

Peter Gutteridge : Carbonate sand bodies at the northern margin of the Darbyshire Carbonate Platform (Lower Carboniferous) U.K.

Laporan (Report)

Dr. P. Gutteridge (22 George Street, Cambridge, CB4 1AJ, U.K.) presented the above talk on 7 February 1991 at the Geology Department, University of Malaya. What follows is a Summary of the talk prepared by the speaker.

Ringkasan (Summary)

The Darbyshire carbonate platform is one of the numerous carbonate platforms which were present over much of northern England during the Lower Carboniferous. Two main types of carbonate sands are present at the northern margin of this platform: a sand-body complex developed on the shelf-top in the immediate vicinity of the platform margin, and a submarine carbonate fan or apron draped over the lower platform margin slope. Trace resedimented carbonates were derived from the shelf margin sand body.

The shelf margin carbonate sand body complex was built-up by repeated basinward progradation and abandonment of large-scale carbonate bedforms in response to minor sea-level fluctuations. The presence of occasional foresets within these bedforms composed of micritised grains and marine cements suggests that the migration of these bedforms was episodic. The large-size suggests that the bedforms were active only during periods of storms.

The bedforms show a consistent basinward migration. The predominant direction of sand transport at this margin of the carbonate platform was thus basinward. The carbonate sands transported offshelf accumulated in a submarine fan or apron deposit which was draped over the lower slope and base of slope of the platform as are series of high and low density turbidites and probable grain-flow deposits.

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