

McCain (2011) undersaturated oil isothermal compressibility @model

Oil isothermal compressibility, $c_o(p)$	bbl /stb	$c_o(p) = \exp X(p), \quad X(p) = c_1 + c_2 \ln p + c_3 \ln p_b + c_4 \ln T + c_5 \ln \gamma_{API} + c_6 \ln R_{sb}$ $c_1 = -7.573, c_2 = -1.45, c_3 = -0.383, c_4 = 1.402, c_5 = 0.256, c_6 = 0.449$
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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
p_b	psia	Bubble point pressure

See Also

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

References

McCain, W.D.; Spivey, J.P.; Lenn, C.P. Petroleum Reservoir Fluid Property Correlations; PennWell Books: Tulsa, OK, USA, 2011, ISBN-13: 978-1593701871