The Tizi-Bent-Hazim SpongE Mound (Late Sinemurian, South Versant of Central Eastern High Atlas, Morocco): Identification and Mode of Edification

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On the south side of the Eastern Central High Atlas, in North of Errachidia, the transition between the shallow plateform to the subsident basin is marked by a permanent flexuration zone, along the Tizi n'Firest Fault. At the top of lower Sinemurian, a system of bioconstruction represented by sponge mounds was established along this zone. The Tizi Bent Hazim Sponge Mound, studied for the first time, is a part of this system. This cone-shaped building overlies the Idikel dolomites and massif limestone formation and marks the transition between the lower and upper Sinemurian. It is characterized by the abundance of well conserved forms of spongiaires which are associated with branched corals and big lamellibranches dispersed in a greyish micritic mud with pelletoidal pockets. Its sequential organisation shows apparently two successive modes of evolution: 1) the keep-up mode during an eustatic rising and the high sea-level, corresponding successively to ante-mound deposits and to the mound deposits; 2) the Giveup mode which announces resignation of spongiaires mound by drowning.

The accretion by retrograding model, which is based on a sedimentary study linked to a sequential analysis, shows the interaction between eustatic level and tectonic processes. This later is linked to a both gradients; tectonical gradient assuring the opening of the south atlas margin by a system of tilted blocks northward overbalanced and WNW-ESE transverse faults, limit these blocks and assure their eastward or westward tilting. This model allows explaining the paleogeographic disposition of the equivalent build-up: Tagounts and Bou Arhous reefal system.

Key words. – Morocco, High Atlas, Liassic, Sponge mound, Sequence stratigraphy.