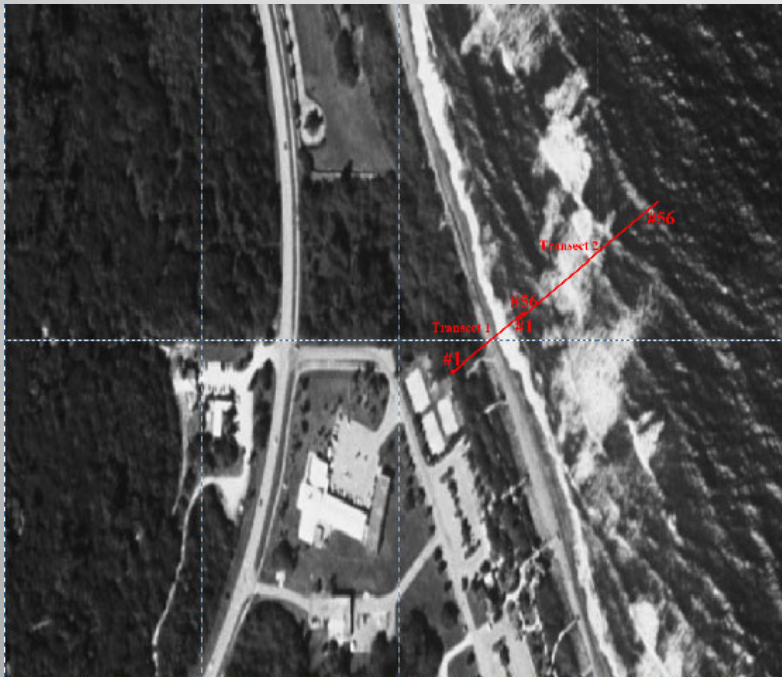




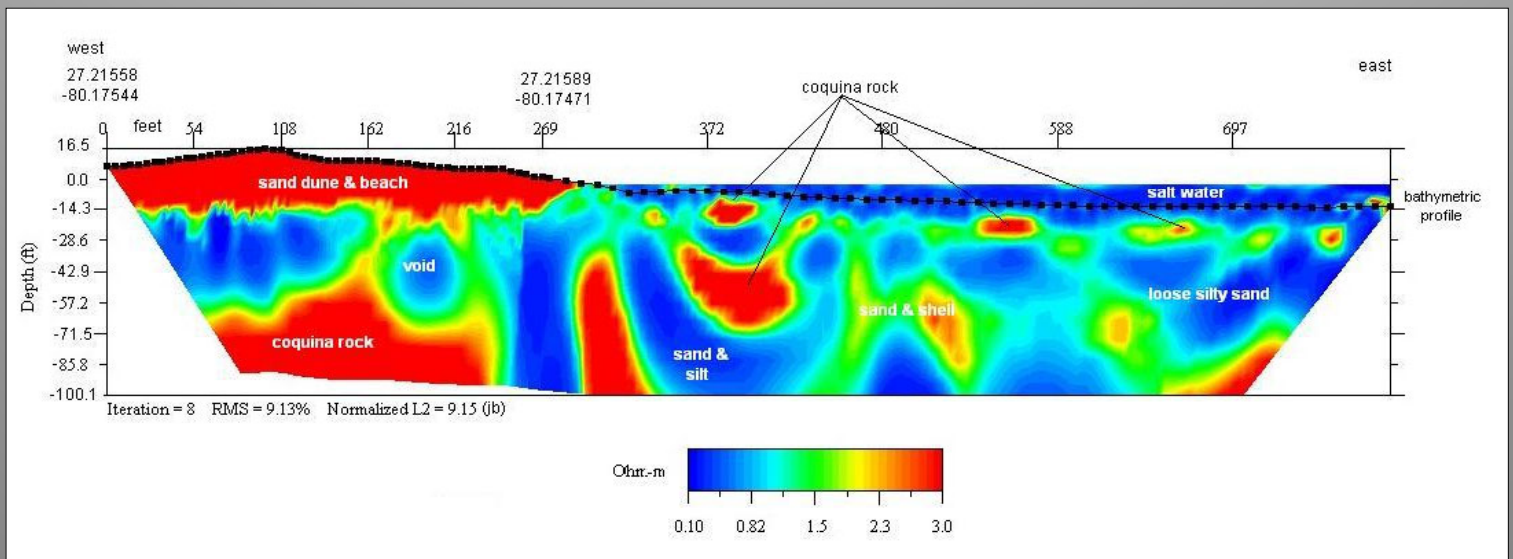
# Coastal Sediment Mapping For Dredging, Drilling, and General Subsurface Characterization

## Ocean intake MER Transect Location Map



Our innovative MER technology was used to map the geology across the north end of Hutchinson Island public beach to aid in the construction of a horizontal well. Two MER transects were performed across the area and the data were combined to form one comprehensive geophysical profile. The scaling factors were manipulated to isolate the sand, shell and coquina. The graphic profile depicts dry sand and coquina rock (high resistivity-red spectra) in the area of the beach dune from 0 to 162 feet on the profile. Loose saturated silty sands (low resistivity-blue spectra) occupy the beach and upper 5 to 6 feet of sediments in the near shore from 162 to 797 feet. Underlying these loose surficial silty sands are shelly sands (medium resistivity-green spectra) with lenses of coquina (high resistivity-yellow to orange spectra). The higher the resistivity in the coquina lenses indicates the greater the degree of cementation between the shell material and the greater the density of the coquina rock. There appear to be large pockets of loose silty sand (low resistivity-blue spectra) that represent lagoon sediments between offshore bars sediments comprised of shelly sand and coquina (higher resistivities-green to orange spectra) along the length of the transect at depth. The project aided in the successful design of horizontal wells.

## Transect 1 & 2 Combined



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