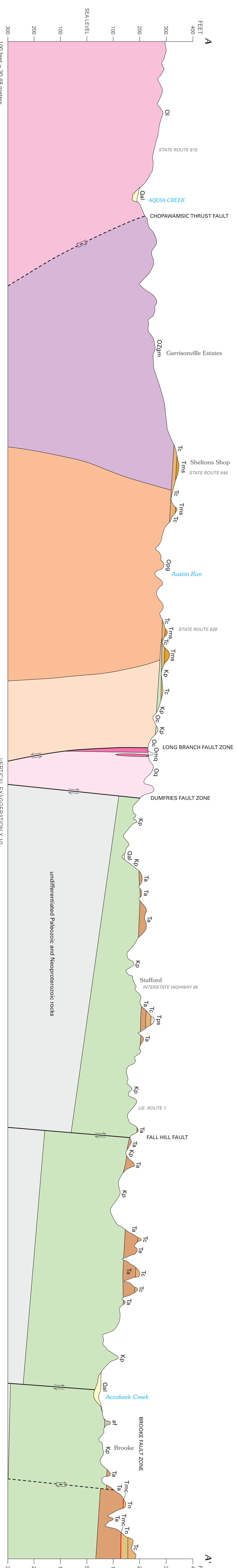
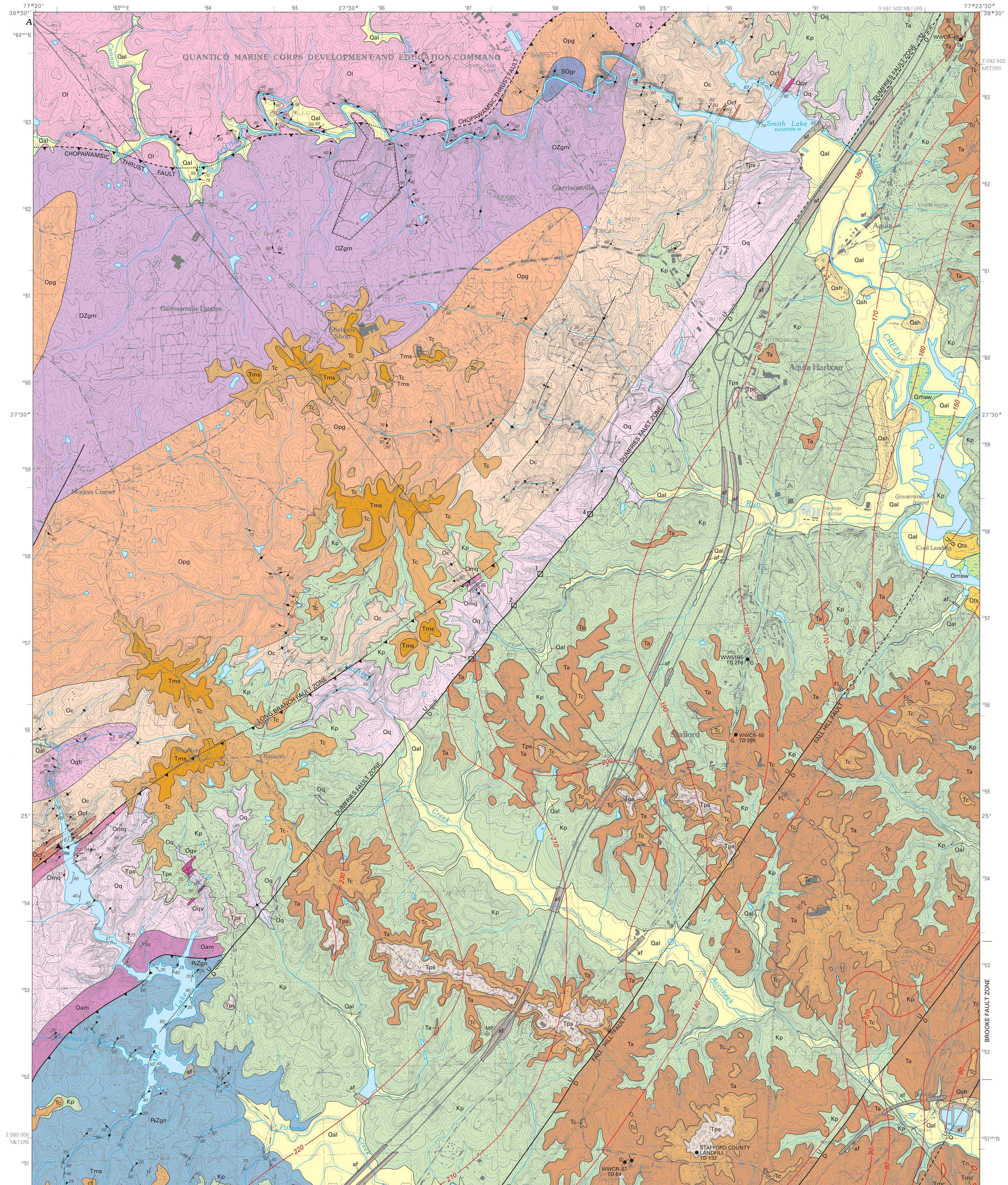
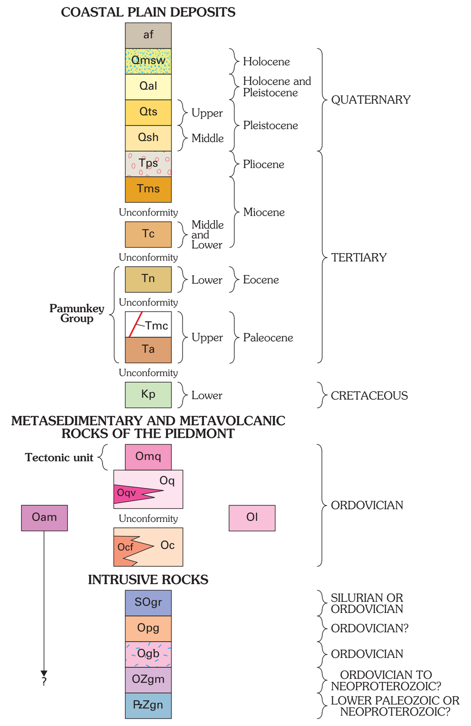




