

KOMATIITIC ROCKS FROM THE RIO MANSO REGION, MINAS GERAIS, BRAZIL

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Metamorphosed ultramafic rocks, including komatiites, were studied in the Rio Manso region, Minas Gerais state, Brazil. The central part of the area exhibits a narrow N 150 E trending Archean greenstone belt sequence including komatiite and basaltic komatiite flows, ultramafic rocks devoid of spinifex texture and subordinate iron formation and amphibolites, in contact with a granite-gneiss terrain. Komatiitic rocks are mainly peridotitic komatiites displaying well-developed spinifex texture and subordinate pillow-bearing komatiitic basalts. Ultramafic rocks devoid of relict igneous textures may include an intrusive layered sequence. Metamorphic evolution began with a Mg-chlorite-tremolite paragenesis, followed by the development of orthopyroxene and olivine porphyroblasts in a Mg-hornblende matrix (amphibolite facies) and late-stage serpentinization and talcification. Molecular proportions and litho-geochemistry plots indicate that SiO₂, TiO₂, Al₂O₃, CaO, FeO and MgO were mobilized to some extent during metamorphism of all ultramafic rocks. Non-homogeneity of normalized REE plots and light REE enrichment in meta-komatiites and in ultramafic rocks devoid of spinifex texture are suggestive of their mobility in alteration/metamorphic processes. However, litho-geochemical evidence of olivine and pyroxene fractionation is still discernible.