

Geochemistry of the granodiorite from the intrusion-controlled gold deposit of Bonikro, Fettèkro greenstone belt, Côte d'Ivoire

OUATTARA ZIE^{1,2*}, COULIBALY YACOUBA², MARIE-CHRISTINE BOIRON³

¹*UFR des Sciences Géologiques et Minières, Université de Man, BP V20 Man, Côte d'Ivoire. (*correspondence : ziegbana@hotmail.fr)*

²*LGSM, UFR STRM, Université Félix HOUPHOUËT-BOIGNY, Côte d'Ivoire. yacoulib@hotmail.fr*

³*Géoressources, Université de Lorraine, CNRS, BP236, 54506 Vandœuvre-lès-Nancy, France. Marie-christine.boiron@univ-lorraine.fr*

Belonging to the southern part of the Fettèkro greenstone belt in Côte d'Ivoire, the Bonikro gold deposit offers the opportunity to geochemically characterize the main intrusive which is controlling a gold-mineralization in the Birimian of West Africa.

The geochemical characters of the granodiorites show that they are high K calc-alkaline. Also, settled in a volcanic arc (VAG), their diagram of $(La+Yb)_N$ versus $(Yb)_N$ confirm that they have TTG affinities and derived from Archean parents. The aplo-pegmatites dykes are metaluminous. The granodiorites enriched in REE ($\Sigma LREE=118\text{ppm}$) relative to HREE and are strongly peraluminous confirm by their AI (<0 and >0) and their ASI (<1). Normalized to the upper crust, these granodiorites are enriched in LILE. The granodiorites appear as strongly oxidized, fractionated and evolved according to the metallogenic characters.

Discussion

Amponsah et al (1) obtained similar results in the Julie deposit in Ghana.

[1] AMPONSAH P.O. (2015). Geology and Geochemistry of the shear-hosted Julie deposit NW Ghana, *J.Afr.Eart.Sci*, pp.75-93