

SESSÕES DA ACADEMIA BRASILEIRA DE CIÊNCIAS

RESUMOS DAS COMUNICAÇÕES

RE-EXAMINATION OF A STRIATED PAVEMENT NEAR JEQUITAÍ, MG: IMPLICATIONS FOR PROTEROZOIC STRATIGRAPHY AND GLACIAL GEOLOGY

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New evidence strongly suggests a "soft sediment" origin for glacial striae and grooves found on and near the top of the quartzite of the Serra da Água Fria, near Jequitai, central Minas Gerais. The quartzite is generally correlated with the Espinhaço Supergroup (Middle Proterozoic). It is directly overlain by diamictites of the Jequitai Formation (Late Proterozoic?).

Main lines of evidence are: a) striae inside grooves laterally covered by slumped plow ridges; b) clasts inside furrows partially embedded in the quartzite; c) sinuosity of furrows; d) skip (crescentic-like) marks and ridges transverse to furrows; e) occurrence of striated surfaces on two bedding planes that are separated by a 25 cm-thick bed of quartzite; and f) contiguous striated and ripple-marked areas on the same bedding plane; ripple marks a few centimeters below the striated surface are, however, not deformed.

In the Serra da Água Fria presence of predominantly unidirectional, trough cross-bedding and current ripple-marks, and desiccation cracks suggest a tide-dominated, shallow marine depositional setting for the quartzite. Small, regular square marks on bedding planes resemble molds of salt crystals. Beds of similar well-sorted, fine quartzite are intercalated with the Jequitai diamictites along road BR-365.

The above reinterpretation raises interesting questions with respect to the Proterozoic stratigraphy of the Espinhaço Range area. If the striated quartzite really belongs to the Espinhaço Supergroup, then the Jequitai glaciation may be older than generally accepted. Alternatively, as indicated by the sedimentological evidence, the quartzite may be part of the Jequitai Formation sequence, that in the Serra da Água Fria is conformably(?) overlain by the Bambuí Group. Solution of these questions requires additional field work and reappraisal of the stratigraphic relations of the above units.

A soft sediment origin for the striated pavement at Jequitai bears also on the interpretation of the mechanism of formation of the striae and grooves, and of the glacial environment setting of the ice.

The features described above, together with the great areal extension, generally planar nature of the striated surfaces, and generally consistent orientation of the striae and grooves all favor formation of the features in the fluctuating grounding zone of a marine ice sheet or tongue just grazing the sediment surface. — (30 de novembro de 1995).

A ORIGEM DO GRUPO BAMBUÍ NO CONTEXTO DA EVOLUÇÃO GEOTECTÔNICA

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A fragmentação do Supercontinente Rodínia ocorrido há cerca de 1000 Ma, deu origem a