

ECONOMIC GEOLOGY

STATE OF PENNSYLVANIA
DEPARTMENT OF FORESTS AND WATERS
TOPOGRAPHIC AND GEOLOGIC SURVEY
(Newville) 1

PENNSYLVANIA
FAIRFIELD QUADRANGLE

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

EXPLANATION

SEDIMENTARY ROCKS

(Subaqueous deposits shown by patterns of parallel lines; subaerial deposits by patterns of dots and circles)

Qal

Alluvium
(gravel and silt in stream bottoms; only larger areas mapped)

QTt

Terrace gravel and alluvial cones
(gravel, cobbles, and sand on elevated terraces and benches along the larger streams and at the mouths of steep mountain streams)

UNCONFORMITY

Gettysburg shale

(chiefly red shale and soft sandstone; middle part, Helderberg member, Hh, contains numerous hard white sandstone beds; Ardenville conglomerate lens, unsorted fragments of quartzite and metabasalt; Beekmantown (?) member, Bm, at the top in places; shale and sandstone altered to hard white sandstone, shown by red ruling)

UNCONFORMITY

Ob

Beekmantown (?) limestone
(dolomite, impure laminated blue limestone, marble, and earthy gray limestone; may include some unsorted Conococheague or Elbrook limestone of Cambrian age)

INTERVENING FORMATIONS CONCEALED

Ewb

Waynesboro formation
(gray sandstone, dolomite, limestone, and purple sandy shale)

Et

Tomstown dolomite
(coarse gray dolomite, blue limestone, and shale)

Ea

Antietam sandstone
(white scottish-bearing sandstone and vitreous quartzite; usually has fossiliferous beds at top)

Ch

Harpers schist with Montalto quartzite member, Cma
(white quartzite containing scottish tubes interbedded with dark sandy slate and flammie schist or phyllite, chiefly quartzite at north)

Cw

Weverton sandstone
(gray and purple feldspathic sandstone and conglomerate)

Ei

Loudoun formation
(soft purplish argillaceous sandstone and conglomerate and dark banded sericite schist)

UNCONFORMITY

METAMORPHOSED VOLCANIC ROCKS

(shown by patterns of triangles, rhombs, and hachures)

Amb

Metabasalt
(basalt flows, altered to schistose greenstone and epidote rock)

Arb

Rhyolitic breccia
(volcanic fragmental material, chiefly coarse but includes some fine whetstone)

Arh

Aporhyolite
(rhyolite flows altered to purplish felsitic rock)

Asq

Sericite schist and vein quartz
(white, greenish, and red fine-grained schist, probably altered tuff, called "suspense")

IGNEOUS ROCKS

(shown by patterns of triangles and rhombs)

Rdb

Diabase
(sills, irregular intrusive masses, and dikes)

Faults

(dotted where concealed)

T Overthrust side of thrust fault

Direction of movement of shear fault

D Downthrown side of normal fault

U Uphrown side of normal fault

S Strike and dip of stratified rocks

Strike of vertical bed

Strike and overturned dip

Quarries and mines

Prospects and abandoned quarries and mines

ECONOMIC DATA

Magnetite

(solid color, area in which magnetite has been mined; ruled pattern, area in which magnetite may occur at depth)

Brown iron ore, white paper clay, and building sand

(area in which deposits of these materials probably occur)

Building sand and quartzite building stone

(area in which deposits of these materials occur)

Greenstone and copper

(granulated greenstone is used in manufacture of artificial slate; ruled area is copper-bearing and has been prospected for copper)

Garnet abrasive

(solid color, area in which considerable garnet occurs; ruled pattern, area in which garnet may occur)

Vein quartz

(only the more prominent veins mapped; the best rock has been used for tiles and pottery)

Sericite schist

(probably suitable for brick clay and possibly for paper clay and slate; also a possible source of potash)

