

## **Study of correlation of oil flow properties with nuclear magnetic resonance and self-diffusion characteristics**

Zaripov T., Gizatullin B., Lozovoi A., Abdullin T., Musin K.  
*Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia*

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### **Abstract**

© Copyright 2016. Correlation curves of viscosity, average spin-spin relaxation time, and average self-diffusion for crude oil samples from Tatarstan oil fields have been obtained. Two different averaging models were used to calculate mean values. It has been found that self-diffusion  $D$  and average spin-spin relaxation time  $R_2$  are best correlated in case reciprocal values  $1/R$  and  $1/D$  are averaged.

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### **Keywords**

Nuclear magnetic resonance (NMR), Oil, Relaxation time, Self-diffusion, Viscosity