A New Reservoir Classification Based on Pore Types Improves Characterization - Part B

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Abstract

This is the second of a two-part article of a new reservoir classification based on pore types. We discussed in the first article a new methodology developed in order to classify all kinds of reservoirs worldwide: fracture, matrix, vugs, or combinations of these using the cementation factor, mvariable, and fuzzy logic concepts. The new classification presented was based on a 2D Model and we identified at least five types of reservoirs according to pore types. This article provides the updated reservoir classification using a ternary diagram based on fractures, vugs and/or intercristaline pore systems. We show in this article how to use core, log, field data and fuzzy logic to build a confident petrophysical model, for complex reservoirs; and how to determine which kind of reservoir belongs to the new classification; and discuss the best practices of how to exploit and increase hydrocarbon production and reduce the uncertainty of the original oil in place calculation.