

Tertiary Tectonic Evolution Model in Cantarell, Ku, Maloob Zaap fields, Campeche Bay

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The structural study of the main oil fields in Campeche Bay, has generated several questions about the factors that participate in it's formation, and gives motivation to find answers to the following items: Why is there contrasting deformation between the Cantarell and the surrounding structures? Why is there a sharp limit on the west of the Cantarell structure? What was the driving force? When did all this happen? A proposed model, consist of four main elements: a.- Yucatan Block; b.-Compressive Stress Direction; c.-Geological Column Composition and d.- Tectonic Deformation Time. The Yucatan Block is a crystalline basement topographic high, covered with thick carbonated rocks deposited on it, and is conforming the continental shelf around the Yucatan Peninsula. A part of the west limit is adjacent to the oil fields in this paper. The Compressive Stress Direction is related with the Cocos Plate subduction in Oaxaca and Chiapas Shore. The Mesozoic Geologic Column is essentially carbonated, covered with Cenozoic siliciclastic rocks. The main Tectonic Deformation Time can be determined with seismic analysis, based on stratigraphic limits correlation and dated with paleontological information on wells. A regional structural analysis using these elements is fundamental to knowledge of the local context.
