

Hydrostatic pressure gradient

@wikipedia

The change in pressure ([pressure gradient](#)) of a fluid column per unit of [true vertical depth](#).

Normal [hydrostatic pressure gradient](#) of popular [petroleum fluids](#) at [Standard Conditions](#)

Fluid	Normal density range	Hydrostatic pressure gradient range	
	g/cc	kPa/m = bar/100m	psi/ft
Natural Gas	0.007 – 0.30	0.69 – 2.94	0.003 – 1.130
Gas Condensate	0.200 – 0.40	1.95 – 3.92	0.090 – 0.174
Oil	0.400 – 1.12	3.92 – 11.0	0.174 – 0.486
Water	1.000 – 1.15	9.81 – 11.28	0.433 – 0.500

The most common value of [hydrostatic pressure gradient](#) is ~ **10.1 bar/100m** which corresponds to rocks saturated by 1.03 [g/cc](#) density [water](#).

Formation pressure at a given depth calculated with [hydrostatic pressure gradient](#) is called Hydrostatic pressure.

If the actual formation pressure is more than 10% higher than hydrostatic pressure then it is called anomalously higher pressure deposit.

If the actual formation pressure is more than 10% lower than hydrostatic pressure then it is called anomalously low pressure deposit.

See Also

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