 7. Cartoon showing the geological evolution of Sabine Bank.

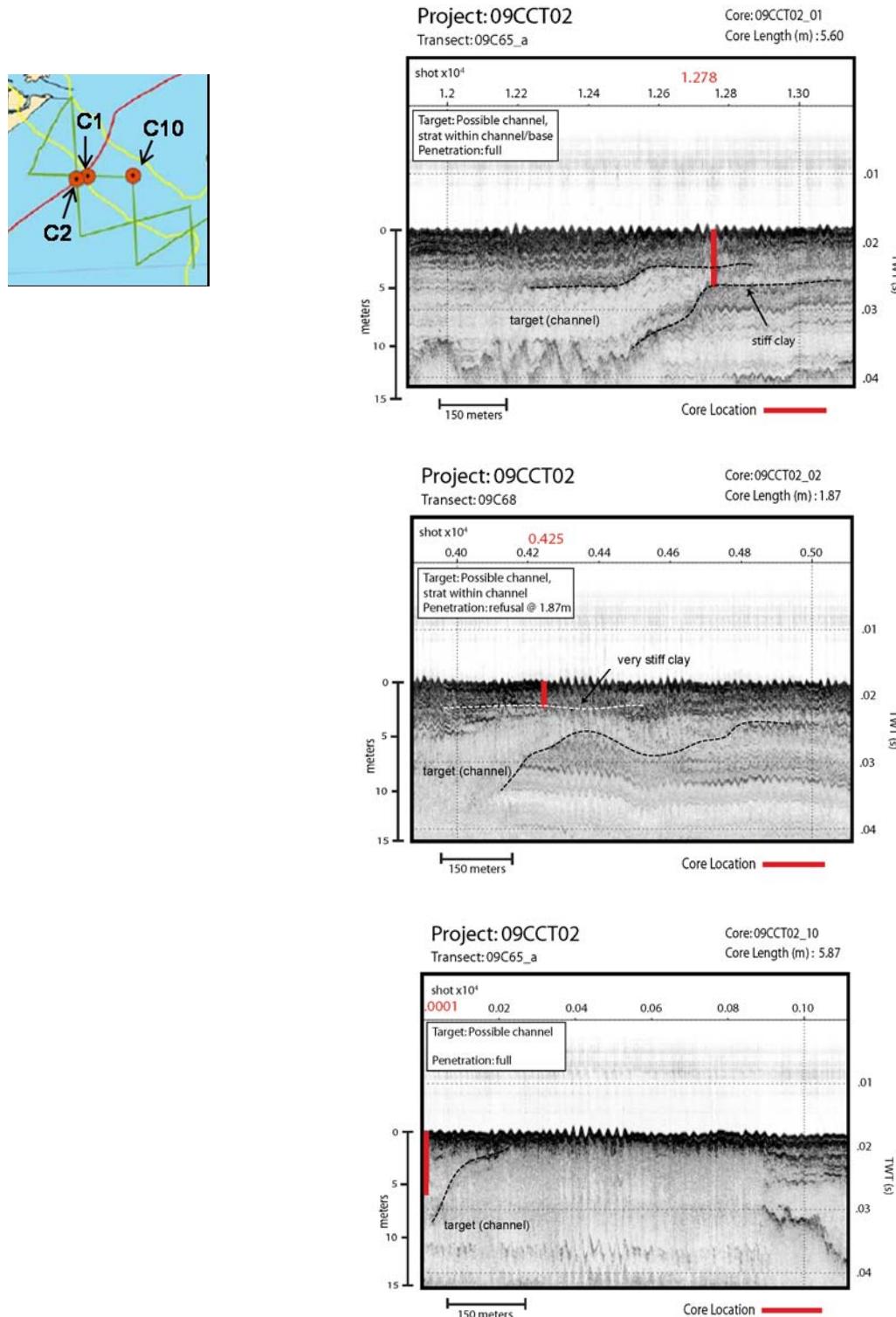


Figure 8. Chirp lines showing core locations and lithologies for Trinity River Incised Channel cores.

The Texas shore was located at the position currently occupied by Sabine Bank by 5.3 ka (Rodriguez et al., 2000). Between 4.7-2.8 ka the shoreline at Sabine Bank retreated ~30 km landward to occupy its current position (Rodriguez et al., 2004). Heald and Sabine banks are located on the inner continental shelf above terraced fluvial deposits of the Trinity-Sabine incised valley, are the only preserved remnants of these former shoreline positions (Rodriguez et al., 2004). As shorelines retreated over fluvial deposits, these deposits served as local sand sources that enabled barrier islands to persist offshore, out of equilibrium with sea level. Once these sand sources became depleted, and/or sea level reached some critical threshold, barrier shorelines became stranded offshore as banks and new shorelines formed landward (Rodriguez et al., 2004). Sabine Bank has been identified as a potential sand source for beach nourishment sands. Beginning in 2002, 1.75 million cubic meters of sand were removed to nourish Holly Beach. Sabine Bank has been estimated to hold 10-20 million cubic yards of sand (Drucker, 2006). No work has been published addressing the smaller channels in the area.

3.0 Methods

3.1 Geophysical Data Acquisition and Analysis

3.1.1 Seismic Data Acquisition

All new geophysical data acquisition for this project was conducted by the U.S. Geological Survey (USGS); under the supervision of James Flocks. All equipment and software used for this data collection and processing belong to the USGS and standard USGS protocols were used for all data acquisition and processing, as described below.

Approximately 1400 km² of the Texas continental shelf surrounding Sabine and Heald Banks were surveyed using a chirp seismic-reflection system and interferometric swath sonar from March 2-6, 2009. The cruise was conducted onboard the NOAA research

vessel Manta. Widely spaced reconnaissance lines were concentrated on Sabine and Heald Banks, and approaches to Galveston Bay and Lake Sabine. Position of the ship and geophysical data were determined using Differential Global Positioning System (DGPS) navigation. During acquisition, the vessel maintained speeds between 1.5 and 2.5 m/s. In total, 690 line-km of high-resolution chirp seismic-reflection profiles were collected from the R/V Manta using an EdgeTech Geo-Star FSSB system and an SB-0512i towfish (0.5–12 kHz) (EdgeTech, 2008). Triton SB-Logger™ acquisition software (Triton Imaging® Inc., 2008) was used to control the Geo-Star topside unit and digitally log trace data in the SEG-Y rev. 1 standard format. Data were acquired using a 0.25 s shot rate, a 20 ms pulse length, and a 0.7 to 12 kHz swept frequency.

Post-acquisition processing of the chirp-seismic reflection data were conducted using Seismic Unix. The seismic profiles were filtered and exported as GIF-format image files for use in interpretation. Navigation and shot information from the SEG-Y headers for each line file were extracted to generate ArcGIS navigation files. The ArcGIS project and image files are included in this report.

3.1.2 Swath sonar bathymetry

Bathymetric data were acquired using a SEA Ltd. Submetrix 2000 series interferometric sonar, which operates at a frequency of 234 kHz. The instrument was mounted on a rigid pole, along the port side of the vessel, ~ 1.5 m below the sea surface. SEA Ltd. SWATplus acquisition software was used to fire the system at a 0.25-s ping rate and digitally log the data at a 1.5 K sample rate. Vessel motion (heave, pitch, roll, and yaw), which was used to rectify bathymetric soundings during post-processing, was recorded continuously using an Octopus F-190 Motion Reference Unit (MRU) mounted directly above the sonar transducers. Additionally, a Sound Velocity Profiler (SVP) was deployed to record the real-time sound velocity in the water column at the transducer head. Ship position was recorded through use of Differential Global Positioning System (DGPS) navigation. The DGPS antenna was positioned atop the side-mount pole, directly above the sonar transducers and MRU.

The interferometric-sonar system acquires acoustic backscatter and depth data across a continuous swath to each side of the survey vessel. Within the study, swath widths ranged from 40 to 60 m, in 10 to 20 m water depths. Horizontal resolution of the bathymetric data, dictated by DGPS accuracy, was $\pm 1 - 2$ m, and vertical resolution was $\sim 1\%$ of water depth, which conforms to the International Hydrographic Organization (IHO, <http://www.ihos.shom.fr/>) standard requirement of 0.3 m accuracy in < 30 m water depths. Data was processed using SeaSwath Plus to generate bathymetric and backscatter images of the seafloor.

3.2 Coring Acquisition and Analysis

Interpretation of the seismic profiles provides an acoustic stratigraphy where geologic features are identified but cannot be confirmed without direct sampling. Targets for direct sampling include areas that have potential for sediment resources, or areas requiring further investigation to verify the acoustic stratigraphy. Once potential targets are identified sediment cores are collected to confirm the nature of the deposits and provide samples for textural analysis. These targets are shown in Figure 1. CHIRP profiles from these sites are included in the appendix. An effective means of quickly collecting sediment samples in shallow sandy environments is vibracoring. All core collection for this project was conducted by the USGS using their standard protocols. Vibracores were obtained from the USGS research vessel *G.K. Gilbert* using a hydraulic crane to position and recover the vibracore rig (Figure 3). The rig is capable of handling aluminum barrels up to 6 m long with a diameter of 7.6 cm. The barrels were vibrated into the sediment using a Rossfelder model P-3 electric motor in a waterproof housing, driving offsetting concentric weights. Brass core-catchers were riveted to the base of each barrel to inhibit loss of sediment during recovery, along with a check-valve at the top to create a vacuum on the sediment. A linear transducer and wire-line was attached to the top of the rig to measure penetration of the barrel into the sea floor. Upon recovery, the barrel was removed from the rig and cut to the length of core penetration. The ends of the core-sample were capped and the barrel labeled with a unique identifier. Core length was measured and compared to the linear transducer reading to estimate

compaction. Twenty-six cores were collected, from June 5 to June 20 of 2009, across the study areas to correlate the seismic profiles (Figure 1). Collected cores were transported to the core analysis laboratory at Texas A&M University in Galveston. Example figures of the seismic profiles and core locations were generated using Adobe Illustrator and are included in this report.

3.2.1 Processing Cores

All core processing and grain size analyses were conducted in accordance with standard practices previously approved by the Texas General Land Office for previously conducted studies from the Texas shelf, and where applicable, ASTM standards were followed. Following ASTM Standard D2487, cores were cut lengthwise, photographed, sampled for grain size analysis, and visual descriptions of the sediment lithology and Munsell color were recorded. One-half of the core was archived for future reference and one-half processed for water content and grain size analysis.

3.3 Grain Size

3.3.1 Grain Size Sample Collection

Grain size samples were collected at intervals of 5 cm and placed in a whirl-pak bag. Samples were placed in different whirl-pak bags if the division of a lithological section was part of a sampling interval.

3.3.2 Grain Size Sample Preparation

One sample from each Lithological unit was randomly picked to be analyzed. Samples were removed from the whirl-pak bags, homogenized, and approximately 15g were placed into 250 ml glass jars. For Samples with more than 50% shell approximately 30-50 g were used. Next, 20ml of 5.5 g l⁻¹ dispersant solution, and approximately 30 ml of

de-ionized water were added to the jar. Jars were then placed into a sonicator for 15-20 minutes to disaggregate the samples.

3.3.3 Wet Sieving

To separate shell material larger than 2mm, all samples are wet sieved. This is performed because the Malvern instrument has a size range of 0-2000 μm . Jars were taken out of the sonicator and samples were sieved through a #10/2mm screen into a 250 ml glass jar. The shell fraction in the sieve was then placed into a pre-weighed aluminum tin and dried in the oven for twenty-four hours. Once dried, the shell fraction ($>2\text{mm}$) was weighed. The sample in the graduated cylinder was rinsed back into the jar and the jar was then filled with de-ionized water to 250 ml.

3.4 Malvern Analysis

A Malvern Particle Size Analyzer is a laser instrument used to analyze the sediment size between 0.2 to 2000 μm in a liquid medium. The jar was placed on a magnetic mixer and a 2-30 ml sample was pipetted into the instrument until the obscuration was in the “green” range on the instrument display. Obscuration is the measure of the range of laser light lost due to the introduction of the sample itself (ideally 3-30%). The instrument runs three, 12-second measurements and then takes an average. The remaining sample in the jar was poured into a pre-weighed aluminum tins and dried in the oven for twenty-four hours. After drying, the sample was weighed.

3.4.1 Calculations

Upon completion of grain size analysis, the Malvern software reported the percent shell (250-2000 μm), sand, silt, clay, mean, standard deviation, skewness, and kurtosis for each sample. The Malvern does not analyze sediment larger than 2mm. To calculate total percent shell in the sample, the percent of the sample used in the Malvern was calculated and then used to calculate the weight of the volume used. The total sample weight was

calculated by adding the weight used the dried remaining weight, and the sieve weight. The weight of the Malvern shell percent ($250\text{-}2000\text{ }\mu\text{m}$) was calculated by multiplying it by the total sample weight. Thus, the total percent shell equals the Malvern shell percent weight and the sieve shell weight.

4.0 Results

A collection of all of the identified targets from the chirp data is presented in Appendix A. All core data are presented in Appendix B. For each core, a base map which shows the outline of the Incised Trinity-Sabine Paleochannel, the geophysical track lines and the core positions, with the location of the core highlighted. Each core position was selected off the chirp lines. The section of the chirp line which was used for the core site selection is shown and the core is drawn on each respective chirp line. For each core a graph is presented showing the percentages of sand, silt and clay plotted versus depth. An additional graph is presented showing mean grain size versus depth. A table is presented subdividing the grain size distributions into specific bin intervals, which correspond to respective sieve sizes for ease in correlation to the older style Ro-Tap sieve analyses. Copies of the lab core descriptions are provided as well as digital core photographs of each core. The following discussion will be referenced to specific cores within Appendix A rather than to figure numbers. Each core will be referenced by the last two digits of the core names, as respective core numbers. Core lengths were restricted to a possible maximum length of 5.6 m. Each core location was selected to sample the most complete stratigraphic sequence possible, so flanks of channels were often selected where individual stratigraphic units are thinner than where they are in the center of channels. There are a wide range of core lengths because of the high degree of spatial heterogeneity of geotechnical properties between core sites. The goal of this study was to find sand deposits and to develop a conceptual framework for stratigraphic interpretations. For those cores where there which contained complex stratigraphic sequences, mixed sand and mud sequences or for which the stratigraphic sequences contained within the core lent themselves to extensive interpretation, those interpretations are contained within the core descriptions. For those cores for which were either very short, contained little

variability in stratigraphy, did not contain extensive sand deposits or for which little stratigraphic interpretation was possible have more abbreviated descriptions and interpretations.

Core 09CCT02_01 (Core 1)

The Core 1 site was selected because the core location is on the flank of channel where the maximum penetration of the strata that fills the channel could be penetrated. Core 1 is 552 cm long. The chirp line shows that there is a surface layer is acoustically dark. The grain size profiles reveal that there is a sand layer at the base of this interval, at 130 cm. The core description reveals this to be a shell hash layer rather than being composed of silica clastic sand. Additional shell layers were encountered throughout the core. In general, it appears this channel was filled with estuarine mud deposits rather than fluvial sands. Overall, the core had 30% sand and most of the sand encountered appears to be shell debris rather than silica clastic sand.

Core 09CCT02_02 (Core 2)

The chirp line for the Core 2 site reveals the site to be within a shoal with a filled, incised channel below. Core 2 was 187 cm long. The water content profile shows an elevated water content in the upper 20 cm of the core, suggesting a modern, surface mixed mud layer. The chirp line reveals a surface layer which is acoustically dark. At the base of this high return layer, the core contains a layer with ~30% sand. The core description reveals to be composed of shell debris rather than silica clastic sand. Below the shell hash layer, the core is primarily mud filled with shell sized sand debris constituting as much as 20% of the sediment. Based on these observations, it appears the lower portion of the core encounter the upper portion of the channel fill and that the portion of the channel fill encountered consists of estuarine mud.

Core 09CCT02_03 (Core 3)

The Core 3 site is on Heald Bank and the target was a shoal with a channel deposit below. Core 3 was 575 cm long. Water content data from the core reveals an interval of water content above 60% for the upper 9 cm, with water content of ~50% or less for the

remainder of the core. Grain size data reveals the upper 9 cm to be composed of mud with 10% sand. These observations suggest a 9 cm surface mixed layer of modern or reworked mud at the surface, and a deposit of relict, older deposits below. The chirp lines contain a surface interval from 0-100 cm of very acoustically dark, with a very acoustically light interval at depth below this interval for the entire section. The core data reveals that interval of high return is a fining upwards sequence. The base of this acoustically dark interval this is an interval from 80-86 cm, which consists of 80% sand sized shell debris, with 20% mud. From 55-80 cm, the core contains ~30% sand sized shell debris, from 9-55 cm, the core contains ~12% sand sized shell debris, capped by the modern mud layer.

Below the shell debris layer, from 86-445 cm, the core consists of an interval composed dominantly of mud with a maximum sand content. From 445-575 cm, the core contains sandy mud with a sand content of 25-30%, which also contains sparse organic plant material, which is influencing the mean grain size. The core description describes this interval to be mud dominated. Based on these observations, it appears that the interval from 886-445 represents an estuarine mud filled channel and the interval from 445-575, with both a high mud content and preserved plant debris suggests that the environment of deposition was an estuarine setting proximal to a bayhead delta.

Core 09CCT02_04 (Core 4)

The Core 4 site is along the northern side of the western most margin of the incised Sabine Channel, just east of where it merges with the Trinity Incised Channel. The target was a channel deposit at depth within the channel. The core was collected on the flank of the channel where this deposit is closest to the surface and the target was collected in the lower portion of the core. Core 4 was 563 cm long. A water content of less than 30% in the sandy surface interval demonstrates that the sediment surface at this site consists of relict deposit rather than modern shelf muds. From 0-37 cm, the core contains ~46% sand and the rest being mud. From 37-112 cm, the core contains ~20% sand, much of this being sand sized shell debris. From 112-115 cm, the core contains a shell hash layer with mud. From 115-213 cm, the core contains silt dominated mud with ~10% sand. From 213-229 cm, the core contains an interval with 50% sand and 50% silt dominated

mud. From 229-300 cm, the core contains silt dominated mud with 10-15% sand and shell debris. The chirp record shows that the interval from 0-300 cm is acoustically dark and below 300 cm, the record is acoustically light. From 300 cm and below, the chirp record also shows that the sediments were deposited within an incised channel, above 300 cm, it appears the sediments were deposited above the incised channel sequence. From 300-330 cm, the core contains alternating layers of mud and shell hash, with a shell hash layer from 330-342 cm, showing that the top of the channel fill sequence is marked by a sequence of shell hash layers. From 342-475 cm, the core contains silt dominated mud with ~10% sand. There is a dark reflector in the chirp line from 451-475 cm, marking the top of the lower channel fill sequence. The core contains a slight increase in shell content in this interval and the core description states this interval contains sparse shell. Below this horizon, from 475-563, the core contains a slight increase of sand content, to ~15%, the clay content decreases from ~35% to ~27%, and the lower unit is silt dominate slightly sandy mud. These observations suggest that the channel is filled with estuarine mud, with the lower unit within the channel potentially closer to sources of sand, i.e. more proximal to a bayhead delta. There was no significant sand deposits encountered in this core.

Core 09CCT02_05 (Core 5)

The Core 5 site location is along the south side of the western most margin of the incised Sabine Channel, adjacent to Heald Bank and just east of where the Sabine Channel merges with the Trinity Incised Channel. The target was a channel deposit at depth within the incised channel. The core was collected on the flank of the channel where this deposit is closest to the surface and the target was collected in the lower portion of the core. Core 5 was 575cm long. The surface of the core has a water content of 22% and contains over 50% sand, demonstrating the surface to be composed of a relict deposit rather than a modern shelf mud layer. The upper 124 m of the cores penetrates a nearly acoustically transparent layer, described as dark grey compacted silty sand with sparse shell. Grain size data reveals this layer to be 50-60% sand, with a mean grain size of the sand being ~110 microns. This interval is the shoal deposit found in the upper portion of the chirp record. From 124-199 cm, the sediment sandy silt with shell. Although the

sand content increases in this interval on the sediment type profiles, much of the sand which makes up the coarser fraction is shell debris rather than silica clastic sand. The chirp profile shows this interval to correlate to the channel fill sequence. From 199 to the base of the core, the core is clay dominated with alternating layers of higher and lower shell content. The chirp profile reveals this interval to be the channel bank into which the channel is cut. In summary, from 0-124 cm, there is a sand dominated layer with a mean size of (~110 microns), which represents the shoal sand deposit potentially being marine reworked fluvial sand deposits which were deposited on top of the bayhead delta or younger barrier island deposits trapped offshore. There is an erosional unconformity at the base of this layer and from 124-199 cm, the core consists of sandy silt and shell debris and this likely represent a bayhead delta environment. From 199-575 cm, the core encountered shelly mud and mud layers, representing estuarine channel fill into which the bayhead delta channel is cut.

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.

Core 09CCT02_06B (Core 6B)

The Core 6B location is the same as Core 6, 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 6B is 436 cm long. The surface interval 0-9 cm of the core

contains ~95% shell gravel and consists of a shell lag deposit. The core completely penetrated through the shoal deposit (0-139 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). From 109-337 cm, the sediments are described as being silty sand with coarse shell. This interval has a mean size of (~110 microns). The basal unit 337-436 of the core consists of sandy mud with shell. This core reveals the shoal is sand dominated and the channel is muddy sand and shell. The channel is likely associated with a bay head delta system and the shoal was probably either the fluvial sand deposit of the bayhead delta or a barrier island complex resting unconformably atop the bayhead delta.

Core 09CCT02_07 (Core 7)

The Core 7 location is on the crest of Heald Bank. The target was both the shoal deposits which make up the bank and an incised channel deposit beneath the shoal deposit. The chirp line reveals two layers of surface deposits, the upper layer is acoustically very dark, the lower layer is acoustically very light. Below the acoustically light layer is the surface of the incised channel deposit, which was completely penetrated by the core. Core 7 is 175 cm long and completely penetrated the upper portion (acoustically dark) of the shoal deposit (0-128 cm) and penetrated into the upper portion of the deeper (acoustically light) incised channel deposit (128-176). The surface deposit (0-128 cm) is very heterogeneous, but in general consists of alternating layers of mud and shell, in general, shell content decreases with depth. The basal layer (128-176) is mud dominated with less than 10% siliclastic sand. This deposit is likely related to the bayhead delta complex which makes up much of Heald Bank.

Core 09CCT02_08 (Core 8)

The Core 8 location is just east of the crest of Heald Bank. The target was a channel fill deposit with a surface layer with an acoustically dark and an acoustically light basal layer. Core 8 is 584 cm long and penetrates both of the channel fill layers and penetrates into the sediment into which the channel was incised. The upper 4 cm of the core

consists of silty sand with sparse shell. From 4-20 cm, the core consists of sandy silt with shell. The upper channel fill layer extends from 20-237 cm and consists of compact gray silt dominated mud with sparse shell. A shell layer from 237-242 cm separates the upper from the lower layer of channel fill. The lower channel fill layer extends from 242-441 cm and consists of gray clay dominated mud with sparse shell. From 451-454 cm, there is a layer of coarse shell hash and mud. This layer is at the base of the incised channel. The layer into which the channel incises begins at 454 cm and extends to 584 cm. This basal layer consists of nearly equal parts clay and silt and ~5% sand. The lower channel fill deposit with higher clay content likely represents estuarine mud more distal from the bayhead delta while the upper channel fill deposit with the lower clay content likely represents deposits proximal to a bayhead delta.

Core 09CCT02_09 (Core 9)

The Core 9 location is on the northern end of the crest of Heald Bank. The target was both the shoal deposits which make up the bank. The chirp line reveals three layers of surface deposits, the upper layer is acoustically dark, the middle layer is acoustically lighter and the bottom layer is acoustically dark. Below these three layers is an acoustically light layer at the top of a channel fill sequence. Core 9 is 499 cm long and only penetrated the upper portion (acoustically dark) of the shoal deposit (0-128 cm) and into the upper deeper (acoustically light) shoal deposit (128-176). The surface deposit (0-67 cm) consists of two intervals, form 0-43 cm, the sediment consists of dark brown compacted silty sand with sparse shells. The lower interval, from 43-67 cm consists of dark brown compacted sand with large shells. The middle layer extends from 67-277 cm. The lower layer of the shoal deposit extends from 277-440 cm and consists of dark gray compacted silt dominated mud with spares shell. At the base of the shoal deposit from 440-442 is a muddy layer of large shells. This interval separates the shoal deposit from the top of the incised channel fill deposit. From 442-500cm is the channel fill, which consists of dark gray compacted silt dominated mud with sparse shell.

Core 09CCT02_10 (Core 10)

The Core 10 location is on the north flank of the Trinity incised channel, approximately half way between the shore and Heald Bank. The chirp line show there to be an acoustically dark surface layer (0-48), a transitional layer (48-252 cm) and a nearly homogenous acoustically light layer below(252-587), and the core penetrates most of the incised channel fill. The core reveals the interval from 0-48 cm to be soft, sandy and mud with abundant shell gravel. From 48-139 cm the sediment is muddy with abundant gravelly shell, sand sized fraction appears to be mainly shell debris. From 139-252 cm and consists of mud with shell debris and an oyster shell layer from 180-235 cm and 235-252 cm with sparse oyster shells. The basal layer (252-587 cm) is nearly equal parts silt and clay, and ranges from 10-20% sand sized shell debris. From 386-463 cm, the core also contains plant material. It appears that the incised channel fill consists of estuarine mud with the sequence from 139-252 to have been deposited proximal to an oyster reef.

Core 09CCT02_11 (Core 11)

The Core 11 location is eastern flank of the incised Sabine channel, near the northern limit of the study site. The chirp line reveals an incised channel and core penetrated the incised channel and also penetrated the sediment below the channel into which the channel incised. Core 11 is 566 cm long. The chirp line reveals that from 0-52 cm there is an extensive surface deposit which is very acoustically dark, which extends across the entire chirp line and the base of this deposit is an unconformity, below which begins the channel fill sequence. Results from the core reveal this 0-52 cm layer to consist of soft mud. From 52-94 cm, the upper channel fill consists of soft gray mud with sparse gravel and sand sized shell material. From 94-150 cm, the core contains soft gray mud with equal parts silt and clay. From 150-507 cm, the core contains light gray compacted silt dominated mud. From 507-566 cm, the core contains densely compacted silt dominated mud. The interval from 52-507 cm represents the channel fill, and shows the channel to be filled with surface layer (52-94 cm) of estuarine mud with shell. From 94-502 cm, the channel is filled with estuarine mud. The channel incised into a mud dominated deposit.

Core 09CCT02_12 (Core 12)

The Core 12 location is the center of the incised Sabine Channel, near the northern limit of the study area. Core 12 is 566 cm long. The chirp line reveals an incised channel below a sequence of surface deposits. The core penetrated both the surface deposits and through much of the channel fill sequence. The chirp reveals the upper interval from 0-60 cm the core consists of soft silt dominated mud with 45-60 cm containing sparse shell. From 60-151 cm, the core consists of light gray compacted silt dominated mud. From 151-262 cm, the core consists of light gray compacted clay dominated mud, the base of this sequence marks the base of the surface layer which exists above the incised channel fill. From 262-370 cm is a sequence of light brown sand and silty sand layers with mud. From 370-444 cm, the core contains hard gray and brown silt dominated mud layers with abundant plant debris. The plant debris is recorded in the grain size distribution data as sand and gravel sized sediment, but there is little if any silica clastic sand in this portion of the sequence. From 444-560 cm, the core contains light brown and gray hard dense silt dominated mud. From 560-566 cm, the core contains a basal layer of hard, light brown silty sand. The basal portion of the core penetrated the upper portion of the lower channel fill sequence, which in chirp appears to be uniform to the base and contains ~2 m more of this sequence. The upper 60 cm of this sequence represents the modern transgressive offshore marine mud sequence. The 60-262 cm interval represents a coarsening upwards estuarine sequence of fill of the wider incised Sabine channel. The 262-370 cm sequence represents the fluvial sand sequence which fills the narrower incised channel. The 370-444 cm sequence is potentially a flood plain deposit proximal to the channel deposit. The 444-560 cm may represent a channel levee deposit or estuarine fill. The 560 cm to base of the core and potentially base of the channel probably represents more fluvial filled channel.

Core 09CCT02_13 (Core 13)

The Core 13 location is on the eastern side of the incised Sabine Channel, near the northern limit of the study area. Core 12 is 580 cm long. The chirp line reveals an incised channel below a sequence of surface deposits. From 0-49 cm is the surface layer of sediment, which is brown and grades to gray with depth and consists of silt dominated

mud with less than 20% shell dominated sand. From 49-152 cm is compacted silt dominated mud. From 152-580 cm is gray and brown layer of silt dominated mud with abundant sand sized plant fragments and layers of plant fragments. Below 49 cm, although the grain size data suggest up to 40% sand and there is a mean size of between 100 and 150 microns, the size of the sand fraction is widely varying, indicative of sand and gravel size debris and in fact, there is little silica clastic sand of beach quality within this core. The sequence of sediment found within the incised channel is mud dominated with abundant plant debris suggesting it is an estuarine mud succession, possibly proximal to the bayhead delta.

Core 09CCT02_14 (Core 14)

The Core 14 location is on the western side of the incised Sabine Channel, near the northern limit of the study area. Core 14 is 566 cm long. The chirp line reveals flatly lying strata with alternating acoustically lighter and darker intervals. The target was what appeared to have been shoal sand deposits. The core reveals that 0-129 cm the sediment consists of soft alternating gray and brown mud alternating between clay and silt dominance and with abundant shell fragments. From 129 cm to 224 cm, the core is silt dominated with traces of brown clay. From 224-251 cm is a layer of large shells and gray mud. From 251-333 cm is compacted gray mud with no mention in the description of plant debris. From 333-566 cm the core contains layers of abundant plant material and is primarily silt dominated gray and brown mud. There is no silica clastic sand reported in the core description for this core. It appears that the upper 224 cm of this core was deposited in either an open marine or an estuarine environment. Below 251 cm, there is abundant plant debris suggesting an estuarine environment. The shell layer between 224-251 suggests a lag deposit on top of an unconformity surface between these two environments.

Core 09CCT02_15 (Core 15)

The Core 15 location is on the west central end of Sabine Bank. Core 15 is 239 cm long. The chirp line reveals flatly lying strata with a surface layer which is acoustically dark

and a deeper layer which is acoustically lighter. The target was the surface bank deposits. The upper 36 cm consists of shelly sand. From 36-140 cm is sand with sparse shell. From 140 cm to 239, the core consists of sandy silt dominated mud with shell fragments.

Core 09CCT02_16 (Core 16)

The Core 16 location is in the middle of the Sabine Incised channel towards the northern end of the survey area. Core 16 is 138 cm long. The chirp line reveals flatly lying strata with a surface layer which is acoustically dark and a deeper layer which is acoustically lighter. The core penetrates the upper acoustically dark layer and penetrates only a short distance into the acoustically lighter sediment. The upper 10 cm of the core consists of dark gray soft silt dominated mud. From 10-36 cm, the core consists of light green hard crumbly silt dominated mud with up to nearly 40% sand. From 36-118 cm, the core consists of green and brown silt dominated mud. From 118-138 cm, the core consists of hard oxidized red crumbly silt dominated mud, probably the Beaumont Clay. Most of this core likely represents paleosol sequences, perhaps subaerial bayhead delta deposits or subaerial flood plain.

Core 09CCT02_17 (Core 17)

The Core 17 location is along the northern flank of the Sabine Incised channel north of the middle of Sabine Bank. Core 17 is 565 cm long. The chirp line reveals an incised channel which contains a very acoustically dark surface layer, an acoustically intermediate layer and an acoustically lighter layer at depth. From 0-14 cm the core contains a surface layer of soft sandy clay dominated mud. From 14-66 cm, the core consists of compact sandy clay dominated mud. From 66-565 cm, the core consists of compact clay dominated mud with layers of shell debris. The high clay content suggests an estuarine mud filled incised channel distal from the bayhead delta.

Core 09CCT02_18 (Core 18)

The Core 18 location is on the west central end of Sabine Bank. Core 18 is 566 cm long. The chirp line reveals flatly lying strata with a surface layer which is acoustically dark

and deeper layers of alternating acoustically darker and lighter tones. There is a deeper incise channel layer below the penetration depth of the core. The target was the surface bank deposits. From 0-18 cm, the core consists of dark brown sand with shell. From 18-28 cm the core consists of shell hash with dark brown sand. From 28-115 cm, the core consists of dark brown sand with shell, this represents the surface dark return interval. From 115-248 cm, the core contains dark gray compacted sand with sparse shell, this interval is more compacted than the surface interval. From 248-566 cm, this interval progressively coarsens upward with a general increase in sand content. There are layers of higher shell content as well. Overall, this core is sand dominated.

Core 09CCT02_19 (Core 19)

The Core 19 location is on the northern side of the western end of Sabine Bank. Core 19 is 574 cm long. The chirp line reveals an incised channel below an acoustically dark surface layer. The core penetrates 80% of the depth of the incised channel, through the acoustically dark sediment and well into the acoustically lighter sediment. The surface interval from 0-46 cm consists of dark gray clay dominated mud with ~33% sand content and abundant grave-sized shell. From 46-150 cm, the core consists of dark gray sandy silt dominated mud with layers of shell gravel. From 150-219 cm, the core consists of shell and gravel mixed with silt dominated mud. From 219-286 cm, the core consists of silt dominated mud. From 286-293 cm, there is a clay dominated layer with abundant plant debris. From 293-574 cm, the core consists primarily of clay dominated mud. The upper 150 cm of the core consists of approximately 33% sand, from 150-574 cm, the core is mud dominated.

Core 09CCT02_20 (Core 20)

The Core 20 location is on the southern side of the western end of Sabine Bank. Core 20 is 470 cm long. The chirp line reveals an incise channel with an acoustically dark surface layer and an acoustically light layers below with a few stringers of acoustically dark intervals. The core penetrates through the surface dark return layer and into about half of the incised channel. The surface interval is 0-43 cm thick and consists of 70-80% gravely

shell with siliciclastic sand. From 43-47 cm, there is a silt dominated mud layer with abundant sand. From 47-90 cm the core is 55% sand with gravelly shell and mud. From 119-236 cm, the core consists of muddy sand with sand being the greatest size fraction. From 236-339 cm, there is equal parts silt and sand as a sandy mud. From 339-344 cm, there is a silty mud layer. From 344-470 cm, the core is 45% sand, 5% shelly gravel and 50% mud.

Core 09CCT02_21 (Core 21)

The Core 21 location is on the southern side of the western end of Sabine Bank. Core 21 is 569 cm long. The chirp line reveals an incise channel with an acoustically dark surface layer and acoustically light layers below with a few stringers which are acoustically dark. The acoustically dark surface layer extends from 0-340 cm. The base of this layer is marked by a shell hash layer from 340-419 cm. From 0-67 cm, the core consists of muddy sand with shell. From 67-108 cm, there is a mud layer with lower sand content. From 108-123 cm, there is compacted muddy sand. From 123-340 cm, the sand content ranges from 20-33% sand. The lower, acoustically light layer begins at the top of the shell hash layer, at 340 cm. Below the shell hash layer, from 419-569 cm, the core is primarily mud dominated, with sparse sand layers.

Core 09CCT02_22 (Core 22)

The Core 22 location is on the central portion of Sabine Bank. Core 22 is 569 cm long. The chirp line reveals there is a flat lying layer which is acoustically dark at the surface, at the base of which this is an acoustically extremely dark layer. Below this is a layer which is acoustically intermediate, with an acoustically dark layer demarcating the transition from flat layers to an incised layer below. The core penetrates through all of the flat lying layers and into the top of the incised channel. The core results show that the upper 0-20 cm of the core contains a surface layer of shell debris and sand. From 20-122 cm, the core is nearly 100% sand with shell. From 122—194 cm, the core is ~85% sand with mud and shell debris. From 194-200 the core contains a clay layers within sand. From 200-273 cm, the core contains muddy sand. From 273-424 cm, the core contains sandy mud. From 424-487 cm, the core contains mud with sand and shell. From 487-

544 cm, the core contains mud with less than 25% sand. The basal layer of the core is comprised of compacted mud with 30% sand. The layer above the incised channel comprises the upper 424 cm. The upper 2m of the core is over 85% sand, with the lower portion ranges from 50-60% sand. The incised channel contains less than 30% sand.

Core 09CCT02_23 (Core 23)

The Core 23 location is in the middle of Sabine Bank. Core 23 is only 43 cm long. The core contains sand with shell.

Core 09CCT02_24 (Core 24)

The Core 24 location is from the middle of the incised Sabine Channel, north of Sabine Bank. Core 24 is 108 cm long. The chirp line shows the site to contain an acoustically dark surface layer below which is an incised channel. The core only penetrated the surface layer and did not penetrate into the incised channel. From 0-14 cm the core contains dark gray soft mud. From 14-108 cm, the core contains hard gray and green crumbly silt dominated mud with oxidation spots. This is likely the paleosol of the Deweyville Terrace.

Core 09CCT02_25 (Core 25)

The Core 25 location is from the middle of Sabine Bank. Core 25 is 557 cm long. The chirp line reveals a very acoustically dark surface layer, below which there exists an acoustically light layer, below which is a series of alternating acoustically darker and lighter layers. The core penetrates through all of these strata into a thin, light return layer. From 0-11 cm the core contains dark brown sand with lighter brown sand and shell. From 11-192 cm, the core contains gray sand with shell, some layers with high and very coarse shell. From 192 cm to 192-257 cm, the core consists of dark gray compacted silty sand. From 257-490 cm, the core contains about equal parts silty mud and sand. From 490-536 cm, the core contains mud with shell. From 536-559 cm, the core contains

muddy sand. With the expectation of the layer from 490-536 cm, the core is sand dominated.

5.0 Discussion

The overarching mission of the project is to identify potential sand deposits in Federal Waters for sand resource projects. To support this mission, the specific goal of this project was to sample as many different types of environments within the Trinity-Sabine Incised Paleochannel, including Sabine Bank and Heald Bank, using a minimum of 20 submersible vibracores. We used over 500 km of chirp survey lines to select coring sites and were able to collect 26 cores in 25 unique sites. Each coring site was selected to geologically characterize the sediments within the core site and each core site had a specific target deposit, which are summarized in Table 1. Each coring site represents a unique environment and setting, so correlations between cores is not feasible and our interpretation of the depositional environments was restricted to the observations of the chirp data and the single core. The types of settings for the coring sites break down geographically as follows: 1) Trinity Incised Channel-northwest of Heald Bank; 2) Heald Bank; 3) Sabine Bank; and 4) Sabine Incised Channel north of Sabine Bank.

5.1 Trinity Incised Channel

Cores 1, 2, and 10 were collected from the Trinity Incised Channel, landward (north) of Heald Bank. Cores 1 and 2 were collected from the southwestern side of the incised channel. Core 10 was collected from the northeastern side of the incised channel. Cores 1 and 2 both targeted the incised channel. Core 1 penetrated through a surface deposit (mud), through the flank of the channel deposit (mud) and into the terrace which makes up the flood plain of the channel. The base of the core was into this terrace and found dense hard brown clay-rich mud with less than 15% sand. Core 2 was only 187 cm long and hit a refusal layer of brown clay-rich mud at the base of the core. It never penetrated into the target channel fill deposit which was below the brown clay layer. Core 10, from

the opposite side of the channel, was collected seaward of the previously discussed two cores and encountered an estuarine mud filled channel.

5.2 Heald Bank

Cores 3, 4, 5, 6, 6B, 7, 8, and 9 were all collected in the area of Heald Bank (Figure 8). Cores 4 and 5 were actually collected from the western end of the Sabine Channel, proximal, but east of where it merges with the Trinity River.

5.2.1 Western Incised Sabine Channel

Core 4 was collected on the northwestern side of the channel and Core 5 was collected on the southeastern side. Core 4 penetrated a flat lying deposit of mud above the channel fill sequence and penetrated into, but not through the channel fill sequence, finding estuarine mud within the portion of the channel fill it penetrated. Core 5 penetrated through a flat lying sand deposit which lays atop the channel fill sequence. The portion of the channel fill penetrated by Core 5 consists of estuarine mud.

5.2.2 Heald Bank Crest

Cores 6 and 6B were collected at the same approximate site along the southern end of the crest of Heald Bank (Figure 9-A and 9-B). Core 6 penetrated 300 cm of 65-80% sand and Core 6B penetrated 340 cm of 60-70% sand, with the sand deposit in each core in the surface layer. Each core encountered muddy sand at the base of the core, suggesting that the cores penetrated through the entire high sand content layer.

Core 9 encountered a 300 cm 50% sand layer at the surface with mud with less than 20% sand beneath the surface layer.

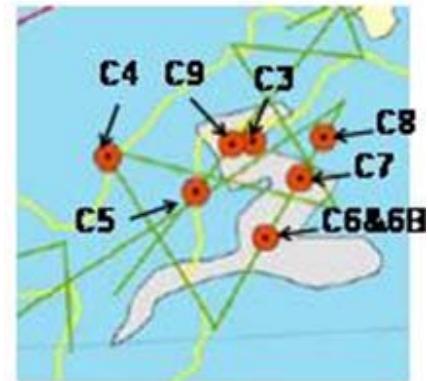
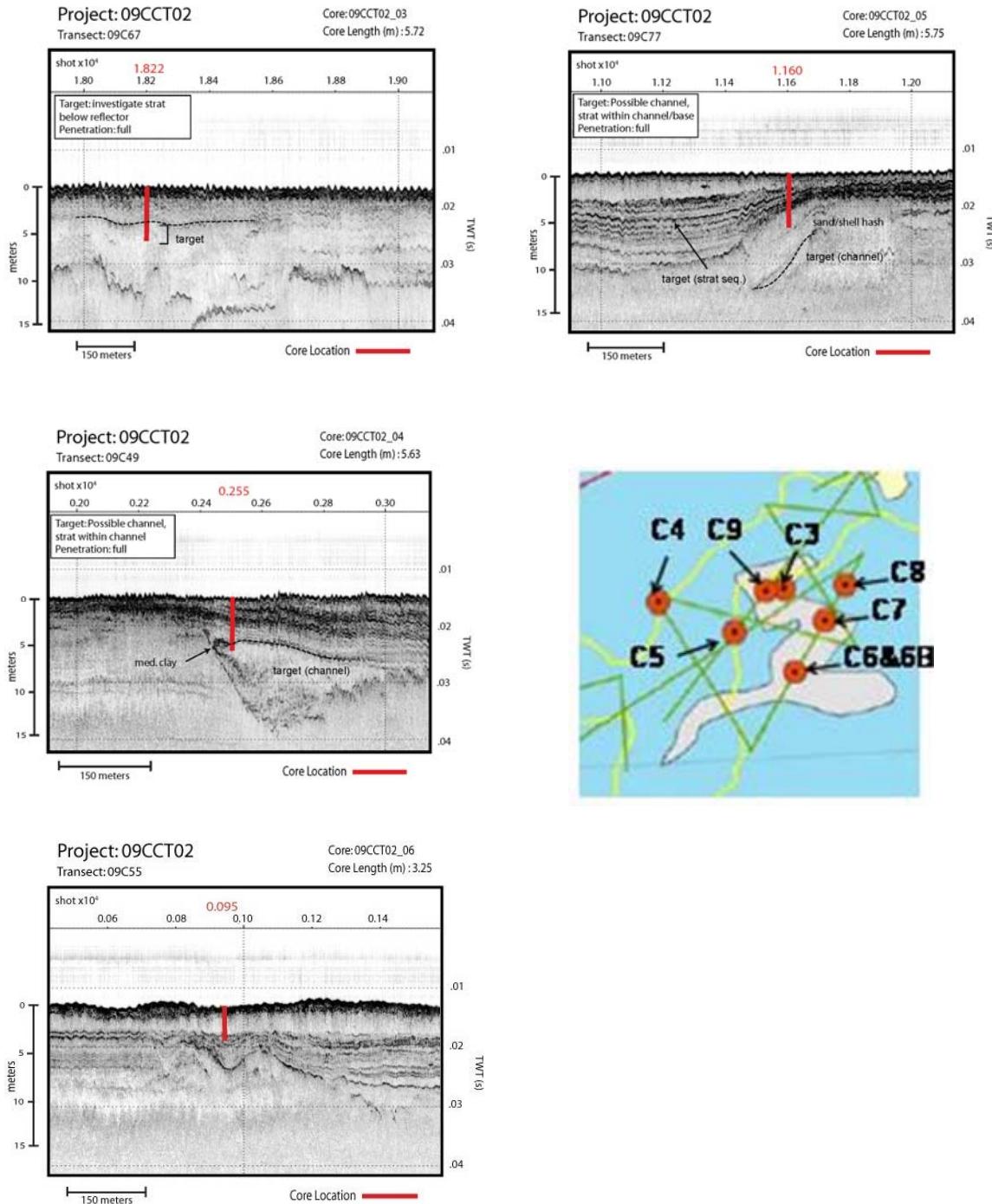


Figure 9-A. Chirp lines showing core locations and lithologies for Heald Bank and western Sabine Incised Channel cores.

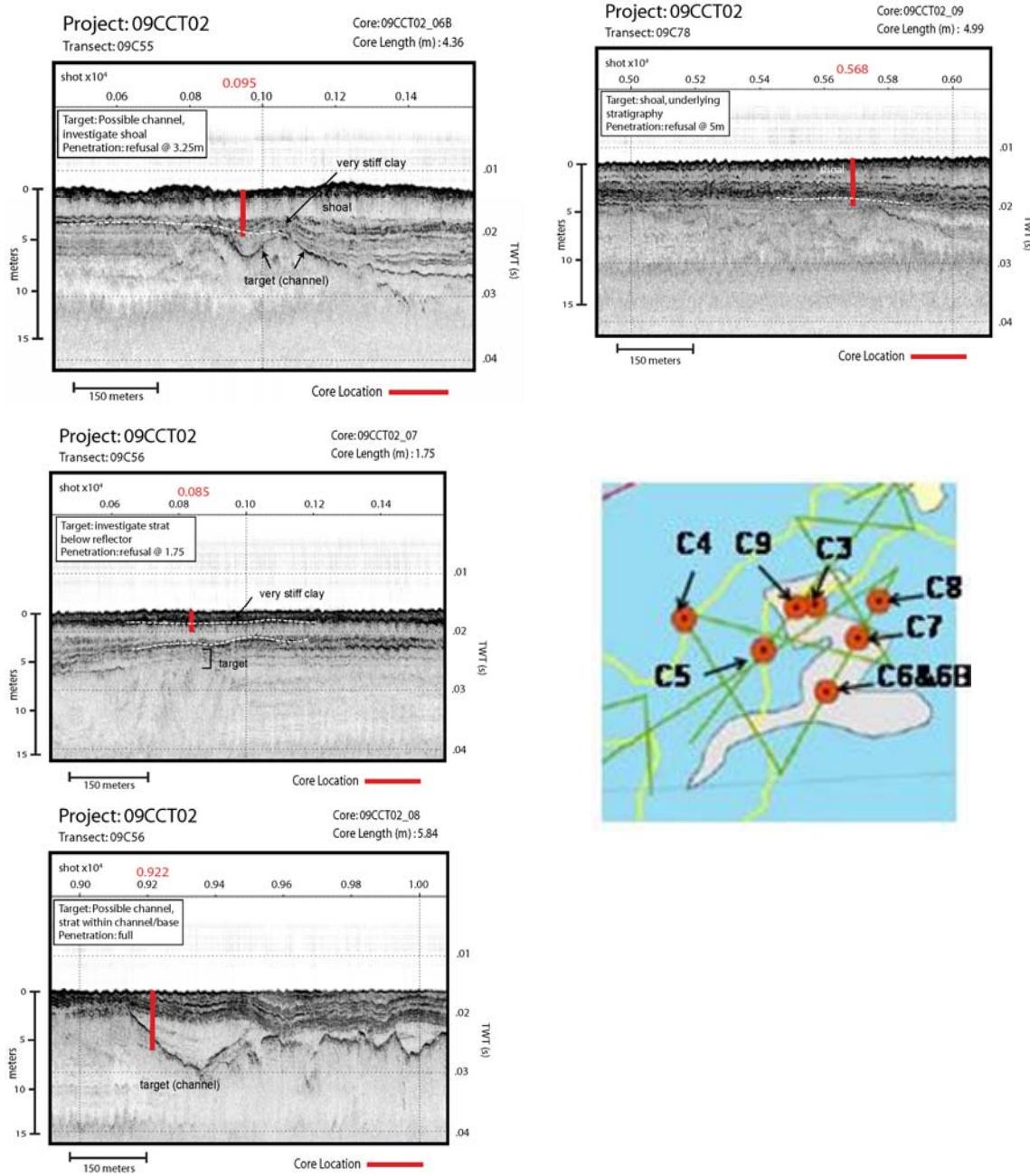


Figure 9-B. Chirp lines showing core locations and lithologies for Heald Bank and western Sabine Incised Channel cores.

5.2.3 Heald Bank Eastern Flank

Cores 3 and 7 were collected on the eastern flank of Heald Bank and Core 8 was collected east of the bank (Figure 10-A and 10-B). At the site of Core 3, the chirp line shows a dark return surface layer with a light return layer at depth, which appears to be channel fill, with a faint channel at depth. The core found the surface layer to consist of mud and the top of the channel fill contained mud with 30% sand.

Core 8 encountered a mud dominated surface layer the chirp shows as draping over a series of incised channels. Below the surface layer is an incised channel, which the core penetrated through and found to be clay filled.

The chirp line shows that at the Core 7 site, there is flat lying strata with a dark surface return layer and a lighter return layer at about 50 cm below the surface. Core 7 was only 175 cm, and encountered mixed mud and shell at the surface and found the lower layer to be clay rich mud.

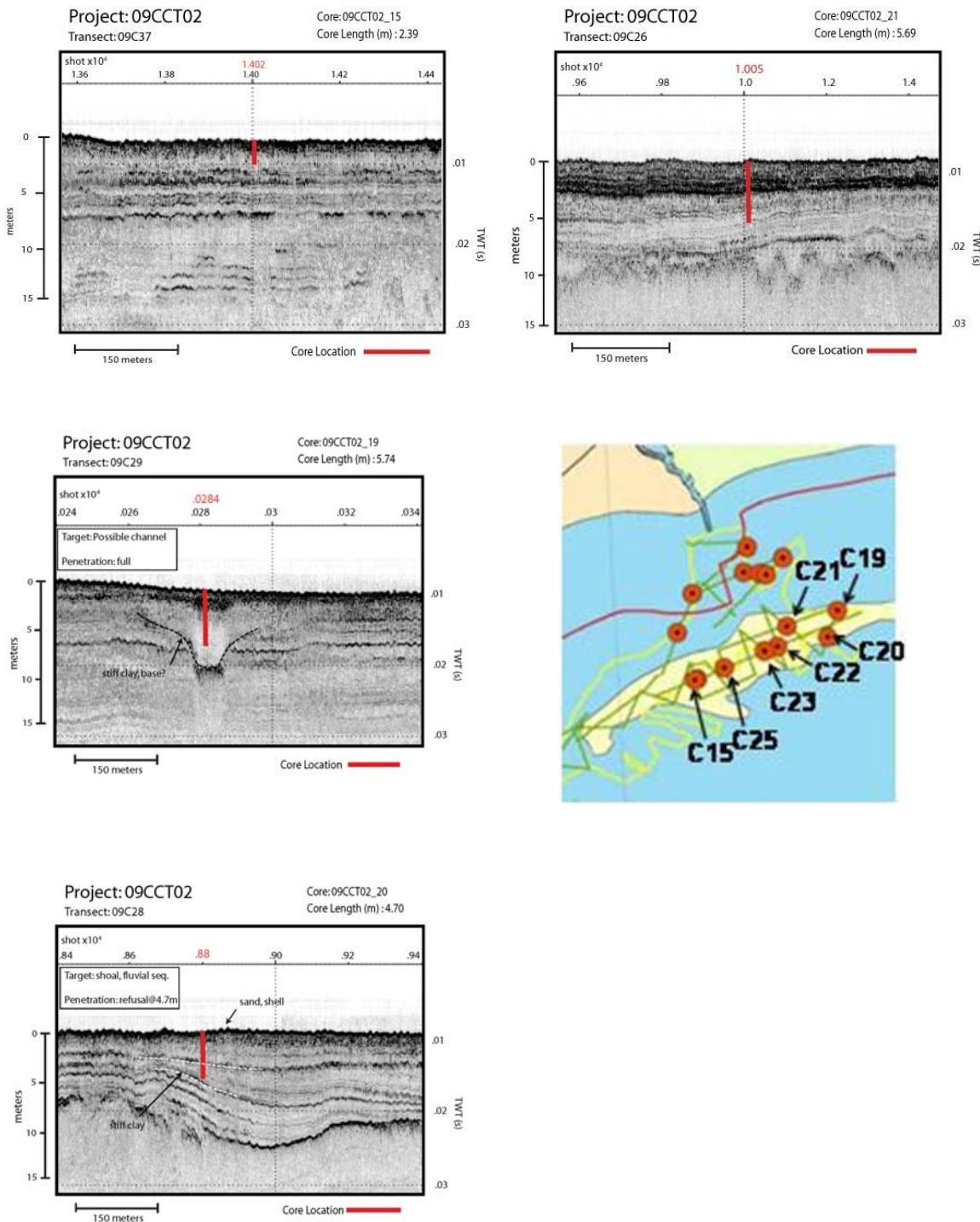


Figure 10-A. Chirp lines showing core locations and lithologies for Sabine Bank

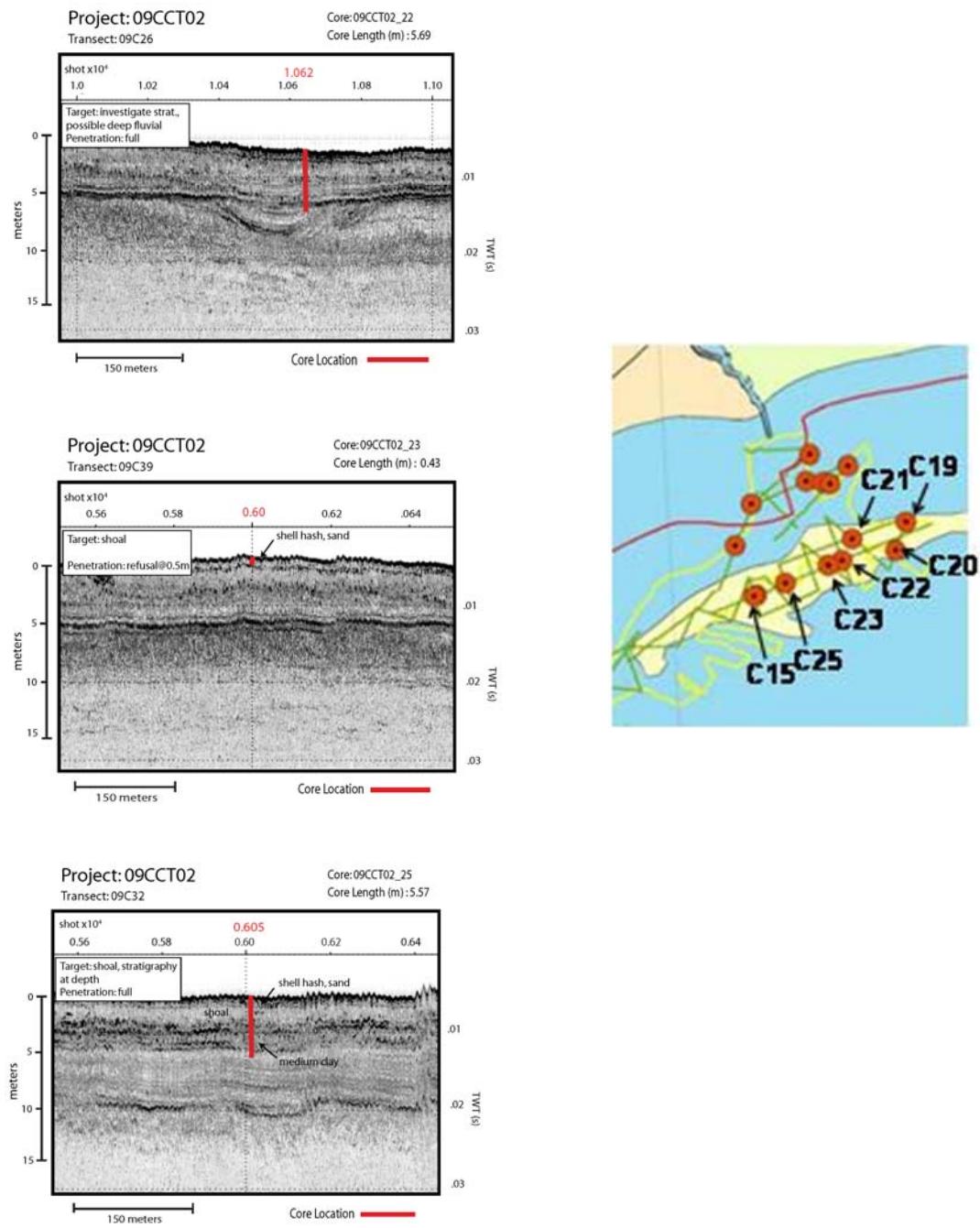


Figure 10-B. Chirp lines showing core locations and lithologies for Sabine Bank

5.3 Sabine Bank

Cores 15, 19, 20, 21, 22, 23, and 25 were all taken from Sabine Bank (Figure 11-A and 11-B). In general, all of the cores encountered a layer at least 10 cm thick at the surface of gravelly shell.

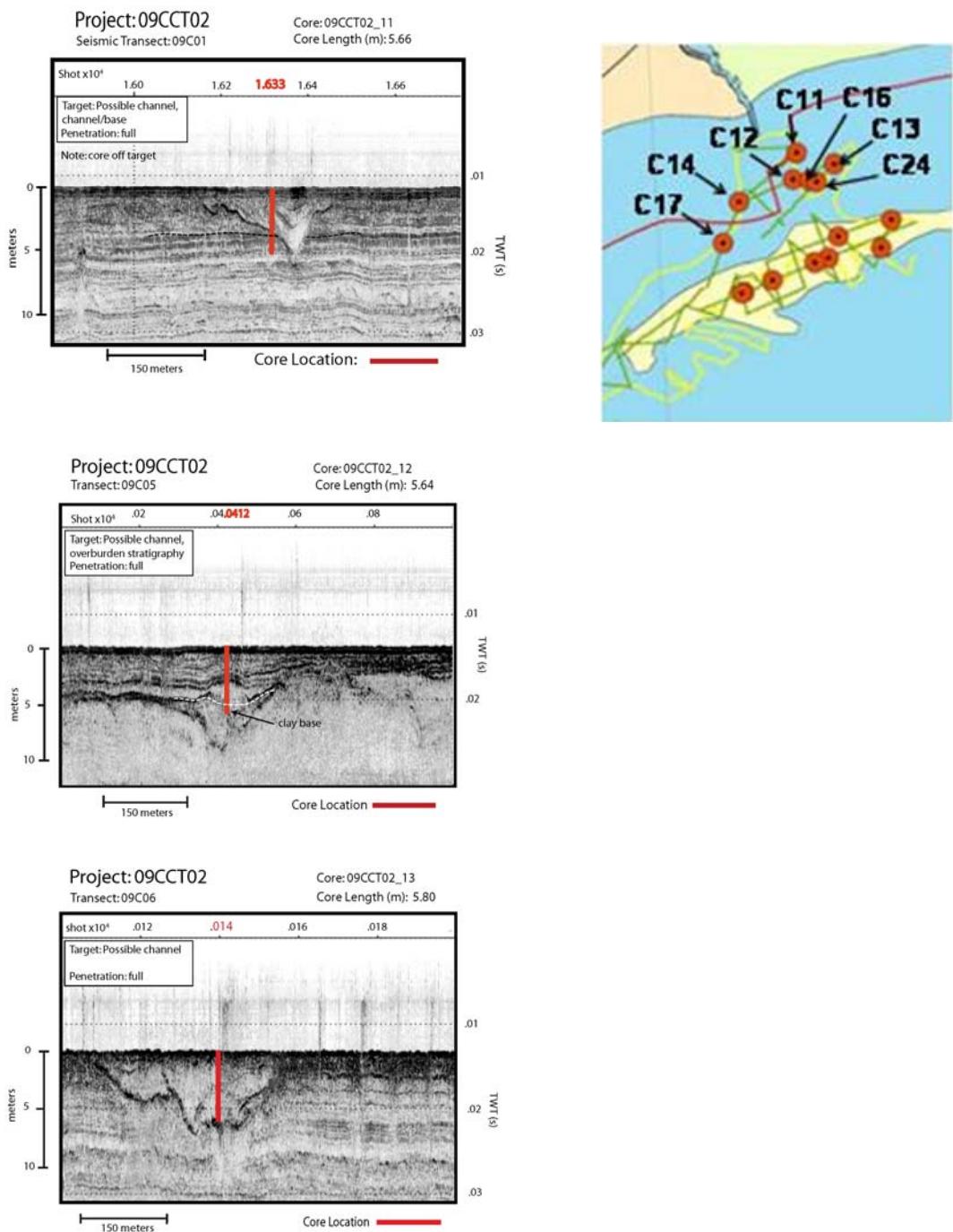


Figure 11-A. Chirp lines showing core locations and lithologies for eastern Sabine Incised Channel cores.

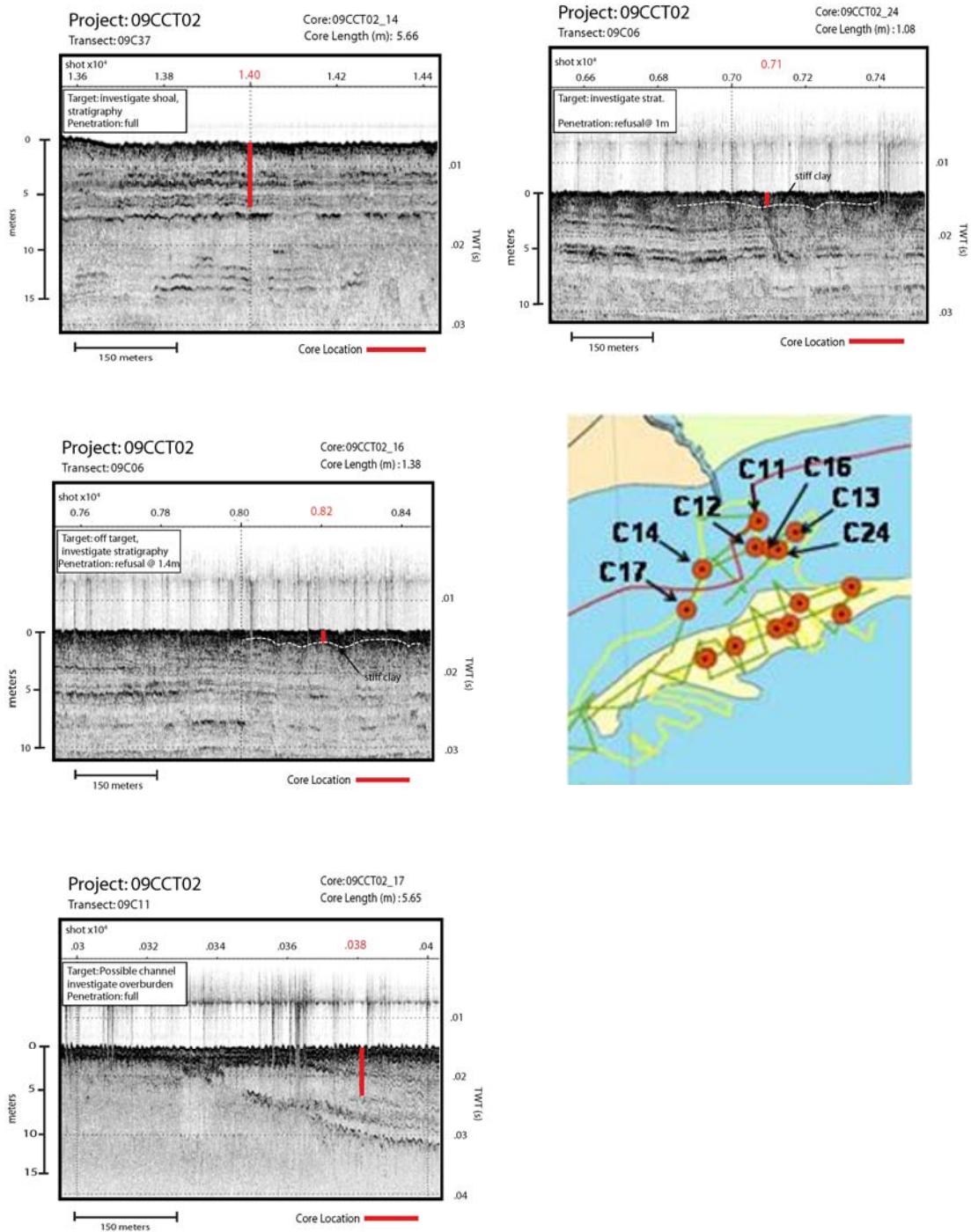


Figure 11-B. Chirp lines showing core locations and lithologies for eastern Sabine Incised Channel cores.

5.3.1 Western Sabine Bank

Cores 15, 25, 23, 22 were collected from the western end of Sabine Bank. Core 15 encountered 140 cm of sand in the upper portion of the core and the lower portion of the core was sandy mud with 30% sand. Core 25 encountered sand in the upper 541 cm of the core and bottomed out in a sandy mud layer. Core 23 was only 43 cm long and was all sand. Core 22 contains a layer of 80-100% sand in the upper 194 cm of the core, below which, from 194-243 cm, the core contains 60% sand. From 243-424 cm, the core contains 50% sand and 50% mud. Below this, the core is more mud dominated.

5.3.2 Eastern Sabine Bank

Cores 21, 19 and 20 were collected from the eastern side of Sabine Bank. The chirp line for the Core 21 site reveals flat lying strata and Core 21 contains a surface layer 0-90 cm, of muddy sand with 50% sand content. The remaining 469 cm contained mud with 40-50% sand. The chirp line for the Core 19 reveals a flat laying layer in the upper seabed, below which is a filled incised channel. Core 19 penetrated through the surface layer, revealing sandy mud and into the incised channel which is filled with clay-rich mud. The chirp line for the Core 20 site reveals flat lying strata over an incised channel at depth. Core 20 penetrated through the flat strata into the upper portion of the incised channel and revealed the entire sequence to contain mud with 40-50% sand.

5.4 Sabine Incised Channel north of Sabine Bank

Cores 11, 12, 13, 16, and 24 are on the eastern side of the Incised Sabine Channel, north of Sabine Bank. Cores 14 and 17 are on the western side of the Incised Sabine Channel, north of Sabine Bank. These two sets of cores will be discussed separately.

5.4.1 Deweyville Terrace

The mainstem of the Sabine Incised channel merges with a side channel on the eastern side of the channel. There is an interfluvial terrace north of the confluence of these two channels, Cores 16 and 24 are from this terrace and contain flat lying strata. These two cores hit a depth of refusal in 1.38 and 1.08 m respectively. Both cores hit a light green, hard crumbly mud layer with oxidation spots, at depths of 10 and 14 cm respectively. Core 16 encountered an oxidized red clay layer in 118 cm which extended to the base of the core. The intervals described in these two cores is consistent with a paleosol (paleo soil) of an exposed fluvial flood plain and it is believed that this unit is the Deweyville Terrace which is known to exist in this area. One goal of this investigation was to sample the Deweyville Terrace, which is known to be sand bearing along the Sabine Incise Channel in landward portions. In this study, we found it to be silt dominated mud with generally less than 20% sand.

5.4.2 Eastern side-Incised Sabine Channel

Cores 11, 12, and 13 were collected along the eastern side of the Incised Sabine Channel. Each of these cores penetrated channel fill of channels which were incised into the Deweyville Terrace paleosol. Core 11 was the landward most core collected on this side of the Incised Sabine Channel. Core 13 was collected landward of the confluence of the Sabine Incised Channel and the side channel, within the side channel. Both Cores 11 and 13 encountered mud filled channels. However, the Core 12 location was seaward and down gradient within the paleochannel of either Cores 11 or 13 and Core 12 encountered 112 cm of muddy sand at the base of the channel. Likely, seaward of Core 12 may be a good location to look for additional sand fluvial sand deposits.

6.0 Conclusions

The primary goal of this investigation was to identify new sand deposits in Federal Waters which could be used for beach nourishment projects. We search a wide variety of different environments across the Trinity Sabine Incised Channel area, including the incised channels and Heald and Sabine Bank. Within the Trinity Incised channel (Figure 8), we cores three locations which were sediment filled incised channels, we found each of these channels to be filled with estuarine mud. We were also able to penetrate the terrace into which these channels were incised and found these terraces to be composed of mud rich paleosols with very little sand.

We collected five cores from four unique locations on Heald Bank (Figure 9-A and 9-B), Cores 3, 6, 6B, 7, and 9. Cores 6 and 6B contained 300 and 340 cm of 65-85% sand respectively and Core 9 contained 300 cm of sand at 50-60% sand. These three cores were collected from the crest of the bank. Core 3, from the eastern flank of the bank, contained a surface layer of mud and a layer of channel fill with 30% sand at depth. Core 8 was collected from an incised channel east of Heald Bank and found the channel to be clay filled. Cores 4 and 5 were collected from the western end of the Sabine Channel proximal to the confluence with the Trinity Channel. Core 4 was from the northern side of the Sabine channel and was mud filled. Core 5 was from the southern side of the channel, proximal to Heald Bank, and contained a surface layer of 50-60% sand, 200 cm thick, below which was a mud filled channel.

We collected seven cores from Sabine Bank (Figure 10-A and 10-B). For the middle and western bank (Cores 15, 22, 23, and 25) in general, sand found in each core from surface layers, which ranged in thickness from 140-541 cm with sandy mud found at depth. For the eastern bank (Cores 19, 20, and 21), we found surface layers of muddy sand and sandy mud.

We collected seven cores from the northern portion of the Sabine Incised Channel, north of Sabine Bank (Figure 11-A and 11-B), Cores 11, 12, 13, 14, 16, 17, and 24. Cores 14

and 17 were collected from the western side of the incised channel. Core 14 was collected from the flat terraced area west of the channel and encountered mud. Core 17 was collected from the filled incised channel and found the channel to be mud filled. Cores 11 and 12 were collected from the eastern side of the incised Sabine Channel. Core 11 was collected landward of Core 12 and Core 12 found the incised channel to be mud filled. Core 12, being seaward, encountered a deeper portion of the section and found at the base of the channel fluvial sand. Cores 16 and 24 were collected from the terrace which separates to channels of the Sabine valley, on the eastern side. These two cores were filled with mud rich paleosols.

6.1 Recommendations for future work:

In terms of identification of new sand resources, we found the majority of the sand deposits on Heald and Sabine Bank, areas already known to be sand bearing. Nearly all of the incised channels cores were filled with estuarine mud. However, Core 12 found fluvial sand at the base of the incised channel. This location was the most seaward core collected along the Sabine Channel north of Sabine Bank. Additional investigation of this area is highly warranted and is the most promising new area investigated. It appears that the sand bearing unit is lower in the stratigraphic section than the estuarine mud filled channels to the north, it may be that if we continue down slope within the channel we will encounter fluvial deposits closer to the seabed surface.

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 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-c-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	40-50%	Plant debris starting @370 cm
09CCT13-13	580 cm	Sab. Incis. Channel-nw	Channel	Estuarine Mud	~200 cm	20-30%	
09CCT14-14	566 cm	Sab. Incis. Channel-nw	Shoal	Flat strata	0		Plant debris starting @207 cm
09CCT15-15	239 cm	Sabine Bank	Shoal	Flat strata	110 cm	70-80%	Plant debris starting @417 cm
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	80-90%	
09CCT19-19	574 cm	Sabine Bank-west	Channel	Fluvial fill	307 cm	50-60%	
09CCT20-20	470 cm	Sabine Bank-west	Channel-flank	Shoal over fluvial fill	290 cm	30-40%	Plant debris starting @286 cm
09CCT21-21	569 cm	Sabine Bank	Shoal	Flat strata	470 cm	40-50%	
09CCT22-22	569 cm	Sabine Bank-middle	Shoal & channel	Flat strata over channel	130 cm	50%	Shoal is sand dominated-channel fill has 25-30% sand
09CCT23-23	43 cm	Sabine Bank-middle	Shoal	Flat strata	200 cm	80%	
09CCT24-24	108 cm	Sab. Incis. Channel-nw	shoal	Flat strata	220 cm	50-60%	
09CCT25-25	557 cm	Sabine Bank	Shoal	Flat strata	43 cm	98%	Paleosol @40 cm Deweyville Ter?
					557 cm	Sand*	

8.0 Appendix A. Potential Core Sites

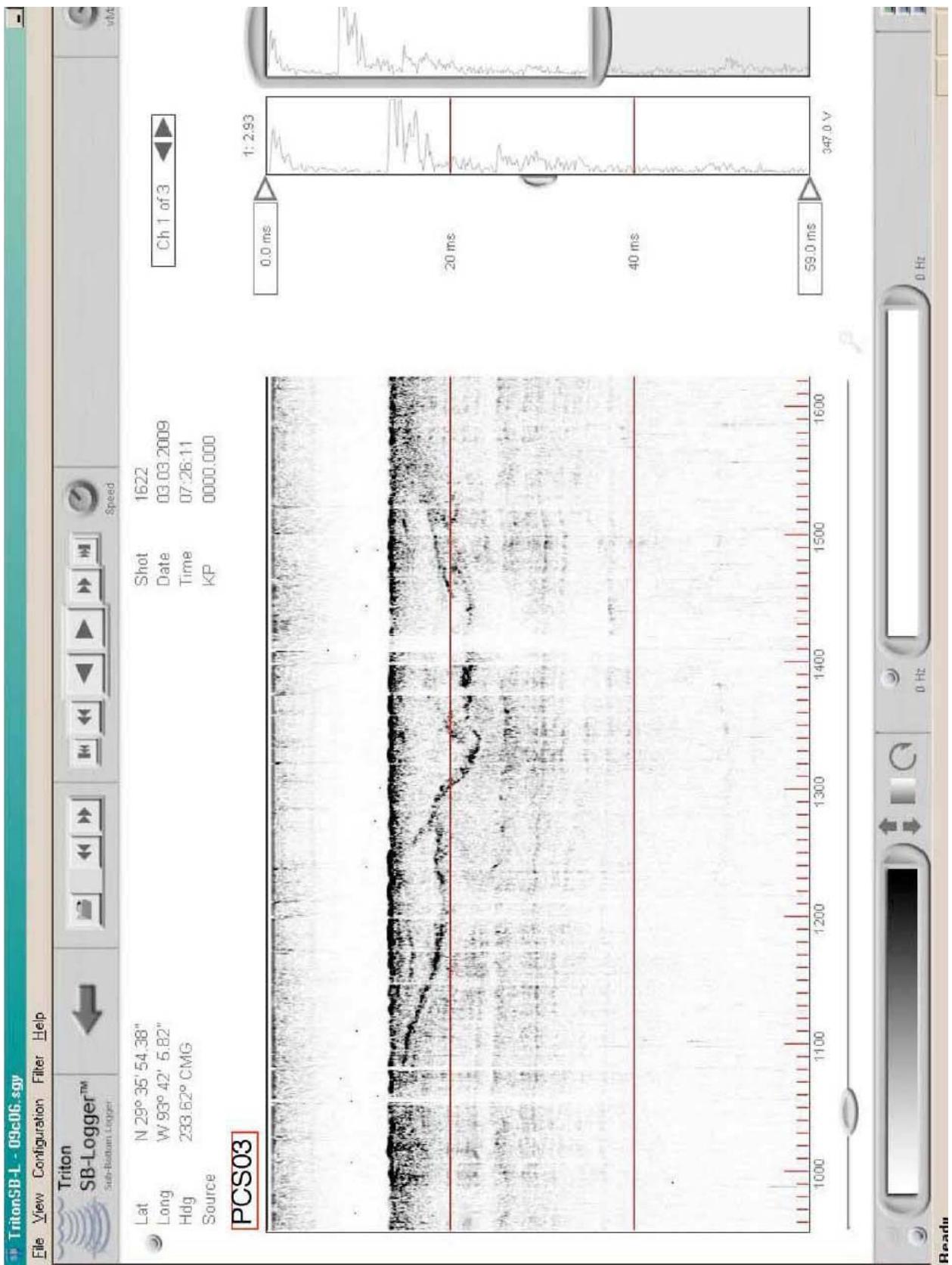
Example CHIRP profiles of areas targeted for further investigation using vibracores. Site locations (designated by PCS#'s) are shown in Figure 3. Descriptions of potential cores sites are shown in Table A-1.1. Not all sites selected have example profiles in thi

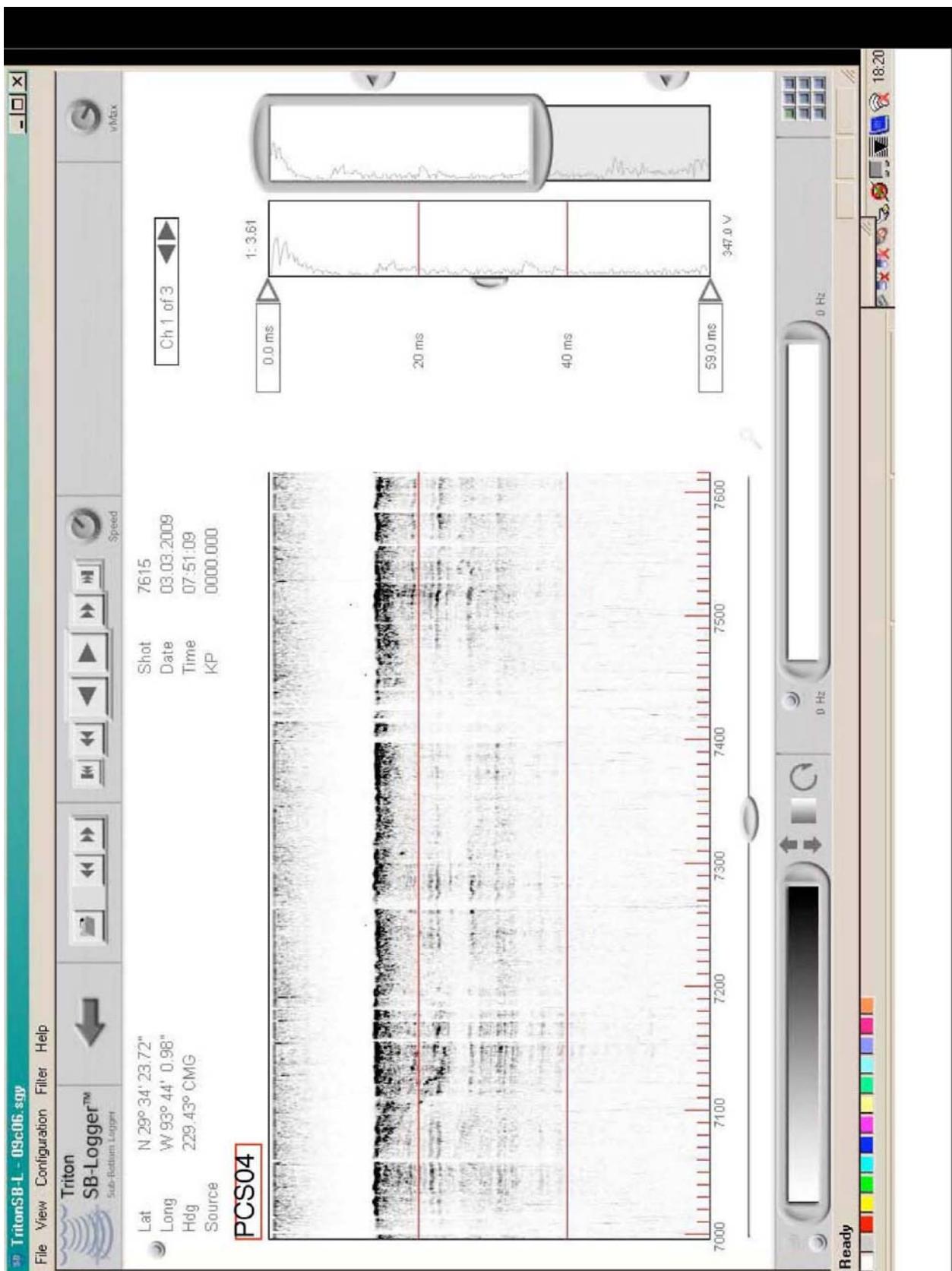
Table A-1.1. Potential core sites determined from CHIRP profiles.

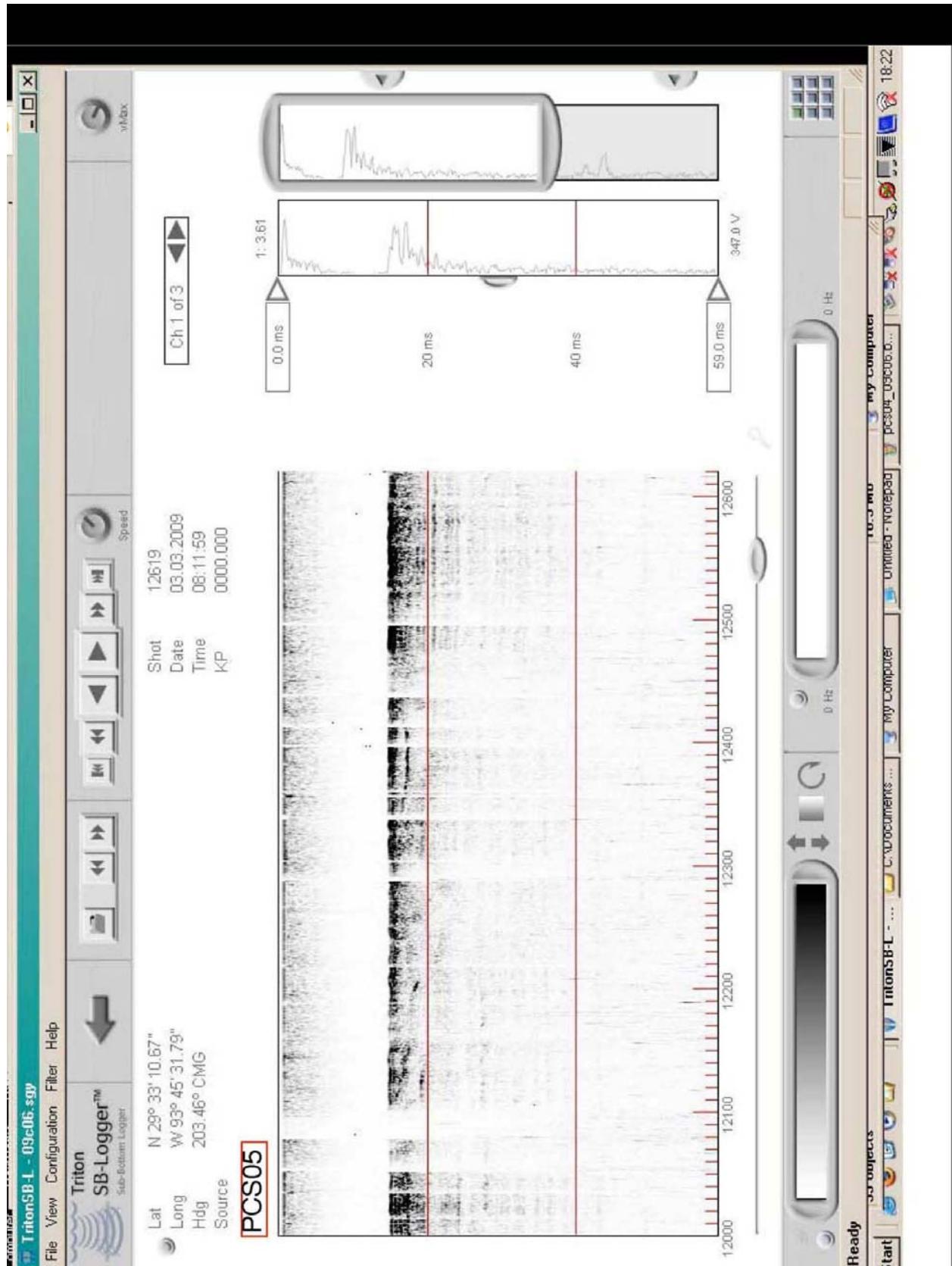
Potential core	Longitude	Latitude	Line ID	Shot ID	Shot Time	Core site objective
site ID	DD°	DD°	CHIRP	CHIRP	Jd:H:M:S	Description of seismic feature
PCS01	-93.751715	29.626433	09c01	16325	62:03:39:56	Est. X-section Area 2250m ² @ 1m depth-4.5m deep
PCS02	-93.862561	29.552178	09c02_b	20600	62:05:07:45	Near surface Channel
PCS03	-93.770688	29.580205	09c05	300	62:06:19:25	Near surface Channel, cont. of PCS01
PCS03_A	-93.700349	29.599282	09c06	1402	62:07:25:16	Near surface Channel, cont. of PCS01
PCS04	-93.696514	29.602027	09c06	714	62:07:22:24	Near surface Channel, cont. of PCS01
PCS05	-93.757304	29.554593	09c06	12250	62:08:10:28	Near surface Channel, cont. of PCS01
PCS06	-93.863225	29.547498	09c10	5202	62:11:13:29	Near surface Channel, cont. of line 10
PCS07	-93.865675	29.540226	09c10	6902	62:11:20:34	Surfac Channel-Laminated
PCS08	-93.614520	29.518978	09c30	2000	63:06:27:32	Surface Channel
PCS09	-93.666758	29.505045	09c30	9000	63:06:56:42	Wide, Shallow Suff. Ch.-Laminated
PCS10	-93.681904	29.501158	09c30	11149	63:07:05:39	Pair of Channels ↑ overburden
PCS11	-93.682612	29.500990	09c30	11249	63:07:06:04	Deep Channel
PCS12	-93.700698	29.496267	09c30	13801	63:07:16:42	Wide Channel, Ch.-Laminated
PCS13	-93.821605	29.460248	09c32	599	63:08:40:13	Shoal, x-ing w/ 09C38
PCS14	-93.802286	29.400000	09c33	1352	63:09:49:42	Shoal Crest on Ravinement
PCS15	-93.821861	29.433619	09c38	6002	63:13:39:04	Shoal Crest x-ing w/ 09C33
PCS16	-93.751176	29.455381	09c39	3999	63:14:32:46	Shoal Crest x-ing w/ 09C26
PCS17	-93.687286	29.473484	09c40	2349	63:15:26:22	Fluvial Seq. w/ in core depth
PCS18	-93.609808	29.513901	09c29	2823	63:06:12:05	Near surface Channel,
PCS19	-93.645040	29.448921	09c28	3140	63:05:17:18	Near surface Channel, Low Priority
PCS20	-93.630648	29.471617	09c28	8400	63:05:39:13	Fluvial Seq.
PCS21	-	29.488054	09c26	11831	63:04:28:17	Edge of Large Channel

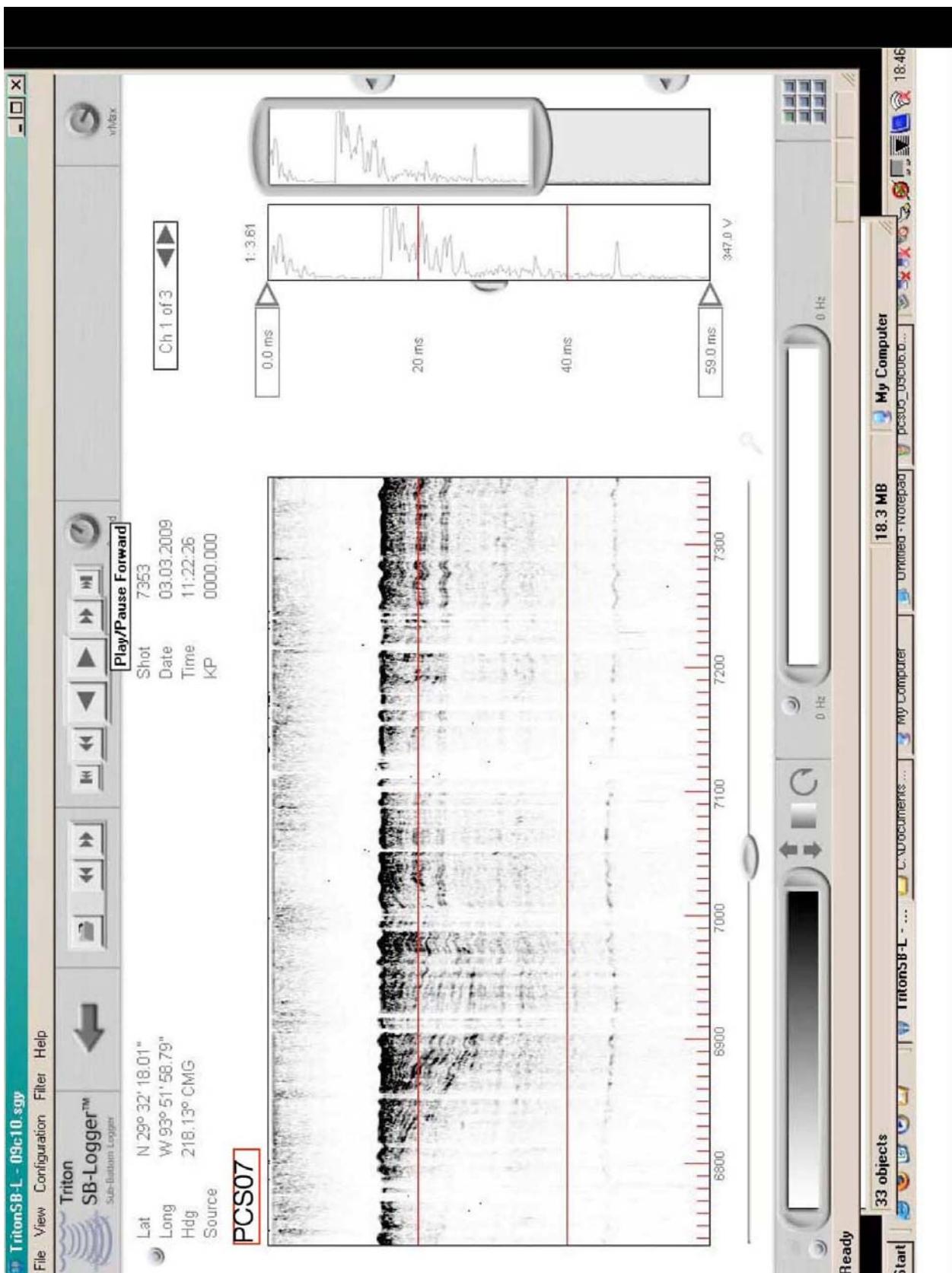
	93.692342					
PCS22	- 93.762286	29.428887	09c22	8342	63:00:14:21	Small Channel, w/ small Shoal on Top
PCS23	- 93.865692	29.420321	09c20	4003	62:22:25:06	Crossline Pick
PCS24	- 94.116481	29.343039	09c15	7200	62:17:58:01	Seq. Strat Core, Coverage of Horizons
PCS25	- 94.225134	29.206569	09c78	5679	65:12:23:08	ID Shoal Text, Deep Channeling
PCS26	- 94.285715	29.145418	09c77	8451	65:11:23:32	X-ing line w/ 09C59, Condensed Sec.
PCS27	- 94.272606	29.158698	09c77	11600	65:11:36:39	Deep Channel Edge, Condensed Sec.
PCS28	- 94.059699	29.293596	09c43	14099	63:21:34:08	Target Acoustic Transparent Deep, Strat.
PCS29	- 94.152501	29.212483	09c45_b	26402	64:01:05:13	Shallow Channel
PCS30	- 94.148449	29.205869	09c45_b	27949	64:01:11:41	Adj. to Shallow Deep Refl. Near Surf.
PCS31	- 94.105979	29.140186	09c46	9552	64:02:17:57	Strat Near Surface, Low Priority
PCS32	- 94.177237	29.152911	09c47	10559	64:03:13:19	Channel Deep
PCS33	- 94.185316	29.155159	09c47	11699	64:03:18:04	Condensed Strat.
PCS34	- 94.382824	29.205776	09c49	992	64:05:22:27	Edge of Deep Channel
PCS35	- 94.382092	29.204584	09c49	1300	64:05:23:44	"Terraced" Material Adj. to Ch., Poss. BH Delta
PCS36	- 94.380776	29.202234	09c49	1900	64:05:26:14	Significant Channel
PCS37	- 94.378864	29.199982	09c49	2552	64:05:28:57	Significant Channel w/in above
PCS38	- 94.369152	29.184306	09c49	6801	64:05:46:39	Condensed Strat.
PCS39	- 94.263185	29.019838	09c52	801	64:08:38:08	Deep Channel, Low Priority
PCS40	- 94.248452	29.025344	09c53	3101	64:09:02:12	Large Nearsurface Channel
PCS41	- 94.244570	29.030503	09c53	4209	64:09:06:49	Large Nearsurface Channel, Overburden Removed
PCS42	- 94.234023	29.044575	09c54	4150	64:09:44:52	Channel Deep (4.5 m)
PCS43	- 94.200709	29.090130	09c54	13559	64:10:24:04	Large Channel Stratified
PCS44	- 94.156582	29.149813	09c55	10201	64:11:14:27	Top of Shoal, x-ing line
PCS45	- 94.148280	29.160959	09c55	12501	64:11:24:02	Strat Near Surface
PCS46	- 94.142673	29.168643	09c56	849	64:11:30:39	Channel Deep (4.5 m)
PCS47	- 94.108745	29.214462	09c56	10462	64:12:10:42	Channel w/ Strat on Top
PCS48	- 94.113112	29.208498	09c56	9222	64:12:05:32	Large Channel Nearsurface
PCS49	- 94.097161	29.230058	09c56	13782	64:12:24:32	Channel Deep
PCS50	-	29.169757	09c59	1	64:14:36:07	x-ing line w/ 09C48

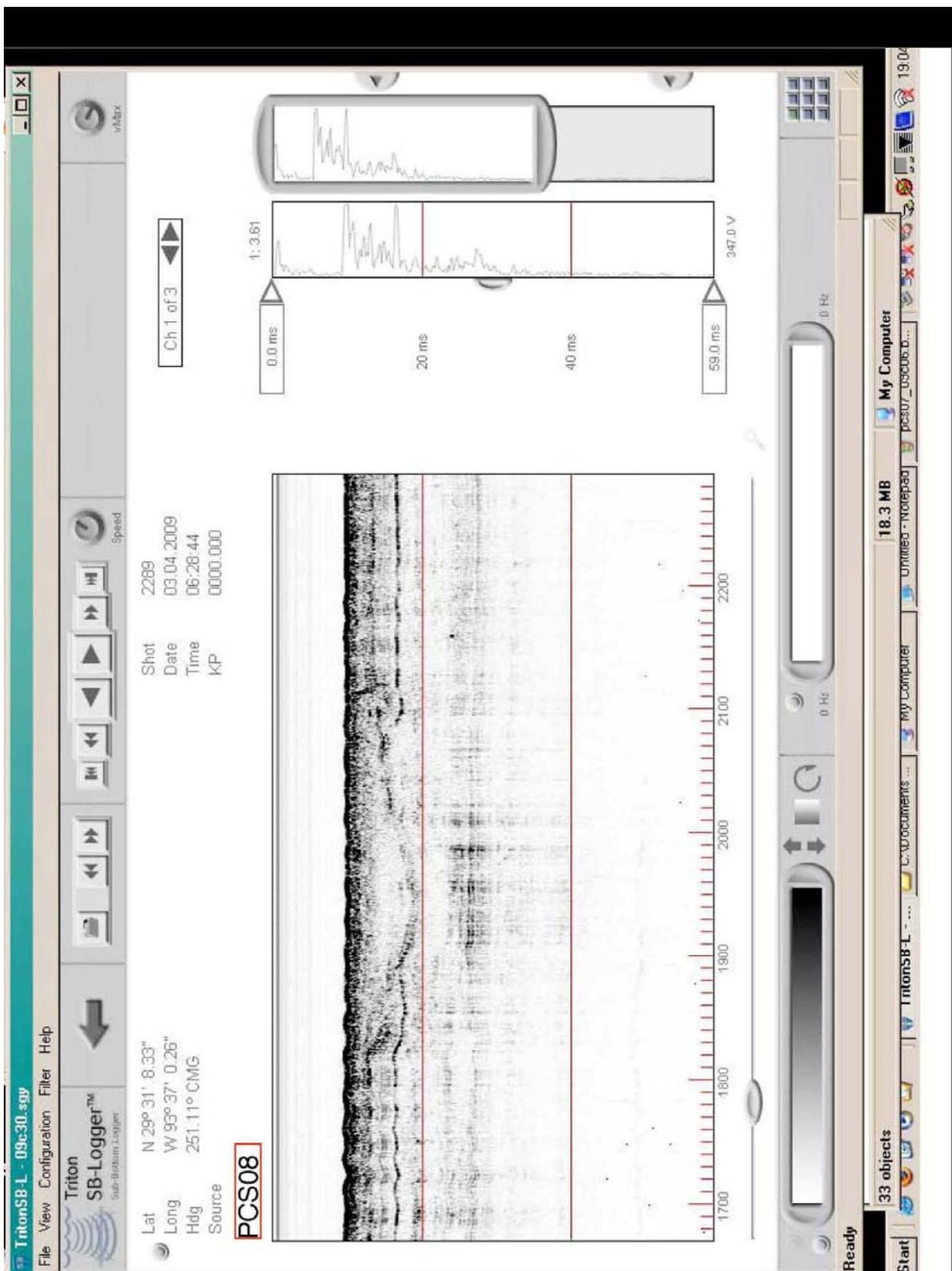
	94.233998					
PCS51	- 94.328097	29.122273	09c60	2001	64:15:50:19	x-ing line w/ 09C50
PCS52	- 94.558555	29.070797	09c63	9848	64:19:31:08	Shallow Channel
PCS53	- 94.558489	29.091041	09c63	13112	64:19:44:44	Large Channel (?)
PCS54	- 94.557043	29.174905	09c65_a	1	64:20:40:34	Channel Near Surface (?)
PCS55	- 94.655712	29.178220	09c65_a	12779	64:21:33:59	Deep Reflector Surfacing
PCS56	- 94.677291	29.179849	09c65_a	15651	64:21:45:57	Shallow Channeling Near Crossing
PCS58	- 94.679873	29.207643	09c67	18222	65:01:54:07	Investigate Deep (4.5 m)
PCS59	- 94.679459	29.158359	09c68_a	4350	65:03:00:22	Sandy Ch. Fill Near Surface
PCS60	- 94.678741	29.103867	09c70	1871	65:03:49:16	Deep Reflector Surfacing, Sandy
PCS61	- 94.678346	29.065964	09c70	9851	65:04:22:31	Deep Reflector Surfacing, Sandy Below
PCS62	- 94.667949	29.065187	09c71	1451	65:04:30:52	Possible Channel, Possible gas
PCS63	- 94.634012	29.071801	09c71	7251	65:04:55:02	Channel Near Surface
PCS64	- 94.567879	29.084480	09c72	3350	65:05:39:14	Down Dipping Refl. Near Surface
PCS65	- 94.521518	29.093228	09c72	13582	65:06:21:52	Same Strat as ↑ But Mpoore Texture

