




Correction to: On the P – T – fO_2 stability of Fe_4O_5 , Fe_5O_6 , and Fe_4O_5 -rich solid solutions

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There were regrettably a few typos that appeared in the published version of Myhill et al. (2016). Equation 8 should have read:

$$K_D = \frac{x_{Fe}^{ol} x_{Mg}^{ox}}{x_{Mg}^{ol} x_{Fe}^{ox}} \quad (8)$$

Typesetting also introduced a number of sign errors in our thermodynamic data tables (Table 3 and Supplementary Table 1). The correct values which we used in all of our calculations are given in Tables 1 and 2. All values are reported in SI units.

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References

- Holland TJB, Powell R (2011) An improved and extended internally consistent thermodynamic dataset for phases of petrological interest, involving a new equation of state for solids. *J Metamorph Geol* 29(3):333–383. <https://doi.org/10.1111/j.1525-1314.2010.00923.x>
- Myhill R, Ojwang DO, Ziberna L, Frost DJ, Ballaran TB, Miyajima N (2016) On the P - T - fO_2 stability of Fe_4O_5 , Fe_5O_6 and Fe_4O_5 -rich solid solutions. *Contrib Mineral Petrol* 171:51. <https://doi.org/10.1007/s00410-016-1258-4>

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Table 1 Thermodynamic data table for the iron-bearing oxides using the Holland and Powell (2011) modified Tait equation of state. Parameters are given in J/mol, J/K/mol, m³/mol, Pa, and K⁻¹.

Name	Fe ₄ O ₅	Fe ₅ O ₆	FeO	Fe _{2/3} O	Mg ₂ Fe ₂ O ₅
H ₀	-1.342e+06	-1.592e+06	-2.65453e+05	-2.55168e+05	-2.008e+06
S ₀	2.3e+02	3.e+02	5.8e+01	3.8501e+01	1.55e+02
V ₀	5.376e-05	6.633e-05	1.2239e-05	1.10701e-05	5.305e-05
K ₀	1.857e+11	1.73e+11	1.52e+11	1.52e+11	1.7e+11
K' ₀	4.e+00	4.e+00	4.9e+00	4.9e+00	4.e+00
a ₀	2.38e-05	1.435e-05	3.22e-05	2.79e-05	2.38e-05
Cp (a)	306.9	351.3	42.638	54.6333	284.9
Cp (b)	0.001075	0.009355	0.00897102	0.0	0.000724
Cp (c)	-3140400.0	-4354600.0	-260780.8	-752400.0	-3328800.0
Cp (d)	-1470.5	-1285.3	196.6	-219.2	-1256.0

The Cp parameters represent a polynomial for the heat capacity at 1 bar: $Cp = a + bT + cT^{-2} + dT^{-0.5}$

Table 2 Thermodynamic data table for the metal–metal oxides using the Holland and Powell (2011) modified Tait equation of state. Some of these parameters are poorly constrained by published experimental data. Parameters are given in J/mol, J/K/mol, m³/mol, Pa, and K⁻¹.

Name	Mo	MoO ₂	Re	ReO ₂
H ₀	0	-5.915e+05	0	-4.4514e+05
S ₀	2.859e+01	5.0016e+01	3.653e+01	4.782e+01
V ₀	9.391e-06	1.9799e-05	8.862e-06	1.8779e-05
K ₀	2.608e+11	1.8e+11	3.6e+11	1.8e+11
K' ₀	4.46e+00	4.05e+00	4.05e+00	4.05e+00
a ₀	1.44e-05	4.4e-05	1.9e-05	4.4e-05
Cp (a)	33.9	56.1	23.7	76.89
Cp (b)	0.006276	0.02559	0.005448	0.00993
Cp (c)	38859.7	-17.6	68.0	-1207130.0
Cp (d)	-12.0	18.9	0.0	-208.0

The Cp parameters represent a polynomial for the heat capacity at 1 bar: $Cp = a + bT + cT^{-2} + dT^{-0.5}$