	T	T				COMPOSIT			
YSTEM	SERIES				P, FORMATION, ER, AND BED	LITHOLOGY	THICKNESS OF COAL BED IN INCHES	THICKNESS IN FEET	DESCRIPTION (All coal is anthracite)
UATER- NARY						0 0 0		10+	Alluvium: unconsolidated clay, silt, sand, gravel, and cobbles. Chiefly sandstone, siltstone, shale, and coal: medium-gray, light-gray, and yellowish-brown sandstone, siltstone, and shale prev
			Little Tracy (No. 17) coal bed Tracy (No. 16) coal bed				14-55 30-100	270+	above Holmes coal bed; medium- to dark-gray conglomeratic sands sandstone, siltstone, and shale predominate below Holmes coal Several local coal beds and splits of coal beds not shown.
	and Lower Pennsylvanian Middle Pennsyl- Middle and Upper Pennsylvanian		W.	Little Diamond (No. 15) coal bed			25-70		
			Diamond (No. 14) coal bed			18-154 420- 550 34-74 36-194			
		Pottsville Formation Llewellyn Formation	Little Orchard (No. 13) coal bed Orchard (No. 12) coal bed Primrose (No. 11) coal bed				0.0.00		
						0.00	18-183	220-	
z			Rough (No. 10½) coal bed Holmes (No. 10) coal bed		0.0	0-144 6-156	390	Mammoth coal zone: generally consists of three coal beds, the Top	
PENNSYLVANIAN			Mam Mam	ur-foot (No. 9½) coal bed ammoth Top Split (No. 9) moth Middle Split (No. 8½) moth Bottom Split (No. 8) Skidmore (No. 7) coal bed Seven-foot (No. 6) coal bed Buck Mountain (No. 5) coal bed Little Buck Mountain (No. 4) coal bed		0-180 10-288 8-306	100- 300	Middle Split, and Bottom Split; splits join or divide abruptly; int between Top and Middle splits ranges from 0–50 feet, between M and Bottom splits from 0–70 feet.	
NNSY			ain			12-366 10-168	195- 340 0- 175 275- 390	Chiefly quartz-pebble conglomerate and sandstone: light- to dark-conglomerate grades northwestward to conglomeratic sandstone sandstone; similarly colored thin shale and siltstone units are communities. Chiefly granule and pebble conglomerate, conglomeratic sandstone, sandstone: medium- to dark-gray; thin to thick units of siltstone shale are common. Coal C and Coal A generally thin and lenticular. Chiefly conglomerate, sandstone, and shale: medium-gray to olive-gradually sixty particular and shale sanglement and shale shale sanglement and shale shale sanglement and shale shale sanglement and shale sanglement s	
PE			Tumbling Run Schuylkill Sharp Mount Member Member Member			0-120			
				Coal C— Coal A— Lykens Valley No. 4 coal bed		0-96 0-126			
					0000000	12-150			
						0000000		325-	and yellowish-brown pebble and cobble conglomerate with cobbles much as 5 inches in diameter; similarly colored sandstone, siltstone, shale units and medium- to dark-gray and brownish-gray siltstone shale units are common. Lykens Valley No. 4 coal bed at top.
						0000000			
SYLVANIAN SYLVANIAN	pper Mississippian and Lower Pennsylvanian		Upper			00000000		425-	Transitional sequence comprised of brownish-gray to grayish-red sa stone, siltstone, and shale characteristic of the underlying Mauch Ch Formation, alternating with medium-dark-gray, brownish-gray, and ol gray conglomerate, sandstone, siltstone, and shale characteristic of overlying Pottsville Formation.
