

Gold Potential in the Sul Riograndense Shield, RS, Brazil

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The Sul Riograndense Shield is represented by two geotectonics units: "Craton do Rio de La Plata" (west) and the Brazilian Mobile Belt "Cinturão Dom Feliciano" (east). Some Brazilian granitic bodies are intruded in these cratonic rocks. The craton encloses the oldest rocks (Lower Proterozoic/Archean ?) known in the Shield and are constituted by granulitic terrains, gneiss-granitic terrains and metavolcano-sedimentary sequences.

Gold mineralization occurs within metavolcano-sedimentary cratonic rocks and at least two gold-bearing granitic, named Lavras do Sul (CBC blocked 10 t Au with grade about 1g/t) and São Sepé. The metavolcano-sedimentary sequences (according some authors greenstone belts terrains-type), have an irregular distribution and receive local names. From metallogenetic view point the most important are Palma - Passo do Ivo and Bossoroca Complexes. These areas consist of lower ultramafic-volcanic unit, middle mafic volcanic unit with a minor felsic type and upper detrital sedimentary formation. These units have been subject to greenschist grade regional metamorphism. Structural trends of foliation, folding, faulting and shearing are dominantly oriented to the NE/SW. They encompass a lot of gold occurrences, some of old works (garimpos) and two small inactive mines, Bossoroca and Cerrito do Ouro. The most important gold prospects are Cerro Branco, Cerro Alegre and Cerro do Ouro. Rock analysis from old works in Cerro Branco reach 80g/t Au, 3.64g/t Au x 17m in trench and two intervals in one drill hole reach respectively 8.24g/t Au x 3m and 72.85 g/t x 2m. Gold mineralization are related to shear zones and quartz vein associated to hydrothermal alteration. No systematic exploration work have been done in this region.