



Geophysical studies to investigate the reasons behind the tilting of the power line cable pillar at Borg Al-Arab, Alexandria, Egypt

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Borg Al-Arab is a new urban coastal area located on the northern coast of Egypt, near to Alexandria city. 15 years ago, a net of power lines cables was constructed to supply the northern coast of Egypt with Electricity. One of the power lines cable pillars has tilted, which may cause damage to the people living in its vicinity and also shortage in supply of electricity. The results of this geoelectrical study shows that the concrete base of the pillar is constructed in alluvial deposits. Alluvial deposits contain salt and intercalations of sand and mud. Ground penetrating radar (GPR) survey shows existence of joints and cracks around the pillar. Joints and cracks appear to conduct water from the surface down to the concrete base of the pillar causing salt dissolution and mud sliding, which has lead to the deterioration and instability problems.