23rd Colloquium of African Geology, Johannesburg, South Africa, January 8-14, 2011. Abstract Volume, p.159.

SUBSIDENCE AND INVERSION HISTORY OF THE CONGO BASIN, AS REVEALED BY FISSION-TRACK AND (U-TH-HE)/ DATA.

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Keywords: Congo Basin, Thermochronology, Subsidence And Inversion History, Long-Term Landscape Evolution

The Congo Basin is one of the largest basins in the World with very little knowledge on the geological evolution as well as the oil and gas potential. In the past, oil seeps are recorded in the central part of the basin. Four sides in the Congo basin have been drilled so far. The cores of the two drill sides Dekese and Samba are located at the Musée royal de l'Afrique Centrale Belgium. In a reconnaissance survey, we sampled both drill cores in a nearly even spacing of ~ 150 m covering the whole stratigraphy from Albian to Proterozoic. The red and green to grey sandstone samples were prepared by usual heavy minerals separation technique. Most of the samples revealed enough apatite and zircon grains for the two thermochronometric techniques fission track and (U-Th-Sm)/He. The time-temperature (t-T) evolution for the two drill locations were modeled by using the determined thermochronological data within the software code HeFTy. We tested various geological evolutionary constrains. Both techniques provide us information on the thermal and exhumation of the possible source area and on the drill location by themselves.