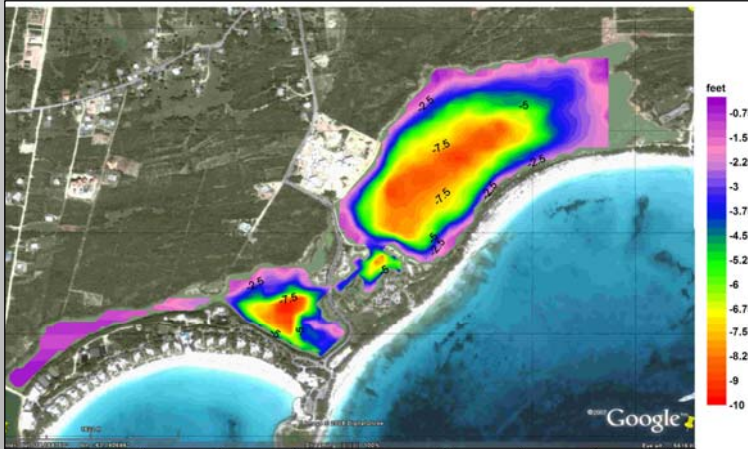




# MER, CRP, and Sub-bottom Profiling to Quantify Sediment Thickness Over Rock

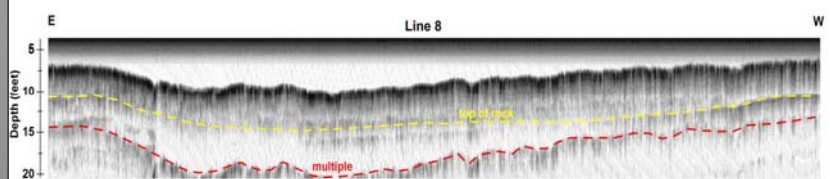
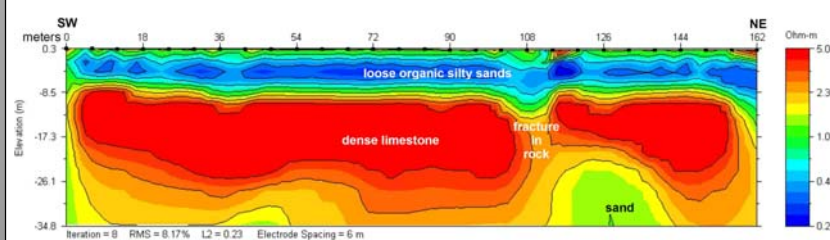
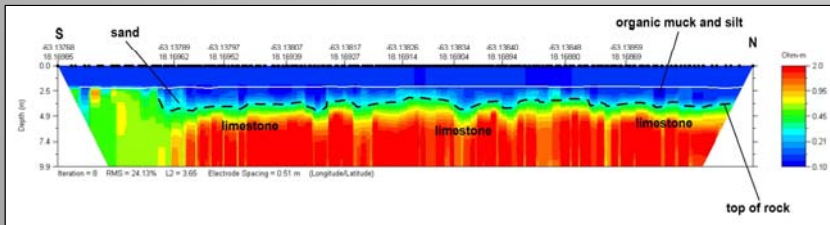
As part of a comprehensive geophysical and hydrological evaluation of the Cap Juluca Resort property (Anguilla, BWI), NSN utilized multiple electrical resistivity techniques combined with seismic reflection profiling to guide the conversion of two stagnant salt ponds into functional marine habitats. The purpose of mapping the salt ponds was to determine the depth to rock (for construction of horizontal flushing channels), thickness of unconsolidated sediments, quantify the amount of sediment overlying rock, and to identify subsurface anomalies within the limestone (e.g., karst features). The resistivity and sonar methods revealed excellent agreement, thereby providing increased confidence in the final results and recommendations.



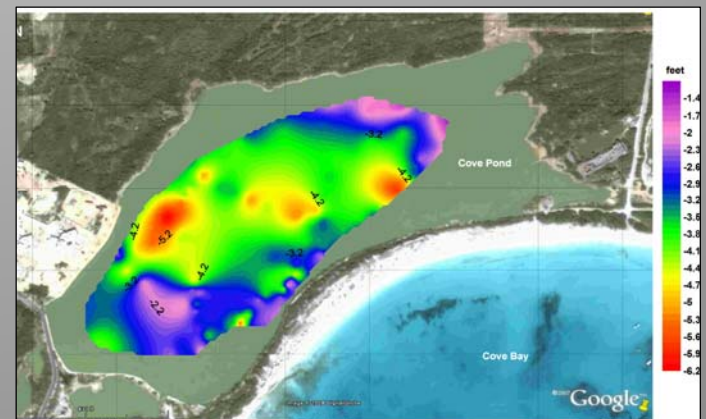
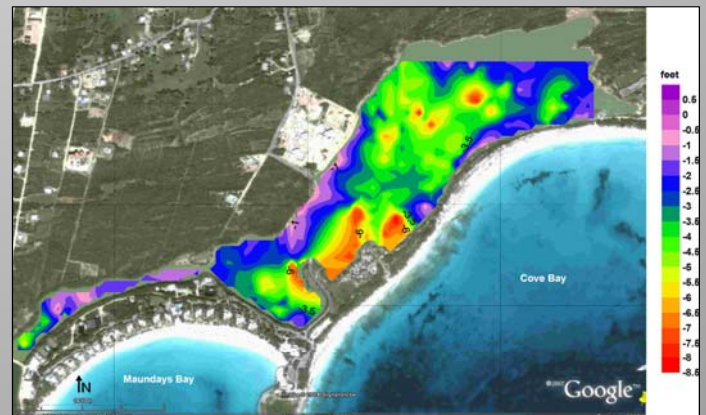
Bathymetry data collected by NSN within the two salt pond systems that back the Cap Juluca resort property.



MER (red lines) and CRP (multicolored lines) transect lines.



**Upper Panel:** Towed CRP profile within the salt pond.  
**Middle Panel:** Stationary MER transect within the salt pond.  
**Bottom Panel:** Seismic reflection profile within the salt pond.



**Upper Panel:** Contour map of sediment thickness within Maundays and Cove Pond using MER and CRP data.  
**Lower Panel:** Contour map of sediment thickness within Cove Pond using sub-bottom profiler data.  
 NSN calculated a volume of 536,400 cubic yards of unconsolidated sediments within the salt pond systems.

