

# Geothermal Systems in Sri Lanka and Exploitation of Geothermal Energy

G.M. Fonseka

*Open University of Sri Lanka, Nawala, Nugegoda, Sri Lanka/  
Institute of Fundamental Studies, Hantana Road, Kandy, Sri Lanka.*

## ABSTRACT

The study of local and regional gravity anomalies, deep seated fault zones, neotectonic movements, thermal history through rock dating, oxygen-hydrogen isotope measurements and natural heat discharge from thermal springs have provided encouraging geological and geophysical information to embark on a detailed study towards exploitation of geothermal energy in Sri Lanka.

High hydraulic pressure gradients created by the highlands ensures surface waters to entering deep fault zones, to be heated by an above-normal temperature gradient and then reach the surface as hot springs. The high temperature thermal waters and deep seated hot dry rock will be future sources of geothermal energy for power generation, use by industry, agricultural processing and tourist hotels.

A typical situation in a geothermal field is discussed together with the resistivity variation within the subsurface as a geophysical target to locate geothermal sources.