OBSIP Experiment Archive

Year:	2002
Experiment Name:	Premiere Experiment, Sea of Cortez, Addressing the Development of Oblique Rifting (PESCADOR)
Principal Investigator(s):	Daniel Lizarralde Gary J. Axen Graham M. Kent John M. Fletcher Antonio Gonzalez-Fernandez Allistair J. Harding W. Steven Holbrook Paul J. Ummhoefer

Experiment Summary: (Taken from NSF MARGINS): A crustal-scale, active-source seismic experiment, funded through NSF MARGINS, was conducted in the Gulf of California in the fall of 2002. This experiment aimed to image crustal structure across conjugate margins of major basins throughout the gulf with the goals of determining the modes of extension, the influence of sedimentation and magmatism on breakup, and other features leading to a better understanding of the rifting process. The experiment involved two ships, the R/V Maurice Ewing and the R/V New Horizon. The Ewing provided the acoustic source and acquired multi-channel seismic (MCS) data using a 6-km-long streamer, and the New Horizon tended to 206 deployments of ocean bottom seismometers (OBSs). MCS and OBS data were acquired along three flow line transects across Guaymas Basin, Alarcon Basin, and between Puerto Vallarta and Cabo San Lucas. *Continued Next Page*

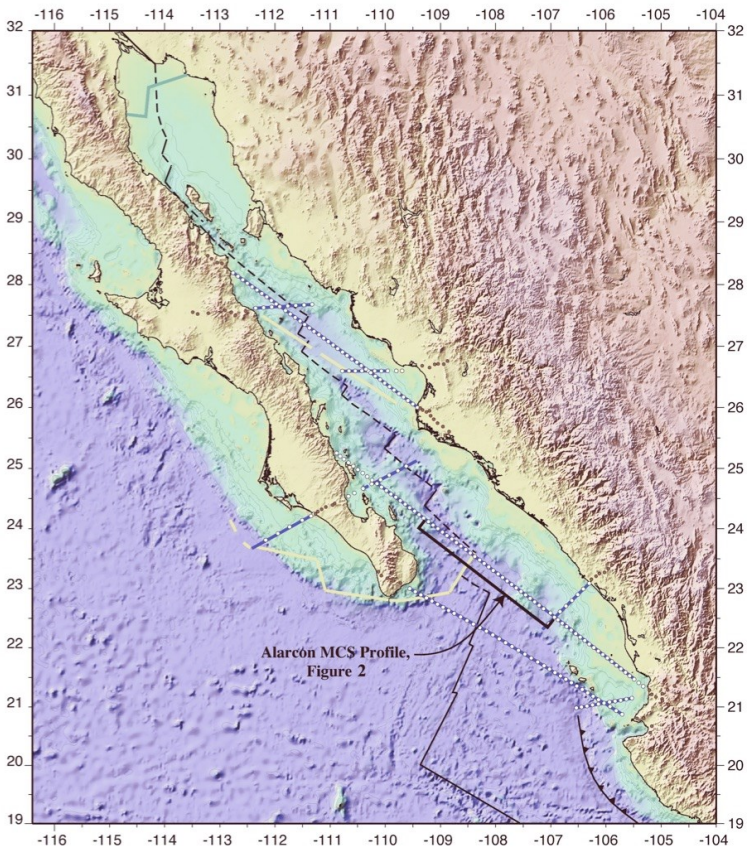

Figure 1: Distribution of combined MCS/wide-angle profiles (blue), OBS locations (white), MCS transects (yellow), and onshore RefTek seismometers (red). There were 206 OBS deployments and 90 RefTek deployments. Location of Alarcon MCS data shown in Figure 2 is indicated. The Guaymas velocity model shown in Figure 3 extends from coast-to-coast along the main transect.

OBS that were deployed as part of PESCADOR (white dots).

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Experiment Summary: ...A fourth, two-part, "coast-perpendicular" transect extended from the Pacific margin across the Baja Peninsula through Bahia de La Paz and, on the Mexican mainland, across the margin south of Mazatlan and up into the Sierras. Each of these transects was instrumented with OBSs spaced 10-15 km apart and similarly spaced seismometers on land recording the offshore shots to ~100 km inland.

Cruises:
9/16/2002 - 10/30/2002:
207 deployments of SIO L-CHEAPO ocean bottom seismometers were deployed with 206 recoveries for a refraction experiment aboard the R/V New Horizon [BAJA02NH] with support for source and MCS data provided by the R/V Maurice Ewing [EW0210].

Data:
Data from all instruments deployed are archived under assembled data set ID #04-018 at the IRIS DMC.

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