

## Using Morlet Wavelet Filter to Denoising Geoelectric 'Disturbances' Map of Moroccan Phosphate Deposit 'Disturbances'

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**Abstract :** Morocco is a major producer of phosphate, with an annual output of 19 million tons and reserves in excess of 35 billion cubic meters. This represents more than 75% of world reserves. Resistivity surveys have been successfully used in the Oulad Abdoun phosphate basin. A Schlumberger resistivity survey over an area of 50 hectares was carried out. A new field procedure based on analytic signal response of resistivity data was tested to deal with the presence of phosphate deposit disturbances. A resistivity map was expected to allow the electrical resistivity signal to be imaged in 2D. 2D wavelet is standard tool in the interpretation of geophysical potential field data. Wavelet transform is particularly suitable in denoising, filtering and analyzing geophysical data singularities. Wavelet transform tools are applied to analysis of a moroccan phosphate deposit 'disturbances'. Wavelet approach applied to modeling surface phosphate "disturbances" was found to be consistently useful.

**Keywords :** resistivity, Schlumberger, phosphate, wavelet, Morocco

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