

IN SEARCH OF THE EGGENBURGIAN – OTTNANGIAN BOUNDARY AT THE SOUTHEASTERN MARGIN OF THE BOHEMIAN MASSIF (LOWER AUSTRIA)



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At the south-eastern margin of the Bohemian Massif in Lower Austria Eggenburgian to Ottnangian sediments are widespread. In the wider surroundings of Eggenburg nearshore clastic deposits of the upper Eggenburgian (Kühnring Mb., Burgschleinitz Fm., Gauderndorf Fm.) occur, which are discordantly overlain by shallow marine sublittoral bioclastic limestone of the Zogelsdorf Fm. Due to the ongoing transgression the Zogelsdorf Fm. shows a fining and deepening upward succession, passing up-section and laterally into marine clays and marls of the Zellerndorf Fm.

Two completely cored logs from Limberg and Pulkau show this sedimentary succession above the crystalline basement. As in many outcrops, in the well Limberg KB2 on top of the Burgschleinitz Fm. a transgressional conglomerate occurs at the base of typical Zogelsdorf Fm. followed by pelites of the Zellerndorf Fm. The well Pulkau S1 exhibits between clastics of the Burgschleinitz Fm. and sands and limestone of the Zogelsdorf-Fm. a 4.5 m pelitic sequence with two tuffitic horizons. Between those not dateable tuffitic clays, badly sorted gravelly and sandy clay with molluscs like *Granulolabium plicatum*, *Ostrea digitalina*, *Perna aquitanica*, *Cerastoderma edule*, *Taras rotundatus*, *Tellina planata*, *Cordiopsis incrassatus*, *Turritella* sp., and *Natica* sp. indicates a deepening upward lagoonal environment. In dark gray fine bedded silty clays above thin shelled bivalves (Cardiidae, Veneridae, Lucinidea) and gastropods (*Turritella eryna*, *Granulolabium plicatum*) also point to shallow marine lagoonal conditions. This pelitic sequence is concordantly overlain by sands and sandy limestone of the Zogelsdorf Fm. and silty clay of the Zellerndorf Fm.

Calcareous nannoplankton associations from the Burgschleinitz Fm. in Limberg KB2 can be correlated by *Triquatorhabdulus carinatus* and *Helicosphaera amplia-*

perta with the upper part of NN2. Sediments from the Zogelsdorf Fm. in the lower part of Limberg KB2 can be assigned to NN2/NN3 by *H. ampliaperta* and *T. carinatus*. Assemblages with *H. ampliaperta* and *Reticulofenestra excavata* in the lowermost part of the Zellerndorf Fm. in Pulkau S1 point to NN3.

The successions in both wells show at the base upper Eggenburgian marine deposit (Burgschleinitz Fm.) followed by a regressional phase and a renewed transgression initiating the deposition in lagoonal facies in Pulkau S1. This regression presumably correlates with the main regional hiatus at the base of the Zogelsdorf Fm. and can be consequently correlated with the 3rd Order Sequence Stratigraphic Boundary Bur 3.