

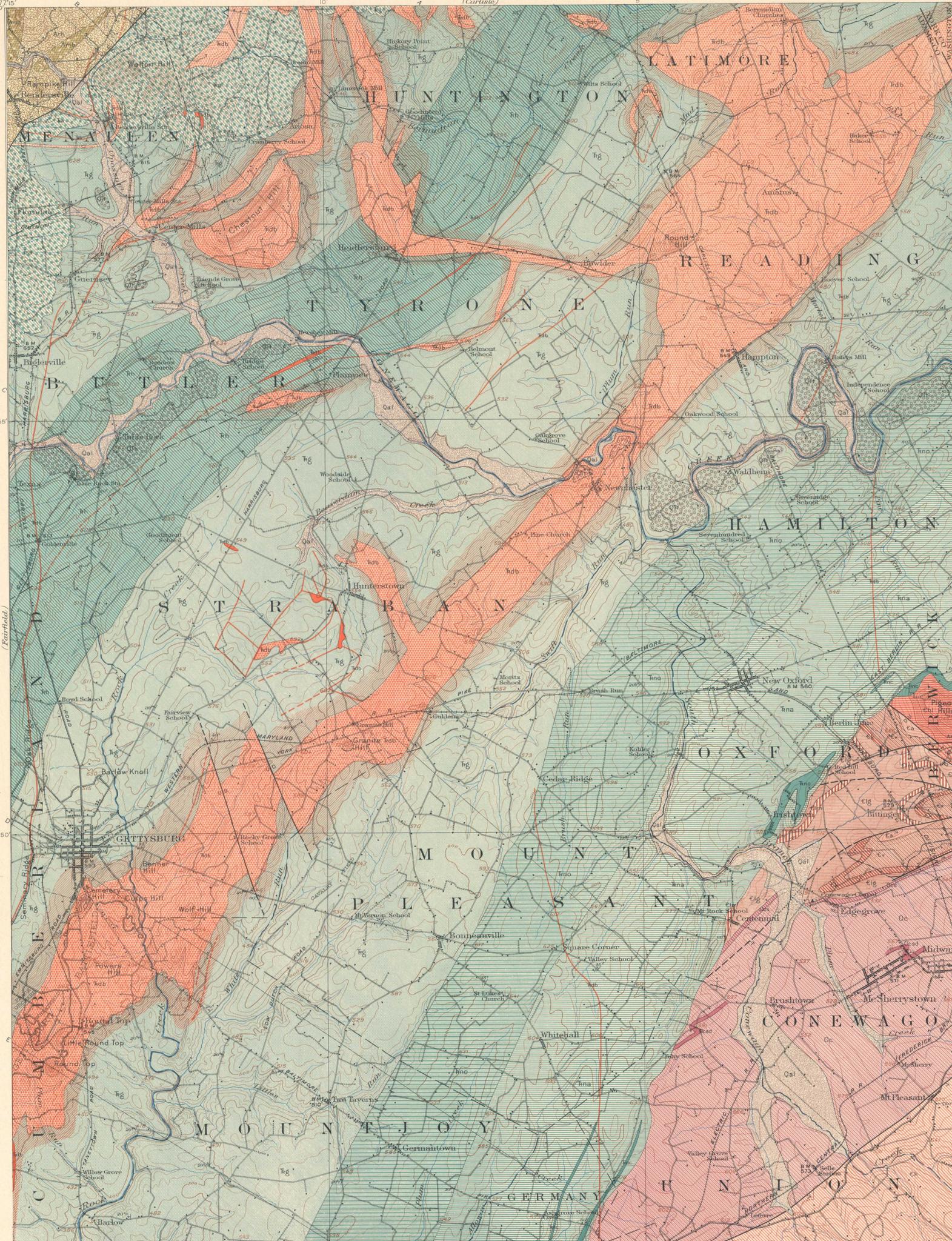
AREAL GEOLOGY

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

DEPARTMENT OF GEOLOGY
OHIO STATE UNIVERSITY

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

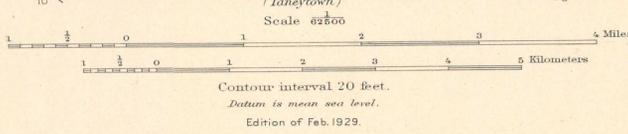
PENNSYLVANIA
GETTYSBURG QUADRANGLE



EXPLANATION

- SEDIMENTARY ROCKS**
(subaqueous deposits shown by patterns of parallel lines; subaerial deposits by patterns of dots and circles)
- Recent**
 - Qal Alluvium (gravel and silt in stream bottoms; only larger areas mapped)
 - Qt Terrace gravel (gravel, silt, and sand on elevated terraces and benches along the larger streams)
 - UNCONFORMITY**
 - Upper Permian (New Cambrian)**
 - Fg Gettysburg shale (chiefly red shale and soft red sandstone; middle part, Helderberg member, Ft, contains numerous harder white sandstone beds; Arundelville conglomerate (entirely unweathered) fragments of quartzite and metabasite, etc., at the top in places; shale adjacent to intrusive dikes metamorphosed to hard dense dark purple and black argillite and red sandstone altered to hard white argillite, shown by red ruling)
 - Lower Permian (New Cambrian)**
 - rno New Oxford formation (red shale and sandstone with beds of hard light-colored micaceous sandstone and conglomerate; lower part, Ft, consisting of many interbedded layers of light-colored, micaceous argillite, and thin beds of quartzite conglomerate, etc.)
 - UNCONFORMITY**
 - Lower Ordovician**
 - Oc Conestoga limestone (thin-bedded, impure, blue limestone; dark argillaceous shale and earthy gray sandstone, Oca at base; sandy beds weathering to sand, Ocsd)
 - UNCONFORMITY**
 - Probably equivalent to Transylvanian dolomite**
 - Clg Ledger dolomite (coarse gray pure dolomite, with pure white and blue limestone marls, C'm, in places)
 - Ch Kinzers formation (shaly gray shale)
 - Gv Vintage dolomite (dark impure dolomite)
 - Ca Antietam sandstone (rusty banded fossiliferous sandstone, weathering porous)
 - Ch Harpers schist (gray sandy schist and buff-weathering slate)
 - Chl Chickies quartzite with Hellam conglomerate member, Chl (argillite, shale, scudite-bearing quartzite, with basal conglomerate, Chl, of glassy quartz pebbles and grains)
 - UNCONFORMITY**
 - Metamorphosed Volcanic Rocks**
(shown by patterns of triangles, rhombs, and hachures)
 - Algonkian**
 - Amc Metabasalt (basalt flows altered to greenstone)
 - Arh Aporhyolite (rhyolite flows altered to purplish felsitic rock)
 - Late Triassic**
 - IGNEOUS ROCKS
(shown by patterns of triangles and rhombs)
 - Dib Diabase (dikes, intrusive masses, and dikes; one small basalt lava flow, Fb, interbedded in upper part of Helderberg member of Gettysburg shale near Bendersville)
 - Faults**
(dotted where concealed)
 - T Overthrust side of thrust fault
 - D Down-dropped side of normal fault
 - U Up-thrown side of normal fault
 - S Strike and dip of stratified rocks

Frank Sutton, Geographer in charge.
Topography by L.C. Fletcher.
Control by S.S. Gannett, Geo. T. Hawkins, and
Gettysburg Battlefield Commission.
Surveyed in 1906-1907.



Geology by Geo. W. Stose.
Surveyed in 1908-1925.

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