

Foreman, John (deceased), James Galloway (MMS, Camarillo, CA), Marc Kamerling (Venoco, Inc, Carpinteria, CA), Tom Redin (Unocal – Retired, Ventura, CA)

STRUCTURE AND CORRELATION SECTIONS, SANTA YNEZ MOUNTAINS TO THE SANTA BARBARA CHANNEL AND THE CHANNEL ISLANDS, WESTERN TRANSVERSE RANGES, CALIFORNIA

During the early 1990s practically all exploration for oil and gas in the Santa Barbara Channel had stopped. Exploration from existing platforms was still allowed. Subsequently all subsurface well information was made available to the public. We, John Forman, James Galloway, Marc Kamerling, and Tom Redin decided much could be learned about the geology of this area by constructing a series of structure-correlation sections utilizing all newly released offshore well log data, paleontological information, plus older onshore well data, time migrated CDP seismic lines where available, well velocity surveys, and onshore geologic field maps. The Pacific Section AAPG encouraged our doing this and agreed to publish the sections as a series of correlation sections CS 32 through CS 42E. As of May 2003 this is an ongoing project.

Our sections do not take sides on the thick-skinned vs. thin-skinned tectonic controversy but do incorporate all the subsurface well data in a manner that may someday lead to more oil and gas exploration within the western Ventura basin. If anything we tend to lean towards thick-skinned tectonics. This is exemplified by our handling of the Oakridge fault as an active reverse fault and not an axial surface.

Stratigraphically, where possible, an effort was made to show all the Paleogene formations down to the top of the Upper Cretaceous Jalama formation. Several wells in the center of the Santa Barbara Channel penetrated Neogene, Paleogene, Upper Cretaceous, and metamorphic basement.

It is uncertain if the Jalama formation-metamorphic basement contact is depositional or represents a detachment surface analogous to, or part of, the Coast Range thrust.