

line minerals occur, in which quartz generally preponderates, associated with calcspar, prehnite and native copper. Some specks of native silver sometimes occur in this veinstone. The strike of the bed is N. 30° E., and the dip about 52° north-westward.

Between the Grand Portage and Isle Royale Veins the trap is of the usual character, reddish-grey coloured, with dark-green grains and spots of delessite impregnating it.

The cupriferous bed of the Isle Royale mine is often of a dark-chocolate colour similar to that of the Pewabic lode. In other places it has the character of the Portage lode, being light-green coloured, non-crystalline and with an uneven fracture, but it is comparatively free from amygdules.

Trap, as usual, underlies the Isle Royale Vein, and, with other rocks, fills up the space between it and Mabb's vein which lies about a mile to the south-eastward. One of these is a conglomerate resembling that of the Albany and Boston mine, so far as the nature of the pebbles is concerned. The matrix is very porous, and in coarse grains, which are in places cemented together by quartz as well as calcspar.

Mabb's Vein, upon which mining has also been commenced by the Isle Royale Co., has a matrix of a much more crystalline character than any of the cupriferous beds already described. It is of a dark-green colour, and is impregnated with grains and irregular spots (but not amygdules) of quartz, which is accompanied by epidote and metallic copper. Sometimes, however, an approach to the light-green earthy rock of the Isle Royale vein is noticeable.

A short distance to the east of Mabb's vein another conglomerate bed is found. The pebbles are porphyritic here also, but contain crystals of quartz as well as of felspar, and the paste is difficultly fusible before the blow-pipe, fine splinters of it only becoming glazed. The pebbles do not seem to be so well rounded as in the other beds.

I had no opportunity of examining any of the rocks further eastward, which form the base of the trap formation, but since those already described form part of a series of strata having a vertical thickness of about 10,000 feet, it may be supposed that they afford good average specimens of the whole.

There is probably no one point, even in Europe, where within a limited area, there are to be found such a number of mines, many of them rich, well appointed and well managed; such a display of beautiful mining machinery; or such magnificent stamp-works as