Petrographic and Geochemical Characteristics of the Mesoproterozoic Granitoids (Granite, pegmatite) of Kibara Belt (1600-1000 Myrs) Bearing Sn-Nb-Ta-W and Cu Ore Minerals in Maniema Province /D.R.Congo

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Granitoids (granite, pegmatite) of the Kibara belt have intruded Mesoproterozoic formations (1600-1000 Ma) for this study in Maniema in Democratic Republic of Congo and their rare metals and mineral contents are economically valuable especially for the 4thindustrial revolution with digital age technologies. Through this study, not only descriptions of several rocks and ore minerals have been done unwittingly to their genesis but also geochemical nature of granitoids and efforts of understanding ore deposition have been at the heart of goals.

Despite the fact that former studies have demonstrated that Sn (and suites) ore metals are symptomatic and formally bound to the Kibaran formations mainly in pegmatites, aplites and their related quartz veins, the discovery of copper mineralization within granite (bornite, arsenopyrite, chalcopyrite, malachite, etc.) attracts our curiosity and revives the debates and critics in terms of material source, deposition conditions and their eventual ages and relationships.

We also noted the presence of cassiterite (and suites) within folded quartz veins which an interesting tectonic fact that can bounce global geological interpretations of their genetic process. Beyond, other tectonic markers have been screened and provide evidences of intensity and extents of the kibaran tectonic events wielded in all likelihood by compressive regime(collision).

The kibaran basement is cross cut by phanerozoic terranes at North West side and is intruded not only by granite, syenite, pegmatite, grano-diorite but also mafic where the harbinger of the bimodal magmatism is possible; the source of material is the upper crust through the partial melting of the crust at utmost and high metamorphic degree during the kibaran collisional tectono-magmatic events.