

## **USE OF THE LITHOLOGY DENSITY TOOL (LDT) TO IMPROVE LITHOLOGY IDENTIFICATION AND GAS DETECTION**

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**The Litho-Density Tool is the latest generation of Density tools. In addition to an improved density recording, it measures a new lithology parameter.**

**The new measurement, Photoelectric Absorption Index or Pe, is strongly related to the nature of the formation matrix. Used alone it is a direct matrix indicator, hence the term "Lithology" in the tool name. In combination with the Density, it is used to analyse two-mineral matrices and to determine porosity. And, with both Density and Neutron measurements, the Pe leads to a description of more complex lithologies**

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containing three matrices and a calculation of porosity. The more accurate matrix identification provides an improved distinction between oil and gas.

Direct lithology indication and combination with Density for bi-matrix identification are readily applicable to wellsite interpretation through on-site computer processing. Three-mineral description requires a more complex computation and crossplot analysis that can be integrated into a complete formation analysis at the Kuala Lumpur Computing Center.

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