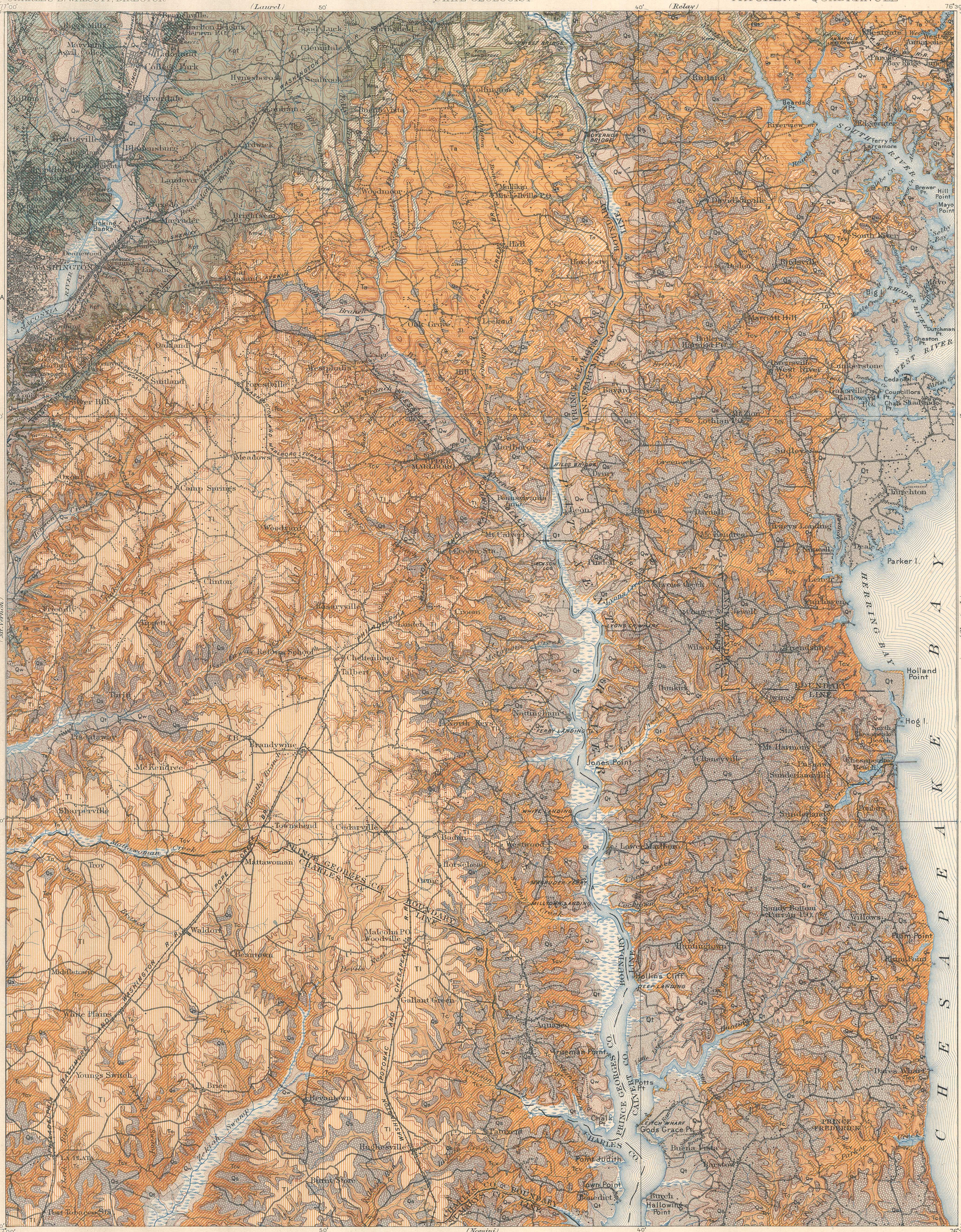
U.S. GEOLOGICAL SURVEY
CHARLES D. WALCOTT, DIRECTOR

AREAL GEOLOGY

STATE OF MARYLAND
WILLIAM BULLOCK CLARK
STATE GEOLOGIST

MARYLAND–DISTRICT OF COLUMBIA
PATUXENT QUADRANGLE



Topography by Coast and Geodetic Survey and U.S. Geological Survey.
Reduced from Washington, Owensville, Brandywine, and Prince Frederick sheets.
Surveyed in 1886, 1890, and 1895-97.

