

Black Oil (BO) fluid @model

3-phase fluid model based on three pseudo-components $C = \{W, O, G\}$:

W – water pseudo-component, which may include minerals (assuming formation water and injection water composition is the same)

O – dead oil pseudo-component

G – dry gas pseudo-component

existing in three possible phases $\alpha = \{w, o, g\}$:

w – water phase, consisting of water component only

o – oil phase, consisting of dead oil pseudo-component and dissolved natural gas pseudo-component (called solution gas)

g – gas phase, consisting of natural gas pseudo-component

it is basically a simplified version of Modified Black Oil model without volatile oil $R_v = 0$.

The accountable cross-phase exchanges are illustrated in the table below:

	w	o	g
W	x		
O		x	
G		x	x

See Also