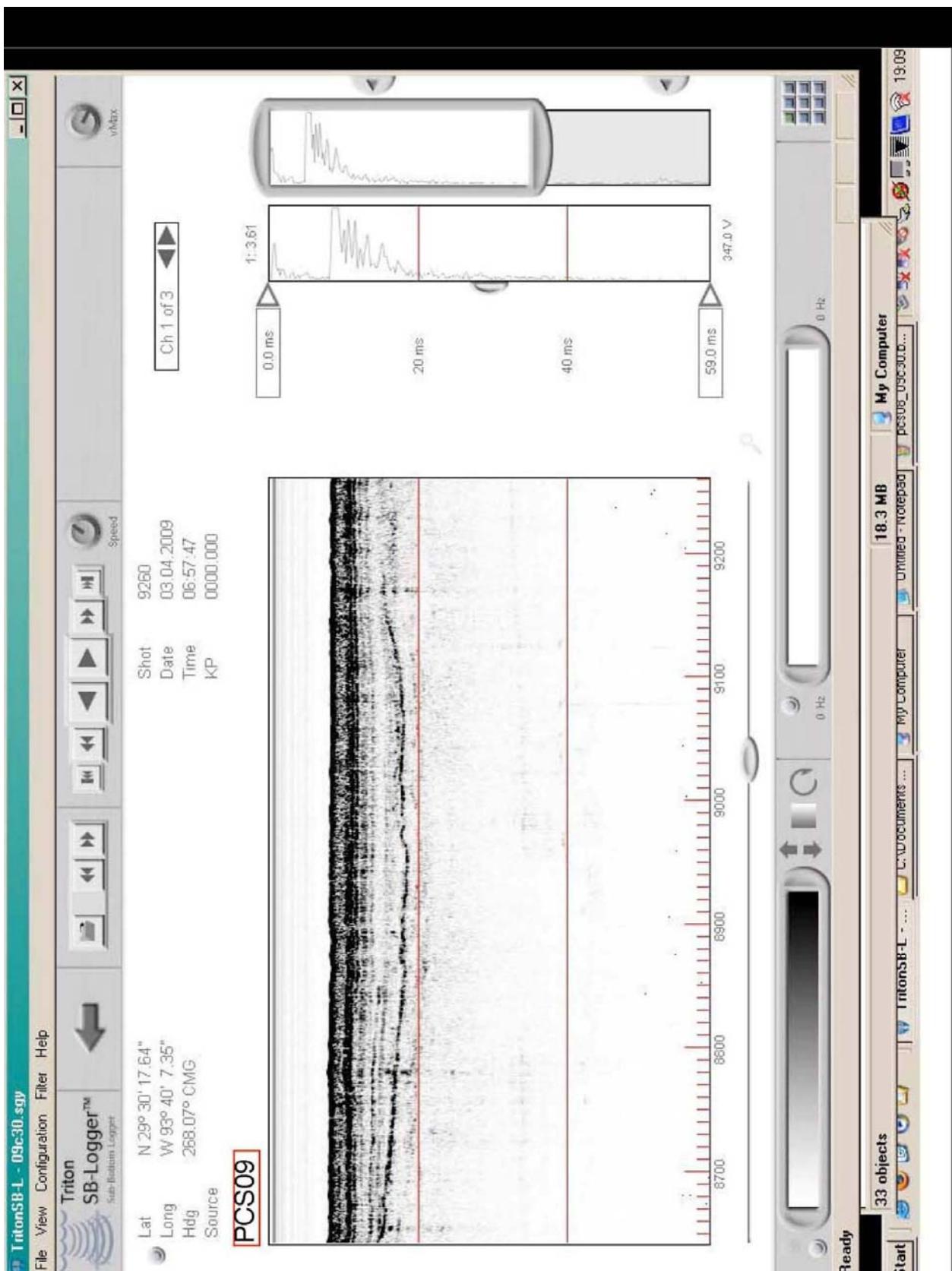


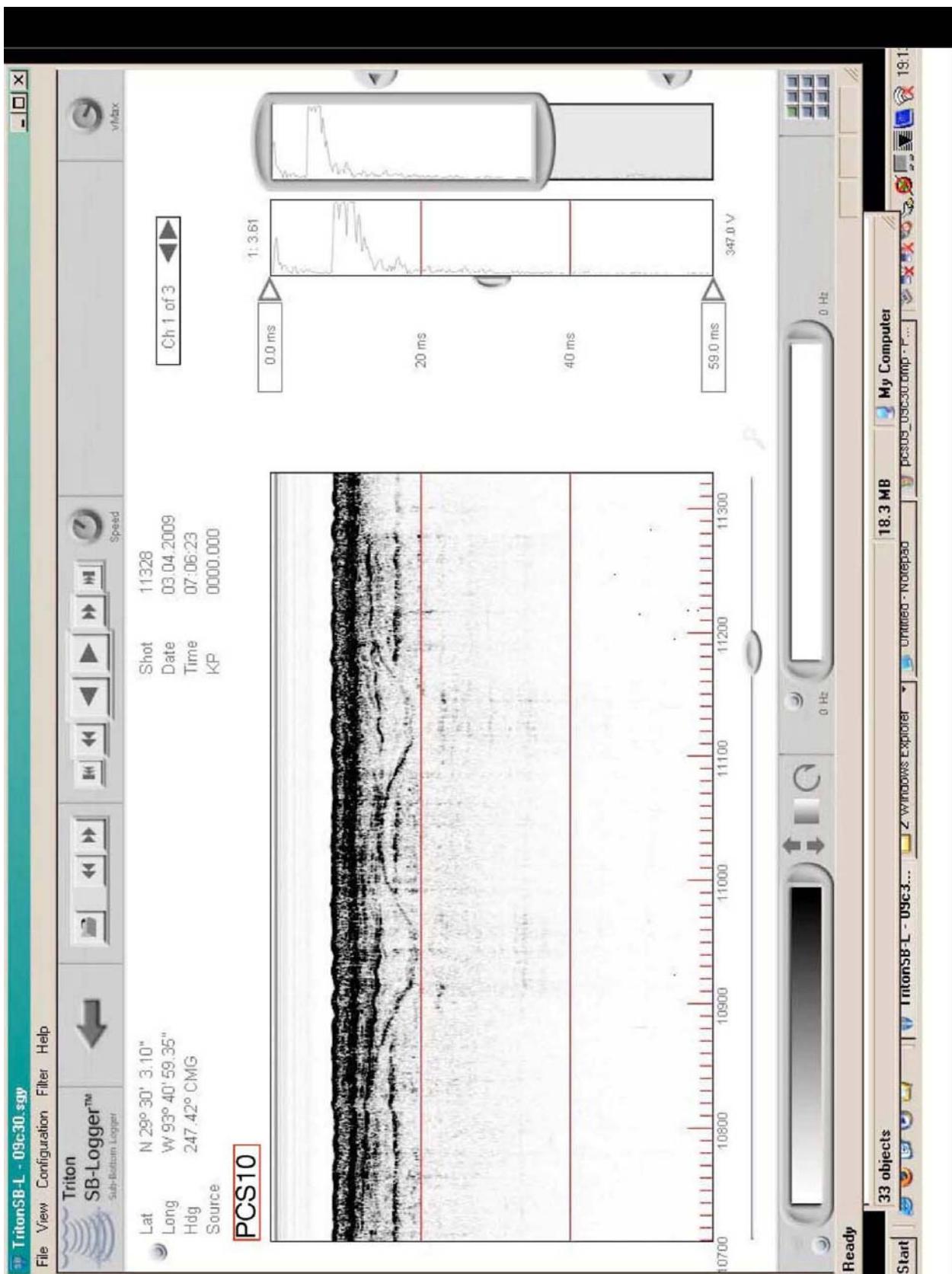


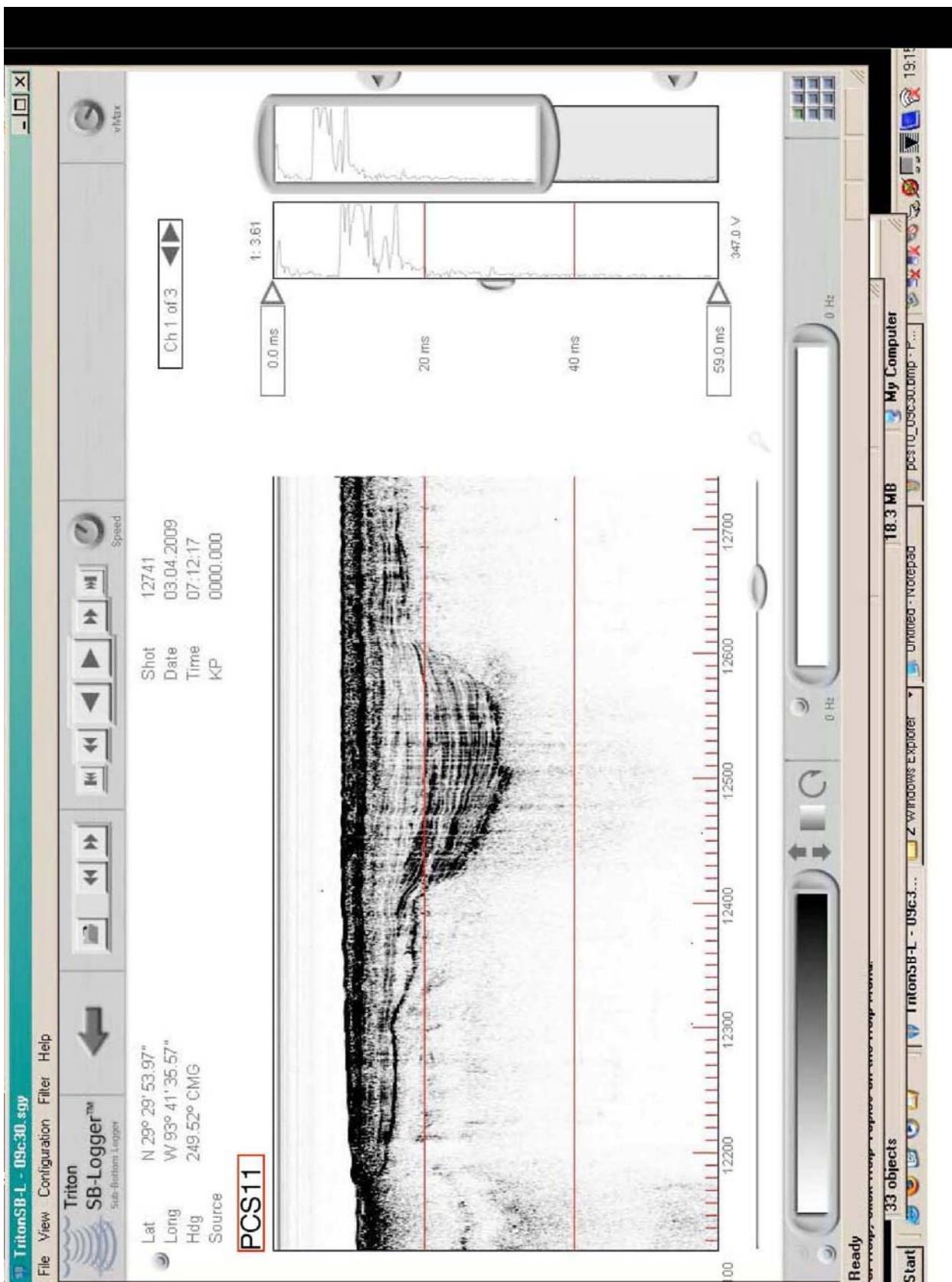


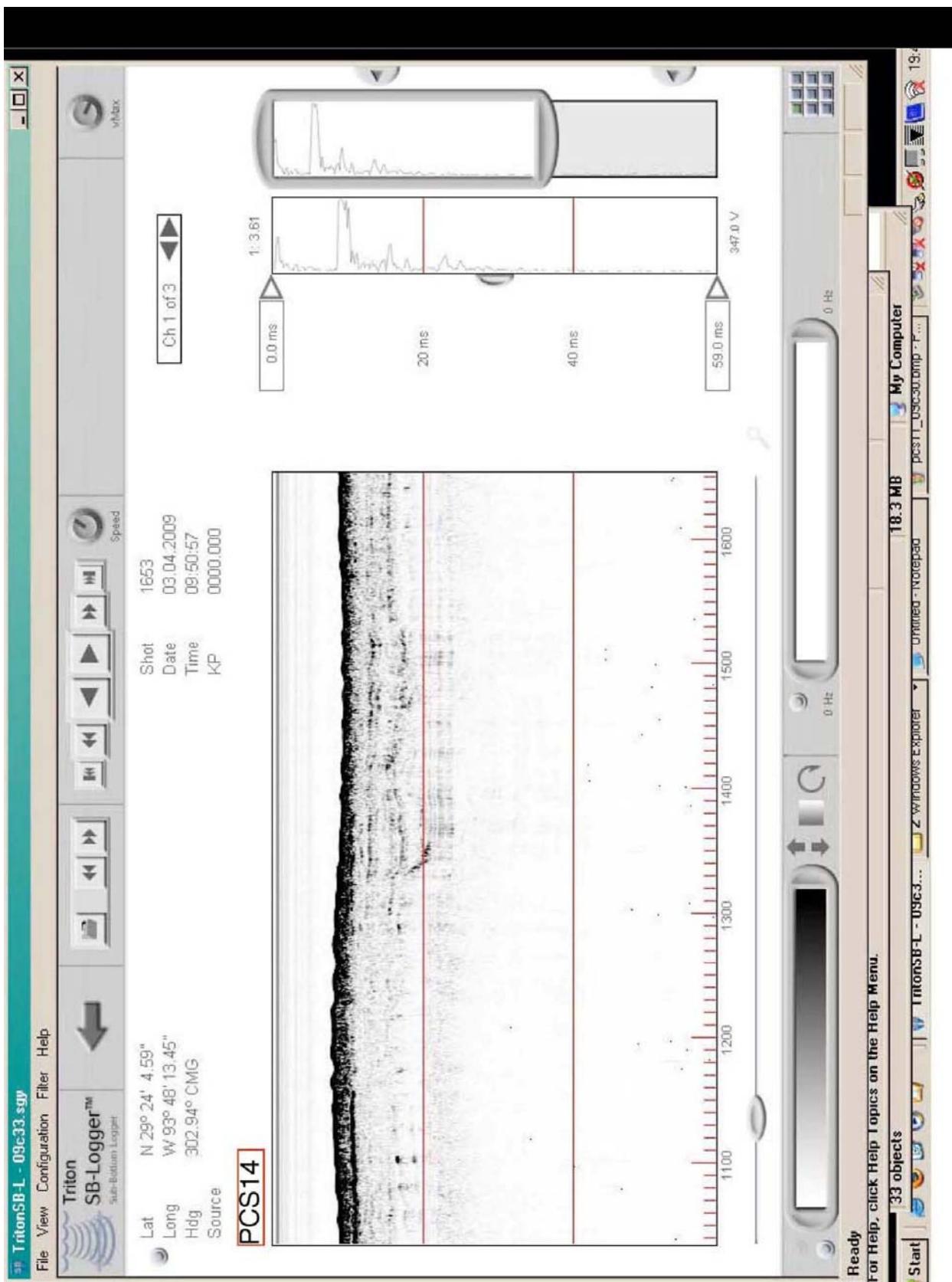


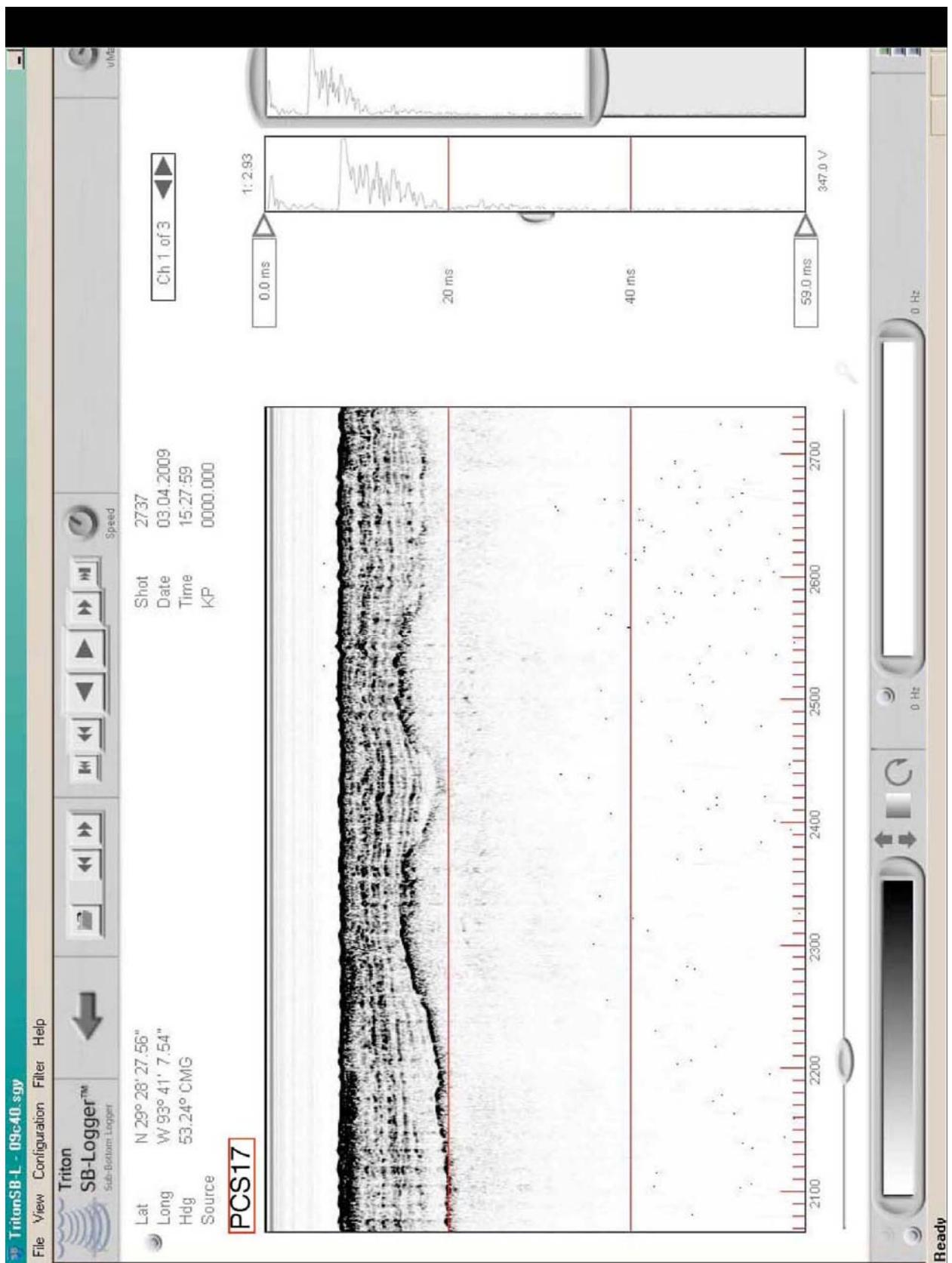


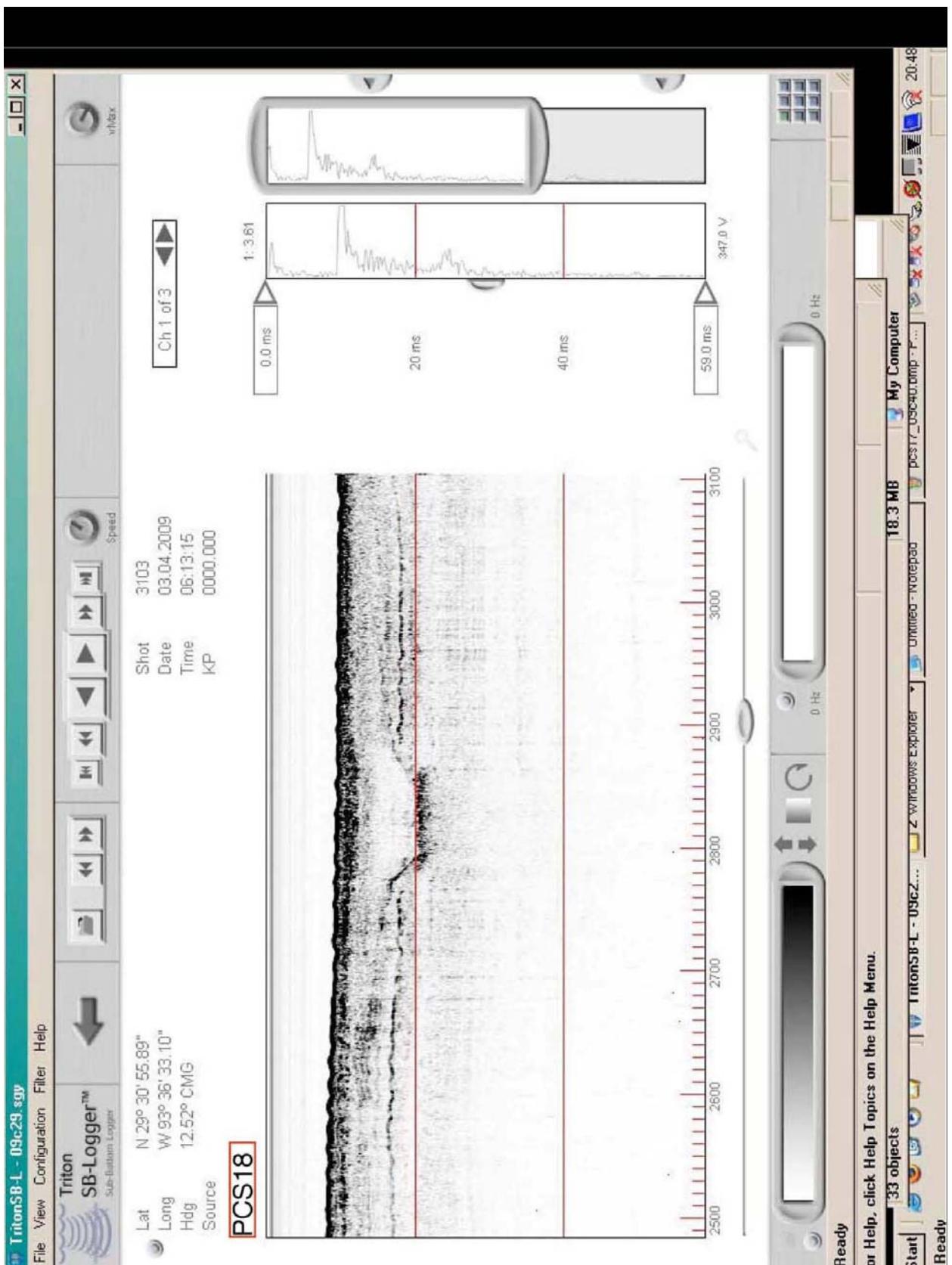


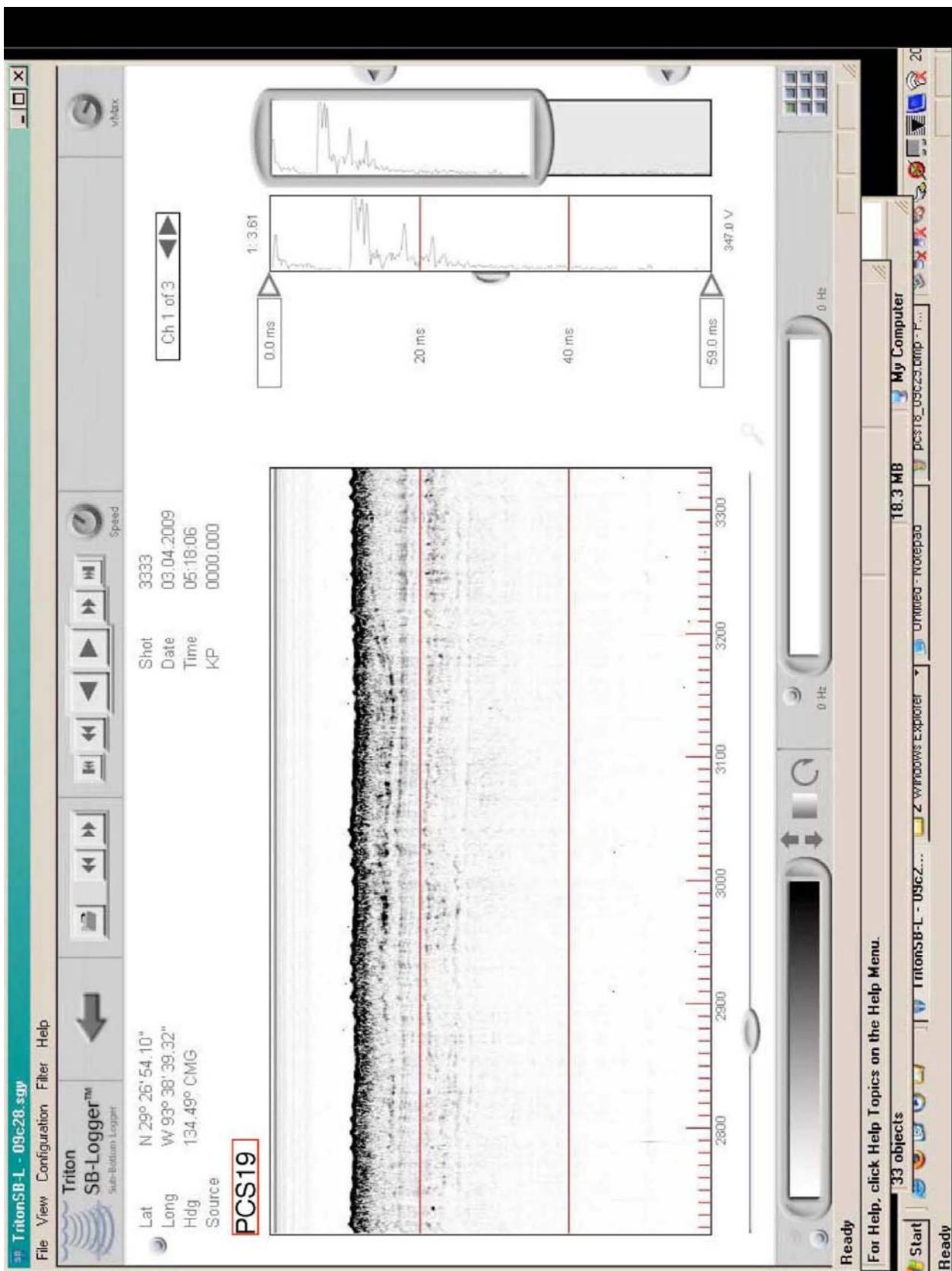


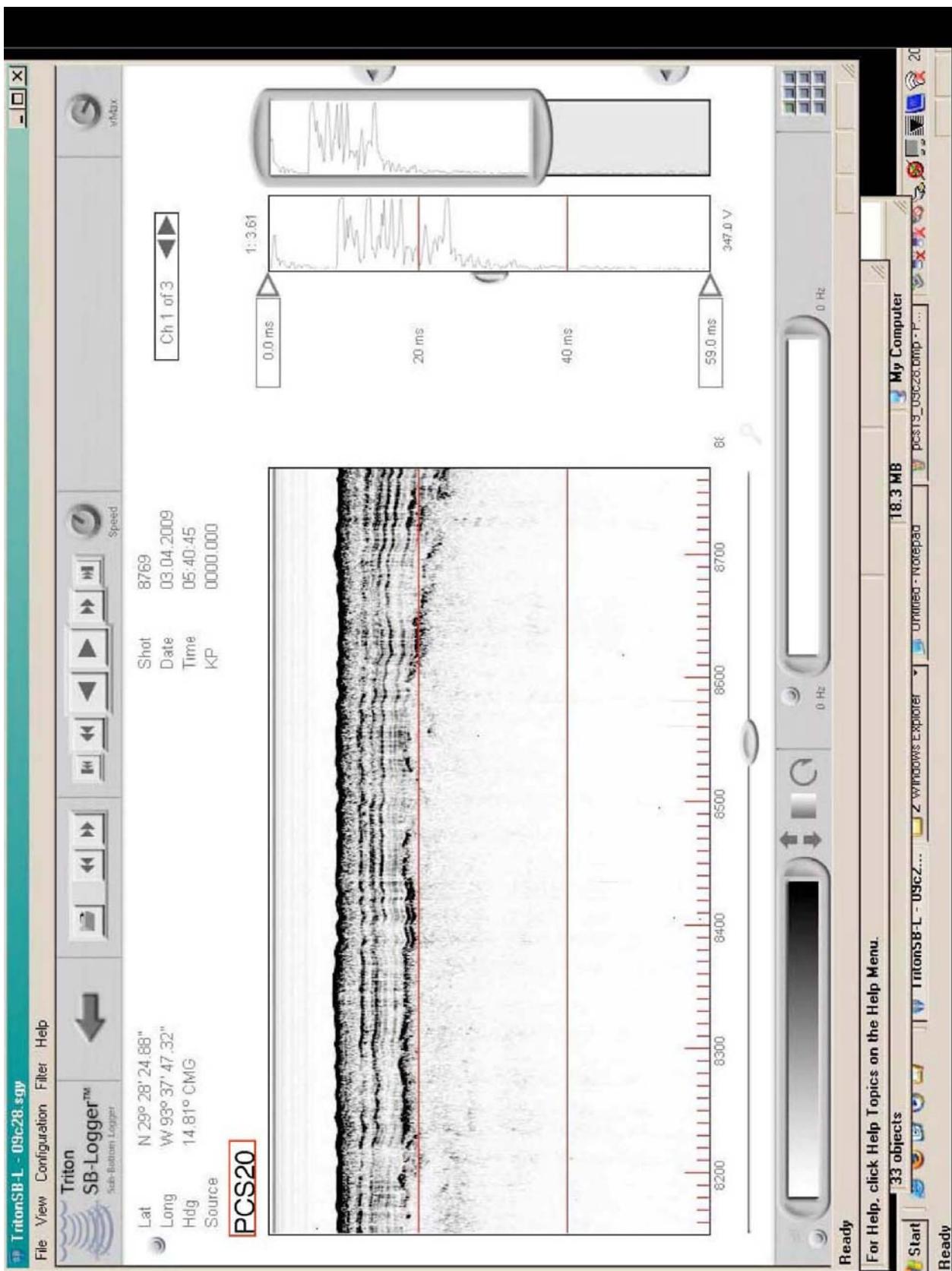


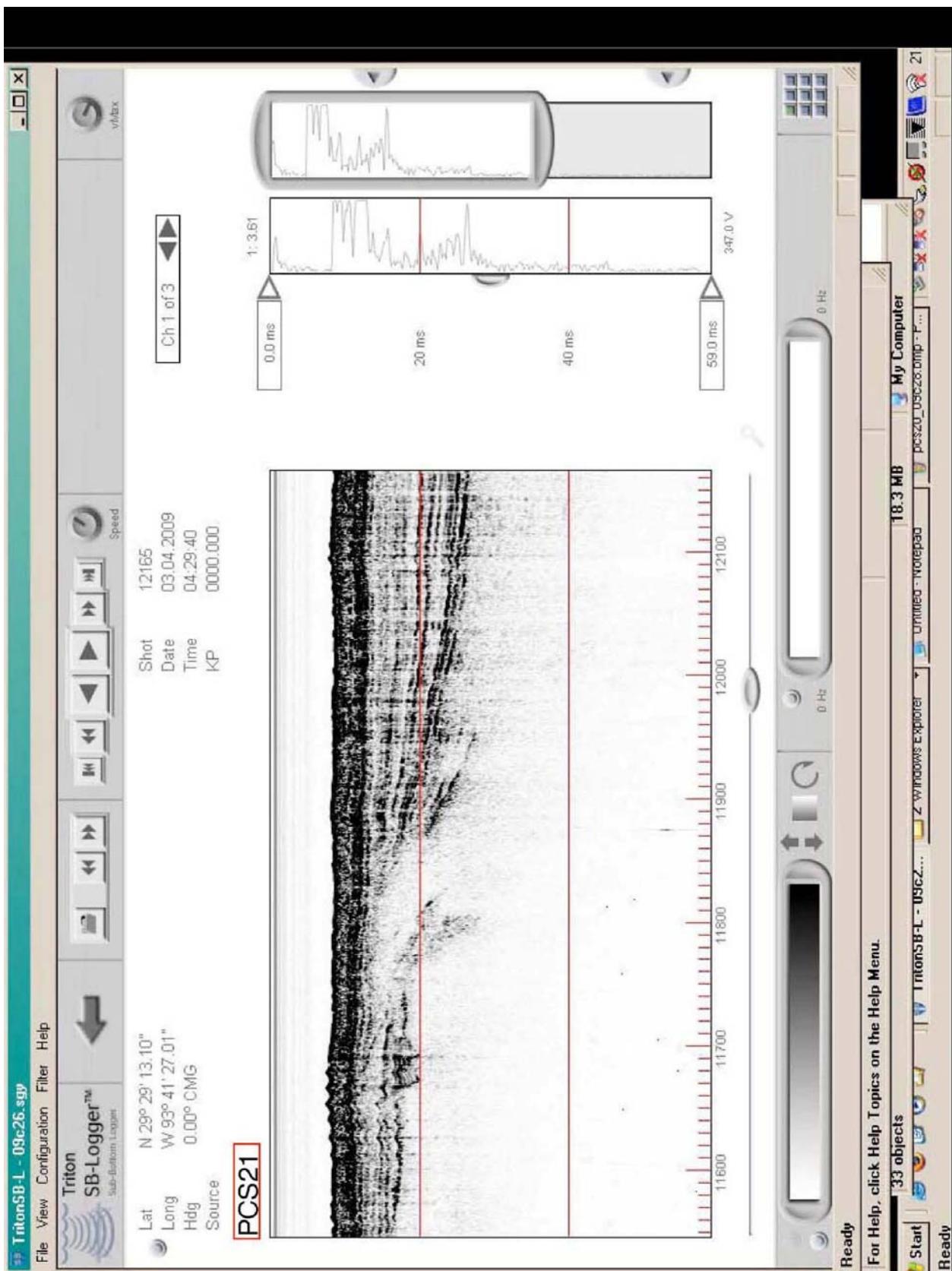


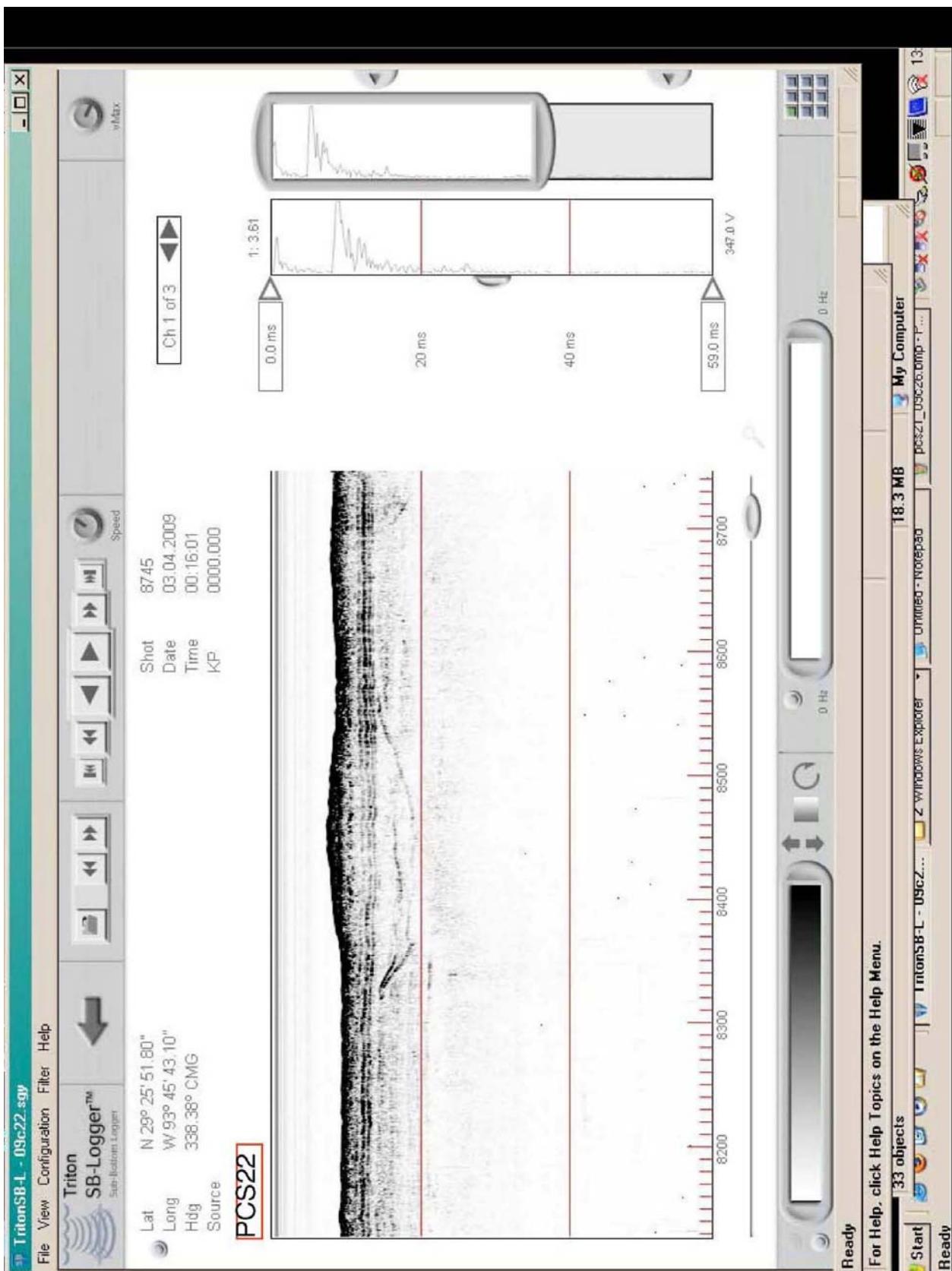




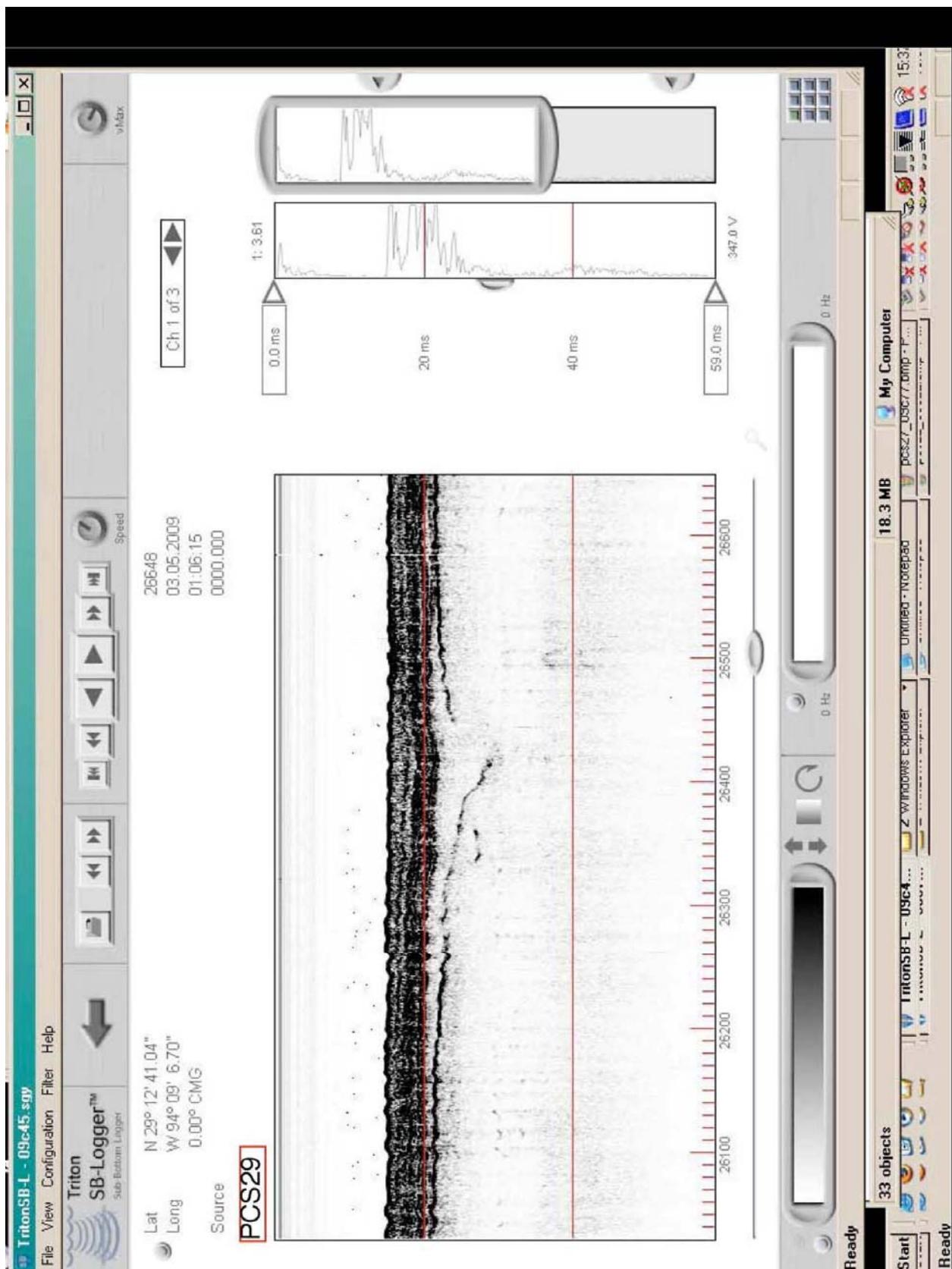


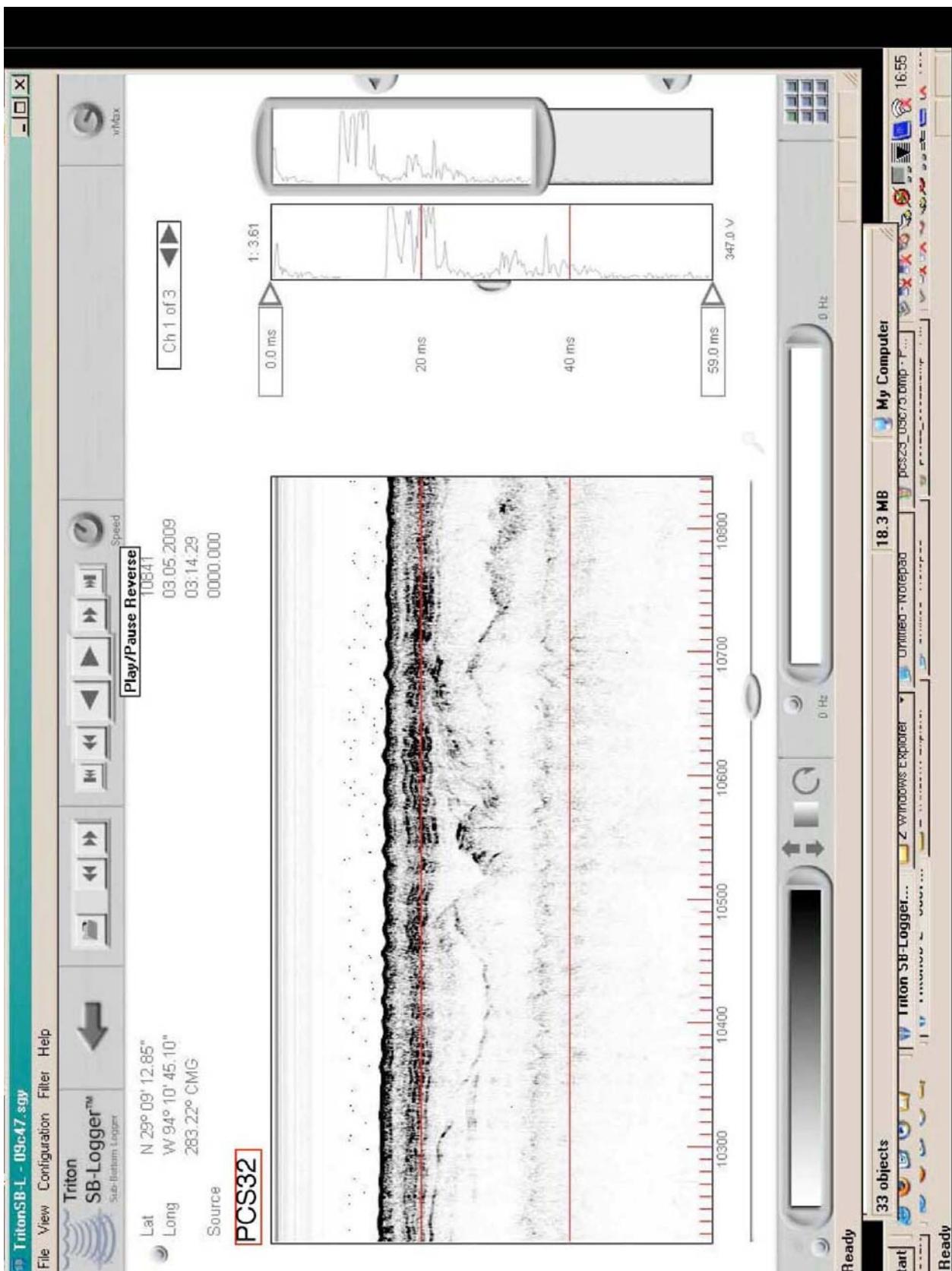


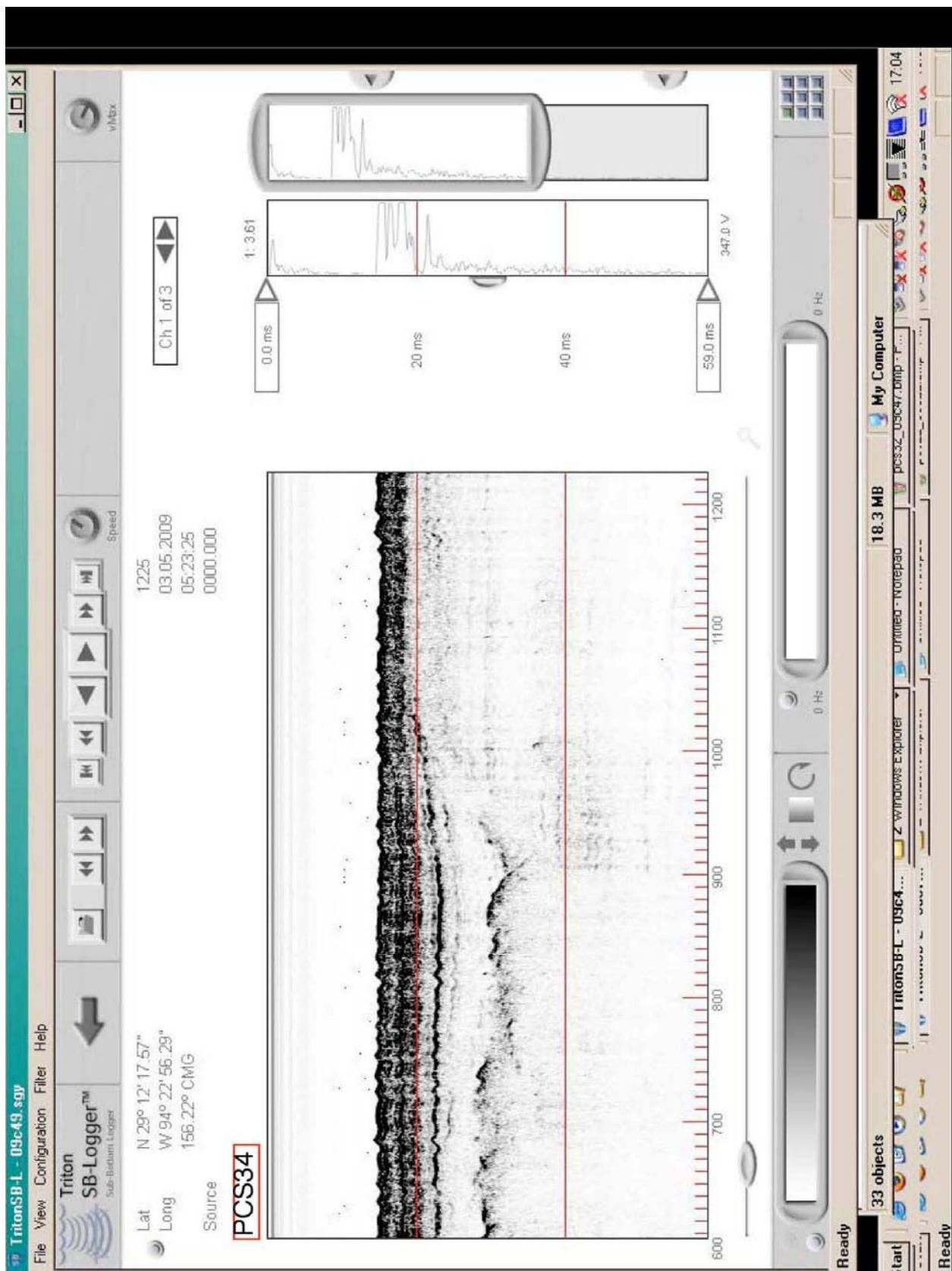


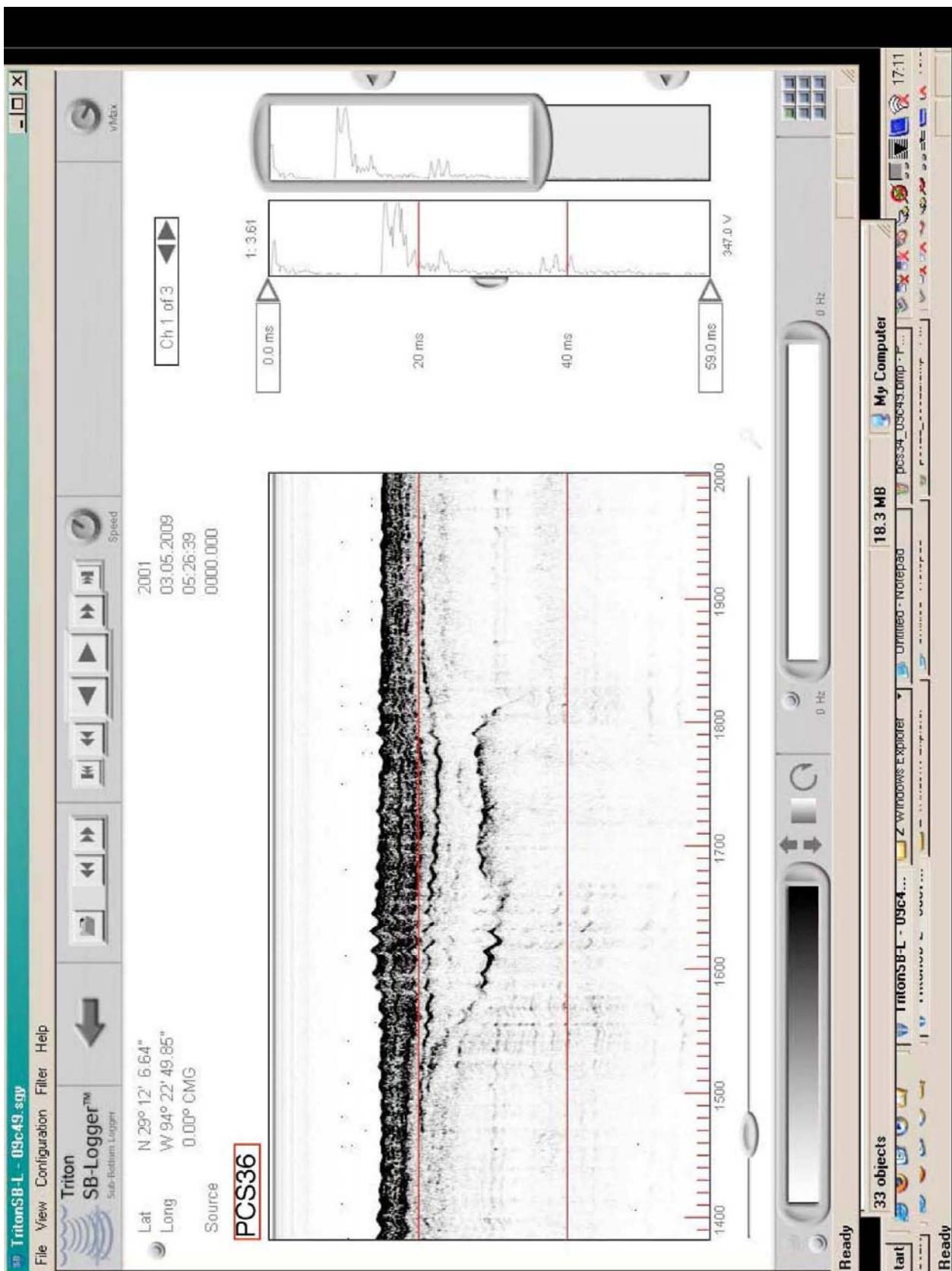


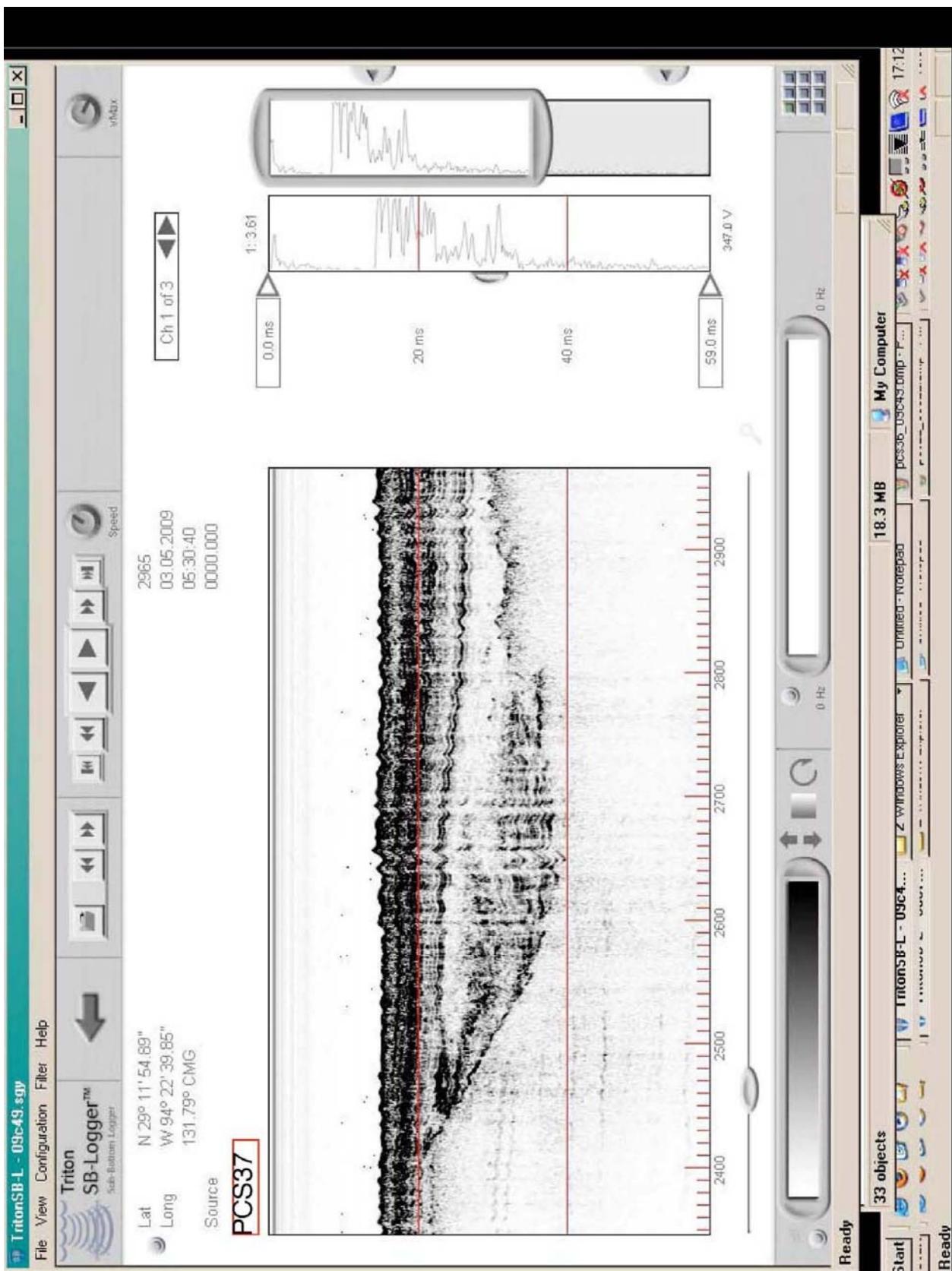


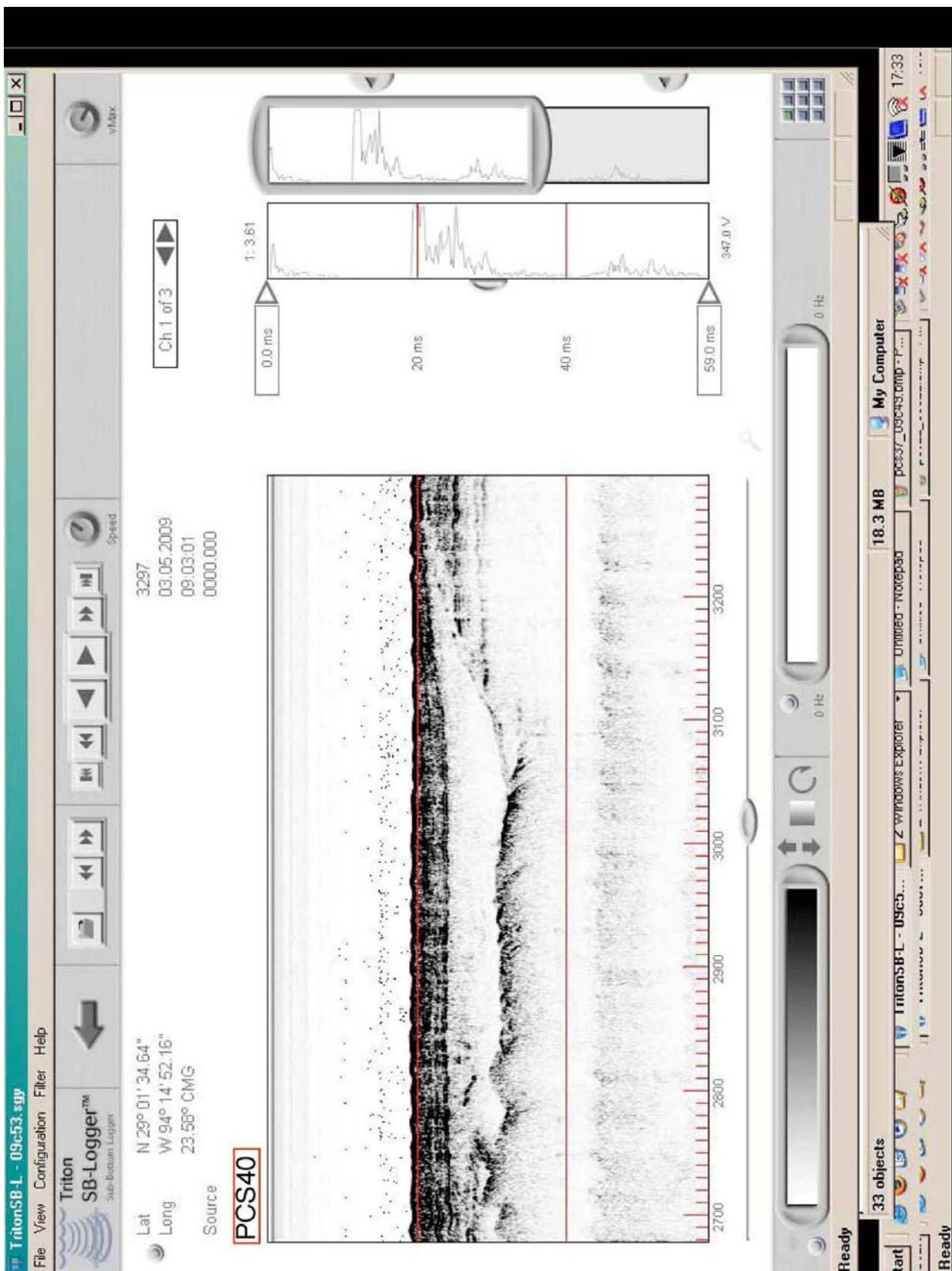


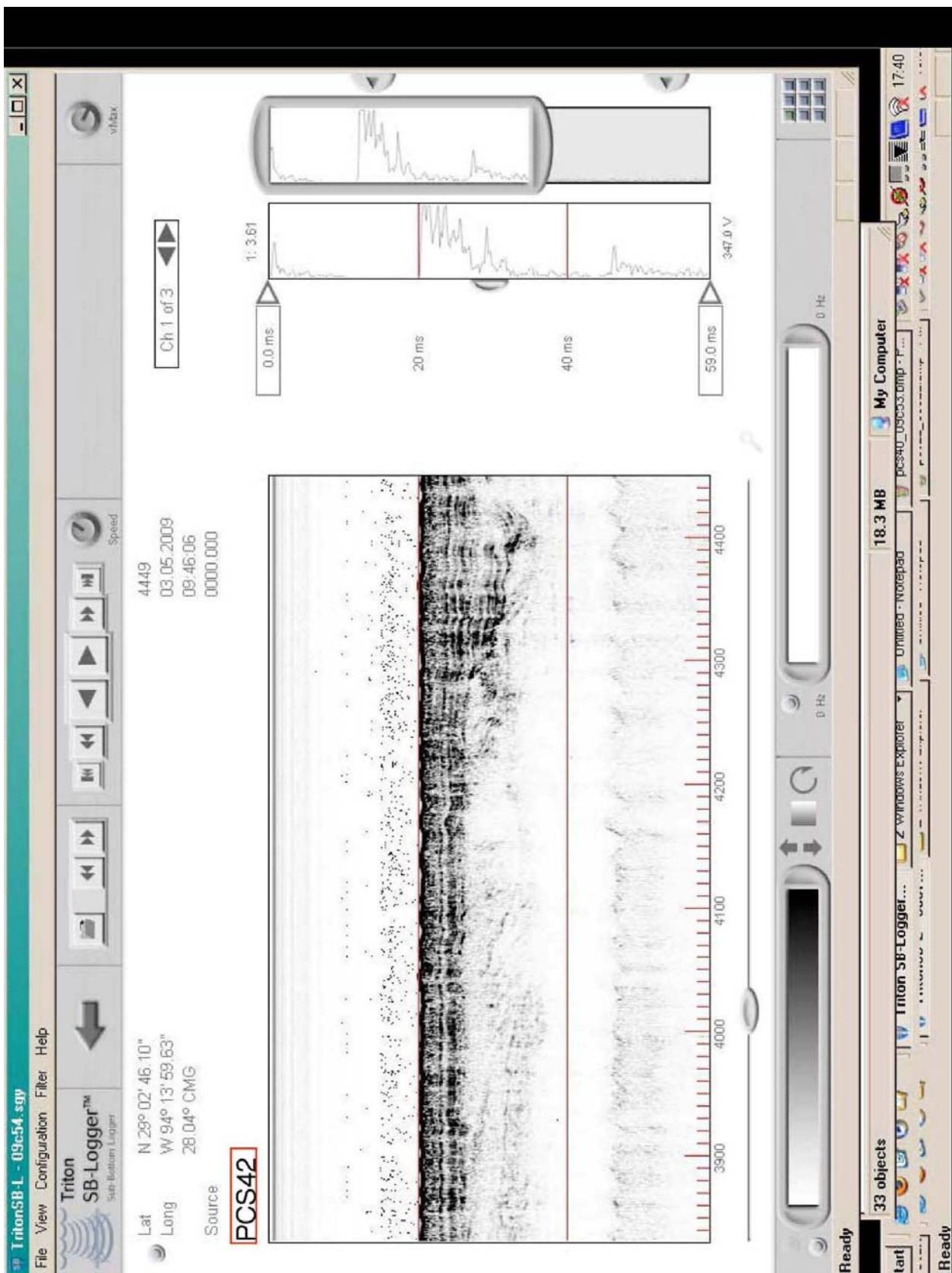


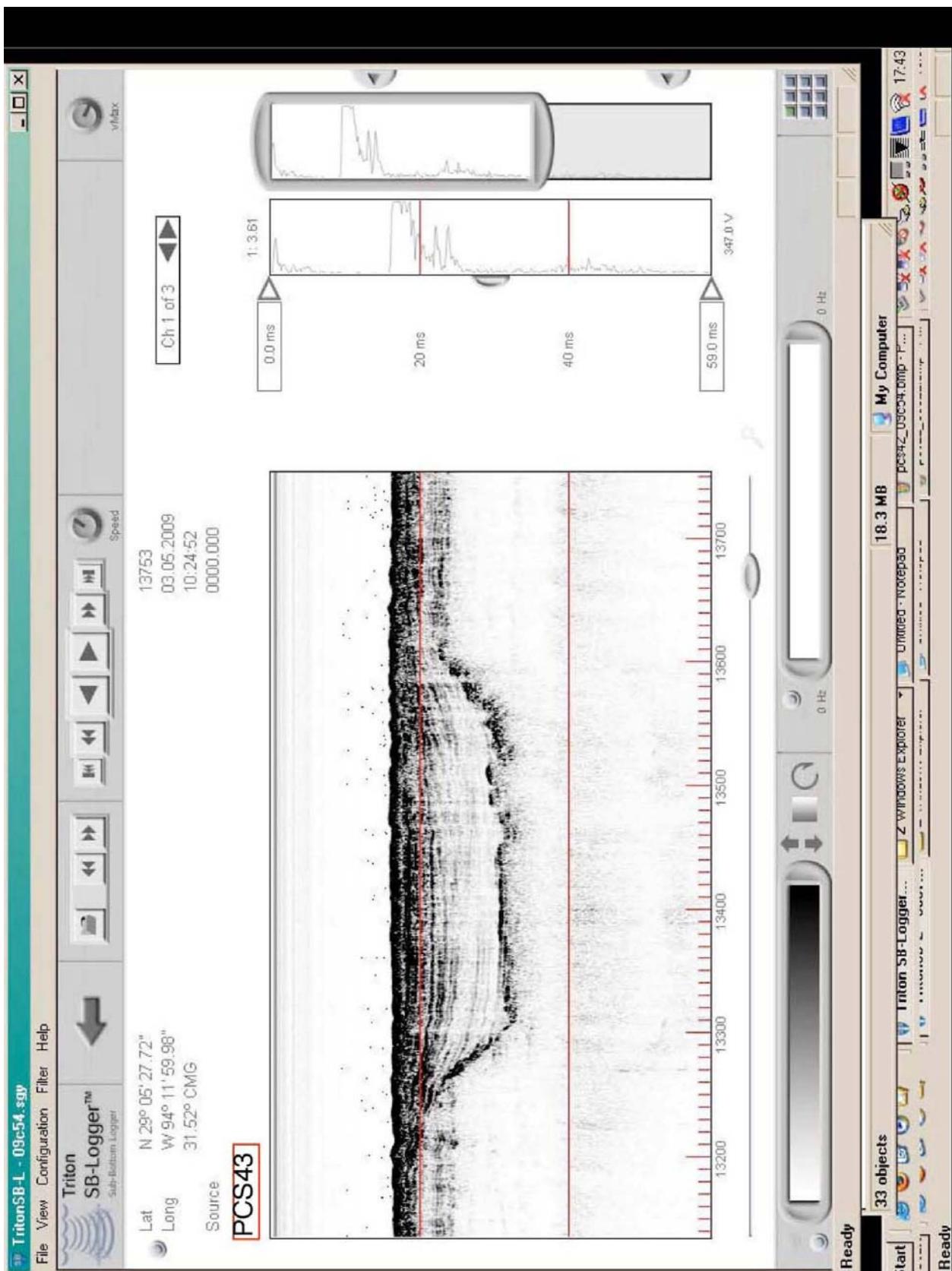


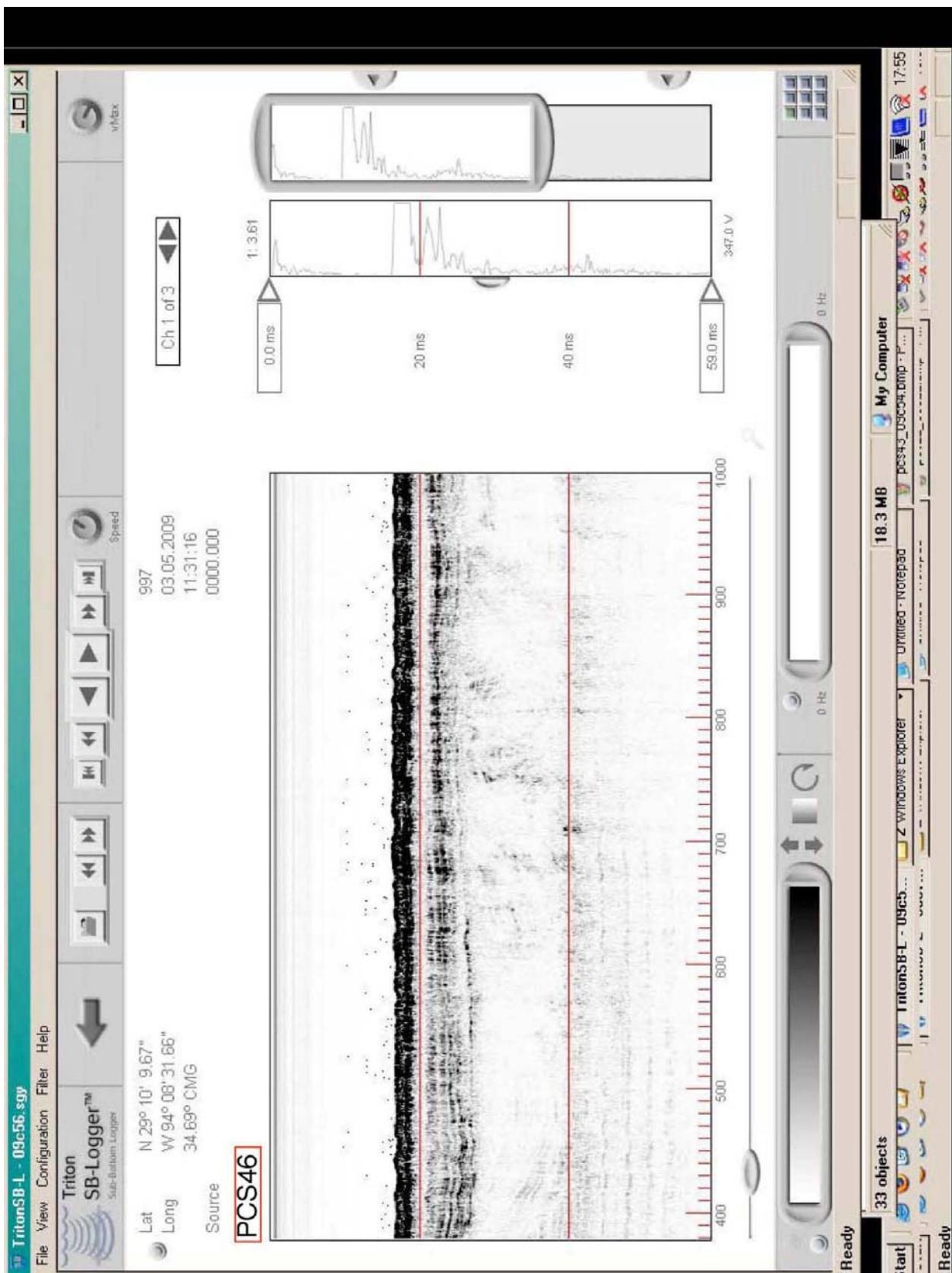


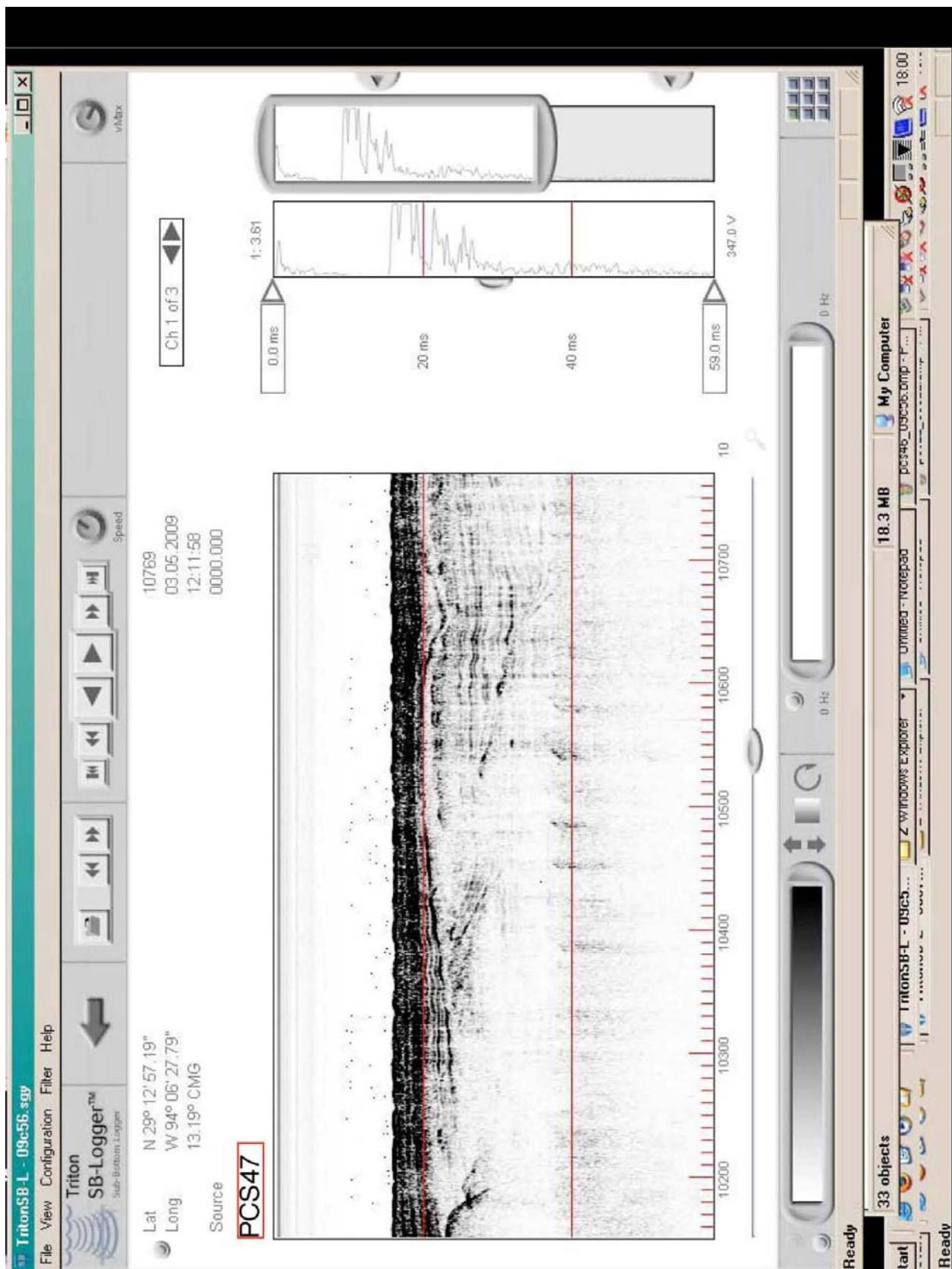


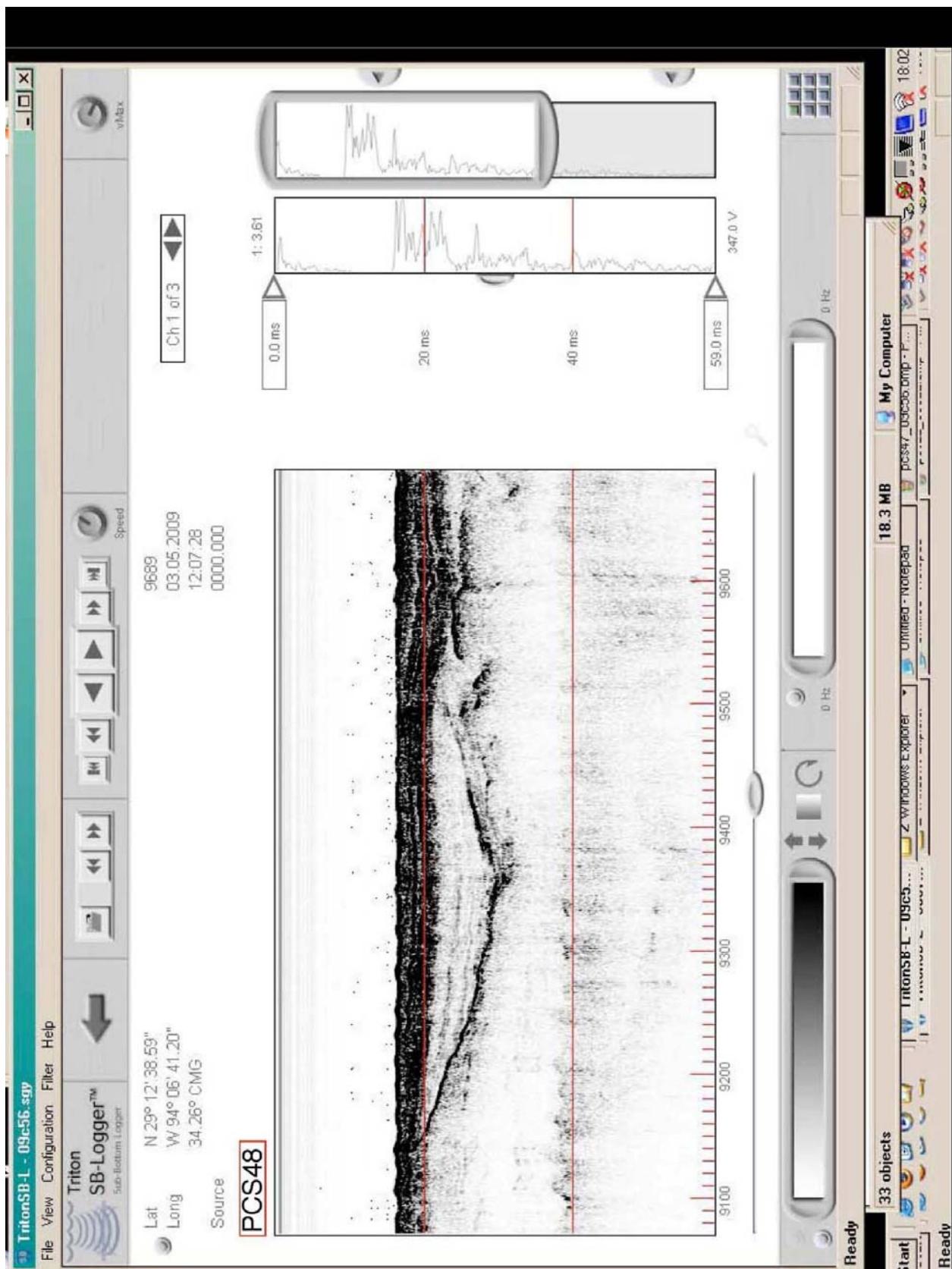


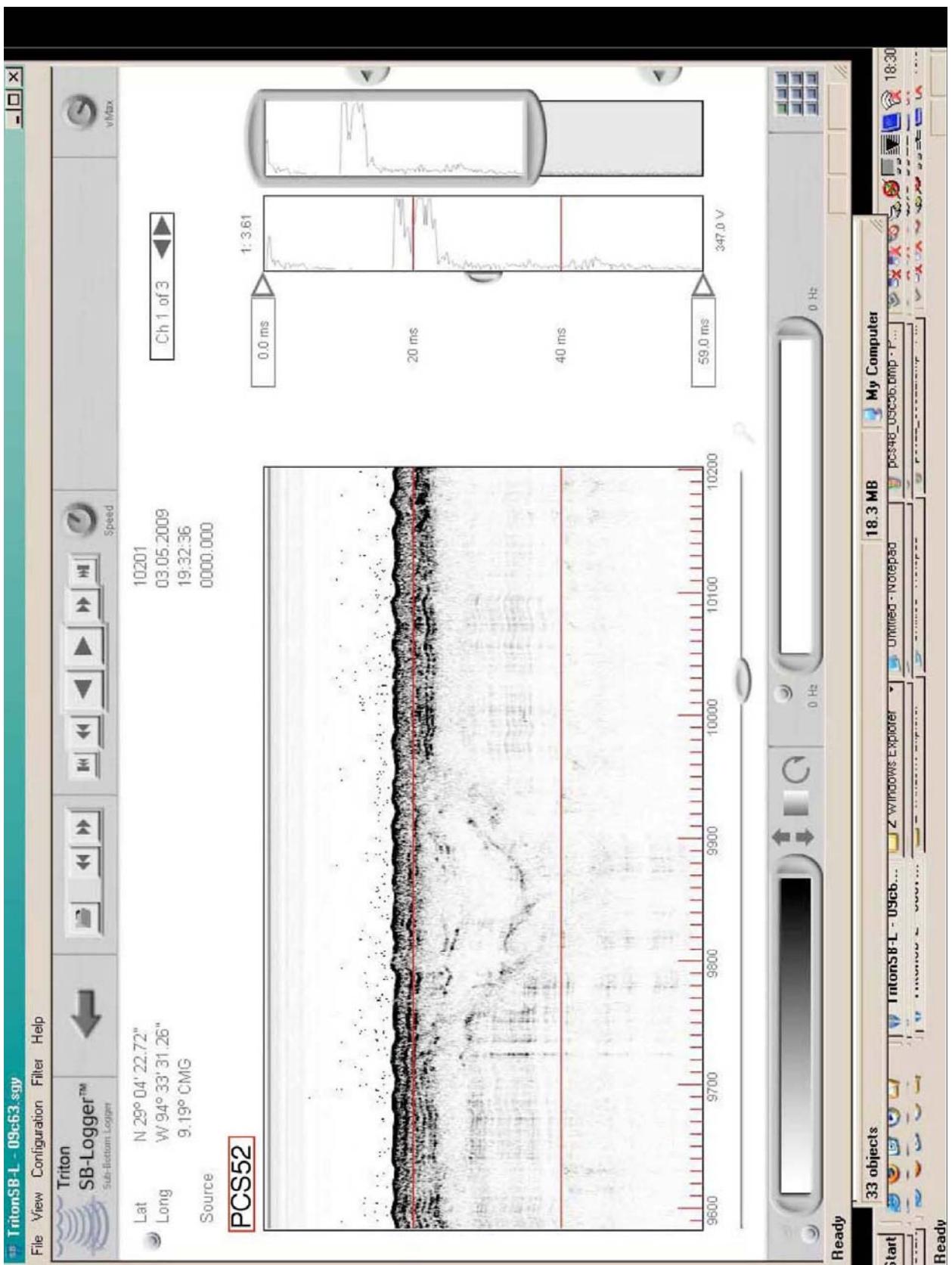


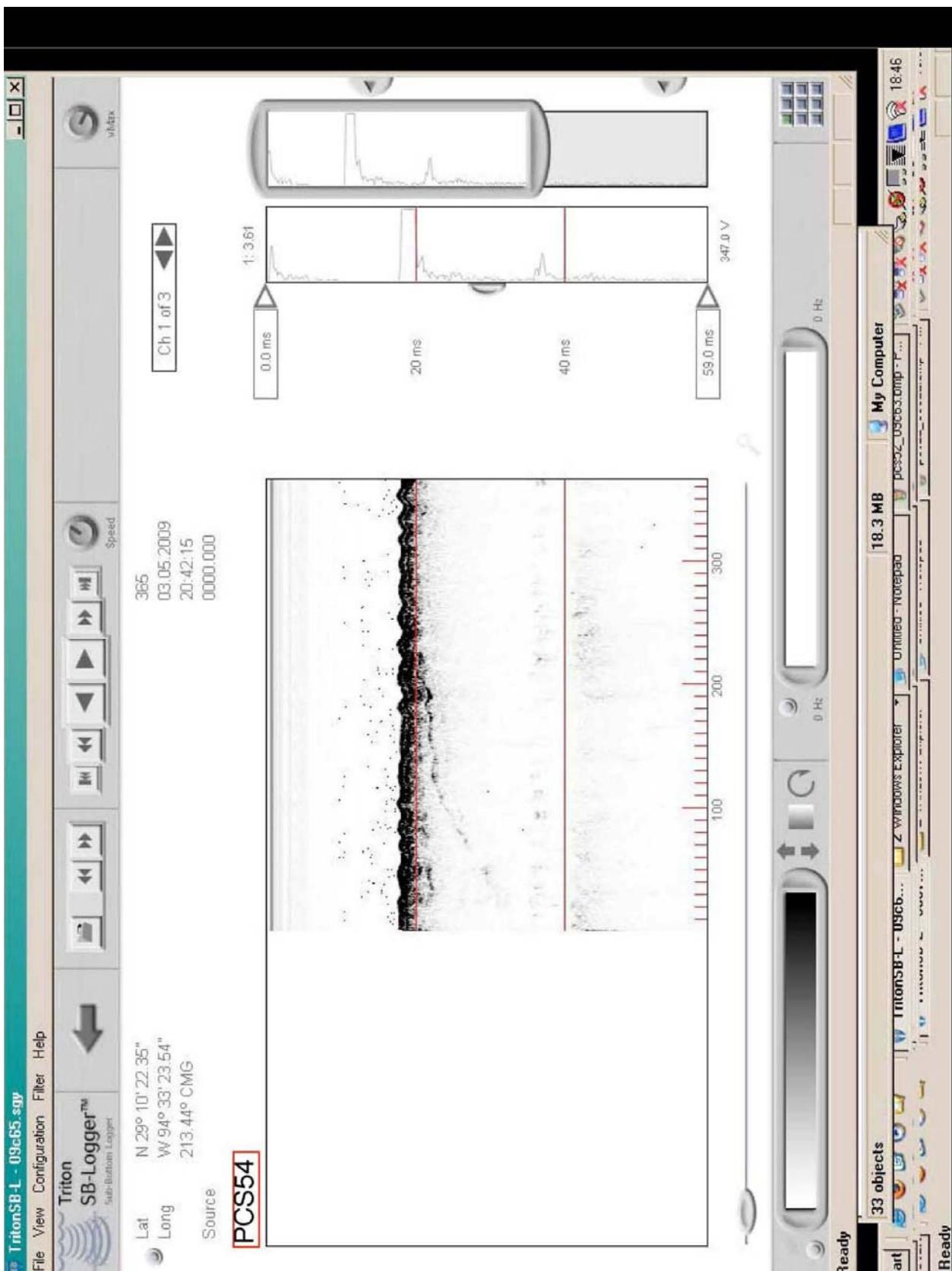


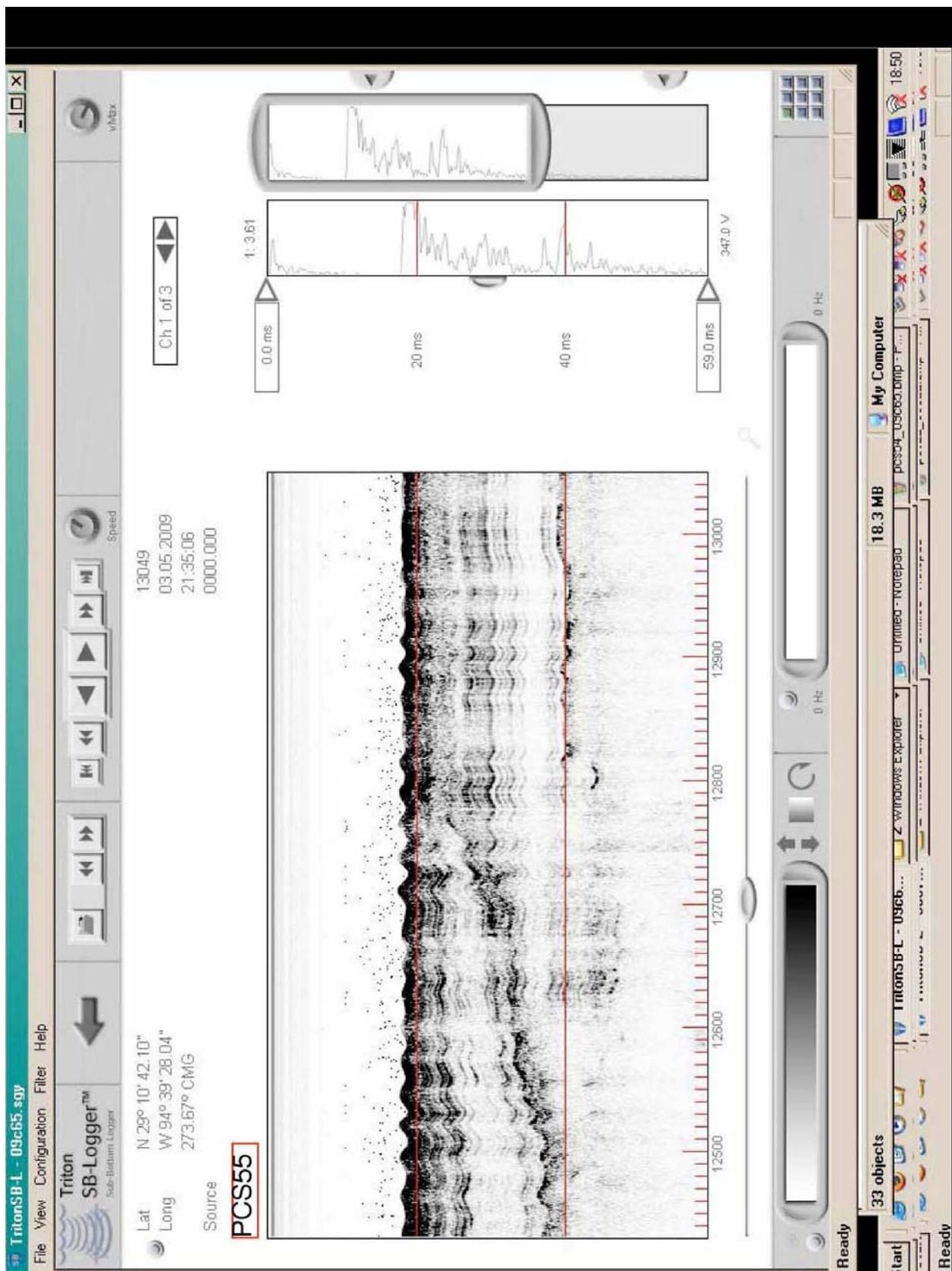


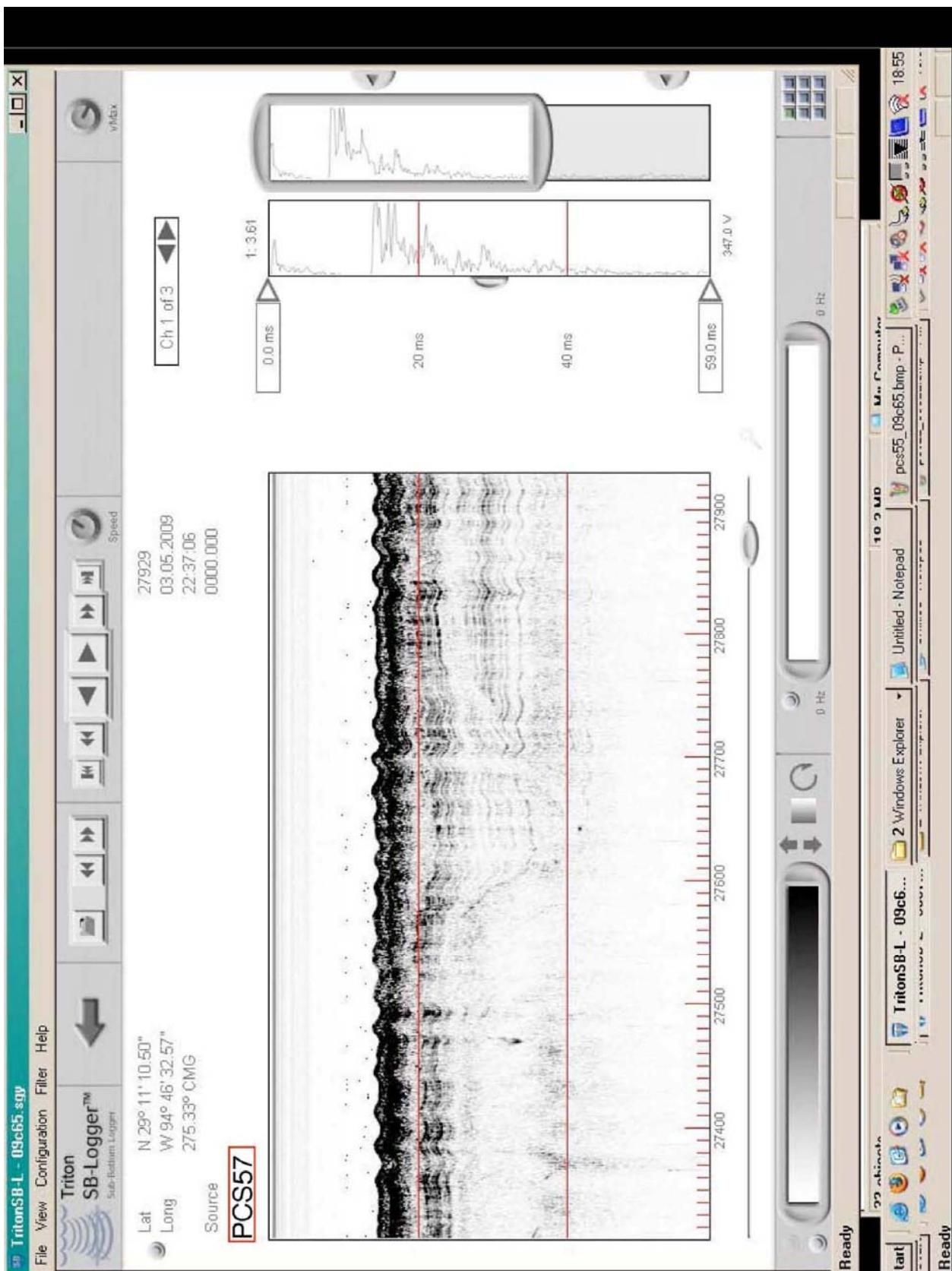


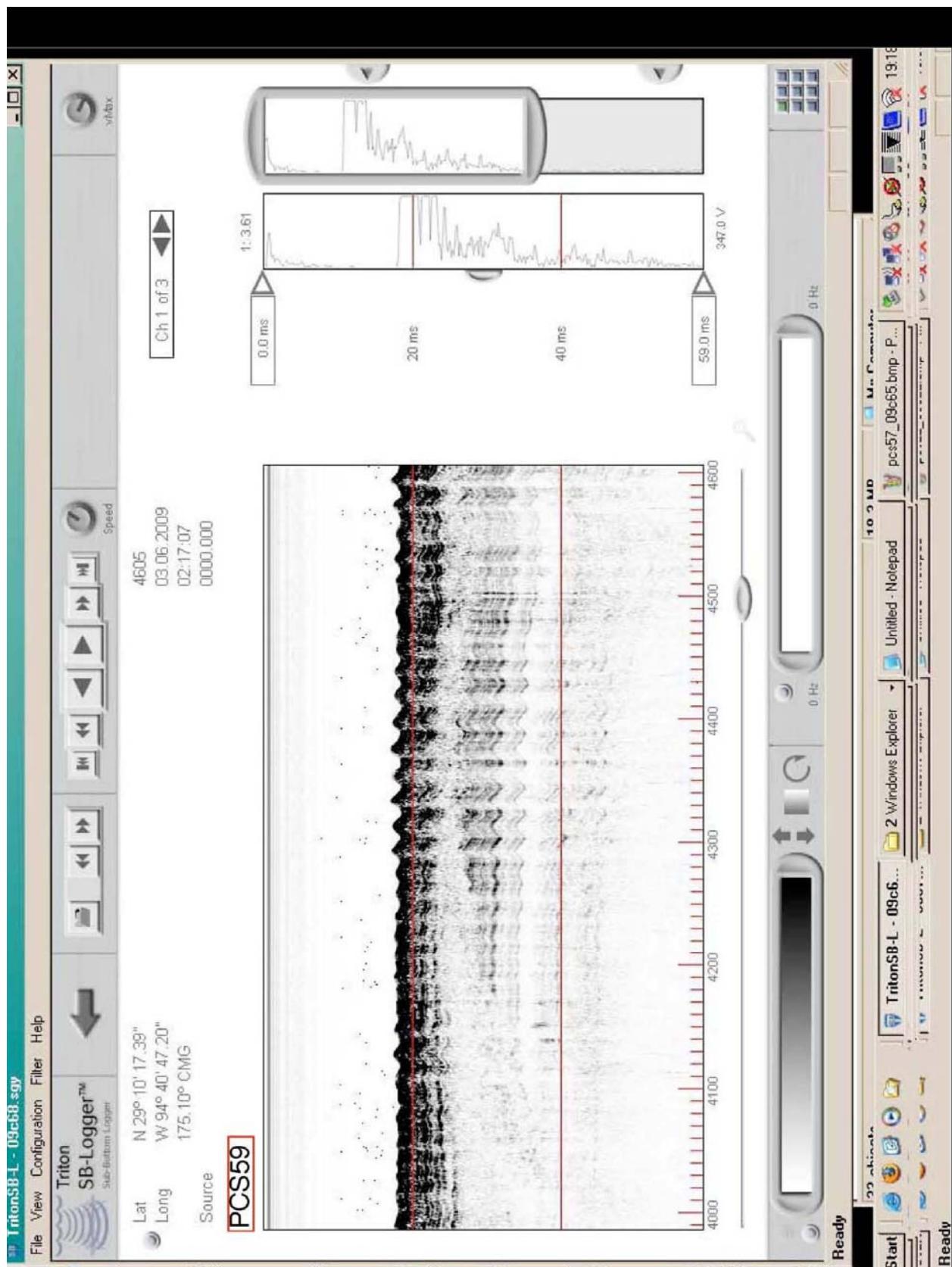


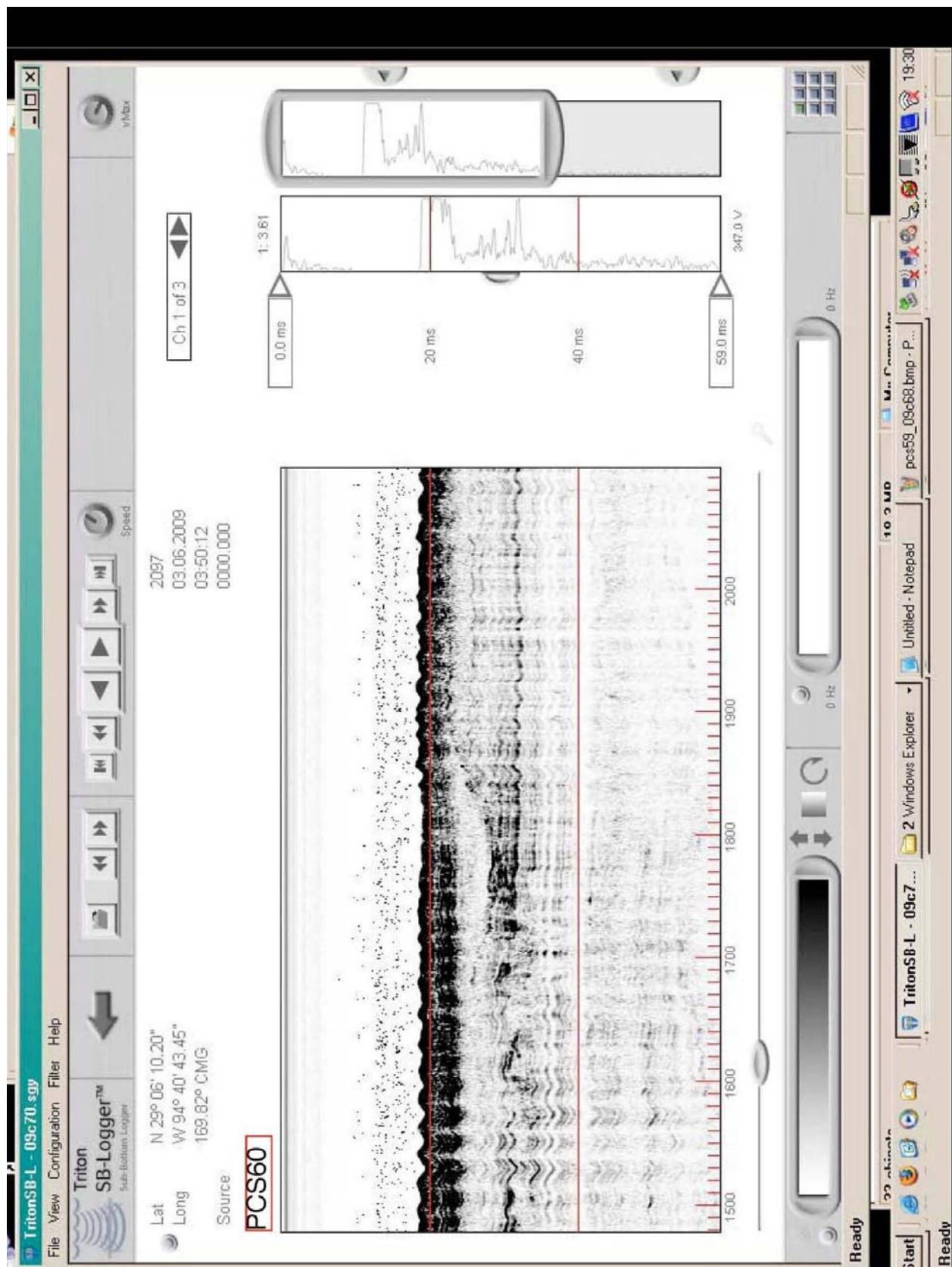


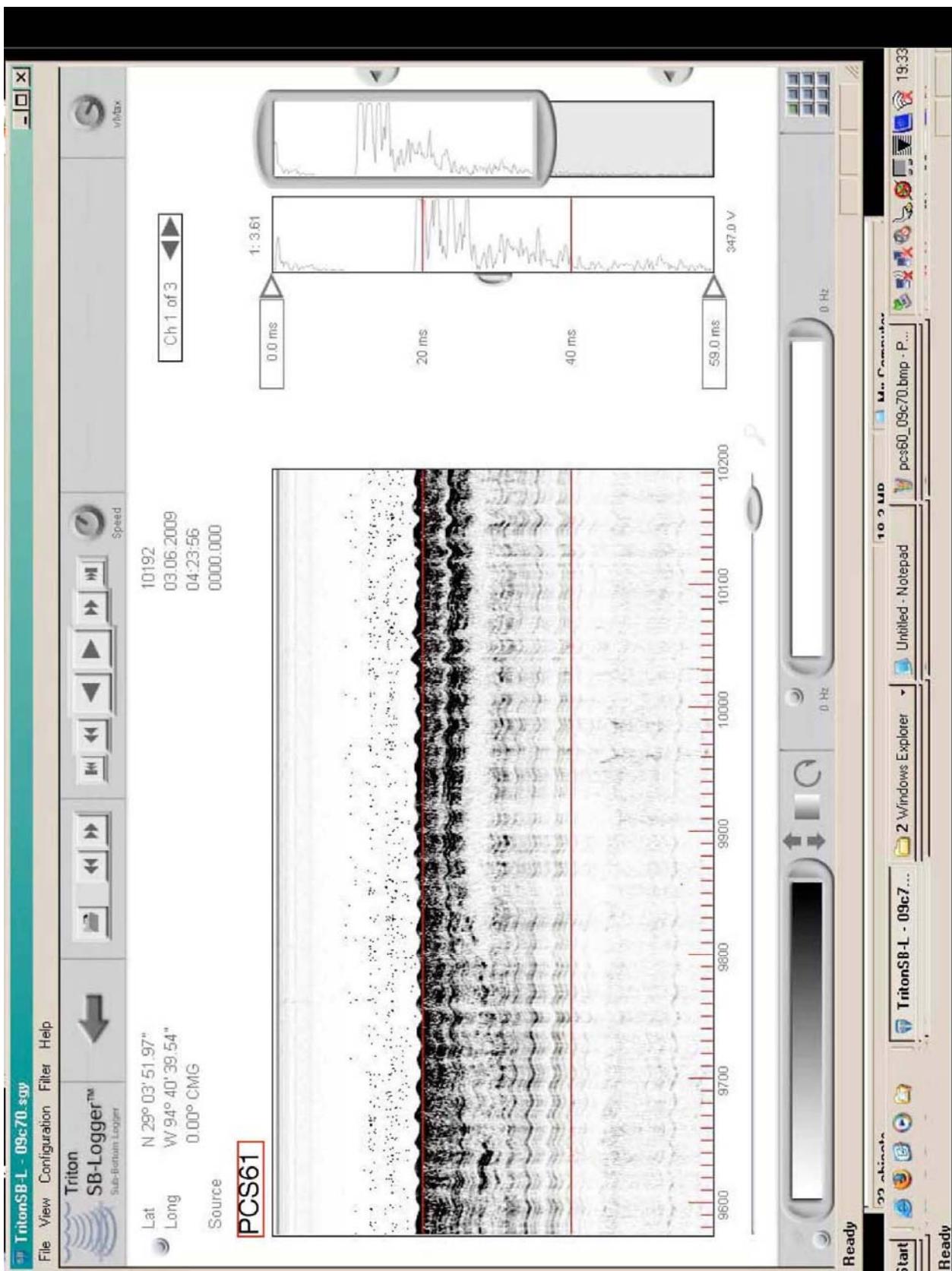


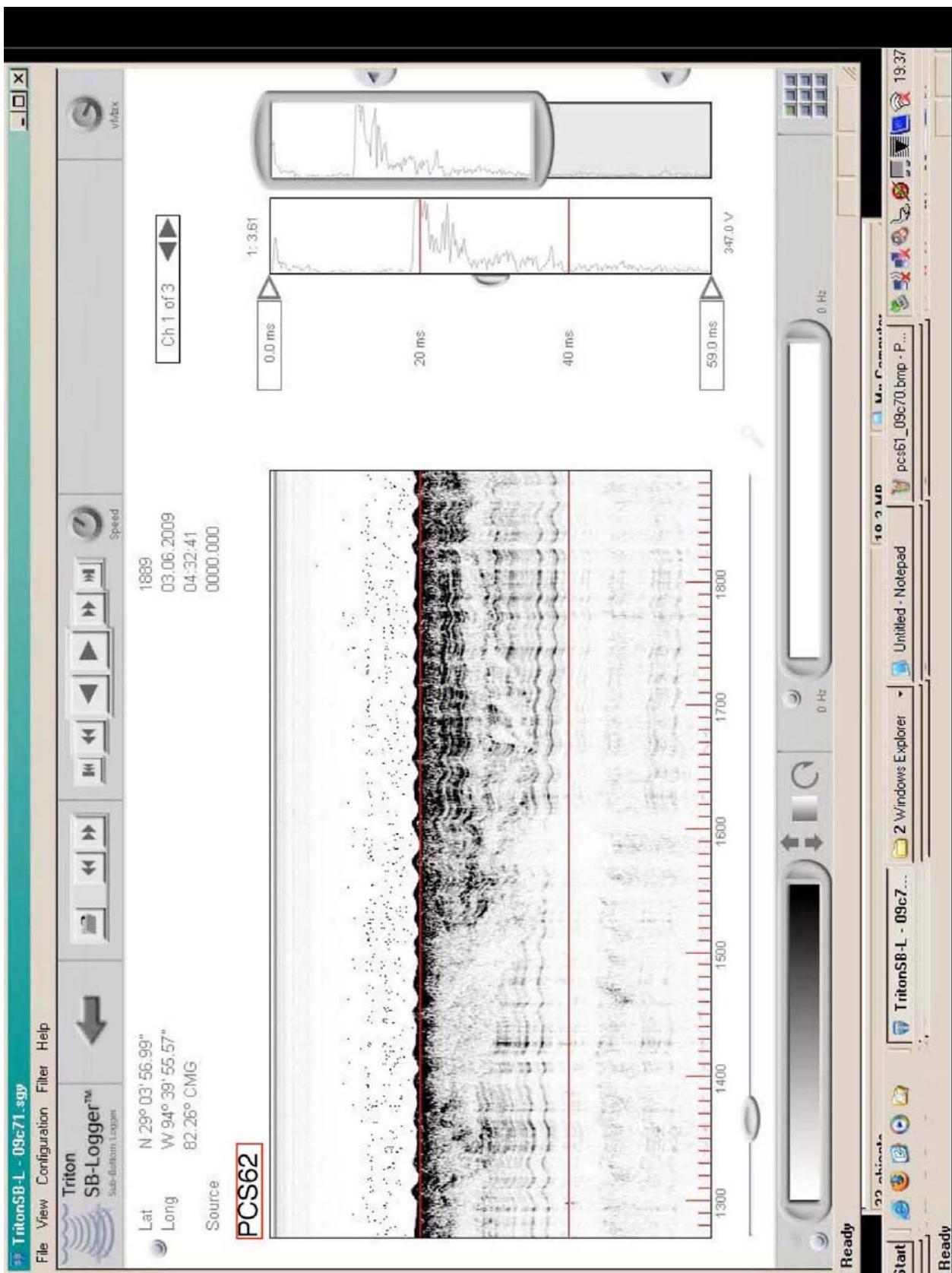


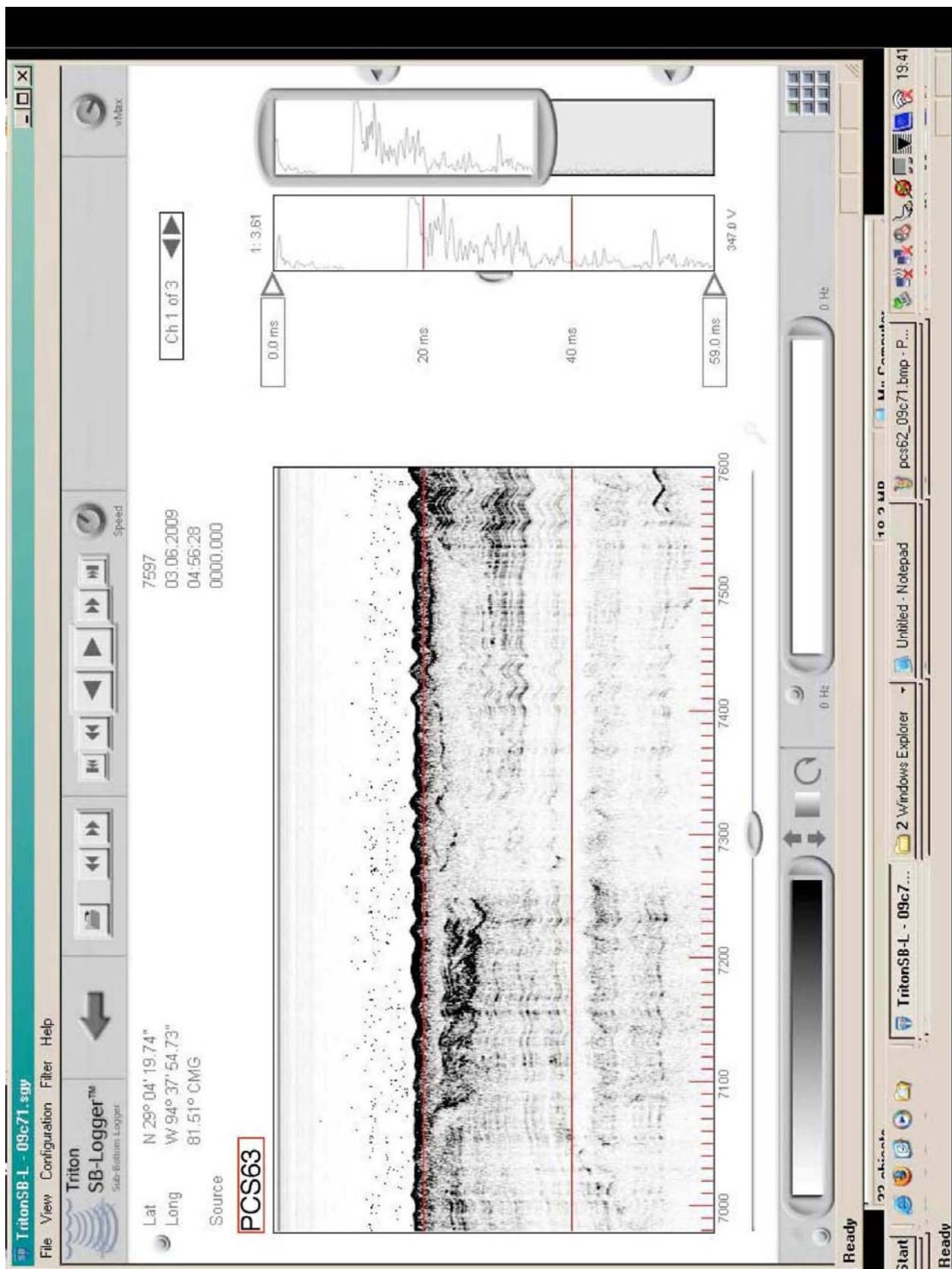


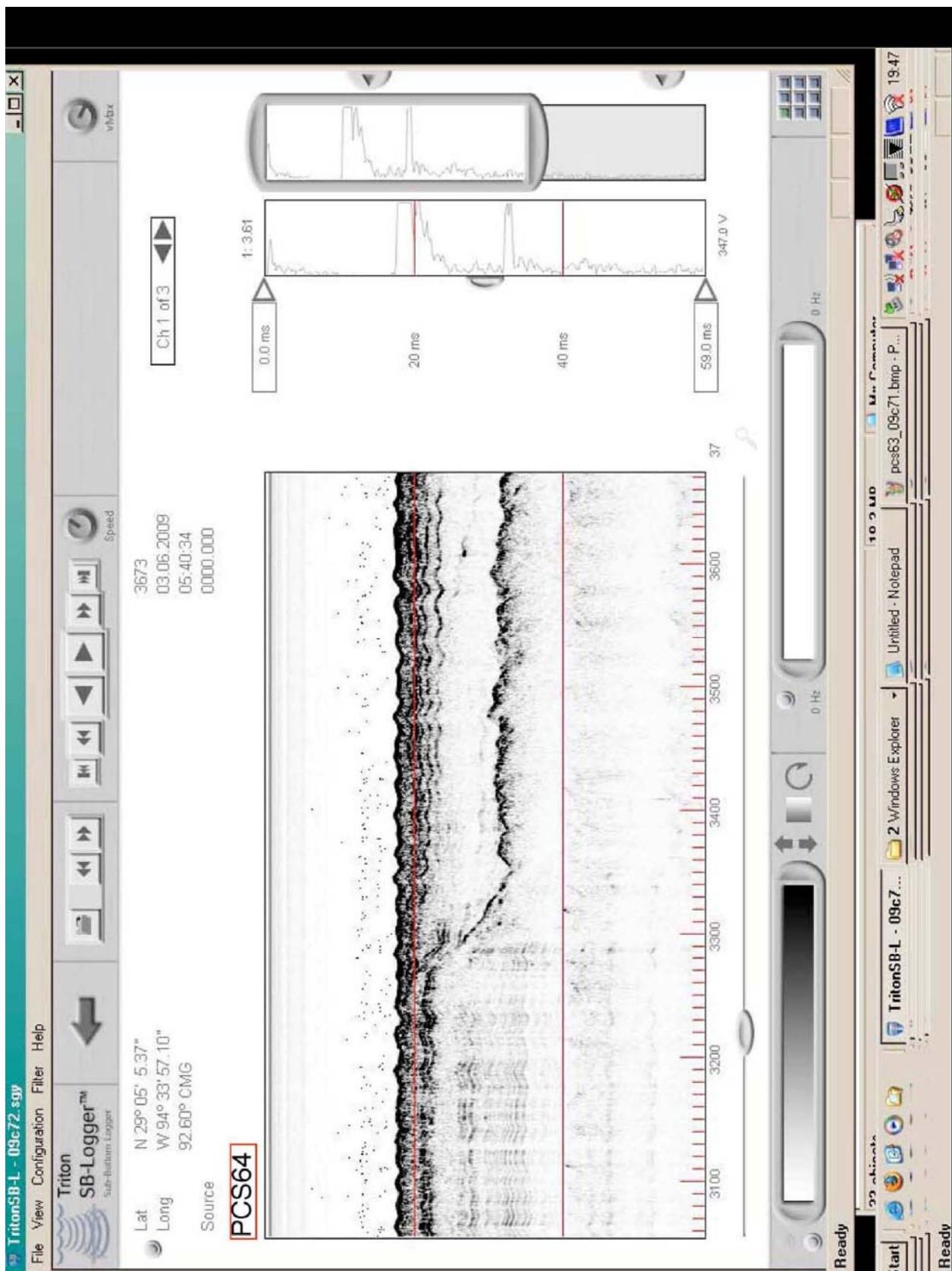


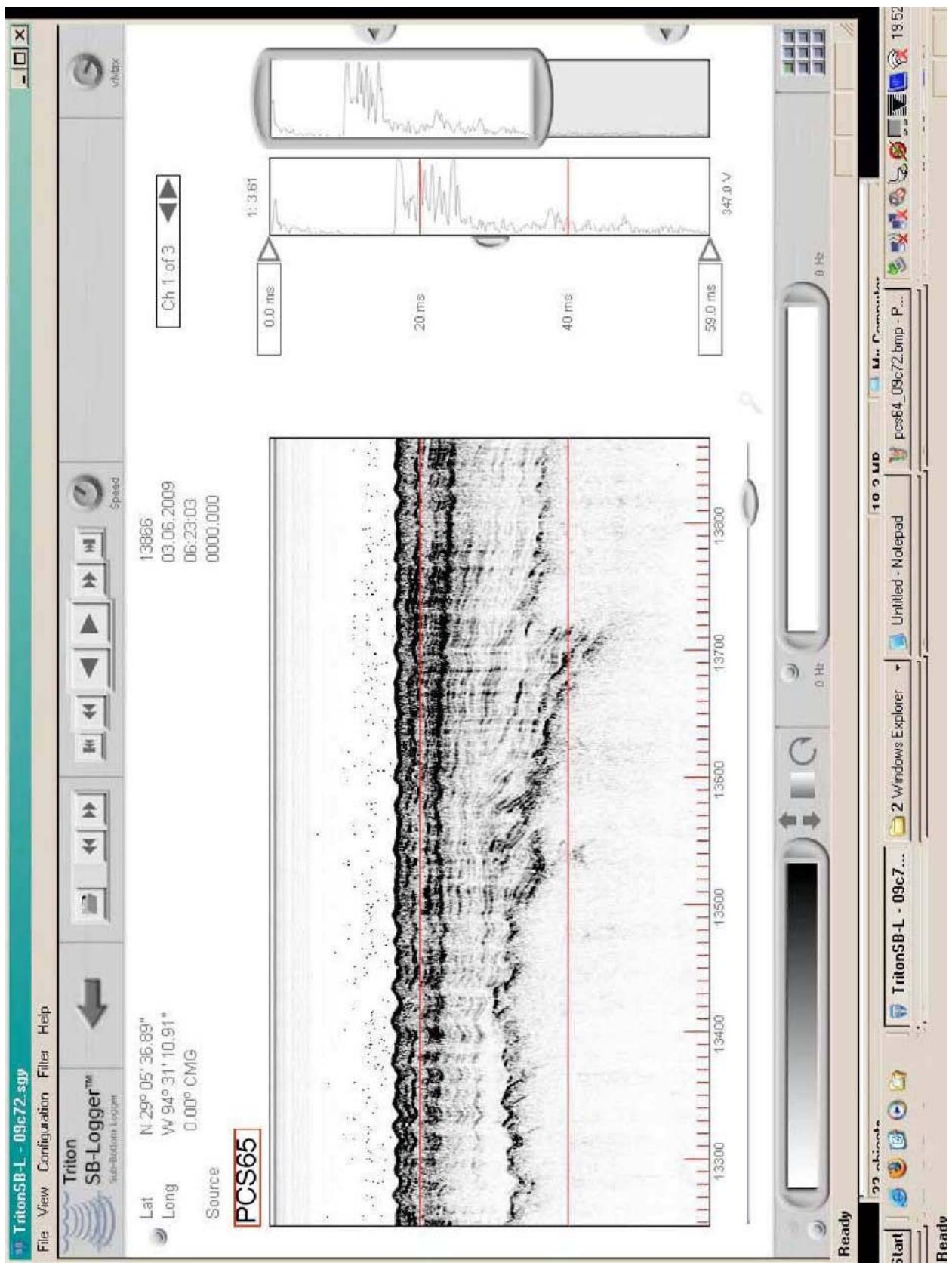










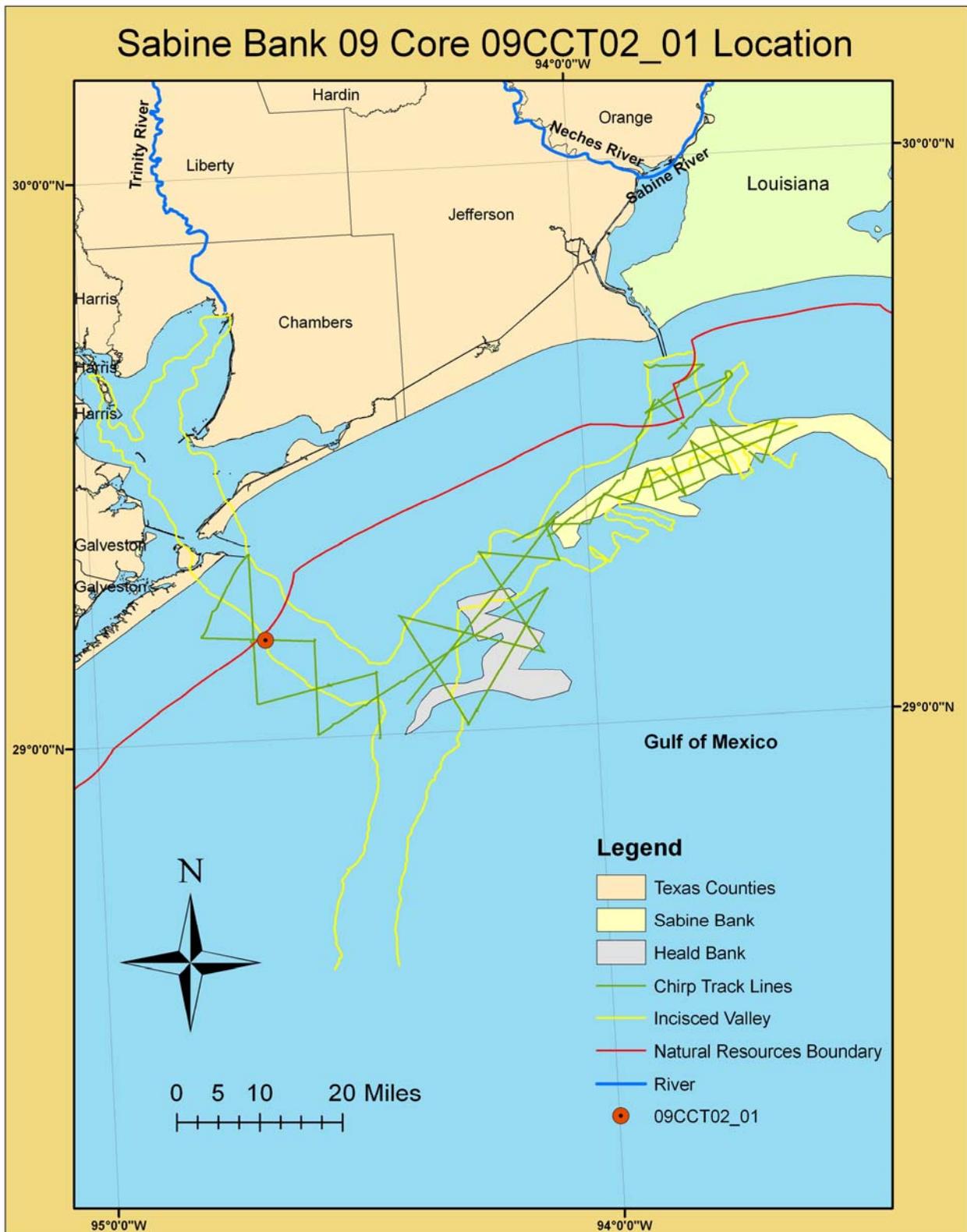


9.0 Appendix B

Core Information

09CCT02 Core Information								
ID	Date	Time Cored (local)	Time Cored (GMT)	Transect	Latitude	Longitude	Water Depth (m)	Core Length (m)
1	June 5, 2009	16:15	21:15	09C65_a	29° 10.682'	94° 39.320'	17.16	5.60
2	June 5, 2009	17:20	22:20	09C68	29° 10.406'	94° 40.788'	16.89	1.87
3	June 5, 2009	18:09	23:09	09C67	29° 12.462'	94° 40.773'	15.76	5.72
4	June 6, 2009	9:29	14:29	09C49	29° 11.986'	94° 22.728'	16.37	5.63
5	June 6, 2009	10:33	15:33	09C77	29° 09.519'	94° 16.374'	15.24	5.75
6	June 6, 2009	11:52	16:52	09C55	29° 06.242'	94° 11.443'	14.36	3.25
6B	June 6, 2009	12:02	17:02	09C55	29° 06.242'	94° 11.443'	14.36	4.36
7	June 6, 2009	13:19	18:19	09C56	29° 09.988'	94° 08.653'	17.07	1.75
8	June 6, 2009	14:14	19:14	09C56	29° 12.503'	94° 06.788'	13.41	5.84
9	June 6, 2009	15:23	20:23	09C78	29° 12.377'	94° 13.534'	13.41	4.99
10	June 6, 2009	16:58	21:58	09C65_a	29° 10.475'	94° 33.406'	17.07	5.87
11	June 15, 2009	17:20	22:20	09C01	29° 37.086'	93° 45.708'	9.85	5.67
12	June 15, 2009	18:22	23:22	09C05	29° 34.82'	93° 46.181'	11.86	5.64
13	June 16, 2009	17:32	22:32	09C06	29° 35.955'	93° 42.002'	11.28	5.81
14	June 17, 2009	14:23	19:23	09C37	29° 33.123'	93° 51.734'	12.50	6.10
15	June 17, 2009	15:37	20:37	09C37	29° 25.306'	93° 51.697'	9.51	2.39
16	June 17, 2009	17:47	22:47	09C06	29° 34.67'	93° 44.553'	8.84	1.38
17	June 18, 2009	16:21	21:21	09C11	29° 29.606'	93° 53.534'	12.35	5.65
18	June 18, 2009	17:29	22:29	09C20	29° 25.207'	93° 51.956'	9.15	6.10
19	June 19, 2009	13:34	18:34	09C29	29° 30.8298'	93° 36.5694'	11.28	5.74
20	June 19, 2009	14:39	19:39	09C28	29° 28.4208'	93° 37.7712'	10.67	4.70
21	June 19, 2009	15:27	20:27	09C26	29° 29.624'	93° 41.985'	10.73	5.69
22	June 19, 2009	16:13	21:13	09C39	29° 27.836'	93° 43.102'	8.93	6.10
23	June 19, 2009	17:30	22:30	09C39	29° 27.491'	93° 44.473'	6.80	0.43
24	June 20, 2009	16:19	21:19	09C06	29° 34.497'	93° 43.863'	11.59	1.08
25	June 20, 2009	17:34	22:34	09C32	29° 26.194'	93° 48.805'	8.38	5.58

