deep quarry between the canal and the Lehigh Valley R. R. This was finally abandoned and the property of the defunct Bonneville Cement Co. along Hockendauqua Creek was purchased. The quarry is about half a mile east of the plant.

The quarry is the deepest one in the district, with a depth of 385 feet. As the quarry face has been advanced eastward the creek has twice been moved, and it is proposed to move it still farther to the east as the quarry is enlarged.

The stone from the quarry is deficient in carbonate so that it is necessary to add high-grade limestone from the Lebanon Valley. At one time a quarry in the Beekmantown limestone in the north part of Catasauqua was operated to supply this additional stone. Inasmuch as the quarry contained interbedded dolomite layers the stone had to be loaded by hand. The dolomite was sold for flux.

This company besides portland cement has long produced Hy-Test Mason Cement consisting of portland cement clinker and natural cement.

The plant has thirteen kilns of different length and diameter.

*Universal Atlas Cement Company.*—The Keystone Cement Co., which was the original company, started operations in 1889 on the west side of the Lehigh River between Coplay and Cementon. The name was changed later to the Atlas Portland Cement Co. and a few years ago to its present name when the company was purchased by the U. S. Steel Co. Its plant has long been the largest in the district.

The company began operations on the west side of the Lehigh River in 1890. In 1895 it purchased property at its present site at Northampton and erected Mill No. 2.

The company at different times has operated several quarries in proximity to the mills and one near Hovertown, but the one now being worked lies north of the State highway to Bath. It covers 80 acres and has a 160-foot face at the highest place. The rock is fairly regular, although crumpled in places, and dips to the north at angles of 20° to 25°. Throughout the cement rock there are occasional lenses of coarsely crystalline high-grade gray limestone from a few inches in thickness up to four feet, containing over 90 percent CaCO₃. This rock when weathered is seen to be composed of fossils, with crinoid stems particularly abundant. Calcite and quartz vein matter is not abundant in the quarry. Because stone as quarried is deficient in carbonates, high-grade limestone is imported from Pine Island, N. Y.

The company has built three different mills at this place and one earlier on the west side of the Lehigh River. Only the latest one,