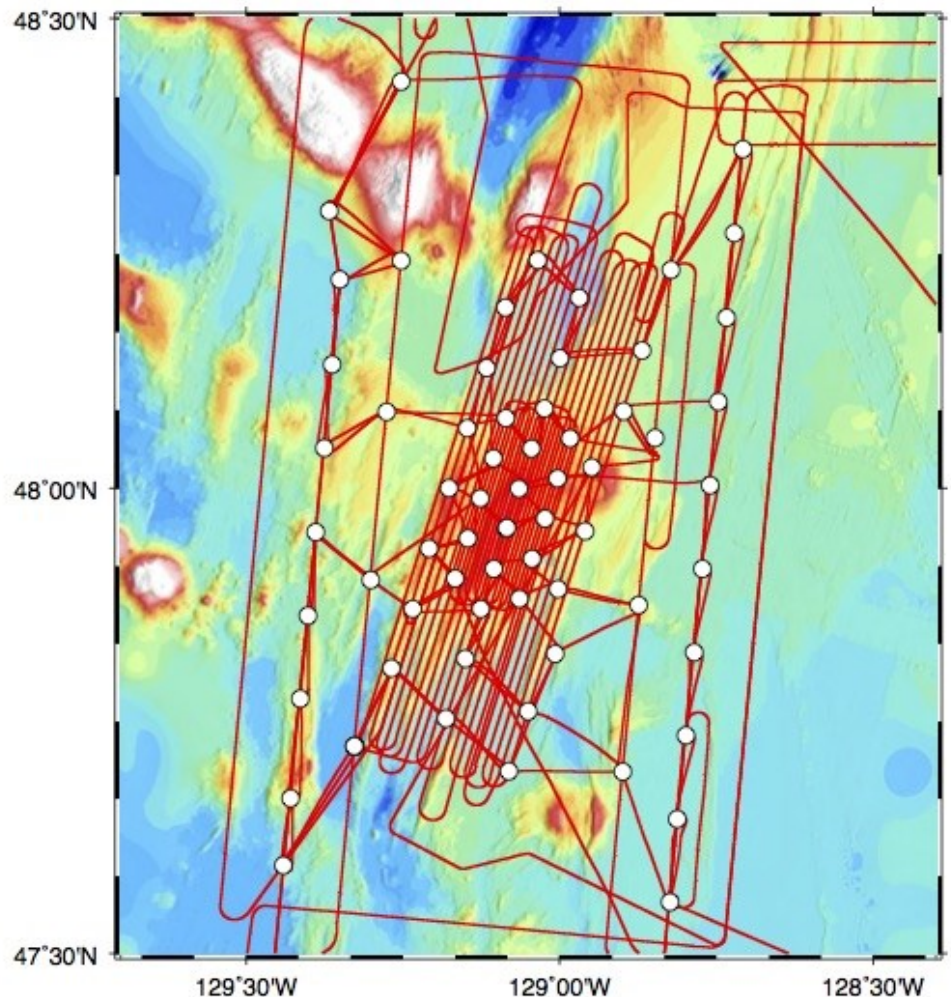


OBSIP Experiment Archive

Year:	2009
Experiment Name:	Endeavor Seismic Tomography Experiment (ETOMO)
Principal Investigator(s):	Doug Toomey (U of Oregon) Emilie Hooft (U of Oregon) William Wilcock (U of Washington)

Experiment Summary: (Taken from experiment website): Competing models for what controls the segmentation and intensity of ridge crest processes are at odds on the scale of mantle and crustal magmatic segmentation, the distribution of hydrothermal venting with respect to a volcanic segment and the properties of the thermal boundary layer that transports energy between the magmatic and hydrothermal systems. The recent discovery of an axial magma chamber (AMC) reflector beneath the Endeavour segment of the Juan de Fuca ridge, as well as systematic along axis changes in seafloor depth, ridge crest morphology and hydrothermal venting provide an ideal target for testing conflicting hypotheses. In 2008 we

will conduct a seismic experiment to investigate the 3-D structure of the crust and topmost mantle beneath the Endeavour segment, a RIDGE2000 Integrated Study Site (ISS). The scientific objectives are to: (1) Determine if the segmentation and intensity of the magma-hydrothermal systems at the Endeavour ridge are related to magma supply or to the magma plumbing between the mantle and crust, and (2) Constrain the thermal and magmatic structure underlying the Endeavour hydrothermal system in order to understand the patterns of energy transfer.



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OBSIP Experiment Archive

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Cruises:

8/18/2009 - 9/19/2009:

23 WHOI and 41 SIO short period ocean bottom seismometers were deployed and recovered on the R/V Marcus Langseth.

Data:

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

Downloads/Links:

[Experiment Website](#)