Supplementary information 1.

To the article:

COMPOSITION OF PHENOCRYSTS OF LAMPROITE LAVA, GAUSSBERG VOLCANO, EAST ANTARCTICA

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Mineralogical and petrographic features of Gaussberg lamproites

Photomicrographs of the thin-sections are given in pairs: in plane and cross polarised transmitted light

List of abbreviations:

***Ol* - olivine,**
***Lc* - leucite,**
***CPx* - clinopyroxene,**
***Sp* - cromium spinel,**
***MI* - melt (glassy) inclusion,**
***Phl* - phlogopite.**

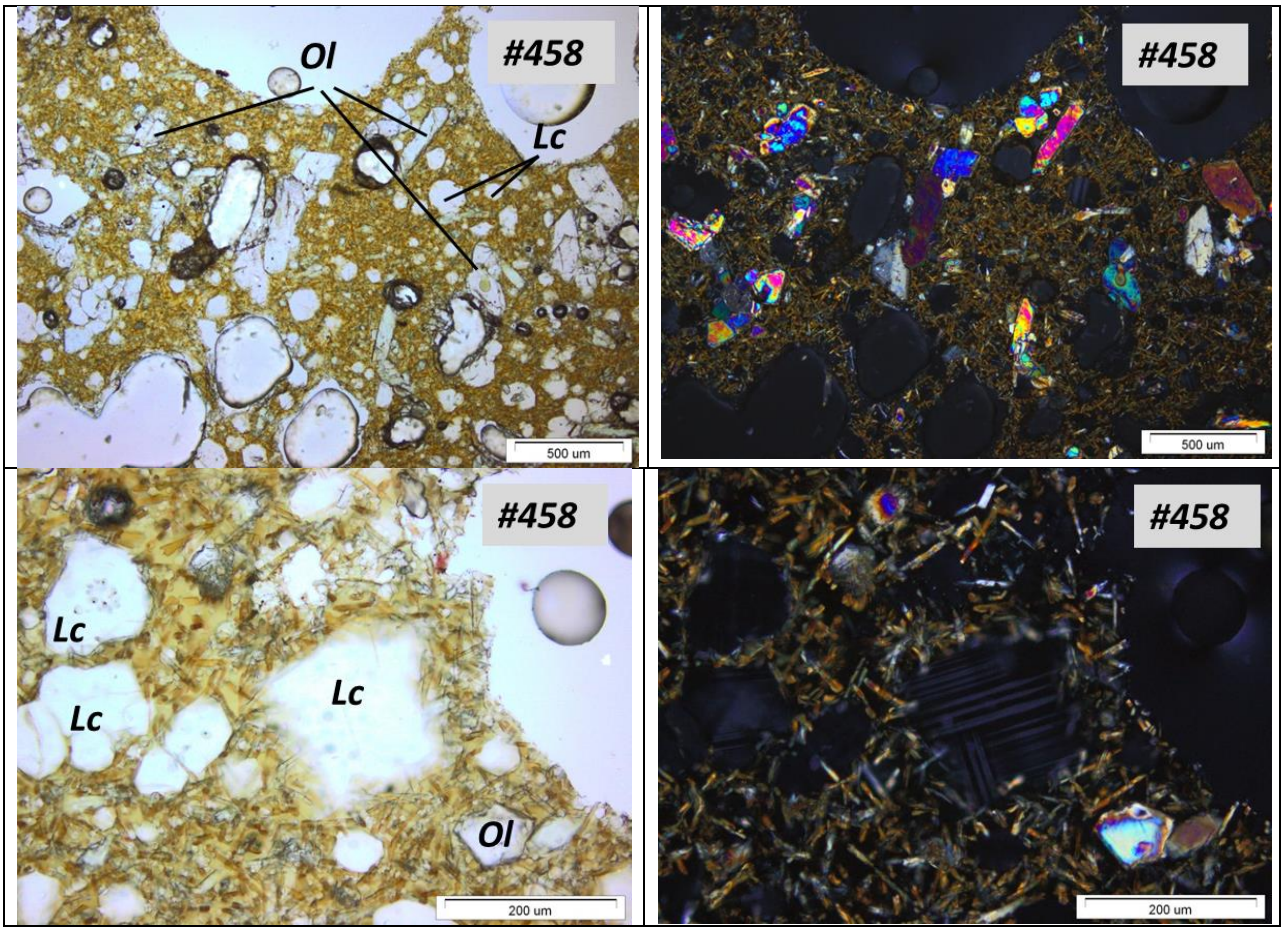

Fig.S1. General view of the lamproite (sample #458): phenocrysts and micro-phenocrysts of olivine and leucite, as well as pores are distributed in a finely crystallized groundmass consisting of microliths of leucite, clinopyroxene, with the possible presence of apatite and amphibole. Microphenocrysts of leucite contain melt inclusionss and have typical twinning (in cross polarised light).

