

MESOZOIC AND CENOZOIC GEOLOGY OF GEORGIA COASTAL PLAIN

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ABSTRACT

The sedimentary-tectonic setting of the Georgia coastal plain was established after Triassic grabens had been filled with terrestrial clastic sediments. Marine invasions from the downwarped southwest, during Early Cretaceous and probably Late Jurassic time, culminated in overlap of the coastal plain by the early Paleocene. Cessation of downwarping, broad folding, and uplift followed Paleocene transgression. Widespread erosion, accompanied by downwarping in southeastern Georgia, preceded "Wilcox" deposition and Claiborne overlap. Evaporites and carbonate rocks are present in southeastern Georgia. During Jackson-Eocene and Oligocene time, shelf carbonate materials were deposited. During and after Oligocene time, uplift and horst- and graben-faulting occurred, not unlike that to be expected on a passive, trailing edge of a continental margin. One graben, trending northeast-southwest, is particularly well developed and contains thicker Oligocene rocks. Nearshore and terrestrial Miocene sediments (thicker in the grabens) overlie the erosion surface. A thin veneer of Pliocene and Pleistocene rocks is at the surface on the Atlantic coastal plain side.

Wireline geophysical data show the presence of distinct reflection horizons.

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