

# **PICO ALTO, TERCEIRA: A NEW GEOTHERMAL FIELD IN THE AZORES**

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***Key Words:***

*Pico Alto, Terceira, Azores, temperature gradient drilling, audiomagnetotelluric surveys, exploration.*

## **ABSTRACT**

A new high-temperature geothermal resource has been identified on the island of Terceira in the Azores, through an exploration program undertaken by GeoTerceira with the assistance of GeothermEx. Previous exploration on the island did not provide enough information about the location and extent of the geothermal system to support deep drilling; the new program was designed specifically to reduce confirmation-drilling risk. A 624-station audiomagnetotelluric survey determined the resistivity structure of the area of interest with sufficient accuracy to develop a working model of the system, which was tested by drilling 4 temperature observation wells up to 600 m deep. Measured temperatures revealed a convective zone of at least 233°C, and a broad area in which temperatures greater than 200°C can be projected. A confirmation-drilling program is being planned in light of the positive results of the exploration work.

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