SEQUENCE STRATIGRAPHY OF LOWER CRETACEOUS STRATA, EASTERN GULF COASTAL PLAIN, USA

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Four depositional sequences of 4 to 15 million years' duration have been recognized in Lower Cretaceous strata of the eastern Gulf Coastal Plain of the United States. These are the LKEGR–1 (Lower Cretaceous, Eastern Gulf Region) (132 to 117 Ma), LKEGR–2 (117 to 109 Ma), LKEGR–3 (109 to 103 Ma) and LKEGR–4 (103 to 99 Ma) sequences. The LKEGR–1 sequence includes the Hosston and Sligo formations (Hauterivian to Aptian Age) that accumulated during a moderate high in global sea-level. The basal Hosston marine sandstones constitute the transgressive systems tract (TST) deposits. Updip, highstand systems tract (HST) sediments are fluvial–deltaic Hosston sandstones, and downdip, these deposits are represented by Sligo shales and limestones. The LKEGR–2 sequence includes the Pine Island, James, Rodessa and Ferry Lake formations (Aptian to Albian Age). Pine Island shales and James limestones are the TST sediments, and Rodessa sandstones and Ferry Lake anhydrites are the HST deposits. The LKEGR–3 sequence includes the Mooringsport and Paluxy formations (Albian Age). Mooringsport shales and limestones are the TST sediments, and Paluxy sandstones are the HST deposits. These sequences accumulated during a moderate low in global sea–level. The LKEGR–4 sequence includes the Andrew and Dantzler formations (Late Albian Age) which accumulated during a significant high in global sea–level. The basal Dantzler marine sandstones constitute the TST sediments. Updip, HST deposits are fluvial-deltaic Dantzler sandstones, and downdip, these deposits are represented by Andrew limestones. These depositional sequences are interpreted to be the result of a combination of post-rift tectonics, variations in siliciclastic sediment supply and dispersal systems and eustasy.