

NMR of liquid ^3He in pores of a clay sample

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Abstract

In the present work a new method for studying porous media by nuclear magnetic resonance of liquid ^3He has been proposed. This method has been demonstrated by an example of a clay mineral sample. For the first time the integral porosity of the clay sample has been measured. For investigated samples the value of the integral porosity is in the range of 10-30%. The inverse Laplace transform of the ^3He longitudinal magnetization recovery curve has been carried out and the distribution of the relaxation times T_1 has been obtained. © Springer 2010.

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