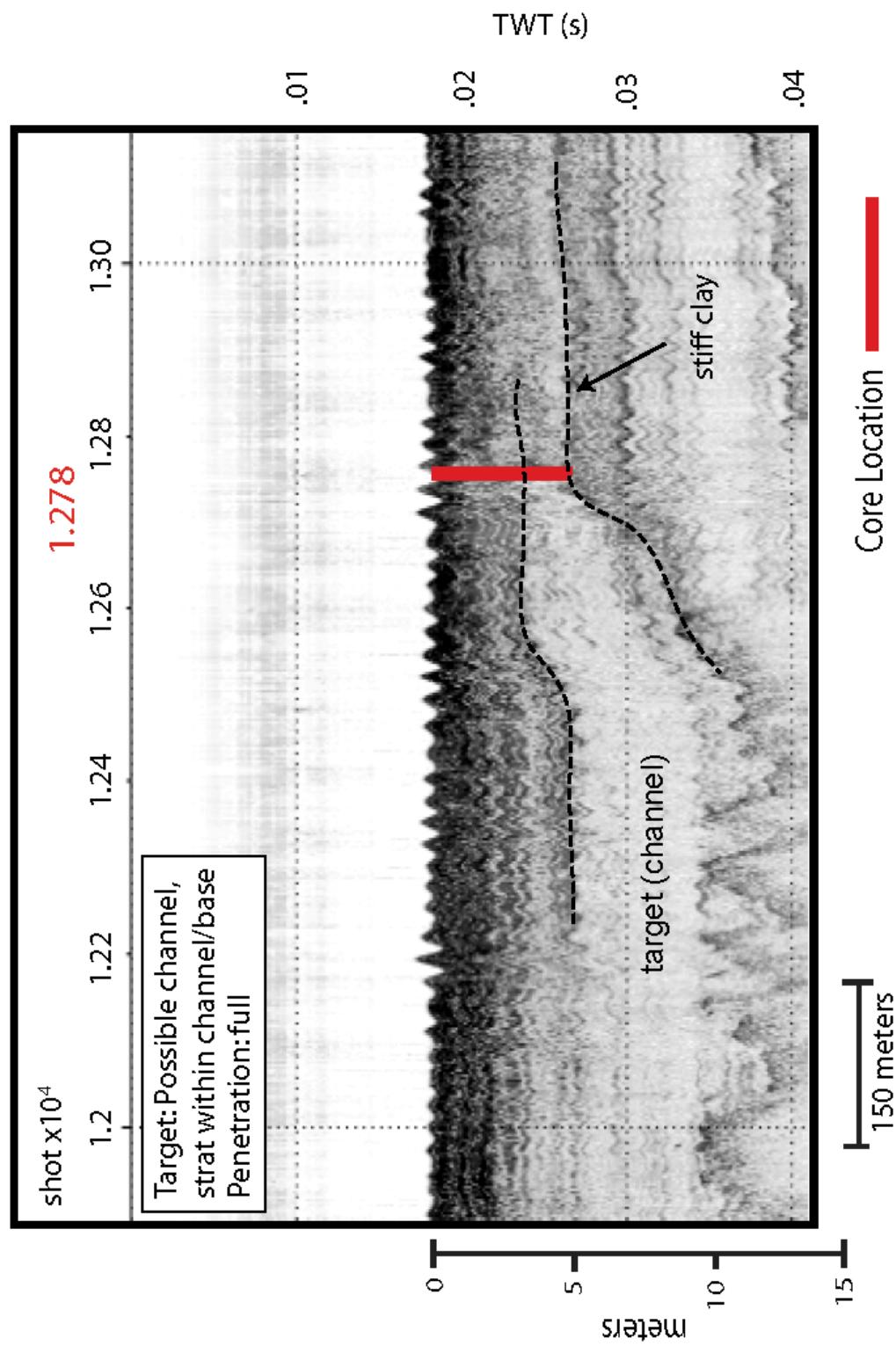
09CCT02_01 Core Location



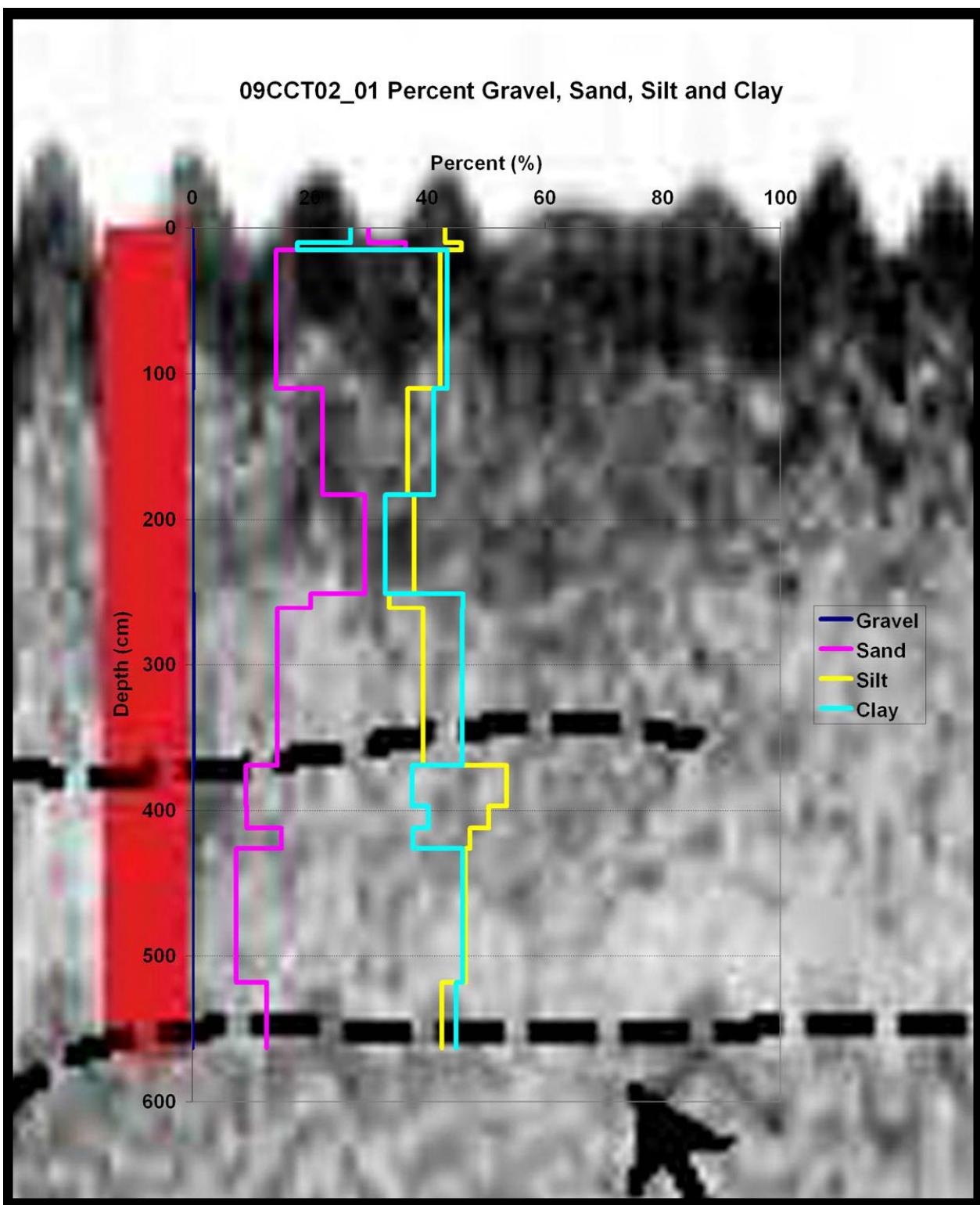
Project: 09CCT02

Transect: 09C65_a

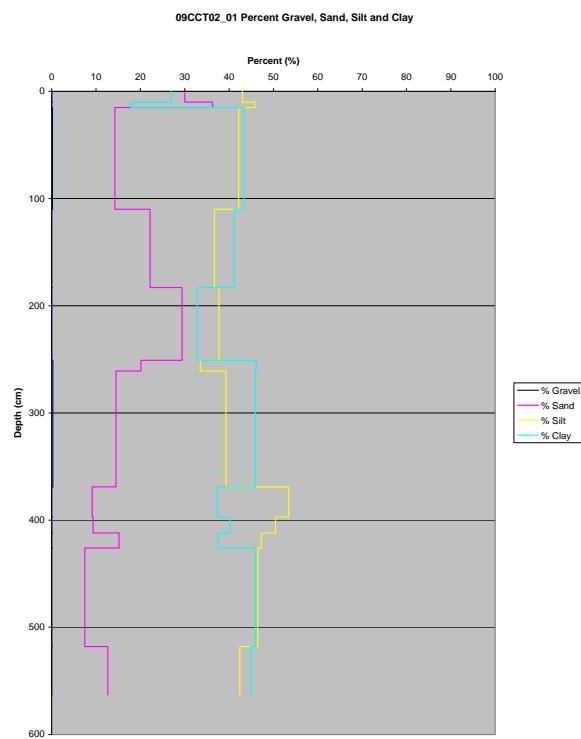
Core: 09CCT02_01
Core Length (m) : 5.60



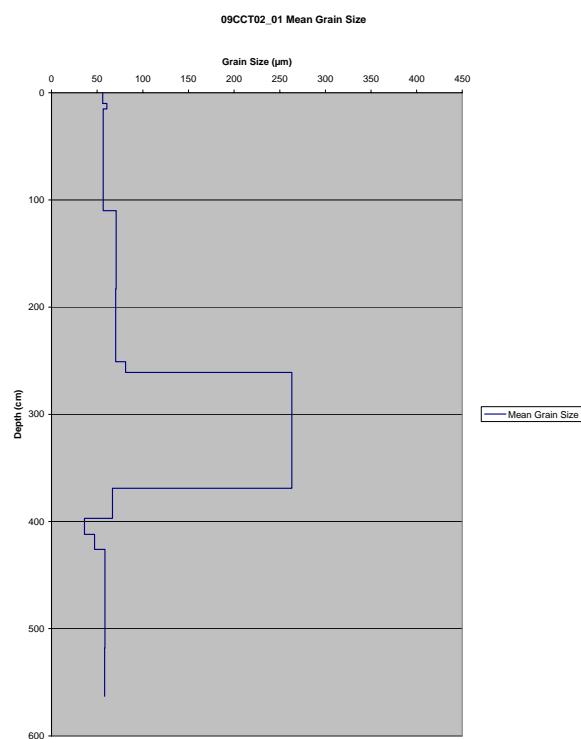
09CCT02_01 Seismic



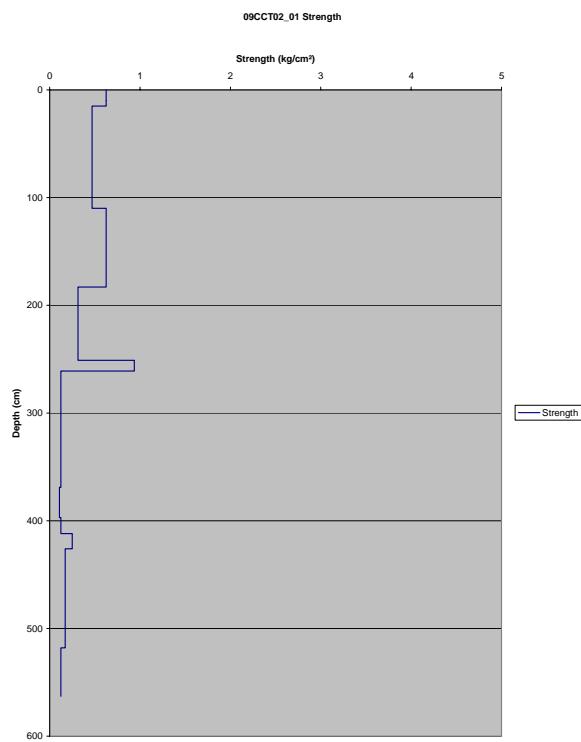
09CCT02_01 Percent Grain Size Distribution



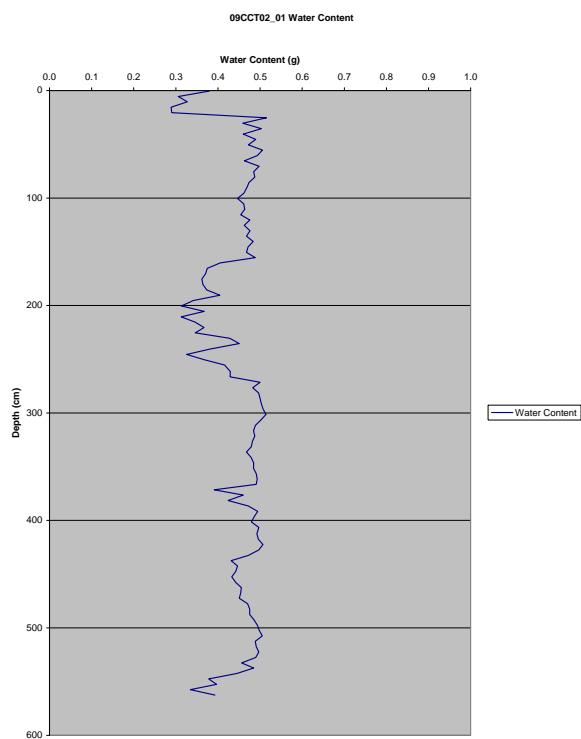
09CCT02_01 Mean Grain Size Distribution



09CCT02_01 Strength Graph



09CCT02_01 Water Content Graph



09CCT02_01 Grain Size Sand Percent Table

Depth (cm)	09CCT02-01											Tot (%)
	63- 257µm (%)	257- 451µ m(%)	451- 645µm(%)	645- 839µ m (%)	839- 1033 µm (%)	1033- 1227 µm (%)	1227- 1421 µm (%)	1421- 1615 µm (%)	1615- 1809 µm (%)	1809- 2000 µm (%)		
0-5	92.45	4.37	1.70	1.19	0.28	0.00	0.00	0.00	0.00	0.00	0.00	100
10-15	96.10	1.31	1.08	0.99	0.46	0.06	0.00	0.00	0.00	0.00	0.00	100
85-90	57.68	6.55	14.87	1	6.38	2.40	0.11	0.00	0.00	0.00	0.00	100
155-160	75.67	5.35	4.47	4.68	3.66	2.55	1.67	1.08	0.55	0.32	100	
225-230	81.43	4.55	5.74	4.45	2.46	1.11	0.24	0.03	0.00	0.00	100	
255-260	60.62	13.19	6.27	6.12	5.04	3.62	2.39	1.52	0.77	0.45	100	
316-321	49.50	13.69	12.75	9.85	6.35	3.74	2.09	1.17	0.55	0.31	100	
376-281	62.10	11.42	12.62	8.82	4.35	0.67	0.02	0.00	0.00	0.00	100	
401-406	46.48	11.14	15.43	2	8.06	4.15	1.58	0.25	0.00	0.00	100	
412-417	60.14	14.54	9.66	6.45	4.06	2.42	1.41	0.73	0.41	0.18	100	
467-472	23.59	6.64	15.98	0	14.46	9.79	5.91	3.37	1.52	0.84	100	
547-552	65.72	5.32	9.27	8.95	5.99	3.25	1.30	0.20	0.00	0.00	100	

Depth (cm)	09CCT02-01											Total (%)
	82- 82µm (%)	101µ m (%)	120µ m (%)	139µ m (%)	139- 158µ m (%)	158- 177µ m (%)	177- 196µ m (%)	196- 215µ m (%)	215- 234µ m (%)	234- 257µ m (%)		
0-5	21.49	18.98	15.78	12.52	9.62	7.24	5.34	3.89	2.81	2.33	100	
10-15	27.20	21.61	16.21	11.71	8.24	5.70	3.86	2.57	1.68	1.22	100	
85-90	37.57	25.84	16.47	9.90	5.59	2.94	1.37	0.33	0.00	0.00	100	
155-160	17.04	17.55	16.01	13.47	10.74	8.28	6.21	4.57	3.33	2.80	100	
225-230	23.86	21.62	17.14	12.60	8.86	6.05	4.05	2.67	1.77	1.37	100	
255-260	7.73	10.98	12.91	13.30	12.59	11.28	9.73	8.18	6.77	6.54	100	
316-321	20.90	17.72	14.50	11.56	9.13	7.26	5.84	4.80	4.07	4.23	100	
376-281	34.34	21.65	14.08	9.33	6.30	4.42	3.22	2.48	2.04	2.15	100	
401-406	34.12	22.08	14.45	9.45	6.25	4.24	3.02	2.33	1.94	2.12	100	
412-417	25.97	18.72	13.71	10.23	7.83	6.22	5.12	4.34	3.80	4.06	100	
467-472	38.71	22.92	14.43	9.22	6.06	3.96	2.21	1.13	0.62	0.74	100	
547-552	24.49	20.62	16.38	12.33	8.94	6.31	4.36	2.96	2.02	1.60	100	

Tables 09CCT02-01

Mean Grain Size 09CCT02-01	
Depth (cm)	Mean Grain Size (μm)
0-5	56.17
10-15	60.70
85-90	56.56
155-160	70.86
225-230	70.37
255-260	81.20
316-321	263.23
376-281	66.72
401-406	36.09
412-417	47.13
467-472	58.46
547-552	58.14

Strength 09CCT02-01	
Interval (cm)	Strength (kg/cm^2)
0-10	0.6250
10-15	0.6250
15-110	0.4690
0-75	0.6250
75-141	0.3130
141-151	0.9380
0-108	0.1250
108-136	0.1094
136-151	0.1250
0-14	0.2500
14-106	0.1719
106-151	0.1250

09CCT02_01 Core Picture



09CCT02_01 Core Log

Core#: 09CCT02_01-01

Core Date: 05-Jun-09

Date Split/subsampled	Length: 110cm
29 Jun - 09	E: 339036
	N: 3228844

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
0-5		0-10cm	
5-10		Gley 2	
10-15			
15-20		4/10G	
20-25			
25-30			
30-35		10-15cm	
35-40		Gley 2	
40-45			
45-50		3/10G	
50-55			
55-60		15-110cm	
60-65		Gley 2	
65-70			
70-75		5/15B	
75-80			
80-85			
85-90			
90-95			
95-100			
100-105			
105-110			

09CCT02_01 Core Log

Core#: 09CCT02-01-02

Core Date: 5-Jun-09

Date Split/subsampled	Length: 15/cm
<u>29-Jun-09</u>	E: 339036
	N: 3228844

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
110-115			
115-120			
120-125			
125-130			
130-135			
135-140			
140-145			
145-150			
150-155			
155-160			
160-165			
165-170			
170-175			
175-180			
180-183			
183-185			
185-190			
190-195			
195-200			
200-205			
205-210			
210-215			
215-220			
220-225			
225-230			
230-235			
235-240			
240-245			
245-250			
250-251			
251-255			
255-260			
260-261			

09CCT02_01 Core Log

Core#: 09CCT02-01-03

Core Date: 5-Jun-09

Date Split/subsampled	Length: 15/cm
<u>30-Jun-09</u>	E: 239035
	N: 3228844

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
261-266	261-369cm		
266-271	Gley 2		
271-276	4/5B		
276-281			261-369cm Grey compacted
281-286	369-397cm		c/g
286-291	7.5YR		
291-296	3/1		369-397cm Dark Brown
296-301	397-412cm		compacted clay
301-306			397-412cm Dark Brown
306-311	7.5YR		
311-316	2.5/1		hard clay
316-321			
321-326			
326-331			
331-336			
336-341			
341-346			
346-351			
351-356			
356-361			
361-366			
366-371			
371-376			
376-381			
381-386			
386-391			
391-396			
396-397			
397-401			
401-406			
406-411			
411-412			

09CCT02_01 Core Log

Core#: 09CCT02-01-04

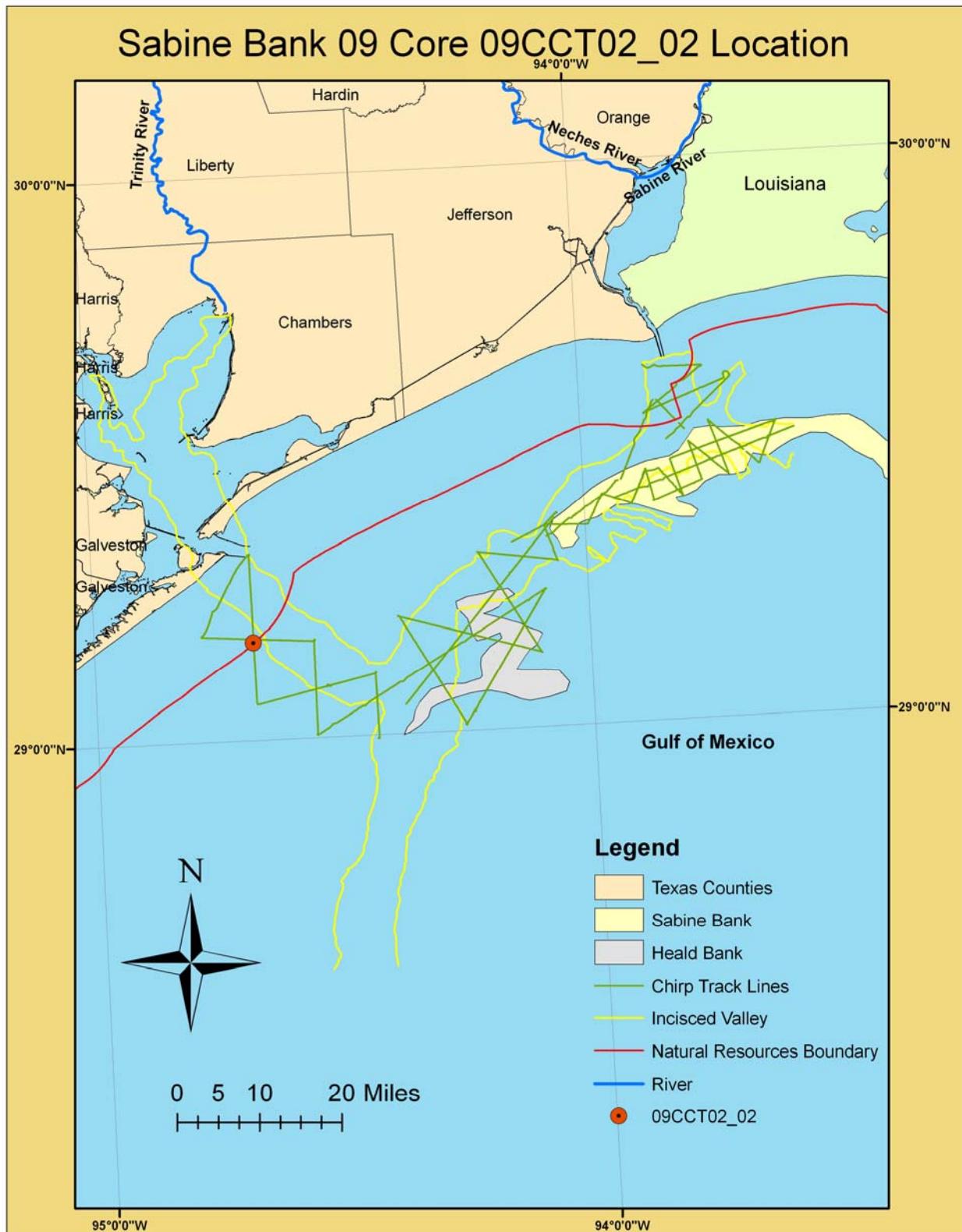
Core Date: 5-Jun-09

Date Split/subsampled	Length: 151 cm
30-Jun-09	E: 339036
	N: 3228844

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
412-413		412-426cm	
417-422		10yR	
422-426		3/11	
426-427			
427-432		426-518cm	
432-437		Gley 2	
437-442		415BC	
442-447		518-563cm	
447-452		10yR	
452-457		4/11	
457-462			
462-467			
467-472			
472-477			
477-482			
482-487			
487-492			
492-497			
497-502			
502-507			
507-512			
512-517			
517-518			
518-522			
522-527			
527-532			
532-537			
537-542			
542-547			
547-552			
552-557			
557-562			
562-563			

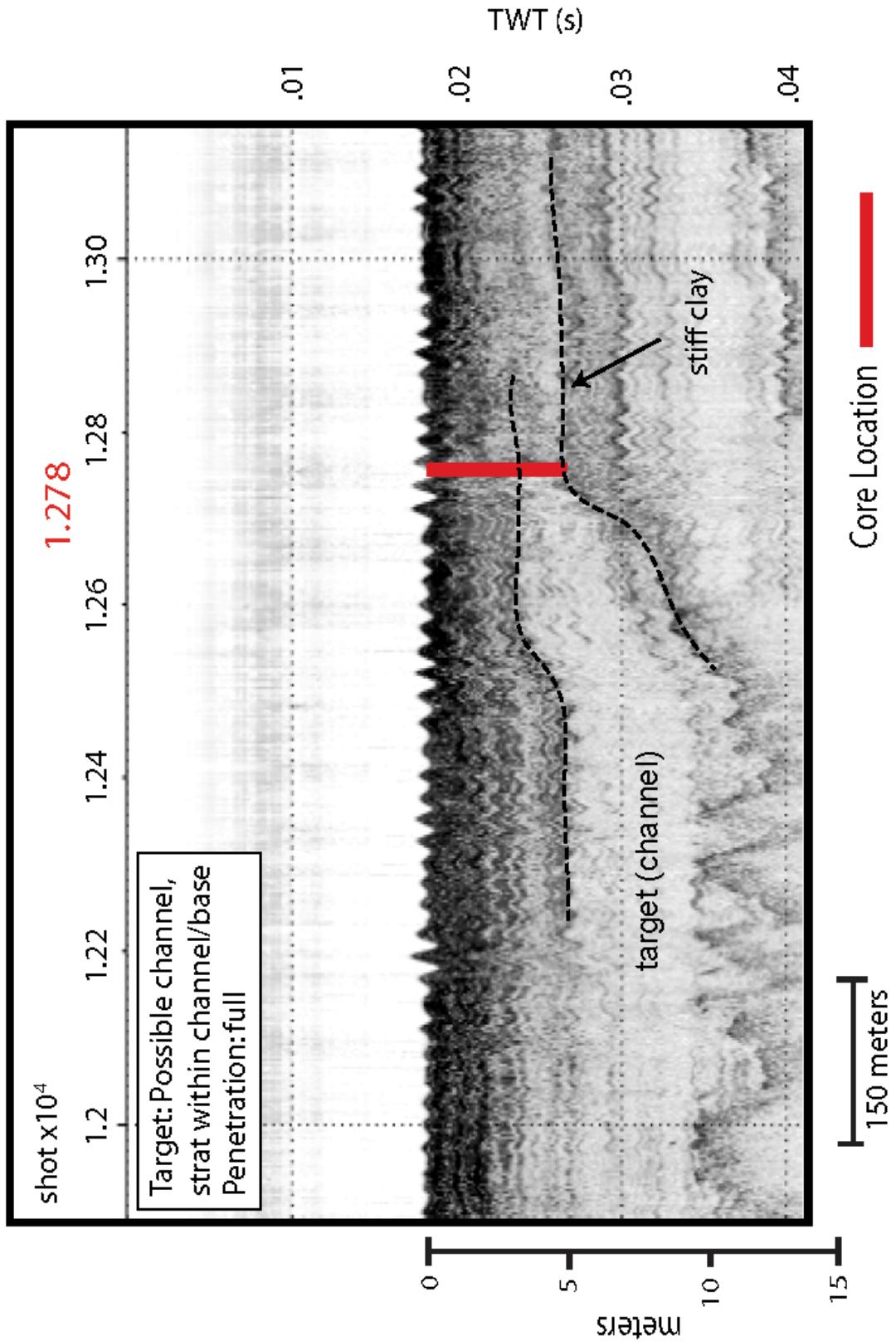
68

09CCT02_02 Core Location

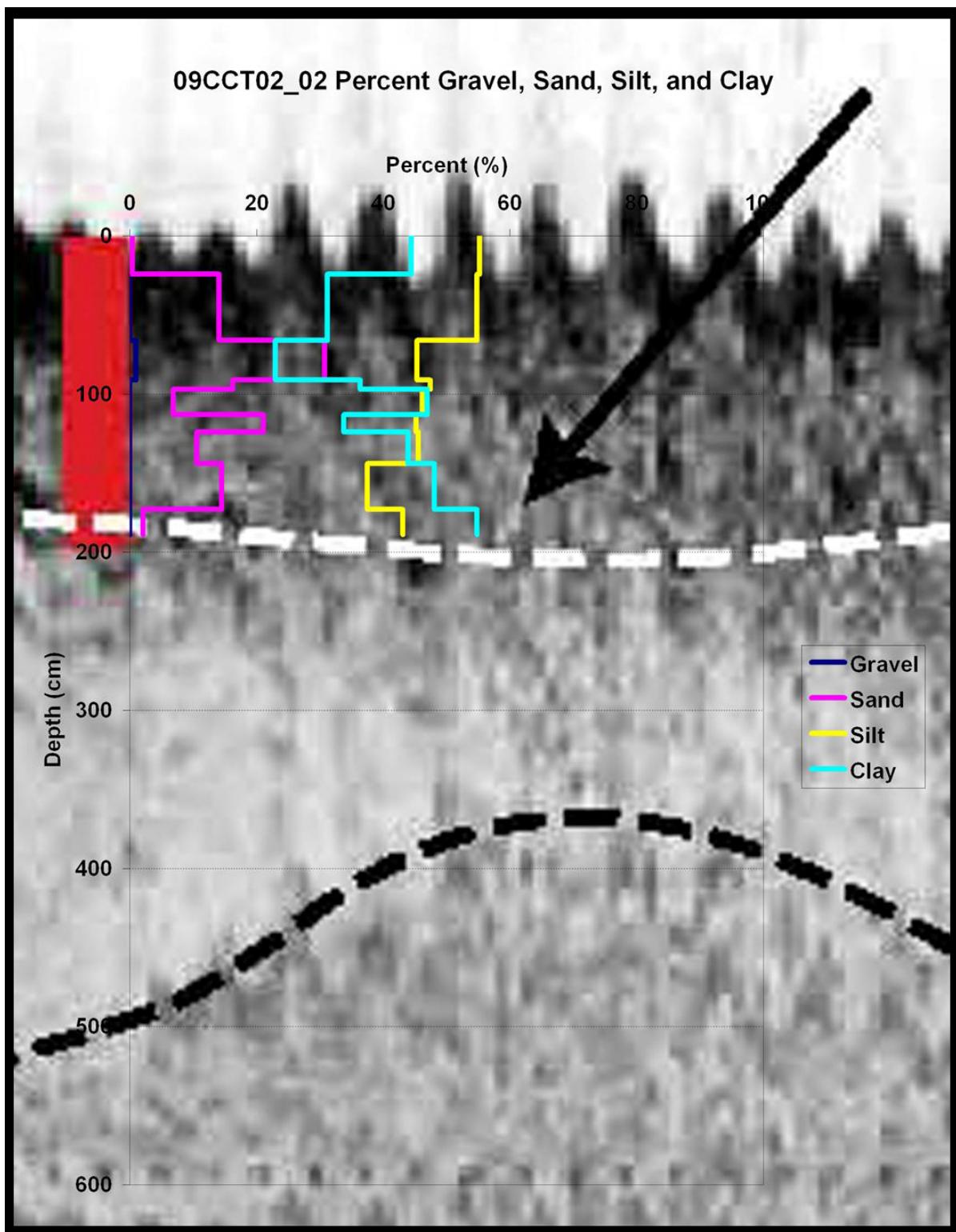


Project: 09CCT02
Transect: 09C65_a

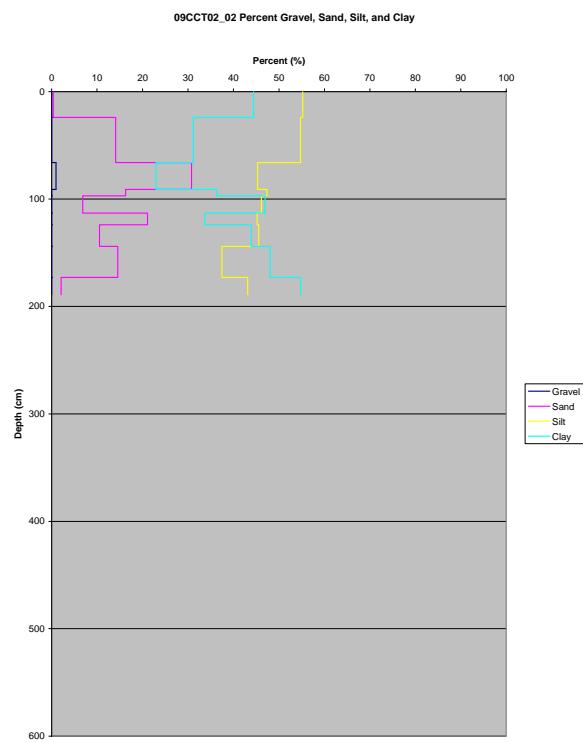
Core: 09CCT02_01
Core Length (m) : 5.60



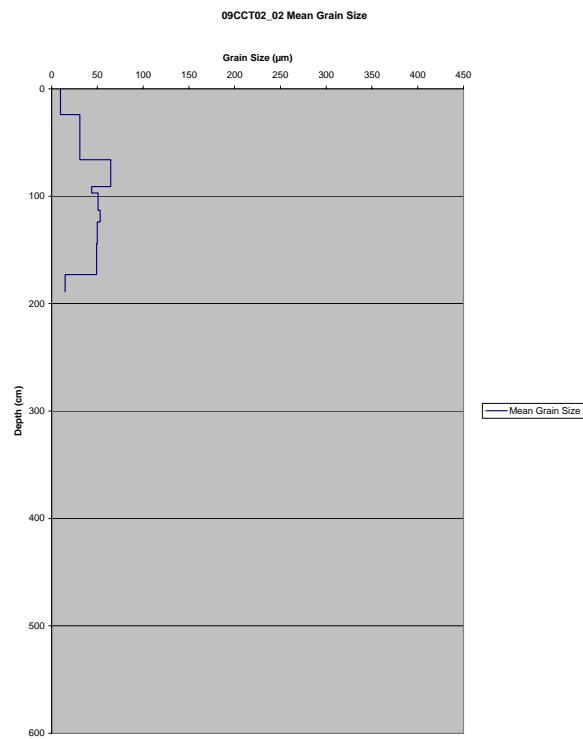
09CCT02_02 Seismic



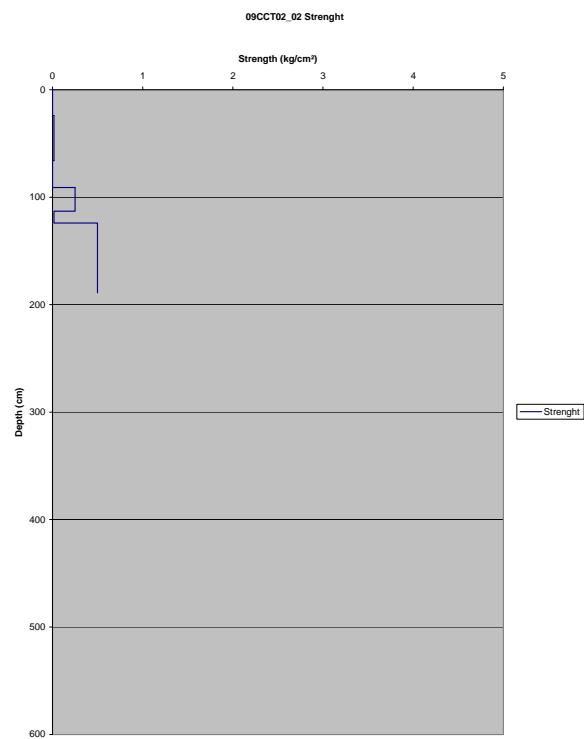
09CCT02_02 Percent Grain Size Distribution Graph



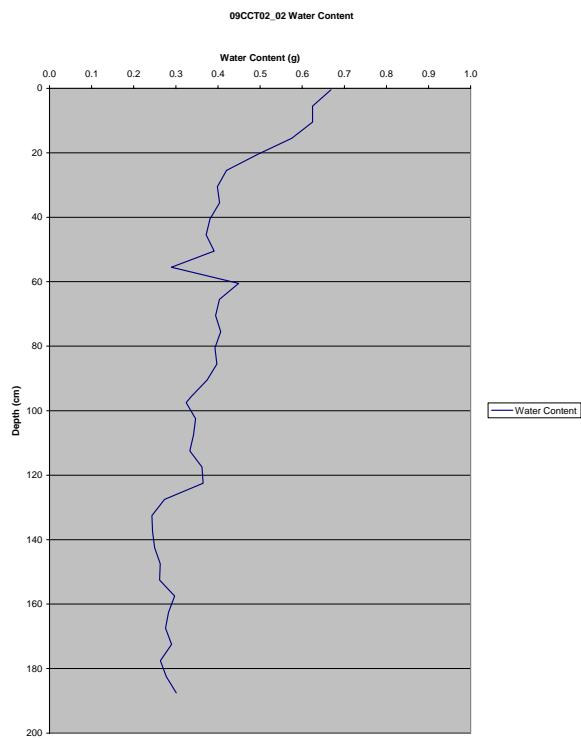
09CCT02_02 Mean Grain Size Graph



09CCT02_02 Strength Graph



09CCT02_02 Water Content Graph



09CCT02_02 Grain Size Sand Percent Table

09CCT02_02 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 (%)	
5-10	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100	
40-45	93.13	2.87	3.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	100	
70-75	91.62	2.83	1.02	1.17	1.04	0.84	0.63	0.45	0.25	0.15	100	
91-95	84.29	4.31	3.05	2.86	2.14	1.49	0.88	0.52	0.31	0.15	100	
102-107	33.49	7.98	12.28	12.47	10.72	8.49	6.26	4.43	2.42	1.47	100	
113-117	88.69	1.16	2.82	2.51	1.78	1.22	0.84	0.52	0.31	0.15	100	
137-142	59.77	5.66	7.12	7.30	6.32	5.04	3.75	2.67	1.47	0.89	100	
157-162	77.02	3.54	5.01	4.44	3.42	2.52	1.78	1.23	0.65	0.39	100	
182-187	58.87	5.54	7.95	7.90	6.48	4.92	3.60	2.46	1.47	0.80	100	

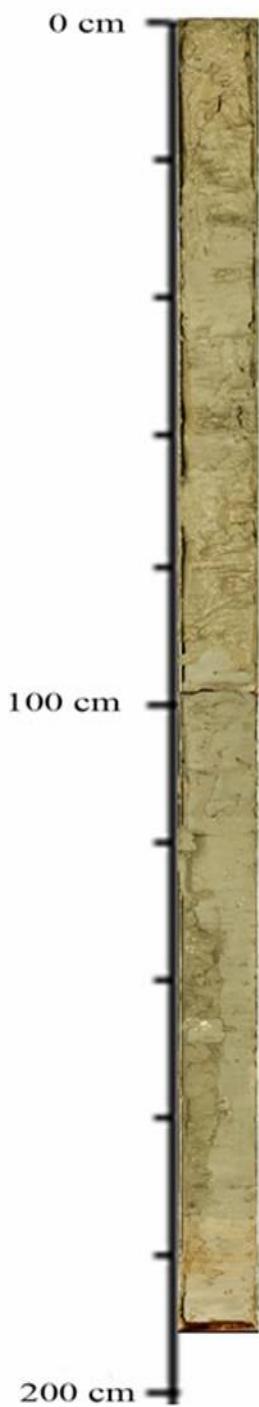
09CCT02-02												
Depth (cm)	63-82µm (%)	82-101µm (%)	101-120µm (%)	120-139µm (%)	139-158µm (%)	158-177µm (%)	177-196µm (%)	196-215µm (%)	215-234µm (%)	234-257µm (%)	Total (%)	
5-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	97.85	2.15	100	
40-45	0.43	0.58	0.98	1.70	2.97	5.12	8.77	14.84	39.95	24.67	100	
70-75	1.58	1.93	2.73	3.88	5.50	7.78	11.00	15.46	28.70	21.44	100	
91-95	1.86	2.22	3.07	4.28	5.96	8.23	11.32	15.40	27.02	20.65	100	
102-107	1.52	0.96	1.44	2.35	3.35	5.26	8.57	14.01	39.32	23.23	100	
113-117	1.59	1.70	2.26	3.11	4.42	6.44	9.57	14.46	34.32	22.14	100	
137-142	0.71	1.14	1.95	3.25	5.19	8.01	11.96	17.07	27.84	22.88	100	
157-162	0.65	0.86	1.40	2.35	3.92	6.46	10.41	16.24	33.53	24.18	100	
182-187	0.96	0.88	1.53	2.89	4.90	7.15	10.29	15.27	33.68	22.43	100	

Tables 09CCT02-02

Mean Grain Size 09CCT02-02	
Depth (cm)	Mean Grain Size (μm)
5-10	9.694
40-45	30.77
70-75	64.575
91-95	43.75
102-107	50.775
113-117	53.036
137-142	49.955
157-162	49.107
182-187	14.711

Strength 09CCT02-02	
Interval (cm)	Strength (kg/cm^2)
0-24	0.0000
24-66	0.0156
66-91	0.0000
91-97	0.2500
0-16	0.2500
16-27	0.0156
27-47	0.5000
47-76	0.5000
76-91	0.5000

09CCT02_02 Core Picture



09CCT02_02 Core Log

Core#: 09CCT02-02-01

Core Date: 5-Jun-09

Date Split/subsampled	Length: 97 cm
16-Jun-09	E: 386649
	N: 3228368

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
0-5		0-24cm	
5-10		10YR	
10-15		4/1	0-24cm grey very soft silty clay
15-20			
20-25		24-66cm	24-66cm grey soft silty c/gy
24-25		10YR	
25-30		5/1	
30-35		66-91cm	66-91cm grey very soft
35-40		10YR	
40-45		5/1	
45-50		91-97cm	91-97cm light grey
50-55		GY 2	compacted c/gy
55-60			
60-65			
65-70			
70-75			
75-80			
80-85			
85-90			
90-91			
91-92			

09CCT02_02 Core Log

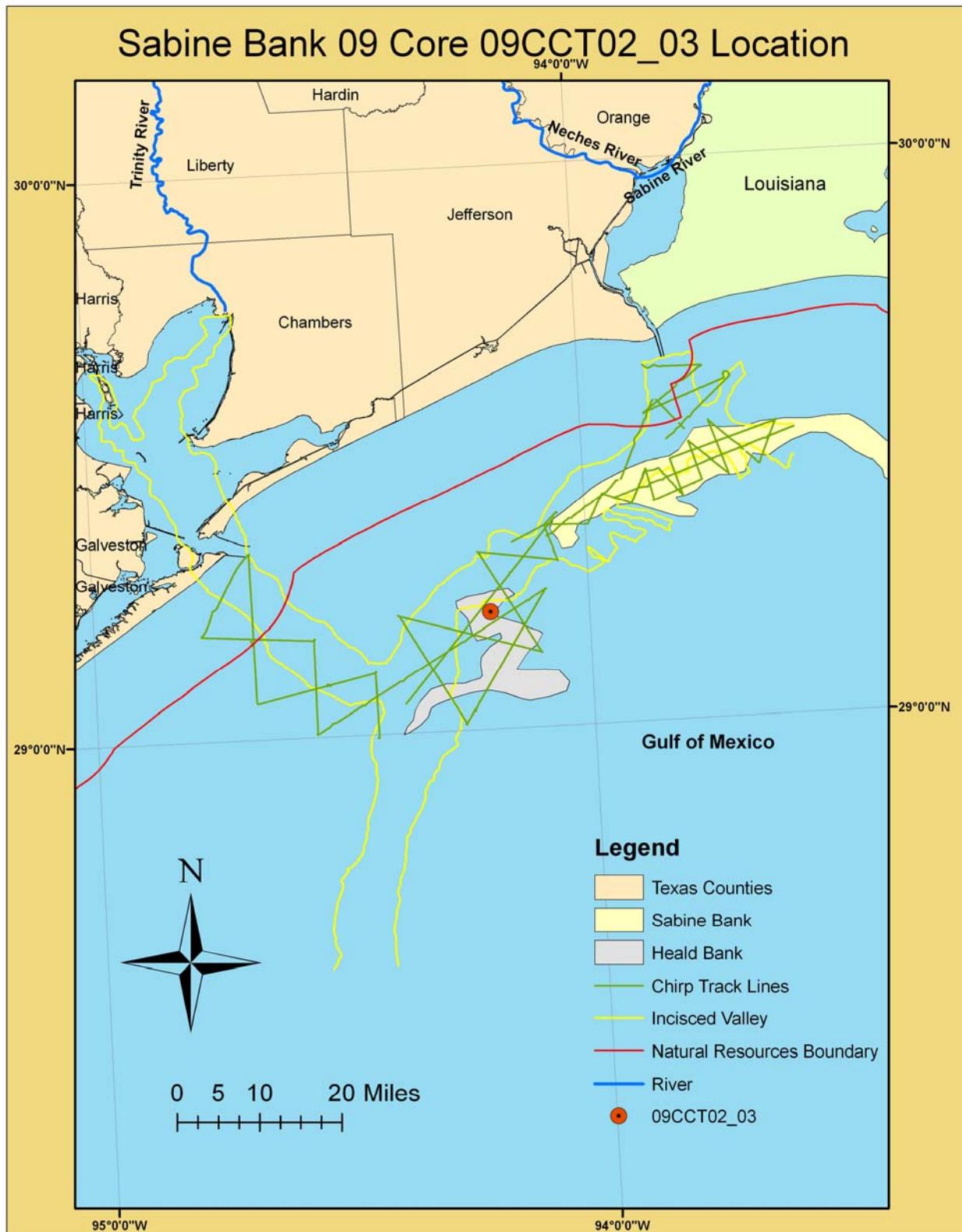
Core#: 09CCT02_02-02

Core Date: 5-Jun-09

Date Split/subsampled	Length: <u>92cm</u>
<u>16-Jun-09</u>	E: <u>336649</u>
	N: <u>3228368</u>

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
97-102		97-113cm	
102-107		Gley 2	
107-112			
112-113		5/10G	
113-117			
117-122		113-124cm	<u>97-113cm grey compacted</u>
122-124		Gley 2	c/gy
124-127			
127-132		4/10G	<u>113-124cm grey uncompacted</u>
132-137			si /tu c/gy
137-142		124-144cm	
142-144		Gley 2	<u>124-144cm grey compacted</u>
144-147			c/gy
147-152		5/10B	
152-157			<u>144-173cm grey compacted</u>
157-162		144-173cm	c/gy w/sparse shells and
162-167		Gley 2	spots of brown c/gy
167-172			
172-173		5/10B	
173-177			<u>173-189cm Brown compacted</u>
177-182		10YR	c/gy w/ layers of gray c/gy
182-187			
187-189		5/2	

09CCT02_03 Core Location

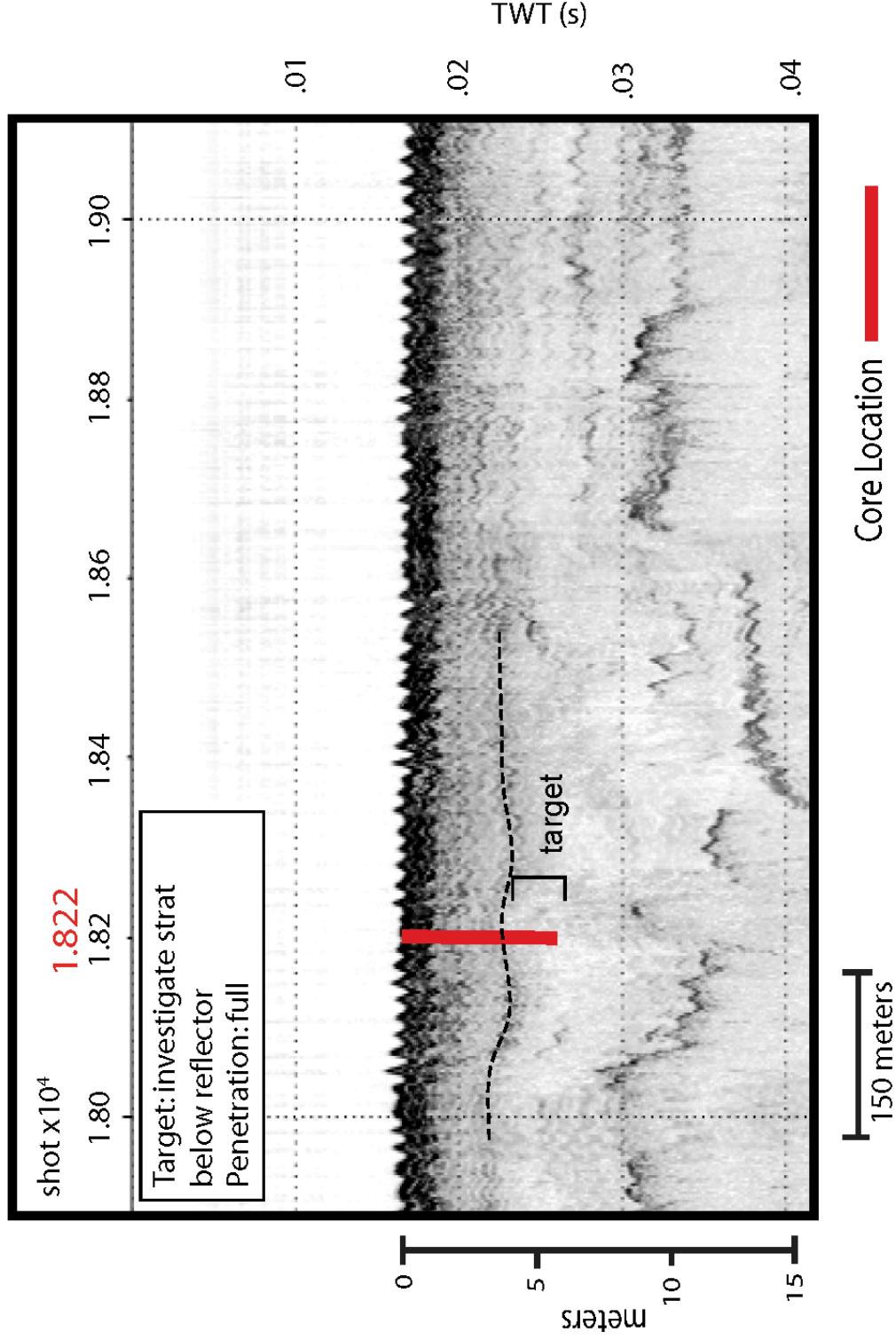


Project: 09CCT02

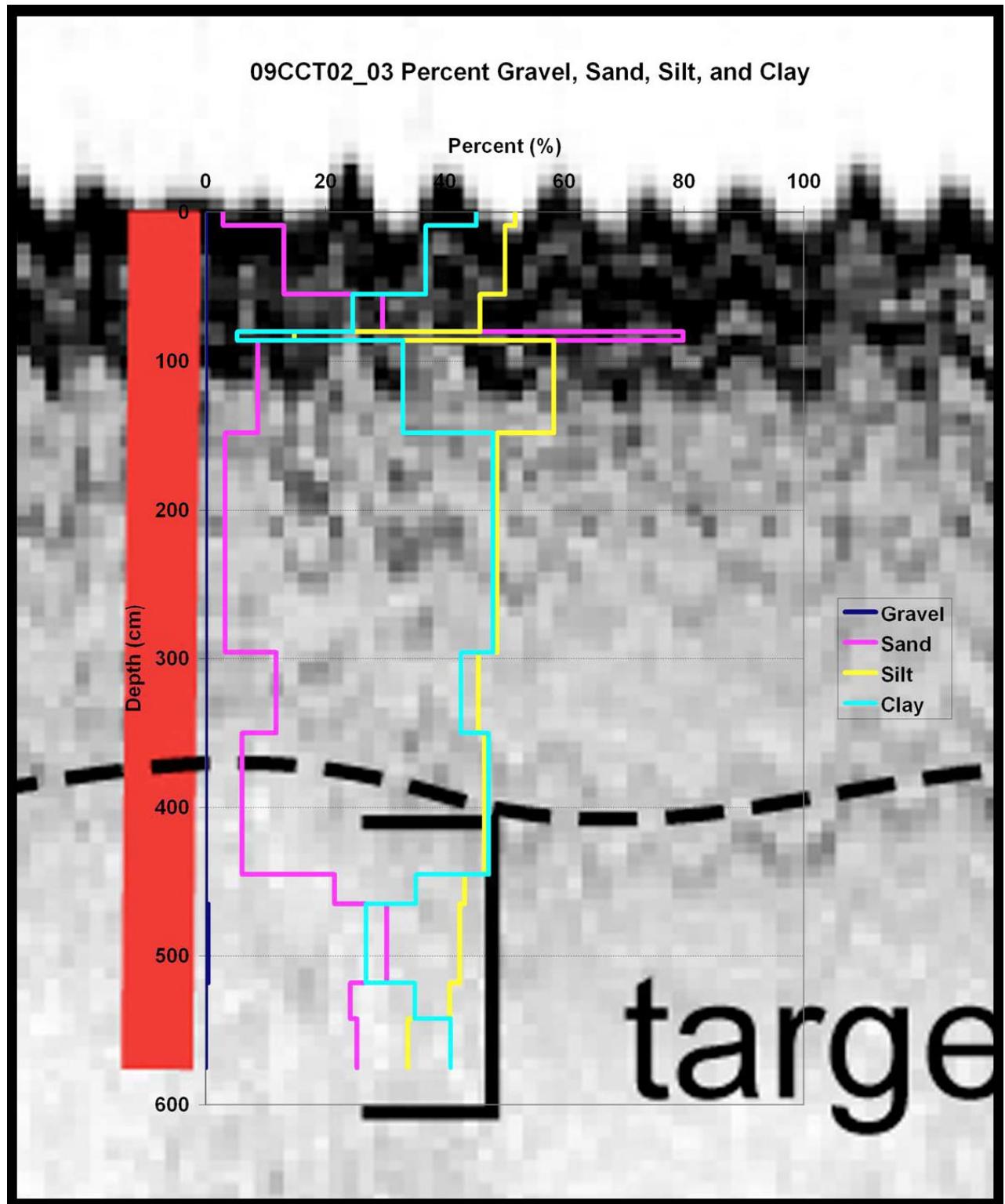
Transect: 09C67

Core: 09CCT02_03

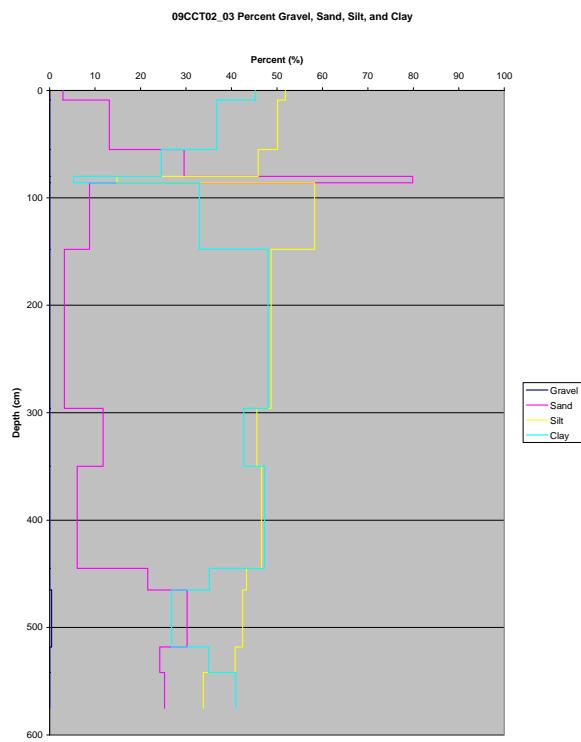
Core Length (m): 5.72



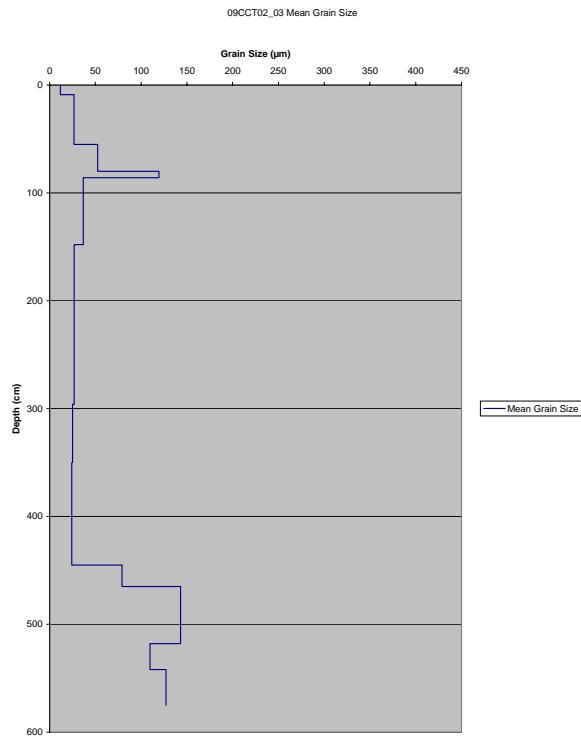
09CCT02_03 Seismic



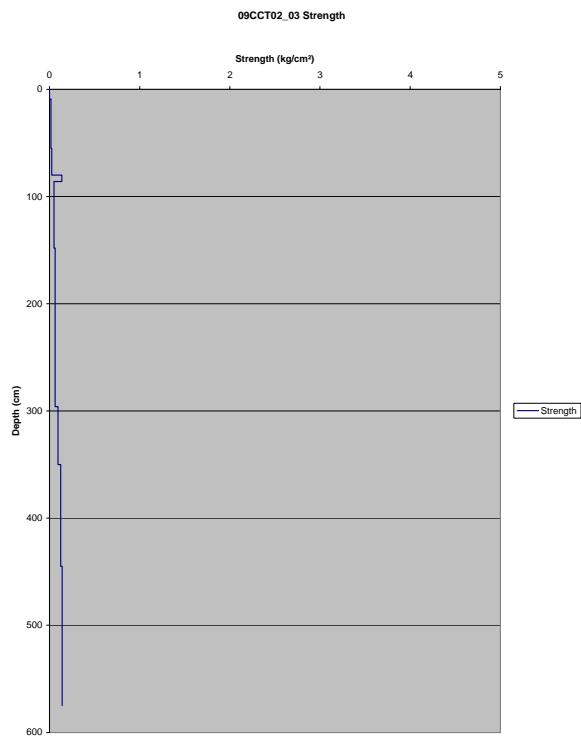
09CCT02_03 Percent Grain Size Distribution Graph



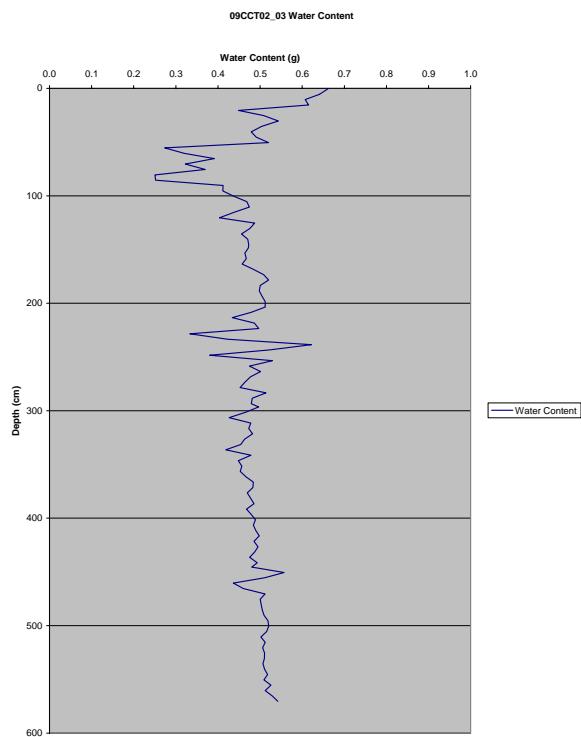
09CCT02_03 Mean Grain Size Graph



09CCT02_03 Strength Graph



09CCT02_03 Water Content Graph



09CCT02_03 Grain Size Sand Percent Table

09CCT02_03 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 (%)
5-9	98.95	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
40-45	96.02	3.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
70-75	93.49	6.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
80-85	94.81	5.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
135-140	69.49	8.45	8.78	6.09	3.61	1.80	1.02	0.48	0.17	0.11	100
203-208	42.69	7.27	9.30	9.73	9.05	7.70	5.97	4.37	2.43	1.48	100
326-331	88.73	8.00	3.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
431-437	60.69	15.62	13.50	7.18	2.66	0.34	0.00	0.00	0.00	0.00	100
455-460	57.80	16.84	10.99	6.70	3.63	1.72	1.03	0.71	0.37	0.22	100
500-505	43.74	17.32	13.64	9.81	6.46	4.04	2.43	1.45	0.70	0.40	100
525-530	47.17	18.73	11.82	7.77	5.28	3.64	2.49	1.65	0.94	0.50	100
565-570	46.33	14.71	10.74	8.44	6.57	4.97	3.59	2.45	1.43	0.77	100

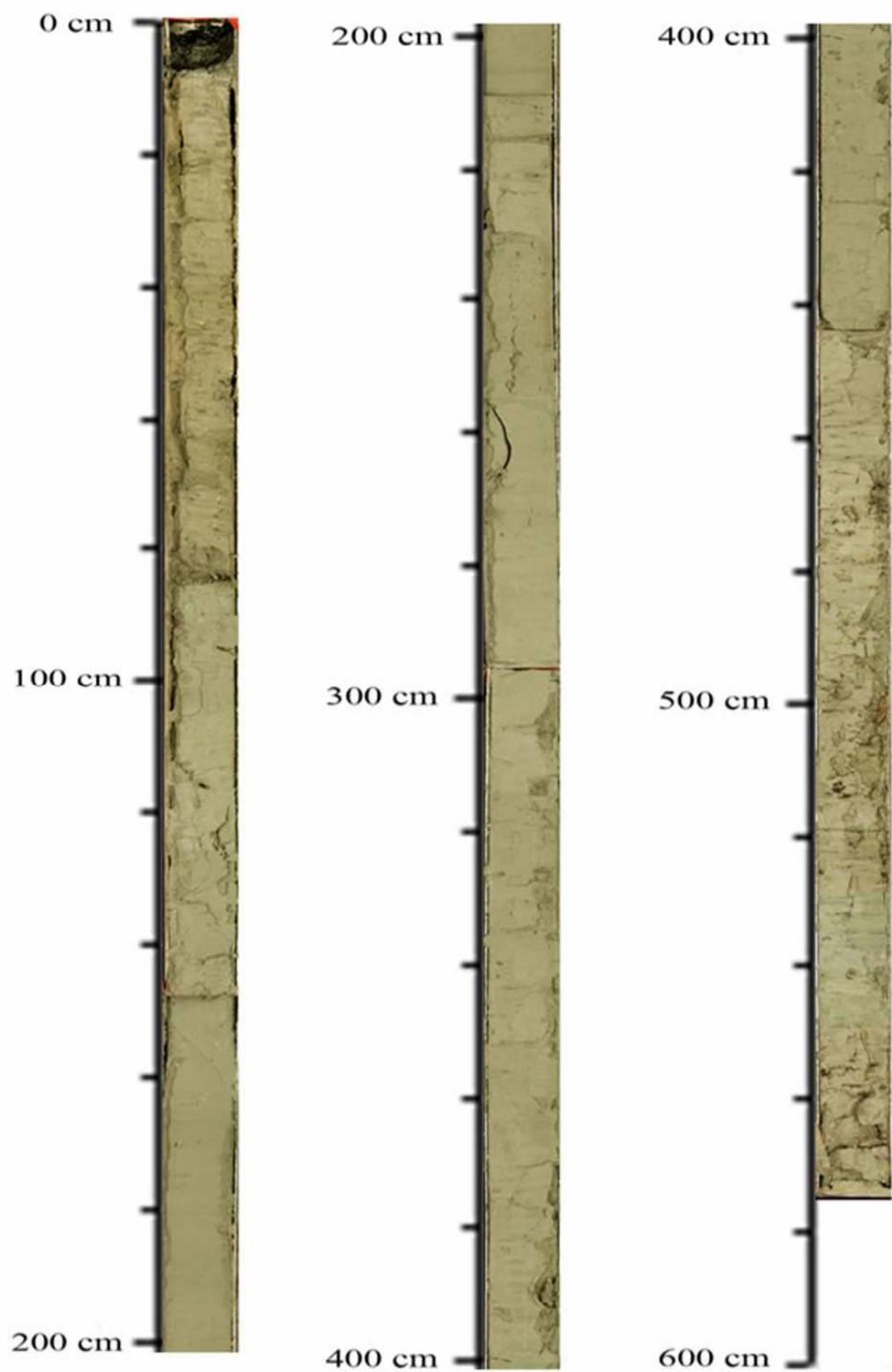
09CCT02-03											
Depth (cm)	63-82µm (%)	82-101µm (%)	101-120µm (%)	120-139µm (%)	139-158µm (%)	158-177µm (%)	177-196µm (%)	196-215µm (%)	215-234µm (%)	234-257µm (%)	Total (%)
5-9	1.68	1.58	2.09	2.88	4.04	5.82	8.70	13.46	38.01	21.75	100
40-45	1.78	2.10	2.91	4.05	5.64	7.84	10.87	15.00	29.08	20.72	100
70-75	3.23	3.59	4.63	5.92	7.48	9.32	11.52	14.17	22.57	17.58	100
80-85	3.57	4.17	5.56	7.29	9.32	11.54	13.74	15.41	13.65	15.75	100
135-140	1.22	1.03	1.18	1.48	2.12	3.42	6.08	11.60	48.64	23.24	100
203-208	1.52	1.23	1.23	1.23	1.30	2.60	6.06	11.69	50.29	22.87	100
326-331	1.00	1.02	1.43	2.24	3.71	6.17	10.12	16.06	34.03	24.24	100
431-437	3.03	2.79	3.27	4.11	5.41	7.36	10.23	14.31	29.25	20.24	100
455-460	4.90	4.57	5.21	6.06	7.20	8.73	10.82	13.58	21.79	17.15	100
500-505	5.75	5.17	5.69	6.41	7.39	8.75	10.62	13.11	20.74	16.37	100
525-530	6.40	5.76	6.30	7.01	7.93	9.15	10.77	12.83	18.49	15.37	100
565-570	5.29	4.94	5.61	6.51	7.69	9.21	11.16	13.55	19.70	16.35	100

Tables 09CCT02-02

Mean Grain Size 09CCT02-03	
Depth (cm)	Mean Grain Size (μm)
5-9	11.78
40-45	26.68
70-75	52.60
80-85	119.54
135-140	36.79
203-208	26.83
326-331	25.01
431-437	24.26
455-460	79.03
500-505	143.14
525-530	109.70
565-570	127.14

Strength 09CCT02-03	
Interval (cm)	Strength (kg/cm^2)
0-9	0.0000
9-55	0.0156
55-80	0.0250
80-86	0.1375
86-148	0.0500
0-148	0.0625
0-54	0.0938
54-149	0.1250
0-20	0.1406
20-73	0.1406
73-97	0.1406
97-130	0.1406

09CCT02_03 Core Pictures



09CCT02_03 Core Log

Core#: 09CCT02-03-01

Core Date: 05-Jun-09

Date Split/subsampled	Length: 178cm
17-Jun-09	E: 383373
	N: 3231593

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
0-5		0-9cm	
5-9		10-3R	
9-10		2/1	
10-15			
15-20			
20-25		9-5.5cm	
25-30		10yR	
30-35			
35-40			
40-45		4/3	
45-50			
50-55		55-80	
55-60		10yR	
60-65			
65-70		4/1	
70-75			
75-80		80-86	
80-85			
85-86	Gley 2		
86-90		S 1/5B	
90-95			
95-100		86-148	
100-105		Gley 2	
105-110			
110-115		5/10G	
115-120			
120-125			
125-130			
130-135			
135-140			
140-145			
145-148			

09CCT02_03 Core Log

Core#: 09CCT02_03-02

Core Date: 05-Jun-09

Date Split/subsampled	Length: 148 cm
	E:383373
	N:3231593

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
148 - 153	148-296		
153 - 158	Gley 2		
158 - 163			
163 - 168	4/10 G		
168 - 173			
173 - 178			
178 - 183			
183 - 188			
188 - 193			
193 - 198			
198 - 203			
203 - 208			
208 - 213			
213 - 218			
218 - 223			
223 - 228			
228 - 233			
233 - 238			
238 - 243			
243 - 248			
248 - 253			
253 - 258			
258 - 263			
263 - 268			
268 - 273			
273 - 278			
278 - 283			
283 - 288			
288 - 293			
293 - 298			

09CCT02_03 Core Log

Core#: 09CCT02_03-03

Core Date: 05-Jun-09

Date Split/subsampled	Length: 149 cm
	E: 362373
	N: 3231593

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
296-301	296-350cm		
301-306	Gley2		
306-311	41/0G		
311-316			
316-321	350-445cm		
321-326	Gley2		
326-331	41/0G		
331-336			
336-341			
341-346			
346-350			
350-351			
351-352			
356-361			
361-366			
366-371			
371-376			
376-381			
381-386			
386-391			
391-396			
396-401			
401-406			
406-411			
411-416			
416-421			
421-426			
426-431			
431-436			
436-441			
441-446			

09CCT02_03 Core Log

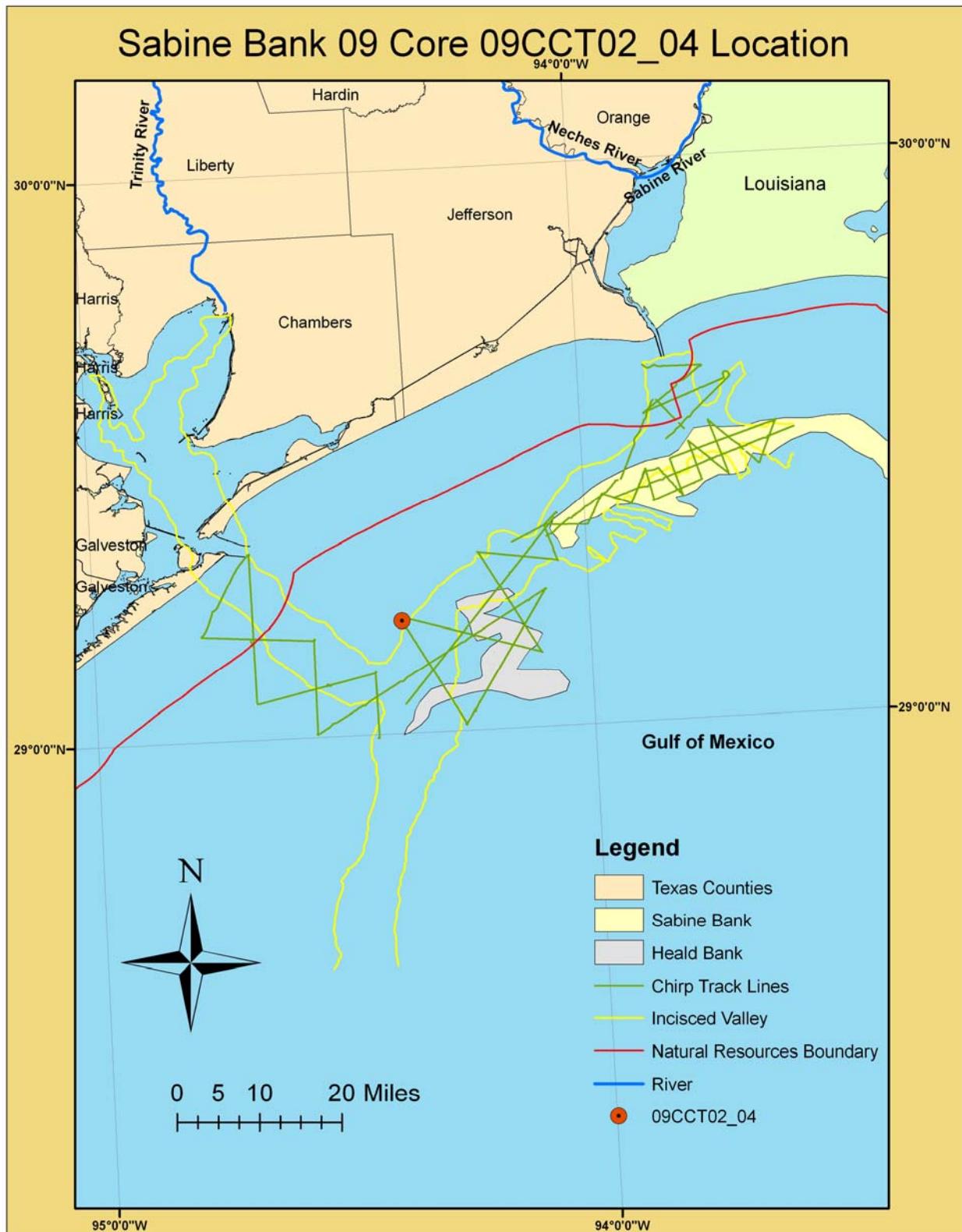
Core#: 09CCT02_03-04

Core Date: 05-Jun-09

Date Split/subsampled	Length: 130cm
	E: 383373
17-Jun-09	N: 3231593

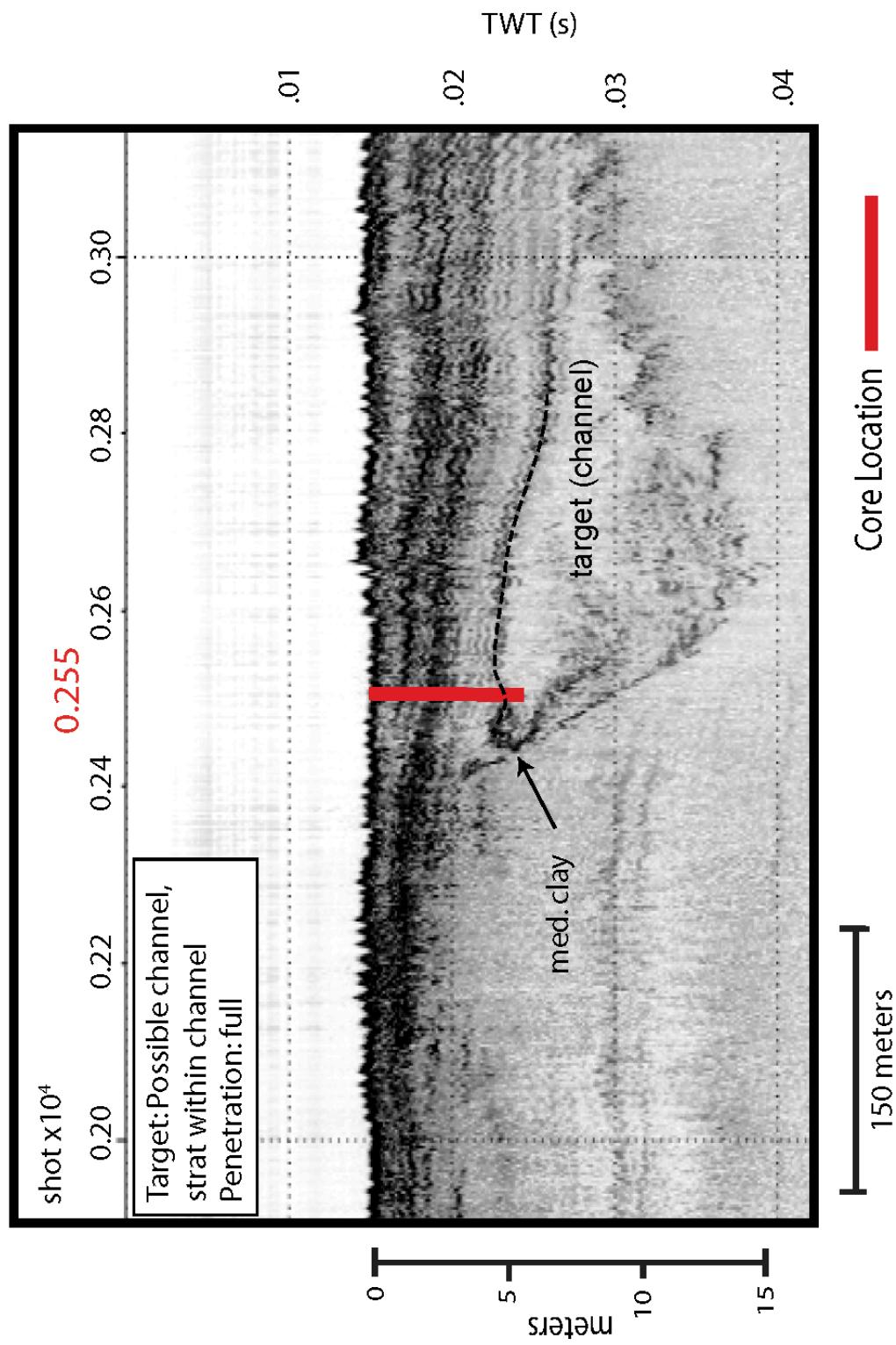
Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
445-450	445-465cm		
450-455	Gley 2		
455-460	4/10G		
460-465			
465-470	465-518cm		
470-475	Gley 2		
475-480	4/15B		
480-485			
485-490	518-542cm		
490-495	Gley 2		
495-500	4/10G		
500-505			
505-510	542-575cm		
510-515	Gley 2		
515-518	4/15B		
518-520			
520-525			
525-530			
530-535			
535-540			
540-542			
542-545			
545-550			
550-555			
555-560			
560-565			
565-570			
570-575			

09CCT02_04 Core Location

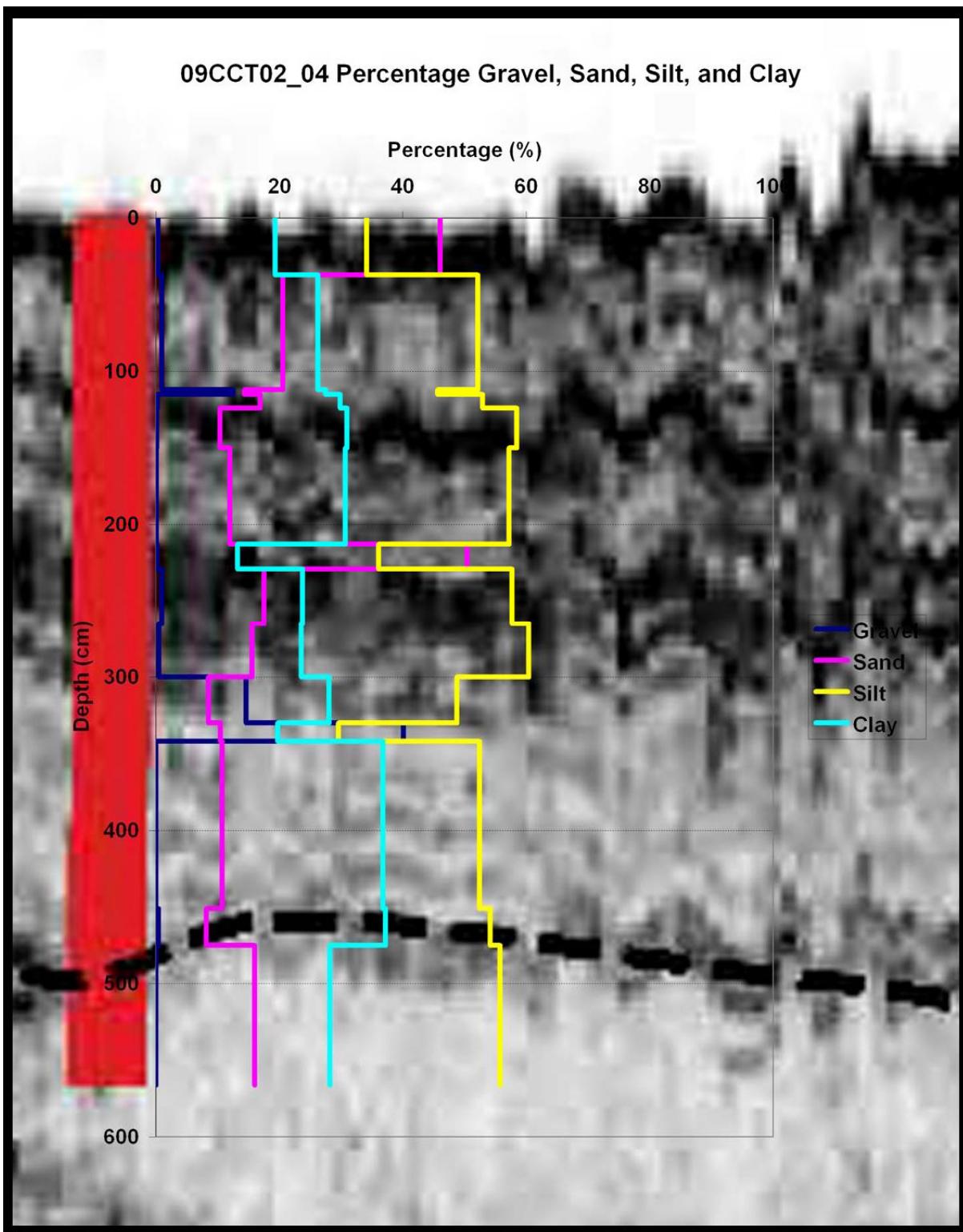


Project: 09CCT02
Transect: 09C49

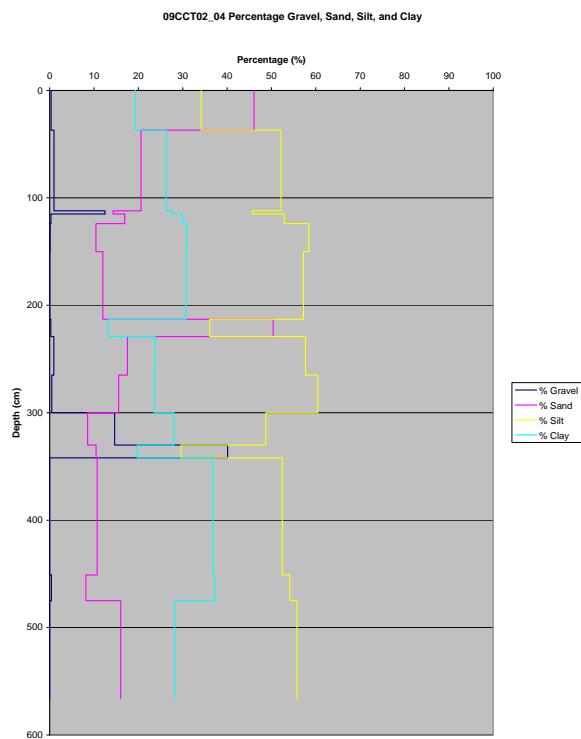
Core: 09CCT02_04
Core Length (m): 5.63



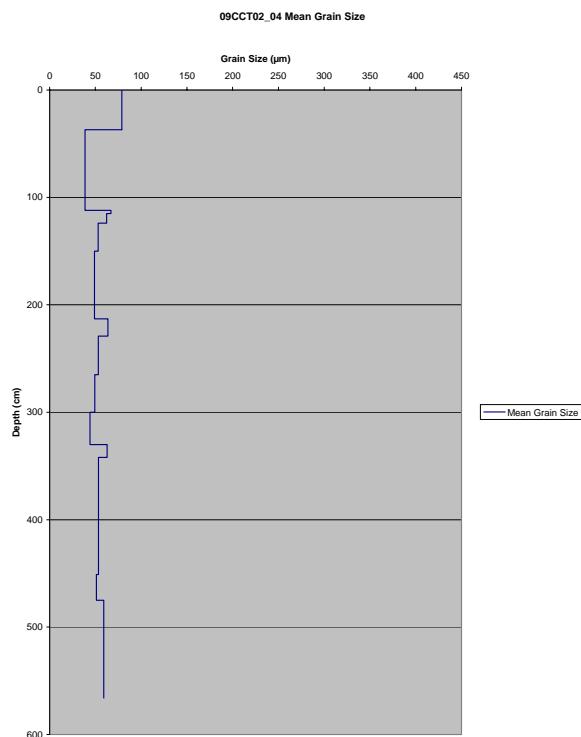
09CCT02_04 Seismic



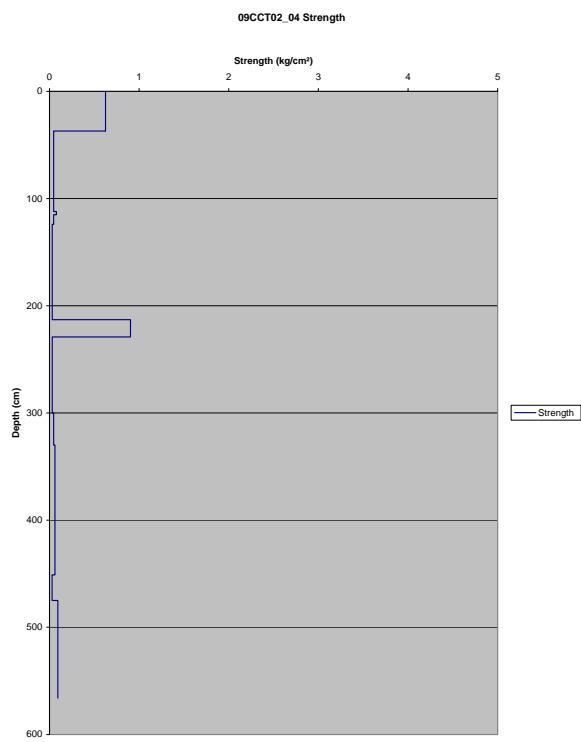
09CCT02_04 Percent Grain Size Distribution Graph



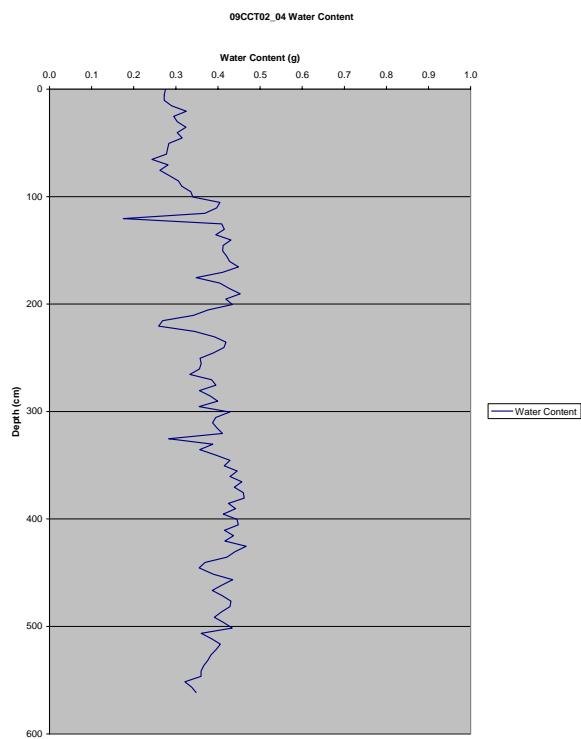
09CCT02_04 Mean Grain Size Graph



09CCT02_04 Strength Graph



09CCT02_04 Water Content Graph



09CCT02_04 Grain Size Sand Percent Table

Depth (cm)	09CCT02_04 Grain Size Sand Percent										Total (%)
	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 (%)	
20-25	91.04	8.93	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
85-90	96.18	3.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
112-115	75.25	1.61	1.42	4.52	5.46	4.69	3.31	2.12	1.04	0.60	100
120-124	68.39	9.87	6.71	5.23	3.86	2.62	1.63	0.97	0.45	0.25	100
135-140	62.85	6.17	6.25	7.00	6.30	4.77	3.17	1.97	0.96	0.55	100
180-185	77.30	1.89	2.80	3.80	4.16	3.68	2.79	1.94	1.03	0.62	100
215-220	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
260-265	84.54	2.52	3.16	2.70	2.31	1.83	1.31	0.89	0.46	0.27	100
290-295	82.78	3.99	3.73	2.99	2.40	1.74	1.16	0.66	0.38	0.17	100
310-315	64.84	8.89	8.83	6.87	4.64	2.84	1.64	0.83	0.45	0.18	100
335-340	68.99	7.75	7.68	6.06	4.11	2.52	1.48	0.78	0.44	0.19	100
400-405	58.83	7.37	8.56	7.57	6.05	4.52	3.17	2.13	1.13	0.67	100
456-461	51.11	6.47	8.61	8.73	7.82	6.34	4.70	3.32	1.81	1.09	100
536-541	71.79	7.49	6.34	4.94	3.58	2.45	1.59	1.02	0.51	0.30	100

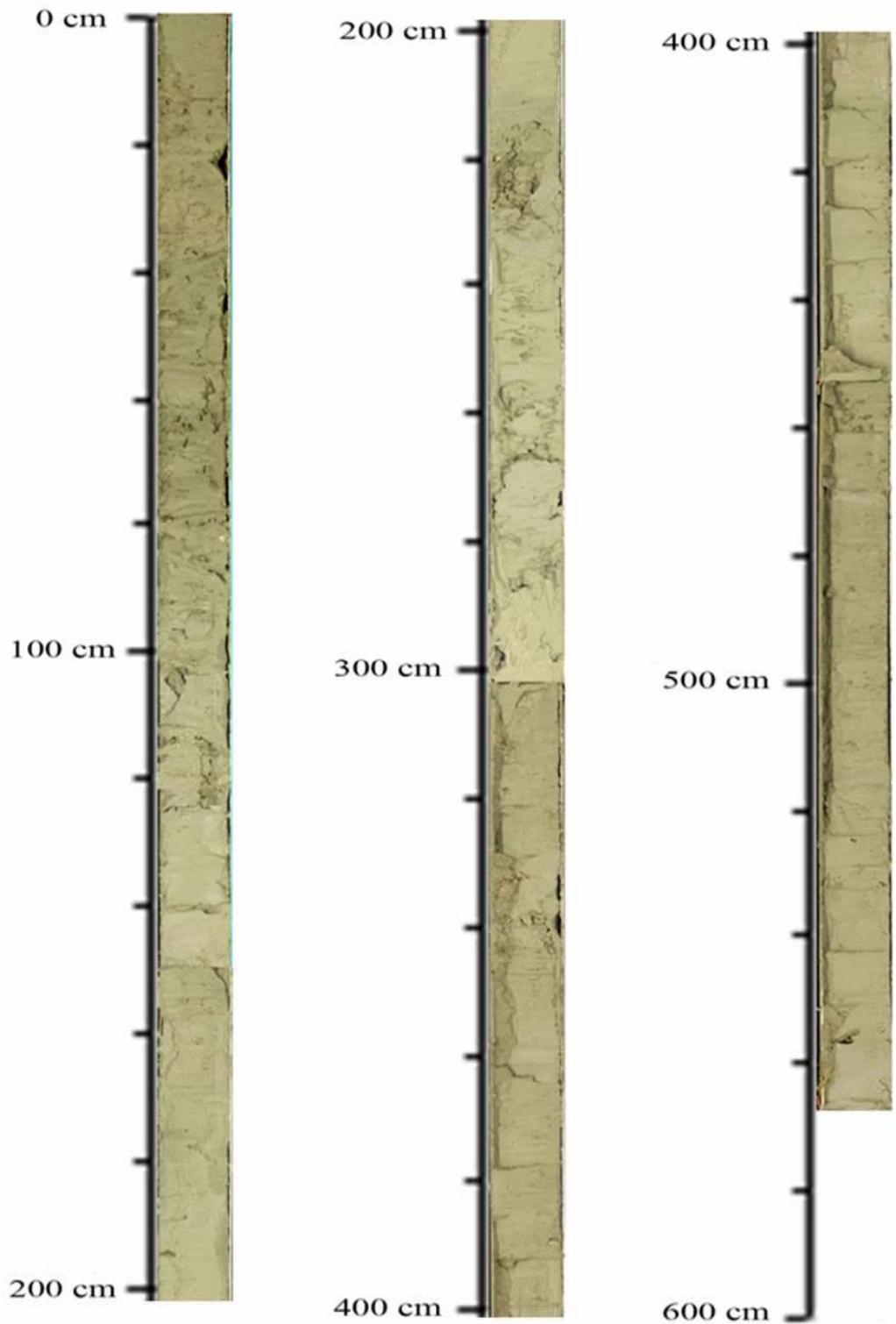
Depth (cm)	09CCT02-04											Total (%)
	63-82µm (%)	82-101µm (%)	101-120µm (%)	120-139µm (%)	139-158µm (%)	158-177µm (%)	177-196µm (%)	196-215µm (%)	215-234µm (%)	234-257µm (%)		
20-25	4.44	4.85	6.14	7.67	9.38	11.18	12.90	14.24	14.38	14.82	100	
85-90	2.31	2.76	3.78	5.14	6.91	9.14	11.91	15.20	23.85	19.02	100	
112-115	1.61	2.00	2.81	3.97	5.56	7.75	10.84	15.08	29.45	20.93	100	
120-124	2.68	2.63	3.17	3.99	5.23	7.11	10.01	14.39	29.98	20.80	100	
135-140	1.48	1.31	1.42	1.62	2.07	3.15	5.64	11.14	49.02	23.15	100	
180-185	0.03	0.25	0.52	1.00	2.01	3.95	7.63	14.23	44.76	25.62	100	
215-220	0.00	0.00	0.37	1.71	3.50	6.52	11.25	17.93	32.65	26.06	100	
260-265	0.00	0.00	0.00	0.01	0.73	2.46	6.17	13.47	50.15	27.01	100	
290-295	0.08	0.00	0.00	0.01	0.52	1.94	5.31	12.44	53.05	26.65	100	
310-315	1.43	1.21	1.32	1.64	2.35	3.83	6.81	12.58	45.21	23.61	100	
335-340	1.49	1.44	1.81	2.44	3.55	5.48	8.78	14.34	37.29	23.38	100	
400-405	1.25	1.17	1.49	2.11	3.25	5.26	8.71	14.43	38.67	23.67	100	
456-461	0.26	0.00	0.00	0.00	0.00	1.17	4.56	11.41	56.42	26.18	100	
536-541	1.45	1.34	1.56	1.99	2.78	4.29	7.22	12.79	43.21	23.37	100	

09CCT02_04 Tables

Mean Grain Size 09CCT02-04	
Depth (cm)	Mean Grain Size (μm)
20-25	78.95
85-90	38.69
112-115	67.05
120-124	62.30
135-140	53.01
180-185	49.01
215-220	63.69
260-265	53.15
290-295	49.31
310-315	44.12
335-340	62.88
400-405	53.44
456-461	51.22
536-541	59.20

Strength 09CCT02-04	
Interval (cm)	Strength (kg/cm^2)
0-37	0.6250
37-112	0.0469
112-115	0.0781
115-124	0.0469
124-150	0.0314
0-63	0.0313
63-79	0.9038
79-115	0.0313
115-150	0.0313
0-30	0.0469
30-42	0.0625
42-151	0.0625
0-24	0.0281
24-115	0.0938

09CCT02_04 Core Pictures



09CCT02_04 Core Log

Core#: 09CCT02-04-01

Core Date: 06-Jun-09

Date Split/subsampled	Length: 150 cm
07-Jun-09	E: 365957
	N: 3230905

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
0-5		0-37cm	
5-10			
10-15	10gR		
15-20	3/1		
20-25			
25-30		37-112cm	0-37cm Dark grey silty clay with deposits of brown soft clay
30-35			
35-40	Gley 2		
40-45	4/5 BG		
45-50		112-15cm	37-112cm Dark grey silty clay w/ sparse shell
50-55			
55-60	5/5 BG		
60-65		115-124	112-15cm Hesh shell w/grey clay
65-70			
70-75	Gley 2		
75-80	5/5 BG		
80-85		124-150cm	115-124cm grey silty clay
85-90			
90-95	Gley 2		
95-100	5/10 BG		
100-105			
105-110			
110-115			
115-120			
120-125			
125-130			
130-135			
135-140			
140-145			
145-150			

09CCT02_04 Core Log

Core#: 09CCT02_04-02

Core Date: 06 Jun -09

Date Split/subsampled	Length: 150cm
07-Jul-09	E: 36 5957
	N: 32 30905

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
150-155		150-213cm	
155-160		Gley 2	
160-165		5/10B	
165-170			
170-175		213-229cm	
175-180		Gley 2	
180-185		4/5B	
185-190			
190-195		229-265cm	
195-200		Gley 2	
200-205		5/10BG	
205-210			
210-213		265-300cm	
213-215		Gley 2	
215-220		5/10BG	
220-225			
225-229			
229-230			
230-235			
235-240			
240-245			
245-250			
250-255			
255-260			
260-265			
265-270			
270-275			
275-280			
280-285			
285-290			
290-295			
295-300			

09CCT02_04 Core Log

Core#: 09CCT02_04-03

Core Date: 06-Jun-09

Date Split/subsampled	Length: 151 cm
08-Jul-09	E: 365957
	N: 3230905

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
300-305		300-330 cm	
305-310		Gley 2	
310-315		S10B G	
315-320			
320-325		330-342 cm	<u>300-330 cm</u> grey compacted clay w/ hash shell
325-330		G/ey 2	
330-335		S15B	
335-340			<u>330-342 cm</u> Hash shell w/grey clay
340-342		342-451	
342-345		G/ey 2	
345-350		S110G	
350-355			<u>342-451 cm</u> grey compacted clay w/ sparse shell
355-360			
360-365			
365-370			
370-375			
375-380			
380-385			
385-390			
390-395			
395-400			
400-405			
405-410			
410-415			
415-420			
420-425			
425-430			
430-435			
435-440			
440-445			
445-450			
450-455			

09CCT02_04 Core Log

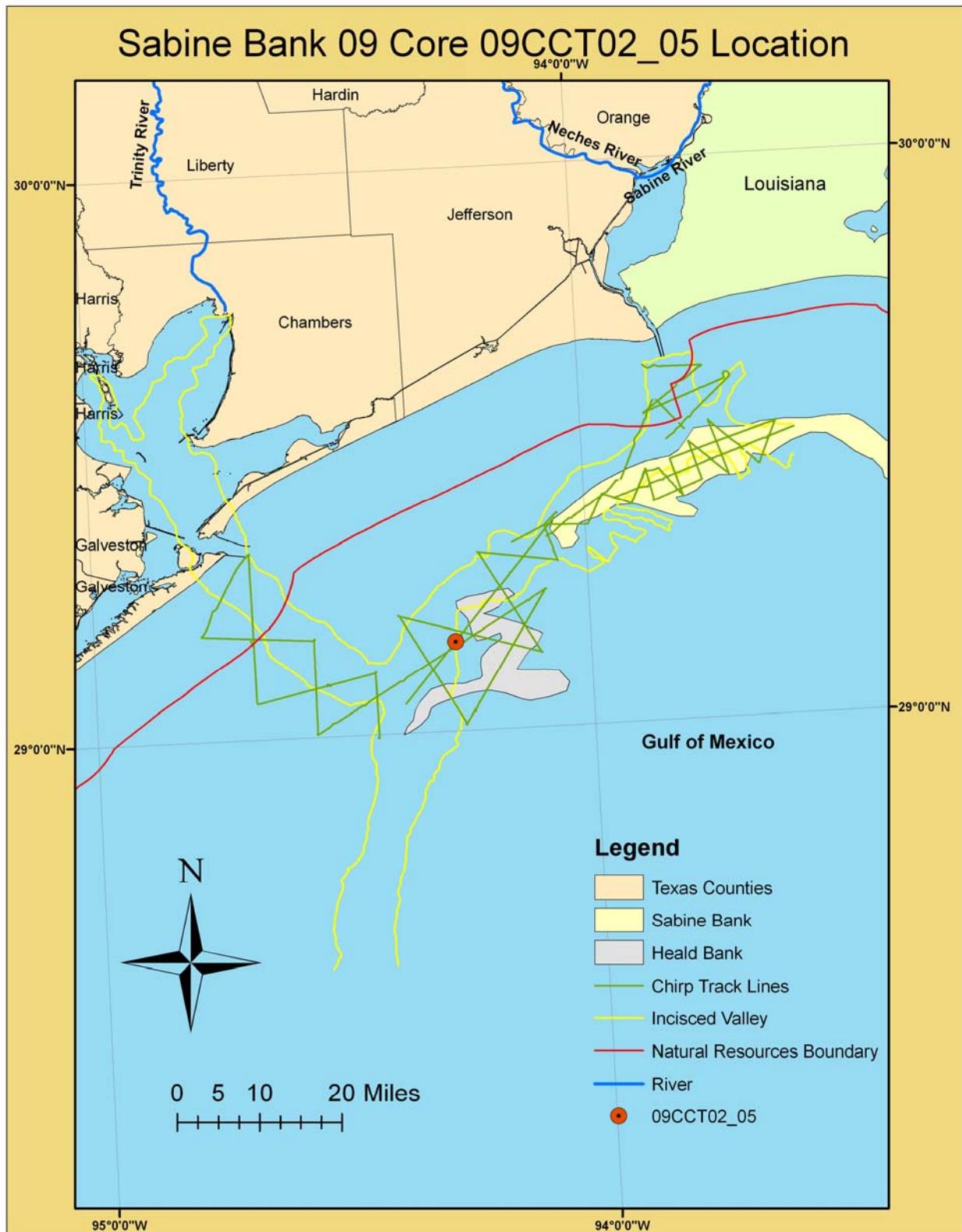
Core#: 09CCT02-04-04

Core Date: 06-Jun-09

Date Split/subsampled	Length: 115cm
<u>08-Jul-09</u>	E: 365957
	N: 3230905

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
481-486	451-475 cm		
486-491	Gley2		
488-496	S110BG		
496-501			
497-498	475-566		<u>451-475 cm Grey compacted</u>
497-501	Gley2		<u>clay w/sparse shell</u>
498-499	S1S1BG		
498-501			<u>475-566cm Grey compacted</u>
501-506			<u>clay</u>
506-511			
511-516			
516-521			
521-526			
526-531			
531-536			
536-541			
541-546			
546-551			
550-556			
556-561			
561-566			

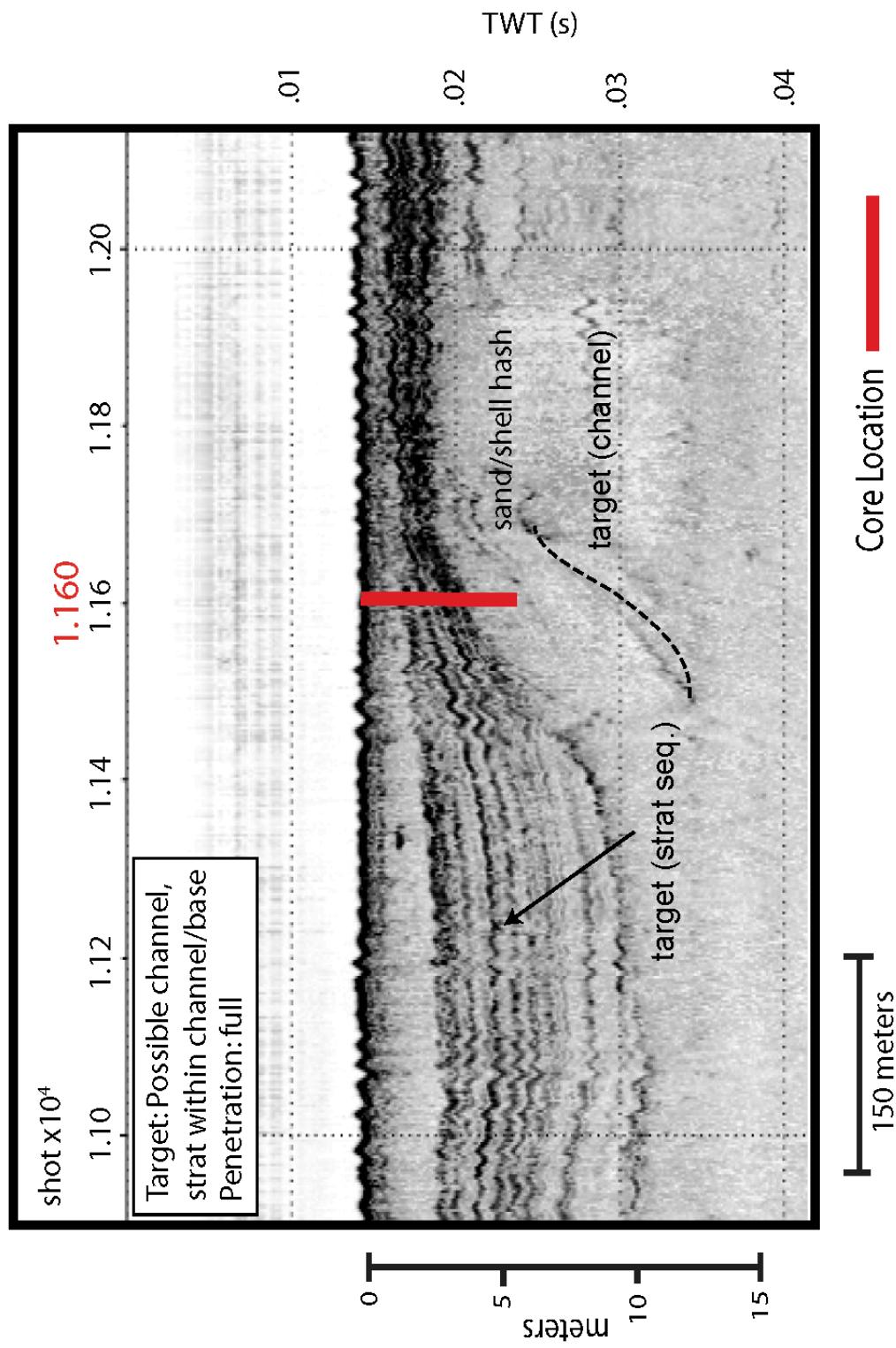
09CCT02_05 Core Location



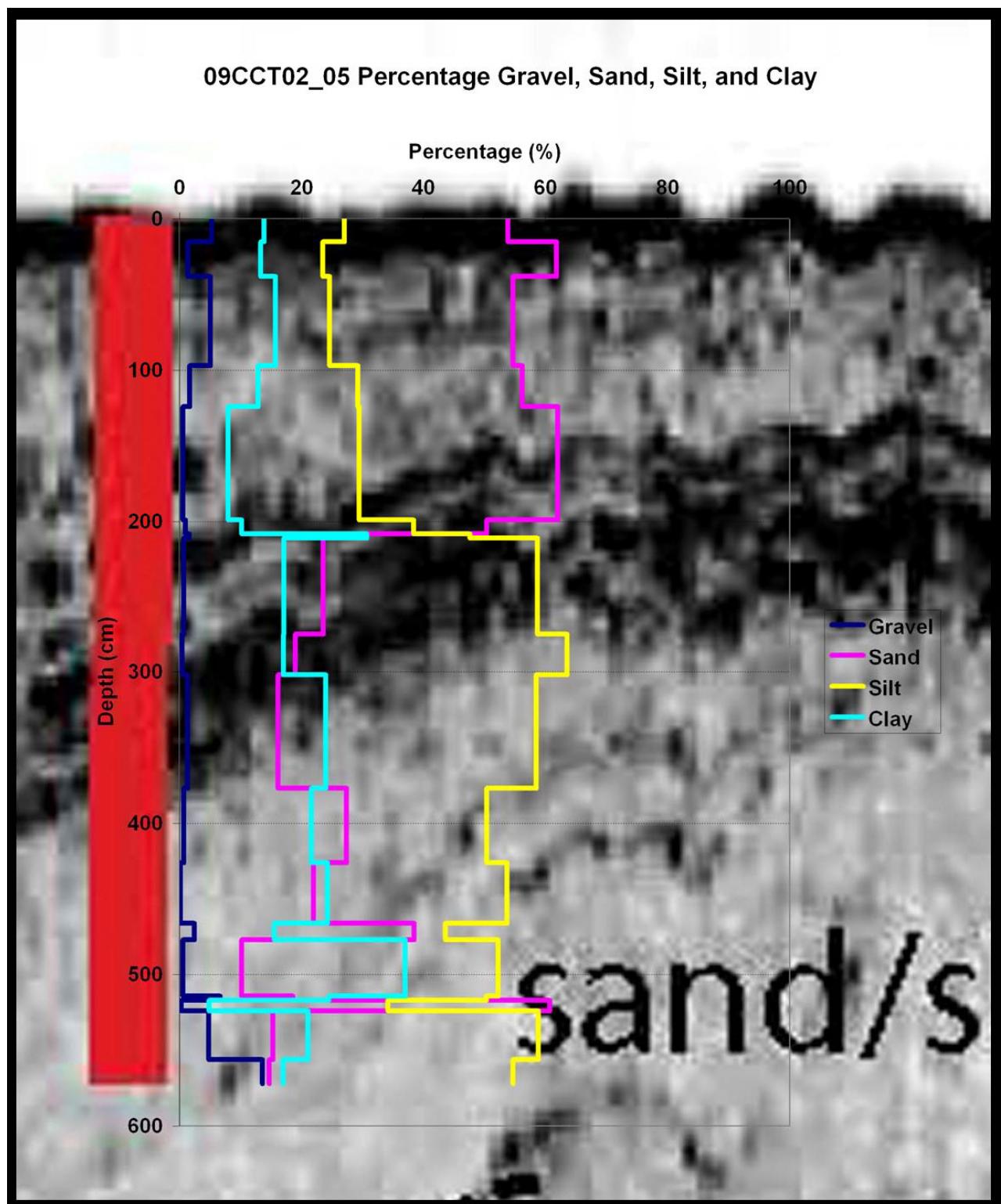
Project: 09CCT02

Transect: 09C77

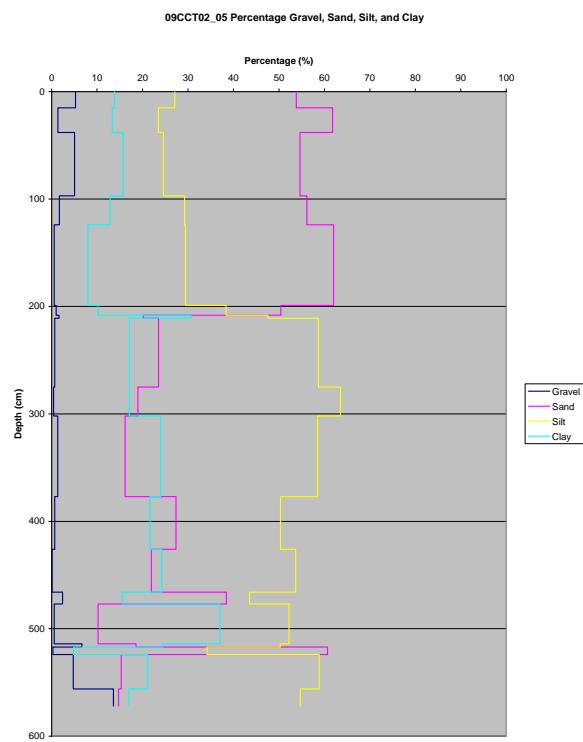
Core:09CCT02_05
Core Length (m) :5.75



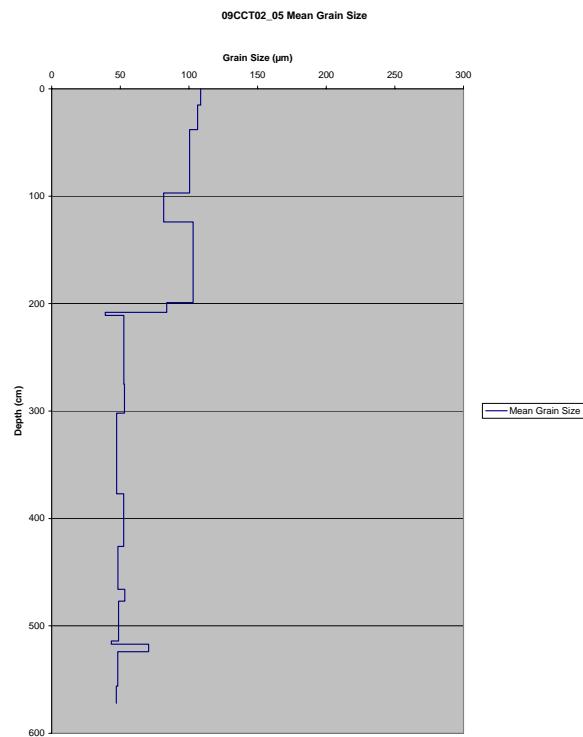
09CCT02_05 Seismic



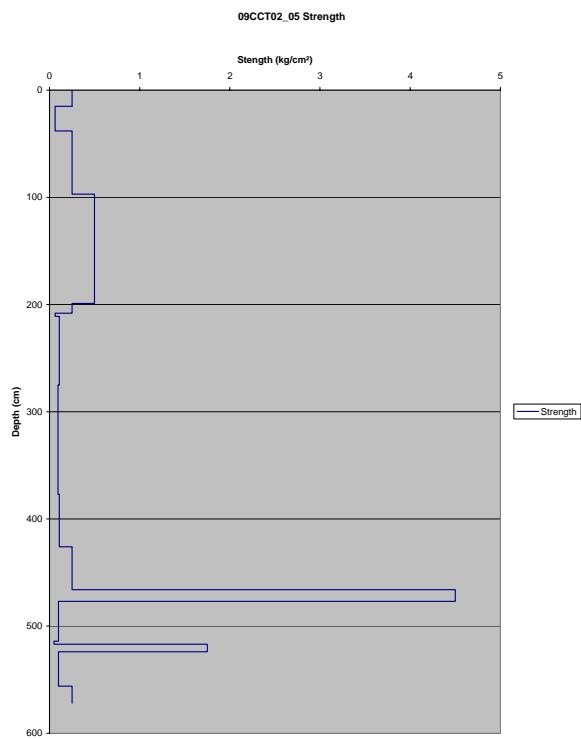
09CCT02_05 Percent Grain Size Distribution Graph



