

DEPOSITIONAL ENVIRONMENTS AND PROCESSES OF MIOCENE  
SEDIMENTS AT WEST MARGIN OF ÇANKIRI - ÇORUM BASIN

Kumartaş and Haçılı formations, products of extensional tectonic regime, deposited during Miocene at western margin of Çankırı - Çorum Basin covering approximately 1000 km<sup>2</sup>. These two formations, which are passing vertically and laterally from each other, are unconformably underlain by Neo - Tethyan suture zone rocks. According to the mammal fauna (MN 3, 4, 5), ages of the formations are Early - Middle Miocene. These are overlain by Late Miocene » Pliocene Kızılırmak and Bozkır formations,

Facies analysis are performed on 400 m thick Miocene deposits and following results are found. Kumartaş formation is generally composed of trough «planar crossbedded sandstones, thick horizontal bedded pebble sandstones, grain supported -bedded conglomerate and mudstones, Haçılı formation has very different facieses as follows massive conglomerate, bedded conglomerate, yellow-green colored well sorting sandstones, laminated mudstones, grey - organic matter rich claystones, green - grey colored claystones, ostracode claystones, oolitic limestones, marls and lignites.

Faciès associations are formed with evaluation of vertical and lateral relations of above defined facieses, and consequently their deposition environments are determined. According to this, Kumartaş formation was deposited at braided with sediment - gravity flow deposits, sandy meandering river and flood plains environments, Sediments composing Haçılı formation was deposited at lake and lake margin (fan - delta, near shore bars) environments. Fan - delta sediments are including facies reflecting subaqueous and subaerial conditions at lake margin, Lake basin facieses show that the lake become deeper, shallower during the course of time.

Early - Middle Miocene lake at western margin of Çankırı - Çorum basin, was reflecting the semi - tropical climate and open lake conditions. Presence of carbonates, demonstrating the high and low energy conditions, and elastics fan - delta sediments, indicating subaqueous and subaerial conditions, show that lake level fluctuations are common process in which tectonics play an important role.