

## **WRENCH TECTONICS IN THE GEOLOGY OF CUBA**

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### **ABSTRACT**

Lower Jurassic to Quaternary rocks outcrop for more than 800 km in the northern region of Cuba. Such rocks constitute the Cuban overthrust belt, lying on the Cuban southern basins, where sedimentary filling began since the Upper Cretaceous-Tertiary. The displacement over time of the northern belt towards the northeast was due to a system of wrench faults, with a main direction towards the SW-NE, which made up the current geological configuration.

By studying the characteristics of numerous seismic sections next to the superficial outcrop, it is possible to differentiate several structures (compression, wrenching, extension) all of which are related to one another. The wrench system played an important role in the formation of the current Cuban structures, both in the overthrust belt in the north, where some "en echelon" folds are formed, and in the formation of the southern basins, which genetically are classified as "pull-apart". The western basin began to develop since the Upper Cretaceous, while the eastern one since the Early Tertiary.

It is debated whether the genesis of the Cuban thrusting structures belongs to a Cuban compressive Laramic system, or to the component of compression of wrench systems all over the Caribbean region, which started with the displacement of the Caribbean Plate towards the northeast in the Mid-Cretaceous, and is today still heading eastwards. Finally, it is possible to propose ideas on the evolution of the island, based on the chronological analysis of the different structures.