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## **High Resolution Stratigraphy Genetic Sequences and Modeling of the Fluvial Triassic Formation in the Oued Mya Basin (Central Sahara, Algeria) by Using: XR Diffractometer of the Clay Fraction and the Geostatistic Method**

The triassic shale sandstone formation of Oued Mya basin, is about 200 meters thick, made of two series of shale sandstone separated by a stratum of volcanic deposits. The clay fraction has studied with XR diffractometer and showed the following results : - The main existing clay minerals are illite, chlorite and mixed layers, - The intensity of Illite peak (1001) and chlorite peak (1002) are very variable, - The variation of peak does not occur at random. Thus, the intensity of the peak (1001) of illite decreases from the bottom to the top in a metric level or profile can be observed. The genetic sequences have been defined as the smallest stratigraphic units represent the regional record of a cycle of variations in the short run of the sedimentation area. The repetition of this sequences in space and time and at the regional scale shows the regularity of an arid to semi-arid climate of the trias. This climate is characterised by an alternation of dry and humid periods. The state of the clay fraction depends on the feeding source reaching the middle of the deposits through a hydrographic network. During the dry season, the evaporation concentrates the solutions of the lakes and sebkhas, turning them more acid and more aggressive. In these conditions, the solutions start by altering the water-sediment contact deposits and then downward to the bottom of the profile without, however, completely reaching it, as the studied samples show.