

Drainage volume

Total [open pore volume](#) around the well where reservoir flow is initiated by [production](#) or [injection](#) from a given well or group of wells.

There are three major types of the [drainage volumes](#):

Dynamic drainage volume of a well	which is formed dynamically depending on the nearby well production and injection
Potential drainage volume of a well	which can be formed in case a given well is working alone on the whole field (no interference with other wells)
Jointly drained volume of a group of wells	which is formed dynamically by production and injection of all wells

For [homogeneous reservoir](#) it can be estimated as:

$$(1) \quad V_e = A_e h_e \phi_e$$

where

$h = \text{const}$	effective formation thickness
$\phi_e = \text{const}$	effective porosity
A_e	drainage area

See also

[Physics](#) / [Fluid Dynamics](#) / [Percolation](#)

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

[[Drainage area \(\$A_e\$ \)](#)] [[Drainage radius \(\$r_e\$ \)](#)]