

2011 SIO OBSIP Field Programs Funded through OCE

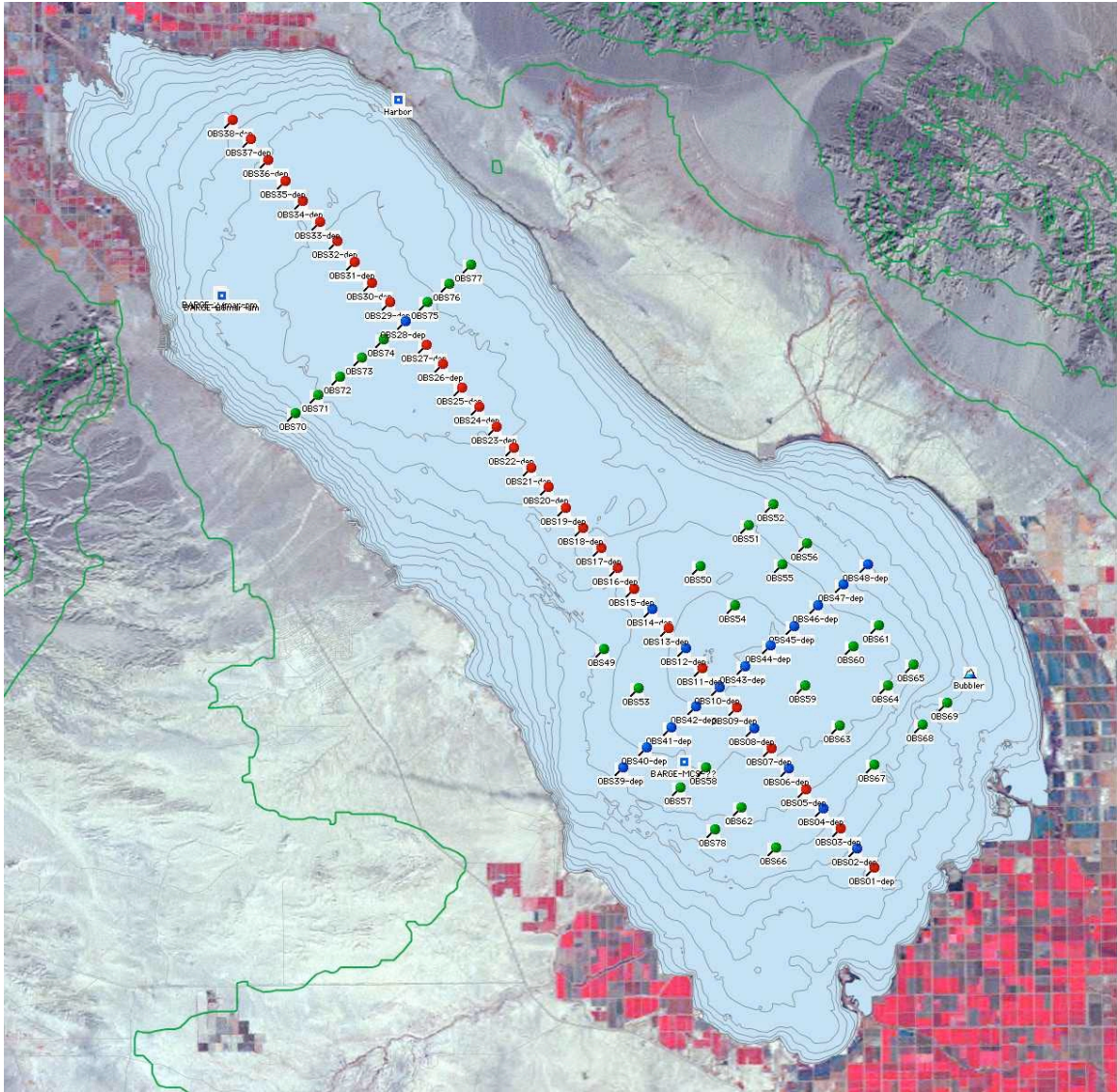
Driscoll et al. – Salton Trough; 50 short-period OBS (LC4x4 OBS), 87 total active-source deployments; R/V Charity Eden:

Proposal title: " Marine Seismic Reflection and Refraction Study of the Salton Trough." The linkage of this fault system through the Salton Sea region is poorly understood, in part because the structure beneath the Salton Sea has not been defined. The project, conducted in conjunction with a deployment of on-land seismic stations, will address that problem by deploying an array of ocean bottom



seismometers (OBS) on the floor of the Salton Sea. Concurrently, a multi-channel seismic survey was conducted toward imaging the structure beneath the Salton Trough. Deployments were scheduled to coincide with a land array (~300-400 sites) and ~125 land shots.

