

Petrosky–Farshad (1993) undersaturated oil isothermal compressibility @model

Oil isothermal compressibility	c_o	psi ⁻¹	$p > p_b$	$c_o(p,T) = c_1 R_s^{c_2}(p,T) \gamma_g^{c_3} \gamma_{API}^{c_4} T^{c_5} p^{c_6}$ $c_1 = 1.705 \cdot 10^{-7}, c_2 = 0.69357, c_3 = 0.1885, c_4 = 0.3272, c_5 = 0.6729, c_6 = -0.5906$
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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
R_{sb}	scf/stb	Gas Solubility at Bubble point pressure

See Also

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

[[Petrosky–Farshad \(1993\) oil correlations](#)]

References

Petrosky, G.E., and F.F. Farshad. "Pressure-Volume-Temperature Correlations for Gulf of Mexico Crude Oils." Paper presented at the SPE Annual Technical Conference and Exhibition, Houston, Texas, October 1993. doi: <https://doi.org/10.2118/26644-MS>