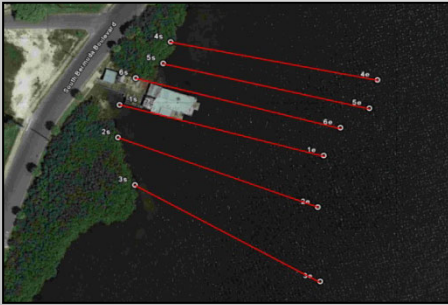


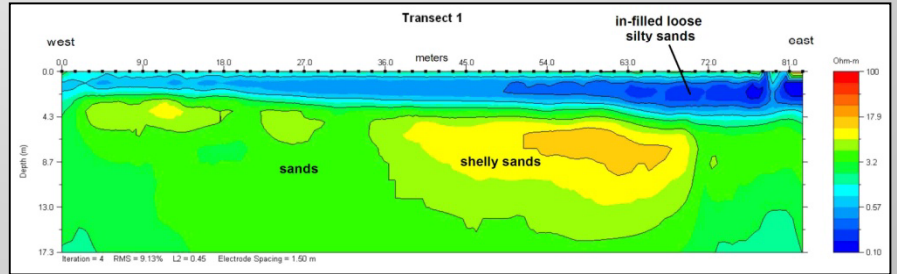


Multi-Method Geophysical Survey and Sediment Analysis to Delineate Original Dredge Depths McKay Bay, Florida

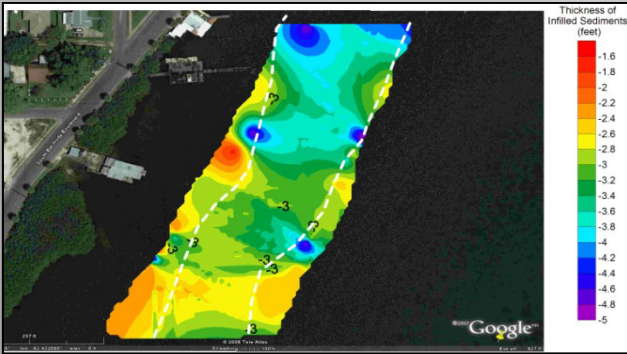
For a dock permitting project in McKay Bay, FL, NSN used a multi-method geophysical approach combining stationary MER, CRP, Sub-bottom Profiling, and groundtruthing with vibracores to accurately determine the original dredge depths of the channel along this basin. This combined geophysical approach allowed for increased confidence in delineating the relic channel, and in quantifying the thickness of infilled non-native material. Vibracore collection allowed for groundtruthing of the geophysical data as well as for analysis of metals content within the infilled organic sediments.



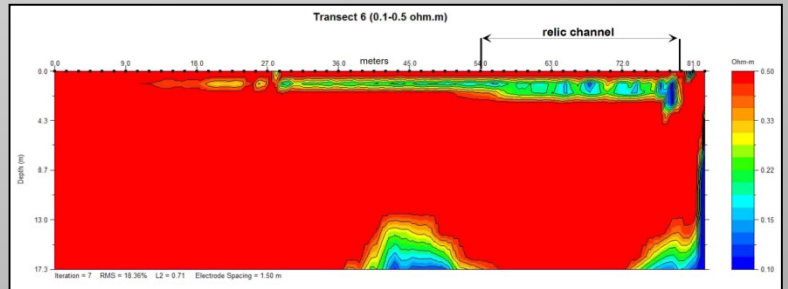
Aerial of McKay Bay project site and location of stationary MER transect lines.



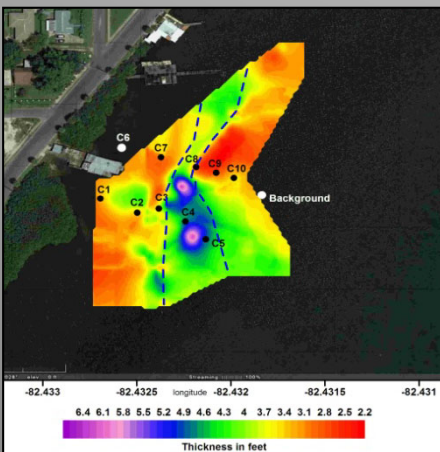
Stationary MER transect line shows resistivity variations that correlate to stratigraphic changes. The relic channel is marked by increased thickness of low resistivity organic muck and silty sands.



Contour map showing infilled sediment thickness and the channel boundaries using CRP data.



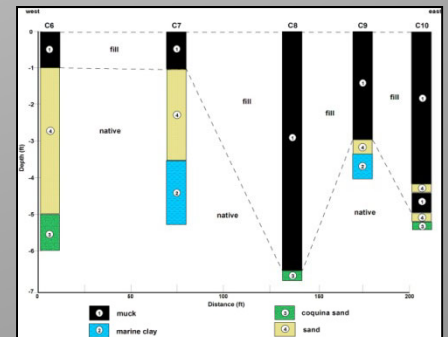
By isolating the ohm.m range of stationary MER transect lines, the low resistivity, infilled channel deposits become very well defined.



Contour map showing infilled sediment thickness and the channel boundaries using seismic reflection data.



A Vibecore-D coring rig was used to collect eleven 6-foot sediment cores within the project site.



Stratigraphic cross-section from vibracores collected along a transect normal to the channel.

