

Solution gas (chemical substance)

Natural Gas dissolved in Oil, which is then called Live Oil.

The quantitative measure is given by Solution GOR:

$$R_s = \frac{V_{Go}^\circ}{V_{Oo}^\circ} = \frac{m_{Go}}{m_{Oo}} \cdot \frac{\rho_O^\circ}{\rho_G^\circ}$$

where

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

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

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