# Determination of conventional and unconventional hydrocarbon bearing zones of C-Interval of Lower Goru Formation in Sawan Area, Lower Indus Basin, Pakistan

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## Abstract

Due to the increase in demand and decline in production of fossil-fuel, the oil and gas industries across the globe will focus to utilize unconventional hydrocarbon reservoirs (tight gas, gas hydrate and coal bed methane) to fulfil the requirement. In this study an attempt was made to demarcate the conventional and unconventional gas zones with quantative analysis of petrophysical parameters, characterize the reservoirs in the Sawan-01 well of Sawan area, Lower Indus Basin Pakistan. Well Log interpretation supports that C- interval of Lower Goru Formation consist of shaly-sandstones, act as hydrocarbon bearing zones, further divided into four zones i-e conventional hydrocarbon zone, water zone, unconventional hydrocarbon zone (Tight gas) and dry zone segregated on the basis of porosity, permeability, water saturation and hydrocarbon saturation. Furthermore the volumetric reserves estimated from the study area suggest that the reserve for conventional (294.68 BSCF) and unconventional (18.14 BSCF) zones has good enough to produce commercially while unconventional reserves can be extracted by increasing secondary porosity by using several techniques like fracturing and acidizing.