



Supercritical bedforms and sedimentary structures from field and core studies, Middle Eocene deep-marine base-of-slope environment, Ainsa Basin, Spanish Pyrenees

Pauline Cornard and Kevin Pickering
University College London

In recent years, many researchers have focussed on supercritical- and subcritical-flow deposits using flume-tank experiments (e.g., Cartigny et al., 2011; Postma et al., 2014; Postma and Cartigny, 2014), or from direct observations on presently active deep-water systems (e.g., Hughes et al., 2012).

Using outcrop and core examples from a base-of-slope environment in the Middle Eocene Ainsa Basin, Spanish Pyrenees, and with published experimental work, a range of deposits are interpreted as upper-flow regime sedimentary structures. This contribution focusses on the interpretation of several supercritical bedforms (antidunes and chutes-and-pools) observed on the field and upper-flow regime sedimentary structures recognized in cores. The spatial distribution of supercritical-flow deposits obtained from an analysis of field outcrops and core sedimentary logs are evaluated in relation to the depositional environment (channel axis, off-axis, margin and interfan). The frequency distributions of the bed thicknesses are also analysed in relation to supercritical versus subcritical bed-thickness distributions.