



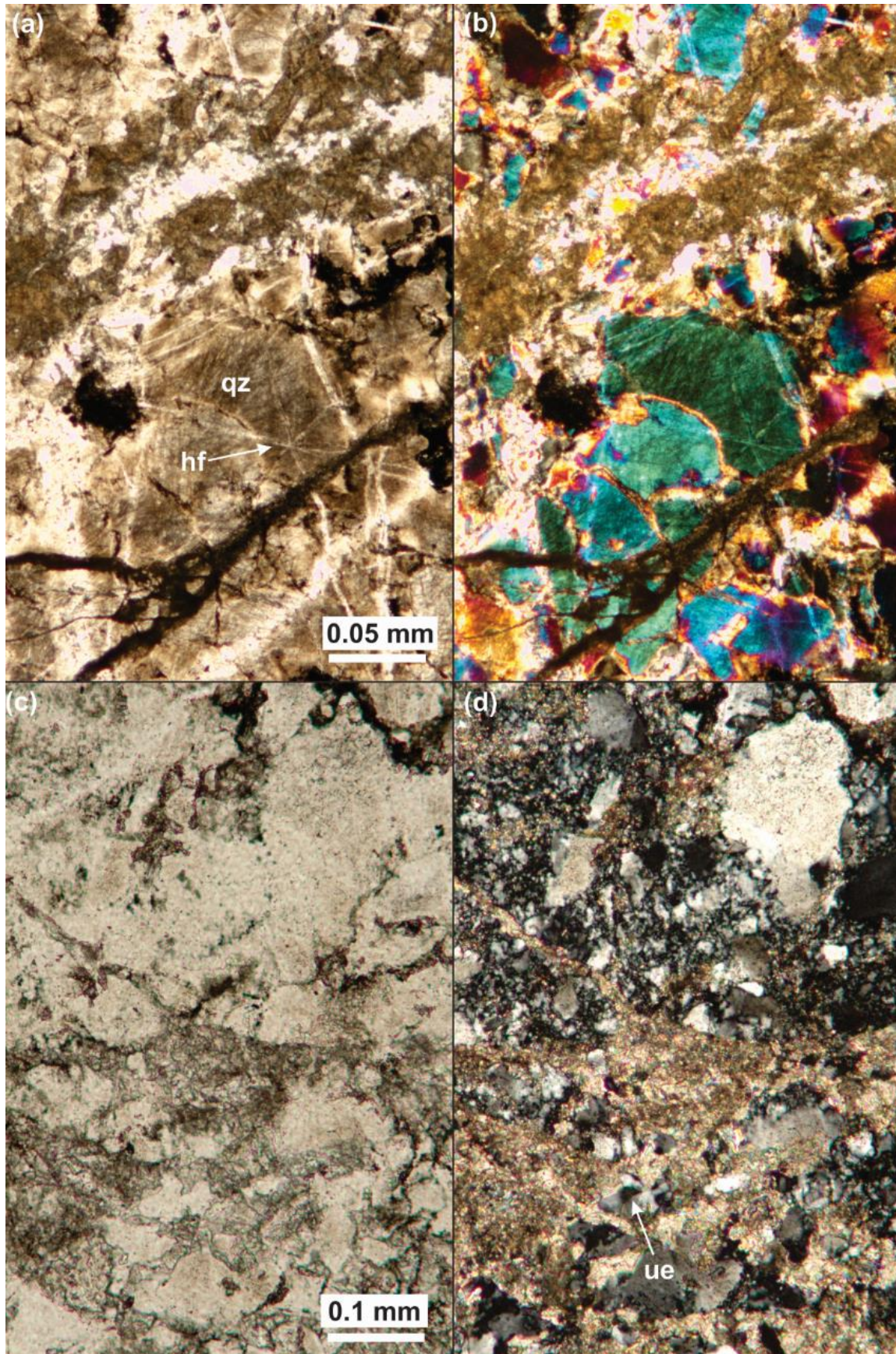
*Supplement of*

## **Early Cenozoic Eureka strain partitioning and decoupling in central Spitsbergen, Svalbard**

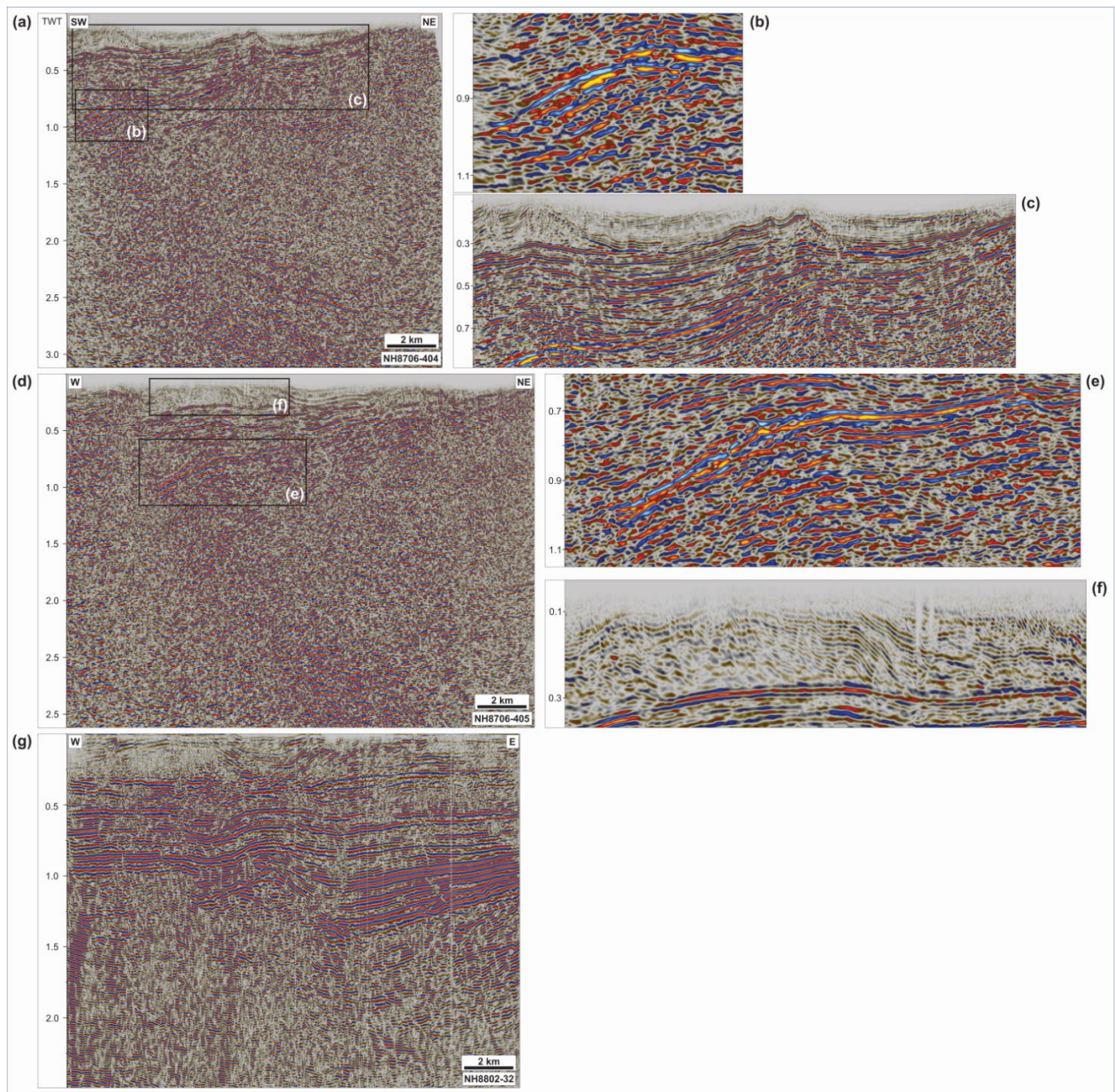
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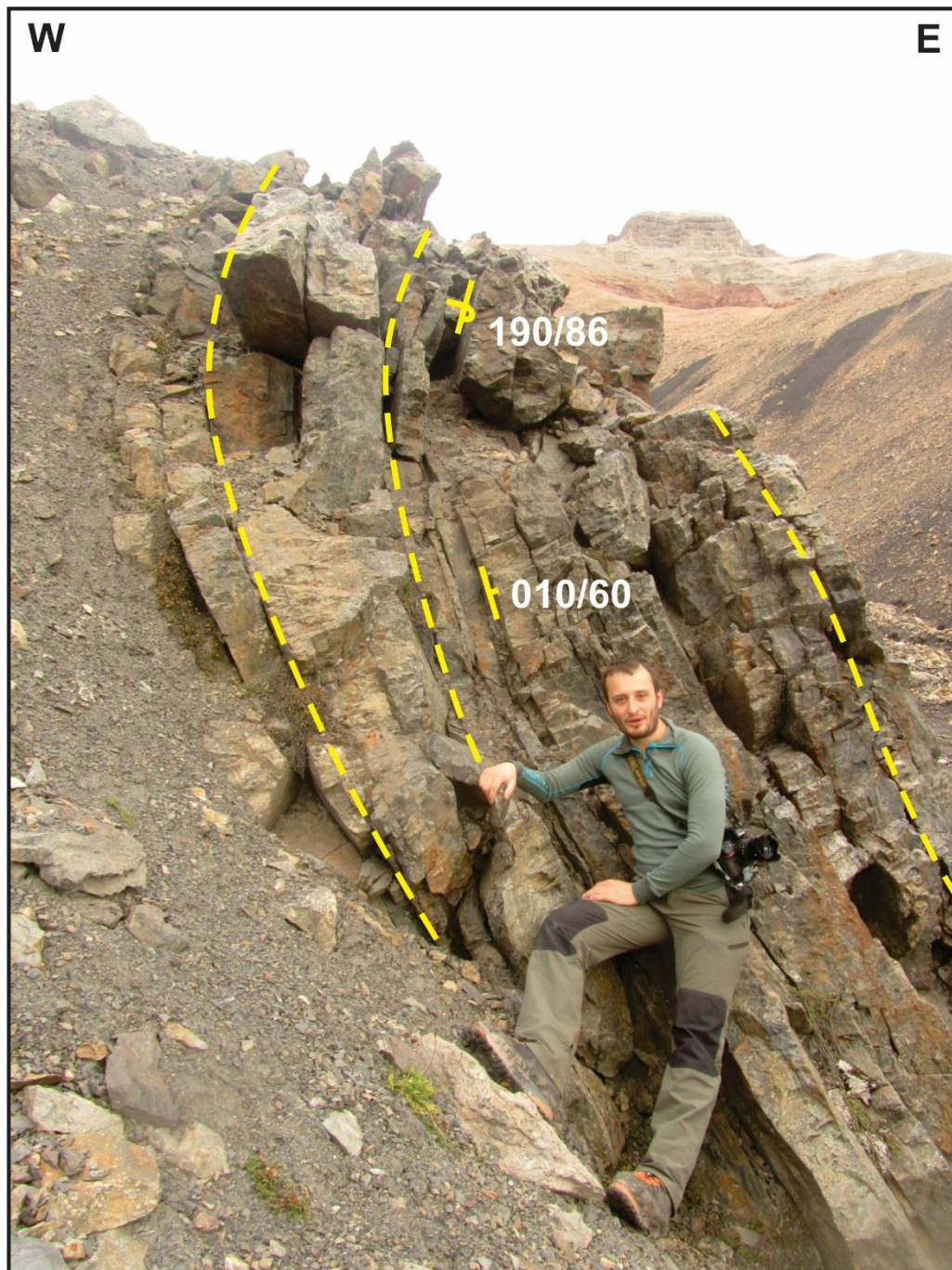
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**S1**: (a) Photographs in non-polarized and (b) polarized light of a thick section in Devonian sandstone including fractured quartz (qz) crosscut by healed fractures (hf) showing no displacement and by quartz-rich cataclastic fault rock filled with calcite cement (upper part); (c) Photographs in non-polarized and (d) polarized light of cataclased Devonian sandstone comprised of quartz crystals showing mild undulose extinction (ue) and grainsize reduction along the subvertical, east-dipping fault in the gully under the coal mine in Pyramiden (see Figure 2 for the location of the fault). Brittle cracks incorporate clasts of quartz, and a matrix of quartz, calcite and brownish, iron-rich clay minerals.



