

Volatile oil (fluid)

Vaporized fraction of liquid oil in natural gas.

The quantitative measure is given by Vaporized Oil Ratio:

$$R_v = \frac{V_{Og}^{\circ}}{V_{Gg}^{\circ}} = \frac{m_{Og}}{m_{Gg}} \cdot \frac{\rho_G^{\circ}}{\rho_O^{\circ}}$$

where

$V_{Og}^{\circ} = \frac{m_{Og}}{\rho_O^{\circ}}$	STP volume of dead oil component of mass m_{Og} and STP density ρ_O°
$V_{Gg}^{\circ} = \frac{m_{Gg}}{\rho_G^{\circ}}$	STP volume of natural gas component of mass m_{Gg} and STP density ρ_G°

$R_v(p,T)$ is a cross-phase exchange coefficient and a function of pressure and temperature

See Also

Petroleum Industry / Upstream / Subsurface E&P Disciplines / Fluid (PVT) Analysis / Fluid (PVT) modelling

[Volatile Oil (VO) fluid @model]