

STRUCTURAL ANALYSIS ON GOLD MINERALIZATION IN THE SERIDÓ BELT (NE-BRAZIL): TWO EVENTS, ONE MINERALIZATION?

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Gold mineralizations in the Seridó Belt have been usually related only to the later tectonic event D3 (brasiliano orogeny). However, the study of some Au-occurrences in central and western Seridó Belt have shown that the mineralization event seems to be more complex than is argued by previous works.

In the central portion of the belt the relationship between D3 structures and the mineralization is evident. Au-bearing quartz-veins occur along a system of transcurrent dextral shear zones, affecting micaschists. Such veins are generally deformed and their asymmetric pattern being consistent with sin-D3 structures.

In the western Seridó Belt some evidences like the presence of Au-bearing quartz-veins along earlier structures (D2), suggest an older mineralization event. These concordant Au-bearing quartz veins along S2 foliation are commonly affected by F3 folding. As a result of this superposition, sulfides and associated gold related to S2 foliation were concentrated along S3, although some gold may also have been emplaced synchronic to D3 event.

Based on the above described relationships, we suggest two events of mineralization. In the central portion of the belt the gold is synchronous and controlled by D3 shear zones, while in the western portion at least part of the mineralization is related to an earlier event, where Au-bearing quartz-veins were emplaced along D2 structures being later reworked by D3 event.