

Petrology and Geodynamics of Magmatic Formations and Connected with Them Large Deposits

ABDRAHMANOV K.A., Kazakh Institute of Mineral Resources, Almaty, Kazakhstan

Indicatoric petrologic and geodynamic parameters of ore-bearing magmatism arise either in the process of regular evolution of oceanic and continental lithospheric platforms, or by the way of differentiation, liquation of initial magmas in the primary and secondary focuses, or by the way of fluid-magmatic splitting of magmasystems with vertical migration through the series of intermittent focuses.

Ore-generated factor at stratiform pyrite-polymetallic ore-formation is the porphyric magma splitting into two contrast magmasystems - potassium and sodium one. One of them (potassium) located in the upper part of the magmatic column becomes rich in potassium, aluminium, magnesium, fluorine, barium, argentum, plumbum, and the second one - sodium-porphyrific - is located in the lower part of the column and characterized by high silicic acidity and it has the high background of sodium, calcium, ferrum, chlorine, strontium, zink and copper. Such splitting for known magmatic processes is not typical and is realized in a condition of pulsation advance of the fusion.

Porphyritic method of magmatic splitting becomes the defined one in the formation of ferrum- manganese- zink- plumbum- barium- argentum deposits, epithermal copper giant Zhezkazgan (Kazakhstan), magnetic with argentum ores of Torgay ferriferous zone (Kazakhstan).

Pyrite-polymetallic zones were formed in the frontal part of the continental platforms. This part was exposed to subduction of the oceanic crust from the side of younger folded zone. Ferrum-manganese- polymetallic deposits are typical for depressional structures in connection with inner continental riftogenesis.