CORRELATION OF MAP UNITS



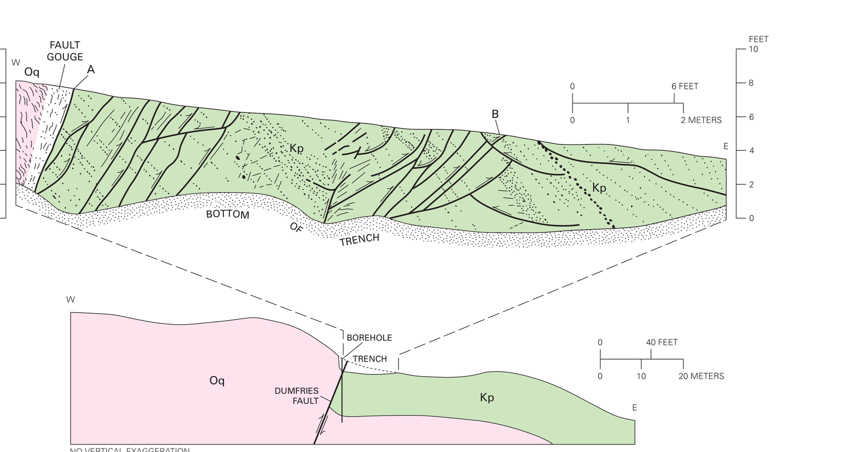


Figure 2.—Trench profile and section across Dumfries fault zone near Stafford, Va. A, Main fault surface and shear; B, Episodic reverse faulting, slumping, and sedimentation. The location of this section on the map is indicated by the [1]□ symbol.

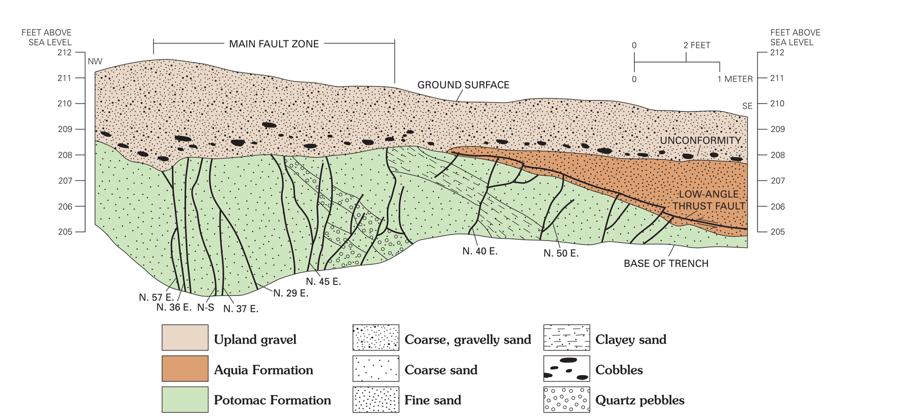


Figure 3.—Sketch of south wall of trench across Fall Hill fault, Falmouth, Va., approximately 2 mi south of Stafford quadrangle. Modified from Potomac Electric Power Company (1976). Nearby outcrop and borehole data show that the same high-angle reverse and vertical faults shown here, offset top of basement rock by as much as 120 ft.

