

Water Influx Constant = B

Elastic capacity of [aquifer](#) to expand into [oil reservoir](#) or [gas reservoir](#) due to [reservoir pressure depletion](#):

(1)
$$B = \frac{\theta}{\pi} \cdot A_e \cdot h \cdot \phi \cdot c_t$$

where

θ	central angle of net pay area aquifer contact
$A_e = \pi r_e^2$	net pay area
h	aquifer effective thickness
ϕ	aquifer porosity
$c_t = c_r + c_w$	aquifer total compressibility
c_r	aquifer pore compressibility
c_w	aquifer water compressibility

See Also

[Petroleum Industry](#) / [Upstream](#) / [Subsurface E&P Disciplines](#) / [Field Study & Modelling](#)

[[Depletion](#)] [[Aquifer](#)] [[Aquifer Drive @model](#)]