Vasquez-Beggs (1980) reference separator gas gravity ygs @model

Recalculation of the total gas relative weight γ_g to the reference separator conditions: $p^*_{sep} = 100$ psig, $T^*_{sep} = 60$ °F:

Reference separator gas gravity	**gs**	**frac**	$\gamma_{gs} = \gamma_g \left[1 + 5.912 \cdot 10^{-5}\, \gamma_{API}\, T\, \ln(p_{sep}/114.7)\right]$

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
p_{sep}	psig	Separator pressure
T_{sep}	°F	Separator temperature

Selection of 100 psig (= 6.89476 barg = 790.801 kPa of absolute pressure) for reference separator conditions was made in favour of cases when separator pressure is not known and 100 psig will be closer to practical cases than other assumptions.

See Also

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

[Vasquez-Beggs (1980) oil correlations]

References

Vasquez, M., and H.D. Beggs. "Correlations for Fluid Physical Property Prediction." J Pet Technol 32 (1980): 968–970, doi.org/10.2118/6719-PA