

LEGEND

SEDIMENTARY ROCKS  
(Areas of subaqueous deposits are shown by patterns of parallel lines; subaerial deposits by patterns of dots and circles.)

- Recent
- Qal Alluvium (in flood plains of present streams)
- Pleistocene
- Qg Glacial gravel (outwash, gravel and silt of Kansan or pre-Kansan age)
  - Qcm Carmichaels formation (gravel and silt of local derivation, Kansan or pre-Kansan age)

- Carboniferous
- Ccm Conemaugh formation (sandy shale and coarse sandstone with a few thin beds of limestone and coal, some red clay shale beds give color to the soil)
  - Ca Allegheny formation and Vanport limestone lentil (shale with thin to massive sandstones and limestone lentils; several valuable beds of coal, fire clay, and iron ore, upper Vanport coal at the top)
  - Cpv Pottsville formation (coarse sandstone or conglomerate sometimes massive, with shale and thin coal seams)
  - Cpo Pocahontas formation (coarse massive sandstone with irregular beds of shale)

- Known productive formations
- Coal outcrops (continuous lines represent coal beds of workable or probably workable thickness; dashed lines, outcrops of possibly workable thickness)
  - Upper Freeport coal
  - Lower Freeport coal
  - Upper Kittanning coal
  - Lower Kittanning coal
  - Brookville coal
- Structure contours drawn on the top of the Vanport limestone lentil (contour interval is 50 feet; datum is mean sea level)

- Mines and quarries
- Coal mines, unless otherwise marked
  - Oil wells
  - Gas wells
  - Dry wells, or product unknown

Sections of numbered wells are shown on well section sheet

OF HORIZON 900  
200' COVER



H.M. Wilson, Geographer in charge.  
Triangulation by S.S. Gannett and E.L. McNair  
Topography by Frank Sutton, R.D. Cummin, and J.D. Forster  
Surveyed in 1901.

SURVEYED IN COOPERATION WITH THE STATE OF PENNSYLVANIA.

APPROXIMATE MEAN  
SEASONAL RAINFALL

Scale 62500  
1 2 3 4 5 Miles  
1 2 3 4 5 Kilometers

Contour interval 20 feet.  
Datum is mean sea level.  
Edition of May 1905

Geology by Charles Butts,  
under the direction of Marius R. Campbell.  
Surveyed in 1902.

SURVEYED IN COOPERATION WITH THE STATE OF PENNSYLVANIA.

MAP # 10367