Geophysical Research Abstracts, Vol. 7, 10611, 2005 SRef-ID: 1607-7962/gra/EGU05-A-10611 © European Geosciences Union 2005



SHALLOW RESISTIVITY IMAGE FROM THE MISION DE GUADALUPE ARCHEOLOGICAL SITE

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In order to Christianize the Mexican natives, the Spanish conquerors established several Missions from the very south of Baja California to the north as San Francisco. These missions are as old as four hundred years and some were abandoned and now they have been hidden by the desert. Here in cooperation with archeologists from INAH, we applied shallow electromagnetics and resistivity prospecting in Misión de Guadalupe in order to discover hidden walls bellow the soil. For resistivity we applied dipolo-dipole in parallel profiles to cover the whole area. Over the same profiles we used a low-induction electromagnetic equipment. Such device consists of two loops, one for the source and the another for the receiver separated by a variable distance (10, 20 and 40 m). Imaginary part of the secondary magnetic field is sensitive to the conductivity contrast and this component is used for the prospecting. We applied an inversion algorithms to recover the conductivity distribution bellow the surface in a three-dimensional way. The best model obtained shows the presence of non-arbitrary alignments that are related with the walls. Some 2D slices were used for a better visualization of the 3D model.