DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

AREAL GEOLOGY

PENNSYLVANIA–DELAWARE
COATESVILLE QUADRANGLE

(New Holland) (Honeybrook) (Phoenixville)
(Quarryville) (West Chester)
(Havre de Grace) (Elkton) (Wilmington)

EXPLANATION

SEDIMENTARY ROCKS

(Areas of subaqueous deposits are shown by patterns of parallel lines; subaerial deposits by patterns of dots and circles; metamorphism is indicated by hachures)

ORDOVICIAN

Lower Ordovician ?

Oc — Conestoga limestone
(thin-bedded blue to white granular limestone, with micaceous laminations and dark slaty partings; limestone conglomerate at base)

UNCONFORMITY
(EROSION AND OVERLAP)

CAMBRIAN

Middle Cambrian

Ce — Elbrook limestone
(fine-grained earthy laminated white crystalline limestone and dolomite)

Cl — Ledger dolomite
(gray to white pure granular crystalline dolomite and some limestone)

Ck — Kinzers formation
(impure micaceous limestone and mica schist; poorly exposed)

Cv — Vintage dolomite
(dark-blue dolomite with knotty texture due to impurities; poorly exposed)

Lower Cambrian

Ca — Antietam quartzite
(gray laminated quartzite and quartzose schist with ferruginous beds at top; mapped only in northwestern part of area; where present in North Valley Hills mapped with Harpers schist)

Chp — Harpers schist
(gray sandy schist and thin quartzites; overlying Antietam quartzite not generally recognizable and where present in North Valley Hills is mapped with Harpers schist)

Cc — Ch — Chickies quartzite with Hellam conglomerate member at base
(thin-bedded to massive quartzite and quartz schist; thin mica schist and conglomerate, and Hellam conglomerate member, Ch, at base)

UNCONFORMITY

ALGONKIAN ?

Metamorphosed rocks

Glenarm series

pck — Peters Creek schist
(green, finely laminated nonfissile quartzitic muscovite-chlorite schist)

wcs, wms — Wissahickon formation
(in northern part, albite-chlorite schist facies, wcs, in part muscovite schist, south of Peach Bottom syncline, oligoclase-mica schist facies, wms, in part muscovite gneiss and in part biotite gneiss)

cv — Cockeysville marble
(white or light-gray saccharoidal marble)

sr — Setters formation
(buff quartzite and gray biotite-quartz-feldspar gneiss)

UNCONFORMITY

ARCHEAN ?

bgn — Baltimore gneiss
(biotite or hornblende gneiss, a recrystallized sediment, in part massive with little banding; in part graphite-bearing muscovite biotite gneiss, bgg)

IGNEOUS ROCKS

(Areas of igneous rocks are shown by patterns of triangles and rhombs; metamorphism is indicated by hachures)

TRIASSIC

Fdb — Diabse
(granular to fine-grained; generally weathered to small rounded rusty ironstone masses)

PRE-CAMBRIAN

pt — Pegmatite
(coarsely crystalline orthoclase, quartz, and mica; only larger dikes shown)

Metamorphosed rocks

sp — Serpentine
(more or less altered peridotite and pyroxenite; includes some magnesite; intrusive masses and dikes)

gb — Gabbro
(large intrusive masses and dikes)

Fault
T Overthrust side of thrust fault

Active quarry
Abandoned quarry
Sand pit

H. M. Wilson, Geographer.
Frank Sutton and Robt. D. Cummin, in charge of section.
Topography by Robt. D. Cummin and A. C. Roberts.
Control by C. B. Kendall.
Surveyed in 1903–1904.

SURVEYED IN COOPERATION WITH THE STATE OF PENNSYLVANIA.

Pre-Cambrian rocks surveyed by F. Bascom in 1902–1923.
Cambrian and Ordovician rocks surveyed by G. W. Stose in 1922–1923.

APPROXIMATE MEAN DECLINATION 1930

Scale 1/62500

1 0 1 2 3 4 Miles

1 0 1 2 3 4 5 Kilometers

Contour interval 20 feet.
Datum is mean sea level.
Edition of Aug. 1931.