



Model ages of fracture fillings and mineralogical and geochemical evidence for water-rock interaction in fractures in granite: The Melechov Massif, Czech Republic

Václav Procházka, Jiří Zachariáš, Ladislav Strnad

PII: S0883-2927(18)30130-6

DOI: [10.1016/j.apgeochem.2018.05.016](https://doi.org/10.1016/j.apgeochem.2018.05.016)

Reference: AG 4093

To appear in: *Applied Geochemistry*

Received Date: 3 August 2017

Revised Date: 19 May 2018

Accepted Date: 21 May 2018

Please cite this article as: Procházka, Vá., Zachariáš, Jiří., Strnad, L., Model ages of fracture fillings and mineralogical and geochemical evidence for water-rock interaction in fractures in granite: The Melechov Massif, Czech Republic, *Applied Geochemistry* (2018), doi: 10.1016/j.apgeochem.2018.05.016.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

**Model ages of fracture fillings and mineralogical and geochemical evidence  
for water-rock interaction in fractures in granite: the Melechov Massif,  
Czech Republic**

Václav Procházka

<sup>1</sup> Institute of Hydrogeology, Engineering geology and Applied geophysics, Faculty of Science, Charles University in Prague, Albertov 6, 128 43 Prague 2, Czech Republic; vprochaska@seznam.cz (corresponding author)

Jiří Zachariáš

<sup>2</sup> Institute of Geochemistry, Mineralogy and Mineral Resources, Faculty of Science, Charles University in Prague, Albertov 6, 128 43 Prague 2, Czech Republic; zachar@natur.cuni.cz

Ladislav Strnad

<sup>3</sup> Laboratories of the Geological Institutes, Faculty of Science, Charles University in Prague, Albertov 6, 128 43 Prague 2, Czech Republic;

## **Abstract**

The mineral, chemical and Pb-isotope composition were investigated in the host granite and low-temperature open-fracture fillings from the 100 m deep borehole PDM-1 located in the Melechov Massif of the Moldanubian Batholith. The fillings are dominated by limonite and clay-mineral (illite, montmorillonite, nontronite, chlorite) mixtures, accompanied by minor amounts of residual minerals from the parent rock (quartz, feldspars, zircon, monazite). Chemically contrasting fracture assemblages occur mainly at lesser depths (< 55 m), where a high content of Fe-oxides and hydroxides locally with Mn-oxides is common. High Fe is correlated with a very high content of U, P, and V, whereas Mn is accompanied by Li, Co, Ni, Zn and Ba. Enrichment in mechanically transported primary accessory minerals

Download English Version:

<https://daneshyari.com/en/article/8863070>

Download Persian Version:

<https://daneshyari.com/article/8863070>

[Daneshyari.com](https://daneshyari.com)