

# **Petrology and geochronology of Vran Kamak paleovolcano, Central Srednogie, Bulgaria**

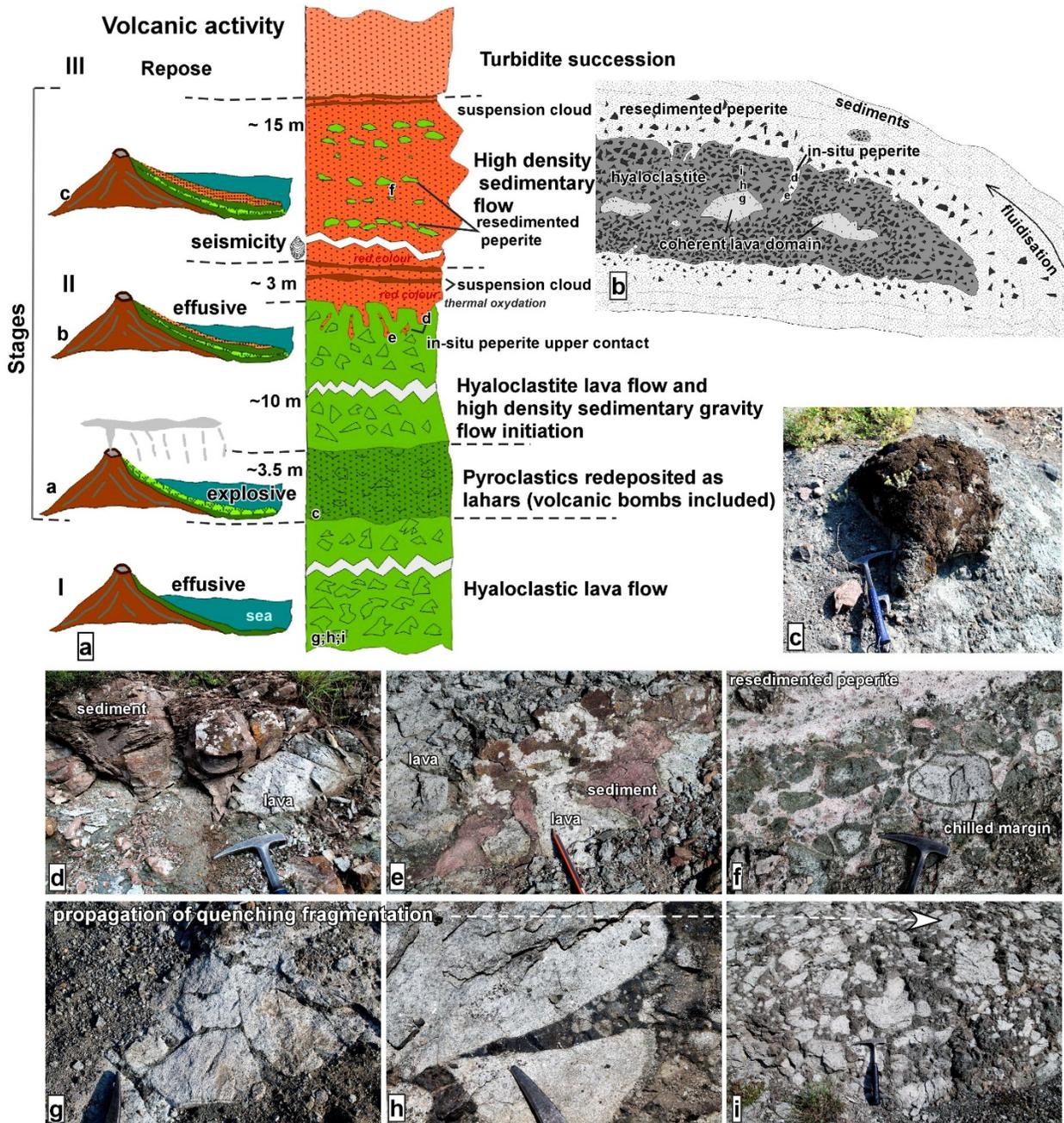
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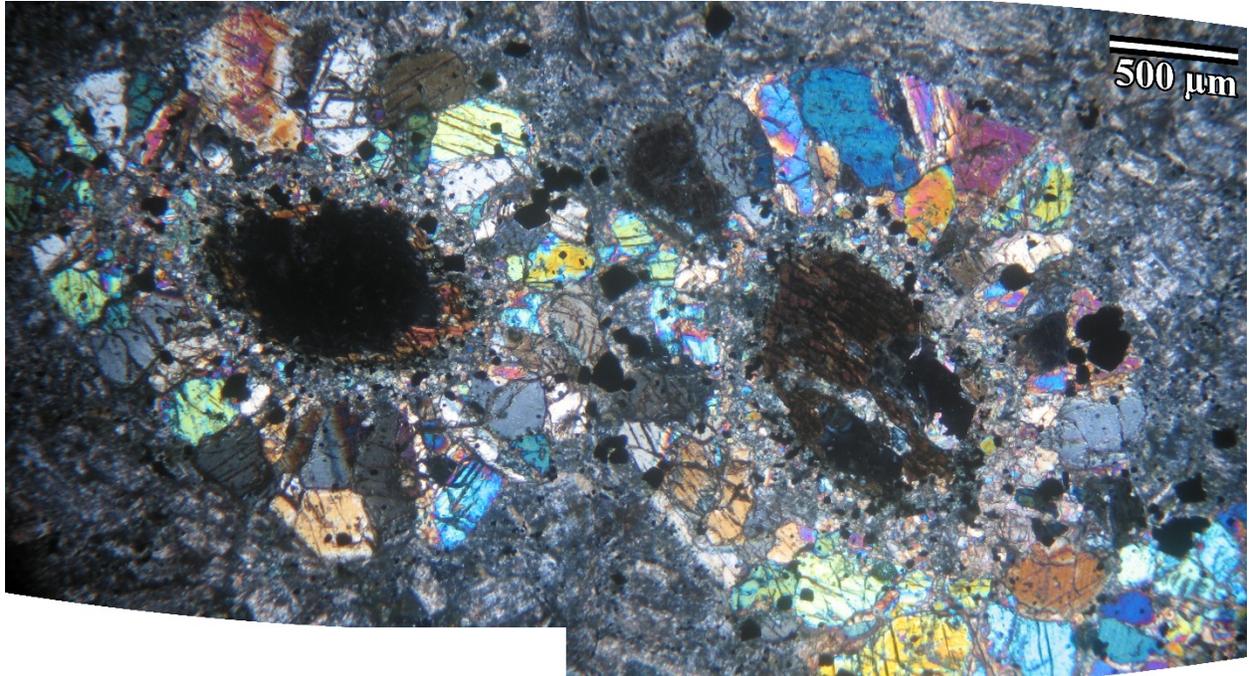
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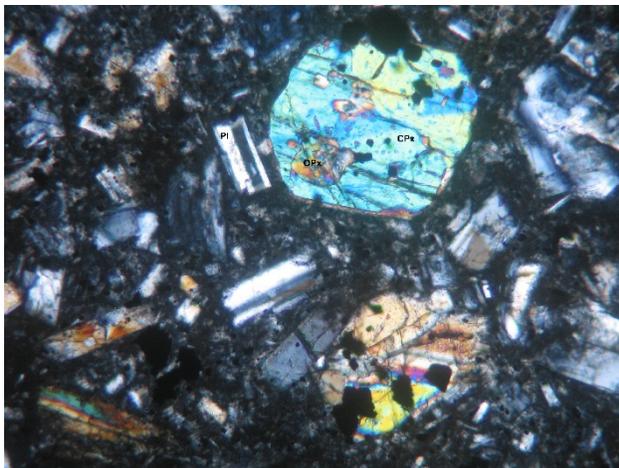
## **Supplementary figures**



