

Diamonds of the Serra do Espinhaço (Minas Gerais - Bahia, Brazil): Distribution in time and space

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Diamonds of the Serra do Espinhaço were first found in alluvial gravels in 1714 near Diamantina, Minas Gerais, Brazil and were the first diamonds discovered outside Asia (India and Borneo). As early as 1732 diamonds were also found in Bahia, but production did not start in Bahia until 1840's and soon surpassed the then declining production of Minas Gerais. Besides the well known localities of Diamantina and Lençóis-Andaraí, numerous places along the Serra do Espinhaço have produced diamonds in minor scale; their occurrences are scattered over approximately 1000 km between 11° and 20° S. The diamonds are associated with coarse, robust, meta-conglomerates. A very high ratio of diamonds from Diamantina (MG) are gemstone quality and with no carbonado, but those from Bahia are high in industrial material with much carbonado (which may attain the ratio of 2:1). - Stratigraphically, conglomerates from Minas Gerais and Bahia belong to the Midproterozoic Espinhaço Supergroup. The Sopa-Brumadinho Formation (MG) belongs to the lower group (~1.7 Ga), but conglomerates of the Tombador and Morro do Chapéu Formations (Bahia) belong to the upper part of this supergroup. It is possible that two distinct events of diamond generation took place along the Espinhaço Rift or the evolution of the basin was diachronous. In the Diamantina region, rocks related to a synsedimentary, diamond-generating volcanic event are exposed. These rocks were severely weathered by the Proterozoic atmosphere and later meta-morphosed. Their original texture, as well as their original mineralogical and chemical character, has been altered.