Diabase foundation stone

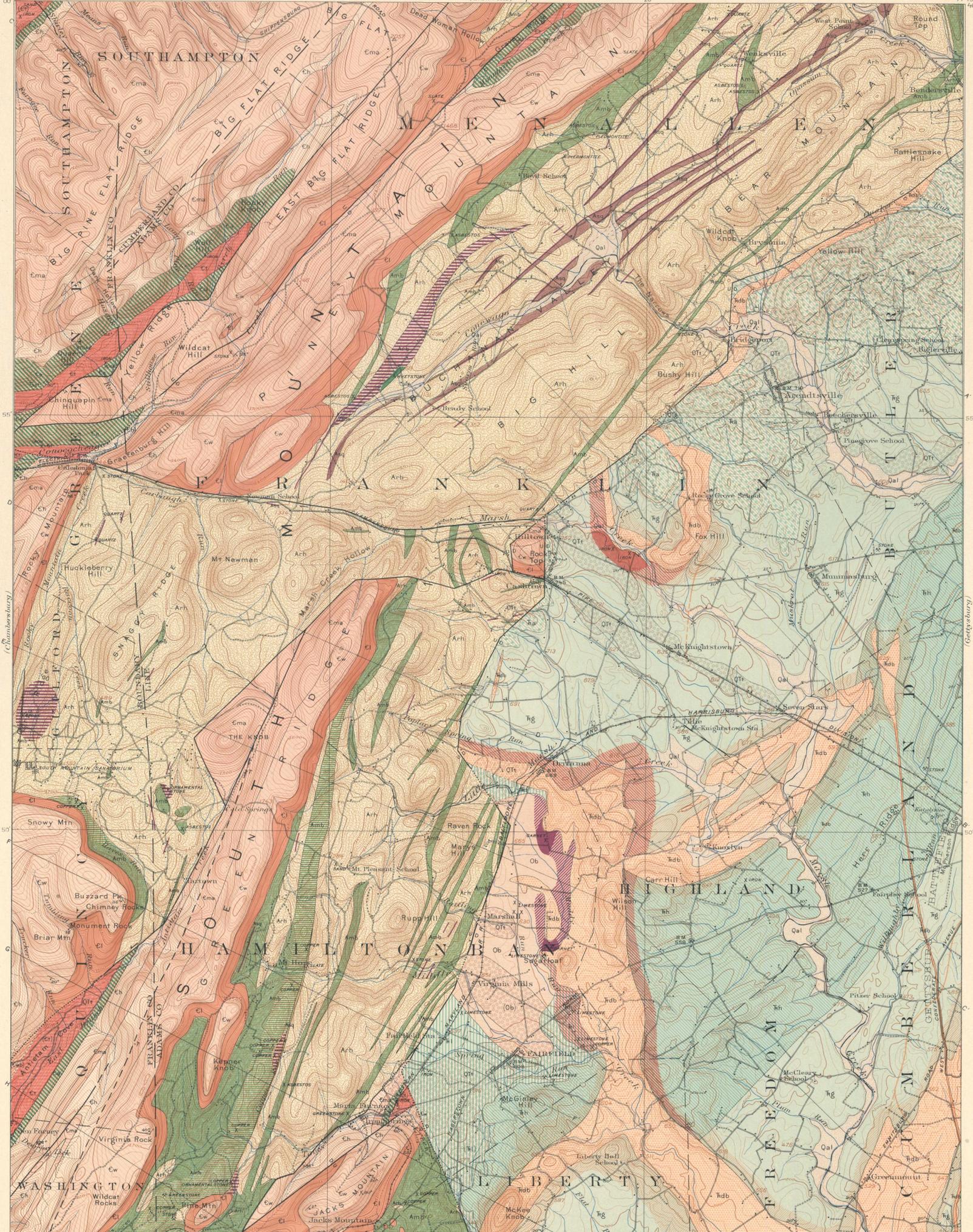
(area in which foundation stone, road material, and possibly building stone may be obtained)

Monumental stone and arts-and-crafts jewelry stone

(altered rhyolite and basalt of pleasing color and fine grain, which take a high polish)

Whetstone

(fine siliceous rhyolite tuff, used for whetstones)



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Frank Sutton, Geographer in charge.
Topography by Hershey Munroe and Second Geol. Survey of Pennsylvania (A. E. Lehman).
Control by Geo. T. Hawkins and H. M. Gillman, Jr.
Surveyed in 1885 and 1908.
SURVEYED IN COOPERATION WITH THE STATE OF PENNSYLVANIA.

(Emmitsburg)
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Contour interval 20 feet.
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