

Enhanced lithological description of some British mudrock sequences using geophysical wireline logs

Brereton, N. R., Gallois, R. W. and Whittaker, A. 2001.

Methods to combine individual wireline logs such as resistivity, sonic, bulk density, neutron porosity and natural gamma have been developed to enhance lithological interpretation, particularly of mudrock sequences. Multiple log data presentation to generate a synthetic, pseudo-lithology log is achieved by combining downhole geophysical log records using a colour cube. Well-documented lithological descriptions of borehole cores from the Kimmeridge Clay Formation (Jurassic) of Britain are compared with the newly processed combination geophysical log data. The colour cube logs confirm existing lithological descriptions and, importantly, enable considerable refinement of general lithological descriptions of 'undifferentiated' mudstone