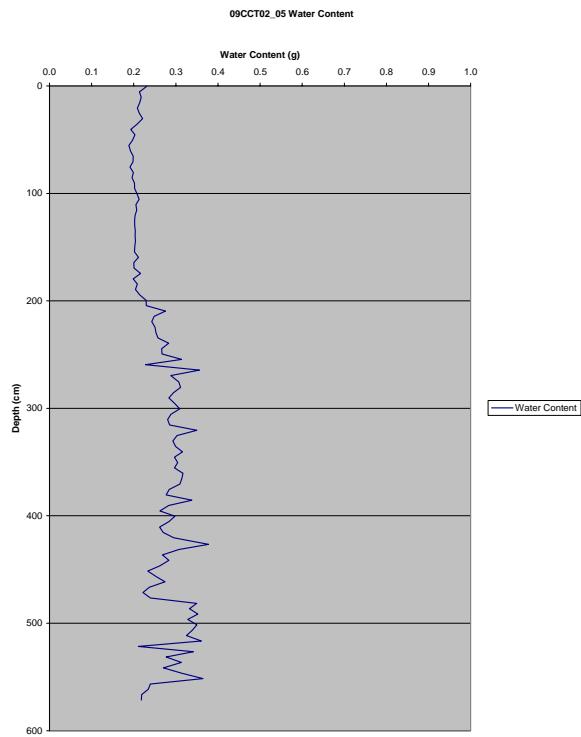
09CCT02_05 Mean Grain Size Distribution Graph



09CCT02_05 Strength Graph



09CCT02_05 Water Content Graph



09CCT02_05 Grain Size Sand Percent Table

09CCT02_05 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 (%)
5-10	87.97	10.23	0.03	0.26	0.41	0.39	0.30	0.21	0.13	0.07	100
30-35	90.13	9.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
40-45	88.78	11.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
115-120	97.52	0.65	0.77	0.70	0.32	0.05	0.00	0.00	0.00	0.00	100
169-174	84.35	5.03	3.78	2.86	1.89	1.15	0.64	0.23	0.03	0.04	100
199-204	81.60	5.49	5.18	3.58	2.18	1.23	0.64	0.10	0.00	0.00	100
208-213	93.32	0.67	2.78	2.04	0.94	0.25	0.00	0.00	0.00	0.00	100
259-264	94.60	0.98	1.26	1.24	0.83	0.51	0.29	0.16	0.09	0.04	100
290-295	95.47	0.22	1.45	1.23	0.75	0.41	0.23	0.13	0.08	0.04	100
340-345	92.32	2.90	2.85	1.47	0.45	0.02	0.00	0.00	0.00	0.00	100
405-410	90.35	3.02	2.99	2.05	1.08	0.45	0.05	0.00	0.00	0.00	100
441-446	90.64	0.73	3.40	2.81	1.62	0.72	0.08	0.00	0.00	0.00	100
471-476	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
491-496	62.89	6.05	7.34	7.39	6.03	4.32	2.83	1.77	0.88	0.51	100
514-516	87.13	6.87	3.89	1.09	0.16	0.19	0.23	0.22	0.15	0.09	100
521-524	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
541-546	83.54	5.00	3.78	2.52	1.84	1.32	0.91	0.57	0.34	0.17	100
561-566	86.14	4.98	3.75	2.08	1.30	0.74	0.46	0.30	0.16	0.09	100

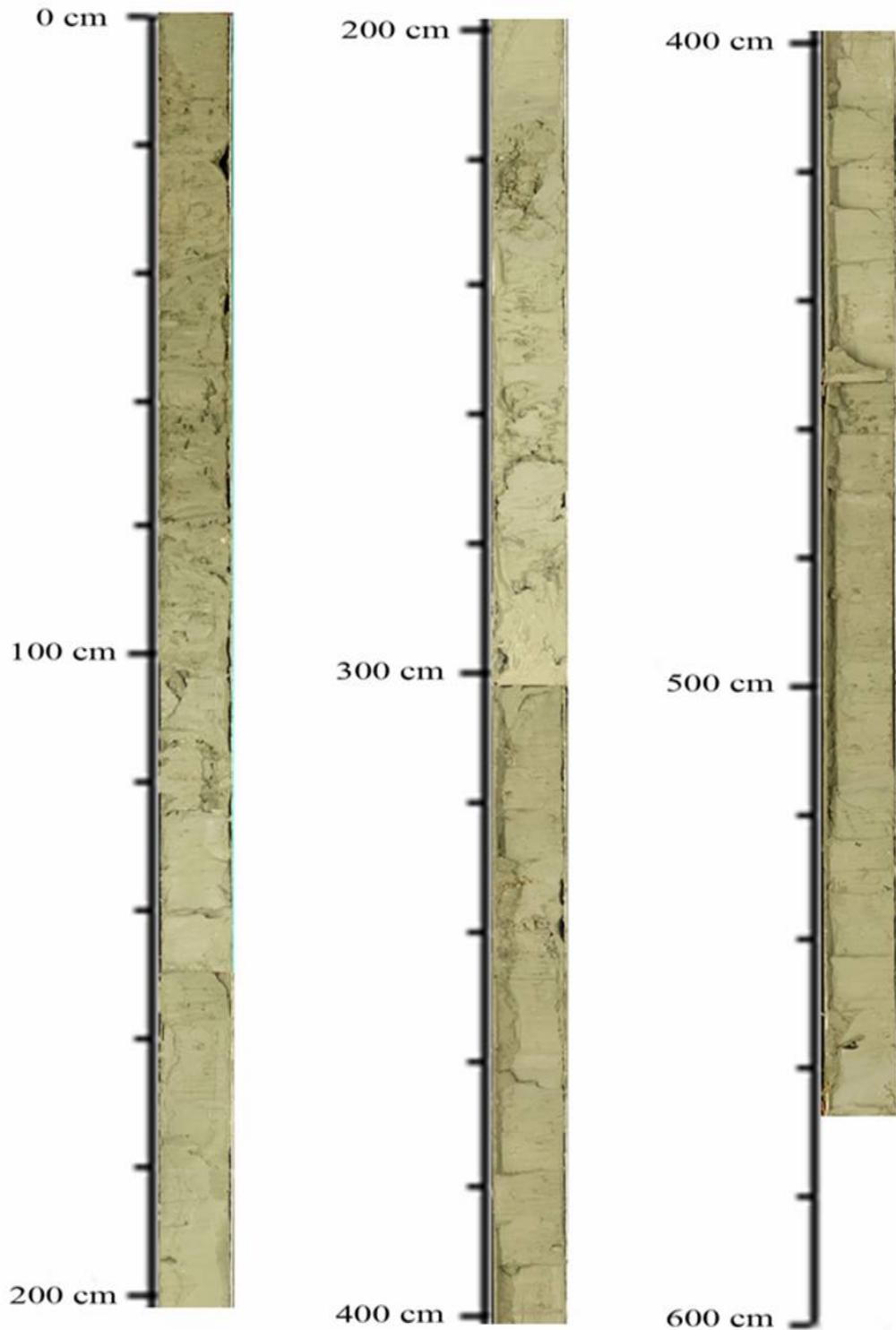
09CCT02-05											
Depth (cm)	63-82µm (%)	82-101µm (%)	101-120µm (%)	120-139µm (%)	139-158µm (%)	158-177µm (%)	177-196µm (%)	196-215µm (%)	215-234µm (%)	234-257µm (%)	Total (%)
5-10	5.31	5.78	7.25	8.94	10.72	12.40	13.63	13.89	9.53	12.56	100
30-35	5.21	5.71	7.21	8.93	10.75	12.47	13.75	14.02	9.33	12.62	100
40-45	5.66	6.10	7.60	9.28	11.02	12.59	13.64	13.63	8.53	11.95	100
115-120	0.99	1.49	2.42	3.82	5.86	8.72	12.57	17.30	24.71	22.13	100
169-174	1.32	1.46	1.97	2.77	4.00	5.92	8.98	13.91	37.45	22.21	100
199-204	0.70	0.65	0.86	1.34	2.30	4.19	7.72	14.05	43.19	25.01	100
208-213	0.08	0.53	1.16	2.21	3.96	6.68	10.83	16.75	33.27	24.53	100
259-264	0.98	1.43	2.29	3.60	5.53	8.28	12.11	17.02	26.30	22.46	100
290-295	0.37	0.78	1.49	2.64	4.47	7.26	11.38	17.07	30.49	24.06	100
340-345	0.83	1.15	1.84	2.97	4.74	7.41	11.33	16.71	29.69	23.33	100
405-410	0.89	1.16	1.78	2.78	4.31	6.66	10.21	15.44	33.79	22.97	100
441-446	0.04	0.31	0.91	2.01	3.80	6.63	10.95	17.05	33.46	24.85	100
471-476	0.00	0.00	0.22	1.40	3.11	6.03	10.71	17.53	34.70	26.30	100
491-496	1.53	1.61	2.12	2.93	4.21	6.25	9.49	14.55	34.94	22.37	100
514-516	0.24	0.10	0.02	0.18	1.07	3.10	7.22	14.80	45.80	27.47	100
521-524	0.00	0.00	0.00	0.00	0.51	2.30	7.31	15.55	44.11	30.23	100
541-546	0.25	0.00	0.00	0.01	0.43	1.77	5.10	12.29	53.45	26.71	100
561-566	0.11	0.00	0.00	0.00	0.00	0.31	3.13	10.76	58.66	27.03	100

09CCT02_05 Tables

Mean Grain Size 09CCT02-05	
Depth (cm)	Mean Grain Size (μm)
5-10	108.57
30-35	106.29
40-45	100.52
115-120	81.68
169-174	103.16
199-204	83.86
208-213	39.09
259-264	52.62
290-295	53.14
340-345	47.38
405-410	52.51
441-446	48.34
471-476	53.34
491-496	48.75
514-516	43.55
521-524	70.61
541-546	48.28
561-566	47.13

Strength 09CCT02-05	
Interval (cm)	Strength (kg/cm^2)
0-15	0.2500
15-38	0.0625
38-97	0.2500
97-124	0.5000
0-75	0.5000
75-84	0.2500
84-87	0.0625
87-151	0.1094
0-27	0.0938
27-102	0.0938
102-151	0.1094
0-40	0.2500
40-51	4.5000
51-88	0.1000
88-91	0.0500
91-98	1.7500
98-130	0.1000
130-146	0.2500

09CCT02_05 Core Pictures



09CCT02_05 Core Log

Core#: 09CCT02-05-01

Core Date: 16-Jun-09

Date Split/subsampled	Length: 124 cm
23-Jun-09	E: 376204
	N: 3226233

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
0-5	0-15cm		
5-10	Grey 2		
10-15	<u>31/0G</u>		
15-20			0-15cm Dark grey compacted
20-25	15-38cm		silty sand
25-30	Grey 2		
30-35	<u>41/5B</u>		15-38cm Dark grey softer silty
35-38			sand w/sparse shells
38-40	38-97cm		38-97cm Dark grey compacted
40-45	Grey 2		sand w/shells
45-50	<u>31/0G</u>		97-124cm Dark grey compacted
50-55			silty sand w/sparse shell
55-60			
60-65	97-124cm		
65-70	Grey C		
70-75	<u>31/0G</u>		
75-80			
80-85			
85-90			
90-95			
95-100			
100-105			
105-110			
110-115			
115-120			
120-124			

09CCT02_05 Core Log

Core #: 09CCT02-05-02

Core Date: 06-Jun-09

Date Split/subsampled	Length: 151 cm
23-Jun-09	E: 376204 N: 3226233

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
121-124		124-199cm	
129-134		Gley 2	124-199cm compacted gray
134-139		4/10 BG	sandy silt w/shells
139-144			
144-159		199-208cm	199-208 cm gray silty clay
149-159		Gley 2	compacted
159-169		5/5 BG	
164-169		208-211cm	208-211cm light gray clay
169-174		Gley 2	
174-179		5/10 BG	211-275cm Grey silt/clay
179-184			
184-189		211-275cm	
189-194		Gley 2	
194-199		4/10 BG	
199-204			
204-208			
208-209			
209-211			
211-213			
214-219			
219-221			
221-229			
229-231			
231-239			
239-249			
241-249			
249-251			
251-259			
259-261			
261-269			
269-271			
271-275			

09CCT02_05 Core Log

Core#: 09CCT02_05-03

Core Date: 06-Jun-09

Date Split/subsampled	Length: 15/cm
23-Jun-09	E: 376204
	N: 3726233

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
275-280	275-302cm		
280-285	Gley 2		
285-290			
290-295	5110BG		
295-300			
300-302	302-377cm		
302-305	Gley 2		
305-310			
310-315	415B		
315-320			
320-325	377-426cm		
325-330	Gley 2		
330-335			
335-340	515B		
340-345			
345-350			
350-355			
355-360			
360-365			
365-370			
370-375			
375-379			
377-380			
380-385			
385-390			
390-395			
395-400			
400-405			
405-410			
410-415			
415-420			
420-425			
425-426			

09CCT02_05 Core Log

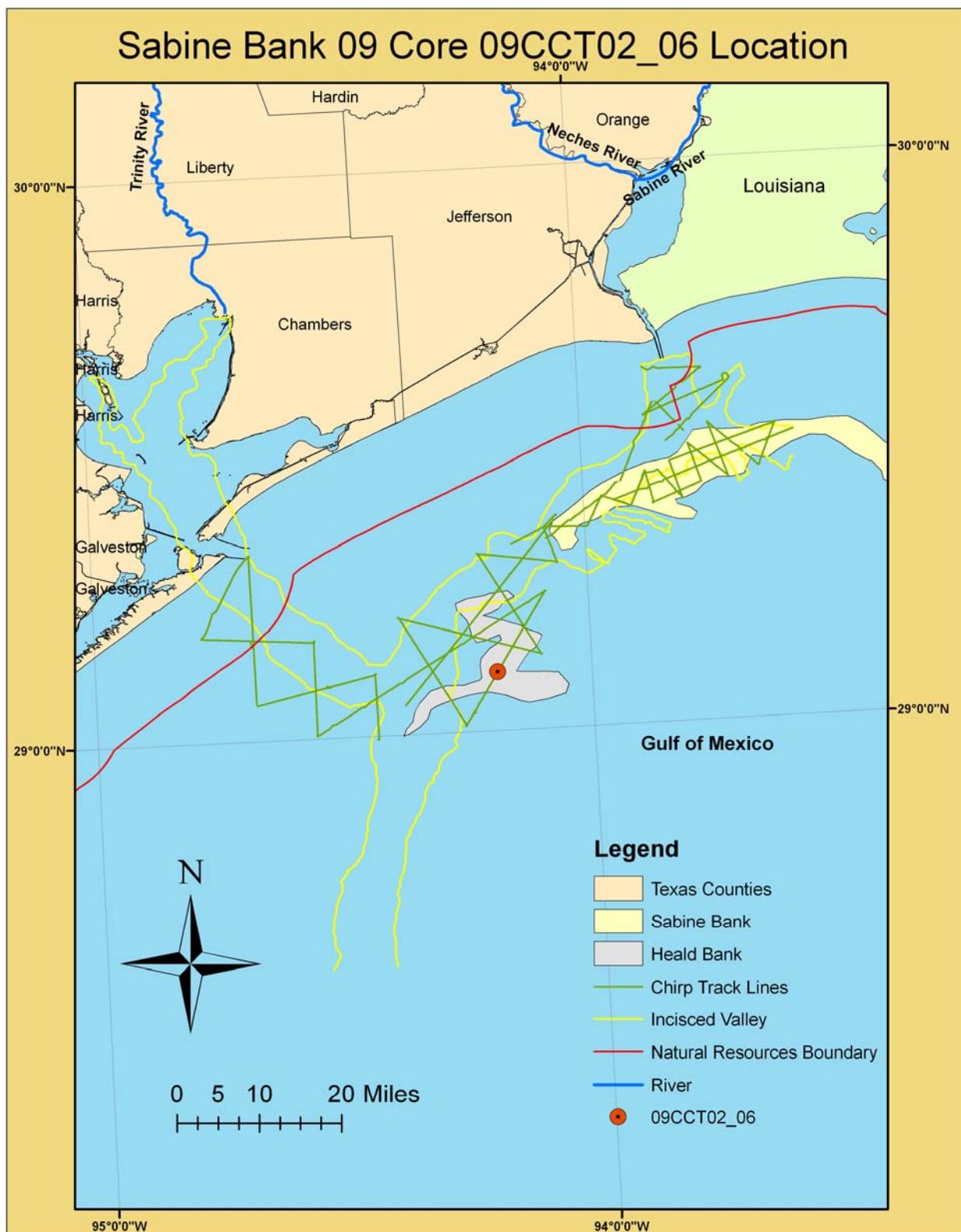
Core#: 09CCT02-05-04

Core Date: 06-Jun-09

Date Split/subsampled	Length: 150cm
24-Jun-09	E: 376204
	N: 3226233

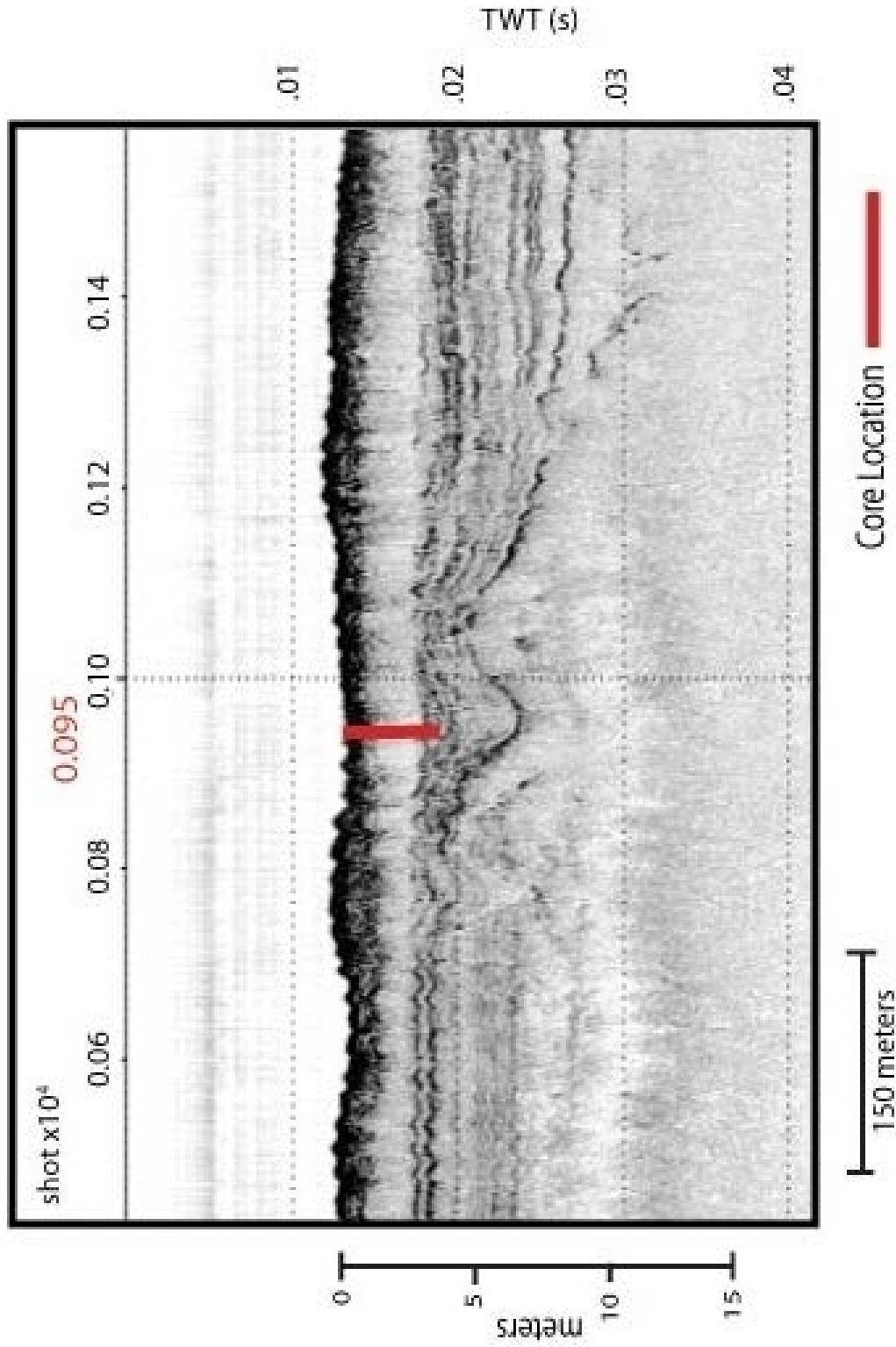
Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
426-431	426-466cm		
431-436	Gley 2		
436-441	S1/SBG		
441-446	466-477cm		
446-451	Gley 2		
451-456	S1/10G		
456-461	477-514cm		
461-466	Gley 2		
466-471	S1/4		
471-476	514-517cm		
476-477	Gley 2		
477-481	S1/SB		
481-486	514-517cm		
486-491	Gley 2		
491-496	S1/10G		
496-501	517-524cm		
501-506	Gley 2		
506-511	S1/10B		
511-514	524-556cm		
514-516	Gley 2		
516-517	S1/10B		
517-521	524-556cm		
521-524	Gley 2		
524-526	S1/10BSG		
526-531	556-576cm		
531-536	Gley 2		
536-541	576-578cm		
541-546	41/10BG		
546-551			
551-556			
556-561			
561-566			
566-571			
571-572			

09CCT02_06 Core Location

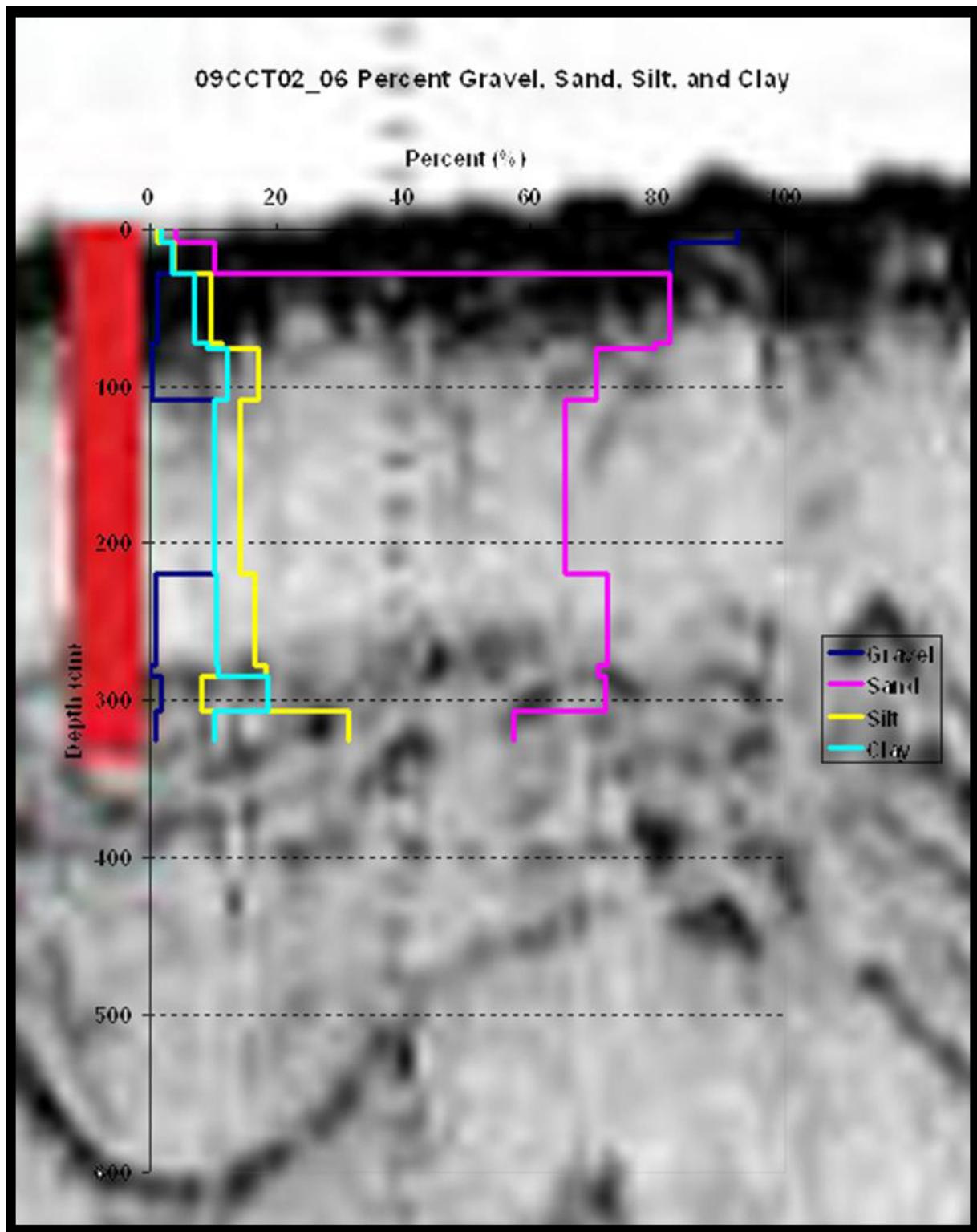


Project: 09CCT02
Transect: 09C55

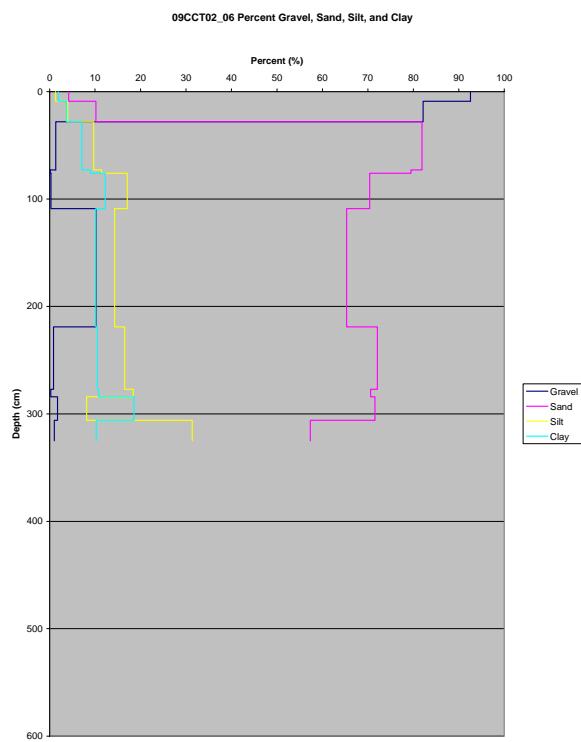
Core:09CCT02_06
Core Length (m) : 3.25



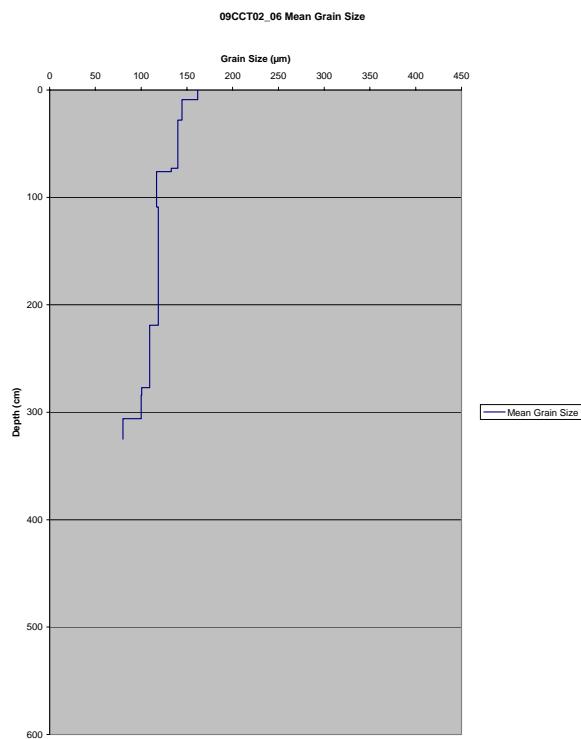
09CCT02_06 Seismic



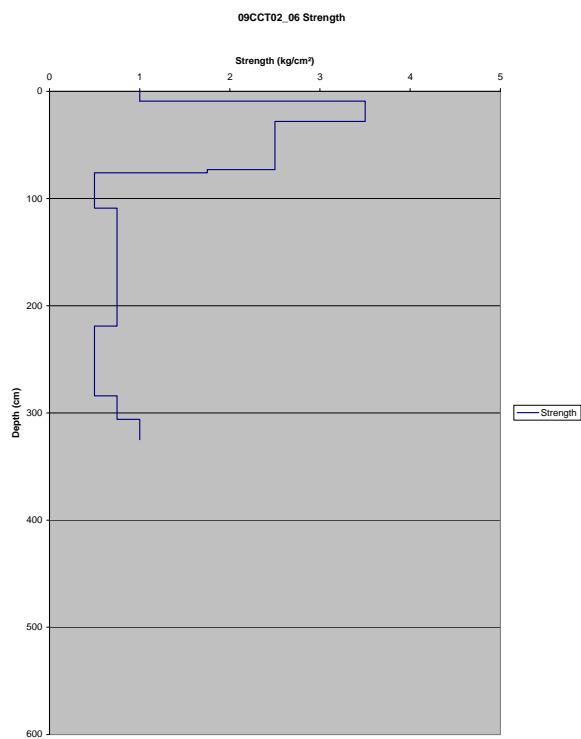
09CCT02_06 Percent Grain Size Distribution Graph



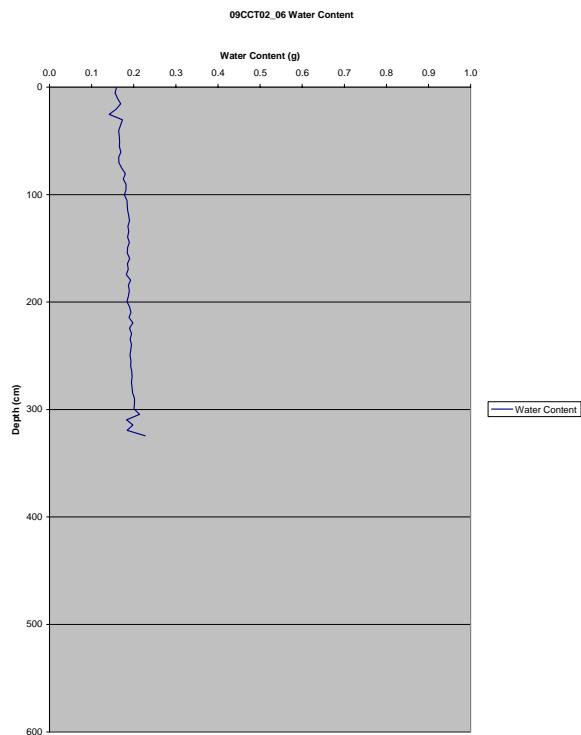
09CCT02_06 Mean Grain Size Distribution Graph



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

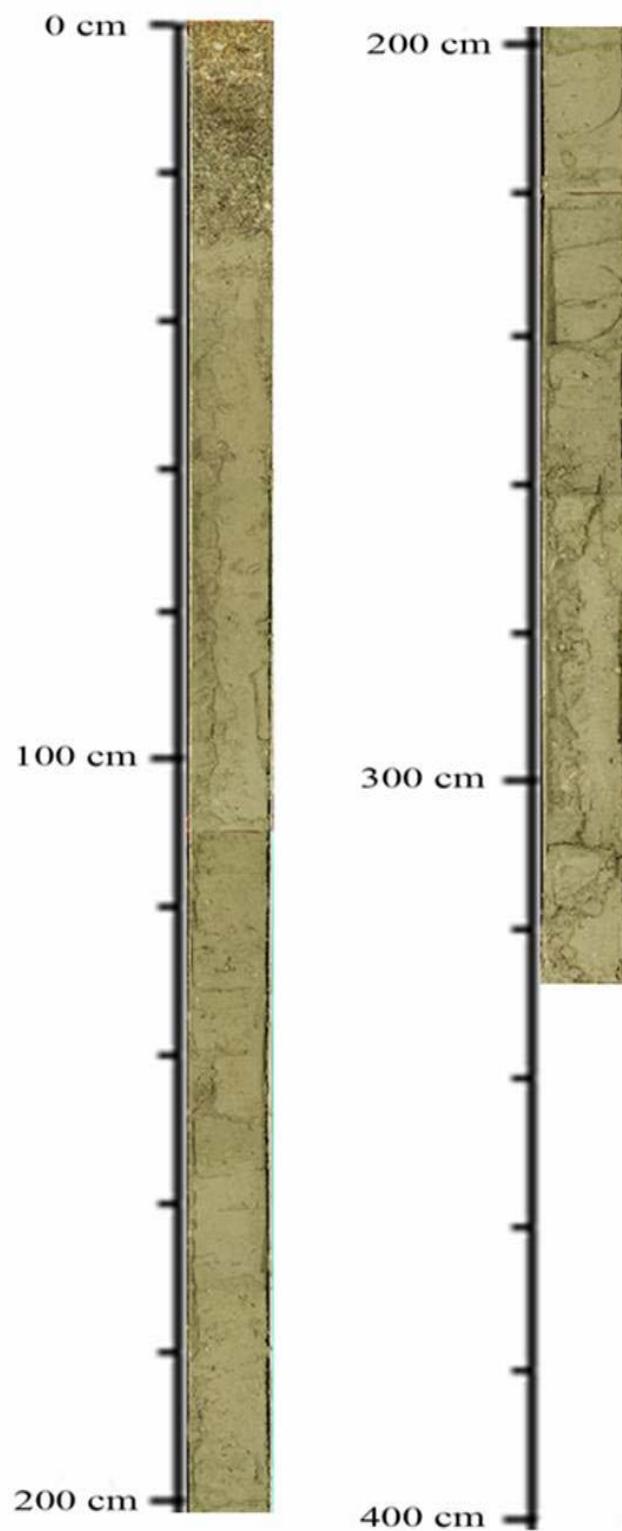
09CCT02-06											
Depth (cm)	63- 82μm (%)	82- 101μm (%)	101- 120μm (%)	120- 139μm (%)	139- 158μm (%)	158- 177μm (%)	177- 196μm (%)	196- 215μm (%)	215- 234μm (%)	234- 257μm (%)	Total (%)
0-5	8.92	8.69	9.91	11.05	11.95	12.39	12.08	10.78	5.79	8.45	100
20-25	7.30	7.40	8.74	10.13	11.42	12.40	12.75	12.12	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/cm^2)
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	0-9 cm		0-9 cm shells w/sparse clay
5-9	10-y2		
9-10	6/3		9-28 cm shells w/grey clay
10-15	9-28 cm		28-73 cm grey compacted
15-20	10-y2		sandy clay w/sparse shells
20-25	4/1		73-76 cm grey compacted
25-28	28-73cm		sandy clay w/ layer of shells
28-30	G/ey 2		76-109 cm grey compacted
30-35	4/15BG		sandy clay w/sparse shells
35-40	73-76cm		
40-45	G/ey 2		
45-50	4/15BG		
50-55	73-76cm		
55-60	G/ey 2		
60-65	4/15BG		
65-70	73-76cm		
70-73	G/ey 2		
73-75	4/15BG		
75-76	76-109cm		
76-80	G/ey 2		
80-85	4/15BG		
85-90			
90-95			
95-100			
100-105			
105-109			

09CCT02_06 Core Log

Core#: 09CCT02-06-02

Core Date: 06-Jan-09

Date Split/subsampled	Length: 110 cm
	E: 384136
15-Jan-09	N: 322000?

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
109 - 114		109-219cm	
114 - 119			
119 - 124	Gray		
124 - 129		5110G	
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			

09CCT02_06 Core Log

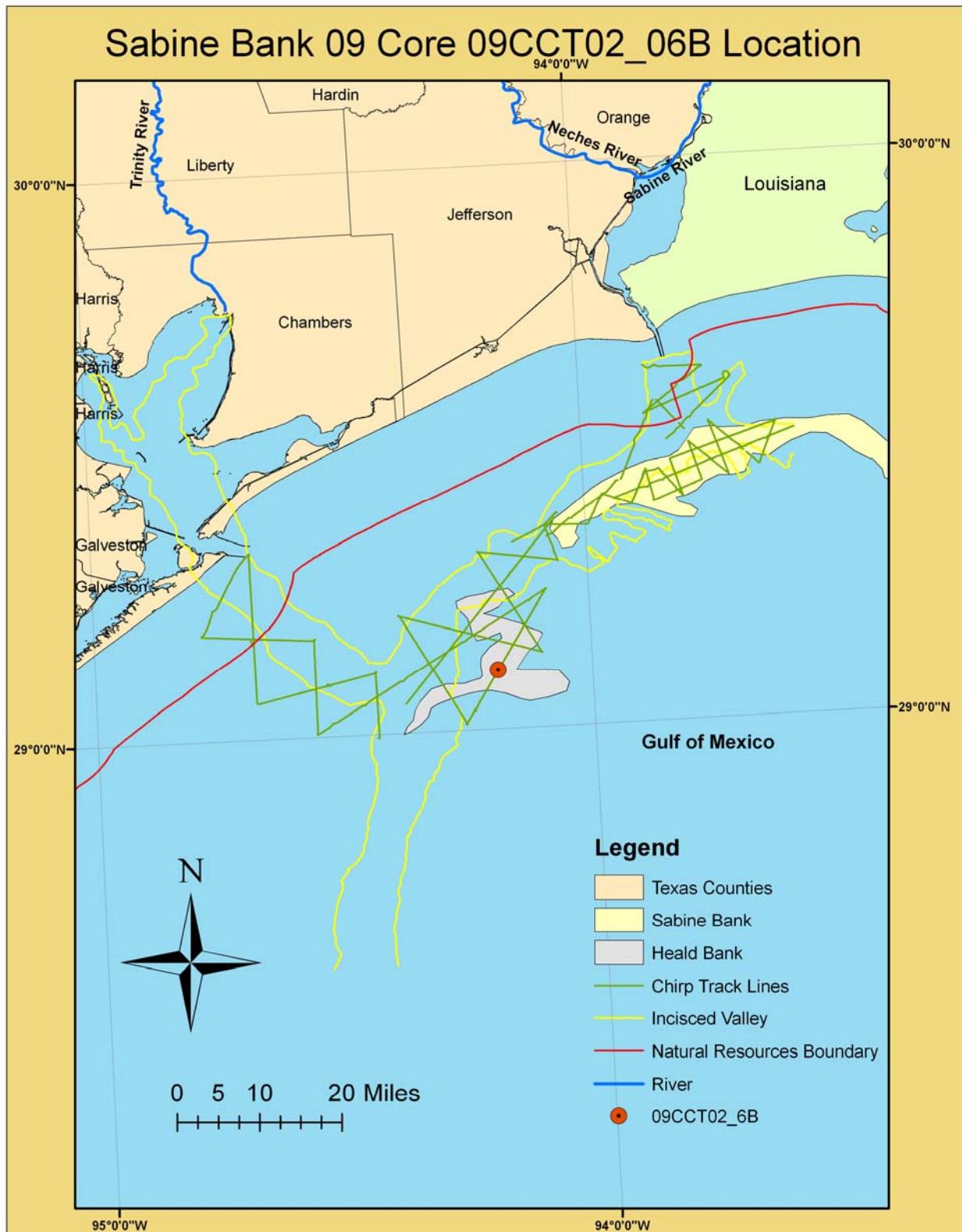
Core#: 09CCT02-06-03

Core Date: 06-Jun-09

Date Split/subsampled	Length: 106 cm
11-Jun-09	E: 384136
	N: 3830097

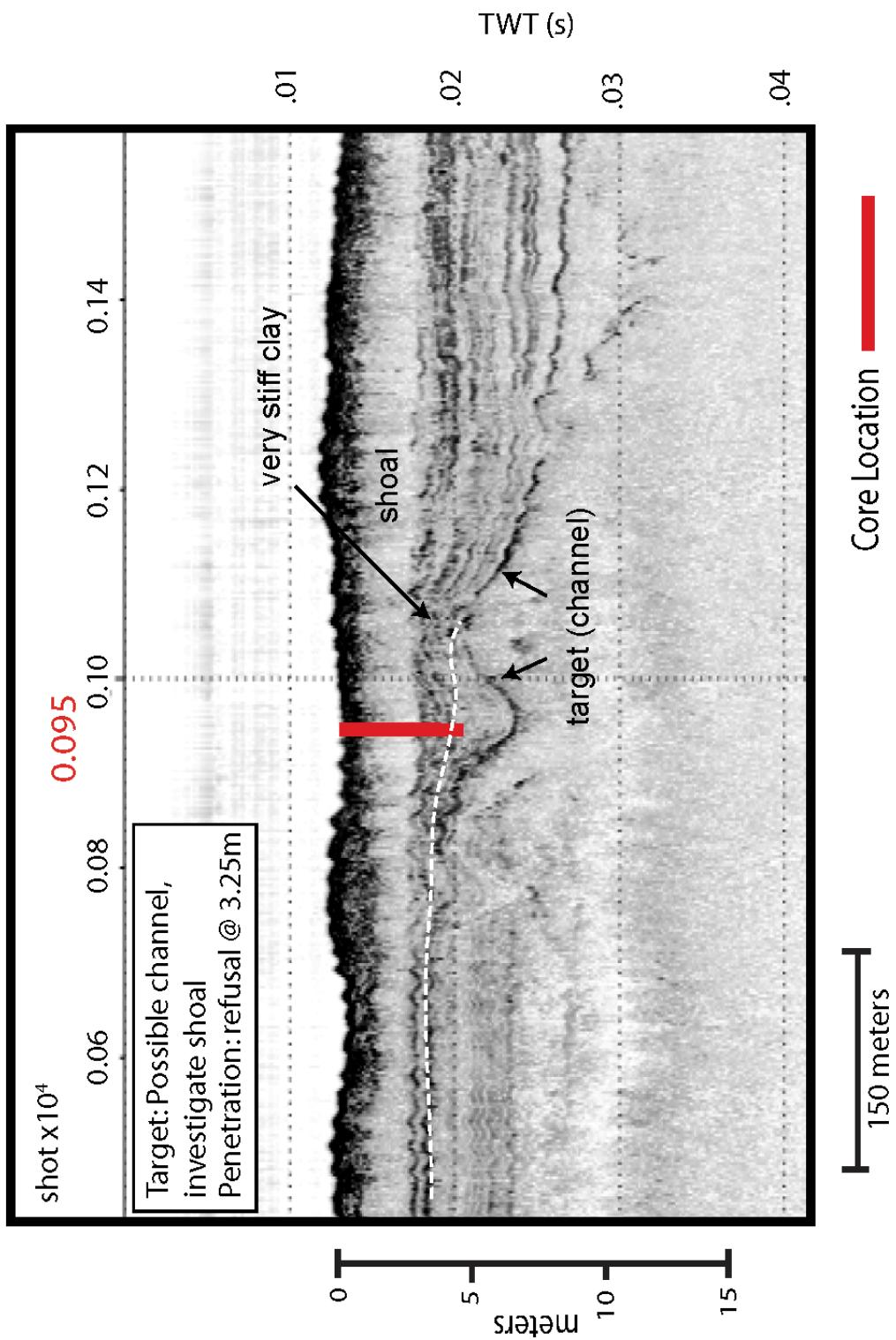
Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
219-224	219-277cm		
224-229	Gley 2		
227-234	5/10BG		
234-237			
237-244	277-284cm		219-277cm grey silty sand w/sparse shell
244-247	Gley 2		
247-254			277-284cm grey silty sand w/layer of shell
254-257	4/1SBG		
257-264			284-306cm grey silty sand w/sparse shell
264-267	284-306cm		
267-274	Gley 2		
274-277			219-277cm grey silty sand w/sparse shell
277-284	4/1SB		
284-287	306-325cm		306-325cm grey silty clay w/sparse shell
287-292	Gley 2		
294-297			
297-304	4/10BG		
304-306			
306-309			
307-314			
314-317			
317-324			
324-325			

09CCT02_06B Core Location

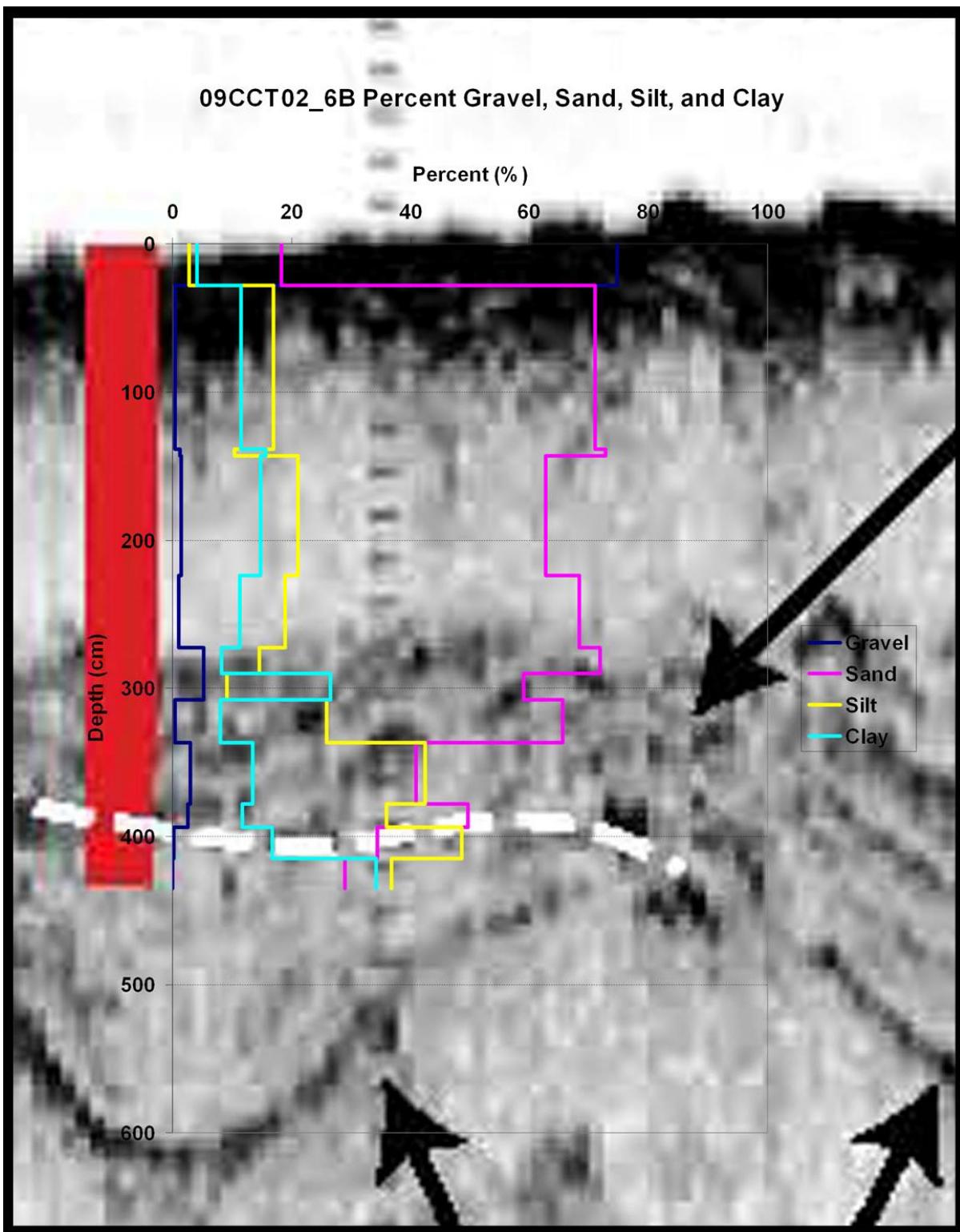


Project: 09CCT02
Transect: 09C55

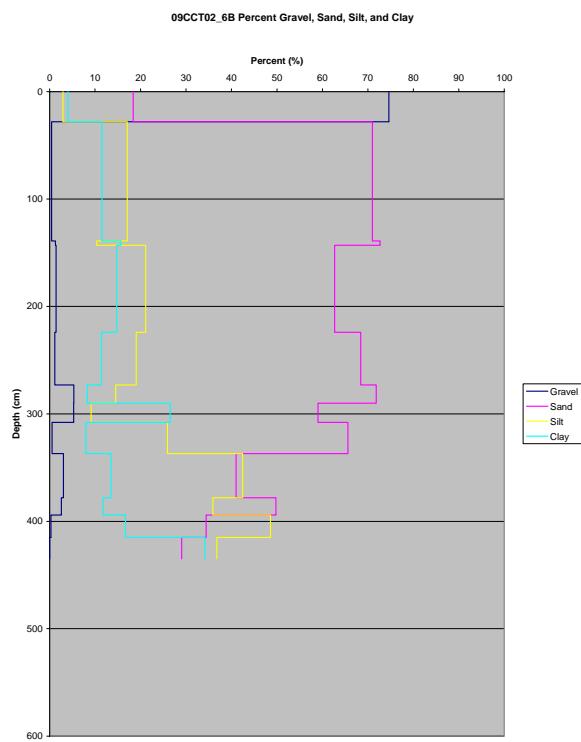
Core: 09CCT02_06B
Core Length (m) : 4.36



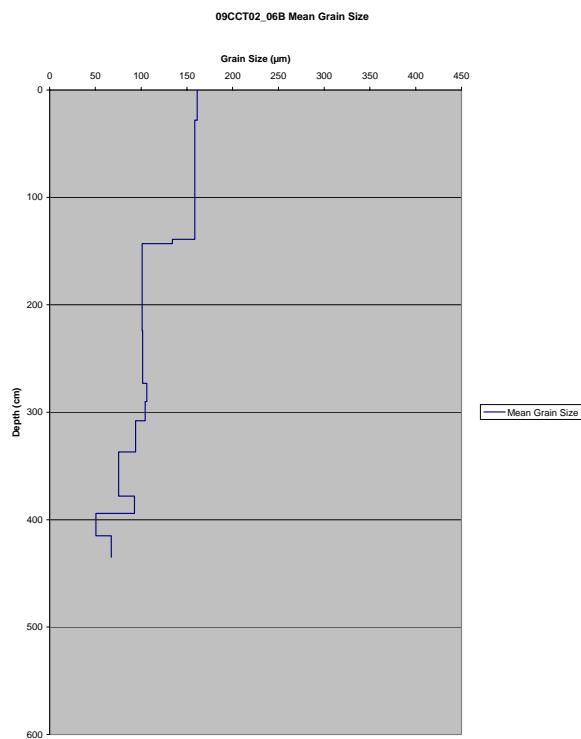
09CCT02_06B Seismic



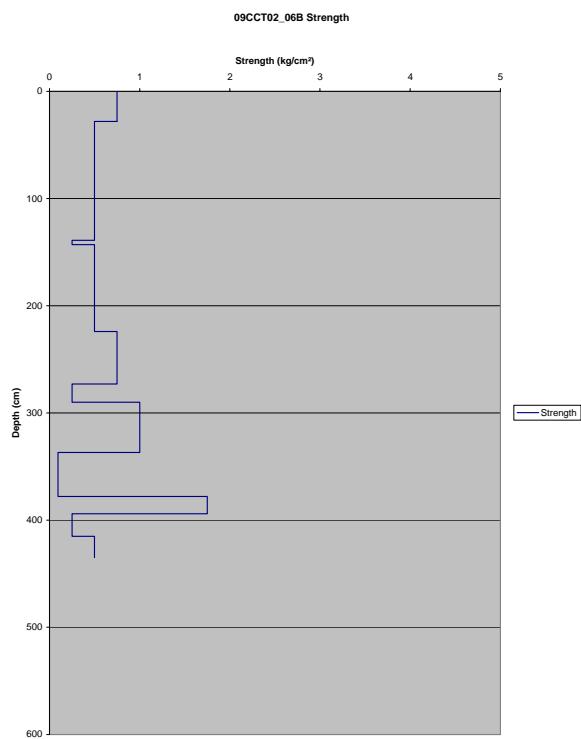
09CCT02_06B Percent Grain Size Distribution Graph



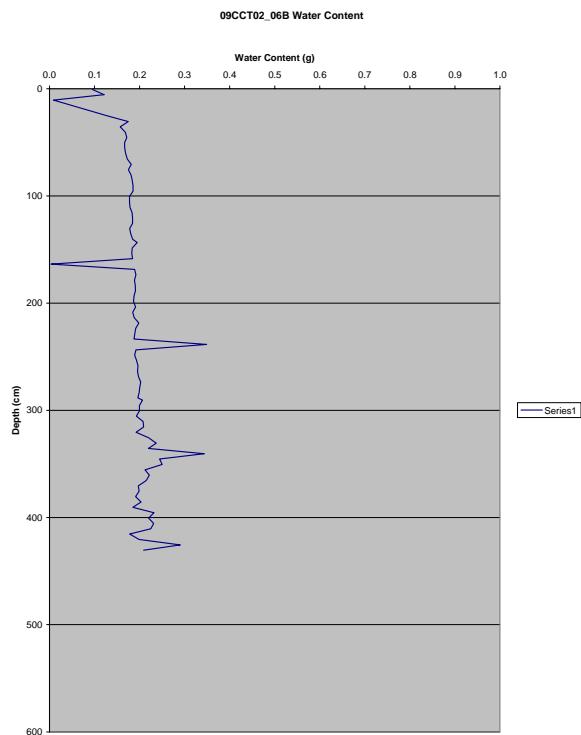
09CCT02_06B Mean Grain Size Distribution Graph



09CCT02_06B Strength Graph



09CCT02_06B Water Content Graph



09CCT02_06B Grain Size Sand Percent Table

09CCT02_6B 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 (%)
15-20	70.56	26.82	2.60	0.02	0.00	0.00	0.00	0.00	0.00	0.00	100
75-80	83.51	11.63	0.19	0.76	1.09	1.00	0.78	0.55	0.32	0.18	100
140-143	89.36	9.10	0.00	0.17	0.35	0.35	0.28	0.21	0.11	0.07	100
168-173	93.31	6.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
248-253	96.30	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
278-283	97.59	2.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
295-300	94.64	2.42	0.44	0.86	0.65	0.42	0.27	0.16	0.09	0.05	100
320-325	97.72	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
355-360	95.80	0.28	0.64	1.01	0.77	0.56	0.41	0.28	0.17	0.09	100
390-394	94.43	0.56	0.99	1.30	0.97	0.69	0.47	0.32	0.17	0.10	100
405-410	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
420-425	88.76	0.15	2.26	2.44	2.02	1.58	1.18	0.85	0.47	0.29	100

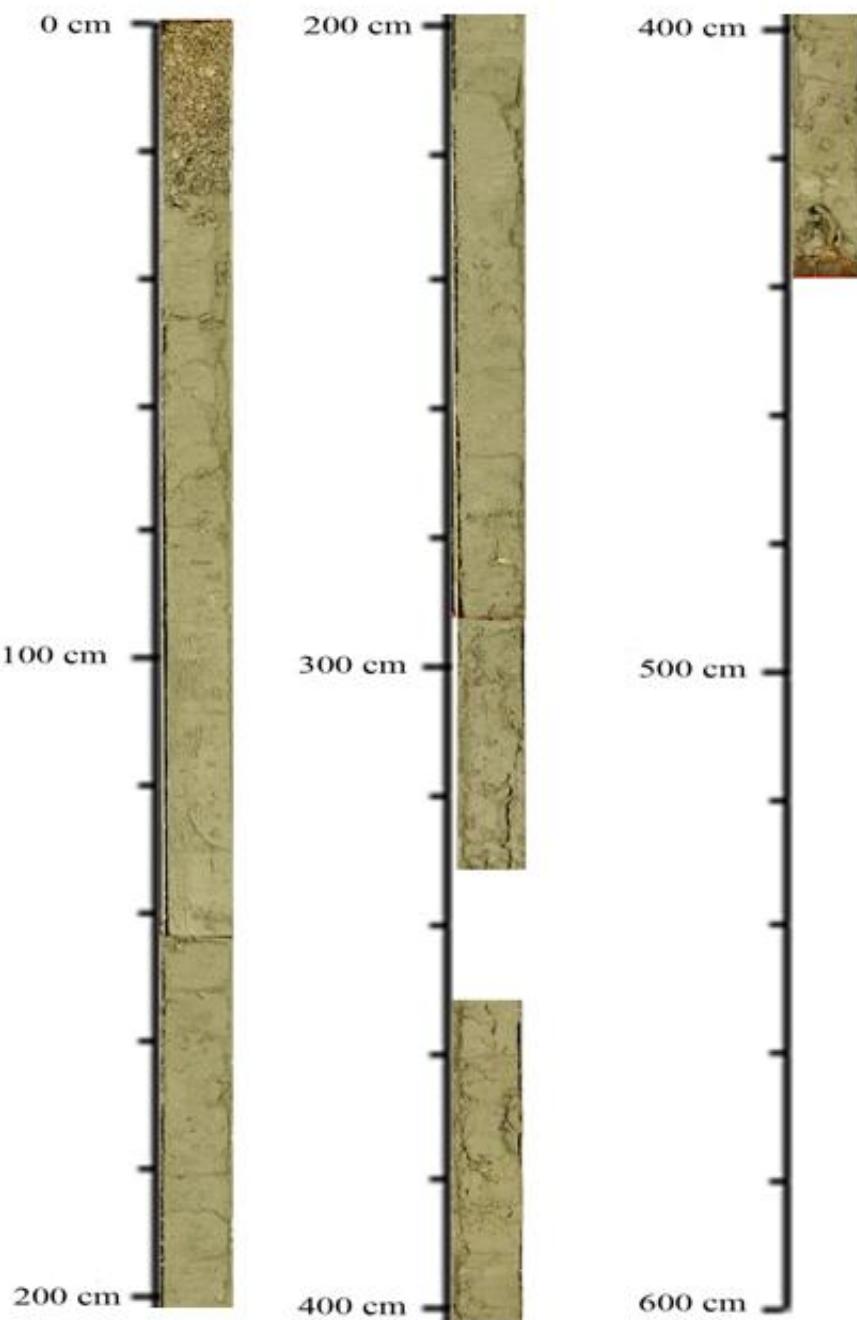
09CCT02-06B											
Depth (cm)	63-82µm (%)	82-101µm (%)	101-120µm (%)	120-139µm (%)	139-158µm (%)	158-177µm (%)	177-196µm (%)	196-215µm (%)	215-234µm (%)	234-257µm (%)	Total (%)
15-20	10.64	10.18	11.36	12.35	12.93	12.83	11.75	9.45	2.46	6.04	100
75-80	6.09	6.56	8.16	9.94	11.73	13.26	14.05	13.45	6.01	10.76	100
140-143	5.24	5.83	7.43	9.29	11.25	13.08	14.32	14.26	7.27	12.03	100
168-173	4.31	4.95	6.49	8.36	10.45	12.56	14.33	15.05	9.74	13.76	100
248-253	3.10	3.83	5.29	7.16	9.40	11.90	14.37	16.13	12.77	16.05	100
278-283	2.50	3.26	4.69	6.57	8.92	11.65	14.50	16.77	13.96	17.18	100
295-300	2.16	2.78	4.02	5.70	7.88	10.57	13.66	16.67	17.94	18.62	100
320-325	2.21	2.87	4.13	5.83	8.01	10.67	13.67	16.56	17.66	18.38	100
355-360	0.78	1.29	2.18	3.53	5.49	8.26	12.02	16.81	27.36	22.28	100
390-394	1.09	1.65	2.66	4.17	6.28	9.12	12.79	17.07	23.90	21.27	100
405-410	0.03	0.42	1.05	2.10	3.85	6.61	10.79	16.80	33.63	24.73	100
420-425	0.09	0.59	1.32	2.54	4.49	7.45	11.79	17.64	29.66	24.44	100

09CCT02_06B Tables

Mean Grain Size 09CCT02-06B	
Depth (cm)	Mean Grain Size (μm)
15-20	161.43
75-80	158.79
140-143	134.09
168-173	101.12
248-253	101.55
278-283	106.27
295-300	104.33
320-325	93.91
355-360	75.52
390-394	92.78
405-410	50.50
420-425	67.41

Strength 09CCT02-06B	
Interval (cm)	Strength (kg/cm^2)
0-28	0.7500
28-139	0.5000
139-143	0.2500
0-81	0.5000
81-130	0.7500
130-147	0.2500
0-18	1.0000
18-47	1.0000
47-88	0.0938
88-104	1.7500
104-125	0.2500
125-145	0.5000

09CCT02_06B Core Picture



09CCT02 06B Core Log

Core#: 09CCT02_06B-01

Core Date: 06-Jun-09

Date Split/subsampled	Length: 143 cm E: 384136 N: 3720099
18-Jun-09	

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
0-5	0-28cm		
5-10	10 yR		<u>0-25cm</u> Hash shell
10-15			
15-20	6/3		
20-25			
25-28	28-139cm		<u>28-139cm</u> Dark grey
28-30	Gley 2		compacted sand
30-35			
35-40	4/15 BG		
40-45			
45-50	139-143cm		<u>139-143cm</u> Dark grey
50-55			
55-60	Gley 2		
60-65			
65-70	3/10 G		uncompacted sand
70-75			
75-80			
80-85			
85-90			
90-95			
95-100			
100-105			
105-110			
110-115			
115-120			
120-125			
125-130			
130-135			
135-139			
139-140			
140-143			

09CCT02_06B Core Log

Core#: 09CCT02_06B-02

Core Date: 06-Jun-09

Date Split/subsampled	Length: 147 cm
18-Jun-09	E: 384136
	N: 3220097

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
143-148			143-224cm grey compacted
148-153			sand w/sparse shell
153-158			
158-163			
163-168			
168-173			
173-178			224-273cm Grey sand
178-183			
183-188			
188-193			
193-198			
198-203			
203-208			
208-213			
213-218			
218-223			
223-224			
224-228			
228-233			
233-238			
238-243			
243-248			
248-253			
253-258			
258-263			
263-268			
268-273			
273-278			
278-283			
283-288			
288-290			

09CCT02_06B Core Log

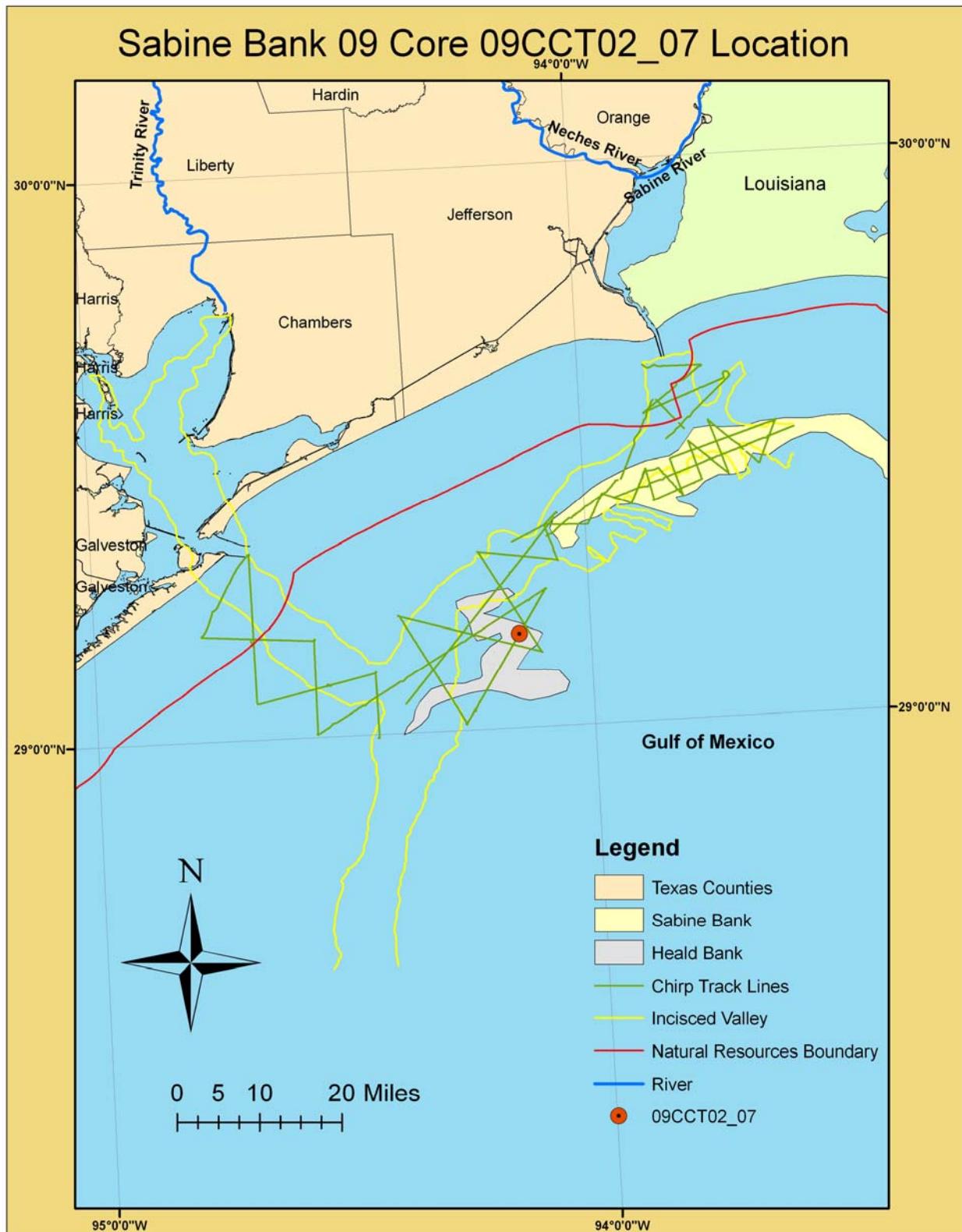
Core#: 09CCT02-06B-03

Core Date: 06-Jun-09

Date Split/subsampled	Length: 148 cm
	E: 384136
	N: 3220097

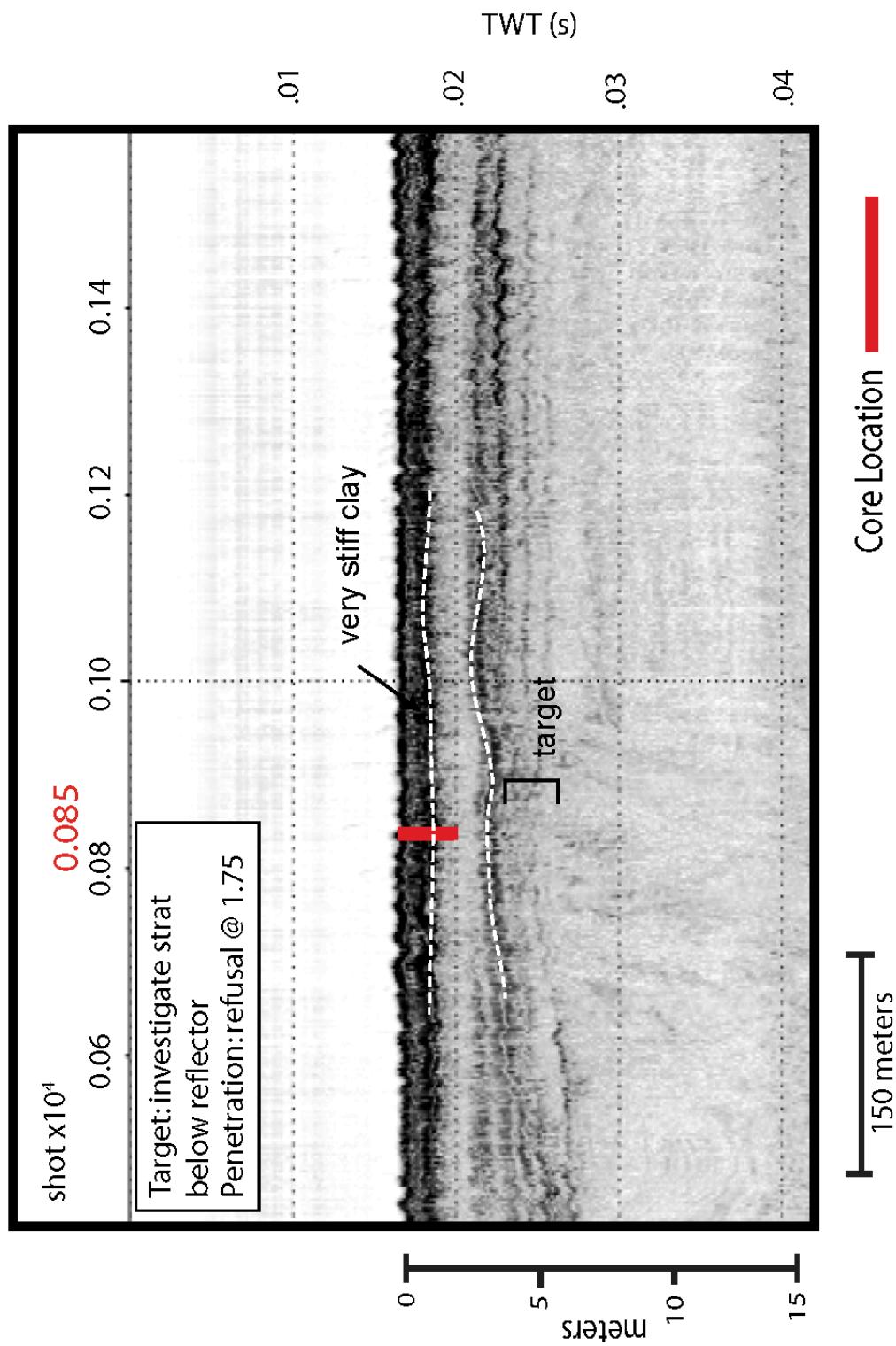
Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
290-295		290-308cm	<u>290-308cm</u> Dark grey
295-300	Gley 2		sand w/sparse shell
300-305		415 BG	
305-308			
308-310		308-337cm	<u>308-337cm</u> Dark grey
310-315	Gley 2		sand
315-320		415 BG	
320-325		337-378cm	<u>337-378cm</u> Dark grey
325-330	Gley 2		silty sand
330-335		4110BG	
335-337			
337-340		378-394cm	<u>378-394cm</u> Grey uncompacte
340-345	Gley 2		silty sand w/grease shell
345-350		415B	
350-355		394-415cm	<u>394-415cm</u> Dark grey
355-360			sandy silt
360-365		394-415cm	
365-370	Gley 2		
370-375		4110G	
375-378			<u>415-435cm</u> Dark grey
378-380		415-435cm	clayey silt
380-385	Gley 2		
385-390		415 BG	
390-394			
394-395			
395-400			
400-405			
405-410			
410-415			

09CCT02_07 Core Location

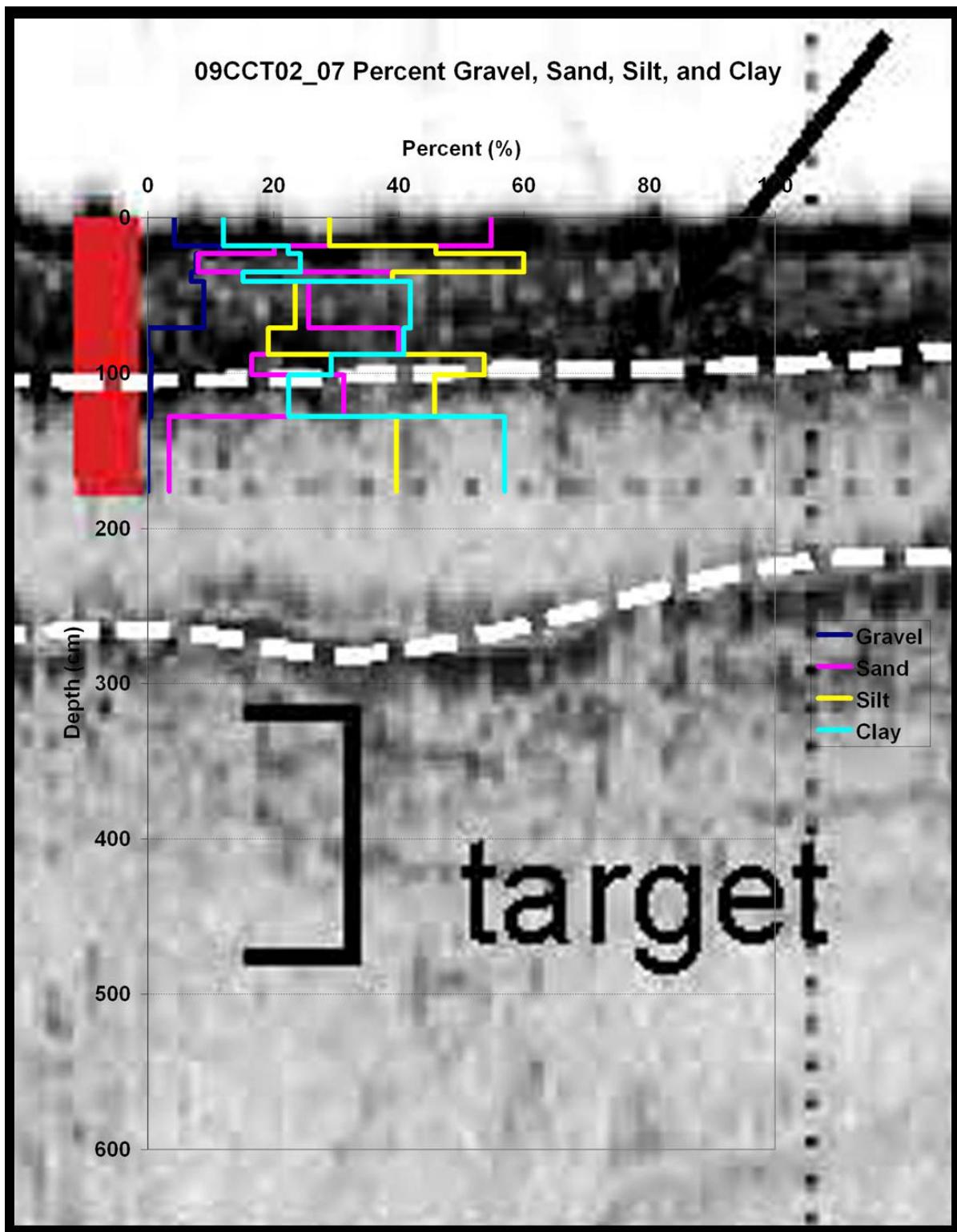


Project: 09CCT02
Transect: 09C56

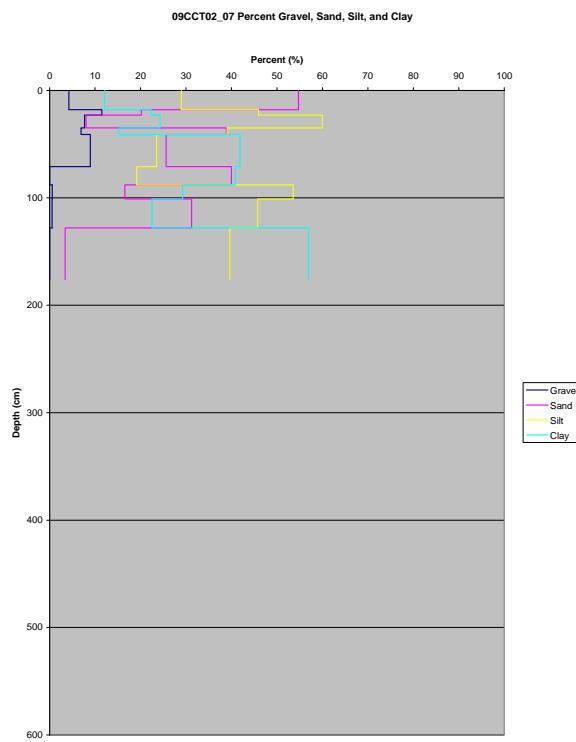
Core: 09CCT02_07
Core Length (m) : 1.75



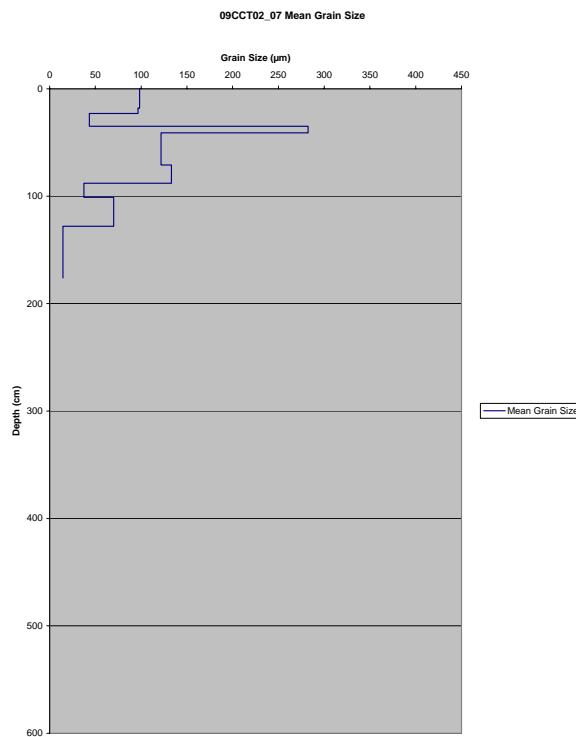
09CCT02_07 Seismic



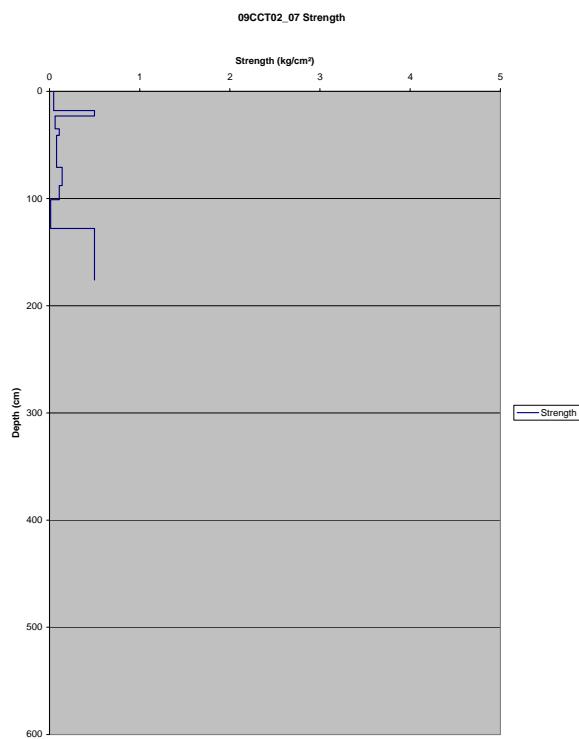
09CCT02_07 Percent Grain Size Distribution Graph



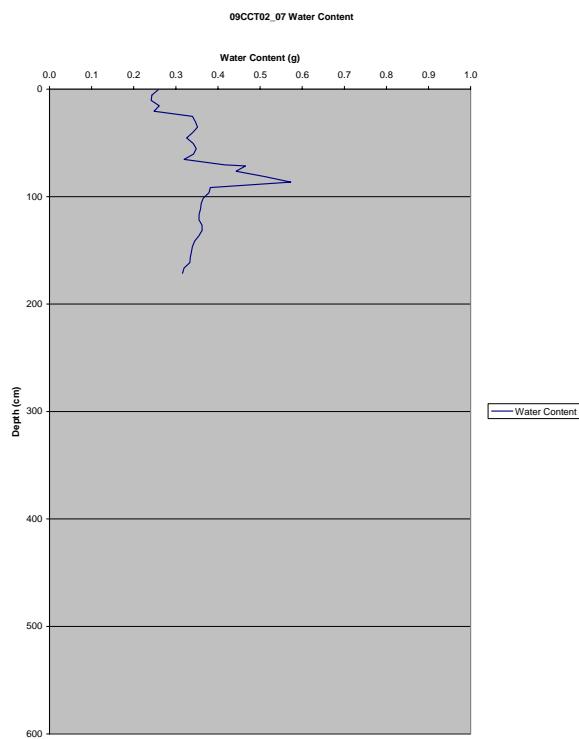
09CCT02_07 Mean Grain Size Distribution Graph



09CCT02_07 Strength Graph



09CCT02_07 Water Content Graph



09CCT02_07 Grain Size Sand Percent Table

09CCT02_07 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 (%)
5-10	88.92	10.81	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
20-23	69.68	3.79	3.72	5.22	5.24	4.46	3.39	2.36	1.39	0.75	100
25-30	67.90	8.44	5.53	4.96	4.23	3.33	2.44	1.70	0.92	0.55	100
35-40	39.20	3.80	8.14	11.18	11.24	9.55	7.24	5.06	2.97	1.61	100
60-65	59.34	12.09	6.32	6.20	5.37	4.13	2.92	1.94	1.11	0.59	100
76-81	59.31	18.40	10.31	5.69	3.04	1.61	0.85	0.45	0.21	0.12	100
96-101	83.84	14.36	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
116-121	84.18	9.44	2.47	1.52	1.04	0.69	0.32	0.18	0.10	0.05	100
151-156	72.01	15.33	10.61	2.05	0.00	0.00	0.00	0.00	0.00	0.00	100

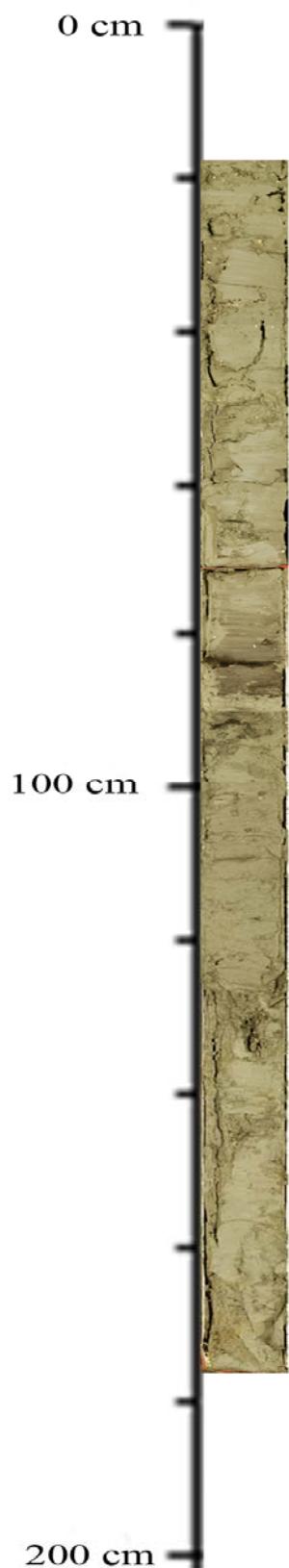
09CCT02-07											
Depth (cm)	63-82µm (%)	82-101µm (%)	101-120µm (%)	120-139µm (%)	139-158µm (%)	158-177µm (%)	177-196µm (%)	196-215µm (%)	215-234µm (%)	234-257µm (%)	Total (%)
5-10	4.70	5.00	6.19	7.60	9.19	10.89	12.59	14.06	14.84	14.95	100
20-23	2.12	2.49	3.39	4.61	6.23	8.37	11.22	14.96	26.74	19.87	100
25-30	2.57	2.49	2.89	3.40	4.08	5.14	7.02	10.83	42.03	19.55	100
35-40	1.24	1.34	1.80	2.55	3.79	5.82	9.21	14.74	36.06	23.43	100
60-65	5.49	5.55	6.58	7.72	8.91	10.08	11.23	12.40	17.93	14.11	100
76-81	5.51	5.14	5.81	6.69	7.83	9.30	11.18	13.49	18.93	16.13	100
96-101	4.49	4.47	5.31	6.34	7.58	9.10	10.99	13.43	21.58	16.70	100
116-121	3.47	3.63	4.48	5.57	6.95	8.71	11.02	14.13	23.74	18.30	100
151-156	3.50	3.46	4.19	5.21	6.59	8.46	10.98	14.28	24.78	18.55	100

09CCT02_07 Tables

Mean Grain Size 09CCT02-07	
Depth (cm)	Mean Grain Size (μm)
5-10	98.28
20-23	96.57
25-30	43.35
35-40	282.41
60-65	121.77
76-81	133.13
96-101	37.58
116-121	70.02
151-156	14.66

Strength 09CCT02-07	
Interval (cm)	Strength (kg/cm^2)
0-18	0.0469
18-23	0.5000
23-25	0.0625
35-41	0.1094
41-71	0.0782
0-17	0.1406
17-30	0.1094
30-57	0.0131
57-105	0.5000

09CCT02_07 Core Picture



09CCT02_07 Core Log

Core#: 09CCT02-07-01

Core Date: 06-Jun-09

Date Split/subsampled	Length: 71cm
	E: 388928
	N: 3226971

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
0-5		0-18cm	
5-10		Gley 2	
10-15		S1S1B	
15-20			
20-25		18-23cm	
25-30		Gley 2	
30-35		S1S1B	
35-40			
40-45		23-35cm	
45-50		Gley 2	
50-55		S1S1BG	
55-60		35-41cm	
60-65		Gley 2	
65-70		S1S1BG	
70-71			
		41-71cm	
		Gley 2	
		S1S1BG	

09CCT02_07 Core Log

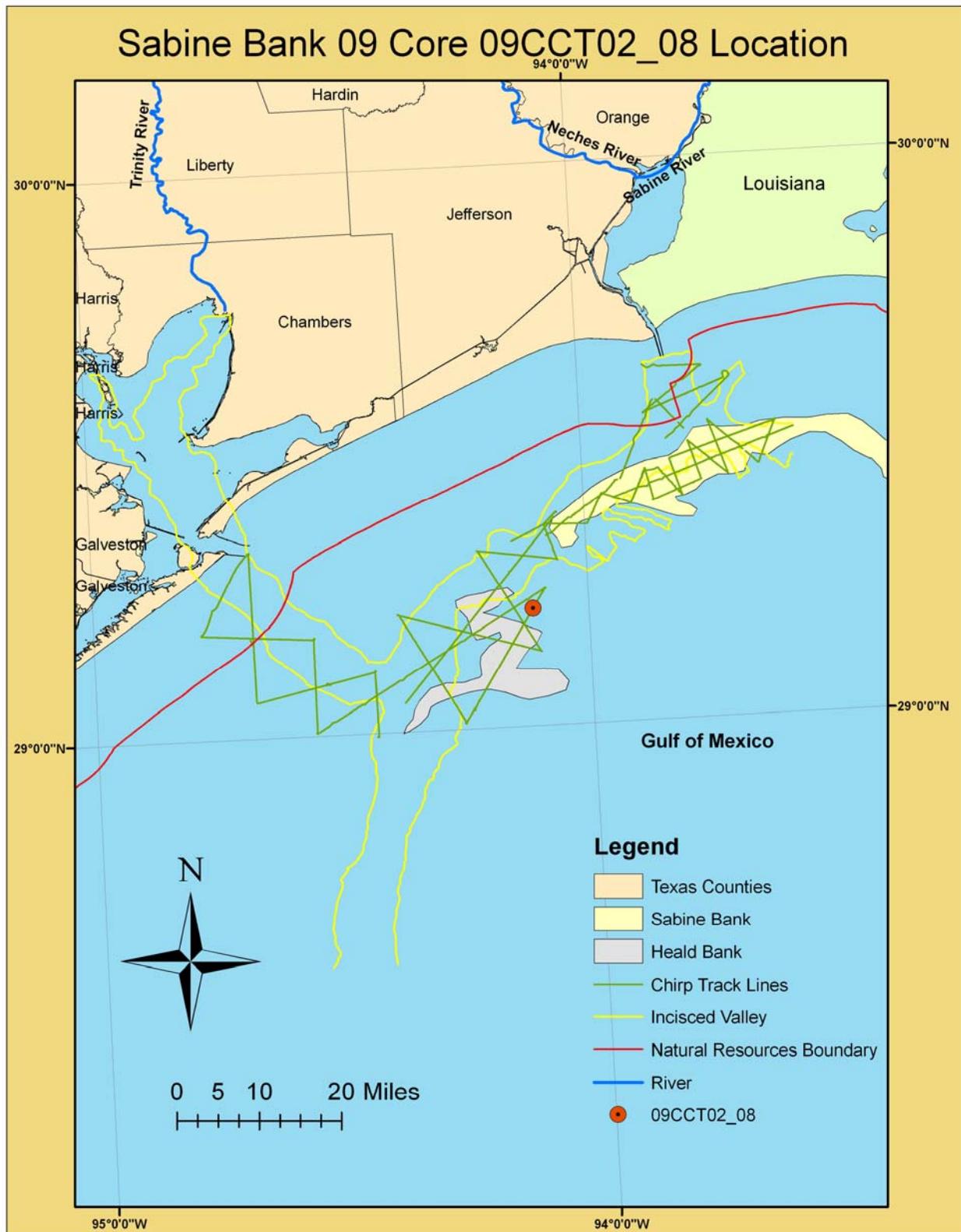
Core#: 09CCT02-07-02

Core Date: 06-Jun-09

Date Split/subsampled	Length: 105 cm
<u>15-Jun-09</u>	E: 388728
	N: 5226971

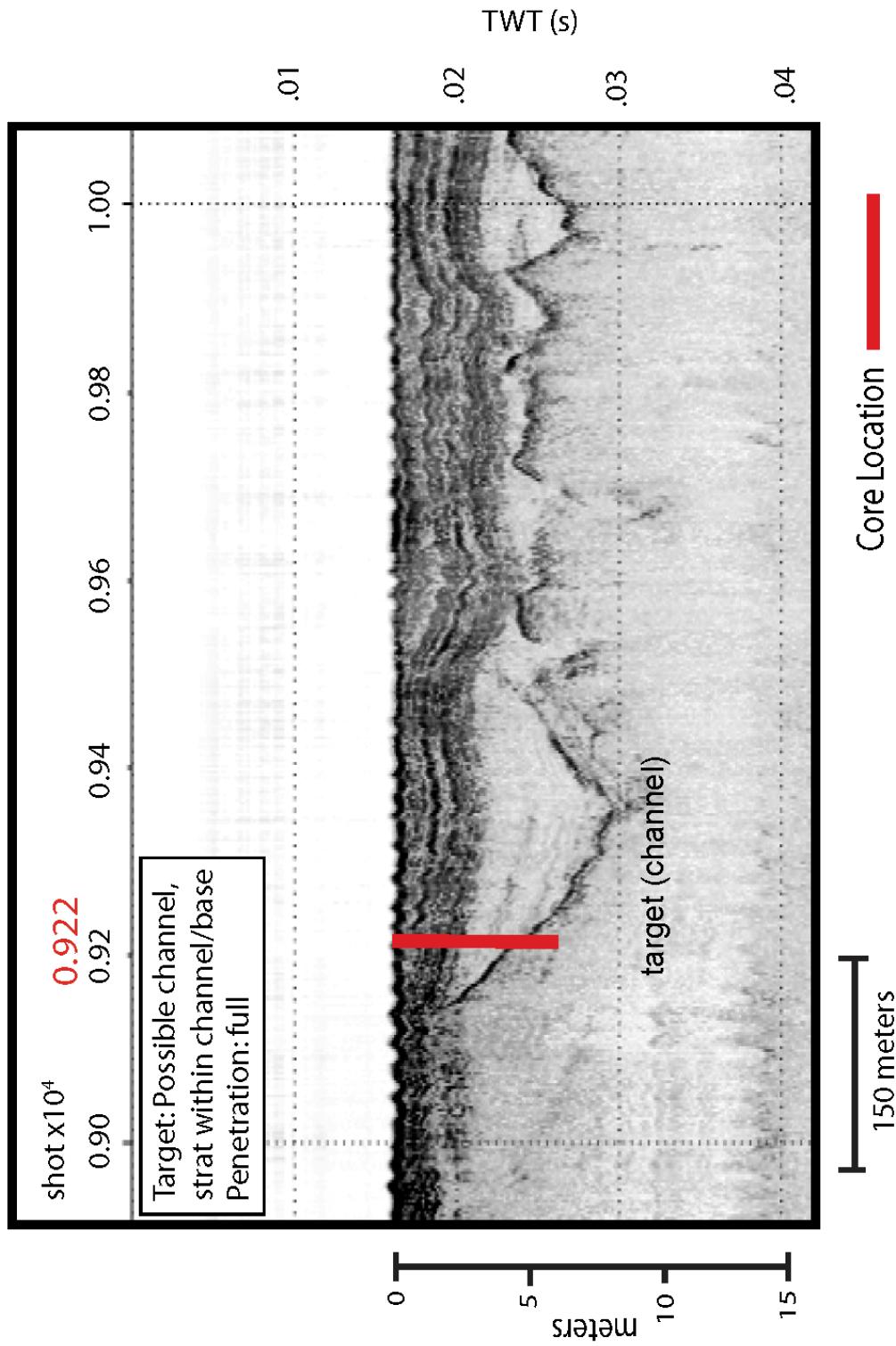
Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
71-76	71-88cm		
76-81	Gley 2		
81-86	3/10G		
86-88			71-88cm Grey clay w/legers of black clay
88-91			
91-96	88-101cm		
96-101	Gley 2		
101-106	4/10BG		
106-111			88-101cm grey silty clay w/spots of black clay
111-116			
116-121	101-128cm		
121-126	Gley 2		
126-128	4/1SB		
128-131			101-128cm Grey soft silty clay
131-136			
136-141	28-176cm		
141-146	Gley 2		
146-151	4/10G		
151-155			128-176cm Grey compacted clay
156-158			
161-166			
166-171			
171-176			

09CCT02_08 Core Location

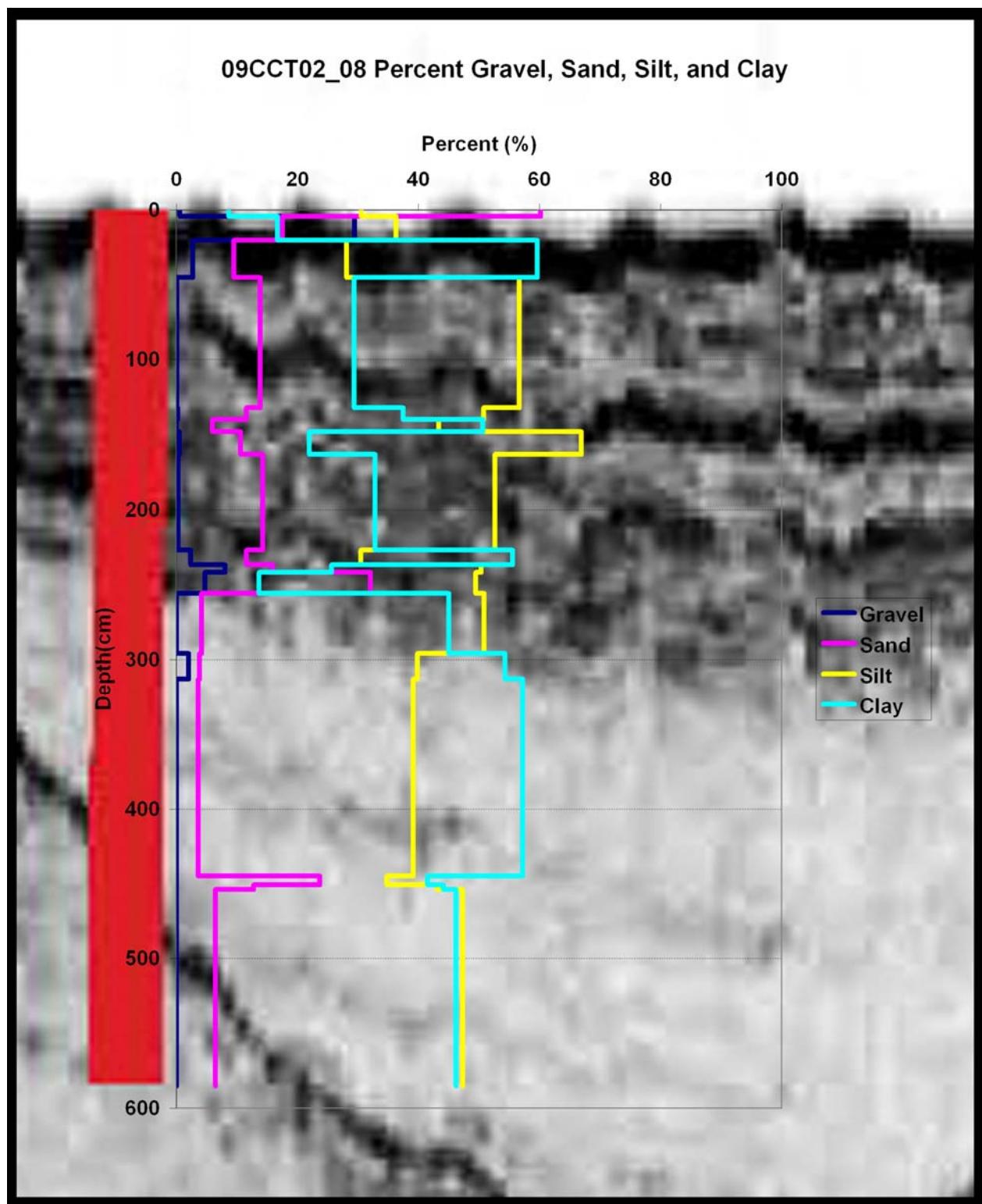


Project: 09CCT02
Transect: 09C56

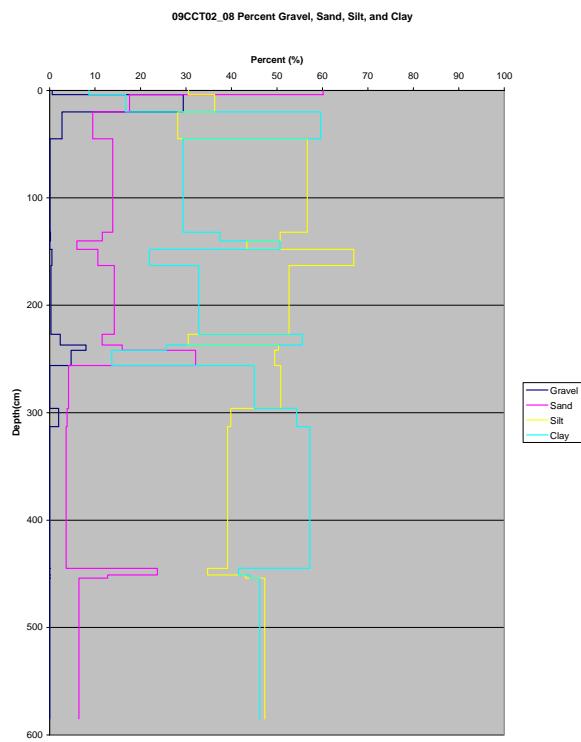
Core: 09CCT02_08
Core Length (m) : 5.84



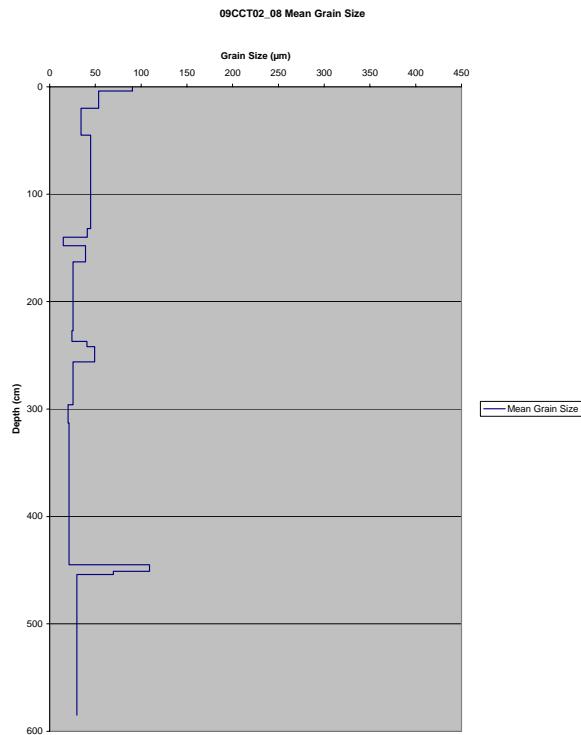
09CCT02_08Seismic



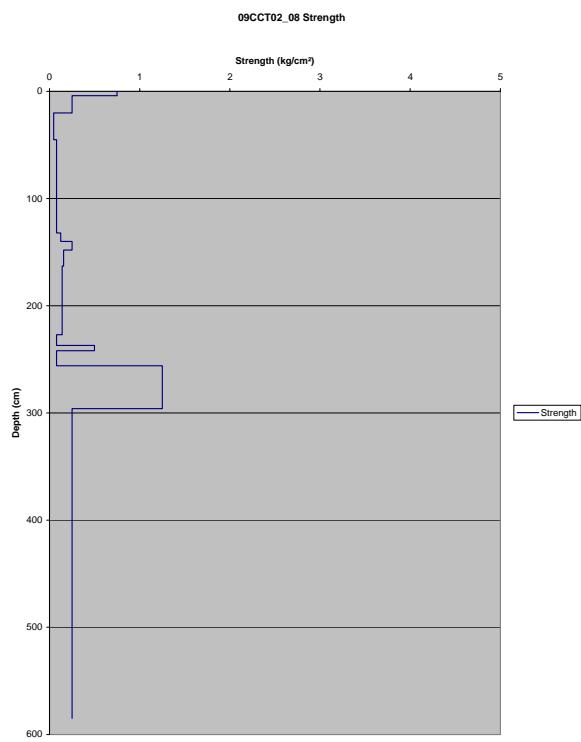
09CCT02_08Percent Grain Size Distribution Graph



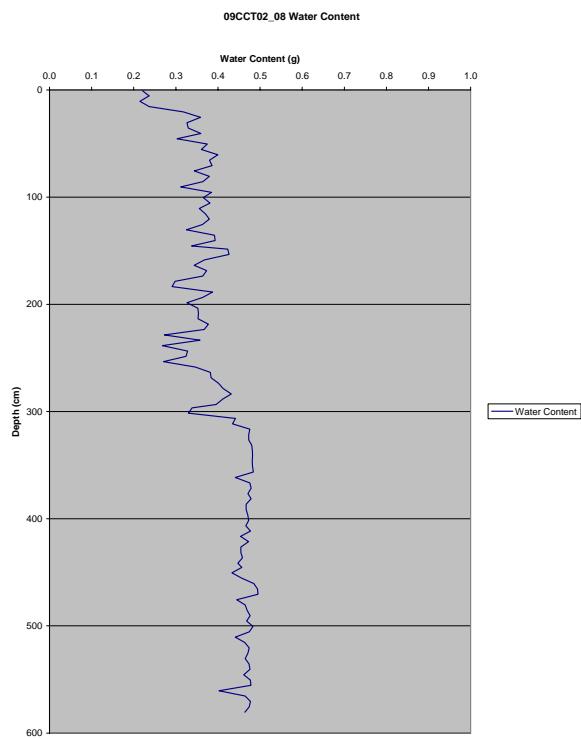
09CCT02_08Mean Grain Size Distribution



09CCT02_08 Strength Graph



09CCT02_08 Water Content Graph



09CCT02_08 Grain Size Sand Percent Table

09CCT02_08 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 (%)
0-4	41.84	17.68	15.72	11.10	6.67	3.64	1.86	0.92	0.38	0.19	100
10-15	48.47	10.43	9.60	8.95	7.39	5.69	4.10	2.86	1.55	0.94	100
35-40	53.94	14.45	13.52	9.03	4.88	2.46	0.99	0.43	0.17	0.11	100
120-125	66.49	4.91	7.38	6.77	5.17	3.67	2.52	1.66	0.94	0.48	100
132-135	42.54	17.55	17.06	8.76	5.49	3.52	2.28	1.48	0.85	0.47	100
145-148	75.80	11.98	6.54	2.81	1.38	0.75	0.40	0.21	0.09	0.05	100
153-158	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
188-193	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
228-233	90.07	2.97	3.06	1.22	0.62	0.57	0.56	0.46	0.30	0.17	100
237-238	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
248-253	64.32	3.36	5.83	6.50	5.95	4.94	3.84	2.69	1.68	0.89	100
278-283	95.39	4.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
326-331	89.581	5.1896	1.9079	1.0524	0.69891	0.54226	0.42979	0.30527	0.1928	0.10042	100
406-411	77.69	7.03	7.30	4.47	1.92	0.76	0.44	0.24	0.11	0.05	100
445-450	80.46	4.45	4.82	3.51	2.43	1.71	1.19	0.76	0.45	0.23	100
451-454	74.43	5.23	6.69	5.25	3.54	2.24	1.45	0.65	0.35	0.18	100
555-560	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100

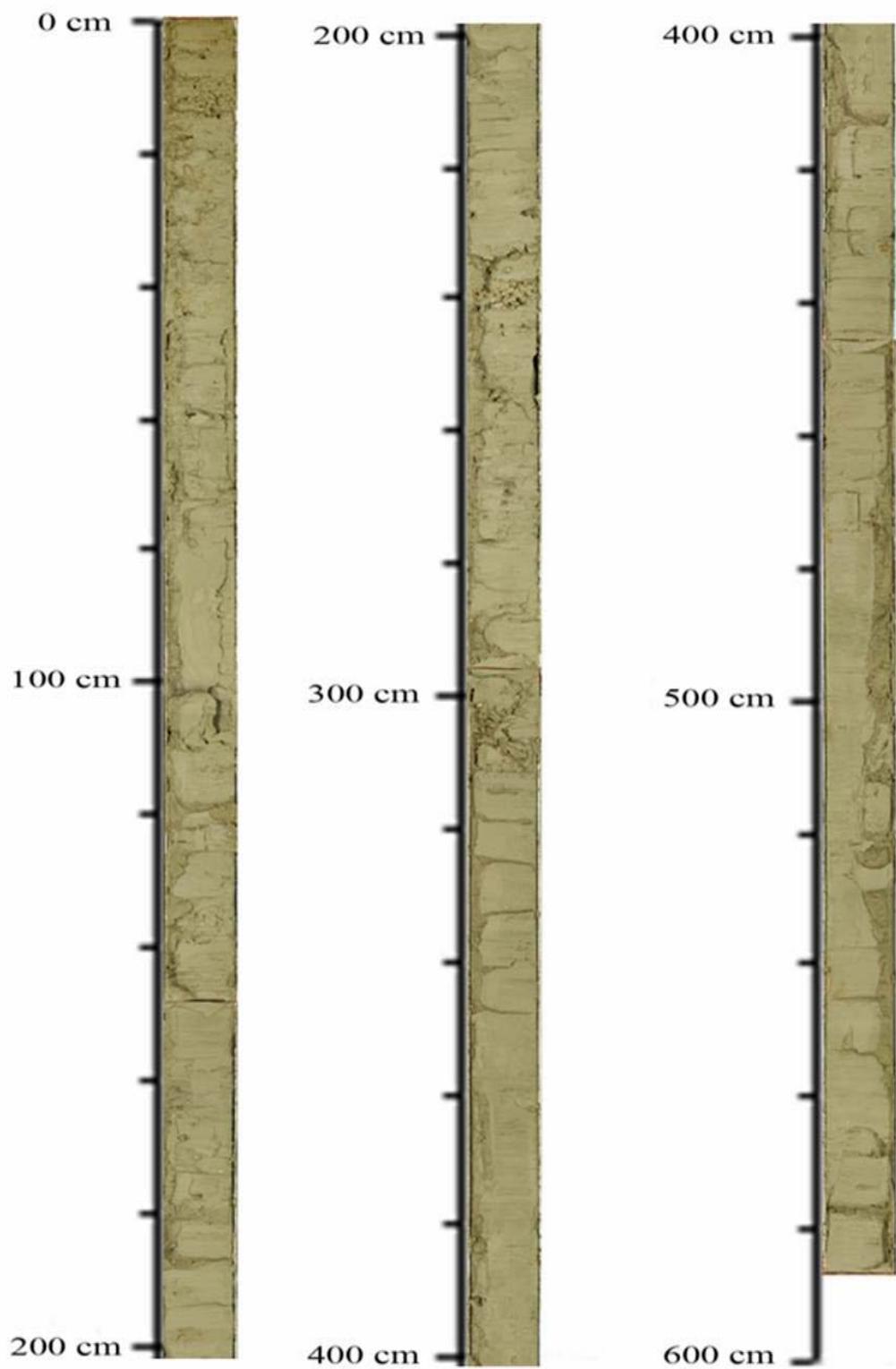
09CCT02-08											
Depth (cm)	63.00-82.00 µm (%)	82.00-101.00 µm (%)	101.00-120.00 µm (%)	120.00-139.00 µm (%)	139.00-158.00 µm (%)	158.00-177.00 µm (%)	177.00-196.00 µm (%)	196.00-215.00 µm (%)	215.00-234.00 µm (%)	234.00-257.00 µm (%)	Total (%)
0-4	2.55	2.97	4.01	5.40	7.20	9.49	12.34	15.65	21.35	19.03	100
10-15	1.78	2.01	2.71	3.74	5.24	7.43	10.64	15.24	29.64	21.57	100
35-40	0.61	0.41	0.59	1.05	1.83	3.48	6.74	12.99	47.46	24.84	100
120-125	0.63	0.72	1.12	1.85	3.18	5.42	9.16	15.16	38.33	24.43	100
132-135	0.87	1.03	1.56	2.49	4.01	6.42	10.14	15.68	34.25	23.55	100
145-148	0.00	0.00	0.08	0.37	2.26	5.00	9.20	16.18	40.43	26.47	100
153-158	2.22	1.88	1.95	2.10	2.43	3.23	5.21	9.94	49.62	21.42	100
188-193	0.01	0.07	0.32	1.27	2.73	5.35	9.73	16.48	37.95	26.09	100
228-233	0.00	0.00	0.26	0.83	2.15	4.59	8.68	15.53	41.77	26.19	100
237-238	0.00	0.03	0.35	1.04	2.35	4.78	9.02	15.93	40.17	26.33	100
248-253	0.00	0.00	0.00	0.01	0.79	3.01	7.33	15.15	45.75	27.97	100
278-283	0.37	0.34	1.01	1.98	2.76	4.29	7.24	12.69	45.93	23.40	100
326-331	0.46	0.38	1.19	2.30	3.33	5.13	8.31	13.71	41.67	23.52	100
406-411	3.48	2.84	3.03	3.55	4.64	6.38	9.16	13.54	32.82	20.57	100
445-450	5.80	5.32	6.05	7.07	8.42	10.13	12.11	14.09	15.53	15.48	100
451-454	3.90	3.88	4.71	5.79	7.22	9.01	11.26	14.05	22.67	17.51	100
555-560	3.93	3.85	4.65	5.77	7.24	9.08	11.34	14.01	22.80	17.32	100

09CCT02_08 Tables

Mean Grain Size 09CCT02-08	
Depth (cm)	Mean Grain Size (μm)
0-4	90.46
10-15	53.57
35-40	34.36
120-125	44.79
132-135	41.13
145-148	14.94
153-158	39.22
188-193	25.74
228-233	24.39
237-238	40.70
248-253	49.10
278-283	25.63
326-331	20.29
406-411	21.39
445-450	109.23
451-454	69.75
555-560	29.92

Strength 09CCT02-08	
Interval (cm)	Strength (kg/cm^2)
0-4	0.7500
4-20	0.2500
20-45	0.0469
45-132	0.0782
132-140	0.1250
140-148	0.2500
0-15	0.1563
15-79	0.1406
79-89	0.0781
89-94	0.5000
94-108	0.0781
108-148	1.2500
0-17	0.2500
17-149	0.2500
0-6	0.2500
6-9	0.2500
9-140	0.2500

09CCT02_08 Core Pictures



09CCT02_08 Core Log

Core #: 09CCT02_08-01

Core Date: 06-Jun-09

Date Split/subsampled	Length: 148 cm
19-Jun-09	E: 380863
	N: 3231462

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
0 - 10		0-4cm	0-4 cm grey silty sand
4 - 5		10-12	w/ sparse shell
5 - 10		3/11	
10 - 15		4-20cm	4-20cm sandy silt w/ shell
15 - 20		Grey 2	20-45cm silty clay w/ sparse
20 - 25		3-10cm	shell
25 - 30		20-45cm	45-132cm grey compacted
30 - 35		Grey 2	clay w/ sparse shell
35 - 40		4/10G	132-140cm grey compacted
40 - 45		4/10G	clay w/ sparse shell
45 - 50		132-140cm	140-148cm grey compacted
50 - 55		Grey 2	clay
55 - 60		4/10G	
60 - 65			
65 - 70			
70 - 75			
75 - 80			
80 - 85			
85 - 90			
90 - 95			
95 - 100			
100 - 105			
105 - 110			
110 - 115			
115 - 120			
120 - 125			
125 - 130			
130 - 132			
132 - 135			
135 - 140			
140 - 145			
145 - 148			

