

Surface Profilometry and Petrophysical Measurements

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Abstract

The surfaces of rocks reveal much about their pore structure and petrophysical properties. Thin section analysis may be used to estimate porosity, permeability, grain size and sorting, and numerous other properties. In this paper, a method is proposed for estimating petrophysical properties of rocks from the characteristics of their surface profiles. These profiles may be obtained from either optical or stylus type profilometers. From a spectral analysis of these profiles, the petrophysical properties are obtained.