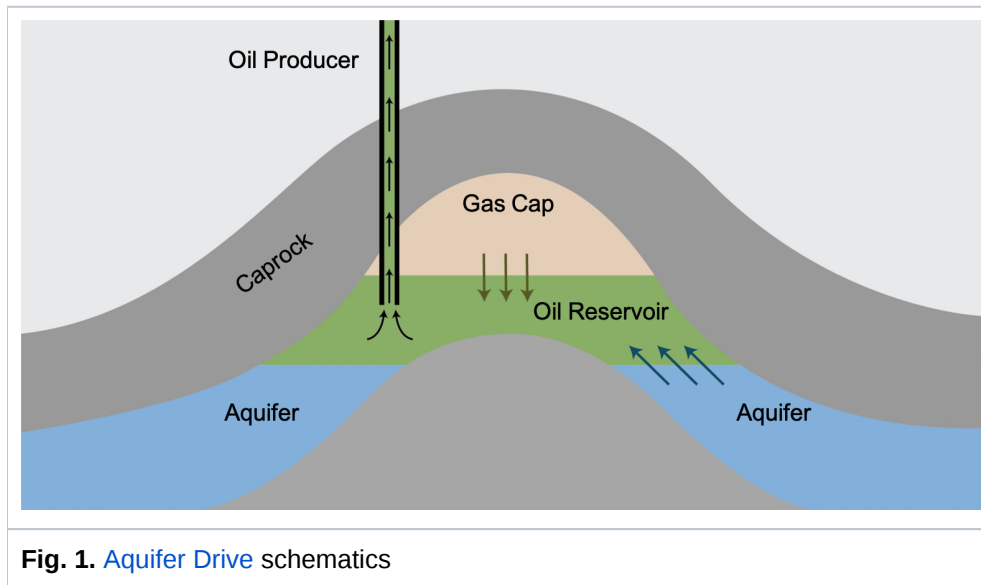


Aquifer Drive

Process of [water](#) invasion from [Aquifer](#) into [oil reservoir](#) or [gas reservoir](#) due to [pressure depletion](#).

The [aquifer drive](#) can be weak or strong depending on [aquifer](#) volume and [water mobility](#) comparing to [mobility](#) of [oil](#) and [gas](#) and [contact](#) geometry.



The most accurate way to simulate [Aquifer Expansion](#) (or shrinkage) is [full-field 3D Dynamic Flow Model](#) where [Aquifer Expansion](#) is treated as one of the fluid phases and accounts of geological heterogeneities, gas fluid properties, [relperm](#) properties and heat exchange with surrounding rocks.

Unfortunately, in many practical cases the detailed information on the [aquifer](#) is not available which does not allow a proper modelling of [aquifer](#) expansion using a geological framework.

Besides many practical applications require only knowledge of cumulative water influx from [aquifer](#) under pressure depletion.

This allows building an [Aquifer Drive Models](#) using analytical methods.

See also

[Physics](#) / [Fluid Dynamics](#) / [Percolation](#) / [Reservoir flow](#) / [Reservoir flow drive mechanisms](#)

[[Depletion](#)] [[Recovery Methods](#)] [[Aquifer](#)] [[Edge-water Drive Aquifer](#)] [[Bottom-water Drive Aquifer](#)] [[Aquifer Drive @model](#)]

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