



Conditions of geochemical specialization of rare-metal granites by the example of Eastern Transbaikalia

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With granites massives of the kukulbey complex in East Transbaikalia, settling down within the limits of two structural-tectonic zones - Aginskaya and Argunskaya, of the rare-metal granites (RG) two geochemical types are connected to various ore specialization: Microcline-Albit with a Muscovite (W, Be, Sn) and Li-F Litionite-Amazonite-Albit (Ta, Nb,) accordingly. Comparison parent of the biotite granites does not show contrast distinctions in mineral, petrochemical and geochemical structures, except for the raised level silica-acid in granites of Argunskaya a zone. Levels of concentration Li, F, Ta and W, determining geochemical distinction ΔA , in parent biotite granites are practically identical. Geochemical reconstruction of geodynamic modes shows, that formation of files with W specialization occurs in a syn-Colg mode (Aginskaya zone) whereas files with Ta specialization are formed in WPG a mode (Argunskaya zone). Despite of various in geodynamic modes, age RG of these zones and initial isotope attitude of Sr are identical ($142,2 \pm 0,6$ Ma, $86\text{Sr}/87\text{Sr}=0.7067 \pm 3$ at MSWD=1,8 (Kovalenko, et al., 1999)), that represents a problem. The estimation of physical and chemical parameters of conditions of crystallization of granites on the basis of structure of micas (Ivanov, 1970) shows that, formation Ta-rich RG occurs in some stages at sharp increase fluid-saturation and alkaline on a background of contrast temperature drop whereas W-rich RG crystallize in less alkaline and more high-temperature conditions at smaller activity of water. The research was supported by the Russian Foundation for Basic Research (03-05-65293).