SZ			U					500	
MISSI	Upper N Lower					0 . 0 0			
	Upper Mississippian	Mauch Chunk Formation	ar.						Sandstone, siltstone, mudstone, and shale: thin- to medium-bedded, v fine to medium grained, grayish-red and reddish-brown sandstone terbedded with similarly colored siltstone, mudstone, and shale; in so mappable units sandstone predominates, in others siltstone and sh predominate (see map); laminae streaks and very thin beds of greand grayish-green mudrock are common throughout; cross-laminat and crossbedding common; mudcracks, ripple marks, and raindrop is pressions locally abundant. Mostly concealed in northern part of ar sandstone, siltstone, and shale: units of yellowish-brown to olive-g sandstone, siltstone, and shale ranging from 10 to 50 feet in thicknesseparated by thicker units of grayish-red to reddish-brown sandsto siltstone, and shale. Well defined south of map area.
			member					2000-	
			Middle						
		Mai							
IPPIAN			Lower member			2000 feet ±			
SISS									
MISS								425-	
								650	
	Lower Mississippian	uo							Chiefly sandstone: thin- to medium-bedded, very light to medium d gray, medium- to coarse-grained; interbedded with similarly colo conglomeratic sandstone, siltstone, and shale. Mount Carbon and Be ville Members present in extreme southern part and south of map an
		Pocono Formation				0 0 0 0		650- 750	
SISSIPPIAN						0.00			
MISSISS	Devonian and Mississippian			Copf		====		350- 500	Conglomerate: medium-bedded to massive, light-gray to yellowish-broquartz-pebble conglomerate. Unconformity at base. Chiefly sandstone, siltstone, and shale: thin- to medium-bedded, med
AND				Spechty Kopf Member		0 0			dark-gray, yellowish-brown, and light-olive-gray sandstone, siltstone, shale; generally interbedded with grayish-red and reddish-brown satone, siltstone, and shale; basal part commonly light-brownish-gray
DEVONIAN	Upper De Lower M			S		000000			light-olive-gray, quartz-pebble conglomerate.
DE	100								Sandstone, siltstone, mudrock, and shale: thin- to medium-bedded, particles brown to grayish-red, very fine to fine grained sandstone interbedd with similarly colored siltstone, mudrock, and shale; scattered units dusky-yellow and light-olive-gray sandstone, siltstone, and shale whereange from 1 to 150 feet in thickness; sparse, poorly preserved fossil plants. Middle and upper parts mostly concealed.
	Upper Devonian		Catskill Formation			2500 feet [±]		3800- 4500	
				ember					
				Run Mem					
				Buddys R					
				В					
						~~~			
		dno							
		Gr					2400- 2600		Sandstone, siltstone, and shale: thin- to medium-bedded, pale-brown a grayish-red alternating with light-olive-gray, greenish-gray, and yellow brown; red hues predominate in upper part, olive and gray hues in lo part; very fine to fine grained sandstone; sparse plant and marine foss
		Susquehanna		ember					
7		S		Irish Valley Member		1500 feet ⁺			
EVONIAN				Irish V				1-74	
DEV									
									Chiefly sandstone, siltstone, and shale: sandstone, very thin to medi bedded, light-olive-gray, moderate-olive-brown, and dusky-yellow, v fine to fine grained. Siltstone and shale, very thin to thin bedded, oli gray, olive-brown, dusky-yellow, and medium-dark-gray. Sparce t beds of argillaceous limestone; even-bedded, flaggy to blocky; abund marine fossils; flute, groove, and load casts. Basal 50 feet includes Bilier Shale (not mapped separately).
			Sandstone Shale					2600- 2800	
			Rock Sandst rallier Shale			1700 feet±			
			S M			1700 feet			
			Trimmer						
			= 0	12				250	Upper 150 feet: upper shale member; chiefly medium- to dark-gray, s ly calcareous shale interbedded with scattered thin beds of medium
			rre					250	gray siltstone.
	Midăle Devonian		Mahantango Harrell Formation Shale			0 0		250	gray sittstone.  Lower 100 feet: Burket Black Shale Member; grayish-black to black s pyritic; scattered calcareous nodules.

MTCARMEL