

## GEOCHEMICAL CHARACTERISTICS AND ORIGIN OF BARITE DEPOSITS BETWEEN ŞARKİKARAAĞAÇ (ISPARTA) AND HÜYÜK (KONYA)

Oya CENGİZ\* and Mustafa KUŞÇU\*

**ABSTRACT.**- Barite deposits in the region of Şarkikaraağaç and Hüyük which are generally located in the form of veins, lenses and layers along the contacts of these units and the schists showing an extensive distribution within the same formation found within recrystallized Çaltepe limestone and dolomite, Çavuştepe calcschists of the Cambrian-Devonian age Sultandede formation are epigenetic in character. According to the results of chemical analysis of barite mineralization in the region, the presence of trace elements such as Pb, Zn, Cu, Cd, Ni, Co, Ag, Sb are locally identified in low values within barites of the region. Especially, in some trace elements such as Pb, Zn, Cu, Cd, Ag and As show an increase towards from Hüyük region to Çarıkisaraylar area. When the results of chemical analysis of barite samples evaluated statistically, the presence of high correlation between Ba-Pb, Ba-Ag, Pb-Ag, and  $Al_2O_3$ - $K_2O$  element pairs and mediumgrade correlation between Ba-Sr, Pb-Cu, Zn-Cd, CaO- $Fe_2O_3$ , CaO- $SiO_2$ ,  $SiO_2$ - $Al_2O_3$ , CO- MgO,  $Fe_2O_3$ - $Al_2O_3$ ,  $Fe_2O_3$ ,  $Fe_2O_3$ - $Na_2O$ , MgO- $K_2O$  element pairs of barite ores have been determined. The deposition forms of the barites in the investigated area, paragenesis, wall rock alteration, the high amount of trace elements, high Ba/Sr ratio, SrO values over 1.5 %, 180°-360°C homogenisation temperatures of the two-phase (liquid+gas) fluid inclusions, +30.15‰ and +13.9‰<sup>34</sup>S isotope ratio in gale-na and barites, and 434°C high formation temperature indicate a hydrothermal origin of barite deposits in the region.