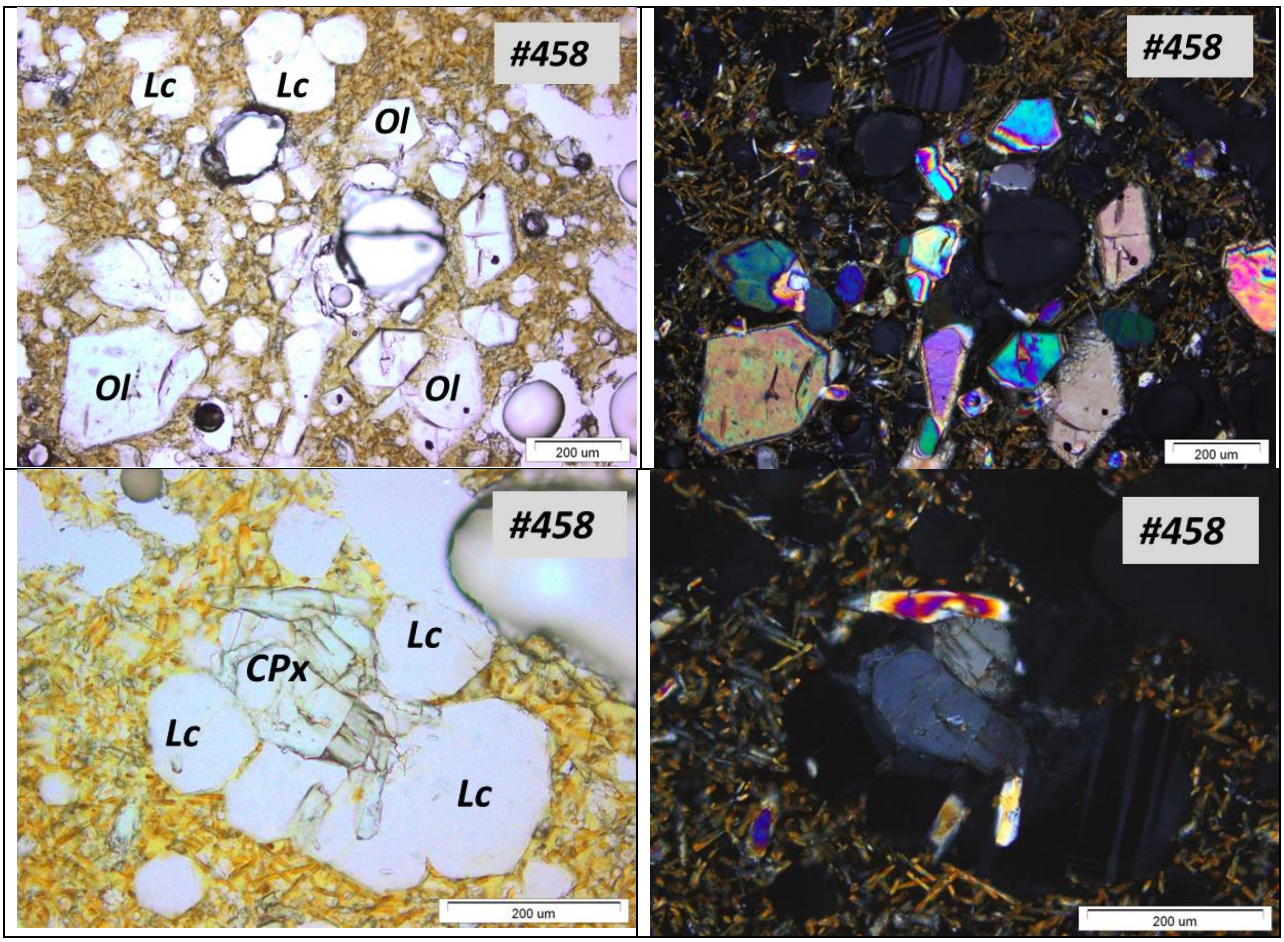

Fig. S2. Aggregates and co-growths of phenocrysts and micro-phenocrysts of leucite, olivine and clinopyroxene (sample #458).

