

## **SYNDEPOSITIONAL FAULTING AND THE DEVELOPMENT OF THE NAMIBIAN CONTINENTAL MARGIN - AN ONSHORE PERSPECTIVE**

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Adjacent to the region developing into the South Atlantic Ocean, the Karoo and Etendeka successions in the Namibian onshore areas preserve an extensional history that started about 160 Ma prior to oceanic onset. During its long-lived history the area, that was to become the present Namibian continental margin, developed a tectonic zonation comprising, from west to east, four important structural elements: (a) the central NW-SE to NNW-SSE trending rift valley depression that divided to initiate a continental shelf; (b) an adjacent rift shoulder that underwent pronounced thermal uplift; (c) a rotational block faulted zone floored by a major down-to-the-west breakaway-detachment; and farther inland (d) the relatively stable cratonic continental interior. The syndepositional activity of normal faults paralleling the future continental margin is recorded by the facies architecture of the volcano-sedimentary succession. Perpendicular to the strike of the rift zone NE-SW trending bundles of oblique-slip faults are developed. These can be interpreted as transfer faults, accommodating the variable timing and variable amounts of extension within individual segments of the rift structure. On a broad scale, the Upper Palaeozoic and Mesozoic succession preserved in Namibia subdivides naturally into (1) the Carboniferous-Permian, (2) the Triassic-Jurassic and (3) the Cretaceous megasequences, each recording extensional periods, separated by major erosional unconformities. Comparison with the more completely preserved sections of the South-American Paraná Basin and Karoo Basins in Botswana and South Africa reveals contrasting stratal thicknesses, depositional environments and transport directions of sediments in the rift zone area and the developing continental margin.