

## ABSTRACT

### IDENTIFICATION RESERVOIR ZONE OF GEOTHERMAL BASED ON ANALYSIS 1D INVERSION RESULTS USING DATA PROCESSING MAGNETOTELLURICS (MT) METHOD, AT WAYANG WINDU GEOTHERMAL FIELD, PANGALENGAN DISTRICT, WEST JAVA

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Has done research on Wayang Windu geothermal field, Pangalengan district. West Java province. Using the MT (Magneto Telluric) method with a total of 14 stations, The spread of toward the north-south measurement station. Data processing performed to obtain 1D resistivity variations and identify continuity based on the results of the correlation all MT stations.

Based on the model built from the geothermal 1D inversion results, the results of interpretation obtained imaging of subsurface by contrasting resistivity values. interpretation are there 4 resistivity contrasts associated with geothermal systems research area. Based on value of resistivity the target, reservoir zones identified consistently from WW23 to WW121 Station with range varying depths. Shallow reservoir found in the data inversion results of WW23 station (North) with a depth of 600 m, while in the deep reservoir zone was found in the inversion results of WW121 (south) to a depth of 1300 m. In addition to depth, the thickness of the reservoir zone also varies from 2300 m up 2800 m with contrasting resistivity values 7-50 Ohm.m. So that from the pattern indicated that the deeper reservoir zones to the south. Based on the correlation of the model indicated that the area has potential to be a production well located at the station MT -ww39 ww23 as a shallow reservoir area with the fault structures that estimated high permeability.

**Keywords:** Magnetotelluric, Model, 1D Inversion, resistivity, reservoir zone