

The Cretaceous Intraplate Volcanism and Andean Reactivations (Western Argentina): Tectonic Significance and Basin Development.

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As a consequence of the Andean convergence and subduction of the Nazca Plate under the South American Plate, the Desaguadero-Valle Fértil megafracture was inverted exhibiting a thick-skinned tectonic style. This style includes left-lateral transpression, marked by high angle reverse faults, en echelon folding of the sedimentary cover and the intrusion of en echelon controlled basaltic dykes. The deformation initiated ca. 7 Ma ago, and became more intense between 4 and 3,4 Ma.. Nevertheless, large-scale tectonic movements continued to be active until at least 0.6 Ma. The segmented remainders of the Cenozoic basins acquired compressive structural styles that evolved, in some cases, into ramp basins that fringe the Andean Cordillera. The objective of the present contribution is the integration of the new K/Ar ages obtained from different volcanic units into the study of **i)** the structural controls of the magmatism and **ii)** tectonosedimentary relationships of the sedimentary fill that constitutes the wide foreland basin of the Andean Cordillera.

New K/Ar volcanic ages at the Cerro Rajado anticline support the following hypothesis: **i)** the recurrent tectonic activity of the Desaguadero-Valle Fértil Lineament during the Mesozoic and Cenozoic times, and **ii)** different alkaline type volcanic intrusions indicate a deep and intracontinental origin, supporting the idea of a persisting crustal discontinuity along this lineament.