



Figure S2. Binary phase diagrams for a. oxide gabbro, b. olivine gabbro at varying oxidation state of the bulk compositions at 1.5 kbar. The observed mineralogical assemblages are shown by purple filled area in both the figures. Abbreviations: feld = feldspar, cpx = clinopyroxene, opx = orthopyroxene, ol = olivine, amph = amphibole, mt = magnetite, ilm = ilmenite.