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AN INTEGRATED APPROACH TO RESERVOIR PETROPHYSICAL PARAMETERS EVALUATION

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Petrophysical parameters necessary for reservoir characterisation are normally derived from borehole data. Such information can be very accurate in the depth direction but has a small lateral penetration. Surface seismic on the other hand has low vertical resolution but is laterally continuous. Calibration of the seismic data to borehole information through integrated processing permits reservoir petrophysical parameters to be accurately mapped from seismic data. The relationship between seismic and petrophysical properties is addressed with reference to a reservoir evaluation study. The relationships are used to calibrate seismic data and to map heterogeneities in reservoir description parameters.