Author's Accepted Manuscript

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PII: S0098-3004(16)30754-3

DOI: http://dx.doi.org/10.1016/j.cageo.2017.06.016

CAGEO3984 Reference:

To appear in: Computers and Geosciences

Received date: 2 December 2016 Revised date: 22 June 2017 Accepted date: 27 June 2017

Cite this article as: Francisco Benavides, Ricardo Leiderman, Andre Souza Giovanna Carneiro and Rodrigo Bagueira, Estimating the surface relaxivity as function of pore size from NMR T2 distributions and micro-tomographic images Computers and Geosciences, http://dx.doi.org/10.1016/j.cageo.2017.06.016

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Estimating the surface relaxivity as a function of pore size from NMR T2 distributions and micro-tomographic images

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Abstract

In the present work, we formulate and solve an inverse problem to recover the surface relaxivity as a function of pore size. The input data for our technique are the T_2 distribution measurement and the micro-tomographic image of the rock sample under investigation. We simulate the NMR relaxation signal for a given surface relaxivity function using the random walk method and rank different surface relaxivity functions

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