

*Tectonics*

Supporting Information for

**Protracted thermal evolution of a migmatitic terrane as revealed by multiple geochronometers from the retro-arc of the Paleozoic Famatinian Orogen in NW Argentina**

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**Introduction**

The tables list U-Pb isotopes and trace element composition of zircon, monazite and titanite, as well as whole-rock geochemistry. They are results of LA-ICP-MS analyses of samples from the Agua del Sapo Complex, Sierra de Quilmes in NW Argentina, part of the retro-arc of the Famatinian Orogen. The methodology is detailed in the main body of the manuscript. The tables are uploaded as separate files and can be found at 4TU online data repository.

Table S1. U-Pb isotope data for samples from Sierra de Quilmes, NW Argentina. See footnote for sample coordinates.

Table S2. Zircon trace element results from samples from Sierra de Quilmes, NW Argentina. See footnote for sample coordinates.

Table S3. Monazite U-Pb LASS results for samples from Sierra de Quilmes, NW Argentina. See footnote

Table S4. Titanite trace element results for samples from Sierra de Quilmes, NW Argentina. See footnote for sample coordinates.

Table S5. Whole-rock composition for samples from Sierra de Quilmes, NW Argentina. See footnote for sample coordinates.

Table S6. Mineral Chemistry Sample SQ17-34b from Sierra de Quilmes, NW Argentina. Coordinates in UTM zone 19: E0783704 N7056799