09CCT02_08 Core Log

Core#: 09CCT02_08-02

Core Date: 06-Jun-09

Date Split/subsampled	Length: 198 cm
19-Jun-09	E: 380863
	N: 3231462

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
148-153		148-163cm	
153-158		Grey 2	
158-163		4/10 G	
163-168			
168-173		163-227cm	148-163cm Grey compacted clay
173-178			
178-182		Grey 2	163-227cm Grey compacted clay w/sparse shell
183-188		4/10 G	
188-193			227-237cm Grey uncompactecl clay
193-198		227-237cm	
198-203		Grey 2	
203-208		4/10 BG	237-242cm Grey c/gy
208-213			w/lager of shells
213-218		237-242cm	
218-223		Grey 2	242-256cm Grey uncompactecl
223-228		4/10 BG	clay w/garge shells
228-233			
233-238		242-256cm	
238-243		Grey 2	
243-248		4/10 BG	256-296cm Grey compacted
248-253			clay
253-258		256-296cm	
258-263		Grey 2	
263-268		4/10 BG	
268-273			
273-278			
278-283			
283-288			
288-293			
293-296			

09CCT02_08 Core Log

Core#: 09CCT02 08-03

Core Date: 06-Jun-09

Date Split/subsampled	Length: 149cm
<u>19-Jun-09</u>	E: 380863
	N: 3231462

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
296-301	296-313cm		296-313cm Grey compacted
301-306	Gley 2		clay w/sparse shells
306-311			
311-313	5110B		
313-316			
316-321	313-445cm		313-445cm grey compacted
321-326	Gley 2		clay
326-331			
331-336	5110B		
336-341			
341-346			
346-351			
351-356			
356-361			
361-366			
366-371			
371-376			
376-381			
381-386			
386-391			
391-396			
396-401			
401-406			
406-411			
411-416			
416-421			
421-426			
426-431			
431-436			
436-441			
441-446			

09CCT02_08 Core Log

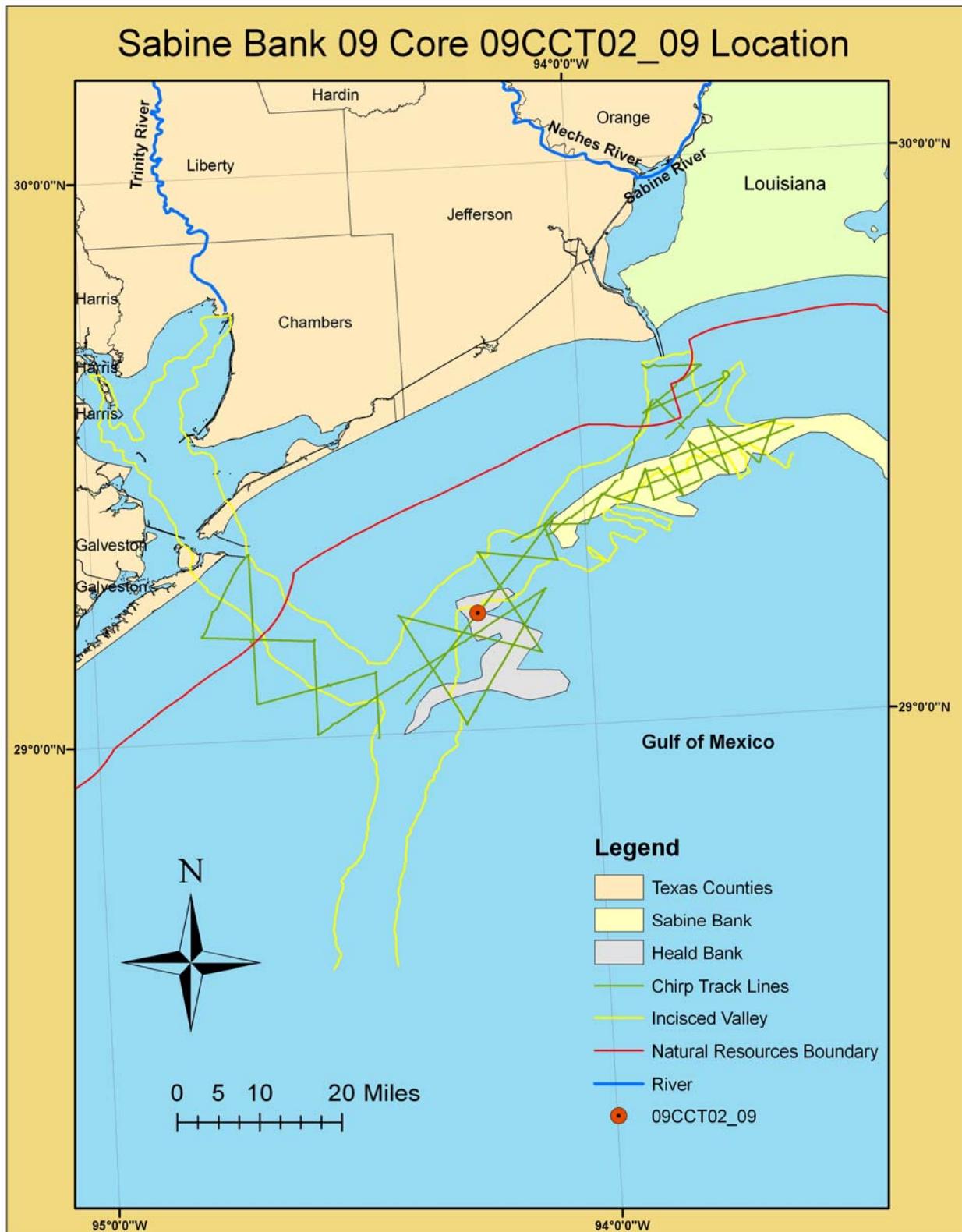
Core#: 09CCT02_08-04

Core Date: 06-Jun-09

Date Split/subsampled	Length: 140cm
19-Jun-09	E: 380863
	N: 3231462

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
443-456	445-451cm		
450-451	Gley 2		
451-454			
454-455	5/10B		
455-456			
460-465	451-454cm		
465-470	Gley 2		
470-475			
475-480	5/10B		
480-485			
485-490	454-585cm		
490-495	Gley 2		
495-500			
500-505	5/10B		
505-510			
510-515			
515-520			
520-525			
525-530			
530-535			
535-540			
540-545			
545-550			
550-555			
555-560			
560-565			
565-570			
570-575			
575-580			
580-585			

09CCT02_09 Core Location

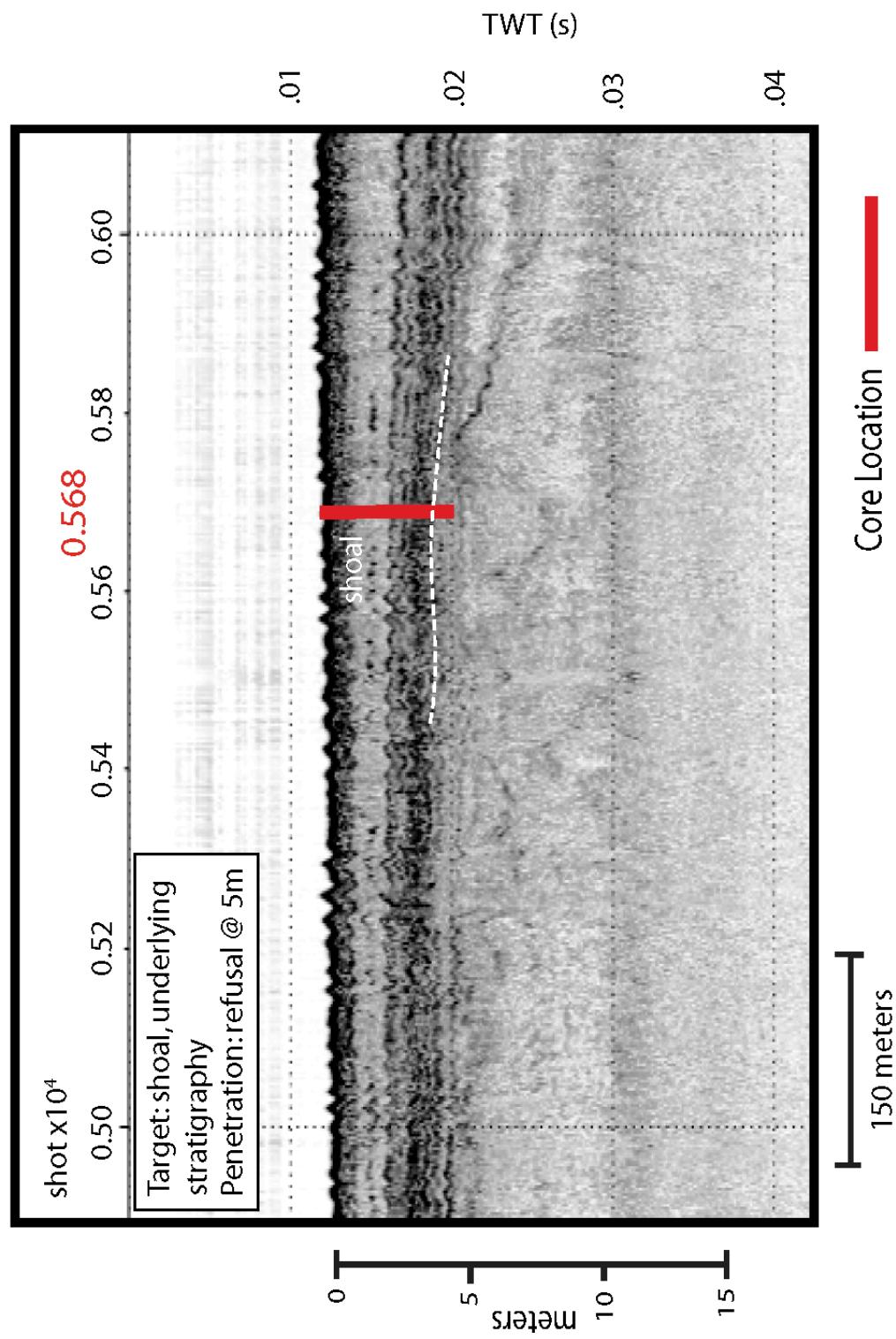


Project: 09CCT02

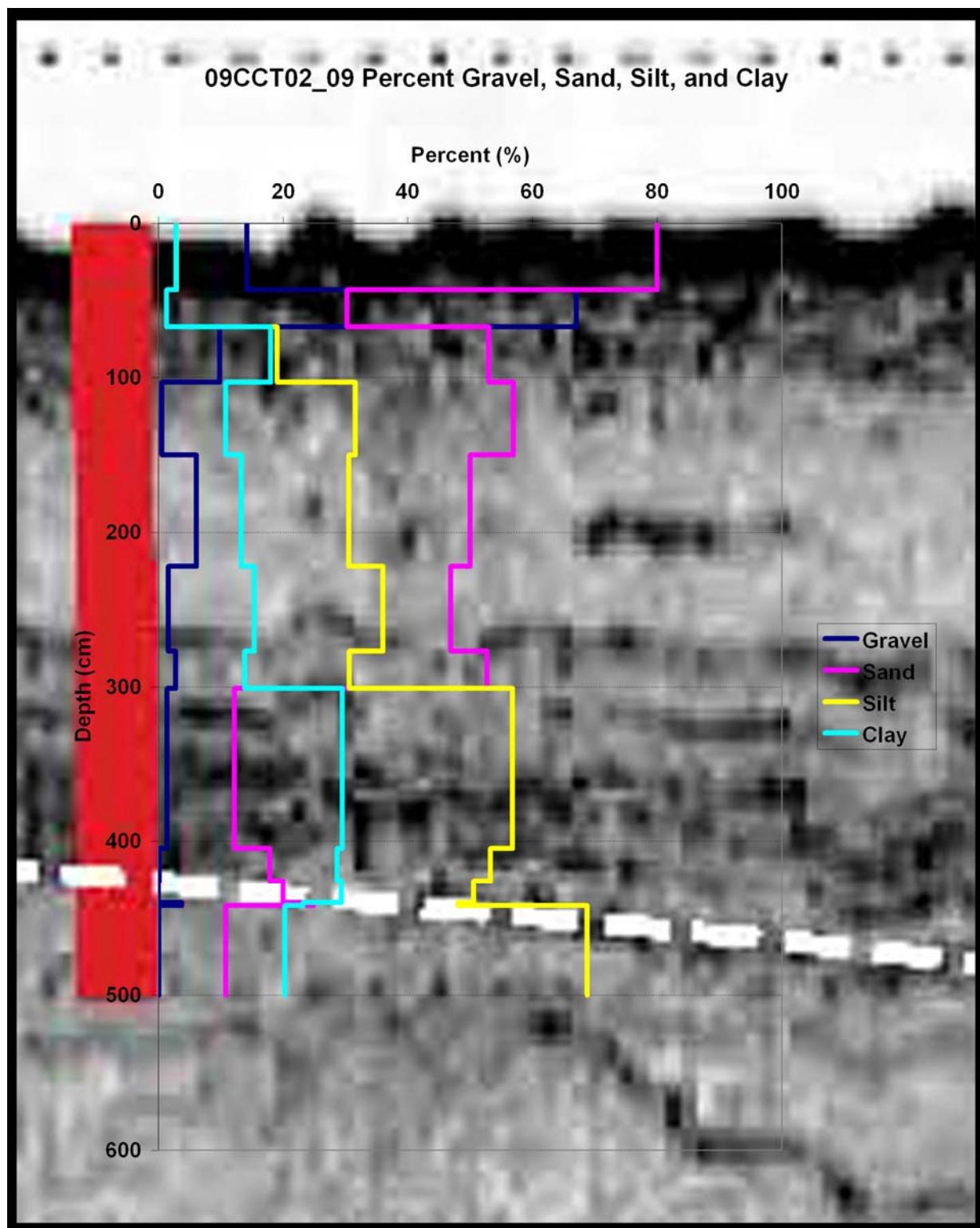
Transect: 09C78

Core: 09CCT02_09

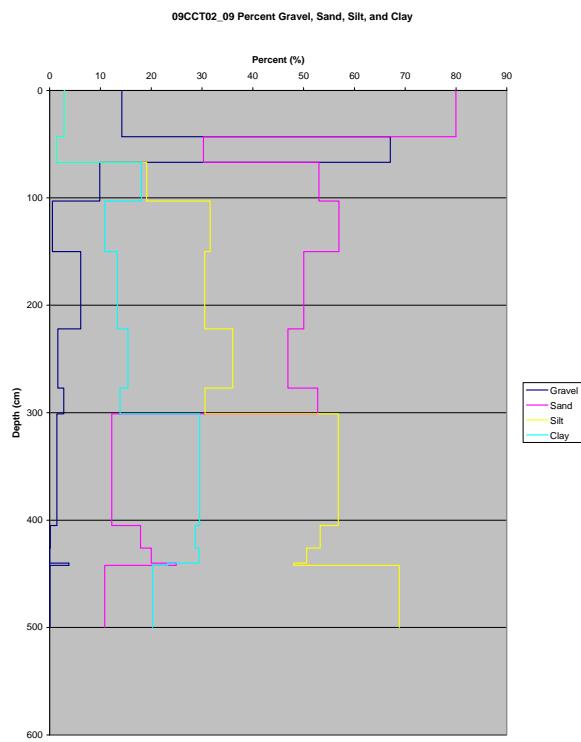
Core Length (m): 4.99



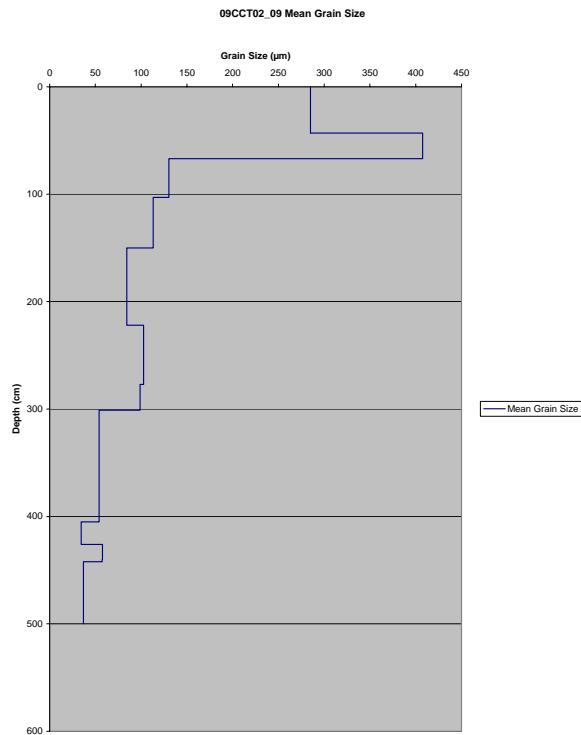
09CCT02_09 Seismic



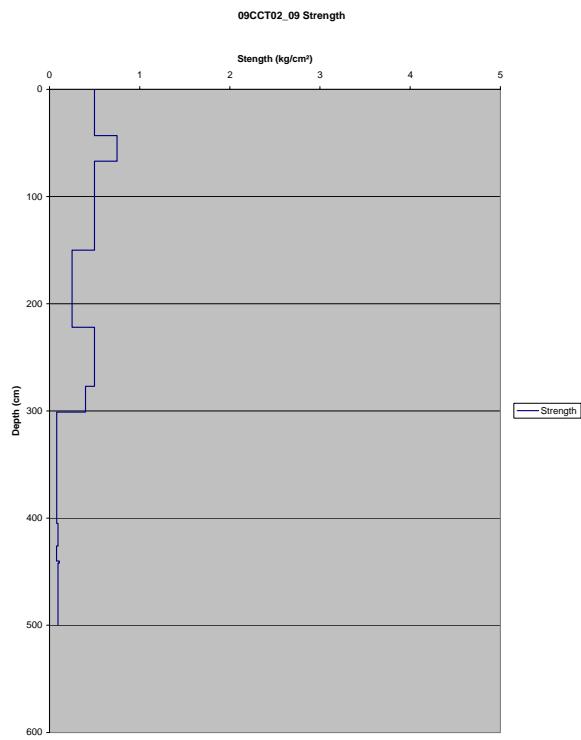
09CCT02_09 Percent Grain Size Distribution Graph



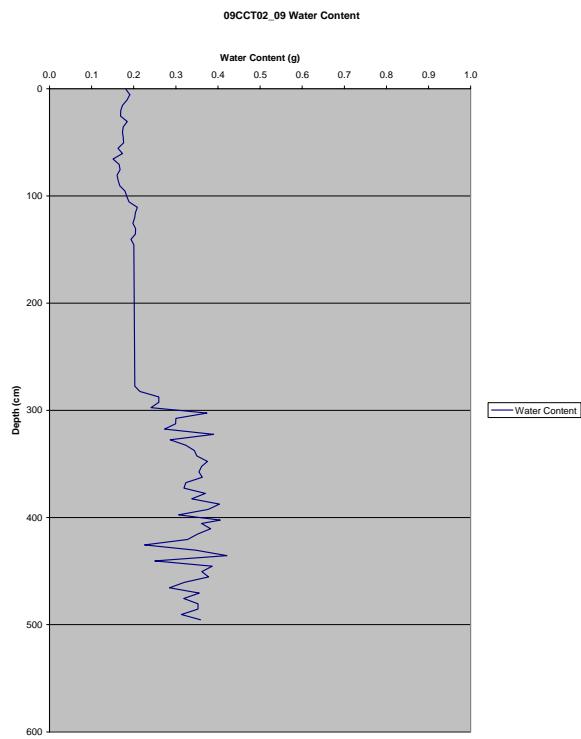
09CCT02_09 Mean Grain Size Distribution



09CCT02_09 Strength Graph



09CCT02_09 Water Content Graph



09CCT02_09 Grain Size Sand Percent

Depth (cm)	09CCT02_09 Grain Size Sand Percent										
	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 (%)
30-35	66.73	22.53	1.71	1.19	1.90	2.01	1.67	1.20	0.70	0.36	100
60-65	39.81	27.67	11.47	7.42	5.26	3.56	2.28	1.40	0.75	0.38	100
90-95	83.97	11.15	0.31	0.80	1.09	0.97	0.73	0.52	0.28	0.17	100
145-150	85.19	12.45	0.84	0.27	0.33	0.32	0.26	0.18	0.11	0.06	100
185-190	94.58	5.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
255-260	88.16	6.83	0.21	1.02	1.17	0.98	0.72	0.50	0.27	0.16	100
282-287	91.71	5.48	0.28	0.64	0.63	0.49	0.35	0.22	0.13	0.06	100
382-387	66.65	7.58	7.08	6.03	4.53	3.22	2.20	1.47	0.77	0.46	100
420-425	93.49	4.34	2.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00	100
430-435	80.91	4.06	4.87	3.69	2.49	1.65	1.07	0.69	0.35	0.21	100
440-445	90.38	1.08	2.73	2.25	1.47	0.91	0.57	0.32	0.19	0.09	100
485-490	85.39	5.16	3.85	2.42	1.49	0.98	0.37	0.16	0.12	0.06	100

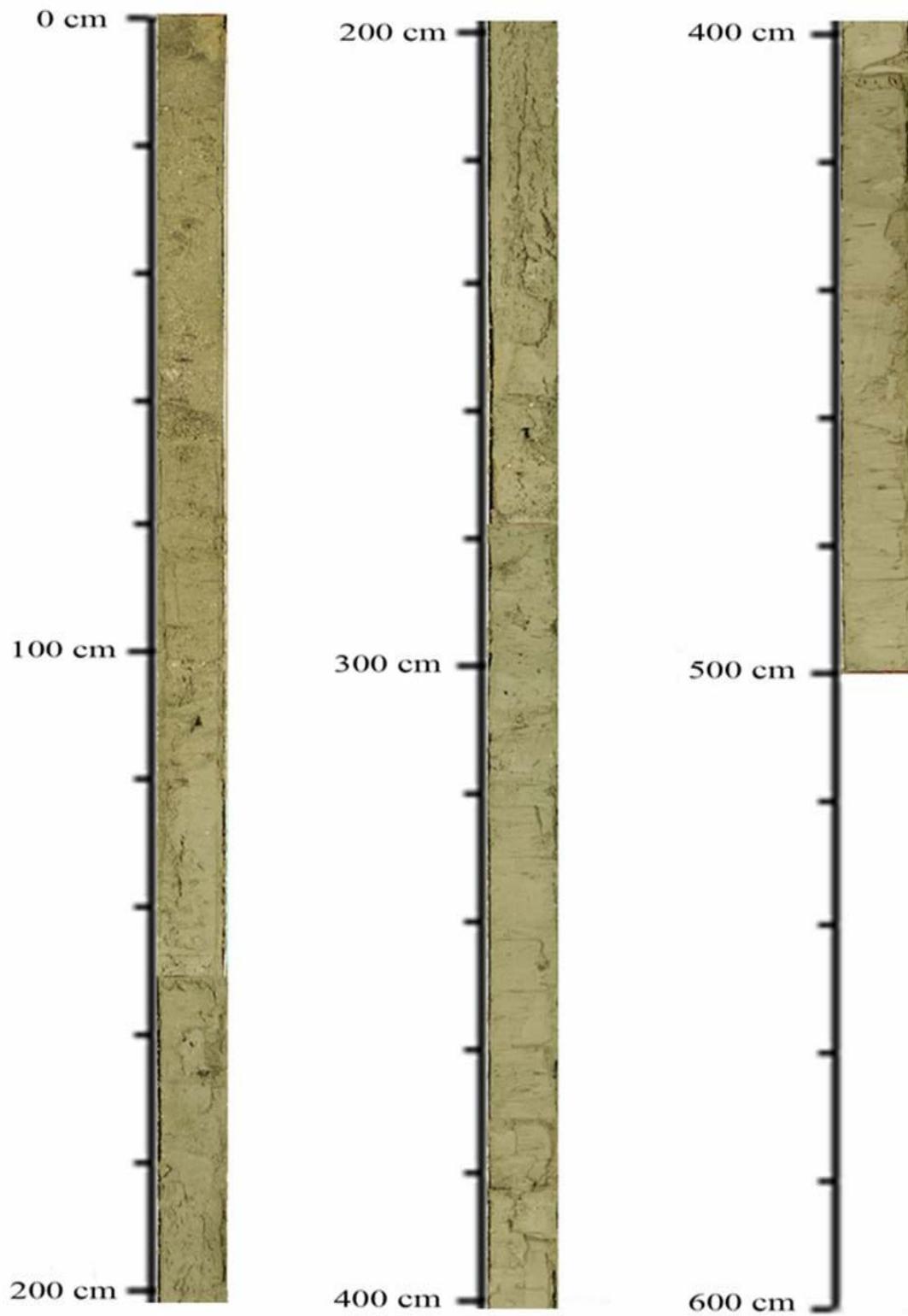
Depth (cm)	09CCT02-09										
	63-82µm (%)	82-101µm (%)	101-120µm (%)	120-139µm (%)	139-158µm (%)	158-177µm (%)	177-196µm (%)	196-215µm (%)	215-234µm (%)	234-257µm (%)	Tot al (%)
30-35	11.01	10.80	12.23	13.39	13.93	13.52	11.77	8.53	0.59	4.24	100
60-65	14.30	12.88	13.63	13.96	13.65	12.45	10.11	6.62	0.00	2.41	100
90-95	5.96	6.42	7.96	9.68	11.40	12.88	13.72	13.35	7.42	11.21	100
145-150	5.35	5.60	6.84	8.26	9.76	11.25	12.56	13.42	13.33	13.63	100
185-190	3.45	4.01	5.33	6.99	8.96	11.17	13.41	15.28	15.28	16.12	100
255-260	3.89	4.37	5.64	7.18	8.94	10.84	12.74	14.39	16.45	15.57	100
282-287	3.29	3.84	5.14	6.80	8.80	11.08	13.46	15.52	15.56	16.50	100
382-387	1.92	1.92	2.38	3.08	4.12	5.77	8.47	13.10	37.75	21.47	100
420-425	0.49	0.56	0.91	1.65	3.01	5.40	9.43	15.84	37.47	25.25	100
430-435	0.56	0.68	1.10	1.89	3.29	5.67	9.60	15.76	36.67	24.79	100
440-445	0.39	0.70	1.32	2.37	4.07	6.73	10.76	16.54	32.93	24.19	100
485-490	0.51	0.16	0.01	0.01	0.70	1.80	4.46	10.78	56.56	25.00	100

09CCT02_09 Tables

Mean Grain Size 09CCT02-09	
Depth (cm)	Mean Grain Size (μm)
30-35	285.07
60-65	407.65
90-95	130.43
145-150	113.12
185-190	84.33
255-260	102.75
282-287	98.88
382-387	54.14
420-425	34.51
430-435	57.69
440-445	57.44
485-490	37.02

Strength 09CCT02-09	
Interval (cm)	Strength (kg/cm^2)
0-43	0.5000
43-67	0.7500
67-103	0.5000
103-150	0.5000
0-72	0.2500
72-127	0.5000
0-24	0.4000
24-128	0.0800
0-21	0.0938
21-35	0.0781
35-37	0.1094
37-95	0.0938

09CCT02_09 Core Pictures



09CCT02_09 Core Log

Core#: 09CCT02-09-01

Core Date 06-Jun-09

Date Split/subsampled	Length: 150cm
22-Jun-09	E:3418617
	N:3228331

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
6-5		0-43cm	
5-10		10gR	
10-15		4/2	
15-20			
20-25			
25-30			
30-35			
35-40			
40-45			
45-50			
50-55			
55-60			
60-65	Gley2		
65-70			
70-75			
75-80			
80-85			
85-90			
90-95			
95-100			
100-105			
105-110			
110-115			
115-120			
120-125			
125-130			
130-135			
135-140			
140-145			
145-150			

09CCT02_09 Core Log

Core#: 09CCT02_09-02

Core Date: 06-Jun-09

Date Split/subsampled	Length:
<u>22-Jun-09</u>	<u>127 cm</u>
	E: <u>348617</u> N: <u>322833</u>

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
150-155		150-222cm	
155-160			
160-165	Gley 2		
165-170			
170-175	3/5 BG		
175-180			
180-185		222-277cm	
185-190	Gley 2		
190-195			
195-200	3/10 BG		
200-205			
205-210			
210-215			
215-220			
220-225			
225-230			
230-235			
235-240			
240-245			
245-250			
250-255			
255-260			
260-265			
265-270			
270-275			
275-280			

09CCT02_09 Core Log

Core#: 09CCT02-09-03

Core Date: 06-Jun-09

Date Split/subsampled	Length: 128cm
<u>26-Jun-09</u>	E: 348617 N: 3228331

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
277-282	277-301cm		
282-287	Grey 2		
287-292	5110G		
292-297			
297-301	301-405cm		
301-302	Grey 2		
302-307	5151B		
307-312			
312-317			
317-322			
322-327			
327-332			
332-337			
337-342			
342-347			
347-352			
352-357			
357-362			
362-367			
367-372			
372-377			
377-382			
382-387			
387-392			
392-397			
397-402			
402-405			

09CCT02_09 Core Log

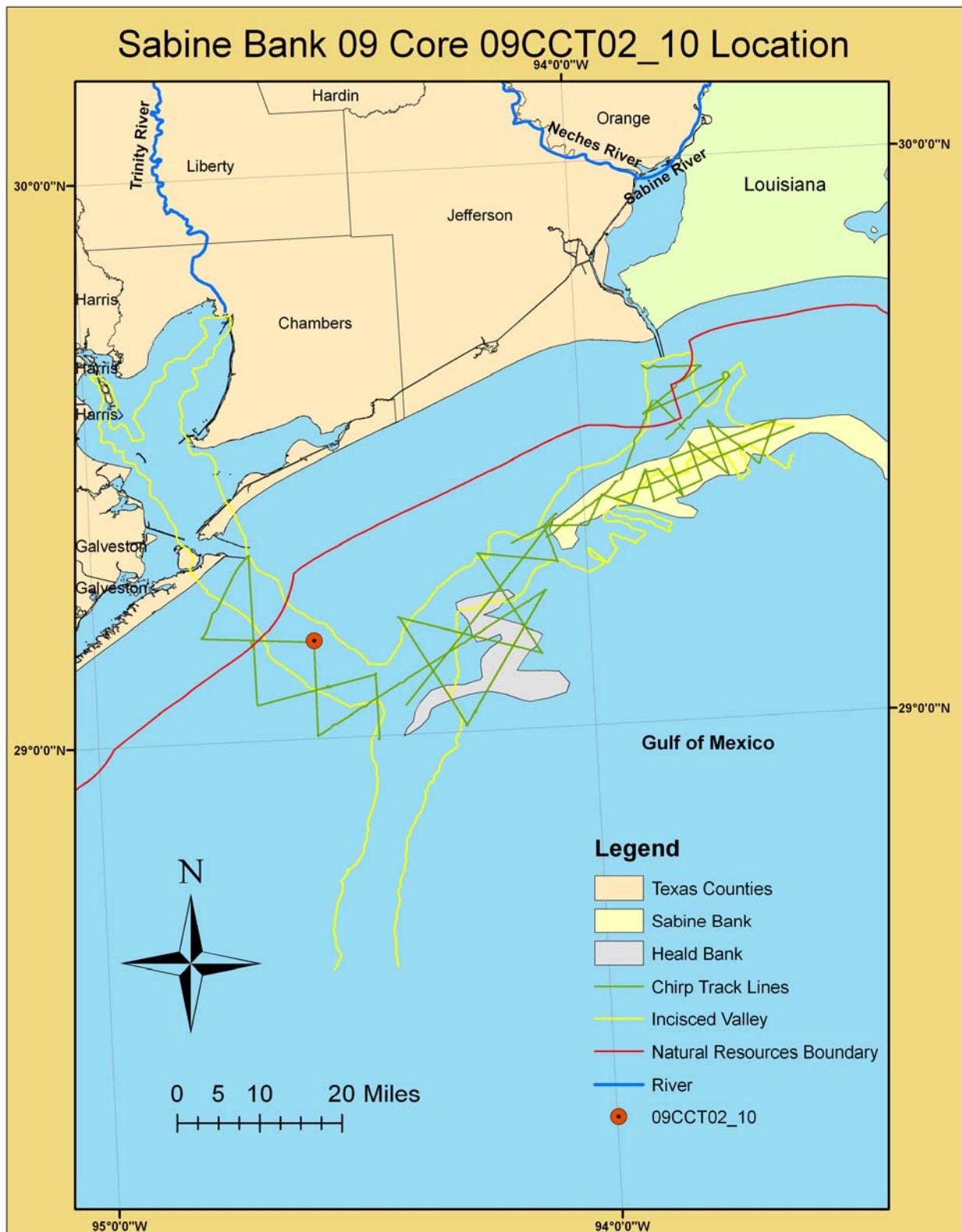
Core#: 09CCT02_09-04

Core Date: 06-Jun-09

Date Split/subsampled	Length: 95cm
22-Jun-09	E: 348617
	N: 3228331

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
405 - 410			
410 - 415			
415 - 420			
420 - 425			
425 - 426			
426 - 430			
430 - 435			
435 - 440			
440 - 442			
442 - 445			
445 - 450			
450 - 455			
455 - 460			
460 - 465			
465 - 470			
470 - 475			
475 - 480			
480 - 485			
485 - 490			
490 - 495			
495 - 500			

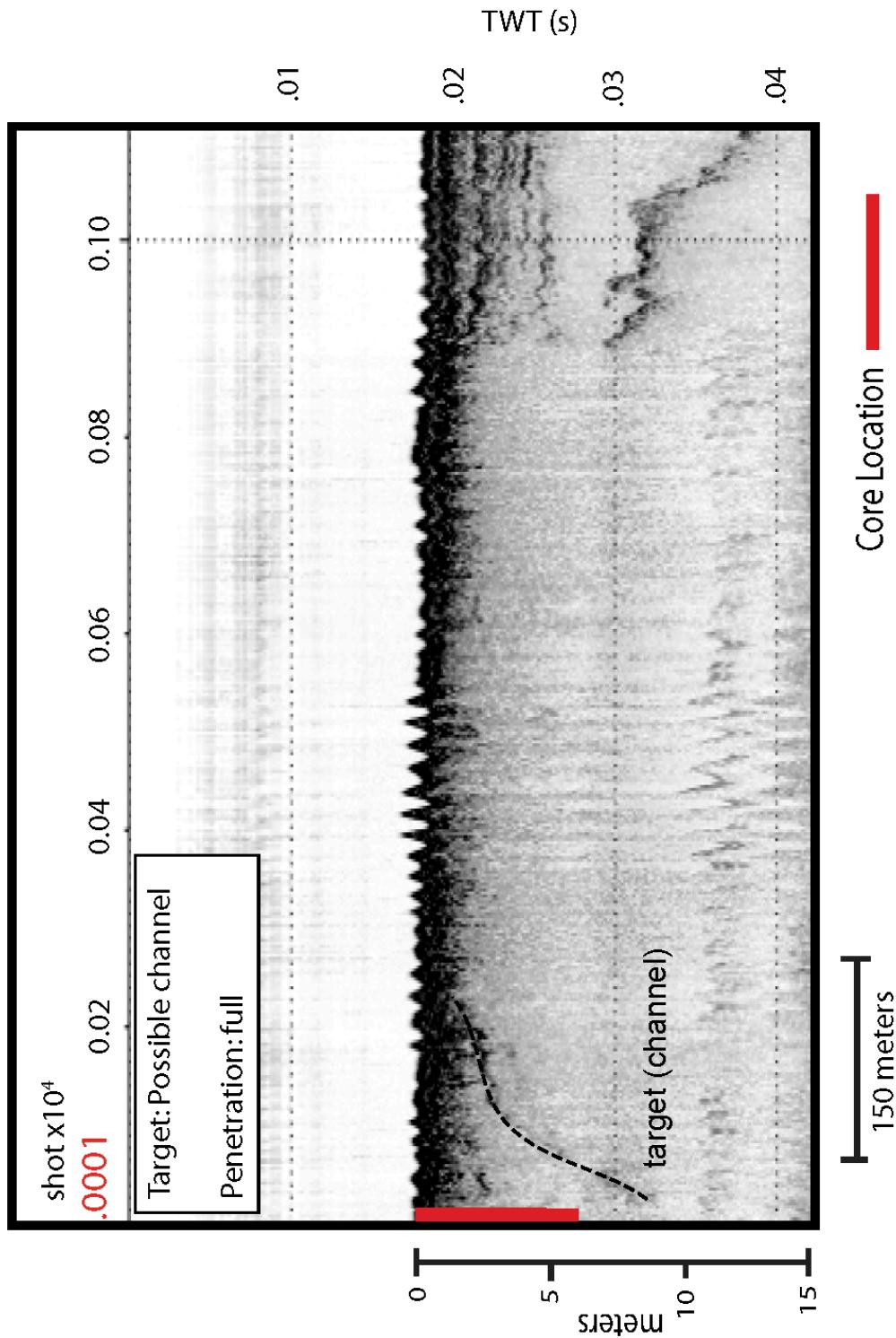
09CCT02_10 Core Location



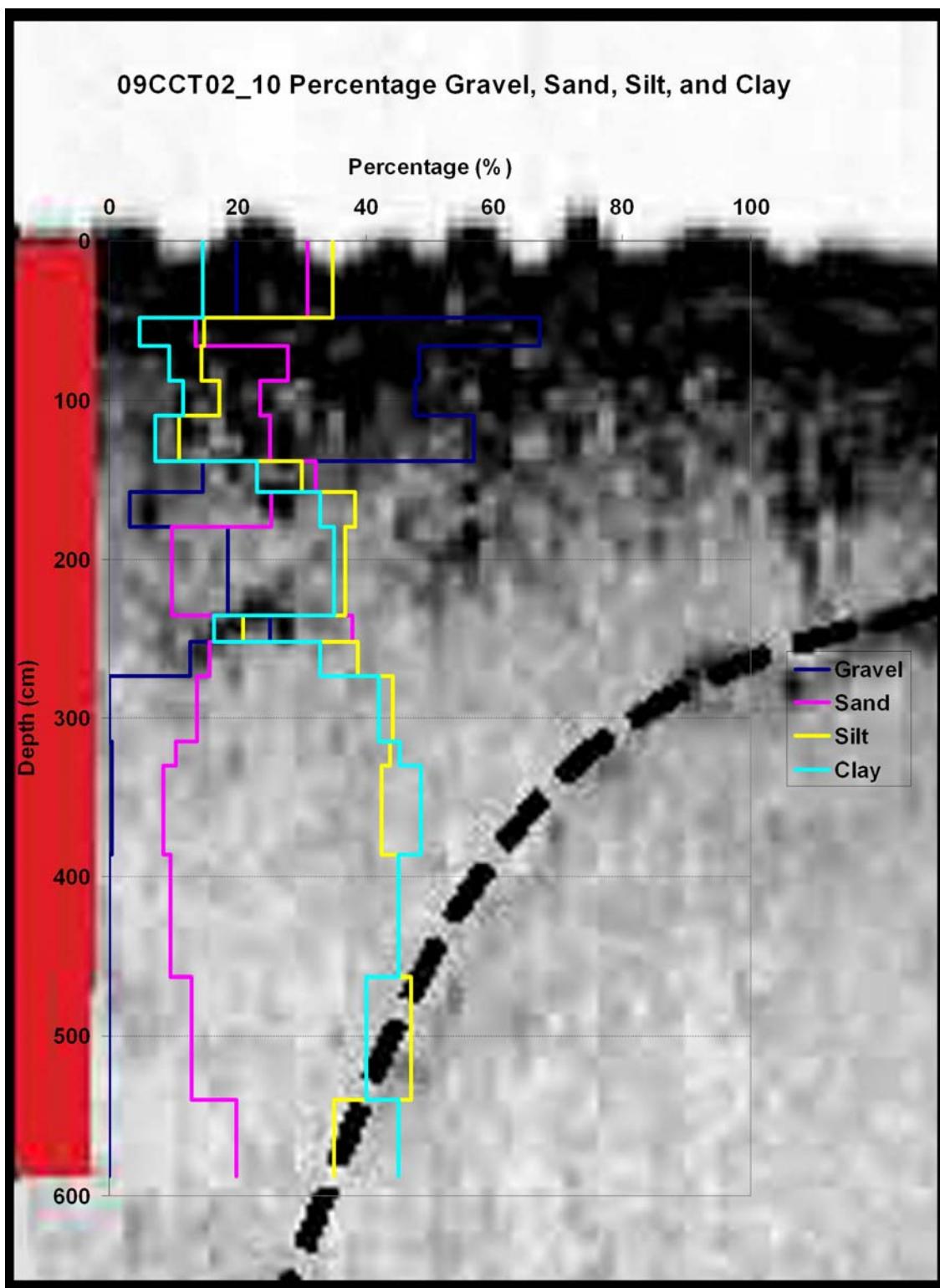
09CCT02_10 Seismic

Project: 09CCT02
Transect: 09C65_a

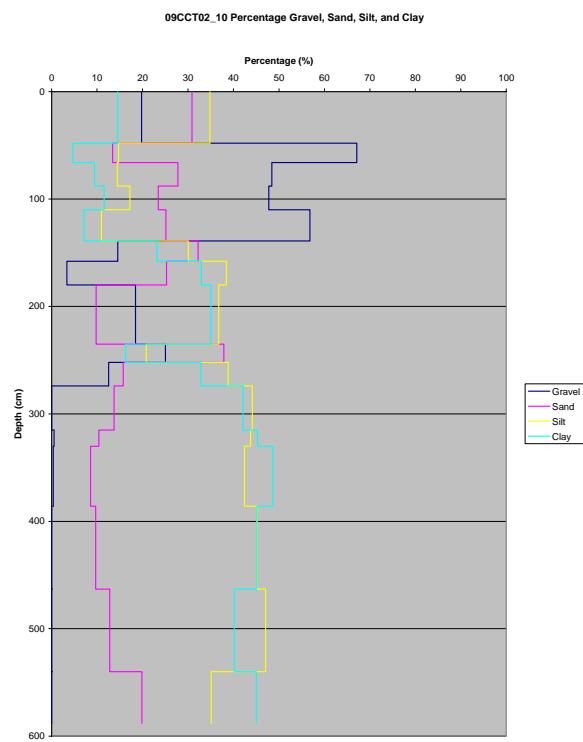
Core: 09CCT02_10
Core Length (m): 5.87



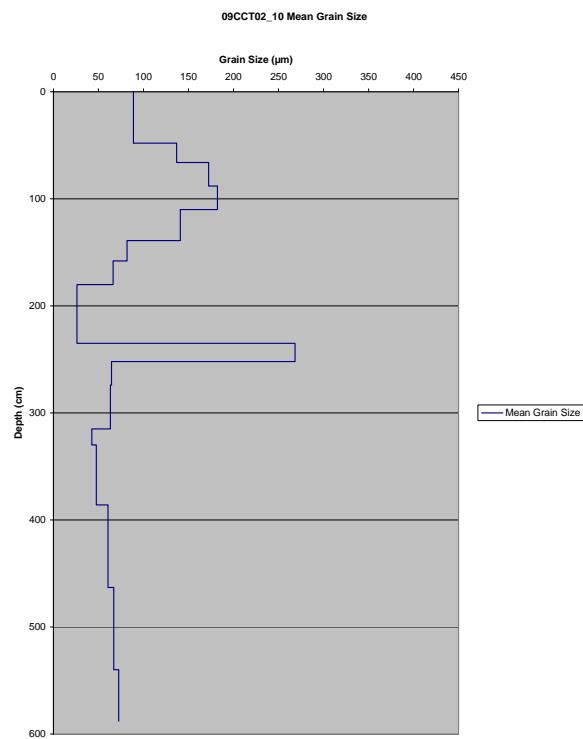
09CCT02_10 Seismic



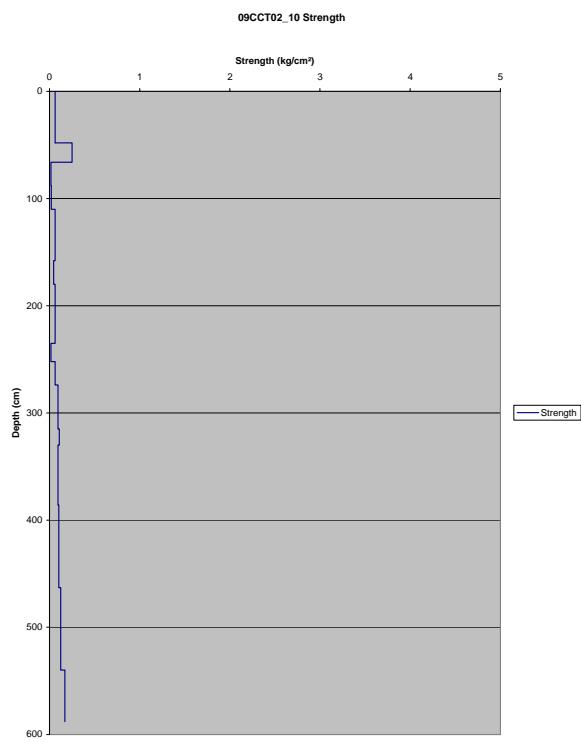
09CCT02_10 Percent Grain Size Distribution Graph



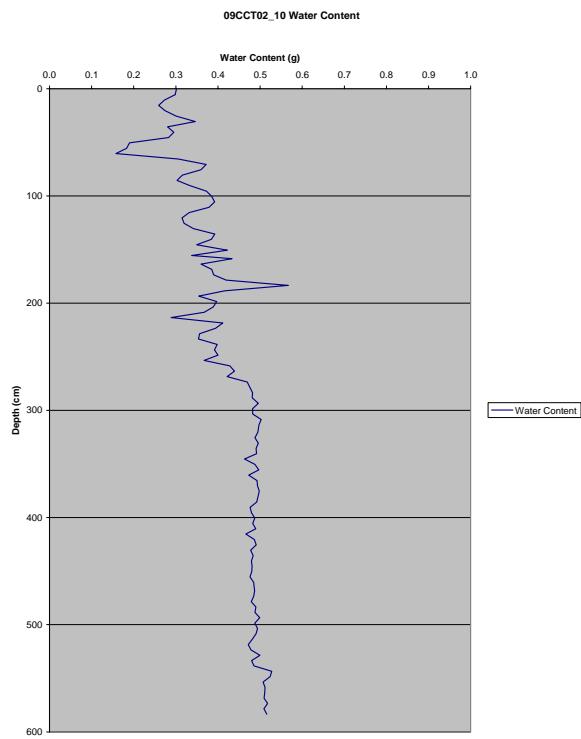
09CCT02_10 Mean Grain Size Distribution Graph



09CCT02_10 Strength Graph



09CCT02_10 Water Content Graph



09CCT02_10 Grain Size Sand Percent Table

09CCT02-10											
Depth (cm)	63-257µm (%)	257-451µm (%)	451-645µm (%)	645-839µm (%)	839-1033µm (%)	1033-1227µm (%)	1227-1421µm (%)	1421-1615µm (%)	1615-1809µm (%)	1809-2000µm (%)	Total (%)
25-30	81.30	12.02	3.00	1.23	0.76	0.59	0.46	0.34	0.19	0.12	100
50-55	71.01	8.86	5.33	4.69	3.64	2.60	1.76	1.13	0.64	0.34	100
75-80	70.62	12.28	3.92	3.34	2.99	2.47	1.87	1.31	0.77	0.42	100
95-100	67.71	4.43	4.15	5.44	5.39	4.59	3.52	2.49	1.47	0.80	100
115-120	84.93	3.74	2.21	2.56	2.17	1.66	1.20	0.82	0.47	0.26	100
150-155	89.34	1.04	2.40	2.43	1.78	1.22	0.81	0.54	0.28	0.16	100
168-173	80.57	6.67	4.53	3.39	2.21	1.30	0.72	0.35	0.18	0.07	100
213-218	88.56	11.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
243-248	49.38	7.20	8.34	9.04	8.17	6.60	4.88	3.37	1.97	1.06	100
263-268	62.86	12.42	9.71	6.69	4.05	2.23	1.19	0.50	0.25	0.10	100
288-293	47.19	17.66	13.15	8.85	5.60	3.43	2.03	1.20	0.58	0.33	100
320-325	52.58	18.26	13.37	8.07	4.31	2.11	0.82	0.33	0.10	0.06	100
365-370	38.93	17.22	15.16	10.84	7.21	4.63	2.88	1.77	0.87	0.50	100
450-455	37.40	12.46	13.15	11.39	8.91	6.55	4.54	3.04	1.60	0.96	100
508-513	48.55	12.50	10.71	8.59	6.63	4.96	3.53	2.43	1.31	0.79	100
563-568	57.88	17.27	10.66	6.67	3.78	1.89	1.01	0.47	0.25	0.12	100

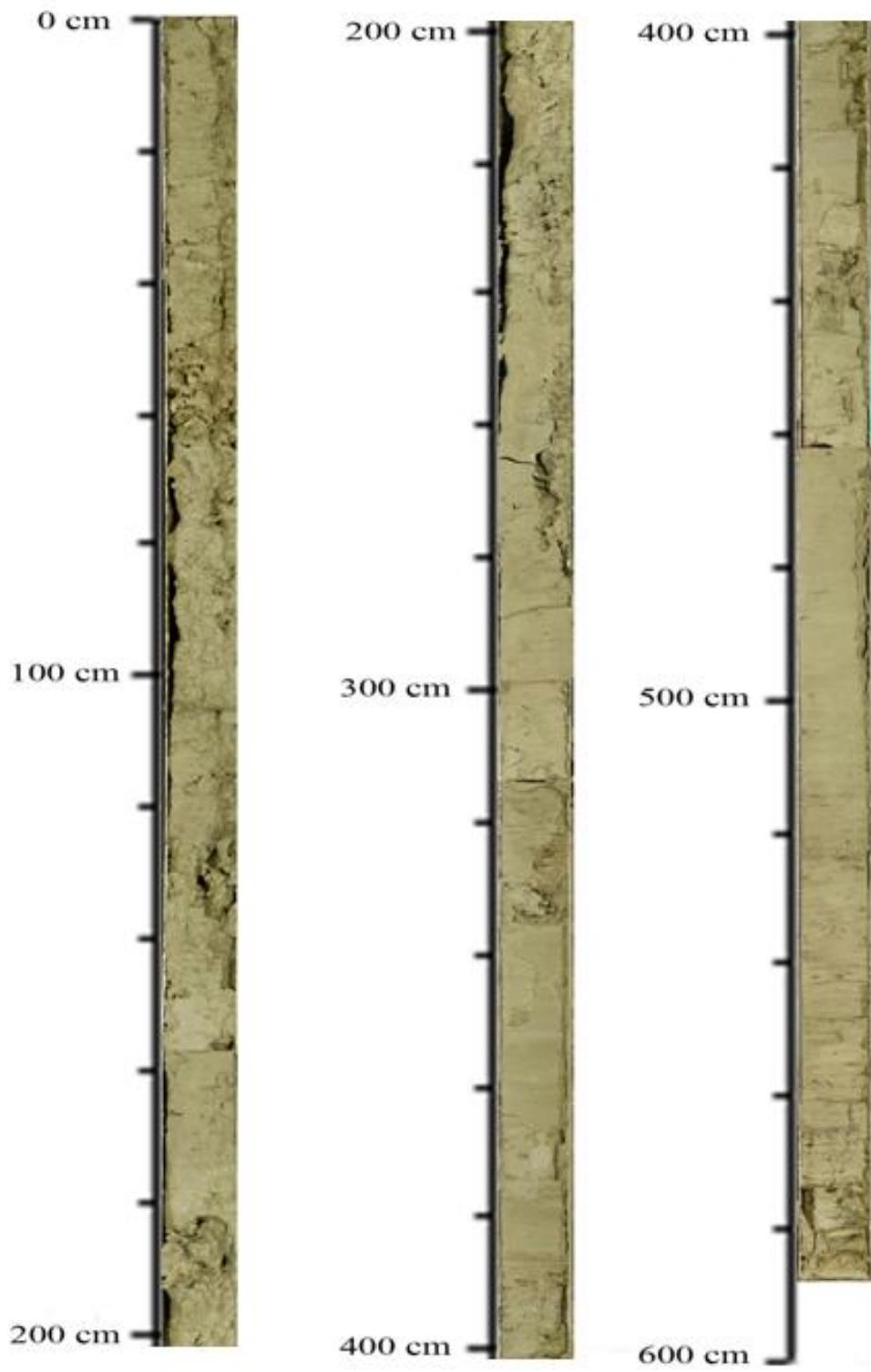
09CCT02-10											
Depth (cm)	63-82µm (%)	82-101µm (%)	101-120µm (%)	120-139µm (%)	139-158µm (%)	158-177µm (%)	177-196µm (%)	196-215µm (%)	215-234µm (%)	234-257µm (%)	Total (%)
25-30	4.28	4.44	5.46	6.75	8.31	10.13	12.16	14.24	18.09	16.15	100
50-55	3.39	3.60	4.52	5.69	7.16	8.99	11.25	14.07	23.51	17.82	100
75-80	5.42	5.64	6.89	8.35	9.96	11.58	13.00	13.82	11.81	13.51	100
95-100	2.44	2.89	3.98	5.47	7.43	9.92	12.94	16.21	19.77	18.96	100
115-120	2.43	3.02	4.29	6.00	8.21	10.89	13.90	16.68	16.47	18.11	100
150-155	1.03	1.57	2.57	4.07	6.21	9.14	12.97	17.44	23.36	21.64	100
168-173	2.18	2.48	3.38	4.68	6.52	9.05	12.39	16.40	22.55	20.37	100
213-218	4.78	4.93	5.99	7.29	8.86	10.71	12.70	14.49	14.91	15.34	100
243-248	2.98	3.27	4.30	5.75	7.70	10.17	13.14	16.22	18.03	18.43	100
263-268	3.35	3.31	4.05	5.12	6.66	8.79	11.67	15.27	22.60	19.18	100
288-293	5.51	4.98	5.52	6.29	7.39	8.95	11.08	13.81	19.65	16.83	100
320-325	4.86	4.35	4.82	5.57	6.70	8.41	10.88	14.18	22.17	18.06	100
365-370	5.05	4.22	4.39	4.78	5.59	7.12	9.69	13.63	26.43	19.10	100
450-455	3.81	3.31	3.61	4.16	5.10	6.70	9.35	13.57	30.28	20.10	100
508-513	3.50	3.14	3.53	4.19	5.27	7.04	9.88	14.18	28.91	20.35	100
563-568	5.37	5.05	5.75	6.66	7.81	9.29	11.18	13.50	19.22	16.18	100

09CCT02_10 Tables

Mean Grain Size 09CCT02-10	
Depth (cm)	Mean Grain Size (μm)
25-30	88.82
50-55	136.74
75-80	172.35
95-100	182.15
115-120	140.89
150-155	81.75
168-173	66.22
213-218	26.13
243-248	268.37
263-268	64.53
288-293	63.32
320-325	42.78
365-370	47.66
450-455	60.65
508-513	66.89
563-568	72.39

Strength 09CCT02-10	
Interval (cm)	Strength (kg/cm^2)
0-48	0.0625
48-66	0.2500
66-88	0.0160
88-110	0.0210
110-139	0.0625
139-158	0.0625
0-22	0.0469
22-77	0.0625
77-94	0.0156
94-116	0.0625
116-157	0.0938
0-15	0.1094
15-71	0.0938
71-148	0.1046
0-77	0.1250
77-125	0.1719

09CCT02_10 Core Pictures



09CCT02_10 Core Log

Core#: 09CCT02-10-01
 Core Date: 06-Jun-09

Date Split/subsampled	Length: 158cm
12-Jun-09	E: 348617
	N: 3228331

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
0-5		0-48 cm	
5-10			0-48cm Grey soft clay
10-15	Gley 2		
15-20		48-66cm	Grey soft clay
20-25	S15B		
25-30			w/shells
30-35		48-66cm	
35-40	Gley 2		
40-45		66-88cm	Grey soft clay
45-50	S10BG		
50-55		66-88cm	w/sparse shell
55-60			
60-65	Gley 2	88-110cm	Grey soft clay
65-70			
70-75		110-139cm	Grey soft clay
75-80			
80-85	Gley 2	110-139cm	w/sparse shell
85-90			
90-95		139-158cm	grey soft clay
95-100			
100-105			
105-110			
110-115			
115-120			
120-125			
125-130			
130-135			
135-140			
139-140			
140-145			
145-150			
150-155			
155-160			

09CCT02_10 Core Log

Core#: 09CCT02-10-02

Core Date: 06-Jun-09

Date Split/subsampled	Length: 157 cm
12-Jun-09	E: 348617
	N: 3228331

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
158-163			
163-168		158-180 cm	158-180cm Light grey clay
168-175	Gley 2		
173-178	S 15 BG		
178-180		180-235cm	180-235cm Soft light grey
180-183			clay with oyster shells
183-188	Gley 2		
188-193	4 1/10 DG		
193-198		235-252cm	235-252cm Light grey clay
198-203			w/sparse oyster shell
203-208	Gley 2		
208-213	S 15 B		
213-218		252-274cm	252-274cm Light grey
218-223			compacted clay
223-228	Gley 2		
228-233	S 15 B		
233-235		274-315cm	274-315cm Light grey
235-236			compacted clay
238-243	Gley 2		
243-248	S 11/10 BG		
248-252			
252-253			
253-258			
258-263			
263-268			
268-273			
273-274			
274-279			
278-283			
283-288			
288-293			
293-298			
298-303			
303-308			
308-313			
313-315			

09CCT02_10 Core Log

Core#: 09CCT02_10-03

Core Date: 06-Jun-09

Date Split/subsampled	Length: 148cm
	E: 348617
15-Jun-09	N: 3228331

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
315 - 320	315-330cm		
320 - 325	Gley 2		
325 - 330			
330 - 335	4/5BG		
335 - 340			
340 - 345	330-386cm		
345 - 350	Gley 2		
350 - 355			
355 - 360	4/5BG		
360 - 365			
365 - 370	386-463cm		
370 - 375	Gley 2		
375 - 380			
380 - 385	4/5BG		
385 - 390			
390 - 395			
395 - 400			
400 - 405			
405 - 410			
410 - 415			
415 - 420			
420 - 425			
425 - 430			
430 - 435			
435 - 440			
440 - 445			
445 - 450			
450 - 455			
455 - 460			
460 - 463			

09CCT02_10 Core Log

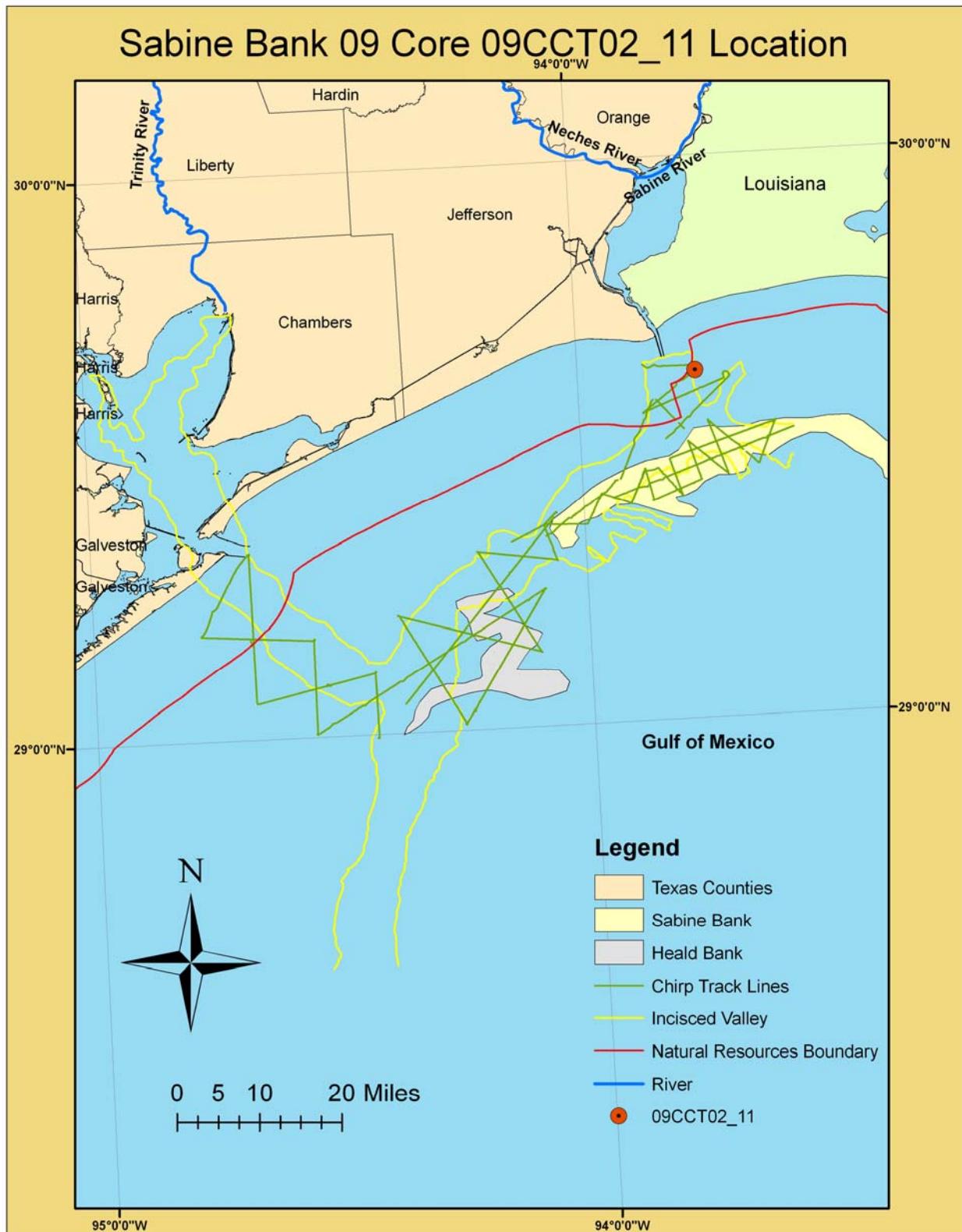
Core#: 09CCT02_10-4

Core Date: 06-Jun-09

Date Split/subsampled	Length: 125 cm
	E: 348617
15-Jun-09	N: 3228331

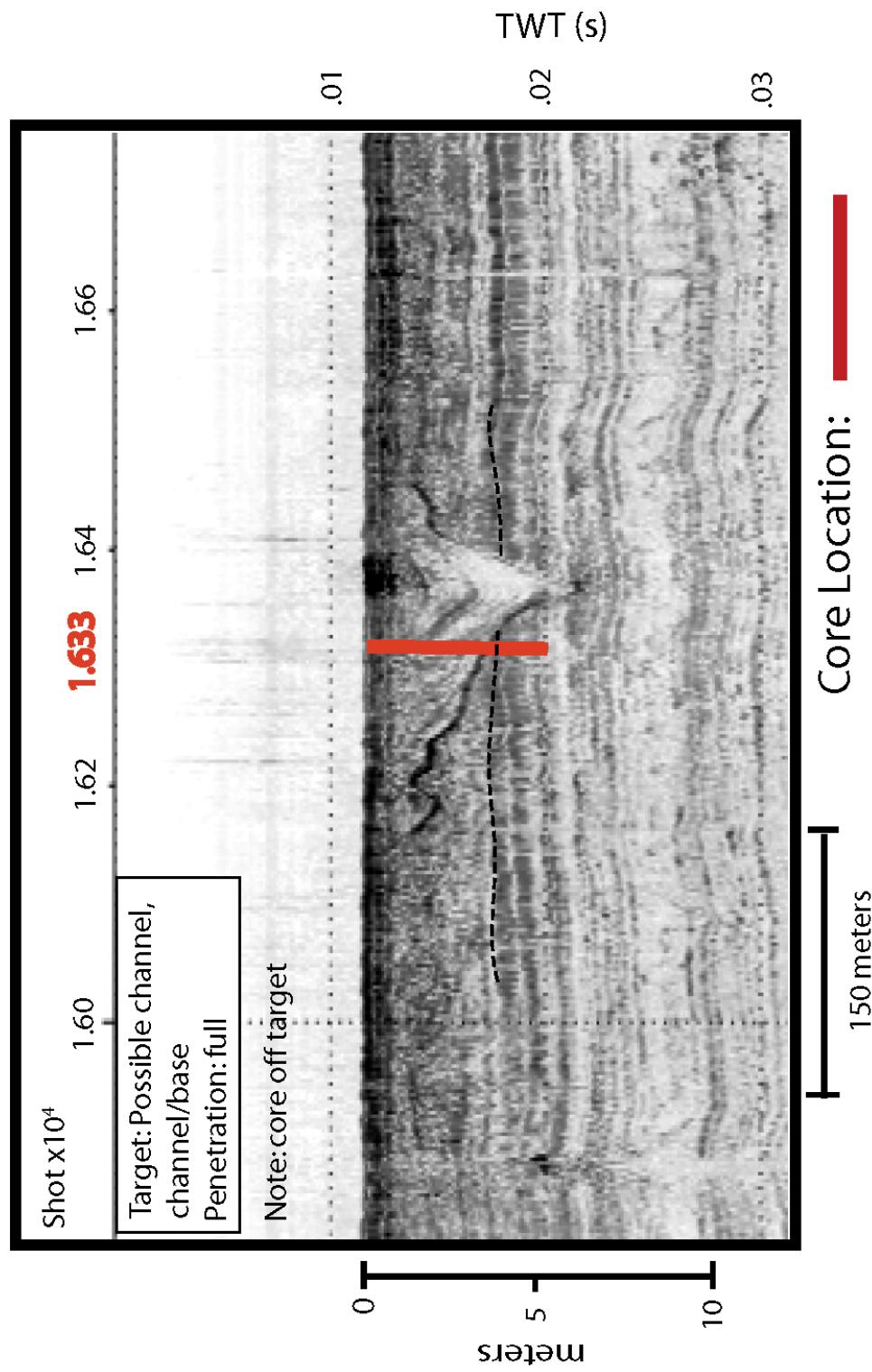
Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
463 - 468	463-540cm		463-540cm Grey soft clay
468 - 473	Gley 2		
473 - 478			
478 - 483	S1/SBG		
482 - 487			
488 - 493	540-588cm		510-588cm Grey soft clay
493 - 498	Gley 2		
498 - 503			
503 - 508	4110G		
508 - 513			
513 - 518			
518 - 523			
523 - 528			
528 - 533			
533 - 538			
538 - 540			
540 - 543			
543 - 548			
548 - 553			
553 - 558			
558 - 563			
563 - 568			
568 - 573			
573 - 578			
578 - 583			
583 - 588			

09CCT02_11 Core Location

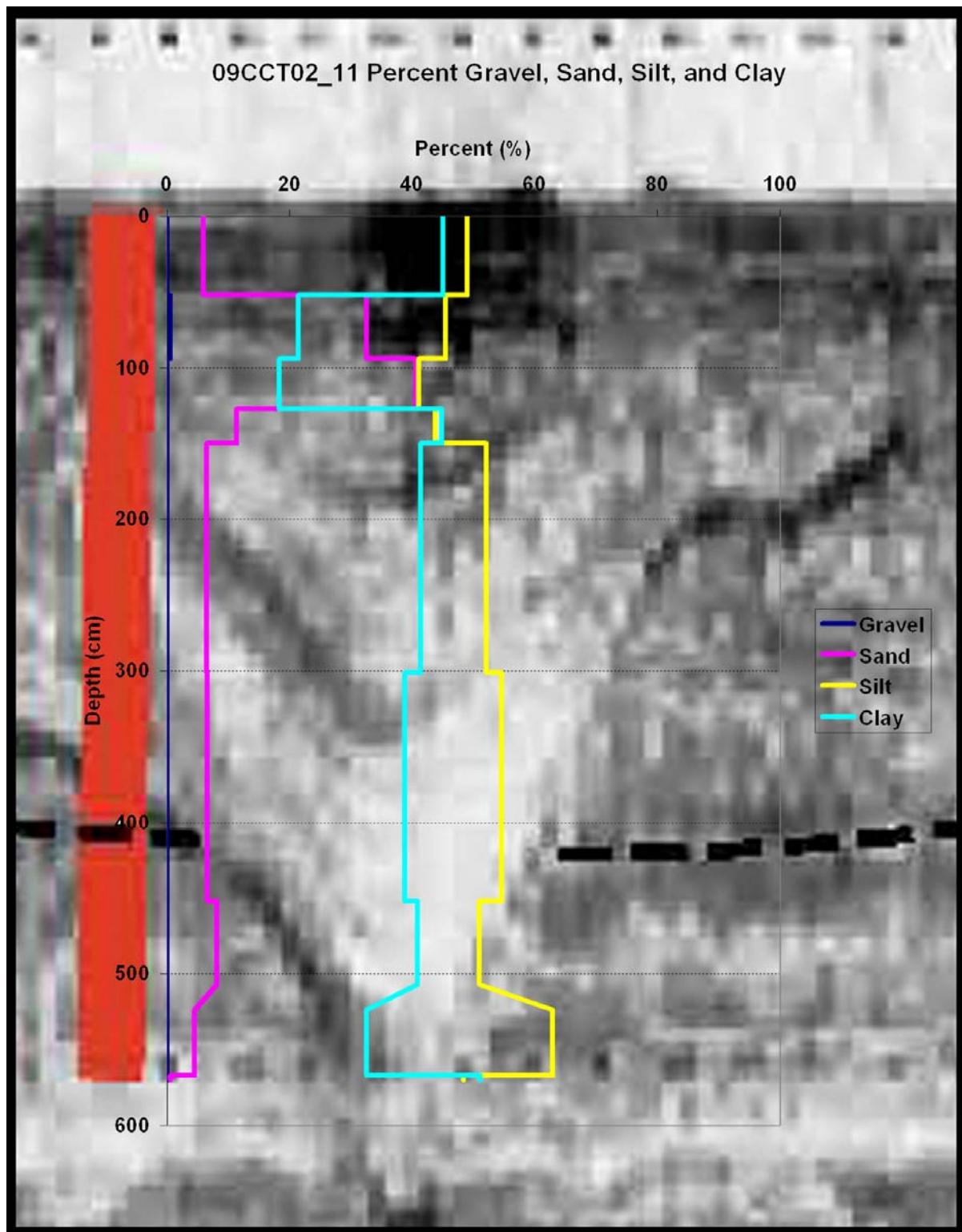


Project:09CCT02
Seismic Transect:09C01

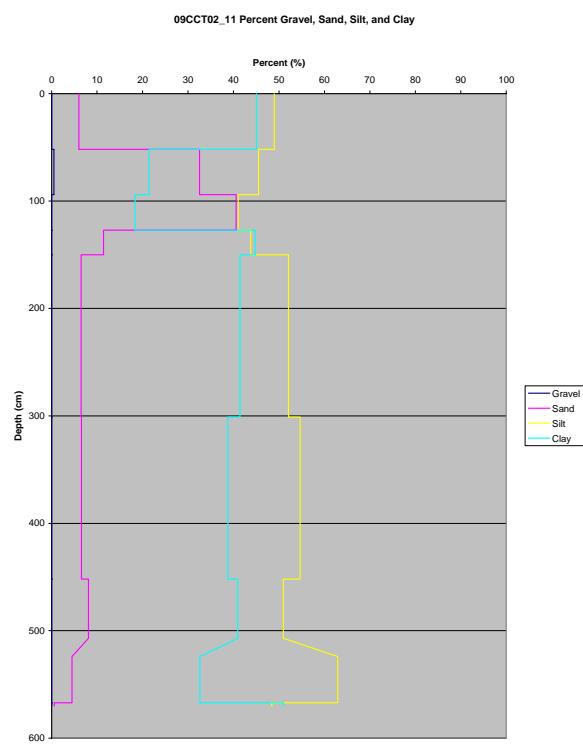
09CCT02_11 Seismic



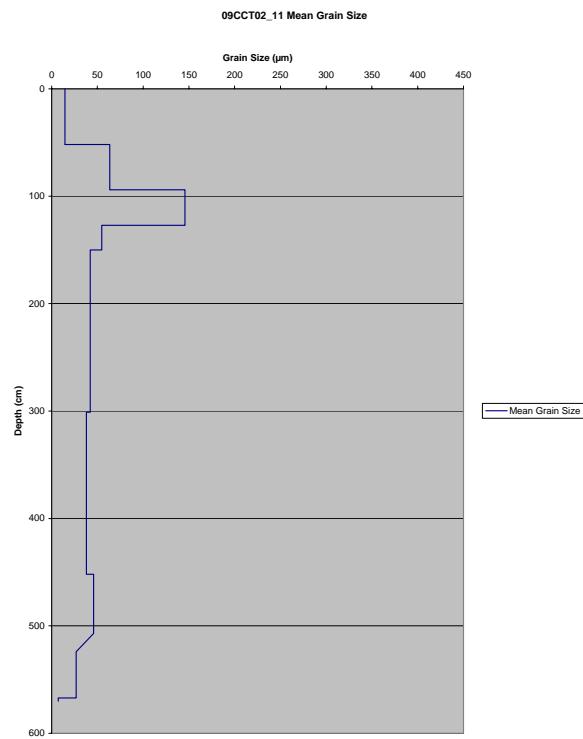
09CCT02_11 Seismic



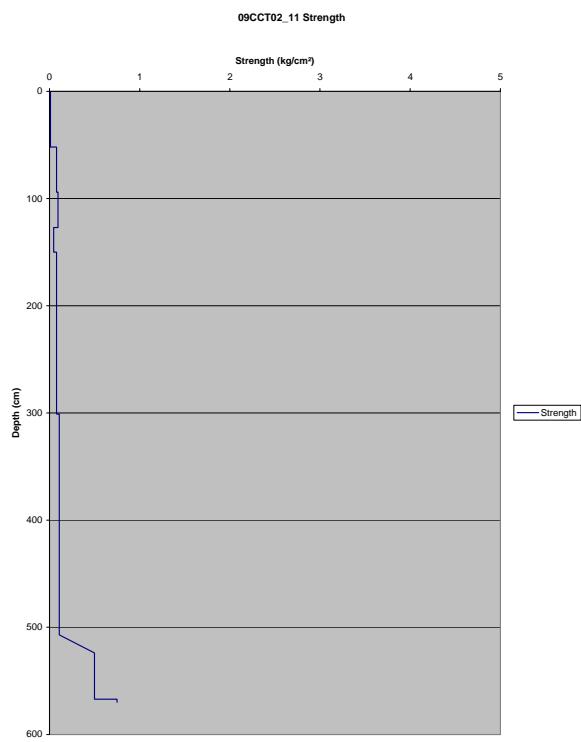
09CCT02_11 Percent Grain Size Distribution Graph



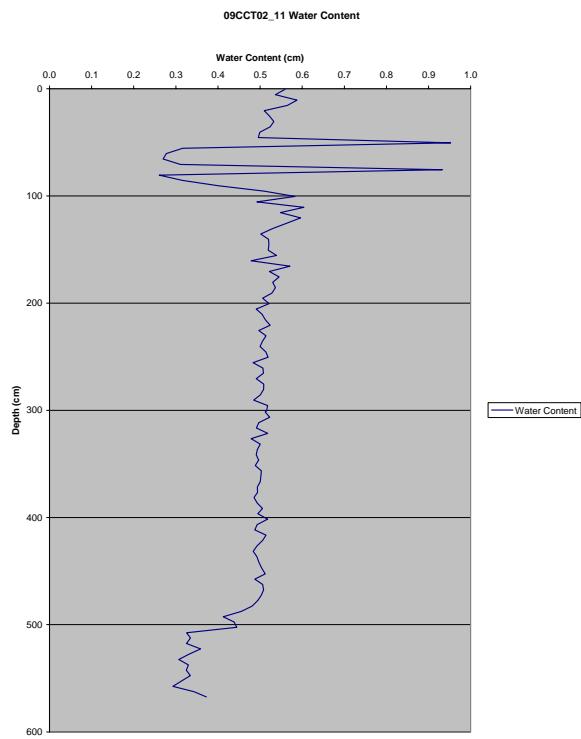
09CCT02_11 Mean Grain Size Distribution Graph



09CCT02_11 Strength Graph



09CCT02_11 Water Content Graph



09CCT02_11 Grain Size Sand Percent Table

09CCT02_11 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 (%)
25-30	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
75-80	88.06	7.94	2.15	1.00	0.53	0.30	0.03	0.00	0.00	0.00	100
120-125	54.70	18.67	11.83	7.18	4.00	2.04	0.97	0.37	0.18	0.06	100
135-140	41.69	17.51	16.70	12.04	6.88	3.37	1.28	0.42	0.04	0.06	100
205-210	26.69	10.61	26.38	21.40	11.30	3.32	0.31	0.00	0.00	0.00	100
366-371	38.68	12.09	20.93	16.01	8.63	3.29	0.36	0.00	0.00	0.00	100
472-477	44.63	10.72	13.86	11.97	8.23	5.02	2.91	1.49	0.83	0.35	100
512-517	55.26	13.01	14.81	10.78	5.35	0.80	0.00	0.00	0.00	0.00	100
557-562	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100

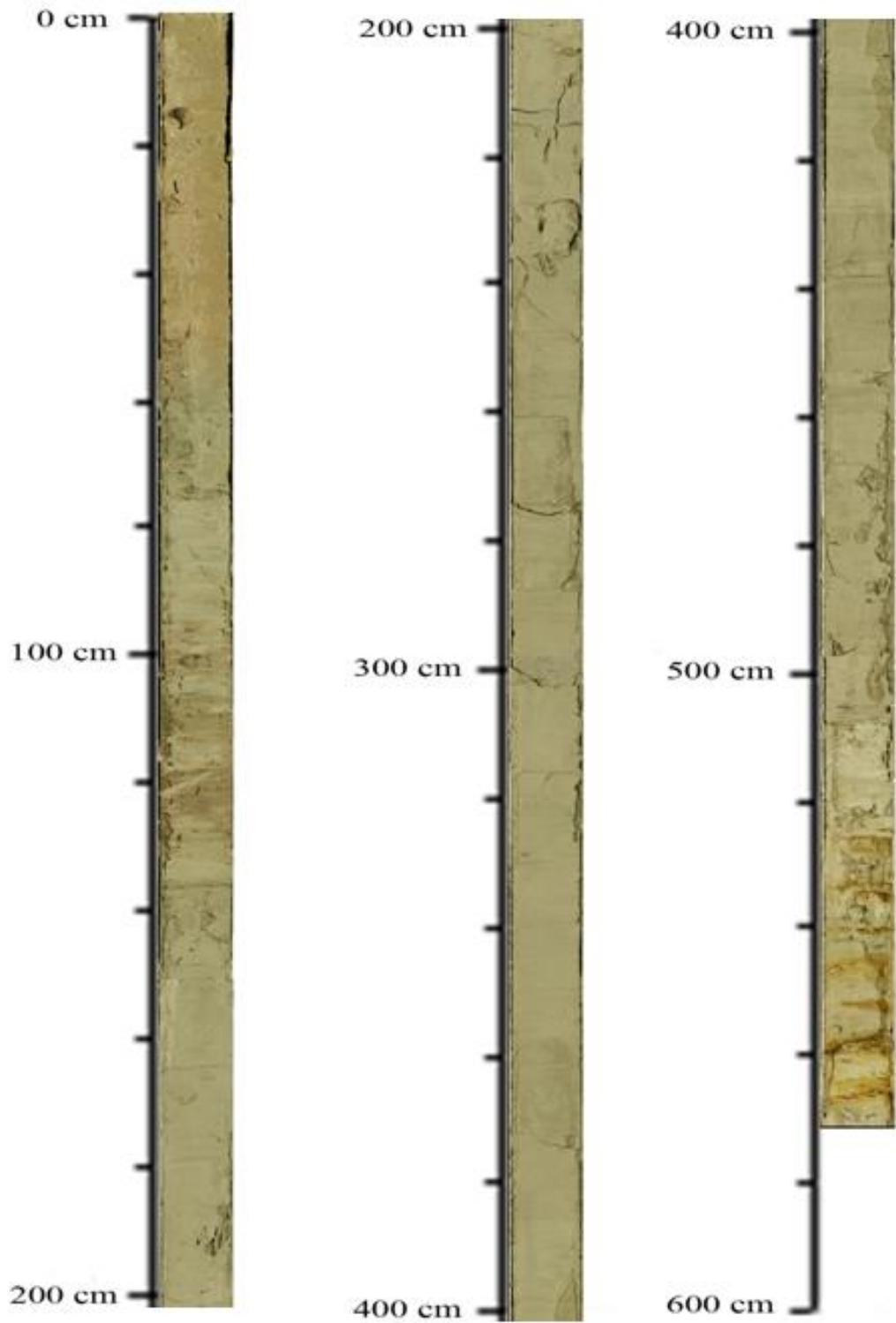
09CCT02-11											
Depth (cm)	63- 82µm (%)	82- 101µm (%)	101- 120µm (%)	120- 139µm (%)	139- 158µm (%)	158- 177µm (%)	177- 196µm (%)	196- 215µm (%)	215- 234µm (%)	234- 257µm (%)	Total (%)
25-30	0.00	0.00	0.49	1.49	3.17	5.96	10.18	16.60	36.69	25.42	100
75-80	2.51	2.59	3.20	4.04	5.25	7.07	9.91	14.35	30.03	21.05	100
120-125	5.61	5.13	5.72	6.49	7.52	8.90	10.79	13.28	20.15	16.40	100
135-140	5.37	4.80	5.30	6.02	7.05	8.52	10.61	13.43	21.84	17.07	100
205-210	0.00	0.00	0.00	0.00	1.62	4.93	9.22	14.90	45.10	24.23	100
366-371	0.20	0.00	0.00	0.00	1.10	3.37	7.06	13.42	49.47	25.38	100
472-477	2.68	2.54	3.07	3.87	5.14	7.05	9.95	14.27	30.74	20.68	100
512-517	2.74	2.38	2.58	2.54	2.06	2.02	3.47	7.22	56.25	18.75	100
557-562	0.00	0.00	0.00	0.00	0.00	4.36	12.89	19.16	39.02	24.56	100

09CCT02_11 Tables

Mean Grain Size 09CCT02-11	
Depth (cm)	Mean Grain Size (μm)
25-30	14.55
75-80	63.56
120-125	145.85
135-140	54.76
205-210	42.14
366-371	38.03
472-477	45.90
512-517	26.79
557-562	7.38

Strength 09CCT02-11	
Interval (cm)	Strength (kg/cm^2)
0-52	0.0116
52-94	0.0781
94-129	0.0938
129-150	0.0469
0-151	0.0781
0-151	0.1094
0-53	0.1094
53-72	0.5000
72-115	0.7500

09CCT02_11 Core Pictures



09CCT02_11 Core Logs

Core#: 09CCT02-11-01

Core Date: 15-Jun-09

Date Split/subsampled	Length: 150 cm
29-Jun-09	E: 426245
	N: 3296711

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
0-5		0-52 cm	
5-10		7.5yR	
10-15			
15-20			
20-25		3/1	
25-30		52-94 cm	
30-35		Grey 2	
35-40			
40-45		4/5BG	
45-50			
50-52			
52-58		94-129 cm	
58-60		7.5yR	
60-65			
65-70		3/1	
70-75		129-150 cm	
75-80			
80-85		Grey 2	
85-90			
90-94		5/10BG	
94-95			
95-100			
100-105			
105-110			
110-115			
115-120			
120-125			
125-129			
129-130			
130-135			
135-140			
140-145			
145-150			

09CCT02_11 Core Log

Core#: 09CCT02_11-02

Core Date: 15-Jun-09

Date Split/subsampled	Length: 151cm
29-Jun-09	E: 426245
	N: 3226211

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
150-155		150-301cm	
155-160			
160-165			
165-170			
170-175			
175-180			
180-185			
185-190			
190-195			
195-200			
200-205			
205-210			
210-215			
215-220			
220-225			
225-230			
230-235			
235-240			
240-245			
245-250			
250-255			
255-260			
260-265			
265-270			
270-275			
275-280			
280-285			
285-290			
290-295			
295-300			
300-301			

09CCT02_11 Core Log

Core#: 09CCT02_11-03

Core Date: 15-Jun-09

Date Split/subsampled	Length: 151 cm
29-Jun-09	E: H2624S
	N: 3276711

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
301-306	301-452cm		
306-311	Gley 2		
311-316			
316-321			
321-326			
326-331			
331-336			
336-341			
341-346			
346-351			
351-356			
356-361			
361-366			
366-371			
371-376			
376-381			
381-386			
386-391			
391-396			
396-401			
401-406			
406-411			
411-416			
416-421			
421-426			
426-431			
431-436			
436-441			
441-446			
446-451			
451-452			

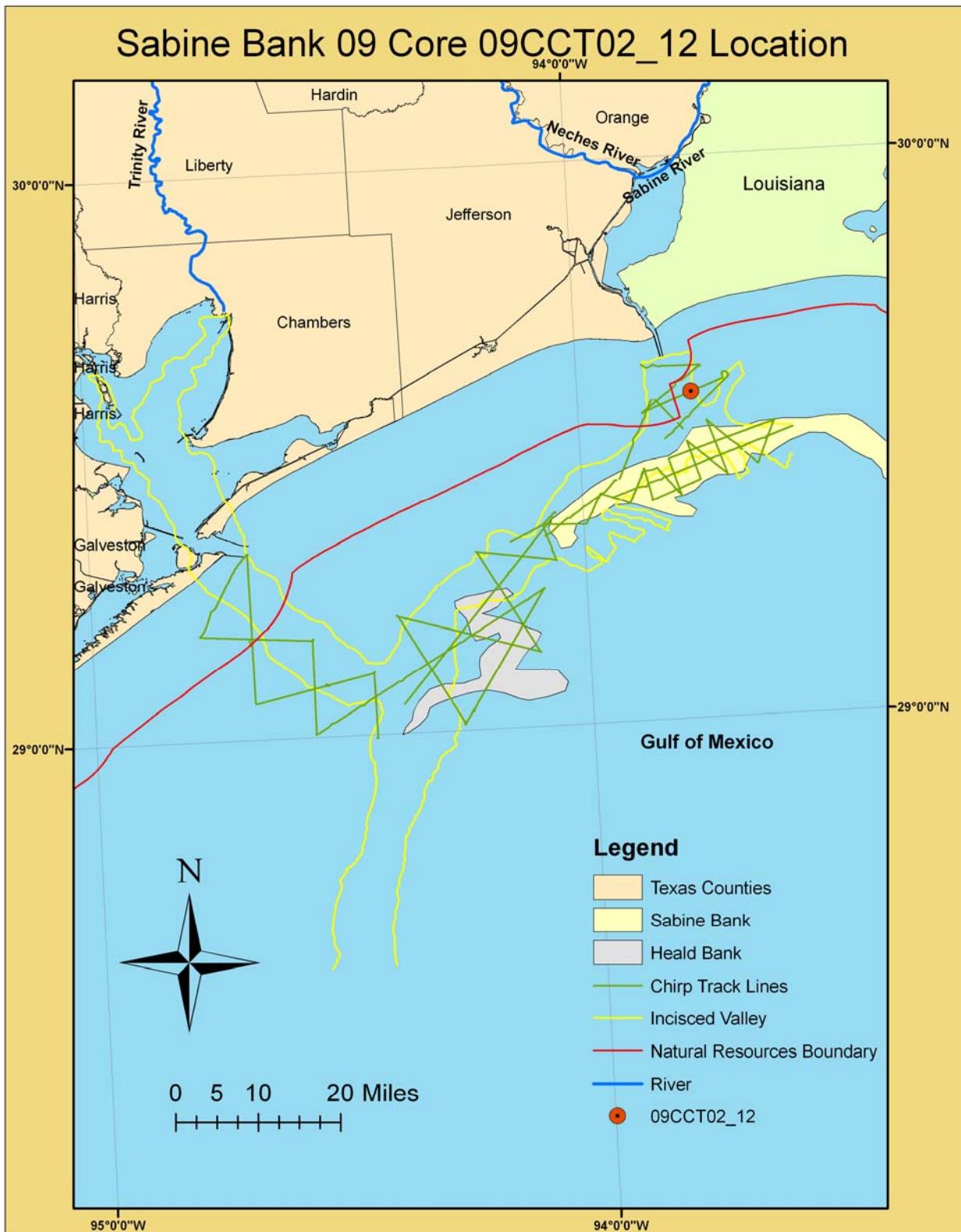
09CCT02_11 Core Log

Core#: 09CC702_11-04

Core Date: 15 Jun-09

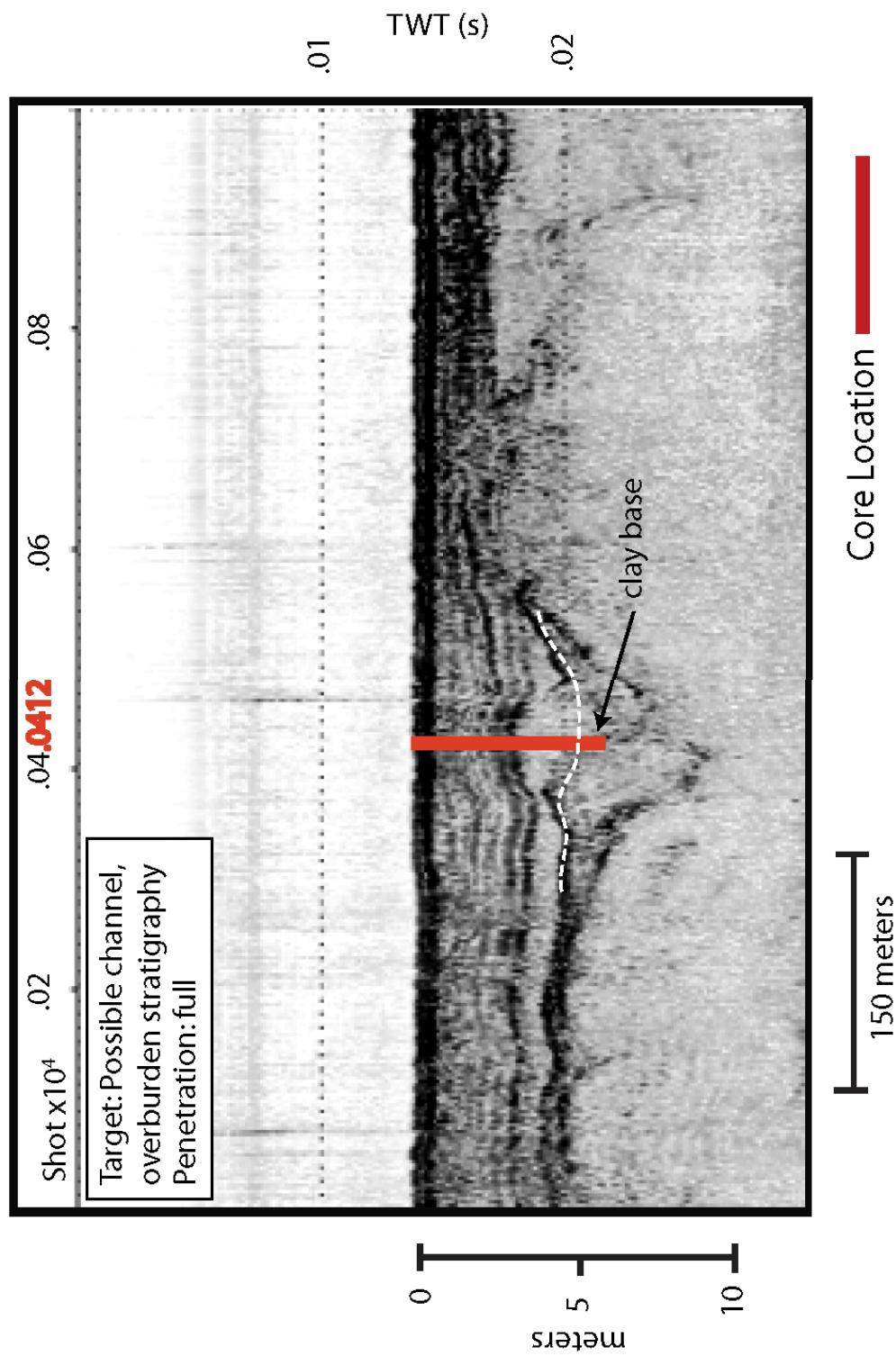
Date Split/subsampled	Length: 118cm
29 Jun 09	E: 426245 N: 3376711

09CCT02_12 Core Location

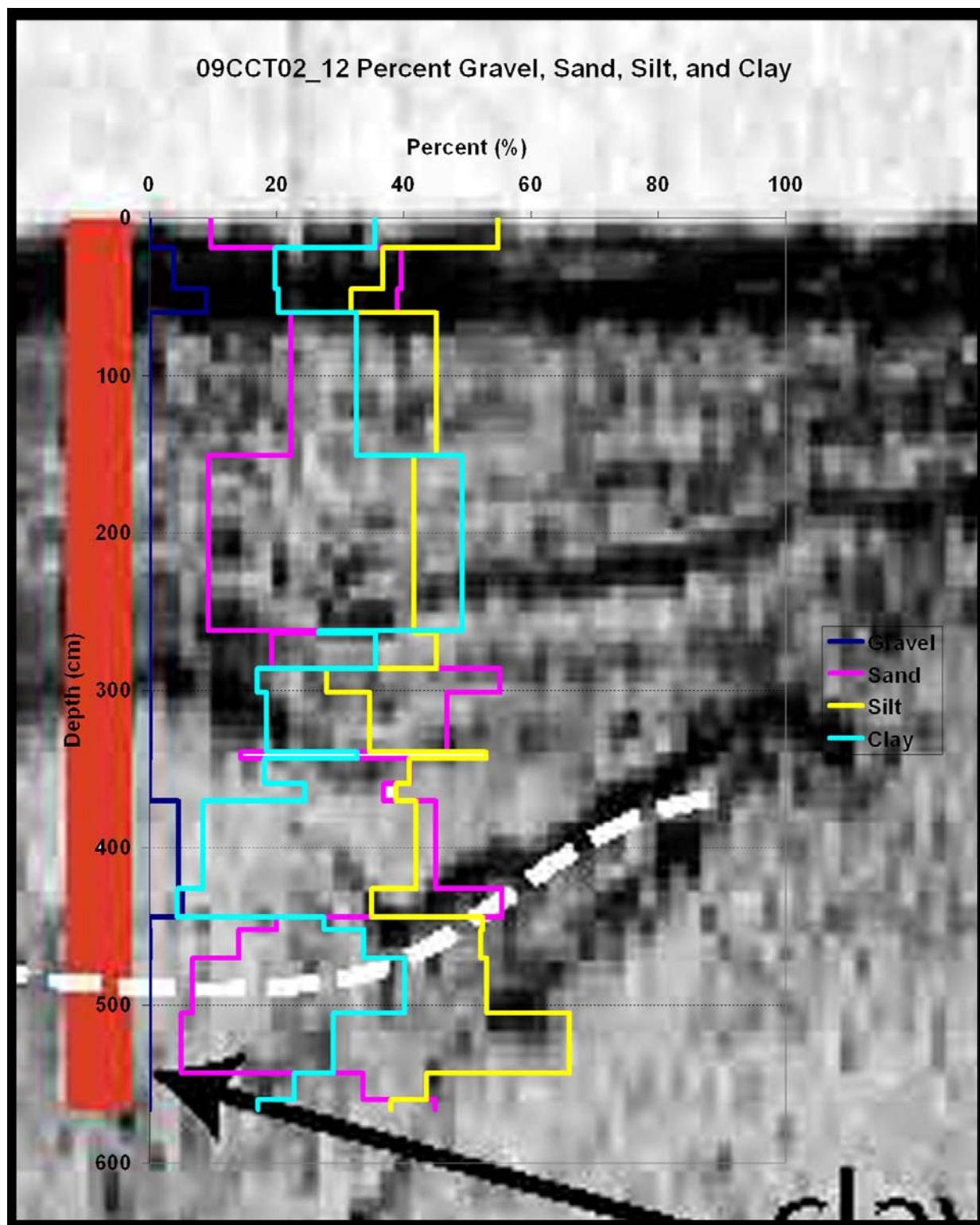


Project: 09CCT02
Transect: 09C05

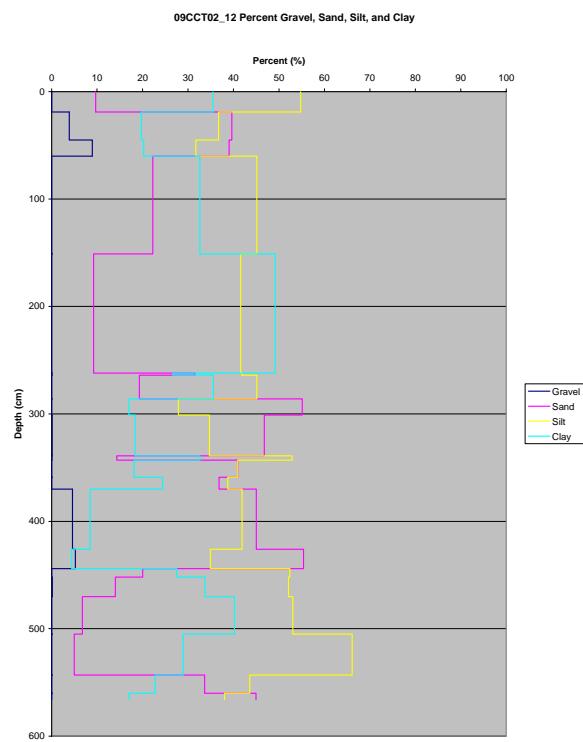
Core: 09CCT02_12
Core Length (m): 5.64



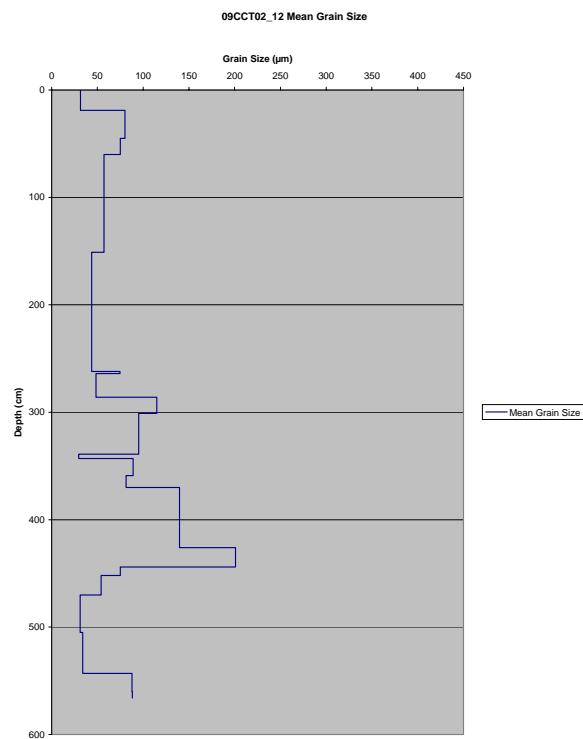
09CCT02_12Seismic



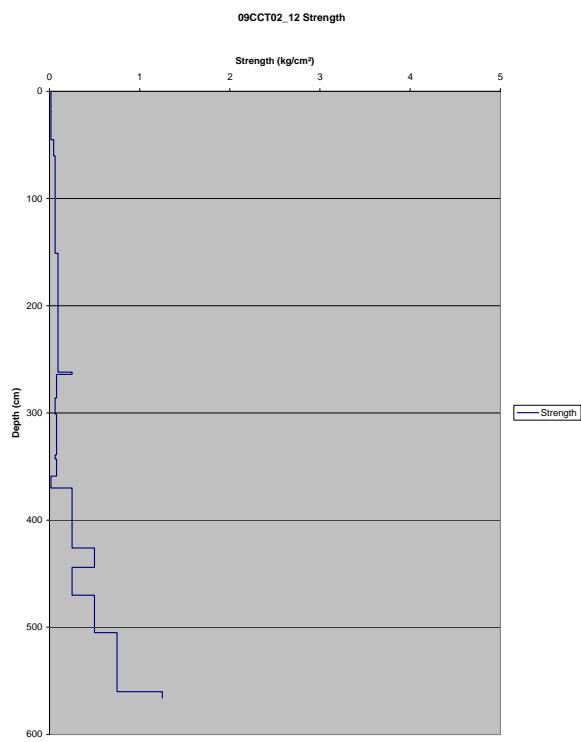
09CCT02_12 Percent Grain Size Distribution Graph



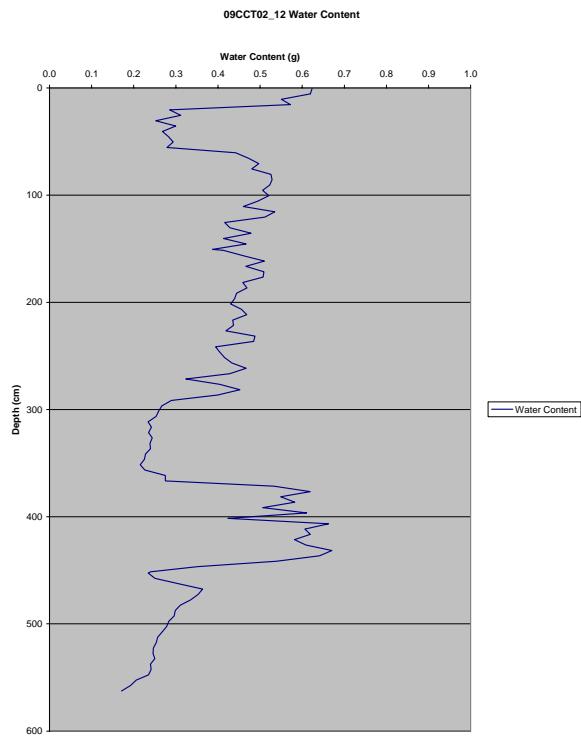
09CCT02_12 Mean Grain Size Distribution Graph



09CCT02_12 Strength Graph



09CCT02_12 Mean Grain Size Distribution



09CCT02_12 Grain Size Sand Percent

Depth (cm)	09CCT02_12 Grain Size Sand Percent										
	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 (%)
15-19	73.05	10.14	11.68	4.97	0.16	0.00	0.00	0.00	0.00	0.00	100
35-40	87.01	8.17	2.28	1.46	0.75	0.25	0.08	0.00	0.00	0.00	100
55-60	91.93	3.87	1.83	1.50	0.71	0.16	0.00	0.00	0.00	0.00	100
145-150	81.96	1.57	6.06	5.20	3.13	1.52	0.49	0.07	0.00	0.00	100
171-176	59.12	8.54	9.65	7.78	5.56	3.78	2.51	1.65	0.88	0.52	100
262-264	79.79	13.99	2.35	1.17	0.97	0.74	0.52	0.26	0.14	0.07	100
271-276	77.43	11.14	6.71	3.92	0.79	0.00	0.00	0.00	0.00	0.00	100
291-296	77.98	18.21	3.27	0.53	0.01	0.00	0.00	0.00	0.00	0.00	100
316-321	84.51	11.22	1.67	0.83	0.67	0.50	0.34	0.15	0.08	0.04	100
339-341	92.35	7.55	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
351-356	84.08	10.58	1.85	0.85	0.73	0.65	0.52	0.39	0.21	0.13	100
361-366	84.00	8.79	2.54	1.79	1.22	0.77	0.46	0.24	0.14	0.06	100
401-406	61.65	19.19	10.99	5.34	2.14	0.57	0.12	0.00	0.00	0.00	100
431-436	56.09	18.90	11.44	6.59	3.56	1.84	0.90	0.43	0.16	0.08	100
441-446	63.97	13.57	7.39	5.15	3.73	2.60	1.70	1.06	0.52	0.30	100
457-462	63.39	15.62	7.13	4.55	3.29	2.38	1.64	1.10	0.58	0.34	100
492-497	68.95	7.23	4.68	4.64	4.31	3.63	2.77	2.00	1.11	0.68	100
532-537	49.00	10.59	9.73	9.37	7.60	5.54	3.79	2.33	1.38	0.68	100
552-557	77.92	13.32	2.35	1.61	1.50	1.24	0.91	0.63	0.33	0.20	100
562-566	87.02	10.41	0.64	0.32	0.42	0.41	0.33	0.23	0.14	0.07	100

09CCT02_12 Grain Size Sand Percent

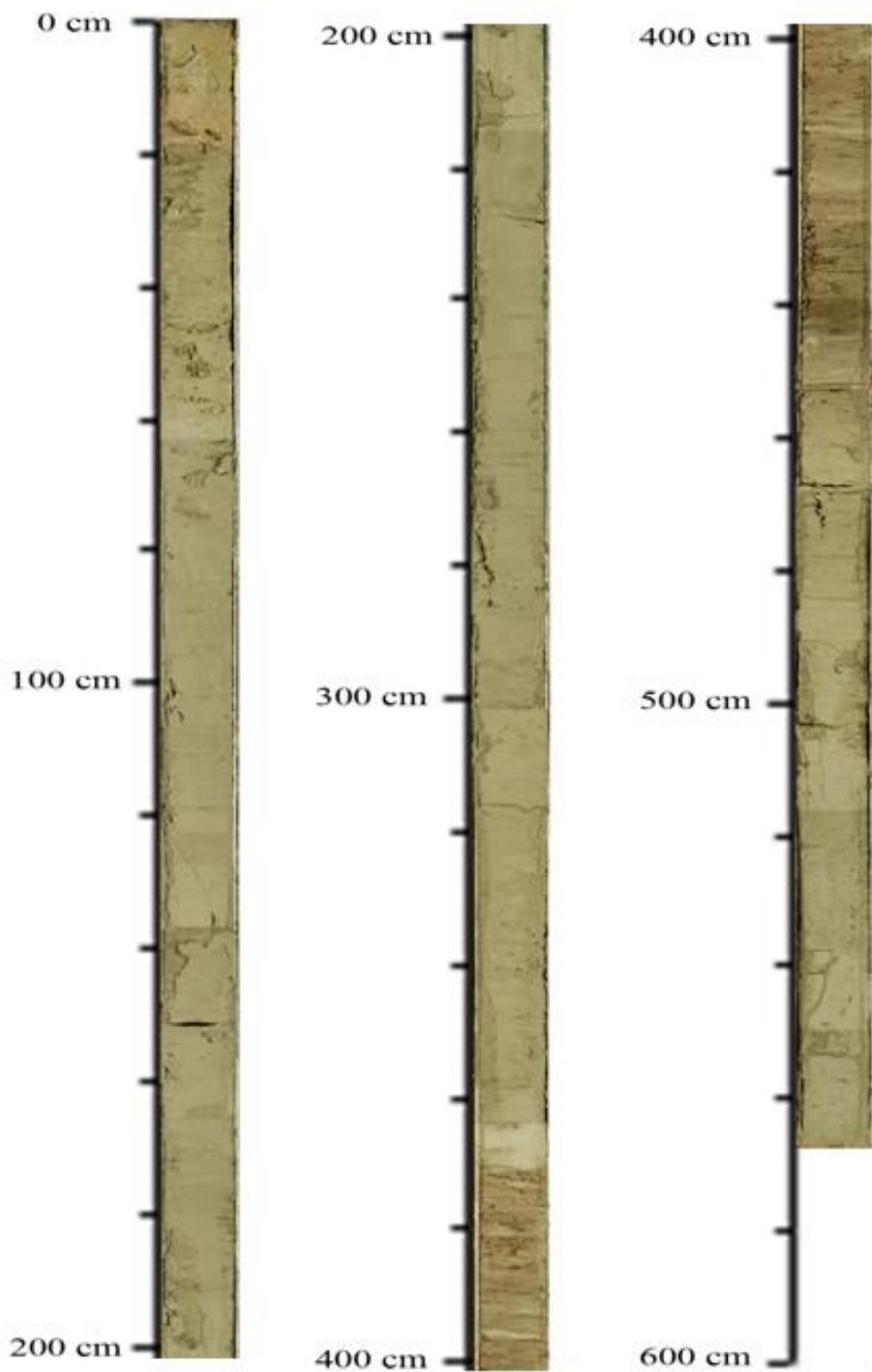
Depth (cm)	09CCT02-12										
	63-82µm (%)	82-101µm (%)	101-120µm (%)	120-139µm (%)	139-158µm (%)	158-177µm (%)	177-196µm (%)	196-215µm (%)	215-234µm (%)	234-257µm (%)	Total (%)
15-19	0.52	0.15	0.20	0.63	1.58	3.41	7.02	13.76	46.89	25.83	100
35-40	3.17	3.42	4.33	5.51	7.01	8.95	11.45	14.65	22.91	18.60	100
55-60	2.10	2.58	3.63	5.08	7.02	9.52	12.64	16.20	21.61	19.61	100
145-150	0.00	0.00	0.18	1.01	2.71	5.59	10.26	17.28	36.33	26.64	100
171-176	1.24	1.06	1.24	1.74	2.78	4.79	8.45	14.68	39.40	24.63	100
262-264	5.37	5.44	6.47	7.64	8.92	10.29	11.71	13.15	16.40	14.61	100
271-276	3.52	3.68	4.59	5.77	7.28	9.16	11.53	14.43	22.11	17.92	100
291-296	6.31	6.19	7.18	8.29	9.48	10.73	11.96	13.02	13.23	13.60	100
316-321	4.42	4.62	5.68	6.97	8.50	10.27	12.24	14.28	16.97	16.04	100
339-341	2.21	2.28	2.87	3.77	5.12	7.16	10.25	14.78	30.33	21.24	100
351-356	4.01	4.20	5.18	6.41	7.93	9.76	11.96	14.43	19.14	16.97	100
361-366	3.54	3.82	4.86	6.18	7.82	9.83	12.21	14.86	19.41	17.46	100
401-406	5.15	4.73	5.30	6.10	7.20	8.74	10.87	13.68	21.09	17.14	100
431-436	5.66	5.22	5.85	6.68	7.78	9.23	11.12	13.47	18.84	16.14	100
441-446	4.17	3.97	4.56	5.32	6.35	7.80	9.91	13.13	26.60	18.19	100
457-462	5.07	4.78	5.42	6.18	7.15	8.42	10.18	12.74	23.41	16.66	100
492-497	2.60	2.73	3.44	4.40	5.71	7.56	10.20	14.04	29.46	19.86	100
532-537	4.10	4.01	4.71	5.53	6.47	7.66	9.21	11.67	30.06	16.58	100
552-557	5.50	5.64	6.78	8.07	9.48	10.93	12.29	13.37	14.01	13.93	100
562-566	4.52	4.80	5.97	7.36	8.97	10.74	12.59	14.27	15.40	15.38	100

09CCT02_12 Tables

Mean Grain Size 09CCT02-12	
Depth (cm)	Mean Grain Size (μm)
15-19	31.64
35-40	80.16
55-60	75.13
145-150	57.31
171-176	43.76
262-264	74.70
271-276	48.62
291-296	114.98
316-321	95.23
339-341	29.64
351-356	89.04
361-366	81.37
401-406	139.67
431-436	200.95
441-446	74.99
457-462	54.08
492-497	31.28
532-537	33.97
552-557	87.93
562-566	88.26

Strength 09CCT02-12	
Interval (cm)	Strength (kg/cm^2)
0-19	0.0156
19-45	0.0156
45-60	0.0469
60-151	0.0625
0-111	0.0938
111-113	0.2500
113-135	0.0781
135-150	0.0625
0-38	0.0781
38-42	0.0625
42-58	0.0781
58-69	0.0156
69-125	0.2500
125-143	0.5000
143-151	0.2500
0-18	0.2500
18-53	0.5000
53-91	0.7500
91-108	0.7500
108-114	1.2500

09CCT02_12 Core Pictures



09CCT02_12 Core Log

Core#: 09CCT02-12-01

Core Date: 15-Jun-09

Date Split/subsampled	Length: 151 cm
	E: 425454
	N: 3272532

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
0-5	0-19cm		
5-10	10 y R		
10-15			
15-19	3/3		
19-20			
20-25	19-45cm		
25-30	Gley 2		
30-35			
35-40	4/5B		
40-45			
45-50	45-60cm		
50-55	Gley 2		
55-60			
60-65	4/5BG		
65-70			
70-75	60-75cm		
75-80	Gley 2		
80-85			
85-90	6/10 BG		
90-95			
95-100			
100-105			
105-110			
110-115			
115-120			
120-125			
125-130			
130-135			
135-140			
140-145			
145-150			
150-155			

09CCT02_12 Core Log

Core#: 09CCT02_12-02

Core Date: 15-Jun-09

Date Split/subsampled	Length: 150 cm
30-Jun-09	E: 725.54
	N: 37.22 S32

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
151-156		151-262cm	
156-161		Gley 2	
161-166		S 15PB	
166-171		262-264cm	
171-176		10 g R	
176-181		412	
181-186		264-286cm	
186-191		Gley 2	
191-196		S 15PB	
196-201		286-301cm	
201-206		10 g R	
206-211		412	
211-216		264-286cm	
216-221		Gley 2	
221-226		S 15PB	
226-231		286-301cm	
231-236		10 g R	
236-241		412	
241-246		264-286cm	
246-251		Gley 2	
251-256		S 15PB	
256-261		286-301cm	
261-262		10 g R	
262-264		412	
264-266		264-286cm	
266-271		Gley 2	
271-276		S 15PB	
276-281		286-301cm	
281-286		10 g R	
286-291		412	
291-296		264-286cm	
296-301		Gley 2	

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09CCT02_12 Core Log

Core#: 09CCT02_12-03

Core Date: 15-Jun-09

Date Split/subsampled	Length: 151 cm
30-Jun-09	E: 425454
	N: 3272532

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
301-306		301-339cm	
306-311	G1e0.2		
311-316	S15BC		
316-321			
321-326	339-343cm		
326-331	G1e0.2		
331-336	S15BC		
336-349	610R		
339-349	343-359cm		
349-349	G1e0.2		
349-349	S15BC		
349-356	359-370cm		
351-355	G1e0.2		
355-359	S15BC		
359-361	G1e0.2		
361-366	S15BC		
366-370			
370-321	329-412cm		
371-326	7.5yR		
376-381	318		
381-386	412-417cm		
386-391	7.5yR		
391-396	2.5/11		
396-401			
401-406	444-472cm		
406-411	7.5yR		
411-416	3.5/8		
416-421			
421-426	426-444cm		
426-431	Dark Brown hard		
431-436	clay w/plant material		
436-441			
441-446	444-452cm		
446-446	Dark Brown		
451-452	hard c/lo		

