ABSTRACT
The archaeological fieldworks aim to unearth the buried remains. The method used in archaeological researches before excavating is the instrumental archeogeophysical measurements. These measurements are the most efficient ways to take three and two dimensional properties such as location, depth, and size of ruins. The predicted parameters obtained by the applied geophysical methods assist in terms of time needed and lowering the cost of excavation studies. This study presents a combined geophysical survey at an archaeological site north of Isparta in Turkey. Here, an illegal excavation revealed a monumental relic which is thought to belong to the Roman architecture. On this basis, a field of about 2 ha around the excavation has been investigated to determine the existence and continuity of possible buried remains of archaeological interest by the electrical resistivity tomography (ERT) with the assistance of magnetic mapping and groundpenetrating radar (GPR), which are the most frequently used in archaeological prospecting. The robust inversion technique was used to invert all ERT data. The total field magnetic map was obtained by interpolating the data set after filtering and pole reduction transformation procedures. The general GPR data processing steps were applied for enhancing the visualization of the measured reflections. The results of the combined geophysical survey reveal further possible locations and borders of buried structures in coherence with a regular architectural plan.
Keywords: Archeogeophysics, ERT, GPR, magnetics, Isparta, Turkey.