

# **Petrogenetic model some of Caucasian magmatites**

## **In the light of tectonic layering of the Earth's crust**

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Pre-Jurassic basement of the Caucasus region is a typical vertical-accretionary complex consisting of conglomeration of various terranes which were formed in absolutely different geodynamic conditions.

Such a horizontal tectonic layering comprises seemingly more deep horizons of the Earth's crust. New geophysical data (deep seismic and magnetotelluric sounding) indicate in favour of this assumption and allow to consider genesis some of magmatites of so-called Dzirulla crystalline massif (salient of pre-Jurassic basement of the Black Sea-Centraltranscaucasian composite terrane) in a new fashion.

It seems to us that in the third sialic "inversion layer" of the Earth's crust at different depth initial magma of Late Hercynian equigranular eutectic and porphyreous K-feldspathic granites were generated. They can be formed without participation of mantle heat and material. Initial basic magma of potassium feldspathic gabbros was generated at the depth more than 30 km in fourth mafic layer of tectonically layered Earth's crust. As a result of interaction with third (sialic) layer formed hybrid magma which penetrated through the upper layers and hardened at the depth about 7-10 km where became saturated with feldspathic material.