profiles were constructed across the basin and from them the deepest part of the basin was mapped. This axis of the basin follows closely its trend. The aeromagnetic data of the region were digitized and then processed (first and second derivatives, reduction to the pole, Hanning filter, susceptibility inversion). The interpretation of the results shows major transcurrent faults to cut across the basin at a ENE-SWS direction. The most prominent of these faults passes through the central part of the basin and is extended well into the Rhodope and Servomacedonian massivas. This fault and another one at the north-western part of the basin define a block, which, according to the wavelength of the anomalies over it, seems to be uplifted compared to the neighbouring regions. Whithin this block the Vrondou granite is intruded, probably influenced by a fault of similar trend. In the southern part of the basin the pattern of the faults is more complicated different directions (N-S, SW-NE, NNW-SE) can be postulated.

GARNET CLINOPYROXENITE FROM BRISTRICA SOUTHERN ZLATIBOR, SERBIA

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In a small lherzolite block (olistolite) in the Diabase-Chert Formation (olistostrome melange) occur thin (up to 30 cm thick) garnet clinopyroxenite veins concordant to the layering of the host rock.

The garnet clinopyroxenite consists of clinopyroxene (slightly deformed comp. ca 66% Di, 9% Hd, 9% Jd, 15%Tsch), garnet (ca55% Prp, 27% Alm, 17% Grs, 1% Sps) and locally very rare orthopyroxene. The lherzolite is composed of olivine (90% Fo), enstatite (90% En), clinopyroxene (ca 80% Di, 4.5% Hd, 7.5% Jd, 8% Tsch), all slightly deformed, and accessory spinel. The texture of the garnet clinopyroxenite is mosaical with subordinate cataclastic phenomena.

The fabric of the garnet clinopyroxenite and the host lherzolite is similar (the difference is only in the presence of layering in the lherzolite) indicating that both rocks originated before the final solidification, since high temperature solid state deformations are expressed in both of them.

The crystallization temperature of the garnet clinopyroxenite from a picritobasaltic melt low in alkalies and high in calcium was over 1050-1100°C, but the equilibration between the coexisting minerals ended at about 1000°C. The solid state equilibration temperature of the lherzolite was at 900-950°C and at ca 12.5 kb pressure. The

difference between these two temperatures of equilibration is due to different migration abilities of ions through the crystal lattices of minerals. The mineral pair geobarometers and the elevated sodium content in clinopyroxenes of both rocks indicate that their consolidation was in the higher pressure part of the spinel peridotite stability field.

The origin of the garnet clinopyroxenite is explained by crystallization of a picritobasaltic melt at high pressures, but there is a possibility also that all the metamorphic and ultramafic rocks in this area were metamorphosed in a subducted ophiolitic slab. Retrograde adjustment during decrease of pressure and temperature was prevented by fast uplift.

RIVER REJUVENATION AT THE AREA SURROUNDING THE NORTH AEGEAN SEA AS RELATED TO POST PLIOCENE TECTONIC AND CLIMATIC CHANGES

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The rivers that drain the continental area of the SE Balkans and discharge into the North Aegean sea, have been rejuvenated twice after the Pliocene. The rejuvenation processes expressed on the relief by the incision of rivers into sedimentary deposits and parent rocks and the formation of river valleys.

Two separate stages have be clarified:

The stage 1 characterized by the formation of rather mature mother valleys, 150-350 m deep and 1-2.5 km wide, opened in the eroded pliocane deposits and the underline varied rock types. The warm semi-arid climate of the Villafrak associated with active tectonic movements of the L-M Pleistocene, have been responsible for the stage 1 river rejuvenation. The subsidence of the N. Aegeis and the flooding of the N. Aegean plateau terminated the stage 1. The stage 2 characterized by the formation of young daughter valleys, 105-330 deep, less than 1 km wide, steepsided (Tempi) with local terraces, opened in the quatemary deposits and the underlie rocks. The climatic fluctuations of the U. Pleistocene - Holocene, associated with intensive vertical movements of the faulted blocks, have been responsible for the stage 2 river rejuvenation, still in progress.

The rejuvenation processes seems to have been 3-4 times faster dirung the stage 2, than during the stage 1, thus explaining the present valley forms, known as Tempi in Thessaly (Peneios river), in Macedonia (Rechios - Rentina r.), in Thrace (Nestos river). It was also found that the entire incision of the rivers that drain the areas of the geotectonic zones Axios, Circum-Rhodope, Serbomacedonian, during the stage 2 was smaller, than that of the rivers occured at the area of the zones Pelagonia and Rhodope.

