where heavy mantles of material lying nearly horizontally effectively protect the underlying rock from the action of the surface waters."[1] The occurrence of the Cuban ores, for the most part, on plateaus presents a difference from that of the nickel ores of New Caledonia which are found on hillsides. Many of the serpentine areas of the latter island are broken and dissected, and the plateau structure is not prominent. Hence there has been more working over of the laterite in this island than in Cuba, and there has been more opportunity for the concentration of the nickel contents, the metal being first leached out by water and then deposited at lower levels on the hillsides. Fissures in the rocks also assist in concentration of the nickel.

In general appearance the deposits of Cuba and New Caledonia present a striking likeness, only chemical analysis brings out the fact that certain of the deposits of the latter island are much richer in nickel than any of those discovered in Cuba, and that they contain a high percentage of combined silica and of magnesia.

Composition of Laterites

Table No. 1 shows the composition of laterites from several countries. It has been compiled from various publications.[2] The analyses of the New Caledonia samples were kindly made for the author by A. L. Clark of Toronto. In certain cases magnesia and other constituents while present have not been determined. Much more complete analyses of the New Caledonia nickel ores are given in table No. 2. This table is of special interest, owing to the content of silica and magnesia of the ores. The composition of the New Caledonia cobalt ores is given in table No. 3, that of the Cuban iron ores in table No. 4, manganese ores of India in No. 5, and bauxite or aluminum ores of Arkansas in No. 6.

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[1] The Residual Iron-Ores of Cuba, A.I.M.E., Vol. XL, p. 310.

[2] Analyses of Cuban samples are taken from publications by Kemp and by Leith and Mead, to which reference is made in this paper; the analysis, India (1), is quoted on a preceding page; that of India (2) is quoted by Clarke, data of Geo. Chem., 3rd Ed., p. 495; that of F. Guinea is from A. Lacroix; those of Borneo and the Philippine Ids. are from Roy. Ont. Ni. Com. Report, pp. 266 and 278.