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Fracture Potential of Challenging Rocks: From Initiation to Productive Stimulated Rock Volume

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Abstract

Fracture potential of challenging rocks determines the ability of a rock to create complex, extensive and highly connected fracture networks that can remain open during production. Prediction of a robust fracture potential is an important prerequisite for optimized stimulation design and maximized Productive Stimulated Rock Volume (*P-SRV*). However fracture potential is not a material property. Contrary to the common belief, “fracability, brittleness, fracture efficiency, fracture potential” are not characteristic properties but rather a rate and stress dependent material “*behavior*” for a given rock type.