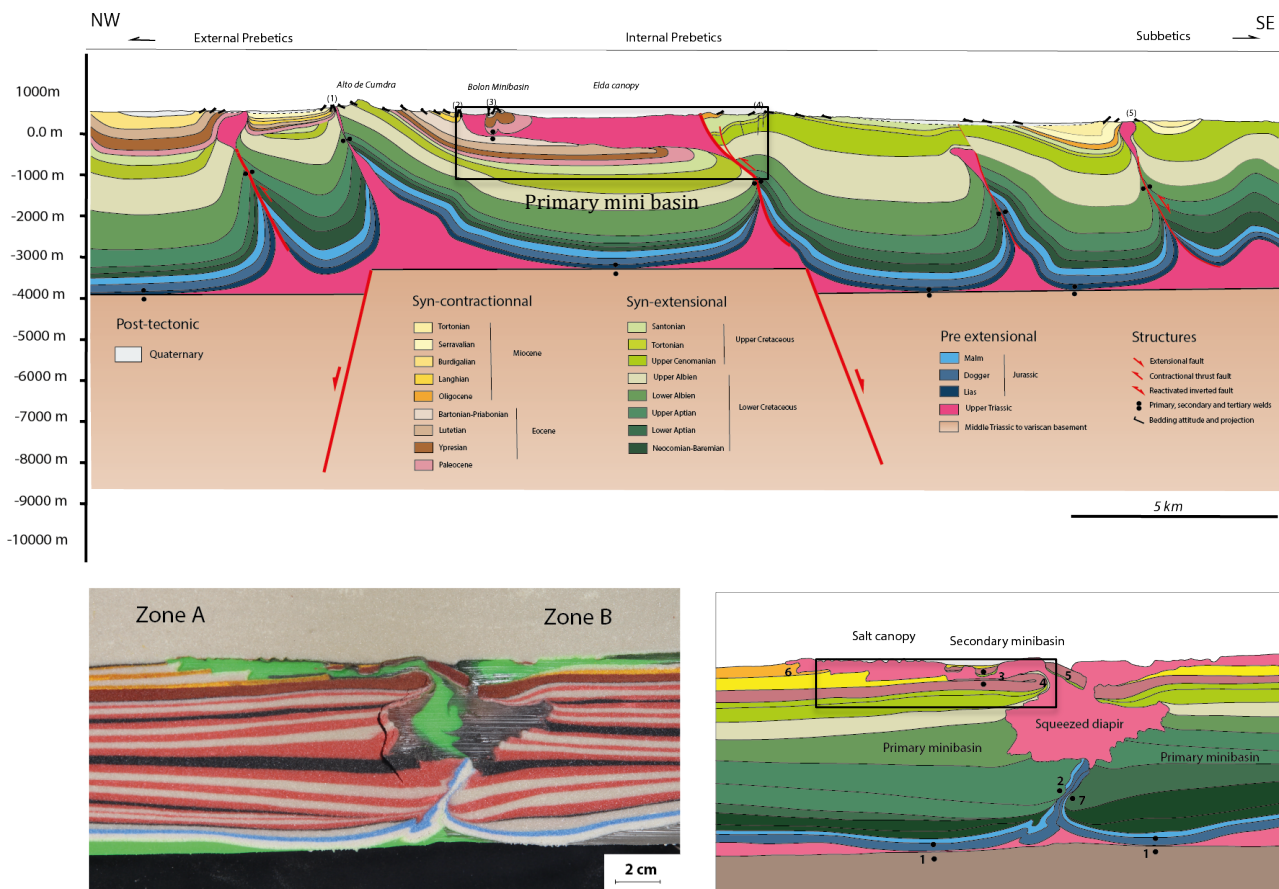


## Abstract

The Pre-Betics represent the remains of the South Iberian old passive margin belonging to the Betic Cordillera part of the Alpine system. It underwent extension during Mesozoic and contraction and inversion during Tertiary times. In the Elda province, the Mesozoic cover detached on the upper Triassic Keuper evaporites level (gypsiferous mudstone) is strongly folded and faulted. A wide allochthonous salt canopy is highlighted and outcrops in relation with their secondary mini-basins. The cross section building and the RV-66 seismic line interpretation defined a graben-horst-graben basement architecture (NW and SE dipping extensional faults) controlling the growth of two diapirs bounding the horst during extension. The inversion, using the fault plan, triggered the squeezing of the diapirs and the development of a salt canopy. The initiation of the salt canopy extrusion is dated around Eocene ages until middle Miocene (syn-contraction units) from the observation of reworking Jacinto de Compostella and onlapping of the Miocene units on the salt canopy. The comparison with an analogue model of a salt sheet extrusion simulated by a squeezed silicon wall, has shown similar structures and geometries in comparison with the Elda cross sections. The diapir grew from active to passive rise during extension and to reactive rise during shortening. It has highlighted the role of raft blocs in the creation and development of secondary mini basins above the canopy (Bolon mini basin) during reactive stage. Raft blocs consist of debris of pre-salt sheet extrusion strata tract above the canopy previously burying the passive diapir. This strata is folded and overturned under the canopy. In Elda, Paleocene units are interpreted as the pre-salt sheet extrusion units at the origin of the Bolon mini basin formation.



**Figure:** Synthetic sketch showing the comparison between the cross section in the Elda province and the results of our analog model of a salt canopy development. The canopy and the relation with secondary mini basin creation is here highlighted