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3D seismic AVO data established by the Wavelet Transform Modulus Maxima Lines to characterize reservoirs heterogeneities in the 2D domain

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The main goal of this paper is to establish reservoirs media heterogeneities by the wavelet transform modulus maxima lines, first we gathered amplitude versus offsets AVO amplitudes at the top of the reservoir and we calculate the 2D wavelet transform after we calculate its maxima and we estimate the Holder exponent at each one, variation of this coefficient can give more information about the variation of lithology and fluid nature at any direction. Application of this idea at synthetic 2D seismic model shows that application on real seismic AVO data and its attributes can give more ideas about reservoirs heterogeneities.
Keywords: reservoirs, heterogeneities, Amplitude versus offset, 2D wavelet transform modulus maxima lines, Holder exponent, AVO attributes.