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Geochemistry

ERRATA FOR 2001 VERSIONS

Errata for 2001 version

(CORRECTED IN ZOOS VERSIONS)

Chapter 1

Page 10, Reference to Fig. 1.6 should be Fig 1.4.

Page 19: Pyroxenes have two bridging oxygens per tetrahedron; amphiboles have 2.5 bridging oxygens between tetrahedron

Chapter 2

p. 30 equation 2.26: delete extra x

p. 31: equation 2.32 denominator on left hand side of equation should be ∂T , not ∂P

p. 51: Figure number 2.13 should be numbered as 2.11.

p. 33. The word "permutation" should be replaced by "combination" on this page and elsewhere

- p. 44 equation 2.89 should read $U = nkT^2 \left(\frac{\partial \ln Q}{\partial T}\right)_V$
- p. 44, equation 2.90 should read $U = RT^2 \left(\frac{\partial \ln Q}{\partial T}\right)_V$
- p. 48. equation 2.102 should read: $C_P = a + bT \frac{c}{T^2}$
- p. 47 last paragraph, replace "equation 2.125" with "equation 2.93"
- p. 53 equation 2.120 should read $S_{298} = \int_0^{298} \frac{C_P dT}{T} + S_0 + \Delta S_{\phi}$
- p. 53 second equation in example 2.5 should read

$$\Delta H = \left[aT + \frac{b}{2}T^2 + \frac{c}{T}\right]_{298}^{573} = \left[46.94 \times T + \frac{0.0343}{2}T^2 + \frac{1129680}{T}\right]_{298}^{573}$$

p. 57 Example 2.7 third paragraph should read "...we use equations 2.127 and 2.128 to see how ΔG will change"

Chapter 3

p. 64. Since the reaction: $K - Na = KNa_{.1}$ may also be written, this system have 4 species, 2 reactions and hence a minimum of 2 components.

p. 71. Equation 3.19 should read:

$$G = \sum_{i} n_{i} \left(\frac{\partial G}{\partial n_{i}} \right)_{P,T,n_{j,j\neq i}} = \sum_{i} n_{i} \mu_{i}$$

p. 75 "defined as" sign in equation 2.41 should be replaced by an equal sign.

p. 78 Equation 3.49 should read:

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ERRATA FOR ZOO1 VERSIONS (CORRECTED IN $\mathbb{ZOO}^{\mathbb{Z}}$ VERSIONS) $\int_{P_{ref}}^{P'} \Delta V_r dP = \Delta V^s (P' - P_{ref}) + \int_{f_{ref}}^{f'} V_{H_2O} df = \Delta V^s (P' - P_{ref}) + RT \ln \frac{f'}{f^{ref}}$

p 78.

Reference to equation 2.139 in Example 3.2 should be to equation 2.133.

equation 3.70 – should read: p. 83

 $\lim_{m \to 0} \frac{a_i}{m_i} = 1$

p. 92 Equation 3.84 should read

$$\sum \mathbf{v}_i \mu_i^o + RT \ln \prod_i a_i^{\mathbf{v}_i} = 0$$

Equation 3.85 should read $K = \prod_{i} a_{i}^{v_{i}}$ p. 107 Equation 3.120 should read: $\log K = -2pH - 2p\varepsilon$

Chapter 4

p. 129. Equations 4.29 and 4.30 should read:

$$\mu_{Ab}^{os} - \mu_{Ab}^{o\ell} = RT \ln \left(\frac{X_{Ab}^{\ell}}{X_{Ab}^{s}}\right)$$
$$\mu_{An}^{os} - \mu_{An}^{o\ell} = RT \ln \left(\frac{X_{An}^{\ell}}{X_{An}^{s}}\right)$$

and