

Beauce, contained 13.27 per cent. of silver. The specific gravity of five worn fragments of gold from Rivière du Loup was as follows: 15.76,—16.49,—16.65—17.60,—17.77. The third specimen, after being hammered into a thin plate and annealed, had a specific gravity of 17.024, and gave 13.60 per cent. of silver. The fifth, after a similar treatment, acquired a specific gravity of 17.848, and gave 12.23 per cent. of silver. A third specimen, in fine scales, had a density of 16.57, and contained 10.76 per cent. of silver. It would seem from the variations in specific gravity, that these specimens of native gold were not homogeneous, but were cavernous, and held earthy impurities. An apparently pure fragment, weighing 7.5 grammes, had a specific gravity of 15.76; but by prolonged fusion with nitre and carbonate of soda, it lost 1.76 per cent. of its weight, and acquired a specific gravity of 17.43. In the assays above given the gold was precipitated by oxalic acid from its solutions, which contained, besides, only traces of copper and iron. The pure gold thus separated, after fusion with nitre, had a specific gravity of 18.68—19.94, as determined on two specimens.

A portion of the gold dust from the washings at the Rivière du Loup was subjected to amalgamation, and left one third of its weight of black ferruginous sand, of which eighteen per cent. were magnetic. The non-magnetic portion was rendered soluble by the successive action of hydrochloric acid and fused bisulphate of potash, leaving 4.8 per cent. of silicious residue. From the solutions which contained iron and chromium, ebullition threw down 23.15 per cent. of titanous acid. The liquid was examined without success for tin, uranium, cerium, and the rarer metals, which are sometimes found in the auriferous gravel of other regions. The gold obtained by the distillation of the amalgam lost 4.27 per cent. of its weight by fusion with borax, and the assay of the resulting ingot gave 12.87 per cent. of silver. This gold contained neither copper nor palladium, but a minute trace of platinum.”*

As much uncertainty must exist with regard to the source of the gold, as to the mode of its distribution. Till, in fact, the latter ques-

* General Report, page 520.