

DRESSING OF THE SUTTON COPPER ORES AND ASSAYS OF THE  
DRESSED ORES.

In order to ascertain if the poorer ores from the Sutton Mine could be dressed to a higher percentage, I took one pound of the ore, which consisted of interlaminations of copper pyrites and slate rock, reduced it to a powder and sifted it, and then washed it in an ordinary gold pan. This ore was estimated to yield about ten per cent. of copper pyrites, or three per cent. of copper. On washing it, one and a half ounces of washed ore was obtained, or ten and seven-tenths per cent. of ore of copper; and, as proved by dissolving out the ore, and weighing the rock remaining, the washed ore contained fifty per cent. of rock and fifty per cent. of copper pyrites; the copper therefore should be in this fifteen per cent., and by assay I found that it yielded 14.42 per cent. of pure metallic copper. By means of a round Welsh buddle, this ore can be washed to a still higher grade.

A sample of the bucked erubescite, or purple copper ore, from the shaft of the Sutton Mine, was also tried. Four ounces of it were washed to one ounce of very clean ore, which was found to contain 75.7 per cent. of the ore, and 24.3 of rock.

This washed ore yielded 46.02 per cent. of pure metallic copper, and the pure ore, free from all rock, yielded 60.766 per cent. of copper. It is obvious, therefore, that these ores can be easily dressed to as rich a state as the market requires. At the present price of copper ore, five dollars per unit per ton, 14.42 per cent. ore is worth \$72.10 per ton, and 46.02 per cent. is worth \$230.10 per ton.

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