

## PREDICTING THE INTERFACIAL TENSION OF BRINE/GAS (OR CONDENSATES) SYSTEMS

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**Abstract :** This paper reviews the available literature data that can be used for estimating : (1) the surface tension of brines at ambient conditions, (2) the interfacial tension between a brine and a gas (or condensate) at reservoir conditions. When dealing with the first problem (surface tension of brines), the increase in surface tension due to the salts is often neglected, although there are enough available data to account for it. For the second problem, the paper reviews the literature data on the interfacial tension between water and hydrocarbons (gas, non polar liquids, or mixtures of both), and tries to improve an earlier correlation introduced by Firoozabadi *et al.* (1988). Still, the improved correlation does not handle properly mixtures of gas and neutral oils, and the need for more laboratory measurements is outlined. Salinity corrections similar to those for surface tensions are presented. The practical use of the predictive correlations is illustrated and compared with laboratory measurements at reservoir conditions on a real gas/brine case.