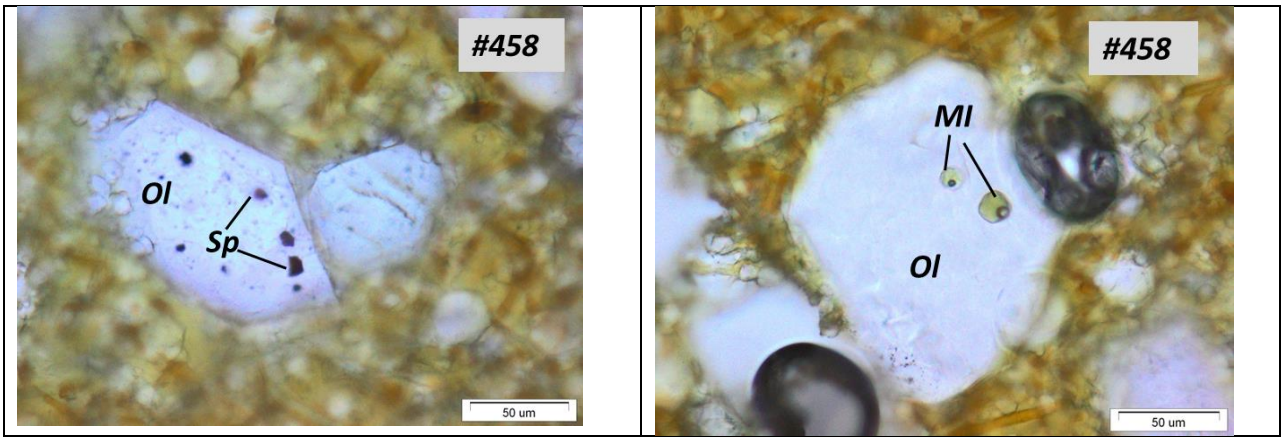

Fig. S3. Micro-phenocrysts of olivine containing inclusions of cromium spinel (left foto) and melt inclusiona (right foto) (sample #458).

