

Depositional geometries in Barremian platform carbonates from south-eastern France.
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Appendices captions

Appendix 1. Palaeogeographic map of the Vercors during the early (A: LPW sequence Ba1; B: LPW sequence Ba3) and lower part of the late Barremian (C and D). These maps highlight the low relative sea-level in this region, the distribution of emerged lands, the narrowness of platform carbonate wedges and the south-eastern location of basin floor fans at the base of depositional sequences. Maps C and D (late TST Ba3 and TST Ba5) show the great diversity of depositional environments near the mfs Ba3, the flooding of the northern margin of the Vocontian basin and the development of the broad Urgonian platform. Orbitolinid-rich marls were deposited in shallow environments sheltered by the bioclastic banks of the eastern Vercors. From the base of the sequence Ba5, a succession of storm deposits exists along the Isère valley and forms an almost continuous, north-east to south-west band. DS, GV and Mo indicate the Deux-Soeurs, Grand Veymont and Montagnette summits, respectively.

Appendix 2. Palaeogeographic maps of the sequence Ba 1 (A) and the three main lobes of sequences Ba2 and Ba3 (B, C and D) over the Glandasse Plateau. These sketches show the evolution of the carbonate sedimentation during the early and the lower part of the late Barremian. Bioclastic facies locally contain oolitic beds (Arnaud, 1981). They were deposited on narrow wedges that bordered emerged regions and thus did not belong to a platform *sensu stricto*. At the base, narrow LPW (B and D) are exclusively constituted with coarse bioclastic material. At each sequence boundary, the drop in relative sea-level induced plurikilometric shifts in progradation toward the basin. During TST and basal HST, bioclastic limestones were widely deposited and are sometimes associated with other facies (e.g. oolitic facies or even large rudists-bearing facies as at the top the HST Ba2).

Appendix 3. Thickness map for the sequence Ba1 (A) and the three main lobes of sequences Ba2 and Ba3 (B, C and D) over the Glandasse Plateau. The sequence Ba1 is the thickest. The general palaeoslope develops around an emerged areas (or only emerged near the mfs) located to the north-east of the Glandasse Plateau (Chichilianne horst). Starting from this area, the sedimentary infill is important on the older western and southern slope of the distally steepened Hauterivian ramp. Compared to the Late Hauterivian, the important drop in sea-level occurred during the depositional sequence Ha7 (latest Hauterivian – earliest Barremian). This tectonically-enhanced boundary permits the development of facies typical of a carbonate platform around the emerged horst; its oldest deposits are located to the north. Overlying levels (B, C and D) display a very similar disposition, although with a highly reduced thickness. Platform facies were deposited in areas with the thinnest deposits, where the sedimentation rates of hemipelagic facies were the slowest. The infill of the northern margin of the Vocontian basin with hemipelagic sediments is important, thanks for high influx of terrigenous (siliciclastic) material. Finally to the East, the occurrence of huge slump scars at the base of depositional sequences allows the ablation and reworking by gravity toward the eastern part of the Vocontian basin of an important part of the deposits. Between the Jasneuf and Cléry faults, results are more complex to interpret because of potential movement along these faults during the sequence Ba2 and the tilting of some compartments.