

**GEOLOGY AND 2D MODELLING OF MAGNETIC DATA TO EVALUATE SURFACE
AND SUBSURFACE SETTING IN BONGONGOAYU GEOTHERMAL AREA,
GORONTALO**

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Indonesia has geothermal potential, one of them in Bongongoayu, Gorontalo. This area requires surface and subsurface data to support the preliminary data. This research aims to determine surface and subsurface data conducted by field survey and laboratory analysis. The surface data, including manifestation data, lithology data, hydrogeology data and geomorphology data. The subsurface data have taken by the magnetic survey. The result of this research is the geothermal manifestation at Bongongoayu is a hot spring water pool with surface temperature 43° - 59°C. Geomorphology in the field area is Volcanic Hill landform and Plain Lake Landform. The lithology in the manifestation area is consisted of Granitic rock and Alluvial. Based on the hydrology data analysis the recharge area of this field is on the north side of the field and the discharge area is on the south side of manifestation field. The magnetic data analysis has imagine the subsurface rock layer and the subsurface structure which is the way out of the geothermal fluid to the surface as a manifestation.

Keywords: Geothermal, Manifestation, Geology, Magnetic.