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Comparative Gulf of Mexico and South Atlantic Salt Basins

The major petroleum salt basins located on divergent margins are the Gulf of Mexico and the South Atlantic basins. These basins have been studied for a long time and the Exploration is still very active with the Deep Offshore tertiary turbiditic plays.

The geodynamic evolution of these margins controls the key parameters of the salt tectonic evolution from the earliest stages in Jurassic-Cretaceous times to present day .

Some of the key parameters will be compared and discussed in relation with the regional geodynamic context:

- the size and shape of the initial reconstituted salt basins before the oceanic opening (one or several subbasins)
- the differences in the initial salt thickness and the impact on the later ductile deformation
- the control of the geometry of the basement (flat and ramp,horst...) on the salt tectonic zonation and deformation
- the polyphased timing of the salt tectonic (early deformations could be related to the subsidence of the margin and late deformations to sediment loading)

We conclude that the understanding of the regional evolution of these basins is the key of the understanding of the salt tectonic evolution which controls majors parameters of the Petroleum Systems