

MONITORING OF WATER RESOURCES AND THEIR IMPACTS ON HAWARA ARCHEOLOGICAL SITE BY TRANSIENT ELECTROMAGNETIC METHOD

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Transient Electro Magnetic (TEM) survey has been conducted at Hawara archeological area, Fayoum, Egypt to investigate the subsurface water and its effect on the archeological targets at this area. This archeological site comprises Hawara pyramid and the so-called labyrinth. Nowadays Hawara area is entirely abandoned and surrounded by some cultivated lands in addition to a surface water canal named “Bahr Wahba”. The surface and underground water bodies have bad effects on the foundation of Hawara pyramid and the labyrinth site, where the entrance to the pyramid is today flooded to a depth of about 6 meters below the ground surface.

TEM data have been acquired at three sites in this area comprising the cultivated land, the pyramid and the labyrinth. Integrated interpretation of these data sets indicates that, the agricultural activities and the flooding irrigation of the planted area are the main sources for the water that invades the subsurface section at this site.

Subsurface water, Hawara archeological site, Egypt

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