

TIMING OF EVENTS IN THE PANAFRICAN DAMARA BELT, NAMIBIA

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The intracontinental Damara belt consists of a passive margin succession comprising initial rift clastics and local overlying felsic volcanic units followed by an erosional phase. After a glaciation event, with diamictite deposition, a second rifting and subsidence stage produced carbonate and carbonate/siliciclastic rocks. To the south a third and final rifting stage, with local basalts, lead to platform carbonate, slope carbo-nate/siliciclastics and abyssal plain graywacke deposition.

During the assembly of Gondwana, via northwest subduction beneath the Congo craton, a minor subduction- and a major collision-related volume of magma were produced during the tectogenesis.

Zircons gained from the oldest felsites and early syntectonic diorite were analysed using the SHRIMP and evaporation techniques. The greenschist facies Naauwpoort felsite dated at 752 ± 7 Ma, while the upper amphibolite facies Kawakeup lava shows Pb-loss up to 647Ma which is linked with the first deformation (D1). The zircons of the foliated Okongava Diorite crystallized at 558 ± 5 Ma, reflecting the onset of collision and second deformation (D2). Pb-loss in the igneous zircon occurred up to 516 ± 6 Ma which is related to doming (D3) during the peak of regional metamorphism between 527-507Ma. The post-orogenic Donkerhuk Granite (476 ± 7 Ma) concluded the Gondwana accretion in central Namibia. Thus: Rifting 750Ma; D1 = 647Ma; D2 = 558Ma; D3 = 516Ma; Closure = 476Ma. Cores in the Okongava Diorite zircons provide a protolith age of 2005+Ma.