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09CCT02_12 Core Log

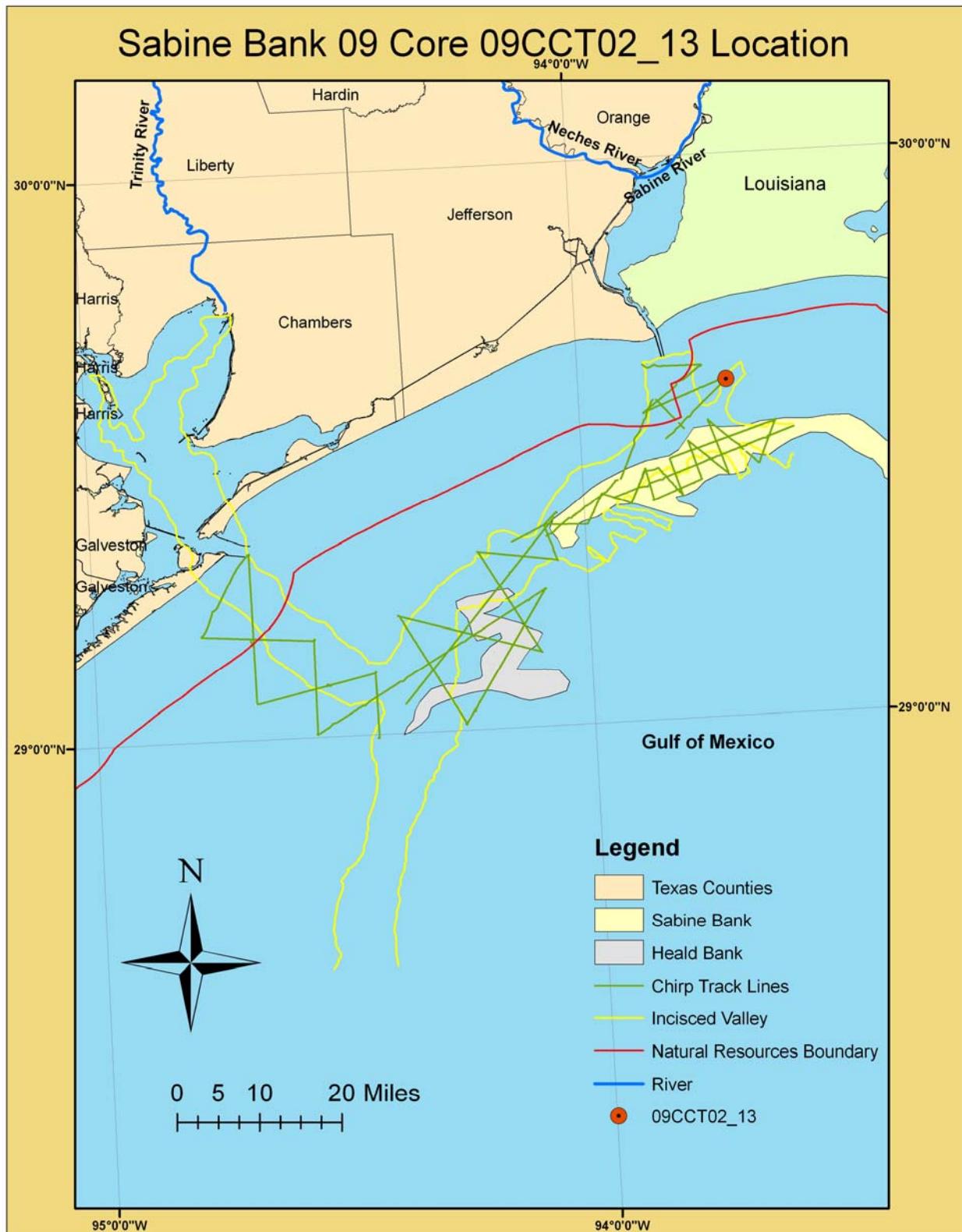
Core#: 09CCT02-12-04

Core Date: 15-Jun-09

Date Split/subsampled	Length: 114 cm
30-Jun-09	E: 425154 N: 3232932

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
451-452	452-470cm		
457-462	10g1		
461-462	412		
467-470			
470-472			
472-473	470-505cm		
477-482	Gley 2		
482-483	6/1BG		
487-492			
492-493	505-543cm		
492-502	Gley 1		
502-505	6/1S		
505-507			
507-512	543-560cm		
512-512	Gley 1		
517-522	5/1G		
522-522			
527-532	560-560cm		
532-537	Gley 1		
537-542	5/1G		
542-543			
543-547	560-560cm		
547-552	Gley 1		
552-552	5/1G		
557-560			
560-562			
562-566			

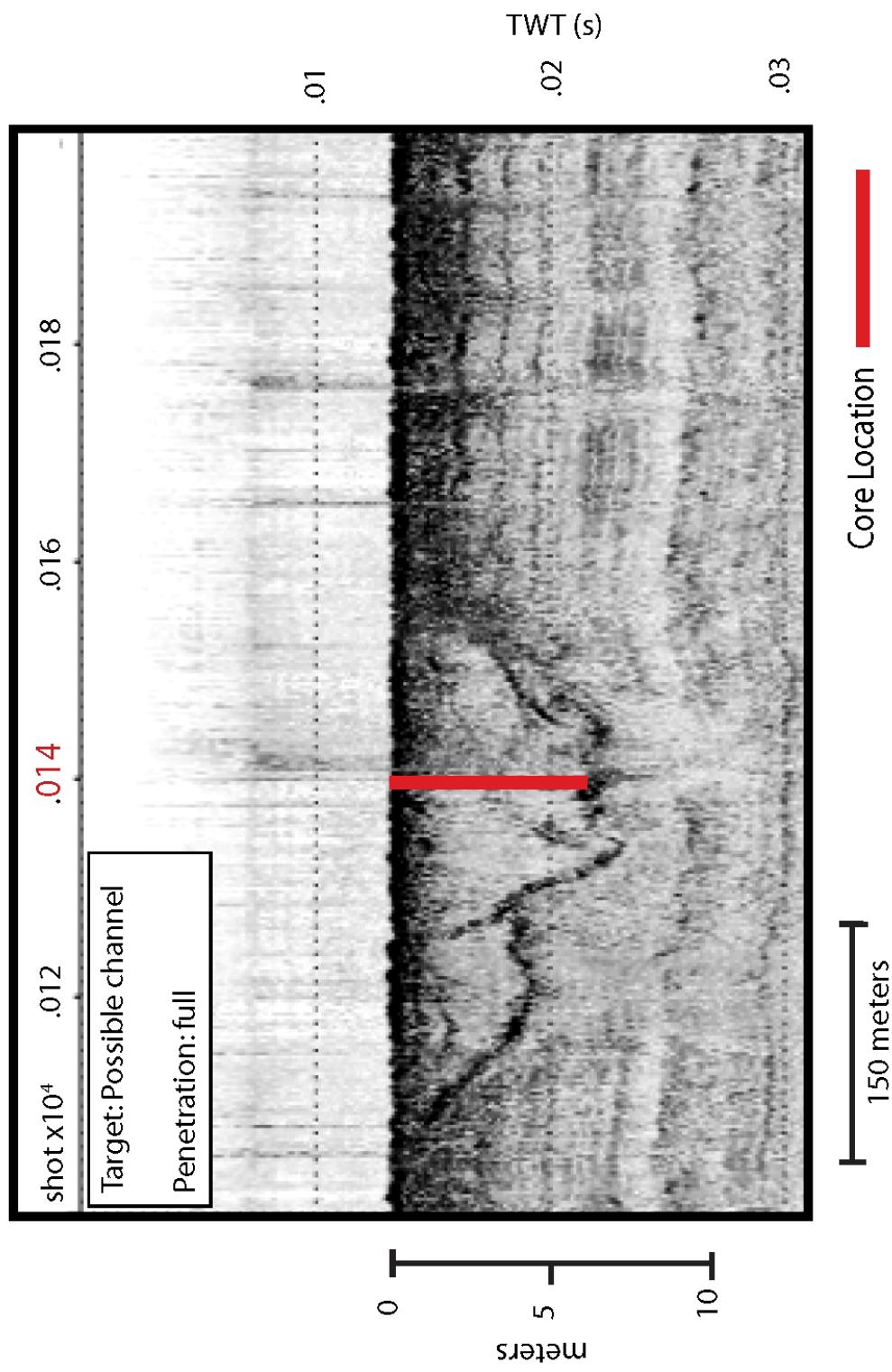
09CCT02_13 Core Location



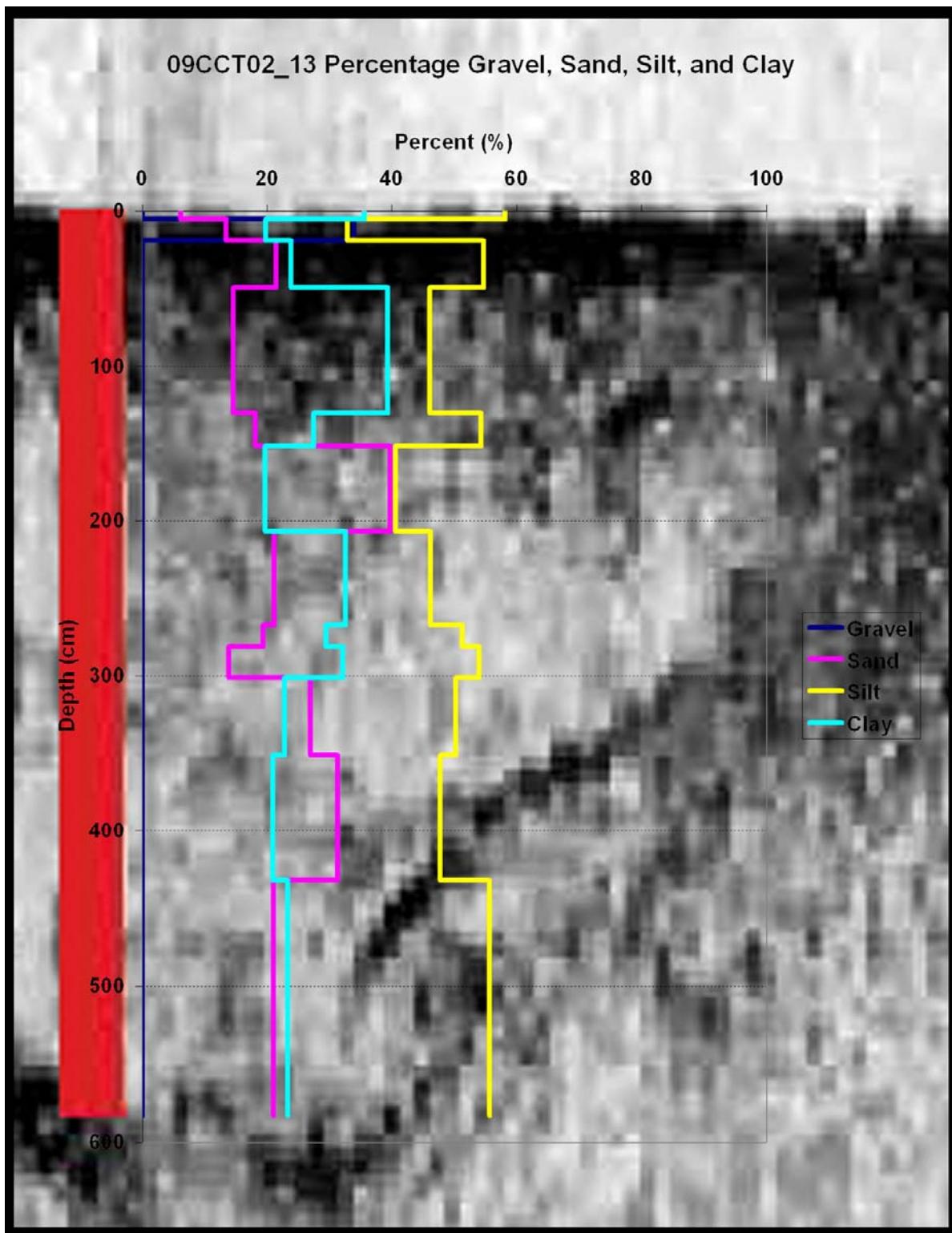
Project: 09CCT02
Transect: 09C06

09CCT02_13 Seismic

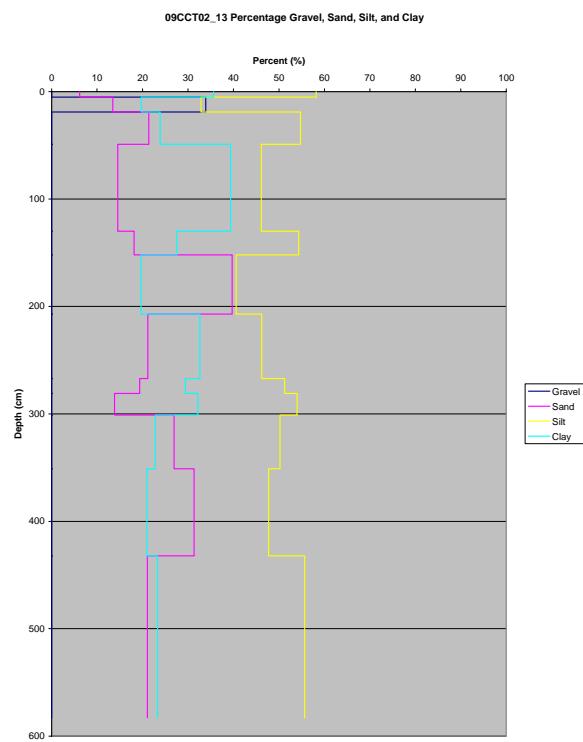
Core: 09CCT02_13
Core Length (m): 5.80



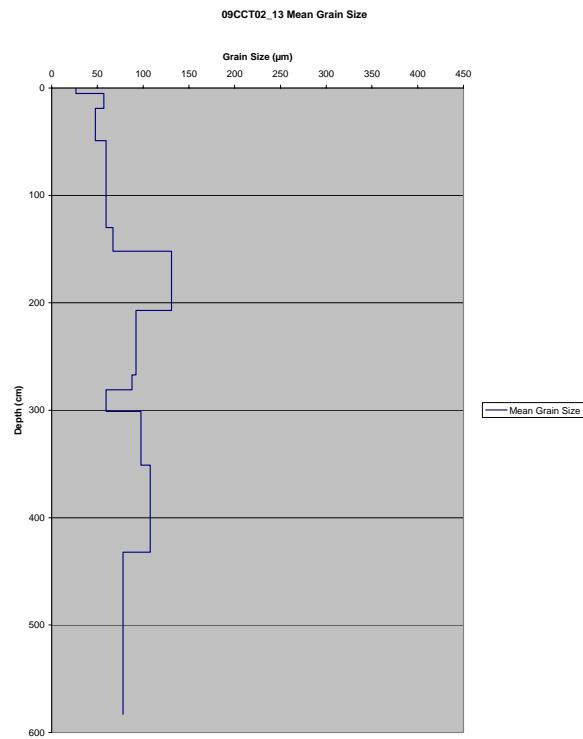
09CCT02_13 Seismic



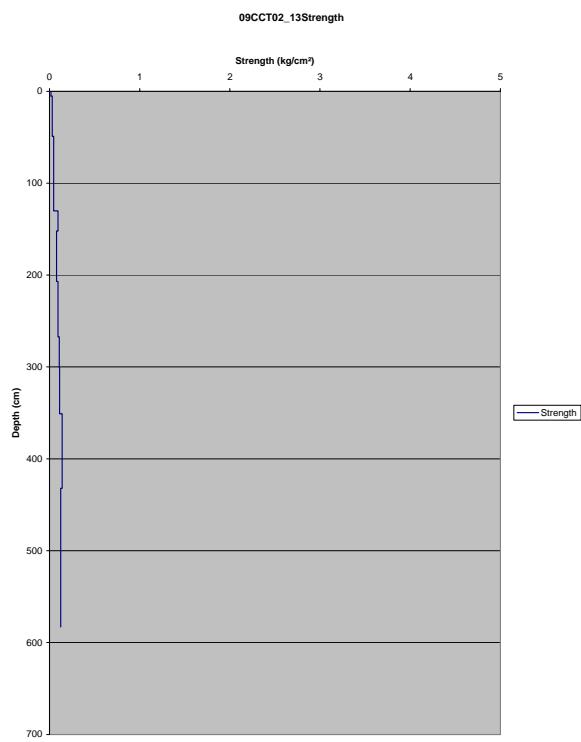
09CCT02_13 Percent Grain Size Distribution Graph



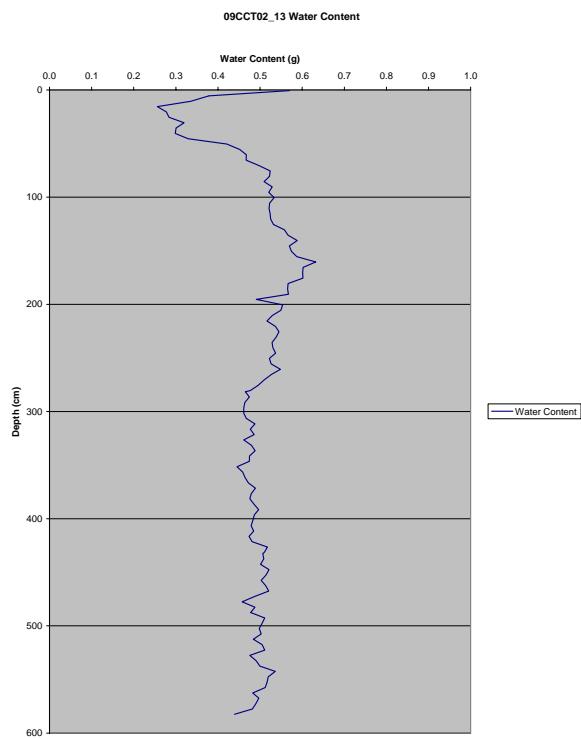
09CCT02_13 Mean Grain Size Distribution Graph



09CCT02_13 Strength Graph



09CCT02_13 Water Content Graph



09CCT02_13 Grain Size Sand Percent Table

09CCT02_013 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	68.92	8.79	10.40	7.06	3.58	1.20	0.05	0.00	0.00	0.00	100
10-15	81.95	5.60	3.21	2.75	2.25	1.68	1.16	0.77	0.40	0.24	100
35-40	89.43	6.49	1.38	0.75	0.71	0.59	0.42	0.16	0.03	0.03	100
120-125	67.96	4.74	5.79	6.35	5.45	4.04	2.68	1.68	0.83	0.48	100
145-150	63.80	13.24	8.26	5.75	3.83	2.39	1.42	0.73	0.40	0.17	100
175-180	61.61	16.63	9.33	5.50	3.19	1.82	1.00	0.55	0.24	0.13	100
215-220	51.66	14.73	11.58	8.65	5.79	3.58	2.06	1.15	0.52	0.28	100
270-275	48.56	17.86	11.93	8.24	5.52	3.54	2.14	1.27	0.60	0.34	100
286-291	60.96	12.23	7.96	6.14	4.63	3.30	2.20	1.42	0.72	0.43	100
331-336	56.97	18.39	10.93	6.42	3.59	1.91	1.00	0.46	0.24	0.09	100
401-406	59.41	18.07	10.06	5.72	3.20	1.76	0.94	0.50	0.22	0.12	100
502-507	58.63	16.92	10.59	6.40	3.67	2.00	1.08	0.43	0.21	0.08	100

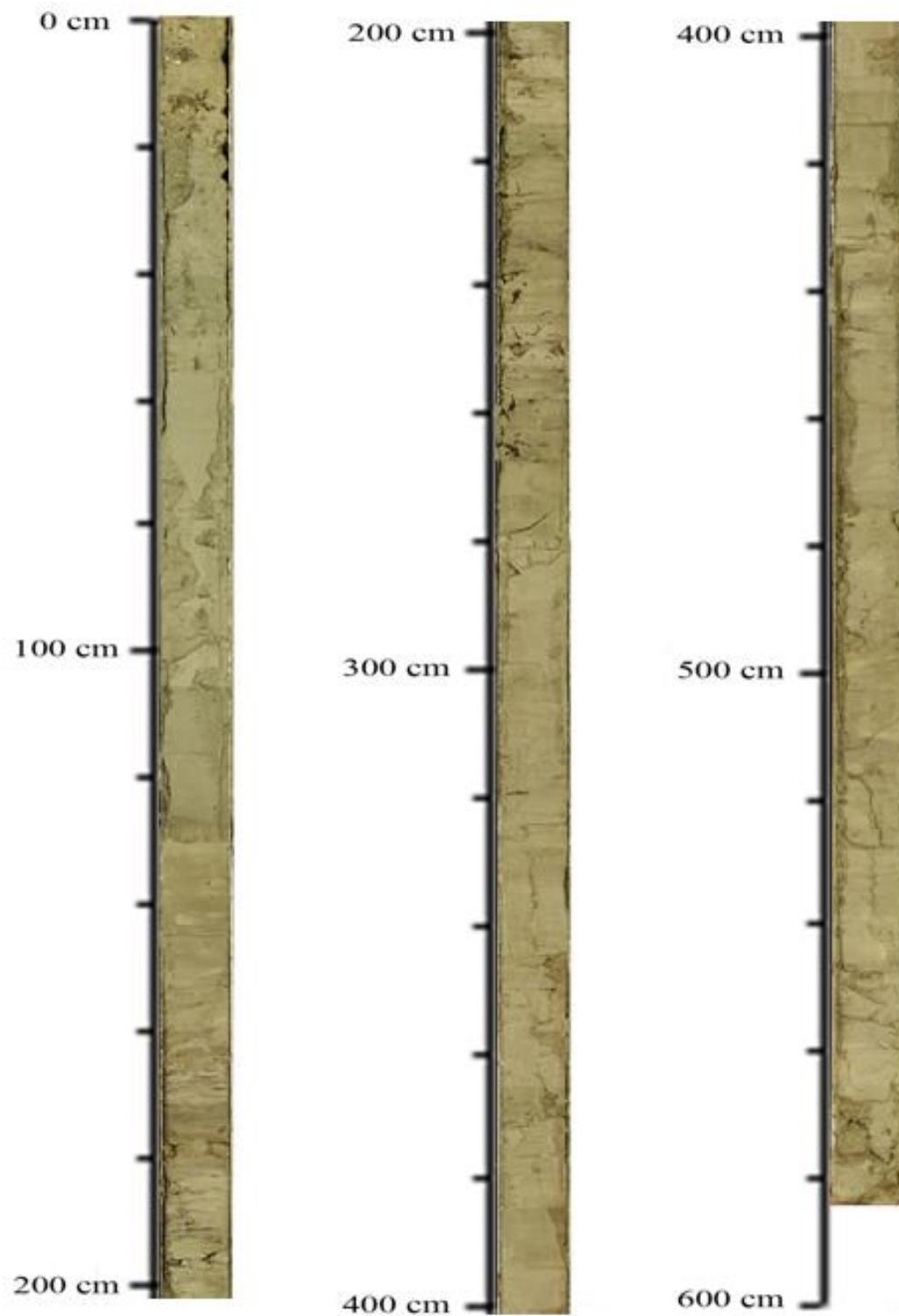
09CCT02-13											
Depth (cm)	63-82µm (%)	82-101µm (%)	101-120µm (%)	120-139µm (%)	139-158µm (%)	158-177µm (%)	177-196µm (%)	196-215µm (%)	215-234µm (%)	234-257µm (%)	Total (%)
0-5	0.68	0.23	0.54	1.22	1.93	3.50	6.67	12.73	48.09	24.41	100
10-15	1.64	1.73	2.24	3.03	4.27	6.26	9.51	14.71	33.91	22.69	100
35-40	1.93	1.93	2.34	2.92	3.85	5.42	8.23	13.32	37.68	22.38	100
120-125	1.59	1.85	2.59	3.71	5.36	7.74	11.15	15.78	28.55	21.69	100
145-150	3.84	3.68	4.27	5.09	6.24	7.88	10.26	13.71	26.29	18.74	100
175-180	4.98	4.71	5.42	6.34	7.56	9.17	11.28	13.89	19.80	16.85	100
215-220	4.56	4.27	4.89	5.76	6.95	8.60	10.85	13.84	22.60	17.67	100
270-275	5.90	5.32	5.84	6.50	7.40	8.62	10.32	12.68	21.39	16.03	100
286-291	3.71	3.54	4.13	4.92	6.05	7.66	10.04	13.54	27.60	18.82	100
331-336	5.50	5.05	5.64	6.40	7.41	8.77	10.62	13.11	21.08	16.43	100
401-406	5.38	4.98	5.58	6.35	7.37	8.73	10.61	13.16	21.26	16.58	100
502-507	4.72	4.32	4.82	5.52	6.51	7.94	10.06	13.19	25.09	17.82	100

09CCT02_13 Tables

Mean Grain Size 09CCT02-13	
Depth (cm)	Mean Grain Size (μm)
0-5	26.61
10-15	57.16
35-40	47.72
120-125	59.55
145-150	67.05
175-180	130.96
215-220	92.30
270-275	87.93
286-291	59.39
331-336	97.65
401-406	107.87
502-507	78.06

Strength 09CCT02-13	
Interval (cm)	Strength (kg/cm^2)
0-5	0.0156
5-19	0.0313
19-49	0.0313
49-130	0.0469
0-22	0.0938
22-77	0.0781
77-137	0.0938
137-151	0.1094
0-20	0.1094
20-70	0.1125
70-151	0.1406
0-151	0.1250

09CCT02_13 Core Picture



09CCT02_13 Core Log

Core#: 09CCT02-13-01

Core Date: 16-Jun-09

Date Split/subsampled	Length: 130cm
02-Jul-09	E: 432213
	N: 3274585

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
0-5	0-5cm		
5-10	7.5yR		
10-15			
15-19	312		
19-20			
20-25			
25-30			
30-35	5-19cm		
35-40	7.5yR		
40-45			
45-49	312		
49-53			
50-55			
55-60			
60-65	19-49cm		
65-70	Gley 2		
70-75			
75-80	5/5B		
80-85			
85-90	49-130cm		
90-95	Gley 2		
95-100			
100-105	5/10BG		
105-110			
110-115			
115-120			
120-125			
125-130			

09CCT02_13 Core Log

Core#: 09CCT02-13-02

Core Date: 16-Jun-09

Date Split/subsampled	Length: 150cm
02-Jun-09	E: 432213
	N: 3274585

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
130-135	130-152cm		
135-140	Gley 2		
140-145			
145-150	31/10BG		
150-152			
152-155			
155-160	152-207cm		
160-165	Gley 2		
165-170	3/15B		
170-175			
175-180	207-267cm		
180-185	Gley 2		
185-190	4/15B		
190-195			
195-200	267-281cm		
200-205			
205-207	Gley 2		
207-210	5/15B		
210-215			
215-220			
220-225			
225-230			
230-235			
235-240			
240-245			
245-250			
250-255			
255-260			
260-265			
265-270			
267-270			
270-275			
275-280			
280-281			

09CCT02_13 Core Log

Core#: 09CCT02_13-03

Core Date: 16-Jun-09

Date Split/subsampled	Length: 151 cm
06-Jul-09	E: 432213
	N: 3274585

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
281-286	281-301 cm		
286-291	10g R		
291-296	4/1		
296-301			
301-306			
306-311	301-351 cm		
311-316	10g R		
316-321	4/1		
321-326			
326-331	351-432 cm		
331-336	10g R		
336-341	4/1		
341-346			
346-351	311		
351-356			
356-361			
361-366			
366-371			
371-376			
376-381			
381-386			
386-391			
391-396			
396-401			
401-406			
406-411			
411-MNG			
416-421			
421-426			
426-431			
431-432			

09CCT02_13 Core Log

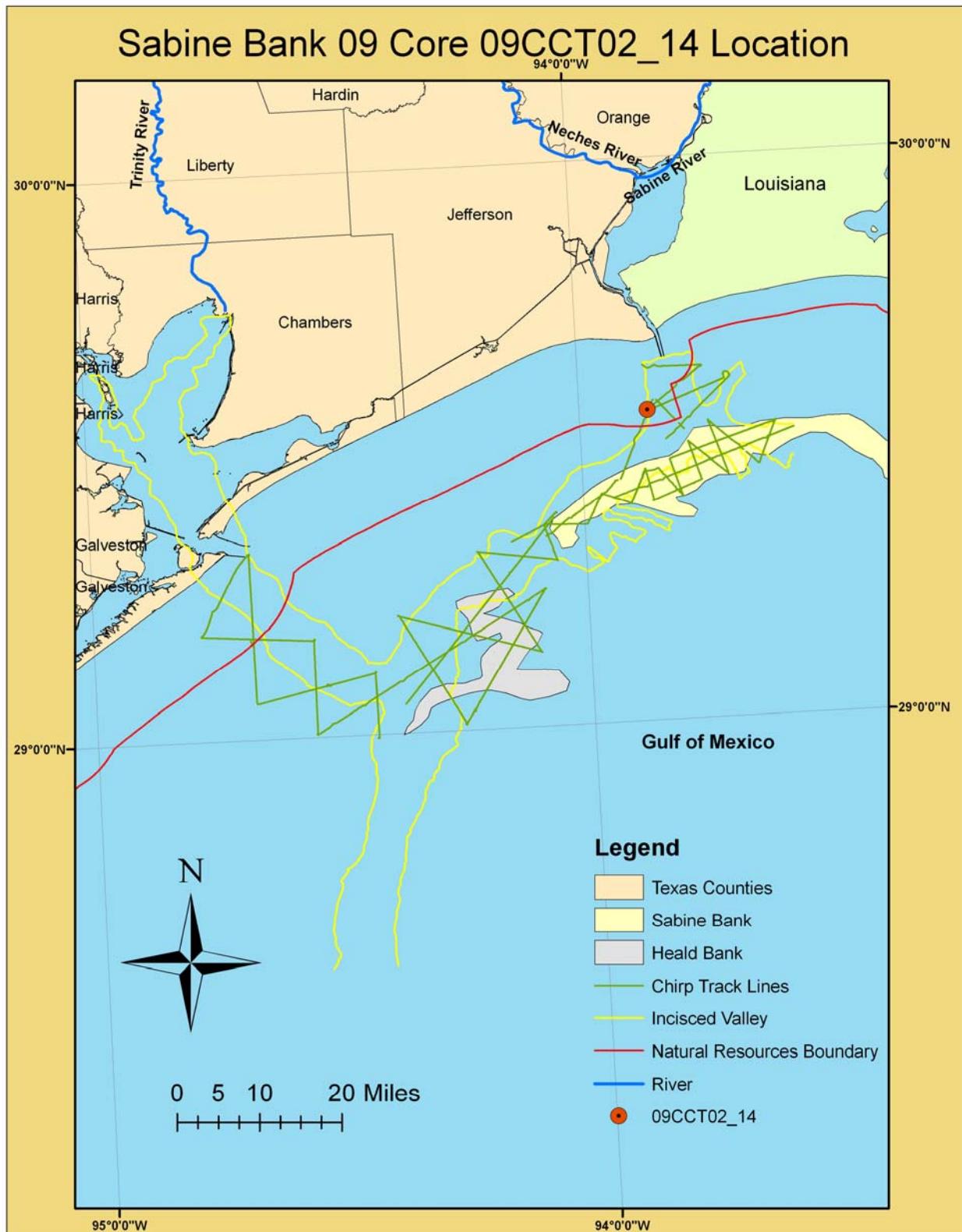
Core#: 09CCT02_13-04

Core Date: 16-Jun-09

Date Split/subsampled	Length: 151cm
06-Jul-09	E: 432-583 N: 367-583

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
432-432	432-583cm		
432-442			
442-447			
447-452			
452-452			
457-462			
462-467			
467-472			
472-472			
472-482			
482-487			
487-492			
492-497			
497-502			
502-507			
507-512			
512-517			
517-522			
522-527			
527-532			
532-532			
532-537			
537-542			
542-547			
552-552			
552-557			
557-562			
562-567			
567-572			
572-572			
577-582			
582-583			

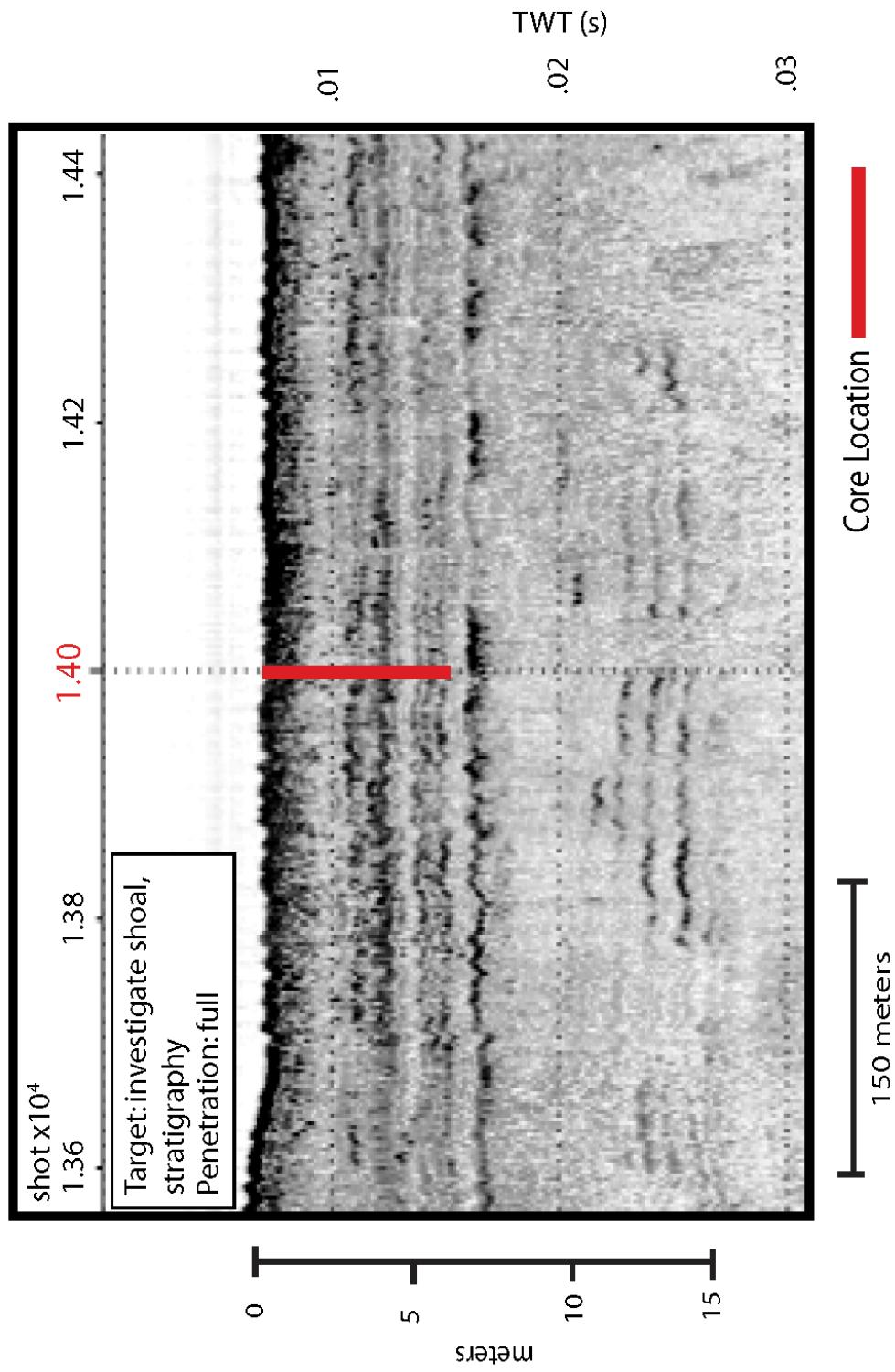
09CCT02_14 Core Location



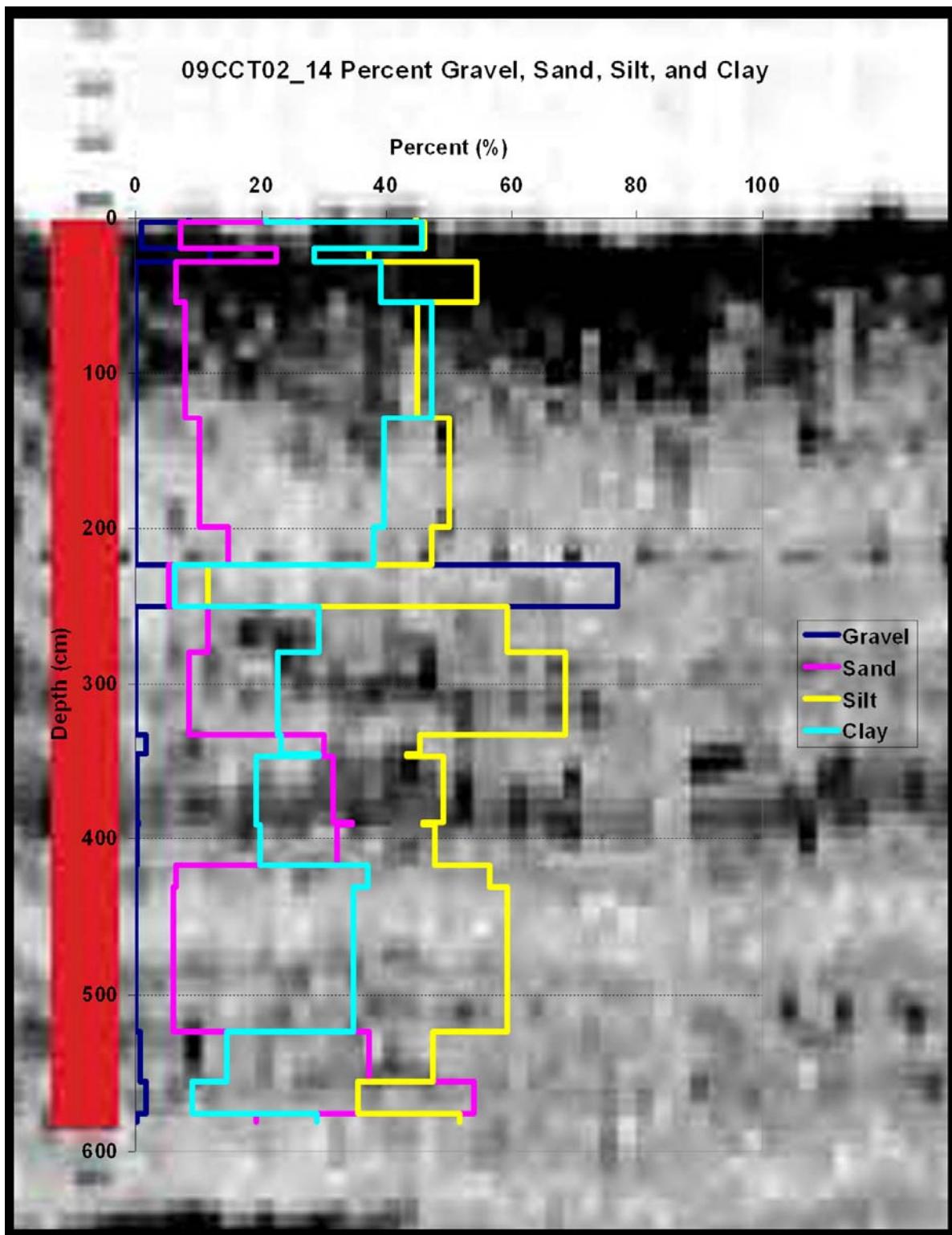
09CCT02_14 Seismic

Project: 09CCT02
Transect: 09C37

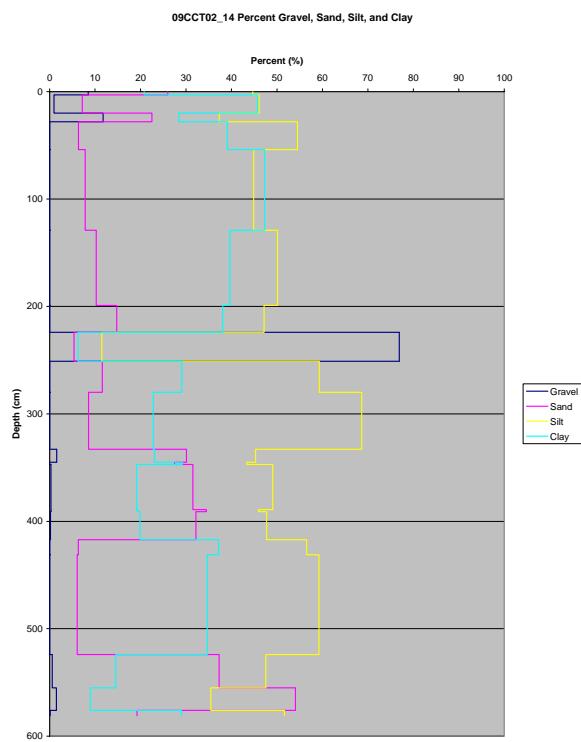
Core: 09CCT02_14
Core Length (m): 5.66



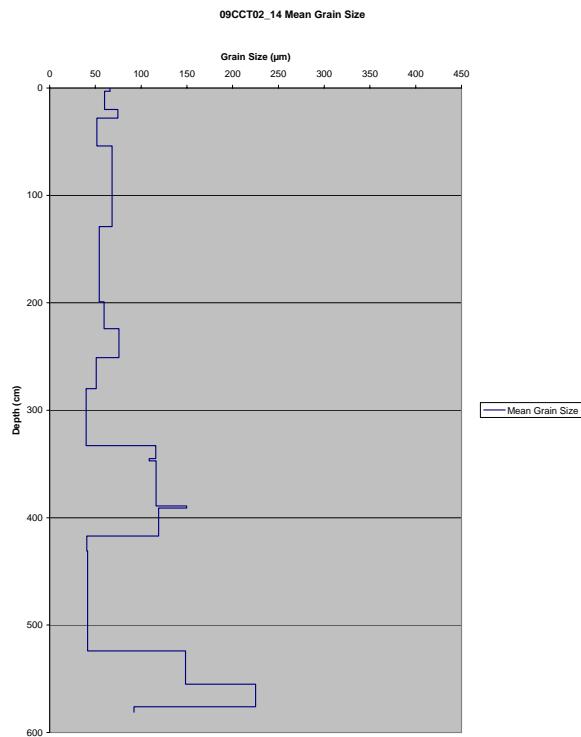
09CCT02_14 Seismic



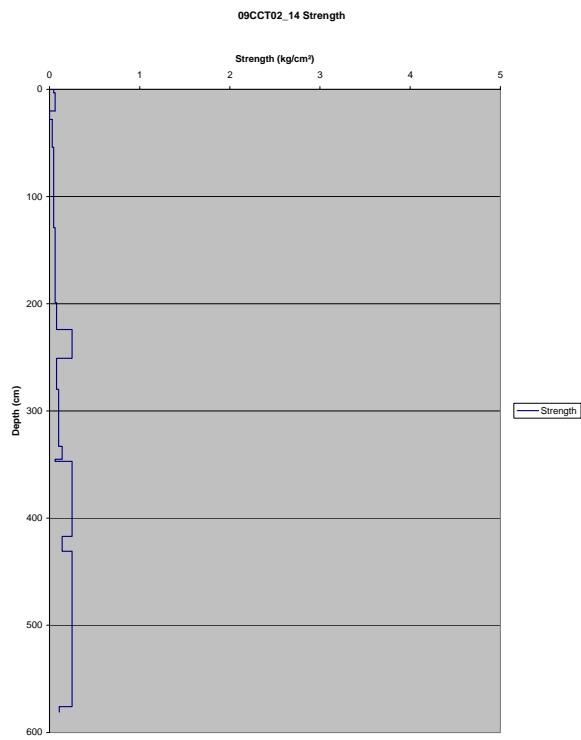
09CCT02_14 Percent Grain Size Distribution Graph



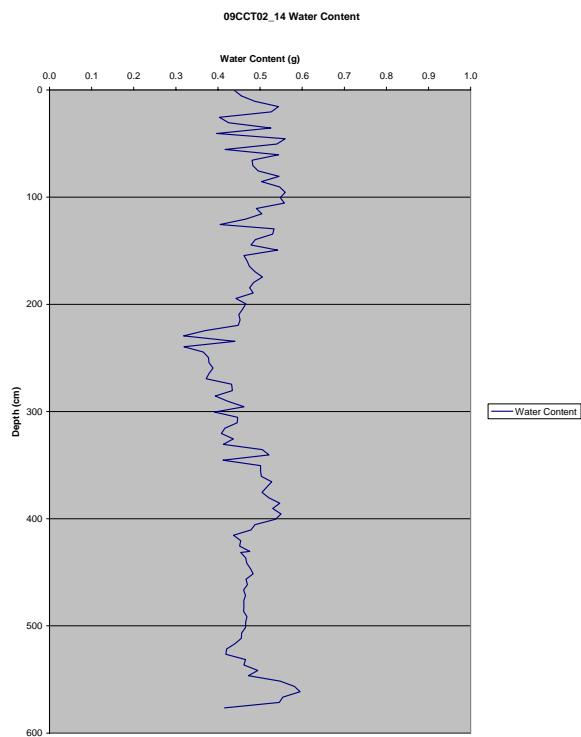
09CCT02_14 Mean Grain Size Distribution Graph



09CCT02_14 Strength Graph



09CCT02_14 Water Content Graph



09CCT02_14 Grain Size Sand Percent Table

Depth (cm)	09CCT02_14 Grain Size Sand Percent										
	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 (%)
0-3	87.16	5.12	1.90	1.57	1.43	1.14	0.79	0.50	0.25	0.14	100
10-15	27.10	7.93	10.03	13.34	13.13	10.78	7.83	5.35	2.83	1.69	100
25-28	70.90	18.71	3.40	1.80	1.65	1.36	0.98	0.66	0.34	0.20	100
40-45	31.72	7.21	10.79	13.09	12.22	9.70	6.86	4.60	2.39	1.43	100
110-115	18.97	8.26	12.55	15.27	14.40	11.60	8.40	5.63	3.20	1.71	100
184-189	59.40	2.56	7.23	8.56	7.54	5.77	4.02	2.68	1.40	0.83	100
214-219	71.28	3.31	4.68	5.45	4.89	3.89	2.83	1.97	1.07	0.64	100
239-244	70.03	10.42	7.00	4.86	3.15	1.99	1.22	0.75	0.37	0.21	100
274-279	63.64	8.24	8.64	7.23	5.14	3.28	1.97	1.04	0.58	0.25	100
315-320	68.51	8.29	6.27	5.12	4.00	2.99	2.14	1.40	0.85	0.43	100
335-340	52.04	19.89	12.68	7.30	3.96	2.09	1.09	0.57	0.25	0.13	100
345-350	48.12	21.35	13.83	8.07	4.38	2.27	1.16	0.48	0.24	0.10	100
370-375	55.13	18.18	11.69	7.06	3.97	2.10	1.07	0.47	0.24	0.08	100
389-394	46.26	19.53	13.36	8.67	5.33	3.17	1.83	1.06	0.50	0.28	100
400-405	50.99	21.54	13.44	7.39	3.74	1.76	0.80	0.24	0.09	0.02	100
420-425	44.43	10.18	11.48	10.83	8.65	6.13	3.95	2.45	1.20	0.69	100
466-471	39.28	11.30	13.28	11.89	9.03	6.30	4.13	2.65	1.35	0.79	100
546-551	50.03	20.13	12.72	7.65	4.39	2.46	1.35	0.75	0.34	0.19	100
561-566	47.85	19.73	12.88	8.16	4.96	2.95	1.72	0.99	0.51	0.25	100
576-581	46.96	14.84	13.06	9.99	6.63	4.03	2.30	1.29	0.58	0.32	100

09CCT02_14 Grain Size Sand Percent Table

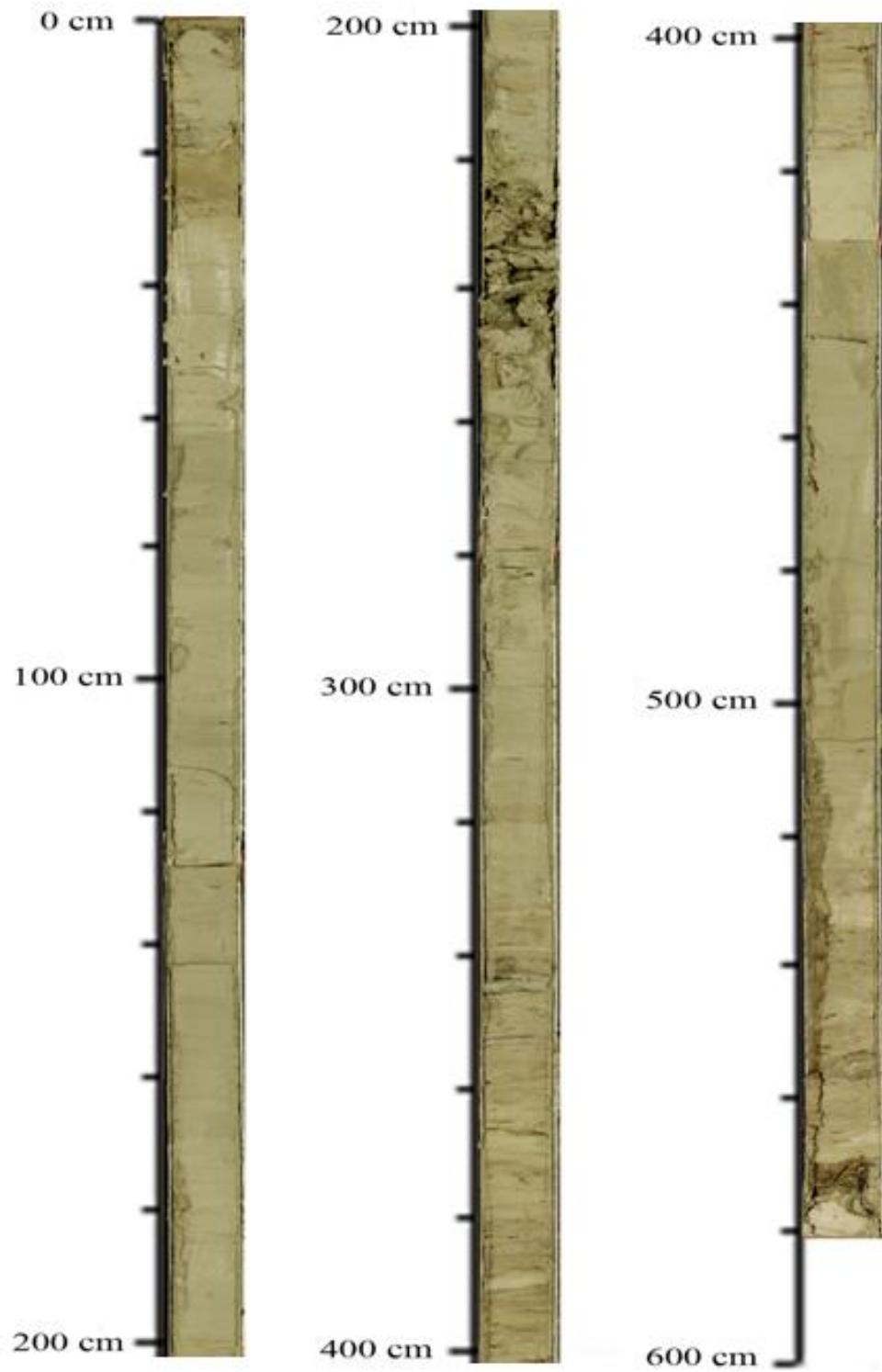
09CCT02-14											
Depth (cm)	63-82µm (%)	82-101µm (%)	101-120µm (%)	120-139µm (%)	139-158µm (%)	158-177µm (%)	177-196µm (%)	196-215µm (%)	215-234µm (%)	234-257µm (%)	Total (%)
0-3	1.66	1.80	2.37	3.24	4.59	6.70	10.03	15.11	32.05	22.46	100
10-15	5.42	5.17	5.83	6.53	7.24	8.11	9.27	11.30	25.68	15.45	100
25-28	7.26	7.01	7.94	8.84	9.65	10.31	10.81	11.29	14.68	12.20	100
40-45	3.17	3.07	3.67	4.46	5.65	7.33	9.81	13.37	30.61	18.87	100
110-115	5.05	4.37	4.64	4.91	5.32	6.06	7.47	10.43	34.45	17.29	100
184-189	0.82	1.31	2.09	3.25	5.04	7.62	11.25	16.16	30.08	22.38	100
214-219	1.59	2.04	3.00	4.39	6.32	8.94	12.32	16.38	24.37	20.65	100
239-244	3.07	3.18	4.01	5.18	6.80	8.99	11.85	15.33	22.49	19.09	100
274-279	1.65	1.57	1.91	2.51	3.53	5.34	8.44	13.75	38.56	22.75	100
315-320	2.12	2.07	2.53	3.23	4.35	6.15	9.12	13.90	34.94	21.59	100
335-340	5.90	5.29	5.81	6.51	7.49	8.85	10.73	13.21	19.93	16.27	100
345-350	6.72	5.96	6.45	7.08	7.94	9.10	10.66	12.68	18.23	15.18	100
370-375	5.24	4.76	5.28	5.99	6.99	8.41	10.46	13.33	22.33	17.22	100
389-394	6.40	5.70	6.19	6.83	7.70	8.89	10.54	12.74	19.40	15.60	100
400-405	6.38	5.64	6.07	6.64	7.45	8.58	10.22	12.57	20.57	15.87	100
420-425	2.35	1.92	1.99	2.28	2.88	4.27	7.07	12.44	42.23	22.57	100
466-471	3.18	2.76	3.06	3.56	4.40	5.82	8.33	12.56	36.14	20.18	100
546-551	6.33	5.64	6.12	6.73	7.55	8.68	10.28	12.54	20.40	15.73	100
561-566	6.50	5.83	6.35	7.02	7.89	9.06	10.64	12.75	18.55	15.41	100
576-581	4.56	4.18	4.70	5.43	6.47	7.95	10.11	13.25	25.46	17.90	100

09CCT02_14 Tables

Mean Grain Size 09CCT02-14	
Depth (cm)	Mean Grain Size (μm)
0-3	65.95
10-15	60.00
25-28	74.52
40-45	51.69
110-115	68.27
184-189	54.32
214-219	59.49
239-244	75.84
274-279	51.05
315-320	39.94
335-340	115.87
345-350	108.80
370-375	116.33
389-394	149.65
400-405	119.18
420-425	40.69
466-471	41.59
546-551	148.45
561-566	224.95
576-581	92.27

Strength 09CCT02-14	
Interval (cm)	Strength (kg/cm^2)
0-3	0.0469
3-20	0.0625
20-28	0.0000
28-54	0.0314
54-129	0.0469
0-70	0.0625
70-95	0.0781
95-122	0.2500
122-151	0.0781
0-53	0.1009
53-65	0.1407
65-67	0.0625
67-109	0.2500
109-111	0.2500
111-137	0.2500
137-151	0.1407
0-93	0.2500
93-124	0.2500
124-145	0.2500
145-150	0.1094

09CCT02_14 Core Pictures



09CCT02_14 Core Log

Core#: 09CCT02-14-01

Core Date: 17-Jun-09

Date Split/subsampled	Length: 124 cm
30-Jun-09	E: 416467
	N: 3269461

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
0-3	0-3cm		0-3cm Dark brown clay
3-5	10 y R		
5-10			
10-15	3/11		
15-20			
20-25			
25-28	3-20cm		
28-30	Gley 2		
30-35	5/10B		
35-40			
40-45	20-28cm		
45-50	10 y R		
50-55			
55-60	3/2		
60-65			
65-70	28-54cm		
70-75	Gley 2		
75-80	5/5BG		
80-85			
85-90	54-129cm		
90-95	Gley 2		
95-100	5/5BG		
100-105			
105-110			
110-115			
115-120			
120-125			
125-129			

09CCT02_14 Core Log

Core#: 09CCT02_14-02

Core Date: 17-Jun-09

Date Split/subsampled	Length: 151cm
02-Jul-09	E: 416467
	N: 3269461

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
129-134		129-199cm	
134-139	Gley 2		
139-144			
144-149	5/5BG		
149-154			
154-159	199-224cm		
159-164	Gley 2		
164-169			
169-174	5/10BG		
174-179			
179-184	224-251cm		
184-189	Gley 2		
189-194			
194-199	4/15B		
199-204			
204-209	251-280cm		
209-214	Gley 2		
214-219			
219-224	4/10BG		
224-229			
229-234			
234-239			
239-244			
244-249			
249-254			
254-259			
259-264			
264-269			
269-274			
274-279			
279-280			

09CCT02_14 Core Log

Core #: 09CCT02-14-03

Core Date: 17-Jun-09

Date Split/subsampled	Length: 151 cm
02-Jul-09	E: 416467
	N: 3269461

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
280-283	280-333cm		280-333cm Grey compacted
285-290	Grey 2		clay
290-293	5/5 BG		
293-305	333-345cm		333-345cm Grey compacted/silky
305-310	Grey 2		clay w/spots of plant material
310-315	5/10 BG		and black layers of clay
315-320	345-347cm		
320-325	Grey 2		345-347cm Light grey soft
325-330	5/10 BG		silty clay
330-333	345-347cm		
333-335	Grey 2		347-389cm Dark grey clay w/lam
335-340	5/10 BG		layers of plant materials and
340-345	347-389cm		black clay layers
345-347	Grey 2		
347-350	5/10 BG		389-417cm Light grey clay
350-355	347-389cm		
355-360	Grey 2		391-417cm Dark grey compacted
360-365	417-431cm		silt/silts clay w/ layers and spots
365-370	Grey 2		of plant material and layers of
370-375	5/10 BG		black clay
375-380	389-391cm		
380-385	Grey 2		417-431cm Grey compacted
385-388	5/10 BG		silty clay
389-390	389-391cm		
390-391	Grey 2		0
391-395	417-431cm		
395-400	Grey 2		
400-405	417-431cm		
405-410	Grey 2		
410-415	5/10 BG		
415-422	417-431cm		
422-420	Grey 2		
420-428	5/10 BG		
428-430	417-431cm		
430-431	Grey 2		

09CCT02_14 Core Log

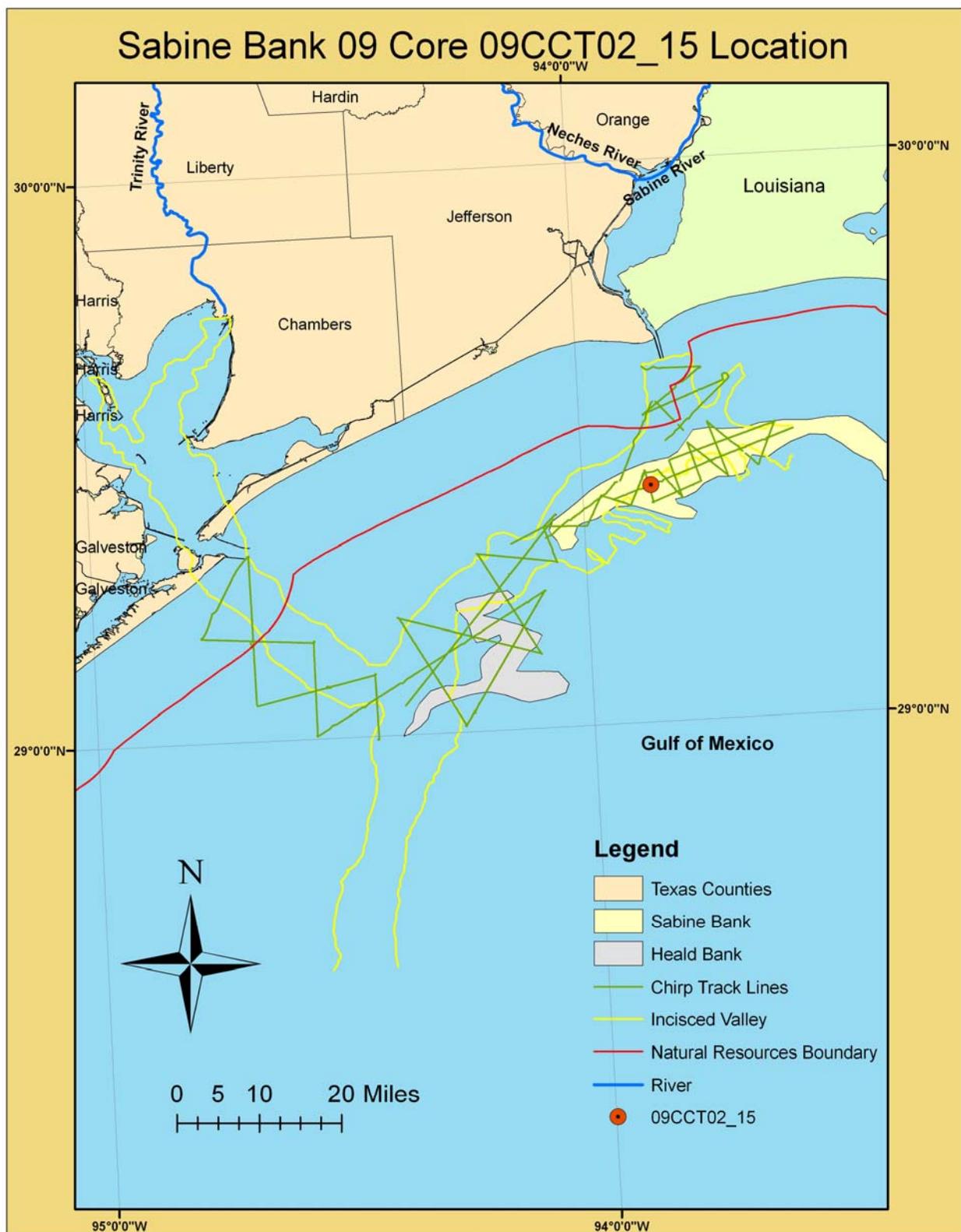
Core#: 09CCT02-14-04

Core Date: 13-Jun-09

Date Split/subsampled	Length: 180cm
02-Jul-09	E: 416467
	N: 3269461

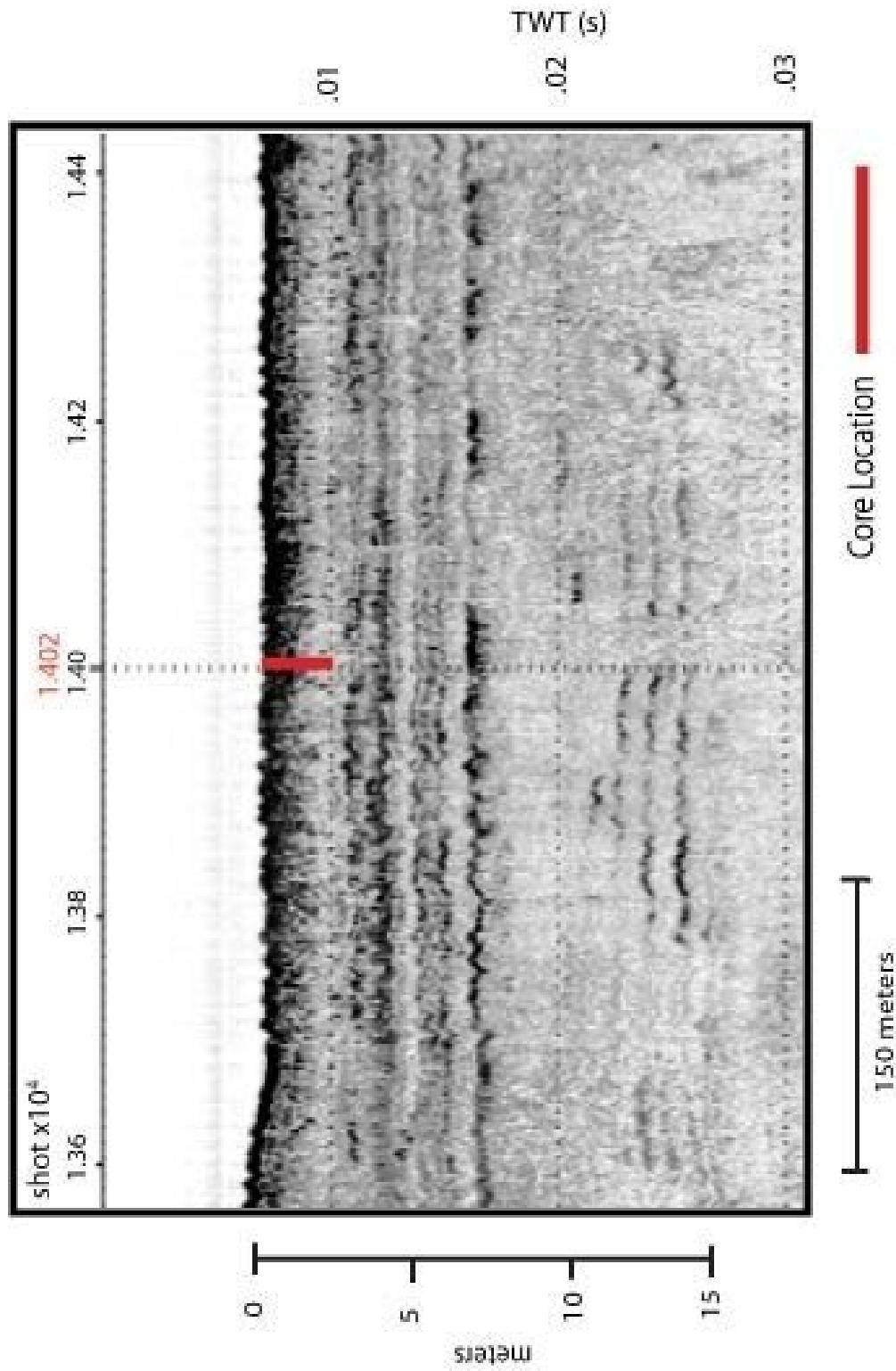
Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
431-436	431-524cm		431-524cm Hard grey clay
436-441	Gley 2		
441-446	5/10BG		
446-451			
451-456	524-555cm		524-555cm Dark Brown clay
456-461	10g R		w/plant material and alternate
461-466	3/2		layers of dark grey clay
466-471			
471-476	555-576cm		555-576cm Dark Brown clay
476-481	10g R		w/plant material
481-486	2/1		
486-491			
491-496	576-581cm		576-581cm Grey silty clay
496-501	Gley 2		
501-506	5/15BG		
506-511			
511-516			
516-521			
521-524			
524-526			
526-531			
531-536			
536-541			
541-546			
546-551			
551-556			
556-558			
558-561			
561-566			
566-571			
571-576			
576-581			

09CCT02_15 Core Location

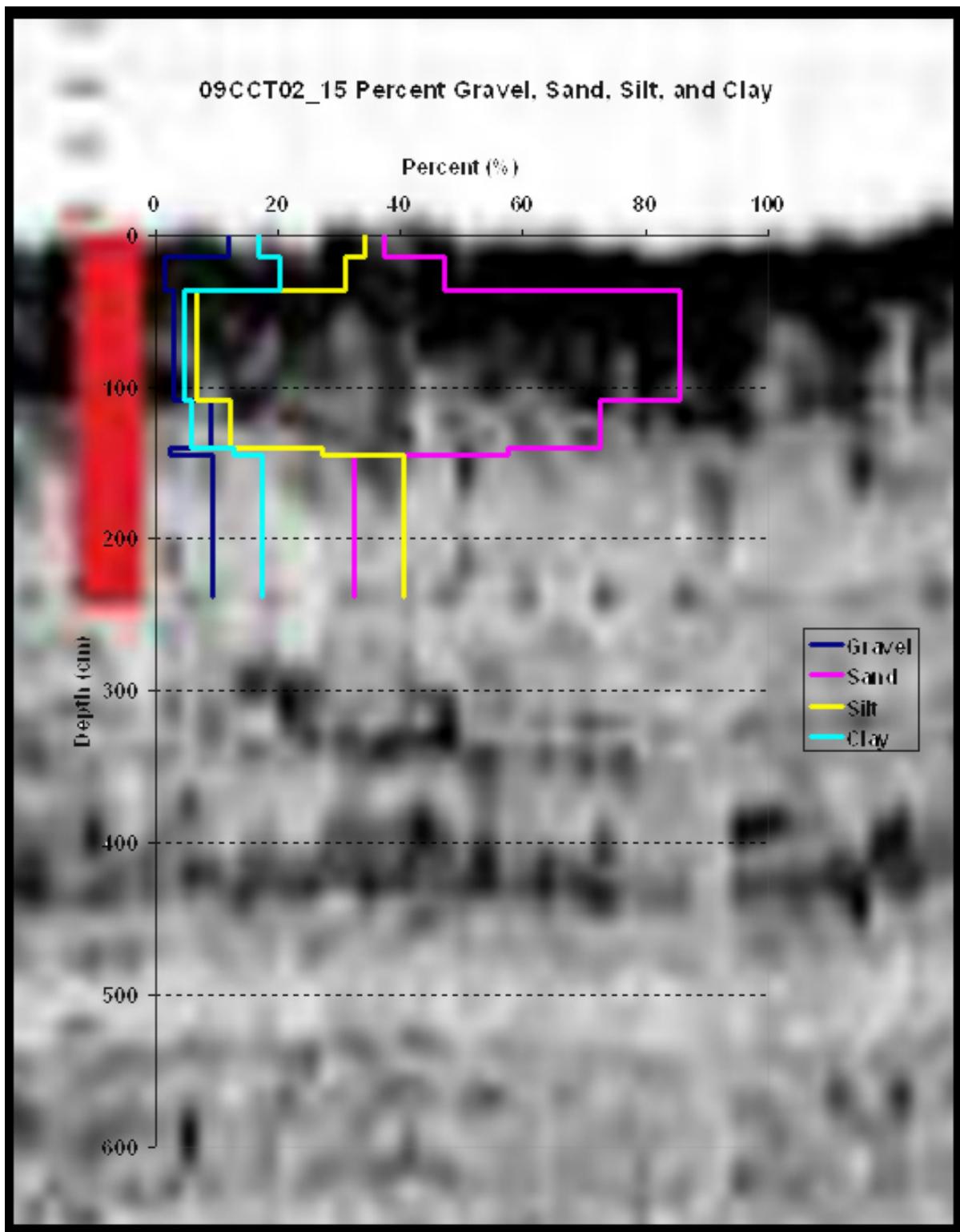


Project: 09CCT02
Transect: 09C37

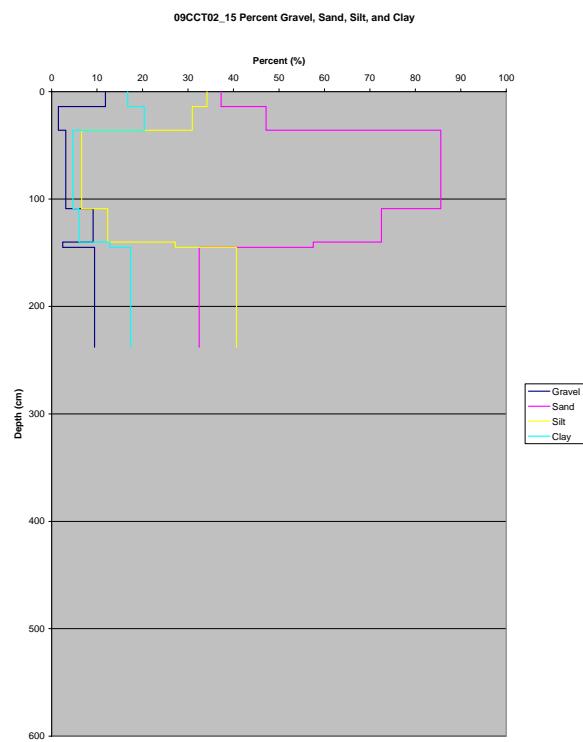
Core:09CCT02_15
Core Length (m) : 2.39



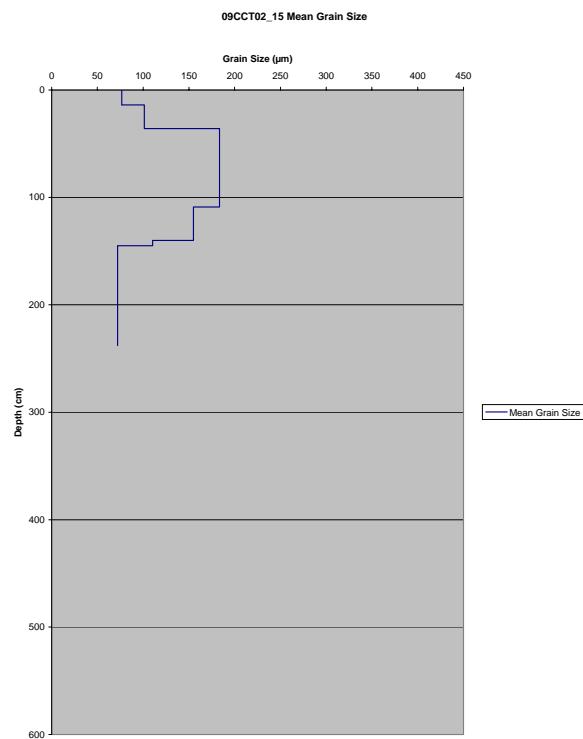
09CCT02_15 Seismic



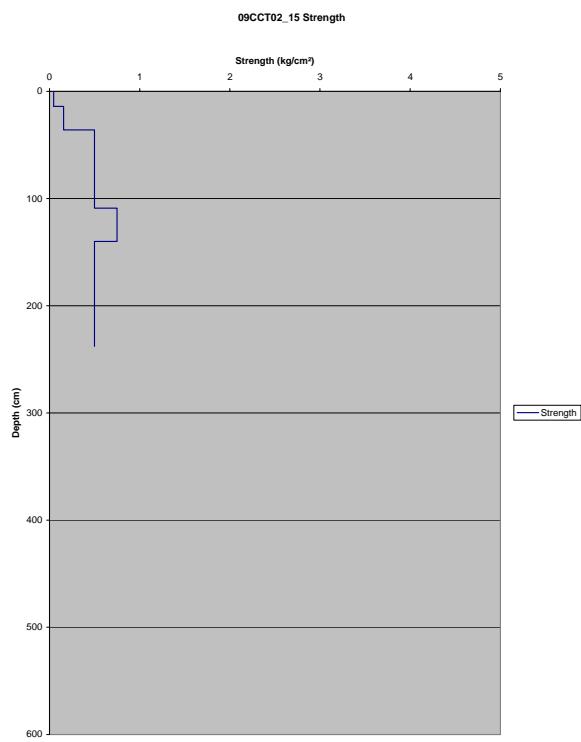
09CCT02_15 Percent Grain Size Distribution Graph



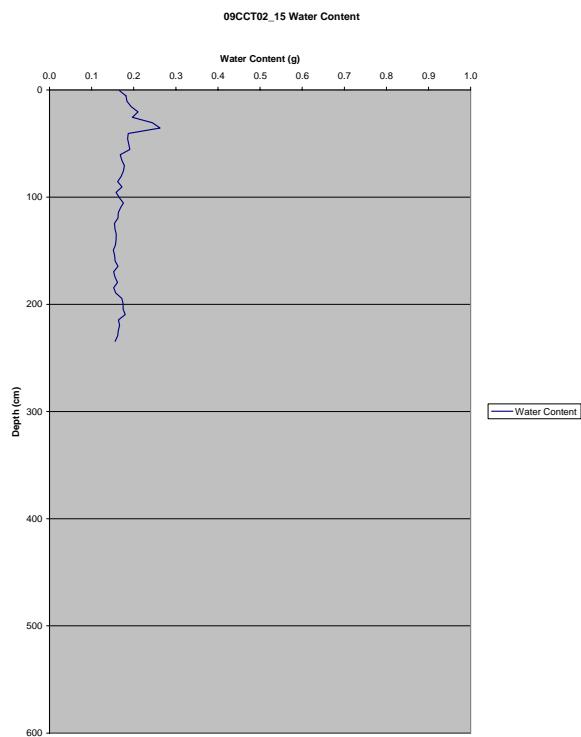
09CCT02_15 Mean Grain Size Distribution



09CCT02_15 Strength Graph



09CCT02_15 Water Content Graph



09CCT02_15 Grain Size Sand Percent Table

09CCT02_15 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 (%)
15-20	89.24	10.63	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
30-35	81.78	15.86	0.75	0.20	0.33	0.35	0.30	0.22	0.14	0.08	100
100-105	81.40	15.95	0.42	0.38	0.53	0.48	0.37	0.26	0.14	0.08	100
125-129	80.62	18.78	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
140-144	84.57	15.03	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
240-245	88.50	9.48	0.49	0.34	0.35	0.30	0.23	0.16	0.10	0.05	100

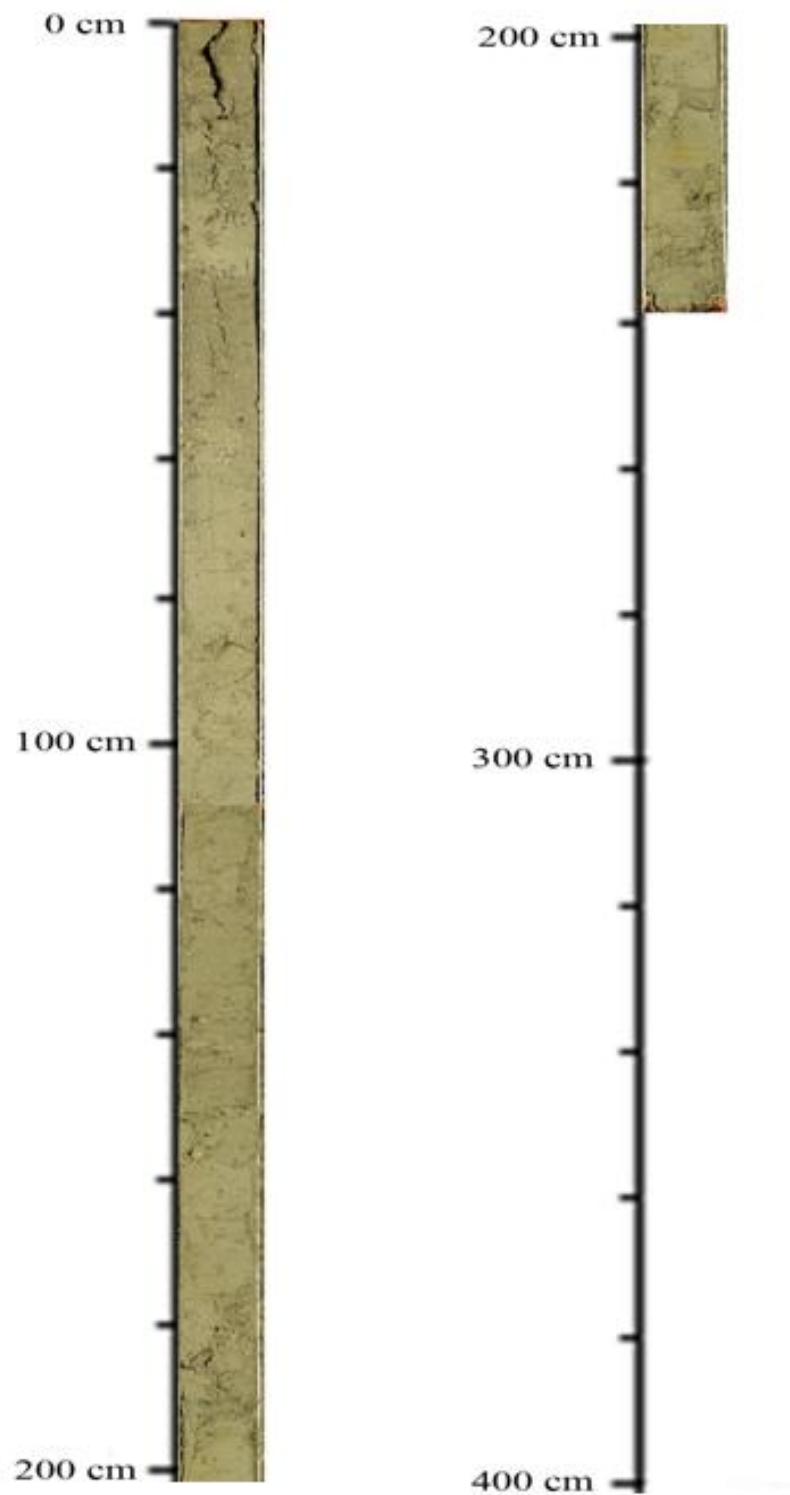
09CCT02-15											
Depth (cm)	63-82µm (%)	82-101µm (%)	101-120µm (%)	120-139µm (%)	139-158µm (%)	158-177µm (%)	177-196µm (%)	196-215µm (%)	215-234µm (%)	234-257µm (%)	Total (%)
15-20	5.08	5.46	6.79	8.31	9.93	11.49	12.78	13.50	13.18	13.46	100
30-35	6.91	7.10	8.47	9.92	11.28	12.34	12.78	12.25	8.38	10.57	100
100-105	7.42	7.67	9.18	10.76	12.20	13.22	13.40	12.21	4.72	9.23	100
125-129	7.95	8.02	9.41	10.79	11.99	12.75	12.71	11.53	5.82	9.03	100
140-144	6.41	6.59	7.86	9.22	10.53	11.63	12.32	12.38	11.25	11.81	100
240-245	4.29	4.59	5.71	7.03	8.50	10.08	11.74	13.47	19.04	15.55	100

09CCT02_15 Tables

Mean Grain Size 09CCT02-15	
Depth (cm)	Mean Grain Size (μm)
15-20	76.69
30-35	101.30
100-105	183.42
125-129	154.98
140-144	110.34
240-245	71.98

Strength 09CCT02-15	
Interval (cm)	Strength (kg/cm^2)
0-14	0.0469
14-36	0.1563
36-109	0.5000
0-31	0.7500
31-36	0.5000
36-129	0.5000

09CCT02_15 Core Pictures



09CCT02_15 Core Log

Core#: 09CCT02-15-01

Core Date: 17-Jun-09

Date Split/subsampled	Length: 109 cm
22-Jun-09	E: 416420
	N: 3255024

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
0-5			
5-10	0-14 cm		
10-14	Grey 2		
14-18	3/10G		
18-23			
23-30	14-36 cm		
30-35	Grey 2		
35-36	3/10G		
36-40			
40-45			
45-50	36-109cm		
50-55	Grey 2		
55-60	3/5BG		
60-65			
65-70			
70-75			
75-80			
80-85			
85-90			
90-95			
95-100			
100-105			
105-109			

09CCT02_15 Core Log

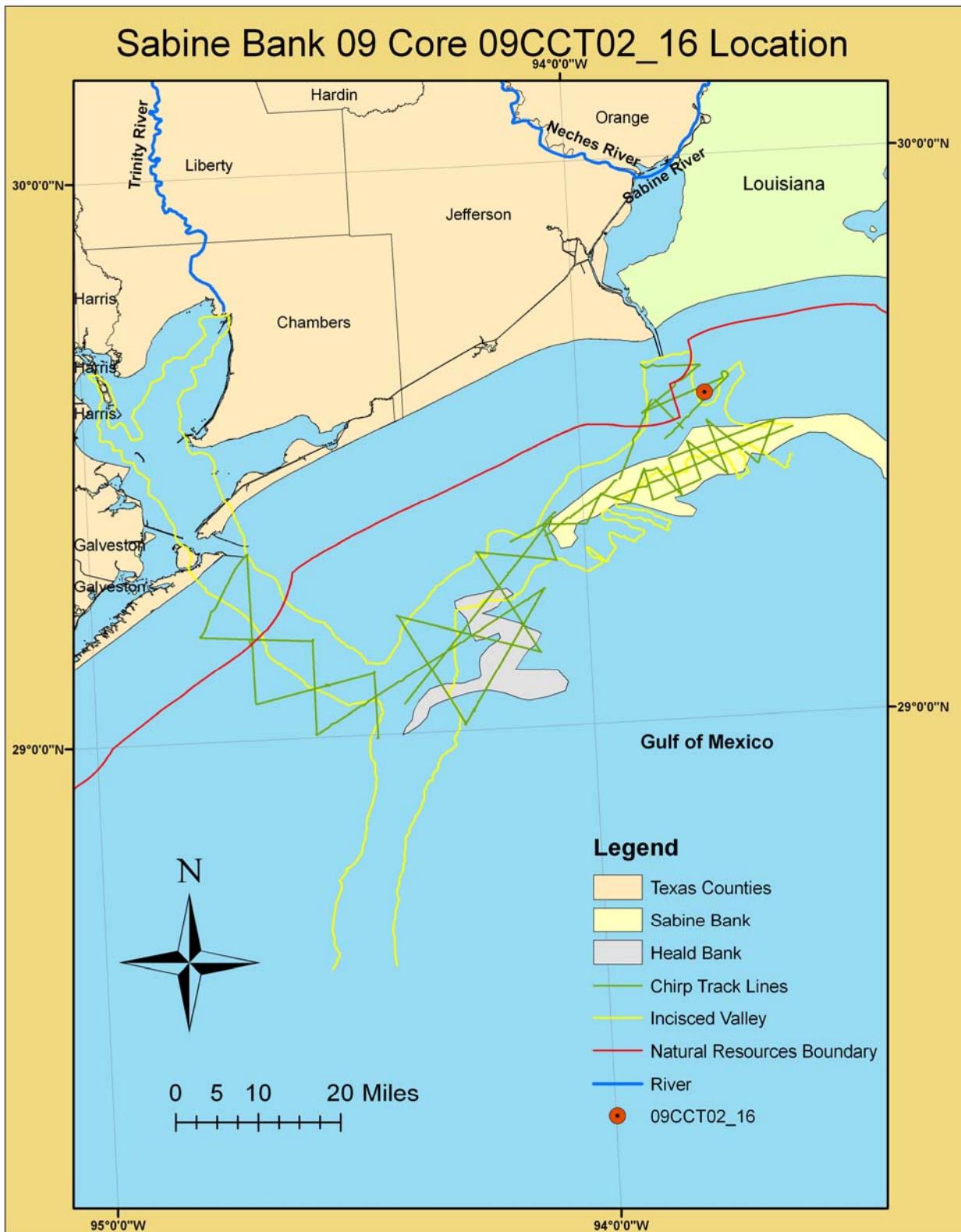
Core #: 09CCT02_15-02

Core Date: 17-Jun-09

Date Split/subsampled	Length: 129cm
22-Jun-09	E: 916.470
	N: 3753021

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
109 - 164	109-140cm Gley2.		109-140cm Dark grey sand with sparse shell
119 - 179			
119 - 184			
129 - 189	315BG		
129 - 184			
139 - 134			
139 - 139	140-145cm Gley2.		140-145cm Sandy silt with sparse shell
139 - 140			
140 - 144			
149 - 145	315B		
149 - 146			
149 - 154	145-238cm Gley2.		145-238cm Silty Sand w/sparse shell
150 - 159			
159 - 164			
164 - 169			
169 - 170			
179 - 179			
179 - 184			
189 - 184			
189 - 194			
194 - 199			
199 - 204			
204 - 209			
209 - 214			
214 - 219			
219 - 224			
229 - 229			
229 - 234			
234 - 238			

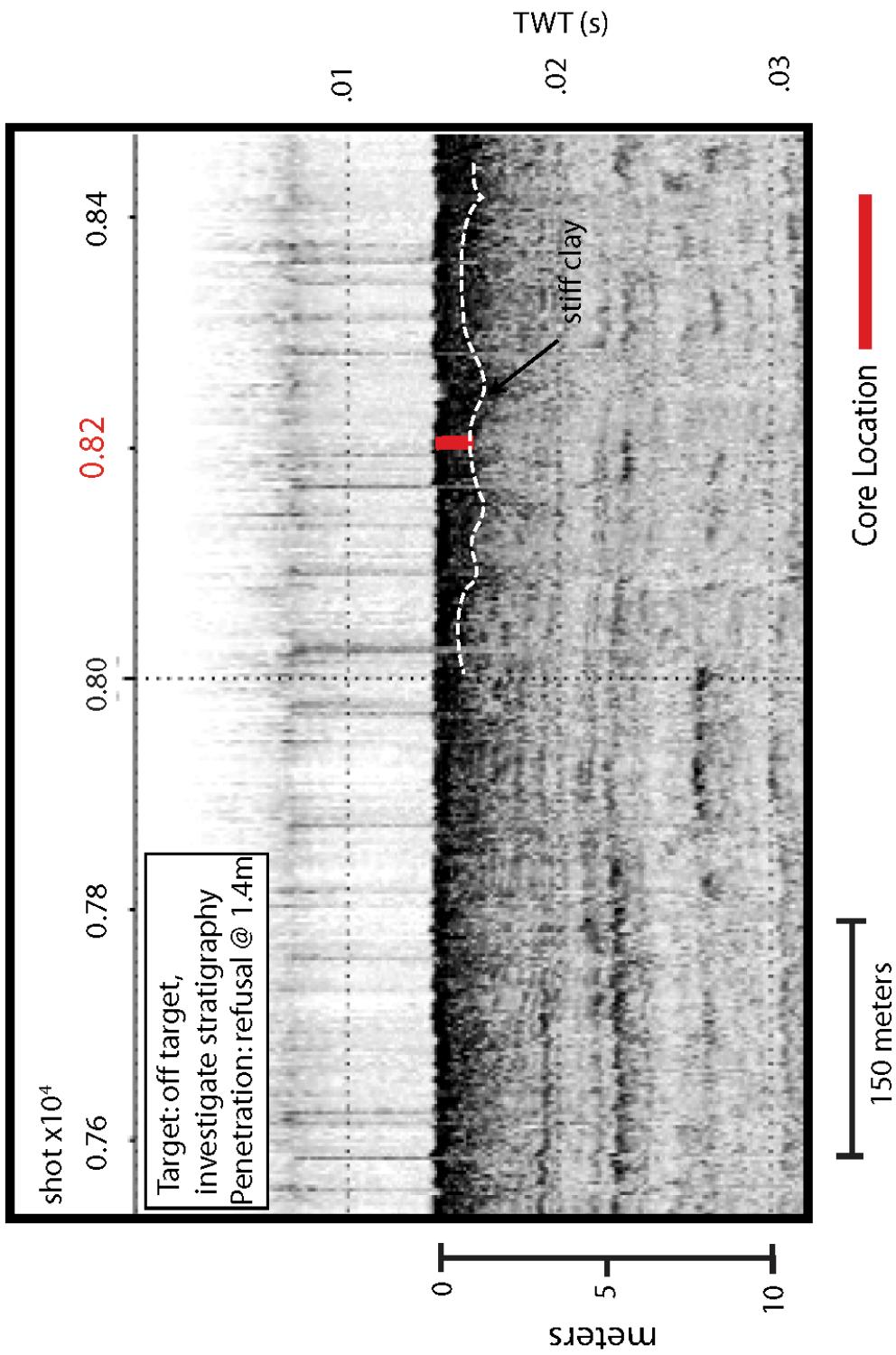
09CCT02_16 Core Location



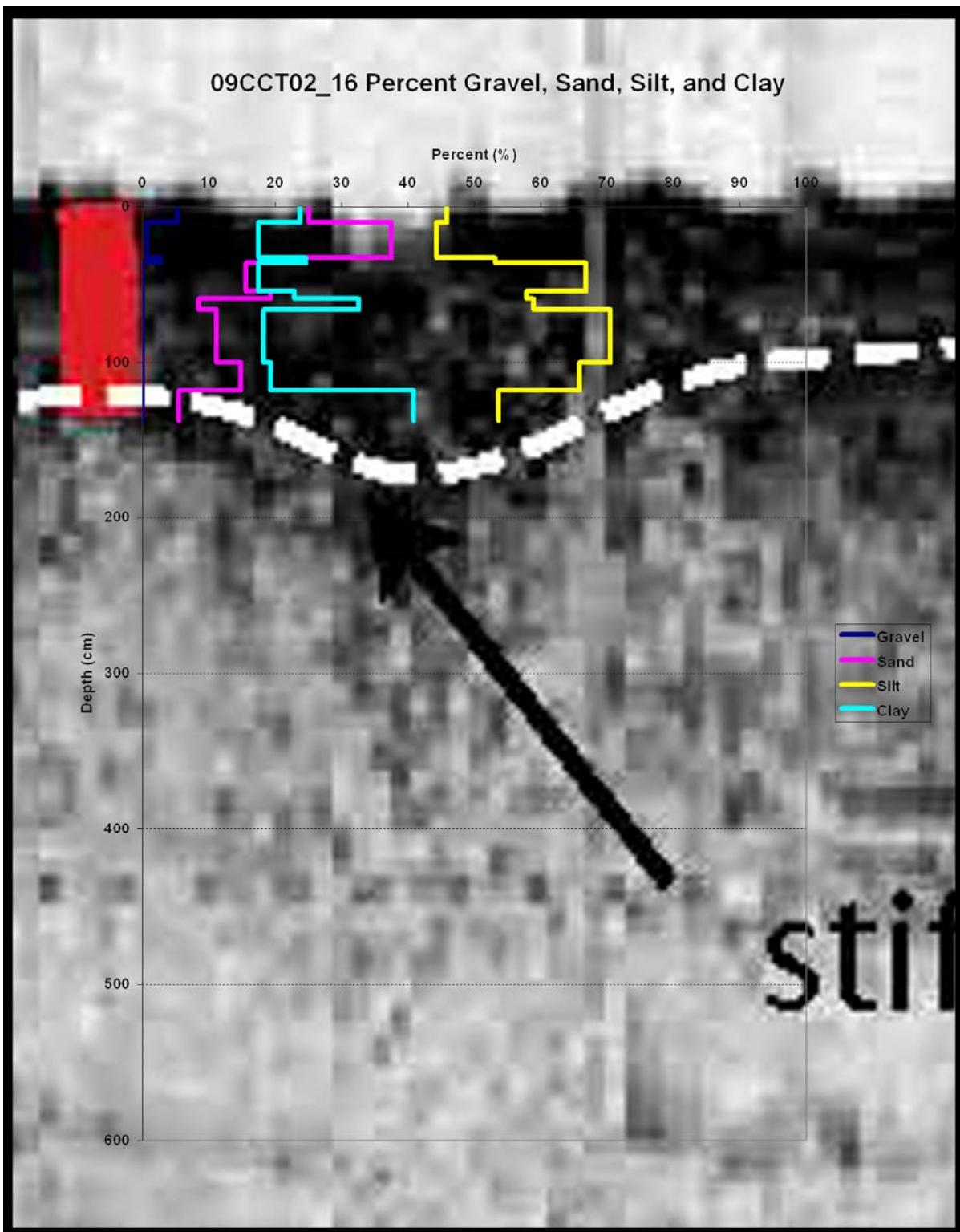
09CCT02_16 Seismic

Project: 09CCT02
Transect: 09C06

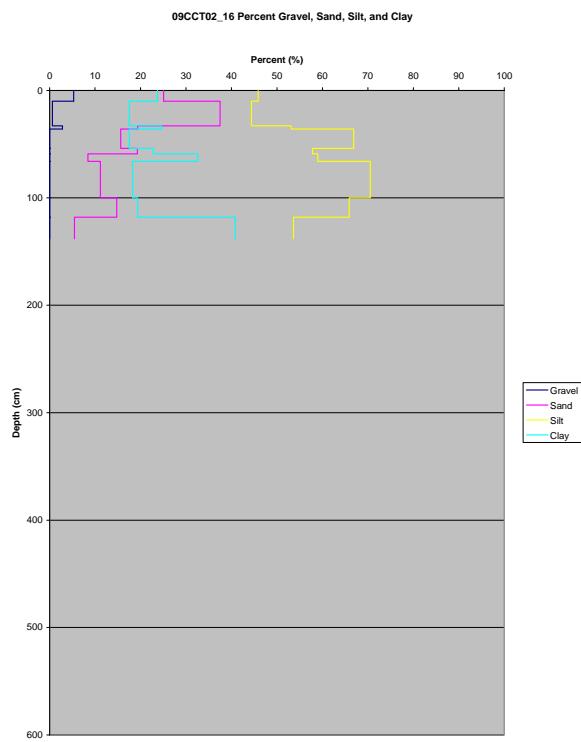
Core:09CCT02_16
Core Length (m) :1.38



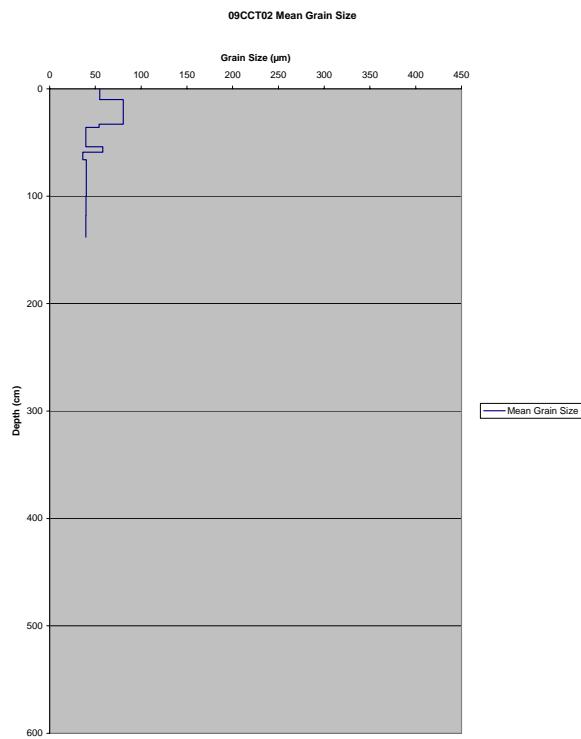
09CCT02_16 Seismic



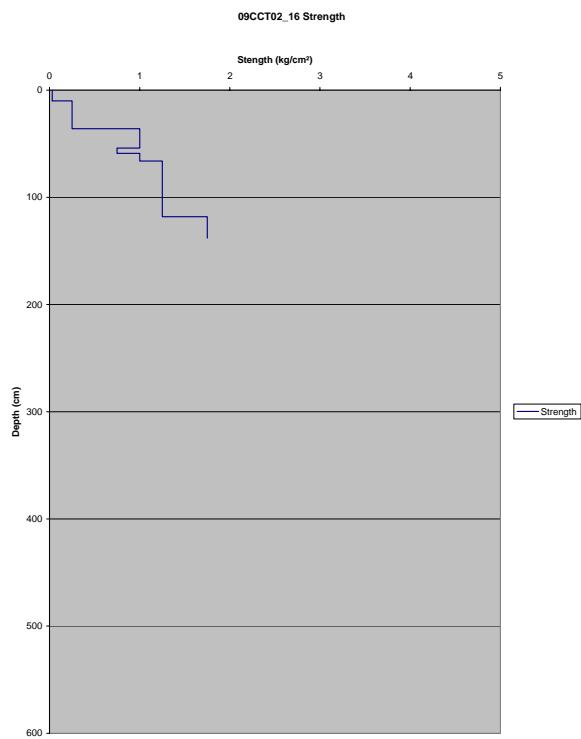
09CCT02_16 Percent Grain Size Distribution Graph



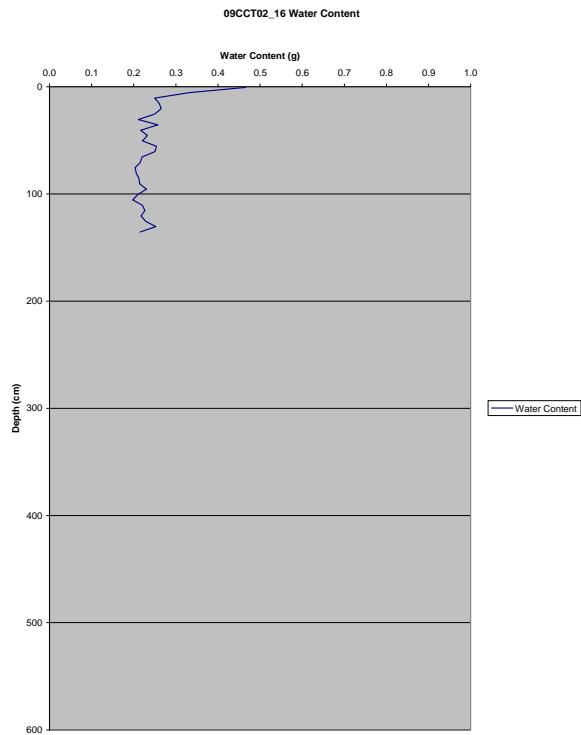
09CCT02_16 Mean Grain Size Distribution



09CCT02_16 Strength Graph



09CCT02_16 Water Content Graph



09CCT02_16 Grain Size Sand Percent Table

09CCT02_16 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 (%)
5-10	90.61	3.27	2.19	1.54	0.99	0.64	0.40	0.21	0.09	0.05	100
20-25	85.55	10.67	1.11	0.47	0.55	0.55	0.46	0.33	0.20	0.11	100
33-35	87.32	2.92	1.48	1.81	1.91	1.67	1.26	0.88	0.47	0.28	100
45-50	91.65	3.85	1.58	1.09	0.82	0.62	0.35	0.04	0.00	0.00	100
55-59	81.35	7.40	2.23	2.11	2.10	1.79	1.33	0.92	0.49	0.29	100
60-65	71.46	5.85	6.00	5.82	4.46	2.95	1.79	0.94	0.51	0.21	100
70-75	86.30	3.04	2.15	2.18	2.07	1.68	1.21	0.73	0.43	0.21	100
110-115	93.25	1.16	1.05	0.98	0.94	0.87	0.72	0.52	0.33	0.18	100
130-135	47.35	4.19	6.16	9.71	10.26	8.60	6.19	4.14	2.15	1.26	100

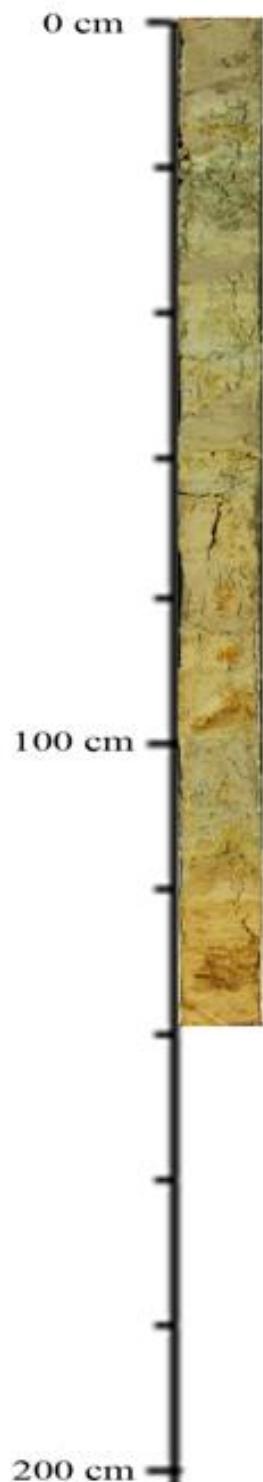
09CCT02-16											
Depth (cm)	63-82µm (%)	82-101µm (%)	101-120µm (%)	120-139µm (%)	139-158µm (%)	158-177µm (%)	177-196µm (%)	196-215µm (%)	215-234µm (%)	234-257µm (%)	Total (%)
5-10	1.02	1.24	1.82	2.75	4.22	6.54	10.16	15.62	33.22	23.40	100
20-25	4.27	4.45	5.46	6.66	8.09	9.74	11.66	13.86	19.43	16.38	100
33-35	1.26	1.50	2.14	3.09	4.55	6.75	10.11	15.15	32.92	22.52	100
45-50	1.19	1.31	1.73	2.40	3.44	5.17	8.14	13.36	40.46	22.80	100
55-59	2.81	2.96	3.69	4.66	5.95	7.70	10.20	13.87	28.69	19.47	100
60-65	1.73	1.86	2.42	3.27	4.50	6.34	9.20	13.78	35.50	21.41	100
70-75	0.62	0.62	0.79	1.13	1.80	3.20	6.05	11.87	49.96	23.96	100
110-115	0.73	0.97	1.52	2.41	3.81	5.99	9.40	14.67	37.46	23.04	100
130-135	2.92	3.04	3.77	4.66	5.81	7.35	9.58	12.97	31.13	18.78	100

09CCT02_16 Tables

Mean Grain Size 09CCT02-16	
Depth (cm)	Mean Grain Size (μm)
5-10	54.70
20-25	80.49
33-35	54.10
45-50	39.70
55-59	58.27
60-65	36.27
70-75	40.20
110-115	39.87
130-135	39.58

Strength 09CCT02-16	
Interval (cm)	Strength (kg/cm^2)
0-10	0.0313
10-33	0.2500
33-36	0.2500
36-54	1.0000
54-59	0.7500
59-66	1.0000
66-100	1.2500
100-118	1.2500
118-138	1.7500

09CCT02_16 Core Pictures



09CCT02_16 Core Log

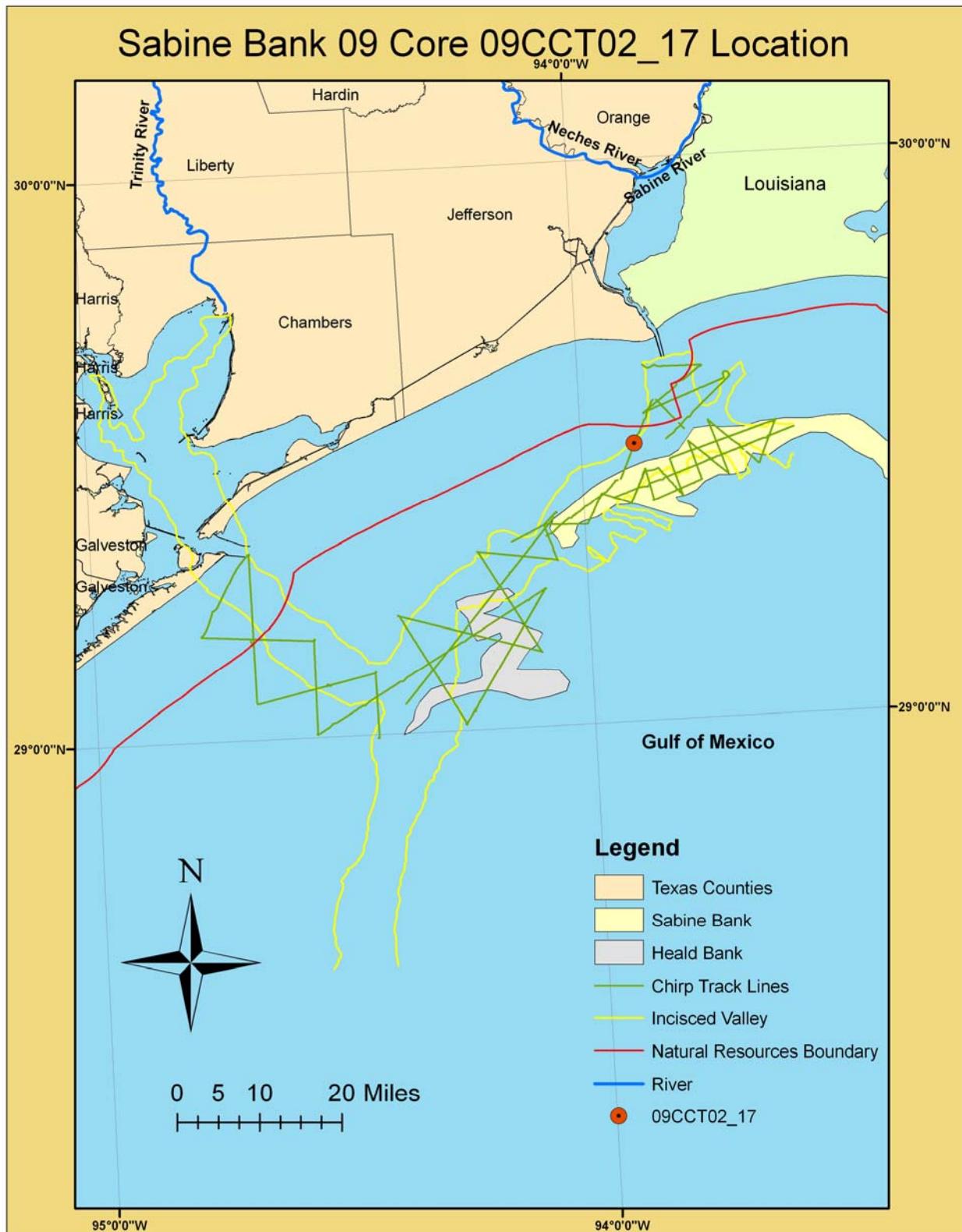
Core #: 09CCT02-16

Core Date: 17-Jun-09

Date Split/subsampled	Length: 158cm
08-Jul-09	E: 428081
	N: 32 722 37

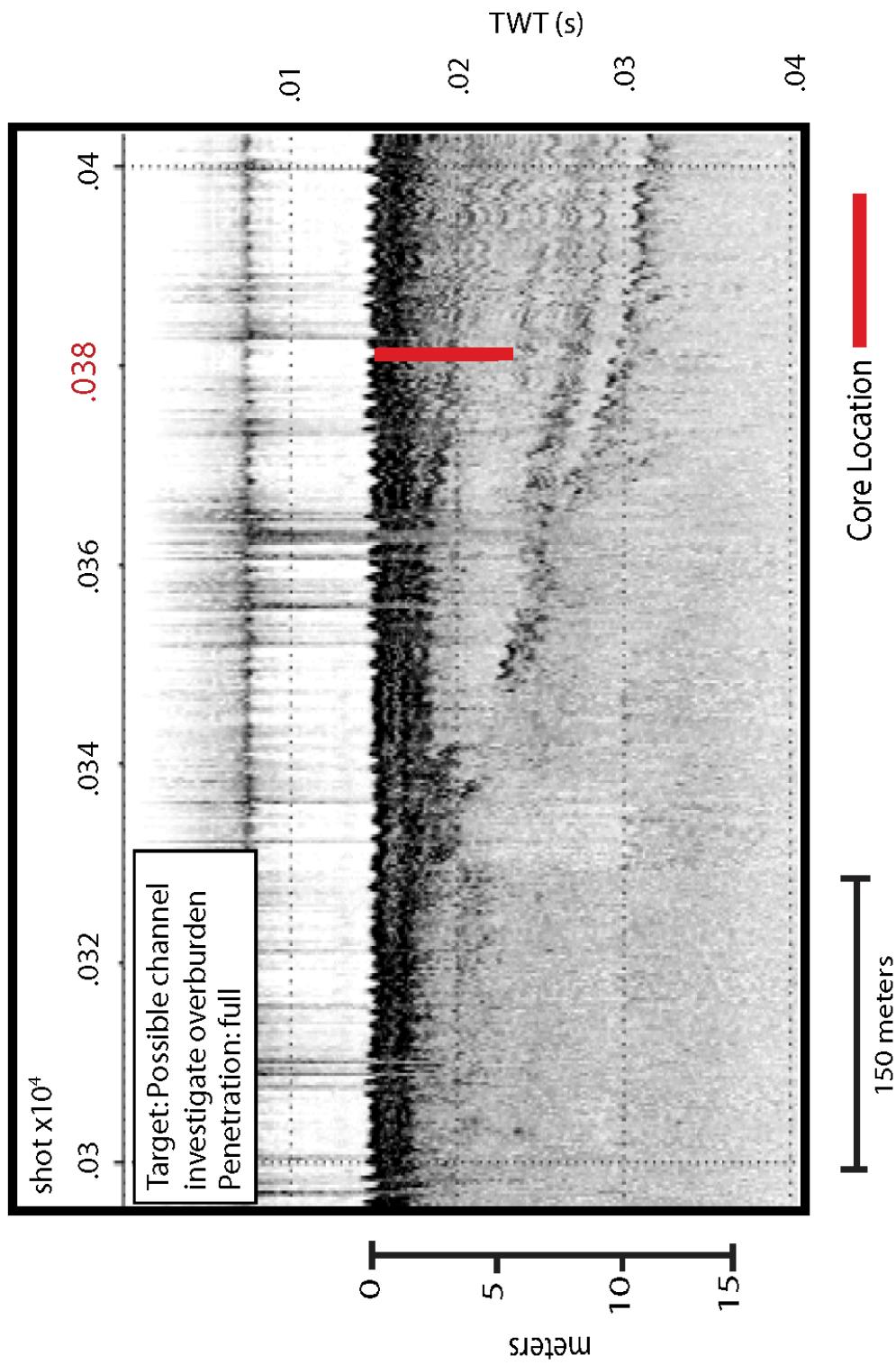
Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
0-5	0-10cm		0-10cm Dark grey soft silty clay
5-10	Gry 2		
10-15			
15-20			
20-25	3/N		
25-30			
30-35	10-35cm		10-35cm light green hard
35-40	Gry 2		crumbly clay w/oxidation spots
40-45			
45-50	5/3G		35-36cm Dark grey soft
50-55			sandy clay
55-60	33-36cm		36-51cm light green hard crumbly
60-65	Gry 2		clay w/layers and spots of oxidation
65-70			
70-75	36-51cm		54-59cm Dark grey soft
75-80	Gry 1		sandy silt w/deposits
80-85			of beige clay
85-90	5/10Gry		59-66cm light green hard
90-95			crumbly clay w/oxidation spots
95-100	59-66cm		66-100cm Beige hard clay w/layers
00-100	Gry 2		and spots of oxidation
105-110	3/3G		100-118cm light grey hard crumbly
110-115			clay w/oxidation spots
115-120	66-100cm		118-138cm Oxidized red hard
120-125	Gry 1		clay
125-130	6/3		
130-135			
135-138	100-118cm		
	7-5y R		
	6/10G		
	118-138cm		
	7-5y R		
	5/6		

