

RELATIONS BETWEEN GEOCHEMICAL ANOMALIES IN A SUBTIDAL TRANSGRESSIVE SEQUENCE. NORTHEASTERN ARGENTINA

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At the Northeastern Argentina, it is present an outstanding heterolithic succession composed by mud, mudrock and very fine sand beds. Typical diagnostics internal structures are present at the sandy lithofacies such as herringbone cross-stratification, tidal bundles, reactivation surfaces and bipolar cross-stratification.

Thirty-five selected samples of the heterolithic succession were analyzed for major and trace elements. Fluorescence x ray spectrometry (FRX) and inductively emission coupled plasma spectrometry (ICP) were used like a primary technique of determinations.

Ten selected samples of loessial country rocks were used in order to make clear the regional geochemical background, which strongly contrast with heterolithic succession geochemical values.

Results show clear differences in geochemical anomalies amongst mud, mudrock and very fine sand facies. Mud and mudrock beds are always characterized by high vanadium and boron values which are higher than very fine sands. Besides, the silica values discriminate between mud (low silica, high potassium) from mudrock (high silica, low potassium). Very fine sands have high geochemical values in several elements as barium, chromium, lead, copper, titanium and zirconium. Vanadium and boron are clearly lower than mud and mudrock facies.