

# COLUMNAR SECTIONS

GENERALIZED SECTION FOR THE EBENSBURG QUADRANGLE.					
SCALE: 1 INCH = 500 FEET.					
SYSTEM.	SERIES.	FORMATION NAME.	SYMBOL.	THICKNESS IN FEET.	CHARACTER OF ROCKS.
CARBONIFEROUS	PENNSYLVANIAN	Monongahela formation.	Cm	100	Shale and thin sandstone.
		Conemaugh formation.	Ccm	770	Prevaillingly shale with heavy sandstone strata in lower two-thirds.
		Allegheny formation.	Ca	270	Prevaillingly gray and dark clay shale with beds of heavy gray sandstone locally developed. Valuable seams of coal.
		Pottsville formation.	Cpv	180	Two beds of heavy sandstone, separated by shale, bearing locally a seam of coal.
		Mauch Chunk formation.	Cmc	180	Soft, red shale at top, coarse greenish to gray heavy-bedded sandstone at bottom.
MISSISSIPPIAN	MISSISSIPPIAN	Pocono formation.	Cpo	1080	Prevaillingly gray sandy shale and coarse gray sandstone. Several bands of red shale.
		Catskill formation.	Dck	1900	Predominantly red shale and red sandstone. Probably 80 per cent red. Some bands of gray and green shale.
		Chemung formation.	Dch	2400	Lower 1400 feet gray and green shale with sandstone layers; upper 1000 feet prevaillingly chocolate shale and sandstone. Rather abundantly fossiliferous throughout.
		Nunda formation.	Dn	1600	Very thinly and evenly laminated pale-brown clay shale, at bottom merging into greenish-gray, sandy, unevenly laminated shale with thin, fine-grained, gray and bluish sandstone layers above. Bands of reddish and chocolate rock up to 1 foot thick occur at a certain zone in upper half. Very sparingly fossiliferous throughout. Minute forms occur characteristic of western Nunda ("Portage") rocks only.
		Genesee shale.	Dg	60	Very soft, black clay shale with limestone nodules; sparingly fossiliferous.
DEVONIAN	DEVONIAN	Hamilton formation.	Dh	1800	Mostly olive sandy and clay shale, frequently with characteristic fracture across lamination planes. Thin, very evenly bedded, and jointed gray sandstone layers. Fossils fairly abundant; characteristic Hamilton forms.

DETAILED SECTION OF CARBONIFEROUS ROCKS OF THE EBENSBURG QUADRANGLE.					
SCALE: 1 INCH = 100 FEET.					
SYSTEM.	SERIES.	NAMES OF FORMATIONS AND MEMBERS.	THICKNESS IN FEET.	CHARACTER OF ROCKS.	
CARBONIFEROUS	PENNSYLVANIAN	Monongahela formation.			
		Pittsburg coal.	2	Occurs only on ridge 3 miles south of Wilmore.	
		Wilmore sandstone.	20-30	Laminated to flaggy and coarse, thick bedded.	
		Summerhill sandstone.	40-60	Laminated to heavy bedded.	
		Ebensburg sandstone.	40-50	Coarse grained, locally conglomeratic and massive.  Red shale (local).	
		Saltsburg sandstone.	40-60	Evenly bedded flags.	
		Gallitzin coal.	1-1 1/2	Generally thin.	
		Mahoning sandstone.	0-90	Generally heavy bedded, in places conglomeratic; sometimes in two benches.	
		Upper Freeport coal.	3 1/2-4	Valuable, persistent seam.	
		Freeport limestone.	0-12	Locally developed; of little value.	
		Lower Freeport coal.	0-2	Generally thin.	
		Upper Kittanning coal.	2-5	Only locally developed; generally worthless.	
		Llanfair sandstone.	40	Coarse gray sandstone.	
		Middle Kittanning coal.	0-2 1/2	Not persistent.	
		Lower Kittanning (Miller or B) seam.	1 1/2-5 3 1/2-4	Thin coal overlies Lower Kittanning seam; persistent. Persistent and valuable.	
MISSISSIPPIAN	MISSISSIPPIAN	Clarion sandstone.	40	Locally developed, coarse, conglomeratic. Thin, not persistent.	
		Clarion coal.	1-5	Persistent seam; poor quality.	
		Brookville coal.	15-4	Coarse, thick bedded. Coal generally worthless, locally minable.	
MISSISSIPPIAN	MISSISSIPPIAN	Homewood sandstone.	100+	Coarse, heavy bedded.	
		Mercer coal, clay, and shale.			
MISSISSIPPIAN	MISSISSIPPIAN	Connoquenessing sandstone.			
		Mauch Chunk formation.			
MISSISSIPPIAN	MISSISSIPPIAN	Loyalhanna ("Siliceous") limestone.	40-60	Heavy bedded and siliceous; characteristically cross-bedded.	
		Burgoon sandstone.	300	Coarse, heavy bedded.	
		Patton shale.	40	Red shale below Burgoon sandstone.	

CHARLES BUTTS,  
*Geologist.*