3. J. Ritter's mine.

"Leased by the Crane Iron Co. This pit, while close to No. 185 (4), is apparently cut off from it by limestone, and seems therefore to be more closely connected with the mines to the east than those lying to the west. There is an abundance of black clay (decomposed Utica shale) in the southern portion, which lies directly under the sod on the south side, and a little deeper on the north side. Immediately underneath and, to the east, alongside of this, is an abundance of pinkish and white clay; the pink lying almost entirely under the black, the white more alongside, but also underneath it. The line of demarcation between the black and other clays, is sharply defined by the change of color. While their composition is approximately the same, they do not seem to be altogether conformable, for the black clay has a northwest dip, while the white has a southwest one. Still these dips are not conclusive, since the clays may have been crimped and folded by the erosion of the limestone underneath them."

"The comparative age of these clays, is, however, of considerable importance as bearing on the origin of the brown hematite ores, as there is a bed of this 8 to 13 inches thick, which cuts through both the black and the white clays. If now these two clays, or the rocks from which they were formed by decomposition, are of the same age, this bed of ore may have been formed cotemporaneously with the enclosing rocks; but if they are of different ages, then, of course, the ore must have been formed by subsequent deposition. The mine, when last visited, was being worked into a good condition, and promised to yield a good deal of ore, the openings in the bottom of the mine being favorable, although the amount in sight was not very large."

The Ritter mine is almost completely filled with water. The banks are somewhat grass-grown but show evidence of yellow clay. Quartz, limestone fragments, and lump and fragmental ore are to be found. A dump at the northeast end of mine offers best specimens. Several small dumps are at the northeast and eastern ends of the mine.


"This pit is but a short distance from the last; it is about 70 feet deep. The mine lies directly in the centre of the limestone synclinal mentioned under mine No. 182 (7), and it is very probable that the ore continues from it to mine No. 184 (5). When last visited work had been stopped and the mine allowed to fill with water owing to a difficulty in selling the ore at a remunerative price during the present period of depression in the iron business. When first visited there was a very good breast of ore some 30 or 40 feet thick in the west end of the excavation, the breast consisting almost entirely of pure ore intermingled with damourite slate and clay and more or less allophane. The eastern end is composed of white clay resulting from the decomposition of damourite slate; but it is a subsequent deposit, for that portion of it on which the plane rests and just north of it, shows from the carbonized wood which has been converted to lignite and from the remains of leaves and a small beech-nut (all of which have been found in it) that this portion at least of the clay is of Post-Tertiary age. The superior position of the clay, stratigraphically, to the ore shows the former to be younger than the latter. The mine presents a very favorable appearance in its western portion. Overlying the ore is black clay (decomposed Utica shale), being thickest in its northern portion, that on the south side having been eroded. Overlying this is a little surface soil. The future of this mine is apparently more favorable than those just described, for while there is but little prospect of ore being found to the east, where the limestone cuts it off, or to the south, where it must soon crop out, it is very likely that a good deal of it will be found in the interval of virgin ground between this mine and No. 184 (5). To the northeast trial pits have been sunk, but with no very favorable indications, nor could any other result have been expected, owing to the proximity of the shafts to the limestone."

Characteristics of this mine are typical of those of mines 5, 6, and 7.