

## **PERSPECTIVES ON THE SEQUENCE STRATIGRAPHY OF GLAUCONY-RICH DEPOSITS AS REVEALED BY THE CENOMANIAN GLAUCONY OF NORMANDY (NORTHERN FRANCE)**

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Detailed characterization of glaucony from five Cenomanian hardgrounds (Octeville, Bruneval 1, Bruneval 2, Rouen 1, and Rouen 2) of Normandy (northern France) reveals additional information on the possible use of the green grains as a key to sequence stratigraphic interpretation of glaucony-bearing deposits. The glaucony-rich deposits at the very base of the Cenomanian stage are approximately 2 m thick and include 30-50% highly evolved (K<sub>2</sub>O 8%) glaucony. Upsection, the four Lower to Middle Cenomanian glaucony-bearing horizons are tens of cm thick and invariably contain less than 15% evolved glaucony (6.5-7.4% K<sub>2</sub>O). These major differences in amount and potassium content of glaucony are laterally persistent, providing the basis for basinwide correlations. Similarly to what recently documented 200 km NE in the Boulonnais, the attributes of glaucony from the base of the Cenomanian in Normandy suggest a depositional hiatus of several hundreds of ka, i.e. the same order of magnitude as the Lower Cenomanian third-order depositional sequences recognized across Western Europe. By contrast, the lower concentration of less mature glaucony recorded in the overlying glaucony-bearing horizons is consistent with depositional hiatuses of shorter duration (a few tens of ka), that took place at sites of condensation (notably, the maximum flooding surface and the transgressive surface) within younger depositional sequences. The results of this study thus demonstrate that detailed glaucony characterization is needed for a correct sequence stratigraphic interpretation of glaucony-bearing deposits.