pocket of ore extended upward, overhead stopes were opened. Drifting followed stringers or pockets of ore; when they died out the drifts were run in almost any direction but mainly parallel to the course of the principal bodies where the ore seemed to be so arranged. The ore was trammed to the shaft in wheelbarrows and hoisted in buckets to the surface, where it was washed and prepared for shipment. The power necessary for hoisting, running the washing plant and grinding machinery, and operating the pumps was furnished by a small steam plant. Cornish pumps took water from the mines or near-by wells for washing the ore.

**Preparation for market**

As the ore came to the surface it was mixed with clay, nodules and fragments of limonite, and pieces of chert. The clay could not be removed by washing, but the hard particles could. The common log washers were very effective; the ocher and clay were washed out at the lower end while the hard particles were pushed out at the upper end. Most of the iron ore was picked out by hand and thrown to one side, where it accumulated until there was enough to ship to some near-by furnace.

The ocher and clay were washed into a series of settling troughs, which were inclined slightly so that the water passed through them rather slowly. The current was further retarded by baffleboards, behind which the coarser particles settled. The coarsest sand settled first; the sediment diminished in size in each trough until the last, where the little sand present was extremely fine. Thence it passed to settling ponds formed by digging a few feet in the surface and throwing up excavated material to form an embankment. These settling ponds were roughly rectangular and varied in size, probably averaging about 40 feet in length, 25 feet in width, and 3 to 4 feet in depth. They were frequently arranged in series so that the finest material passed from the first pond into the second. The overflow from the last pond was carried off through a pipe. The material could be graded by turning the best grade of ocher brought to the surface into one pond and that having a large admixture of clay into another pit. When a pond was full the surplus water was allowed to evaporate. Evaporation might require a few weeks to several months, depending on the weather. When the ocher was dry enough to be shoveled readily, it was dug and hauled in wheelbarrows to the drying sheds, where it was placed on long open shelves for final drying. In a few mines steam-drying sheds were used, but most of the ocher was air-dried. From the drying sheds the material either was hauled direct to the railroad for shipment or was ground in French buhr mills and shipped in bags or barrels.

Ocher has been dug from mud-dam deposits where the amount of sand was smallest, and washing was not necessary. In some of these deposits ocher was obtained of almost as good quality as that carefully purified by washing. The ocher, however, is likely to contain more clay and sand than do prepared ochers; washing may then be necessary to remove the sand. Several layers of fairly clean ocher are usually present in extensive mud-dam deposits.

**Descriptions of Individual Properties**

In recent years there has been little production of ocher in Lehigh County so that little can be added to the descriptions published by the writer in 1911 (Miller, B. L., 1911).

**MINE OF THE VICTOR MINING COMPANY, WESCOOSVILLE**

The Victor Mining Company, with offices at 140 Maiden Lane, New York City, and also in Alburtis, opened an ocher mine ¾ mile south by west of Wescosville on the farm of Hiram Hiskey. The shaft sunk during the summer of 1910 was located beside an old open-cut limonite.