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**Sedimentology and Stratal Geometry of the Strunian-Carboniferous Sandstone Beds, Berkine Basin, Algerian Sahara**

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The Berkine basin is located in the eastern part of the Algerian Sahara desert, spanning three countries, Algeria to the West, Libya to the East and Tunisia to the North. Most of the basin is covered by sand dunes of the great eastern erg.

The Berkine Basin has a significant hydrocarbon potential related to several reservoir rocks (Cambrian, Ordovician, Silurian-Devonian, Carboniferous and Trias). Recently, the exploration and development of the basin have been carried by several companies. This considerable effort has resulted in the application of several lithostratigraphic schemes to the stratigraphy of the Devonian-Carboniferous (RKF, F1 & F2, Strunian, Tournaisian, Visean sandstones). The situation had developed in which it was very difficult to correlate the reservoir units from permit to permit, due to a lack of regional stratigraphic markers.

This poster depicts the depositional models of the Strunian-Carboniferous sediments from the detailed sedimentological study of outcrop analogues in the Illizi region in integration with biostratigraphic data and subsurface data (core and composite logs). With regard to petroleum interests, this investigation aims to provide better understanding of the spatial distribution of the different lithofacies units as well as the origin of the unconformities in relation to relative sea-level changes. It should therefore enhance the reliability of the stratigraphic subdivisions and bring out the controls on the basin stratigraphy to enable further exploration and development of the basin.