



Faciology and mineralogy of the Estrada Nova Formation in the state of Sao Paulo-Brazil

Sergio Ricardo Christofolletti (1), Carolina Del Roveri (2), and Rogers Raphael Da Rocha (3)

(1) Forest Institute-DFEE, State Forest Edmundo Navarro de Andrade, Rio Claro-Sao Paulo- Brazil (sergioricardoc@gmail.com), (2) Federal University of Alfenas-UNIFAL-Alfenas, Minas Gerais -Brazil (carolina.delroveri@unifal-mg.edu.br), (3) Ceramic Rocha Forte-Rio Claro, São Paulo-Brazil (rogers.rocha@rochaforte.com.br)

The present work presented the lithofaciological and mineralogical study of the Estrada Nova Formation in the south-central region of the State of São Paulo. Six lithofacies were identified in the Estrada Nova Formation (Massive Silty shales, Massive, Laminated Siltstone, Intercalated Sandstone, Intercalated Siltstone and Altered). The Serra Alta Member, according to the lithofaciological characteristics, indicates deposition in a deep platform environment in the process of low energy decantation, sometimes occurring traction processes which allowed the formation of sandstone layers of fine granulometry. In the Teresina Member, it was observed that the lithofacies presented a thicker granulometry, reddish coloration, and increased layers of sandstone with carbonate cementation toward the top forming a rhythmic structure. The high presence of the carbonates given by the calcite mineral indicates shallow platform marine environment of hot waters and the reddish coloration oxidant environment in the formation of these lithofacies. The description of the lithofacies combined with the mineralogical characterization proved to be a very important tool in the preliminary evaluation of the sediments of the Estrada Nova Formation as raw material for the ceramic industry as well as in the diagenetic interpretations.