

Abstract

In front of the fast development of information technology and increasing requests for digital or analog geological data in the Hoggar region, GIS has become now a full-fledged technology in the field of digital management of geological information to ensure effectively the organization, storage, and retrieval of useful information. In this context, the work we present is part of a methodological approach for data analyzing and processing on the gold mineralization geology and metallogeny of the Hoggar. The resulting geographic information system has allowed us to develop a base of "Or-Hoggar-Geodatabase" data, structured according to several categories and classes of information (fields, indexes, and mineralized points, geological formations, tectonic, hydrographic network, and topography). This structured set of information using Arcgis support allows the design and combination of thematic maps at different scales levels of Hoggar, including structural map, geological map (with all showings optional representation), and hydrographic chart. This system offers also an editing possibility of several cartographic materials at different scales and a better option for analyzing the Hoggar geological data. It also allows an exceptional view for the gold mineralization distribution of the Hoggar. Thus, GIS applied to the Hoggar region shows that even if the showings of this region have different characteristics and morphology, they are all controlled by tectonic structures related to major events that have affected the Hoggar.