



Detailed sedimentological study and magnetic susceptibility of an Eifelian mixed ramp-related system in the Eifel area

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This study focuses on the base of the Eifelian stage and on the abandoned Ohlesberg quarry. The exposed section (92 m thick) is related to the Lauch and Nohn formations. Petrographic study leads to the definition of 11 microfacies which are integrated in a palaeogeographical model. It corresponds to a complex ramp setting where carbonate, mixed and siliciclastic deposits coexist. The microfacies evolution is interpreted in terms of bathymetric and lateral variations, showing a general shallowing upward trend and transitions between carbonate-dominated and siliciclastic-dominated sedimentary domains. This interpretation is supported by trends in magnetic susceptibility data. Even if the proximity to emerged areas appears to be the major influence on magnetic susceptibility values, the influence of carbonate productivity and wave agitation is also noted. The Ohlesberg section clearly points to the local and regional complex facies architecture, and advocates to variegated depositional environments along the Mid-Eifelian High.