

Triassic Allochthonous Evaporites Emplaced During Cretaceous Passive Margin Stage in the Betic Cordillera. Are They Extensive to the Rif and Tell Cordilleras?

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Well log and seismic data in the Guadalquivir Valley and field data from the External Betic Cordillera of Spain suggests that Allochthonous Triassic evaporites, mostly gypsum and salt were emplaced during the passive margin stage within the deep-water Cretaceous and Paleogene section. Triassic evaporites that range from centimetric to kilometeric scale blocks or as thrust sheets are interbedded with pelagic Cretaceous to Paleocene deep-water deposits, mostly marls. Similar examples of that are present in the Rif. Even though part of the emplacement that we see today took place during Late Neogene compressional phase associated with the westward escape of the Alboran block, previous emplacement during passive margin stage is necessary to explain the structure. The restored Betic margin (mostly the so-called Sub-Betic Unit) was probably very similar to some areas of the present day Gulf of Mexico or Offshore Angola. The Betic margin was facing the Magrebian margin that today is part of the Meso-Rif of Morocco and the "Zone des Domes" of Algeria and Tunisia in the Tell Cordillera. This southern part, specially of Algeria and Tunisia with extensive salt glaciers represents perhaps a more proximal part of the margin with less allochthony than in the Betic Cordillera.