

Comments to the author: (Editor/Klaus Mezger)

Dear Dr. Simpson

thank you for submitting a revised and improved version of your manuscript. The paper is now acceptable for publication but needs some technical corrections. Some are outlined by the Associate Editor. I have a few more suggestions concerning the figures.

Fig. 1, C4 All mineral names are capitalized except for "pyrite",

Capitalised "pyrite"

Fig 4. % along x-axis not needed, it is explained in the description of the axis: 2S(%)

Fixed

Fig a2: digits of datum and uncertainty need to match

Changed 1517.3 ± 0.32 to 1517.3 ± 0.3

Dear Dr. Simpson, (associate editor/Sandra Kamo)

Thank you for your revised manuscript in which you have addressed all comments raised by the two reviewers, and in particular the many detailed suggestions made by reviewer Roberts.

I am pleased to recommend this innovative methodology/application paper for publication after a number of minor technical items have been addressed:

-line 18—this sentence should be improved by splitting into two or by better punctuation

Changed line 18 to: 'Calcite (CaCO_3) is the main mineral phase of most carbonate sedimentary rocks and their metamorphic equivalents. Calcite is also a common diagenetic phase and is a major component of carbonatites.'

-line 135—reference to "Schetselaar et al., 2018" is noted as "2017" in reference list

Changed line 135 to Shetselaar et al., 2017

-line 145—reference to "Breeman and Corriveau, 2005" should be "van Breemen and Corriveau, 2005" and changed accordingly in reference list

Changed line 145 to 'van Breemen and Corriveau, 2005 and updated reference in list.

-line—287—change "hf" to "Hf—"

Fixed

-lines 314-315—correct brackets and commas in both citations

Fixed

-line—326—remove comma in citation

Fixed

References

—missing Cherniak 1998 (cited in line 361)

Fixed – (this reference is actually to Cherniak 1997).

-line—471—“towards”

Fixed

-line 490—incomplete citation to Journal of Metamorphic Geology

Fixed

-line 503—as noted above, in line 135 citation given as “2018” and 2017 in ref list

Fixed

-line 524—“Contributions”

Fixed

Appendix B

-line 649—reference is missing; should be “calculated”

Added reference to Sylvester, 2008 in line 649 and reference list (and changed calculate to calculated)

-line 652—reference is missing

Added reference to Stern and Amelin., 2003

-line 655—“concordia”

Fixed