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**ABSTRACTS OF PAPERS**

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**THE BAUXITES OF THE QUADRILÁTERO FERRÍFERO  
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The "Quadrilátero Ferrífero", located in the south of Minas Gerais State is part of the folded belt of the São Francisco Shield. It is limited mainly by the folds of the Precambrian deposits of the Minas Supergroup, including two groups (Caraçá and Itabira Groups) forming the thick series where are located the large iron ore deposits. Often associated with the iron deposits, occur many bauxite deposits with reserves estimated of ten million tons. We have studied twenty four deposits and despite of their different altitudes they can be classified, according to their facies and their geomorphologic setting, into three types: hill slopes bauxites, depression bauxites and plateau bauxites.

The hill slopes bauxites are autochthonous and developed from the dolomitic schists and sericitic schists of the Gandarela Formation. The deposits are protected by a ridge of itabirites capped by a ferruginous hardpan. The bauxite profile shows a sequence of horizons which include, from bottom to top, a facies of massive bauxite, a facies of friable bauxite, an alumino-ferruginous hardpan, and an upper nodular horizon.

The second type of bauxites results from a transport of the previous bauxitic deposits of the depressions located at the foot slopes. Generally the profiles show three units, from bottom to top: a lower kaolinitic unit, a middle bauxitic unit - including an argilomorphous bauxitic facies going to a ferruginous nodular facies, and last a barren overlapping unit with evident sedimentary characteristics.

A unique deposit represents the plateau bauxites type. Located on the edge of a large plateau covered by hardpan, this deposit shows an uniform profile formed at the bottom by a pseudobrecciated facies going up to a massive facies, and next to a nodular facies.

The studies of these various deposits of the "Cuadrilátero Ferrífero" show a tight lithologic control : apart from the third type, all deposits are related to the carbonate facies of the Gandarela Formation. Moreover the hill slopes bauxites are autoctonous and have mainly a paleoclimatic control, whereas the depression bauxites are allochtonous and have mainly a paleogeographic control.

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