DESCRIPTION OF MAP UNITS

Ta — **Aquia Formation (upper Paleocene)**—Glauconitic quartz sand, fine to medium, variably clayey and silty, thick- to very thick bedded or massive, sparsely to abundantly shelly. Fresh exposures are light olive gray to dark olive gray, olive black, and greenish black; weathers to yellowish gray, grayish yellow, grayish orange, and reddish brown. In

EXPLANATION OF MAP SYMBOLS

Contact—Dotted where concealed

Structure contour—Drawn at the base of the Aquia Formation. Contour interval 10 ft

FAULTS

Fault—Sense of displacement not known

DISCUSSION

indicates that this metamorphism was a late Paleozoic (Alleghanian) event (Sutter and others, 1985).

STRUCTURES OF THE PIEDMONT

Folds and Minor Structures

An overview of the structural geology, including foliations, lineations, and small folds, as well as regional folds and faults, is provided by Pavlides (1995, 2000). The

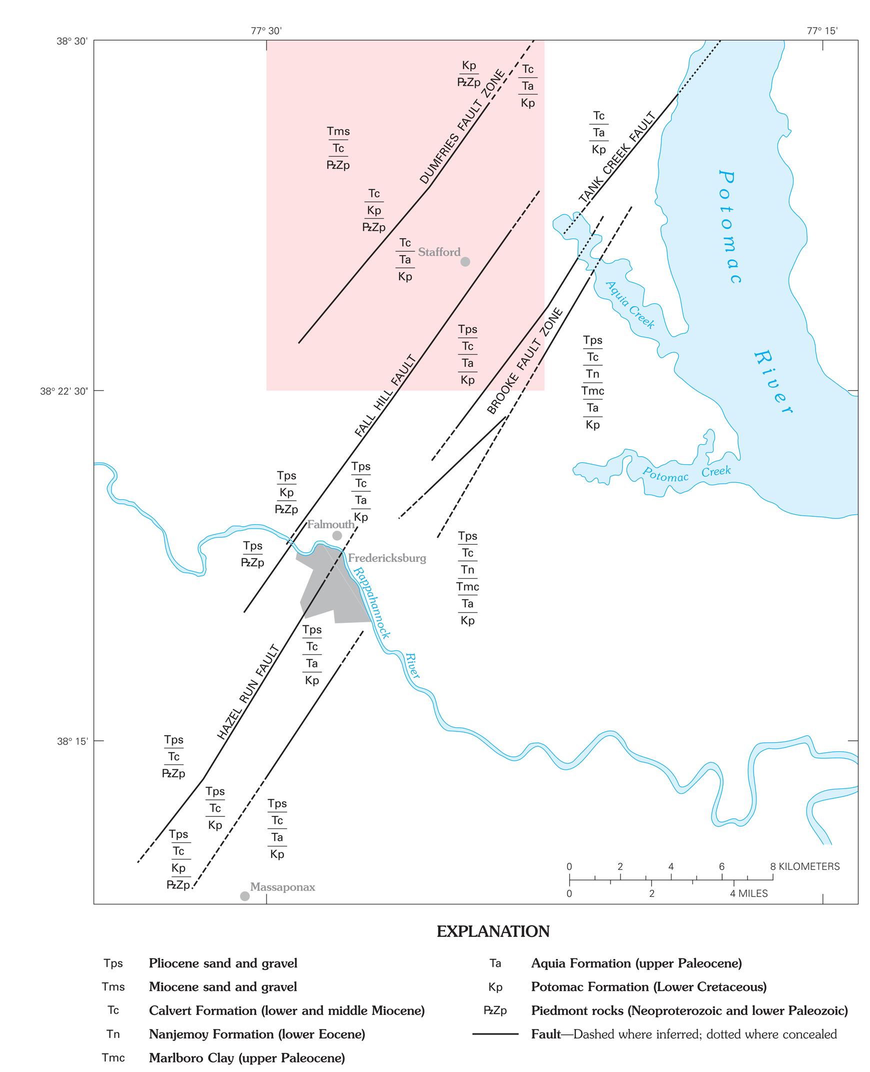


Figure 1.—Variation in stratigraphic section across structures of Stafford fault system as observed in outcrop. Down-to-the-coast displacement of Coastal Plain beds by high-angle reverse faults preserves thicker and more complete sections on the southeastern side of structures. Conversely, on the relatively upthrown, northwestern side of faults, westward onlap by marine formations (Aquia and Calvert) has resulted in sharp truncation of older strata. Southwest-northeast differences in stratigraphic section reflect varying amounts of displacement along structural strike and relief on unconformities. Stafford quadrangle is shown in red.

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GEOLOGIC MAP OF THE STAFFORD QUADRANGLE, STAFFORD COUNTY, VIRGINIA

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2005

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