



LEGEND

WITH DESCRIPTIONS OF THE GEOLOGICAL FORMATIONS AND AGRICULTURAL SOILS

GEOLOGY	PLEISTOCENE	SOILS
Looms, sands, and gravels of river bottoms		Chiefly heavy loams; good corn and grass land
	PERMIAN (?)	
Black shales, with thin beds of coal and limestone; thickness about 400 feet	Dunkard	Thin, oftentimes stony loams; mostly hill pasture land
	CARBONIFEROUS	
Red shales and sandstones	Monongahela	Heavy loams, thin shale soils and sandy soils; mostly hill pasture land; near towns produce good crops of garden truck
	Conemaugh	Thin, stony soils; surface strewn with boulders; hill pastures and forest areas
	Allegheny	Thin, stony soils with surface strewn with boulders; chiefly hill pastures and forest areas, some good fruit lands
Reddish brown shales and sandstones	Pottsville	Thin, rocky soils of mountain top; soil heavy in places, but surface always strewn with boulders; areas mostly forested
Conglomerate	Mauch Chunk	Red, sandy loam; on steep hill-sides, thin soils, mostly forested
	Greenbrier	Shallow, clay loams; not important on account of small extent of formation
	Pocono	Shallow, sandy soils, mixed with fragments of sandstone; areas forest-covered
	DEVONIAN	
	Hampshire	Red, sandy loams, on sandy ridges soils have good body and can be improved; where red shale predominates soils are poor
	Jennings	Light yellowish loams, mixed with fragments of broken shale; fair pasture land, but hard to improve
	Romney	Light loams, filled with fragments of broken shale; soils not naturally fertile, but make fair hill-pasture land
	Oriskany	Grayish, sandy soils; shallow and mixed with sandstone fragments; steep slopes forested
	Helderberg	Strong clay soils; good grass and wheat land; soil poor and hard to improve except where cherty shales come to the surface
	SILURIAN	
	Salina	Red, sandy loams; fair grass and wheat land; soil has good body and can be improved
	Niagara	Yellow, clay loams; fair grass and wheat land; soil poor and hard to improve where shales predominate
	Clinton	Shallow loams, filled with shale fragments; soils light and not easily improved.
	Tuscarora	Grayish, sandy soils; shallow and stony soils of little value; areas mostly forested.
	Juniata	Red, sandy loams; of small value on account of limited extent

PERMIAN (?) AND CARBONIFEROUS

FORMATIONS	MATERIALS AND APPROXIMATE EQUIVALENTS
Dunkard 400 feet	Shales and thin limestones
Monongahela 250 feet	Koonce coal [Waynesburg] Shales and limestones Tyson ("Gas") coal [Senickley] Shale Elk Garden ("Fourteen-foot" or "Big vein") coal [Pillsbury] Sandstone and shales Franklin ("Dirty Nine-foot") coal [Little Clarkburg]
Conemaugh 600 to 625 feet	Shales and sandstone Bakerstown coal [Bakerstown] Sandstones and shales
Allegheny 275 to 300 feet	Thomas ("Three-foot") coal [Upper Freeport] Sandstones and shales Davis ("Six-foot") coal [Lower Kittanning] Shales and sandstones Parker coal [Clarion] Blauvelt coal [Brookville] Westersport ("Two-foot") coal Sandstone Bloomington ("Railroad") coal Shale
Pottsville 450 to 500 feet	Gray sandstone and conglomerates
Mauch Chunk 650 feet	Red shales
Greenbrier 300 to 350 feet	Grayish and reddish limestones
Pocono 400 to 450 feet	Massive gray sandstone

SILURIAN

FORMATIONS	MATERIALS
Salina 625 to 650 feet	Calcareous gray shale
Niagara 250 to 300 feet	Cement beds Red shales and sandstones
Clinton 550 to 600 feet	Blackish shales and bluish thin-bedded limestones Black shales and limestone, and upper iron ore
Tuscarora 250 to 300 feet	Black shale Reddish shale Lower iron ore
Juniata 650 feet	White conglomeritic sandstone Red shales and sandstones

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Surveyed in 1897 and 1898.

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Soils by C. W. Dorsey.
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