The OBS deployments occurred throughout the months of February to April and utilized a series of short cruise legs on the 29' pontoon boat *R/V Charity Eden*. In total, 48 SP 4x4 OBS units were used for 78 total deployments within the Salton Sea. These are the shallowest deployment of OBS units to date – the deepest deployment was 42 feet and the shallowest was only 12 feet! All OBS activities on the sea were based aboard a small barge adapted for OBS work and anchored to the seafloor. The project also heavily utilized a ground-based support location at the Sony Bono Wildlife Reserve. This was a very successful project, all units recording data for the entire duration of the campaign.



Grid of all Salton Sea OBS deployments.



R/V Charity Eden w/ OBS units.



OBS encrusted in barnacles after 1-mos deployment.

Summary of Salton Sea deployments:

SALTON SEA 2011

Format: DMM M/D/Y H:M:S LOCAL-TIME Datum: WGS 84													
Site	Redeployed As:	Acous/Logger	Array Status	Dep Date Time - local	Rec Date Time - local	Latitude	Longitude	Sync Time:	Wakeup Time:	Recovery Time Tag:	Drift	Comment	
OB501	OB559	au-98 lg-11	Dep1, Red	03/01/2011 12:07	03/12/2011 12:50	33 10357'	-115 40.694'	2011.059.20:43:00.00	2011.060.06:00:00.00	2011.071.22:19:00.0543050	0.054305	Hooked from boat	
OB502		au-61 lg-139	Dep1 & Dep 2, Blue	03/01/2011 15:43	04/20/2011 13:00	33 10859'	-115 41.217'	2011.060.20:00:00.00	2011.061.00:00:00.00	2011.111.04:30:00.15999	0.15999	Diver recovery	
OB503	OB574	au-58 lg-85	Dep1, Red	03/01/2011 11:59	03/10/2011 14:30	33 11388'	-115 41.701'	2011.059.22:48:00.00	2011.060.06:00:00.00	2011.070.19:19:59.7929216	-0.2079784		
OB504		au-150 lg-75	Dep1 & Dep 2, Blue	03/01/2011 15:35	03/18/2011 12:23	33 11904'	-115 42.218'	2011.060.18:47:00.00	2011.061.00:00:00.00	2011.077.23:34:59.9868637	-0.0131363		
OB505	OB573	au-105 lg-33	Dep1, Red	03/01/2011 11:50	03/10/2011 14:53	33 12391'	-115 42.749'	2011.059.22:36:00.00	2011.060.06:00:00.00	2011.070.19:16:59.9651209	-0.034879099		
OB506		au-03 lg-33	Dep1 & Dep 2, Blue	03/01/2011 15:27	04/19/2011 11:34	33 12936'	-115 43.257'	2011.060.18:18:00.00	2011.061.00:00:00.00	2011.110.03:25:00.03847	0.02847		
OB507	OB572	au-49 lg-73	Dep1, Red	03/01/2011 11:43	03/10/2011 15:13	33 13455'	-115 43.788'	2011.059.23:32:00.00	2011.061.00:00:00.00	2011.070.19:14:00.0500915	0.0500915		
OB508		au-83 lg-68	Dep1 & Dep 2, Blue	03/01/2011 15:20	04/20/2011 14:55	33 13976'	-115 44.307'	2011.060.19:51:00.00	2011.061.00:00:00.00	2011.111.04:28:59.4248999	-0.05751	Diver recovery	
