Title of Article: Geoelectric investigation of the groundwater potential of Moniya area, Ibadan.
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Abstract: Geoelectric measurements using the Vertical Electrical Sounding (VES) method were carried out in Moniya, Akinyele Local Government, Oyo State, Nigeria, using the ABEM terrameter SAS 300B . The objectives of the study were to investigate the aquifer characteristics and groundwater potential of the subsurface formations. Seventeen profiles were carried out using the Schlumberger array configuration. The data was interpreted using the conventional curve matching and computer iteration methods. Results show that four major curve types were identified, namely: A, H, KH and HA. The top layer has resistivity value ranging from 61.8 to 504.3 ohm-m showing that it consists of clayey sand and sandy clay, with maximum layer thickness of 3.5 m. The resistivity of the second layer which is the weathered zone ranges from 19.7 to 724.6 ohm-m while the thicknesses vary between 0.7 to 30.3 m. These VES stations: 9, 11, 16, and 17 are fourth layer region. The third layers constitute the weathered layer which has resistivities from 13.7 to 95.3 ohm-m while it's layer thicknesses vary from 12.6 to 44.6 m the layer will be good for well sitting. VES stations 9, 6, 7, 12, 14, and17 are the locations that will be recommended for deep well sitting, because they have highest thickness of both weathered zone and fractured zone respectively which are good for groundwater storage.