

## **IAPÓ FORMATION: GLACIATION IN THE ORDOVICIAN-SILURIAN BOUNDARY, PARANÁ BASIN, SOUTHERN BRAZIL**

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The Late Ordovician to Early Silurian Rio Ivaí Group is the lowermost megasequence at the Brazilian side of the Paraná basin. The Rio Ivaí Group is composed, from base to top, by Alto Garças, Iapó and Vila Maria formations. The stratigraphic succession is clearly transgressive in the siliciclastic shelf sediments of the Alto Garças Formation (Late Ordovician). The transgression was interrupted by a short glacial event in the Ordovician-Silurian boundary, recorded by the Iapó Formation. The Iapó Formation is discontinuous and commonly less than 20 m thick. Massive diamictites occur in association with conglomerates and coarse-grained sandstones at the base of the unit, and are interpreted as lodgement tillites. This subglacial facies association is succeeded upward by stratified diamictites and fine laminated facies with dropstones. Glaciomarine deposition is testified by the presence of brachiopods. The Iapó Formation is overlaid by post-glacial transgressive shelf shales of the Vila Maria Formation (Early to Middle Llandovery). The stratigraphic profile indicates a single glacial cycle, product of advance and retreat of a grounded ice sheet over unconsolidated shelf sediments of the Alto Garças Formation. Glaciation in the Ordovician/Silurian boundary was consequence of a short and global icehouse period. Correlation with other Gondwanan basins suggests maximum glacial in the late Ashgillian age.