

## **Tectono-Sedimentary Evolution of the Central African Copperbelt**

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The Katangan of Congo and Zambia is the world's richest Neoproterozoic sedimentary succession, being host to the important copper-cobalt and uranium deposits in its lower part (Lower Roan/Série des Mines) and to polymetallic deposits in its upper part (Kundelungu Supergroup). Continental sedimentation on a block-faulted craton in the early stages of rifting started shortly after the emplacement of the anorogenic Nchanga Red Granite (880 Ma). The basal siliciclastic unit, up to a few hundred meters thick, consists mainly of conglomerate and sandstone deposited in braided streams and eolian dunes. A major marine transgression followed, during which various facies of the Ore Formation were deposited. Episodes of transgression and regression occurred during and after deposition of the Ore Formation until an extensive carbonate platform developed during passive margin sedimentation. Major rift-related mafic igneous events mark different stages of this basin evolution. Following deposition of the Mwashya black shale in what was probably a large euxinic basin, glaciogenic sediments of the Grand Conglomérat (Kundelungu Tillite) mark the global glacial event correlatable with Rapitan and Sturtian glacials (approximately 750 Ma). The closure of the Katangan rift basin started during the Lower Kundelungu. The development of a foreland basin can be detected from the north-tapering wedge of carbonates and siliciclastics overlying the Grand Conglomérat and underlying the Petit Conglomérat, the latter probably correlatable with Varangerian/Marinoan glacials.

Collision of the Zimbabwe and Congo cratons caused folding and thrusting of the sedimentary succession. Thrust sheets hosting Cu-Co mineralisation were transported northward. Tectonic breccias formed between and sedimentary fragmentites in front of the advancing thrust sheets. A thick succession of flat-lying siliciclastic rocks exposed on the Kundelungu Plateau of Congo may be interpreted as the molasse filling the foreland basin.