Petrosky-Farshad (1993) undersaturated oil formation volume factor Bo(p) @model

Undersaturated oil formation volume factor	**Bo**	bbl/stb	$p > p_b$	$B_o(p,T) = B_{ob} \cdot \exp\left[A \cdot (p_b^{c_6} - p^{c_6})\right]$ $A = c_1 \cdot R_{sb}^{c_2} \cdot \gamma_g^{c_3} \cdot \gamma_{API}^{c_4} \cdot T^{c_5}$ $c_1 = 4.16463 \cdot 10^{-7}$, $c_2 = 0.69357$, $c_3 = 0.1885$, $c_4 = 0.3272$, $c_5 = 0.6729$, $c_6 = 0.4094$

where

B_{ob}	bbl/stb	Formation volume factor at bubble point pressure p_b
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

[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