Improved chronology of magmatic and hydrothermal events in the Příbram ore region, Czech Republic

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The Příbram Ore Region (POR) is a world-famous ore district intruded by Variscan magmatic rocks and hosting several types of genetically distinct vein-type ores, with Ag–Pb–Zn±Sb, and U veins being economically important in the past. These ore veins are preceded by subeconomic quartz veins hosting locally molybdenite and gold. The chronology of individual magmatic events and of hydrothermal pulses of the POR is poorly constrained. Here we discuss new zircon U-Pb ages of two minor granitic stocks intruding the northern part of the POR and Re-Os ages of spatially related subeconomic molybdenite mineralization. A detailed description of geological relationships and of the analytical methods used is contained in [1].

The Padrť Stock (~5 sq. km) and the Bohutín Stock (~3.6 sq. km) are two small intrusions in the NW part of the POR. Both stocks contain several types of magmatic rocks. The dating focused on the most voluminous hornblende-biotite granodiorite of the Padrť Stock and hornblende-biotite quartz diorite of the Bohutín Stock. The obtained U-Pb zircon ages of the dated rocks are very close, 342.8±1.1 Ma for Padrť [1], and newly obtained 344.2±0.6 Ma age for Bohutín. These data are comparable with the range of published ages for granitoids of the voluminous Central Bohemian Plutonic Complex (354±4 to 337±1 Ma), occurring in the southern part of the POR and more southerly of it.

These intrusions are postdated by quartz veins with molybdenite and those with Au, which is indicated by the age data as well as field relationships. Padrť molybdenite Re-Os ages of 337.2±2.4 and 339.8±2.5 Ma (two samples, see [1]) are similar to the new molybdenite Re-Os age from Bohutín (334.6±2.2; one sample, the other Bohutín sample had disturbed isotope system). The ages of the sulfidic Ag–Pb–Zn±Sb veins are still poorly constrained within a long time interval between ~335 Ma (relatively older molybdenite) and ~278–275 Ma (U-Pb ages of younger uraninite veins).

[1] Žák *et al*. (2014) *Journal of Geosciences* **59**, 351-366.