

# **SAND VOLUMES AND TRANSPORT PATHWAYS FOR GULF OF MEXICO REGIONAL SEDIMENT MANAGEMENT**

**Jennifer M. Wozencraft  
Joint Airborne Lidar Bathymetry  
Technical Center of Expertise  
US Army Corps of Engineers Mobile District**

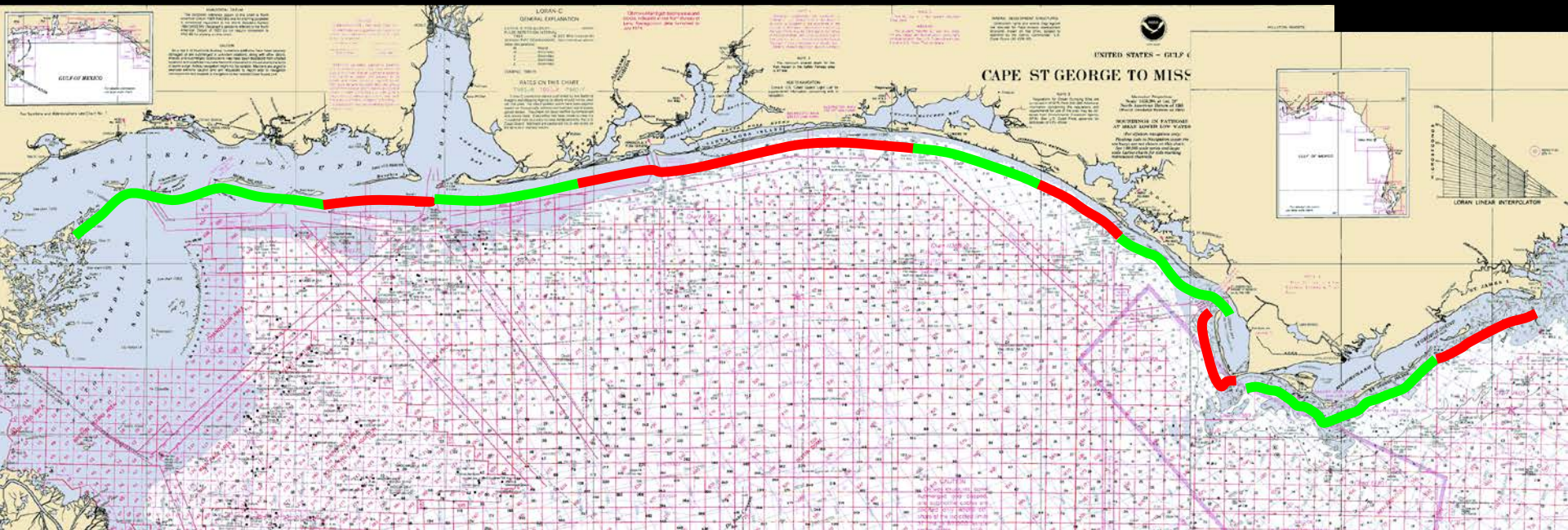
**Linda S. Lillycrop  
Hydraulics and Hydrology  
Engineering Division  
US Army Corps of Engineers Mobile District**

**Jennifer L. Irish  
Coastal and Hydraulics Laboratory  
Joint Airborne Lidar Bathymetry  
Technical Center of Expertise  
US Army Corps of Engineers Mobile District**

# *RSM Demonstration Region*



- 500 km of shoreline
- Thirteen federal projects
- Eight state parks
- Gulf Island National Seashore
- Five military bases
- Local projects
- Panama City Beach
- Gulf Shores



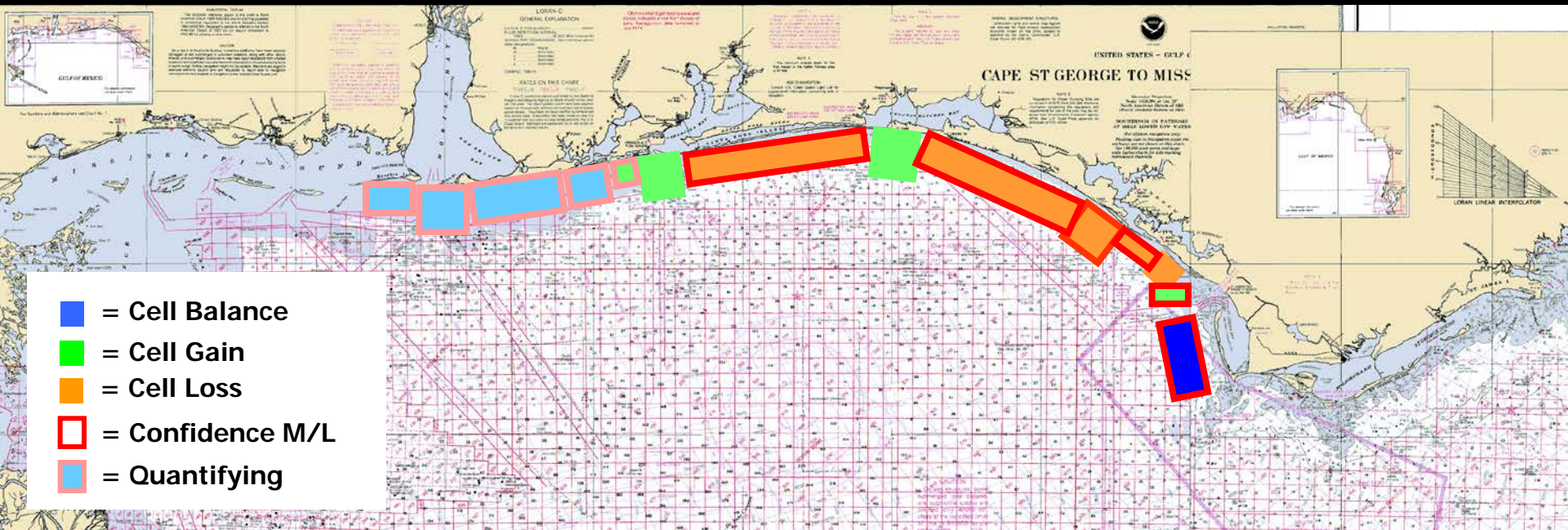


# RSM Demonstration Region



**Progress to date**

- Data collection
- Data input into GIS
- Literature review
- RSM GIS tools
- Regional modeling





