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CONSTRAINTS ON THE STRUCTURAL EVOLUTION OF THE SIVAS BASIN, CENTRAL TURKEY

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The Sivas basin is located at the easternmost wedge-like tip of the Central Anatolian Block. An evolution model for the basin should, at least, include the following characteristics: The basin started to develop on a Pre-Maastrichtian mosaic made up of continental metamorphics, Jurassic-Early Cretaceous platform carbonates and coloured ophiolitic melange derived from the closure of northern branch of Neo-Tethys oceanic realm. The basin dominated by a thick Maastrichtian-Tertiary fill resting unconformably on the basement is divided into several subbasins bounded by NE-SW trending oblique-slip faults with predominant strike-slip component. Each of these basins is characterized by a different stratigraphic succession composed of molassic continental to shallow marine facies alternation. Both the northern and southern margins of the basin include Late Eocene olistostromes with megablocks of various origins which are the records of second-order nappe emplacement into a shallow marine depositional setting. The basin fill is also characterized by local and regional unconformities, vertical to lateral facies changes and continental to shallow marine volcanics. The basin is asymmetrical in both the longitudinal and transversal directions with respect to its axis.

Based on regional framework and characteristics present above, a post collisional model may be preferable rather than other alternatives for the Sivas basin.