Development of Marine DC Resistivity Sounding System for Detecting Methane Hydrate

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Sub-seafloor area containing methane hydrate, one of new energy resources, can be identified as distribution of bottom-simulated reflectors (BSR) by seismic reflection surveys. However, geophysical methods how to estimate the thickness of methane-hydrate rich layer are still under development. We demonstrate how effectively a marine DC resistivity survey can detect the methane-hydrate layer as a resistive layer. We also introduce a development of new instruments for marine DC resistivity survey.