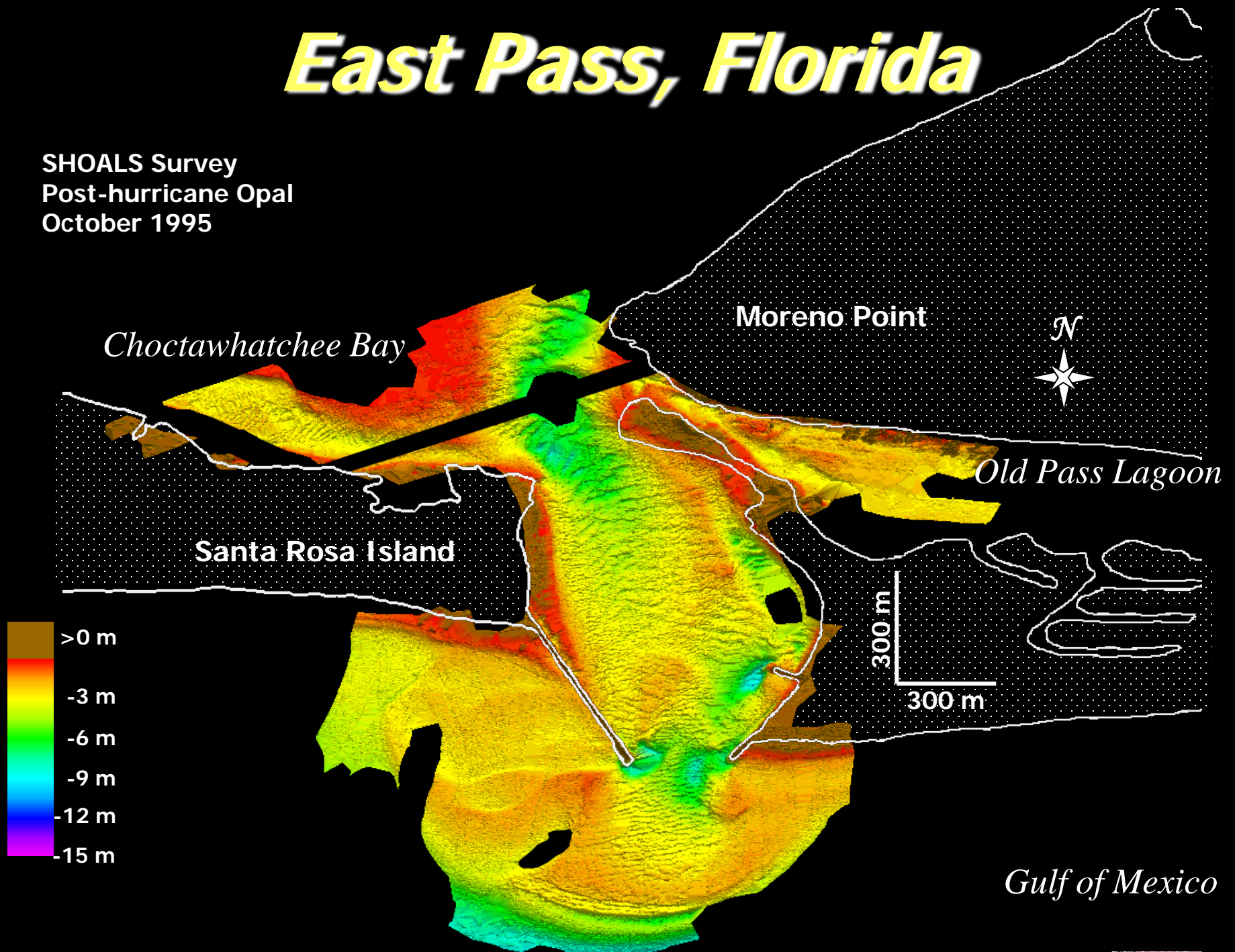
9-APRIL-96 1:19200 PAN-22 ROLL 971 FLT.

