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### **Upper Miocene Depositional History of the Central Gulf of Mexico Basin**

The Upper Miocene depositional episode (UM episode) records a long-lived family of sediment dispersal systems that persisted for nearly 6 m.y. with little modification. In the central Gulf of Mexico Basin, this episode records extensive margin offlap, primarily centered on the paleo-Tennessee River and Mississippi River dispersal axes, that began immediately following the *Textularia W/Textularia stapperi* flooding and was terminated by a regional flooding event associated with the *Robulus E* biostratigraphic top. Using three additional flooding events associated with *Cibicides carstensi*, *Discorbis 12* and *Cristellaria K* biostratigraphic tops, the UM genetic sequence can be subdivided into 4 genetic subsequences, which display an overall progradational stacking pattern. Thickest sediments were deposited in the paleo-Tennessee River delta beneath modern SE Louisiana, where three major depocenters were recognized. These depocenters migrated in both strike and dip directions, and margin progradation was very prominent. Sediments also continuously bypassed into the Mississippi Canyon, Atwater Valley and Green Canyon OCS areas throughout the entire UM, forming two secondary depocenters composing the McAVLU submarine fan system at the base of the paleo-continental slope. The composite fluvial-dominated paleo-Tennessee and Mississippi delta system rapidly built beyond the subjacent middle Miocene shelf margin to construct a sandy delta-fed apron. Lowstand prograding wedges, incised channels and associated delta lobes, and gravity flow deposits were very common at the shelf margin. Margin outbuilding was locally and briefly interrupted by hypersubsidence due to salt withdrawal and consequent slope mass wasting. A broad, but relatively thin, sandy shore zone and clastic shelf - shelf margin succession, supplied by reworking of the deltaic deposits, extends both eastward and westward from the delta system. Abundant strike-reworked sediment locally prograded the strand plain to the shelf edge, with slope offlap exceeding 30 mi.