

LITHOGEOCHEMICAL AND STRUCTURAL STUDY OF YAMOUSOUKRO' GRANITOIDS

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The study area is located in central Côte d'Ivoire, at the western limit of the Toumodi-Fètèkro trench. The objective of this study is to improve the knowledge of the geology of the Yamoussoukro granitoids. To achieve this objective we carried out fieldwork and thin section analysis in the laboratory as well as geochemical analysis by XRF.

The petrographic results allowed us to identify two (02) major petrographic facies, namely granites and granodiorites. In the granites, we find alkaline granites, two-mica granites and metagranites (two-mica and biotite). All these formations are intersected by veins (aplite, pegmatite and microgranite). These granitoids are affected by greenschist facies metamorphism and hydrothermal alteration, mainly fissural, materialised by quartz veins. The pervasive type, characterised by sericitisation, chloritisation and epidotization, is also noted.

The geochemical data show compositions of granite, alkaline granite and granodiorite. These Yamoussoukro granitoids generally have shoshonitic and calc-alkaline chemistries rich in potassium. They are metaluminous to peraluminous and of type I and S. These characteristics indicate a dual origin.

Structural analysis has revealed two deformation mechanisms: flattening and simple shearing. Flattening is evidenced by mineral stretch lineations. Simple shear is shown by asymmetric folds (Z-type), sigmoidal figures and dropouts. The directions of the structures (brittle and ductile) are essentially ENE-WSW; N-S; E-W; ENE-WSW to E-W; N-S to NNE-SSW and NNE-SSW to NE-SW.

Keywords: Côte d'Ivoire, Yamoussoukro, granitoids, lithogeochemistry, structural.