

Relationship between extensional and contractional deformations in the center-south region of the Maracaibo Basin: Implications for the development of potential oil traps Relación de la deformación extensional y contractiva en la región centro-sur de la

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From 3D seismic-structural interpretations and well data integration, a set of inverted structures were identified, which allowed to establish the relationships between extensional and compressional deformation in the central-south region ("B" and "VIII" blocks) of the Maracaibo Basin, starting with the recognition of a group of inverted structures. Important harpoon structures and short cuts have developed, representing efficient structural traps and new exploratory opportunities in the petroleum industry. Different N-S and E-W seismic profiles show how the partial inversion of the Mesozoic half-grabens plays a fundamental role in the control of compressional deformations in the region. The compressional deformation and the associated structural traps are related to two principal tectonic phases (Paleocene and Miocene) associated with tectonic episodes affecting the northern margin of Venezuela, correlated with the oblique collision between the Panamá Arc and the NW edge of South Amer