

GEOLOGIC STRUCTURE

STATE OF PENNSYLVANIA
TOPOGRAPHIC AND GEOLOGIC SURVEY COMMISSION
JOSEPH N. FEW, CHAIRMAN
(Patterson)

PENNSYLVANIA
EBENSBURG QUADRANGLE

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



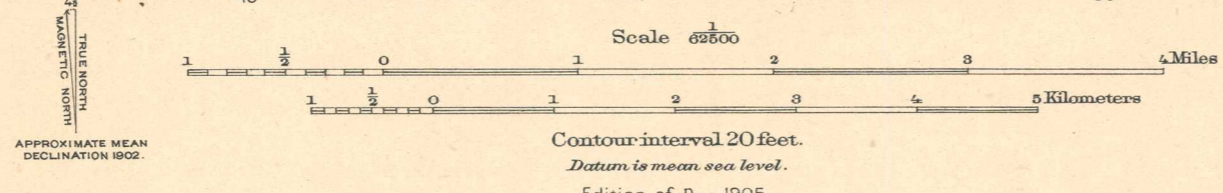
LEGEND

SEDIMENTARY ROCKS

RECENT	PENNSYLVANIAN	MISSISSIPPIAN	DEVONIAN
<p>Quaternary</p> <p>Recent</p> <p>Alluvium (in flood plains of present streams)</p>	<p>Monongahela formation (shale and thin sandstone)</p> <p>Conemaugh formation with Saltsburg, Ebensburg, Summerhill, and Wilmore sandstone lentils (principally gray sandy shale with sandstone beds, Ccb, Ccb, and Cw respectively)</p> <p>Allegheny formation (shaly gray and dark clay shales with beds of coarse gray sandstone, locally shaly, and several valuable coal beds; Upper Freeport coal at the top)</p> <p>Pottsville formation (two beds of black bedded sandstone, separated by shaly lentils, usually a thin coal bed)</p>	<p>Mauch Chunk formation (soft red shale in upper part, grayish to gray sandstone, with several heavy bedded sandstone in lower part)</p> <p>Pocono formation (principally gray sandy shale and coarse gray sandstone, with several beds of red clay shale)</p>	<p>Carboniferous</p> <p>Devonian</p> <p>Catskill formation (predominantly red shale and red sandstone, with some beds of gray and green shale)</p> <p>Chemung formation (gray and green shale with sandstone layers in lower part; sandstone in upper portion, fossiliferous throughout)</p> <p>Nunda formation (thinly laminated, shaly clay shale at bottom, shaly to gray sandy shale containing thin gray and bluish sandstone layers of reddish rock; fossils rare)</p> <p>Genesee shale (soft black clay shale with limestone nodules; sparsely fossiliferous)</p> <p>Hamilton formation (mostly olive and dark green clay shale and sandy shale, with a few thin beds of gray sandstone; fossils abundant)</p>

Structure contours
(showing the elevation above sea and the top of the Upper Freeport coal. Contour interval is 50 feet up to 2000 feet, 200 feet above 2000 feet. Where the coal has been removed by erosion, the lines are determined by the calculated position of the beds)

H.M. Wilson, Geographer in charge
Control by S.S. Gannett and H.B. Paige
Topography by Frank Burton, R.D. Cummin,
T.G. Basinger, and J.S.B. Daingerfield.
Surveyed in 1901-1902.



Geology by Charles Butts,
assisted by W.C. Phalen,
under the direction of Marius R. Campbell.
Surveyed in 1903.

SURVEYED IN COOPERATION WITH THE STATE OF PENNSYLVANIA.