

VLF-EM METHOD IMPROVEMENT: A VES – VLF-EM SURVEY ON A LANDFILL IN CAMAIORE (ITALY)

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As well known the vertical magnetic component normalized respect to the horizontal magnetic component H_z/H_y (tipper in MT-related subjects), is measured in order to detect local changes of electrical conductivity and interpret VLF-EM surveys. Unfortunately this technique gives only qualitative information. Recently Choteau et al. (1996) proposed a filter to transform the real part of the tipper vector into apparent resistivity profiles, assuming that the horizontal magnetic field does not vary along the profile and DC resistivities can be employed in filter application. An integrated VES - VLF-EM survey to investigate an old landfill in Camaiore (Italy) allowed to test the performance of the said linear filter technique. Using VES resistivities as initial parameters for VLF-EM data interpretation, we obtained quantitative responses about soil resistivities inside and below the old landfill. So doing we joined the speed and low cost advantages of VLF-EM method with the local quantitative resistivity obtained by few VES measurements.