OBSIP Experiment Archive

Year:	2011
Experiment Name:	Salton Trough
	Seismic Imaging of the Salton Sea (SSIP)
Principal Investigator(s):	Neal Driscoll (UCSD)

Experiment Summary: (Taken from the NSF Abstract Award #<u>1132984</u>): The Salton Trough is a critical structure where two very different styles of deformation meet; spreading-center dominated deformation to the south in the Gulf of California and dextral strike-slip deformation along the San Andreas fault system. Extremely high heat flow, young volcanism, shallow metamorphism and micro-seismicity led early researchers to interpret the southern Salton Sea as a buried spreading center with a NE-striking system of normal faults. To date, however, a critical portion of this system at the intersection between the San Andreas Fault

with the Brawley Seismic Zone (BSZ) in the southern Salton Sea remains poorly understood, in large part, due to a lack of seismic imaging in the Salton Sea. To address this problem, the NSF has funded two projects, one a marine seismic study of the Salton Trough and the other an onshore study. These projects are highly complementary in that seismic signals from both onshore and offshore will be recorded by both experiments, but the deployments of airguns for the projects requires a boat of sufficient size to deploy the ocean bottom seismometers and safely operate the airguns.



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Experiment Name:Salton TroughSeismic Imaging of the Salton Sea (SSIP)

Principal Investigator(s): Neal Driscoll (UCSD)

Cruises:

2/28/2011 - 3/17/2011 The complex southern end of the San Andreas fault includes an extensional stepover zone beneath the Salton Sea. This is an active source experiment that deployed 78 OBS.

Data:

Data from all OBSIP instruments deployed will be archived at the IRIS DMC under network code <u>YG</u>. Data will be restricted for two years following the experiment, per NSF policy.

Broadband land stations are archived under network code <u>XD</u>, active source land receivers are under assembled dataset ID#<u>11-012</u>, the 2.4 km cabeled array data are archived under ID#<u>13-</u><u>006</u>, related data is under ID#<u>14-059</u>

Downloads/Links:

<u>SSIP Website</u> <u>USGS Open-File Report</u>