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

GEOLOGY, GEOCHEMISTRY AND GEOTECTONIC SETTING OF VOLCANICS COMPRISING KÜRE (KASTAMONU) ORE MINERALIZATION

Şükrü KOÇ*; Ahmet ÜNSAL** and Yusuf Kaan KADIOĞLU*

ABSTRACT.- The rock formations cropping out in the area have the following stratigraphic sequence: The basement rocks are commonly serpentinized peridotite of pre-Jurassic age associated with occasional pyroxenite and dunite. This is overlain by the Küre formation of pre-Lias/Lias age composed of basaltic volcanics at the lower section and a thick sedimentary portion at the upper part Next is the Karadana formation of Upper Dogger-Lower Malm age consisting of reef limestones with interlayers of sandstone. In addition, gabbro, diorite, dacite, and basaltic dikes intruding these formations are also observed. Küre volcanics are determined as tholeiitic basalts based on their petro-chemical properties. These rocks are island-arc type volcanics produced from the mixture of continental crust and magma originated from mantle. The pyritic copper deposits are of the Kieslager-type mineralizations which were determined as Cyprus-type in the earlier studies. This new and important finding was obtained after a detailed study on the geotectonic setting host rock types, geochemical properties, and paragenesis of the ore mineralization.

FEATURES OF THE TERTIARY VOLCANIZM OBSERVED AT BİGA PENINSULA AND GÖKÇEADA, TAVŞAN ISLANDS

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ABSTRACT.- Six main volcanic rock groups that formed at different stages between Eocene to late Upper Miocene were differentiated in the area, depending on the field and laboratory studies, namely "Balıklıçeşme volcanics" of Eocene age, "Çan volcanics" of Oligocene age, "Kirazlı volcanics" of Upper Oligocene age, "Behram volcanics" of Lower to Middle Miocene age, "Hüseyinfakı volcanics" of Middle Miocene age and "Ezine volcanics" of Upper Miocene age. Together with petrographic and geochemical studies, K/Ar dating and Stronbum/Neodium isotope ratio measurements (87Sr/86Sr and 143Nd/144Nd) were done on the rocks. Volcanic rocks formed between Eocene and Middle Miocene were found to be of calc-alcaline, whereas only that formed during Upper Miocene were of alcaline type. Geochemical and isotopic studies show that the magma formed the calc-alcaline volcanizm have undergone intense contamination and got a hybrid character whereas the source of alcali volcanizm is different and formed by partial melting of a heterogeneous mantle material. The rocks are related with tectonic regime of the area; calc-alcaline volcanics have been formed under a compressional regime, but alcaline rocks have been formed under a tensiona) regime, contranly.

DEPOSITIONAL CONDITIONS OF PLEISTOCENE ALLUVIAL FAN DEPOSITES IN THE GÜZELYURT BASIN (TURKISH REPUBLIC OF THE NORTHERN CYPRUS)

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ABSTRACT.- The alluvial fan deposites are widely distributed in the Güzelyurt basin. In the southern pan of the Güzelyurt basin, these deposites unconformably overlie the units of Middle-Late Cretaceous Troodos massive, Late Miocene-Early Pliocene Myrtou Marls and Late Pliocene Athalassa formation. Towards the north, they are unconformably overlain by recent alluvium deposits. The fan deposites are deposited by high-viscosity debris flows and braided streams dominated by sheet-flood events. Six different lithofacies are recognized; (A) Clast supported conglomerates are hyper-concentrated debris flow deposits, (B) Matrix supported conglomerates represent mud flow deposits, (C) Thick bedded sandy conglomerates represent sheet-flood and braided-stream deposits, (D) Clast supported, thick bedded conglomerates with interbedded sandstones are suggested as a braided-stream deposits, (E) Thirs bedded sandstones and conglomerates represent sheet-flood deposits by very shallow migrating channels on a broad, planar surface during upper-flow regime, (F) Caliche bearing mudstones represent distal sheet-flood deposits in semiarid dimates At the end of the Late Pliocene, due to the rapidly uplifting of the Troodos massive, the coarse-very coarse pebbles of alluvial sediments are deposited as the inner fan deposites over the Pliocene sediments. As from Middle Pleistocene, the other alluvial fan fades are deposited together with relatively the coarse facies. The depositional conditions and the caliche concentrations in the alluvial fan deposites indicate a semi-arid climate.

