



# San Joaquin Geological Society

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## Santa Barbara Channel Structure and Correlation Sections Project, Santa Ynez Mountains to the Channel Islands, Western Transverse Ranges, California

by

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### ABSTRACT

After practically all exploration for oil and gas in the Santa Barbara Channel had stopped in the early 1990s, all subsurface well information was made available to the public. 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 this undertaking and agreed to publish the "Channel Series" of sections as part of the correlation sections it has been publishing since 1951. After more than seven years of work, this project is completed and the sections are now available from the Pacific Section AAPG Publications Committee.

These sections do not take sides on the "thick-skinned thin skinned" tectonic controversy but do incorporate all the subsurface well data in a manner that has increased our geologic understanding of the western Ventura basin. Our handling of the Oakridge fault as an active reverse fault and not as an axial surface exemplifies our tendency to lean towards "thick skinned" tectonics. These sections may someday lead to more oil and gas exploration within the Santa Barbara Channel. They are also an important resources for ground water studies and earthquake hazards evaluations.

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.

### BIOGRAPHY

*Tom Redin hails from the North Chicago area where he graduated from Maine Township High School in 1943. After two years in Europe with the U. S. Army, he attended the University of Illinois for one year then transferred to UCLA, receiving his Bachelors Degree in Geology in 1952.*

*Tom began his career in the offshore. From 1955 to 1959, he worked for the offshore exploration consortium, Continental, Union, Superior and Shell (the CUSS group). In 1960, he began a regional evaluation of Pakistan's Indus River Basin with Union Oil Company. In 1961 he was transferred to Santa Paula, California where he conducted field-mapping studies in the Ventura Basin. In 1963 he was transferred to Santa Fe Springs, California, to work with Union's offshore exploration group. Tom became District Exploration Geologist in 1969 and added the Los Angeles Basin to his responsibilities. He retired in 1986.*

*Tom was a contributor to AAPG Memoir 52 on active margin basins and has given talks on oil and gas production from submarine fan deposits. With Jack West, he co-authored a series of five regional cross sections of LA Basin for Pacific Section AAPG. For the past eight years, Tom has been the key geologist developing a series of regional cross*

*sections and maps in the Santa Barbara Channel. This project was completed in late 2005 and is now available from the Pacific Section AAPG Publications Committee.*