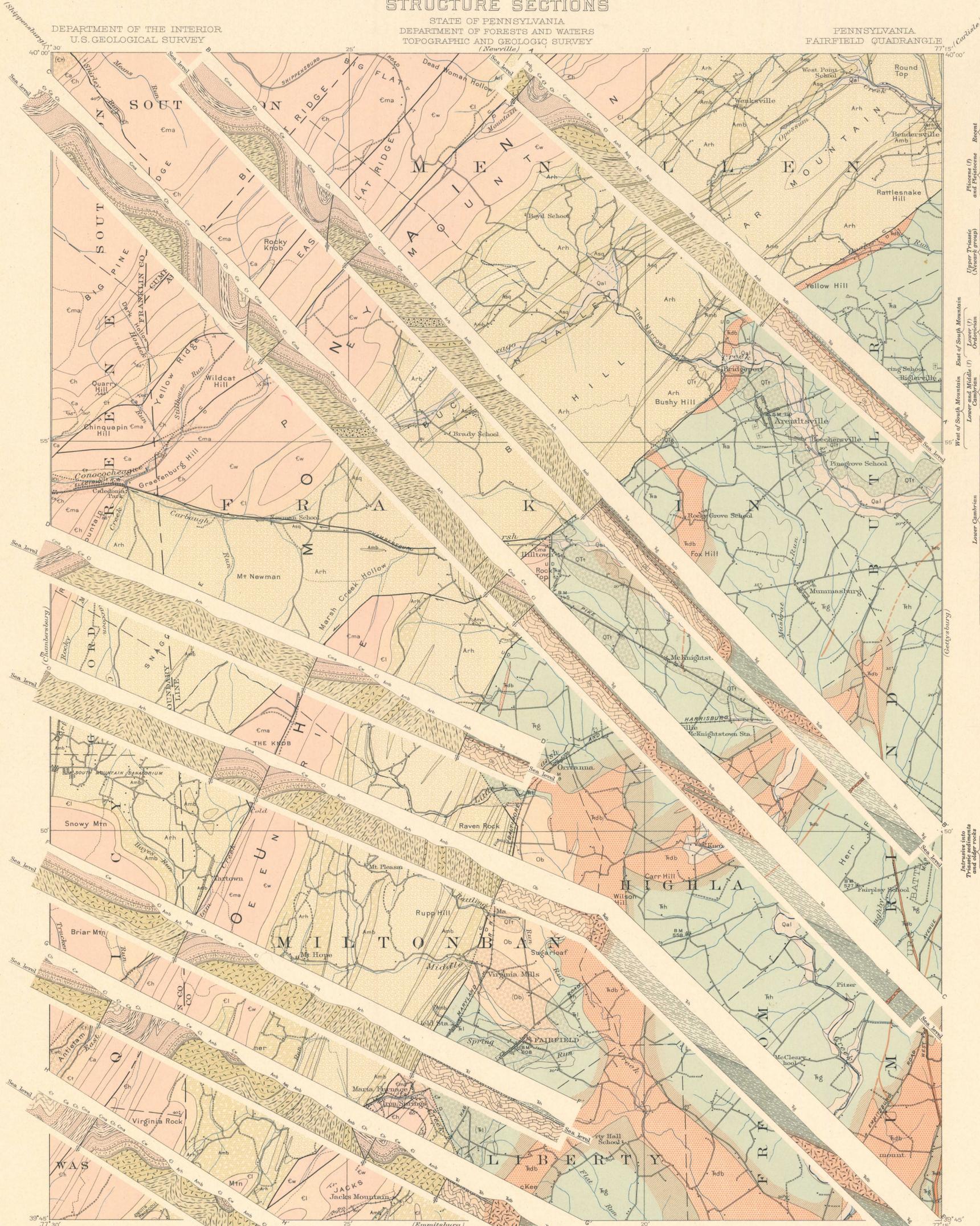


STRUCTURE SECTIONS

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

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

PENNSYLVANIA
FAIRFIELD QUADRANGLE



EXPLANATION

SEDIMENTARY ROCKS

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

Pliocene (?) and Pleistocene
QTf 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)

Upper Triassic (Newark group)
UNCONFORMITY
Gt Gettysburg shale
(chiefly red shale and soft red sandstone; middle part, Helderberg member, sh., contains numerous harder white sandstone beds; Arentsville conglomerate lens, unassorted fragments of quartzite and waterworn, sh. and limestone conglomerate lens, sh., at the top in place; shale adjacent to intrusive dike is metamorphosed to hard dense dark-purple and black crystalline, and red sandstone altered to hard white sandstone, shown by red ruling)

Lower (?) Ordovician
UNCONFORMITY
Ob Beekmantown (?) limestone
(dolomite, impure laminated blue limestone, marble, and quartz gray limestone; may include some unassorted Conococheague or Elvaston limestone of Cambrian age)

Lower and Middle (?) Cambrian
INTERVENING FORMATIONS CONCEALED
Cwb

Lower Cambrian
Waynesboro formation
(gray sandstone, dolomite, limestone, and purple sandstone)

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

Lower Cambrian
Antietam sandstone
(white scottish-bearing sandstone and vitreous quartzite; rusty banded fossiliferous beds at top)

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

Lower Cambrian
Weverton sandstone
(gray and purple feldspathic sandstone and conglomerate)

Lower Cambrian
Loudoun formation
(soft purplish arkosic sandstone and conglomerate and dark banded sericite schist)

UNCONFORMITY METAMORPHOSSED VOLCANIC ROCKS
Amb Metabasalt
(basalt flows, altered to schistose greenstone and epidote rock)

Algonkian
Arb Rhyolitic breccia
(volcanic fragmental material, chiefly coarse but includes some fine shales)

Algonkian
Aph Apophyllite
(rhyolite flows altered to purplish felsitic rock)

Algonkian
Sericite schist and vein quartz
(white, greenish, and red fine-grained schist, probably altered rhyolite)

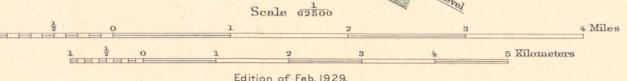
IGNEOUS ROCKS
Rhb Diabase
(sills, irregular intrusive masses, and dikes)

Faults
(dotted where concealed)

T Overthrust side of thrust fault
D Direction of movement of steep fault
D Downthrown side of normal fault
U Upthrown side of normal fault
S Strike and dip of stratified rocks
S Strike of vertical bed
X Strike and overturned dip

R.B. Marshall, Chief Geographer.
Frank Sutton, Geographer in charge.
Topography by Hersey 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.

APPROXIMATE MEAN DECLINATION 1929.



Scale 1:25000
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Geology by Geo. W. Stose and F. Bascom.
Surveyed in 1909-1925.