GEOLOGY OF THE AKDAĞ MASSIF AND SURROUNDINGS

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ABSTRACT.- The study area is located in the eastern part of Akdağ massive and its surrounding area. The purpose of this paper is to contribute in understanding of the regional geology. In the study area, Akdağmadeni Lithodem represents basement rocks consisting mainly of gneiss, amphibolite, schist, marble and quartzite The metamorphic assemblage underwent metamorphism in the higher temperature part of amphibolite fades and was intruded by granitoids and gabbro. The contact between metamorphics and Paleocene volcanics is tectonic. The units showing different fodimentary environments were deposited during Eocene. For example, in the northern part of the area, Eocene units were represented by hemi-petegic elastics which overlie Paleocene volcanics conformably and olistostromal rocks composed of Upper Cretaceous mega olistolithes. Within some of the olistolithes there is a sharp fades change between Campanian pelagic limestone and Maastrichtian turbidites. Maastrihtian turbidites pass to the Maastrichtian-Paleocene (?) volcanics conformably. Ophiolitic: melange overlies the olistostrome by a north ward-dipping overthrust and, passing to the Campanian hemipelagic limestone in the upper levels, in trio southern part of the area, the Eocene units are represented by shallow marine deposits and overlie the metamorphic rocks unconformably. This sequence is followed by Oligocene and Lower-Middle Miocene continental deposits respectively. The Upper Miocene-Pliocene fluviatile and lacustrine deposits overlie the rest of the older units unconformably. In the neotectonic period, in the study area, the faults showing left lateral-reverse oblique slip in NE-SW trending, right lateral oblique slip in NNW-SSE trending and dip-slip faults in N-S trending, were developed under the control of N-S compression.

FEATURES AND ORIGIN OF THE KOÇKALE-ELAZIĞ MANGANESE MINERALIZATIONS

Mehmet ALTUNBEY** and Ahmet SAĞIROĞLU**

ABSTRACT.- Koçkale and its vicinity (Elazığ) is composed of four different units. These are; Upper Jurassic-Lower Cretaceous Guleman Group, Campanian-Maastrichtian Yüksekova Complex, Maastrichtian-Lower Eocene Hazar Group and Middle Eocene Maden Complex. The Mn mineralizations of Koçkale are situated in volcanosedmentary rocks of Maden Complex and occur in two types: (1) The mineralizations conformable with volcanosedimentary rocks, are syngenetic and volcanosedimentary type. This type of mineralizations occur within mudstone and as a constituent of this unit The mineralized bodies are tense and stratiform shaped. Any alteration related to mineralization is absent. Ore mineral assemblage is pyroiusite, psilomelane, rodokrosite, brauntte, manganite, limonite, hematite, magnetite, chromite, pyrite and baryite. In places baryite forms silica rich lenses. (2) Vein type mineralizations are epigenetic and are products of hydrothermal solutions circulating through fault and openings. The vein type mineralizations are also situated in different levels and places of mudstone. The mineral assemblage is; pyrolusite, psilomelane, rodokrosite, limonite, hematite, magnetite, chromite and a significant alteration associated with the mineralizations is present.

TERTIARY MOLLUSK FAUNA AND STRATIGRAPHY OF PINARHİSAR (KIRKLARELİ) AREA

Yeşim İSLAMOĞLU* and Güler TANER***

ABSTRACT.- A pateontotogic-stratigraphic study based primarly on the pelecypod and gastropod fauna was carried out at Pınarhisar (Kırklareli) and its surrounding, for which previous researchers have put forward various ideas, by taking into consideration tha ages of the Tertiary sediments and their relation with the Tethis which crop out in the region. In the stratigraphic cross-section made using 8 measurements; 15, 5 and 6 species of molluscan fauna were observed in the İslambeyli formation, Kırklareli limestone and Pınarhisar formation respectively: The ages of the formations were once again taken into consideration under the light of all paleontologic data, and an approximated age was given by evaluating both the paleontological and stratigraphic conditions. The following conclusions were made: The age of the İslambeyli formation which represents the base of the Tertiary sediments is Early Priabonian, the age of the Kırklareli limestone which conformably overlies the İslambeyli formation and which represents the reef carbonates is Late Priabonian and the age of the Pınarhisar formation which unconformably overlies the Kırklareli limestone and which has shelf-margin and shallow sea properties, is Stampian. It was also concluded that the age of the Balıklı serie, which conformably continues over the Pınarhisar formation, is -Stampian as well, according to the paleogeographic distribution of the present molluscan fauna, It can be seen that the majority of it is completely the same with those in the Balcan countries; a minonty of it is also seen in the Western European countries in Eocene. In the Oligocene, where it is not abundantly seen, the fact that the basin contains completely the same fauna with Bulgaria shows that it is, within the area of spread of the Paratethis.

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