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

THE STRUCTURAL AND STRATIGRAPHIC POSITION OF DAĞKÜPLÜ (NORTH OF ESKİŞEHİR) OPHIOLITHIC COMPLEX AND PETROGRAPHY OF CUMULATES

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ABSTRACT.— Dağküplü ophiolithic complex which is situated around Yakakayı-Gündüzler villages to the north of Eskişehir indicates southerly overturned structural position. Mesozoic ophiolithic rocks, from bottom to top present a sequence of ophiolithic melange, mafic and ultramafic cumulates and tectonites. Cumulate sequence begins with gabbroes at the bottom passes to the dunite interlayered pyroxenites towards to the top.

STRATIGRAPHY OF THE MUŞ TERTIARY BASIN

Ergün AKAY*; Emin ERKAN* and Engin ÜNAY*

ABSTRACT.— The Muş Tertiary basin is composed of independently developed basins which are the Middle-Late Eocene, Uppermost Eocene-Early Miocene, Middle-Late Miocene, Pliocene and Uppermost Pliocene-Quaternary in age. The Middle-Late Eocene basin is represented the detritics of Kızılağaç formation. The Uppermost Eocene-Early Miocene basin comprises the transgressive detritics of Uppermost Eocene Ahlat formation at the bottom. The upper part of this formation is composed of intercalated continental and marine detritics. Upwards the calcareous detritic rocks of Gerisor formation and detritics of Norkavak formation are seen. Above them Middle-Late Oligocene Yazla formation composed of marine detritic and calcareous rocks is exposed. The sequences varies upwards, to rhyolitic volcanic rocks of the Uppermost Oligocene of Sergen formation of which the exposures are few. On top of the above mentioned rocks, regressive detritic and calcareous rocks of Adilcevaz formation of Uppermost Oligocene-Eaiiy Miocene are exposed. In the Middle-Late Miocene basin, the rocks are developed under the conditions which caused the deformation of the previous basin and is represented by acidic volcanics of Elçiler formation. In the Pliocene basin, basaltic andesites, agglomerates and tuffites of Solhan formation and lacustrine deposites of Zırnak formation are developed. The Uppermost Pliocene-Quaternary basin represented by lacustrine and fluvial deposites of Bulanık formation, tuffites of Nemrut formation, sandstone and conglomerates of Muş Ovası formation and Holocene alluvial deposites.

TECTONIC ZONES OF THE CAUCASUS AND THEIR CONTINUATIONS IN THE NORTH-EASTERN OF TURKEY : A CORRELATION

Ali YILMAZ*

ABSTRACT.— The study area covers the Caucasus and the northeastern Turkey. Tectonic zones of the Caucasus and their continuations in the northeastern Turkey, and also the relationships, lateral variations, similarities and differences of the both district, will be presented. On the basis of the main geologic characteristics, the rock units of the Caucasus are divided into the tectonic zones. Each zone has pre-Liassic, Liassic and post Liassic units reflecting different geotectonic environment. The northern part named as the Great Caucasus, the southern part as the Lesser Caucasus, median part as the Transcaucasus of the Caucasus was bordered by the Scythian platform to the north and by the Iranian platform to the south. The tectonic zones of the Great Caucasus lie from north to south are presented below: the Laba-Malka zone (the Bechasinian Subzone and the Forerange Subzone), the Main Range zone, the Southern Slope zone. The Gagra-DJava zone and the Drizula massif and its covers are situated to the north, the Somcheti-Kafan (Karabakh) zone to the south and the Adjara-Trialetian and Talysh zones which are the continuation of each other are between the zones of the Transcaucasus. The ophiolitic belt (the Sevan-Akeran Ophiolitic zone to the north, the Vedi Ophiolitic zone to the south) of the Lesser Caucasus and the Miskhan-Zangezur zone and the Araks zone of the northern part of Iranian platform have been differentiated. The Caucasus tectonic zones are bordered by the overthurst planes dipping 70-80 degrees to the north. The Oligocene-Recent molasse showing enormous lateral and vertical facial changes, sits upon the rocks of the tectonic zone conformably or unconformably, in places. The results, presented below, can be obtained by the correlation of the Caucasus tectonic zones and tectonic zones of northeastern Turkey: 1- The tectonic zones of the Great Caucasus and northern part of the Transcaucasus can not be followed in the northeastern Turkey. 2- The Adjara-Trialetian zone continues along the Black Sea Shores. 3- The Somcheti-Kafan (Karabakh) zone, which is southern part of the Transcaucasus corresponds to the Pontian zone. But, considerable differences on the basis of the stratigraphic sequence and facial changes are observed in the both sides of the zone. 4- The Lesser Caucasus ophiolitic belt corresponds to the North Anatolian ophiolitic belt. There are two subzones, one of them is to the north and another is to the south, showing similarities in both side of the belt. 5- Iranian platform of the Lesser Caucasus corresponds to the Taurus platform, in general. Pre-Liassic Miskhan-Zangezur zone of Iranian platform corresponds to the Central and East Anatolian massifs the Araks zone to the Taurus zone respectively. If the corresponding tectonic zones of the Caucasus and northeastern Turkey are correlated, considerable facial changes as well as the similarities are observed. A lot of the differences result in the lateral and vertical changes of the zones.

