EFFUSIVE CARBONATITES IN WEST TRANSBAIKALIA

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Phonolites, teshenites formed in the West Transbaikalia troughs in Early Cretaceous, and alkali gabbro-syenite rocks in the margin parts (Litvinovsky et. al, 1998, Yarmoluk et. al, 1998). During this period carbonatite magmatizm developed within blocks of crystalline basement, basing in the frame of riffting troughs. Carbonatites occur as subvolcanic veins, dykes (Oshurcovo, Shalutay) and effusive sheets (Arshan, Khaluta, Juzhny). The sheets are erosional remains, laying on the weathered rocks, represented by granites, slates, gneisses. Banding in carbonatites is parallel to the contact in the dykes and veins and conformal to the surface of the slopes in the sheets. Rocks have porphiric structure, caused by the presence of barite-celestine, calcite, phlogopite, bastnaesite phenocrysts. The slit-like and oval gas interstices in small amounts are noted, oriented in accordance with banding of rocks. At the base of sheets there usually is a greater amount of xenoliths of underlying rocks. Borders of the carbonatites with xenoliths are distinct, and banding bends around contours of debris. Other type of breccia carbonatites is widespread at the Juzhny area. Their debris have marcs of mechanical processing as the result of melt rise and are represented by rounded rubble-shaped debris with size from mm to 5-7 cm. Small rounded debris of calcite, phlogopite and bastnaesite phenocrysts are met amongst xenoliths. Isotopic compositions of oxygen, carbon and sulfate sulfur are similar to ones typical for effusive carbonatites. The studies have been carried out under support of RFFR (grants 98-05-65651, 99-05-64435).