

TABLE 1
LONGWALL MINE DATA

Mine Item	Blacksville	Bailey	Dilworth	Enlow Fork	Emerald	Cumberland	Maple Creek	Warwick
Coal Seam	Pittsburgh	Pittsburgh	Pittsburgh	Pittsburgh	Pittsburgh	Pittsburgh	Pittsburgh	Sewickley
Panel width (ft)	700 to 1000	900 to 1200	400 to 750	900 to 1200	800 to 1200	400 to 1000	400 to 900	400 to 700
Panel length (ft)	5000 to 12000	4000 to 12000	2000 to 9000	4000 to 12000	3000 to 10000	3000 to 24000	1100 to 8500	3000 to 7000
Gate width (ft)		150 to 250	70 to 200	90 to 275				
Range in overburden thickness (ft)	630 to 1200 Avg. 800	319 and up	240 to 902 Avg. 600	600 (valley) 900 to 1200 (ridges)	600 to 1010 Avg. 800	540 to 1070 Avg. 800	310 to 710, however it down to 100 feet at stream locations	400 to 960 Avg. 500 to 600
Extraction thickness (ft)	5 to 8 Avg. 6.7	6.5 to 8.5 (continuous) 5.5 to 6.5 Avg. 5.8 (longwall)	6 to 8.5 Avg. 7	6.5 to 8.5 (continuous) 5.5 to 6.5 (longwall)	Coal seam thickness = 4.5 to 7 Avg. 6	6.83 to 7.33 Avg. 6.5 Coal seam thickness = 7 to 8.1	5 to 8 Avg. 5 (longwall) Avg. 6 (development mining avg.)	5 to 7.5 Avg. 5.67 to 6
Reported/estimated subsidence	2 to 4.8		2 to 4.8		3.3 to 3.7			up to 3
Subsidence factor	0.58			0.6	0.54	0.53		
Dip angle (deg)		1 to 2	0.5 to 1	1 to 2	1	0.5 to 1	0.5 (N30E), however it is hard to generalize	
Hard rock %	20 (limestone & sandstone)	40 (limestone & limestone)	36 (limestone and sandstone)	50 (mostly limestone)	22 (limestone and limestone)	25 (limestone and sandstone)	50 (limestone & some sandstone)	11 (limestone and sandstone)
Extraction %	30 to 38 (gate) 50 (protected) 100 (longwall)	30 to 44 (gate) 50 (protected) 100 (longwall)	32 to 38 (gate) 50 (protected) 100 (longwall)	44 (gate) 100 (longwall)	35 (gate) 50 (protected) 100 (longwall)	30 – phase I 80 – phase II (gate) 50 (protected) 100 (longwall)	75 (gate – two phases with pillar removal) 30 to 50 (two phases with partial pillar removal)	30 to 35 (gate) 100 (longwall)
Used angle of draw		15	15	15		15	15	
Available subsidence model	Yes				Yes	Yes		Survey data available after mining in 1992, however, we do not have them
Pillar punching		No	No			No		Limited
Floor heave			Occasional floor heave			Frequently occur	Occasionally 12-inches	
Roof caving height (ft)					3 to 6		Block caving might occur	Limited
Mining period	1977 until now	1986 until now	1984 until now	1991 until now	1982 until now	1981 until now	1980 until now	1992 to 1996

Note: The coal seam thickness and overburden depth for the Eighty-Four Mine, Humphrey No. 7 Mine and Gateway Mines are anticipated to be similar to the adjacent Maple Creek Mine, Cumberland Mine and Dilworth Mine, respectively.