**Supplementary Material for**

**Extension and early orogenic inversion along the basal detachment of a hyper-extended rifted margin: an example from the Central Pyrenees (France)**

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**Supplementary Table 1:** RSCM temperatures of 14 North Pyrenean samples located in Figure 3.

**Supplementary Figure 1:** Original and high quality photograph of the samples presented in Figure 4.

**Supplementary Figure 2:** Original and high quality photograph of the samples presented in Figure 7.

**Supplementary Figure 3:** Original and high quality photograph of the samples presented in Figure 7.

**Supplementary Figure 4:** Original and high quality photograph of the samples presented in Figure 7.

**Supplementary Figure 5:** Original and high quality photograph of the samples presented in Figure 7.

**Supplementary Figure 6:** Original and high quality photograph of the samples presented in Figure 7.

**Supplementary Figure 7:** Original and high quality photograph of the samples presented in Figure 8.

**Supplementary Figure 8:** Original and high quality photograph of the samples presented in Figure 8.

**Supplementary Figure 9:** Original and high quality photograph of the samples presented in Figure 8.

**Supplementary Figure 10:** Original and high quality photograph of the samples presented in Figure 8.

References

Beyssac, O., Goffé, B., Chopin, C., & Rouzaud, J. N. (2002). Raman spectra of carbonaceous material in metasediments: a new geothermometer. Journal of metamorphic Geology, 20(9), 859-871.

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