

Geochemistry of pegmatites and associated granitic rocks, in the Borborema Province, RN - Brazil

¹BONZANINI, L. A. F.; ¹COSTA CAMPOS, T. F.; ¹PETTA, R. A.;
¹Pósgraduação em Geociências - Universidade Federal do Rio Grande do Norte- Brazil

The Borborema Pegmatitic Province, located in the Seridó Fold Belt (RN-Brazil) shows more than 1.500 pegmatite bodies with most varied dimensions and characteristics, emplaced at the end of the Brasiliano Cycle (Upper Proterozoic). Most contain mineralizations of Ta-Nb, Be, Sn and Li, and good reserves of feldspars at first quality, quartz and kaolinite.

The present paper review the geochemistry, petrographic and isotopic data of the associated granites, country rocks (Seridó Formations and Caicó Complex), and minerals of the most representative pegmatitic bodies. It also discuss the genetic evolution of the pegmatites and their relations with the associated granites.

The pegmatites were classified in two main classes - homogeneous and heterogeneous, and the geochemical studies were made in accord with the internal structure of the heterogeneous class, which was classified by zones (I, II, III, IV). About 60% of the pegmatites which are mineralized are heterogeneous, 25% are homogeneous, and the remainder are mixed.

The integration of all the data has been organized in a database associated to a Geographic Information System - GIS, where all the geological information, spatial position of the bodies, dimensions, geochemical data and others characteristics of the mineralized pegmatites can be visualized and manipulated in a clear and interactive process.