PRELIMINARY OSL AGES FOR THE IÇA FORMATION (SOLIMÕES BASIN)

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RESUMO: The stratigraphic position of the Içа Formation in the Solimões basin has not been well defined to date. Some authors indicate it was part of the Solimões Formation and consequently of miocene age while others have positioned it into the lower pleistocene. In this study we analyze the sedimentology and stratigraphy of the deposits overlaying the Solimões Formation near Coari, Amazonas, with the objective of defining its main characteristics as well as its age. These deposits outcropped in the right margin of the Amazon River (Solimões River in Brazil) forming cliffs up to 20 meters high and are mainly located downstream Coari with some also located upstream. Two facies associations were identified; the first is composed of fine to medium sandstones with a lesser proportion of coarse sandstone with granules. Tabular and trough cross-stratification characterized this association, paleocurrent data show a northwestern migration tendency of these structures. Intraformational conglomerates with clay clasts up to 20cm in diameter are distributed on the base of cross-stratification and sometimes indicate reactivation surfaces. These conglomerates show an erosional surface indicating the contact between the Solimões and Içа formations. This association is interpreted as meandering channel. The second association comprises ritmites with flaser, wavy and lenticular bedding intercalated with sets of cross-stratification and mega ripples. Overlaying mega ripples, claystone and sporadic organic detritus are present. This association has coarsening upward cycles. Massive bedding is also present and is associated with intense bioturbation and convolute lamination. This second association is interpreted as floodplain and crevasse splay. Heavy minerals analysis also confirms the individualized facies association. The concentrations of andalusite and garnet are in phase with the canal fluvial association and mica minerals correlated with the crevasse splay deposits. This is a preliminary heavy minerals correlation based on the hydrodynamic deposition of each environment. Five preliminary age dates were obtained using optically stimulated luminescence (OSL) situated the formation between the middle to the upper pleistocene with ages between 48600±7800 to133800±20900 years. This clearly indicates its Pleistocene age although more precise dating is needed for a better definition of its position in the Quaternary.

PALAVRAS-CHAVE: IÇA FORMATION; PLEISTOCENE.