



## **Climatic Trends in the Triassic to Early Jurassic Lacustrine Succession of East Greenland: Implications for Correlation in the North Atlantic Region**

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The Triassic continental successions of the North Atlantic region are poorly age constrained and therefore regional correlation is problematic. Climatic trends offer potential as the basis of regional correlation.

The Triassic of East Greenland lies in the northern continuation of the northern North Sea Rift and, following reconstruction, aligns with the Viking Graben. This position, between the northern North Sea, Norwegian Sea and the Barents Shelf successions, means it is key in constructing regional correlations and understanding both tectonic and climatic evolution throughout the Triassic of the North Atlantic region. Detailed sedimentological study of exceptional exposures through the largely lacustrine Mid-Late Triassic succession of East Greenland has provided the basis for a palaeoclimatic reconstruction. This has highlighted the occurrence of significant periods of increased aridity during the Late Ladinian and the Late Carnian which bracket the more humid conditions of the Early Carnian (the 'Carnian Pluvial Event'). Following the Late Carnian arid phase a gradual cooling through the Late Triassic and Early Jurassic is recorded. Comparisons and correlations are made with Triassic successions throughout the North Atlantic.

Understanding climatic trends and the response of sedimentary systems to these has important implications for the construction of facies models and therefore the prediction of both reservoir and seal distribution in the prospective North Atlantic petroleum provinces.