

*2008 Los Angeles Basin Geological Society Field Trip*  
Neogene Extensional Tectonics and Sedimentation,  
Coastal Southern California.

**Sunday, March 16, 2008 RESCHEDULED !!!!**

**Field Trip Leaders:**

Mark Legg (Legg Geophysical)

Richard Behl (California State University Long Beach)



This field trip will visit coastal exposures of Miocene and younger extensional faults, syn-rift sediments and intrusives (San Onofre Breccia, Monterey Formation, dacitic and andesitic dikes) and post-rift sediments (Capistrano Formation) that were deposited in the newly formed tectonic troughs. Discussions at San Onofre State Beach, Dana Point, and Laguna Beach will be based upon excellent coastal outcrops and recently acquired multichannel seismic reflection profiles and high-resolution bathymetric data from the adjacent offshore continental borderland.



Although developed within the transform framework of the Pacific-North American plate boundary, an extreme extensional component was critical to the development of southern California's Neogene basins. Miocene transtension gave way to Pliocene and younger transpression as the plate boundary shifted inland to the San Andreas fault with its major restraining bend, and the Transverse Ranges rotated clockwise within the predominant northwest-trending right-slip transform motion vector. The evolving structure of the Neogene basins and troughs controlled the distribution of basin-fill as sedimentation increased during the late Miocene to Pliocene. Structural inversion of Miocene extensional basins in the late Neogene-Quaternary resulted in the formation of most of the major oil and gas fields in southern California.

**Professional:** \$100

**Students and Retirees:** \$40 (limit of first 5)

**Please make reservations with:** LABGS Vice President / Program Chair: Bill Long,  
Email: [Wlongbrd@aol.com](mailto:Wlongbrd@aol.com) Phone: 626-272-4557 c

Trip departure from CSULB, more details to follow.