

Beal (1946) undersaturated oil viscosity o @model

Undersaturated oil viscosity	o	cp	$p > p_b$	$\mu_o(p) = \mu_{ob} + c_1 (p - p_b) \left[c_2 \mu_{ob}^{c_3} + c_4 \mu_{ob}^{c_5} \right]$ $c_1 = 0.001, c_2 = 0.024, c_3 = 1.6, c_4 = 0.038, c_5 = 0.56$
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where

μ_{ob}	cp	oil viscosity at bubble point pressure p_b
p	psia	Fluid 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](#)

[[Beal \(1946\) oil correlations](#)]

References

Beal, C., 1946. The viscosity of air, water, natural gas, crude oils and its associated gases at oil field temperatures and pressures. Trans. AIME 165, 94–112

Standing, Marshall Burton. Volumetric and phase behavior of oil field hydrocarbon systems. Society of petroleum engineers of AIME, 1981