

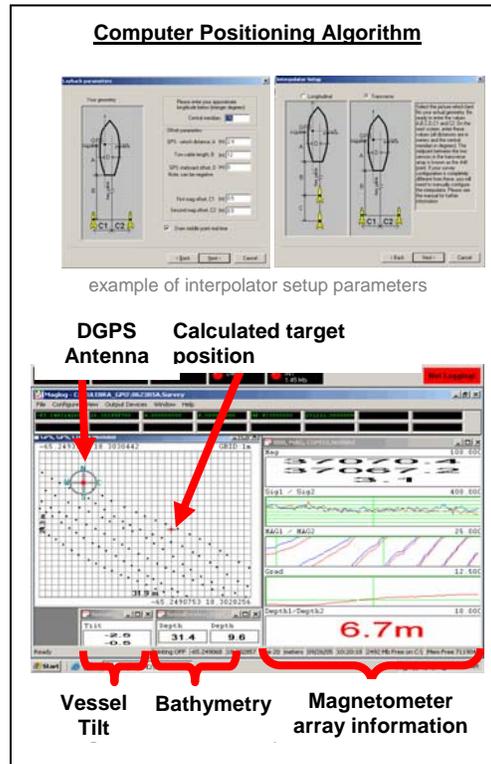
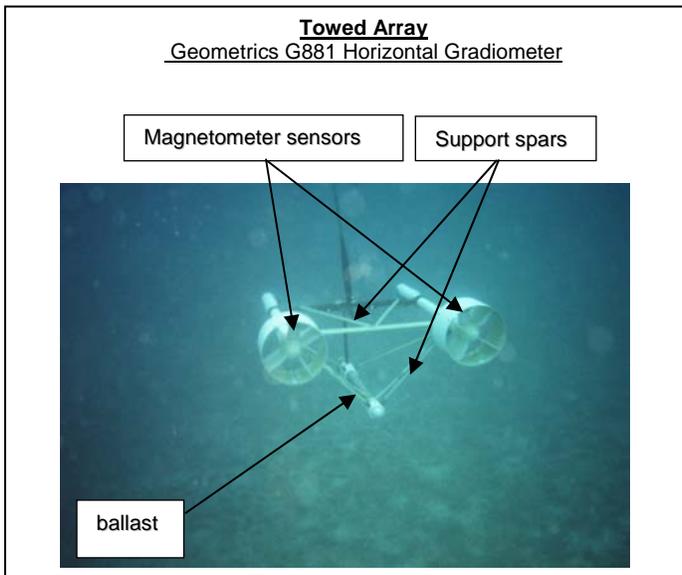
US Army Corps Of Engineers
Engineering and Support Center, Huntsville

Ordnance & Explosives Innovative Technologies Program

PROJECT: Marine Geophysics

Team Member: U.S. Army Engineering & Support Center, Huntsville

Project Description: The current state of the art in marine magnetometer surveying for MEC is demonstrated in this project. This project also presents five options available to position marine geophysical data: the ORE Offshore Trackpoint II Plus acoustic positioning system, the Desert Star AquaMap acoustic positioning system, the Geometrics, Inc. MagLogNT Interpolator algorithm, the Hypack Survey navigation and positioning system, and the Geometrics, Inc. MagMap2000 algorithm



Potential technology Applications:

The magnetometers evaluated can detect MEC producing very small magnetic fields at the magnetometer sensors: in areas having little geologic interference, total field anomalies as small as 1.5 to 2 nT will have signal to noise ratios of 10:1 or more.

All systems evaluated can be used to characterize sites for potential MEC presence. Fixed arrays are simple and straight forward to position using commonly available software. Arrays towed on or beneath the water surface can be accurately positioned using any of the equipment evaluated, with precisions and accuracies varying from 10s of centimeters to over two meters, depending on tow parameters, sea states and current conditions.

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