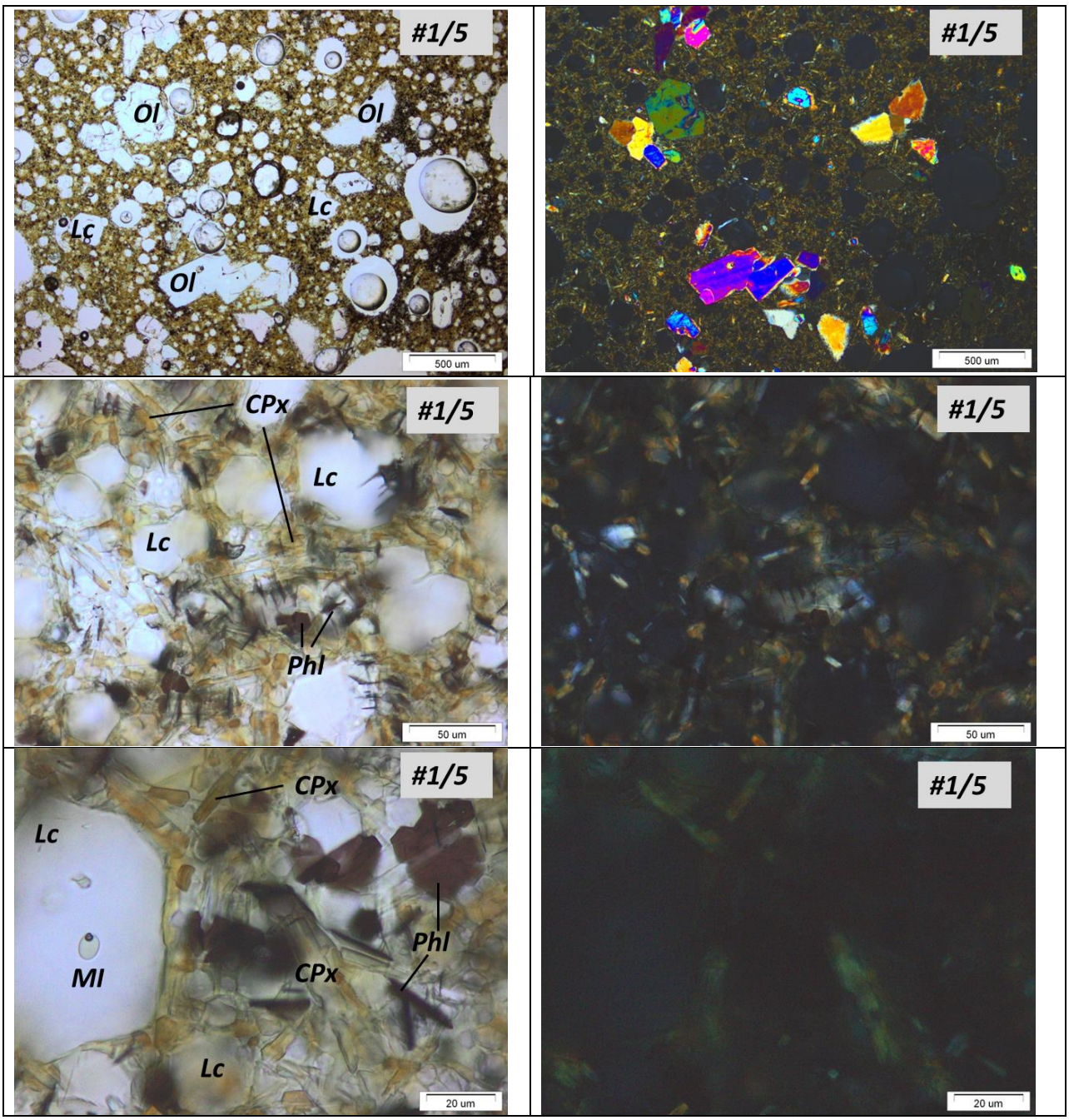

Fig.S4. General view of the lamproite (sample #1/5): phenocrysts and micro-phenocrysts of olivine and leucite, as well as pores are distributed in a finely crystallized groundmass consisting of microliths of leucite, clinopyroxene and phlogopite with the possible presence of apatite and amphibole. Microphenocrysts of leucite contain melt inclusions.

