

# Pressure Control (Reservoir Flow Modelling)

Specification of DFM dynamic inputs and outputs at well level:

Dynamic Input	Dynamic Output
• BHP	• Liquid rate • Formation pressure • Water cut • GOR

The pressure control is a usual condition for water injectors and gas injectors and specified by the THP maintained by the ground booster pump.

In this case a reservoir takes as much fluid as it can depending on quality of well-reservoir contact and reservoir capacity and reservoir transmissibility around a given injector.

Sometimes producing wells produce at nearly constant bottomhole pressure, when it is being reduced by the downhole pump to its minimal value  $p_{wf} = p_{wf,min} = \text{const}$ , specified by the pump location inside the wellbore.

In this case the liquid rate is declining  $q_L^\uparrow(t) < q_{LL}^\uparrow$

This does not actually qualifies this production as Pressure Control and the well is still under Liquid Control conditions and once bottomhole pressure raises above minimal the pump returns to producing the target liquid rate  $q_L^\uparrow(t) = q_{LL}^\uparrow = \text{const}$ .

## See also

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Petroleum Industry / Upstream / Subsurface E&P Disciplines / Dynamic Flow Modelling / Reservoir Flow Modelling / Well Control (Reservoir Flow Modelling)

Petroleum Industry / Upstream / Production / Subsurface Production Operations / Well Control / Pressure Control