A METHOD FOR PRECISE ESTIMATION OF THE VOLUME OF OIL RESOURCE VIA APPLICATION OF FIRST AND SECOND DERIVATION OF WAVELET TRANSFORMATION. CASE STUDY: DETERMINATION OF VOLUME OF OIL RESERVOIRS IN THE SOUTHERN PART OF IRAN

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Using the welcomed property of the first and second order derivation of wavelet transformation for signal detection a new method for estimation of oil reservoirs based on gravity observation on the surface of the earth has be devised. This method has been first examined for simulated data and then having assured of its capabilities it has been adapted to estimate the volume of the oil reservoir in the southern part of Iran. Details of mathematical formulation of the problem and the results of case studies will be presented.