PARTIALLY REVISED IN 1900 AND 1904-1905 IN COOPERATION WITH THE STATE OF MARYLAND.

APPROXIMATE MEAN DECLINATION 1906.

Scale $\frac{1}{125000}$

Contour interval 20 feet.
Datum is mean sea level.

Edition of June 1907

Geology of the Coastal Plain by G.B. Shattuck, B.L. Miller, and A. Bibbins, assisted by M.W. Twitchell and W.D. Neal.
Geology of the crystalline rocks by Arthur Keith.
Surveyed in 1900-1906.

SURVEYED IN COOPERATION WITH THE STATE OF MARYLAND.

LEGEND

SEDIMENTARY ROCKS

QUATERNARY — Pleistocene (Columbia group)

Qt — Talbot formation (*loam, sand, and gravel, with clay lenses and ice-borne bowlders; forms terraces and lowlands from 0 to 45 feet above sea level*)

UNCONFORMITY

Qw — Wicomico formation (*loam, sand, and gravel, with ice-borne bowlders; covers rolling terraces and divides from 40 to 100 feet above sea level*)

UNCONFORMITY

Qs — Sunderland formation (*loam, sand, and gravel; covers terraces and divides from 90 to 200 feet above sea level*)

UNCONFORMITY

TERTIARY — Pliocene ?

Tl — Lafayette formation (*coarse sand, loam, and gravel; covers divides from 180 to 300 feet above sea level*)

UNCONFORMITY

Miocene (Chesapeake group)

Tc — Choptank formation (*fine sand, sandy clay, and shell marl*)

UNCONFORMITY

Tcv — Calvert formation (*blue clay, sandy clay, shell marl, and diatomaceous earth*)

UNCONFORMITY

Eocene (Pamunkey group)

Tn — Nanjemoy formation (*glauconitic sand, pink clay, and shell marl*)

Ta — Aquia formation (*light and dark glauconitic sand and shell marl, in places firmly cemented by iron oxide*)

UNCONFORMITY

CRETACEOUS — Upper Cretaceous

Km — Monmouth formation (*reddish-brown to greenish-black sand with many iron crusts*)

Kmw — Matawan formation (*gray to black micaceous sandy clay carrying glauconite*)

UNCONFORMITY

Kma — Magothy formation (*thinly laminated alternating sand and clay with much lignite and ferruginous sandstone layers*)

UNCONFORMITY

Lower Cretaceous (Potomac group)

Kr — Raritan formation (*variegated clay, sand, and gravel, with some lignite*)

UNCONFORMITY

Kpt — Patapsco formation (*highly-colored variegated clay interbedded with sand and gravel*)

UNCONFORMITY

JURASSIC ?

Ja — Arundel formation (*drab, red, and black clay carrying lignite and iron ores*)

UNCONFORMITY

Jp — Patuxent formation (*light-colored arkosic sand with clay lenses and gravel bands*)

IGNEOUS ROCKS

ARCHEAN — Metamorphic

Ag — Granite gneiss (*including granite, gneissoid granite, and schistose granite*)

Quarries
Clay, gravel, and sand pits

Note—*Building stone is obtainable from the granite gneiss; building sand from all Coastal Plain formations; brick and tile clay and gravel from* Qt, Qw, Qs, Tl, Kr, Kpt, Ja, *and* Jp; *marl for fertilizer from* Tc, Tcv, Tn, Ta, Km, *and* Kmw; *iron ore from* Ja; *and diatomaceous earth from* Tcv.