

## **Relation between kyanite - staurolite - garnet and gold within the Banfora (Burkina Faso - Afrique de l'Ouest)**

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### **New geological data**

Based on field work and laboratoires investigation, it has possible to highlight a metamorphic mineral assemblage from possibly low amphibolite facies. The assemblage comprises kyanite, staurolite and garnet with biotite, Fe-muscovite, quartz, chlorite and carbonate as accessories species. Rhyolite constitutes the main host rock and the associated sulfides with gold are: pyrite, pyrrhotite, chalcopyrite, arsenopyrite, galena, sphalerite, tetraedrite, boulangerite, molybdenite, freibergite, acanthite. Gold occurs in pyrite or in pyrite fracture but also in kyanite matrix. Therefore, relation between gold and other minerals are also indicated.

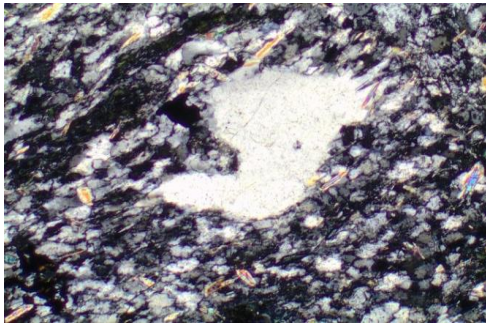


Figure 1: Main host rock with embayed quartz

### **Discussion of the Result**

At this state of knowledge, no economic gold discovery was made in the Banfora Belt (165km long and 35km large). This new discovery that establishes the relation between metamorphic minerals and gold constitute a guide for mineral exploration. It has not been previously documented in this belt (Ouattara, [1], Baratoux *et al.* [2]).

Therefore the assemblage were already made in Taiwan (Hwang, *et al.*[3])

[1] Ouattara, G.(1998). Thèse doct. Univ. Orléans, 290p. [2] Baratoux et al. (2011). *Prec. Res.*, **191**, 18–45. [3] Hwang, et al. (2002) *WPES*, **2**, 161-170.