CARBONATITE TUFFS OF SIBERIA AND MONGOLIA AS PROMISING RARE METAL RAW MATERIAL.

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The carbonatite tuffs with rare-metal mineralization have been discovered recently in some alkaline provinces of Siberia and Mongolia. The carbonatite tuffisites containing cerussite ($PbCO_3$) were found to be hosted in the carbonatite province Mushugay-Khuduk. Pb concentrations in these rocks amount to 15-17%. Tuffisites form vein bodies in association with glassy lavas of trachytes and fluorite carbonatites. In Zabaikalia, in the Khalutinsky province of carbonatites there were discovered carbonate tuffs with high concentrations of Ba and Sr as minerals of strontianite and barite. A great deal of Nb and TR enclosed in carbonatite tuffs occur in the form of minerals of pyrochlore and monazite is available in the Tomtor massif in the north of the Siberian platform (Pre-Anabar). The lamproite tuffs of the Tomtor massif represent the source of diamond placers of the Ebelyakh region.The minerals concentrating rare elements were revealed in carbonatite tuffs of different alkaline provinces, as well as geochemical specifics of these rocks. Their genetic relationship with silicate rocks of K-alkaline complexes was proved based on geochemical and isotope data. The carbonatite tuffites seem to have a wide distribution in different provinces of the world. They are easily decomposed, so they are difficult to be found. When decomposed such rocks are readily enriched in useful components and may be of commercial value.The work is supported by RFBR, grant 97-05-65680.