

## ABSTRACTS OF THE PAPERS PUBLISHED ONLY IN THE TURKISH EDITION OF THIS BULLETIN

### GEOLOGY OF THE TEKMAN (ERZURUM) BASIN AND PETROLEUM POSSIBILITIES

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ABSTRACT.— In the investigated area, Paleozoic aged Akdağ metamorphics, Cretaceous aged Şahvelet ophiolitic complex, Upper Cretaceous aged Derviş Halit formation, Eocene aged Musakomu and Gıngımtepe formations, Oligocene aged Ağcakoca formation, Miocene aged Hürübaba, Haneşdüzü and Hacıömer formations, Pliocene aged İncesu formation, Middle Miocene aged Aras volcanics and Plio-Quaternary aged Yıldırımdağ basalts are exposed. Katranlı stream area active oil seepages are present. Mesozoic-Tertiary aged formations have intervals having the characteristics of source rocks, reservoir rocks and cap rocks.

### THE GEOLOGY OF AROUND ESKİŞEHİR AND THERMAL WATER SOURCES

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ABSTRACT.— The investigated area comprises Eskişehir province and its immediate vicinity. The basement consist of Pre-Triassic tectonic unit comprising metamorphic, ophiolitic and metadetritics. Jurassic is represented by detritics and limestones. These are unconformably overlain by sediments and volcanic rocks of Paleocene, Eocene, Miocene and Pliocene age. The uppermost unit consist of sandstones of Pleistocene age. The magmatic rocks are respectively represented by porphyritic granite and an assemblage of andesite, bazalt and tüff. The vertical fault systems passing through north of Eskişehir, responsible for the present morphology trends E-W and the northern and southern system dip respectively to the S and N the reverse faulting of the region is believed to have played and important role in the tectonic evolution of studied area.

### HYDROTHERMAL ALTERATION STUDY AND VOLCANIC ROCK PETROLOGY OF ÇANAKKALE-TUZLA GEOTHERMAL AREA

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ABSTRACT.— Hydrothermal alteration zones have been investigated by x-ray diffraction techniques and geochemical analysis. In studied area; alunite, kaolinite, montmorillonite, illite, and silica zones have been recognized. These hydrothermal alteration zones indicate that there are geothermal fluids which have a temperature of 150-225°C in the reservoir. The tectonic structure of studied area is developed by NW-SE and NE-SW directional forces. Geothermal fluids coming from the diagonal cracks formed as a result of faults having a strike of E-W and formed as a result of these forces have formed the necessary environment for hydrothermal alteration. Volcanic rocks where hydrothermal zones are observed in the studied area are of Lower-Middle Miocene age and are represented by latite, andesite, dacite, rhyolite type lavas and tuff and ignimbrites. With petrochemical studies it has been concluded that volcanites are an inner continental volcanism having calc-alkaline with high potassium and schoshonitic properties and are shelf characteristic.

## THE GENESIS OF ESKİŐEHİR-BEYLİKAHİR COMPLEX FLUORITE DEPOSIT AND PRELIMINARY BENEFICIATION STUDIES

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ABSTRACT.— This paper describes beneficiation studies of a complex fluorite ore containing considerable amount of barite as well as rare earth minerals. The deposit is located at Eskişehir-Beylikahır district, West of Turkey. Genesis of the ore is thought to be hydrothermal. Following the characterization studies, the liberation size of relatively coarse fluorite was found to be minus 0.15 mm at which approximately 40 % of the total fluorite was liberated. Obtaining a higher degree of liberation does not seem to be possible owing to the micro and crypto crystalline form of the rest of fluorite. As accessory minerals, calcite, quartz, ironhydroxides, psilomelane, muscovite and some clay minerals have also been determined. The liberated fluorite was concentrated by gravity (shaking table) and flotation methods. Acceptable concentrates have been obtained for metallurgical, glass and ceramics industries.

## MIDDLE MIOCENE BIOSTRATIGRAPHY

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ABSTRACT.— In this study, 21 planktonic Foraminifera species determined in the Middle Miocene sequence at the Karaisalı region of Adana. The following biozones in Langhian-Serravalian ages are distinguished: ? *Globorotalia fohsi lobata* zone, *Globorotalia fohsi fohsi* zone, *Globorotalia fohsi peripheroronda* zone. In addition to above mentioned planktonic Foraminifera, 13 Nannoplankton species are determined in the same samples. The result of this study has been compared with other studies which have been done in Trinidad, New Zeland, Libya, SW Africa and Nord Carrebean Sea and similar results are obtained. The fossil association and property of the sediments are also indicated that the environment is pelagic.