

The beds appear to strike N.  $8^{\circ}$  E., and dip  $25^{\circ}$  to  $29^{\circ}$  westward. They would therefore seem to be conformable with the sandstone and conglomerate. Further north-eastward the rock becomes more compact, of a reddish-green colour, and exhibits curves of igneous flow. The geodes become much less frequent and consist almost exclusively of agate. The next rock to the north-east is a light red sandstone, striking N.  $65^{\circ}$  W., and dipping  $35^{\circ}$  to  $40^{\circ}$  N. E. Its contact with the trap is not visible, but its dip is such as to lead to the supposition that it has been disturbed by that rock. There is a great thickness of this sandstone exposed here, in strata frequently vertical, striking generally east and west, or to the north of west, and exhibiting dips varying from  $35^{\circ}$  N. to  $57^{\circ}$  S., and at least two anticlinal axes. From what has been stated here and also concerning the south shore of Mamainse, it would appear that there is evidence of the existence of a sandstone of greater age than the bedded melaphyres and conglomerates, and it would appear not unreasonable to suppose that it belongs to what has been called the Lower group of the Upper Copper-bearing series.

The trap rocks which surround the south-west base of Gros Cap, although comparatively seldom amygdaloidal, are readily distinguished as melaphyres. They are sometimes coarse-grained, consisting of reddish-grey felspar, soft dark-green iron-chlorite (delessite), and occasional spots of yellowish-green epidote. From this they graduate into finer-grained varieties, but they very seldom become impalpable, or their constituents altogether indistinguishable. Sandstone was not observed in contact with the traps, but a large mass of quartzose porphyry is seen at a short distance from the shore.

Another large development of traps and sandstones occurs to the north of Pointe-aux-Mines, where an occasional bed of tuffaceous melaphyre is also found.

Besides the rocks above described, there are found on the low ground betwixt Goulais and Bachewahnung Bays, betwixt the latter and Pancake Bay, and on many of the islands of the east shore, large areas of red sandstone, almost horizontal, which are supposed to be the continuation of that occurring at Sault St. Marie, and usually called the St. Peter Sandstone. The true relations of this rock to those of the upper group of the Upper Copper-bearing series have not yet been made out. It closely resembles, in lithological character, the sandstone described above as occurring in almost