Basic principles

This Section presents the important physical principles upon which DC resistivity methods are based. The relations between current flow, potentials and resistivity in uniform ground are explained. This forms the basis for the concept of apparent resistivity derived from practical survey arrangements (two current and two potential electrodes planted at the surface). The effect of anisotropic ground upon measured potentials is then described. Finally, charge distribution is explained because it is a useful way of understanding how potentials arise at the surface due to variations in electrical conductivity underground. The forward modeling relations are also based upon charge distribution.

Contents

DC\_basic\_principles\_equations DC\_basic\_principles\_current\_voltage\_halfspace DC\_basic\_principles\_heterogeneous\_earth DC\_basic\_principles\_anisotropy