Available Information

As nearly 50 years have elapsed since the mines were operated practically all the men concerned have passed away. Published accounts by Clerc, Drinker, and Eyerman furnish nearly all the reliable information available. Clerc was an engineer at the mines for several years and was apparently very familiar with them. Several of the photographs reproduced were furnished by him. Eyerman, a local mineralogist, was the authority on the minerals. Drinker limited his observations mainly to the mines and plants. Even though their descriptions are at variance and slightly repetitious at different places, it seems desirable to present considerable portions of their published articles. The writer’s discussions follow these quotations:

Description by F. L. Clerc

The zinc deposits in the Saucon valley, Lehigh county, Pennsylvania, which were once extensively worked, now produce but little ore. Their history, however, has a special interest from their connection with the introduction of speltermaking into this country, and from the fact that they belong to a class of deposits which seems to warrant a belief in their continuance to a considerable depth, and because they are a good illustration of the general effect of the characteristic feature of the ore market above referred to.

Three principal deposits have been discovered, known respectively as the Ueberroth, Hartman and Sauoon mines: they occur in magnesian limestone of the Lower Silurian formation, and have many points in common, while they also present some striking differences. They were all at one time owned or controlled by the Lehigh Zinc Company, whose works were at Bethlehem, four miles distant.

The Ueberroth mine, which is, so far as developments have shown, the largest, was worked continuously from 1853 up to the fall of 1876. It was for many years the main dependence of these works, and produced in the neighborhood of 300,000 tons of ore. The strata of limestone are here very much disturbed and tilted up almost to the vertical, apparently by the obtrusion of the syenite ridge of the neighboring South mountain. The ore came close to the surface, and a very rich pocket was found in the clay above and around limestone boulders, which is estimated to have produced 100,000 tons of ore. When this body of ore was exhausted, the ore was followed down in crevices between the boulders. These crevices lie in planes parallel to the bedding of the limestone, or in planes perpendicular to it, and preserve great regularity in their position, and a parallel course for several hundred yards in a northeast and southwest direction; they are nearly vertical, and at the depth of 225 feet, to which the mine was worked, showed no signs of closing up. The ores at first were exclusively calamine and smithsonite; but at greater depth blende made its appearance, coating the walls of the crevices, and in some cases penetrating into them several feet; in other cases, segregated as rich seams, which nearly filled the cross-openings. At first, it was confined to the northeastern end of the mine; but at the lowest depth reached it could be traced almost continuously to the extreme southwestern end. The dip of the orebody appeared to be regular, and to the southwest. Six of these parallel crevices were worked, and about as many crossings; and where they intersected, rich bunches of ore were found, some of which were as much as 60 feet across and 20 feet thick. All the indications seemed to point with increasing certainty to the existence of a backbone or underlying deposit of blende, out of the reach of the action of meteoric waters, from the continuation of which the oxidized ores have been derived.

Timbering the mine was always a serious difficulty, but the greatest obstacle to be overcome was the water. Even at a depth of 40 feet, the flow was already very strong; at the depth of 150 feet, it was found necessary to put in what was then the largest pumping engine in the world. This