1 Supplement Figures to Anonymous Reviewer's Comments

3 458 Reviewer: Based on your histograms I can't evaluate this statement. Histograms are not informative
4 representations of fluid inclusion data. Box and whisker plots are preferred. For instance, you could plot salinity
5 and Th for each FIA next to each other so that we can check if Th and salinity ranges somehow correlate. As
6 shown, there could be many reasons for these wide data spreads: Mix-up of FIAs that formed under widely
7 varying conditions (perhaps most likely); partial resetting or necking (although difficult to explain the Tm
8 ranges); partial leakage during freezing (would explain range in Tm but be visible during freezing run); or a
9 combination of all these. Which inclusions are primary, which secondary?

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11 Authors: Supplement Figure 1 Following the request of the reviewer, we carried out Thtot-salinity plot where
12 all the studied FIAs are plotted. Different markers and colours are used to identify distinct structural domains,
13 distinct quartz vein generations and fluid inclusions generations, following the approach proposed in the
14 manuscript. Please note that we reported all the estimated salinity and homogenization temperatures ranges for
15 each FIA.

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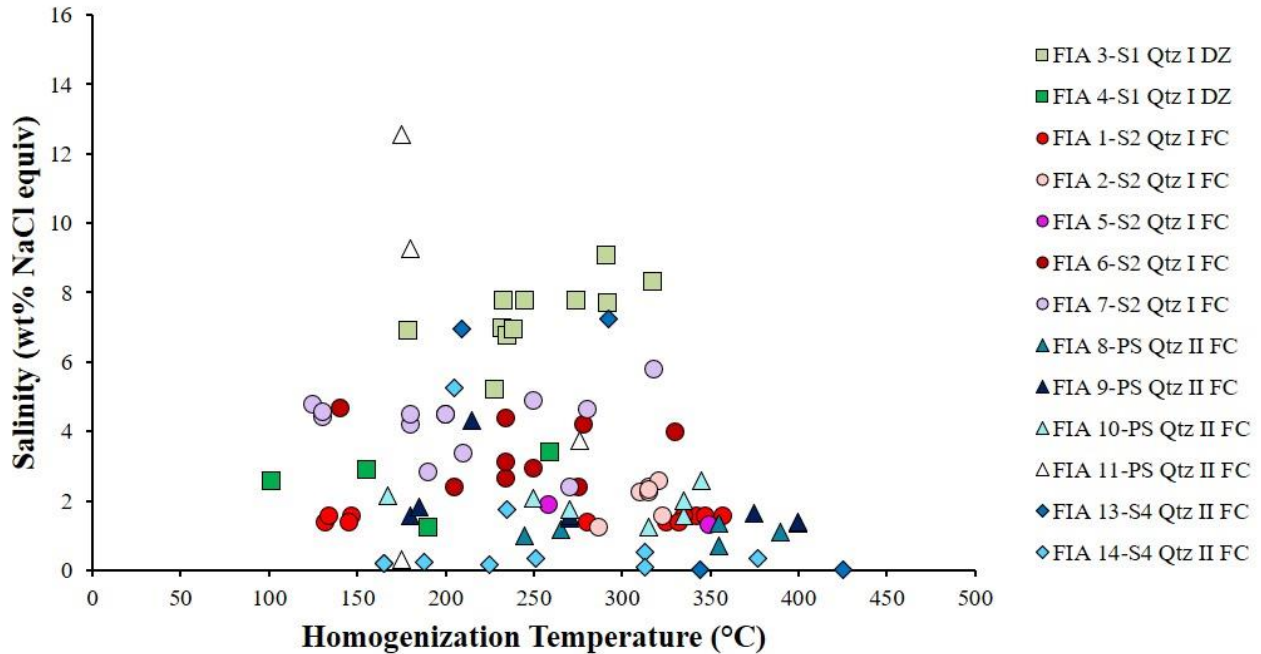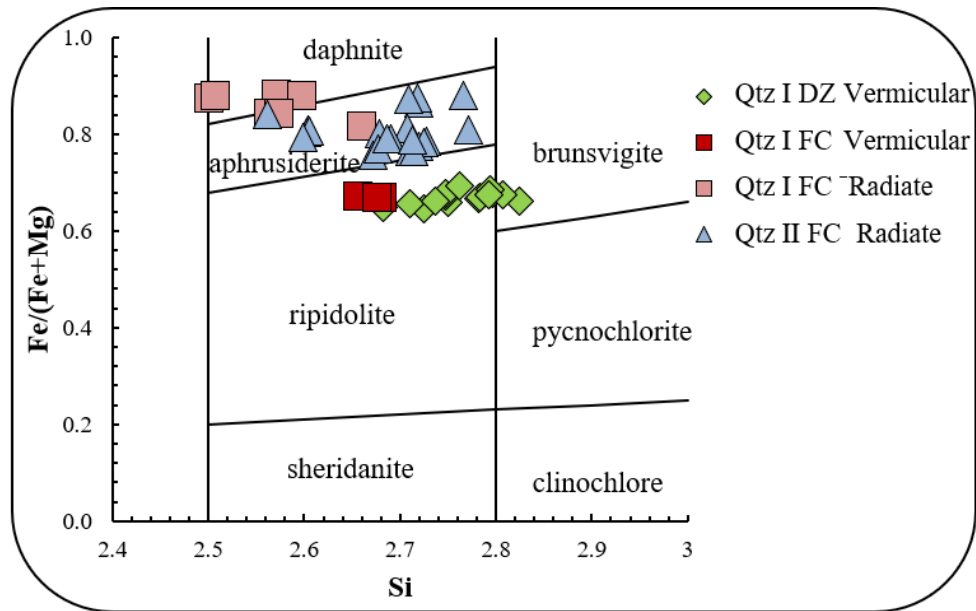
Supplement Figure 2: Chlorite compositions expressed as Si vs Fe/(Fe+Mg) classification diagram based on Hey, 1954. It shows distinct chlorite compositions across the BFZ300 as the results of distinct fluid pulses of low-salinity fluids injected into the fault zone. Green, red, pink and light blue markers indicate distinct textural types of chlorite and their provenance regarding fault architecture and their association with Qtz I or Qtz II. Petrographically documented chlorite textures (i.e. vermicular and radiate; Figures 3 and 8) are related to chemical variability.