OB509	OB576	au-62 lg-14	Dep1, Red	03/01/2011 11:35	03/10/2011 15:32	33 14944'	-115 44.822'	2011.059.22:25:00.00	2011.060.06:00:00.00	2011.070.19:11:00.0088153	0.0088153		
OB510		au-67 lg-65	Dep1 & Dep 2, Blue	03/01/2011 15:13	04/19/2011 15:34	33 15027'	-115 45.338'	2011.060.20:27:00.00	2011.061.00:00:00.00	2011.110.02:53:00.05469	0.05469		
OB511	OB577	au-108 lg-43	Dep1, Red	03/01/2011 11:28	03/10/2011 15:51	33 15524'	-115 45.849'	2011.059.23:04:00.00	2011.060.06:00:00.00	2011.070.19:18:00.00001040	0.000104		
OB512		au-85 lg-23	Dep1 & Dep 2, Blue	03/01/2011 15:05	04/20/2011 16:54	33 16032'	-115 46.342'	2011.060.19:09:00.00	2011.061.00:00:00.00	2011.111.04:31:00.04154	0.04154	Diver recovery	
OB513	OB575	au-24 lg-17	Dep1, Red	03/01/2011 11:21	03/10/2011 16:11	33 16550'	-115 46.852'	2011.059.23:43:00.00	2011.061.00:00:00.00	2011.070.19:06:00.0176060	0.017606		
OB514		au-43 lg-72	Dep1 & Dep 2, Blue	03/01/2011 14:56	04/20/2011 18:04	33 17044'	-115 47.355'	2011.060.20:37:00.00	2011.061.00:00:00.00	2011.111.04:12:00.16975	0.16975	Diver recovery	
OB515	OB562	au-44 lg-77	Dep1, Red	03/01/2011 11:13	03/11/2011 13:47	33 17569'	-115 47.891'	2011.059.23:54:00.00	2011.061.00:00:00.00	2011.070.23:30:59.9763559	-0.0236441		
OB516	OB566	au-72 lg-87	Dep1, Red	03/01/2011 11:06	03/11/2011 13:50	33 18102'	-115 48.400'	2011.060.00:16:00.00	2011.061.00:00:00.00	2011.070.23:40:00.0072780	0.0072780		
OB517	OB557	au-38 lg-93	Dep1, Red	03/01/2011 10:59	03/11/2011 14:04	33 18117'	-115 48.896'	2011.060.00:05:00.00	2011.061.00:00:00.00	2011.070.23:36:59.9851280	-0.014872		
OB518	OB578	au-31 lg-81	Dep1, Red	03/01/2011 10:46	03/11/2011 14:08	33 19129'	-115 49.434'	2011.060.00:27:00.00	2011.061.00:00:00.00	2011.070.23:33:59.9300771	-0.0699229		
OB519	OB570	au-69 lg-02	Dep1, Red	02/28/2011 14:50	03/11/2011 14:27	33 19658'	-115 49.962'	2011.059.19:05:00.00	2011.060.00:00:00.00	2011.070.23:28:00.0004248	0.0004248		
OB520	OB571	au-02 lg-74	Dep1, Red	02/28/2011 14:44	03/11/2011 14:31	33 20201'	-115 50.478'	2011.059.18:55:00.00	2011.060.00:00:00.00	2011.070.23:25:59.9717693	-0.0282307		
OB521	OB561	au-30 lg-86	Dep1, Red	02/28/2011 14:38	03/11/2011 14:43	33 20685'	-115 50.986'	2011.059.20:08:00.00	2011.060.00:00:00.00	2011.070.23:19:00.0368882	0.0368882		
OB522	OB558	au-100 lg-90	Dep1, Red	02/28/2011 14:32	03/11/2011 14:45	33 21213'	-115 51.504'	2011.059.19:37:00.00	2011.060.00:00:00.00	2011.070.23:22:00.0080919	0.0080919		
OB523	OB560	au-103 lg-89	Dep1, Red	02/28/2011 14:26	03/12/2011 09:03	33 21740'	-115 52.038'	2011.059.19:27:00.00	2011.060.00:00:00.00	2011.071.17:52:00.0060497	0.0060497		
