

Simple PVT

Single-phase or pseudo single-phase **PVT model** with the following correlations:

Total sandface flowrate:

$$(1) \quad q_t = q_s B$$

where B is **fluid formation volume factor** and q_s is **surface flowrate**.

Fluid Mobility:

$$(2) \quad \left\langle \frac{k}{\mu} \right\rangle = \frac{k_{air}}{\mu}$$

where k_{air} is **absolute formation permeability to air**, μ is **dynamic fluid viscosity**.

Total compressibility:

$$(3) \quad c_t = c_r + c$$

where c_r is **formation compressibility** and c is **fluid compressibility**.