



Geophysical and geotechnical studies to stand behind the damage potential in 15th May city, Cairo, Egypt.

T. Abdel-Hafez

National Research Institute of astronomy and Geophysics, 11722 Helwan, Cairo, Egypt,
(t.abdel-hafez@gmx.net / Fax: 002025548020 / Phone: 002025089250)

15th May City is a new urban that has been developed over 25 years in Eocene sediments, south of Cairo. After a period of time, some of the buildings are found cracked. The Results of geoelectric investigation show existence of clay intercalation, while scanning electron microscopy (SEM) and Energy dispersive system (EDS) of some selected rock samples show that the rocks have pores in their internal structure and existence of smectite. X-ray diffractions (XRD) analysis for selected rock samples shows that existence of gypsum, halite and quartz. Existence of water and fissures are a good environment for clay, halite and gypsum to react causing deterioration of the territory due to volumetric changes.