

Pressure Drop

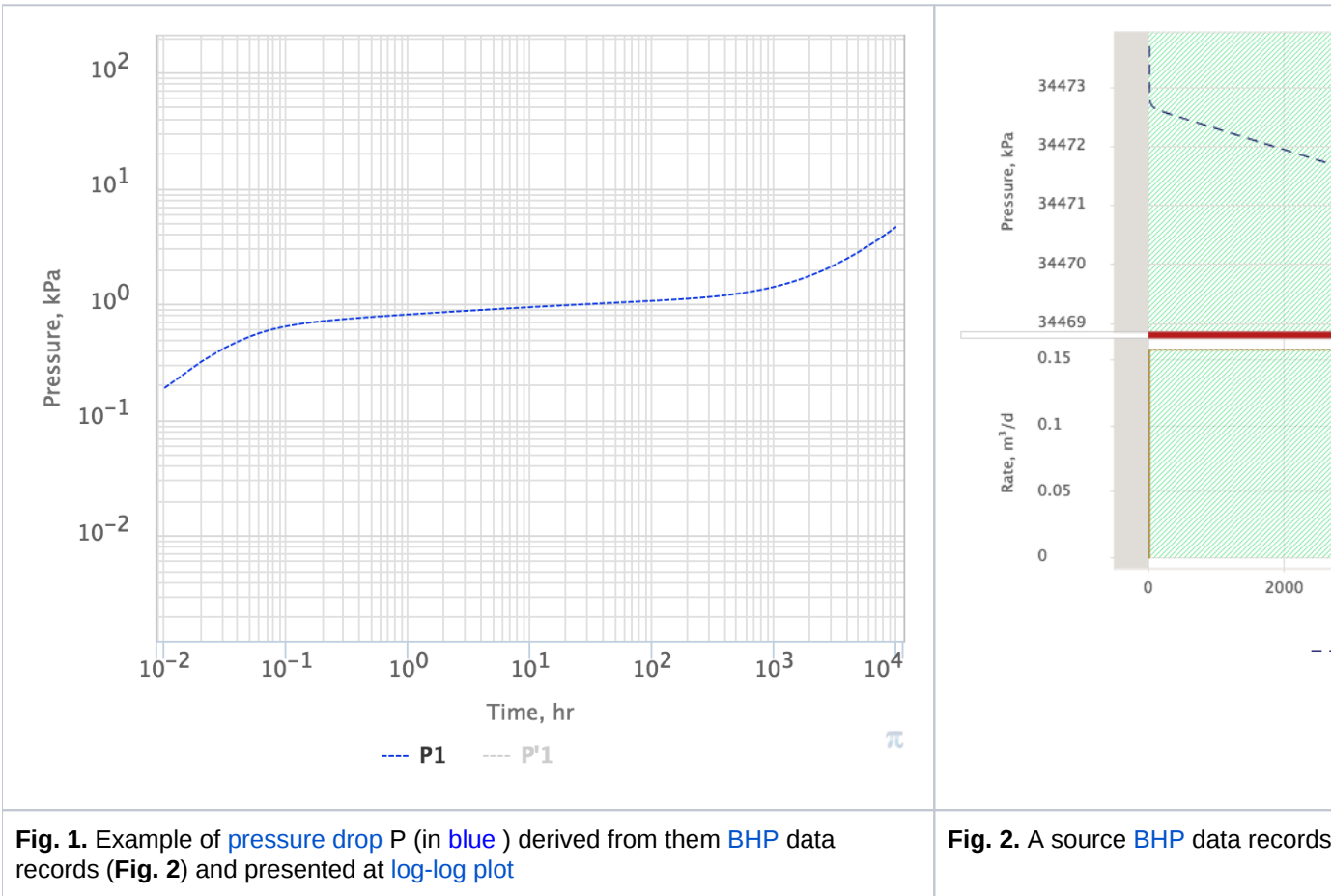
Pressure difference between the current **bottom-hole pressure** $p_{wf}(t)$ and the **bottom-hole pressure** $p_{wf}(t_0)$ at time moment $t = t_0$ when flowrate has changed :

$$\delta p(t) = p_{wf}(t_0) - p_{wf}(t)$$

Pressure drop is:

positive	$\delta p(t) > 0$	when production rate is increased or injection rate is decreased
negative	$\delta p(t) < 0$	when production rate is decreased or injection rate is increased

On log-log plots the pressure drop is always pictured as positive (see Fig. 1).



In particular case when the well has been shut-in for a long time and **bottom-hole pressure** has stabilised by the time moment t_0 and when well is opened for flow the **pressure drop** will be equal to **pressure drawdown**:

$$\text{pressure drop} = \delta p(t) = p_{wf}(t_0) - p_{wf}(t) = p_e - p_{wf}(t) = \Delta p(t) = \text{pressure drawdown}$$

as the initial **bottom-hole pressure** value $p_{wf}(t_0)$ represents **formation pressure** p_e : $p_{wf}(t_0) = p_e$

See Also

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[[Well & Reservoir Surveillance](#)] [[Pressure Diffusion](#)] [[Pressure drawdown](#)]