

Heath Falcon Project Technical Activities – Tectonic Setting Evaluation

The Heath-Falcon property may include Appinite Complex lithologies, which are triggered by processes very similar to those that trigger Cu Porphyry deposits, and possibly IOCG/Breccia-type Cu deposits.

Appinites are medium- to coarse-grained plutonic rocks, generally in small intrusive bodies, rich in hornblende in a matrix of intermediate plagioclase feldspar and/or alkali feldspars, with or without quartz.

J. Brendan Murphy (2020) Appinite suites and their genetic relationship with coeval voluminous granitoid batholiths, *International Geology Review*, 62:6, 683-713

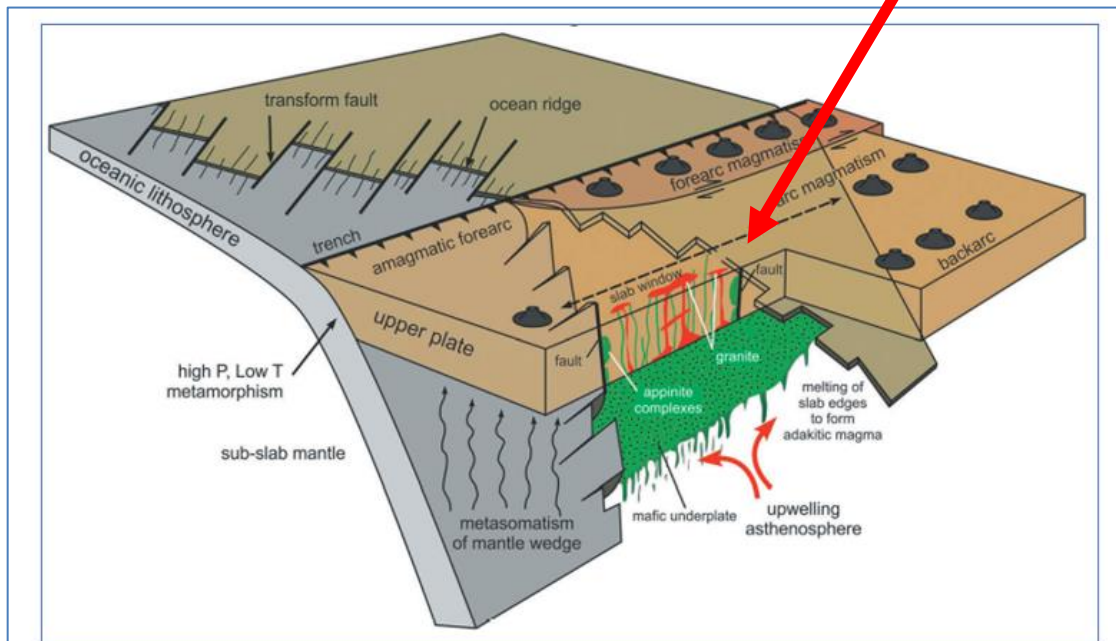


Figure 4: Conceptual model showing the development of a slab window by ridge-trench interaction⁴. Note location of **appinite complexes** adjacent to major faults along the periphery of the granite-appinite magmatic event.

Appinite/Cu Porphyry-formative tectonic settings

Richards, S. W., and R. J. Holm. "Tectonic preconditioning and the formation of giant porphyry deposits." (2013). Society of Economic Geologists, Inc. Special Publication 17, pp. 265–27

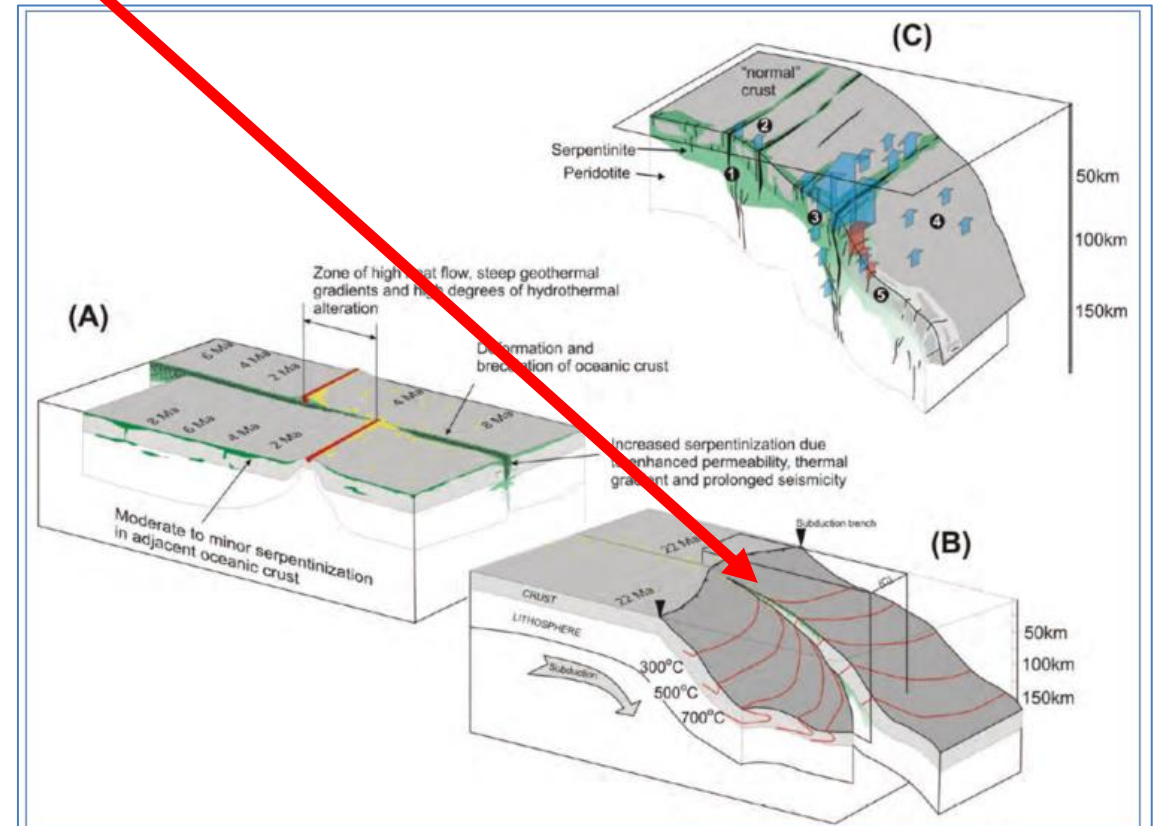


Figure 5: Model showing the two main stages associated with the tectonic and hydrothermal preconditioning of the oceanic crust and mantle for **mineralized porphyry intrusion**⁵.