

**USGS CMSC FACS OVERVIEW LOG  
ACTIVITY ID: 10BIM03**

TOPIC	INFORMATION
USGS ACTIVITY ID	10BIM03
OTHER ID (IF ANY)	
ORGANIZATION(S)/PROGRAM	U.S. Geological Survey, St. Petersburg Coastal and Marine Science Center
PROJECT/THEME	Addendum to MsCIP ( Mississippi Coastal Improvement Project (MsCIP) / Coastal Change and Transport)
AREA OF OPERATION	Cat Island, MS
PRINCIPAL INVESTIGATOR	Jennifer Miselis, Jack Kindinger, Dawn Lavoie
INFORMATION SPECIALIST(S)	Kyle Kelso
ACTIVITY TYPE	Vibracores
SCIENTIFIC PURPOSE/GOALS	<p>We propose to develop a detailed geochronology of the formation and morphologic modifications of Cat Island. By identifying historical conditions, processes (natural and anthropogenic if relevant) and barrier response, the impact of future destructive events including storms and rising sea level can be inferred. Questions include:</p> <ul style="list-style-type: none"> <li>• Which model of barrier island formation does Cat Island best represent (emergent shoal, aggradational)?</li> <li>• What is the underlying geometry and geologic composition of the barrier and surroundings, and how does that contribute to its stability (resistance to westward migration)?</li> <li>• What is the timing of the two barrier segments and can that help identify: <ul style="list-style-type: none"> <li>- Sediment provenance when related to shifting Holocene depocenters?</li> <li>- Prevailing regional climate conditions and rates of sea-level rise?</li> </ul> </li> <li>• How does Cat Island fit in with the surrounding geology of the Gulf of Mexico; does it represent a transition point between two areas (Chandeleurs and</li> </ul>

	<p>other Mississippi barriers)?</p> <ul style="list-style-type: none"> <li>Based on its evolution, what can we infer about its future response to prevailing physical processes?</li> </ul>
PLATFORM	<i>Terrestrial vibracore</i>
STARTING DATE	August 4, 2010
STARTING PORT	Biloxi, Mississippi
ENDING DATE	August 6, 2010
ENDING PORT	Biloxi, Mississippi
EQUIPMENT USED	Rossfelder model P-3 electric motor (Vibracorer)
INFORMATION TO BE DERIVED	Geologic framework to determine the island geomorphology, stratigraphy and geologic history.
SUMMARY OF ACTIVITY AND DATA GATHERED	11 terrestrial vibracores
NOTES	<p>Staff – Jack Kindinger, Jennifer Miselis, Kyle Kelso, Dawn Lavoie, Dallon Weathers, Mike Brown, Kathryn Rose, Michael Potts, and Meghan Alesce</p> <p>Digital 10BIM03 FACS logs were generated by Noreen Buster using handwritten logbook and personal accounts of crew members</p>