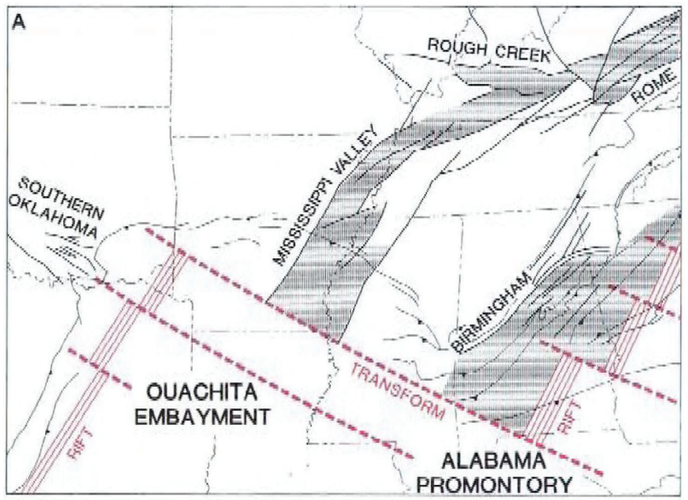
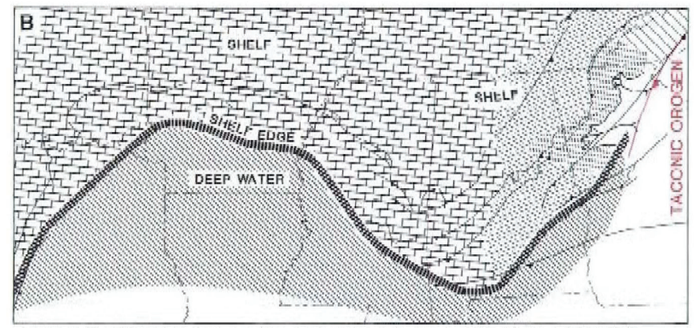
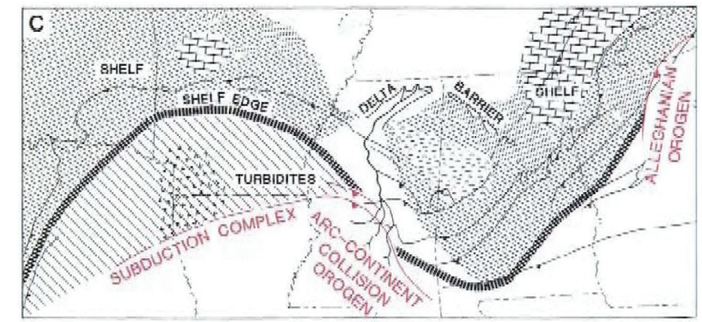


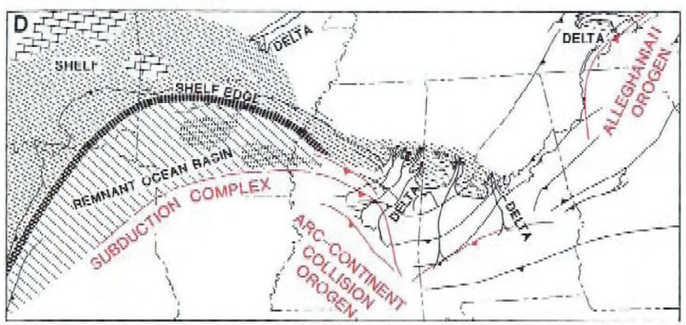
A. Late Precambrian and Early to Middle Cambrian: rifted continental margin; graben filling sediments on continental crust.



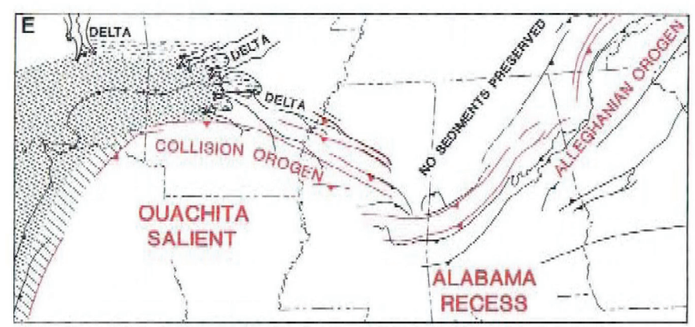
B. Middle to Late Ordovician: passive margin around Alabama promontory and Ouachita embayment; carbonate shelf (including deeper or outer shelf in area of Mississippi Valley graben) on continental crust and off shelf deep water basin; synorogenic clastic wedge prograding westward from Taconic orogen.



C. Late Mississippian: arc continent collision along southwest side of Alabama promontory; synorogenic clastic wedge prograding northeastward onto shallow shelf in Black Warrior basin and westward into deep basin in Ouachita embayment shallow marine shelf and passive margin around Ouachita embayment; separate clastic wedge prograding westward from Alleghanian orogenic source northeast of Alabama promontory.



D. Early Pennsylvanian (Late Morrowan): continued thrusting and prograding of clastic wedges from southwest (arc continent collision orogen) and from northeast (Alleghanian orogen) onto Alabama promontory; cratonic delta prograding southward into Arkoma basin; diachronous closing from east to west of remnant ocean basin in Ouachita embayment and prograding of turbidites from both orogenic and cratonic sources into deep remnant ocean basin; initial thrusting and prograding of synorogenic clastic sediment from southeast onto Alabama promontory.



E. Middle Pennsylvanian (Late Atokan): thrusting along Appalachian Ouachita orogen; Appalachian style thrust faults overriding older Ouachita style thrust faults south of Black Warrior foreland basin on Alabama promontory; synorogenic clastic wedge prograding northward and cratonic delta prograding southward to fill Arkoma foreland basin above older deep water deposits.

Legend

INTRACRATONIC AND CONTINENTAL-MARGIN GRABEN-FILL FACIES
- SAND, MUD, AND CARBONATE SEDIMENT

FACIES DEPOSITED ON CONTINENTAL SHELF
- CARBONATE SEDIMENT
- SAND
- MUD
- MARSH AND SWAMP MUD

FACIES DEPOSITED OFF THE SHELF IN DEEP WATER
- MUD, CHERT, SAND, AND CARBONATE DEBRIS
- SAND AND MUD TURBIDITES
- MUD TURBIDITES
- TUFF

ACTIVE FAULTS
- APPALACHIAN-OUACHITA THRUST FAULT
- BASEMENT FAULT

PRESENT STRUCTURES
- THRUST FAULT
- ANTICLINE

(Reference 218)

FIGURE 2.5-205
Paleogeographic Reconstructions of Phases in the Tectonic Evolution of the Appalachian-Ouachita Orogen