Tectono-sedimentary characterization of the Aptian carbonate platform (Urgonian) in the Chaînons Béarnais (France): role of the salt tectonics.

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The Chaînons Béarnais (France) is a salt-detached fold belt in the western North Pyrenean Zone. These are pre-orogenic structures formed during Aptian -Albian rifting and hyper-thinning of the Iberian and Eurasian margins, which were further compressed during the Pyrenean orogeny. The role of salt diapirism in belt folding during Cretaceous extension and subsequent Pyrenean orogeny raise many questions regarding its interactions with syn-tectonic sedimentary fill.

In this work, we aim to describe the geometry of the Aptian carbonate platform deposits in the Ossau valley at the level of the Jaout and Pène Béon anticlines, in order to better constrain the controlling factors on the carbonate sedimentation. The chronology of the Aptian deposists was made possible thanks to the acquisition of new sedimentological observations and led to a reconsideration of the "Urgonian" sedimentary model in this area.

The occurrence of numerous lateral facies variations, gravity instabilities as well as syn-sedimentary geometries, allowed us to highlight an important syn-sedimentary structuration of the area. Three major depositional sequences could be identified showing different phases of aggradation and progradation of the Urgonian platform during the diapir growth. This shows that the paleogeography of the study area has evolved from an initially very regular surface to a very complex morphology.

We propose a sequential model for the evolution of the platform carbonate. Our results suggest that its morphology and geometry of the carbonate platform is controlled by salt tectonics.

Mots-Clés: North Pyrenean Zone, urgonian plateform, Chaînons Béarnais, halokinetics movements, tectono-sedimentation interactions

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