

and six of the first range, and on lot fifteen of the second range of Leeds, as well as lot nineteen of the second range of Thetford, but the quantity and character of the ore are unknown, the locality not having yet been explored.

The more recent developments in connection with the copper ores of the province are taken from the reports of Mr. J. A. Dresser to this department, who devoted several seasons' work to their study over a large area; and from reports by Mr. J. Obalski, inspector of mines for the province.

Recent work
by Prof.
Dresser.

In his report for 1902, Mr. Dresser expresses the opinion that in the area of Cambrian rocks the copper occurs only in, or in close association with, igneous rocks of the district, all highly metamorphosed; that the ore does not occur as true veins, but in rudely lenticular masses, and that many of the rocks, formerly regarded as altered sediments in this association, are really altered volcanics.

In 1903, this view is somewhat elaborated and he says, 'the ore bodies have not been observed to form true veins in any case. In numerous cases they show in surface exposures, the elliptical outlines of much flattened lenses conforming to the foliation of the rock. The walls are not well defined and "horses" and lean ore masses are not infrequent within the larger ore bodies. The largest ore bodies were seen in the Eastis mine, where masses occur which are more than 100 feet in the least dimension, while they generally follow the dip and strike of the foliation which affords a useful means of tracing ore bodies: at times they also cross the plane of schistosity of the country rock at an oblique angle. Then they have more nearly the character of true veins. Such bodies appear to cut the dip more frequently than the strike of the enclosing rock. The lenticular bodies also appear to be frequently arranged in echelon, since the lode, when lost, is most frequently recovered, not by following through the pinched out part along the strike, but by driving at right angles to it.'

Among new properties developed in recent years may be mentioned the following:

Melbourne.

Lot 7, range 1, Melbourne, by Mr. W. F. E. Bowes of Chicago, who opened up a deposit of copper pyrites and bornite in stringers in quartz, by a shaft seven feet and a half square, to a vertical depth of 50 feet, the copper-bearing portion being about a fourth of the width. The copper pyrites was said to yield 24 per cent. of copper and 32 per cent. of sulphur; the bornite 19 per cent. of copper and the same of sulphur with gold reported at \$9 per ton.