List of symbols – Part 2

P_c, confining pressure (Pa)

P_p, pore pressure (Pa)

$P_{eff} = P_c - P_p$, effective pressure (Pa)

α, effective pressure coefficient

B, Skempton's coefficient

k, permeability (m^2)

k_{exp}, experimental value of permeability (m^2)

k_{pred}, predicted value of permeability (m^2)

k_{gas}, permeability measured with gas (m^2)

k_{liquid}, permeability measured with gas (m^2)

k_{eff}, predicted permeability given by the effective medium model (m^2)

T_2, NMR transverse relaxation time (s)

ϕ, porosity

ϕ_{micro}, porosity obtained from BIB-SEM analysis

w, average crack half aperture (m)

w_{sol}, effective crack half-aperture, solution of the effective medium model (m)

λ_L, linear crack density (m^{-1})

λ_A, surface crack density (m^{-2})

L_P, length of the pipes in the pore network model (m)

χ, fraction of occupied bonds in the pore network model

R, average crack radius (m)

R_{sol}, effective crack radius, solution of the effective medium model (m)

ξ, crack aspect ratio (=w/R)

ξ_{sol}, effective crack aspect ratio, solution of the effective medium model

N_V, number of cracks per unit volume (m^{-3})

V_C, volume of a single spheroidal crack (m^3)

$\rho_V = N_V.R^3$, crack density for effective medium model

m, hydraulic radius (m)

α, dimensionless parameter for Poiseuille's law (=1/3 for cracks)

FFI, free fluid index

BVI, bound volume index

Γ, constant linked to pore geometry in the free-fluid model

R, equivalent resistance in RC circuit

C, equivalent capacitor in RC circuit

$G=V_{out}/V_{in}$, gain

θ, phase shift (rad)

f, frequency (s^{-1})

f_B, break frequency (s^{-1})

L, sample length (m)

A, sample cross-sectional area (m^2)

μ, dynamic viscosity (Pa.s)

β_D, downstream reservoir storage (m^3Pa^{-1})

KG²B, K for Grimsel granodiorite benchmark

BIB-SEM, broad ion beam – scanning electron microscopy

ViP, Virtual Petroscan

PPL/XPL, in-plane / crossed polarized light

EDS, energy dispersive spectroscopy

PSD, pore size distribution

NMR, nuclear magnetic resonance

PNM, pore network modeling

WM, Wood’s metal

MICP, mercury injection capillary pressure

REV, representative elementary volume

CT, computerized tomography