

**STUDIES ON RESIDUAL SOIL GEOCHEMISTRY IN THE EVALUATION OF
NIOBIUM WITHIN SAMCHAMPI ALKALINE CARBONATITE COMPLEX,
KARBI ANGLONG DISTRICT, ASSAM, INDIA**

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Abstract

The Samchampi Alkaline Carbonatite Complex (SACC), emplaced into the Archean granite-gneisses of Mikir Hills, Assam, hosts significant resources of Nb, Ta and Y associated with carbonatites of upper Cretaceous age (109 Ma). A thick weathering crust of residual soil mantles the complex, covering an area of 16 sq. km. A preliminary reserve estimate in about 11 sq.km of the residual soil of the complex indicates 12,124 metric tonnes (t) of niobium, 2685t of tantalum and 1821t of yttrium.

Keywords: Soil geochemistry, Niobium, Samchampi, Carbonatite, Assam, India