



Using the two-dimensional anisotropic wavelet transform for exploring anisotropy from a digitized core image

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A natural process is the mixture of various components of different scales. The two-dimensional anisotropic wavelet analysis appears to be perfectly appropriate to investigate such processes and to highlight details at a given analyzing scale.

Here, we present a wavelet-based technique, which is specifically the Normalized Optimized Anisotropic Wavelet Coefficient (NOAWC). Then, the potential of the latter is demonstrated through its application on a digitized image of a core extracted from an Algerian exploration borehole.

The NOAWC method has allowed to accurately quantify anisotropies of orientation, shape and spatial distributions of the investigated core at different scales, and thus to provide supplementary information enriching the conventional analysis.