

## MAJOR ACTIVE FAULTS OF VENEZUELA

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Northern Venezuela essentially lies in the interaction zone between the South America and Caribbean plates. Although it is generally accepted that the latter moves eastward with respect to South America, this boundary is not of the simple dextral type; but instead it is an over 100 km wide active transpressional zone, which has associated important reliefs (the Andes on the west and the Coastal and Interior ranges along the coast). The plate boundary on western Venezuela is more complex, where the Maracaibo block –bounded by the Santa Marta-Bucaramanga and Boconó faults and separated from the Bonaire block on the north by the Oca-Ancón fault- is being extruded northward and is overridding the Caribbean plate north of the Leeward Antilles islands. Nevertheless, a large portion of the right-lateral motion along the boundary seems to take place along the RLSS Boconó-San Sebastián-El Pilar fault system.

Northern Venezuela is undergoing a strike-slip regime characterized by a NNW-SSE maximum stress, which is responsible for present activity of five fault sets: east-west right-lateral faults, NW-SE right-lateral faults, NNW-SSE normal faults, almost north-south left-lateral faults and ENE-WSW reverse faults (sub-parallel to fold axes). On the Maracaibo block and south of the Oca-Ancón fault, this stress field progressively turns counterclockwise to a more east-west orientation, allowing left- and right-lateral slip along the north-south striking (e.g.: Valera and Burbusay) and NE-SW striking (e.g.: Boconó) faults respectively.

Slip on the major boundary faults is about 1 cm/yr, whereas secondary faults at least slip one order of magnitude less faster.