Cross section of gangway ----unnel showing position of intersecting gangwa where projected to the section.

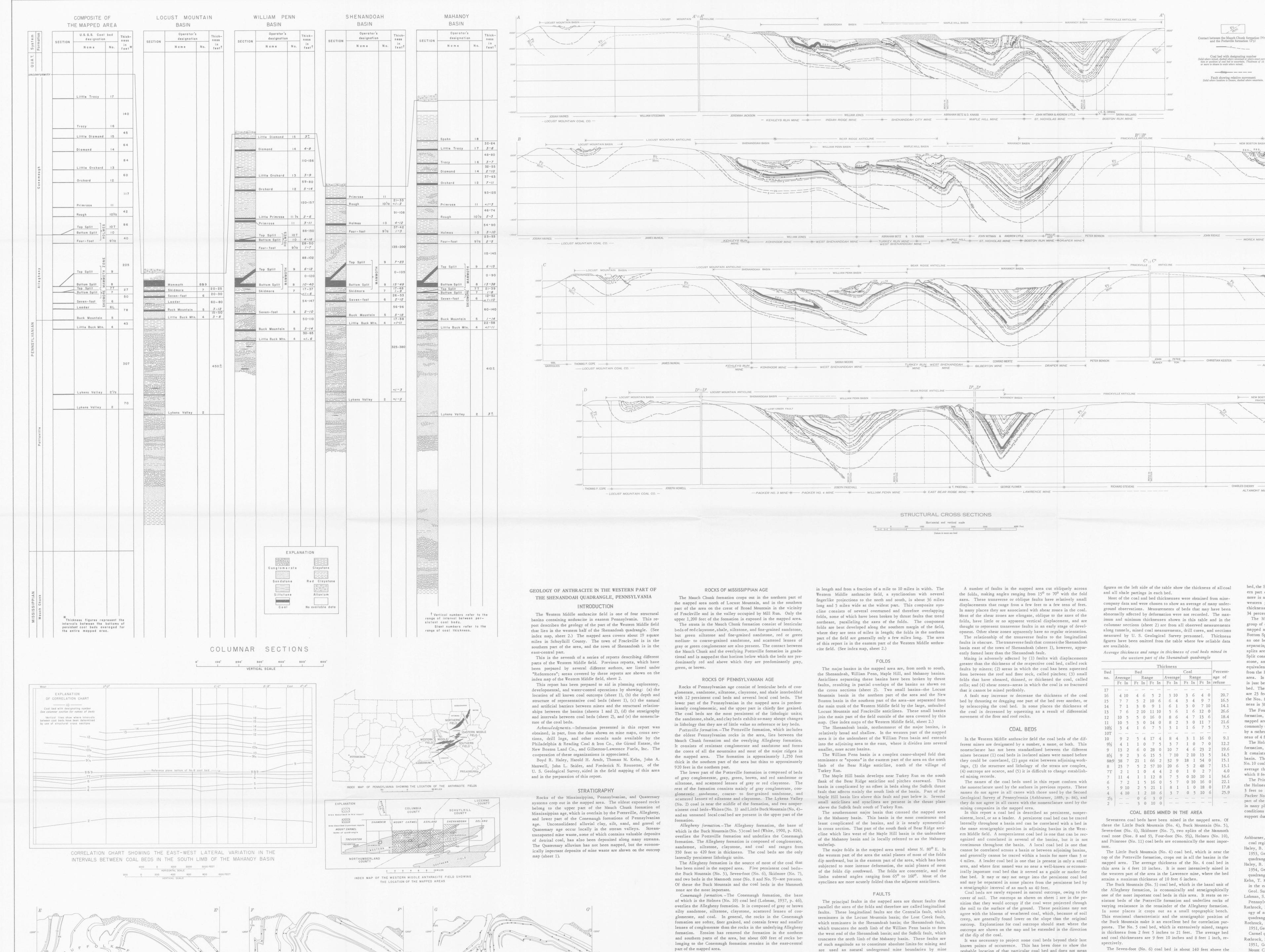
> 6000000000 Mine waste

EXPLANATION

NEW BOSTON BASIN

- ALTAMONT MINING CO.

ALTAMONT MINING CO.



Modified from cross sections prepared by the Philadelphia & Read-ing Coal & Iron Company. Coal bed thicknesses exaggerated.

Eight persistent coal beds are present in the Conemaugh formation in the mapped area. These are the Holmes (No. 10), Primrose (No. 11), Orchard (No. 12), Little Orchard (No. 13), Diamond (No. 14), Little Diamond (No. 15), Tracy (No. 16), and Little Tracy (No. 17). (See columnar section, sheet 2.)

