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Petrographical and geochemical characteristics of Upper Creteaceous- Lower Tertiary sandstones from Central Anatolian Basins, Turkey

E. Bayhan (1), **A. Temel** (2)

- Geological Enginnering Department, Hacettepe University, Ankara, Turkey (ebayhan@hacettepe.edu.tr, Fax: +903122992034, Phone: +903122977700
- 2. Geological Enginnering Department, Hacettepe University, Ankara, Turkey (atemel@hacettepe.edu.tr, Fax: +903122992034, Phone: +903122977700

This study is carried out in the vicinity of Tuzgölü, Bala, Haymana and Polatlı regions known as Central Anatolian Basin. The sedimentological and the sedimentary petrological properties were correlated belong to Upper Cretaceous-Tertiary sequence in these subbasins. The detritial sedimentary sequences of the collected samples indicate the similar petrographic characteristics. According to Dickinson and Suczec (1979), the sandstones were originated from recycled orogenic source. The geochemical analyses reflect that the sandstones were not originated from the single source. The Al₂O₃/SiO₂-Fe₂O₃+MgO and TiO₂-Fe₂O₃+MgO diagrams reveal that these rocks have been present in oceanic arc, continental arc and active continental margin regions. Furthermore, using the major elements for sandstones in discriminant function 1 and discriminant function 2 improved by Roser and Korsch (1988), the sandstones of Bala and Polatlı regions were originated from an intermediate igneous provenance and the sandstones of Tuzgölü, Kulu, Haymana regions were originated from a quartzose sedimentary provenance.

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