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Geological control of Au-Cu mineralization in the Neoproterozoic Itombwe formations of Kaziba, South Kivu (D.R. Congo).

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The Kaziba formations are located in the middle part of the Neoproterozoic Itombwe synclinorium which forms a N-S domain from Luemba in the Fizi territory of South-Kivu province to Sake in the North-Kivu province. These Neoproterozoic formations contain a succession of greenschist facies metasedimentary rocks defined as the Itombwe Supergroup, dated between 1020 ± 50 and 575 ± 83 Ma [1].

Kaziba syntectonic mineralization could have been structurally controlled by a double plunging N-S anticline related to the Pan African orogeny at about 560 Ma or stratigraphically controlled by intrusion in the carbonaceous phyllite.

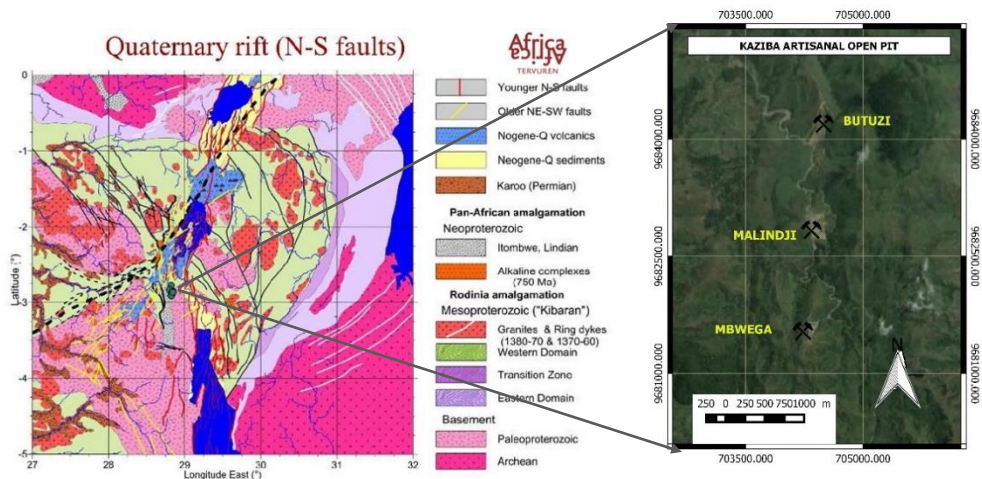


Figure 1: localisation of the kaziba main artisanal open pit from a central Africa geological map



Figure 2: Mbwega artisanal open pit

The Copperbelt mineralization as well as auriferous mineralization are largely concentrated in a N-S shear zone. This area is the site for a series of artisanal mining sites.

Microtectonic analysis points to two major phases of deformation: the first (D1) that corresponds to second phase of kibarienne deformation (paraxysmal phase) is translated

by the major fold oriented N160°E; and the second phase of deformation (D2; posterior phase)

References:

[1] K.M.A. Walemba, S. Master. Neoproterozoic diamictites from the Itombwe Synclinorium, Kivu Province, Democratic Republic of Congo: Palaeoclimatic significance and regional correlations. *Journal of African Earth Sciences* 42 (2005) 200–210