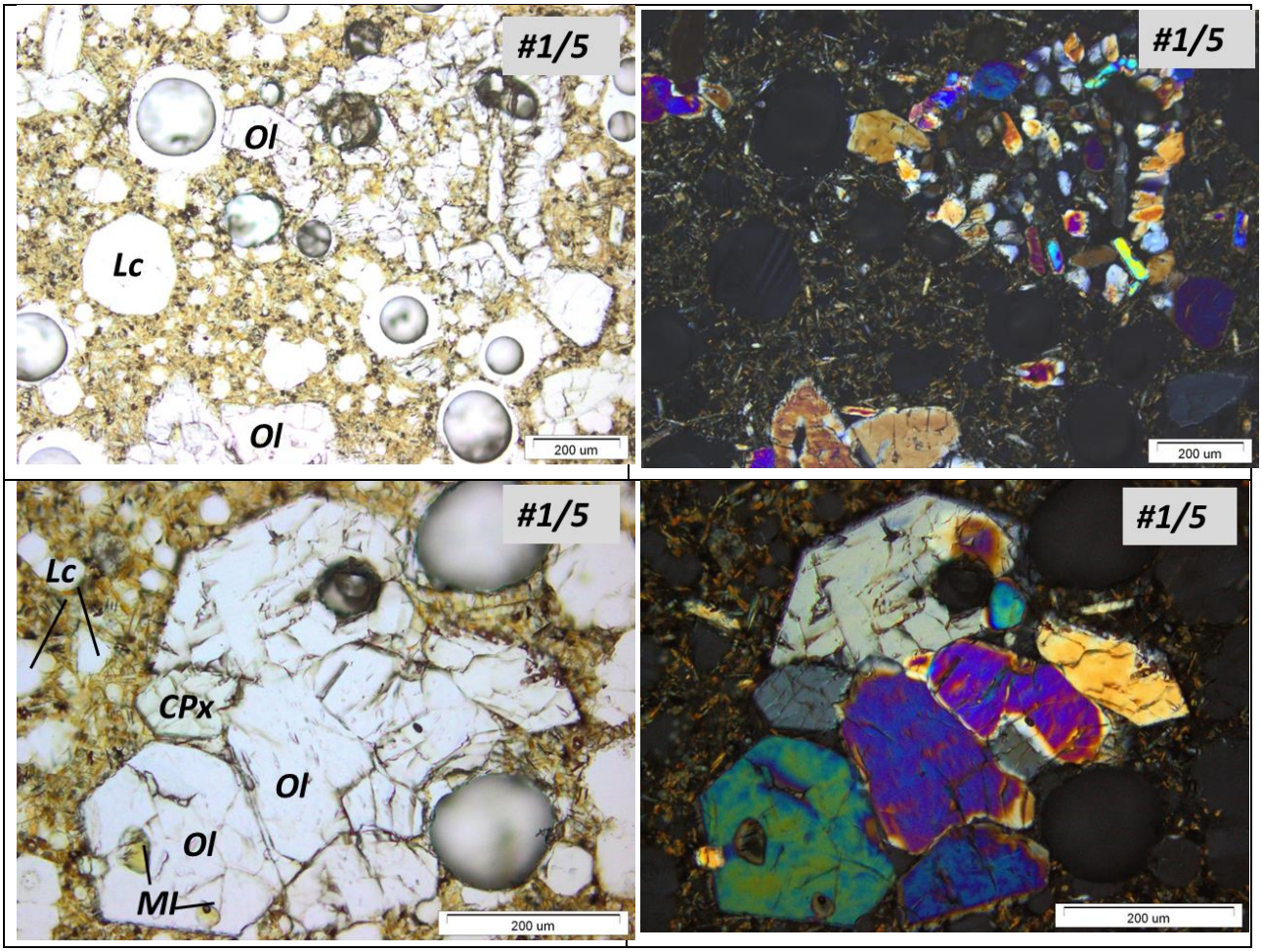

Fig. S5. Aggregates and co-growths of phenocrysts and micro-phenocrysts of leucite, olivine and clinopyroxene (sample #1/5).