09CCT02_17 Core Location

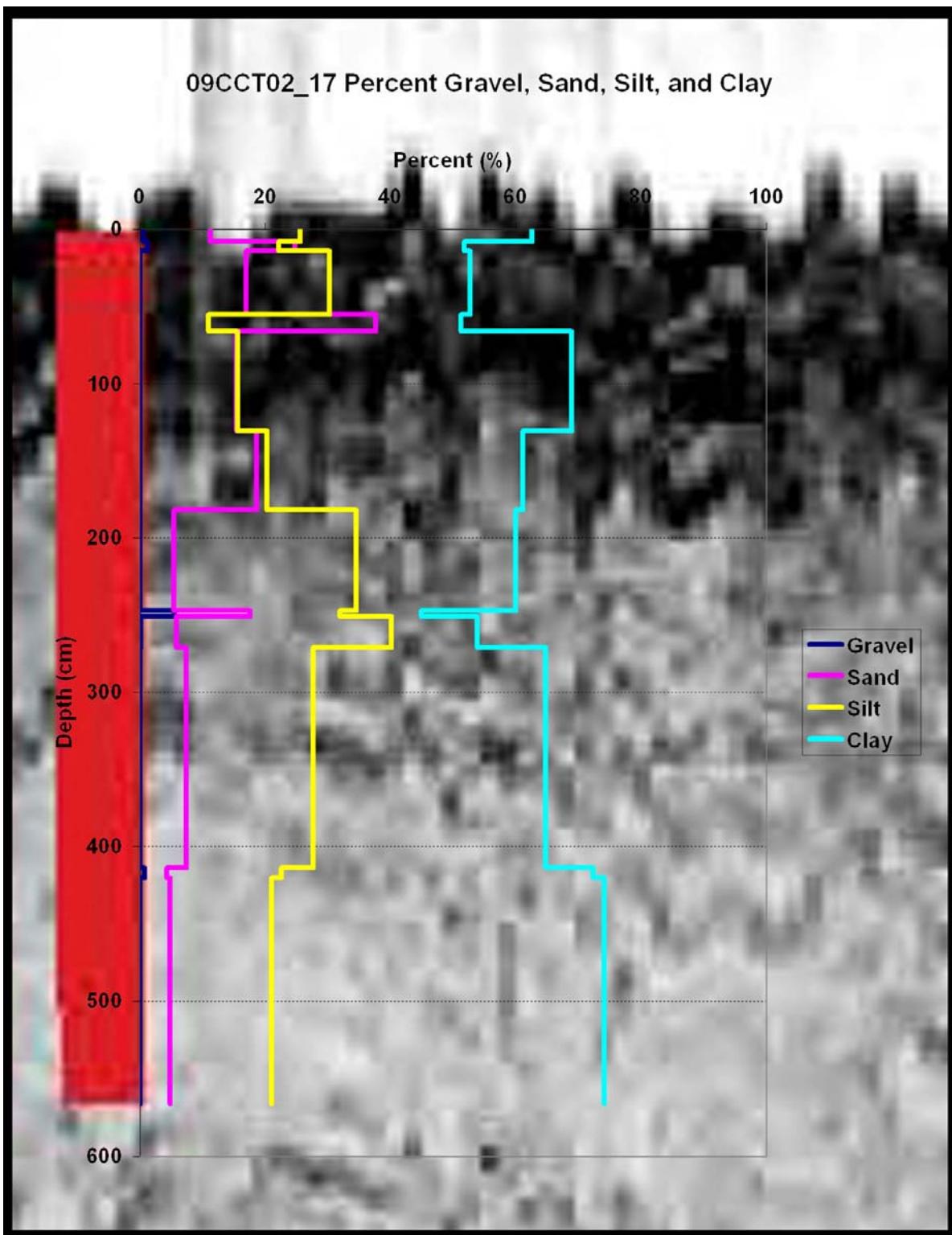


Project: 09CCT02
Transect: 09C11

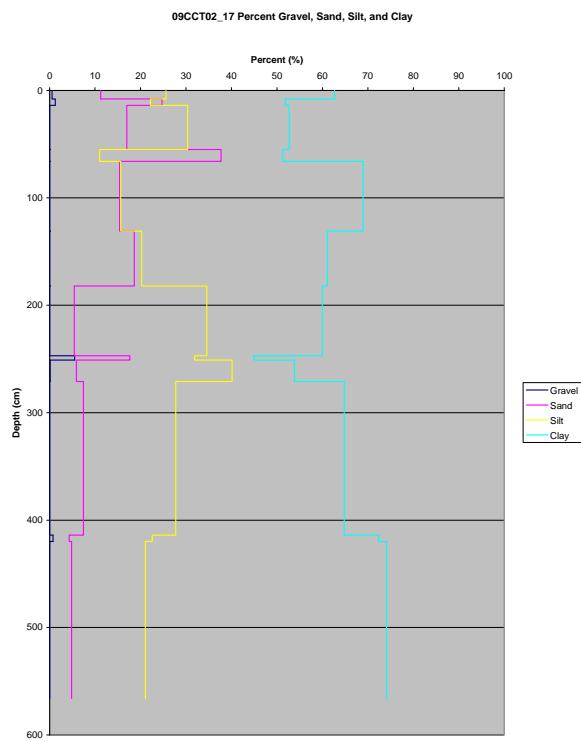
Core:09CCT02_17
Core Length (m):5.65



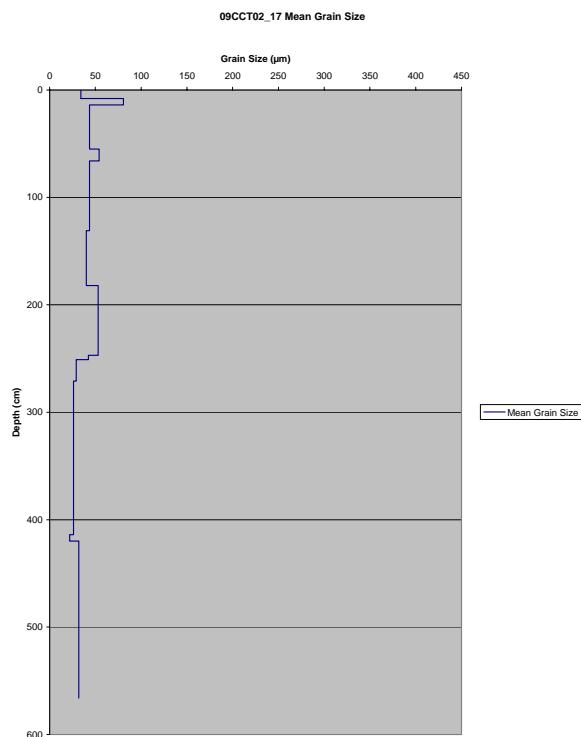
09CCT02_17 Seismic



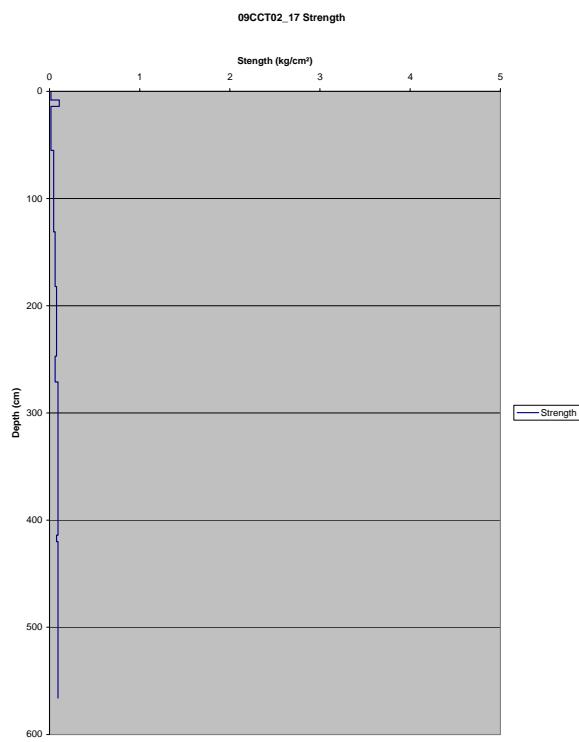
09CCT02_17 Percent Grain Size Distribution Graph



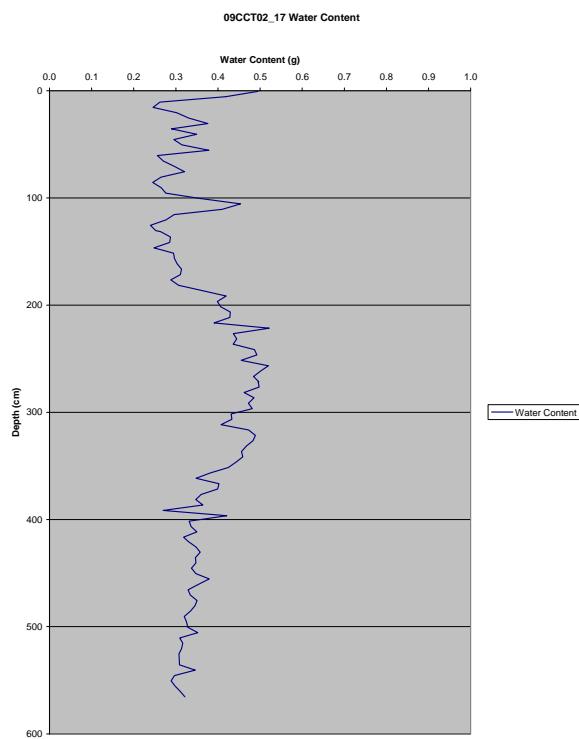
09CCT02_17 Mean Grain Size Distribution



09CCT02_17 Strength Graph



09CCT02_17 Water Content



09CCT02_17 Grain Size Sand Percent

09CCT02_17 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	83.12	8.06	4.92	2.81	1.05	0.05	0.00	0.00	0.00	0.00	100
10-14	79.97	9.10	2.65	2.18	1.92	1.55	1.14	0.80	0.43	0.26	100
40-45	85.96	2.90	4.54	3.28	1.90	0.94	0.42	0.05	0.00	0.00	100
60-65	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
115-120	88.49	4.22	3.19	1.78	1.07	0.69	0.48	0.08	0.00	0.00	100
141-146	92.70	4.87	2.24	0.19	0.00	0.00	0.00	0.00	0.00	0.00	100
231-236	71.70	13.70	12.08	2.52	0.00	0.00	0.00	0.00	0.00	0.00	100
247-251	87.23	7.09	2.57	2.20	0.84	0.07	0.00	0.00	0.00	0.00	100
266-271	59.21	8.39	13.41	9.76	5.45	2.60	1.07	0.10	0.00	0.00	100
356-361	85.04	2.44	6.02	4.12	2.05	0.32	0.00	0.00	0.00	0.00	100
416-420	82.49	8.55	7.37	1.59	0.00	0.00	0.00	0.00	0.00	0.00	100
500-505	70.19	5.56	5.27	5.13	4.36	3.45	2.60	1.78	1.10	0.56	100

09CCT02-17											
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	1.85	1.78	2.07	2.49	3.19	4.43	6.86	11.78	43.55	21.99	100
10-14	3.49	3.63	4.46	5.50	6.81	8.51	10.81	13.99	24.38	18.44	100
40-45	0.01	0.17	0.42	0.94	1.99	4.01	7.77	14.48	44.24	25.96	100
60-65	0.00	0.00	0.08	0.33	1.71	4.25	8.58	15.97	41.84	27.25	100
115-120	0.01	0.00	0.00	0.00	0.00	0.65	3.61	10.77	58.55	26.42	100
141-146	0.74	0.68	0.85	1.22	2.00	3.60	6.82	13.07	46.17	24.86	100
231-236	2.18	2.02	2.36	2.92	3.79	5.20	7.58	11.94	41.27	20.75	100
247-251	3.75	4.29	5.64	7.30	9.20	11.24	13.18	14.65	15.48	15.27	100
266-271	0.00	0.00	0.46	1.61	2.72	4.73	8.23	14.08	43.82	24.35	100
356-361	0.00	0.13	0.81	1.94	3.38	5.76	9.55	15.36	38.84	24.23	100
416-420	1.42	1.48	1.93	2.62	3.71	5.33	7.90	12.12	42.98	20.50	100
500-505	1.33	1.21	1.33	1.44	1.59	1.97	3.27	7.36	60.32	20.18	100

09CCT02_17 Tables

Mean Grain Size 09CCT02-17	
Depth (cm)	Mean Grain Size (μm)
0-5	34.27
10-14	80.80
40-45	43.61
60-65	54.11
115-120	43.59
141-146	40.10
231-236	53.04
247-251	42.25
266-271	29.09
356-361	26.19
416-420	21.98
500-505	31.92

Strength 09CCT02-17	
Interval (cm)	Strength (kg/cm^2)
0-8	0.0156
8-14	0.1094
14-55	0.0156
55-66	0.0469
66-131	0.0469
0-51	0.0625
51-116	0.0781
116-120	0.0625
120-140	0.0625
0-143	0.0938
143-149	0.0781
0-146	0.0938

09CCT02_17 Core Pictures



09CCT02_17 Core Log

Core#: 09CCT02-17-01

Core Date: 18-Jun-09

Date Split/subsampled	Length: 13/cm
E: 9/3/11	
N: 3262982	

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
0-4	0-8cm		
5-8	10 y R		
8-10			
10-14	2/1		
14-18			
18-20			
20-25	8-14cm		
25-30	10 y R		
30-35	2/1		
35-40			
40-45	14-55cm		
45-50	Grey 2		
50-55			
55-60	3/10G		
60-65			
65-68	55-66cm		
66-70	Grey 2		
70-75			
75-80	3/10G		
80-85			
85-90	66-131cm		
90-95	Grey 2		
95-100			
100-105	3/10G		
105-110			
110-115			
115-120			
120-125			
125-130			
130-131			

09CCT02_17 Core Log

Core#: 09CCT02-17-02

Core Date: 18-Jun-09

Date Split/subsampled	Length: 140cm
23-Jun-09	E: 413511 N: 3262982

Grain Size Samples:		Munsell Soil Color	Depths Sampled	Description:
131 - 136			131-182cm	
136 - 141			Gley 2	
141 - 146			<u>S1/10G</u>	
146 - 151				
151 - 156			182-247cm	
156 - 161			Gley 2	
161 - 166			<u>S 1/5B</u>	
166 - 171				
171 - 176			247-281cm	
176 - 181			Gley 2	
181 - 186			<u>4 1/5B</u>	
186 - 196				
191 - 196			281-291cm	
196 - 201			Gley 2	
201 - 206			<u>4 1/10G</u>	
206 - 211				
211 - 216				
216 - 221				
221 - 226				
226 - 231				
231 - 236				
236 - 241				
241 - 246				
246 - 251				
251 - 256				
256 - 261				
261 - 266				
266-271				

09CCT02_17 Core Log

Core#: 09CCT02 17-03

Core Date: 18-Jun-09

Date Split/subsampled	Length: 194cm
28-Jun-09	E: 413.511
	N: 3262982

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
271-246	271-414cm		
276-211	Gley 2		
281-288	4110B		
286-291			
291-296			
296-301	414-420cm		
301-306	Gley 2		
306-311	415B		
311-316			
316-321			
321-326			
326-331			
331-336			
336-341			
341-346			
346-351			
351-356			
356-361			
361-366			
366-371			
371-376			
376-381			
381-386			
386-391			
391-396			
396-401			
401-406			
406-411			
411-416			
416-421			
421-426			

09CCT02_17 Core Log

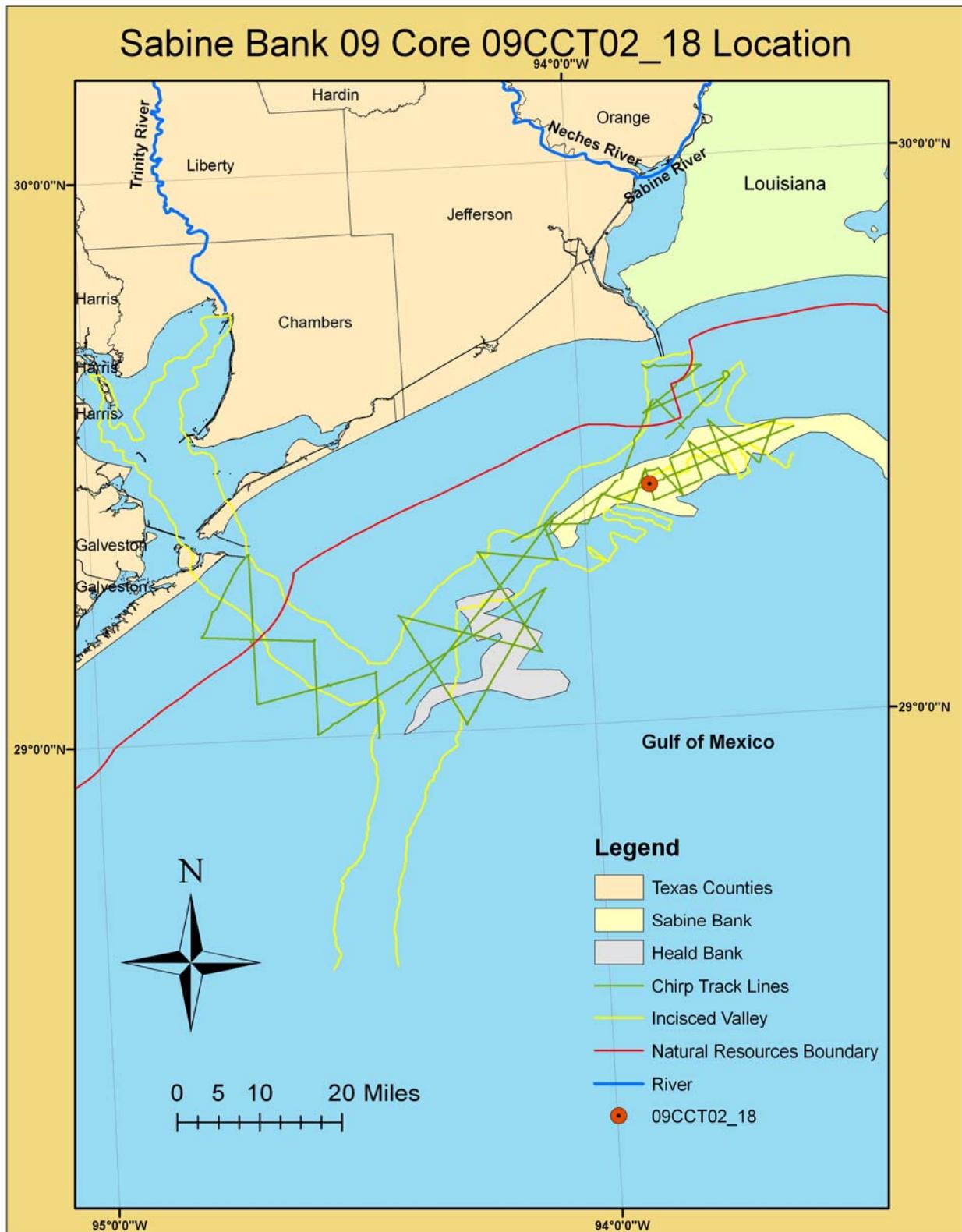
Core#: 09CCT02_17-04

Core Date: 18-Jun-09

Date Split/subsampled	Length: 146cm
23-Jun-09	E: 413511
	N: 3262987

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
420-425	420-566cm		
425-430	Gley 2		
430-435			
435-440	S110BC		
440-445			
445-450			
450-455			
455-460			
460-465			
465-470			
470-475			
475-480			
480-485			
485-490			
490-495			
495-500			
500-505			
505-510			
510-515			
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560-565			
565-570			

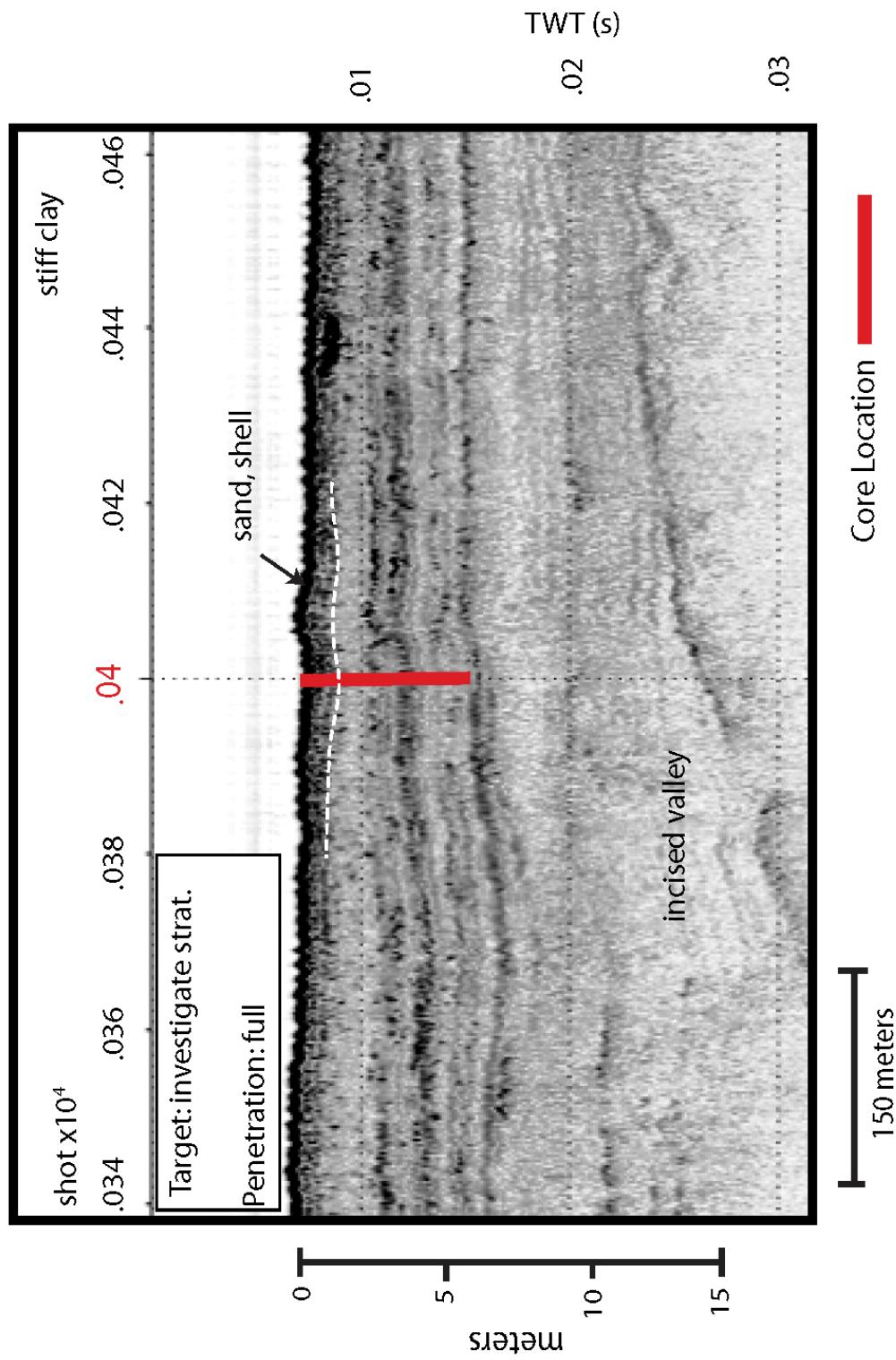
09CCT02_18 Core Location



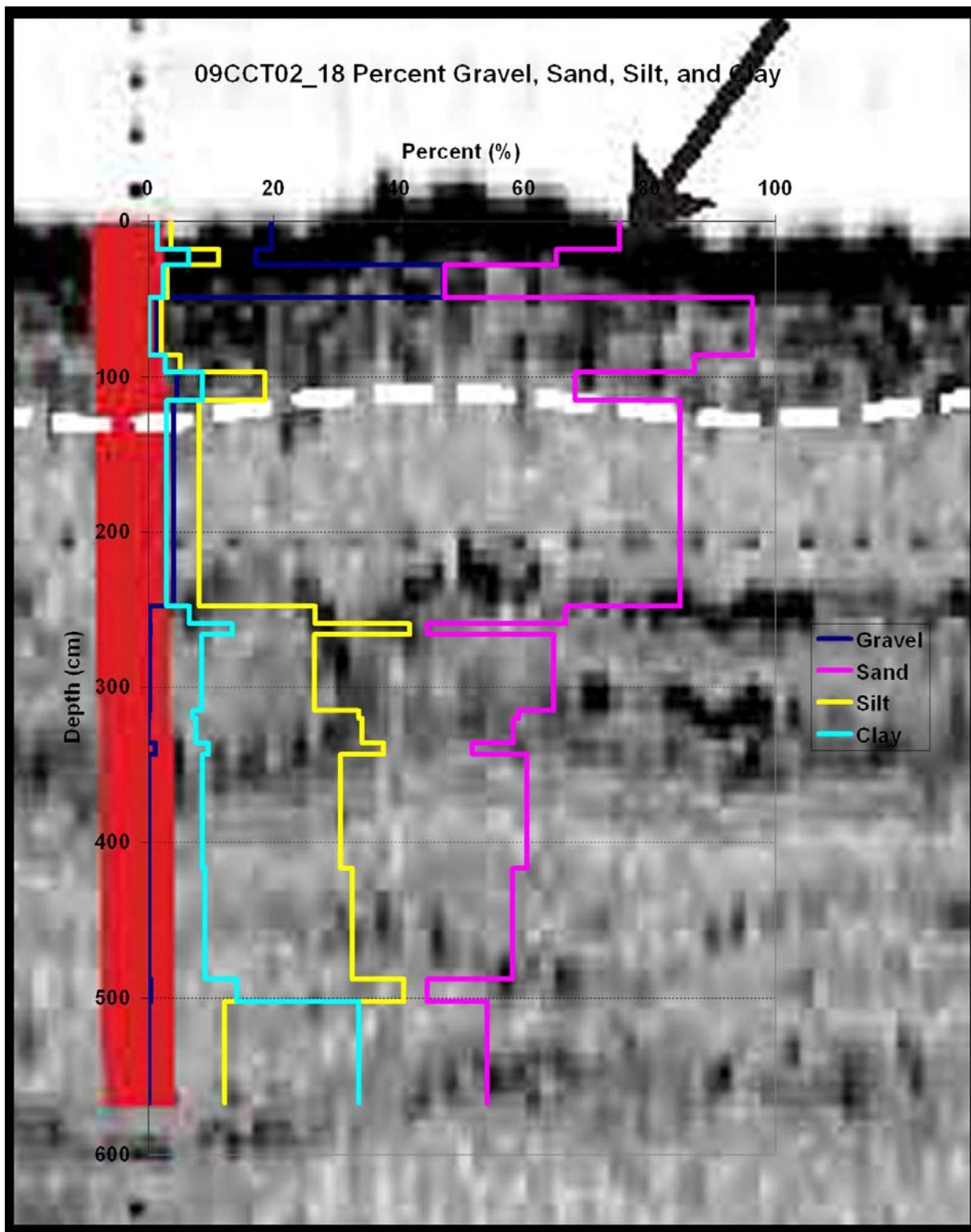
09CCT02_18 Seismic

Project: 09CCT02
Transect: 09C20

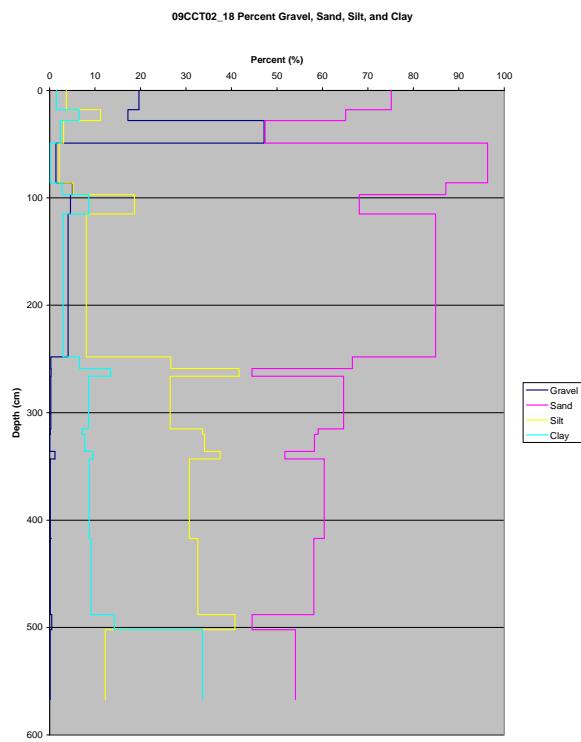
Core: 09CCT02_18
Core Length (m) : 5.66



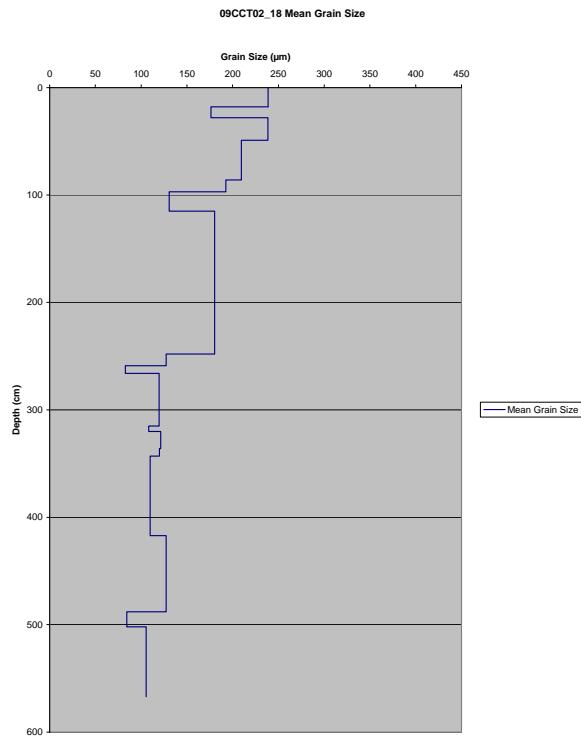
09CCT02_18 Seismic



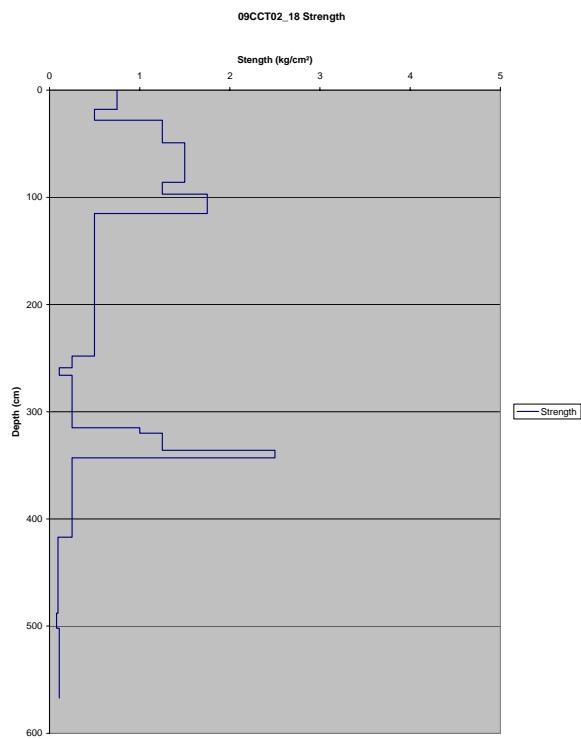
09CCT02_18 Percent Grain Size Distribution Graph



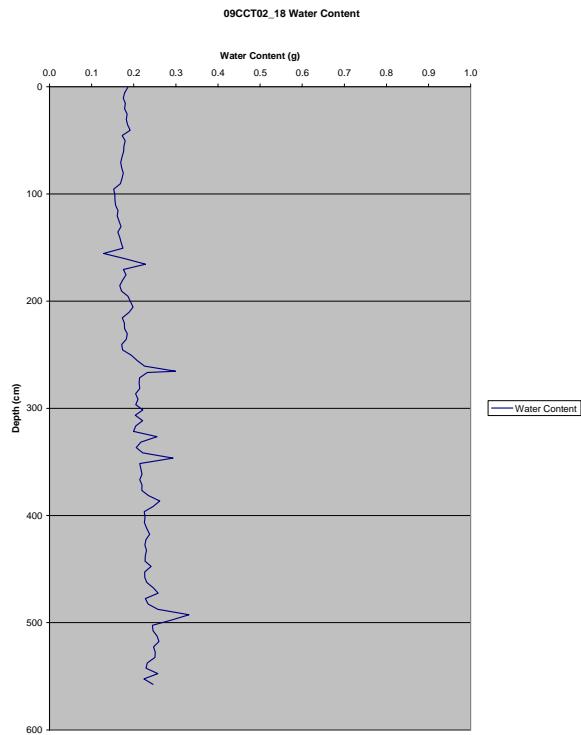
09CCT02_18 Mean Grain Size Distribution



09CCT02_18 Strength Graph



09CCT02_18 Water Content Graph



09CCT02_18 Grain Size Sand Percent Table

09CCT02_18 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 (%)
10-15	69.31	24.24	2.61	0.62	0.79	0.82	0.68	0.49	0.29	0.16	100
20-25	72.80	24.32	2.05	0.08	0.16	0.19	0.17	0.12	0.07	0.04	100
35-40	65.10	26.75	4.12	1.18	0.88	0.74	0.55	0.37	0.20	0.12	100
70-75	73.88	24.76	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
95-97	75.71	23.54	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
105-110	84.99	14.76	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
185-190	77.12	22.17	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
250-255	86.29	11.63	0.55	0.25	0.35	0.33	0.26	0.17	0.11	0.06	100
260-265	88.82	9.72	0.71	0.16	0.17	0.15	0.11	0.08	0.05	0.02	100
286-291	88.11	9.78	0.54	0.35	0.38	0.32	0.23	0.15	0.09	0.05	100
316-320	89.90	8.18	0.34	0.31	0.38	0.33	0.25	0.16	0.10	0.05	100
326-331	85.11	11.09	0.83	0.53	0.69	0.64	0.49	0.34	0.18	0.11	100
341-343	83.62	10.16	1.21	1.07	1.17	1.02	0.76	0.53	0.28	0.17	100
396-401	89.26	8.87	0.42	0.32	0.36	0.30	0.21	0.13	0.08	0.04	100
452-457	85.30	8.45	1.22	1.25	1.22	0.98	0.70	0.48	0.25	0.15	100
497-502	89.92	7.94	0.49	0.41	0.42	0.33	0.23	0.14	0.08	0.04	100
557-562	89.17	7.69	0.35	0.66	0.70	0.56	0.39	0.26	0.13	0.08	100

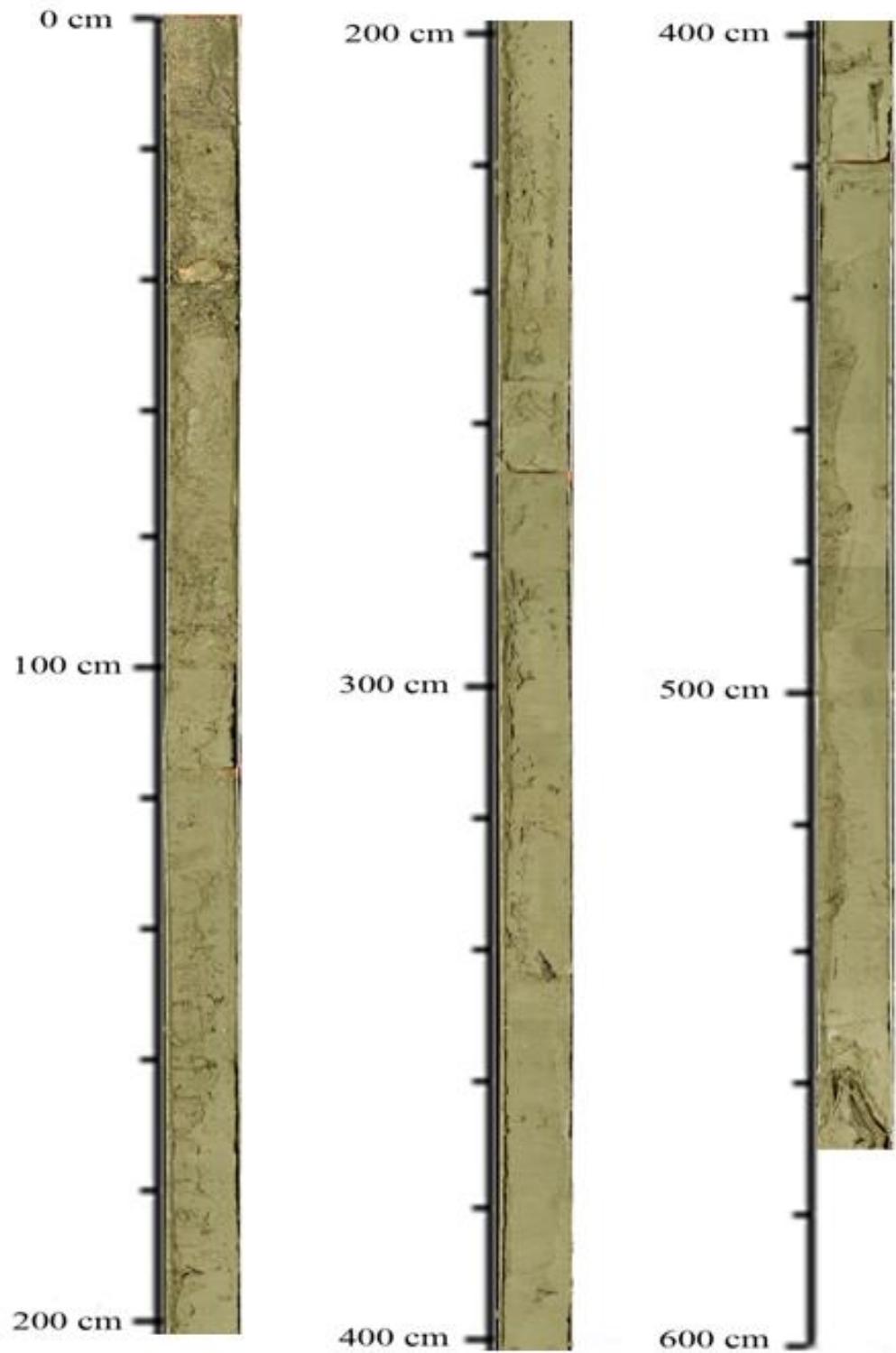
09CCT02-18											
Depth (cm)	63-82µm (%)	82-101µm (%)	101-120µm (%)	120-139µm (%)	139-158µm (%)	158-177µm (%)	177-196µm (%)	196-215µm (%)	215-234µm (%)	234-257µm (%)	Total (%)
10-15	10.24	9.93	11.22	12.35	13.08	13.13	12.13	9.79	2.03	6.11	100
20-25	9.97	9.71	11.02	12.18	12.98	13.12	12.24	10.01	2.38	6.40	100
35-40	11.22	10.72	11.94	12.93	13.44	13.17	11.75	8.95	0.93	4.96	100
70-75	10.85	10.66	12.11	13.30	13.91	13.57	11.89	8.68	0.65	4.37	100
95-97	10.57	10.46	11.95	13.19	13.85	13.58	11.96	8.84	0.96	4.64	100
105-110	6.58	6.82	8.19	9.64	11.04	12.17	12.76	12.48	9.17	11.15	100
185-190	9.36	9.25	10.63	11.89	12.82	13.11	12.41	10.37	3.17	6.99	100
250-255	5.08	5.35	6.56	7.97	9.50	11.07	12.55	13.69	14.03	14.22	100
260-265	3.97	4.20	5.21	6.43	7.88	9.59	11.60	13.98	20.30	16.83	100
286-291	4.49	4.84	6.06	7.53	9.18	10.96	12.73	14.21	14.94	15.06	100
316-320	3.86	4.22	5.34	6.72	8.33	10.15	12.14	14.23	18.64	16.36	100
326-331	4.72	4.93	6.01	7.25	8.62	10.09	11.64	13.30	18.15	15.29	100
341-343	4.36	4.56	5.58	6.78	8.14	9.66	11.38	13.41	20.05	16.07	100
396-401	4.12	4.47	5.65	7.08	8.72	10.56	12.50	14.36	16.68	15.85	100
452-457	3.91	4.24	5.36	6.73	8.35	10.21	12.26	14.40	18.12	16.43	100
497-502	3.67	4.00	5.07	6.38	7.93	9.73	11.81	14.18	20.31	16.93	100
557-562	4.12	4.59	5.89	7.45	9.22	11.12	12.96	14.44	15.04	15.18	100

09CCT02_18 Tables

Mean Grain Size 09CCT02-18	
Depth (cm)	Mean Grain Size (μm)
10-15	238.76
20-25	176.35
35-40	238.49
70-75	209.39
95-97	192.48
105-110	130.72
185-190	180.29
250-255	127.21
260-265	82.71
286-291	119.66
316-320	108.25
326-331	121.38
341-343	119.95
396-401	109.93
452-457	127.34
497-502	84.28
557-562	105.55

Strength 09CCT02-18	
Interval (cm)	Strength (kg/cm^2)
0-18	0.7500
18-28	0.5000
28-49	1.2500
49-86	1.5000
86-97	1.2500
97-115	1.7500
0-133	0.5000
133-144	0.2500
144-151	0.1094
0-49	0.2500
49-54	1.0000
54-70	1.2500
70-77	2.5000
77-151	0.2500
0-71	0.0938
71-85	0.0781
85-150	0.1094

09CCT02_18 Core Pictures



09CCT02_18 Core Log

Core#: 09CCT02-18-01

Core Date: 18-Jun-09

Date Split/subsampled	Length: 115 cm
24-Jun-09	E: 416000 N: 3254844

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
0-5		0-18 cm	
5-10		10yr	
10-15		2/1	
15-18			0-18 cm very dark brown wet sand w/sparse shell
18-20		18-28cm	
20-25		10yr	
25-28		3/1	
28-30			18-28cm Dark brown wet sand w/sparse shell
30-35		28-49cm	
35-40		10yr	
40-45		3/1	
45-49			28-49cm Shell w/dark brown sand
49-50		49-86cm	
50-55		10yr	
55-60		3/1	
60-65			49-86cm Dark brown sand w/sparse shell
65-70		86-97cm	
70-75		10yr	
75-80		2/1	
80-85			86-97cm shells w/dark brown sand
85-86		97-115cm	
86-90		10yr	
90-95		3/1	
95-97			97-115cm Dark brown sand w/sparse shell
97-100			
100-105			
105-110			
110-115			

09CCT02_18 Core Log

Core#: 09CCT02-18-02

Core Date: 18-Jun-09

Date Split/subsampled	Length: <u>151cm</u>
<u>24-Jun-09</u>	E: <u>4116000</u> N: <u>3254844</u>

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
115-120	115-248cm		115-248 cm Dark grey
120-125	Gley 2		compacted sand w/sparse shell
125-130	4/5 B		
130-135			
135-140	248-259cm		248-259 cm Dark grey
140-145	Gley 2		compacted silty sand
145-150	3/5 BG		w/sparse shell
150-155			
155-160	259-266cm		259-266 cm Dark grey
160-165	Gley 2		compacted silt
165-170			
170-175	3/10 BG		
175-180			
180-185			
185-190			
190-195			
195-200			
200-205			
205-210			
210-215			
215-220			
220-225			
225-230			
230-235			
235-240			
240-245			
245-248			
248-250			
250-255			
255-259			
259-260			
260-265			

09CCT02_18 Core Log

Core#: 09CCT02-18-03

Core Date: 18-Jun-09

Date Split/subsampled	Length: 151 cm
	E: 4110000
24-Jun-09	N: 3254844t

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
266-271	266-315cm		266-315 cm Dark grey
271-276	Grey 2		Compacted silty sand w/sparse shells
276-281	3/10 BG		
281-286	315-320cm		315-320 cm Dark grey sand
291-296	Grey 2		
296-301	4/5 B		
301-306	320-336cm		320-336cm Dark grey silty clay
306-311	Grey 2		
311-315	3/5 BG		
315-316	336-343cm		336-343 cm Dark grey
316-320	Grey 2		silty sand w/sparse shell
320-321	3/10 BG		
321-326	343-417cm		343-417 cm Dark grey
326-331	Grey 2		compacted silty clay
331-336	4/10 B		w/sparse shell
336-341			
341-343			
343-346			
346-351			
351-356			
361-366			
366-371			
371-376			
376-381			
381-386			
386-391			
391-396			
396-401			
401-406			
406-411			
411-416			
416-417			

09CCT02_18 Core Log

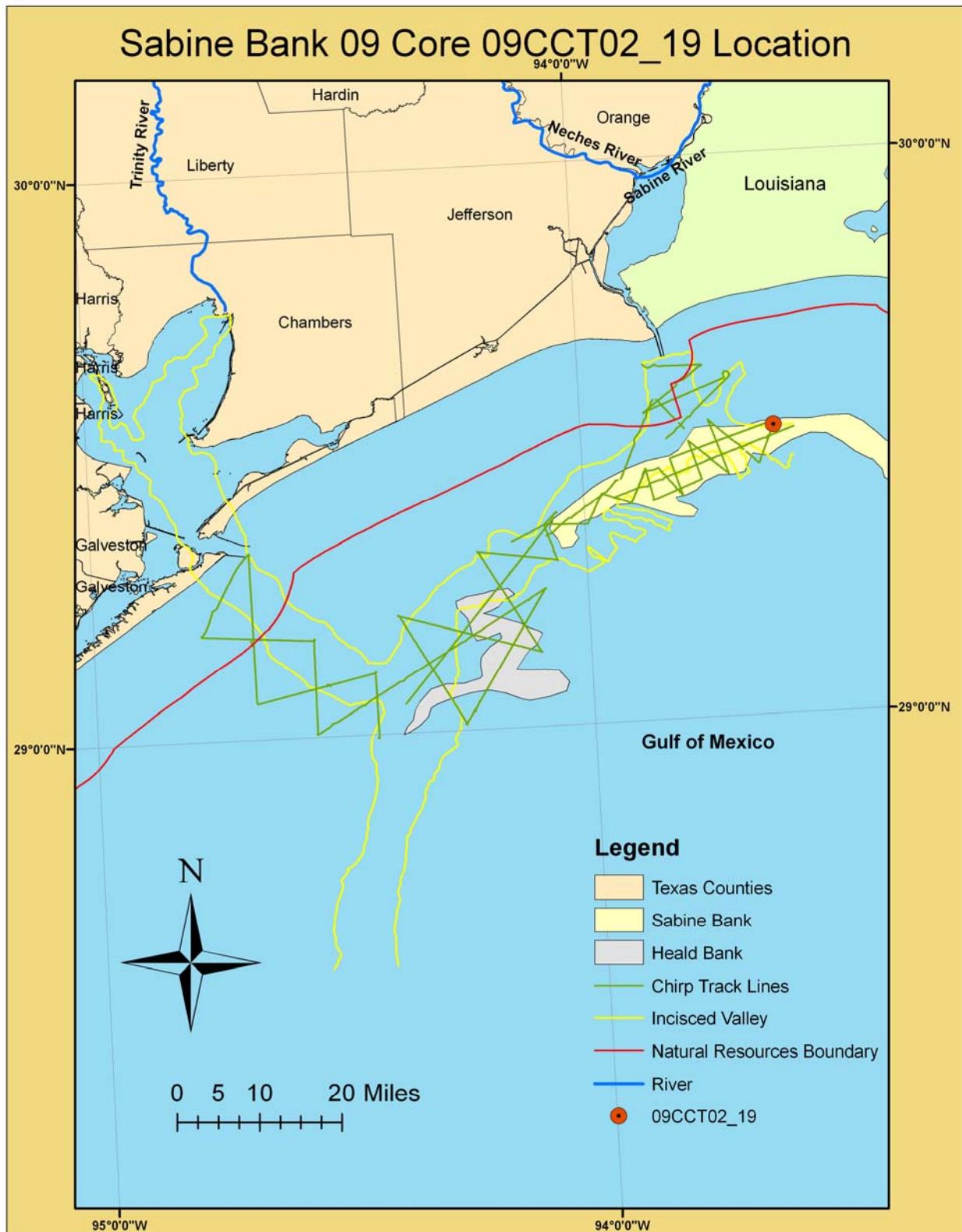
Core#: 09CCT02-18-04

Core Date: 18-Jun-09

Date Split/subsampled	Length: 150 cm
24-Jun-09	E: 416000 N: 3254844

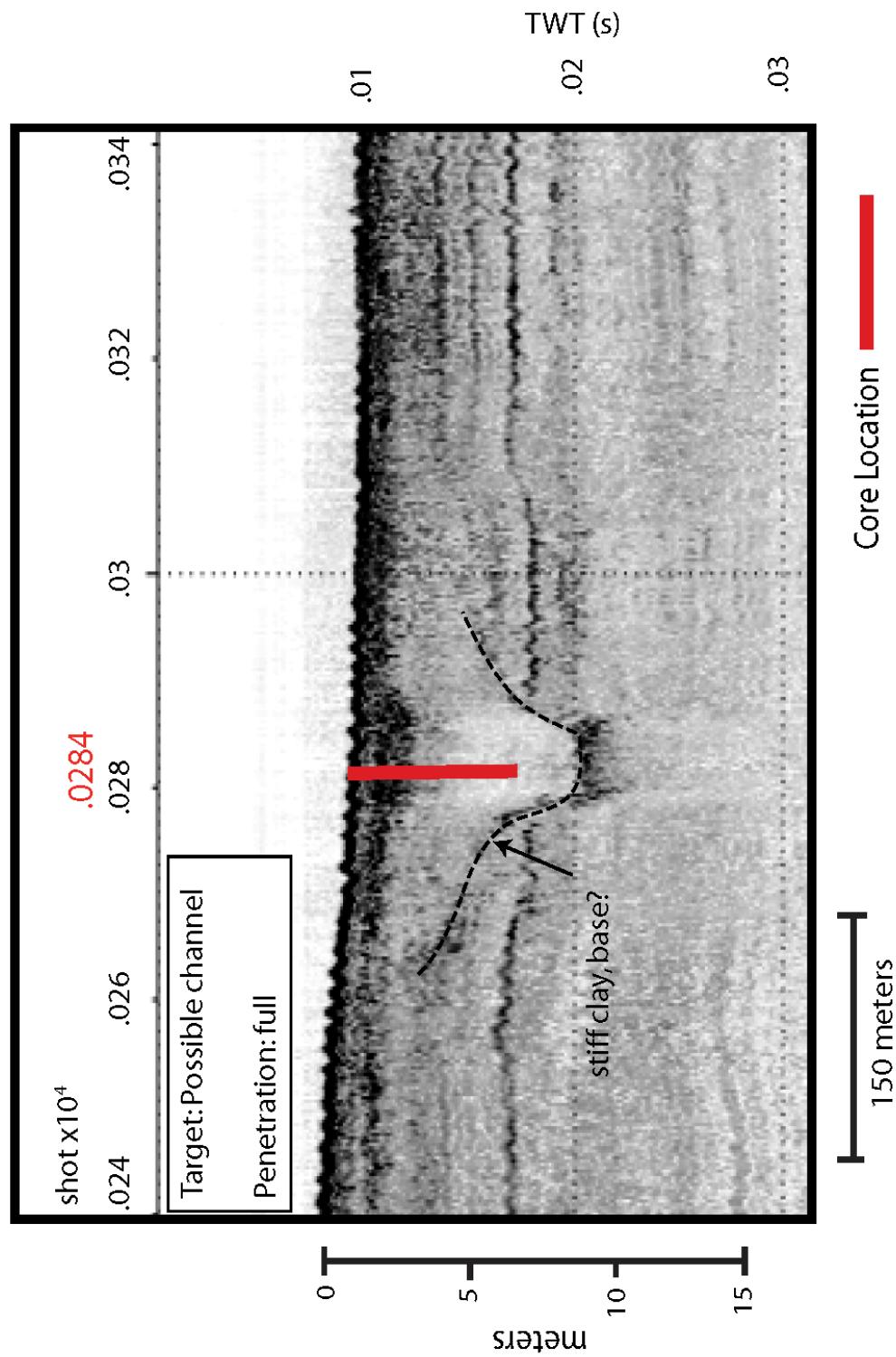
Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
417-422	417-488cm		417-488 cm Dark grey
422-427	Gley 2		Compacted sandy silt
427-432	3/5 BG		
432-437	488-502cm		488-502 cm Dark grey
437-442	Gley 2		Compacted silty clay
442-447	4/5 B		
447-452	502-567cm		502-567 cm Dark grey
452-457	Gley 2		compacted sandy silt
457-462	4/5 BG		
462-467			
467-472			
472-477			
477-482			
482-487			
487-488			
488-492			
492-497			
497-502			
502-507			
507-512			
512-517			
517-522			
522-527			
527-532			
532-537			
537-542			
542-547			
547-552			
552-557			
557-562			
562-567			

09CCT02_19 Core Location

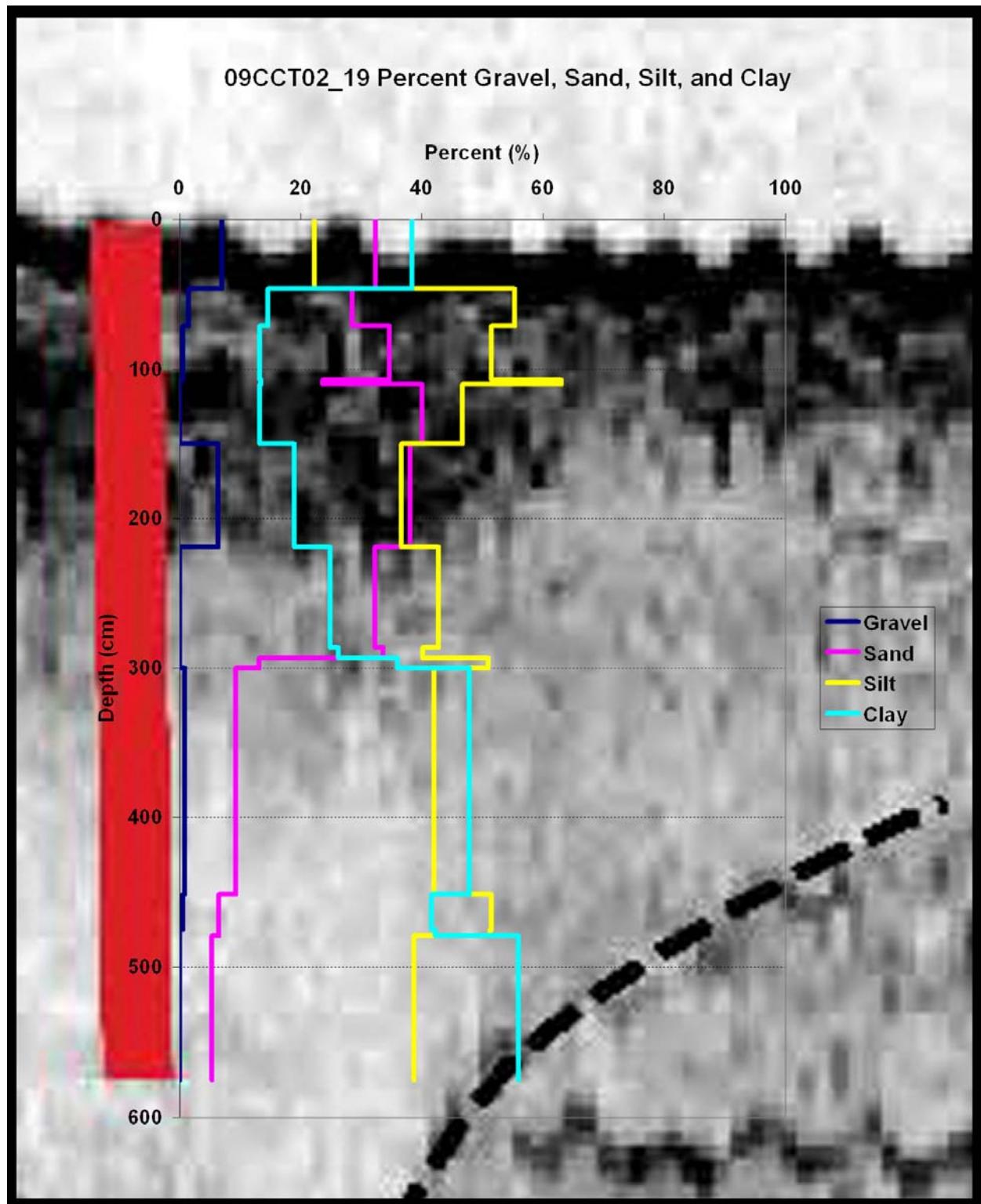


Project: 09CCT02
Transect: 09C29

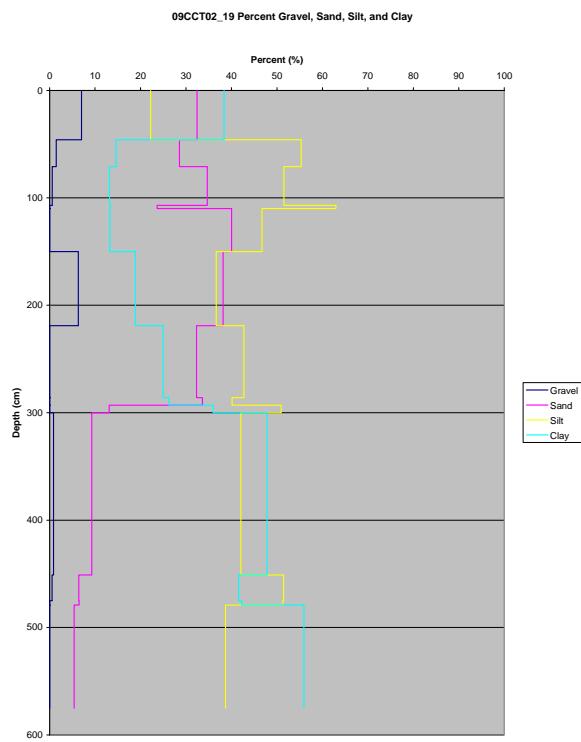
Core:09CCT02_19
Core Length (m) :5.74



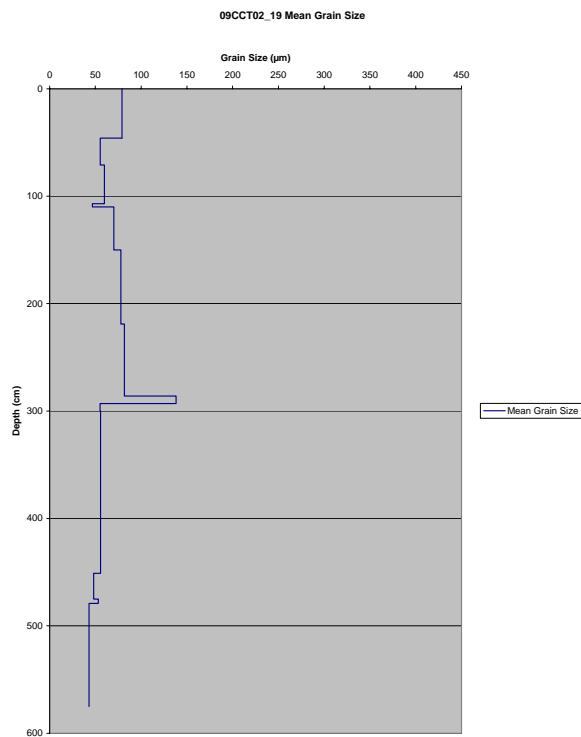
09CCT02_19 Seismic



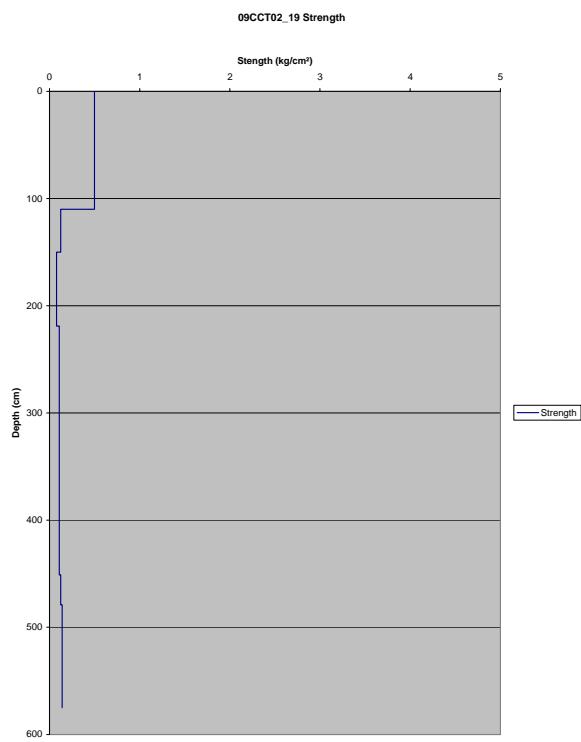
09CCT02_19 Percent Grain Size Distribution Graph



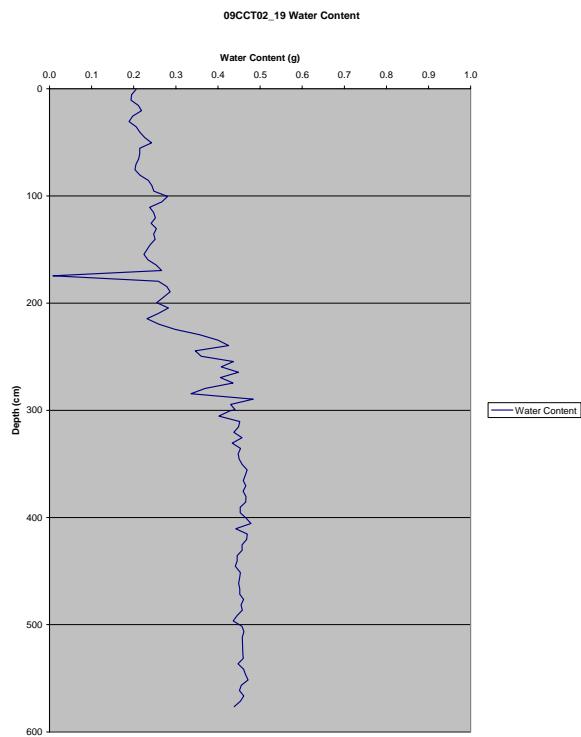
09CCT02_19 Mean Grain Size Distribution



09CCT02_19 Strength Graph



09CCT02_19 Water Content Graph



09CCT02_19 Grain Size Sand Percent

Depth (cm)	09CCT02_19 Grain Size Sand Percent										
	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 (%)
15-20	79.74	15.20	2.51	0.62	0.48	0.47	0.41	0.30	0.19	0.10	100
60-65	91.34	7.59	1.07	0.01	0.00	0.00	0.00	0.00	0.00	0.00	100
95-100	93.29	5.34	1.23	0.14	0.00	0.00	0.00	0.00	0.00	0.00	100
107-110	94.23	4.84	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
135-140	91.41	7.99	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
205-210	89.79	8.40	0.09	0.33	0.42	0.37	0.28	0.18	0.11	0.05	100
265-270	79.47	11.32	2.93	1.92	1.53	1.14	0.78	0.50	0.25	0.15	100
286-290	52.39	16.29	11.04	7.78	5.18	3.28	1.98	1.18	0.56	0.32	100
295-300	68.60	7.06	4.48	4.91	4.67	3.84	2.82	1.95	1.04	0.63	100
375-380	52.18	7.08	6.77	7.58	7.49	6.56	5.15	3.77	2.12	1.29	100
466-471	33.67	7.85	13.30	13.79	11.41	8.29	5.47	3.48	1.73	1.00	100
475-476	29.38	6.04	11.59	13.96	12.94	10.21	7.18	4.77	2.47	1.47	100
556-561	32.38	9.55	12.19	12.49	10.95	8.59	6.13	4.18	2.21	1.32	100

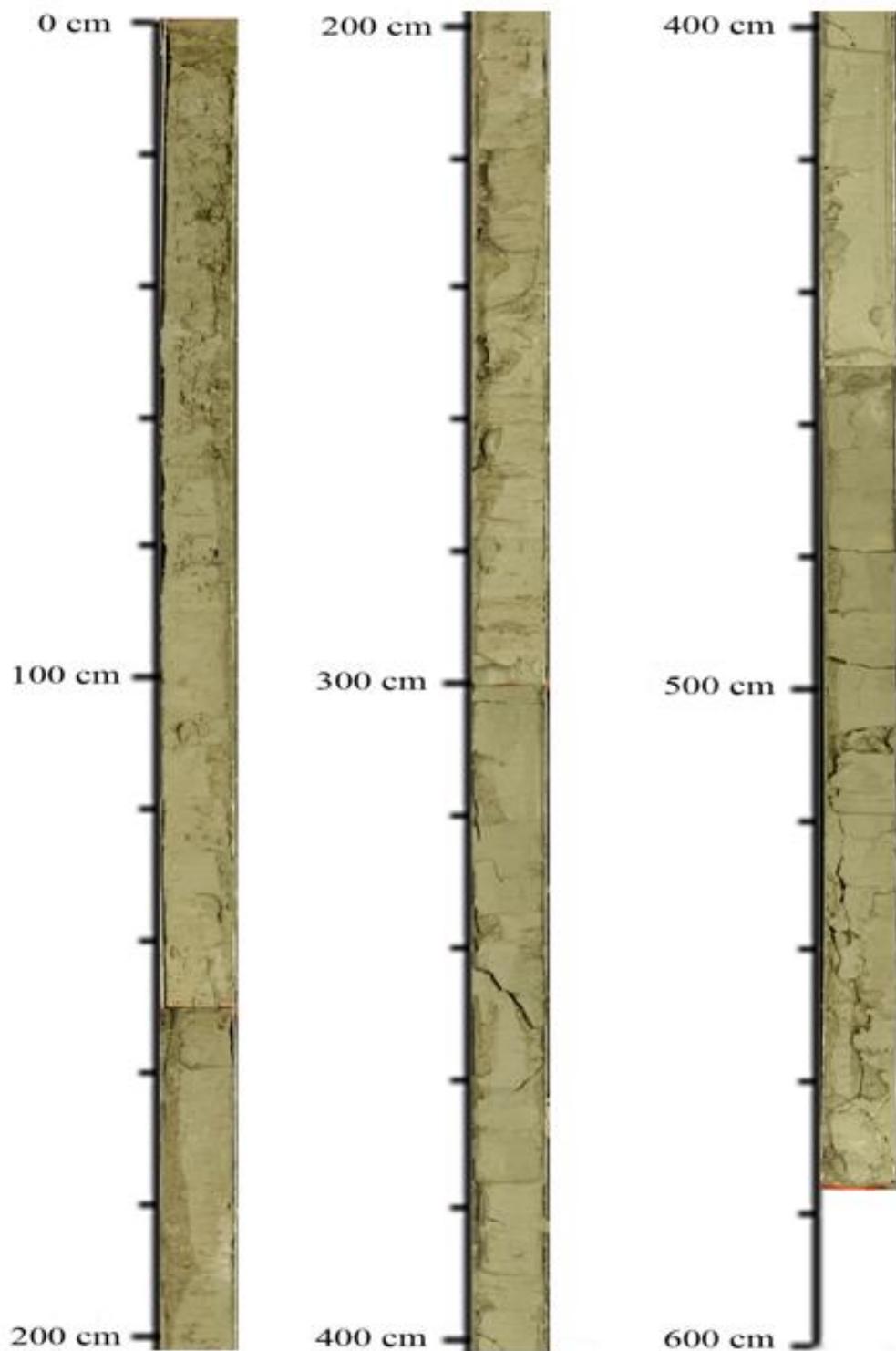
Depth (cm)	09CCT02-19										
	63-82µm (%)	82-101µm (%)	101-120µm (%)	120-139µm (%)	139-158µm (%)	158-177µm (%)	177-196µm (%)	196-215µm (%)	215-234µm (%)	234-257µm (%)	Total (%)
15-20	5.09	4.93	5.64	6.44	7.36	8.51	10.13	12.63	22.63	16.63	100
60-65	2.30	2.29	2.74	3.37	4.31	5.84	8.52	13.31	35.61	21.72	100
95-100	1.32	1.32	1.65	2.22	3.22	5.03	8.35	14.21	38.65	24.04	100
107-110	0.94	0.84	0.96	1.23	1.87	3.32	6.42	12.73	46.77	24.91	100
135-140	3.02	3.16	3.89	4.83	6.04	7.69	10.08	13.75	28.05	19.50	100
205-210	4.21	4.60	5.82	7.27	8.91	10.68	12.47	14.08	16.57	15.37	100
265-270	4.32	4.46	5.45	6.66	8.10	9.80	11.76	13.97	19.09	16.39	100
286-290	5.28	4.92	5.57	6.43	7.55	9.03	10.99	13.52	20.11	16.59	100
295-300	2.62	2.72	3.38	4.26	5.47	7.21	9.81	13.83	30.50	20.19	100
375-380	2.71	2.81	3.53	4.55	5.98	7.93	10.64	14.31	28.02	19.53	100
466-471	0.51	0.55	0.87	1.65	3.22	5.14	8.27	13.64	42.99	23.15	100
475-476	0.26	0.00	0.16	1.10	2.89	4.73	7.67	13.18	46.48	23.53	100
556-561	2.58	1.67	0.98	1.09	2.93	4.31	6.55	11.55	46.52	21.83	100

09CCT02_19 Tables

Mean Grain Size 09CCT02-19	
Depth (cm)	Mean Grain Size (μm)
15-20	79.083
60-65	55.362
95-100	59.982
107-110	46.889
135-140	70.188
205-210	77.965
265-270	81.727
286-290	138.12
295-300	55.267
375-380	55.659
466-471	48.042
475-476	53.233
556-561	43.083

Strength 09CCT02-19	
Interval (cm)	Strength (kg/cm^2)
0-46	0.5000
46-71	0.5000
71-107	0.5000
107-110	0.5000
110-150	0.1250
0-69	0.0781
69-136	0.1094
136-143	0.1094
143-150	0.1094
0-151	0.1094
0-24	0.1250
24-28	0.1250
28-124	0.1406

09CCT02_19 Core Pictures



09CCT02_19 Core Log

Core#: 09CCTD2-19-01

Core Date: 19-Jun-09

Date Split/subsampled: 07-30-09 Length: 150cm
 E: 440931 N: 3265071

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
0-5		0-46cm	
5-10		Grey 2	<u>0-46 cm</u> Dark grey sand w/sparse shell
10-15		4/5B	
15-20			
20-25			
25-30		46-71cm	<u>46-71cm</u> Dark grey silt
30-35		Grey 2	w/ 0.5 cm layers of sand
35-40		4/10 BG	
40-45			
46-50		71-107cm	<u>71-107cm</u> Dark grey sandy silt w/ sparse shell
50-55		Grey 2	
55-60		4/10 B	
60-65			
65-70		107-110cm	<u>107-110cm</u> Dark grey sand
71-75			
75-80		Grey 2	
80-85		4/10 G	
85-90			
90-95		110-150cm	<u>110-150cm</u> Dark grey Sandy silt
95-100		Grey 2	
100-105		4/5B	
105-107			
107-110			
110-115			
115-120			
120-125			
125-130			
130-135			
135-140			
140-145			
145-150			

09CCT02_19 Core Log

Core#: 09CCT02-19-02

Core Date: 19-Jun-09

Date Split/subsampled	Length:
07-Jul-09	150cm
	E: 440931 N: 3265071

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
150-155	150-219cm		150-219 cm Dark grey hard
155-160	Gley 2		silty clay w/sparse shell
160-165	4/10 BG		
165-170			
170-175			
175-180	219-286cm		219-286cm Dark grey
180-185	Gley 2		softer silty clay
185-190			
190-195	4/5 BG		
195-200			
200-205	286-293cm		286-293cm Dark grey
205-210	Gley 2		clay w/plant material
210-215			
215-219	4/10 G		
219-220			
220-225	293-300cm		293-300cm Grey soft clay
225-230	Gley 2		
230-235			
235-240	5/10 BG		
240-245			
245-250			
250-255			
255-260			
260-265			
265-270			
270-275			
275-280			
280-285			
286-290			
290-293			
293-295			
295-300			

09CCT02_19 Core Log

Core#: 09CCT02-19-03

Core Date: 19-Jun-09

Date Split/subsampled	Length: 151cm
E: 440931	
N: 3265071	

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
300-305	300-451cm		
305-310			
310-315	Grey 2		
315-320			
320-325			
325-330			
330-335			
335-340			
340-345			
345-350			
350-355			
355-360			
360-365			
365-370			
370-375			
375-380			
380-385			
385-390			
390-395			
395-400			
400-405			
405-410			
410-415			
415-420			
420-425			
425-430			
430-435			
435-440			
440-445			
445-450			

09CCT02_19 Core Log

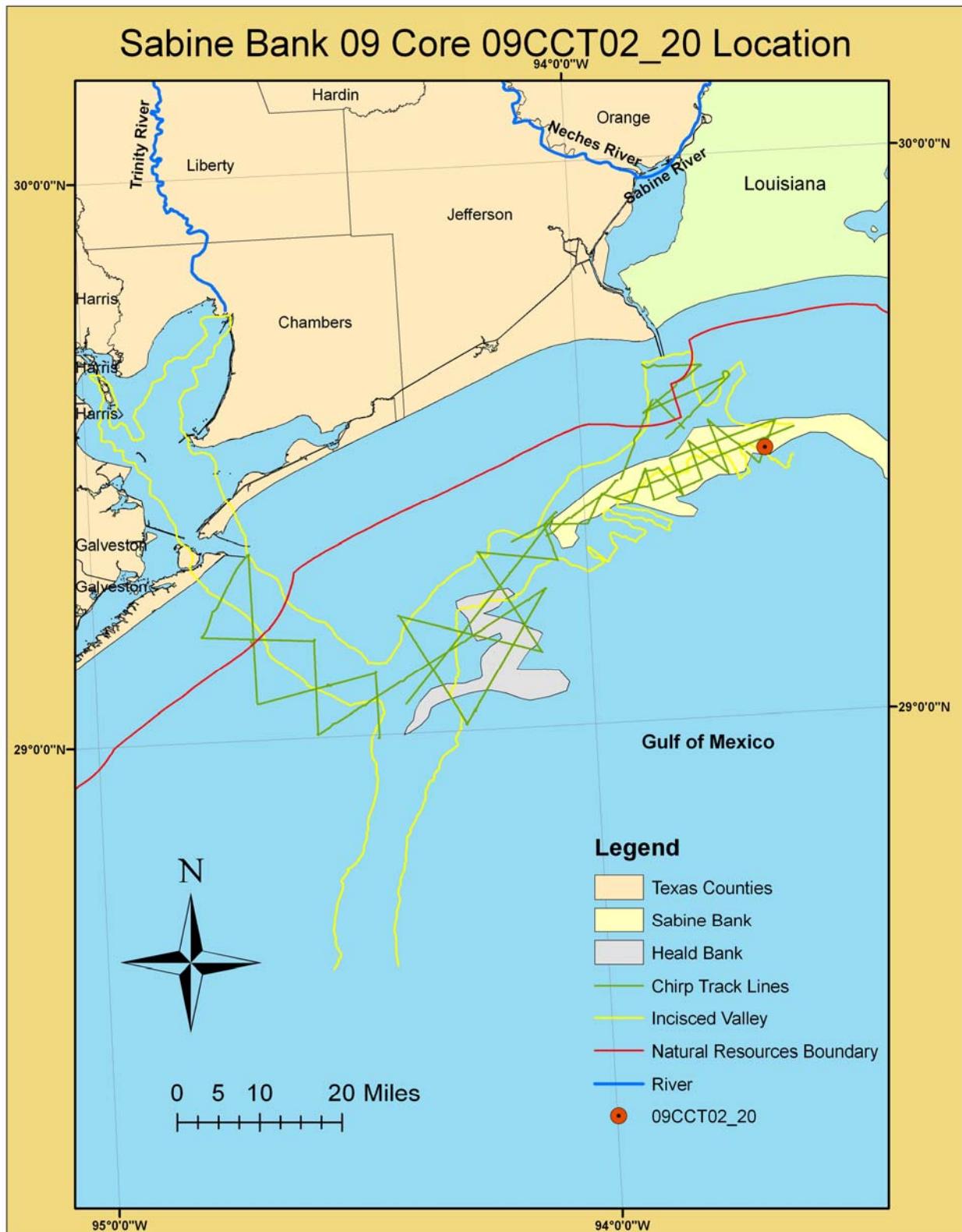
Core#: 09CCT02-19-04

Core Date: 19-Jun-09

Date Split/subsampled	Length:
	124
07-Jul-09	E: 440931 N: 3265071

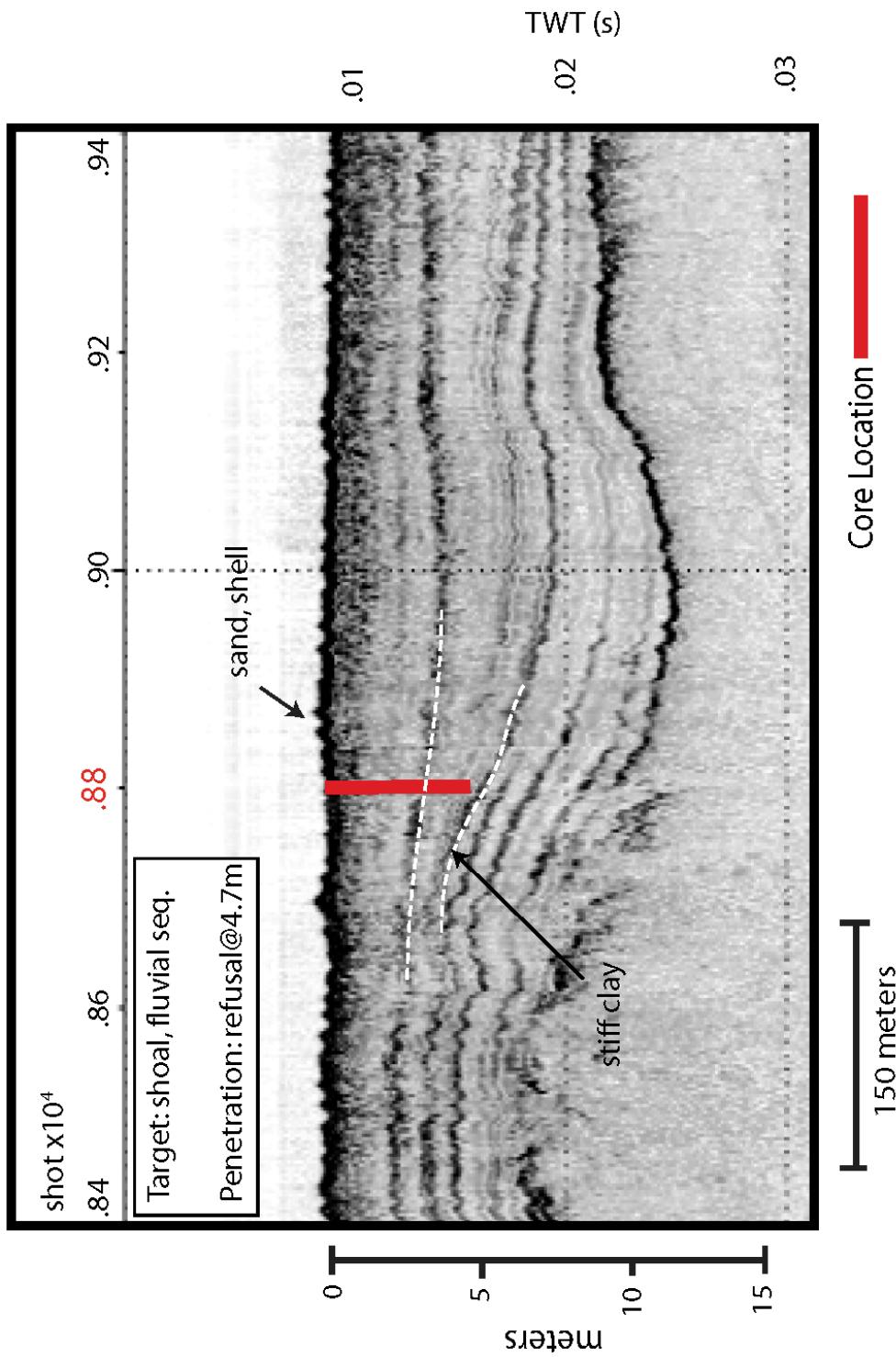
Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
451-456		451-475cm	
456-461		Grey 2	
461-466			
466-471		5/5 B	
471-475			
475-476		475-479cm	
476-479			475-479 cm Grey hard
479-481			clay w/ deposits of beige
481-486			clay
486-491		6/5 G	
491-496			
496-501		479-575cm	
501-504			479-575 cm Grey hard
506-511			clay
511-516			
516-521			
521-526		5/5 BG	
526-531			
531-536			
536-541			
541-546			
546-551			
551-556			
556-561			
561-566			
566-571			
571-575			

09CCT02_20 Core Location

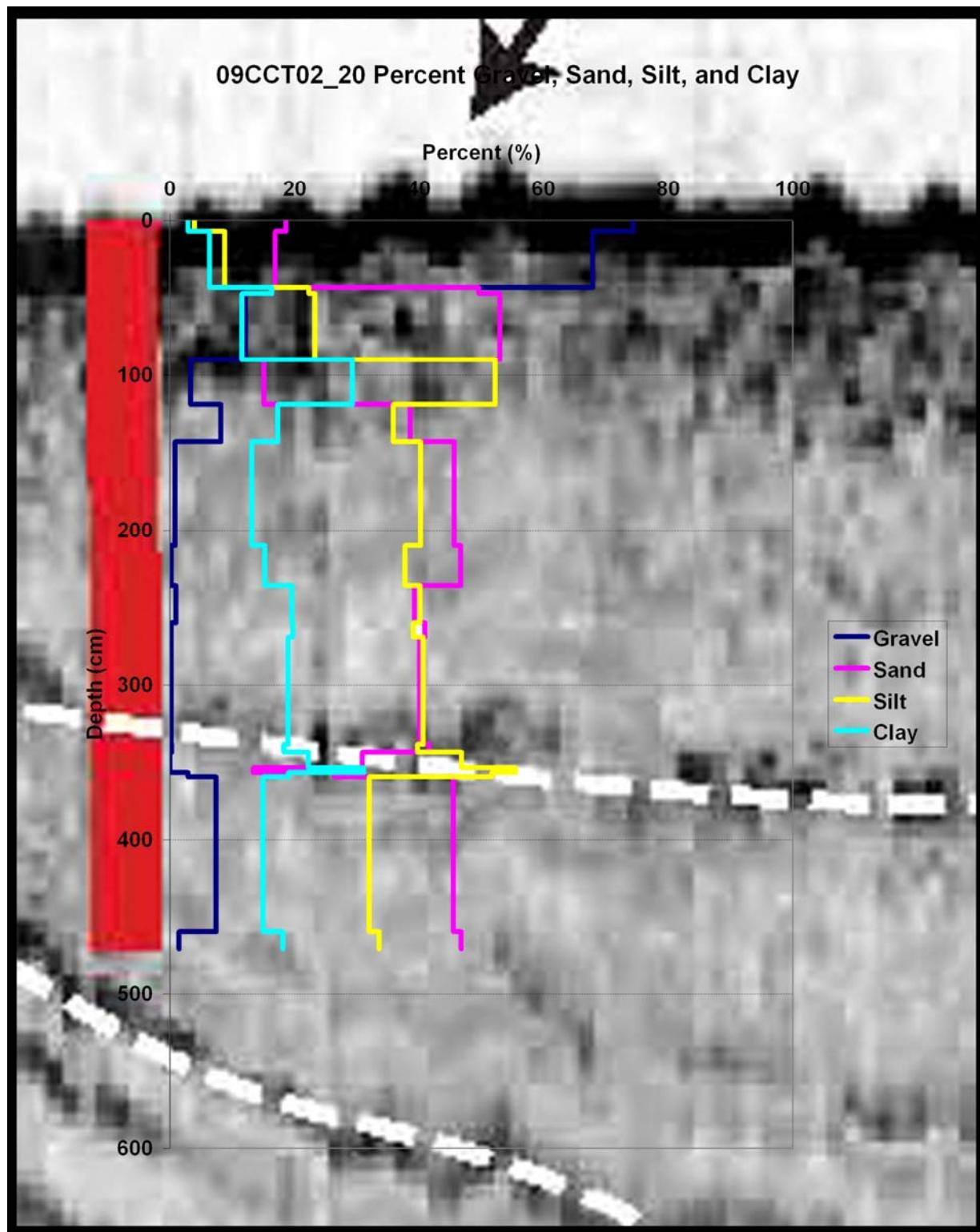


Project: 09CCT02
Transect: 09C28

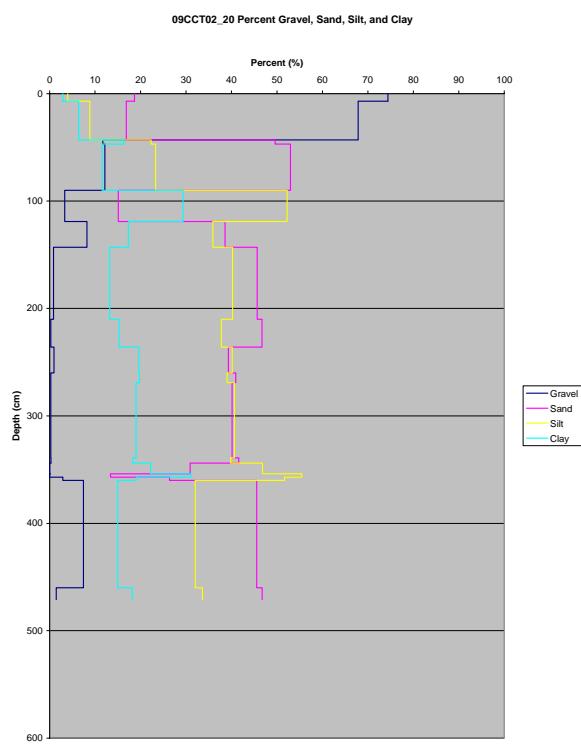
Core: 09CCT02_20
Core Length (m) : 4.70



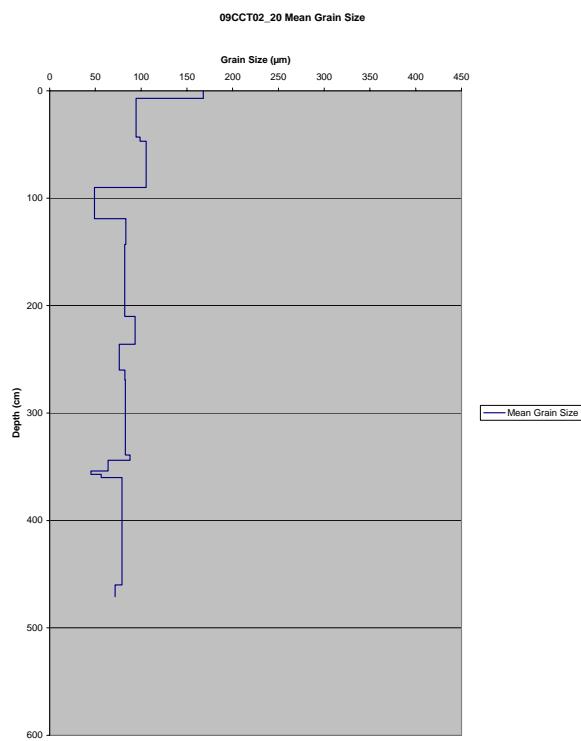
09CCT02_20 Seismic



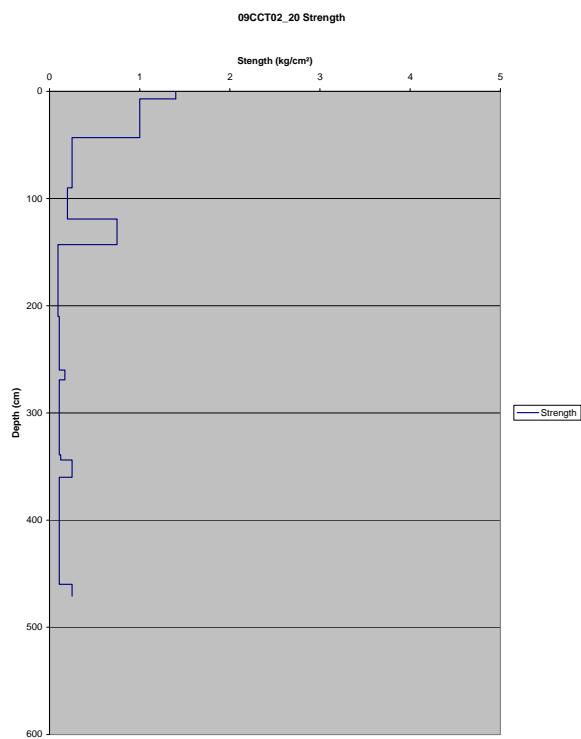
09CCT02_20 Percent Grain Size Distribution Graph



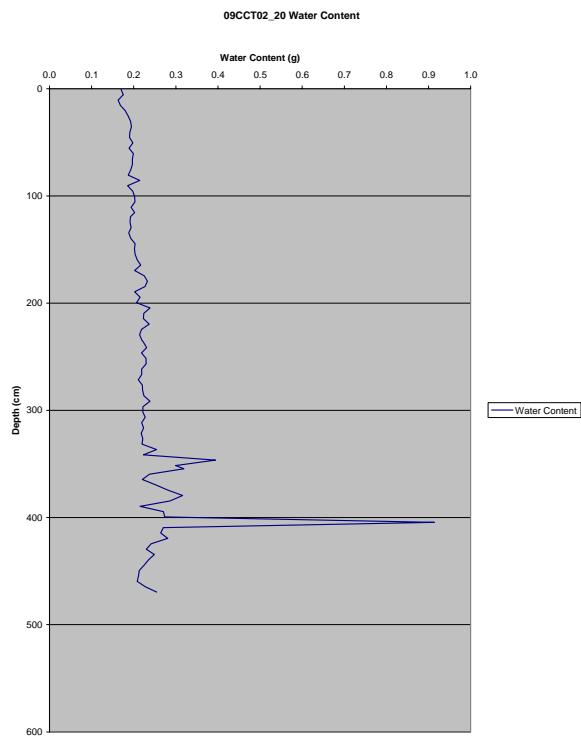
09CCT02_20 Mean Grain Size Distribution Graph



09CCT02_20 Strength Graph



09CCT02_20 Water Content Graph



09CCT02_20 Grain Size Percent Graph

09CCT02_20 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	78.12	16.62	1.25	1.06	1.13	0.84	0.51	0.28	0.12	0.06	100
30-35	88.00	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
43-45	88.52	11.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
65-70	88.51	11.34	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
100-105	80.40	6.05	3.42	3.43	2.69	1.80	1.11	0.60	0.34	0.15	100
129-134	88.17	10.35	0.46	0.36	0.33	0.21	0.11	0.02	0.00	0.00	100
164-169	87.80	8.92	0.78	0.66	0.64	0.49	0.33	0.20	0.12	0.06	100
224-229	88.87	6.78	0.65	1.00	1.00	0.75	0.50	0.24	0.13	0.06	100
246-251	86.95	7.89	1.17	1.35	1.15	0.75	0.43	0.18	0.09	0.04	100
260-264	88.60	6.74	1.62	1.52	1.01	0.47	0.05	0.00	0.00	0.00	100
306-311	88.07	9.66	0.35	0.43	0.49	0.40	0.28	0.17	0.10	0.05	100
341-344	90.64	8.57	0.32	0.14	0.14	0.10	0.07	0.01	0.00	0.00	100
346-351	86.28	11.09	0.66	0.52	0.57	0.43	0.26	0.12	0.04	0.03	100
354-357	74.01	7.78	7.11	6.03	3.56	1.36	0.15	0.00	0.00	0.00	100
357-3.60	89.08	9.50	0.67	0.16	0.18	0.15	0.11	0.08	0.04	0.02	100
424-429	94.35	5.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
460-464	96.85	3.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100

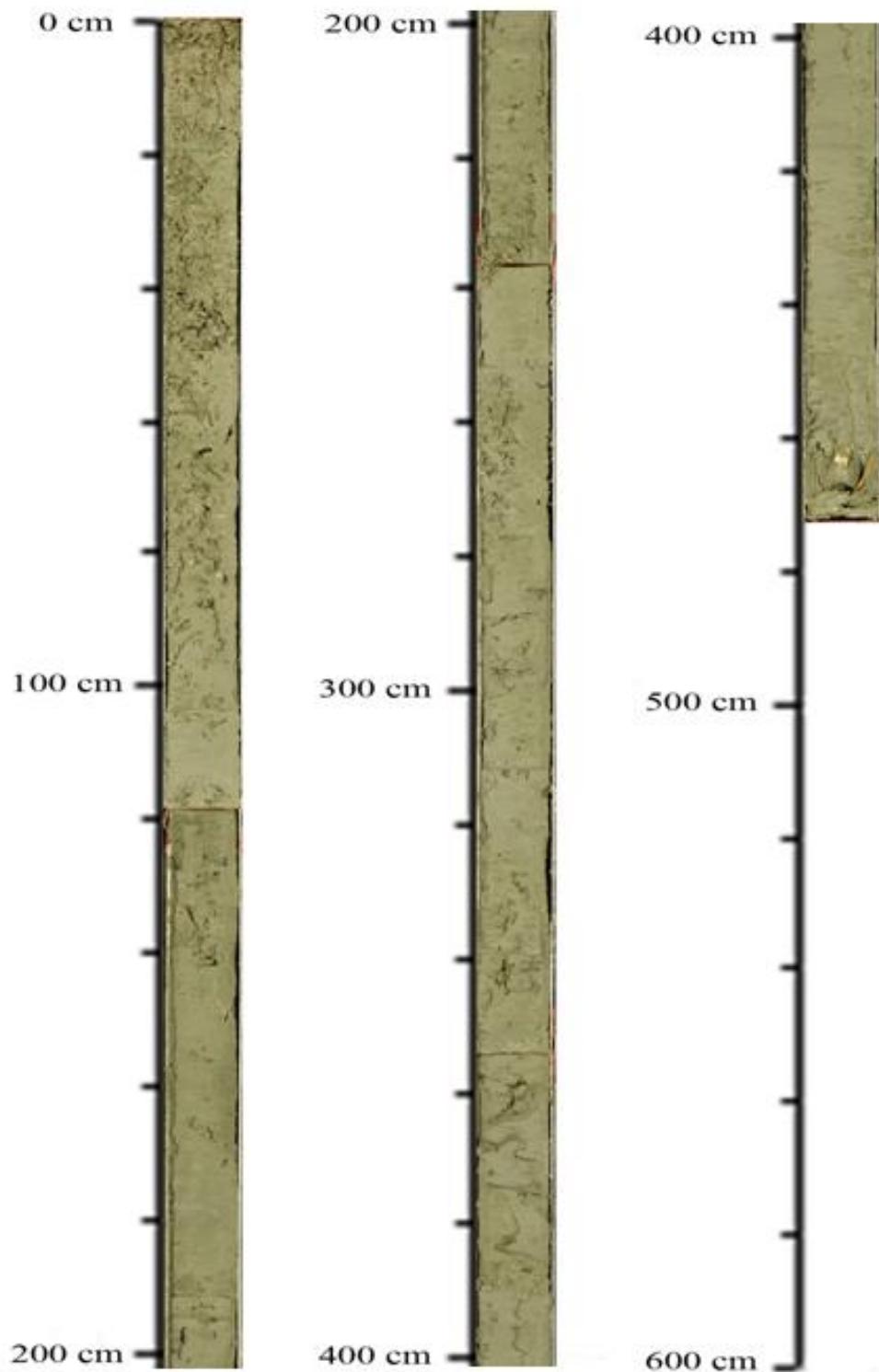
09CCT02-20											
Depth (cm)	63-82µm (%)	82-101µm (%)	101-120µm (%)	120-139µm (%)	139-158µm (%)	158-177µm (%)	177-196µm (%)	196-215µm (%)	215-234µm (%)	234-257µm (%)	Total (%)
0-5	7.81	8.05	9.61	11.20	12.59	13.47	13.39	11.80	3.73	8.37	100
30-35	6.06	6.50	8.02	9.71	11.37	12.77	13.53	13.12	7.82	11.11	100
43-45	5.73	6.16	7.64	9.30	11.00	12.51	13.50	13.45	8.83	11.88	100
65-70	5.38	5.75	7.10	8.64	10.24	11.75	12.94	13.47	11.70	13.03	100
100-105	2.47	2.70	3.48	4.48	5.79	7.53	9.98	13.64	30.32	19.60	100
129-134	4.85	5.20	6.47	7.93	9.52	11.12	12.56	13.62	14.58	14.15	100
164-169	4.15	4.52	5.71	7.15	8.82	10.65	12.55	14.30	16.51	15.63	100
224-229	3.51	3.92	5.06	6.49	8.18	10.14	12.31	14.59	18.99	16.81	100
246-251	3.82	4.20	5.34	6.73	8.36	10.20	12.20	14.28	18.53	16.34	100
260-264	3.20	3.57	4.62	5.95	7.56	9.48	11.76	14.43	21.82	17.61	100
306-311	4.65	5.01	6.26	7.71	9.30	10.93	12.46	13.68	15.46	14.53	100
341-344	3.94	4.26	5.36	6.67	8.19	9.90	11.81	13.92	19.58	16.36	100
346-351	4.89	5.15	6.31	7.64	9.08	10.56	12.01	13.35	16.38	14.63	100
354-357	2.52	2.70	3.44	4.41	5.69	7.40	9.81	13.41	31.17	19.45	100
357-3.60	3.80	3.96	4.83	5.85	7.04	8.44	10.25	12.87	25.69	17.27	100
424-429	3.49	4.03	5.33	6.94	8.85	10.97	13.15	15.04	16.06	16.15	100
460-464	2.47	3.09	4.34	5.98	8.05	10.53	13.32	16.05	18.15	18.01	100

09CCT02_20 Tables

Mean Grain Size 09CCT02-20	
Depth (cm)	Mean Grain Size (μm)
0-5	167.88
30-35	94.38
43-45	98.76
65-70	105.44
100-105	49.06
129-134	83.30
164-169	82.07
224-229	93.53
246-251	76.06
260-264	82.24
306-311	82.70
341-344	87.93
346-351	63.93
354-357	45.19
357-3.60	56.40
424-429	79.10
460-464	71.58

Strength 09CCT02-20	
Interval (cm)	Strength (kg/cm^2)
0-7	1.4000
7-43	1.0000
43-47	0.2500
47-90	0.2500
90-119	0.2000
0-24	0.7500
24-91	0.0938
91-117	0.1094
0-24	0.1094
24-33	0.1719
33-103	0.1094
103-108	0.1250
108-118	0.2500
0-3	0.2500
3-6	0.2500
6-106	0.1094
106-117	0.2500

09CCT02_20 Core Pictures



09CCT02_20 Core Log

Core#: 09CCT02-20-01

Core Date: 19-Jun-09

Date Split/subsampled	Length: 119
25-Jun-09	E: 4389666
	N: 3260632

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
0-5		0-7 cm	
5-7		Grey 2	0-7 cm shells w/dark grey silty sand
7-10			
10-15		3/5 BG	
15-20		7-43cm	
20-25			7-43 cm Dark grey silty sand w/shells
25-30			
30-35			
35-40		4/5 B	
40-43		43-47cm	
43-45		Grey 2	43-47cm Shells w/Dark grey sandy silt
45-47			
47-50			
50-55		4/5 B	
55-60		47-90cm	
60-65		Grey 2	47-90 cm Dark grey sandy silt
65-70			
70-75			
75-80		5/5 BG	
80-85			
85-90		90-119cm	
90-95		Grey 2	90-119 cm Dark grey sandy silt w/sparse shell
95-100			
100-105		5/10 BG	
105-110			
110-115			
115-119			

09CCT02_20 Core Log

Core#: 09CCT02_20-02

Core Date: 19-Jun-09

Date Split/subsampled	Length:
<u>25-Jun-09</u>	<u>117</u>
	E: 4389606 N: 32600632

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
119-124		119-143cm	119-143 cm Dark grey
124-129	Gley 2		Sandy silt w/shell
129-134			
134-139			
139-143			
143-144		143-210cm	143-210cm Dark grey
144-149	Gley 2		Sandy silt w/parsue
149-154			Shell
154-159			
159-164			
164-169		210-236cm	210-236cm Dark grey
169-174	Gley 2		Sandy silt w/shell
174-179			
179-184			
184-189			
189-194			
194-199			
199-204			
204-209			
210-214			
214-219			
219-224			
224-229			
229-334			
334-336			

09CCT02_20 Core Log

Core#: 09CCT02-20-03

Core Date: 19-Jun-09

Date Split/subsampled	Length:
<u>25-Jun-09</u>	<u>118 cm</u>
	E: 4389666 N: 3240032

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
236-241		236-260cm	
241-246	Gley 2		
246-251			
251-256	4/5 BG		
256-260			
260-261		260-269cm	
261-266	Gley 2		
266-269			
269-271	4/5 B		
271-276			
276-281		269-339cm	
281-286	Gley 2		
286-291			
291-296	5/10 B		
296-301			
301-306		339-344cm	
306-311	Gley 2		
311-316			
316-321	4/10 BG		
321-326			
326-331		344-354cm	
331-336	Gley 2		
336-339			
339-341	3/10 BG		
341-344			
344-346			
346-351			
351-354			

09CCT02_20 Core Log

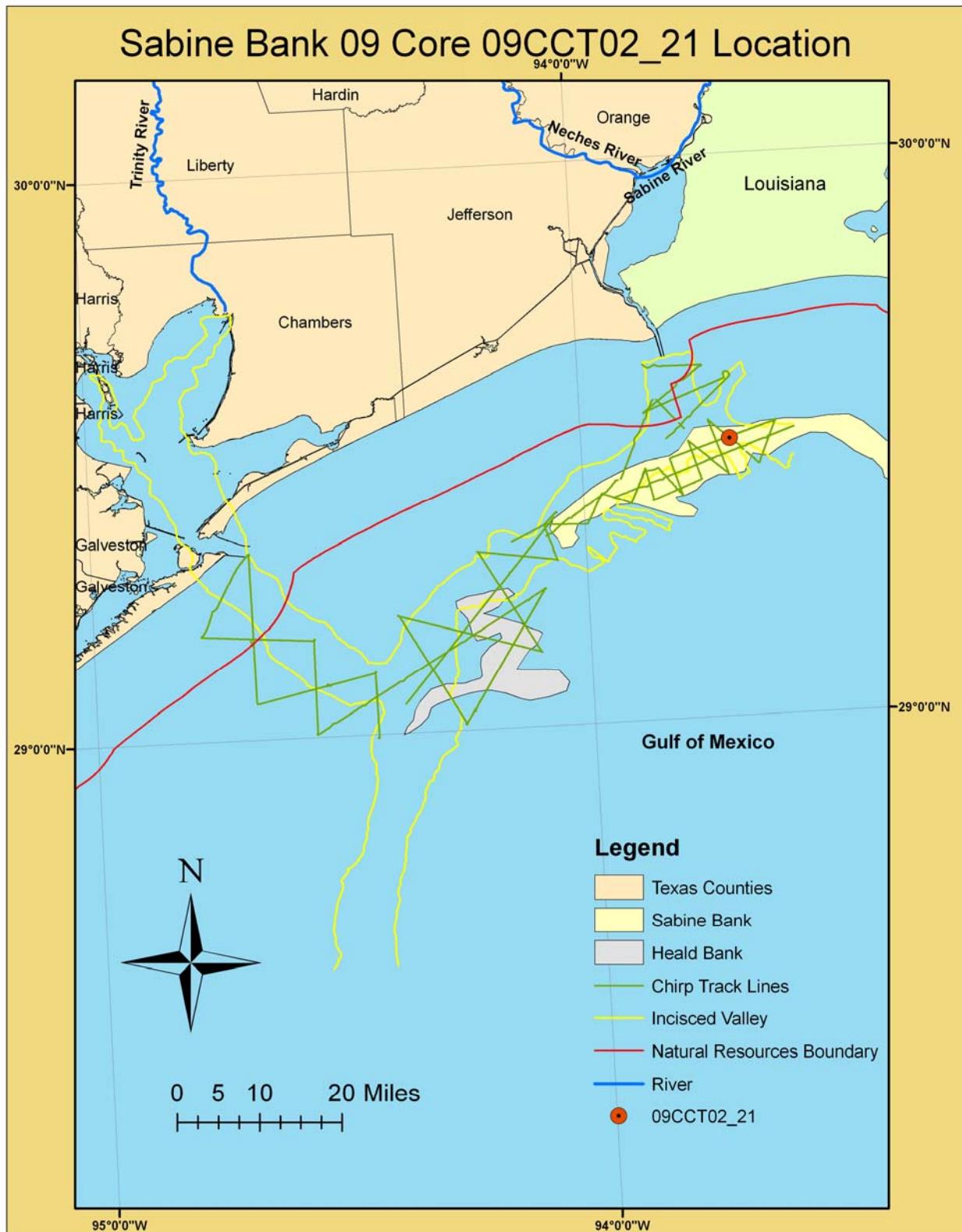
Core#: 09CCT02-20-04

Core Date: 19-Jun-09

Date Split/subsampled	Length: 117 cm
25-Jun-09	E: 4389 L06
	N: 32160632

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
354-357		354-357cm	
357-359	Gley 2		<u>354-357 cm</u> Dark grey compacted silt
360-364		5/10 BG	
364-369			
369-374		357-360cm	
374-379			<u>357-360cm</u> Dark grey compacted silt w/ big shell
379-384	Gley 2		
384-389		4/10 G	
389-394			
394-399		360-460cm	
399-404			<u>360-460cm</u> Dark grey compacted sandy silt w/ pockets of sand
404-409	Gley 2		
409-414		4/10 BG	
414-419			
419-424		460-471cm	
424-429			<u>460-471 cm</u> Dark grey compacted sandy silt w/ shell
429-434	Gley 2		
434-439		4/10 BG	
439-444			
444-449			
449-454			
454-459			
460-464			
464-469			
469-471			

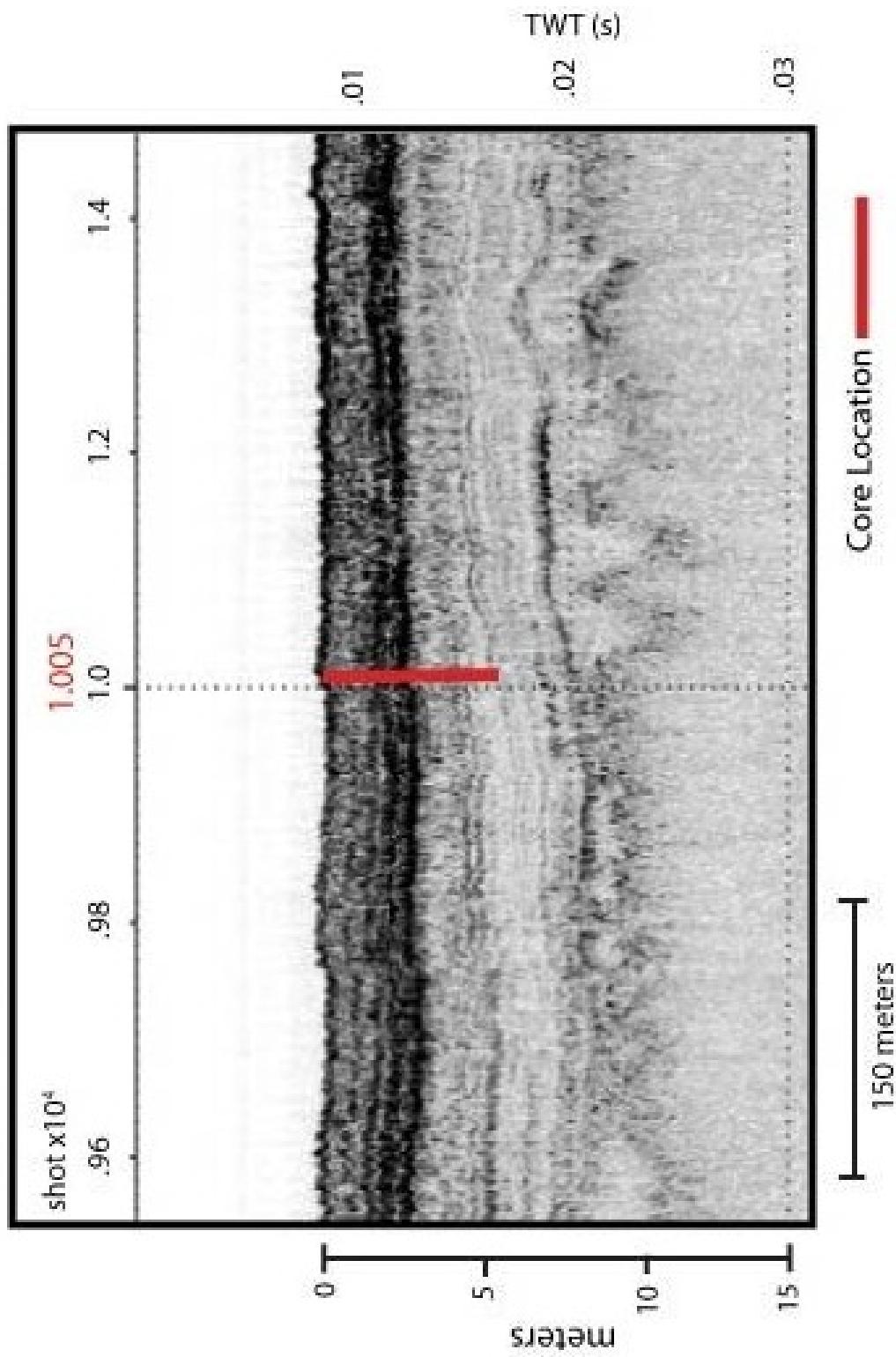
09CCT02_21 Core Location



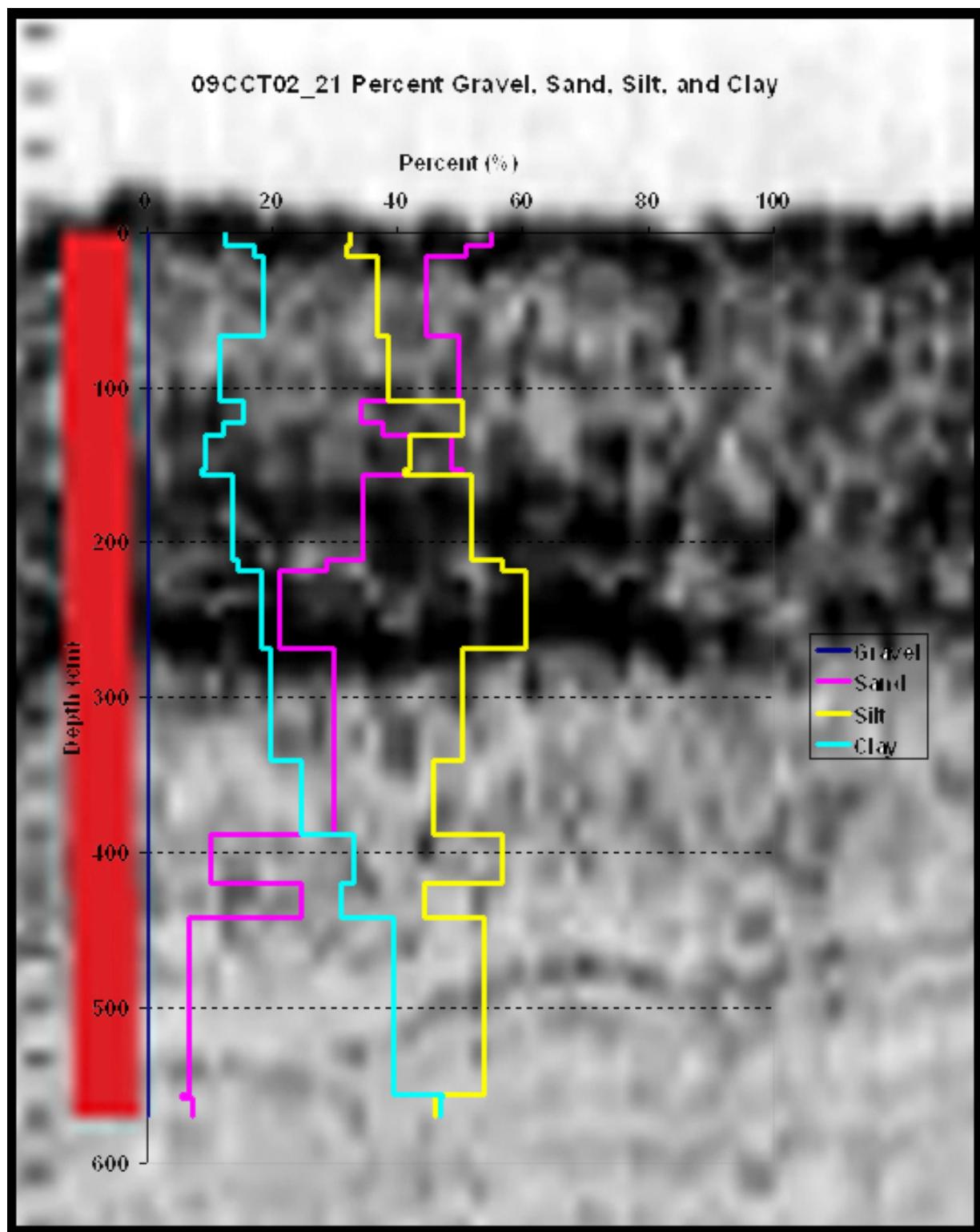
Project: 09CCT02
Transect: 09C26

Core: 09CCT02_21
Core Length (m) : 5.69

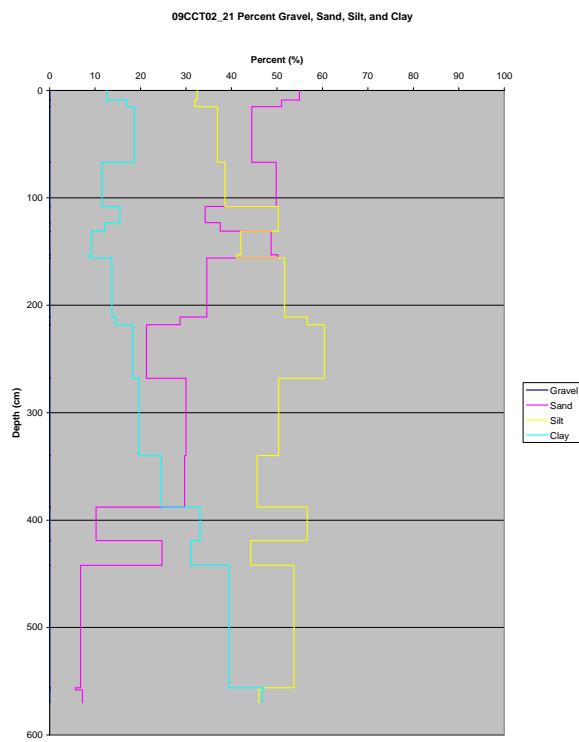
09CCT02_21 Seismic



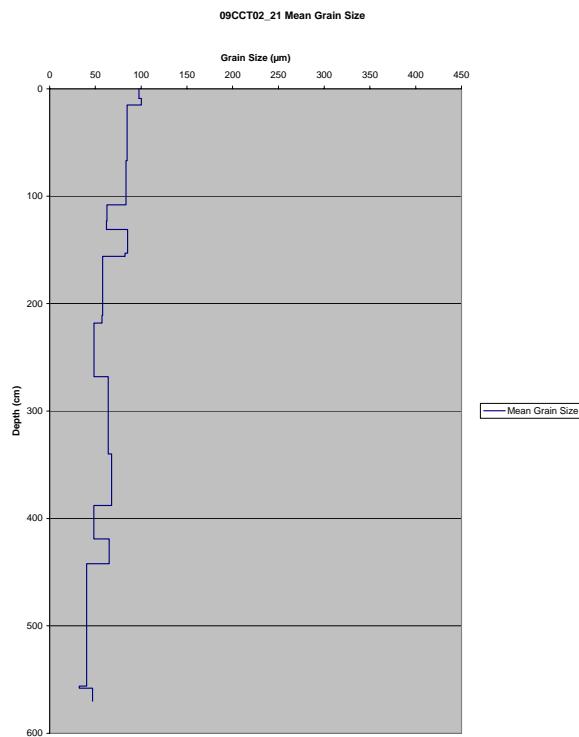
09CCT02_21 Seismic



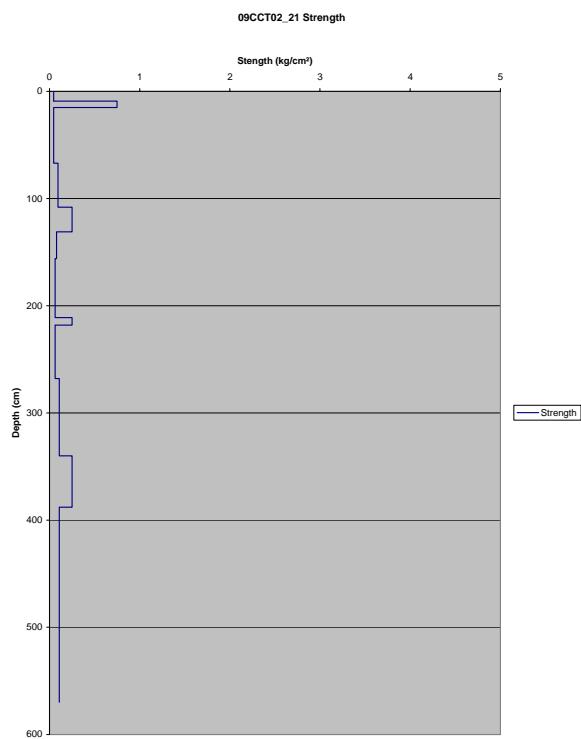
09CCT02_21 Percent Grains Size Distribution Graph



