

## Abstract

Gravity and ground magnetic surveys were conducted over an area of 76 Km<sup>2</sup> in order to investigate thermal structures responsible for geothermal manifestations such as hot springs in the Homa Hills geothermal prospect. The two surveys show that the southern part of the prospect has a potential for geothermal resource and should be investigated further to establish presence of an exploitable hydrothermal system. The magnetic survey indicates higher demagnetization in this part of the field compared to other parts of the field. The gravity survey is relatively sharp with a classic dome shaped profile associated with a large shallow dike