# *East Pass, Florida*



# *East Pass, Florida*

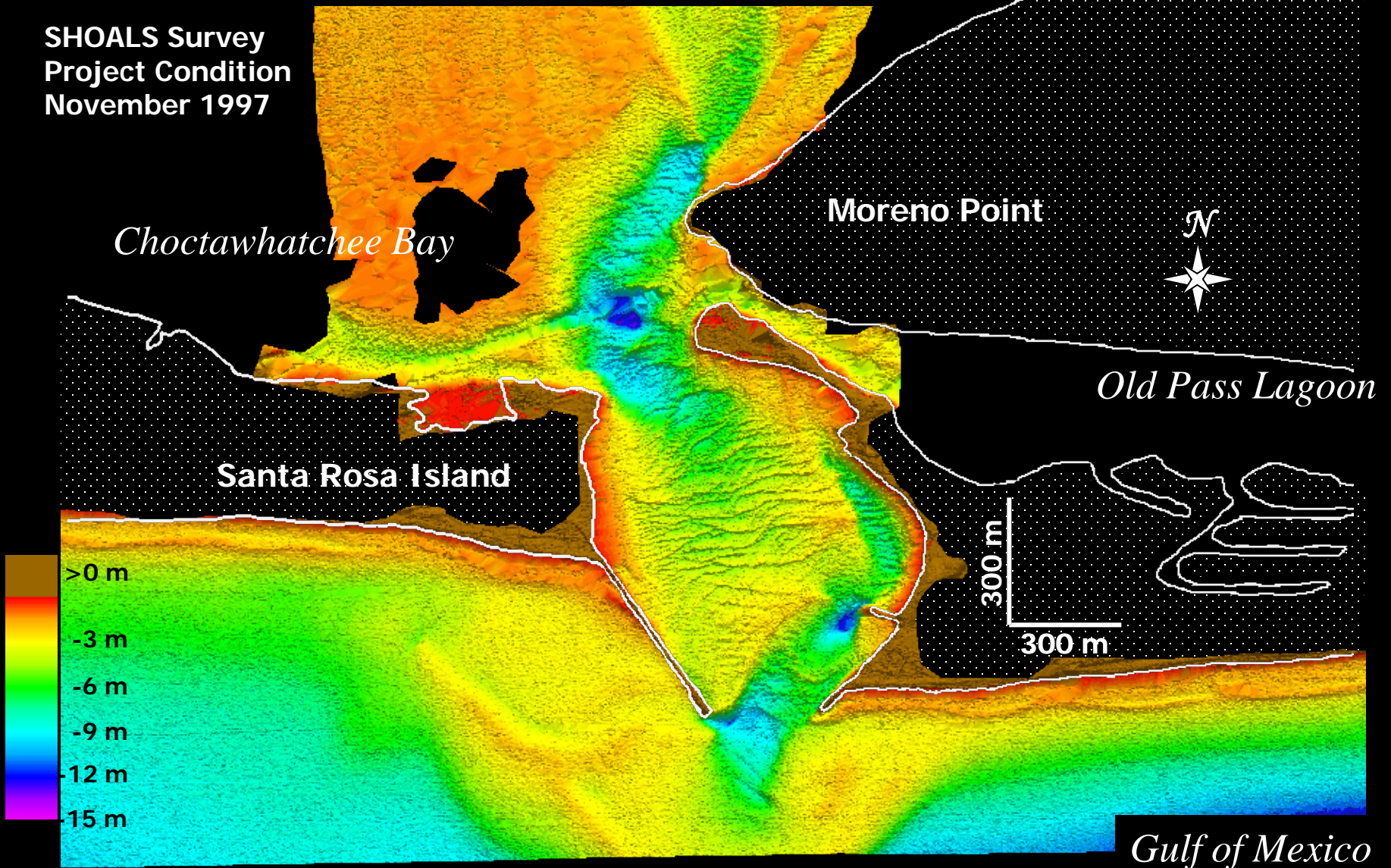
SHOALS Survey  
Post-hurricane Opal  
October 1995





