

# Dobrynin Pore compressibility-pressure @model

Correlation between pore compressibility  $c_{\phi}(p)$  at a given pressure  $p$  and initial pore compressibility  $c_{\phi i}$  at initial formation pressure  $p_i$  :

| Correlation                                                                                                               | Scope                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| (1) $c_{\phi}(p) = c_{\phi i} \cdot \frac{\ln\left(\frac{p_n}{p_{\max}}\right)}{\ln\left(\frac{p_{ni}}{p_{\max}}\right)}$ | Sandstone<br><br>Wide pressure range: $p_{\min} = 1 \text{ MPa} < p < p_{\max} = 200 \text{ MPa}$ |
| (2) $p_n = p_{\min} + 1.75 \cdot \phi^{0.51} \cdot (p_{\max} - p)$                                                        |                                                                                                   |
| (3) $p_{ni} = p_{\min} + 1.75 \cdot \phi^{0.51} \cdot (p_{\max} - p_i)$                                                   |                                                                                                   |

## See also

[Petroleum Industry / Upstream / Subsurface E&P Disciplines / Petrophysics / Geomechanical Rock Modelling / Pore compressibility / Pore compressibility-pressure correlations](#)

## Reference

[in Russian] .., , , 1970 ., 239 ., : 552.5; 553.98:551.25 (021)