

PLATINUM. olent mercury to dissolve any gold that may be present. The platinum left behind is now ready for the market. In its crude state it usually contains from 75 to 85 per cent of pure metal. It is then ready to be sold to the refineries. The bulk of the produce of Russia is exported in the crude state.

Occurrences. In *Colombia*, which is the platinum producer next in importance to Russia, the metal is also recovered by very simple methods. The greater proportion is obtained from the working of the "caliche" beds which are usually ground-slucied. River bars and beds are worked in even a more primitive way; women diving for the black sand and washing it in pans.

Since the foregoing notes were compiled and printed in the Report of the Section of Mines for 1901, a bulletin on 'Geological Relations and distribution of platinum and associated metals,' by Prof. J. F. Kemp, of Columbia University, New York, has been published by the United States Geological Survey and treats the subject very exhaustively. Owing to the importance which the question of the supply of platinum is assuming, it is thought that abstracts of some parts of this bulletin could very appropriately be appended to this article and special attention drawn to the bearing which some of the observations mentioned in the bulletin may have on certain rocks in Canada which might be found on careful search to be platiniferous. Some results have also been given of the analyses of serpentine rocks collected by R. W. Brock in British Columbia and assayed by Donald Locke, both of the Geological Survey of Canada.

Source and associated minerals.

In connection with platinum deposits, many observers have endeavored to trace back to the rock *in situ* the source of the metal found in placers. Minerals associated with the nuggets in the alluvial deposits are therefore important to consider, especially those minerals which are found to actually form part of the nuggets and which are therefore derived from the same source, such as the following, viz: chromite, olivine, serpentine, pyroxene, mica and gold. As to minerals which are present merely as components of the gravels they offer less interest; they are, as a rule, minerals of high specific gravity, and on panning, one may expect to find among them gold, silver, copper, metals of the platinum group, chromite, magnetite, garnet, &c.

Chromite.—Chromite is by far the commonest of foreign minerals found attached to the nuggets. The two minerals seem to have crystallized simultaneously, for they are, as a rule, intergrown so that