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## **STRUCTURAL HISTORY OF THE MALAY BASIN, A CLASSICAL TERTIARY WRENCH BASIN**

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This paper describes the major tectonic events of the Malay Basin. Its Eocene inception is postulated to be caused by the collision between the Indian and Asian plates which created a major NW-SE 'scissor' divergent wrench fault along its axis. Today this fault has a right lateral displacement of some 80 km.

The next major tectonic event was the Eo-Oligocene opening up of the South China Sea. It resulted in its E-W en echelon half grabens which together with divergent wrenchings of the NW-SE faults facilitated the rapid development of the Malay Basin during early Miocene.

By middle Miocene, the compressional regime exerted by the impinging Pacific plate was felt in the Malay Basin. This stress was initially taken up predominantly by convergent right lateral wrenchings of the basin inception faults which also caused structural inversion over the E-W half grabens.

By late Miocene, this stress could no longer be taken up by wrench movements resulting in the stress becoming more E-W compressional. This stress caused crustal shortening through tilting of different fault blocks and culminated in a regional truncation unconformity and the prominent set of N-S faults. After that an extensional regime existed probably due to the spreading axis of the South China Sea extending into it.

In summary the structural history of the Malay Basin has been reconstructed with its structural style and timing defined. In so doing, the foundation for precise play type definition has been laid.