

- 1 Supplementary Data 2. Whole-rock major and trace element compositions of amphibolite from
2 the WGB.
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- 4 Supplementary Data 3. Whole-rock major and trace element compositions of basalts from the
5 Yilgarn Craton.
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- 7 Supplementary Data 4. Laser ablation inductively coupled plasma mass spectrometry (LA-ICP-
8 MS) trace element analyses of garnet.
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- 10 Supplementary Data 5. LA-ICP-MS trace element analyses of hornblende.
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- 12 Supplementary Data 6. Representative bulk rock composition of BIF from the WGB, and from
13 the rest of the Youanmi Terrane (Yilgarn Craton).
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- 15 Supplementary Data 7. EPMA measurements of garnets.
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- 17 Supplementary Data 8. LA-ICP-MS trace element analyses of garnets.
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- 19 Supplementary Data 9. Raw $^{18}\text{O}/^{16}\text{O}$ ratios and the corrected $\delta^{18}\text{O}$ values of SIMS analyses
20 in garnet (quoted with respect to Vienna Standard Mean Ocean Water, or VSMOW, in per mil).
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- 22 Supplementary Data 10. Ion microprobe U-Th-Pb analyses of monazite and zircon.
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- 24 Supplementary Data 11. Sm-Nd and Lu-Hf isotope data.
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- 26 Supplementary Data 12. Representative mineral compositions for sample 219364.
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- 28 Supplementary Data 13. Compositions used in phase equilibria modelling for sample 219364