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Magnetotelluric (MT) study at Cimandiri Fault, Pelabuhan Ratu, West Java, Indonesia

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To verify the mechanisms of earth currents as sources of Ultra Low Frequency (ULF) electromagnetic emissions associated with large earthquakes occurred close to Cimandiri fault, Pelabuhan Ratu, West Java, Indonesia, we have carried out the subsurface structure near Cimandiri fault by using forty eight MT points. The MT exploration was carried out during two weeks, from Juli 27, 2009 to August 8, 2009. The data were distributed along about 17.81 km x 13.36 km profile. All of points are situated on two lines. The first line which directed from south to north is about 12.31 km long and the second one which directed from west to east is about 6.11 km long. There are 29 and 19 sounding points along the first and second line, respectively. Data analysis has been analyzed by using the 1-D Bostick inversion. The result highlights the southern part of the first and second line are dominated by the conductive zone. The results also provide information of the existence of resistive zone from the surface until the deeper depth in the northern part of study area. This deep resistive zone has been appeared in the first as well as second lines.