

PALAEOGEOGRAPHIC EVOLUTION OF SIVAS TERTIARY BASIN (W-SW SIVAS)

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ABSTRACT.- Sedimentological studies has been made at the west and the south west of Sivas (Figure 1) and investigated palaeogeographic evolution facies and environmental features of deposit rocks. A1 A2 A3 facies have been recognized at the middle Eocene aged Sahantepe member. A1 facies has deposited at the continental shelf; A2 A3 facies at swamp and coastal sabkha. B1 B2 B3 facies have been recognized at the Oligocene aged Küçüküzhisar Formation. B facies in lagoon, B1 facies has deposited in barrier island. B2 B3 facies have deposited at continental sabkha and playa lake environment. At the Akören formation C1 C2 C3 C4 C5 C6 C7 facies have been recognized. C1 C2 facies at the meandering river and subenvironments. C3 C4 facies at the playa lake. C5 C6 facies meandering river and C7 facies has deposited at alluvial fan environments. Continental shelf deposits consists of claystone, siltstone and sandstone, has very well (Ta-Tb), (Ta-Tc) and (Ta) structures. These have been deposited by turbidite flows in shallow sea improved. At in the coastal sabkha environment have been deposited gypsum series and they are together with elastics. Meandering river deposits consist of channel fill, point bar and flood plain subfacies fining upward cycles. Playa lake and continental sabkha deposits consist of terrestrial elastics with interlayer gypsum and anhydrite; alluvial fan deposits consist of conglomerates and poorly sorted, pebbly sandstone with muddy matrix and show normal and reverse grading. In the studied area the marine regime has been the dominating agent up to of Eocene- then the marine influence has restrained but continental regime, as a result of this swamp and coastal sabkha environments have improved. During Oligocene period has become more effective. During this period continental sabkha, playa lake, meandering river and alluvial fan environments have been made. At the Sahantepe member palaeocurrent direction is towards from the NE to NW: at the Küçüküzhisar Formation palaeocurrent directions are towards from the N to S and NW to SE and at the Akören formation palaeocurrent directions are towards from S to N, SW to NE. In Eocene period the formations (Bozbel Formation - Sahantepe Member) was supported by the ophiolites and metamorphic units, situated in the NE of the region and Oligocene period these formations (Küçüküzhisar and Akören Formations) were supported by the ophiolites and metamorphic units and deep acidic and basic rock as well as volcanics situated in the SW and NW of the region. On the basis of these observations, it can clearly be indicated that the Sivas basin reflects an intraplate basin characteristics following the continent-continent collision.