

Trace elements (REE, Sc, Y) in laterites from Mindoro, Philippines

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The Philippines is one of the world's largest nickel sources from its weathered ultramafic laterites. Aside from Ni (% occurrence), other trace elements were only recently analyzed (REE, Sc, Y) that are not included in ore payments. Some Mindoro laterites were examined by several sample preparation methodologies and ICPMS. The data show a strong correlation of Sc (8-68 ppm) with high Fe occurrence in laterites, also observed elsewhere. Laterite samples also show relative depletion of heavy rare earth elements (HREE) – Dy to Lu, to light rare earth elements (LREE), but whether this is source related or weathering induced is not definitive. The significance for Philippine economic geology is that the low-grade, unmined iron-rich but nickel-poor laterites may actually host significant Sc that could add to the economic viability of these ores.