

Pressure Transient

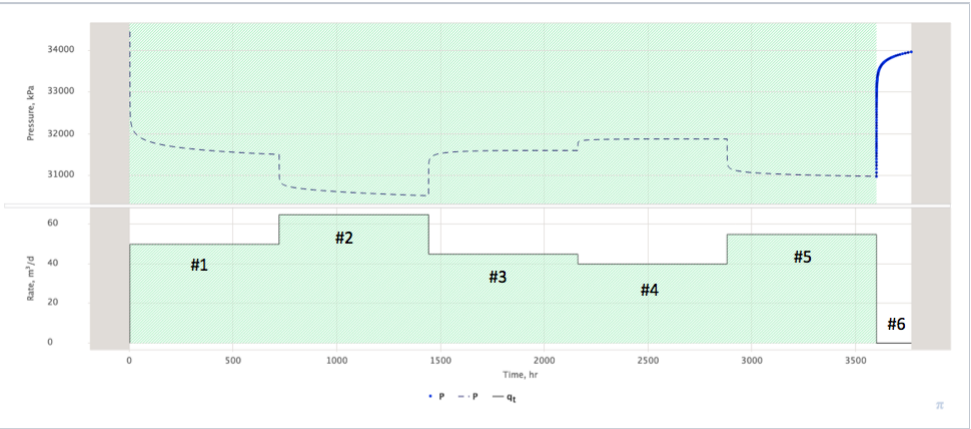
Synonym: [Pressure Transient](#) = [Pressure Transition](#)

[Wellbore](#) and [reservoir](#) pressure transition from one flow regime to another caused by the change in flow rate in the same well (Fig. 1 – Fig. 4) or remote well (Fig. 5 – Fig. 6).

Also called [Unsteady State](#).

Represent the basic data input to [Pressure Transient Analysis](#).

A popular convention for pressure transient data analysis is [PTA Diagnostic Plot](#).

blocked URL	 The figure consists of two vertically stacked plots sharing a common x-axis representing time in hours (0 to 3500). The top plot shows pressure in kPa (31000 to 34000) with a dashed line representing pressure response. The bottom plot shows production rate in m³/d (0 to 60) as a step function with six labeled regions: #1 (0-750 hr, ~50 m³/d), #2 (750-1500 hr, ~60 m³/d), #3 (1500-2100 hr, ~45 m³/d), #4 (2100-2900 hr, ~35 m³/d), #5 (2900-3400 hr, ~55 m³/d), and #6 (3400-3500 hr, 0 m³/d). A legend at the bottom indicates symbols for pressure (P), pressure difference (P - P_i), and production rate (q_t).
Fig. 1 – Drawdown pressure transient as response to opening a well for production (#1) and to production rate increase (#2)	Fig. 2 – Build-up pressure transient as response to production rate decrease (#1) and to shutting down the production (#6).
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Fig. 3 – Injection pressure transient as response to opening a well for injection (#1) and to injection rate increase (#2)	Fig. 4 – Fall-off pressure transient as response to injection rate decrease (#1) and to shutting down the injection (#2).

See Also

[Petroleum Industry](#) / [Upstream](#) / [Subsurface E&P Disciplines](#) / [Well Testing](#) / [Pressure Testing](#)

[[Well & Reservoir Surveillance](#)] [[Pressure Diffusion](#)] [[Pressure Transient Analysis \(PTA\)](#)]

