

عنوان مقاله:

Wavelet Transform & Petroleum Engineering

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نویسندگان:

سعید صادق نژاد - M.Sc student of Reservoir Eng., Sharif University of Technology

محمودرضا پیشوایی - Department of Chemical & Petroleum Eng. Sharif University of Technology

خلاصه مقاله:

By introduction of wavelets in 1980s the new ways to do signal processing is generated Wavelets transforms provide a multiresolution framework for data representation. They are a family of basis functions that separate a function or a signal into distinct frequency packets that are localized in the time domain. Wavelet transform has been widely applied in the last two decades to analyze non-stationary phenomena in the 2-D time-frequency domain in many different fields, ranging from fractals geometry to image processing, from heart bit analysis, to data compression and also application in some areas of medicine, biology, etc. In recent years, wavelet analysis has found its application in the petroleum industries. Wavelet transform has a lot of application in petroleum engineering. Here after describing mathematical background of wavelet transform, all applications which are found in the literatures are described, such as reservoir characterization, data up and down scaling, data compression in MWD and Permanent down hole gauge data, well test analysis, cyclicity determination and boundary identification, etc.

کلمات کلیدی:

Wavelet Transform, Properties, Analysis, Applications, Petroleum engineering

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