

Supplementary Figures: Pressures and temperatures of melt segregation for primary magmas calculated from melt inclusions using Lee et al. (2009)'s model as a function of the $\text{Fe}^{3+}/\Sigma\text{Fe}$ ratio and H_2O content. (a) $\text{Fe}^{3+}/\Sigma\text{Fe} = 0.1, 0.2$ and 0.3 at a given H_2O content of 1 wt.%; (b) $\text{Fe}^{3+}/\Sigma\text{Fe} = 0.1, 0.2$ and 0.3 at a given H_2O content of 2 wt.%; (c) $\text{Fe}^{3+}/\Sigma\text{Fe} = 0.1, 0.2$ and 0.3 at a given H_2O content of 3.4 wt.%; (d) $\text{H}_2\text{O} = 1.0, 2.0$ and 3.4 wt.% at a given $\text{Fe}^{3+}/\Sigma\text{Fe}$ of 0.1; (e) $\text{H}_2\text{O} = 1.0, 2.0$ and 3.4 wt.% at a given $\text{Fe}^{3+}/\Sigma\text{Fe}$ of 0.2; (f) $\text{H}_2\text{O} = 1.0, 2.0$ and 3.4 wt.% at a given $\text{Fe}^{3+}/\Sigma\text{Fe}$ of 0.3.











