

a thickening-upward signature defined by an increase in subtidal facies. This trend is attributed to the transition of transgressive to highstand system tracts related to third-order relative sea-level rise and reflects the increase of accommodation space for each successive parasequence. The parasequence sets in the Alto Paraguai basin record a post-Varanger carbonate platform subjected to high frequency (fourth/fifth-order)/low amplitude eustatic cycles in response to lower frequency (third order)/higher amplitude sea level change. — (*December 8, 2000*) .

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HYDROCARBONS IN CARBONATE ROCKS OF THE NEOPROTEROZOIC ALTO PARAGUAI BASIN, MATO GROSSO, BRAZIL*

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Presented by ANTONIO C. ROCHA-CAMPOS

A singular occurrence of hydrocarbons (bitumen) was found in Neoproterozoic carbonate rocks of the Araras Formation (Alto Paraguai basin) in the Terconi quarry (Mirassol d'Oeste, Mato Grosso, Brazil). The bitumen occurs in a transgressive carbonate succession overlying Varanger tillites, that consists of two facies associations: (1) lagoon complex, with pink parallel-laminated dolomicrites and fenestral stromatolitic biostromite, and (2) tidal-flat complex, represented by terrigenous gray micrites and pseudosparites, with parallel lamination, asymmetric ripple marks, tepee breccia, planar stromatolites and evaporites. When fresh, the bitumen is compact and vitreous, filling fractures, stylolites and dissolution cavities, generally associated with calcite cement and euhedral dolomite crystals. Microscopic examination shows the bitumen filling pores of primary (fenestral) and secondary (moldic and intragranular) origins. As

the first record of hydrocarbon in Neoproterozoic rocks of the Paraguai Belt, this occurrence opens a new perspective for the evaluation of oil potential in Precambrian rocks of Central Brazil. — (*December 8, 2000*) .

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THE ARAÇATUBA PALEOSWAMP AND THE BAURU BASIN INITIAL SEDIMENTATION*

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The Bauru Basin (lower Cretaceous) corresponds to a continental sandy succession, on a basaltic substratum (Serra Geral Formation, Early Cretaceous). Its first depositional phase, essentially desertic, corresponds to a progressive burial of the basaltic surface by a widespread and homogeneous sandy blanket, formed mainly by eolian sheets, with small dunes and minor interbedded loess deposits. The rare fluvial deposits of this phase refer to desert flash floods wadis. The original relief of the substratum favored the formation of an endorheic drainage system in the interior of the basin, causing the appearance of a large swampy area under semi-arid climate, the *Araçatuba paleoswamp*.

The swamp deposits (Araçatuba Fm.) comprise siltstone and tabular strata of very fine, massive sandstone, up to decimeters thick, with typical greenish-gray color. Carbonatic cement may form tabular crusts parallel to the stratification. Sometimes, fining upward beds show incipient planar lamination in their upper part, where desiccation cracks and root marks are common. Dolomite pseudomorphs and moulds and pseudomorphs of gypsum radial fibrous aggregates were identified. The crystal moulds may be associated with root marks, indicating subaerial exposition cycles. Mudstones with crystal