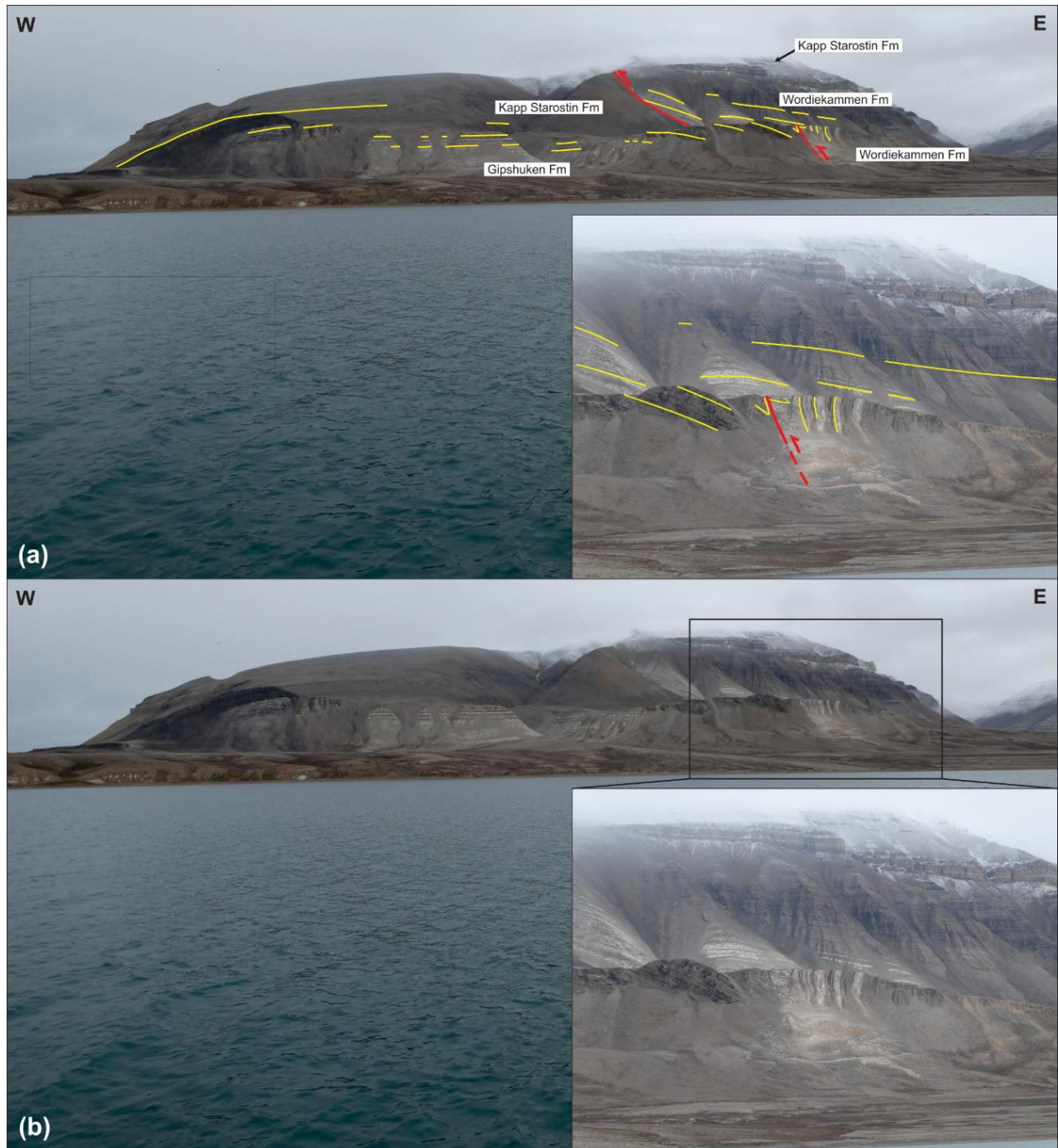
**S2:** Uninterpreted seismic sections in Sassenfjorden–Tempelfjorden (a–f) and Reindalspasset (g). See Figure 1b for location.



**S3:** Field photograph of steeply east-dipping, partly overturned Lower Devonian dark sandstone near the bottom of the gully below the mine entrance.



**S4: Uninterpreted field photograph of Figure 3b in Pyramiden.**



**S5: (a) Interpreted and (b) uninterpreted field photograph along the northern shore of Sassenfjorden showing uppermost Pennsylvanian–lower Permian strata of the Wordiekammen and Gipshuken formations thrust and folded top-west by a low-angle Eureka thrust. The lower right inset is a zoom in the main thrust. Photos: Erik P. Johannessen.**

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