

Indonesia Model (Poupon-Leveaux) @model

One of the [saturation from resistivity](#) models:

(1)
$$s_w = \left[\frac{\sqrt{\frac{1}{R_t}}}{\frac{V_{sh}^{(1-0.5 V_{sh})}}{\sqrt{R_{sh}}} + \sqrt{\frac{\phi_e^m}{A R_w}}} \right]^{(2/n)}$$

where

s_w	formation water saturation	
ϕ_e	effective porosity	
V_{sh}	shaliness	
R_t	specific electrical resistivity from OH logs	
R_w	specific electrical resistivity of formation water	
R_{sh}	specific electrical resistivity of wet shales	
m	formation matrix cementation exponent	1.5 ÷ 2.5, default value is 2
n	formation matrix water-saturation exponent	1.5 ÷ 2.5, default value is 2

See Also

[Petroleum Industry](#) / [Upstream](#) / [Subsurface E&P Disciplines](#) / [Petrophysics](#)

[Well & Reservoir Surveillance](#) / [Well logging](#) / [Reservoir Data Logs \(RDL\)](#) / [Formation Resistivity Log @model](#)

Reference

Poupon, André, and J. Leveaux. "Evaluation Of Water Saturation In Shaly Formations." Paper presented at the SPWLA 12th Annual Logging Symposium, Dallas, Texas, May 1971.