

Neotectonic markers in the Panafrican belt formations of Cameroon: elements of interpretation and their environmental impacts *Poster*

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The North equatorial Panafrican Belt, whose Cameroonian formations are dated between 650 and 400 million years, and which are located in the North of the Congo Craton, is subdivided in to three major geodynamic domains: a north Cameroon domain, a central Cameroon domain and a south Cameroon domain. These major domains are generally, particularly the central domain, affected by great strike-slip faults in which the most important are the central cameroonian shear zone and the Sanaga fault.

Studies that establish the order of occurrence of geological events, generally performed in these domains and particularly at Banefo area (West Cameroon) reveal markers of recent tectonics (post panafrican) that affect the granitogneissic basement. They include:

1. pseudotachytes observed in the regions of Yaoundé, Tibati, Edea, and Banefo (Fig. 1);
2. Net and fresh stries of movement observed on the quartzofeldspathic injections sampled in some faults in the Banefo locality (Fig. 2).

The impact of the repeated action of this fault on the environment is expressed by:

- the fissuration of the tarred road at the level of the Banefo road cut,

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Figure 1: pseudotachylites

in the same direction as the major fractures of this locality;

- the crumbling of gneissified massifs in the Banefo Region in 1955, preceding a series of local minor earth tremors;
- fissuration, in parallel directions, of houses in some urban areas of the Yaoundé town; capital of the Republic of Cameroon (Fig. 3);



Figure 2: Stries of movement.



Figure 3: Fissurations of the houses.

- the most recent regional earth tremor (March 2005) recorded along the Sanaga Fault, which was registered right at Yaoundé situated 70 km away from the fault.

The tectonic processes that occur in the North Equatorial Panafrican belt since the end of panafrican orogeny (400 My) to the present day can be explained in the context of the neotectonic processes. The causes of the neotectonics, according to Ngako (1999), might be due to the processes of progressive peneplanation of the Panafrican reliefs by erosion, thus controlling the mechanism of isostatic rising of the crust/mantle interface from the end of the orogeny.

The genetic link existing between the pseudotachytes and the seismic faults coupled with the recorded minor earth tremors make the geotectonic environment of these areas a non-aseismic one, and for this reason, a particular attention should be focussed in the study of those major accidents in order to predict, monitor and take the necessary measures to minimize the consequences

of an eventual natural seismic catastrophe in this environment which seems aseismic.