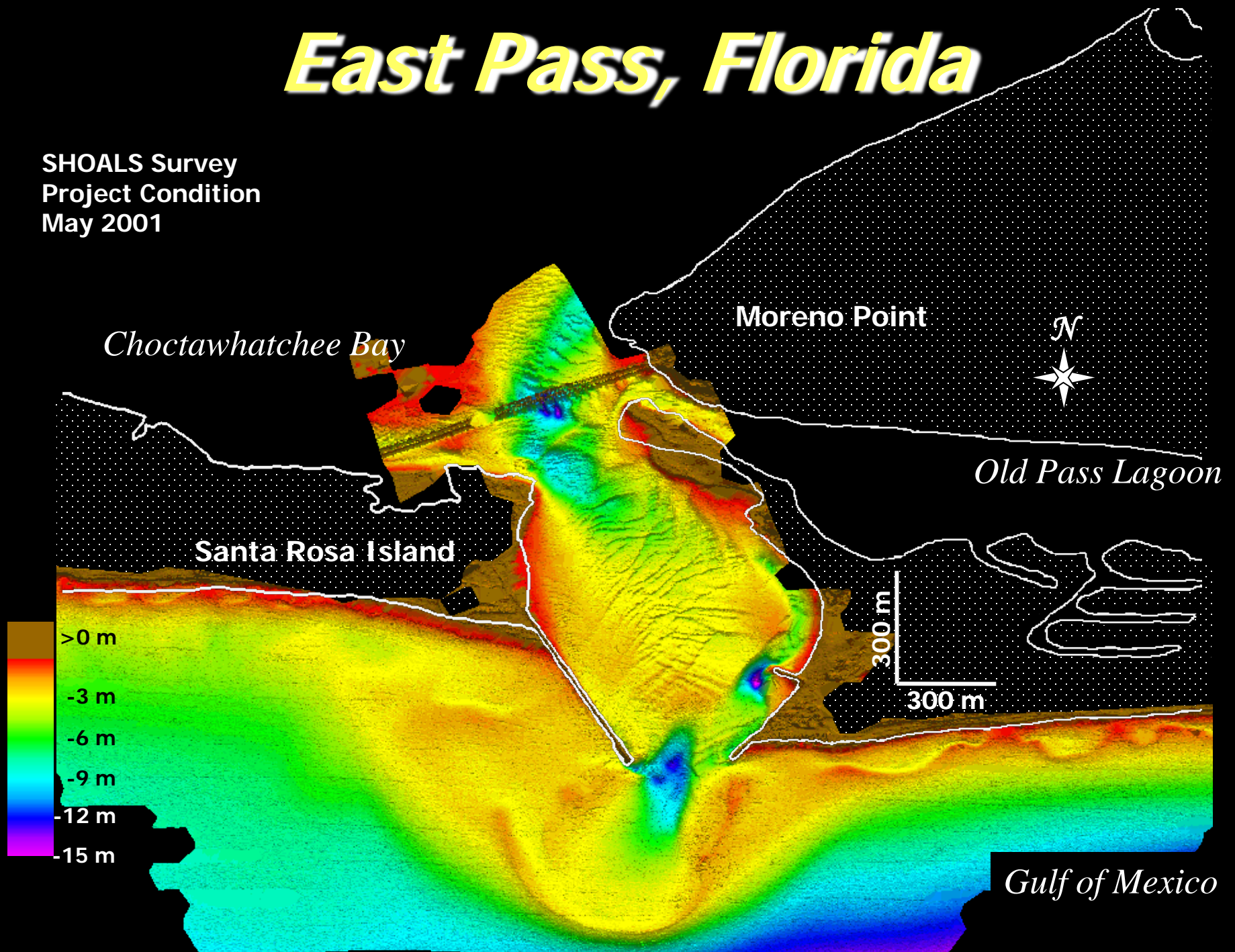
# *East Pass, Florida*

SHOALS Survey  
Project Condition  
November 1997



# *East Pass, Florida*

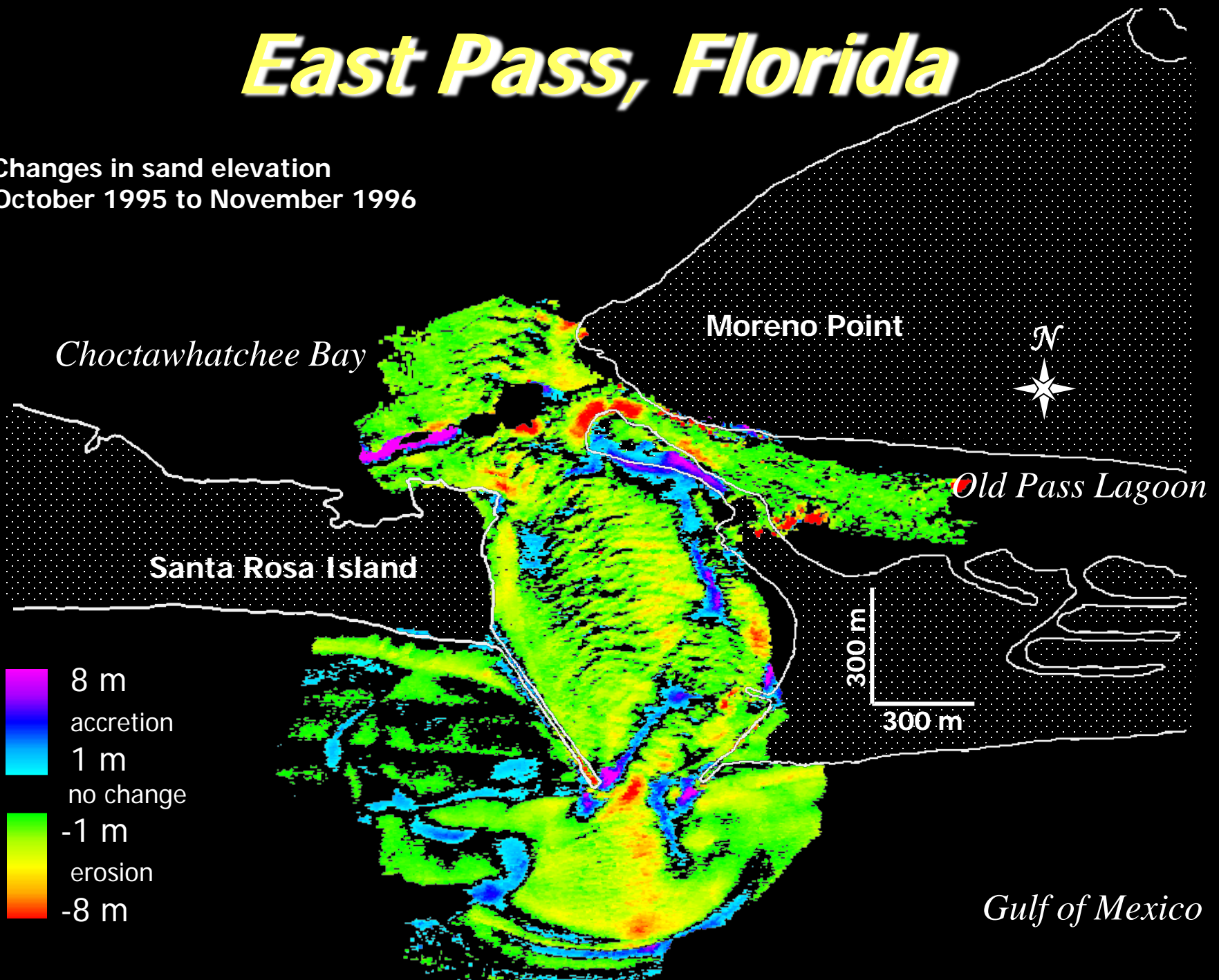
SHOALS Survey  
Project Condition  
May 2001





