

P.3 THE MAGNETOTELLURIC METHOD IN GEOTHERMAL EXPLORATION: CASE STUDIES

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ABSTRACT

Among the geophysical tools employed for investigation of geothermal systems, the magnetotelluric (MT) method could be very effective since it is sensitive to the electrical conductivity, which is an important parameter characterizing a geothermal setting in a target area. Many of high temperature zones and recharge areas are characterized by reduced resistivity. Often hydrothermal processes result in forming conductive clay caps. The reliably identified low resistivity zones produced by brines and clays that cap a geothermal system represent attractive targets for EM exploration. In this paper we consider some examples of MT application in geothermal studies, performed by or in close cooperation with the Nord-West company.

KEYWORDS: Electromagnetic exploration, geothermal energy, volcanic regions