COLUMNAR SECTION

GENERALIZED SECTION FOR THE KITTANNING QUADRANGLE. SCALE: 1 INCH = 100 FEET.								
SYSTEM.	SERIES.	FORMATION NAME.	Symbol.	COLUMNAR SECTION.	THICKNESS IN FELT.	NAMES OF MEMBERS.	CHARACTER AND DISTRIBUTION OF MEMBERS.	GENERAL CHARACTER OF FORMATIONS.
	PENNSYLVANIAN		(Cam)			Ames ("Crinoidal") lime- stone.	Grayish-green, fossiliferous limestone, 2 feet thick. Hills north of Slate Lick.	
		Conemaugh formation.	Ccm (Csb)		400+	Saltsburg sandstone. Bakerstown coal.	Red shale. Hills northeast of Slate Lick. Coarse, thick-bedded sandstone. Excellent quarry rock. Hills in southwest corner of quadrangle. Thin and worthless. Southwest corner of quadrangle. Red shale.	Chiefly shale of clayey or sandy composition, with thick coarse sandstones and thin coal seams and limestone.
				WWW.	(0-50)	Brush Creek coals. Mahoning sandstone. Upper Freeport coal. Fire clay. Upper Freeport limestone.	Generally thin and worthless, associated with bed of black shale. Underlying limestone rarely found. Occurs in south half of quadrangle. Often coarse and thick-bedded or massive; sometimes a thin bed of finegrained flags. Generally present in some form. Generally present and of minable thickness. Thin and poor occasionally. Usually plaster, rarely flint; probably always present under coal. Hard blue limestone.	
EROUS		Allegheny formation.			(0-20)	Upper Freeport Innestone. Upper Freeport sandstone. Lower Freeport coal. Lower Freeport limestone. Lower Freeport sandstone. Upper Kittanning coal.	Hard file limestone. Coarse, heavy-bedded sandstone, rarely present. Generally thin. Valuable seam along Glade Run. Thin and rarely present. Generally flaggy and coarse, and heavy-bedded near Fosters Mills. Generally thin and worthless; locally thick and valuable.	
CARBONIF			Ca (Cv)	wH(W)	(0-2) 340-360 (3-4)	Middle Kittanning coal. Lower Kittanning coal.	Not known to be of minable thickness in the quadrangle. Present throughout quadrangle so far as known. The most valuable coal in the area. Underlain by thick, valuable fire-clay.	Shale with heavy beds of sandstone, beds of limestone with associated iron ores, and several valuable coal seams and beds of fire clay. Source of all the valuable mineral products of the quadrangle except oil and gas.
				**************************************	(0-40) (0-20)	Kittanning sandstone. Vanport limestone. Clarion coal. Clarion sandstone. Craigsville coal.	Coarse and heavy bedded. Gray fossiliferous limestone, often cut by Kittanning sandstone. Thin seam of iron ore at top. Generally thin and of little value. Underlain by valuable fire clay. Coarse, massive sandstone, rarely present. Local, 3 feet thick or less.	
				######################################		Brookville coal. Brookville fire clay.	Thin and worthless.	The state of the s
		Pottsville formation.	Сру		120–140	Homewood sandstone. Mercer coals? Connoquenessing sandstone.	Variable. Often partly replaced by shale; rarely coarse and massive. Thin and worthless. Coarse, heavy-bedded sandstone with beds of shale. Exposed along Allegheny River and in vicinity of Craigsville.	Generally heavy-bedded sandstone, often shaly at top and at horizon of Mercer coal.
	MISSISSIPPIAN	Pocono formation.	Сро		200+		Heavy-bedded gray sandstone, found along the gorge of the Allegheny River and along Red Bank Creek.	Mostly a heavy-bedded sandstone to depth exposed in quadrangle, with small coals, accompanied by shale near top. Underlain by an unknown thickness of shale.

STRUCTURE SECTION ALONG THE LINE A-A ON THE GEOLOGIC MAPS.

HORIZONTAL SCALE: 1 INCH = 1 MILE. VERTICAL SCALE: 1 INCH = 1500 FEET.



Ccm, Conemaugh formation; Ca, Allegheny formation; Cv, Vanport limestone lentil; Cpv, Pottsville formation; Cpo, Pocono formation, uf, Upper Freeport coal; If, Lower Freeport coal; uk, Upper Kittanning coal; mk, Middle Kittanning coal; lk, Lower Kittanning coal.

CHARLES BUTTS,

Geologist.