

# **GEOCHEMICAL VALUES APPLIED TO DISCRIMINATE TECTONIC ENVIRONMENT USING DISCRIMINATION DIAGRAMS FOR CLASTIC SEDIMENTS, NORTHEASTERN ARGENTINA**

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Much effort was made in recent years in order to establish appropriate geochemical relation with classical tectonic environment using outstanding sedimentary units.

At the Northeastern Argentina, an immense deposit of the shallow marine transsgresion was registered on the Middle Miocene.

The author found that the region enters in the so called "craton interior" setting. This based on a previous work upon triangular diagrams showing average comparisons of sand derived from different provenance terranes studies.

The geochemical study of these shallow marine sediments provides an excellent tool in order to test that result.

The discrimination diagrams  $\text{TiO}_2$  (%) vs  $(\text{Fe}_2\text{O}_3+\text{MgO})$  (%);  $\text{Al}_2\text{O}_3/\text{SiO}_2$  (%) vs  $(\text{Fe}_2\text{O}_3+\text{Mg})$  (%) and the  $\log (\text{K}_2\text{O}/\text{Na}_2\text{O})$  (%) vs  $\text{SiO}_2$  (%) indicate that the more probable setting was "continental arc", mixed with active continental arc and continental island-arc.

Authors' experience with the triangular diagrams Sr, Rb versus Y, Th or Ta (alternatively) showed results compatible and approximate to "passive margin".

At the present, we are engaged to look into all possible geochemical relations in order to obtain an accurate model for this region.