

## **GEOCHEMICAL FEATURES OF THE LATE MESOZOIC CARBONATITES IN WEST TRANSBAIKALIA**

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Subvolcanic dykes and effusive sheets of carbonatites are characteristic of the Late Mesozoic rifting stage in West Transbaikalia. Carbonatites are represented by barium-strontium (Oshurcovo, Khaluta) and rare-earth (Arshan, Juzhny) types. The most important feature of both types is high concentration of sulfate sulfur, exceeding in 3-4 times content of the average calcite carbonatite and being connected with the presence of barite, celestine and barite-celestine. Concentration of REE, represented by light lanthanoids, varies from 4.4 % in rare-earth to 0.24 % in barium-strontium carbonatites. Concentration of Nb, Zr, Y, P is greatly lower than in the average carbonatite. Values of primary strontium ratios of all occurrences with an average of 0.7056 and are similar to ones in the continental alkali basalts widespread in rifting structures of West Transbaikalia. Isotopic composition of sulfur ranges from 3.2 to 13.5 promille, and carbon is close to that expected for a mantle source (on the average -5.1 promille). Oxygen has mantle values in veins and phenocrysts (calcite, bastnaesite) of effusive deposits. Interaction between melt and a fluid phase led to higher oxygen ratios of the bulk calcites in the sheets. In the Arshan area there are negative values (-5.11 promille), explained by the interaction with meteoric water. During the hydrothermal stage enrichment by heavy oxygen (to 17 promille) and light carbon (to 1-2 promille) occurred. The studies have been carried out under support of RFFR (grants 98-05-65651, 99-05-64435).