



Folds and faults interactions during the development of a Tortonian elongated narrow basin: the Almanzora corridor (SE Betic Cordilleras)

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The Betic Cordilleras provide good examples of basins generated in different tectonic frameworks. The relief started to develop during the early Tortonian by the NW-SE Eurasian-African plate convergence. E-W oriented mountain ranges and depressions coincide with large antiforms and synforms. The Almanzora Corridor constitutes a good example of an elongated narrow basin, generated by folds and fault interaction, which undergone NW-SE compression and a NE-SW associated extension since early Tortonian. Dextral E-W strike slip faults were active during early Tortonian, and determine the position of the present-day south corridor border, parallel to the E-W fold growth of Sierra de Los Filabres that which also probably start to uplift at the same time. Simultaneously, NW-SE normal faults located in the westernmost corridor sector start to open the Baza basin. During the late Tortonian continued the NW-SE compression detected by the growth of N70°E folds (responsible of Sierra de Las Estancias uplift) and N70°E reverse faults activity, only located in the central and eastern Corridor. In addition, NW-SE normal faults developed, producing locally steps in the north border of the Corridor. At the end of the Tortonian, the fold growth probably related to crustal thickening produced the Almanzora Corridor uplift that became a continental basin. The basin is asymmetric, with a southern sharp boundary and a homogeneous slope in the northern margin, covered by large alluvial fan deposits. This structure may be consequence of the northern vergence of the large late folds, and the presence of transcurrent faults. Finally, during the Pliocene and Quaternary, the NE-

SW opening of the Baza basin and the NW-SE shortening of the easternmost sector of the Corridor are still active.