some sections transverse to the regional strike, beds are repeated not once only, but again and again: the result is a complex outcrop pattern suggesting, though on a far smaller scale of course, that of the Appalachian Valley. The number of fold axes, too, is far greater than recognized at

Figure 15. Sharp anticline, with northwest overturning, as seen in southwest wall of Lehigh Gap quarry. Width shown about 30 feet.

Bangor and Pen Argyl. In a section along Lehigh River between the first slate outcrops at Slatington and Lehigh Gap, twelve anticlinal axes and eleven synclinal ones are recognized and there are certainly several more which are not exposed. The most prominent and persistent of these are the Prudential, Empire, Cambridge and Eureka synclines which are exposed in or near the quarries after which they are named. The Prudential and Eureka synclines extend completely across the Slatington region.

Individual Quarries in the Slatington District

In “Slate in Pennsylvania” all known quarries in the county are described. It seems inadvisable to republish all of these descriptions but descriptions of certain selected ones are given. All active quarrying is now confined to the Slatington district.

Locke and Royal Blue Quarries. About 8080 feet north of the Slatedale Hotel are four quarries, which are so close together that they are grouped under one number. With respect to each other, they lie along the regional strike. The western is the Locke quarry and the three easterly are generally referred to as the Royal Blue openings.

The Locke quarry is an irregular opening, roughly in the shape of a rectangle with the west corner truncated, and measuring about 50 feet by 350 feet in maximum dimensions. The greater part of the hole is full of water, but in 1927 work was being done along the northwest edge.

Near the southwest corner the beds strike N.65°E., and dip steeply north but along the northwest edge the dip is gentler, here only 52°. Strike and dip of cleavage is N.74°E., 65°S. The inference is that an anticlinal crest lies some distance to the south and a synclinal crest immediately north.

The beds exposed are the Lower and Middle Locke big beds in the southwest part of the opening and the Upper Locke (or Manhattan) big bed on the north piece mentioned. The latter is here about 20 feet thick.