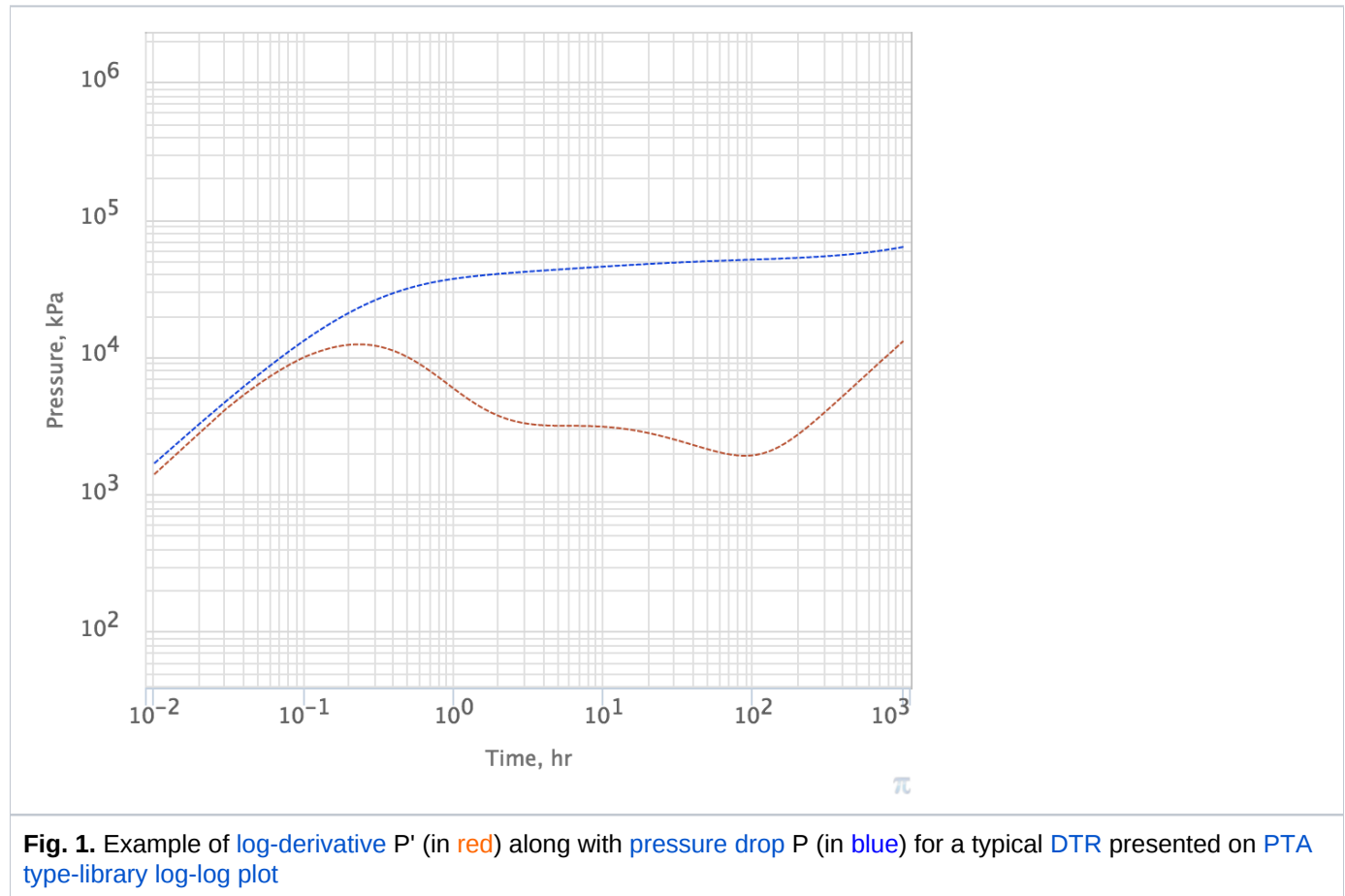


Logarithmic Derivative = p'

Synonym: [Logarithmic Derivative](#) = [Log Derivative](#)

[Derivative](#) with respect to the [natural logarithm](#) of the argument (see **Fig. 1**):

$$(1) \quad \frac{dp}{d(\ln t)} = t \frac{dp}{dt}$$



The calculation algorithm of [logarithmic derivative](#) is brought in [Logarithmic Derivative @model](#).

✓ In [Well Testing](#) applications the [logarithmic derivative](#) is often denoted as $p' = t \frac{dp}{dt}$ which is misnomer as the usual mathematical convention for prime " ' " is the regular [Derivative](#) with respect to the argument $p' = \frac{dp}{dt}$.

See also

[Formal science](#) / [Mathematics](#) / [Calculus](#)

[[Logarithmic Derivative @model](#)]

[Petroleum Industry](#) / [Upstream](#) / [Subsurface E&P Disciplines](#) / [Well Testing](#) / [Pressure Testing](#) / [Pressure Transient Analysis \(PTA\)](#) / [PTA Diagnostic Plot](#)

[[Well & Reservoir Surveillance](#)] [[Pressure Diffusion](#)] [[Pressure log-log plot](#)]