# *East Pass, Florida*

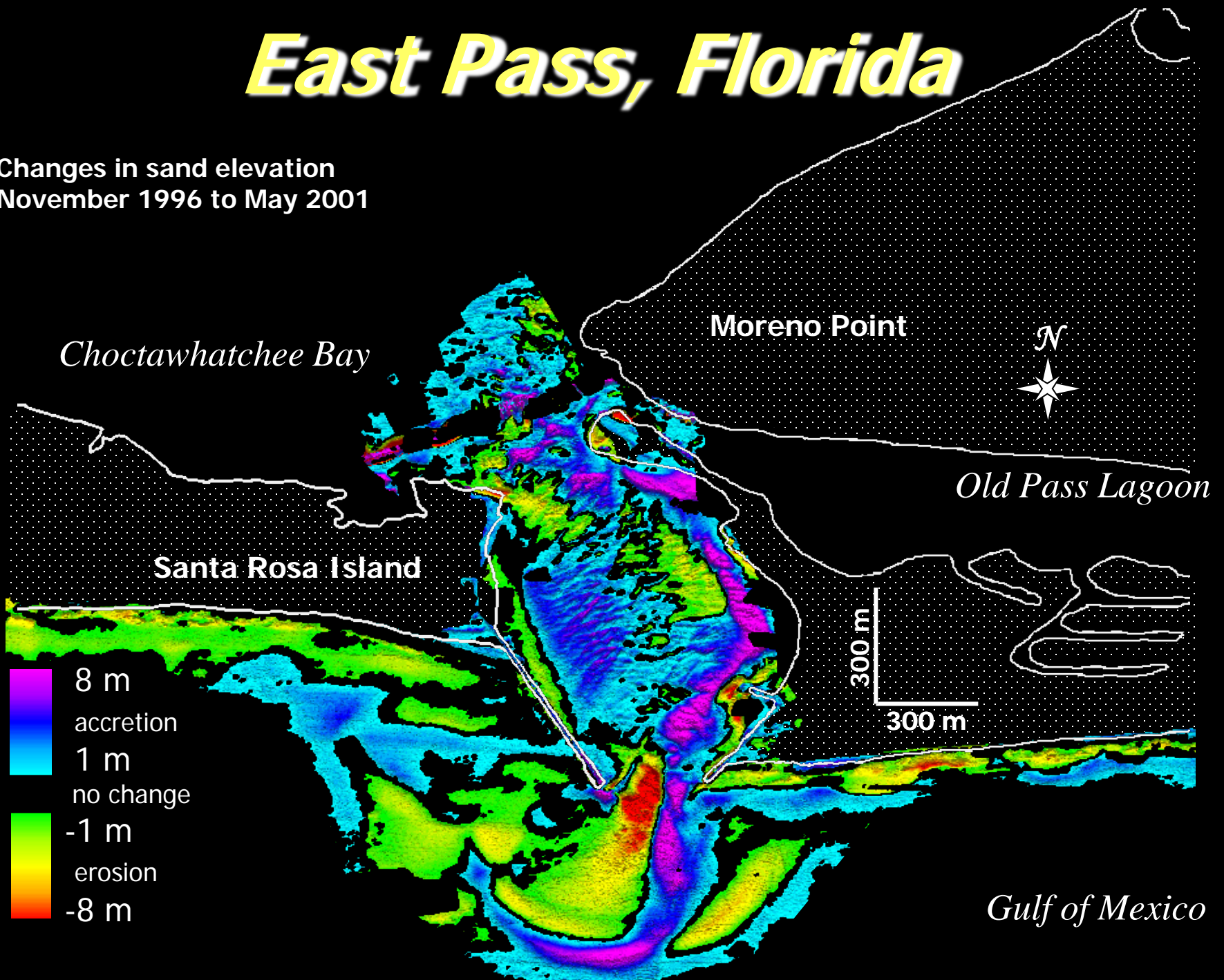
Changes in sand elevation  
October 1995 to November 1996



