

GOR Fractional Flow @model

A [proxy model](#) of [GOR](#) in producing well with [reservoir saturation](#) $s = \{s_w, s_o, s_g\}$ and reservoir pressure p_e :

(1)
$$GOR = Y_g = R_s + \frac{M_{rg}}{M_{ro}} \cdot \frac{B_o}{B_g}$$

where

$M_{ro}(s)$	Relative oil mobility	$B_o(p_e)$	Oil formation volume factor	s	Reservoir saturation $\{s_w, s_o, s_g\}$
$M_{rg}(s)$	Relative gas mobility	$B_g(p_e)$	Gas formation volume factor	p_e	Current formation pressure

It provides a good estimate when the [drawdown](#) is much higher than delta pressure from gravity and capillary effects.

The model [\(1\)](#) can also be used in gross field [production analysis](#) and in this case the average reservoir saturation can be assumed homogeneous:

(2)
$$s_g(t) = (1 - s_{wi}) \cdot RF(t)/E_S$$

See also

[Water cut \(Yw\)](#)