STRUCTURE The anthracite fields of Pennsylvania are northeast-trending

synclinoria or composite synclines that range from 24 to 66 miles

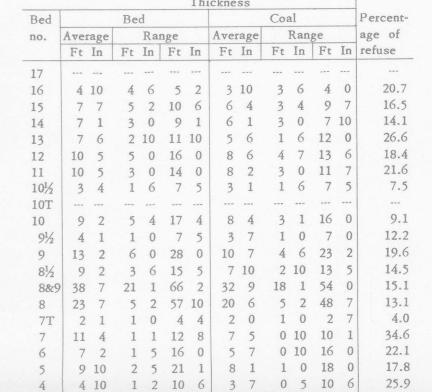
The most persistent longitudinal fault in the mapped area, the Suffolk fault, has a stratigraphic throw of more than 500 feet and locally brings the Pottsville formation over the entire Allegheny formation. Coal beds along this fault have been intensely deformed, as shown in the detailed cross sections on sheet 2, with the result that in some places the coal has been squeezed into relatively thick, irregular pockets, and in other places coal has been dragged out along the fault into thin sheets of shelly coal.

probable location of that particular coal bed and does not mean that the coal is of minable thickness throughout its indicated extent. Local or leader coal beds less than 18 inches thick were not mapped.

THICKNESS OF COAL BEDS Listed below are the average thickness and range in thickness of coal beds in the area covered by this report. Figures on the right side of the table show the thickness of all coal in each bed; figures on the left side of the table show the thickness of all coal

Most of the coal and bed thicknesses were obtained from minecompany data and were chosen to show an average of many underground observations. Measurements of beds that may have been abnormally affected by deformation were not recorded. The maximum and minimum thicknesses shown in this table and in the columnar sections (sheet 2) are from all observed measurements along tunnels, mined coal measurements, drill cores, and sections measured by U. S. Geological Survey personnel. Thickness figures have been omitted from the table where few reliable data

Average thickness and range in thickness of coal beds mined in the western part of the Shenandoah quadrangle



Seven-foot (No. 6), Skidmore (No. 7), two splits of the Mammoth coal zone (Nos. 8 and 9), Four-foot (No. 9½), Holmes (No. 10), and Primrose (No. 11) coal beds are economically the most impor-The Little Buck Mountain (No. 4) coal bed, which is near the top of the Pottsville formation, crops out in all the basins in the mapped area. The average thickness of the No. 4 coal bed in

The Buck Mountain (No. 5) coal bed, which is the basal unit of the Allegheny formation, is economically and stratigraphically one of the most important coal beds in this area. It rests on resistant beds of the Pottsville formation and underlies rocks of varying resistance in the remainder of the Allegheny formation. In some places it crops out as a small topographic bench. This erosional characteristic and the stratigraphic position of the Buck Mountain make it an excellent bed for correlation purposes. The No. 5 coal bed, which is extensively mined, ranges in thickness from 2 feet 5 inches to 21 feet. The average bed

Buck Mountain coal bed in the southern part of the area. The same stratigraphic interval is only about 50 feet in the northern part of the area. Apparently this northward convergence is due to northward thinning of an intervening sequence of conglomerate beds. The Seven-foot coal bed has been mined extensively. The bed, which in many places contains partings of bony coal, ranges from 1 foot 5 inches to 16 feet in thickness. The Skidmore (No. 7) coal bed is approximately 50 feet above the Seven-foot (No. 6) coal bed. A split of the Skidmore coal

bed, the Skidmore Top Split (No. 7T), has been mined in the southern part of the area in the Mahanoy basin. Elsewhere the Skidmore is a single coal bed. It has been extensively mined in the western part of the Shenandoah quadrangle. The average bed thickness is 11 feet 4 inches, of which an average of more than 34 percent usually constitutes waste.

The Mammoth coal zone is economically the most important group of coal beds in the Allegheny formation. Over most of the mapped area the Mammoth coal zone consists of two splits, the Bottom Split (No. 8) and Top Split (No. 9). The splits are mined as one bed where the intervening strata are thin, but where the separating strata increase in thickness as much as 120 feet, the splits are mined separately. In the Shenandoah basin the Bottom Split consists of three units-an upper coal; a middle shale, siltstone, and impure coal; and a lower coal. The middle unit is equivalent to the strata that separate the Middle Split (No. 81/2) from the Bottom Split in the Maple Hill basin, east of the mapped area. In other places in the Maple Hill basin the Middle Split is just beneath the Top Split and the two coals are mined as one

the Nos. 8 and 9 beds have been mined together the average thickness is 38 feet 7 inches. The Four-foot (No. 9½) coal bed, near the top of the Allegheny formation, has been mined at scattered localities. West of the mapped area the coal is generally of poor quality and the bed is commonly too thin to mine. In this area the bed is characterized

bed. The average bed thicknesses of the Nos. 8 and 9 coal beds

are 23 feet 7 inches and 13 feet 2 inches, respectively. Where

by a rather low percentage (12.2) of waste and an average thick-The Holmes (No. 10) coal bed, the basal unit of the Conemaugh formation, is one of the most persistent coal beds in this area. It consists of two splits in the south limb of the William Penn No. 10 coal bed east and west of the south limb of the basin. The average thickness of the No. 10 coal bed is 9 feet 2 inches, of

which 8 feet 4 inches is coal. The Primrose (No. 11) coal bed is approximately 130 feet above the Holmes (No. 10) coal bed. The bed ranges in thickness from 3 feet to 14 feet. It has been most extensively mined in the Packer No. 4, Turkey Run, and Maple Hill mines, in the central part of the area. Coal beds younger than the Primrose are mined in many places but on a smaller scale and under more hazardous conditions because the roofs of these coal beds are difficult to

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support during mining operations.

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CROSS SECTIONS (LOOKING EAST) SHOWING DEFORMATION OF COAL BEDS ALONG SUFFOLK FAULT