

# **Eocene Rifting and Its Relationship to Strike Slip Faulting in the Western Gulf of Thailand**

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Large scale strike slip faults such as the Red River Fault and Mae Ping Fault form a prominent part of the geology of SE Asia. In the past it had been assumed that basin formation in the Gulf of Thailand was a result of dextral shear between parallel strike-slip faults. The availability of 3-D seismic data from these areas shows that although the faults form prominent features onshore, their offshore extent is limited. Thus it would appear that the offshore basins have a dominantly extensional mode of deformation.

However, in the western Gulf of Thailand and onshore Peninsula Thailand there is a close relationship between basins such as the Chumphon Basin and a major NE-SW trending sinistral strike-slip fault, the Khlong Marui Fault. Newly acquired field data shows that both extension and inversion within this basin are consistent with different phases of movement on this Fault, but it appears more likely that it was an older structure that was reactivated as an accommodation zone in a predominantly extensional setting.

The western Gulf of Thailand are also shallower than those, such as the Pattani Basin, further to the east. Early rift events are much more clearly imaged than in the Pattani Basin, and show the importance of oblique fault reactivation in developing the complex fault patterns that characterise the younger reservoir bearing part of the sequence. The formation of narrow half graben during the early Eocene rift event has potential implications for source rock distribution.