

Technical Announcement

U. S. Department of the Interior
Bureau of Ocean Energy
Management, Regulation and Enforcement
Gulf of Mexico OCS Region

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Multicomponent and Multifrequency Seismic for Assessment of Fluid-Gas Expulsion Geology and Gas Hydrate Deposits: Gulf of Mexico Hydrates

OCS Study BOEMRE 2010-046

The Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE), Gulf of Mexico OCS Region, announces the availability of a new study report, *Multicomponent and Multifrequency Seismic for Assessment of Fluid-Gas Expulsion Geology and Gas Hydrate Deposits: Gulf of Mexico Hydrates*.

In this study, comparisons were made between single-component, high-frequency chirp sonar data acquired with an autonomous underwater vehicle with multicomponent, low-frequency seismic data acquired with 4-component ocean bottom cable. Two locations in the Gulf of Mexico were examined. One site was in Green Canyon Block 205 and the other was in Green Canyon Block 237. The multicomponent data was processed using specialized techniques that produced images of near-seafloor geology that were comparable in spatial resolution to the chirp sonar data. Results indicate that the multicomponent data may be highly useful in evaluating the location and extent of hydrates and free gas with greater precision than traditional seismic methodologies.

This report is available only in compact disc format from the Bureau of Ocean Energy Management, Regulation and Enforcement, Gulf of Mexico OCS Region, at a charge of \$15.00, by referencing OCS Study BOEMRE 2010-046. The report may be downloaded from the BOEMRE website through the [Environmental Studies Program Information System \(ESPIS\)](#). You will be able to obtain this report also from the National Technical Information Service in the near future. Here are the addresses. You may also inspect copies at selected Federal Depository Libraries.

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