

PSEUDOKARST FEATURES IN THE LATERITIC COVER OF SERRA DOS CARAJÁS- PARÁ STATE, BRAZIL.

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The thick residual cover of the Serra dos Carajás, was essentially developed on metavolcanics and banded iron formations of the Grão Pará Group of Archean age. This alteration mantle is constituted by ferro-aluminous laterite, hematitic brecciated canga and conglomerate compose of pebbles and angular fragments of these two rock types. After being formed in the end of Lower Tertiary, the duricrust underwent a progressive degradation caused, on one hand, by climatic variations and, on the other, by a slow regional uplifting and the consequent lowering of the base level. While weathering proceeded in depth, intense pseudopisolithization took place in the upper part of the crust and complex anastomosed systems of cracks and tubules developed within this horizon. Also, mobilization and redistribution of Fe and Al in the duricrust yielded the generation of cutans and pockets of ferruginous and aluminous neoformed products. At the interface of the duricrust with the saprolite or within the duricrust, highly porous and permeable "low density zones" appeared as a result of the joint action of Fe and Al-rich "per descensum" percolating solutions and of lateral fluxes of underground waters. The farther evolution of these "low density zones" brought the formation of doliniform depressions and numerous caves.