portions of the banks show some yellow clay, quartz containing limonitic material, limestone fragments, and a little lump ore. These three pits are very close together, and mines 164 and 161 are separated only by a small wall of clay. Mine 160 has been almost completely filled in, but what is left of it is very similar in all respects to mine 159.

163. Jacob Steiner's and Solomon Kehm's mine.

"The former, which is the most easterly of the excavation, is leased by the Lehigh Iron Co.; the latter, which lies westerly, is leased by the Emaus Iron Co. To the east of the main excavation are two smaller ones, the nearest of which is 30 feet deep and grass-grown, the further one is not worked and there is so much water in the bottom that it is inaccessible. The Emaus Iron Co. are working their portion of the pit. In the extreme west end there is a good body of ore and clay, 20 feet thick, and above it white and pink clay. Near this a very small quantity of pyrite altered to limonite, occurs in the clay, the mineral occurring in small lenticular shaped masses. On the south side there is a great bed of white clay, 6 feet thick, containing no ore, but there is ore underneath it. There are everywhere seams of white clay through the ore. The mine presents a rather favorable appearance, the chief difficulty in working it is the heavy body of clay above the ore which has to be stripped off. The Lehigh Iron Co. are not working their part of the excavation, which on their side is only 20 feet deep. On their side, however, the ore comes within 6 feet of the surface and the white clay within 18 inches. The ore and clay are almost horizontal, but are undulatory, so as to have no very regular dip."

"Lump ore, hard, compact, and tough; carries some particles of quartz and considerable adhering clay."

This pit is now almost completely filled except one end which is covered by grass and brush so that nothing can be seen.

165. Reinhart's mine.

"Leased by the Allentown Iron Co. At the top there are about 5 feet of surface soil, succeeded by brown, drab and white clay with ore, having a depth of about 20 feet. In the centre of the mine the ore looks well in the bottom of the excavation. There is plenty of decomposing damourite slate in the north end of the mine. On the piles of refuse in the excavation there is an abundance of small pieces of slaty limestone, but none could be seen in place. The appearance of this pit is a good one. Adjoining this there is a small pit, 12 feet deep, which contains ore in white clay. This latter is not so extensively opened, nor does it look as well as the former one."

This is a relatively shallow pit covering a large area. Several small mud-dam deposits are present. Fragments of bombshell ore are numerous, some quartz containing limonitic material, silicified limestone, and a small amount of lump ore. Yellow clay makes up most of the dumps.

166. H. and F. Jobst's mine.

"The ore is all wash ore, and is irregularly distributed in the clay in which it occurs."

"Wash ore; rather compact, shelly with a large amount of clay."

This pit, adjacent to mine 165, is much smaller, and is partly covered by trees and brush. Nothing is to be seen.

167. Crane Iron Company's mine.

"At the junction of the road from New Texas to Emaus, and Millerstown to Allentown. The most western of the three openings belonging to this company was not worked, and nothing could be observed. The middle mine