

**STUDY OF HEAVY METALS AND TRACE  
ELEMENTS IN DEEP GROUNDWATER AROUND  
MAHA OYA THERMAL SPRINGS**

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by

**A.A.M.P SILVA**  
**UWU/MRT/09/0034**

**Mineral Resources and Technology Degree Program**  
**Uva Wellassa University, Sri Lanka**  
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## **Abstract**

Groundwater in and around Maha Oya thermal springs found in the Precambrian high-grade metamorphic terrain of Sri Lanka were investigated to assess their geochemical properties with compared to normal deep ground water of particular area and to produce a data set to develop a model of identification of thermal springs or mixing of thermal and non-thermal groundwater..

The main objective is this study, to compare the geochemical parameters of thermal springs with nearby cold ground water and interprets the geochemical relationships among them.

Samples of low temperature (<35 C) groundwater from nearby springs, piezometers and open wells were also collected for comparison. All samples were analyzed for their major and trace element compositions.

These waters showed low concentrations of selected trace elements and were also comparable to that of geothermal ground waters. Major cation and anion concentrations of thermal springs are similar to nearby cold springs. Close matches of geochemical data from geothermal and dug wells waters confirm the hypothesis of a common source.

Key words: Geothermal springs, geochemistry, Highland complex, Vijayan Complex