

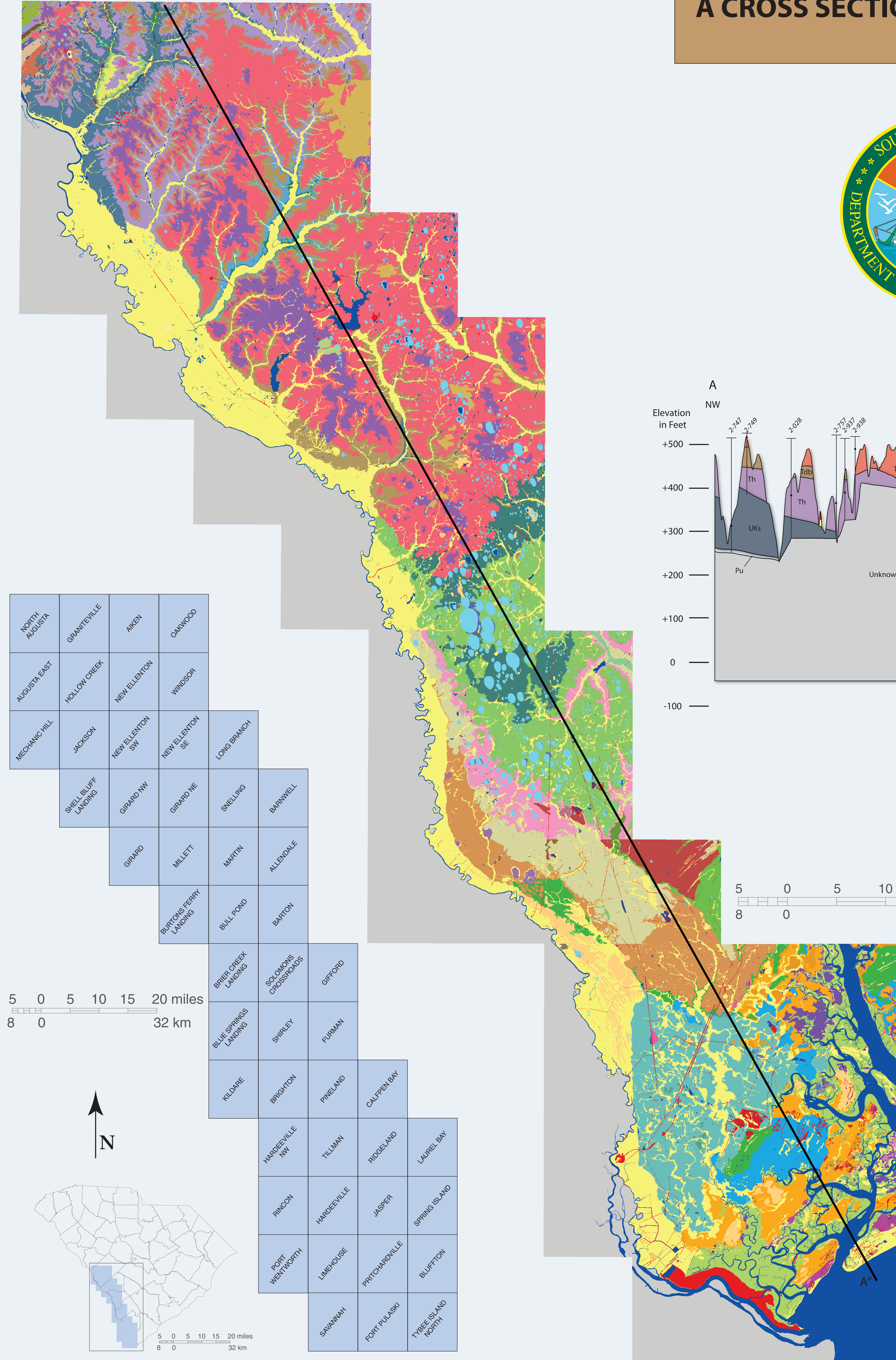
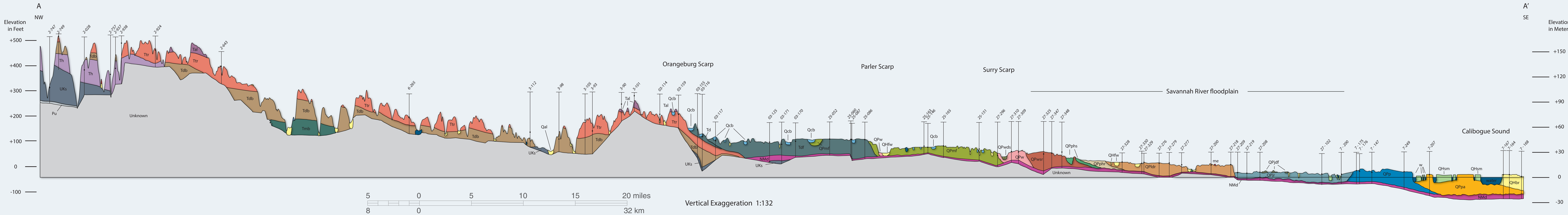
A CROSS SECTION FROM THE FALL LINE IN EDGEFIELD COUNTY, SOUTH CAROLINA, TO THE ATLANTIC OCEAN IN BEAUFORT COUNTY, SOUTH CAROLINA, ILLUSTRATING COASTAL PLAIN DEPOSITIONAL RELATIONSHIPS