OB524	OB564	au-102 lg-13	Dep1, Red	02/28/2011 14:20	03/12/2011 08:51	33 22260'	-115 52.555'	2011.059.19:57:00.00	2011.060.00:00:00.00	2011.071.17:48:59.9853030	-0.0146497		
OB525	OB565	au-95 lg-89	Dep1, Red	02/28/2011 14:14	03/12/2011 08:47	33 22766'	-115 53.068'	2011.059.19:16:00.00	2011.060.00:00:00.00	2011.071.18:03:00.0062726	0.0062726		
OB526	OB563	au-89 lg-140	Dep1, Red	02/28/2011 14:08	03/12/2011 08:33	33 23363'	-115 53.641'	2011.059.19:47:00.00	2011.060.00:00:00.00	2011.071.17:55:00.0154103	0.0154103		
OB527	OB567	au-146 lg-63	Dep1, Red	02/28/2011 14:01	03/12/2011 08:28	33 23870'	-115 54.153'	2011.059.20:30:00.00	2011.060.00:00:00.00	2011.071.17:57:59.9537926	-0.0462074		
OB528		au-17 lg-27	Dep1 & Dep 2, Blue	02/28/2011 13:54	03/19/2011 15:57	33 24469'	-115 54.773'	2011.059.20:19:00.00	2011.060.00:00:00.00	2011.079.00:32:00.0012256	0.0012256		
OB529	OB569	au-74 lg-66	Dep1, Red	02/27/2011 17:56	03/12/2011 08:13	33 24957'	-115 55.250'	2011.058.22:52:00.00	2011.060.00:00:00.00	2011.071.18:00:00.0163279	0.0163279		
OB530	OB568	au-73 lg-56	Dep1, Red	02/27/2011 15:41	03/12/2011 08:08	33 25466'	-115 55.788'	2011.058.19:40:00.00	2011.060.00:00:00.00	2011.071.18:09:00.0122473	0.0122473		
OB531	OB553	au-99 lg-88	Dep1, Red	02/27/2011 17:46	03/11/2011 09:42	33 26008'	-115 56.303'	2011.058.23:10:00.00	2011.060.00:00:00.00	2011.070.18:41:00.0078201	0.0078201		
OB532	OB554	au-01 lg-71	Dep1, Red	02/27/2011 15:32	03/11/2011 09:37	33 26528'	-115 56.826'	2011.058.20:29:00.00	2011.060.00:00:00.00	2011.070.18:47:59.9942506	-0.0057494		
OB533	OB559	au-75 lg-57	Dep1, Red	02/27/2011 17:37	03/11/2011 09:24	33 27039'	-115 57.349'	2011.058.22:40:00.00	2011.060.00:00:00.00	2011.070.18:43:59.9796568	-0.1209414		
OB534	OB552	au-96 lg-92	Dep1, Red	02/27/2011 15:21	03/11/2011 09:19	33 27577'	-115 57.869'	2011.058.19:55:00.00	2011.060.00:00:00.00	2011.070.18:50:59.8035894	-0.1964106		
OB535	OB555	au-77 lg-40	Dep1, Red	02/27/2011 17:28	03/11/2011 09:14	33 28094'	-115 58.393'	2011.058.23:37:00.00	2011.060.00:00:00.00	2011.070.18:53:59.9515080	-0.0484932		
OB536	OB556	au-59 lg-61	Dep1, Red	02/27/2011 15:09	03/11/2011 08:59	33 28634'	-115 58.923'	2011.058.19:25:00.00	2011.060.00:00:00.00	2011.070.18:56:59.9829411	-0.0170589		
OB537	OB551	au-29 lg-137	Dep1, Red	02/27/2011 17:16	03/11/2011 08:26	33 29162'	-115 59.434'	2011.058.22:16:00.00	2011.060.00:00:00.00	2011.070.18:59:59.9881256	-0.018744		
OB538	OB550	au-28 lg-94	Dep1, Red	02/27/2011 14:52	03/11/2011 08:10	33 29672'	-115 59.983'	2011.058.19:05:00.00	2011.060.00:00:00.00	2011.070.19:02:59.9917693	-0.0682307		
