Further evidence for ~8 kbar amphibolite facies metamorphism in the Marymia Inlier, Western Australia

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SUPPLEMENTARY PAPER

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SUPPLEMENTARY PAPER

Activity composition models for MG027 and MG327

SUPPLEMENTARY MATERIAL

Activity–composition models for MG027 and MG327

MG027:

All phases not specifically mentioned below are pure.

Feldspar – Baldwin *et al.* (2005)
 Ilmenite – Ideal model in Theriak
 Download on 09/12/13
 Epidote – Holland & Powell (1998)
 Garnet – Holland & Powell (1998)
 Omphacite – Green *et al.* (2007)
 Orthopyroxene – White *et al.* (2002)
 Chlorite – Holland *et al.* (1998)
 White Mica – Coggon & Holland (2002)
 Biotite – White *et al.* (2007)
 Amphiboles – Diener *et al.* (2007)
 Liquid – White *et al.* (2007)

MG327:

All phases not specifically mentioned below are pure.

Feldspar – Baldwin *et al.* (2005)
 Ilmenite – White *et al.* (2007)
 Epidote – Holland & Powell (1998)
 Garnet – Holland & Powell (1998)
 Omphacite – Green *et al.* (2007)
 Orthopyroxene – White *et al.* (2002)
 Chlorite – Holland *et al.* (1998)
 White Mica – Coggon & Holland (2002)
 Biotite – White *et al.* (2007)
 Amphiboles – Diener *et al.* (2007)
 Liquid – White *et al.* (2007)

ADDITIONAL REFERENCES

- BALDWIN J. A., POWELL R., BROWN M., MORAES R. & FUCK R. A. 2005. Modelling of mineral equilibria in ultra high-temperature metamorphic rocks from the Anapolis-Itaucu Complex, central Brazil. *Journal of Metamorphic Geology* **23**, 511–531.
- COGGER R. & HOLLAND T. J. B. 2002. Mixing properties of phengitic micas and revised garnet–phengite thermobarometers. *Journal of Metamorphic Geology* **20**, 683–696.
- DIENER J. F. A., POWELL R., WHITE R. W. & HOLLAND T. J. B. 2007. A new thermodynamic model for clino- and orthoamphiboles in the system Na₂O–CaO–FeO–MgO–Al₂O₃–SiO₂–H₂O–O. *Journal of Metamorphic Geology* **25**, 631–656.
- GREEN E. C. R., HOLLAND T. J. B. & POWELL R. 2007. An order–disorder model for omphacitic pyroxenes in the system jadeite–diopside–hedenbergite–acmite, with applications to eclogite rocks. *American Mineralogist* **92**, 1181–1189.
- HOLLAND T. J. B. & POWELL R. 1998. An internally consistent thermodynamic dataset for phases of petrological interest. *Journal of Metamorphic Geology* **16**, 309–343.
- HOLLAND T. J. B., BAKER J. M. & POWELL R. 1998. Mixing properties and activity–composition relationships of chlorites in the system MgO–FeO–Al₂O₃–SiO₂–H₂O. *European Journal of Mineralogy* **10**, 395–406.
- WHITE R. W., POWELL R. & HOLLAND T. J. B. 2007. Progress relating to calculation of partial melting equilibria for metapelites. *Journal of Metamorphic Geology* **25**, 511–527.