

CRETACEOUS EPICLASTIC ROCKS OF WESTERN MINAS GERAIS STATE, CENTRAL BRAZIL

SGARBI, G. N. C.IGC-UFMG, BELO HORIZONTE, MG BRAZIL

Lower to Early Cretaceous rocks occur in the southern Sanfranciscana Basin (SB), and in the northeastern border of the Paraná Basin (PB). They are separated by a Precambrian structural arch extending from SSE to NNW, named the Alto Paranaíba Arch (APA). The Patos Formation corresponds to a remarkable volcanic event of ultramafic-alkaline characteristics, also including intrusive associations of kimberlites, kamafugites and carbonatites that occurred during the Upper Cretaceous (c.a. 80 Ma) in the SB, APA and in the PB. The studied epiclastic sandstones, conglomerates and breccias constitute the erosional products of the Patos Formation and were deposited by debris flow and alluvial sedimentary processes in the both sides of the APA. In the SB they constitute the Capacete Formation and in the PB, the Uberaba Formation. The region is an important diamond province in the country, the stones are found in recent alluvial deposits originated from erosion of the Cretaceous igneous and sedimentary rocks. As the diamonds are assumed to be genetically associated with the Patos volcanism, these epiclastic rocks can represent important sites for diamond prospection. Some authors are, however, of the opinion that the source of the diamonds is located in the Espinhaço mountains of southern Bahia state (600 miles far) and they were transported from NE to SW until the present sites by Permo-Carboniferous glaciers. This hypothesis is controversial since igneous rocks that could potentially bear diamonds are found in the region and euhedral, unbroken diamonds have historically been found.