OB539		au-11 lg-67	Dep1 & Dep 2, Blue	03/02/2011 11:12	04/19/2011 12:49	33 13004'	-115 48.309'	2011.060.21:06:00.00	2011.061.12:00:00.00	2011.110.03:33:00.13549	0.13549		
OB540		au-33 lg-39	Dep1 & Dep 2, Blue	03/02/2011 11:19	04/19/2011 13:00	33 13507'	-115 47.571'	2011.060.22:29:00.00	2011.061.12:00:00.00	2011.110.03:00:00.04988	0.04988		
OB541		au-57 lg-47	Dep1 & Dep 2, Blue	03/01/2011 16:12	04/20/2011 16:10	33 14024'	-115 46.824'	2011.060.18:58:00.00	2011.061.00:00:00.00	2011.111.04:26:00.04574	0.04574	Diver recovery	
OB542		au-88 lg-38	Dep1 & Dep 2, Blue	03/02/2011 11:28	04/19/2011 13:37	33 14533'	-115 46.062'	2011.060.22:39:00.00	2011.061.12:00:00.00	2011.110.03:29:00.07750	0.07750		
OB543		au-80 lg-50	Dep1 & Dep 2, Blue	03/02/2011 11:36	04/19/2011 15:47	33 15543'	-115 44.546'	2011.060.23:00:00.00	2011.061.12:00:00.00	2011.110.03:31:00.18152	0.18152		
OB544		au-65 lg-24	Dep1 & Dep 2, Blue	03/02/2011 11:42	04/19/2011 16:00	33 16070'	-115 43.762'	2011.060.22:50:00.00	2011.061.12:00:00.00	2011.110.03:39:59.95937	-0.40063		
OB545		au-35 lg-55	Dep1 & Dep 2, Blue	03/02/2011 11:48	04/19/2011 16:13	33 16565'	-115 43.041'	2011.060.18:30:00.00	2011.061.00:00:00.00	2011.110.03:01:59.993229	-0.00677		
OB546		au-87 lg-95	Dep1 & Dep 2, Blue	03/02/2011 11:52	04/19/2011 16:25	33 17082'	-115 42.300'	2011.060.23:15:00.00	2011.061.12:00:00.00	2011.110.03:08:59.8349899	-0.16501		
OB547		au-23 lg-20	Dep1 & Dep 2, Blue	03/02/2011 11:57	04/19/2011 16:37	33 17604'	-115 41.528'	2011.060.20:52:00.00	2011.061.00:00:00.00	2011.110.03:11:59.8260999	-0.1739		
OB548		au-34 lg-78	Dep1 & Dep 2, Blue	03/02/2011 12:01	04/19/2011 16:49	33 18112'	-115 40.771'	2011.060.23:39:00.00	2011.010.12:00:00.00	2011.110.02:56:00.37705	0.37705		
OB549		au-75 lg-57	Dep2, Green	03/11/2011 13:41	04/19/2011 14:14	33 16028'	-115 48.838'	2011.058.22:40:00.00	2011.060.00:00:00.00	2011.110.03:37:59.999510	-0.50049		
OB550		au-28 lg-94	Dep2, Green	03/11/2011 14:27	04/20/2011 10:59	33 18130'	-115 45.852'	2011.058.19:05:00.00	2011.060.00:00:00.00	2011.111.04:10:59.967599	-0.0324		
OB551		au-29 lg-137	Dep2, Green	03/11/2011 14:20	04/20/2011 09:31	33 19149'	-115 44.392'	2011.058.22:16:00.00	2011.060.00:00:00.00	2011.111.04:04:10:59.952379	-0.04762		
OB552		au-96 lg-92	Dep2, Green	03/11/2011 14:14	04/19/2011 11:50	33 19683'	-115 43.644'	2011.058.19:55:00.00	2011.060.00:00:00.00	2011.110.02:41:59.25053	-0.74947		
OB553		au-99 lg-88	Dep2, Green	03/11/2011 13:34	04/18/2011 19:08	33 15018'	-115 47.813'	2011.058.23:10:00.00	2011.060.00:00:00.00	2011.110.03:35:00.046500	0.04650		
OB554		au-01 lg-71	Dep2, Green	03/11/									