

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

PETROLOGY OF CENOZOIC AGED VOLCANIC ROCKS AROUND ACIGÖL (NEVŞEHİR) AREA

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ABSTRACT.- One of the important Tertiary and Quaternary aged volcanic areas in Central Anatolia is Acıgöl (Nevşehir). The basement consists of probably Cretaceous aged gabbros and Paleocene granitic intrusions. Tertiary volcanism overlies the basement. Gülşehir dacitic tuff which covers large areas with several explosions in Upper Miocene is the first volcanic product. Sandstone, marl, claystone and limestone of Aktepe formation is intercalated with these tuffs in local small lakes which developed lacustrine environment. Later volcanism became intensified again and Yalman ignimbrite was occurred. This acidic volcanism became intermediate in Late Miocene and andesitic lavas and agglomerates were originated (Kevençetepe andesite). From Lower Pliocene volcanism started to be active again with obsidian flows and ignimbrites (Boğazköy obsidian and Basansamıç ignimbrite), and became basic at the end of Upper Pliocene. Kızıldağ basalt and Kızıltepe scoria cones were formed at that time. A new severed acidic volcanism dominated in the area in Early Quaternary. Its products are Alacaşar tuff and Karapınar volcanic ashes. Later on Karnıyarıktepe basalt was occurred and largely spread out. Volcanism became acidic again and the dome structures were formed at the end of Quaternary. This last stage of volcanism originated İcik volcanic ashes, Taşkesiktepe obsidian, Tepeköy perlite and rhyolite, Obruktepe basaltic scoria cones. Volcanic rocks are commonly calc-alkalic and only a few basaltic lavas are purely alkaline according to the results of petrographic and geochemical investigations on volcanic rocks. All volcanic rocks have a crustal origin. Moreover, radiometric dating on basaltic lavas and obsidians was carried out for the first time. Abundant hot springs, mineralized springs and gas exits with volcanic origin were found in the investigated area. It was concluded that the region has positive geothermal characteristics.

GEOLOGY AND PETROLOGY OF THE NEOGENE VOLCANICS IN THE VICINITY OF HINIS-VARTO-KARLIOVA REGION-TURKEY

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ABSTRACT— Neogene volcanic rocks start with the Bingöl Mountain Group of Middle Miocene age in the investigated and a joining areas. Varto Group of Upper Miocene age rests unconformably on these volcanics. Both of these groups are mutually overlain by the horizontal strata of Middle/Upper Pliocene age and the Hamurpet lava of Lower Pliocene age. In the region, N-S compressional forces produced by a post Lower Miocene collision (or compression) causing crustal thickening, thrusting and slicing. All these events caused sinking of the continental crust into the mantle and formed detachment faults and zones of weakness leading to partial melting and volcanism. The volcanic sequence display distributional and sectional variations of chemistry interpreted to have been caused by variations in lithologic character. The rocks are generally andesitic in composition with calc-alkaline to weak alkaline affinity. The volcanic rocks have been deformed by the dextral North Anatolian and sinistral East Anatolian faults.

GEOLOGICAL SETTING, DISTRIBUTION AND FORMATION OF KIRKA (SEYİTGAZİ-ESKİŞEHİR) BORATE DEPOSITS

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ABSTRACT.- Middle-Upper Miocene aged borate deposits in the Kirka basin having volcano sedimentary lacustrine rocks are found within the dolomitic claystone/marls as lense shaped. The most lower and upper parts of the deposit are surrounded by carbonaceous rocks. Borate deposits situated in the two parts of the region were separated by paleotopographic threshold consisting of basement rocks and/or vertical blocking movements. Borate minerals show vertical and lateral mineralogical zonation such as Na, NaCa and Ca-borate in the southeastern area of the basin (Sarıkaya), whereas Ca-borate is represented only in the northwestern area (Göcenoluk). Borate minerals were formed by different processes such as symsedimentary, authigenesis and diagenetic transformation, according to their shapes/forms and kinds.

THE GEOLOGY OF THE SIVAS-DIVRİĞİ-TAŞLITEPE IRON PLACER AND ITS MINING

Hüseyin ÖZTÜRK***

ABSTRACT— Taşlitepe iron ore plaser occurrences was deposited during the Pliocene time which is the oldest plaser than the other ones at the region. It displays fairly well belonging to colluvial fan deposition features. Fragmental ore material that has moved down from mountainside by the influence of gravity will tend to accumulate at the foot of the slope. The basement rocks consist of crystalized limestones Mesozoic age, serpantinized ultrabasics Upper Cretaceous age, sienite-monzonite plutons Paleogene age and conglomerate-mudstone Miocene age. Taşlitepe iron plaser overlies these basement rocks with angular unconformity and it is overlain by the river deposits with unconformably. But plaser was faced with these river deposits by oblique strike slip faulting events of plio Quaternary age. These river deposits are exposed at the high position as a 400 m. from the actually river level as a result of quickly uplift of the region recently. Sedimentological, structural and morphological data of the placers indicate that plaser materials has been transported from southwest toward northeast route. It is thought that there was a primary deposit at the sienite serpentine contact although there isn't any primary deposit at present. Source deposits of the plaser has finished due to erosion effects from Pliocene to present. 600.000 tons measured ore and 400.000 tons probably ore total 1.000.000 tons iron ore was determined in the light of the eight drilling holes at the plaser. The content of the iron mineral which is martite in the plaser varies from 1 ton 1.3 tons per cubic metre. Approximately 200.000 tons martite containing % 62 Fe was produced from the plaser in 1989.

UPPER CRETACEOUS (MAESTRICHTIAN) BENTHIC FORAMINIFERA FAUNA IN THE OSMANİYE (ADANA) REGION

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ABSTRACT— In this paper general information is presented on the regional stratigraphy on the base of the data gathered by studying the benthic foraminifera present in the Upper Cretaceous (Maestrichtian) sediments of the Osmaniye (Adana) region. Mesozoic ophiolite unit forms the basement in the region. Middle-Upper Maestrichtian sediments which include clayey and micritic limestones disconformably overlie the ophiolite. In this clayey limestone benthic foraminifera such as *Lofiusia morgani* Douville, *L. baykali* Meriç, *L. oktayi* Meriç, *L. kahtaensis* Meriç, *Orbitoides medius* (d'Archiac), *O. triangularis* Checchia-Rispoli, *Omphalocyclus macroporus* (Lamarck), *Siderolites calcilrapoides* Lamarck and *S. cf. denticulatus* Douville have been identified. At the top Miocene sediments overlie the Middle-Upper Maestrichtian sediments with an unconformity.

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