

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

Oil isothermal compressibility, $c_o(p)$	bbl/stb	$c_o(p) = c_1 \cdot R_{sb}^{c_2} \cdot \gamma_g^{c_3} \cdot \gamma_{API}^{c_4} \cdot T^{c_5} \cdot p^{c_6}$ $c_1 = 1.705 \cdot 10^{-7}$, $c_2 = 0.69357$, $c_3 = 0.1885$, $c_4 = 0.3272$, $c_5 = 0.6729$, $c_6 = -0.5906$
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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](#)

References

Petrosky, G.E., and F. Farshad. "Pressure-Volume-Temperature Correlations for Gulf of Mexico Crude Oils." *SPE Res Eval & Eng* 1 (1998): 416–420. doi: <https://doi.org/10.2118/51395-PA>