

Glaso (1980) saturated oil gas solubility Rs(p) @model

Saturated oil gas solubility	R s	psia	p p _b	$R_s(p,T) = \gamma_g \cdot \left[\gamma_{API}^{-c_5} T^{-c_6} p_b^* \right]^{1/c_4},$ $p_b^* = 10^X, \quad X = (0.5/c_3) \cdot \left(-c_2 + \sqrt{c_2^2 - 4 c_3 (c_1 - \log_{10}(p))} \right)$ $c_1 = 1.7669, \ c_2 = 1.7447, \ c_3 = -0.30218, \ c_4 = 0.816, \ c_5 = -0.989$ $\text{Black Oil: } c_6 = 0.172, \ \text{Volatile Oil: } c_6 = 0.130$
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where

p	psia	Fluid pressure
T	°F	Initial formation temperature
γ _{API}	°API	Oil API gravity
γ _o	frac	Oil specific gravity
γ _g	frac	Gas specific gravity

See Also

[Petroleum Industry / Upstream / Petroleum Engineering / Subsurface E&P Disciplines / Reservoir Engineering \(RE\) / PVT correlations / Oil correlations](#)

[[Glaso \(1980\) oil correlations](#)]

References

Glaso, Oistein. "Generalized Pressure-Volume-Temperature Correlations." J Pet Technol 32 (1980): 785–795. doi: <https://doi.org/10.2118/8016-PA>