

## **Relationship between the Zimbabwe Craton and adjacent Zambezi Orogenic Belt: a structural-metamorphic transect across a craton margin (1 - Archean Evolution)**

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The Archean Craton in Zimbabwe is bound along its northern margin by the Zambezi Belt. Both the craton margin and the adjacent Archean high-grade gneisses to the north are characterized by a series of common 2.6 Ga D1 colinear folding events that occur around a relatively constant E or W plunging lineation. Metamorphic pressures increase from the craton (1-4 kbar) across the craton margin (4-6 kbar) into the gneiss terrane (6-13 kbar), indicating that moderate to deep sections of Archean crust are exposed. In the craton, strain is partitioned into discrete shear zones, that accommodated stacking of the greenstone stratigraphy but in the gneiss terrane strain is homogeneous and uniformly high.

Linear fabrics are prominent and complicated fold/boudin structures and transposition fabrics occur within one dominant, straight foliation. These fabrics were formed in a crustal-scale transpressional shear zone that accommodated flow in a constrictional environment. Shear sense indicators demonstrate the structural top to have moved in a westerly direction. Shearing was contemporaneous with westward thrusting along the northeastern margin of the craton. Exhumation of deep sections of Archean crust may have been the result of collision related crustal thickening and unroofing or crustal convection and solid-state diapirism above mantle plumes in thinned mantle lithosphere.