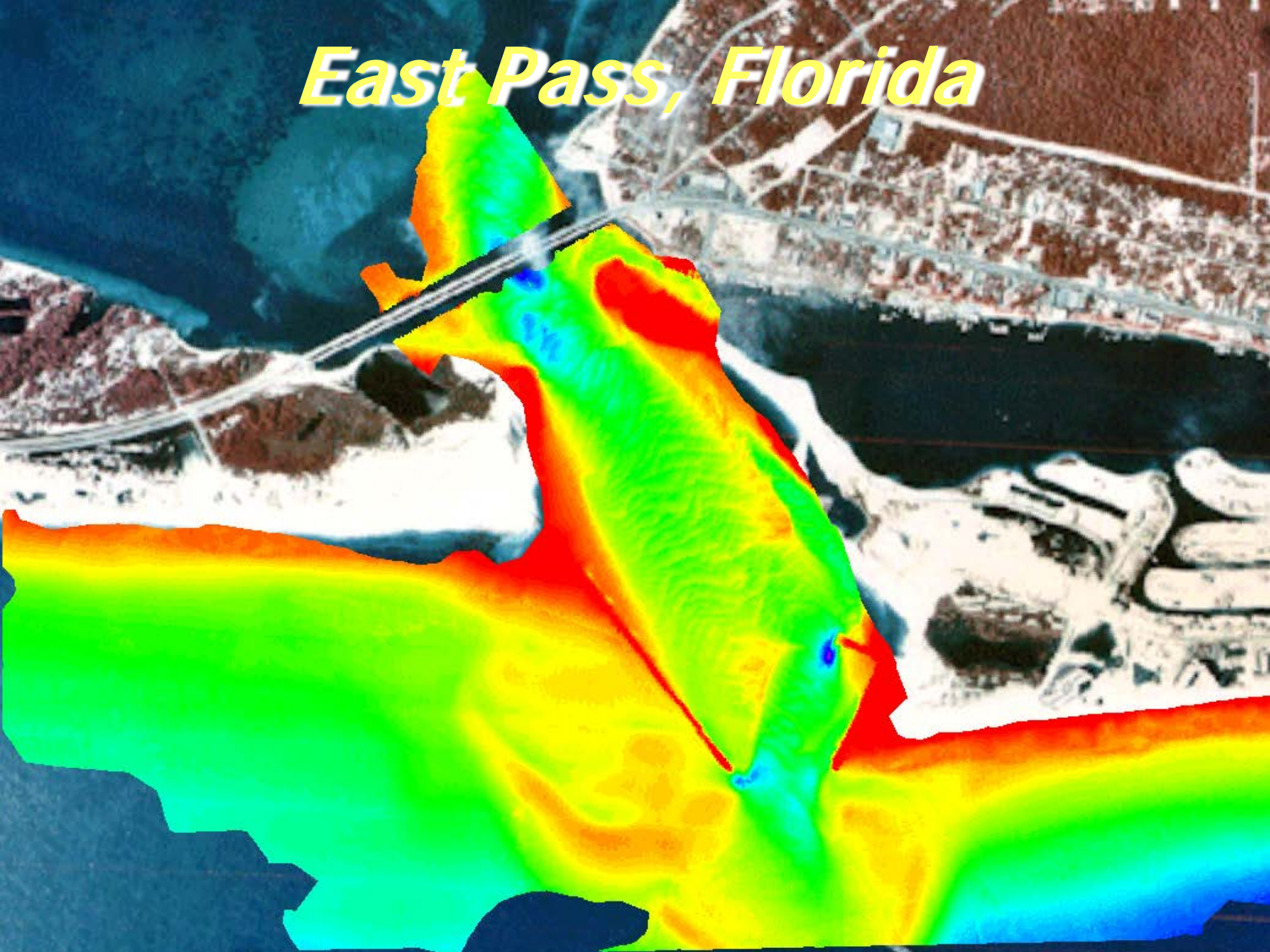


# *East Pass, Florida*

Changes in sand elevation  
November 1996 to May 2001



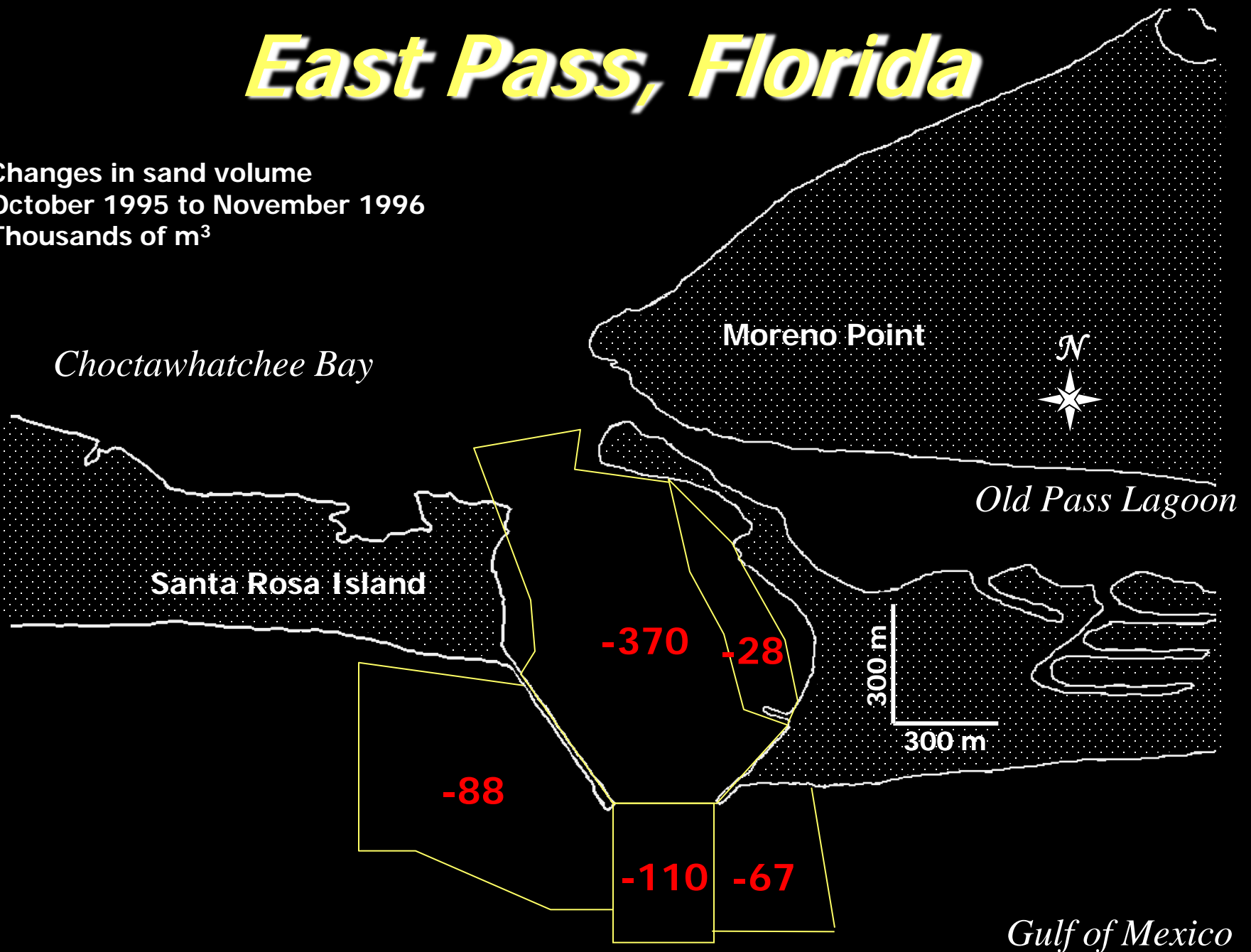
# *East Pass, Florida*





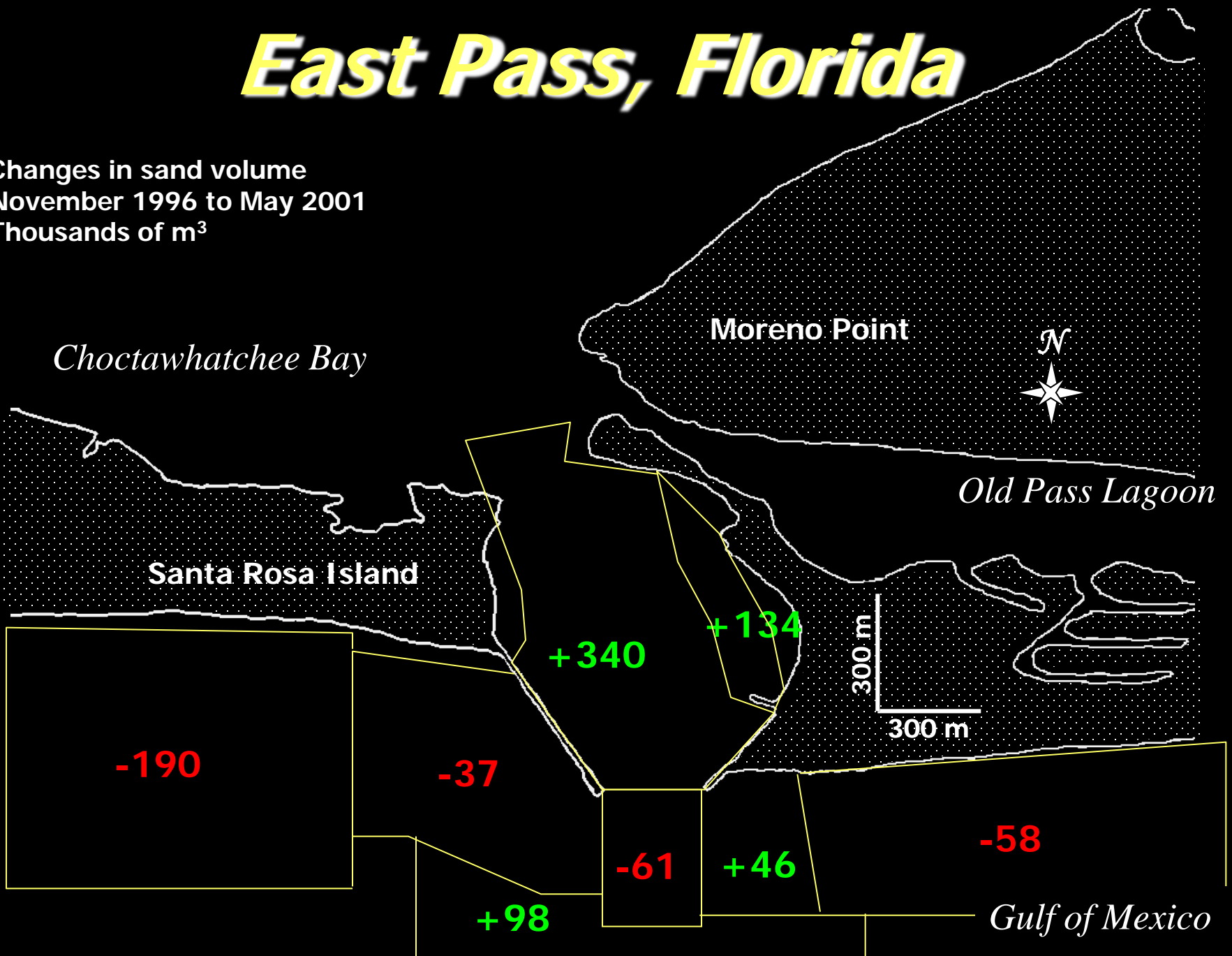