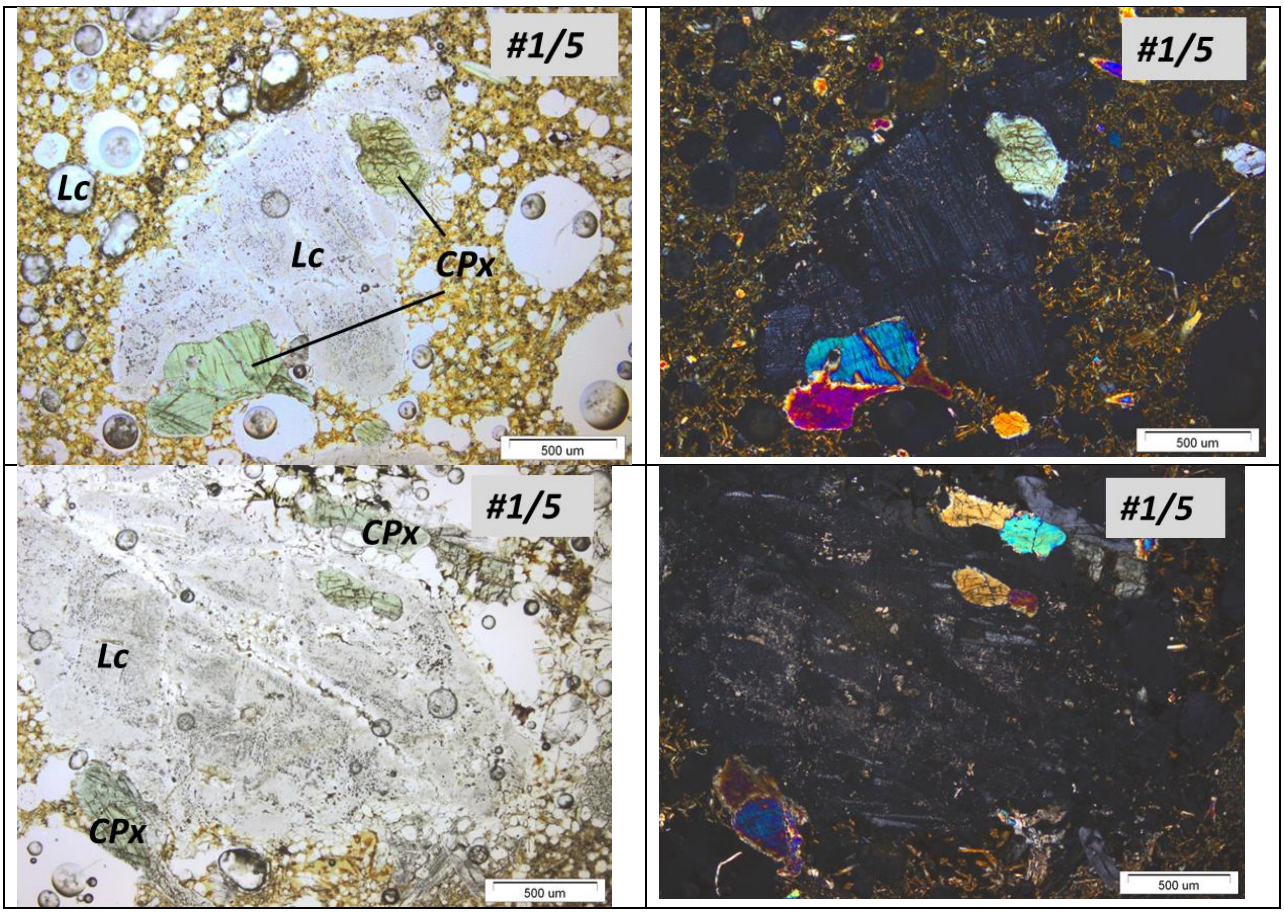

Fig. S6. Aggregates of large **partly resorbed leucite grains,** containing microinclusions of secondary minerals, and **green clinopyroxene phenocrysts** (sample #1/5).

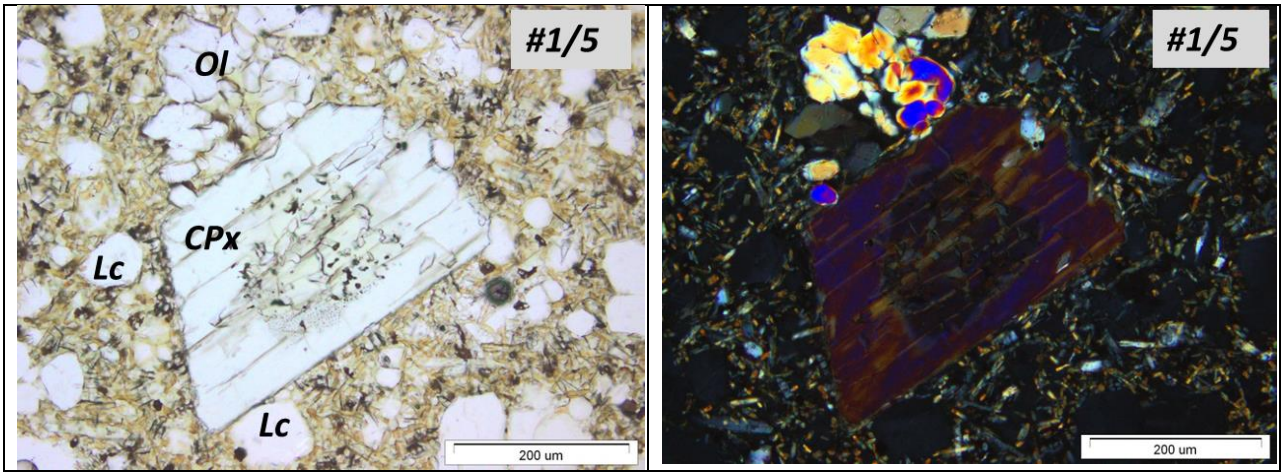

Fig. S7. Clinopyroxene phenocryst with partly resorbed green core. Also present are: micro-phenocrysts of olivine and leucite in groundmass consisting of microliths of leucite, clinopyroxene and phlogopite with the possible presence of apatite and amphibole (sample #1/5).