

219--1 NEW INSIGHTS INTO CRUSTAL STRUCTURE OF MAGMA- RICH TURKANA RIFT ZONE IN EAST AFRICAN SYSTEM



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207A (Anaheim Convention Center)

Abstract

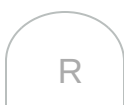
Studies on the crustal structure of the Turkana Rift Zone (TRZ) in southern Ethiopia began in the early 1980s. These studies revealed that the rift zone commenced in the Eocene at the intersection zone of the N-S African Rift System (EARS) and the E-Wrending Mesozoic African Rift System (CARS). However, few seismic and borehole data were available, resulting in limited subsurface data. A data gap has led to an incomplete understanding of the rift zone and how earlier CARS-related tectonic development of the

Here, we leverage newly collected seismic data and the TRZ, spanning a 300 x 150 km² region, to construct a map of several key subsurface horizons, including a profile, which we tie to surface geology and basement produced new structure contour maps on the TRZ's crustal architecture. We also present maps of key strain migrated toward the modern Turkana axis, following the widespread eruption of the Gombi. Together, these results indicate that the area of the area transected by the TRZ is a CARS. These results provide crucial information for understanding the development and evolution of the TRZ. These results provide crucial information for understanding the development and evolution of the TRZ. These results provide crucial information for understanding the development and evolution of the TRZ.

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