# *East Pass, Florida*

Changes in sand volume  
October 1995 to November 1996  
Thousands of m<sup>3</sup>



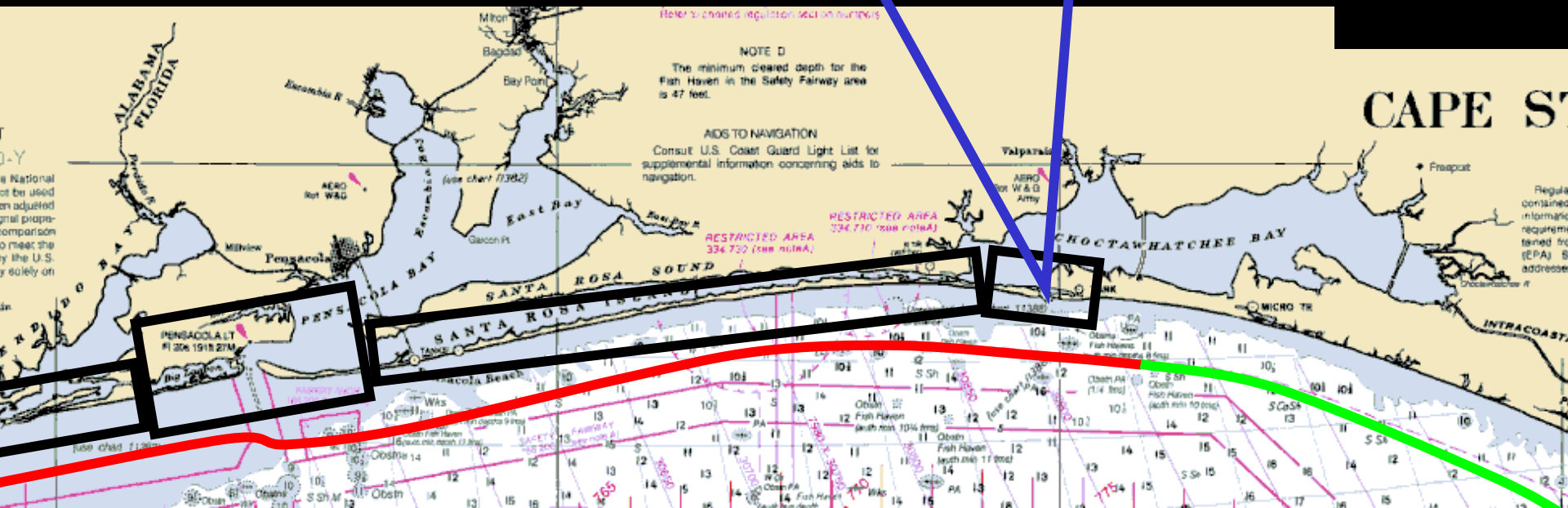
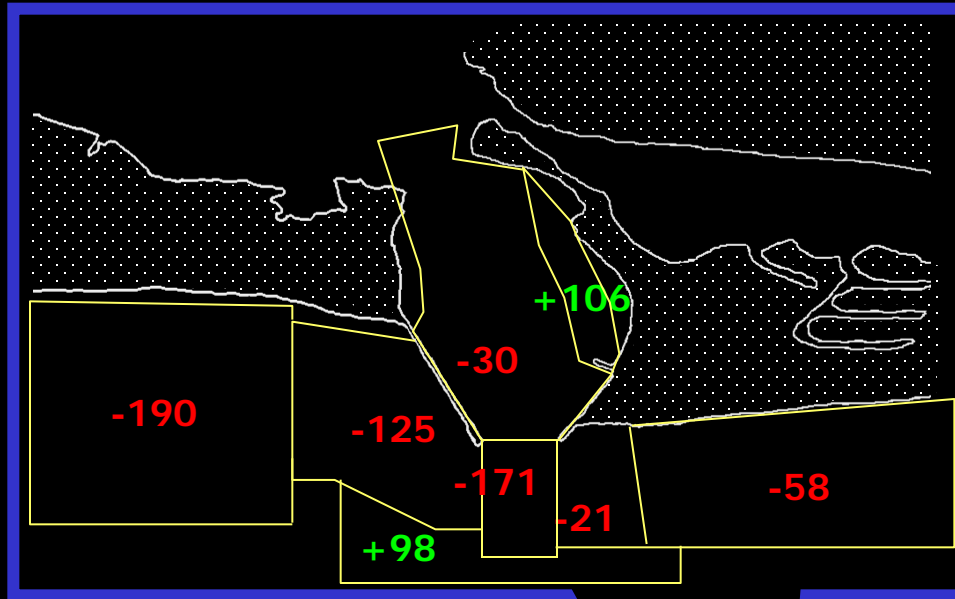
# East Pass, Florida

