Gas sandface flowrate = qg

Produced or injected flowrate of natural gas across the well-reservoir contact with the volumes measured at the sandface temperature and pressure conditions.

For MBO fluid @model the gas sandface flowrate q_g is related to surface flowrates of crude oil q_O and natural gas q_G as (see derivation):

(1) $$q_g = \frac{B_g \cdot (q_G - R_s\, q_O)}{1 - R_v\, R_s}$$

where

$B_o,\ B_g$	gas formation volume factor between separator and sandface pressure/temperature conditions
R_s	Solution GOR at sandface pressure/temperature conditions

It simplifies for Dry Gas Reservoir with surface flow rate q_G and gas formation volume factor B_g to:

(2) $$q_g = q_G \cdot B_g$$

See Also

Petroleum Industry / Upstream / Subsurface E&P Disciplines / Well Testing (WT) / Flowrate Testing / Flowrate

[Well & Reservoir Surveillance]

[Sandface flowrates] [Oil sandface flowrate] [Gas sandface flowrate] [Water sandface flowrate]

[Surface flowrates] [Oil surface flowrate] [Gas surface flowrate] [Water surface flowrate]