

Petrogenesis and Ore Content of Comendite-alkalic-granitic Formations

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Alkalic granites and comendites form the three formations which are different in geology and geodynamics. Comendites and alkalic granites of oceanic islands associated with alkalic basalts belong to the first formation. Pantellerites of continental rifts associated with ultramafite-mafitic rocks of high potassium and sodium form the second formation. The third type is comendite-granite-alkalic formation of the folded areas which is revealed to the time-dimentional and petrogenetic connection with potassium granites of the latest stage of granite formation represented by leucogranites and alaskites.

The development of the comendite-granite-alkalic magmatism is possible in mature continental crust with addition of the high-alkalic fluids. Such conditions are realized in the latest stage of folded zones, in continental rifts, in zones of activization of cratones and platforms. Alkalic granites and leucogranites which were synchronically formed in different parts of united areas of granitization, may be considered as agpaitic and plumasitic branches of genetically united group of potassium granites.

Granite-alkalic formations are divided in the abyssal facies: volcanic, hyp- and mezoabyssal. Petrochemical and mineralogical criteries of depth formation evaluation were developed on example of alkalic riebeckitic granites of Kazakhstan. The most ore-bearing formations are hypabyssal alkalic granites isolated by apogranitic type of evolution, enrichment by heavy lanthanoids, rare-earth zonations and variety of accessories.

Primary strontium relations testify the mantle and crustal nature of alkalic granites.