

MAPPING THE EVOLUTION OF SEAWATER INTRUSION IN USING RESISTIVITY AND HIGH RESOLUTION REFLECTION PROFILES

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Seawater intrusion is a severe contamination problem in the Tordera delta, Northeast Spain. Farmlands and tourist activities are considerable, thus the water consume is important. In 1969 control piezometers are installed and vertical electrical soundings (SEV) have been carried out in this area. Starting from 1994, periodical SEV have been collected at the same locations.

Considering that the saline water has been delineated as an area of low resistivity, this study presents the evolution of the marine intrusion plume obtained from these soundings during those 27 years. Three high resolution reflection profiles have been preformed for obtaining the lithologic information and solving the geoelectrical uncertainties do to the saturated materials with marine water. In addition, well logs are make for calibrate this seismic sections.