

Abstract

The main goal of this paper is to identify heterogeneities from well logs data using the wavelet-based multifractal analysis. Firstly, the wavelet transform modulus maxima lines method is applied with a moving window of 128 samples to the raw well logs data. After that, the generalized fractal dimensions that correspond to the three first moments of the function of partition are estimated. Application to synthetic and real well logs data of the main and pilot Kontinentales Tiefbohrprogramm der Bundesrepublik Deutschland wells shows that the information and the correlation dimensions can be used for heterogeneities analysis and lithofacies segmentation from well logs data