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Permo-Carboniferous Magmatism and Rifting in Europe

Edited by

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M. Heeremans and B. T. Larsen**

Widespread extension occurred within the Variscan orogen and its northern foreland during Late Carboniferous to Early Permian times. This was associated with magmatism



and with a fundamental change, at the Westphalian–Stephanian boundary, in the regional stress field, coincident with the termination of orogenic activity and onset of dextral translation between North Africa and Europe. Rifting propagated across basement terranes with different ages and thermal histories. Most of the rift basins developed on relatively thin lithosphere; however, the highly magmatic Oslo Graben initiated within the edge of a craton. Early Stephanian regional uplift is contemporaneous with the onset of magmatism, inviting speculation that it might have been

induced by a thermal anomaly within the upper mantle. The contributions to this volume suggest that the geodynamic setting in which magmatism occurred was complex, involving wrench tectonics, slab detachment, and delamination or thermal erosion of the base of the lithosphere.

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ISBN 1-86239-152-1



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Cover illustration:

Permian Hovedøya Dyke, Oslo Fjord, Norway.
Photograph by Martin Timmerman.