



Figure S1

SUPPLEMENTAL FIGURE S1. (a) $P/T-X(\text{CO}_2)$ phase diagram section in the system CMS-H₂O-CO₂, calculated for the prograde $P-T$ path of the BIU (Fig. 1b). Product assemblages on the right side of reactions; the isobaric/isothermal univariant reactions “seen” by the studied sample DM675 are reported in red. Qz/Coe-bearing equilibria are not numbered. Large black points are isobaric/isothermal invariant points; the fluid-present isobaric/isothermal invariant points correspond to univariant curves in the $P-T$ mixed volatile projection of Fig. 7. (b) $P/T-X(\text{CO}_2)$ pseudosection calculated for sample DM675 (bulk composition in mol%) in the system CFMS-H₂O-CO₂ for the prograde $P-T$ path of the BIU. White (i.e. 5 mineral phases), light-grey (4 mineral phases) and dark-grey (3 mineral phases) fields are di-, tri- and quadri-variant fields, respectively. The narrow isobaric/isothermal 3-phases fields correspond to the isobaric/isothermal univariant reactions in (a). The stable assemblage Ol + Cpx + Dol + Arg is modelled by the narrow 4-phases field labelled in red.