(a) Generalized volcano-sedimentary succession (N24 35.177, E23 59.979) and eruption history reconstruction; (b) schematic model of a submarine hyaloclastic lava flow, quench fragmentation and peperite formation; field photographs: (c) volcanic bomb; (d, e) intrusion and penetration of sediments into the lava flow – in-situ peperite formation; (f) reseeded peperite; (g, h, i) propagation of quench fragmentation and hyaloclastite formation



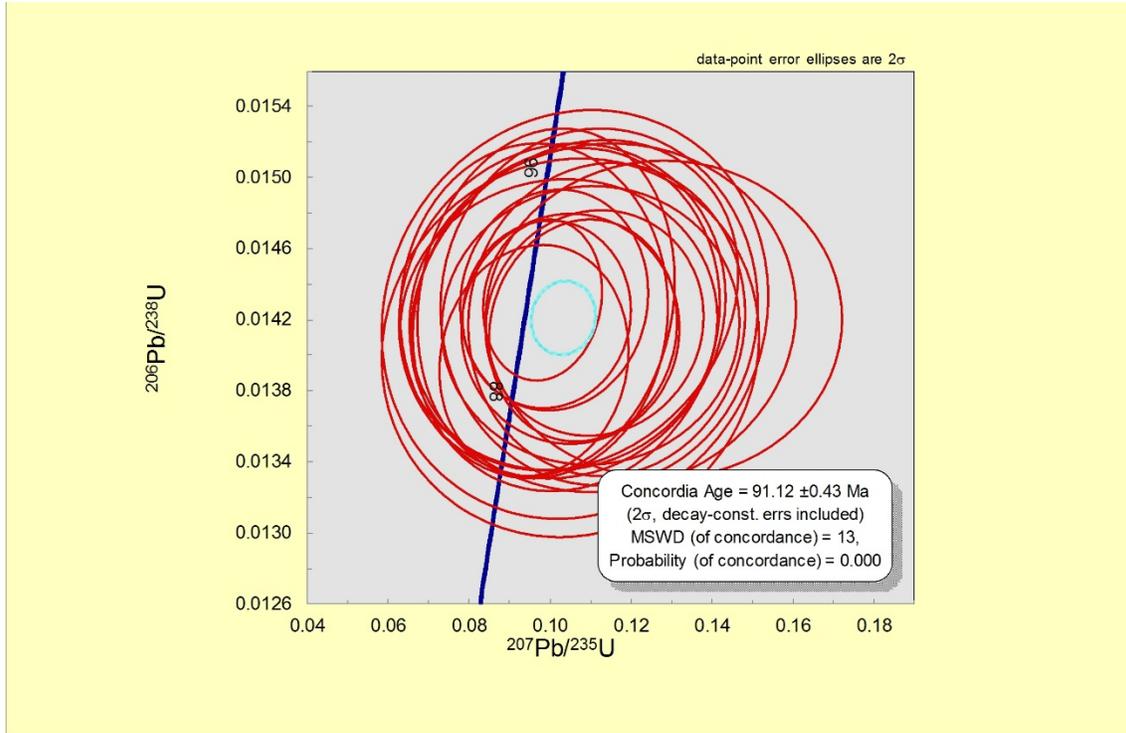
Some of the clinopyroxenes form corona texture around the amphibole, showing processes of dewatering



Pyroxenes (mostly augite and rare small enstatite crystals embedded in them)



Magmatically corroded amphibole



The zircon population of the trachydacite neck is presented mostly by own magmatic grown crystals giving a Concordia age of  $91.12 \pm 0.43$  Ma