## E. J. CHAPMAN ON THE WALLBRIDGE HEMATITE MINE.

have shewn that, both here and in the main pit, the ore is practically exhausted. No. 6, in the annexed sketch-plan, indicates the position of a shaft sunk on this supposed extension to a depth of nearly seventy feet. Drifts were run in an easterly and westerly direction, to a distance of about twenty feet from the bottom of the shaft. These workings were known as the Miller Mine; but in one drift little more than poor, fragmentary ore and iron-stained rock was met with, and in the other the indications were not sufficient to warrant further outlay. No. 7 shews the position of another shaft, sunk (against advice) to about the same depth of seventy feet, immediately north of the Wallbridge pit, on the thirteenth lot of the fifth concession. This passed through some light-grey crystalline limestone and then entered the underlying gnessic strata, meeting only with a small string of hematite, and with little more than traces of amphibolic rock.

A sample of ore taken some time ago from the body of the Wallbridge pit, contained by my analysis 97.18 per cent. ferric oxide, equivalent to 68 per cent. metal, with only 2.78 per cent. amphibolic rock-matter; whilst the best sample that I could get from the bottom of the Miller shaft <sup>1</sup> contained 23.43 per cent. rock-matter with much free silica in it, and a second sample held no less than 29.32 per cent. rock-matter.

As the working of all stock-formed deposits must necessarily be followed sooner or later by the exhaustion of the ore, and as no surface indications will enable one to predict with any certainty the amount of ore present in a stock-formed mass, greater caution than usual is required in handling these deposits. Happily, in the diamond drill, we have the means of testing rapidly and economically the dimensions and general purity of ore-masses of this character. By a few borings put down at short distances beyond the visible or supposed limits of the deposit, and in the central part of the deposit itself, not only can its dimensions be safely ascertained, but the cores of ore brought up by the drill will afford a thorough insight into the character of the deposit, from depth to depth, throughout its entire mass.

<sup>1</sup> At the date of my visit to this so-called mine, the drifts were entirely closed, so that I could not get into them.

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