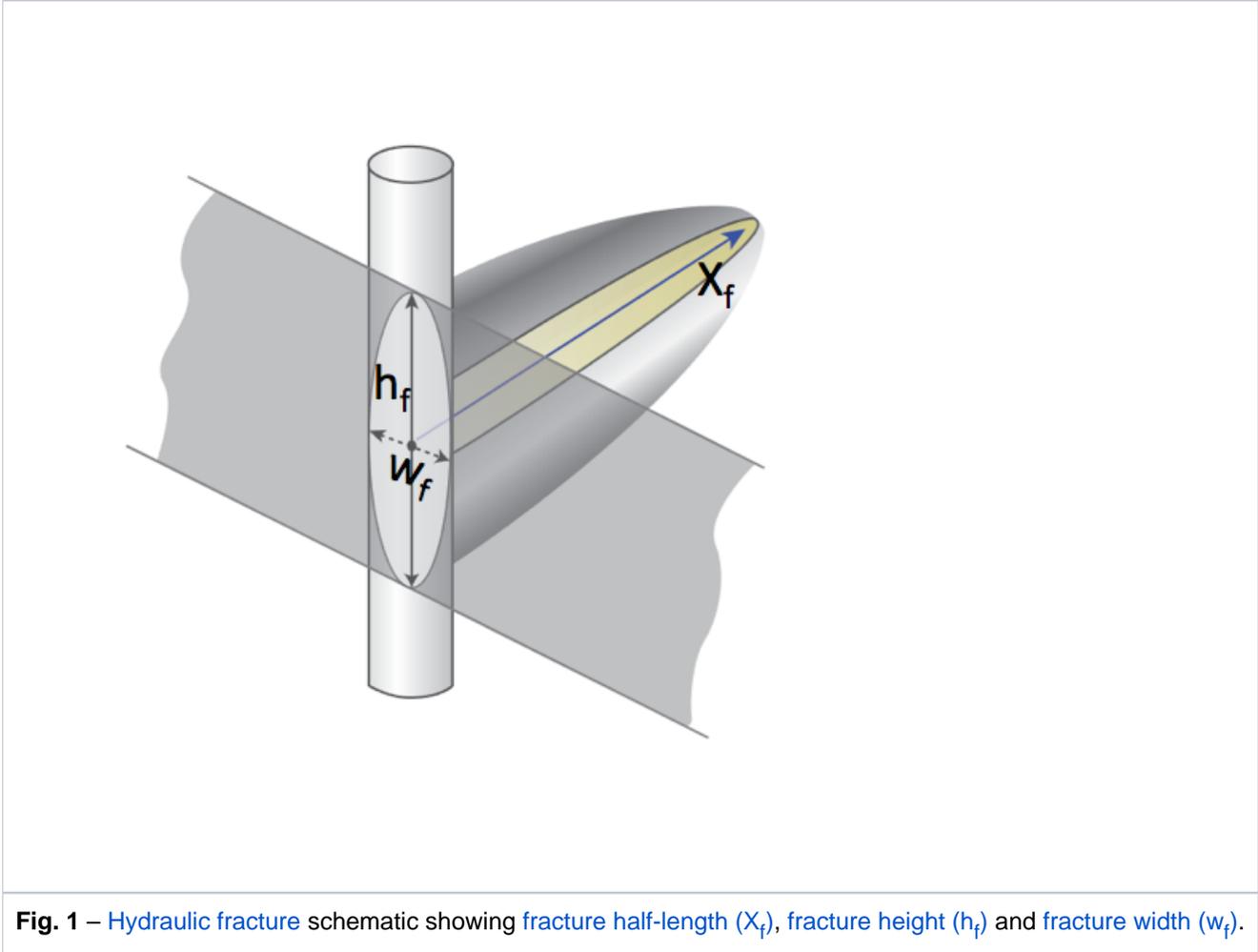


Fracture half-length = X_f

Half of the total length $X_f = 0.5 \cdot L_f$ of the hydraulically induced vertical plane fracture (see **Fig. 1**).



For the fractured vertical well the **geometrical skin-factor** S_G is related to **Fracture half-length** X_f as:

$$(1) \quad S_G = -\ln\left(\frac{X_f}{r_w}\right) + \frac{1.65 - 0.328u + 0.116u^2}{1 + 0.18u + 0.064u^2 + 0.05u^3}$$

where

$u = \ln F_{CD}$	
F_{CD}	dimensionless hydraulic fracture conductivity

In case of high **dimensionless hydraulic fracture conductivity** (corresponding to **infinite conductivity fracture** case) the skin-factor model can be simplified:

$$(2) \quad S_G = -\ln\left(\frac{X_f}{2r_w}\right)$$

See Also

[Petroleum Industry](#) / [Upstream](#) / [Well](#) / [Well-Reservoir Contact \(WRC\)](#) / [Hydraulic Fracture](#)