less strong; and in the Saucon mine, the blende is met with at the edge of the pit, and only moderate-sized pumps are required in working it at a depth of 200 feet. That the water in these mines comes from the same surface springs which supply the Saucon Creek, is evident from the fact that, when the big mine was abandoned, this creek shrank at once to a small fraction of its former volume, and only gradually recovered it as the mine filled up. Very careful surveys of the bed of this stream failed to discover any point at which it showed any diminution of its volume or seemed to sink into the ground. It is, therefore, very improbable that the water, having once come to the surface, found its way back into the mine. It was probably tapped in underground courses connected with the springs which give rise to the creek. This is the more probable, as the mine which has the most water is on the highest ground and is farthest from the creek, and the mine having the least water is nearest the creek. It is therefore reasonable to suppose that nearly the maximum quantity of water likely to be encountered was already handled, and that, if a solid body of underlying blende were developed, it could be profitably worked with the machinery already in place. The Saucon mine is still the main dependence of the Bergen Point Zinc Works, but its continued working must be attended with increasing cost and uncertain risks.

The ores of this region are remarkably free from lead, arsenic and antimony, and it is this circumstance that gives them their principal value and interest, and has been the basis of the very high reputation of the metal and oxide obtained from them. Only the richest of the ores are, in the present state of the ore market, available as spelter ores, but even the leanest of the oxidized ores produce a very fine quality of oxide. The blende is very peculiar. It is massive, and rarely shows even traces of crystallization; when pure, it has a bluish slate color, has a very characteristic conchoidal fracture, is translucent on thin edges, and gives a clear ring when struck. As generally sent to the works, it resembles broken limestone; is somewhat mixed with iron pyrites, and assays from 35 to 40 per cent of zinc. It is not easy to concentrate, both on account of its non-crystalline structure and of the pyrite it contains.

The causes which led to the extinction of the Lehigh Zinc Company and the abandonment of the first two-named mines were briefly these; the impossibility of competing successfully in the oxide market with the owners of the big mine in Sussex county, New Jersey, after the expiration of the patents covering the oxide process left them free to take the trade, or in the sheet-zinc and metal market with the western smelters, using cheaper and richer ores, at a time when a general depression of all manufacturing enterprises made it unusually burdensome to carry the heavy bonded indebtedness incurred during a period of high prices and general inflation in acquiring mines and putting up machinery to work them. Under more favorable circumstances, it is probable that these mines could have been profitably worked for years to come; for although the pumping expenses were heavy, they were not excessive, considered as a royalty on the ore, and these charges per ton would diminish in proportion to the amount of ore mined. Now, however, it will probably be left for another generation to discover what value they still have.” (F. L. Clerc, 1883.)

Description by J. Eyerman

As the ore (calamine, smithsonite and sphalerite) in this mine (Ueberroth) is near the surface, it is not, at present, difficult to work. The calamine is found in large quantities disseminated through the limestone. It is found mostly on the north side of the mine, where it is worked by a small force of men.

This mine has furnished, and will continue to furnish, the finest specimens of calamine (or silicate of zinc) known to the world. It is very often found in botryoidal and stalactical forms. It is not seldom that sheets or plates of calamine from two to three feet square and from one-eighth to one-fourth of an inch thick, and containing thousands of little crystals on the surface, are found between the crevices of the limestone. Again, it is