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**ABSTRACT**  
A cross section has been constructed from the Fall Line in Edgefield County, SC, through the Coastal Plain to the Atlantic Ocean in Beaufort County, SC, approximately parallel to the Savannah River. Geologic information was collected from power-auger drilling and outcrop exposures in 27 7.5-minute quadrangles during South Carolina Geological Survey and STATEMAP projects. A compilation cross section was constructed and is here presented. Results include: the identification of Eocene through Pleistocene Coastal Plain surface deposits; recognition of the underlying stratigraphy; and the identification of lateral changes in the underlying Cretaceous to Miocene units. Deposition of younger units has removed older sediments, or in some cases the younger units consist of reworked older deposits. The spacial distribution of preserved Cretaceous to Miocene depositional systems varies from west to east and is controlled by changes in the course of the Savannah River, erosional processes, or fault displacement. Ongoing work is refining the understanding of fault controls on the stratigraphy and the history of the Savannah River basin.



**BACKGROUND**  
This work was created from subsurface sampling and maps produced by the South Carolina Geological Survey over a 40+ year time frame. During that span of time, changes in the stratigraphic interpretations have occurred. For example, the former Barnwell Formation has been elevated to the Barnwell Group with the recognition and differentiation of the Dry Branch and Tobacco Road formations. Incorporating that change into this cross section required reinterpretation of the older works.

This work was supported by the taxpayers of South Carolina and by various STATEMAP grants. Contributors include- Louise K. Price, Paul G. Nystrom, Jr., Ralph H. Willoughby, Joseph A. Gellici, C. W. (Bill) Clendenin, Jr., William R. Doar, III, G. Smith, Gary L. Taylor (Driller), and Joseph J. Koch (Driller) and many others who aided the interpretations with paleontological interpretations, age-dating, and physical labor.

**Legend**  
2-74 SCGS borehole ID number  
• borehole surface elevation  
Not all boreholes used to construct the cross section are shown. All boreholes noted on the cross section are within 1.6 km (1 mile) of the section line.  
Cartographic assistance provided by  
*Matt Henderson and Tanner Arrington*

- Holocene**
- water
  - me
  - beach ridge
  - salt marsh
  - freshwater marsh
  - freshwater swamp/alluvium
  - dunes
  - Carolina Bay
  - Carolina Bay sands
  - alluvium
  - Qc
  - Savannah flood plain (older)
  - Qt
  - Qws
- Pleistocene**
- Silver Bluff eolian
  - Silver Bluff
  - Silver Bluff estuarine
  - Princess Anne eolian
  - Princess Anne
  - Pamlico
  - Pamlico estuarine
  - Ten Mile Hill
  - Jasper river sediments
  - Jasper dune field
  - Ladson riverine
  - Ladson
  - Penholloway riverine
  - Penholloway
  - Wicomico riverine
  - Wicomico- Sandridge member
  - Wicomico
  - Marietta riverine
- Pliocene**
- Duplin riverine
  - Duplin
- Miocene**
- Miocene sediments- undifferentiated
  - Altamaha
- Tertiary**
- Tobacco Road
  - Dry Branch
  - Orangeburg District beds
  - Huber
  - McBean
- Cretaceous**
- Cretaceous sediments- undifferentiated
  - Piedmont- undifferentiated