

Structural Styles of the Perdido and Mexican Ridges Fold-Belts

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Perdido and Mexican Ridges contractional growth-fold-belts (PEFB& MRFB) in deep water, were driven by gravity sliding of the continental platform at the southwestern Gulf of Mexico.

Extensional fault systems associated to the fold-belts were extensive northern in the Burgos Basin than the extensional system towards southern. From north to south PEFB& MRFB have indistinctive trend trajectories but others structural features like detachment levels, growth strata ages and folding mechanisms are different for each fold-belt.

PEFB structures typically involve a thick: Jurassic, Cretaceous and Tertiary column that form wide and height folds detached at jurassic salt. Folds present some vertical deformation too and early salt roles affected the pre-kinematics strata. Growth strata on the structures of the PEFB indicate a Miocene-Pliocene folding. Western margin of the PEFB is represented by allocthonous shallow salt that shadow the structure below salt this fact reveals its complex evolution and its eastern margin is represented by a typical undeformed foreland.

MRFB present narrow folds built in the Tertiary column, detached at Paleocene mud. Folds are commonly chevron or buckle growth structures, formed during Pliocene or Present time. Western margin of the MRFB is a clear transition to the extensional growth-fault system and its eastern margin corresponds to a typical transition to an un-deformed terrain.

Trap charge potential is more distinctively attractive for the Perdido folds detached below the Jurassic source rock than the Mexican Ridges folds detached above Jurassic source rock. For trap preservation Perdido salt cored folds have collapsed sectors that compartmentalize structure.