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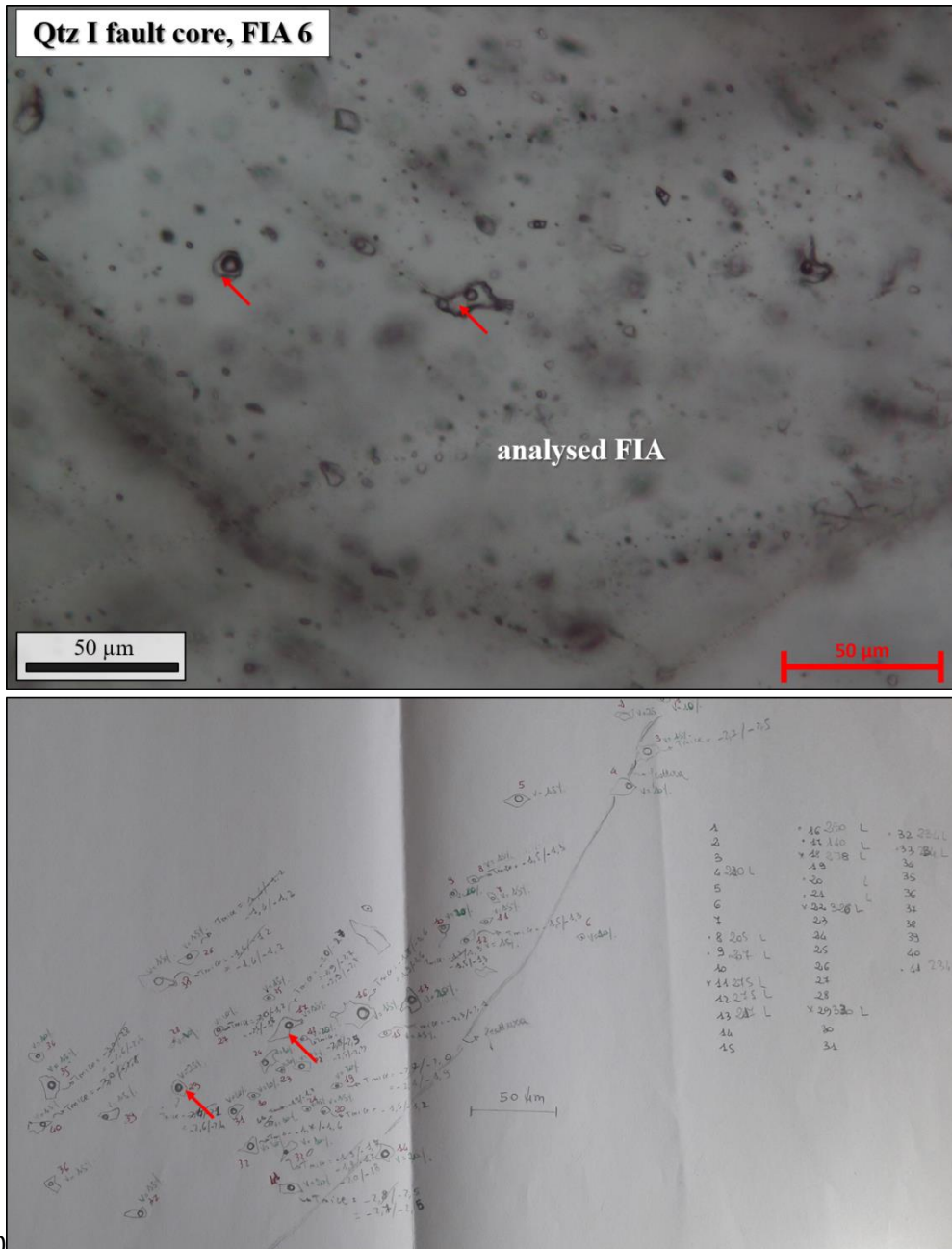
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Supplement Figure 3: Example of fluid inclusion textures in a FIA. Because the absence in re-equilibration textures, microthermometric analysis were performed in this sample. This FIA is hosted in Qtz I fault core grains.