

FORMATION OF MAGMA CHAMBERS OF OROGENIC PLUTONS IN UZBEKISTAN VOLCANO-TECTONIC DEPRESSION (CENTRAL ASIA, TIEN-SHAN)

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On the territory of Uzbekistan there are two geoblocks: Middle and South Tien-Shan, with different histories of magmatism evolution. At Middle Tien-Shan orogenic granitoid magmatism was the next after the gabbro, appeared at Early Carbonic as a product of basaltoid magma. Subsequent process of magma chambers formation was conditioned by successive migration of the basic melt out of the basaltic bed into diorite and granite-metamorphic ones. This was connected with deep assimilation of metasedimentary rocks of the substratum by the basaltic magma. This is the way for the formation of mixed magma chambers, that originated diorite-granodiorite-granite formation sequence in upper levels of the earth crust at Middle and Late Carbonic. Under the influence of energy and matter of mantle fluid flows on the initial seat firstly of the basic meltings and then of the more acidic and acid ones, these chambers revived and magmas were formed which generated subalkali sequence: monzogabbro-diorite-adamellite-rare metallic leucogranite. Such mechanism of magma chambers formation is considered to be the effect of metamagmatism.

At Late Paleozoic period of South Tien-Shan formation of the magmas is the result of upwards remelting in succession of amphibolites, gneisses and schists of the earth crust selection to alkali-silica fluids flowing out of ultra-metamorphic zones and the upper mantle. Displacement of initial magma chambers from the bottom to the top of Precambrian substratum seems to be the cause of the formation sequence quartz diorite-granodiorite-granite in South Tien-Shan plutons with clearly expressed signs of crustal granitoids.