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CONTROLS ON GOLD DEPOSITS INHOGGAR, TUAREG SHIELD (Southern Algeria)

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Abstract

The Hoggar shield belongs to the 3000 km-long Pan-African Trans-Saharan belt that was formed in the Neoproterozoic, between 750 and 500 Ma by continental collision between the converging West African craton, Congo craton and Saharan Metacraton.More than 600 gold occurrences have been identified by ORGM, which are confined along North-South Pan-African megashear zones stretching some hundreds of kilometres long. Until now, no global classification and mineral paragenesis characterisation have been proposed for the Hoggar's gold mineralization. In this paper, we briefly review the main gold mineralization, in order to classify them and to highlight their characteristics andcontrols. According to field work , spectral, microscopic and microthermometric studies, these mineralization can be globally classified asorogenic type shear zone, which can subdivided into three main sub-types according to the degree of their relationships with the major Pan-African shear zones : (i)Ultramylonite-mylonite hosted including Tirek and Amesmessa, world class deposits; (ii)Granite hosted, including Tekouyat occurrence (iii) Volcano-sediment hosted including Tiririne and In Abbegui deposits .

All the deposits are coeval and were formed at the end of the post-collisional stage (530-520 Ma). InHoggar, gold mineralization depend on a double control, first order giant sub-meridian shear zone control and the gold districts disposed in N40°-50°E corridors that may be interpreted