

Regularities of Granite Formation and Granitogenic Metallogeny in the Earth Crust of Polycyclic Folded Areas

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From the position of platform tectonics the granite formation reveals synchronically in different aged folded areas with oceanic crust formation in adjacent spreading zone. In space the granite formation and spreading basalt-tholeiitic magmatism represent the caused lateral pair system which is developed in a time united interval. The source of silic-alkalic fluids, which provoked granitization, is an inner continental diapir.

The granite formation is developed on a different-aged and typical continental foundation and has no connection with its early formed geological formations. During one granitization cycle (90-100 mln.years) 12 petrochemical types characterized by regulary distribution of petrogenic elements depending on general alkalinity and potassium-sodium relation were formed. In an early sodium stage the lateral series of leucoplagiogranite-plagiogranite-tonalite-quartz-diorite was formed, in a middle stage potassium- sodium- leucogranite- granite- melogranite-granodiorite, in late potassium stage – plumasitic leucogranite-alaskite- subalkalic granite- alkalic granite. Lateral trend from the frontal part to the rear area of the granite formation has a tendency of rising general and sodium alkalinity and rock basicity. Between the stages of crust granitization andesite-basaltic and gabbro-dioritic formations were formed. Their alkalinity developes monotypically in time and on lateral with petrochemical types of granites.

Granite formation caused the formation of rare metallic potassium-plumasitic leucogranites, rare-earth alkalic granites, molibdenum-copper-porphyric, gold volcanogenic deposits.