

# **Pre-Salt Continental Carbonates Reservoir Potential of Namibe Basin, Southern Angola**

**Gustavo Pereira<sup>1</sup>**

<sup>1</sup>University of Manchester, Sedimentology, Manchester, United Kingdom  
geologo.gcrp@gmail.com

## **ABSTRACT**

Since the discovery of the massive South Atlantic hydrocarbon reservoirs (Pre-Salt), the industry interest in these continental carbonates has increased greatly. Continental carbonates are a new play type in the Santos and Kwanza Basins of the South Atlantic rift. So far, discoveries remain more important in the Santos Basin in terms of volumes. Despite numerous studies, discovery and development of these reservoirs remains a challenge due to their complex architecture, heterogeneous pore network, and poorly constrained diagenetic evolution. The Namibe Basin in southern Angola contains outcrops of pre-salt carbonates. In combination with offshore core data this provides a unique opportunity to examine the sedimentary fill of South Atlantic rift basins and to evaluate their petroleum systems and in particular to characterize 'Pre-Salt' reservoirs. The project covered in this application focuses on the diagenetic and pore network evolution of continental carbonates in Angola. A combination of detailed petrography, mineral characterization with X-ray diffraction and cathodoluminescence, and petrophysical analysis will constrain the diagenetic phases, their mineralogy, and how they have affected pore networks. The wider PhD study will combine petrographic observations with diagenetic fluid chemistry and timing of fluid flow in a tectonostratigraphic context. This will construct a regional view of pre-salt diagenesis and its impact on reservoir quality. Results of this study have direct application to South Atlantic reservoirs, but predictive rules are equally applicable to exploration in other rift systems.