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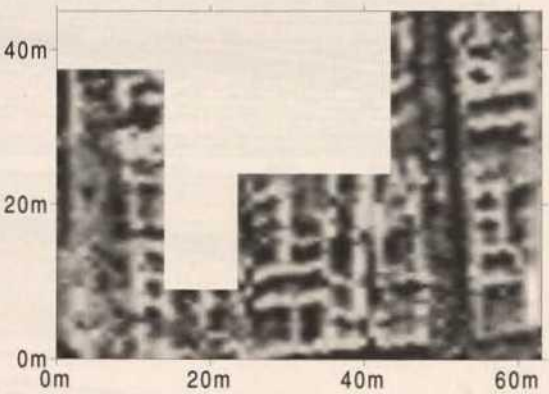
Integration of Geophysical Survey into Archaeological Prospecting Strategy : the Case of Apamée upon Euphrat

For three years, the archaeological site of Apamée upon Euphrat was investigated by electric and magnetic methods in relation with the excavations and the topographic study. These geophysical surveys have greatly contributed to the global understanding of this site, which will disappear in December 1999 by the formation of a lake due to the building of a dam. This mission of rescue organised on this Hellenistic City required fast and efficient methods. Thanks to a greater and greater efficiency and the edition of maps more and more detailed, the geophysical methods are confirmed today very adapted to this context. The use of the Cesium gradiometer (G-858, Geometrics) for the magnetic method allowed maps of a rare quality revealing the urban system (streets, walls of defence, stocks of habitations). They constitute a real archaeological document, which permitted one to make a pertinent choice of the locations of the excavations. These excavations have completed the geophysical information, studying sectors in an out of the way place with the magnetic method, but localised in the urban scheme from the geophysical maps. Twelve hectares have been surveyed among the thirty-five hectares of the site. Different sectors occupied by thick orchards can't be prospected with the Cesium gradiometer but they should be razed before the filling in of the lake. We hope thus to complete the map of Apamée before its disappearance under the waters.

Fig. 1. Magnetic survey of local area (houses and streets)



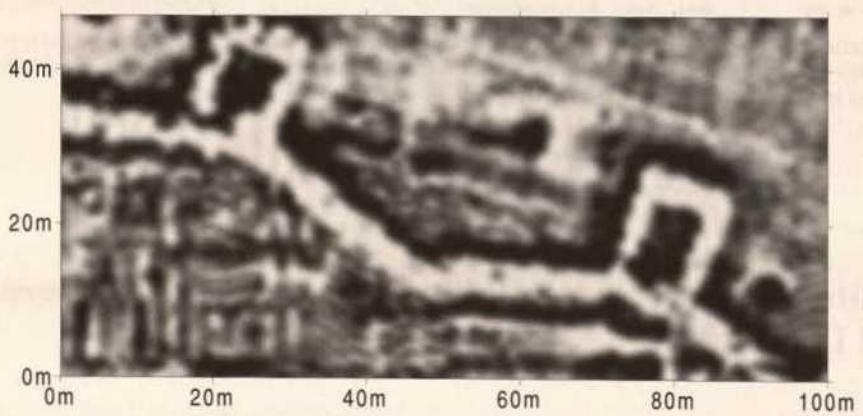


Fig. 2. Magnetic survey on the northern rampart of the city