

Supplementary file

Expanding role of borehole image logs in reservoir fracture and heterogeneity characterization: A review

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Equations used in quantitative borehole image analysis

The following published sources provide the equations used in the quantitative borehole image log analysis addressed in this review.

For fracture spacing distribution: Gillespie et al., 1999; Hooker et al., 2013.

For fracture aperture calculations : Luthi and Souhaité, 1990; Ponziani et al., 2015; Van Stappen et al., 2018; Nian et al., 2021.

For fracture spacing correction: Wang et al., 2023.

For weighted rose diagram: Wang et al., 2023.

For fracture shape: Baraian et al., 2023.

For stress orientation and direction analysis from borehole image breakout data: Barton et al. 1988; Zoback et al., 2003.

For in situ stress magnitudes: Huffman et al., 2016.

For relationships between horizontal stresses, geomechanical variables and borehole image breakout analysis: Faraji et al., 2021.

For depth of investigation of compressional and shear waves associated with acoustic borehole image logs: Sadeqi et al., 2022.

For analysis of anisotropic reservoirs: Nelson, 2001.