Merguerian, Charles; Baskerville, C. A.; and Okulewicz, S., 1982, Cameron's Line in the vicinity of New York City.

Urban field mapping in New York City from Westchester County to Staten Island indicates that Cameron's Line, a synmetamorphic fault, separates contrasting metamorphosed Cambrian and Ordovician lithofacies. Throughout northwest Connecticut, Cameron's Line is a mylonitic fault separating the Cambrian-Ordovician eugeosynclinal Hartland terrain in the east from Cambrian- Ordovician rocks of the Waramaug (= Manhattan) Formation in the west. We have located Cameron's Line in an area not previously studied and find that it enters N.Y. City near and roughly parallel to White Plains Road in Bronx County, separating Hutchinson River Group (= Hartland) rocks from N.Y. City Group of Prucha (1956) in the west. About 1.2 km west of Bronx Zoo, in Boro Hall Park, Cameron's Line is an east-dipping fault expressed by a zone of mylonitic schist about 100 m thick separating Hartland gneiss and amphibolite in the east from the Manhattan Schist and amphlbolite. The Line extends southwest forming a ”U” near the Triborough Bridge, then curving around a northeast plunging antiform in the south Bronx into western Queens. Between Long Island City and Astoria, Queens, the Line forms an “S”, the southeast curve of which is interpreted as enclosing the plunging southwest end of the antiform. The Line proceeds south along the east share of the East River cutting across southeast Manhattan Island where the Ravenswood Granodiorite lies east of it. Schist and amphibolite of northwest and west Manhattan are lithostratigraphic equivalents of the Waramaug in probable thrust contact with the Fordham Gneiss-Inwood Marble sequence. This thrust, structurally beneath Cameron's Line, may have scattered serpentinite (ophiolite?) along strike in eastern New Jersey and southwest Manhattan. From lower Manhattan, Cameron's Line trends south toward the Staten Island serpentine; the exact position of Cameron's Line on Staten Island remains speculative. The northeast part of the serpentine has been sheared to form anthophyllite augen schist with porphyroclasts of enstatite and olivine, but the age of shearing is unknown.

To Cite This Abstract: Merguerian, Charles; Baskerville, C. A.; and Okulewicz, S., 1982, Cameron's Line in the vicinity of New York City (abs.): Geological Society of America Abstracts with Programs, v. 14, p. 65.