

character to porphyrite. For instance, to the west of the entrance to the harbour on the south side of Michipicoten Island, there is found, forming part of a bed of undoubted compact melaphyre, a rock of a greenish-grey colour, with conchoidal fracture. It had a specific gravity of 2.589, and could only be glazed at the edges before the blowpipe. To the east of the same harbour entrance, another rock occurs intermediate in character betwixt compact melaphyre and porphyrite. It is black, impalpable, with imperfectly conchoidal fracture. It bears some resemblance to pitchstone, but differs from that rock in its specific gravity, which is 2.774, and in being readably fusible to a black glass. It possesses a slightly resinous lustre, and contains an occasional crystal of colourless triclinic felspar. It exhibits planes of separation at right angles, or nearly so with the inclination of the bed, and agate veins are observable, which seem to accompany the divisional joints. This latter phenomenon is also seen in some of the beds of compact melaphyre, and in one of these, curved joints are visible, standing at right angles to the plane of bedding and filled out with calcespar. Brecciated quartz veins occasionally permeate these rocks, and agatic geodes are very frequent among them. The latter are sometimes so frequent as to form amygdaloids, but they are much larger, and never so numerous as are the cavities in the amygdaloids of which delessitic melaphyre is the matrix. There is further this peculiarity with the amygdules of the compact melaphyres, that they contain little or no delessite, agate occupying its place, with occasionally calcespar filling the centre of the geode.

*Tufaceous Melaphyre.*—Interstratified with the rocks above described, and much more frequently associating with, and graduating into the delessitic melaphyres than the other varieties, there are occasionally found beds of comparatively soft, dark brown, porous rock, with almost earthy fracture and seldom destitute of amygdaloidal structure. These frequently carry metallic copper, and constitute the 'ash beds' so extensively worked in the mines of the south shore. Although they are generally of a dark brown or chocolate colour, as in the case of the 'Pewabic lode,' there are rocks of this species which are bluish-brown and green coloured. The matrix is generally fusible, and in places impregnated with grains of metallic copper, sometimes of a very minute size. The larger grains of the metal are frequently found in the amygdules, either alone or accompanied by green-earth, calcespar, quartz, delessite, laumontite, and prehnite. Besides the rounded grains