**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)**

Paul Angrand1,2\*, Mary Ford1, Maxime Ducoux3,4, and Michel De Saint Blanquat2

1 CRPG-CNRS, UMR 7358, 15, rue Notre-Dame-des-Pauvres, 54501 Vandœuvre-les-Nancy, France  2 GET-OMP, Université de Toulouse, CNRS, IRD, 14 av. Edouard Belin, 31400 Toulouse, France
3 CSTJF, Total SA, Pau, France,
4 M&U sas, 38120 Saint-Égrève, France

**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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