

### **Table captions**

Table S1 Zircon GJ-1 LA-ICP-MS U–Pb isotopic data in this study

Table S2 Zircon Reverse depth profiling LA-ICP-MS U–Pb isotopic data

Table S3 Zircon Reverse depth profiling LA-ICP-MS trace element ( $\mu\text{g}\cdot\text{g}^{-1}$ ) data