

PARAGENESIS OF ULTRAALKALINE GRANITES AND LEUCITE SYENITES WITH CARBONATITES OF SOUTHERN GOBI, MONGOLIA

1N.V.VLADYKIN, 2W.IVANUCH, 1.Institute of Geochemistry, Irkutsk, P.B. 4019,664033 Russia;2.Rua Luiz Tolezano, 223, 09400-000 Ribeirao Pires-SP,Brazil

In the 1970s the province of alkaline granites with unique Zr, TR and Nb deposits was discovered in the Khan-Bogdo massif in Mongolia (Kovalenko, 1977; Vladykin et al., 1981). The same province hosts Luginol massif of leucite syenites, shonkinites and TR carbonatites (Kovalenko, Vladykin, et al., 1971). In carbonatites and alkaline granites TR is enclosed in the minerals synkhisite and bastensite. In spite of close absolute age of these massifs the genetic affinity of alkaline granites and leucite syenites is questionable. The association of leucite and alkaline syenites with granites is known in the massif Itatia, Brazil. In the Aldan alkaline province, in the Murun and Bilibinsky massifs we discovered a complete genetic series of rocks from Bt pyroxenites, leucite shonkinites and syenites to alkaline granites. We proved genetic affinity of these rocks based on geochemical, petrochemical and isotope data. The genetic series of rocks from alkaline-ultrabasic to granitic is formed due to a continuous differentiation and lamination of alkaline magma (Vladykin, 1997). The rare earth mineralization of carbonatites of the Luginol massif is analogous to carbonatites of Bajun-Obo (China) with the distance only 100 km. Correlation of geochemistry of granites, syenites and carbonatites of the Mongol province and Bajun-Obo will help to solve the problem of genesis of this greatest deposit of rare-earth elements. The work has been supported by RFBR, grant 97-05-65680.