



An Emsian-Eifelian Calciturbidite sequence and the possible correlatable pattern of the Basal Choteč event in Western Ossa-Morena Zone, Portugal (Odivelas Limestone)

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Abstract

*An Emsian-Eifelian carbonate-volcaniclastic sequence in south-western Ossa-Morena Zone (Portugal) was studied in terms of reef fauna, conodont biostratigraphy, macro- and micro-facies and magnetic susceptibility stratigraphy. The results point to a bracketing between the *Po. patulus* and *T. australis* conodont biozones (uppermost Emsian – middle-late Eifelian). The field data, facies analysis and reef fauna indicate that the sequence is composed entirely of calciturbidite and debris-flow deposits (intercalated with hemipelagic tuffites) related to a (up-slope) reefal system resting on top of volcanic buildings within a large volcanic complex. The purity of the limestones does not seem to be generally influenced by volcanic contributions. Although with some uncertainties, the first part of the section seems to show pre-, syn- and post-Basal Choteč Event (BCE) beds as recorded by significant shifts in lithofacies and magnetic susceptibility signal. A tentative interregional correlation with magnetic susceptibility curves is suggested with sections in Morocco, Nevada (USA) and Uzbekistan.*

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