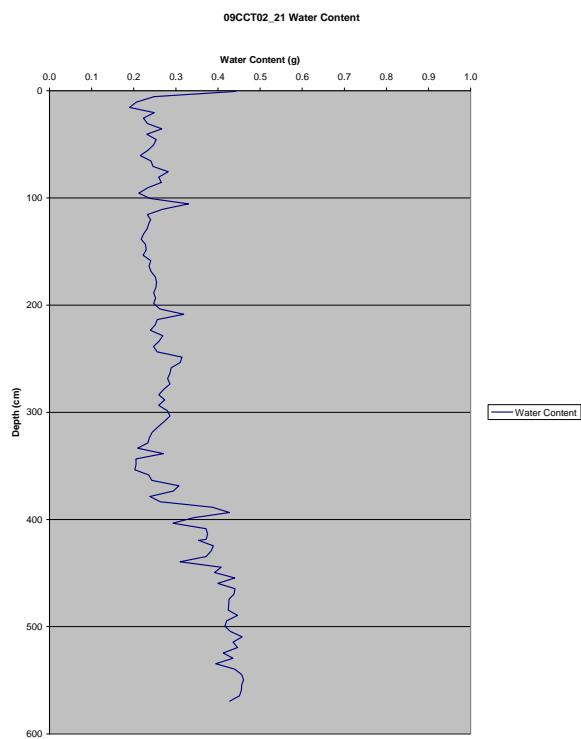
09CCT02_21 Mean Grain Size Distribution Graph



09CCT02_21 Strength Graph



09CCT02_21 Water Content Graph



09CCT02_21 Grain Size Sand Percent Table

09CCT02_21 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 (%)
5-9	87.81	11.91	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
10-15	85.44	11.90	0.85	0.59	0.52	0.35	0.19	0.10	0.04	0.02	100
50-55	88.07	7.52	1.73	1.11	0.76	0.43	0.23	0.10	0.03	0.02	100
90-95	91.54	6.57	1.03	0.38	0.24	0.17	0.06	0.00	0.00	0.00	100
110-115	90.64	6.76	1.77	0.52	0.13	0.10	0.08	0.01	0.00	0.00	100
128-131	94.77	4.94	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
143-148	91.45	6.57	0.75	0.46	0.38	0.25	0.13	0.02	0.00	0.00	100
153-156	93.65	3.55	1.29	0.82	0.47	0.20	0.02	0.00	0.00	0.00	100
188-193	95.30	1.55	2.00	0.94	0.21	0.00	0.00	0.00	0.00	0.00	100
213-218	90.98	4.36	2.53	1.30	0.62	0.20	0.01	0.00	0.00	0.00	100
253-258	89.06	4.67	3.40	1.92	0.83	0.12	0.00	0.00	0.00	0.00	100
313-318	89.20	6.51	1.10	0.88	0.77	0.60	0.43	0.27	0.16	0.08	100
378-383	85.42	7.25	2.33	2.33	1.58	0.83	0.23	0.03	0.00	0.00	100
403-408	58.53	9.39	10.57	9.20	6.25	3.52	1.75	0.54	0.22	0.05	100
434-439	82.15	7.39	2.61	2.64	2.06	1.38	0.87	0.49	0.28	0.13	100
489-494	38.45	10.22	20.58	17.19	9.69	3.51	0.37	0.00	0.00	0.00	100
556-559	60.12	6.83	12.36	10.59	6.43	2.86	0.81	0.02	0.00	0.00	100
558-564	27.70	12.93	22.58	18.41	10.74	5.25	2.07	0.32	0.00	0.00	100

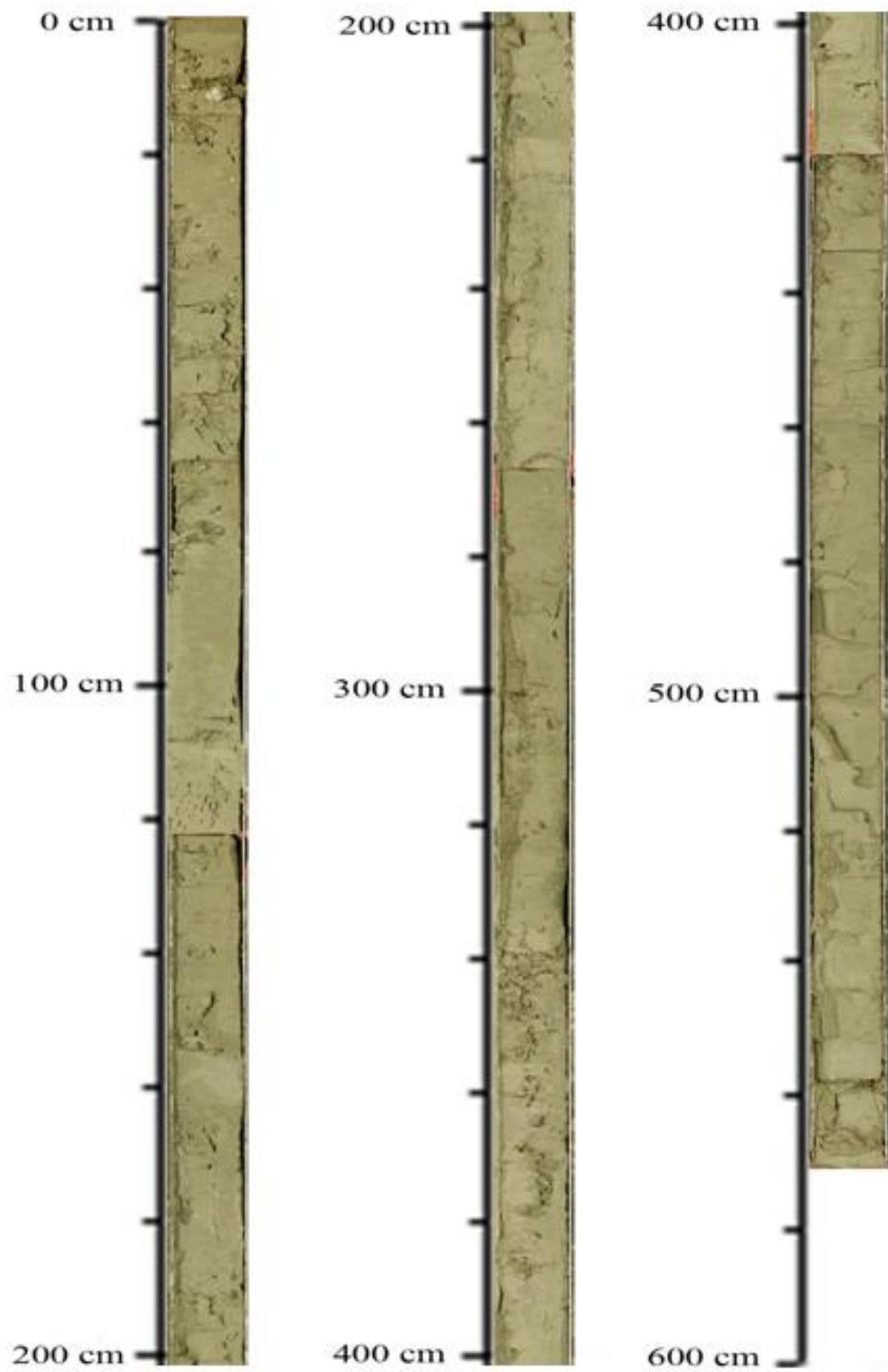
09CCT02-21											
Depth (cm)	63-82µm (%)	82-101µm (%)	101-120µm (%)	120-139µm (%)	139-158µm (%)	158-177µm (%)	177-196µm (%)	196-215µm (%)	215-234µm (%)	234-257µm (%)	Total (%)
5-9	5.26	5.52	6.74	8.12	9.59	11.05	12.37	13.38	14.04	13.92	100
10-15	5.37	5.68	6.98	8.45	10.01	11.53	12.81	13.54	12.25	13.38	100
50-55	2.90	3.13	3.98	5.10	6.59	8.58	11.29	14.92	24.07	19.46	100
90-95	2.41	2.59	3.30	4.27	5.65	7.63	10.57	14.89	27.80	20.89	100
110-115	1.81	1.81	2.22	2.85	3.89	5.66	8.78	14.16	35.84	22.99	100
128-131	1.64	1.75	2.24	2.98	4.14	6.01	9.15	14.38	34.93	22.77	100
143-148	2.68	2.89	3.66	4.66	5.99	7.82	10.45	14.33	27.52	19.99	100
153-156	1.35	1.58	2.21	3.16	4.62	6.86	10.34	15.55	31.44	22.88	100
188-193	0.03	0.21	0.52	1.16	2.42	4.72	8.79	15.61	40.35	26.19	100
213-218	0.72	0.69	0.87	1.28	2.14	3.89	7.34	13.81	43.91	25.34	100
253-258	0.70	0.66	0.83	1.20	2.00	3.65	6.96	13.33	45.56	25.11	100
313-318	2.70	2.91	3.69	4.69	5.98	7.71	10.18	13.85	28.69	19.60	100
378-383	3.49	3.89	5.01	6.40	8.05	9.93	12.01	14.25	20.23	16.74	100
403-408	1.99	1.78	1.93	2.21	2.73	3.79	6.08	11.06	46.47	21.98	100
434-439	3.63	4.07	5.28	6.80	8.60	10.63	12.77	14.73	17.31	16.18	100
489-494	0.42	0.50	0.54	0.69	1.38	3.18	6.06	11.42	52.36	23.46	100
556-559	0.13	0.00	0.41	1.42	2.05	3.50	6.46	12.29	49.57	24.18	100
558-564	2.49	2.24	2.79	3.74	5.18	7.22	10.06	13.85	32.69	19.73	100

09CCT02_21 Tables

Mean Grain Size 09CCT02-21	
Depth (cm)	Mean Grain Size (μm)
5-9	97.74
10-15	100.16
50-55	84.66
90-95	83.59
110-115	62.71
128-131	62.03
143-148	85.34
153-156	82.41
188-193	57.96
213-218	57.27
253-258	48.55
313-318	64.19
378-383	67.66
403-408	48.44
434-439	65.04
489-494	40.43
556-559	32.39
558-564	47.00

Strength 09CCT02-21	
Interval (cm)	Strength (kg/cm^2)
0-9	0.0469
9-15	0.7500
15-67	0.0469
67-108	0.0938
108-123	0.2500
0-8	0.2500
8-30	0.0781
30-33	0.0781
333-88	0.0625
88-95	0.2500
95-145	0.0625
0-72	0.1094
72-120	0.2500
120-151	0.1094
0-23	0.1094
23-138	0.1094
138-139	0.1094
139-151	0.1094

09CCT02_21 Core Pictures



09CCT02_21 Core Log

Core #: 09CCT02-21-01

Core Date: 19-Jun-09

Date Split/subsampled	Length: 123 cm
26-Jun-09	E: 432190
	N: 3262893

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
0-5	0-9cm		
5-9	7.5YR		
9-10	2.5YR		
10-15	2.5YR		
15-20	2.5YR		
20-25	9-15cm		
25-30	2.5YR		
30-35	2.5YR		
35-40	2.5YR		
40-45	15-67cm		
45-50	Gley 2		
50-55	3/10G		
55-60	3/10G		
60-65	67-108cm		
65-72	Gley 2		
72-78	4/10B		
78-80	4/10B		
80-85	108-123cm		
85-90	Gley 2		
90-95	3/5 BG		
95-100			
100-105			
105-108			
108-110			
110-115			
115-120			
120-123			

09CCT02_21 Core Log

Core#: 09CCT02-21-02

Core Date: 19-Jun-09

Date Split/subsampled	Length: 145 cm
	E: 432170
26-Jun-09	N: 3262893

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
123-128	123-131cm		123-131 cm Dark grey sandy silt w/sparse shells
128-131	Grey 2		
131-133	3/10G		
133-138			
138-143			
143-148	131-153cm		131-153 cm Dark grey sandy silt
148-153	Grey 2		
153-156	3/5 BG		
156-158			
158-163	153-156cm		153-156 cm Dark grey silty sand
163-168	Grey 2		
168-173	4/10B		
173-178			
178-183	156-211cm		156-211 cm Dark grey clay silt
183-188	Grey 2		
188-193	4/10 G		
193-198			
198-203	211-218cm		211-218 cm Dark grey silty sand
203-208	Grey 2		
208-214	3/5 B		
211-213			
213-212	218-268cm		218-268 cm Dark grey compacted clay silt
212-213	Grey 2		
213-228	4/5 B		
222-223			
233-238			
238-243			
243-248			
248-253			
253-258			
258-263			
263-268			

09CCT02_21 Core Log

Core#: 09CCT02-21-03

Core Date: 19-Jun-09

Date Split/subsampled	Length: 151 cm
26-Jun-09	E: 432170
	N: 32 62 893

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
268-273	268-340cm		268-340 cm Dark grey silty
273-278	Grey 2		clay
278-283	4/5 B		
283-288			
288-293	340-388cm		340-388 cm Dark grey Sandy
293-298	Grey 2		Sandy silt and shell hash
298-303	3/5 BG		
303-308			
308-313	388-419		388-419 cm Dark grey silty
312-318	Grey 2		clay w/ shell hash
318-323	5/10 BG		
323-328			
328-333			
333-338			
338-340			
340-343			
343-348			
348-353			
353-358			
358-363			
363-368			
368-373			
373-378			
378-383			
383-388			
388-393			
393-398			
398-403			
403-408			
408-413			
413-418			

09CCT02_21 Core Log

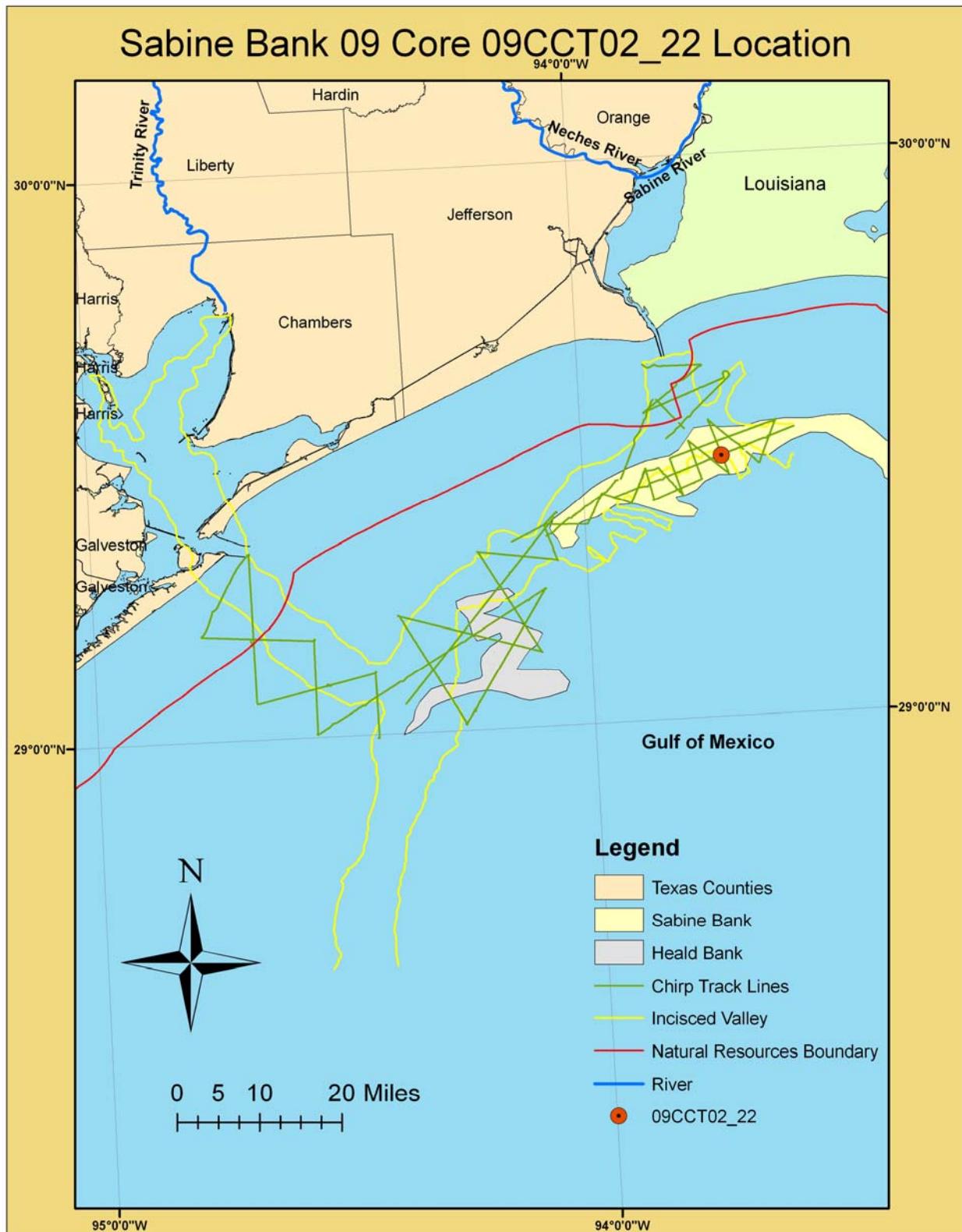
Core #: 09CCT02-21-04

Core Date: 19-Jun-09

Date Split/subsampled	Length:
<u>26-Jun-09</u>	<u>151 cm</u>
	E: 432170 N: 3262893

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
419-424	419-442cm		<u>419-442 cm</u> Grey Silty clay
424-429	Gley 2		w/trace of sparse shell
429-434	5/10 BG		
434-439			
439-442	442-556cm		<u>442-556cm</u> Grey Compacted
442-444	Gley 2		clay
444-449	5/10 B		
449-454			
454-459	556-558cm		<u>556-558 cm</u> Grey clay sand
459-464	Gley 2		
464-469	3/10 G		
469-474			
474-479	558-570cm		
479-484	Gley 2		<u>558-570cm</u> Grey Compacted
484-489	5/10 B		clay
489-494			
494-499			
499-504			
504-509			
509-514			
514-519			
519-524			
524-529			
529-534			
534-539			
539-544			
544-549			
549-554			
554-556			
556-558			
558-559			
559-564			
564-569			

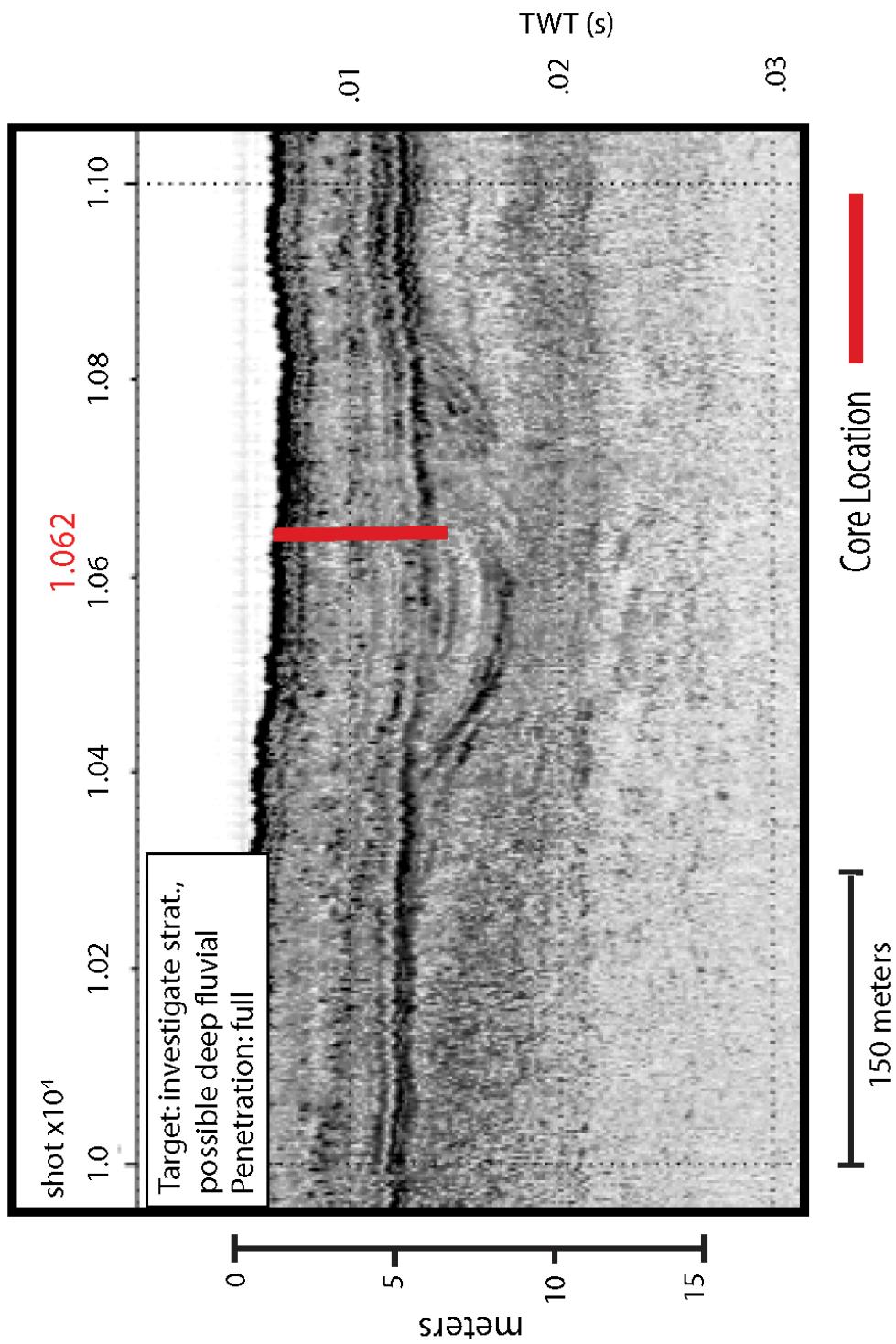
09CCT02_22 Core Location



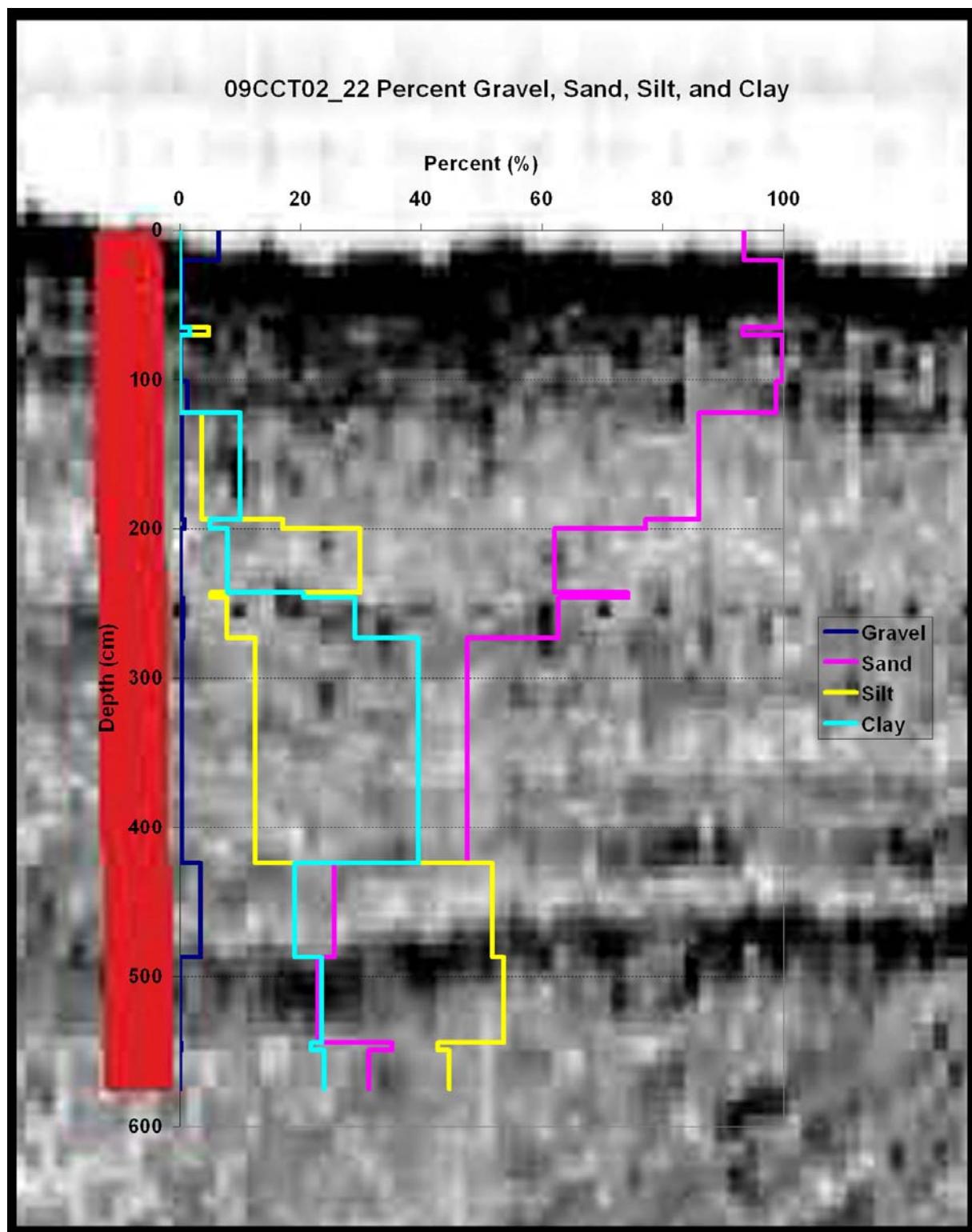
09CCT02_22 Seismic

Project: 09CCT02
Transect: 09C26

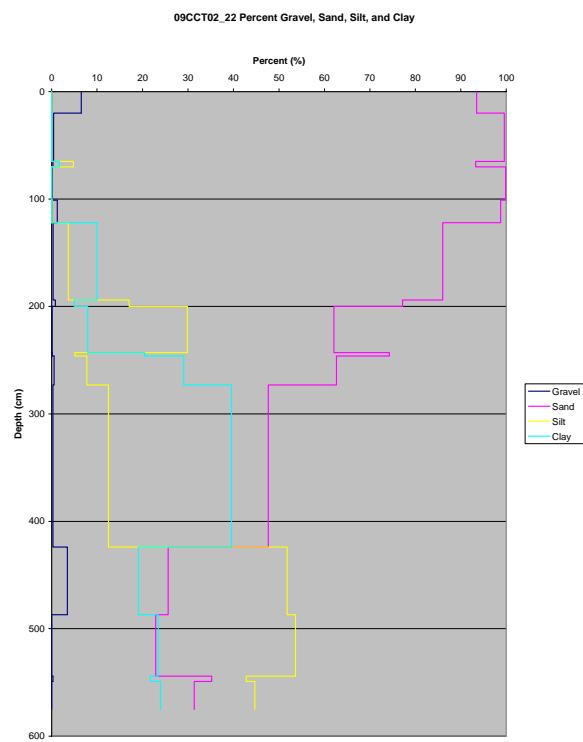
Core:09CCT02_22
Core Length (m) :5.69



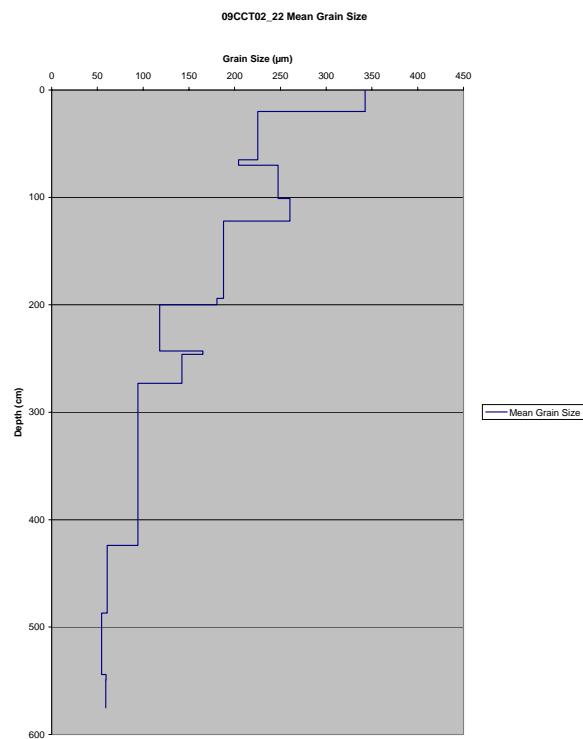
09CCT02_22 Seismic



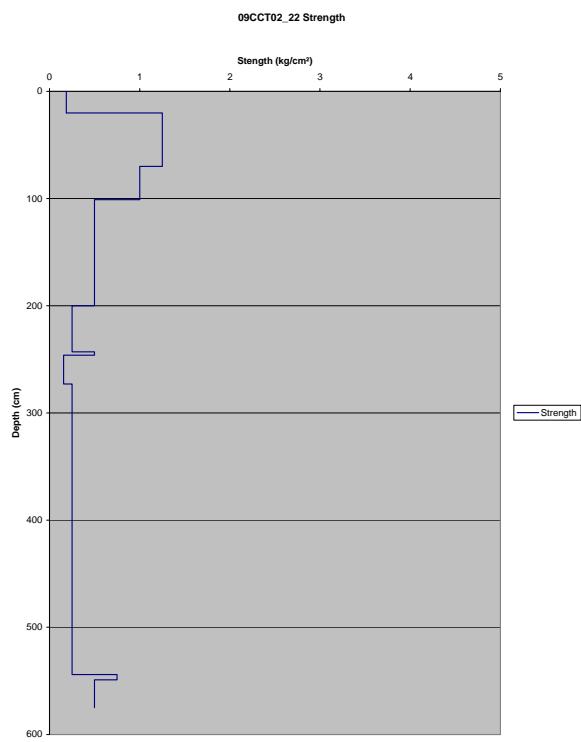
09CCT02_22 Percent Grain Size Distribution Graph



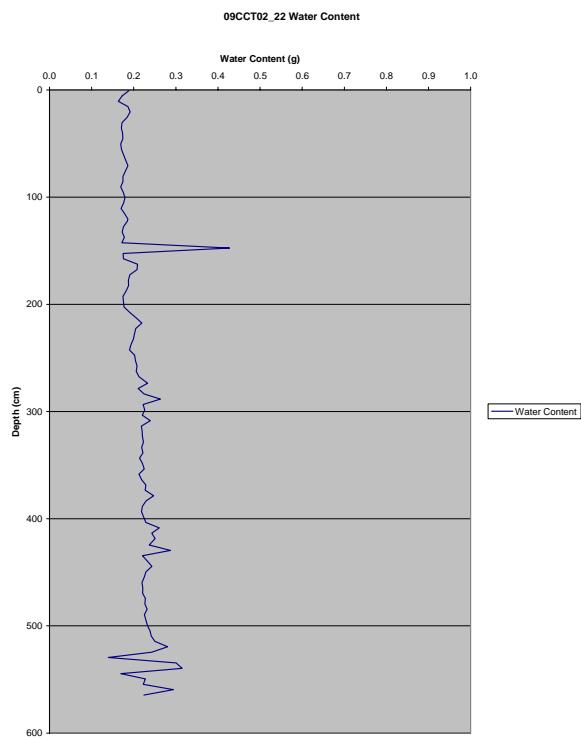
09CCT02_22 Mean Grain Size Distribution



09CCT02_22 Strength Graph



09CCT02_22 Water Content Graph



09CCT02_22 Grain Size Sand Percent Table

09CCT02_22 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 (%)
10-15	49.60	32.09	8.44	3.63	2.38	1.64	1.07	0.65	0.34	0.17	100
45-50	69.62	28.65	1.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
65-70	72.46	26.32	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
90-95	64.81	30.34	3.65	0.20	0.17	0.25	0.24	0.18	0.10	0.06	100
105-110	64.51	29.12	3.55	0.52	0.55	0.60	0.50	0.36	0.19	0.11	100
167-172	75.06	22.22	1.74	0.16	0.22	0.22	0.17	0.11	0.07	0.03	100
197-202	77.31	16.92	1.75	0.93	0.99	0.83	0.59	0.38	0.19	0.11	100
237-242	86.54	10.93	0.89	0.49	0.47	0.34	0.20	0.09	0.03	0.02	100
243-246	79.57	15.11	1.77	0.90	0.86	0.71	0.50	0.32	0.16	0.10	100
262-267	82.72	11.70	0.82	0.80	1.12	1.04	0.79	0.55	0.29	0.17	100
348-353	88.11	8.56	0.87	0.62	0.61	0.50	0.37	0.20	0.11	0.06	100
469-474	89.88	4.03	1.35	1.37	1.16	0.87	0.61	0.38	0.23	0.11	100
514-519	87.80	3.98	2.42	2.48	1.81	1.04	0.40	0.06	0.00	0.00	100
544-549	95.30	4.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
559-564	92.57	5.66	0.21	0.47	0.43	0.29	0.18	0.10	0.05	0.03	100

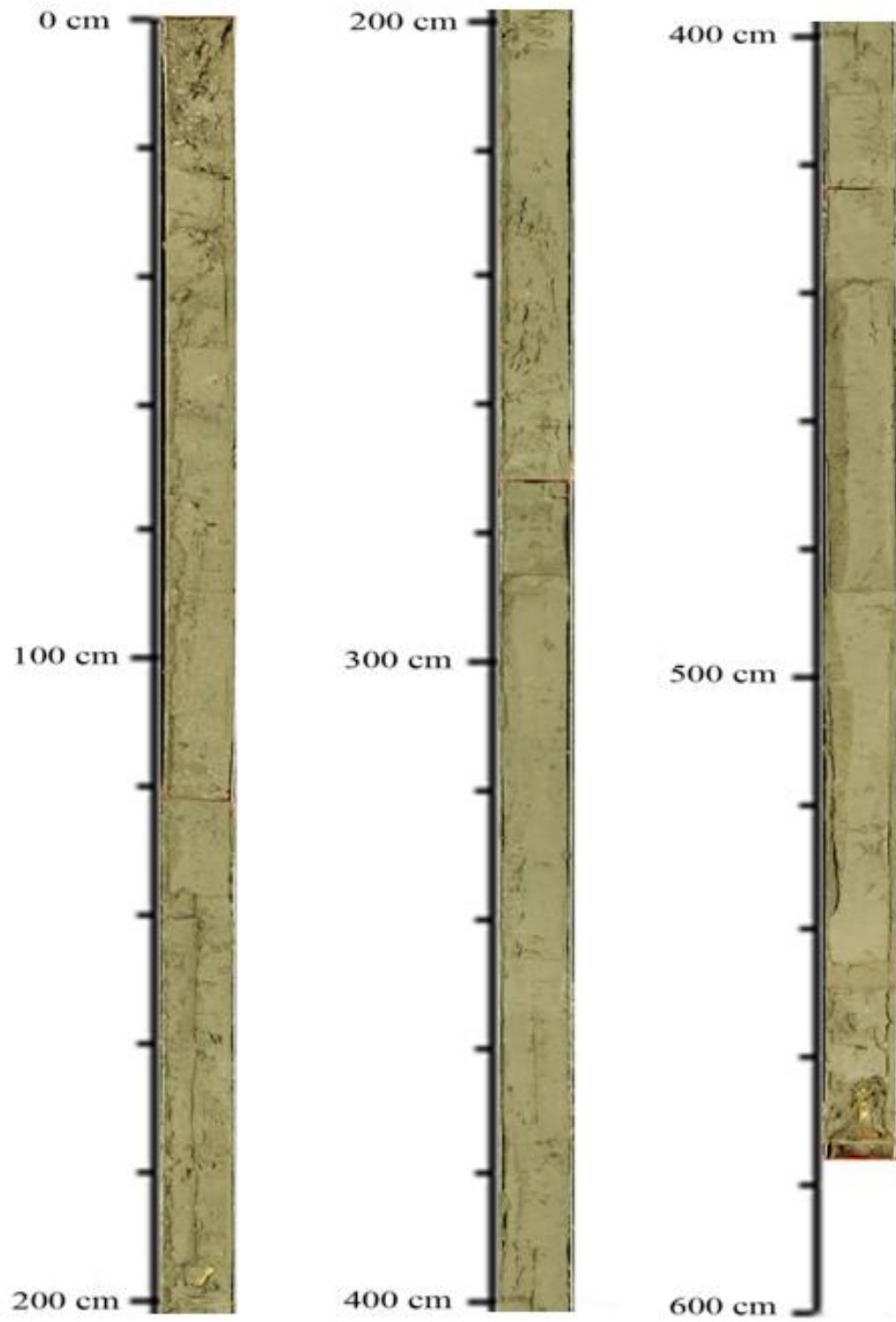
09CCT02-22											
Depth (cm)	63-82µm (%)	82-101µm (%)	101-120µm (%)	120-139µm (%)	139-158µm (%)	158-177µm (%)	177-196µm (%)	196-215µm (%)	215-234µm (%)	234-257µm (%)	Total (%)
10-15	14.47	13.10	13.87	14.18	13.79	12.46	9.94	6.25	0.00	1.93	100
45-50	12.56	12.04	13.32	14.16	14.23	13.19	10.75	6.97	0.10	2.68	100
65-70	11.60	11.27	12.63	13.64	13.97	13.30	11.28	7.91	0.59	3.81	100
90-95	12.46	11.70	12.81	13.58	13.76	13.05	11.14	7.83	0.17	3.51	100
105-110	12.24	11.56	12.71	13.54	13.78	13.13	11.27	7.98	0.18	3.61	100
167-172	9.19	9.05	10.38	11.62	12.57	12.95	12.40	10.60	3.77	7.46	100
197-202	7.21	7.28	8.56	9.89	11.11	12.04	12.43	12.01	8.82	10.65	100
237-242	4.73	5.00	6.16	7.53	9.04	10.65	12.26	13.74	15.95	14.94	100
243-246	6.30	6.43	7.66	9.00	10.34	11.55	12.43	12.74	11.27	12.29	100
262-267	5.16	5.37	6.52	7.82	9.23	10.68	12.09	13.36	15.36	14.41	100
348-353	3.72	4.00	5.01	6.27	7.76	9.54	11.64	14.14	20.78	17.13	100
469-474	1.79	2.05	2.74	3.70	5.05	6.98	9.87	14.31	32.24	21.27	100
514-519	1.62	1.86	2.50	3.42	4.74	6.68	9.65	14.30	33.51	21.72	100
544-549	3.21	3.77	5.05	6.64	8.53	10.64	12.85	14.91	17.88	16.52	100
559-564	3.24	3.72	4.90	6.37	8.13	10.15	12.38	14.67	19.50	16.94	100

09CCT02_22 Tables

Mean Grain Size 09CCT02-22	
Depth (cm)	Mean Grain Size (μm)
10-15	342.57
45-50	225.39
65-70	204.30
90-95	247.35
105-110	260.34
167-172	187.74
197-202	180.72
237-242	118.15
243-246	165.21
262-267	142.40
348-353	94.24
469-474	60.69
514-519	54.55
544-549	59.41
559-564	59.10

Strength 09CCT02-22	
Interval (cm)	Strength (kg/cm^2)
0-20	0.1875
20-65	1.2500
65-70	1.2500
70-101	1.0000
101-122	0.5000
0-72	0.5000
72-78	0.5000
78-121	0.2500
121-124	0.5000
124-151	0.1562
0-151	0.2500
0-63	0.2500
63-120	0.2500
120-125	0.7500
125-151	0.5000

09CCT02_22 Core Pictures



09CCT02_22 Core Logs

Core #: 09CCT02-22-01

Core Date: 19-Jun-09

Date Split/subsampled	Length:
24-Jun-09	122 cm
	E: 430345 N: 3259602

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
0 - 5		0-20 cm	
5 - 10		Gley 2	
10 - 15		2.5/10G	
15 - 20			0-20 cm Dark grey sand w/shells
20 - 25			
25 - 30			
30 - 35		20-65 cm	
35 - 40		Gley 2	
40 - 45		3/10G	
45 - 50			20-65 cm Grey sand compacted w/sparse shells
50 - 55			
55 - 60		65-70 cm	
60 - 65		Gley 2	
65 - 70		3/5 B	
70 - 75			65-70 cm Dark grey silty sand
75 - 80			
80 - 85		70-101cm	
85 - 90		Gley 2	
90 - 95		4/5 BG	
95 - 100			70-101 cm Grey compacted sand w/sparse shells
101 - 105			
105 - 110		101-122cm	
110 - 115		Gley 2	
115 - 120		4/5 BG	
120 - 122			101-122 cm Grey soft sand w/sparse shells

09CCT02_22 Core Logs

Core#: 09CCT02 - 22-02

Core Date: 19-Jun-09

Date Split/subsampled	Length:
<u>24-Jun-09</u>	<u>151 cm</u>
	E: <u>430345</u>
	N: <u>3259602</u>

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
122-127	122-194cm		122-194 cm Grey sand
127-132	Gley 2		w/sparse shells
132-137	4/5 BG		
137-142			
142-147			
147-152	194-200cm		194-200 cm Grey sand
152-157	Gley 2		w/big shale
157-162	4/5 BG		
162-167			
167-172			
172-177	200-243cm		200-243 cm Grey Silty Sand
177-182	Gley 2		
182-187	5/10 B		
187-192			
192-194			
194-197	243-246cm		243-246 cm small shells
197-200	Gley 2		w/grey silty sand
200-202	4/5 BG		
202-207			
207-212	246-273cm		246-273 cm Grey silt
212-217	Gley 2		w/sparse shell
217-222	4/5 BG		
222-227			
227-232			
232-237			
237-242			
242-244			
244-246			
246-247			
247-252			
252-257			
257-262			
262-267			
267-262			

09CCT02_22 Core Logs

Core#: 09CCT02_22-03

Core Date: 19-Jun-09

Date Split/subsampled	Length:
	<u>151 cm</u>
<u>25-Jun-09</u>	E: 430345 N: 3259602

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
273-278	273-424cm		
278-283	Grey 2		
283-288	315 BG		
288-293			
293-298			
298-303			
303-308			
308-312			
312-318			
318-323			
323-328			
328-333			
333-338			
338-343			
343-348			
348-353			
353-358			
358-363			
363-368			
368-373			
373-378			
378-383			
383-388			
388-393			
393-398			
398-403			
402-408			
408-413			
413-418			
418-423			

09CCT02_22 Core Logs

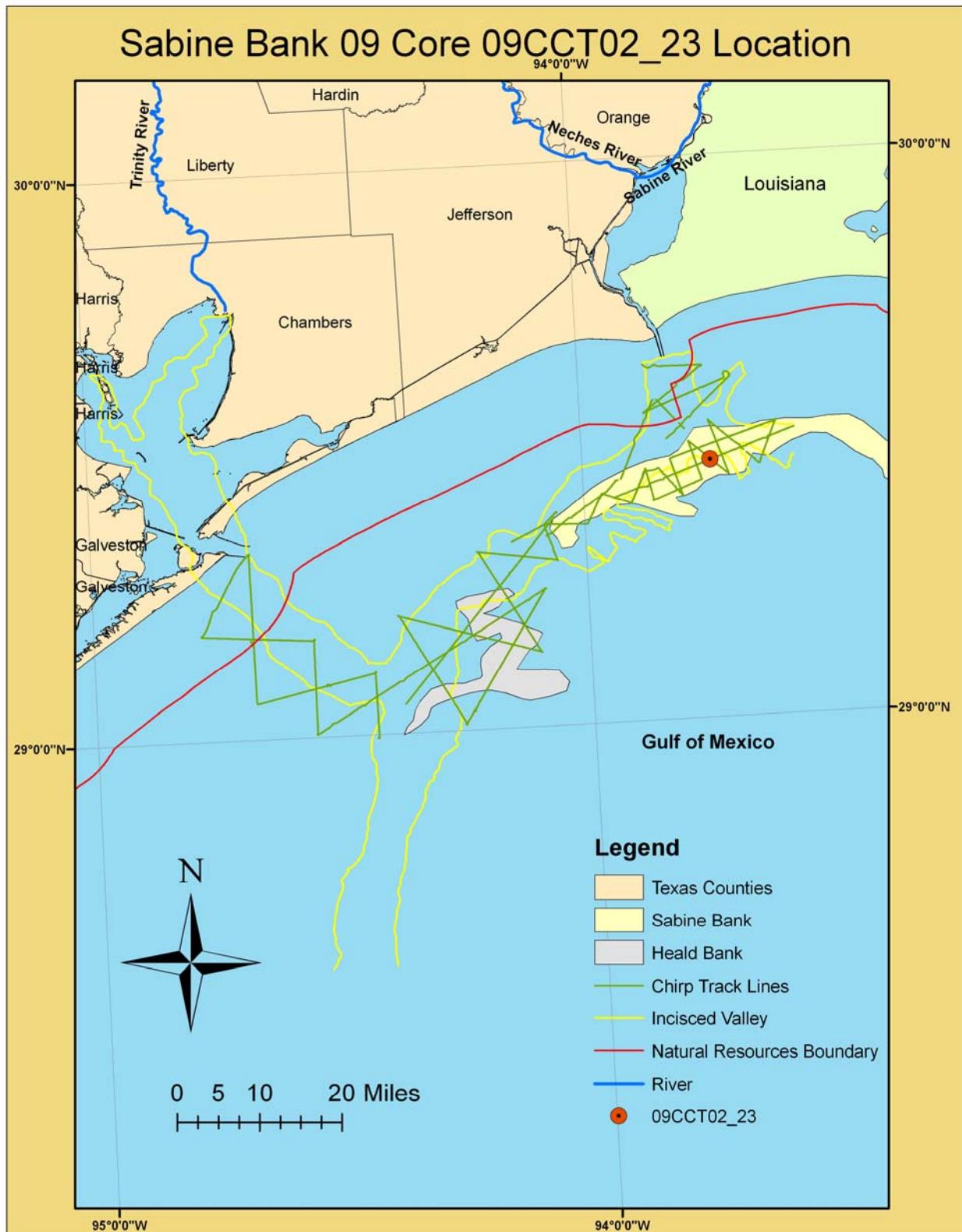
Core #: 09CCT02-22-04

Core Date: 19-Jun-09

Date Split/subsampled	Length:
<u>25-Jun-09</u>	<u>151 cm</u>
	E: <u>430345</u> N: <u>3259602</u>

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
424-429	424-487cm		424-487cm Dark grey
429-434	Gley 2		compacted silt
434-439	4/5 B		
439-444			
444-449			
449-454			
454-459			
459-464			
464-469			
469-474			
474-479			
479-484			
484-489			
489-494			
494-500			
500-504			
504-509			
509-514			
514-519			
519-524			
524-529			
529-534			
534-539			
539-544			
544-549			
549-554			
554-559			
559-564			
564-569			
569-574			

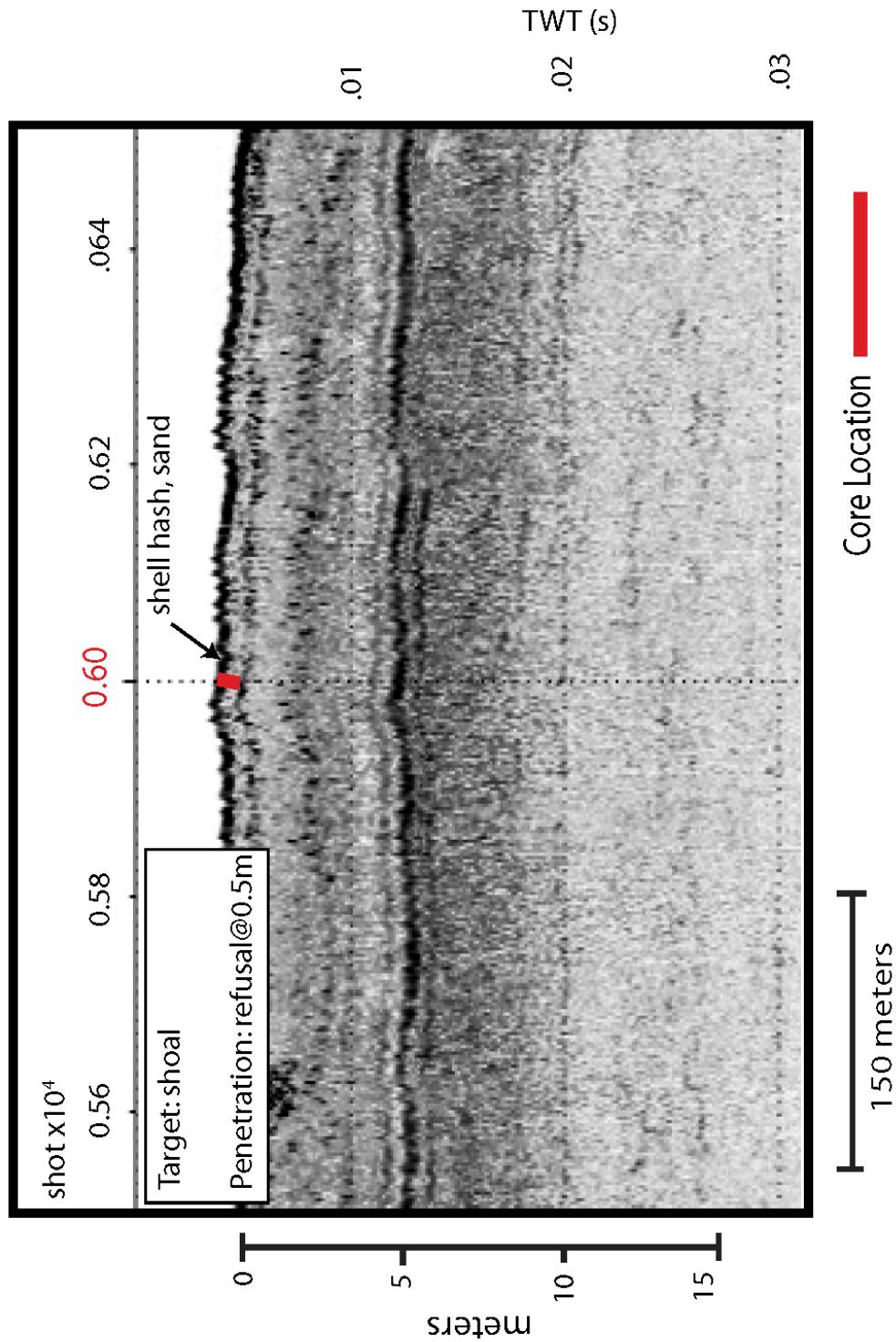
09CCT02_23 Core Location



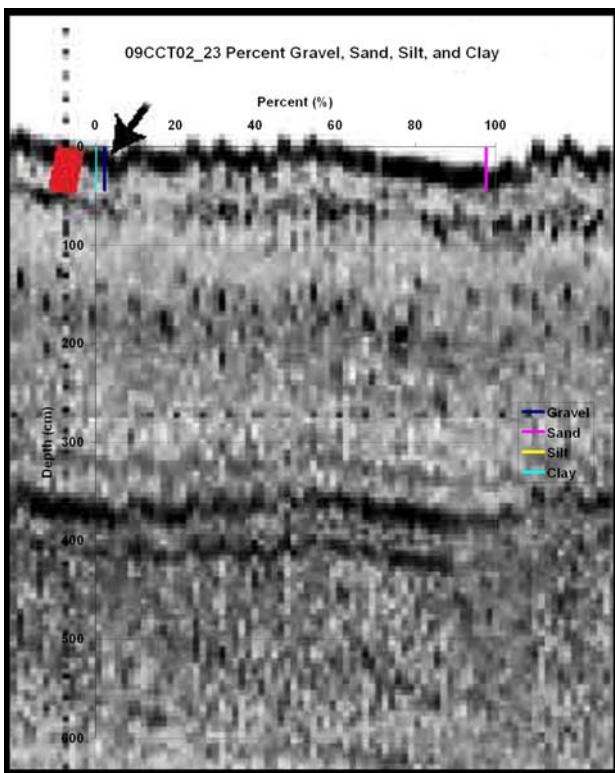
09CCT02_23 Seismic

Project: 09CCT02
Transect: 09C39

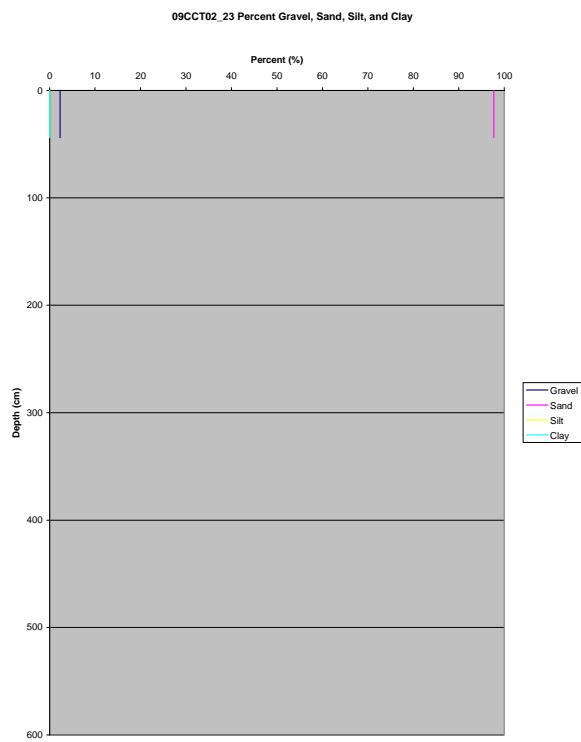
Core: 09CCT02_23
Core Length (m) : 0.43



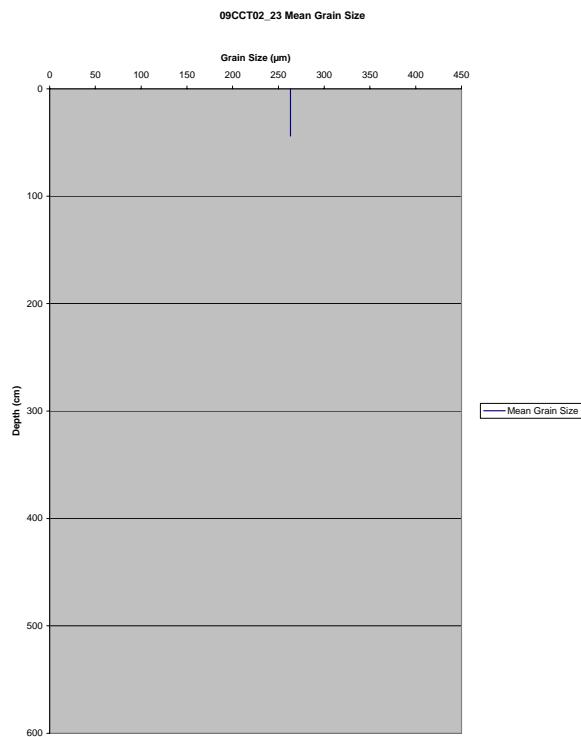
09CCT02_23 Seismic



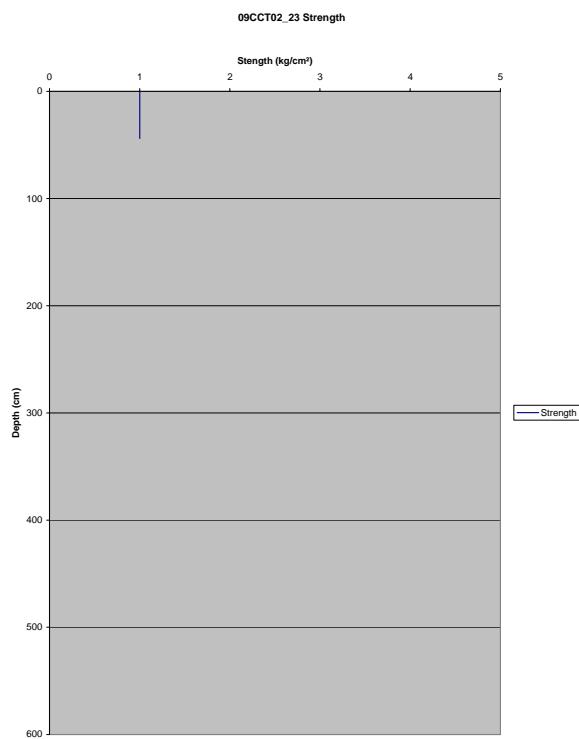
09CCT02_23 Percent Grain Size Distribution Graph



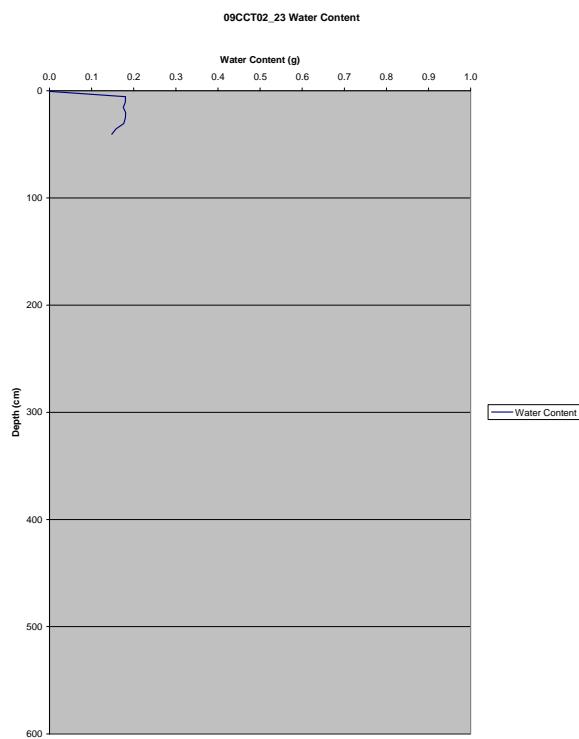
09CCT02_23 Mean Grain Size Distribution Graph



09CCT02_23 Strength Graph



09CCT02_23 Water Content Graph



09CCT02_23 Grain Size Sand Percent

09CCT02_23 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 (%)
20-25	54.84	39.98	5.10	0.08	0.00	0.00	0.00	0.00	0.00	0.00	100

09CCT02-23

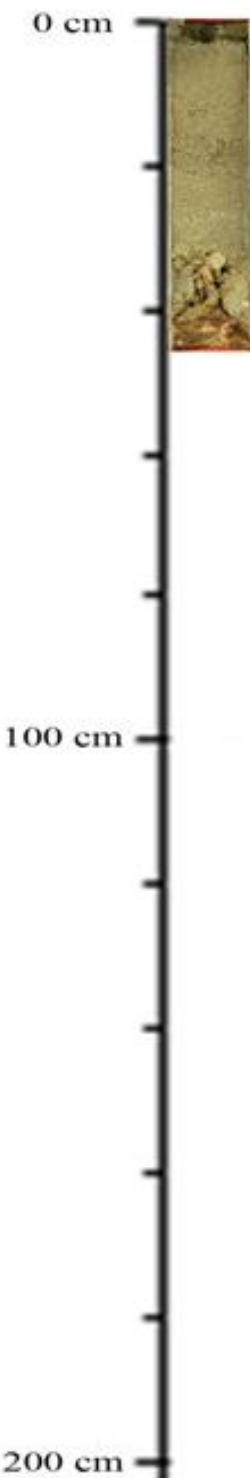
Depth (cm)	63- 82 μm (%)	82- 101 μm (%)	101- 120 μm (%)	120- 139 μm (%)	139- 158 μm (%)	158- 177 μm (%)	177- 196 μm (%)	196- 215 μm (%)	215- 234 μm (%)	234- 257 μm (%)	Total (%)
20-25	17.34	15.39	15.80	15.39	13.90	11.25	7.45	3.32	0.00	0.16	100

09CCT02_23 Tables

Mean Grain Size 09CCT02-23	
Depth (cm)	Mean Grain Size (μm)
20-25	263.23

Strength 09CCT02-23	
Interval (cm)	Strength (kg/cm ²)
0-44	1.0000

09CCT02_23 Core Picture



09CCT02_23 Core Log

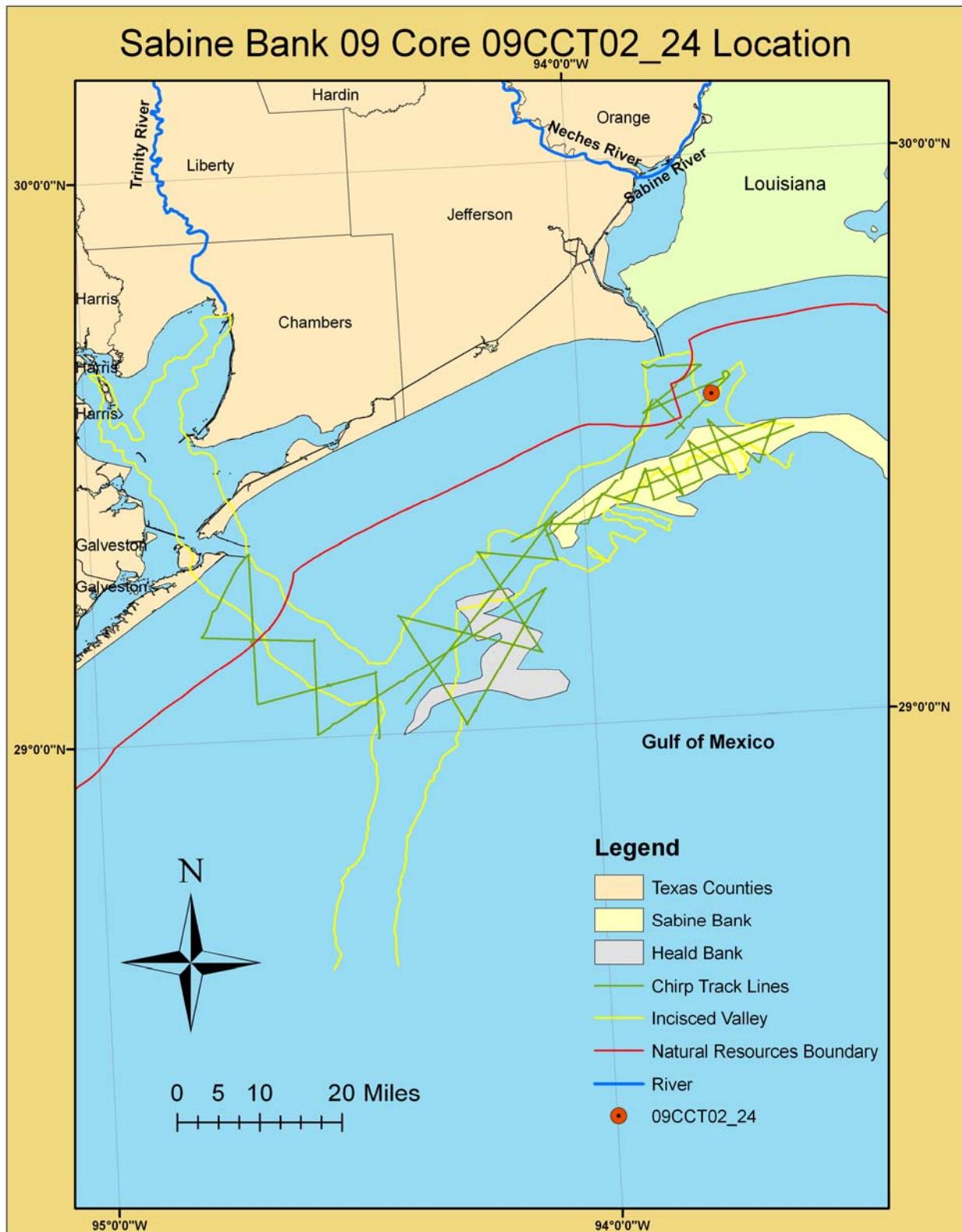
Core#: 09CCT02_23

Core Date: 19-Jun-09

Date Split/subsampled	Length: <u>44cm</u>
	E: <u>428125</u>
	N: <u>3258979</u>

Grain Size Samples:		Munsell Soil Color	Depths Sampled	Description:
0 - 5 5 - 10 10 - 15 15 - 20 20 - 25 25 - 30 30 - 35 35 - 40 40 - 44		0-44cm 10 yr 5/2		0-44cm Brown sand w/shells

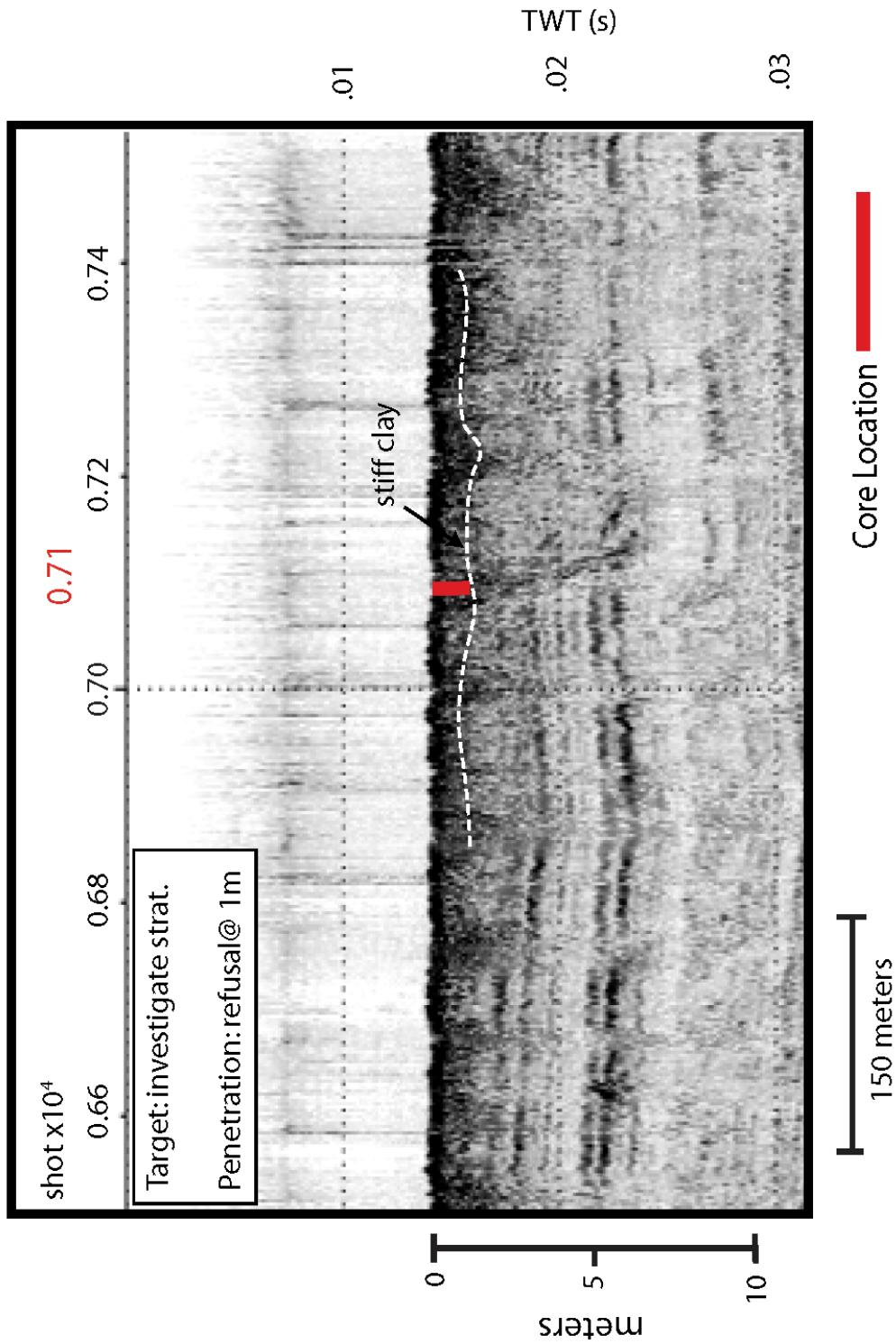
09CCT02_24 Core Location



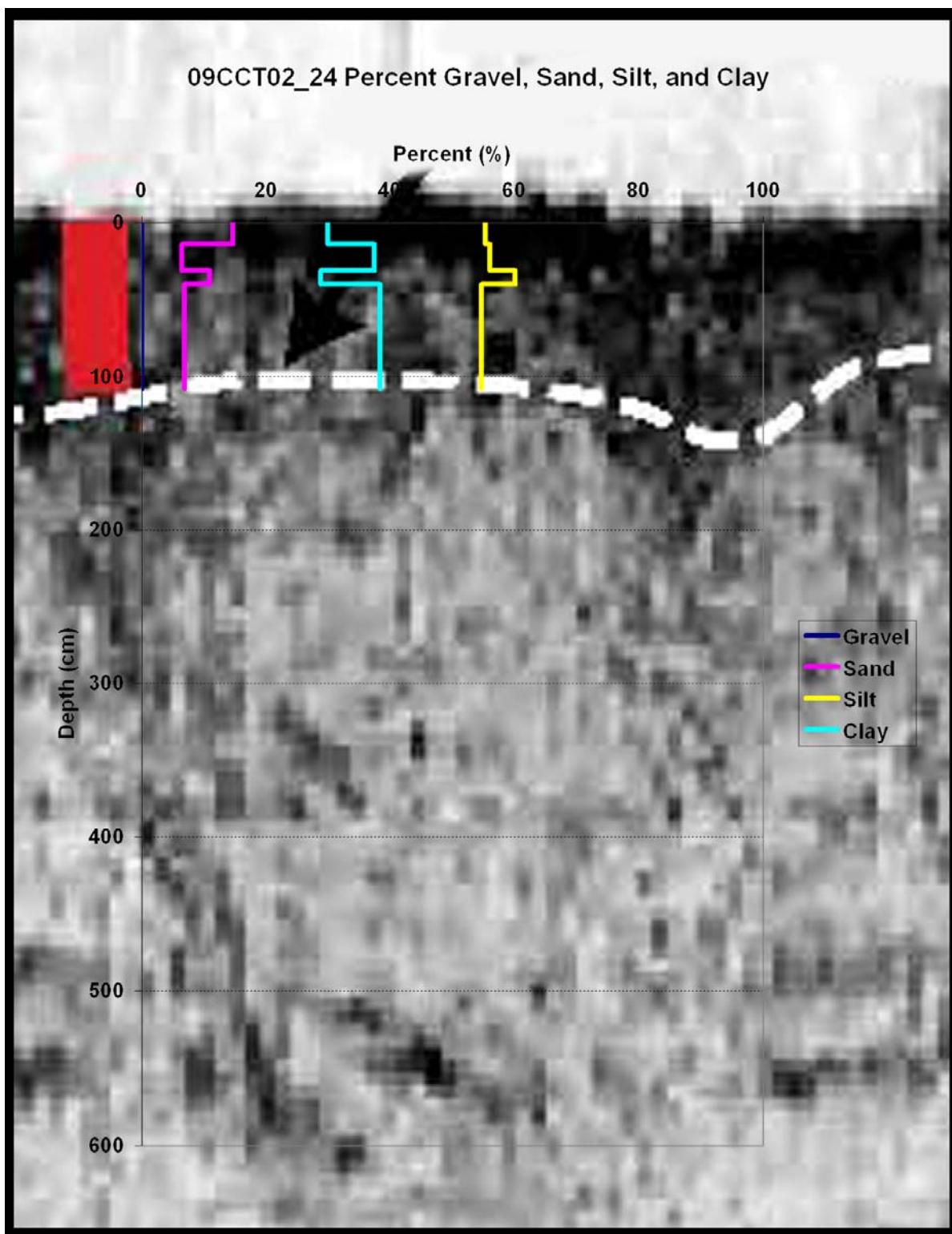
09CCT02_24 Seismic

Project: 09CCT02
Transect: 09C06

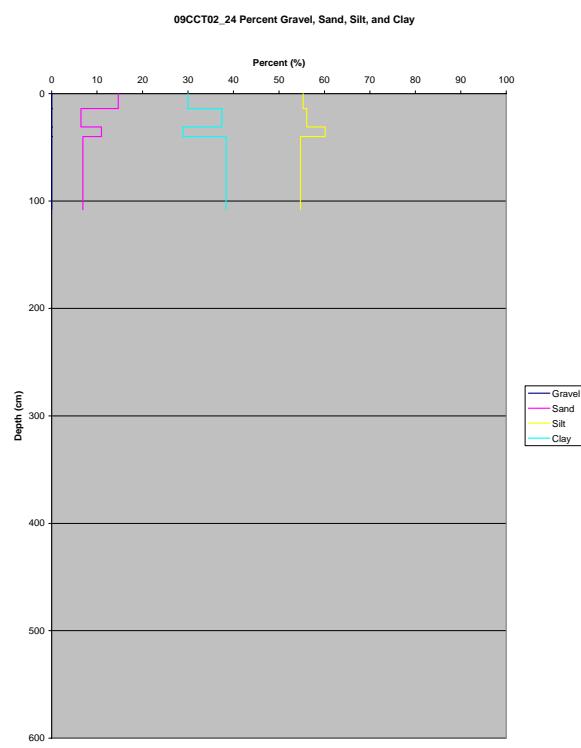
Core: 09CCT02_24
Core Length (m) : 1.08



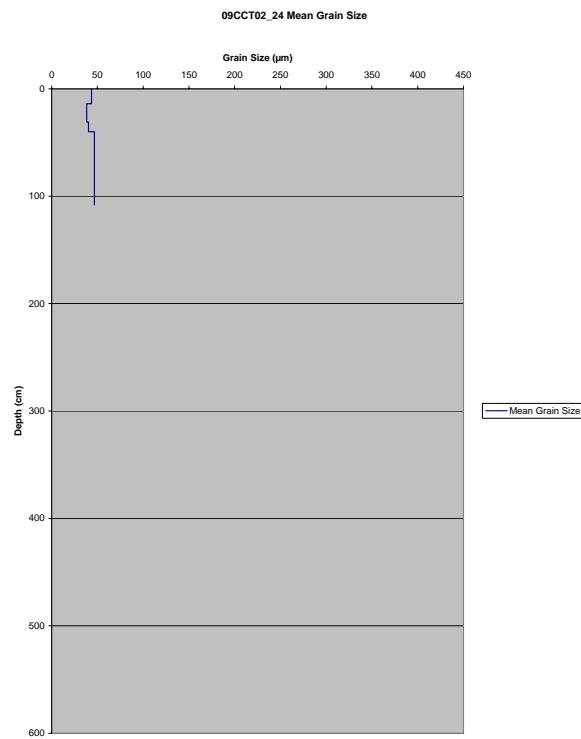
09CCT02_24 Seismic



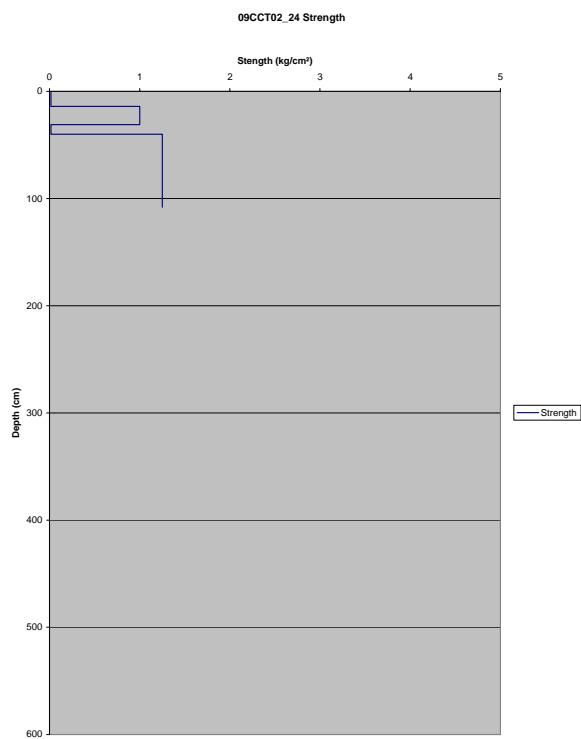
09CCT02_24 Percent Grain Size Distribution



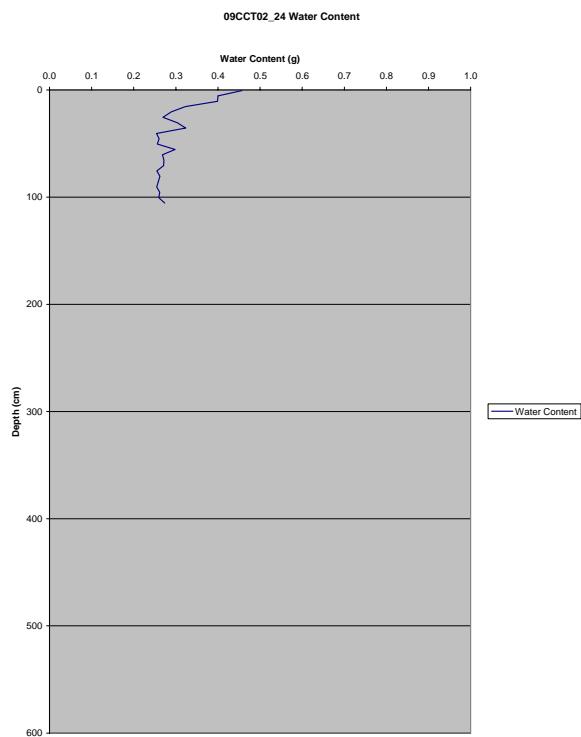
09CCT02_24 Mean Grain Size Distribution



09CCT02_24 Strength Graph



09CCT02_24 Water Content Graph



09CCT02_24 Grain Size Sand Percent Table

Depth (cm)	09CCT02_24 Grain Size Sand Percent										Total (%)
	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 (%)	
5-10	84.52	3.93	2.67	2.39	2.10	1.67	1.22	0.78	0.47	0.24	100
25-30	54.83	8.71	6.51	7.35	7.08	5.84	4.28	2.93	1.55	0.93	100
35-40	75.22	9.82	3.29	2.97	2.82	2.29	1.65	1.03	0.61	0.30	100
90-95	43.52	5.40	10.88	11.67	10.01	7.52	5.09	3.28	1.65	0.97	100

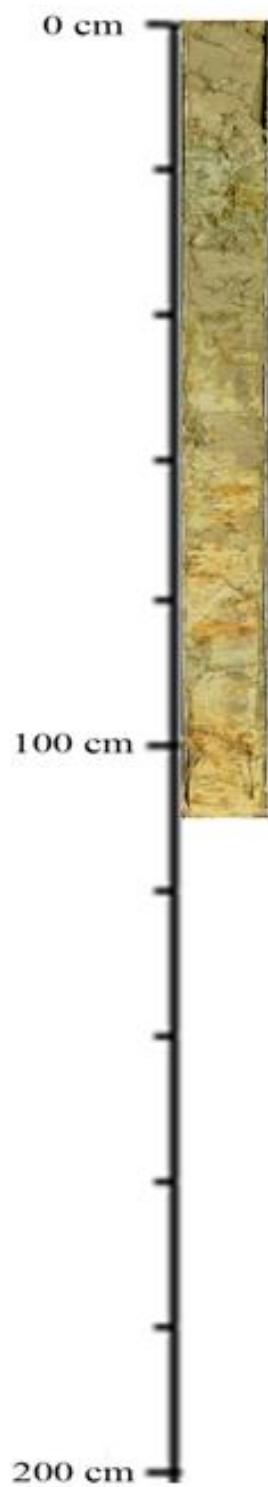
Depth (cm)	09CCT02-24										
	63-82µm (%)	82-101µm (%)	101-120µm (%)	120-139µm (%)	139-158µm (%)	158-177µm (%)	177-196µm (%)	196-215µm (%)	215-234µm (%)	234-257µm (%)	Total (%)
5-10	0.98	1.05	1.43	2.07	3.18	5.10	8.46	14.24	39.56	23.93	100
25-30	3.28	3.17	3.67	4.32	5.23	6.61	8.85	12.69	32.62	19.56	100
35-40	3.51	3.49	4.12	4.90	5.88	7.25	9.33	12.77	29.94	18.81	100
90-95	0.00	0.00	0.00	0.00	0.00	2.13	6.74	13.90	50.02	27.21	100

09CCT02_24 Tables

Mean Grain Size 09CCT02-24	
Depth (cm)	Mean Grain Size (μm)
5-10	43.57
25-30	38.47
35-40	40.36
90-95	46.71

Strength 09CCT02-24	
Interval (cm)	Strength (kg/cm^2)
0-14	0.0156
14-31	1.0000
31-40	0.0156
40-108	1.2500

09CCT02_24 Core Pictures



09CCT02_24 Core Logs

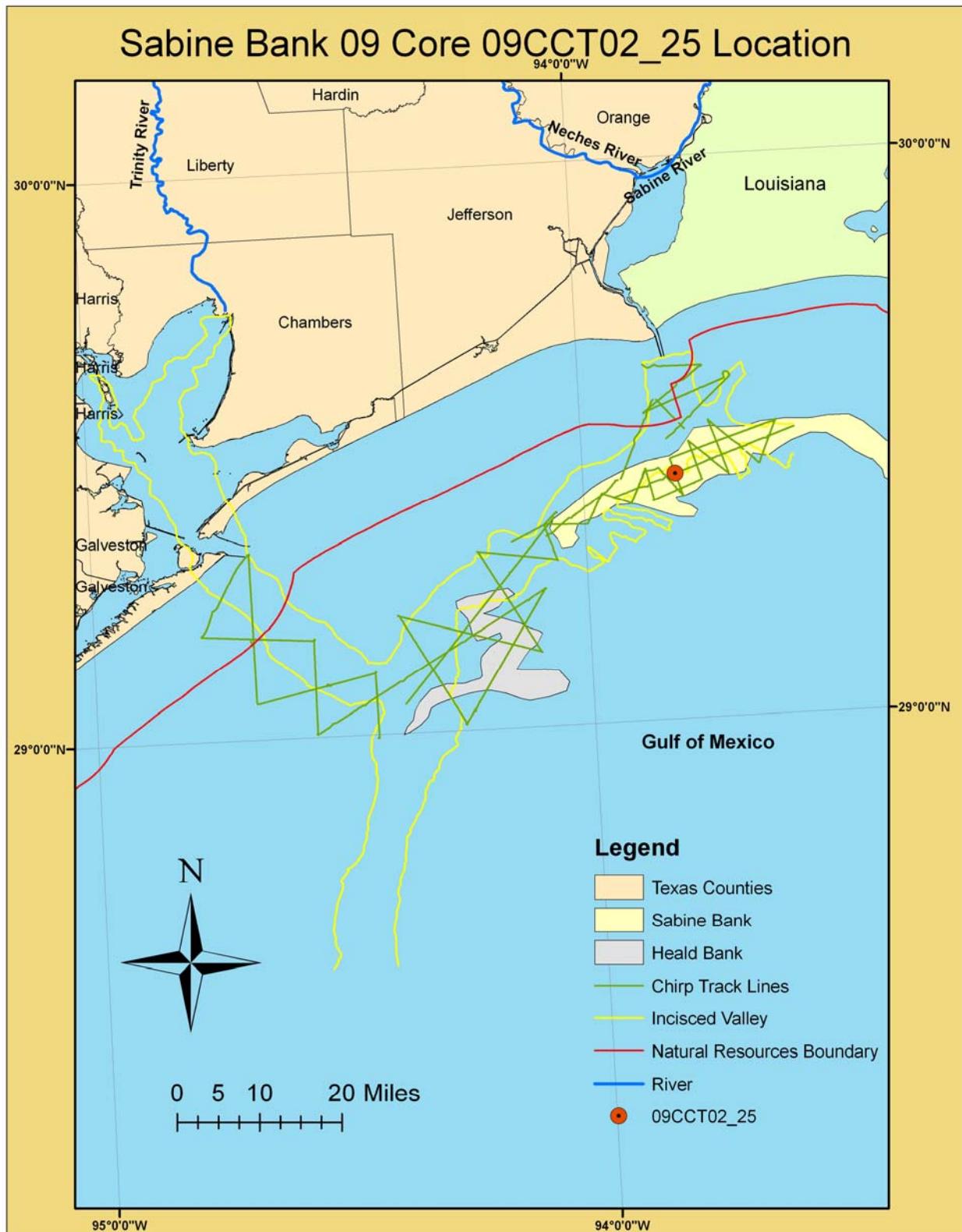
Core#: 09CCT02_24

Core Date: 20-Jun-09

Date Split/subsampled	Length:
08-Jul-09	108 cm
	E: 429192 N: 3271911

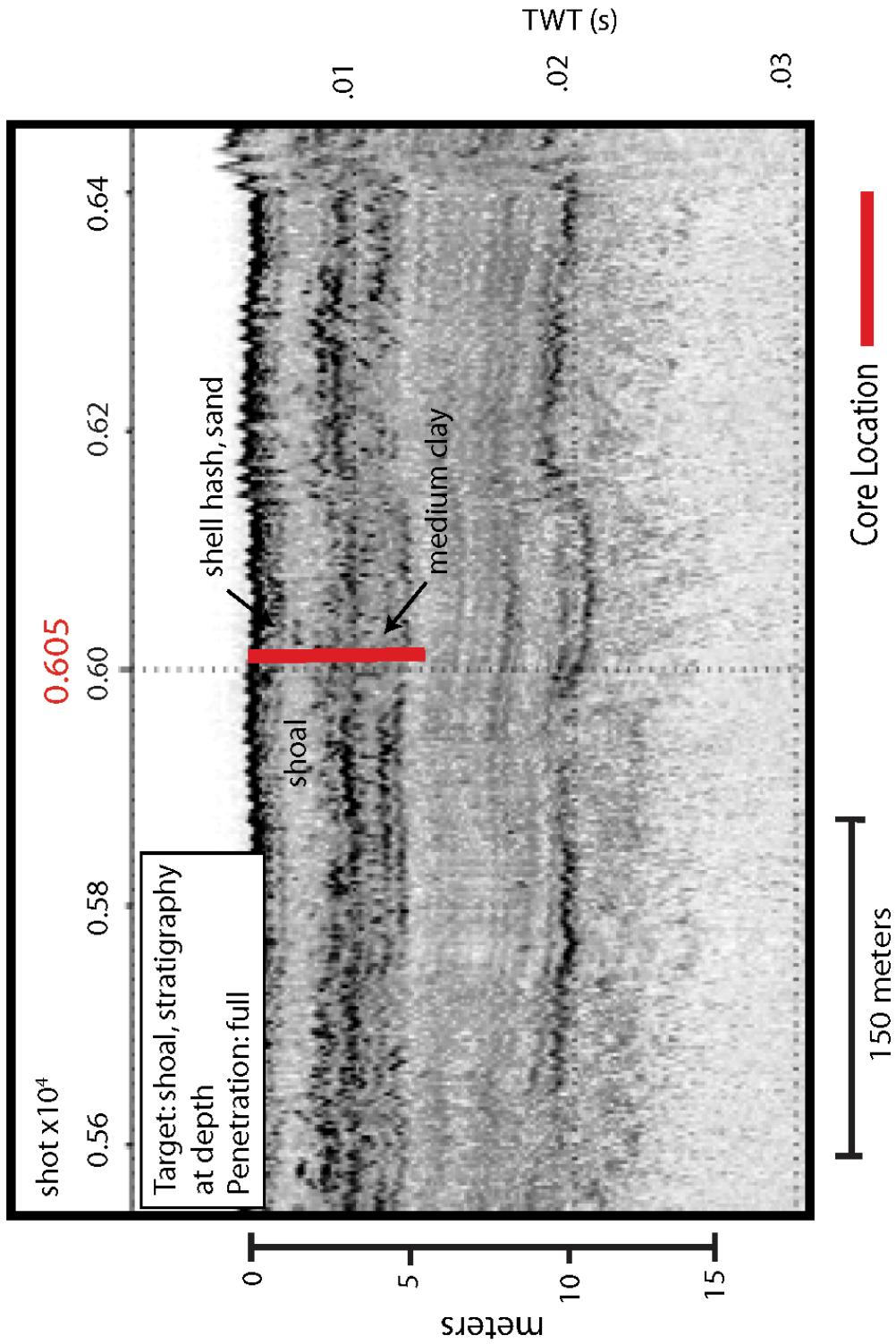
Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
0 - 5			
5 - 10			
10 - 15			
15 - 20			
20 - 25			
25 - 30			
30 - 35			
35 - 40			
40 - 45			
45 - 50			
50 - 55			
55 - 60			
60 - 65			
65 - 70			
70 - 75			
75 - 80			
80 - 85			
85 - 90			
90 - 95			
95 - 100			
100 - 105			
105 - 110			

09CCT02_25 Core Location

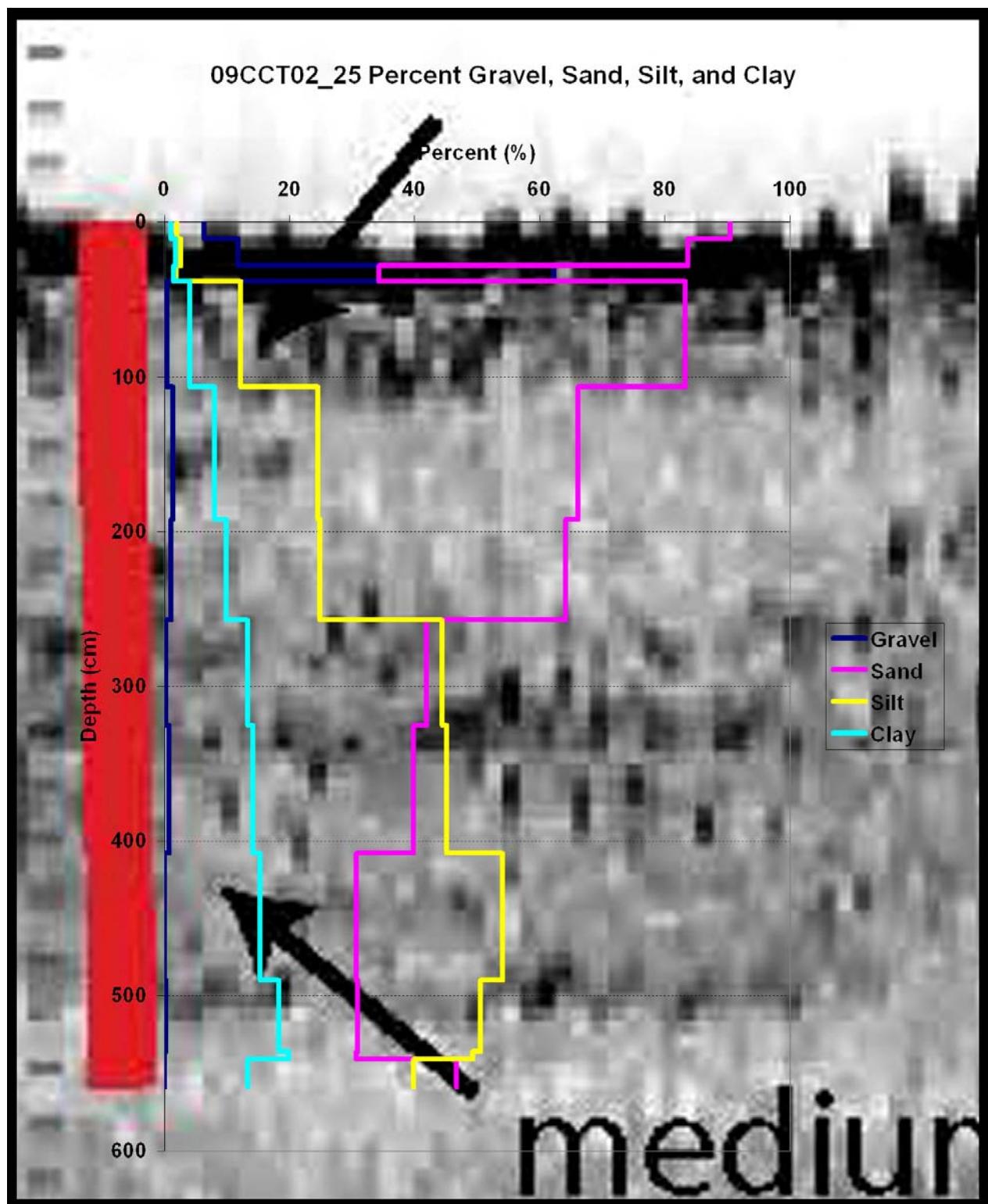


Project: 09CCT02
Transect: 09C32

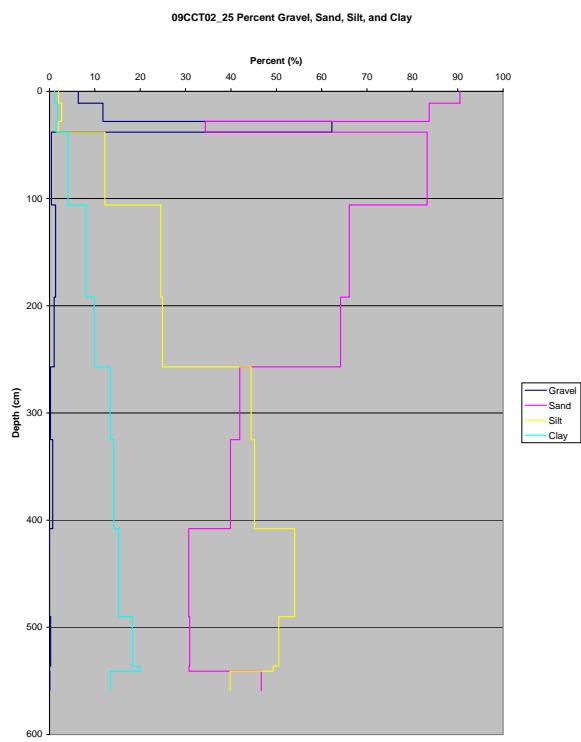
Core:09CCT02_25
Core Length (m):5.57



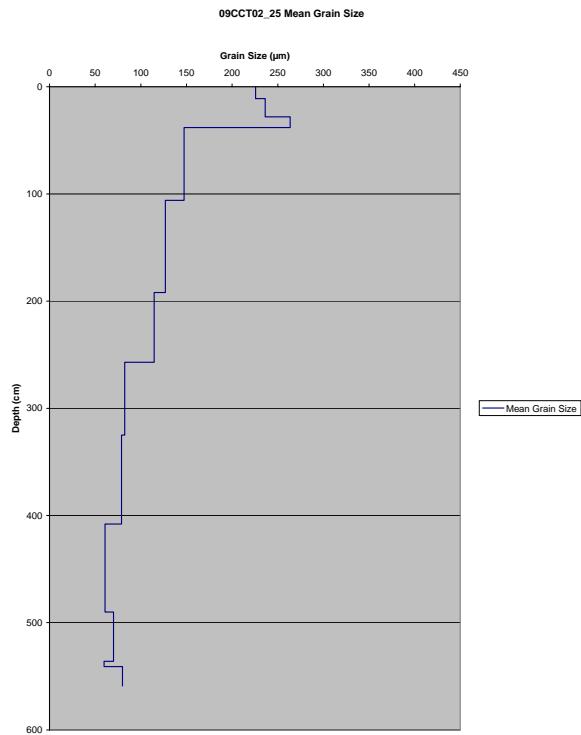
09CCT02_25 Seismic



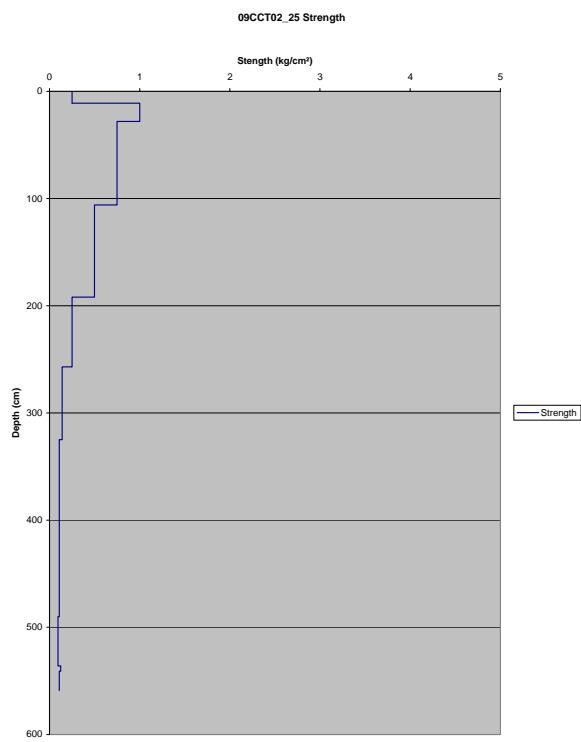
09CCT02_25 Percent Grain Size Distribution Graph



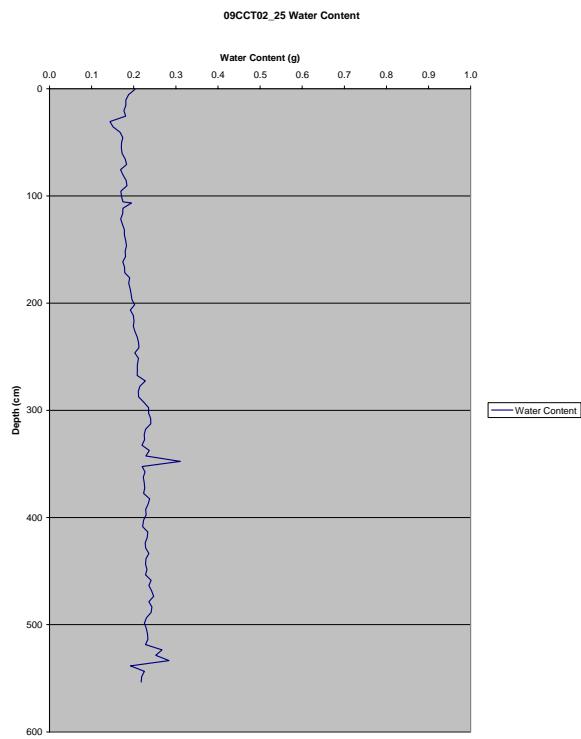
09CCT02_25 Mean Grain Size Distribution



09CCT02_25 Strength Graph



09CCT02_25 Water Content Graph



09CCT02_25 Grain Size Sand Percent Table

09CCT02_25 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 (%)
5-10	67.68	29.22	2.73	0.05	0.04	0.08	0.08	0.06	0.04	0.02	100
20-25	68.68	26.54	2.23	0.38	0.52	0.58	0.48	0.33	0.17	0.09	100
30-35	64.27	24.20	4.37	1.98	1.65	1.33	0.97	0.65	0.37	0.20	100
95-100	86.45	13.43	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100
166-171	87.05	11.01	0.26	0.26	0.38	0.36	0.29	0.21	0.11	0.07	100
251-256	88.79	9.92	0.41	0.20	0.21	0.17	0.13	0.08	0.05	0.03	100
197-202	90.19	6.76	0.60	0.49	0.55	0.49	0.39	0.27	0.16	0.09	100
292-297	91.99	3.70	0.87	0.90	0.79	0.64	0.48	0.34	0.18	0.11	100
373-378	92.06	4.83	1.14	0.80	0.55	0.37	0.14	0.06	0.04	0.02	100
413-418	88.43	6.55	0.88	0.76	0.86	0.83	0.69	0.52	0.30	0.18	100
436-438	91.63	6.96	0.22	0.32	0.31	0.23	0.15	0.10	0.05	0.03	100
448-453	92.58	7.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100

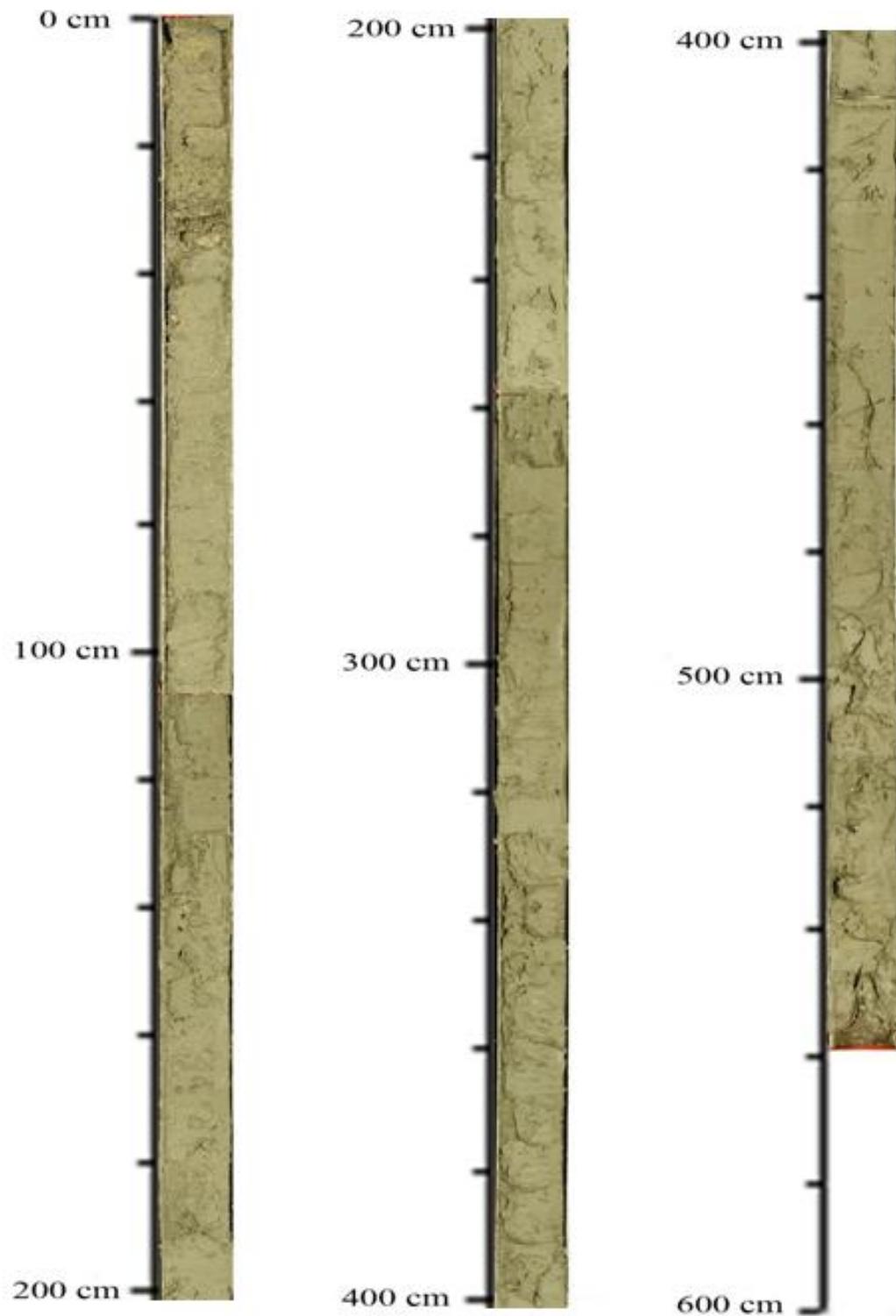
09CCT02-25											
Depth (cm)	63-82µm (%)	82-101µm (%)	101-120µm (%)	120-139µm (%)	139-158µm (%)	158-177µm (%)	177-196µm (%)	196-215µm (%)	215-234µm (%)	234-257µm (%)	Total (%)
5-10	12.30	11.70	12.91	13.76	13.94	13.15	11.06	7.61	0.23	3.35	100
20-25	11.84	11.44	12.79	13.78	14.08	13.35	11.24	7.72	0.32	3.43	100
30-35	10.36	9.99	11.26	12.37	13.11	13.19	12.21	9.85	1.63	6.03	100
95-100	6.27	6.59	8.02	9.58	11.13	12.44	13.21	12.98	8.42	11.36	100
166-171	5.10	5.43	6.70	8.15	9.72	11.29	12.70	13.67	13.33	13.91	100
251-256	4.57	4.94	6.22	7.74	9.46	11.30	13.05	14.38	13.61	14.74	100
197-202	3.04	3.33	4.25	5.43	6.91	8.77	11.16	14.29	24.30	18.52	100
292-297	1.95	2.33	3.21	4.44	6.10	8.35	11.36	15.34	26.52	20.41	100
373-378	2.00	2.24	2.95	3.92	5.26	7.16	9.94	14.19	31.49	20.86	100
413-418	2.83	3.08	3.93	5.02	6.41	8.21	10.63	14.01	26.87	19.02	100
436-438	3.45	3.82	4.90	6.22	7.77	9.56	11.61	13.98	21.69	16.99	100
448-453	4.00	4.45	5.70	7.21	8.91	10.72	12.53	14.13	16.92	15.43	100

09CCT02_25 Table

Mean Grain Size 09CCT02-25	
Depth (cm)	Mean Grain Size (μm)
5-10	225.78
20-25	236.24
30-35	263.65
95-100	147.59
166-171	126.93
251-256	114.76
197-202	82.48
292-297	78.96
373-378	60.83
413-418	70.21
436-438	59.73
448-453	80.02

Strength 09CCT02-025	
Interval (cm)	Strength (kg/cm^2)
0-11	0.2500
11-28	1.0000
28-38	0.7500
38-106	0.7500
0-86	0.5000
86-150	0.2500
0-68	0.1406
68-151	0.1094
0-82	0.1094
82-128	0.0938
128-133	0.1250
133-150	0.1094

09CCT02_25 Core Pictures



09CCT02_25 Core Log

Core #: 09CCT02_25-01

Core Date: 20-Jun-09

Date Split/subsampled	Length: 106 cm
06-Jun-09	E: 421107
	N: 3256630

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
0-5	0-11cm		
5-10	7.5 yr		
11-15	4/3		
15-20			
20-25			
25-28	11-28cm		
28-30	Gley 2		
30-35			
35-38	3/10 G		
38-40			
40-45			
45-50	28-38cm		
50-55	Gley 2		
55-60			
60-65	4/10 G		
65-70			
70-75			
75-80	38-106cm		
80-85	Gley 2		
85-90			
90-95	4/5 B		
95-100			
100-105			

09CCT02_25 Core Log

Core #: 09CCT02-25-02

Core Date: 20-Jun-09

Date Split/subsampled	Length:
<u>06-Jul-09</u>	151 cm E: 421107 N: 3256630

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
106-111	106-192cm		106-192 cm Dark grey compacted sand w/sparse shell
111-116	Gley 2		
116-121	3/5 BG		
121-126			
126-131	192-257cm		
131-136	Gley 2		192-257 cm Dark grey compacted silt+ sand
136-141	4/10BG		
141-146			
146-151			
151-156			
156-161			
161-166			
166-171			
171-176			
176-181			
181-186			
186-192			
192-196			
196-201			
201-206			
206-211			
211-216			
216-221			
221-226			
226-231			
231-236			
236-241			
241-246			
246-251			
251-256			

09CCT02_25 Core Log

Core#: 09CCT02-25-03

Core Date: 20-Jun-09

Date Split/subsampled	Length:
<u>06-Jul-09</u>	<u>151 cm</u>
E:	<u>421107</u>
N:	<u>3256630</u>

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
257-262	257-325cm		
262-267	Gley 2		
267-272	4/10 BG		
272-277			
277-282			
282-287	325-408cm		
287-292	Gley 2		
292-297	315 BG		
297-302			
302-307			
307-312			
312-317			
317-322			
322-325			
325-327			
327-332			
332-332			
337-342			
342-347			
347-347			
352-357			
357-362			
362-367			
367-372			
372-377			
377-382			
382-387			
387-392			
392-397			
397-402			
402-407			

09CCT02_25 Core Log

Core#: 09CCT02_25-04

Core Date: 20-Jun-09

Date Split/subsampled	Length:
<u>06-Jul-09</u>	<u>151 cm</u>
	E: <u>421107</u> N: <u>3256603</u>

Grain Size Samples:	Munsell Soil Color	Depths Sampled	Description:
408-412	408-410 cm		408-490 cm Dark grey sandy
413-418	Gley 2		silt w/sparse shell
418-423	4/10 BG		
423-428			
428-433	490-536 cm		490-536 cm Dark silty
433-438	Gley 2		clay w/sparse shell
438-443	4/15 BG		
443-448			
448-453	536-541 cm		536-541 cm Dark grey sand
453-458	Gley 2		
458-463	4/10 BG		
463-468			
468-473	541-559 cm		541-559 cm Dark grey
473-478	Gley 2		sandy silt
478-483	3/5 BG		
483-488			
488-490			
490-493			
493-498			
498-508			
503-508			
508-513			
513-518			
518-523			
523-528			
528-533			
533-536			
536-538			
538-541			
541-543			
543-548			
548-553			
553-558			

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