

Simandoux @model

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

(1)
$$\frac{1}{R_t} = \frac{\phi_e^m s_w^n}{AR_w(1 - V_{sh})} + \frac{V_{sh}}{R_{sh}} s_w^{n/2}$$

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	
A	dimensionless constant, characterizing the rock matrix contribution to the total electrical resistivity	0.5 ÷ 1, default value is 1 for sandstones and 0.9 for limestones
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](#)