

OPPORTUNITY FOR DIMENSION STONE EXPLOITATION IN SOUTHEASTERN BRAZIL: THE CAPIXABA MINERAL PROVINCE

Alessandro Silva de Oliveira

We present here an analysis of the mineral potential of the *Capixaba Mineral Province* (CMP), a region with historical records of rock exploitation for dimension stone and coating. It is located in the context of the Mantiqueira Province (Southeastern region of Brazil), limited to the North and to the West with the São Francisco Craton and to the East with the Atlantic Ocean. The CMP contains marble, granite, gneiss and pegmatite (for industrial and gem purposes).

There are three main mining districts of dimension stones, named as: (1) Northwestern, (2) Central and (3) Southern. It can be suggested that fault and shear zones (as well as lithology) control the emplacement of granitoids (with variable color, texture and patterns), pegmatites and veins. Marbles, historically used as dimension stones, are located in the metamorphosed carbonatic sequence from the older Paraíba do Sul basement. Gneissic rocks and pegmatites shows an ample range of exotic and busy patterns and pegmatites contain the gems.

Traditionally that is the general idea that the mining sector of dimension stones is not economically viable, if compared to metallic and other ores. It do not corresponds to the reality in this region, where about 100% of the outcropping area of the CMP is being or has been subject of investigations or inquiries. However the techniques employed in those investigations were empirical, and large mineralized areas are still out of business; some extractions and small mines are abandoned for lack of investment in boreholes or geophysical data.

In the present day there are a new scenery for the CMP economicity, due to the growth of the international market for dimension stones, new policies, fiscalization and regulation of exploitation by the brazilian government, intervention of universities and research centers in science, technology and education to develop this sector and exploitation planning of mining companies. There are also new training centers and experienced professionals in private and public universities and enterprises in Southern Brazil.

The CMP have ample mineral reserves that have not been exploited recently, and the volume of ore exploitation is still very small in comparison to the size of ore reserves.

Moreover, the informal and traditional manual exploitations (*garimpos*) are being controlled by the government and some new practices and methodology of ore exploitation and processing are being used by large companies in quarries.

This scenario shows that the Capixaba Mineral Province is actually an excellent opportunity for investors in the dimension stone sector in Southern Brazil.