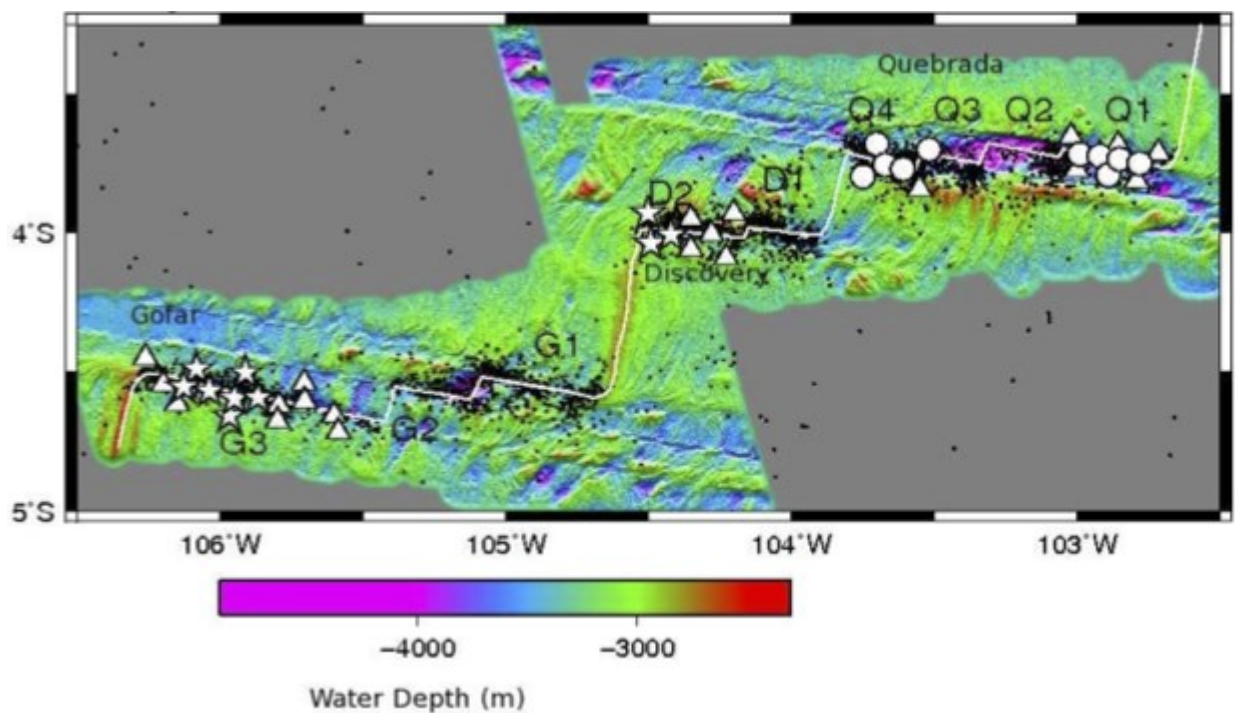


# OBSIP Experiment Archive

<b>Year:</b>	2007
<b>Experiment Name:</b>	Seismicity of Quebrada-Discovery-Gofar Transforms (QDG) Oceanic Transform Faulting: Foreshocks, Seismic and Aseismic Slip on the Quebrada, Discovery and Gofar Transforms
<b>Principal Investigator(s):</b>	Jeff McGuire (WHOI) John Collins (WHOI) Robert Detrick (WHOI)

**Experiment Summary:** (Taken from NSF Abstract Award #[0351143](#)): Aseismic fault slip is one of the most important processes in plate tectonics. Oceanic transforms are advantageous for understanding aseismic fault slip because about 90% of the plate motion is aseismic and only about 10% results in earthquakes. This project will deploy an acoustic ranging system across the Discovery transform fault for one year that will be contemporaneous with a deployment of ocean bottom seismometers. The combination of this instrumentation, Discovery's fast slip rate, and the mixture of seismic and aseismic slip on the Discovery fault will yield constraints on the portions of the fault that fail seismically and aseismically. Inferences about the seismic and aseismic regions of the fault will be combined with both passive and active source seismic imaging results that will relate the behavior of the transform to rock mechanics knowledge about the deformation properties of basalt, gabbro, serpentine, and peridotite. *Continued Next Page*



# OBSIP Experiment Archive

...Continued

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## Cruises:

*12/15/2007 - 1/17/2008:*

10 WHOI short period, 20 SIO broadband, and 10 WHOI Keck ocean bottom seismographs were deployed via the R/V Thomas Thompson along three oceanic transform faults.

*1/11/2009 - 2/3/2009:*

38 of the instruments were recovered using the R/V Atlantis, two WHOI short period instruments did not respond.

## Data:

Data from all OBSIP instruments deployed is archived under temporary network code [ZD](#) at the IRIS DMC.

## Downloads/Links:

[Nature Geoscience Publication](#)

[JGR Publication](#)

[G-Cubed Publication](#)

[G-Cubed Publication](#)

[Cruise Report—deploy](#)

[Cruise Report—recovery](#)