

Thrusting Fronts Frame (3D) and Their Relations with the Main Strike-Slip Faults in the Rifian Limestone Dorsale (Northern Morocco)

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The Gibraltar Arc constituted by the betic belt (southern Spain) and the Rif range (northern Morocco) was mainly formed during compressive alpine stages. It is subdivided into external domain and paleozoic internal domain (Ghomarids and metamorphic Sebtids) in which the limestone Dorsale is the mesozoic platform. The Dorsale allochthonous units, composed by limestone Mesozoic and unconformable Eocene-Oligocene mainly detrital cover, is generally considered as the southern margin of European plate (or Alboran domain) displaced to the west and thrust upon the North-African margin.

The main purpose of this work is to describe the alpine structural phases and geometric framework evolution of the Dorsale faulting systems since the upper Triassic. On the basis of a structural survey of the area, it accounts for the results of micro tectonics, cartography, regional fracturing, applied remote sensing, geodynamics and retrotectionics.

Thus the Internal Dorsale early jointing (Liassic) and External Dorsale dissolution cleavage allows to consider them as the covers of respectively Ghomarids and Sebtids basements before thrusting.

The reconstitution of the EW Dorsal margin of Tethys as the result of Acores senestral transform fault lays on Mesozoic extension and retrotectionic analysis.

From the Aquitanian the Dorsal complex is thrust, backthrust (Haouz) but specially shaped by rotations related with 4 main strike-slip faulting stages and associated fractures. At the Alboran plate translation westward, take turns with a clockwise rotation of its dorsalian margin attested by the progressive rotation of the main compression stress trend ?1 during the Miocene.