AN EXAMPLE FOR THE MULTIVARIATE GEOSTATISTICAL ANALYSES OF GEOCHEMICAL DATA: IRON MINES OF DİVRİĞİ AREA, CENTRAL TURKEY

Taner ÜNLÜ* and Henrik STENDAL**

ABSTRACT.— Geostatistical analyses were carried out on 160 rock samples for 24 elements from the Divriği iron ore region. The samples were initially treated as one population. Thereafter the individual rock types were divided into several groups and geostatistically analysed. The geostatistical methods are described shortly for univarite and bivariate analyses and, most importantly, the multivariate methods such as Discriminant, Cluster and Factor analyses. The results of the geostatistical analyses yield a division into different rock groups (Discriminant analysis), and several elementassociation (Cluster and Factor analyses) which reflect the different rock types. In the individual groups the elementassociation tells more about the geological processes e.g. serpentinization and hydrothermal alteration. The difference between Cluster and Factor analyses is seen in the Factor analysis, which is a little more differentiated, enabling a more subtle interpretation of the possible geological environment. The interpretation of the elementassociation suggests that the iron ores are closely associated with mafic to ultramafic rocks, their serpentinization and also later hydrothermal events.

PRESENCE OF UPPER TRIASSIC BY CONODONTS IN ARMUTLU PENINSULA (WESTERN PONTIDES)

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ABSTRACT.— At the vicinity of Elmalı village to the NE of İznik (Armutlu Peninsula, Western Pontides) recent data have shown the presence of Upper Triassic conodonts in the limestones on the upper part of metaclastics, which were previously considered to be of Paleozoic age. New techniques were utilised in the obtaining and determination of the conodonts in this study, as the conventional methods have failed.

PETROLOGICAL INVESTIGATION OF LOWER TERTIARY AGED DETRITAL SEQUENCE AROUND BURDUR

Emel BAYHAN*

ABSTRACT.— In the study area, starting with Triassic-Jurassic series and including Upper Pliocene-Quaternary series as well, Lower Tertiary series show the characteristics of turbidite fades. It has been determined through quantitative analyses of light, heavy and clay minerals of this detrital sequence, that the sandstones in the region are of moderately and poorly sorted greywacke characters, and that the principal constituents consist of mono and polycrystalline quarty, plagioclase, igneous and metamorphic rock fragments. The most abundant group of heavy minerals is the group of amphiboles. Pyroxene, epidote, garnet and mica, apatite, zircon and tourmaline are found in lesser amounts. Smectite is the most important clay mineral thin the clay fraction in the region. Apart from dioctahedral smectite, illite and chlorite occur sparsely. Under the light of the present information, it is seen that the detrital material in the region is derived principally from a source consisting of igneous and metamorphic rocks.

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