

The first attempt to utilize the Jacksontown ores was made in 1848, after which operations were carried on more or less interruptedly for over twenty years, the average production being 50 tons per week. The ore contains about 36 per cent. of metallic iron, with 1.29 per cent. of phosphorus and a little manganese, the latter giving it somewhat of the character of a natural spiegel. The manufactured metal was of remarkable tensile strength (24.80 tons per square inch), and was for a time used by the British Admiralty in the armor plating of vessels. The mines have, however, long since been abandoned.

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## COPPER

The copper ores of New Brunswick are mainly confined to a series of Pre-Cambrian rocks (chloritic and hydro-mica schists, felsites, diorites, etc.), extending along the northern side of the Bay of Fundy through the greater part of its length. The strata are highly disturbed and altered, the general conditions being very similar to those characterizing the copper bearing rocks of Sherbrooke and other points in the eastern townships of Quebec. The ores are partly chalcopyrite and partly bornite, while malachite also occurs as a secondary product.

### SULPHIDE OF COPPER. (Chalcopyrite)

Letete, Charlotte County.

(Herbert McLean and Chas. E. Starr.)

Mining operations have been carried on at this point at intervals for nearly fifty years, and considerable quantities of low grade ore have been removed. The average yield from the works now in progress, attaining a depth of 375 feet, is from 2.5 per cent. to 5 per cent., but portions of the ore would yield as much as 15 per cent. The ore is chalcopyrite in white quartz, with some calcite, with a large admixture of nickeliferous pyrrhotite. The associated rocks are chloritic slates, felsites and diorites.

### SULPHIDES OF COPPER. (Bornite, Chalcopyrite and Copper Glance)

Simpson's Island, Charlotte County.

The occurrence of the copper ores on Simpson's (and Adam's) Island is similar to that of Letete, except for the presence of bornite and copper glance. Some fine masses of the latter have been removed.