

Formation Evaluation and Imaging in Horizontal Wells

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This paper shows examples of one-dimension (1-D) inversion of resistivity to find true resistivity (RT) and also looks into the use of azimuthal density and image to find the correct density of the formation. 1-D inversion shows that the correct log interpretation of the formation resistivity in both the virgin and invaded zones surrounding a well bore should account for the apparent formation dip angle, lamination, anisotropy, and the bed boundary effect. Examples of formation dips from density image log, borehole spiral effect, geosteering, and three dimension (3-D) visualization of the well bore from borehole image will be discussed.