

Reassessment of Salzgitter-Salder as potential stratotype for the Turonian-Coniacian Boundary

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The Turonian-Coniacian succession of the Salzgitter-Salder limestone quarry (Lower Saxony, Germany) has been proposed as international standard section based on its assumed completeness, comparable high sedimentary thickness and its high abundance and diversity of macrofossils (WOOD et al., 1984). The succession contains one of the richest and most persistent records of inoceramid bivalves in Europe. The base of the Coniacian in the Salzgitter-Salder section is marked by a flood occurrence of *Cremnoceramus deformis erectus* and an apparent local change in one scaphitid lineage a short distance below the boundary (WALASZCZYK et al., 2010). In terms of calcareous nannofossils, the boundary falls within the interval between the first occurrence of *Broinsonia parca expansa* and the last occurrence of *Helicolithus turonicus* (LEES, 2007). A carbon isotope curve of rather low resolution shows the Turonian–Coniacian boundary in the inflection point from falling to rising $\delta^{13}\text{C}$ values consistent with other sections in Europe (VOIGT & HILBRECHT, 1997). In 1995, the Coniacian Working Group of the Subcommittee on Cretaceous Stratigraphy proposed the Salzgitter-Salder quarry as the main candidate Global Boundary Stratotype Section and Point (GSSP) for the base of the Coniacian Stage. However, later stratigraphic work at the Słupia Nadbrzeżna section in Poland showed the first occurrence of *Cremnoceramus erectus* to predate its first flood occurrence, which indicates a small hiatus in the boundary interval at Salzgitter-Salder (WALASZCZYK et al., 2010). Here we present new high-resolution carbon isotope data together with detailed calcareous nannofossil assemblages for the Turonian–Coniacian boundary interval to tie in precisely the recorded macrofossil events and to reassess the magnitude of the hiatus.

LEES, 2007. Cretaceous Research, doi: 10.1016/j.cretres.2007.08.002.

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