



Kinematic of the hercynian shortening into the moroccan links of the western Anti-Atlas and Zemmour. Implications for the north-western edge of the African craton.

M. A. Belfoul (1), F. Faïk (1), M. Bouabdelli (2).

1. GESCAT, Faculty of Sciences, Ibn Zohr University, Agadir, Morocco.
2. Structural geology laboratory, Faculty of Sciences, Cadi Ayyad University, Marrakesh, Morocco.

aladinbel@yahoo.fr

Abstract:

The Palaeozoic history of the NW edge of African craton is attributed to the post-Panafrican inherited structures. Its history reveals a polycyclic and very heterogeneous evolution.

Focused upon detailed analysis of the final deformation, Hercynian structural events in the South-western Anti-Atlas and its southernmost cartographic extension toward Zemmour link, lead to highlight zones of different structures and tectonic styles associated with a deformation gradient that decreases toward the African craton.

The reactivation of successive states of deformation suggests a continuum of deformation between each episode until the end Carboniferous, when hercynian structures are developed by tensor fluctuations between WNW and WSW direction while remaining sub-horizontal.

The kinematics and geodynamic evolution presented here illustrates the behaviour of the NW edge of the African craton at a time characterised by Avalonian accretion in the American continent and the closure of Iapetus along its western side and Rheic sea with its eastern margin. This mode of Palaeozoic structural configuration implies

movement of the west African craton which seems to operate a migration toward the West and the NW, at the time of shortening phase, with the possibility of an expulsion toward north of all the NW edge of the craton by dextral transpressive movement between this craton and the Tizi n'Test fault.

These Palaeozoic dynamics are continuous with a relative anti-clockwise rotation of the craton, associated to the whole movement of Gondwana.