SEQUENCES AND SEDIMENTOLOGY OF THE FIGUEIRA DA FOZ FORMATION — APTIAN TO CENOMANIAN, NORTHERN LUSITANIAN BASIN (PORTUGAL, WESTERN IBERIA MARGIN)

DINIS, J. Dep. Ciências da Terra, Centro Geociências, Univ. Coimbra, Portugal

The western Iberia continental breakup migrated northwards along three structural segments (Tagus, Iberia and Galicia), and after eastward, causing a counterclockwise rotation of Iberia and its interference with Africa and Eurasia. The mainly siliciclastic Figueira da Foz Formation (upper Aptian — late Cenomanian) includes seven members and overlays an unconformity reflecting the sea-floor onset in the Galicia Sector (uplifting north-western Iberia).

The Albian-Cenomanian eustatic rise is the major allogenic control, and the three macrosequences within the formation (FF1,2,3) reflects eustasy and intraplate stress due to peri-plate tectonics (extensional and compressional). Each macrosequence displays a fining-upward trend and express the swing of interconnected systems: perennial unconfined braidplain (wandering), distally increasing in sinuosity, passes to a fluvial-dominated low-energy braid-delta (upper delta to prodelta), with interdistributary lacustrine/brackish lagoons linked to an inner mixed carbonate-siliciclastic platform:FF1 (upper Aptian): After the initial progradation, retrogradation was probably caused by an eustatic rise (latest Aptian maximum).FF2 (Albian): The initial progradation is tentatively related to the plate interior uplift caused by the onset of sea-floor spreading in the Bay of Biscay. A late Albian limestone marks an eustatic high.FF3 (Cenomanian - base to upper): The initial progradation can reflect Iberia/Africa compression, transpression with Eurasia in the Pyrenees and a widespread sea-level drop. Minor sea-level changes (eustatic ?) can be detected in the upper part.