

ABSTRACT

The sedimentological and geochemical properties of the Mesozoic sedimentary sequence outcropping in the Geneva Basin have been characterized in several studies in the last decade; however, there is a lack of understanding of such properties in the subsurface. Therefore, in order to investigate the Geneva Basin subsurface, a first explorative well (Geo-01) has been drilled in the context of the GEothermie 2020 Program. The target of interest ranges from the Upper Jurassic to the Lower Cretaceous geological units. This sedimentary sequence is composed mainly of carbonate rocks intercalated with thin layers of marls and shales, so the local stratigraphy can be characterized by the variation in concentration of minerals and specific groups of chemical elements (eg. major and rare earth elements). The application of chemostratigraphic tools was used to define geochemical zonations of the principal formations crossed by the GGeo-01 well. Finally, a regional correlation is proposed using the geochemical data from two other wells (Crozet and Grilly) located near to the study area. Extending this chemical zonation, a chemostratigraphic correlation was produced between the investigated wells.

