

**Supplementary Figure 1.** Morphological and phase diversity of spurrite marbles from the Kochumdek contact aureole. A – typical sample of spurrite marble with a coarse banded structure consisting of light grey (mainly calcitic) and darker (silicate) layers inherited from the marly limestones; B, D, F – spurrite large grains with sporadic inclusions of merwinite, melilite, calcite, and perovskite; D-F – rocks with limited retrograde alterations (crack-filling CSHs and djerfisherite in spurrite or/and along grain boundaries); C – partial Mtc-Spu symplectite pseudomorph after merwinite; B-F – back-scattered (BSE) image; Cal, calcite; CSHs, Ca-hydro-silicates; Djr, djerfisherite; Mll, melilite; Mtc, monticellite; Mw, merwinite; Po, pyrrhotite; Prv, perovskite; Rsv, rasvumite; Spu, spurrite.