Changes in sand volume  
November 1996 to May 2001  
Thousands of m<sup>3</sup>

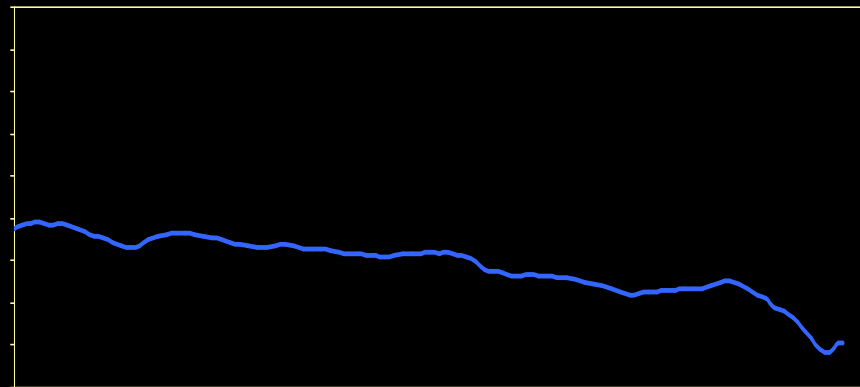




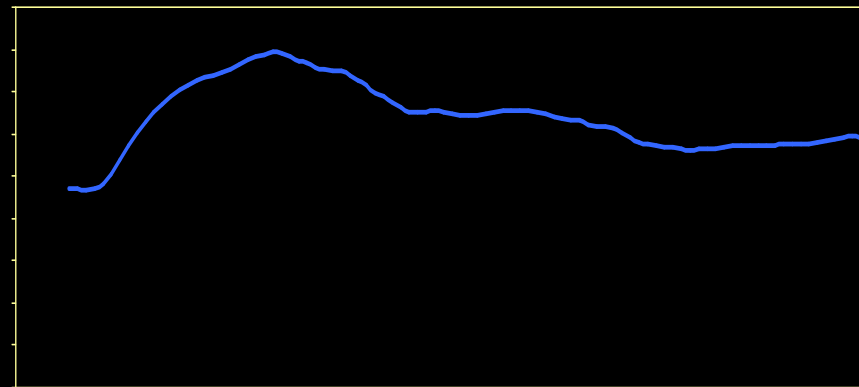
# Regional Sediment Budget



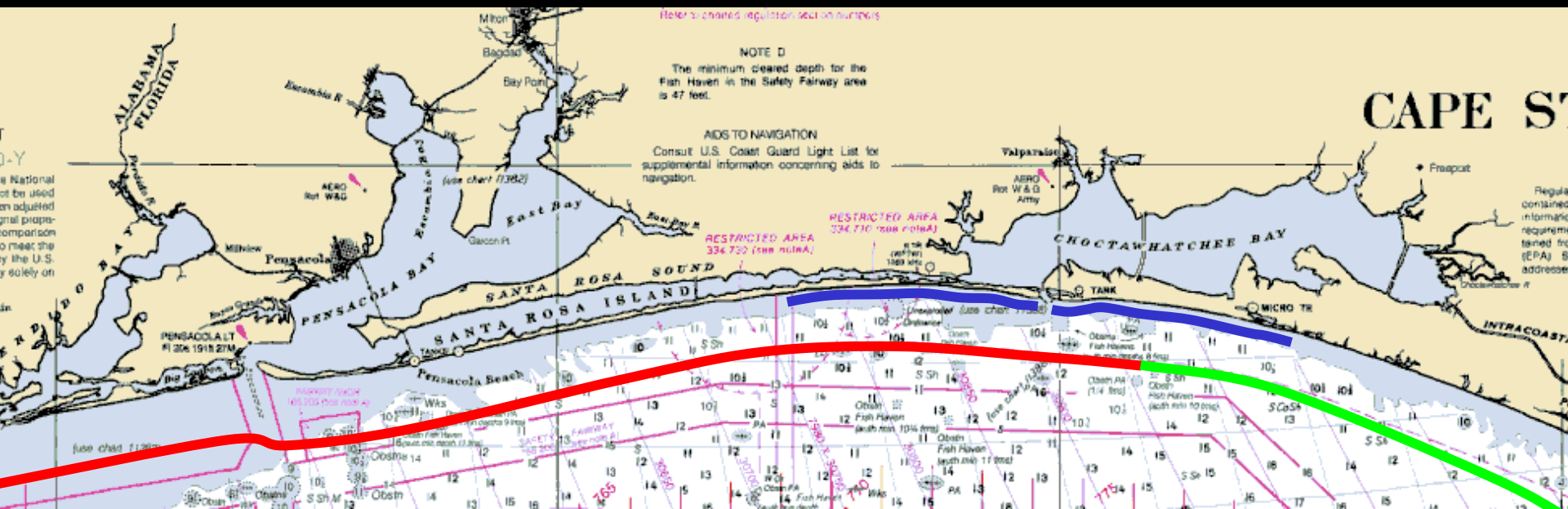
# Regional Modeling



60  
30  
0  
-30



In thousands of m<sup>3</sup>/year





# *Concluding Statements*

An analysis of SHOALS data collected at East Pass, Florida has provided new information regarding the transport pathways and sediment volume changes at the inlet.

This new information will be used to calibrate numerical model estimates of transport rates for the area.

The calibrated models will allow engineers and scientists to understand how modifications to the federal navigation project will affect the region in which the inlet is located.